AGENDA

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025 at 7:00 PM

Village Board Room 740 Hillgrove Avenue, Western Springs, IL 60558

1. **Call to Order**

2. **Pledge of Allegiance**

3. **Roll Call**

   Heidi Rudolph , Village President
   Amy Avakian, Trustee
   Nicole Chen, Trustee
   Alan Fink, Trustee
   Scott Lewis, Trustee
   Phil Nawrocki, Trustee
   James Tyrrell, Trustee

4. **Public Comment**

5. **Approval of Meeting Minutes**

   A. Approval of the meeting minutes for the January 13, 2025 and January 27, 2025 Board of Trustees meeting. (Omnibus Item)

6. **General Government Committee Report**

7. **Finance Committee Report**

   A. Resolution Approving and Authorizing a Billing Services Agreement with EMS Management & Consultants (EMS/MC) (Omnibus Item)

   B. Budget Amendment: HVAC & Grand Ave Gym Improvement (Omnibus Item)

   C. Budget Amendment: Village Hall HVAC Controls (Omnibus Item)

8. **Planning and Zoning Committee Report**

   A. Remediation Agreement with Regards to Certain Sump Pump Improvements and Water Discharge at 4524 & 4528 Grand Avenue (Omnibus Item)

   B. 2025 Official Zoning Map (Report only)

   C. Timber Trails Subdivision, Sidewalk and Public Utility Easements for Lots 222, 223, 274, 275, and 276 (Report only)

   D. French Market - Sixth Addendum to the Market License Agreement Between the Village of Western Springs and Bensidoun USA, Inc. Relative to Operation of a French Market in the Village

(Extended term: February 24, 2025, to December 31, 2028) (Report only)

E. [Previously Discussed] 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Dissolve a Conditional Use Permit (Omnibus Item)

F. [Previously Discussed] 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Plat of Abrogation for a Public Sidewalk Easement and Termination Agreement (Omnibus Item)

G. [Previously Discussed] 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Assignment, Assumption, and Consent Agreement and Redevelopment Agreement (Omnibus Item)

H. [Previously discussed] Downtown Western Springs Market Assessment Update (Omnibus Item)

I. [Previously discussed] PC-2024-02 – A Waiver of the Five Acre Minimum Area and Reduction of Certain Planned Development Submission Materials - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

J. [Previously discussed] PC-2024-02 – An Amendment to the Comprehensive Plan Long Range Land Use Map - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

K. [Previously discussed] PC-2024-02 – A Conditional Use Permit for a Planned Development, Zoning Map Amendment, and Variations- 5600 Wolf Road, McNaughton Development, LLC (Old Business)

L. [Previously discussed] PC-2024-02 – Vacation of Portion of Lawn Avenue Right-of-Way 5600 Wolf Road, McNaughton Development, LLC (Old Business)

M. [Previously discussed] PC-2024-02 – A Plat of Aborgation for Storm Sewer and Public Utility Easement - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

N. [Previously discussed] PC-2024-02 – A Final Plat of Subdivision - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

O. [Previously discussed] PC-2024-02 – A Redevelopment Agreement - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

P. [Previously discussed] PC-2024-02 – An Minor Amendment to the Conditional Use Permit for a Planned Development for Heritage Springs Towhomes - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

9. Public Works & Water Committee Report

A. [Project Previously Approved] Updated Agreement Attachment: 2025 MFT Street Resurfacing Program Engineering Agreement with Christopher B. Burke Engineering, Ltd.- IDOT Form (Omnibus Item)

B. [Project Previously Approved] - Updated Agreement Attachment: Gilbert Avenue Resurfacing Preliminary Engineering Professional Services Agreement with Baxter & Woodman Form BLR 05530 (Omnibus Item)

C. [Project Previously Approved] Updated Agreement Attachment: Gilbert Avenue Resurfacing Design Engineering - MFT Resolution Form BLR 09110 (Omnibus Item)

D. 2025 IDOT Motor Fuel Tax Authorization for Maintenance Items (Report only)

E. Lead Service Line Replacement - Phase 2 CY25-26 - Funding Nomination Form for Loan Assistance (Report only)

F. Water System Update

10. Properties & Recreation Committee Report

A. Village Hall HVAC Controls RFB Recommendation (Report only)

B. 2025 Grand Avenue Community Center Flooring Replacement RFB Recommendation (Report only)

11. Public Health & Safety Committee Report

A. 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (Omnibus Item)

12. Consideration of and Action on Agenda Items

13. Explanation of Omnibus Voting Procedure

The Illinois State Statutes allow a municipality to collectively vote on a group of ordinances, resolutions, and other motions, such as awards of contract, appointments, etc. This is known as an omnibus vote. All the items contained on the omnibus vote list have been previously discussed by the President and Board of Trustees on at least one occasion, and often on several occasions. By placing them on the omnibus vote list, a single vote may be taken to approve them. A Trustee may remove any item from the list and have it discussed and voted on separately, prior to the omnibus vote. Is there any such request?

14. Consideration of an Omnibus Vote

A. A motion to approve the Remediation Agreement between the Village of Western Springs and Homeowners Doug King and Natalie King with regards to certain sump pump improvements and water discharge.

B. A motion to approve the Gilbert Avenue Resurfacing Design Engineering - MFT Resolution Form BLR 09110A.

C. A motion to approve the January 13, 2025 and January 27, 2025 Board of Trustees meeting minutes as read.

D. Resolution No. 25-2866

A Resolution approving a plat of abrogation for public sidewalk easement (address: 4300 Franklin Avenue, Western Springs, Illinois) and approving the termination of letter of agreement for construction and maintenance of a public sidewalk and abrogation of easement for a public sidewalk to allow for the removal of the public sidewalk and public parking spaces within the 43rd Street right-of way adjacent to Lot 1 and Lot 9 in the Field Park Subdivision, Western Springs, Illinois.

F. Resolution No. 25-2867

A Resolution authorizing the approval and execution of an assignment, assumption and consent agreement for the removal of a public sidewalk and certain public parking spaces, installation of a new public sidewalk and restoration of 43rd Street right-of-way at the 4300 Howard Avenue property in the Village of Western Springs (Lots 1, 8 and 9 in Field Park Subdivision) and a related redevelopment agreement to be entered into by and between the Village of Western Springs, Illinois and 4300 Franklin Western Springs LLC to allow for the completion of such work.

G. Resolution No. 25-2876
A Resolution approving and authorizing the execution of a Billing Services Agreement and Business Associate Addendum with EMS Management & Consultants, Inc. of Winston-Salem, North Carolina for the provision of emergency medical services billing and collection services.

H. Resolution No. 25-2877
A resolution authorizing the acceptance and approval of the downtown Western Springs Market Assessment dated February 10, 2025 and prepared by Teska Associates, Inc. for the Village of Western Springs.

I. Resolution No. 25-2880
A Resolution approving and authorizing the execution of a local public agency engineering services agreement (IDOT form BLR 05530) between the Village of Western Springs and Christopher B. Burke Engineering, Ltd. for the performance of phase II design and phase III construction engineering services relating to the 2025 Motor Fuel Tax (MFT) asphalt roadway resurfacing project (45th Street between Gilbert Avenue and Wolf Road) (not-to-exceed engineer's fee: $84,850.00)

J. Resolution No. 25-2881
A Resolution authorizing the adoption of the update of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan.

K. Resolution No. 25-2882

L. A Resolution approving and authorizing the execution of a local public agency engineering services agreement (IDOT Form BLR 05530) between the Village of Western Springs and Baxter and Woodman Ltd. for the performance of phase I design engineering services relating to the Gilbert Avenue resurfacing project (not-to-exceed engineer's fee: $110,000)

M. Ordinance No. 25-3236
An Ordinance rescinding and repealing the Board of Trustees' approval of Ordinance no. 18-2934 (an Ordinance approving a conditional use permit for the installation and operation of an early childhood education center at the 4300 Howard Avenue property) to facilitate the demolition of a church building and removal of a public sidewalk and on-street public parking spaces, abrogation of a public sidewalk easement, installation of a new public sidewalk and restoration of 43rd street right-of-way in the Village of Western Springs, Illinois (Lots 1, 8 and 9 in Field Park Subdivision)

N. Ordinance No. 25-3245
An Ordinance approving budget amendments / transfer $10,000.00 to the fiscal year 2025 operating budget in the Recreation Fund.

O. Ordinance No. 25-3246
An Ordinance approving budget amendments / transfer $10,000.00 to the fiscal year 2025 operating budget in the General Fund.

15. Second to Omnibus Motion/Discussion of Omnibus Motion/Roll Call Vote

16. New Business

17. Old Business

Resolution No. 25-2878
A Resolution approving a waiver of the five (5) acre minimum land area requirement under section 10-8-3 (guidelines) of the Western Springs Village Code and the reduction of certain planned development submission materials under section 10-8-8 (submittal requirements) of the Western Springs Village Code as requested by applicant / contract purchaser McNaughton Development, LLC for approval of a conditional use for a planned development to construct the proposed 29 unit Heritage Crossing townhome development at the property commonly known as 5600 South Wolf Road, Western Springs, Illinois.

Second the Motion.
Roll call vote.

Ordinance No. 25-3239
An Ordinance approving and adopting an updated long range land use map to the Western Springs Official Comprehensive Land Use Plan for purposes of reclassifying the zoning designation of the 5600 South Wolf Road property, Western Springs, Illinois from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District to allow for the construction the proposed heritage crossing townhome development by applicant / contract purchaser McNaughton Development, LLC.

Second the Motion.
Roll call vote.

Ordinance No. 25-3240
An Ordinance approving a map amendment to rezone the 5600 South Wolf Road property, Western Springs, Illinois, from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District; approving an application for a conditional use permit for a planned development for the construction and operation of the proposed 29 unit Heritage Crossing townhome development located at the 5600 South Wolf Road property, including the approval of the combined preliminary / final development plans, subject to Village plan review process, and approval of certain development allowances, exceptions and variations from the Village zoning regulations, including a waiver of the five (5) acre minimum lot area requirement and a reduction of certain planned development submission requirements.

Second the Motion.
Roll call vote.

Ordinance No. 25-3241
An Ordinance approving and authorizing the vacation of the 66.00 feet by 225.00 feet portion of the Lawn Avenue right-of-way adjacent to and west of the 5600 South Wolf Road property located in Western Springs, Illinois and Lot 5 and lot 6 of Maxted Subdivision, and approving a plat of vacation and reservation of a stormwater drainage easement (Applicant: McNaughton Development, LLC)

Second the Motion.
Roll call vote.

Ordinance No. 25-3242
An Ordinance authorizing the approval and execution of a plat of abrogation for storm sewer easement and public utility easement located within the property commonly known as 5600 South Wolf Road, Western Springs, Illinois for the construction of the proposed 29 unit Heritage Crossing townhome development by applicant / contract purchaser McNaughton Development, LLC.

Second the Motion.
Roll call vote.

Ordinance No. 25-3243
An Ordinance authorizing the approval and execution of a final plat of Heritage Crossing Resubdivision for the proposed 29 unit Heritage Crossing townhome development to be constructed at 5600 South Wolf Road, Western Springs, Illinois by applicant / contract purchaser McNaughton Development, LLC.

Second the Motion.
Roll call vote.

Resolution No. 25-2879
A Resolution authorizing the approval and execution of redevelopment and maintenance agreement by and between the Village of Western Springs, Illinois and McNaughton Development, LLC for the Heritage Crossing residential townhome development (5600 South Wolf Road, Western Springs, Illinois)

Second the Motion.
Roll call vote.

Ordinance No. 25-3244
An Ordinance approving a minor amendment to the conditional use permit for a planned development issued for the Western Springs townhomes subdivision (the “Heritage Springs Subdivision”) located south of 55th Street and west of Wolf Road in Western Springs, Illinois relative to construction of on-street parking spaces within Heritage Court.

Second the Motion.
Roll call vote.

18. Reports

A. Monthly Financial Report (Trustee Chen)

B. Village President Rudolph

C. Village Manager Baer

D. Village Attorney Jurusik

19. Closed Meeting

Recess and adjourn to closed meeting for the purpose of discussion of:

- The setting of a price for sale or lease of property owned by the Village pursuant to 5 ILCS 120/2 (c)(6);
- Pending litigation pursuant to 5 ILCS 120/2 (c)(11); and
- Probably and Imminent Litigation pursuant to 5 ILCS 120/2 (c)(11).

20. Adjournment

Individuals with disabilities who plan to attend / participate in this meeting and who require accommodations to allow them to observe and participate, or who have questions regarding accessibility of the meeting or facilities, are requested to contact Jill Izzo at 708-246-1800, extension 127.

MINUTES OF THE VILLAGE OF WESTERN SPRINGS
PRESIDENT AND BOARD OF TRUSTEES REGULAR MEETING
Monday, January 13, 2025

President Heidi Rudolph, Presiding

CALL TO ORDER:
The meeting opened at 7:00 p.m.
Edward Tymick, Village Clerk

Board Members Present:
Amy Avakian, Trustee
Nicole Chen, Trustee
Alan Fink, Trustee
Scott Lewis, Trustee
Phil Nawrocki, Trustee
James Tyrrell, Trustee

Michael T. Jurusik, Village Attorney

Staff Present:
Ellen Baer, Village Manager
Casey Biernacki, Deputy Village Manager
Daisy Chavez, Asst. to Village Manager
John Mastandona, Director of Finance
Sean Gilhooley, Director of Law Enforcement
Heather Valone, Director of Community Development
Aleks Briedis, Director of Recreation
Jeff Koza, Director of Engineering
Matt Supert, Director of Municipal Services
Brian Scott, Director of Fire & EMS
Kelsey Fawell, Senior Planner
Jill Izzo, Deputy Village Clerk

ROLL CALL

CITIZEN COMMENTS

None.

DRAFT

APPROVAL OF MEETING MINUTES

President Rudolph stated that a motion to approve both the December 2, 2024 and December 16, 2024 Board of Trustees meeting minutes would be brought tonight under New Business.

GENERAL GOVERNMENT COMMITTEE REPORT

Trustee Tyrrell reported on the proposed contract extension with MGT Impact Solutions, LLC, which provides human resources services through project manager, Stephana Przybylski. Ms. Przybylski manages certain recruitments, employee training and special projects on behalf of the Village.

Trustee Tyrrell reported that Deputy Village Clerk, Jill Izzo, was recommended to be the Alternate to our Intergovernmental Risk Management Agency (IRMA) and Casey Biernacki will remain the Delegate.

Trustee Tyrrell reported on the DuPage Mayors and Managers Conference (DMMC) Legislative Action Program and discussed DMMC's legislative priorities and their proposed resolution to be considered by members of DMMC Trustee Tyrrell stated that the Village supports the DMMC's legislative priorities.

FINANCE COMMITTEE REPORT

No report.

PLANNING AND ZONING COMMITTEE REPORT

Trustee Nawrocki reported on the comprehensive plan amendment to the long-range land use map and an amendment to the Village zoning map at 917 Lawn Court. Senior Planner, Kelsey Fawell reported that the property owners are seeking an amendment from its current zoning of R4 - Multi-family Residential District to A - Single-Family Residential District in order to construct a single-family home.

Trustee Nawrocki reported that the First United Methodist Church ("FUMC") and Hinsdale First United Methodist Church have merged. As a result of the First United Methodist Church is selling their property. FUMC has a pending real estate contract with a purchaser that intends to develop the property for single-family homes. On behalf of Hinsdale United Methodist Church, Zed Francis gave a history of the property.

DRAFT

Trustee Nawrocki introduced the Downtown Western Springs Market Assessment Update and consultants from Teska provided a presentation of the market study findings.

Trustee Nawrocki introduced Director Valone to provide a report on McNaughton Development's plans for the proposed development of townhomes at 5600 Wolf Road. Director Valone presented information on the proposed development which included what actions have been taken by the applicant, the Plan Commission's reviews, and the current site design.

Trustee Nawrocki reported on the V3 Engineering Services Agreement for the Timber Trails Subdivision Development and the Committee's recommendation to approve the agreement for construction observation and closeout services.

Trustee Nawrocki reported that the Committee reviewed and recommended approval of Amendment No. 2 of the Baxter & Woodman ("B&W) Consulting Engineers Agreement for the Heritage Crossing stormwater modeling and management. Trustee Nawrocki reported that the fee for the Agreement and Amendment No. 1 has been fully expended. Trustee Nawrocki stated that Amendment No. 2 allows the Village to utilize B&W's services as needed, as the review process has required more reviews than originally contemplated. The Village will initially pay the B&W for services completed, but all costs incurred are then billed by the Village to the developer.

PUBLIC WORKS & WATER COMMITTEE REPORT

Trust Fink reported the 2022 grant received from the West Central Municipal Conference Surface Transportation Program will cover 80% of construction and construction engineering for the resurfacing of Gilbert Avenue from Odgen Ave. to 47th Street. The Village shares jurisdiction of Gilbert Avenue with the Village of La Grange, as such, costs associated with this local match will be split 50-50 between the two Villages. The Village also received funding for design engineering services from a grant from the Cook County Department of Transportation and Highways ("CCDOTH"). An intergovernmental agreement ("IGA") is needed to define each Village's responsibility for the design engineering phase of the project. Trustee Fink stated the Committee reviewed and recommended approval of the IGA with the Village of La Grange and an agreement with Baxter & Woodman for design engineering services.

Trustee Fink report that in 2017 Well #3 pump and motor were pulled from service. It was determined in 2017 that the motor would not be repaired. Due to the fact that it has mercury seal it will cost $25,662.00 to properly to decommission the Well #3 motor.

DRAFT

Trustee Fink indicated that the Committee recommended that motor be declared surplus property and recommends Layne to properly decommission the motor to comply with IEPA standards.

Trustee Fink reported that Committee reviewed and recommends the surplus declaration of water meters from Well 3 and Well 4 that were replaced in the Fall of 2024.

Trustee Fink reported that Committee reviewed and recommends the purchase of water meters and accessories from Water Resources, Inc.

Trustee Fink reported that the Committee recommends the approval of the following contract renewals: National Power Rodding for sewer televising and cleaning services; and Murphy Construction Services, LLC for the Sidewalk Shaving Program.

Trustee Fink reported that the Committee reviewed and recommends the approval of a three-year Software Services Agreement with Brightly Asset Essentials.

PROPERTIES & RECREATION COMMITTEE REPORT

Trustee Avakian reported that the Committee reviewed and recommends the approval of the following contract renewals: Vega Building Maintenance, Inc. for custodial services; The YMI Group, Inc. for HVAC maintenance services; Winkler Tree and Lawn Care for tree trimming services; Beary Landscape Management, LLC for landscape services; and Desiderio Landscaping & Tree Removal LLC for tree removal services.

Trustee Avakian reported that the Recreation Department has several successful events. Trustee Avakian also mentioned that basketball leagues registration numbers have gone up and that the Recreation Center Playground surfacing project is complete and looks great.

PUBLIC HEALTH & SAFETY COMMITTEE REPORT

Trustee Lewis reported that a grant was received to develop the Safe Routes to School Village-Wide Travel Plan. Trustee Lewis indicated improvements will include sidewalk installation and reconfiguration, intersection safety improvements, bike safety and drop-off improvements. Village staff recommended and the Committee concurred that the Village should enter into an agreement with Epstein for this project.

DRAFT

Trustee Lewis reported that a grant was received from the Illinois Department of Commerce and Economic Opportunity for the purchase of a new ambulance to replace a 2008 model. A specifications committee was formed consisting of Municipal Fleet Services and Fire & EMS staff to research manufacturers and their products. The committee recommends the purchase of the ambulance from Foster Coach Sales, Inc. through the Suburban Purchasing Cooperative (SPC) and the Public Health and Safety Committee agreed with the recommendation. Trustee Lewis indicated it will take three years for the ambulance to be built due to ongoing supply chain issues.

Trustee Lewis indicated that the Committee reviewed and recommends license plate reader agreements to allow the Village to install license plate reader equipment and poles to monitor traffic on Wolf Road and 47th Street. This would require agreements with the Timber Trails Homeowners Association and Lyons Township High School District 204 as LPR equipment poles would be installed there with one pole located on each of these organization's properties.

NEW BUSINESS

Manager Baer introduced a Proclamation congratulating the Village of Riverside on the Sesquicentennial Anniversary and celebrating the unique history of Riverside and their collaborative relationship with Western Springs.

Trustee Tyrrell motioned to accept the Proclamation, seconded by Trustee Nawrocki.
Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

Trustee Tyrrell made a motion to approve the DMMC Mayors and Managers Conference 2025 Legislative Action Program Resolution, seconded by Trustee Nawrocki.
Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

Trustee Tyrrell made a motion to approve the December 2, 2024 and December 16, 2024 Board of Trustees meeting minutes as read, seconded by Trustee Nawrocki.
Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

DRAFT

OLD BUSINESS

Resolution No. 24-2864
A Resolution authorizing the approval and execution of a cloud services agreement between the Village of Western Springs and Brightly Software, Inc. for a Government Cloud-Based License, subscription and use of Asset Essentials Enterprise to allow the Village to operate its work order management, asset management, fleet and safety programs. (Contract Term 36 Months).

Trustee Fink made a motion to approve Resolution No 24-2864, second by Trustee Avakian. Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

REPORTS

Monthly Financial Report (Trustee Chen)

No report.

Village President Rudolph

President Rudolph stated that she wanted to encourage everyone to check the Village website for information on the 2025 Referendum. President Rudolph indicated that the Village website is a great resource for information and continues to be updated by staff. President Rudolph also wanted to call out the property tax calculator found on the website, as a helpful tool to assist residents in determining the impact of the referendum on their property tax.

Village Manager Baer
Village Manager Baer discussed several dates that the Village will be hosting both virtual and in-person open houses to provide information on the upcoming referendum.

Village Manager Baer reminded residents that the Village is in the last week of Christmas tree collection.

Village Manager Baer also stated the holiday light recycling program will run through January 31, 2025.

Village Attorney Jurusik

DRAFT

No report.

ADJOURNMENT
Trustee Tyrrell made a motion to adjourn, seconded by Trustee Nawrocki. Motion passed on a voice vote. Meeting was adjourned at 8:33 p.m.

Respectfully submitted,

Jill Izzo

Deputy Village Clerk

DRAFT

MINUTES OF THE VILLAGE OF WESTERN SPRINGS
PRESIDENT AND BOARD OF TRUSTEES REGULAR MEETING
Monday, January 27, 2025

President Heidi Rudolph, Presiding

CALL TO ORDER
The opened at 7:00 p.m.
Edward Tymick, Village Clerk

Board Members Present:
Amy Avakian, Trustee
Nicole Chen, Trustee
Alan Fink, Trustee
Scott Lewis, Trustee
Phil Nawrocki, Trustee
James Tyrrell, Trustee

Michael T. Jurusik, Village Attorney

Staff Present:
Ellen Baer, Village Manager
Casey Biernacki, Deputy Village Manager
Daisy Chavez, Asst. to Village Manager
John Mastandona, Director of Finance
Sean Gilhooley, Director of Law Enforcement
Heather Valone, Director of Community Development
Aleks Briedis, Director of Recreation
Jeff Koza, Director of Engineering
Matt Supert, Director of Municipal Services
Brian Scott, Director of Fire & EMS
Kelsey Fawell, Senior Planner
Jill Izzo, Deputy Village Clerk

ROLL CALL

CITIZEN COMMENTS

President Rudolph advised that there will be separate public comment for the 5600 Wolf Road development.

DRAFT

No citizen comments were made at this time.

COMMISSION REAPPOINTMENTS
President Rudolph acknowledged the reappointments of both Martin Healy and Winifred Lyday to the Recreation Commission and stated the items will be considered for approval under New Business.

GENERAL GOVERNMENT COMMITTEE REPORT

Trustee Tyrrell indicated that the previously discussed Employee Leasing Agreement with MGT Impact Solutions, LLC and the IRMA Alternate Delegate Resolution will be on tonight's omnibus.

FINANCE COMMITTEE REPORT
No report.

PLANNING AND ZONING COMMITTEE REPORT

Trustee Nawrocki reported that the Downtown Western Springs Market Assessment Update was discussed at the last meeting and that Director Valone and Teska representatives were present tonight for any questions. There were no questions or comments, and Director Valone indicated that the item will be on the agenda for formal acceptance at the February 10, 2025 Board of Trustees meeting.

Trustee Nawrocki reported that the 5600 Wolf Road, McNaughton Development, LLC project was discussed at the last meeting and introduced Director Valone to provide additional information on the project. Director Valone introduced, John Beary with McNaughton Development, LLC, who provided an update on the proposed plans for the development. There were no questions at the time. Director Valone then presented information on the proposed development. Following Director Valone's presentation and discussion with the Trustees, the meeting opened to citizen comments on the item.

CITIZEN COMMENTS – 5600 WOLF RD., MCNAUGHTON DEVELOPMENT, LLC

Resident George Rogers provided comments regarding the proposed development including his concerns for flooding and parking.

Resident Berry Allen provided his comments regarding the proposed development including his concerns for the development's proposed variances, as well as density and flooding.

DRAFT

Resident Debroah David provided comments regarding the proposed development including flooding, parking and her concern for maintaining the charm of the Western Springs.

Resident Anthony J. Perino provided comments regarding his concerns for the proposed development including flooding, density due to the square footage of the proposed units, as well as the stairs in the units that are not suitable for empty nesters. Mr. Perino also commented on his concern for the construction methods and aesthetics. Mr. Perino stated he prefers less density and is concerned about potential stormwater issues.

Resident Rachel (last name inaudible) provided comments regarding her concerns for the construction disruption and traffic. She expressed her concern for safety of young children and other pedestrians during construction. She commented that young families would be interested in the units of the proposed development and believes there would be a lot of cars coming in and out of the development.

Director Valone indicated that the draft development agreement contains provisions that construction traffic is only permitted on site. Attorney Jurusik further stated the developer would not be allowed to have any its contractors, etc. to park in Ridgewood and parking must be contained within the development.

Director Koza provided information regarding a planned study that was requested by the Village to determine a plan forward regarding stormwater that comes down from La Grange Highlands. Director Koza further stated that Ridgewood stormwater project is currently being engineered to address flooding on Ridgewood Drive.

Resident George Rogers provided additional comments regarding his flooding concerns and the need to increase retention.

Resident Laura Jost provided comments regarding her disapproval of the proposed development and her concerns for flooding and safety of children walking to school. Ms. Jost expressed her appreciation for the Board listening to public opinion.

Resident Erin Miller commented on the potential increase in traffic its effect on the safety of young children and pedestrians walking and crossing Wolf Road. Ms. Miller also expressed her concern for construction traffic and the safety of young children commuting.

DRAFT

CLOSE PUBLIC COMMENT

RESUME PLANNING AND ZONING COMMITTEE REPORT

Director Valone indicated that items A, B, E and F were previously discussed and were on tonight's Omnibus.

PUBLIC WORKS & WATER COMMITTEE REPORT

Trustee Fink stated that agenda items A – G were previously discussed and were on tonight's Omnibus for approval.

PROPERTIES & RECREATION COMMITTEE REPORT

Trustee Avakian stated the previously discussed contracts renewals with Vega Building Maintenance, Inc., The YMI Group, Inc., Winkler Tree & Lawn Care, Beary Landscape Management, LLC., and Desiderio Landscaping & Tree Removal LLC were on tonight's Omnibus for approval.

PUBLIC HEALTH & SAFETY COMMITTEE REPORT

Trustee Lewis stated that agenda items A and B were previously discussed and were on tonight's Omnibus for approval.

Trustee Lewis reported on the Training Participation Agreement between the Village of Western Springs and Adventist Midwest Health to conduct safety active shooter training and that the item will be considered for approval tonight under New Business.

EXPLANATION OF OMNIBUS VOTING PROCEDURE

President Rudolph stated the Illinois State Statues allow a municipality to collectively on a group of ordinances, resolutions, and other motions, such as awards of contracts, appointments, etc. This is known as an omnibus vote. All the items in the omnibus vote list have been previously discussed by the President and Board of Trustees on at least once occasion, and often on several occasions. By placing them on the omnibus vote list, a single vote may be taken to approve them. A Trustee may remove any item form the list and have it discussed and voted on separately, prior to the omnibus vote.

There were no changes to the omnibus vote list.
CONSIDERATION OF AN OMNIBUS VOTE:

DRAFT

Trustee Tyrrell moved that the ordinances, resolutions and motions as contained on the meeting agenda for January 27, 2025, be adopted and/or approved under an omnibus vote. Trustee Tyrrell read the omnibus in its entirety and motioned it be approved.

Trustee Nawrocki seconded the motion. The motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, Tyrrell and President Rudolph
Voting Nay: None

NEW BUSINESS

Trustee Avakian made a motion to approve the reappointment of Martin Healy as a member of the Recreation Commission for a three-year term to expire February 28, 2028, seconded by Trustee Fink.

Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

Trustee Avakian made a motion to approve Winifred Lyday as member of the Recreation Commission for a three-year term to expire on February 28, 2028, seconded by Trustee Fink.

Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

Trustee Lewis made a motion to approve Resolution No. 25-2870 authorizing the execution of a training participation agreement between the Village of Western Springs and Adventist Midwest Health d/b/a UChicago Medicine AdventHealth La Grange Hospital regarding conduct of training exercises, seconded by Trustee Chen.
Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

REPORTS

<u>Monthly Financial Report (Trustee Chen)</u>

DRAFT

Trustee Chen presented the December 2024 Financial Report highlighting investment activity, the General Fund including upcoming adjustments and water consumption.

Trustee Chen made a motion to approve the December 2024 Financial Report, seconded by Trustee Lewis.

Motion passed on a roll call vote.
Voting Aye: Trustees Avakian, Chen, Fink, Lewis, Nawrocki, and Tyrrell
Voting Nay: None

Village President Rudolph

President Rudolph discussed the water main breaks and how busy January has been repairing the water main breaks. President Rudolph thanked the Public Works staff for all of their hard work. President Rudolph expresses concern that the projected breaks may continue at the pace they are currently failing. President Rudolph also mentioned that some of the breaks happened under already improved roads that had to be torn up to make the repairs. President Rudolph reminded residents to visit the Village website for more information about infrastructure.

Village Manager Baer

Manager Baer stated that the Village hosted a virtually open house providing information regarding the 2025 Referendum and that you can rewatch the open house on the Village website. Manager Baer indicated that there are two additional open houses planned. One to take place in-person at the Thoms Ford Memorial Library on February 11, 2025 from 6:00 p.m. – 8:00 p.m. along with a third in-person open house to take place in March with the location to be determined.

Manager Baer reported that the Village of Western Springs was awarded the Asset Management Award by the American Public Works Association Suburban Branch. Manager Baer congratulated staff, and the Board of Trustees for their guidance. Manager Baer then announced that the American Council of Engineering is also planning to award their Special Achievement Award for the Capital Infrastructure Plan to be bestowed on February 27, 2025.

Manager Baer remined residents that the holiday lights recycling program ends on January 31, 2025.

Village Attorney Jurusik

DRAFT

No report.

ADJOURNMENT

Trustee Tyrrell made a motion to adjourn, seconded by Trustee Nawrocki. Motion passed on a voice vote. Meeting was adjourned at 9:15 p.m.

Respectfully submitted,

Deputy Village Clerk

DRAFT

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 7.A.

To: Board of Trustees
From: Brian Scott, Director of Fire and EMS
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager, John Mastandona, Director of Finance
RE: Resolution Approving and Authorizing a Billing Services Agreement with EMS Management & Consultants (EMS/MC) (Omnibus Item)

Recommendation

The Finance Committee reviewed this item at their meeting on February 6, 2025 and recommended approval of the Billing Services Agreement between the Village and EMS Management & Consultants (EMS/MC).

Summary

The Village has been working with Andres Medical Billing, Ltd. for over 10 years to manage the entire process of submitting claims to insurance companies and collecting payments for ambulance services provided by the Department of Fire & EMS. In May 2024, Andres Medical Billing was incorporated into a larger company, EMS Management & Consultants, Inc. As a result, a new agreement must be established between the Village and the new company, EMS Management Consultants, Inc. No changes have been made to the fee structure from the old agreement to the new agreement. Village Attorney Anne Skrodzki has reviewed and approved the accompanying agreement and resolution.

Financial Impact

Account	5103100-55112
Fund	General Fund
2025 Budget	$16,500
Project Cost	As required

Recommended Motion

I move to approve the Billing Services Agreement between the Village and EMS Management & Consultants (EMS/MC).

Strategic Plan Alignment

None

File Attachments

1. Resolution No. 25-___ re Approval of Service Agreement with EMS Management & Consultants, Inc. and Business Associate Addendum to Comply with HIPAA R
2. Agreement between EMS_MC and the Village of Western Springs

DRAFT 2.4.2025
RESOLUTION NO. 25-????
VOTE: Passed by an omnibus vote.
AYE:
NAY:
ABSENT:
ABSTAIN:
DATE: February 24, 2025
OTHER: None.

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A BILLING SERVICES AGREEMENT AND BUSINESS ASSOCIATE ADDENDUM WITH EMS MANAGEMENT & CONSULTANTS, INC. OF WINSTON-SALEM, NORTH CAROLINA, FOR THE PROVISION OF EMERGENCY MEDICAL SERVICES BILLING AND COLLECTION SERVICES.

WHEREAS, the President and Board of Trustees of the Village of Western Springs (the "Village Board") and EMS Management & Consultants, Inc. ("EMS/MC" or the "Vendor") desire to enter into a service agreement entitled "Billing Services Agreement Between the Village of Western Springs and EMS Management & Consultants, Inc." for the performance of third party emergency medical services billing and collection services (the "Services") and its Attachment "A" entitled "Business Associate Addendum", copies of which are attached hereto as **Group Exhibit "A"** and made a part hereof (collectively the "Agreement"); and

WHEREAS, the Services provided under the Agreement include billing, bill processing and fee collection services related to emergency medical transportation services within and provided by the Village of Western Springs ("Village"); and

WHEREAS, in addition, the Agreement includes an Addendum, entitled the "Business Associate Addendum," that provides a detailed structure for the handling and protection of all protected medical information under the Health Insurance Portability and Accountability Act ("HIPAA"); and

WHEREAS, as provided for in the attached Agreement, the Vendor agrees to perform the Services in exchange for a percentage commission payment of 5.0% on all net collections, as defined by the Agreement, including all funds collected from insurance reimbursements and then, if any amounts remain, from direct collection from patients/service recipients; and

WHEREAS, at an open public meeting held on February 6, 2025, the Finance Committee (the "Committee") reviewed the services offered and terms of the attached Agreement and received input from the Village staff and provided an opportunity for public input on the matter, and then the Committee recommended that the Village Board review and approve the Agreement; and

WHEREAS, at open public meetings held on February 10, 2025 and February 24, 2025, the President and Board of Trustees of the Village reviewed and discussed the Services, the Agreement and the Committee's recommendation and received input from the Village staff and provided an opportunity for public input on the matter. At its February 10, 2025 meeting, the President and Board of Trustees of the Village of Western Springs accepted the Committee's recommendation to approve and enter into the Agreement; and

WHEREAS, pursuant to the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation), as well as the Illinois Intergovernmental Cooperation Act (5 ILCS 220/), of the Constitution of Illinois of 1970 and the applicable provisions of the Illinois Municipal Code (65 ILCS

5/8-1-7), the President and Board of Trustees of the Village of Western Springs are authorized to approve and enter into the attached Agreement, and find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the attached Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2. Approval and Execution of Agreement and Other Related Documents. The President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the Billing Agreement and its Attachment "A" entitled "Business Associate Addendum", substantially in the form attached hereto as **Group Exhibit "A"** for the performance of the Services by the Vendor, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and further authorizes and directs the President and Clerk, or their designees, to execute such other documents as are necessary to fulfill the Village's obligations under the Agreement.

SECTION 3. Approval of Related Expenses. Provided that the Vendor performs or provides additional Services in accordance with the terms and provisions of this Agreement, the Village agrees to pay the Vendor for such Services at the stated prices and pursuant to the payment schedule (if any) set forth in the attached Agreement or as outlined in a future proposal for additional Services that is mutually agreed to in writing by the Village and the Vendor.

SECTION 4. Delivery of Signed Documents. After approval and execution of this Resolution and the Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Agreement to the Vendor for record retention purposes.

SECTION 5. Effective Date. This Resolution shall be in full force and effect from and after its adoption and approval in the manner provided by law.

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 24th day of February, 2025, and approved by me as Village President on the same day, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Group Exhibit "A"

Billing Agreement
Between The Village Of Western Springs
and
EMS Management and Consultants, Inc. (EMS/MC)

and

Attachment "A" to the Service Agreement -
Business Associate Addendum

(attached)

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A BILLING SERVICES AGREEMENT AND BUSINESS ASSOCIATE ADDENDUM WITH EMS MANAGEMENT & CONSULTANTS, INC. OF WINSTON-SALEM, NORTH CAROLINA, FOR THE PROVISION OF EMERGENCY MEDICAL SERVICES BILLING AND COLLECTION SERVICES.

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 24th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 24th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ___ day of February, 2025.

_____
Edward Tymick, Village Clerk

SEAL

BILLING SERVICES AGREEMENT

THIS BILLING SERVICES AGREEMENT (hereinafter "Agreement"), is entered into this _____ day of _____ 2025, between EMS MANAGEMENT & CONSULTANTS, INC. (hereinafter "EMS|MC") and the VILLAGE OF WESTERN SPRINGS, (hereinafter "Client").

WITNESSETH:

WHEREAS, EMS|MC is an ambulance billing service company with experience in providing medical billing and collection services to medical transport providers, including fire and rescue and emergency medical service (EMS) providers; and

WHEREAS, Client, the Village of Western Springs, Illinois ("Village" or "Client"), is an Illinois Municipal Corporation normally engaged in the business of providing emergency medical services, and billable medical transportation services; and

WHEREAS, Client wishes to retain EMS|MC to provide medical billing, collection and related services as set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual agreements described below and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the parties agree as follows:

1. ENGAGEMENT.

a. During the term of this Agreement, EMS|MC shall provide routine billing, bill processing and fee collection services reasonably required and customary for service providers of similar size and situation to Client (the "Revenue Cycle Management Services" or "RCM Services"). The RCM Services shall include: (1) preparing and submitting initial and secondary claims and bills for Client to insurers and others responsible for payment; (2) performing reasonable and diligent routine collection efforts to secure payments from primary and secondary payers and patients or other entities, (as EMS|MC, in its sole discretion deems appropriate); (3) issuing up to three patient statements for all unpaid balances; and (4) referring accounts which have not been collected during EMS|MC normal billing cycle to an outside collection agency if so directed by Client.

b. Collectively, the RCM Services that EMS|MC provides to Client shall be referred to as the "Services".

2. EMS|MC Responsibilities.

a. EMS|MC will provide the RCM Services in material compliance with all applicable local, state and federal laws, ordinances and regulations.

b. EMS|MC will submit all "Completed Claims" to the applicable third-party payer. A "Completed Claim" is a claim for emergency medical services and billable medical transportation services that (i) is received by EMS|MC and supported by an ePCR record that contains all necessary and accurate information; (ii) has been reviewed and any identified issues sent to Client for remediation have been rectified; (iii) is for a patient encounter that has been electronically signed off by Client in the ePCR; (iv) has been reviewed by Client and deemed ready for billing; and (v) is not subject to a billing hold. EMS|MC will not have any responsibility for any adverse impact to Client that may result from any delay of Client in completing claims caused by the affirmative act or inaction of Client.

c. Accounts with outstanding balances after the insurance and/or third-party payer has determined benefits due will be billed by EMS|MC to the patient. EMS|MC will send up to three patient statements to the patient or responsible party, except as to those accounts on which an insurance carrier or third-party payer has accepted responsibility to pay. Once Client has submitted all necessary information, EMS|MC will bill all uninsured patients directly.

d. Within ten (10) business days of the last business day of the month, EMS|MC will provide to Client a month end report, which shall include an account analysis report, aging report and accounts receivables reconciliation report for the previous month. Deposit reports will be provided daily.

e. During the term of this Agreement, EMS|MC shall maintain, provide appropriate storage and data back-up for all billing records pertaining to the RCM Services provided by EMS|MC hereunder. Upon at least two (2) business days' prior written notice, EMS|MC shall make such records accessible to Client during EMS|MC business hours. EMS|MC acknowledges that Client is a unit of local government subject to the Illinois Freedom of Information Act (FOIA) (5 ILCS 140/ *et seq*.). EMS|MC will cooperate fully with Client to facilitate compliance with any FOIA request. Upon termination of this Agreement, trip data pertaining to the RCM Services shall be returned to Client. Notwithstanding anything to the contrary herein, Client acknowledges and agrees that EMS|MC is not a custodian of clinical records nor a clinical records repository. Client is responsible for maintaining all clinical records in accordance with Section 3(d).

f. EMS|MC shall notify Client of (i) all patient complaints about clinical services within five (5) business days of receipt; (ii) all patient complaints about billing within ten (10) business days of receipt; and (iii) all notices of audit, requests for medical records or other contacts or inquiries out of the normal course of business from representatives of Medicare, Medicaid or private payers with which Client contracts or any law enforcement or government agency ("Payer Inquiries") within ten (10) business days of receipt, unless such agency prohibits EMS|MC from disclosing its inquiry to Client.

g. EMS|MC will reasonably assist Client in responding to Payer Inquiries which occur in the normal course of Client's business and arise from EMS|MC's provision of the Services. If EMS|MC, in its sole discretion, determines that (i) Client is frivolously utilizing EMS|MC's assistance in responding to Payer Inquiries,; or (ii) a Payer Inquiry does not arise from the Services provided by EMS|MC, EMS|MC may charge Client, and Client shall pay, for any assistance provided by EMS|MC at EMS|MC's then current hourly rates.

h. EMS|MC is appointed as the agent of Client under this Agreement solely for the express purposes of this Agreement relating to billing and receiving payments and mail, receiving and storing documents, and communicating with hospitals and other entities to facilitate its duties. EMS|MC will have no authority to pledge credit, contract, or otherwise act on behalf of Client except as expressly set forth herein.

i. As to all payments received from Medicare, Medicaid and other government funded programs, the parties specifically acknowledge that EMS|MC will only prepare claims for Client and will not negotiate checks payable or divert electronic fund transfers to Client from Medicare, Medicaid or any other government funded program. All Medicare, Medicaid and any other government funded program payments, including all electronic fund transfers, will be deposited directly into a bank account designated by Client to receive such payments and as to such account only Client, through its officers and directors, shall have access.

j. The Services provided by EMS|MC to Client under this Agreement are conditioned on Client's fulfillment of the responsibilities set forth in this Agreement.

k. EMS|MC shall have no responsibility to provide any of the following services:

i. Determining the accuracy or truthfulness of documentation and information provided by Client;

ii. Providing services outside the EMS|MC billing system;

iii. Submitting any claim that EMS|MC believes to be inaccurate or fraudulent; or

iv. Providing any service not expressly required of EMS|MC by this Agreement.

l. For Client's service dates that occurred prior to the mutually agreed go live date for the Services, Client agrees and understands that EMS|MC is not responsible for any services including, but not limited to, submitting claims or managing any denials, refunds or patient calls. As between Client and EMS|MC, Client is fully responsible for the proper billing and accounting of any remaining balances related to service dates that occurred prior to such go live date.

3. RESPONSIBILITIES OF CLIENT. The following responsibilities of Client are a condition of EMS|MC's services under this Agreement, and EMS|MC shall have no obligation to provide the Services to the extent that Client has not fulfilled these responsibilities:

a. Client will pay all agreed amounts owed to EMS|MC under this Agreement. EMS|MC shall not condition Services or refuse to provide additional services based on an outstanding amount disputed by Client in good faith, as provided in Section 5(c) below.

b. Client will implement standard commercially reasonable actions and processes as may be requested by EMS|MC from time-to-time to allow EMS|MC to properly and efficiently provide the RCM Services. These actions and processes include, but are not limited to, the following:

i. Providing EMS|MC with complete and accurate demographic and charge information necessary for the processing of professional and/or technical component billing to third parties and/or patients including, without limitation, the following: patient identification (name, address, phone number, birth date, gender); guarantor identification and address; insurance information; report of services; special claim forms; pre-authorization numbers; and such additional information as is requested by EMS|MC;

ii. Providing EMS|MC with complete and accurate medical record documentation for each incident or patient service rendered for reimbursement, which is necessary to ensure proper billing and secure claim payment;

iii. Providing EMS|MC, in a timely manner, with Patient Care Reports (PCRs) that thoroughly detail the patient's full medical condition at the time of service and include a chronological narrative of all services and treatment rendered;

iv. Obtaining authorizations and signatures on all required forms, including consent to treat, assignment of benefits, release of information and claims;

v. Obtaining physician certification statements (PCS) forms for all non-emergency transports and other similar medical necessity forms or prior authorization statements as deemed necessary by the payer;

vi. Obtaining or executing all forms or documentation required by Medicare, Medicaid, CHAMPUS, and any other payer or insurance carriers to allow EMS|MC to carry out its billing and other duties under this Agreement; and

vii. Implementing reasonable and customary charges for complete, compliant billing.

c. Client represents and warrants that the PCR and any and all associated medical records, forms and certification statements provided to EMS|MC are true and accurate and contain only factual information observed and documented by the attending field technician during the course of the treatment and transport.

d. Client shall maintain Client's own files with all original or source documents, as required by law, and only provide to EMS|MC copies of such documents. Client acknowledges that EMS|MC is not the agent of Client for storage of source documentation.

e. Client will provide EMS|MC with a copy of any existing billing policy manuals or guidelines, Medicare or Medicaid reports, or any other record or document related to services or billing of Client's accounts.

f. Client will report to EMS|MC within ten (10) business days of payments received directly by Client, and promptly notify EMS|MC of any cases requiring special handling or billing. Client shall timely advise EMS|MC of any Payer Inquiries.

g. Client shall ensure that any refunds posted by EMS|MC are actually issued and paid to the patient, insurer, or other payer as appropriate.

h. Client agrees to provide EMS|MC with administrative access to the ePCR system or similar access in order to run reports and review documents and attachments to better service Client's account.

i. Client shall provide EMS|MC with access to its facilities and personnel for the purpose of providing on-site and/or online training to such personnel. Client shall cooperate with EMS|MC and facilitate any training that EMS|MC and the Village mutually agree are required trainings as set forth in subsection (j) below.

j. Client shall complete EMS|MC's online training course within 90 days of the contract start date and all new hires will complete EMS|MC's online documentation training within 90 days of hire date. Newly developed training materials by EMS|MC should be mutually agreed upon by the parties to be required training.

k. Client shall comply with all applicable federal, state, and local laws, rules, regulations, and other legal requirements that in any way affect this Agreement or the duties and responsibilities of the parties hereunder.

4. EMS|MC WEB PORTALS.

a. EMS|MC shall provide Client and those individuals appointed by Client ("Users") with access to EMS|MC Web Portals (the "Portals"), which shall be subject to the applicable Terms of Use found on the Portals. To be appointed as a User, the individual must be an employee of Client or otherwise approved by Client and EMS|MC. Client is responsible for all activity of Users and others accessing or using the Portals through or on behalf of Client including, but not limited to, ensuring that Users do not share credentials for accessing the Portals. Client is also responsible for (i) identifying individuals who Client determines should be Users; (ii) determining and notifying EMS|MC of each User's rights; (iii) monitoring Users' access to and use of the Portals; (iv) acting upon any suspected or unauthorized access of information through the Portals; (v) ensuring each User's compliance with this Agreement and the Terms of Use governing the use of the Portals; and (vi) notifying EMS|MC to deactivate a User account whenever a User's employment, contract or affiliation with Client is terminated or Client otherwise desires to suspend or curtail a User's access to and use of the Portals. Client agrees to follow best practices to ensure compliance with this provision.

b. Client acknowledges that EMS|MC may suspend or terminate any User's access to the Portals (i) for noncompliance with this Agreement or the applicable Terms of Use; (ii) if such User poses a threat to the security or integrity of the Portals or information available therein; (iii) upon termination of Client; or (iv) upon notice of

suspension or termination of such User by Client. Client may suspend or terminate a User's access to the Portals at any time.

5. COMPENSATION OF EMS|MC.

a. Client shall pay a fee for the Services of EMS|MC hereunder, on a monthly basis, in an amount equal to 5.0% percent of "Net Collections" as defined below (the "RCM Fee"). Net Collections shall mean all cash and check amounts including electronic fund transfers (EFTs) received by EMS|MC from payers, patients, attorney's offices, court settlements, collection agencies, government institutions, debt set-off programs, group health insurance plans, private payments, credit cards, healthcare facilities or any person or entity submitting funds on a patient's account, or any amounts paid directly to Client with or without the knowledge of EMS|MC that are paid, tendered, received or collected each month for Client's transports, less refunds processed or any other necessary adjustments to those amounts. Price adjustments for such services shall be allowed at the completion of each contract year. Price adjustments shall not exceed the change in the average of the Consumer Price Index (CPI) for all Urban Consumers, Not Seasonally Adjusted, Area: U.S. city average, Item: All item, Base Period: 1982-84=100 over the twelve months prior.

b. The RCM Fee is referred to as the "Compensation".

c. EMS|MC shall submit an invoice to Client by the tenth (10^{th}) day of each month for the Compensation due to EMS|MC for the previous calendar month. The Compensation amount reflected on the invoice shall be paid pursuant to the terms of the Illinois Local Government Prompt Payment Act, 50 ILCS 505/ *et seq.* Such amount shall be paid without offset unless the calculation of the amount is disputed in good faith, in which case Client shall pay the undisputed amount and shall provide EMS|MC with detailed written notice of the basis for the disputed portion within ten (10) days of said dispute. Any invoices not disputed in writing within ten (10) days shall be deemed "undisputed" for all purposes of the Agreement. All invoices are to be paid directly from Client's banking institution to EMS|MC via paper check, direct deposit or ACH draft initiated by EMS|MC into EMS|MC's bank account.

d. In the event of a material change to applicable law, the billing process and/or scope of Services provided in this Agreement or a material difference in any of the patient demographics provided by the Client and set forth in Exhibit A, EMS|MC reserves the right to negotiate a fee change with Client and amend this Agreement accordingly or terminate this Agreement.

e. EMS|MC may, in its sole discretion, immediately cease to provide Services for Client should the outstanding balance owed to EMS|MC become in arrears (except in cases of a documented dispute regarding outstanding sums owed). Claims processing will not resume until all outstanding balances are paid in full or arrangements approved by EMS|MC have been made to wholly resolve any outstanding balances.

6. TERM OF AGREEMENT.

a. This Agreement shall be effective commencing on January 1, 2025, and shall thereafter continue through December 31, 2025, ("Initial Term"). This Agreement shall be binding upon the parties hereto and their respective successors, assigns, and transferees. The Agreement shall automatically renew on the same terms and conditions as stated herein, for successive one (1) year terms (each a "Renewal Term"), unless either party gives written notice of intent not to renew at least 60 days before expiration of any term. Notwithstanding anything herein to the contrary, this Agreement may be terminated under the provisions provided below. (The Initial Term and any Renewal Terms are referred to as the "Term".)

b. **Termination for Cause**. Notwithstanding Section 6(a), either party may terminate this Agreement if the other party materially breaches this Agreement or its Addendum, unless (i) the breaching party cures the breach within 10 days following receipt of notice describing the breach in reasonable detail, or (ii) with respect to a breach which may not reasonably be cured within a 10-day period, the breaching party commences, is diligently pursuing cure of, and cures the breach as soon as practical following receipt of notice describing the breach in reasonable detail.

c. **Immediate Termination**. Either party may terminate this Agreement immediately as a result of the following:

i. Failure of Client to make timely payments due under this Agreement;

ii. Injury to any customer, independent contractor, employee or agent of the other party hereto arising from the gross negligence or willful misconduct of a party;

iii. Harassment of any employee or contractor of a party or commitment of any act by a party which creates an offensive work environment; or

iv. Commitment of any unethical or immoral act which harms the other party or could have the effect of harming the other party.

7. RESPONSIBILITIES UPON TERMINATION.

a. Subject to Client's payment of all amounts due hereunder, upon any termination of this Agreement, and during the period of any notice of termination, EMS|MC will make available to Client or its authorized representatives data from the billing system regarding open accounts in an electronic format, and will otherwise reasonably cooperate and assist in any transition of the Services to Client, or its successor billing agent. Upon request, EMS|MC will provide to Client trip data associated with the claims submitted by EMS|MC on behalf of Client pursuant to this Agreement. EMS|MC shall retain financial and billing records not tendered or returned to Client on termination hereof for at least ten (10) years following the date of service.

b. Following termination of this Agreement, for a period of ninety (90) days (the "Wind Down"), EMS|MC will continue its billing and collection efforts as to those accounts with dates of services prior to termination, subject to the terms and conditions of this Agreement including, but not limited to, Section 5. Client will continue to provide EMS|MC with copies of checks and payments on those accounts which were filed by EMS|MC under this Agreement. EMS|MC shall have no further responsibilities as to such accounts after the Wind Down; however, EMS|MC shall be entitled to compensation as provided in Section 5(a) for such amounts filed by EMS|MC, regardless of whether such amounts are collected by Client during or after the Wind Down period. During the Wind Down and for up to twelve months following termination of this Agreement, EMS|MC shall continue to make the Portals available to Client, subject the applicable Terms of Use. Notwithstanding the foregoing, in the event EMS|MC terminated this Agreement pursuant to Sections 6(b) or 6(c), EMS|MC shall have no obligation to provide any Services after the date of termination.

8. EXCLUSIVITY AND MISCELLANEOUS BILLING POLICIES.

a. During the term of this Agreement, EMS|MC shall be Client's exclusive provider of the RCM Services. Client may not directly file, submit or invoice for any medical or medical transportation services rendered while this Agreement is in effect.

b. In addition, Client agrees not to collect or accept payment for services from any patient unless the service requested does not meet coverage requirements under any insurance program in which the patient is enrolled or the patient is uninsured. Payments received directly by Client for these services must be reported to EMS|MC as provided in Section 3(f) hereof and shall be treated as Net Collections for purposes of Section 5(a) hereof.

c. In compliance with CMS regulations, Medicare patients will not be charged by Client a higher rate or amount for identical covered services charged to other insurers

or patients. Accordingly, only one fee schedule shall exist and be used in determining charges for all patients regardless of insurance coverage.

d. EMS|MC reserves the right not to submit a claim for reimbursement on any patient in which the PCR and/or associated medical records are incomplete or appear to be inaccurate or do not contain enough information to substantiate or justify reimbursement. This includes missing patient demographic information, insurance information, Physician Certification Statements (PCS) or any required crew and/or patient signatures, or otherwise contradictory medical information.

e. Client shall implement and maintain a working compliance plan ("Compliance Plan") in accordance with the most current guidelines of the U.S. Department of Health and Human Services ("HHS"). The Compliance Plan must include, but not be limited to, formal written policies and procedures and standards of conduct, designation of a compliance officer, quality assurance policy and effective training and education programs.

f. In accordance with the HHS Office of Inspector General ("OIG") Compliance Program Guidance for Third-Party Medical Billing Companies, EMS|MC is obligated to report misconduct to the government, if EMS|MC discovers credible evidence of Client's continued misconduct or flagrant, fraudulent or abusive conduct. In the event of such evidence, EMS|MC has the right to (a) refrain from submitting any false or inappropriate claims, (b) terminate this Agreement and/or (c) report the misconduct to the appropriate authorities.

9. NON-INTERFERENCE/NON-SOLICITATION OF EMS|MC EMPLOYEES. Client understands and agrees that the relationship between EMS|MC and each of its employees constitutes a valuable asset of EMS|MC. Accordingly, Client agrees that both during the term of this Agreement and for a period beginning on the date of termination of this Agreement, whatever the reason, and ending one (1) year after the date of termination of this Agreement (the "Restricted Period"), Client shall not, without EMS|MC's prior written consent, directly or indirectly, solicit or recruit for employment; attempt to solicit or recruit for employment; or attempt to hire or accept as an employee, consultant, contractor, or otherwise, or accept any work from EMS|MC's employees with whom Client had material contact during the term of this Agreement, in any position where Client would receive from such employees the same or similar services that EMS|MC performed for Client during the term of this Agreement. Client also agrees during the Restricted Period not to unlawfully urge, encourage, induce, or attempt to urge, encourage, or induce any employee of EMS|MC to terminate his or her employment with

EMS|MC. Client has carefully read and considered the provisions of Section 9 hereof, and having done so, agrees that the restrictions set forth in such section (including, but not limited to, the time period) are fair and reasonable and are reasonably required for the protection of the legitimate interests of EMS|MC, its officers, directors, shareholders, and employees.

10. PRIVACY.

a. *Confidentiality*. The Parties acknowledge that they will each provide to the other Confidential Information as part of carrying out the terms of this Agreement. EMS|MC and Client will be both a Receiving Party and a Disclosing Party at different times. The Receiving Party agrees that it will not (i) use any such Confidential Information in any way, except for the exercise of its rights and performance of its obligations under this Agreement, or (ii) disclose any such Confidential Information to any third party, other than furnishing such Confidential Information to its employees, consultants, and subcontractors, who are subject to the safeguards and confidentiality obligations contained in this Agreement and who require access to the Confidential Information in the performance of the obligations under this Agreement. In the event that the Receiving Party is required by applicable law to make any disclosure of any of the Disclosing Party's Confidential Information, by subpoena, judicial or administrative order or otherwise, the Receiving Party will first give written notice of such requirement to the Disclosing Party, and will permit the Disclosing Party to intervene in any relevant proceedings to protect its interests in the Confidential Information, and provide full cooperation and assistance to the Disclosing Party in seeking to obtain such protection, at the Disclosing Party's sole expense. "Confidential Information" means any information designated as confidential before its disclosure by either Party (the "Disclosing Party") to the other Party (the "Receiving Party"), or information that is considered confidential by operation of law or regulation. Information will not be deemed Confidential Information hereunder if the Receiving Party can prove by documentary evidence that such information: (a) was known to the Receiving Party prior to receipt from the Disclosing Party directly or indirectly from a source other than one having an obligation of confidentiality to the Disclosing Party; (b) becomes known (independently of disclosure by the Disclosing Party) to the Receiving Party directly or indirectly from a source other than one having an obligation of confidentiality to the Disclosing Party; (c) becomes publicly known or otherwise ceases to be secret or confidential, except through a breach of this Agreement by the Receiving Party; or (d) is independently developed by the Receiving Party without the use of any Confidential Information of the Disclosing Party.

b. *HIPAA Compliance*. The parties agree to comply with the Business Associate Addendum, attached hereto and incorporated by reference herein as Attachment 1, documenting the assurances and other requirements respecting the use and disclosure of Protected Health Information. It is Client's responsibility to ensure that it obtains all appropriate and necessary authorizations and consents to use or disclose any individually identifiable health information in compliance with all federal and state privacy laws, rules and regulations, including but not limited to the Health Insurance Portability and Accountability Act. In the event that this Agreement is, or activities permitted or required by this Agreement are, inconsistent with or do not satisfy the requirements of any applicable privacy or security law, rule or regulation, the parties shall take any reasonably necessary action to remedy such inconsistency.

11. DISCLAIMERS, LIMITATIONS OF LIABILITY AND DISPUTE RESOLUTION

a. Each Party acknowledges that the liability limitations and warranty disclaimers in the Agreement are independent of any remedies hereunder and shall apply regardless of whether any remedy fails of its essential purpose. Client acknowledges that the limitations of liability set forth in this Agreement are integral to the amount of consideration offered and charged in connection with the Services and that, were EMS|MC to assume any further liability other than as provided in the Agreement, such consideration would of necessity be set substantially higher.

b. EMS|MC and Client acknowledge and agree that despite their best efforts, billing errors may occur from time to time. Each party will promptly notify the other party of the discovery of a billing error. EMS|MC's sole obligation in the event of a billing error will be to correct the error by making appropriate changes to the information in its system, posting a refund if appropriate, and re-billing the underlying claim if permissible.

c. Except for any express warranty provided herein or in the applicable exhibit, the services are provided on an "as is," "as available" basis. Client agrees that use of the services is at client's sole risk; and, to the maximum extent permitted by law, EMS|MC expressly disclaims any and all other express or implied warranties with respect to the services including, but not limited to, warranties of merchantability, fitness for a particular purpose, title, non-infringement or warranties alleged to arise as a result of custom and usage.

d. A "Claim" is defined as any claim or other matter in dispute between EMS|MC and Client that arises from or relates in any way to this Agreement or to the Services, or data provided by EMS|MC hereunder, regardless of whether such claim or

matter is denominated as a contract claim, tort claim, warranty claim, indemnity claim, statutory claim, arbitration demand, or otherwise.

e. Reserved.

f. To the fullest extent allowed by law, EMS|MC and Client waive claims against each other for consequential, indirect, incidental, special, punitive, exemplary, and treble damages, and for any other damages in excess of direct, compensatory damages including, but not limited to, loss of profits, loss of data, or loss of business, regardless of whether such claim or matter is denominated as a contract claim, tort claim, warranty claim, indemnity claim, statutory claim, arbitration demand, or otherwise, even if a party has been apprised of the possibility or likelihood of such damages occurring (the "Non-Direct Damages Waiver").

g. All Claims between EMS|MC and Client shall be resolved by a Court of competent jurisdiction. For the purposes of this Agreement, venue shall be proper in Cook County, Illinois or the Northern District of Illinois.

h. In any proceeding regarding any Claim, the prevailing party shall be entitled to recover from the non-prevailing party the reasonable costs and expenses incurred by the prevailing party in connection with such proceeding, including, without limitation, the reasonable attorneys' fees, court filing fees, arbitrator compensation, expert witness charges, court reporter charges, and document reproduction charges incurred by the prevailing party. Which party is the prevailing party shall be determined in light of the surrounding circumstances, such as comparing the relief requested with that awarded, and shall not be determined simply by whether one party or the other receives a net monetary recovery in its favor.

12. GENERAL.

a. Status of Parties. Nothing contained in this Agreement shall be construed as establishing a partnership or joint venture relationship between EMS|MC and Client, or as establishing an agency relationship beyond EMS|MC's service as a billing and collection agent of Client under the express terms of this Agreement. EMS|MC and its employees and representatives shall have no legal authority to bind Client.

b. Assignment. Neither this Agreement nor any rights or obligations hereunder shall be assigned by either party without prior written consent of the other party, except that this Agreement may be assigned without consent to the survivor in any merger or other business combination including either party, or to the purchaser of all or substantially all of the assets of either party.

c. Binding Effect. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors, assigns (where permitted), and transferees.

d. Notices. All notices required or permitted by this Agreement shall be in writing and shall be deemed to have been given: (i) on the day received, if personally delivered; (ii) on the day received if sent by a recognized overnight delivery service, according to the courier's record of delivery; and (iii) on the 5th (fifth) calendar day after the date mailed by certified or registered mail. Such notices shall be addressed as follows:

Client:

Village of Western Springs
d/b/a: Western Springs Fire Department
740 Hillgrove Avenue
Western Springs, IL 60558

EMS|MC:

EMS Management & Consultants, Inc.
Chief Executive Officer
2540 Empire Drive
Suite 100
Winston-Salem, NC 27103

Either party may change its address for notices under this Agreement by giving written notice of such change to the other party in accordance with the terms of this section.

e. Governing Law. This Agreement and the rights and obligations of the parties hereunder shall be construed in accordance with and governed by the laws of the State of Illinois, notwithstanding any conflicts of law rules to the contrary.

f. Integration of Terms. This instrument together with all attachments, exhibits and schedules constitutes the entire agreement between the parties, and supersedes all prior negotiations, commitments, representations and undertakings of the parties with respect to its subject matter. Without limiting the foregoing, this Agreement supersedes and takes precedence over any inconsistent terms contained in any Request for Proposal ("RFP") from Client and any response to that RFP from EMS|MC.

g. Amendment and Waiver. This Agreement may be amended or modified only by an instrument signed by all of the parties. A waiver of any provision of this Agreement must be in writing, designated as such, and signed by the party against whom enforcement of the waiver is sought. The waiver of a breach of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent or other breach thereof.

h. Severability. If any provision of this Agreement shall not be valid for any reason, such provision shall be entirely severable from, and shall have no effect upon, the remainder of this Agreement. Any such invalid provision shall be subject to partial enforcement to the extent necessary to protect the interest of the parties hereto.

i. Force Majeure. With the exception of Client's payment obligation, a Party will not be in breach or liable for any delay of its performance of this Agreement caused by natural disasters or other unexpected or unusual circumstances reasonably beyond its control.

j. Third Party Beneficiaries. There are no third-party beneficiaries to this Agreement.

k. Counterparts. This Agreement may be executed in multiple counterparts by a duly authorized representative of each party.

l. Survival. All terms which by their nature survive termination shall survive termination or expiration of the Agreement including, but not limited to, Sections 3(c), 3(f) – (h), 5(a), 5(c), 7, 9 – 12.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be duly executed on the later of the dates set forth below.

Each person whose signature appears hereon represents, warrants and guarantees that he/she has been duly authorized and has full authority to execute this Agreement on behalf of the party on whose behalf this Agreement is executed.

EMS|MC:	CLIENT:
EMS Management & Consultants, Inc.	Village of Western Springs
By: _____	By: _____
Print Name: _____	Print Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

Attachment 1
Business Associate Addendum

This Business Associate Addendum (the "Addendum") is made effective the ____ day of _____ 20__, by and between the Village of Western Springs, hereinafter referred to as "Covered Entity," and EMS Management & Consultants, Inc., hereinafter referred to as "Business Associate" (individually, a "Party" and collectively, the "Parties").

WITNESSETH:

WHEREAS, the Parties wish to enter into a Business Associate Addendum to ensure compliance with the Privacy and Security Rules of the Health Insurance Portability and Accountability Act of 1996 ("HIPAA Privacy and Security Rules") (45 C.F.R. Parts 160 and 164); and

WHEREAS, the Health Information Technology for Economic and Clinical Health ("HITECH") Act of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, modified the HIPAA Privacy and Security Rules (hereinafter, all references to the "HIPAA Privacy and Security Rules" include all amendments thereto set forth in the HITECH Act and any accompanying regulations); and

WHEREAS, the Parties have entered into a Billing Services Agreement (the "Agreement") whereby Business Associate will provide certain services to Covered Entity and, pursuant to such Agreement, Business Associate may be considered a "business associate" of Covered Entity as defined in the HIPAA Privacy and Security Rules; and

WHEREAS, Business Associate may have access to Protected Health Information or Electronic Protected Health Information (as defined below) in fulfilling its responsibilities under the Agreement; and

WHEREAS, Covered Entity wishes to comply with the HIPAA Privacy and Security Rules, and Business Associate wishes to honor its obligations as a Business Associate to Covered Entity.

THEREFORE, in consideration of the Parties' continuing obligations under the Agreement, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to the provisions of this Addendum.

I. DEFINITIONS

Except as otherwise defined herein, any and all capitalized terms in this Addendum shall have the definitions set forth in the HIPAA Privacy and Security Rules. In the event of an inconsistency between the provisions of this Addendum and mandatory provisions of the HIPAA Privacy and Security Rules, as amended, the HIPAA Privacy and Security Rules in effect at the time shall control. Where provisions of this Addendum are different than those mandated by the HIPAA Privacy and Security Rules, but are nonetheless permitted by the HIPAA Privacy and Security Rules, the provisions of this Addendum shall control.

The term "Breach" means the unauthorized acquisition, access, use, or disclosure of protected health information which compromises the security or privacy of such information, except where an unauthorized person to whom such information is disclosed would not reasonably have been able to retain such information. The term "Breach" does **not** include: (1) any unintentional acquisition, access, or use of

protected health information by any employee or individual acting under the authority of a covered entity or business associate if (a) such acquisition, access, or use was made in good faith and within the course and scope of the employment or other professional relationship of such employee or individual, respectively, with the covered entity or business associate, and (b) such information is not further acquired, accessed, used, or disclosed by any person; or (2) any inadvertent disclosure from an individual who is otherwise authorized to access protected health information at a facility operated by a covered entity or business associate to another similarly situated individual at same facility; and (3) any such information received as a result of such disclosure is not further acquired, accessed, used, or disclosed without authorization by any person.

The term "Electronic Health Record" means an electronic record of health-related information on an individual that is created, gathered, managed, and consulted by authorized health care clinicians and staff.

The term "HIPAA Privacy and Security Rules" refers to 45 C.F.R. Parts 160 and 164 as currently in effect or hereafter amended.

The term "Protected Health Information" means individually identifiable health information as defined in 45 C.F.R § 160.103, limited to the information Business Associate receives from, or creates, maintains, transmits, or receives on behalf of, Covered Entity.

The term "Electronic Protected Health Information" means Protected Health Information which is transmitted by or maintained in Electronic Media (as now or hereafter defined in the HIPAA Privacy and Security Rules).

The term "Secretary" means the Secretary of the Department of Health and Human Services.

The term "Unsecured Protected Health Information" means Protected Health Information that is not rendered unusable, unreadable, or indecipherable to unauthorized individuals through the use of a technology or methodology specified by the Secretary in guidance published in the Federal Register at 74 Fed. Reg. 19006 on April 27, 2009 and in annual guidance published thereafter.

II. PERMITTED USES AND DISCLOSURES BY BUSINESS ASSOCIATE

a. Business Associate may use or disclose Protected Health Information to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in the Agreement or this Addendum, provided that such use or disclosure would not violate the HIPAA Privacy and Security Rules if done by Covered Entity. Until such time as the Secretary issues regulations pursuant to the HITECH Act specifying what constitutes "minimum necessary" for purposes of the HIPAA Privacy and Security Rules, Business Associate shall, to the extent practicable, disclose only Protected Health Information that is contained in a limited data set (as defined in Section 164.514(e)(2) of the HIPAA Privacy and Security Rules), unless the person or entity to whom Business Associate is making the disclosure requires certain direct identifiers in order to accomplish the intended purpose of the disclosure, in which event Business Associate may disclose only the minimum necessary amount of Protected Health Information to accomplish the intended purpose of the disclosure.

b. Business Associate may use Protected Health Information in its possession for its proper management and administration and to fulfill any present or future legal responsibilities of Business Associate, provided that such uses are permitted under state and federal confidentiality laws.

c. Business Associate may disclose Protected Health Information in its possession to third parties for the purposes of its proper management and administration or to fulfill any present or future legal responsibilities of Business Associate, provided that:

1. the disclosures are required by law; or

2. Business Associate obtains reasonable assurances from the third parties to whom the Protected Health Information is disclosed that the information will remain confidential and be used or further disclosed only as required by law or for the purpose for which it was disclosed to the third party, and that such third parties will notify Business Associate of any instances of which they are aware in which the confidentiality of the information has been breached.

d. Until such time as the Secretary issues regulations pursuant to the HITECH Act specifying what constitutes "minimum necessary" for purposes of the HIPAA Privacy and Security Rules, Business Associate shall, to the extent practicable, access, use, and request only Protected Health Information that is contained in a limited data set (as defined in Section 164.514(e)(2) of the HIPAA Privacy and Security Rules), unless Business Associate requires certain direct identifiers in order to accomplish the intended purpose of the access, use, or request, in which event Business Associate may access, use, or request only the minimum necessary amount of Protected Health Information to accomplish the intended purpose of the access, use, or request. Covered Entity shall determine what quantum of information constitutes the "minimum necessary" amount for Business Associate to accomplish its intended purposes.

e. Business Associate may use Protected Health Information to de-identify such information in accordance with 45 C.F.R. § 164.514(b) for Business Associate's own business purposes or in connection with the services provided pursuant to the Agreement or to provide Data Aggregation services to Customer as permitted by 45 C.F.R. 164.504(e)(2)(i)(b). Once the Protected Health Information has been de-identified or aggregated, it is no longer considered Protected Health Information governed by this Addendum.

III. OBLIGATIONS AND ACTIVITIES OF BUSINESS ASSOCIATE

a. Business Associate acknowledges and agrees that all Protected Health Information that is created or received by Covered Entity and disclosed or made available in any form, including paper record, oral communication, audio recording, and electronic display by Covered Entity or its operating units to Business Associate or is created or received by Business Associate on Covered Entity's behalf shall be subject to this Addendum.

b. Business Associate agrees to not use or further disclose Protected Health Information other than as permitted or required by the Agreement, this Addendum or as required by law.

c. Business Associate agrees to use appropriate safeguards to prevent use or disclosure of Protected Health Information other than as provided for by this Addendum. Specifically, Business Associate will:

1. implement the administrative, physical, and technical safeguards set forth in Sections 164.308, 164.310, and 164.312 of the HIPAA Privacy and Security Rules that reasonably and appropriately protect the confidentiality, integrity, and availability of any Protected Health Information that it creates, receives, maintains, or transmits on behalf of Covered Entity, and, in accordance with Section 164.316 of the HIPAA Privacy and Security Rules, implement and maintain reasonable and appropriate policies and procedures to enable it to comply with the requirements outlined in Sections 164.308, 164.310, and 164.312; and

2. report to Covered Entity any use or disclosure of Protected Health Information not provided for by this Addendum of which Business Associate becomes aware. Business Associate shall report to Covered Entity any Security Incident of which it becomes aware. Notice is deemed to have been given for unsuccessful Security Incidents, such as (i) "pings" on an information system firewall; (ii) port scans; (iii) attempts to log on to an information system or enter a database with an invalid password or user name; (iv) denial-of-service attacks that do not result in a server being taken offline; or (v) malware (*e.g.*, a worms or a virus) that does not result in unauthorized access, use, disclosure, modification or destruction of Protected Health Information.

d. Business Associate agrees to ensure that any agent, including a subcontractor, to whom it provides Protected Health Information received from, or created or received by Business Associate on behalf of Covered Entity, agrees to the same restrictions and conditions that apply through this Addendum to Business Associate with respect to such information.

e. Business Associate agrees to comply with any requests for restrictions on certain disclosures of Protected Health Information to which Covered Entity has agreed in accordance with Section 164.522 of the HIPAA Privacy and Security Rules and of which Business Associate has been notified by Covered Entity. In addition, and notwithstanding the provisions of Section 164.522 (a)(1)(ii), Business Associate agrees to comply with an individual's request to restrict disclosure of Protected Health Information to a health plan for purposes of carrying out payment or health care operations if the Protected Health Information pertains solely to a health care item or service for which Covered Entity has been paid by in full by the individual or the individual's representative.

f. At the request of the Covered Entity and in a reasonable time and manner, not to extend ten (10) business days, Business Associate agrees to make available Protected Health Information required for Covered Entity to respond to an individual's request for access to his or her Protected Health Information in accordance with Section 164.524 of the HIPAA Privacy and Security Rules. If Business Associate maintains Protected Health Information electronically, it agrees to make such Protected Health Information available electronically to the applicable individual or to a person or entity specifically designated by such individual, upon such individual's request.

g. At the request of Covered Entity and in a reasonable time and manner, Business Associate agrees to make available Protected Health Information required for amendment by Covered Entity in accordance with the requirements of Section 164.526 of the HIPAA Privacy and Security Rules.

h. Business Associate agrees to document any disclosures of and make Protected Health Information available for purposes of accounting of disclosures, as required by Section 164.528 of the HIPAA Privacy and Security Rules.

i. Business Associate agrees that it will make its internal practices, books, and records relating to the use and disclosure of Protected Health Information received from, or created or received by Business Associate on behalf of, Covered Entity, available to the Secretary for the purpose of determining Covered Entity's compliance with the HIPAA Privacy and Security Rules, in a time and manner designated by the Secretary, subject to attorney-client and other applicable privileges.

j. Business Associate agrees that, while present at any Covered Entity facility and/or when accessing Covered Entity's computer network(s), it and all of its employees, agents, representatives and subcontractors will at all times comply with any network access and other security practices, procedures

and/or policies established by Covered Entity including, without limitation, those established pursuant to the HIPAA Privacy and Security Rules.

k. Business Associate agrees that it will not directly or indirectly receive remuneration in exchange for any Protected Health Information of an individual without the written authorization of the individual or the individual's representative, except where the purpose of the exchange is:

1. for public health activities as described in Section 164.512(b) of the Privacy and Security Rules;

2. for research as described in Sections 164.501 and 164.512(i) of the Privacy and Security Rules, and the price charged reflects the costs of preparation and transmittal of the data for such purpose;

3. for treatment of the individual, subject to any further regulation promulgated by the Secretary to prevent inappropriate access, use, or disclosure of Protected Health Information;

4. for the sale, transfer, merger, or consolidation of all or part of Business Associate and due diligence related to that activity;

5. for an activity that Business Associate undertakes on behalf of and at the specific request of Covered Entity;

6. to provide an individual with a copy of the individual's Protected Health Information pursuant to Section 164.524 of the Privacy and Security Rules; or

7. other exchanges that the Secretary determines in regulations to be similarly necessary and appropriate as those described in this Section III.k.

l. Business Associate agrees that it will not directly or indirectly receive remuneration for any written communication that encourages an individual to purchase or use a product or service without first obtaining the written authorization of the individual or the individual's representative, unless:

1. such payment is for a communication regarding a drug or biologic currently prescribed for the individual and is reasonable in amount (as defined by the Secretary); or

2. the communication is made on behalf of Covered Entity and is consistent with the terms of this Addendum.

m. Business Associate agrees that if it uses or discloses patients' Protected Health Information for marketing purposes, it will obtain such patients' authorization before making any such use or disclosure.

n. Business Associate agrees to implement a reasonable system for discovery of breaches and method of risk analysis of breaches to meet the requirements of HIPAA, The HITECH Act, and the HIPAA Regulations, and shall be solely responsible for the methodology, policies, and procedures implemented by Business Associate.

o. State Privacy Laws. Business Associate shall understand and comply with state privacy laws to the extent that state privacy laws are not preempted by HIPAA or The HITECH Act.

IV. BUSINESS ASSOCIATE'S MITIGATION AND BREACH NOTIFICATION OBLIGATIONS

a. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of Protected Health Information by Business Associate in violation of the requirements of this Addendum.

b. Following the discovery of a Breach of Unsecured Protected Health Information, Business Associate shall notify Covered Entity of such Breach without unreasonable delay and in no case later than forty-five (45) calendar days after discovery of the Breach. A Breach shall be treated as discovered by Business Associate as of the first day on which such Breach is known to Business Associate or, through the exercise of reasonable diligence, would have been known to Business Associate.

c. Notwithstanding the provisions of Section IV.b., above, if a law enforcement official states to Business Associate that notification of a Breach would impede a criminal investigation or cause damage to national security, then:

1. if the statement is in writing and specifies the time for which a delay is required, Business Associate shall delay such notification for the time period specified by the official; or

2. if the statement is made orally, Business Associate shall document the statement, including the identity of the official making it, and delay such notification for no longer than thirty (30) days from the date of the oral statement unless the official submits a written statement during that time.

Following the period of time specified by the official, Business Associate shall promptly deliver a copy of the official's statement to Covered Entity.

d. The Breach notification provided shall include, to the extent possible:

1. the identification of each individual whose Unsecured Protected Health Information has been, or is reasonably believed by Business Associate to have been, accessed, acquired, used, or disclosed during the Breach;

2. a brief description of what happened, including the date of the Breach and the date of discovery of the Breach, if known;

3. a description of the types of Unsecured Protected Health Information that were involved in the Breach, if known (such as whether full name, social security number, date of birth, home address, account number, diagnosis, disability code, or other types of information were involved);

4. any steps individuals should take to protect themselves from potential harm resulting from the Breach; and

5. a brief description of what Business Associate is doing to investigate the Breach, to mitigate harm to individuals, and to protect against any further Breaches.

e. Business Associate shall provide the information specified in Section IV.d., above, to Covered Entity at the time of the Breach notification if possible or promptly thereafter as information becomes available. Business Associate shall not delay notification to Covered Entity that a Breach has occurred in order to collect the information described in Section IV.d. and shall provide such information to Covered

Entity even if the information becomes available after the forty-five (45)-day period provided for initial Breach notification.

V. OBLIGATIONS OF COVERED ENTITY

a. Upon request of Business Associate, Covered Entity shall provide Business Associate with the notice of privacy practices that Covered Entity produces in accordance with Section 164.520 of the HIPAA Privacy and Security Rules.

b. Covered Entity shall provide Business Associate with any changes in, or revocation of, permission by an individual to use or disclose Protected Health Information, if such changes affect Business Associate's permitted or required uses and disclosures.

c. Covered Entity shall notify Business Associate of any restriction to the use or disclosure of Protected Health Information to which Covered Entity has agreed in accordance with Section 164.522 of the HIPAA Privacy and Security Rules, and Covered Entity shall inform Business Associate of the termination of any such restriction, and the effect that such termination shall have, if any, upon Business Associate's use and disclosure of such Protected Health Information.

VI. TERM AND TERMINATION

a. Term. The Term of this Addendum shall be effective as of the date first written above, and shall terminate upon the later of the following events: (i) in accordance with Section VII.c., when all of the Protected Health Information provided by Covered Entity to Business Associate or created or received by Business Associate on behalf of Covered Entity is destroyed or returned to Covered Entity or, if such return or destruction is infeasible, when protections are extended to such information; or (ii) upon the expiration or termination of the Agreement.

b. Termination for Cause. Upon Covered Entity's knowledge of a material breach of this Addendum by Business Associate and Business Associate's failure to cure such breach within 10 days following receipt of notice describing the breach in reasonable detail, or (ii) with respect to a breach which may not reasonably be cured within a 10-day period, the breaching party commences, is diligently pursuing cure of, and cures the breach as soon as practical following receipt of notice describing the breach in reasonable detail, Covered Entity shall have the right to terminate this Addendum.

c. Effect of Termination.

1. Except as provided in paragraph 2. of this subsection, upon termination of this Addendum, the Agreement or upon request of Covered Entity, whichever occurs first, Business Associate shall return or destroy all Protected Health Information received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Neither Business Associate nor its subcontractors or agents shall retain copies of the Protected Health Information.

2. In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible and shall extend the protections of this Addendum to such Protected Health Information and limit further uses and disclosures of such Protected Health Information to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such Protected Health Information.

VII. MISCELLANEOUS

a. **No Rights in Third Parties**. Except as expressly stated herein, the Parties to this Addendum do not intend to create any rights in any third parties.

b. **Survival**. The obligations of Business Associate under Section VII(c) of this Addendum shall survive the expiration, termination, or cancellation of this Addendum, the Agreement, and/or the business relationship of the parties, and shall continue to bind Business Associate, its agents, employees, contractors, successors, and assigns as set forth herein.

c. **Amendment**. This Addendum may be amended or modified only in a writing signed by the Parties. The Parties agree that they will negotiate amendments to this Addendum to conform to any changes in the HIPAA Privacy and Security Rules as are necessary for Covered Entity to comply with the current requirements of the HIPAA Privacy and Security Rules. In addition, in the event that either Party believes in good faith that any provision of this Addendum fails to comply with the then-current requirements of the HIPAA Privacy and Security Rules or any other applicable legislation, then such Party shall notify the other Party of its belief in writing. For a period of up to thirty (30) days, the Parties shall address in good faith such concern and amend the terms of this Addendum, if necessary to bring it into compliance. If, after such thirty (30)-day period, the Addendum fails to comply with the HIPAA Privacy and Security Rules or any other applicable legislation, then either Party has the right to terminate this Addendum and the Agreement upon written notice to the other party.

d. **Independent Contractor**. None of the provisions of this Addendum are intended to create, nor will they be deemed to create, any relationship between the Parties other than that of independent parties contracting with each other solely for the purposes of effecting the provisions of this Addendum and any other agreements between the Parties evidencing their business relationship.

e. **Interpretation**. Any ambiguity in this Addendum shall be resolved in favor of a meaning that permits Covered Entity to comply with the HIPAA Privacy and Security Rules.

f. **Certain Provisions Not Effective in Certain Circumstances**. The provisions of this Addendum relating to the HIPAA Security Rule shall not apply to Business Associate if Business Associate does not receive any Electronic Protected Health Information from or on behalf of Covered Entity.

g. **Ownership of Information**. Covered Entity holds all right, title, and interest in and to the PHI and Business Associate does not hold and will not acquire by virtue of this Addendum or by virtue of providing goods or services to Covered Entity, any right, title, or interest in or to the PHI or any portion thereof.

h. **Entire Agreement**. This Addendum is incorporated into, modifies and amends the Agreement, inclusive of all other prior amendments or modifications to such Agreement. The terms and provisions of this Addendum shall control to the extent they are contrary, contradictory or inconsistent with the terms of the Agreement. Otherwise, the terms and provisions of the Agreement shall remain in full force and effect and apply to this Addendum.

IN WITNESS WHEREOF, the Parties have executed this Addendum as of the day and year written above.

Each person whose signature appears hereon represents, warrants and guarantees that he/she has been duly authorized and has full authority to execute this Agreement on behalf of the party on whose behalf this Agreement is executed.

Business Associate:	**Covered Entity:**
EMS Management & Consultants, Inc.	**Village of Western Springs**
By: _____	By: _____
Print: _____	Print: _____
Title: _____	Title: _____
Date: _____	Date: _____

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 7.B.

To: Board of Trustees
From: Aleks Briedis, Director of Recreation
CC: Ellen Baer, Village Manager, John Mastandona, Director of Finance
RE: Budget Amendment: HVAC & Grand Ave Gym Improvement (Omnibus Item)

Recommendation

The Finance Committee reviewed this item at their meeting on February 6, 2025 and recommended the approval of budget amendments for replacement of the HVAC rooftop units at the Recreation Center gymnasium and Grand Ave Gym improvements.

Summary

Attached for review are the following budget amendments for the Recreation Department:

.

6603210-60015 Building and Building Improvements ($44,705.47)
The replacement of the HVAC rooftop units at the Recreation Center gymnasium project was estimated to be completed prior to December 31, 2024, however the project was unable to be completed by year-end. The project will be completed in February 2025. The total amount of the project is $67,058.20 and was entirely budgeted in FY 2024. $22,352.73 worth of the project was completed and paid out in FY 2024, leaving $44,705.47 in the fund balance. Staff is requesting a budget amendment of $44,705.47 in the FY 2025 Recreation Fund.

6605210-60015 Building and Building Improvements ($84,159.14)
The Grand Avenue Gym Improvement project was estimated to be completed prior to December 31, 2024; however, the project has been delayed due to a backorder of the basketball backboard fixtures. The project is now estimated to be completed by April 2025. The total amount of the project is $179,594 and was entirely budgeted in FY 2024. $95,434.86 worth of the project was completed and paid out in FY 2024, leaving $84,159.14 in the fund balance. Staff is requesting a budget amendment of $84,159.14 in the FY 2025 Recreation Fund.

Both projects were anticipated to be completed and paid in FY 2024. These estimates were included in the anticipated 2024 expenditures in the 2025 budget, which means the proposed budget amendments will not impact the estimated fund balance included in the 2025 Budget.

Financial Impact

Budget amendment in the amounts of:

Grand Ave Gymnasium Project
Amount $44,705.47
Account 6603210-60015

Recreation Center HVAC Project
Amount $84,159.14
Account 6605210-60015

Both accounts are included in the Recreation Fund.

Recommended Motion

I move to approve the budget amendments to the Recreation Fund for the completion of the Grand Avenue Gymnasium (in the amount of $44,705.47) and the Recreation Center HVAC Project (in the amount of $84,159.14).

Strategic Plan Alignment

File Attachments

1. Budget Amendment - Rec gym HVAC and Grand gym improvement - 01.29.25
2. Budget Amendment Ordinance-2-24-2025 - Rec

VILLAGE OF WESTERN SPRINGS
BUDGET TRANSFER/AMENDMENT FORM

Requested by: Aleks Briedis
Date: 01/29/25

FINANCE USE ONLY:

APPROVED:

Village Manager Da

Dir of Support Srvcs Dat

DATE ENTERED

_____/____/____

By: _____

Resolution Required:
Yes _____
Resolution # _____
No _____

Budget Transfer #

Page _____ of _____

FROM ACCOUNT: *(decrease)*			TO ACCOUNT: *(increase)*		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
			6603210-60015	Bldg & Bldg Improvements	$44,706
REASON:			REASON: Rec gym HVAC project not completed in FY 2024 Carry forward remaining balance to FY 2025		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
			6605210-60015	Bldg & Bldg Improvements	$84,160
REASON:			REASON: Grand Ave gym improvement project not completed in FY 2024. Carry forward remaining balance to FY 2025		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		

ORDINANCE NO. 25-XXXX

VOTE:

Voting aye:

Voting nay:

APPROVING BUDGET AMENDMENTS / TRANSFER OVER $10,000.00 TO THE FISCAL YEAR 2025 OPERATING BUDGET IN THE RECREATION FUND

DATE: February 24, 2025

OTHER: Published in pamphlet form

WHEREAS, the Village of Western Springs acting by and through its President and Board of Trustees (Board) has previously approved an Operating Budget for the Fiscal Year ending December 31, 2025 as part of Ordinance 24-3227; and

WHEREAS, the Director of Recreation is requesting a budget amendment in the Recreation Fund for costs associated with the HVAC replacement at the recreation center. The project was started in FY 2024 and was projected to be completed and paid for in FY 2024; and

WHEREAS, the Director of Recreation is requesting a budget amendment in the Recreation Fund for costs associated with the gymnasium improvement located at the Grand Avenue building. The project was started in FY 2024 and was projected to be completed and paid for in FY 2024.

NOW THEREFORE BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, as follows:

SECTION 1. That the transfers/amendments over $10,000.00 to the Operating Budget for the Fiscal Year Ending December 31, 2025, are hereby approved in order to fund the following:

1. The costs of HVAC replacement at Recreation Center
2. The costs of gymnasium improvements at the Grand Avenue Building

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 24th day of February 2025 and approved by me as President on the same day.

ATTEST:

Village President Heidi Rudolph

Village Clerk Edward Tymick

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 7.C.

To: Board of Trustees
From: Matthew Supert, Director of Municipal Services
CC: Ellen Baer, Village Manager, William Tomczyk , Diana Puga, Municipal Services Coordinator
RE: Budget Amendment: Village Hall HVAC Controls (Omnibus Item)

Recommendation

The Finance Committee reviewed this item at their meeting on February 6, 2025 and recommended the approval of a budget amendment in the amount of $51,750 for the 2025 Village Hall HVAC Controls contract with the lowest bidder, Air Comfort, LLC.

Summary

The Village HVAC controls system is more than twenty years old and currently operates on a Windows XP computer system, which presents potential network and security risks to the Village's infrastructure and internal computer network. Additionally, some components of the HVAC system are more than twenty years old. In 2024, the Village Board approved an architectural design contract with 845 Design Group and Novaspace to review and design bid specifications for a replacement system.

On December 5, 2024, the Village issued a Request for Bids (RFB) for the replacement of Village Hall's HVAC Controls. An optional walk-through was held on December 13, in which interested bidders were provided an overview of the contract document and were encouraged to ask questions. On December 19, the Village received a total of 3 bids.

The results of the base bids are summarized as follows:

Air Comfort, LLC	$ 84,900.00
Interactive Building Solutions	$ 167,100.00
Building Automation Solutions	$ 207,280.00

The bid tab, including all alternates, is attached to this report.

The Municipal Services and IT Departments reviewed the project and proposals, and after careful consideration of the alternates, staff recommends adding the following alternates to the base bid pricing:

1. Alternate #2: Electric radiant heat to operate in conjunction with VAV-25
This alternate would integrate the Police Departments' women's locker room into the controls

system. It is currently on its own stand-alone thermostat.

2. Alternate #3: Electric radiant heat to operate in conjunction with VAV-9
This alternate would integrate the Police Departments' men's locker room into the controls system. It is currently on its own stand-alone thermostat.

3. Alternate #5: Stand-Alone EF's on BAS
This alternate would allow for the exhaust fans to be turned off while the building is not occupied, reducing energy. The exhaust fans currently run 24 hours a day.

The recommended alternate pricing combined is summarized as follows:

Air Comfort, LLC	$ 3,850.00
Interactive Building Solutions	$ 10,100.00
Building Automation Solutions	$ 15,200.00

The total recommended bid amount with additional alternates would be $88,750.00.

The Village budgeted $37,000 for this project in the 2025 budget. During the initial design of the bid specifications, it was anticipated that the existing HVAC controls could remain in place and the components of the system could be replaced/upgraded. It was discovered that HVAC control systems have changed significantly since the system was last modified approximately twenty years ago. Any new controls system would require an entirely new controller and new components, along with the associated programing for those components. The Municipal Services Department is requesting a budget amendment in the amount of $51,750.00. That amendment will need to be approved prior to any approval of this recommended bid. The Properties & Recreation Committee will met on Tuesday, February 4th to review the bid proposal and advanced a recommendation to the Village Board for consideration pending the budget amendment.

Financial Impact

The HVAC Controls Project is funded through the Capital Improvement Fund as listed below. The 2025 budget includes $37,000.00 for this project. A budget amendment of $51,750 will be required to fund the entire project.

Account	4104310 60020
Fund	Capital Fund
2025 Budget	$ 37,000.00
Project Cost	$ 88,750.00

Recommended Motion

I move recommend a budget amendment in an amount of of $51,750 for the 2025 Village Hall HVAC Controls contract to the lowest bidder, Air Comfort, LLC.

Strategic Plan Alignment

Infrastructure Improvements

File Attachments

1. Budget Amendment - - VH HVAC Controls - 4104310 60020 - February 2025
2. Letter of recommendation 01.17.2025
3. 2024 HVAC Controls - Air Comfort Bid
4. Bid Tabulation (1)
5. Budget Amendment Ordinance-2-24-2025 - MS

VILLAGE OF WESTERN SPRINGS
BUDGET TRANSFER/AMENDMENT FORM

Requested by: Matthew Supert
Date: 02/04/25

FINANCE USE ONLY:

APPROVED:

Village Manager Da

Dir of Support Srvcs Dat

DATE ENTERED

_____/____/____

By: _____

Resolution Required:
Yes _____
Resolution # _____
No _____

Budget Transfer #

Page _____ of _____

FROM ACCOUNT: *(decrease)*			TO ACCOUNT: *(increase)*		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
			4104310 60020	Machinery and Equipment	$51,750
REASON:			REASON: Unanticipated additional cost for project completio		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		
NUMBER	DESCRIPTION	AMOUNT	NUMBER	DESCRIPTION	AMOUNT
REASON:			REASON:		

106 Calendar Court, No. 131
La Grange, Illinois 60525
t: 708.872.4146 | f: 708.407.9008
www.845designgroup.com

JANUARY 17, 2025

Matthew Supert, Director of Municipal Services
Village of Western Springs
740 Hillgrove
Western Springs, IL. 60558

Re: The Village of Western Springs, Village Hall, Temperature Control System Upgrades

Dear Matt,

This project was bid twice due to low bidder turnout. In the most recent bid process a pre-bid walk through was held at the site on December 13, 2024. One Contractor attended, and three Contractors provided bids for the project. The bids varied from $88,750.00 (accepting three alternates) to $207,280.00. Air Comfort was the low bidder with a bid of $88,750.00. The references provided by Air Comfort were verified; all four references were reached. The feedback was very positive and each recommendation stated that they have or will work with Air Comfort in the future. All references stated that Air Comfort has a good technical team and is qualified to complete the work. I spoke with the Steve Strnic, a Project Executive at Air Comfort, and verified the scope of the project and confirmed that the bid was based on prevailing wage numbers.

Based on the references provided, the work went well and all references stated Air Comfort is a very capable Contractor and will continue to work with them. I am comfortable with recommending Air Comfort for the Village Hall Temperature Controls System Upgrades. Please let me know if you have any questions or require further information.

Best Regards,



Jamie Zaura, AIA, LEED AP BD+C
Principal, 845 Design Group P.C.

AIR COMFORT
Providing the Right Climate for Business Since 1935

BUILDING AUTOMATION GROUP

Temperature Control Proposal

TO: **Village of Western Springs**

DATE: **December 17, 2024**
PROJECT: **Village of Western Springs Village Hall – Temperature Control System Upgrades**

We propose to furnish the materials and/or perform the work described below for the net price of:
Base Bid: $84,900.00
Alternate #1 New boiler controls…..$9,450.00
Alternate #2 Electric radiant heat to operate in conjunction with VAV-25…..$1,150.00
Alternate #3 Electric radiant heat to operate in conjunction with VAV-9…..$1,150.00
Alternate #4 Stand-Alone CUH & UH on BAS…..$8,550.00
Alternate #5 Stand-Alone EF's on BAS…..$1,550.00

For the above Base Bid price this proposal includes:

- Furnish and install open protocol Temperature Controls System work per the project plans & specifications dated 12/5/2024 and all associated addenda.

Lower Level

- Furnish and install (7) new thermostats for electric duct re-heat control
- Furnish and install (2) new thermostats for VAV and associated re-heat control
- Provide Johnson Controls, Inc Facility Explorer BAS Network, Supervisory Controller (FX90), programming, and commissioning. Provide and install new server to aggregate information. The new system will integrate with the existing BAS
- Integrate TEKMAR boiler controller into new building automation system
- Existing VFD's to remain
- Existing electrical panel for reheats to remain

First Floor

- Furnish and install (19) new thermostats for VAV and associated re-heat control

Our Base Bid proposal includes:

- Provide BAS training
- Provide union electrical labor & installation materials as specified. All exposed or concealed-inaccessible wiring shall be installed in EMT conduit. All concealed accessible wiring (above drop ceilings, etc.) shall be properly supported open plenum cable

o: 708.345.1900
f: 708.345.2730
2550 Braga Drive
Broadview, IL 60155
aircomfort.com

AIR COMFORT
Providing the Right Climate for Business Since 1935

- Engineering, project management, owner training, commissioning agent assistance and (2) year warranty on items we provide

Our Base Bid proposal does not include:

- Providing Variable Frequency Drives
- Test & Balance scope of work (we will assist the T&B Contractor as required)
- Furnishing or wiring of Fire & Smoke Dampers/Actuators, & AHU Duct Smoke Detectors
- Painting & patching. Ceiling removals and/or replacements
- Any work shown on the Electrical Drawings. Power wiring to any mechanical equipment.
- Overtime Labor

(IMPORTANT: This proposal incorporates by reference the terms and conditions on the reverse side hereof).

This proposal and alternates listed below are hereby accepted and Applied Controls is authorized to proceed with the work.

This proposal is valid until:

December 31, 2024

_____
Purchaser - Company Name

AIR COMFORT, LLC

Signature

Signature

Name: _____
Title: _____
Date: _____

Name: Kevin Kisala
Title: Vice President

AIR COMFORT
Providing the Right Climate for Business Since 1935

STANDARD EXCLUSIONS & CLARIFICATIONS

1. All work to be completed on straight time during normal working hours 7:00 a.m. – 3:30 p.m. Monday through Friday, excluding holidays, unless otherwise indicated.
2. Adequate access and entry into site and work area(s) is required.
3. Any work found necessary other than what is outlined and approved within this proposal will be completed on a time and material or quoted basis and invoiced accordingly.
4. Permits, permit drawings, PSM or engineered drawings and engineering fees are not included unless otherwise indicated.
5. Structural engineering is not included.
6. Asbestos abatement or testing of any kind is not included.
7. Painting or patching or drywall repair is not included.
8. Project change orders or additional work outside of original scope must be agreed to in writing prior to proceeding or acceptance.
9. Air Comfort reserves the right to invoice for materials ordered but not installed due to installation or repair delays which are a result of customer scheduling, access to equipment, delays created by other trades not under contract with Air Comfort or overall project delays which fall outside of our immediate control.
10. Warranty Terms:
    a. Standard warranty for service repairs is one (1) year from date of completion if the repaired systems/equipment is maintained on a regular PM schedule by Air Comfort certified technicians.
    b. Equipment which is not maintained by Air Comfort. by others is subject to a 90-day warranty, material, and workmanship.
    c. Warranty exclusions other than those noted above or extended warranties where applicable will be noted within the proposal if repair or replacement of proposed equipment warranty would deviate from standard options.
    d. Seal repair or replacement carry a standard manufacturer 90-day warranty.
    e. Equipment or materials supplied by customers and installed by Air Comfort maintain a workmanship warranty.
11. All applicable sales tax has been included unless otherwise indicated.
12. This proposal shall remain valid for 30 days.
13. Payment terms are net 30 days.
14. Credit card payments will incur a 5% processing fee per transaction unless otherwise agreed upon prior to purchase.

AIR COMFORT
Providing the Right Climate for Business Since 1935

BUILDING AUTOMATION GROUP

Temperature Control Proposal

TO: **Village of Western Springs**

DATE: **December 17, 2024**
PROJECT: **Village of Western Springs Village Hall – Temperature Control System Upgrades**

We propose to furnish the materials and/or perform the work described below for the net price of:
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- Integrate TEKMAR boiler controller into new building automation system
- Existing VFD's to remain
- Existing electrical panel for reheats to remain

First Floor

- Furnish and install (19) new thermostats for VAV and associated re-heat control

Our Base Bid proposal includes:

- Provide BAS training
- Provide union electrical labor & installation materials as specified. All exposed or concealed-inaccessible wiring shall be installed in EMT conduit. All concealed accessible wiring (above drop ceilings, etc.) shall be properly supported open plenum cable

o: 708.345.1900
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Our Base Bid proposal does not include:

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- Test & Balance scope of work (we will assist the T&B Contractor as required)
- Furnishing or wiring of Fire & Smoke Dampers/Actuators, & AHU Duct Smoke Detectors
- Painting & patching. Ceiling removals and/or replacements
- Any work shown on the Electrical Drawings. Power wiring to any mechanical equipment.
- Overtime Labor

(IMPORTANT: This proposal incorporates by reference the terms and conditions on the reverse side hereof).

This proposal and alternates listed below are hereby accepted and Applied Controls is authorized to proceed with the work.

This proposal is valid until:

December 31, 2024

_____
Purchaser - Company Name

AIR COMFORT, LLC

Signature

Signature

Name: _____
Title: _____
Date: _____

Name: Kevin Kisala
Title: Vice President

AIR COMFORT
Providing the Right Climate for Business Since 1935

STANDARD EXCLUSIONS & CLARIFICATIONS

1. All work to be completed on straight time during normal working hours 7:00 a.m. – 3:30 p.m. Monday through Friday, excluding holidays, unless otherwise indicated.
2. Adequate access and entry into site and work area(s) is required.
3. Any work found necessary other than what is outlined and approved within this proposal will be completed on a time and material or quoted basis and invoiced accordingly.
4. Permits, permit drawings, PSM or engineered drawings and engineering fees are not included unless otherwise indicated.
5. Structural engineering is not included.
6. Asbestos abatement or testing of any kind is not included.
7. Painting or patching or drywall repair is not included.
8. Project change orders or additional work outside of original scope must be agreed to in writing prior to proceeding or acceptance.
9. Air Comfort reserves the right to invoice for materials ordered but not installed due to installation or repair delays which are a result of customer scheduling, access to equipment, delays created by other trades not under contract with Air Comfort or overall project delays which fall outside of our immediate control.
10. Warranty Terms:
    a. Standard warranty for service repairs is one (1) year from date of completion if the repaired systems/equipment is maintained on a regular PM schedule by Air Comfort certified technicians.
    b. Equipment which is not maintained by Air Comfort. by others is subject to a 90-day warranty, material, and workmanship.
    c. Warranty exclusions other than those noted above or extended warranties where applicable will be noted within the proposal if repair or replacement of proposed equipment warranty would deviate from standard options.
    d. Seal repair or replacement carry a standard manufacturer 90-day warranty.
    e. Equipment or materials supplied by customers and installed by Air Comfort maintain a workmanship warranty.
11. All applicable sales tax has been included unless otherwise indicated.
12. This proposal shall remain valid for 30 days.
13. Payment terms are net 30 days.
14. Credit card payments will incur a 5% processing fee per transaction unless otherwise agreed upon prior to purchase.

I. Legal Notice

VILLAGE OF WESTERN SPRINGS, VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

The Village of Western Springs, Cook County, Illinois, does hereby invite sealed bids for the following: Village of Western Springs

Bids will be received until **9:00 am**. Prevailing Local Time on **Thursday, December 19, 2024** by mail or delivered by hand to the drop box located outside the front entrance of Village Hall, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois, 60558-0528 immediately after which time and at such place all bids will be publicly opened. A walk through of the Village Hall (meet in the lobby) located at 740 Hillgrove Avenue, Western Springs, IL 60558 shall be held on **Friday, December 13, 2024 at 9:00 am.**

Those desiring to bid may obtain copies of the contract, specifications and other bidding documents online at wsprings.com/bids.

As evidence of good faith, each bid shall be accompanied by a bid bond, bank draft or certified check and made payable to the Village of Western Springs, Illinois, in the amount of five hundred dollars ($500) or 10% of the bid price, whichever is greater, which shall be submitted to secure the Village against loss occasioned by failure of the bidder to abide by and comply with the terms of his bid.

The successful bidder shall be required to furnish payment and performance bonds in the full amount of the bid or proposal, at the time a contract is awarded, to the Village of Western Springs by a surety company authorized to do business in the State of Illinois and approved by the Village. Failure to produce acceptable bonds will constitute default and the bid bond will be forfeited. No bid shall be withdrawn after the opening of bids without the consent of the Village for a period of sixty (60) days after the scheduled time of closing bids.

Bidders will be required to comply with all laws including those related to employment of labor and the payment of local prevailing wage rates. Each bidder shall satisfy the Village as to his ability, financial and otherwise, to perform the work specified.

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

VILLAGE OF WESTERN SPRINGS
By Edward Tymick, Village Clerk

Published in the Sun-Times Newspaper on December 5, 2024
cc: Ellen Baer, Village Manager

II. Instructions to Bidders

VILLAGE OF WESTERN SPRINGS
DUE DATE: December 19, 2024

Proposals to be entitled to consideration must be made in accordance with the following instructions:

Proposals shall be submitted in an opaque, sealed envelope plainly marked with the words:

VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

and shall be delivered by hand to a drop box or mailed in time for delivery to the Office of Village Clerk, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois by **9:00 A.M.** Prevailing Local Time on **Thursday, December 19, 2024**, after which time and at such place all bids will be publicly opened and read aloud. A walk through of the Village Hall located at 740 Hillgrove Avenue, Western Springs, IL 60558 shall be held on **Friday, December 13, 2024 at 9:00 am.**

Proposals received after the time for opening will not be considered.

Proposals must be signed by an authorized official of the contractor's organization, and the name of the official and his title typed below the signature. If the bidder is a corporation, the corporate seal must be affixed.

Bid security in the form of a bid bond, bank draft or certified check made payable to the Village of Western Springs, in the amount of FIVE HUNDRED DOLLARS ($500) or 10% of the bid (whichever is more), shall be submitted with each bid. The proceeds of any bid security shall become the property of the Village if, for any reason, a bidder, within FORTY-FIVE (45) days after the opening of bids withdraws his bid without the consent of the Village, or if on notice of award refuses or is unable to execute the approved contract and obtain the required performance and payment bonds. Bid deposits may be held for a period not exceeding FOURTY FIVE (45) days. (NOTE: For those projects which will not require the performance bonds, consideration should be given to holding the bid security until delivery is made.)

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

The successful bidder will be required to furnish and pay for satisfactory Performance and Labor and Material Payment Bonds in the amount of one hundred percent (100%) of the contact sum. Execution of the Contract by the Village is contingent upon receipt of acceptable Performance and Payment Bonds and Insurance Certificates.

The Village reserves the right to require of any bidder, such information necessary to satisfy the Village of the bidder's qualifications and to withhold formal signing of the contract until such information is received.

The successful bidder will be required to execute a contract in the form prescribed by the Village and must certify that the bidder is eligible to enter into public contracts under the Illinois Criminal Code, has a written sexual harassment policy and complies with Illinois Department of Revenue policies regarding taxes by executing the Certification attached hereto as **"Exhibit A"** and made a part hereof.

Bidders will be required to comply with all applicable laws including those relating to the employment of labor and the Illinois Prevailing Wage Act and payment of the applicable prevailing wage.

This contract will be awarded without discrimination in compliance with all applicable local state and federal laws.

Responsibility of the bidders will be determined by factors in addition to financial responsibility, such as past records of its or other entities' transactions with the Village of Western Springs, experience, ability to work cooperatively with the Village and its Administration, adequacy of equipment, ability to complete performance within necessary time limits, and other pertinent considerations, such as, but not limited to, reliability, reputation, competency, skill, efficiency, facilities and resources.

III. Proposal

TO: Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

RE: VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

1. The specifications and directions for the proposed service are those prepared by the Village of Western Springs and designated as Special Provisions and which cover the work described in said document and the "Agreement."

2. In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal as principals are those named herein; and that the proposal is made without collusion with any other person, firm, or corporation.

3. The undersigned further understands and agrees that if this proposal is accepted, the undersigned is to furnish and provide all necessary equipment, machinery, tools, apparatus and other means of maintenance, and to do all of the work and perform all the services, and to furnish all of the materials specified in the bid documents in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth.

4. The undersigned further agrees to execute an Agreement for this work and present the same to the Village within seven (7) days after the date of notice of the award of the Agreement to the Contractor.

5. The undersigned further agrees that he and his surety will execute and present within seven (7) days after the date of notice of the award of Agreement the performance and labor and materials payment bonds in a form satisfactory to the Village of Western Springs, in the amount of one hundred percent (100%) of the contract sum guaranteeing the faithful performance of the work in accordance with the terms of the bid documents.

6. The undersigned further agrees to be available to begin work by **February 2025**, as provided for in the Agreement, unless otherwise agreed to by the Village, and to prosecute the work in such manner and with sufficient materials, equipment, and labor as will insure the providing of specified service within the time limit specified herein, it being understood and agreed that the providing of the specified service within the time limit and according to the maintenance schedule is an essential part of the Agreement.

7. This proposal is accompanied by a bid bond, bank draft or certified check complying with the requirements of the specifications and directions, made payable to the "Village of Western Springs, Illinois". The amount of the bid security is Five Hundred ($500.00) Dollars of 10% of the bid (whichever is more). If this proposal is accepted

and the undersigned shall fail to execute an Agreement and said security as required herein, it is hereby agreed that the amount of the bid bonds shall become the property of the Village, and shall be considered as payment of damages due to delay and other causes suffered by the Village because of failure to execute said Agreement or provide the required performance and payment bonds; otherwise said bid security shall be returned to the undersigned pursuant to the bid documents.

ATTACH BID SECURITY HERE

8. The undersigned submits herewith a schedule of prices covering the work to be performed under this Agreement; the undersigned must show in the schedule the prices for which the undersigned proposed to perform.

9. The undersigned further declares to have carefully examined this proposal, the specifications and directions, the Agreement, the legal notice, and special provisions (if any), and to have inspected in detail the site of the proposed work and is familiar with all of the local conditions affecting the Agreement and the detailed requirements of service and understands that in making this proposal waives all right to plead any misunderstanding regarding the same.

12/17/2024
Date

Proposed Contractor (Bidder)

Carrie Cooke

Witness

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Air Comfort LLC
2550 Braga Drive
Broadview, IL 60155

SURETY:
(Name, legal status and principal place of business)
Berkshire Hathaway Specialty Insurance Company
1314 Douglas Street, Suite 1400
Omaha, NE 68102

OWNER:
(Name, legal status and address)
Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

BOND AMOUNT: $ Ten Percent (10%) of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
Village of Western Springs Village Hall – Temperature Control System Upgrades

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Bid Bond

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

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User Notes: (1362455416)

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 19th day of December , 2024

Carrie Ceske	Air Comfort LLC
(Witness)	*(Contractor as Principal)* *(Seal)*
	Vice President
	(Title)
	Berkshire Hathaway Specialty Insurance Company
	(Surety) *(Seal)*
Laura A Benevento	
(Witness) Laura A. Benevento	*(Title) Evelyn A. Benevento, Attorney-in-Fact*

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User Notes: (1362455416)

Additions and Deletions Report for
AIA® Document A310™ – 2010

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 17:32:12 ET on 12/11/2024.

PAGE 1

Air Comfort LLC
2550 Braga Drive
Broadview, IL 60155

Berkshire Hathaway Specialty
Insurance Company
1314 Douglas Street, Suite 1400
Omaha, NE 68102

...

Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

...

BOND AMOUNT: $ Ten Percent (10%) of Amount Bid

...

Village of Western Springs Village Hall – Temperature Control System Upgrades
PAGE 2

Signed and sealed this 19th day of December , 2024

Air Comfort LLC

...

Berkshire Hathaway Specialty Insurance Company

...

(Witness) Laura A. Benevento

(Title) Evelyn A. Benevento, Attorney-in-Fact

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Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Evelyn A. Benevento, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 17:32:12 ET on 12/11/2024 under Order No. 3104238759 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A310™ – 2010, Bid Bond, other than those additions and deletions shown in the associated Additions and Deletions Report.

Evelyn A Benevento Jr
(Signed)

Attorney - In - Fact
(Title)

December 19, 2024
(Dated)

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Berkshire Hathaway Specialty Insurance

Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at One Lincoln Street, 23rd Floor, Boston, Massachusetts 02111, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131 and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Evelyn A. Benevento, Kimberly Miles, Tammy Selbe, Katelyn Williams, Nicole Moon, 3190 Fairview Park Drive, Suite 400 of the city of Falls Church, State of Virginia,** their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. **This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.**

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of August 24, 2023. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. **The following seals of the Companies and signatures by an authorized officer of the Company may be affixed by facsimile or digital format, which shall be deemed the equivalent of and constitute the written signature of such officer of the Companies and original seals of the Companies for all purposes regarding this Power of Attorney, including satisfaction of any signature and seal requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.**

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY,

By: _____
David Fields, Executive Vice President

NATIONAL INDEMNITY COMPANY, NATIONAL LIABILITY & FIRE INSURANCE COMPANY,

By: _____
David Fields, Vice President

NOTARY
State of Massachusetts, County of Suffolk, ss:
On this 24th day of August, 2023, before me appeared David Fields, Executive Vice President of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY and Vice President of NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.
[Notary Seal]

JOHN C. SKINNER
Notary Public, Commonwealth of Massachusetts
My Commission Expires January 22, 2027

_____
Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, see hereunto affixed the seals of said Companies this December 19, 2024.

_____
Ralph Tortorella, Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, One Lincoln Street, 23rd Floor Boston, MA 02111 | (770) 625-2516 or by email at Jennifer.Porter@bhspecialty.com *THIS POWER OF ATTORNEY IS VOID IF ALTERED*

To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

. . . .

EXECUTION OF DOCUMENTS:

. . . .

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

(1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and

(2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

IV. Bid Schedule

Contact Information

All questions concerning this Request for Bids shall be directed to jamiez@845designgroup.com at (708) 872-4146. Proposals must be submitted in a sealed envelope clearly marked with the title, and opening date on the outside of the envelope, VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES and Bidder's name as follows: Village of Western Springs, Western Springs, IL 60558.

Schedule of Bid Prices

THE UNDERSIGNED SUBMITS HEREWITH THIS SCHEDULE OF PRICES COVERING THE WORK TO BE PERFORMED UNDER THIS CONTRACT

Bidder, in submitting this proposal, hereby agrees to comply with all provisions and requirements of the specifications and contract documents attached hereto. This proposal shall remain in force and effect for a twelve (12) month period from start date.

BASE BID

Name of Bidder: Air Comfort, LLC

Address: 2550 Braga Dr. Broadview, IL 60155

Telephone No. 708-345-1900 Fax No. N/A

Signature: Kevin Kisala

Name and Title: (Please Print) Kevin Kisala, Vice President

Date: 12/17/2024

References

Name of Organization: Lyons Township High School

Year of Contract: 2024

Contact Name: Tim Chromzack

Telephone No: 708-579-6574

Email Address: tchromzack@d204.lths.net

Name of Organization: Nokia

Year of Contract: 2024

Contact Name: Craig Morgan

Telephone No: 331-529-2084

Email Address: craig.morgan.ext@nokia.com

Name of Organization: Cicero School District 99

Year of Contract: 2024

Contact Name: Travis Couch

Telephone No:

Email Address: tcouch@cicd99.edu

Name of Organization: Allstate Insurance Corp

Year of Contract: 2024

Contact Name: Steve Thunberg

Telephone No:

Email Address: sthunber@allstate.com

Name of Organization:

Year of Contract:

Contact Name:

Telephone No:

Email Address:

V. Pre-Qualification Process (N/A)

REQUIRED DOCUMENTATION

- **OVERVIEW OF THE COMPANY**
- **THREE YEARS CLEANING GOVERNMENT OR COMMERCIAL ACCOUNTS**
- **FIVE (5) GOVERNMENT OR COMMERCIAL REFERENCES**
- **QUALITY CONTROL/QUALITY ASSURANCE PLAN**
- **INSURANCE DOCUMENTATION**

PRE-QUALIFICATION INFORMATION (N/A)

This will be a Performance Based Contract. This is a one-year contract with four, one-year extension options. The extension option is for a one-year period and is effective if approved by the Village Board.

BASIS OF AWARD (N/A)

The evaluation process for the award of this contract is a **two-step** process consisting of a Request for Qualifications, narrowing the field down to appropriate candidates, and then a Request for Proposals outlining the costs and terms of service.

VI. Contract Provisions

Location

This project is located at the Village Hall located at 740 Hillgrove Avenue, Western Springs,

IL 60558.

These specifications are not to be construed as exclusive. It is intended that the services provided by the Contractor include all functions normally considered a part of workmanlike, satisfactory work, whether or not specifically listed herein.

Term

The term of this contract shall be a one calendar year period and ending 365 days after the notice to proceed date, unless the contract is terminated pursuant to the terms herein.

VII. General Specifications

Acceptability of Work

The Village of Western Springs will be sole and final judge of the acceptability of the work to be performed and the services to be rendered under the terms of the Agreement.

Applicable Laws and Regulations

The Vendor agrees to comply with the following laws and to assist the Village in complying with the following laws: the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) and all rules and regulations issued pursuant to the Act. All applicable provisions of Federal, State and local laws, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Vendor agrees to comply with all applicable Federal laws and State laws and regulations including, but not limited to, the Illinois Prevailing Wage Act and such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Vendor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and Federal and State statutes, and the Vendor further agrees to make all required withholdings and deposits therefor. Such requirements shall be included by the Vendor in all its contracts and agreements with any of its subcontractors. The Parties agree that the most recent of such State and Federal requirements will govern the administration of this Contract at any particular time. Likewise, new State and Federal laws, regulations, policies and administrative practices may be established after the date that this Contract has been executed and may apply to this Contract. The Vendor agrees to maintain full compliance with changing government requirements that govern or apply to its operation. Any complaint of such discrimination received by the Vendor shall be immediately forwarded to the Village. Further, the Vendor certifies that:

A. The Vendor is the only person/entity interested in the above Contract as the sole principal named herein and that no other person/entity than herein mentioned has any interest in the Contract to be entered into; that this Contract is made without connection with any other person, company or parties submitting qualification information; and that it is in all respects fair and in good faith without collusion or fraud.
B. The Vendor is not delinquent in the payment of any tax administered by the Illinois Department of Revenue nor is delinquent in the payment of any money owed to the Village.
C. The Vendor is not barred from contracting with any unit of the State of Illinois or local government, such as the Village, as a result of violating Section 33E-3 or 33E-4 of the Illinois Criminal Code.
D. The Vendor complies with the Illinois Drug Free Work Place Act.
E. The Vendor complies with the Equal Employment Opportunity Clause of the Illinois Human Rights Act and the Rules and Regulations of the Illinois Department of Human Rights.
F. The Vendor complies with the Americans with Disabilities Act.

G. The Vendor states that any work to be performed by it or its contractors on Village-owned property shall be in a good and workmanlike manner and in accordance with all applicable Federal, State and county laws and regulations and the Village codes, ordinances and regulations, including but not limited to all local zoning ordinances and regulations, and other applicable codes.
H. The Vendor also agrees to require any subcontractor doing work under this Contract to agree to adhere to the requirements of this Contract.

Assignment

The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of any award or any or all of its rights, title, or interest therein, without the prior written consent of the Village of Western Springs.

Authority

The Village, as a non-home rule Illinois Municipal Corporation, has the authority to enter into this Contract pursuant to the statutory authority and contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution and the Illinois Intergovernmental Cooperation Act (5 ILCS 220/) and the Illinois Municipal Code (65 ILCS 5/).

Bidder Investigations

Before submitting a bid, each bidder shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village of Western Springs upon which the bidder will rely. If the bidder receives an award as a result of its bid submission, failure to have made such investigations and examinations will in no way relieve the bidder from its obligation to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

Bonds

If required, Bonds required to guarantee performance and payment for labor and material for the Work shall be in a form acceptable to the Village and shall provide that they shall not terminate on completion of the Work, but shall be reduced to ten percent (10%) of the contract sum upon the date of final payment by the Village for a period of one (1) year to cover a warranty and maintenance period which Vendor agrees shall apply to all material and workmanship for one (1) year from the date of issuance of the final payment by the Village.

Change in Scope of Work

The Village of Western Springs may order changes in the work consisting of additions, deletions, or other revisions within the general scope of the contract. No claims may be made by the Contractor that the scope of the work or of the Contractor's services has been changed, requiring changes to the amount of compensation to the Contractor or other adjustments to

the contract, unless such changes or adjustments have been made by written amendment to the contract approved by the Village Board and the Contractor.

If the Contractor believes that any particular work is not within the scope of contract, is a material change, or will otherwise require more compensation to the Contractor, the Contractor must immediately notify the Village Manager in writing of this belief. If the Village Manager believes that the particular work is within the scope of the contract as written, the Contractor will be ordered to and shall continue with the work as changed and at the cost stated for the work within the scope.

Where change orders, or a series of change orders, authorize or necessitate an increase or decrease in either the cost of the work totaling $10,000 or more, or the time of completion of the work by thirty (30) days or more, a written determination must be approved by the Village Board and signed by the Village President or his designee stating that the circumstances necessitating the changes in performance were not reasonably foreseeable at the time the Contract was signed or, the change is germane to the Contract or the change order is in the best interests of the Village.

Collusion among Bidders

Each bidder, by submitting a bid, certifies that it is not a party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any or all bids shall be rejected if there is any reason for believing that collusion exists among the bidders. The Village of Western Springs may or may not, at its discretion, accept future bids for the same work from participants in such collusion.

More than one bid from an individual, firm, partnership, corporation, or association under the same or different names may be rejected. Reasonable grounds for believing that a bidder has interest in more than one bid for the work being bid may result in rejection of all bids in which the bidder is believed to have interest.

Nothing in this clause shall preclude a firm acting as a subcontractor to be included as a subcontractor for two or more primary Contractors submitting a bid for the work.

Compliance with Freedom Of Information Act Requests

Section 7(2) of the Illinois Freedom of Information Act (FOIA) (5 ILCS 120/7(2)) requires certain records that qualify as "public records," which have been prepared by and are in the possession of a party who has contracted with the Village, be turned over to the Village so that a FOIA requestor can inspect and photocopy the non-exempt portions of the public records pursuant to a FOIA request. The Village has a very short period of time from receipt of a FOIA request to comply with the request, and it requires sufficient time to review the records to decide what information is or is not exempt from disclosure. The Contractor/Consultant acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village for public records (as that term is defined by Section 2(c) of FOIA) in the Contractor/Consultant's possession and to provide the requested public records to the Village within two (2) business days of the request being made by the Village.

The Contractor/Consultant agrees to indemnify and hold harmless the Village from all claims, costs, penalties, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the Village under this Agreement.

The Contractor/Consultant acknowledges that certified payroll records submitted to a public body under Section 5(a)(2) of the Prevailing Wage Act are public records subject to inspection and copying in accordance with the provisions of this Act (See 5 ILCS 140/2.10)."

Compliance with Laws; Employment Discrimination

In the performance of its obligations pursuant to this Agreement, the Contractor shall comply with all applicable provisions of federal, state and local law, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation, Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Contractor agrees to comply with all applicable federal laws, state laws and regulations including, but not limited to, such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Contractor also agrees to require any contractor doing work or performing professional or consulting services in connection with its program or this Agreement to agree to adhere to the requirements of this Section. The Contractor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and federal and state statutes, including the Illinois Prevailing Wage Act, and the Contractor further agrees to make all required withholdings and deposits therefore. Such requirements shall be included by the Contractor in all its contracts and agreements with contractors and subcontractors for this program. The parties agree that the most recent of such state and federal requirements will govern the administration of this Agreement at any particular time. Likewise, new state and federal laws, regulations, policies and administrative practices may be established after the date of the Agreement has been executed and may apply to this Agreement. The Contractor agrees to maintain full compliance with changing government requirements that govern or apply to its operation." In addition, the Contractor agrees to comply with the Americans with Disability Act (42 U.S.C. 12101 et seq.), and all rules and regulations issued pursuant to the Act, there shall be no discrimination on the basis of disabilities (as defined in the Act) in the operation of the services and programs provided by the Contractor hereunder. Any complaint of such discrimination received by the Contractor shall be immediately forwarded to the Village Manager.

The Contractor shall comply with all applicable provisions of the Illinois Human Rights Act including the requirement that the Contractor have on file a written sexual harassment policy.

Contractor Personnel

The Village Manager shall, throughout the life of the contract, have the right of reasonable rejection and approval of employees or subcontractors assigned to the work by the Contractor. If the Village of Western Springs reasonably rejects employees or subcontractors, the

Contractor must provide replacement staff or subcontractors satisfactory to the Village in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees and subcontractors is the responsibility solely of the Contractor.

Debarment

By submitting a bid, the bidder certifies that it is not currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois and that it is not an agent of a person or entity that is currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois.

Default Clause

A default shall occur under this contract if the Contractor or Village shall not comply with the terms of this contract. The following list is presented as an example only and does not include a listing of all events of default. Omission of an event does not indicate an intent to excuse such an event as an event of default. Examples are, if the Contractor fails to begin work on the date set forth in the contract (unless the Contractor and Village shall agree in writing to a delay in the start of performance), if the Contractor fails to diligently and consistently perform the work once the contract has started (including but limited to, failing to provide enough properly skilled workers; to supply proper material; to make proper payments to subcontractors, or for materials or labor), or otherwise is guilty of a substantial violation of the contract or specifications, then the Village may declare that a default exists under the contract. The Village shall specify the nature of the default in a written notice mailed to the Contractor or delivered to its employee or agent. Upon receipt of said notice, the Contractor shall be liable and shall pay the Village the amount shown in the following schedule of deductions, not as a penalty but as liquidated damages, for each day until the default is corrected. The liquidated damages for default are approximate, due to the impracticality of calculating and proving actual delay costs. This schedule of deductions establishes the cost of delay to account for administration, engineering, inspection, and supervision during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by the Village during extended and delayed performance by the Contractor of the work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of the Contractor. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work off the contract even though the work may be substantially complete. The Village will deduct these liquidated damages from any monies due or to become due to the Contractor from the Village.

Schedule of Deductions for Each Day of Default Original Contract Amount from more than	to and including	calendar day
$0	$25,000	$300
$25,000	$100,000	$375
$100,000	$500,000	$550
$500,000	$1,000,000	$725

$1,000,000	$2,000,000	$900
$2,000,000	$3,000,000	$1,100
$3,000,000	$5,000,000	$1,300
$5,000,000	$7,500,000	$1,450
$7,500,000	And over	$1,650

If such default is not corrected within seven (7) days after receipt of the notice, the Village may terminate the Contractor's rights under the contract and complete the work by whatever method the Village deems is appropriate. Upon the termination of the contract, the Contractor agrees to promptly and completely remove all equipment and materials from the job site with no damage to the improvements in place and to return all keys to Village buildings, and all employee security passes. In the case of a default, the Contractor shall not be entitled to receive any further payments until the work under the contract has been completed.

Delay

Contractor shall perform the work of this contract expeditiously in cooperation with the Village, its agents, employees and other Contractors and subcontractors. Contractor shall make no claim against Village, and no claim shall be allowed for any damages which may arise out of any delay caused by Village, its agents, employees or other Contractors or subcontractors. Contractor's sole remedy for delay from the Village shall be an extension in the Contract Time.

Entire Agreement

This Contract and its Exhibits contain the entire agreement between the Parties hereto and supersedes any and all prior agreements and understandings, whether written or oral, and whether formal or informal. In addition, this Contract embodies and merges the entire understanding between and among the Parties hereto, and any and all prior correspondence, conversations or memoranda relating to the subject matter stated herein are being merged herein and replaced hereby. This Contract may be modified or amended only by the mutual consent of the Parties and any such modification or amendment must be in writing, signed by the Parties and duly executed, otherwise it is void.

Exceptions

Bidders taking exception to any part or section shall indicate such exceptions on the bid form. Failure to indicate any exception will be interpreted as the bidder's intent to comply fully with the requirements as written. Conditional or qualified bids, unless specifically allowed, shall be subject to rejection in whole or in part.

Expenses Incurred in Preparing Bid

The Village accepts no responsibility for any expense incurred by the bidder in the preparation and presentation of a bid. Such expenses shall be borne exclusively by the bidder.

Failure to Deliver

In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Village, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any resulting additional purchase

and administrative costs. This remedy shall be in addition to any other legal remedies that the Village may have.

Guaranty, Warranties and Representations

A. The prices for the goods, supplies, equipment and/or services are based on the Vendor's standard pricing schedule, are commercially reasonable and competitive prices for the industry, are not artificially inflated, and do not contain any premium or hidden charges, commitments or other undisclosed obligations.

B. All Work shall be performed in a good workmanship manner consistent with industry standards and in accordance with the manufacturers' specifications and instructions.

C. It will exercise the due care and diligence generally associated with the delivery and installation of the goods, supplies, equipment and/or services being provided under this Contract. Due care and diligence shall be applied to all phases of the Vendor's Work.

D. It is authorized to sell and install the goods, supplies, equipment and/or services.

E. The goods, supplies, equipment and/or services are of a good quality, fit for their intended use and purpose, and all express or implied warranties of any kind, including the warranty of merchantability, are in full force and effect and have not been waived.

F. It shall transfer all third party product warranties and guaranties relative to the goods, supplies, equipment and/or services.

G. In addition to any other third party warranty or guaranty, the Vendor shall provide a minimum one (1) year guaranty relative to any equipment and its components. In the event the Vendor's Invoice/Purchase Order provides for a longer guaranty, the longer guaranty shall control.

H. The Vendor shall maintain a current, valid Village business license, and the Vendor shall post with the Village and keep on file and in force for the duration of this Contract a contractor's license bond in the amount required by the Village Code.

I. A written statement containing guaranty for a minimum of one (1) year after final payment or longer for all material and workmanship must be furnished with the bid.

Indemnity/Hold Harmless Provision

To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify and hold harmless the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, against all injuries, deaths, loss, damages, claims, patent claims, suits, actions, liabilities of any kind, including, as allowed by law, liabilities incurred due to joint negligence of the Village and the Contractor, judgments, cost and expenses, which may in anyway accrue against the Village, its officers, appointed and

elected officials, president and trustees, agents, employees, attorneys and volunteers, arising in whole or in part or as a consequence of the performance the contract or any part of the work by the Contractor, its employees, agents, or subcontractors, or which may in anyway result therefore, except that arising out of the sole legal cause of the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. The Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same.

Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as herein provided.

Independent Contractor

The Vendor is retained by the Village only for the purposes and to the extent set forth in this Contract, and the Vendor's relationship to the Village shall, during the term of this Contract and period of its Work hereunder, be that of an independent contractor based on the following: (a) this Contract is a non-exclusive, independent contractor arrangement; (b) the Vendor, in its discretion, is free to set its schedule regarding the performance of the Work, provided such scheduling and performance of the Work results in the timely and efficient delivery of the Work without interruption of the Village's and its employees' ability to perform their functions and duties; (c) the Vendor will utilize a high level of skill necessary to perform the Work; (d) the Vendor shall not be considered as having Village employee status, nor shall the Village make any deductions or withhold any sums for the payment of any and all applicable Federal, State, local and other taxes, income taxes or FICA taxes; (e) the Vendor shall not be entitled to receive or participate in any employee plans, benefit programs, retirement plans or related employee benefit arrangements or distributions by the Village pertaining to or in connection with any pension or retirement plans, or any other benefits for the regular employees of the Village; (f) the Vendor shall file all necessary tax returns (Federal, State, county and local) and to make such required deductions and pay all income tax, social security, and any and all other taxes due as an independent contractor in its profession; (g) the Vendor is ineligible to file a claim for unemployment compensation benefits or for workers compensation benefits against the Village and agrees not to file any such claims in the event this Contract is terminated or if it or any of its employees are injured performing any Work; (h) the Vendor agrees to assume all risk of death, illness and injury relative to performing any Work under this Contract; (i) the Vendor shall provide all of its own equipment required for the performance of the Work under this Contract; (j) the Vendor shall retain the right to perform services for others during the term of this Contract so long as the Work: (i) is not inconsistent or incompatible with the Vendor's obligations under this Contract; or (ii) does not violate any provisions of this Contract; (k) the Vendor and its employees shall maintain all applicable certifications, licensure and training as required for its area of expertise and promptly provide copies of such documents upon request by the Village; (l) this Contract shall not render the

Vendor, or any its employees, an employee, partner, agent of, or joint venturer with the Village for any purpose; and (m) The Vendor shall comply with the Village's Non-Harassment / Discrimination Policy, a copy of which is incorporated herein by reference.

Insurance Requirements

Contractor shall procure and maintain, for the duration of the contract, insurance written on an "occurrence" basis, against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

I. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

A. Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers named as additional insureds, including ISO Additional Insured Endorsement CO 2026, CG 2010; and
B. Owners and Contractors Protective Liability (OCP) policy with the Village as insured; and
C. Insurance Service Office Business Auto Liability coverage form number CA 0001 (Ed. 10/90 or newer), Symbol 01 "Any Auto."
D. Workers' Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.

II. MINIMUM LIMITS OF INSURANCE

Contractor shall maintain limits no less than:

A. Commercial General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate shall be twice the required occurrence limit. Minimum General Aggregate shall be no less than $2,000,000 or a contract specific aggregate of $1,000,000.
B. Business Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.
C. Workers' Compensation and Employers' Liability: Workers Compensation coverage with statutory limits and Employers' Liability limits of $1,000,000 per accident.
D. Excess Liability/Umbrella Coverage: $2,000,000 per occurrence and in the aggregate.

III. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions relative to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers;

or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

IV. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

A. General Liability and Automobile Liability Coverages

1. The Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers are to be covered as specifically listed additional insureds as respects: liability arising out of the Contractor's work, including activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
2. The Contractor's insurance coverage shall be primary as respects the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. Any insurance or self- insurance maintained by the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
4. The Contractor's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that Contractor's insurance shall apply separately to each insured against whom the claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the Contractor shall be required to name the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds. A copy of the actual additional insured endorsement shall be provided to the Village.

B. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Village, its officers, officials, trustees, agents, employees and volunteers for losses arising from work performed by Contractor for the municipality.

C. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Village Manager at the Village's principle office address.

V. ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

VI. VERIFICATION OF COVERAGE

Contractor shall furnish the Village with certificates of insurance naming the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds, and with original endorsements affecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Contractor's Public Liability Insurance shall be written on the Comprehensive form and shall include Contractual Liability, Products and Completed Operations, and Automobile Liability, all to the limits state above. Comprehensive Liability Insurance shall specifically include coverage for Independent Contractors and for both Hired and Non-Owned Automobiles. The insurance shall apply to all activities including spray-painting operations. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

VII. SUBCONTRACTORS

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

VIII. ASSUMPTION OF LIABILITY

The Contractor assumes liability for all injury to or death of any person or persons including employees of the Contractor, any sub-contractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to this contract.

IX. NO PERSONAL LIABILITY.

No appointed official, agents, attorneys, employees, volunteers and representatives of the Village or any of its local government members shall be personally liable, in law or in contract, to the Vendor as the result of the execution of this Contract. Notwithstanding any provision in this Contract to the contrary, the operation of this Section 15 shall survive the termination of this Contract.

Law and Venue

This Agreement provides for services to be performed within the State of Illinois. Accordingly, this Agreement, and all questions of interpretation, maintenance and enforcement hereof, and all controversies hereunder, shall be governed by the applicable statutory and common law of the State of Illinois. The parties agree that for the purpose of any litigation relative to this Agreement and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the parties' consent to the in person and jurisdiction of said Court for any such action or proceeding.

Non-appropriation

All funds for payment by the Village under this contract are subject to the availability of an annual appropriation for this purpose by the Village. In the event of non-appropriation of funds by the Village for the services provided under the contract, the Springs will terminate the contract, without termination charge or responsibility for or obligation to the Contractor or for damages or other liability, on the last day of the then-current fiscal year for the services covered by this contract is spent, whichever event occurs first. If at any time funds are not appropriated for the continuance of this contract, cancellation shall be accepted by the Contractor on thirty days' prior written notice, but failure to give such notice shall be of no effect and the Village shall not be obligated under this contract beyond the date of termination.

Oral Statements

No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this contract. All modifications to the contract must be made in writing by the Village of Western Springs in the form of addenda which shall be mailed to all those that have picked up bid specifications and be made available to the public.

Permits, Licenses

The Contractor shall procure and pay for all permits and licenses necessary for the performance of the work, and/or required federal, state, county, and Village regulations and laws.

Protection and Restoration of Property

The Contractor shall take all necessary precautions for the protection of corporate or private property. The Contractor is responsible for the damage or destruction of real or personal property resulting from neglect, misconduct or omission in his manner or method of execution or non-execution of the work, or caused by defective work or the use of unsatisfactory materials, and such responsibility shall not be released until the work shall have been completed, accepted, and the requirements of the specifications complied with as determined by the Village.

Whenever public or private property is so damaged or destroyed, the Contractor shall, at its own expense, restore such property to a condition equal to that existing before such damage or injury was done by repairing, rebuilding or replacing it as may be directed, or he shall otherwise make good such damage or destruction in an acceptable manner. If the Contractor fails to do so, the Village may, after the expiration of a period of 48 hours after giving notice in writing, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and, in addition to any other remedy, the cost thereof shall be deducted from any compensation due, or which may become due, under the contract.

References

A list of current references for jobs of similar size and scope must be submitted and included with the bid. A minimum of five (5) shall be required. Please fill out reference sheet in the Schedule of Bid Prices section of this document.

Renewal of Contract

Upon written agreement of both parties at least **THIRTY (30)** days prior to anniversary date of the contract, this contract may be renewed by the Village of Western Springs for a period of **FOUR (4)** successive one-year period(s) under the same prices, terms, and conditions as in the original contract.

Responsibility for Work

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

(a) All employees on the work and other persons who may be affected thereby;

(b) All the work and all materials or equipment to be incorporated therein, whether in storage on or off the side; and

(c) Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, maintenance or replacement in the course of work.

The Contractor shall be responsible for complying with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. The Contractor shall be responsible for erecting and maintaining as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. The Contractor shall notify owners of adjacent utilities when performance of the work may affect them. All damage, injury or loss to any property referred to in paragraph (a) or (b) caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and accepted by the Village.

Right to Audit

The Contractor shall maintain such financial records and other records as may be prescribed by the Village of Western Springs or by applicable federal and state laws, rules, and regulations. The Contractor shall retain these records for a period of five years after final payment, or until they are audited by the Village, whichever event occurs first. These records shall be made available during the term of the contract and the subsequent three-year period for examination, transcription, and audit by the Village, its designees, or other authorized bodies.

Severability

In the event any term or provision of this Contract shall be held illegal, invalid, unenforceable or inoperative as a matter of law, the remaining terms and provisions of this Contract shall not be affected thereby, and each such term and provision shall be valid and shall remain in full force and effect.

Smoking Policies

All Contractors, their subcontractors, employees and agents are required to abide by the smoking policies in effect in all municipal buildings owned, leased, or operated by the Village. Failure to abide by these regulations is a violation of this contract; and in addition may subject the violator to civil penalties as prescribed in State law.

Successors/Assigns

This Contract shall ensure to the benefit of and shall be binding upon the transferees, assigns, representatives, owners, insurers, agents, servants, employees, administrators and/or successors in interest of any kind whatsoever of the parties hereto. This Contract and the obligations it impose upon the Contractor are not transferable by Contractor without the written consent of the Village, which may or may not be granted in its exclusive discretion.

Taxes, Benefits and Royalties

The Village of Western Springs is a public body and is exempt from all sales, excise and use taxes and the Village shall supply its sales tax number to the Contractor for its use where appropriate. Each payment by the Village to the Vendor includes all applicable Federal, State and local taxes, fees, surcharges, license fees and tariffs of every kind and nature applicable to the Work, as well as all taxes, contributions, premiums, costs, royalties and fees arising from the use of, or the incorporation into, the Work of patented or copyrighted equipment, materials, supplies, tools, appliances, devices, processes or inventions. All claims or rights to claim additional compensation by reason of the payment of any such tax, contribution, premium, cost, royalty or fee are hereby waived and released by the Vendor.

Termination

If the contract is terminated by a default of the Contractor the Village shall pay the Contractor any amount due for actual, completed and accepted work, and the Village shall not be obligated to pay the Contractor any more money.

Unnecessarily Elaborate and Unresponsive Submittals

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to the solicitation are not desired and may be construed as an indication of the bidder's lack of responsiveness. Further, if the format of the bidder's submittal is prescribed in the bid documents and the bidder fails to follow that format, this may be construed as an indication of the bidder's lack of responsiveness.

Waivers of Lien

The Village requires for each application for payment a properly completed Contractor's Affidavit setting out, under oath, the name, address and amount due or to become due, of each subcontractor, vendor or party included in that payment. For every party listed, the Contractor shall also provide a full or partial waiver of lien, as appropriate, before a payment will be made to the Contractor. The Contractor's partial or final waiver of lien must be included. Payment Certificates shall not be issued without such mechanics' lien waivers and Contractor's sworn statements unless they are conditioned upon receipt of such waivers and statements.

If the rate of progress is satisfactory to the Village, payment requests will be submitted by the Vendor to the Village once a month during the progress of the Work for ninety percent (90%) of the value of the work done and in place at the date of the preparation of the payment estimate. Payment will be made to the Vendor once all required waivers of lien for material suppliers and subcontractors have been submitted to the Village. The waivers of lien will be for the amount of the current payment estimate, except for the final estimate where the waivers of lien shall be for the total contract amount. Pursuant to the provisions of Section 5 of the Mechanics' Lien Act of Illinois, prior to making any payment on this Contract the Village demands that the Vendor furnish a written statement of the names of all parties furnishing labor and/or materials under this Contract and the amounts due or to become due on each. This statement must be made under oath or be verified by an affidavit. Final payment shall not be issued by the Village nor shall any retained percentage become due until releases and waivers of lien have been supplied as the Village designates.

The Contractor will indemnify and save the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers harmless from all claims growing out of the lawful demands of subcontractors, laborers, workers, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Village's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Village may, after having notified the Contractor, withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents.

The Village shall have the right to enter the premises for the purposes of doing work not covered by the contract. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work, or the restoration of any damage work except such as may be caused by agents or employees of the Village.

Contractor's Drug-Free Workplace Certification

Pursuant to Illinois Compiled Statutes, Chapter 30, Act 580 et. seq. ("Drug-Free Workplace"), the undersigned Contractor hereby certifies to the contracting agency that it will provide a drug-free workplace by:

(A) Publishing a statement:

(1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in the grantee's of Contractor's workplace.

(2) Specifying the actions that will be taken against employees for violations of such prohibition.

(3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

(a) Abide by the terms of the statement; and

(b) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(B) Establishing a drug free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's or Contractor's policy of maintaining a drug-free workplace

(3) Any available drug counseling, rehabilitation, and employee assistance program; and

(4) The penalties that may be imposed upon employees for drug violations.

(C) Making it a requirement to give a copy of the statement required by subsection (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(D) Notifying the contracting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) from an employee or otherwise receiving actual notice of such conviction.

(E) Imposing a sanction on, or requiring the satisfactory participation in a drug assistance or rehabilitation program by any employee who is so convicted, as required by Illinois Compiled Statutes, Chapter 127, Act 580, Paragraph 5.

(F) Assisting employees in selecting a course of action in the event drug counseling treatment and rehabilitation is required and indicating that a trained referral team is in place.

(G) Making a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

Failure to abide by this certification shall subject the Contractor to the penalties provided in Illinois Compiled Statutes, Chapter 30, Act 580, Paragraph 6.

Air Comfort
Contractor
Date: 12/19/24

Attest

Contractor's Certification Regarding
Non-Payment of Compensation

AirComfort/Applied Controls hereby certifies that neither it nor any of its affiliated companies, nor any of its agents, employees or representatives offered or paid any type of compensation or commission to any third party, including any official of the Village of Western Springs, Illinois, to influence the Village of Western Springs.

AirComfort
Contractor

DATED: 12/19/24

ATTEST:

Exhibit A

Agreement

This Agreement (the "Agreement") made this the ___day of_____in the year 2024 by and between the Village of Western Springs, Illinois, 740 Hillgrove Avenue, Western Springs, Illinois, 60558 (the "Village") and _____ (the "Contractor"). The Village and the Contractor are at times referred herein, individually, as the "Party" and, collectively, as the "Parties".

The Village and Contractor agree as set forth below:

1. For the financial consideration hereinafter set forth, the Contractor agrees to furnish and provide and install all commercially necessary labor, materials, equipment and services and to do all other activities commercially required (the "Work") to complete the Village of Western Springs Village Hall – Temperature Control System Upgrade as set forth in the contract requirements, a copy of which is attached here to as exhibit 1 dated 12.05.2024, and as agreed to in the Contractor's Proposal dated 12.19.2024.

2. The Contractor agrees to commence the Work on or before **February 2025,** and will officially, diligently, and expeditiously conduct the Work in a commercially reasonable manner so as to assure completion by **April 2025**.

3. The Village shall pay the Contractor for the performance of the Work to complete the Village of Western Springs Village Hall – Temperature Control System Upgrades a total dollar amount not to exceed _____ in accordance with the Contractor's Proposal dated **December 19, 2024,** subject to further additions and deductions as may be agreed upon in accordance with the terms of the contract documents. Payment shall be made monthly however, the financial payments and any penalties associated with late payments due under the Contract shall be paid by the Village only in accordance with the provisions of the Local Government Prompt Payment Act (50 ILCS 505/).

4. The Contractor represents and warrants that it will comply with the applicable state and federal laws concerning prevailing wage rates and all applicable state and federal laws and requirements concerning equal opportunities.

5. This Agreement shall consist of, incorporate and include each of the following contract documents, whether attached hereto or incorporated by reference herein:

   A. Legal Notice (Advertisement for Bid) published on **December 5, 2024.**

   B. Instructions to Bidders dated **December 5, 2024.**

   C. Contractor's Proposal dated **December 19, 2024.**

D. Contractor's bid bond submitted by _____ in the amount of $_____ dated **December 19, 2024.**

E. General Specifications and all additional provisions **December 5, 2024.**

F. Contractor's Drug Free Workplace Certification dated **December 19, 2024.**

G. Contractor's Certification Regarding Non-Payment of Compensation dated **December 19, 2024.**

H. Exhibit B - Contractor certifications including Certification of Eligibility to Enter into Public Contracts.

I. Exhibit C – Change Order Form

J. Required Performance and Payment Bonds provided by the Contractor.

K. Required Insurance Certificates provided by the Contractor.

L. Rider to Contract- General Conditions

6. Notice to Proceed With the Work. The Vendor shall commence work under this Contract upon issuance of written Notice to Proceed and the duration of the contract shall be one year or as otherwise stated with a completion date.

7. Independent Contractor Status; Reporting. The Vendor is an IRS Form 1099 independent contractor and not an employee of the Village. To comply with the employer reporting requirements of Public Act 103-0343 (amendments to the Illinois Unemployment Insurance Act regarding the Directory of New Hires, 820 ILCS 405/1801.1), upon execution of this Contract, the Village shall submit the Vendor's name and required information to the Illinois Department of Employment Security.

8. Effective Date. After this Contract has been signed by the Vendor, this Contract shall be deemed dated and become effective on the date that the Village President or the Village Manager signs this Contract.

EXCEPTIONS TO THIS BID (THIS PAGE MUST ACCOMPANY BID)

All of the contract documents are a part of this Agreement as if attached hereto or repeated herein.

IN WITNESS WHEREOF, the signatories below, pursuant to properly issued authority, have signed this Contract, which shall become effective on the date that the Village President or Village Manager signs this Contract.

Contractor:	Village of Western Springs
By: _____ (Name and Title)	By: _____ Heidi Rudolph, Village President
*Corporate Seal of corporation	*Village Seal
Attest:	
By: _____ (Name and Title)	By: _____ Ed Tymick, Village Clerk

EXHIBIT B

CERTIFICATION OF ELIGIBILITY TO ENTER INTO PUBLIC CONTRACTS BY THE CONTRACTOR

I, _____, having being first

duly sworn, depose and state that I am the

_____

(insert "sole owner "partner", "president"," other" proper title)

and the authorized agent of _____, which has submitted a proposal to, and is entering into a contract with, the Village of Western Springs for the performance of work in relation to the _____ Project in the Village of Western Springs, and certifies on behalf of said company as follows:

1. The company is not barred from contracting with the Village as a result of a violation of either Section 33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "bid-rigging" or "bid-rotating" of any state or of the United States.

2. The company shall comply with all applicable provisions of the Illinois Human Rights Act and has a written sexual harassment policy in full compliance with that Act.

3. The company is not delinquent in the payment of any tax administered by the Illinois Department of Revenue or,

   a. is contesting such liability or the amount of tax in accordance with procedures established by the appropriate revenue act, or

   b. has entered into an agreement with the Department of Revenue for payment of all taxes due and is in compliance with that agreement.

   c. Not in default, as defined in 5 ILCS 385/2, on an educational loan, as defined in 5 ILCS 385/1.

4. In compliance with the Veterans Preference Act (330 ILCS 55/).

5. In compliance with equal employment opportunities and, during the performance of the Agreement, the Contractor shall:

   a. Not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

b. If it hires additional employees in order to perform the Agreement or any portion hereof, it will determine the availability (in accordance with the Illinois Department of Human Right's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

c. In all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

d. Send to each labor organization or representative of workers, with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the VILLAGE and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

e. Submit reports as required by the Illinois Department of Human Rights, Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

f. Permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

g. Not maintain or provide for its employees any segregated facilities at any of its establishments, and not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. As used in this section, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin because of habit, local custom or otherwise.

6. In compliance with 775 ILCS 5/2-105(A)(4) by having in place and enforcing a written sexual harassment policy.

7. In agreement that, in the event of non-compliance with the provisions of this certification relating to equal employment opportunity, the Illinois Human Rights Act or the Illinois Department of Human Rights, Rules and Regulations, the Contractor may be declared ineligible for future contracts with the VILLAGE, and the Agreement may be canceled or

voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

8. In compliance with the requirements of 30 ILCS 580/ (Drug Free Workplace Act).

9. The Contractor and its officers, employees and agents agree not to commit unlawful discrimination and agree to comply with all applicable provisions of the Illinois Human Rights Act, Title VII of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act, the Age Discrimination in Employment Act, Section 504 of the Federal Rehabilitation Act, and all applicable rules and regulations. The Contractor certifies that it is an "Equal Opportunity Employer" as defined by federal and State laws and regulations, and agrees to comply with the Illinois Department of Human Rights ("IDHR") Equal Opportunity Employment clause as required by the IDHR's Regulations (44 Ill. Adm. Code, Part 750, Appendix A). As required by Illinois law and IDHR Regulation, the Equal Opportunity Employment clause is incorporated by reference in its entirety as though fully set forth herein. The Contractor certifies that it agrees to comply with the Prohibition of Segregated Facilities clause, which is incorporated by reference in its entirety as though fully set forth herein. See, Illinois Human Rights Act (775 ILCS 5/2-105). See also, Illinois Department of Human Rights Rules and Regulations, Title 44, Part 750. Administrative Code, Title 44: Government Contracts, Procurement and Property Management, Subtitle B: Supplemental Procurement Rules, Chapter X: Department of Human Rights, Part 750: Procedures Applicable to All Agencies, Section 750.160: Segregated Facilities (44 Ill. Adm. Code 750.160)

By: _____
Name: _____
Title: Authorized Agent of Contractor

Subscribed and Sworn To
Before Me This _____ Day
Of _____, 2024.

_____
Notary Public

Notary Public

Exhibit C

CHANGE ORDER NO.:

Owner:
Engineer:
Contractor:
Project:
Contract Name:
Date Issued:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

The Contract is modified as follows upon execution of this Change Order:
Description:
Attachments:

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)	Accepted by Contractor
By: _____	_____
Title: _____	_____
Date: _____	_____
_____	Approved by Funding Agency (if applicable)
By: _____	_____
Title: _____	_____
Date: _____	_____

Village of Western Springs
Recreation Center - Temperature Control Upgrades
JOB NO. 24.07.10
Bid Documents due December 19, 2024, 9:00 am

Bidder	Base Bid Number	Alternate 1	Alternate 2	Alternate 3	Alternate 4	Alternate 5	Deduct	Bid Bond	References
Air Comfort	**$84,900.00**	$9,450.00	$1,150.00	$1,150.00	$8,550.00	$1,550.00		Yes	Yes
Interactive Buiding Solutions	$167,100.00	$31,200.00	$2,000.00	$2,000.00	$9,300.00	$6,100.00		Yes	Yes
Building Automation Solutions	$207,280.00	$34,720.00	$4,400.00	$4,000.00	$10,200.00	$6,800.00	$8,600.00	Yes	Yes

ORDINANCE NO. 25-XXXX

VOTE:

Voting aye:

Voting nay:

APPROVING BUDGET AMENDMENTS / TRANSFER OVER $10,000.00 TO THE FISCAL YEAR 2025 OPERATING BUDGET IN THE GENERAL FUND

DATE: February 24, 2025

OTHER: Published in pamphlet form

WHEREAS, the Village of Western Springs acting by and through its President and Board of Trustees (Board) has previously approved an Operating Budget for the Fiscal Year ending December 31, 2025 as part of Ordinance 24-3227; and

WHEREAS, the Director of Municipal Services is requesting a budget amendment in the General Fund for costs associated with the HVAC replacement at Village Hall. The increases are due to a scope change in the project due to outdated equipment.

NOW THEREFORE BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, as follows:

SECTION 1. That the transfers/amendments over $10,000.00 to the Operating Budget for the Fiscal Year Ending December 31, 2025, are hereby approved in order to fund the following:

1. The costs of HVAC replacement at Village Hall

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Special Meeting thereof, held on the 24th day of February 2025 and approved by me as President on the same day.

ATTEST:

Village President Heidi Rudolph

Village Clerk Edward Tymick

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.A.

To: Board of Trustees
From: Jeff Koza, Director of Engineering Services
CC: Ellen Baer, Village Manager, Heather Valone, Director of Community Development
RE: Remediation Agreement with Regards to Certain Sump Pump Improvements and Water Discharge at 4524 & 4528 Grand Avenue (Omnibus Item)

Recommendation

The Planning and Zoning Committee reviewed this item at their meeting on February 6, 2025. The item was reviewed during the "other business" portion of the meeting and thus the Committee did not provide a formal recommendation on this item at the meeting.

Summary

The owners of 4528 Grand Avenue have purchased 4524 Grand Avenue which is the lot to the north of 4528 Grand Avenue. The owners have submitted an application to demolish the existing home and they plan to build an addition to their current home on the 4524 property along with a new swimming pool. The development includes the installation of a new sump pump for the additional structure.

Engineering Services Staff was called to the 4528 Grand Avenue property in 2022 due to an overactive sump pump that was believed to be causing standing water on the sidewalk in front of the home. Staff had concerns that adding another sump pump to the property could worsen the situation. The property owners advised that they believe the sump pump is now far less active than it had been previously.

The purpose of this remediation agreement is to come to a formal agreement with the property owners that requires them to take corrective action to address any drainage issues on the sidewalk or Village right of way caused by the new development and identified by Village staff. The Village attorney has advised that this agreement with the property owners must be signed by the Village President. Staff will present the Board with a resolution authorizing the approval of the agreement at the February 24, 2025 Board of Trustees meeting.

Included in the agenda packet is a copy of the remediation agreement that was drafted by the Village Attorney and has been executed by the property owners.

Financial Impact

N/A

Recommended Motion

I move to approve the Remediation Agreement with regard to certain sump pump improvements and water discharge at 4524 & 4528 Grand Avenue.

Strategic Plan Alignment

N/A

File Attachments

1. 4524-4528 Grand Avenue Remediation Agreement

REMEDIATION AGREEMENT BETWEEN THE VILLAGE OF WESTERN SPRINGS AND [HOMEOWNERS OF 4524 AND 4528 GRAND AVENUE] WITH REGARDS TO CERTAIN SUMP PUMP IMPROVEMENTS AND WATER DISCHARGE

This Remediation Agreement (the "Agreement") has been entered into this 3 day of February, 2025, by and between the Village of Western Springs, an Illinois municipal corporation (the "Village"), and Doug and Natalie King (collectively the "Property Owners") (the Village and the Property Owners are collectively referred to herein as the "Parties"), in regard to the following:

WHEREAS, the Village is the owner of a certain public right-of-way (i.e., the sidewalk and parkway) that is located on property within the corporate boundaries of and controlled by the Village adjacent to the 4524 and 4528 Grand Avenue property and adjacent to the west side of Grand Avenue in Western Springs, Illinois (the "ROW Area"), attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, the Property Owners are the owners of the residential property at 4524 and 4528 Grand Avenue, Western Springs, Illinois (the "Residence"), which is adjacent to the ROW Area. The Property Owners have a sump pump and a discharge component that has historically been active and has caused flooding and pooling of water on the sidewalk in the ROW Area; and

WHEREAS, the Property Owners have submitted a permit application to the Village of Western Springs which involves demolition of an existing home and construction of a new building structure which includes plans to install and maintain an additional new sump pump and discharge component, as shown on the drawing attached hereto as **Exhibit "A"** and made a part hereof (together the "Sump Pump Improvements"); and

WHEREAS, subject to executing this Agreement, the Property Owners have applied for and received Village approval of a Permit to install and maintain the Sump Pump Improvements subject to certain conditions to be set forth below; and

WHEREAS, this Agreement is allowed by Sections 8-1-1 (Supervision By Department Of Public Works), 8-2-7(G) (Restricted And Prohibited Acts And Conditions), and 8-1-10 (Restricted And Prohibited Acts And Conditions) of Title 8 (Public Ways and Property) of the Western Springs Municipal Code and is a necessary inducement for the Village to prevent obstruction, unsafe conditions, and damage to a public sidewalk. The Parties are also authorized to enter into this Agreement pursuant to the statutory authority set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970 and the applicable provisions of the Illinois Municipal Code, including 65 ILCS 5/11-20-5 and 5/11-20-10, and find that entering into this Agreement is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners and the public.

NOW, THEREFORE, the Village grants the Property Owners a permit to install and maintain the Sump Pump Improvements in accordance with the following terms and conditions:

1. Installation of Sump Pump Improvements.

The Property Owners shall be allowed to construct the Sump Pump Improvements as shown on **Exhibit "A"**, including a new additional sump pump and discharge component. The Property Owners, at

their sole cost, agree to take all commercially reasonable efforts and measures to install the Sump Pump Improvements to prevent the recurrence of sump pump water discharge issues, including regular ongoing maintenance and inspection of the sump pump system and discharge component. The Property Owners further agree that the installation will comply with all relevant statutes, ordinances, requirements, and laws of all Village, State, county, and federal authorities now in force, or which may hereafter be enacted, relative to the Sump Pump Improvements.

2. Remediation Required.

During the lifetime of the Sump Pump Improvements, in the event that the Village Staff determines that the Sump Pump Improvements allowed under the contemplated permit are causing adverse water and drainage impacts to neighboring private properties and/or to the Village sidewalk or any other part of the Village ROW or other public or private properties, the Property Owners agree to promptly take all commercially reasonable efforts to implement additional remedial measures to remediate the water and drainage issues at 100% cost to the Property Owners. Prior to taking any additional remedial measures, the Property Owners agree to consult with the Village to determine whether a permit is required and agree to obtain any and all required permits. Additional remedial measures shall be completed within one hundred twenty (120) calendar days from the receipt of written notice from the Village. Notice shall be effective if mailed or personally delivered to the following address:

Property Owner
4528 Grand Avenue
Western Springs, Illinois 60558

3. Release, Hold Harmless and Indemnification.

The Property Owners agree as follows:

A. **Release Of Claims:** The Property Owners agree to waive and relinquish any and all claims, demands or causes of action of any kind, including but not limited to death, damages, personal injury, illness, or economic and non-economic damages or losses, that the Property Owners or their family members, invitees or members of the public may have against the Village and its officers, appointed and elected officials, President and Trustees, employees, agents, attorneys, engineers and volunteers arising out of, connected with or in any way associated with the approval, existence, use or operation of the Sump Pump Improvements or this Agreement. This Release of Claims provision expressly includes any and all claims, demands or causes of action of any kind, including but not limited to death, damages, personal injury, or economic and non-economic damages or losses, related to or arising from physical or environmental conditions created by the operation or use of the Sump Pump Improvements, specifically including any claims, demands or causes of action based on unnatural accumulations of snow or ice caused by the use or operation of the Sump Pump Improvements.

B. **Risk Of Injury:** The Property Owners assume the full risk of personal injuries, death, illness, damages or losses of any kind which their family members, invitees, or members of the public may sustain in any way as a result of the approval, existence, use or operation of the Sump Pump Improvements. The Property Owners further assume the risk of injuries, death, damages, or losses of any kind which their family members, invitees or members of the public may sustain in any way in, on or about the adjacent

ROW Area as a result of the approval, existence, use or operation of the Sump Pump Improvements. This Risk Of Injury provision expressly includes any and all claims, demands or causes of action of any kind, including but not limited to death, damages, personal injury, or economic and non-economic damages or losses, related to or arising from physical or environmental conditions created by the operation or use of the Sump Pump Improvements, specifically including any claims, demands or causes of action based on unnatural accumulations of snow or ice caused by the use or operation of the Sump Pump Improvements.

C. **Indemnity and Defense:** The Property Owners agree to protect, indemnify, save and hold forever harmless and defend the Village and its officers, appointed and elected officials, President and Trustees, employees, agents, attorneys, engineers and volunteers from and against any and all liabilities, obligations, claims, demands, economic and non-economic damages or losses, penalties, causes of action of any kind, including the Property Owners and their family members, invitees or members of the public arising out of, connected with or in any way associated with the approval, existence, use or operation of the Sump Pump Improvements or any provision or section of this Agreement. This Indemnity and Defense provision expressly includes any and all claims, demands or causes of action of any kind, including but not limited to death, damages, personal injury, illness or economic and non-economic damages or losses, related to or arising from physical or environmental conditions created by the operation or use of the Sump Pump Improvements, specifically including any claims, demands or causes of action based on unnatural accumulations of snow or ice caused by the use or operation of the Sump Pump Improvements.

4. Default.

Failure or refusal by the Property Owners to comply with any of the obligations set forth in this Agreement or the Village Municipal Code, including failure to pay any fee or charge owed to the Village when due shall constitute an "Event of Default".

5. Effective Date.

This Agreement shall become effective upon the date of execution by all Parties, which date shall be inserted on Page 1 hereof, and shall continue for the life of the Sump Pump Improvements.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date of the last signatory below, which date shall be inserted on Page 1 of this Agreement.

VILLAGE OF WESTERN SPRINGS

By: _____
Signature: _____
Title: _____
Date: _____, 2025.

PROPERTY OWNERS:

By: Doug King

Signature: _____
Date: 2/3, 2025.

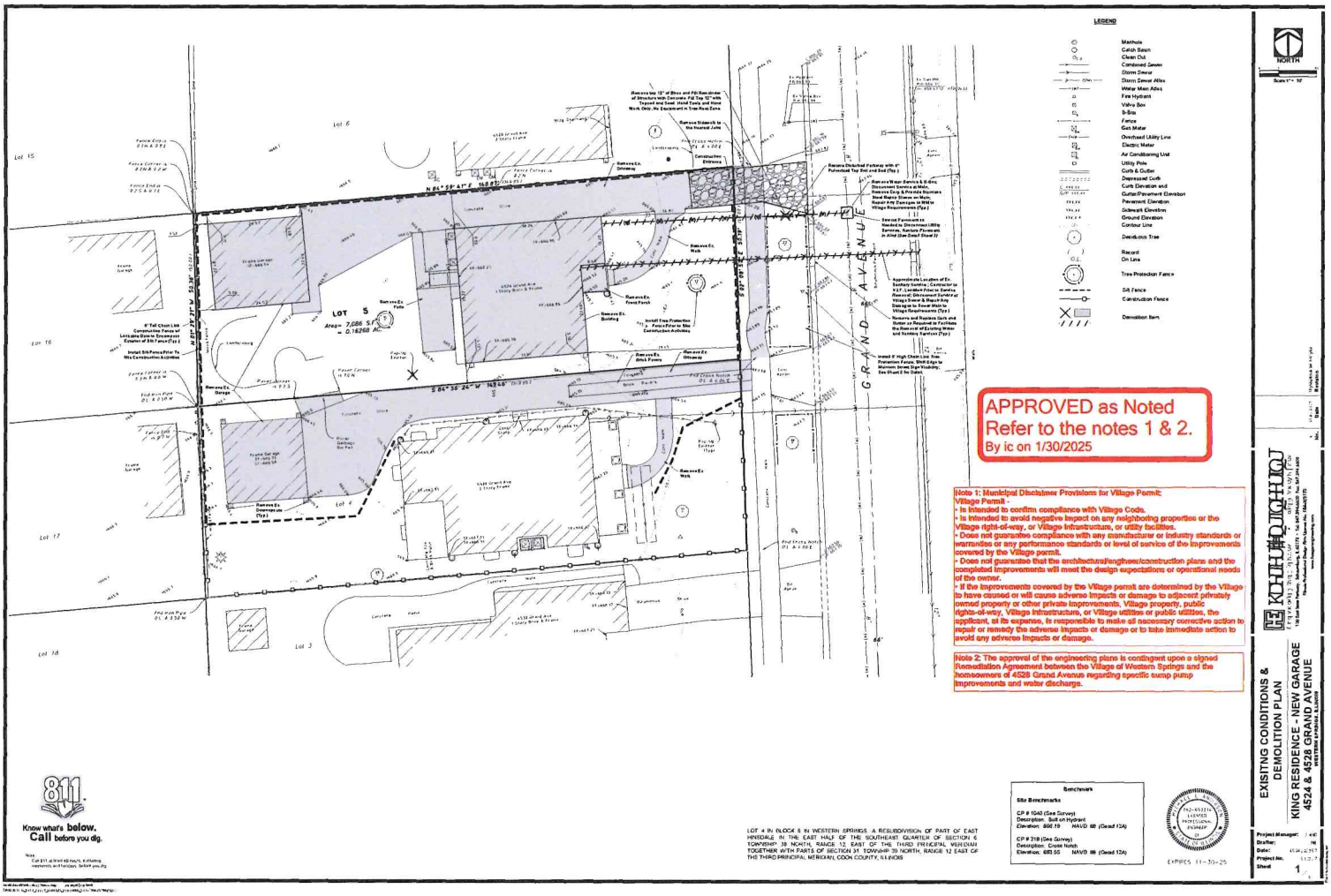
By: Natalie King

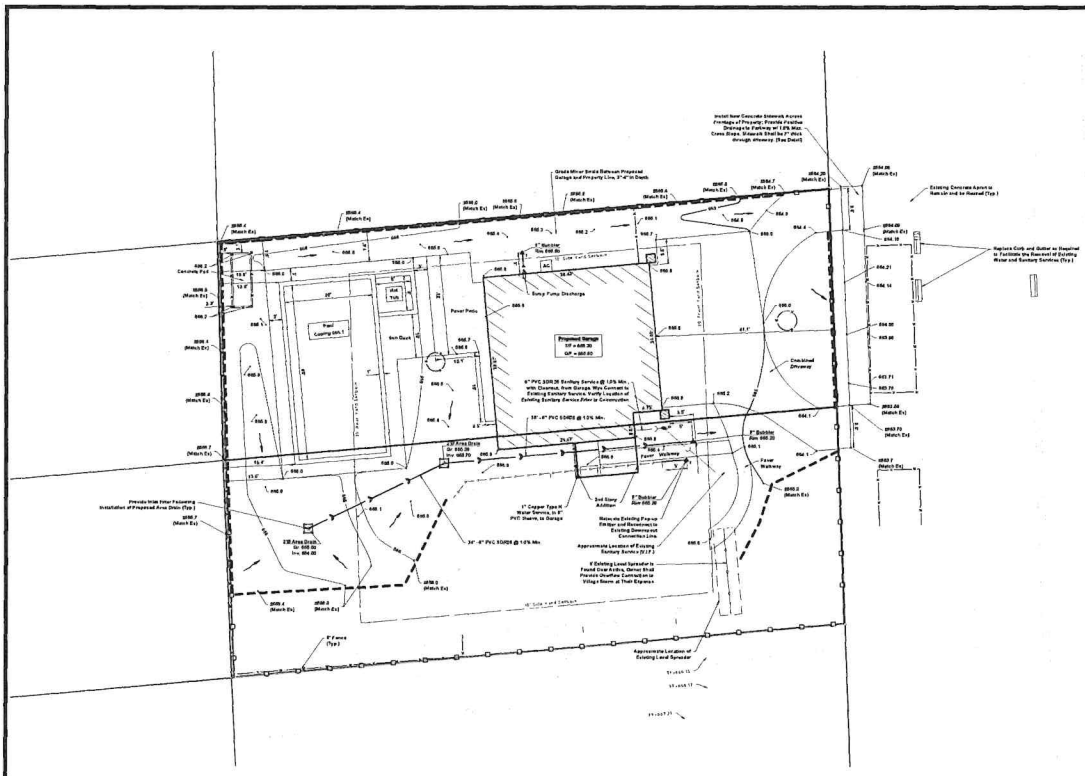
Signature: _____
Date: 2.3., 2025.

Exhibit "A"

Site Plan and Drawings
of the Sump Pump Improvements

(attached)


LEGEND
Manhole
Catch Basin
Clean Out
Combined Sewer
Storm Sewer
Storm Sewer Atlas
Water Main Atlas
Fire Hydrant
Valve Box
B-Box
Fence
Gas Meter
Overhead Utility Line
Electric Meter
Air Conditioning Unit
Utility Pole
Curb & Gutter
Depressed Curb
Curb Elevation and Gutter/Pavement Elevation
Pavement Elevation
Sidewalk Elevation
Ground Elevation
Contour Line
Deciduous Tree
Record
On Line
Tree Protection Fence
Silt Fence
Construction Fence
Demolition Item
NORTH
LOT 5
Area= 7,686 S.F.
= 0.18268 Ac.
GRAND AVENUE
APPROVED as Noted
Refer to the notes 1 & 2.
By ic on 1/30/2025
Note 1: Municipal Disclaimer Provisions for Village Permit;
Village Permit -
• Is intended to confirm compliance with Village Code.
• Is intended to avoid negative impact on any neighboring properties or the Village right-of-way, or Village infrastructure, or utility facilities.
• Does not guarantee compliance with any manufacturer or industry standards or warranties or any performance standards or level of service of the improvements covered by the Village permit.
• Does not guarantee that the architecture/engineer/construction plans and the completed improvements will meet the design expectations or operational needs of the owner.
• If the improvements covered by the Village permit are determined by the Village to have caused or will cause adverse impacts or damage to adjacent privately owned property or other private improvements, Village property, public rights-of-way, Village infrastructure, or Village utilities or public utilities, the applicant, at its expense, is responsible to make all necessary corrective action to repair or remedy the adverse impacts or damage or to take immediate action to avoid any adverse impacts or damage.
Note 2: The approval of the engineering plans is contingent upon a signed Remediation Agreement between the Village of Western Springs and the homeowners of 4528 Grand Avenue regarding specific sump pump improvements and water discharge.
Know what's below.
Call before you dig.
Benchmark
Site Benchmarks
CP # 1040 (See Survey)
Description: Bolt on Hydrant
Elevation: 806.19 NAVD 88 (Geod 12A)
CP # 218 (See Survey)
Description: Cross Notch
Elevation: 683.55 NAVD 88 (Geod 12A)
EXPIRES 11-30-25
LOT 4 IN BLOCK 6 IN WESTERN SPRINGS, A RESUBDIVISION OF PART OF EAST HINSDALE IN THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 6 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN TOGETHER WITH PARTS OF SECTION 31 TOWNSHIP 39 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS
EXISITNG CONDITIONS & DEMOLITION PLAN
KING RESIDENCE - NEW GARAGE
4524 & 4528 GRAND AVENUE



LEGEND

Manhole
Catch Basin
Clean Out
Combined Sewer
Storm Sewer
Storm Sewer Atlas
Water Main Atlas
Fire Hydrant
Valve Box
B-Box
Fence
Gas Meter
Overhead Utility Line
Electric Meter
Air Conditioning Unit
Utility Pole
Curb & Gutter
Depressed Curb
Curb Elevation and
Gutter/Pavement Elevation
Pavement Elevation
Sidewalk Elevation
Ground Elevation
Contour Line
Deciduous Tree
Record
On Line
Tree Protection Fence
Inlet Filter Basket
Silt Fence
Construction Fence
Softscape Flow
Sump Pump Discharge
Sanitary Service
Water Service
Storm Sewer

NORTH
Scale 1" = 10'

BUILDING COVERAGE CALCULATIONS

STRUCTURE	AREA (SF)
1ST FLOOR HOUSE	1,475
ROOF COVERED FRONT PORCH	230
PROPOSED GARAGE	690
PROPOSED SOCIAL SPACE	605
2ND FLOOR HALLWAY	68
MUDROOM ROOF	48
ROOF COVERED PATIO	80
TOTAL	3,386

PER CODE UP TO 30% OF LOT AREA IS ALLOWED

LOT AREA	14,126
30% OF LOT AREA	4,238
PROPOSED BUILDING COVERAGE	3,386

ACTUAL (3,386) < MAX ALLOWED (4,238)

IMPERVIOUS COVERAGE CALCULATIONS

LOT AREA 14,126

EXISTING		PROPOSED	
HOUSE & GARAGE	3,780	EX. HOUSE	1,475
DRIVEWAY	2,600	EX. FRONT PORCH	230
WALKS, STOOP, PATIO	873	EX. PATIO/PERGOLA	197
AC PAD	19	GARAGE & COLUMNS	888
		SOCIAL SPACE	605
		ROOF AT SOCIAL SPACE	80
		PAVER PATIO	230
		POOL & HOT TUB	864
		SUN DECK	693
		POOL EQUIP. PAD	48
		COMBINED DRIVEWAY	1,372
		WALKWAYS	198
		2ND FLOOR HALLWAY	68
		MUDROOM ROOF	48
		AC PAD	75
TOTAL IMPERVIOUS	7,280	TOTAL IMPERVIOUS	6,963
% IMPERVIOUS	51.53%	% IMPERVIOUS	49.43%
		Net Decrease	-297

EXPIRES: 11-30-25

811
Know what's below.
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

GENERAL NOTES

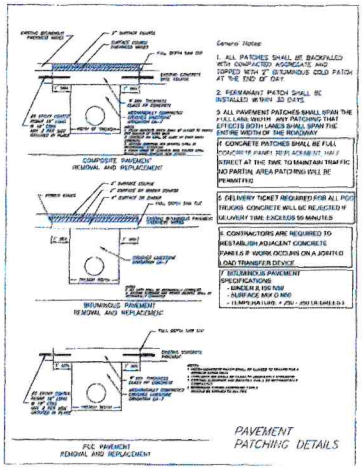
1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES, EVEN THOUGH THEY MAY NOT BE SHOWN ON THESE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE VILLAGE AND THE OWNER, OR BE REPLACED.
2. CONTRACTOR SHALL MAINTAIN OR KEEP/HAVE STREET FREE OF EXCESSIVE DIRT AT ALL TIMES. CONCRETE AND LATEX CONSTRUCTION EQUIPMENT WASH-OUT MUST NOT OCCUR WITHIN THE RIGHT-OF-WAY OR INTO THE STORM SEWER.
3. DUST CONTROL METHODS SHOULD BE USED TO MINIMIZE THE SPREAD OF AIRBORNE PARTICLES. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, SOD, RESEEDING/MENT CONTROL METHODS SHALL BE IMPLEMENTED AND VEGETATION SHALL BE PROMPTLY RE-ESTABLISHED WITHIN 30 DAYS IN SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL. MINIMIZE THE AMOUNT OF NATURAL VEGETATION REMOVED.
4. STORM WATER RUNOFF FROM THIS SITE MUST BE MAINTAINED ON THE SITE AND NOT BE DIRECTED OR DISCHARGED ONTO ADJACENT PROPERTIES. MATERIALS STORED ON SITE MUST ALSO NOT CREATE RUNOFF THAT ADVERSELY AFFECTS ADJACENT PROPERTIES.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB SITE.
6. CONTRACTOR IS RESPONSIBLE FOR COMPARING ENGINEER'S PLAN TO ARCHITECT'S PLAN. ANY DISCREPANCIES MUST BE CLARIFIED BY THE ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BRACING, SHORING, OR ANY OTHER NECESSARY MEASURES/METHODS TO ENSURE THE PROTECTION OF ALL TREES SHOWN TO BE SAVED ON THESE PLANS.
8. CALL J.U.L.I.E 800-892-0123 BEFORE STARTING CONSTRUCTION

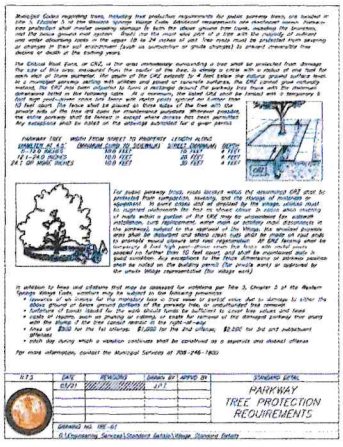
KHUHAMOTHOT
ENGINEERING, INC.
Civil • Structural • Site
120 East Main Street, Schaumburg, IL 60173 • Tel: 847.254.4400 Fax: 847.254.4405
www.khuhamothengineering.com

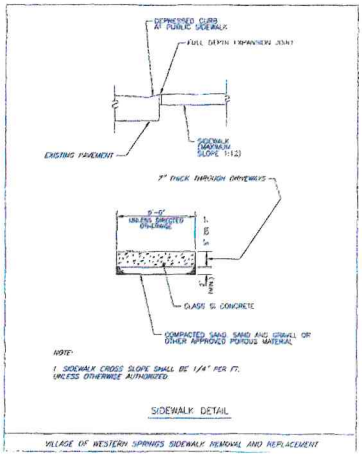
SITE IMPROVEMENT PLAN

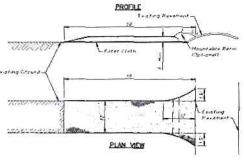
KING RESIDENCE - NEW GARAGE
4524 & 4528 GRAND AVENUE
WESTERN SPRINGS, ILLINOIS

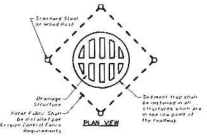
Project Manager: [illegible]
Drafter: HE
Date: 10.24.2025
Project No. 5323.7
Sheet 2

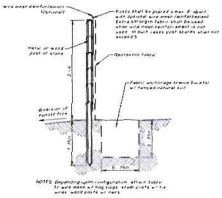


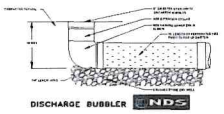


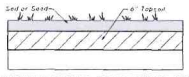


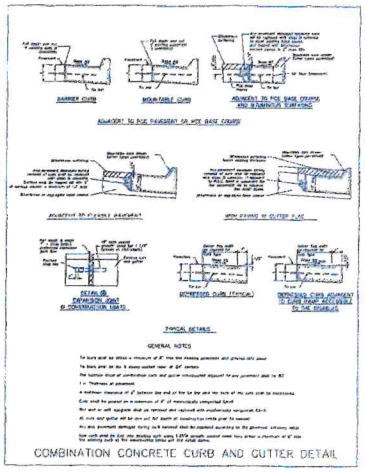












KOHUTEK
STANDARD DETAILS
KING RESIDENCE - NEW GARAGE
4524 & 4528 GRAND AVENUE
Project Manager:
Drafter:
Date:
Project No.
Sheet 3

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.B.

To: Board of Trustees
From: Heather Valone, Director of Community Development
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager, Jill Izzo, Village Clerk, Michael Jurusik, Village Attorney, Anne Skrodzki, Village Attorney
RE: 2025 Official Zoning Map (Report only)

Recommendation

The Planning and Zoning Committee reviewed this item at their meeting on February 6, 2025, and recommended the approval of the 2025 Official Zoning Map.

Summary

The Village of Western Springs's Community Development Department has prepared the 2025 Official Zoning Map for review and recommendation by the Planning & Zoning Committee and for adoption by the Corporate Authorities. The Illinois Municipal Code 65 ILCS 5/11-13-19 requires that a municipality adopt and publish a new zoning map on an annual basis by March 31st of each year. The published zoning map should include and acknowledge existing zoning, boundary changes (i.e. annexations), zoning map amendments, and subdivisions that have been approved the preceding year.

Sec. 11-13-19. Except as otherwise provided in this section, the corporate authorities shall cause to be published no later than March 31 of each year a map clearly showing the existing zoning uses, divisions, restrictions, regulations and classifications of such municipality for the preceding calendar year. The first map published in 1960 shall reflect all zoning uses, divisions, restrictions, regulations and classifications in effect on and prior to December 31, 1959. If in any calendar year after the first map is published, there are no changes in zoning uses, divisions, restrictions, regulations and classifications in such municipality, no map shall be published for such calendar year. The map published by the corporate authorities shall be the official zoning map. The corporate authorities may establish a fee charged any person desiring a copy of such map. Such fee shall be paid to the appropriate zoning officer and shall be applied to defray the cost of publication of the official map.

For clarification purposes, any changes being incorporated into the official zoning map have already received Plan Commission and/or Board of Zoning Appeals recommendations and have also been authorized, approved and adopted by the Corporate Authorities. There is no express legal requirement that the Plan Commission review the zoning map, but staff believes that it is prudent that the Planning & Zoning Committee be included in this process because of their

advisory role.

Although the Village has had no changes to the zoning map in the last calendar year, the Village is still required to update the date and republish the map. Attachment 1 contains the current zoning map. No action from the Committee or the Village Board is required. The map only requires review before staff will ask the Village President and Clerk to sign the map. The updated map will then be posted on the Village's website. Note that this requirement is only for the static zoning map (via PDF), the Village's interactive zoning map is updated in real time as zoning changes are approved by the Village Board.

The Planning and Zoning Committee reviewed the draft 2025 Zoning Map and resolution at their meeting on February 6, 2025, and recommended to advance the item for review and discussion by the Village Board. The draft ordinance for adoption of the 2025 Official Zoning Map is attached.

Attachments

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1. Draft Map - 2025 Village of Western Springs Zoning Map Dated January 10, 2025

2. Draft Ordinance - An Ordinance approving an updated version of the Village of Western Springs Official Zoning Map pursuant to Sections 11-12-6, 11-12-7 and 11-13-19 of the Illinois Municipal Code (65 ILCS 5/11-12-6, 11-12-7 And 11-13-19) and Section 10-5-3 (Zoning Map) of the Western Springs Municipal Code

Financial Impact

None.

Recommended Motion

I move to approve the 2025 Official Zoning Map.

Strategic Plan Alignment

Economic Development.

File Attachments

1. Draft Map
2. Draft Ordinance

VILLAGE OF Western Springs

2025 Official Zoning Map

DRAFT

0 250 500 1,000 1,500 2,000 2,500 Feet

ADOPTED BY THE VILLAGE OF WESTERN SPRINGS

Date 1/10/2025 Village President

ATTEST:

Deputy Village Clerk (SEAL)

DISCLAIMER: This drawing is neither a legally recorded map nor a survey, and is not intended to be used as such. This drawing is a compilation of records, information and data located in various village, county and state offices, and other sources, affecting the land area displayed and is to be used for reference purposes only. The Village of Western Springs shall not be responsible for any inaccuracies herein contained. If discrepancies are found, please contact the Western Springs Community Development Department.

Legend

C1	*village center - commercial district*
C2	*community shopping district*
MXD	*mixed use commercial - residential district*
ORI	*office research and limited industrial district*
O	*limited office district*
A	*single family residence*
R1	*single family residence*
R2	*single family residence*
R2PUD	*residential planned unit development*
R3	*two-family residence*
R4	*multi-family residence*
R4PUD	*residential planned unit development*
SFA	*single family attached residence*
MGL	*municipal and governmental land district*
CU	*existing conditional use (refer to Community Development Dept. for more information)*
	parks
	corporate limits

ORDINANCE NO. 25-_____
VOTE:
AYES:
NAYS:
ABSTAIN:
DATE: February 24, 2025.
OTHER: Published in pamphlet form.

AN ORDINANCE APPROVING AN UPDATED VERSION OF THE VILLAGE OF WESTERN SPRINGS OFFICIAL ZONING MAP PURSUANT TO SECTIONS 11-12-6, 11-12-7 AND 11-13-19 OF THE ILLINOIS MUNICIPAL CODE (65 ILCS 5/11-12-6, 11-12-7 AND 11-13-19) AND SECTION 10-5-3 (ZONING MAP) OF THE WESTERN SPRINGS MUNICIPAL CODE.

WHEREAS, pursuant to Sections 11-12-6, 11-12-7 and 11-13-19 of the Illinois Municipal Code (65 ILCS 5/11-12-6, 11-12-7 and 11-13-19) and Section 10-5-3 (Zoning Map) of the Development Control Ordinance of the Western Springs Municipal Code ("DCO"), the President and Board of Trustees of the Village of Western Springs (the "Village Board") desire to approve and adopt an updated version of the Official Zoning Map consisting of the entire land area located within the corporate boundaries of the Village of Western Springs, as described in the Comprehensive Land Use Plan approved by the Corporate Authorities under Ordinance No. 03-2226 on February 24, 2003, as amended by Ordinance No. 11-2643 dated August 22, 2011 (the "2011 Western Springs Downtown Redevelopment Plan") and by Ordinance No. 22-3074 dated April 25, 2022, as part of the adoption of the "2022 Land Use Plan Amendments", and which contains all of the map amendments, conditional use permits and planned unit developments that have been approved since the last time the Official Zoning Map was updated. A copy of the updated Official Zoning Map dated January 10, 2025 is attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, in accordance with 65 ILCS 5/11-12-6, the attached Official Zoning Map contains or incorporates by reference the standard requirements of the municipality relating to size of streets, alleys, public ways, parks, playgrounds, school sites, other public grounds, and ways for public service facilities; the kind and quantity of materials which shall be used in the construction of streets and alleys; and the kind and quality of materials for public service facilities as may be consistent with Illinois Commerce Commission or industry standards, and the standards required for drainage and sanitary sewers, and collection and treatment of sewage. The Official Zoning Map is drawn to scale, is reasonably accurate, and shows the north point, section lines and numbers, and streams, all of which are incorporated into this Ordinance; and

WHEREAS, at a public meeting held on February 6, 2025, the Planning and Zoning Committee (the "Committee") reviewed and discussed the attached version of the Official Zoning Map and received input from the Village staff and provided an opportunity for public input, and then recommended that the Official Zoning Map be approved by the Village Board so that it can be placed with the Village Clerk's Office and made available to the public for inspection and photocopying; and

WHEREAS, at public meetings held on February 10, 2025 and February 24, 2025, the Village Board reviewed and discussed the attached version of the Official Zoning Map as well as considering the input of Village staff and the recommendation of the Committee with regard to the approval of the Official Zoning Map, and provided an opportunity for public input on the updated Official Zoning Map; and

WHEREAS, pursuant to Sections 11-12-6, 11-12-7 and 11-13-19 of the Illinois Municipal Code (65 ILCS 5/11-12-6, 11-12-7 and 11-13-19) and Section 10-5-3 (Zoning Map) of the DCO, the President and Board of Trustees of the Village of Western Springs desire to approve the attached version of the Official Zoning Map for the Village of Western Springs.

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. The above recitals are incorporated by reference into Section 1 of this Ordinance as material terms and provisions.

SECTION 2. Authority. Pursuant to Sections 11-12-6, 11-12-7 and 11-13-19 of the Illinois Municipal Code (65 ILCS 5/11-12-6, 11-12-7 and 11-13-19), the **Official Zoning Map dated January, 10, 2025**, attached hereto as **Exhibit "A"** and made a part hereof, is approved and established as the "Official Zoning Map" for the Village of Western Springs, and shall serve as the "Official Zoning Map" referenced in Section 10-5-3 (Zoning Map) of the Western Springs Municipal Code and throughout other sections of the Code.

SECTION 3. Repealer. All previously adopted Ordinances, approving prior versions of the Official Zoning Map, are repealed, with the "Official Zoning Map" attached hereto as **Exhibit "A"** superseding and taking the place of any Official Zoning Maps attached to said repealed ordinances.

SECTION 4. Effective Date. This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by State law.

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois at a Regular Meeting thereof, held on the 24th day of February, 2025 and approved by me as President, and attested by the Village Clerk, on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the __ day of February, 2025.

_____
Edward Tymick, Village Clerk

DRAFT

Exhibit "A"

Official Zoning Map
dated January 10, 2025

(attached)

DRAFT

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Ordinance now on file in my office, entitled:

ORDINANCE NUMBER 25-_____

AN ORDINANCE APPROVING AN UPDATED VERSION OF THE VILLAGE OF WESTERN SPRINGS OFFICIAL ZONING MAP PURSUANT TO SECTIONS 11-12-6, 11-12-7 AND 11-13-19 OF THE ILLINOIS MUNICIPAL CODE (65 ILCS 5/11-12-6, 11-12-7 AND 11-13-19) AND SECTION 10-5-3 (ZONING MAP) OF THE WESTERN SPRINGS MUNICIPAL CODE

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 24th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 24th day of February, 2025.

I further certify that the vote on the question of the passage of the said Ordinance by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this __ day of February, 2025.

_____
Edward Tymick, Village Clerk

SEAL

DRAFT

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.C.

To: Board of Trustees
From: Heather Valone, Director of Community Development
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager, Jill Izzo, Village Clerk, Michael Jurusik, Village Attorney, Anne Skrodzki, Village Attorney, Kelsey Fawell, Senior Planner
RE: Timber Trails Subdivision, Sidewalk and Public Utility Easements for Lots 222, 223, 274, 275, and 276 (Report only)

Recommendation

The Planning and Zoning Committee reviewed this item at their meeting on February 6, 2025, and recommended the approval of the sidewalk and public utility easements for lots 222, 223, 274, 275, and 276 in the Timber Trails Subdivision.

Summary

On March 21, 2005, the Village Board approved Ordinance 05-2335 annexing the property known as the Timber Trails Country Club into the Village; Resolution No. 05-1858 which approved an annexation agreement for the subject property; Ordinance 05-2336 rezoning the property; and Ordinance 05-2337 which granted a conditional use permit for a planned development for the construction of a 338 unit mixed use single family residential development (Timber Trails Subdivision). The Timber Trails Subdivision also included amenities including open space areas, tree conservation areas, a five acre park site, tennis courts, tot lot parks, storm water detention facilities, and a pedestrian circulation system. The pedestrian circulation system is comprised of a system of eight foot sidewalks / walkways generally behind and within the yards of the single family lots. The sidewalks / walkways are located within common areas (outlots) and are also located on private property.

On October 25, 2010, the Village Board approved Resolution 10-2111 (Attachment 1) approving sidewalk and public utility easements and related plats of sidewalk easements and public utility easements for lots 222 (5922 Timber Trails Boulevard), 223 (1100 White Pine Lane), 274 (5923 Timber Trails Boulevard), 275 (5922 Timber Trails Boulevard), and 276 (5919 Timber Trails Boulevard). The resolution established easements on the five single family lots for sidewalks on these private properties. In 2010, all five lots were still under a single ownership of the developer for the Timber Trails Subdivision. At the time of the 2010 approvals the developer was Real Property Holding-Western Springs, IL, LLC.

However, the plats were not fully executed or recorded with Cook County. As such the sidewalks were constructed on these five lots without proper easements. Additionally, all five

lots have been sold to individual property owners. Without easements, the homeowner's association for the Timber Trails subdivision does not have the ability to maintain these sidewalks. Additionally, certain aspects of the sidewalk impact the property owner due to the absence of an easement. This is similar to the easement that was approved by the Village Board on November 11, 2024, via Ordinance No. 24-3222 for lot 95 (5904 Juniper Court).

Village staff and the Village Attorney have updated the documents accordingly and drafted a resolution (Attachment 2) to resolve the matter. The Planning and Zoning Committee reviewed the easements at their meeting on February 6, 2025 and recommended to advance the item for review and discussion by the Village Board.

Attachments

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1. Resolution No. 10-2111 - A Resolution approving Public Sidewalk Easement and Public Utility Easement Agreement and Related Plats of Sidewalk Easements and Public Utility Easements for Lots 15, 16, 17, 222 of Unit 1 and Lot 223 of Unit 2 within the Timber Trails Subdivision.

2. Draft Resolution- A Resolution approving Public Sidewalk Easement and Public Utility Easement Agreements and Related Plats of Sidewalk Easements and Public Utility Easements for Lots 274, 276, 222 and 275 Of Unit 1 and Lot 223 of Unit 2 within the Timber Trails Subdivision.

Financial Impact

None.

Recommended Motion

I move to approve the sidewalk and public utility easements for lots 222, 223, 274, 275, and 276 in the Timber Trails Subdivision.

Strategic Plan Alignment

None.

File Attachments

1. Resolution No. 10-2111
2. Draft Resolution

RESOLUTION NO. 10-2111

VOTE: Passed on a roll call vote.

Voting aye: Trustees Horvath, Lyons, Maragos, Buell, Dahl and Glowiak.

Voting nay: None.

DATE: October 25, 2010

OTHER:

A RESOLUTION APPROVING PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENTS AND RELATED PLATS OF SIDEWALK EASEMENTS AND PUBLIC UTILITY EASEMENTS FOR LOTS 15, 16, 17 AND 222 OF UNIT 1 AND LOT 223 OF UNIT 2 WITHIN THE TIMBER TRAILS SUBDIVISION.

WHEREAS, the Village President and Board of Trustees of the Village of Western Springs have requested from the current owners of the Timber Trails Subdivision that two (2) sidewalk easements and related public utility easements be created within the Timber Trails Subdivision to more fully complete the interconnection of the eight (8.00) foot wide asphalt public sidewalk that is also referred to as the "Pedestrian Circulation System" in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC (the former owner of Timber Trails Subdivision) on March 21, 2005. The Pedestrian Circulation System is a recreational amenity for the Western Springs community and is used as a means of pedestrian travel within the Timber Trails Subdivision; and

WHEREAS, Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company (the "Unit 1 Owner" or "Unit 1 Grantor"), is the current owner of the unsold lots and dedicated open space within Unit 1 of the Timber Trails Subdivision. Real Property Holding-Western Springs, IL, Phase 2, LLC, a Delaware limited liability company (the "Unit 2 Owner" or "Unit 2 Grantor"), is the current owner of the unsold lots and dedicated open space within Unit 2 of the Timber Trails Subdivision; and

WHEREAS, the Unit 1 Owner and the Unit 2 Owner have agreed to create the two (2) sidewalk easements and related public utility easements within the Timber Trails Subdivision to more fully complete the interconnection of the Pedestrian Circulation System as requested by the Village; and

WHEREAS, pursuant to the authority to create easements within the Timber Trails Subdivision that are necessary to support the development as set forth in Section 12 of the Annexation Agreement, the following documents have been prepared and reviewed by the Village, the Unit 1 Owner and the Unit 2 Owner relative to the creation of the two (2) sidewalk easements and related public utility easements referenced above:

1. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof.

2. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "B"** and made a part hereof.

3. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "C"** and made a part hereof.

4. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "D"** and made a part hereof.

5. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "E"** and made a part hereof.

WHEREAS, on October 11 and 25, 2010, pursuant to notice as required by State law, the Village President and Board of Trustees of the Village of Western Springs held public meetings at which they considered the approval of the attached Easement Agreements and related Plats of Easement, and have determined that approval of the attached Easement Agreements and related Plats of Easement would be in the best interests of the Village, the residents of the Timber Trails Subdivision and the public; and

WHEREAS, in accordance with the authority set forth in Section 12 of the Annexation Agreement and 65 ILCS 5/11-15-1 (Approval of Maps and Plats; Prerequisite to Recording), the Village President and Board of Trustees of the Village of Western Springs approve the attached Easement Agreements and related Plats of Easement.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: The Village President and Board of Trustees of the Village of Western Springs approve the attached documents:

1. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof.

2. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "B"** and made a part hereof.

3. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "C"** and made a part hereof.

4. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "D"** and made a part hereof.

5. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "E"** and made a part hereof.

The Village President and Board of Trustees of the Village of Western Springs authorize and direct the Village President, Village Clerk, Village Collector, Village Engineer and any other necessary Village official, or their designees, to sign the attached Easement Agreements and related Plats of Easement so that they can be filed with the Office of the Cook County Recorder of Deeds.

SECTION 3: A certified copy of this Resolution and the original of the attached Easement Agreements and related Plats of Easement shall be recorded with the Office of the Cook County Recorder of Deeds by the Village after all of the required signatures are placed on the documents.

SECTION 4: This Resolution shall take effect from and after its adoption and approval.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Regular Meeting thereof, held on the 25th day of October, 2010, and approved by me as Village President, and attested by the Village Clerk on the same day.

William T. Rodeghier
Village President

ATTEST:

Jeanine M. Jasica
Village Clerk

EXHIBIT "A"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein Thorpe and Jenkins, Ltd.
20 North Wacker Drive
Suite 1660
Chicago, Illinois 60606-2903

Record Against PIN:
18-18-409-001

AFTER RECORDING RETURN TO:
Recorder's Box 324
(MTJ)

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR

LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the south side yard and is adjacent to and extends along the southwesterly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, an executed copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

INSERT LEGAL

(hereinafter the "Easement Area")

ADDRESS: 5922 Timber Trails Blvd., Western Springs, Illinois

PIN: 18-18-409-001

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. Within three (3) months of the effective date of this Easement Agreement, the Owner shall construct the sidewalk and public utilities within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and become part the existing Pedestrian Circulation System. The Owner and then the Homeowners Association shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Owner shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat shall be filed by the Owner with the Office of the Cook County Recorder of Deeds at the Owner's expense. A copy of the Easement Agreement and Plat with the Recorder's stamp affixed thereto shall be delivered to the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs and the Members of Real Property Holding-Western Springs, IL, LLC have taken the appropriate corporate action to approve this Easement Agreement, the authorized officials of each Party have executed this Easement Agreement, including the attached Plat, and this Easement Agreement becomes effective on the date the last signatory executes his/her signature line below.

GRANTOR / OWNER:
Real Property Holding-Western Springs, IL, LLC,
a Delaware limited liability company

By:_____
Terrence Sands, Managing Member

ATTEST:

_____
Name:
Title: Secretary

Date:_____, 2010

Village of Western Springs,
an Illinois municipal corporation

_____
William T. Rodeghier, Village President

Date: Oct. 25, 2010

ATTEST:

_____
Jeanine M. Jasica, Village Clerk

Date: October 25, 2010

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Terrence Sands is personally known to me to be the Managing Member of Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company, and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Real Property Holding-Western Springs, IL, LLC, and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

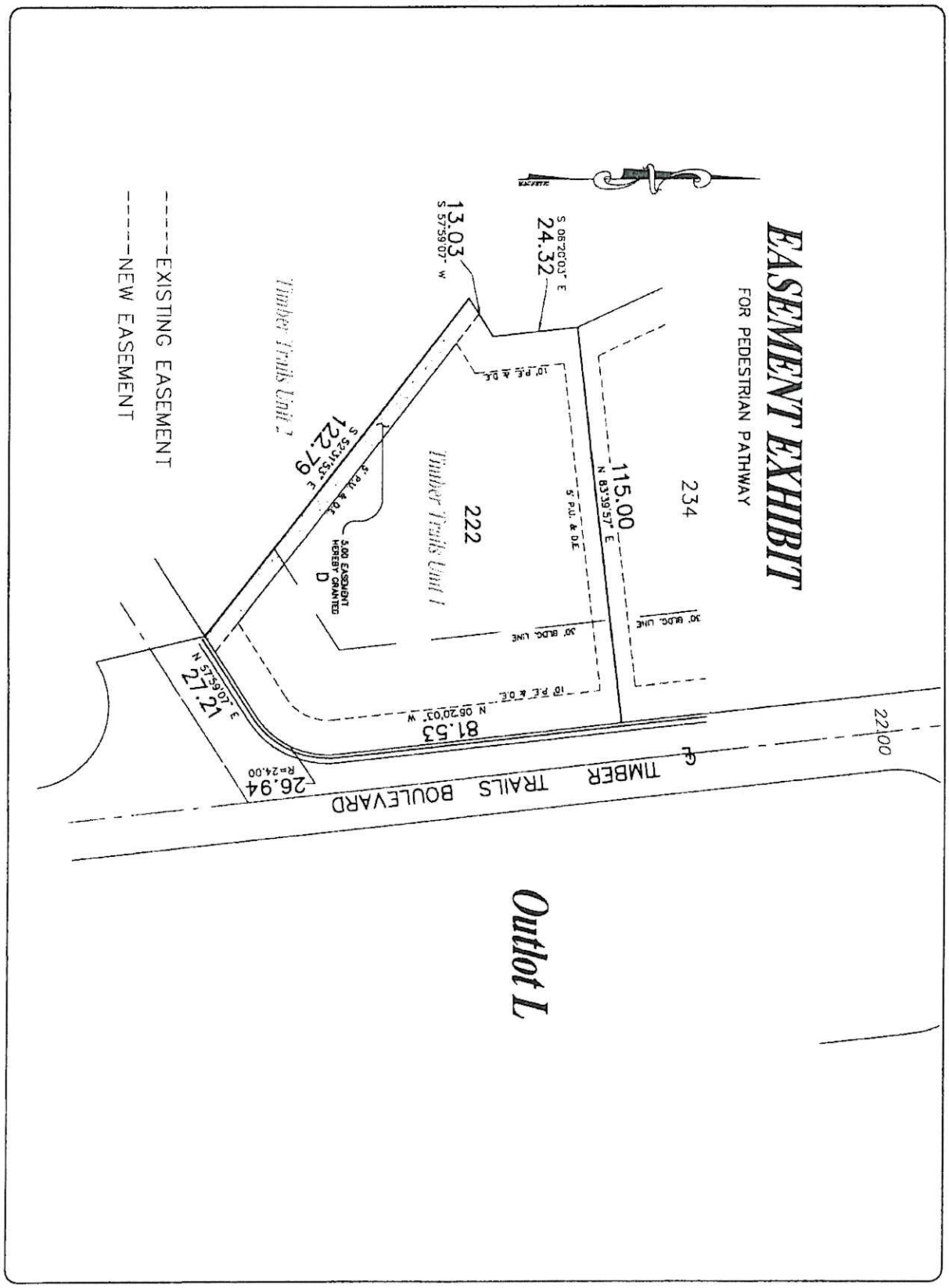
GIVEN UNDER my hand and Notarial Seal this ___ day of _____, 2010.

_____
Notary Public

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)



SHEET NO. 1

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS
211 WEST WACKER DRIVE, SUITE 600
CHICAGO, ILLINOIS 60606
(312) 372-2023 ; FAX (312) 372-2274

TIMBER TRAILS UNIT 1

RED SEAL DEVELOPMENT CORP.
425 HUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

EASEMENT EXHIBIT

EXHIBIT "B"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 15 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein Thorpe and Jenkins, Ltd.
20 North Wacker Drive
Suite 1660
Chicago, Illinois 60606-2903

Record Against PIN:
18-18-404-006

AFTER RECORDING RETURN TO:
Recorder's Box 324
(MTJ)

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 15 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the north side yard and is adjacent to and extends along the northerly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 15 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, an executed copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

INSERT LEGAL

(hereinafter the "Easement Area")

ADDRESS: 5923 Timber Trails Blvd., Western Springs, Illinois

PIN: 18-18-404-006

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 15 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. Within three (3) months of the effective date of this Easement Agreement, the Owner shall construct the sidewalk and public utilities within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and become part the existing Pedestrian Circulation System. The Owner and then the Homeowners Association shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Owner shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat shall be filed by the Owner with the Office of the Cook County Recorder of Deeds at the Owner's expense. A copy of the Easement Agreement and Plat with the Recorder's stamp affixed thereto shall be delivered to the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs and the Members of Real Property Holding-Western Springs, IL, LLC have taken the appropriate corporate action to approve this Easement Agreement, the authorized officials of each Party have executed this Easement Agreement, including the attached Plat, and this Easement Agreement becomes effective on the date the last signatory executes his/her signature line below.

GRANTOR / OWNER:
Real Property Holding-Western Springs, IL, LLC,
a Delaware limited liability company

By:_____
Terrence Sands, Managing Member

ATTEST:

_____
Name:
Title: Secretary

Date:_____, 2010

Village of Western Springs,
an Illinois municipal corporation

_____
William T. Rodeghier, Village President

Date: Oct. 25, 2010

ATTEST:

_____
Jeanine M. Jasica, Village Clerk

Date: October 25, 2010

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Terrence Sands is personally known to me to be the Managing Member of Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company, and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Real Property Holding-Western Springs, IL, LLC, and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

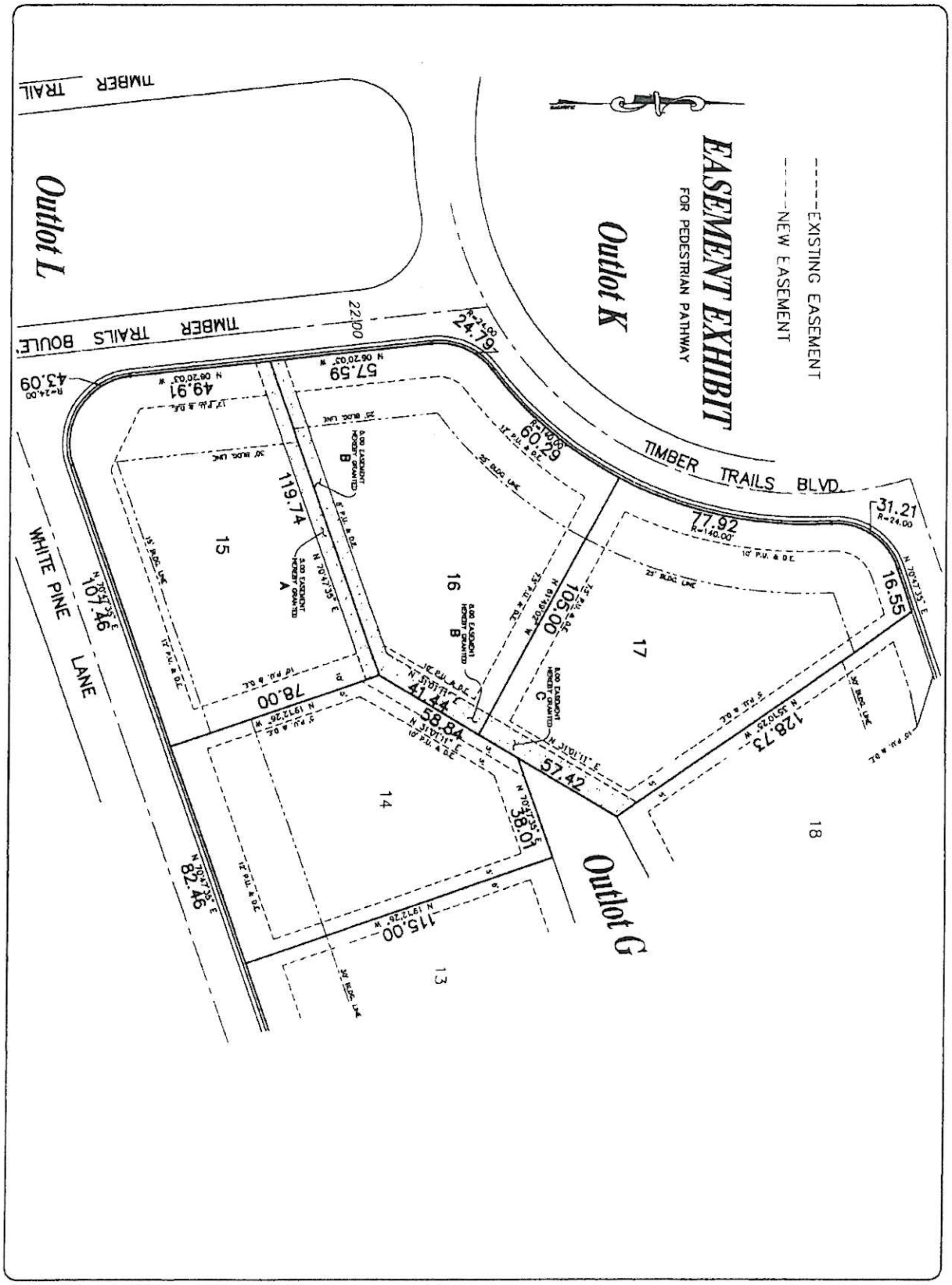
GIVEN UNDER my hand and Notarial Seal this ___ day of _____, 2010.

_____
Notary Public

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 15 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)



SHEET NO. 1 OF 1 SHEETS

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS
111 WEST WACKER DRIVE, SUITE, 600
CHICAGO, ILLINOIS 60606
(312) 372-3933 ; FAX (312) 372-9374

TIMBER TRAILS UNIT 1
PREPARED FOR:
RED SEAL DEVELOPMENT CORP.
425 HUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

EASEMENT EXHIBIT
REVISIONS

EXHIBIT "C"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 16 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein Thorpe and Jenkins, Ltd.
20 North Wacker Drive
Suite 1660
Chicago, Illinois 60606-2903

Record Against PIN:
18-18-404-007

AFTER RECORDING RETURN TO:
Recorder's Box 324
(MTJ)

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 16 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a eight (8.00) foot wide strip of land that is located in the southeast rear yard and is adjacent to and extends along the southeasterly rear lot line of the below-described property and a five (5.00) wide strip of land that is located adjacent to and extends along the south lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 16 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, an executed copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

INSERT LEGAL

(hereinafter the "Easement Area")

ADDRESS: 5921 Timber Trails Blvd., Western Springs, Illinois

PIN: 18-18-404-007

Easement Purpose and Terms:

1. Purpose. The purpose of the eight (8.00) foot wide public sidewalk easement and five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the public utility easement, which occupies the Easement Area, is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easements and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 16 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. Within three (3) months of the effective date of this Easement Agreement, the Owner shall construct the sidewalk and public utilities within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and become part the existing Pedestrian Circulation System. The Owner and then the Homeowners Association shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Owner shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat shall be filed by the Owner with the Office of the Cook County Recorder of Deeds at the Owner's expense. A copy of the Easement Agreement and Plat with the Recorder's stamp affixed thereto shall be delivered to the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs and the Members of Real Property Holding-Western Springs, IL, LLC have taken the appropriate corporate action to approve this Easement Agreement, the authorized officials of each Party have executed this Easement Agreement, including the attached Plat, and this Easement Agreement becomes effective on the date the last signatory executes his/her signature line below.

GRANTOR / OWNER:
Real Property Holding-Western Springs, IL, LLC,
a Delaware limited liability company

By:_____
Terrence Sands, Managing Member

ATTEST:

_____
Name:
Title: Secretary

Date:_____, 2010

Village of Western Springs,
an Illinois municipal corporation

_____
William T. Rodeghier, Village President

Date: Oct. 25, 2010

ATTEST:

_____
Jeanine M. Jasica, Village Clerk

Date: October 25, 2010

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Terrence Sands is personally known to me to be the Managing Member of Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company, and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Real Property Holding-Western Springs, IL, LLC, and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

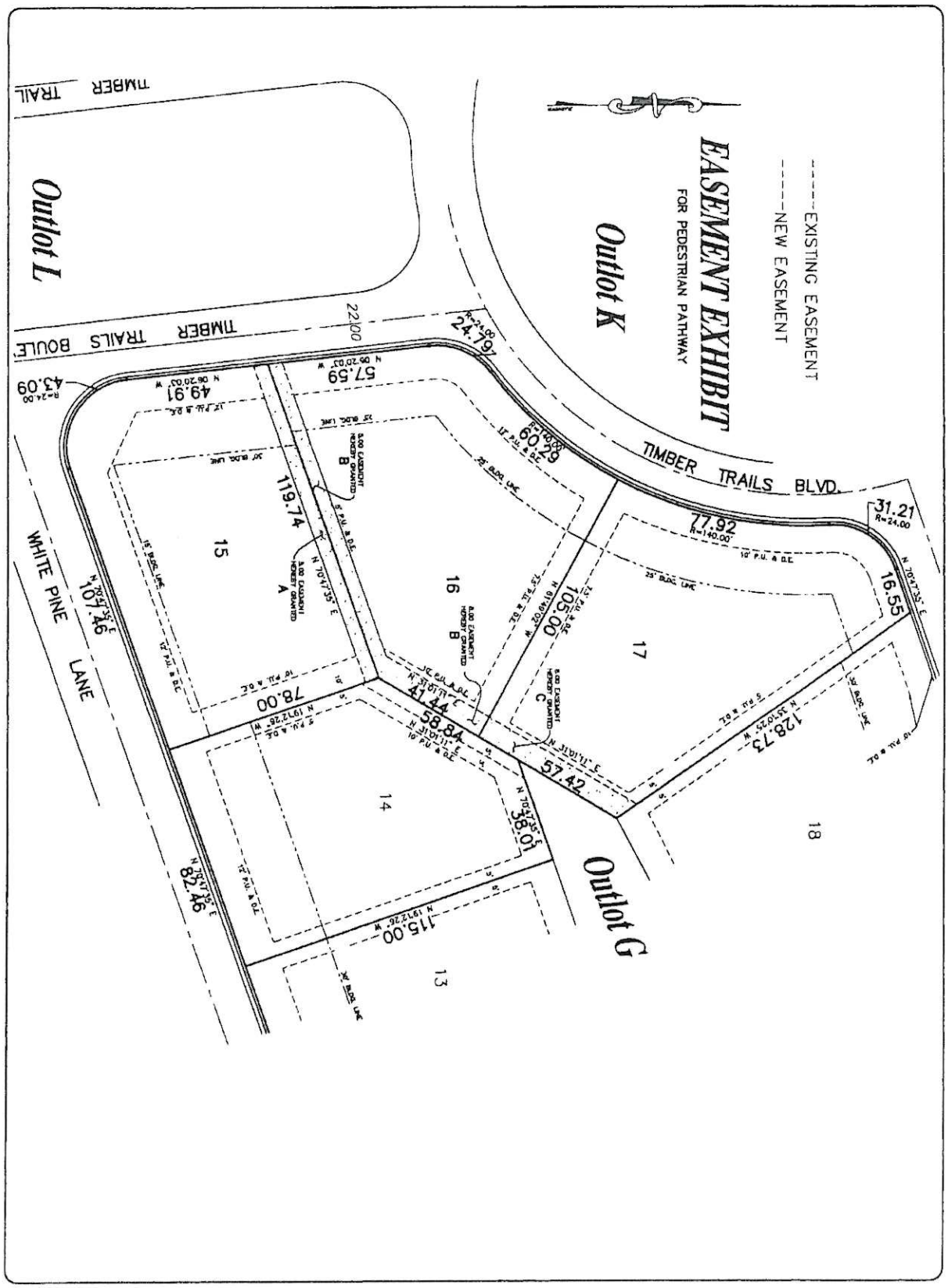
GIVEN UNDER my hand and Notarial Seal this ___ day of _____, 2010.

_____
Notary Public

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 16 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)



SHEET NO. 1 OF 1 SHEETS

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS
211 WEST WACKER DRIVE, SUITE 600
CHICAGO, ILLINOIS 60606
(312) 372-2023 ; FAX (312) 372-5274

TIMBER TRAILS UNIT I
PREPARED FOR:
RED SEAL DEVELOPMENT CORP.
425 HUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

EASEMENT EXHIBIT
REVISIONS

EXHIBIT "D"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 17 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein Thorpe and Jenkins, Ltd.
20 North Wacker Drive
Suite 1660
Chicago, Illinois 60606-2903

Record Against PIN:
18-18-404-008

AFTER RECORDING RETURN TO:
Recorder's Box 324
(MTJ)

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 17 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a eight (8.00) foot wide strip of land that is located in the rear yard and is adjacent to and extends along the southeasterly rear lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 17 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, an executed copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

INSERT LEGAL

(hereinafter the "Easement Area")

ADDRESS: 5919 Timber Trails Blvd., Western Springs, Illinois

PIN: 18-18-404-008

Easement Purpose and Terms:

1. Purpose. The purpose of the eight (8.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the public utility easement, which occupies the Easement Area, is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easements and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 17 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. Within three (3) months of the effective date of this Easement Agreement, the Owner shall construct the sidewalk and public utilities within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and become part the existing Pedestrian Circulation System. The Owner and then the Homeowners Association shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Owner shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat shall be filed by the Owner with the Office of the Cook County Recorder of Deeds at the Owner's expense. A copy of the Easement Agreement and Plat with the Recorder's stamp affixed thereto shall be delivered to the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs and the Members of Real Property Holding-Western Springs, IL, LLC have taken the appropriate corporate action to approve this Easement Agreement, the authorized officials of each Party have executed this Easement Agreement, including the attached Plat, and this Easement Agreement becomes effective on the date the last signatory executes his/her signature line below.

GRANTOR / OWNER:
Real Property Holding-Western Springs, IL, LLC,
a Delaware limited liability company

By:_____
Terrence Sands, Managing Member

ATTEST:

_____
Name:
Title: Secretary

Date:_____, 2010

Village of Western Springs,
an Illinois municipal corporation

_____
William T. Rodeghier, Village President

Date: Oct. 25, 2010

ATTEST:

_____
Jeanine M. Jasica, Village Clerk

Date: October 25, 2010

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Terrence Sands is personally known to me to be the Managing Member of Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company, and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Real Property Holding-Western Springs, IL, LLC, and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

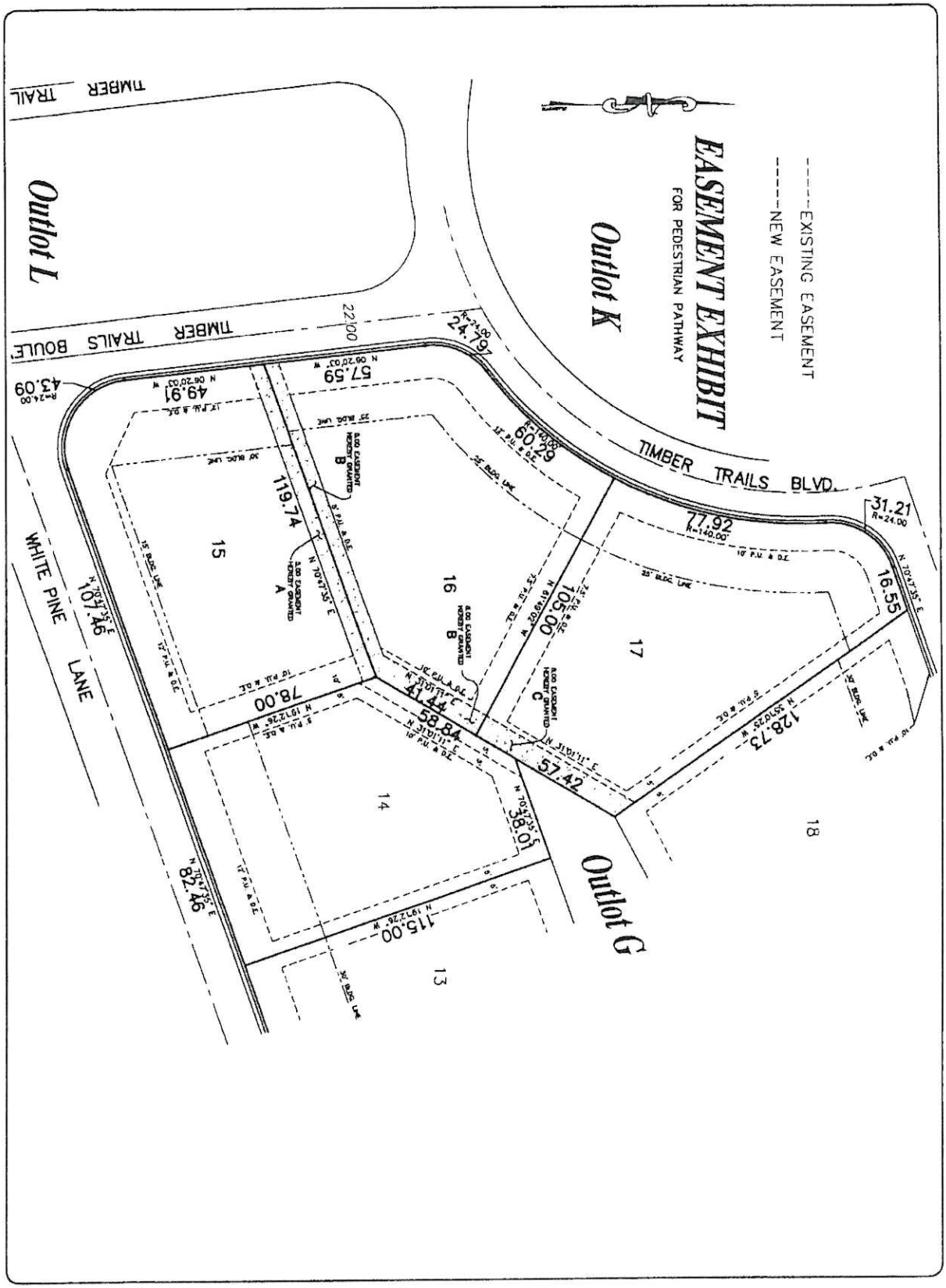
GIVEN UNDER my hand and Notarial Seal this ___ day of _____, 2010.

_____
Notary Public

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 17 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)



SHEET NO. 1 OF 1

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS · PLANNERS · SURVEYORS
211 WEST WACKER DRIVE, SUITE 400
CHICAGO, ILLINOIS 60606
(312) 372-2033 ; FAX (312) 372-5174

TIMBER TRAILS UNIT 1
PREPARED FOR:
RED SEAL DEVELOPMENT CORP.
425 HUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

EASEMENT EXHIBIT
REVISIONS

EXHIBIT "E"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION

(attached)

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein Thorpe and Jenkins, Ltd.
20 North Wacker Drive
Suite 1660
Chicago, Illinois 60606-2903

Record Against PIN:
18-18-415-001

AFTER RECORDING RETURN TO:
Recorder's Box 324
(MTJ)

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR

LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS, that Real Property Holding-Western Springs, IL, Phase 2, LLC, a Delaware limited liability company (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the east side yard and is adjacent to and extends along the northeasterly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION, an executed copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

INSERT LEGAL

(hereinafter the "Easement Area")

ADDRESS: 1100 White Pine Lane, Western Springs, Illinois

PIN: 18-18-415-001

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. Within three (3) months of the effective date of this Easement Agreement, the Owner shall construct the sidewalk and public utilities within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and become part the existing Pedestrian Circulation System. The Owner and then the Homeowners Association shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Owner shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat shall be filed by the Owner with the Office of the Cook County Recorder of Deeds at the Owner's expense. A copy of the Easement Agreement and Plat with the Recorder's stamp affixed thereto shall be delivered to the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs and the Members of Real Property Holding-Western Springs, IL, Phase 2, LLC have taken the appropriate corporate action to approve this Easement Agreement, the authorized officials of each Party have executed this Easement Agreement, including the attached Plat, and this Easement Agreement becomes effective on the date the last signatory executes his/her signature line below.

GRANTOR / OWNER:
Real Property Holding-Western Springs, IL, Phase 2, LLC,
a Delaware limited liability company

By:_____
Terrence Sands, Managing Member

ATTEST:

_____
Name:
Title: Secretary

Date:_____, 2010

Village of Western Springs,
an Illinois municipal corporation

_____
William T. Rodeghier, Village President

Date: Oct. 25, 2010

ATTEST:

_____
Jeanine M. Jasica, Village Clerk

Date: October 25, 2010

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Terrence Sands is personally known to me to be the Managing Member of Real Property Holding-Western Springs, IL, Phase 2, LLC, a Delaware limited liability company, and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Real Property Holding-Western Springs, IL, Phase 2, LLC, and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ___ day of _____, 2010.

_____
Notary Public

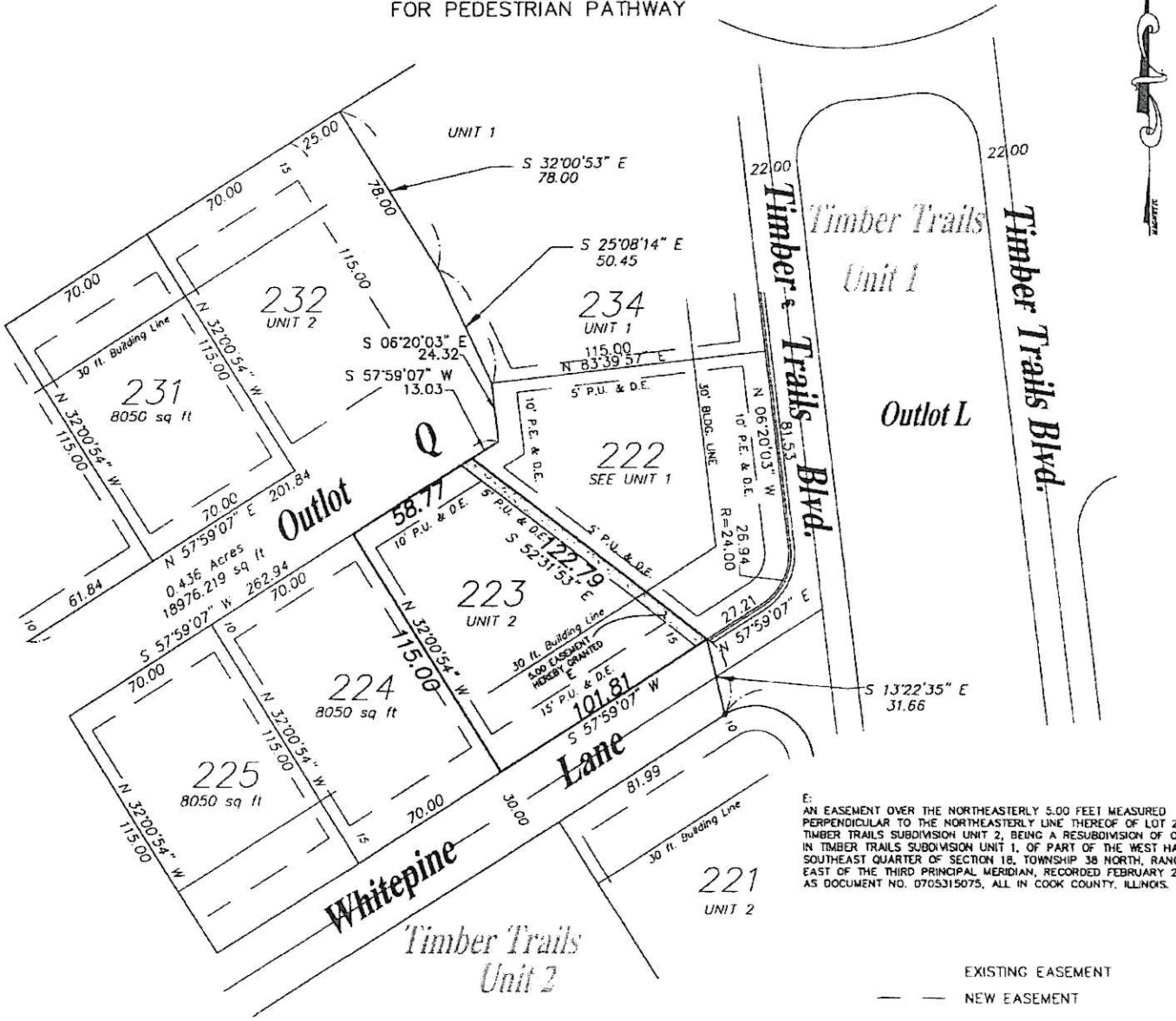
EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION

(attached)

EASEMENT EXHIBIT

FOR PEDESTRIAN PATHWAY



E:
AN EASEMENT OVER THE NORTHEASTERLY 5.00 FEET MEASURED PERPENDICULAR TO THE NORTHEASTERLY LINE THEREOF OF LOT 223 IN TIMBER TRAILS SUBDIVISION UNIT 2, BEING A RESUBDIVISION OF OUTLOT N IN TIMBER TRAILS SUBDIVISION UNIT 1, OF PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED FEBRUARY 22, 2007 AS DOCUMENT NO. 0705315075, ALL IN COOK COUNTY, ILLINOIS.

EXISTING EASEMENT

— — NEW EASEMENT

EASEMENT EXHIBIT

TIMBER TRAILS UNIT 2

RFD SEAL DEVELOPMENT CORP.
424 SOUTH WOLF ROAD, BLDG. 1B
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
111 WEST WACKER DRIVE, SUITE 800
CHICAGO, ILLINOIS 60601
(312) 372-3424 FAX (312) 372-5374

SHEET NO.
1
OF 1
DATE 07-26-13
JOB NO 99-022

STATE OF ILLINOIS)
) **SS**
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Jeanine M. Jasica, the duly elected and qualified Village Clerk of the Village of Western Springs, Cook County, Illinois, do hereby certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 10-_____

A RESOLUTION APPROVING PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENTS AND RELATED PLATS OF SIDEWALK EASEMENTS AND PUBLIC UTILITY EASEMENTS FOR LOTS 15, 16, 17 AND 222 OF UNIT 1 AND LOT 223 OF UNIT 2 WITHIN THE TIMBER TRAILS SUBDIVISION

which was passed by the Village President and Board of Trustees of the Village of Western Springs at a regular meeting held on the 25th day of October, 2010, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 25th day of October, 2010.

I further certify that the vote on the question of the passage of the said Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 25th day of October, 2010.

Village Clerk

150527

RESOLUTION NO. 25-_____
VOTE: _____
AYES: _____
NAYS: _____
ABSTAIN: _____
ABSENT: _____
DATE: February 24, 2025.
OTHER: None.

A RESOLUTION APPROVING PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENTS AND RELATED PLATS OF SIDEWALK EASEMENTS AND PUBLIC UTILITY EASEMENTS FOR LOTS 274, 276, 222 AND 275 OF UNIT 1 AND LOT 223 OF UNIT 2 WITHIN THE TIMBER TRAILS SUBDIVISION.

WHEREAS, in 2010, the Village President and Board of Trustees of the Village of Western Springs (the "Village Board") requested from the then-current owners of the Timber Trails Subdivision that certain sidewalk easements and related public utility easements be created within the Timber Trails Subdivision to more fully complete the interconnection of the eight (8.00) foot wide asphalt public sidewalk that is also referred to as the "Pedestrian Circulation System" in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs (the "Village") and Western Springs One, LLC (the former owner of Timber Trails Subdivision) on March 21, 2005. The Pedestrian Circulation System is a recreational amenity for the Western Springs community and is used as a means of pedestrian travel within the Timber Trails Subdivision; and

WHEREAS, with the passage of Resolution No. 10-2111 on October 25, 2010, the Village Board, working in conjunction with the then-current owners of the Timber Trails Subdivision, approved certain plats of sidewalk easements and related public utility easement agreements for the benefit of Lot 274 (5923 Timber Trails Boulevard), Lot 276 (5919 Timber Trails Boulevard), Lot 222 (5922 Timber Trails Boulevard) and Lot 275 (5921 Timber Trails Boulevard) of Unit 1 and Lot 223 (1100 White Pine Lane) of Unit 2 within the Timber Trails Subdivision (collectively, the "Subject Properties") in order to more fully complete the interconnection of the Pedestrian Circulation System as requested by the Village. At the time of the approval of Resolution No. 10-2111, Real Property Holding-Western Springs, IL, LLC, a Delaware limited liability company, was the fee simple owner of the Unit 1 portion of the Timber Trails Subdivision (referred to as the "Unit 1 Owner") and Real Property Holding-Western Springs, IL, Phase 2, LLC, a Delaware limited liability company, was the fee simple owner of the Unit 2 portion of the Timber Trails Subdivision (referred to as the "Unit 2 Owner"). Thereafter, the Unit 1 Owner and the Unit 2 Owner sold their fee simple title interests in the Timber Trails Subdivision prior to executing the Village-approved plats of sidewalk easements and related public utility easement agreements for the Subject Properties; and

WHEREAS, the Village Board now desires to work with the current developer of the Timber Trails Subdivision, Timber Trails Building Company, Inc., and the current property owners of the Subject Properties in order to record plats of sidewalk easements and related public utility easement agreements for the Subject Properties within the Timber Trails Subdivision to more fully complete the interconnection of the Pedestrian Circulation System, which sidewalk improvements have already been installed on such ***Lots*** to complete the interconnectivity of the Pedestrian Circulation System; and

WHEREAS, the current owners of the Subject Properties have agreed to create the necessary sidewalk easements and related public utility easements on their respective Lots within the Timber Trails Subdivision to more fully complete the interconnection of the Pedestrian Circulation System as requested by the Village; and

DRAFT

WHEREAS, pursuant to the authority to create easements within the Timber Trails Subdivision that are necessary to support the development as set forth in Section 12 (Dedications; Easements) of the Annexation Agreement, the following documents have been prepared and reviewed by the Village and the current property owners of the Subject Properties relative to the creation of the sidewalk easements and related public utility easements referenced above:

1. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof;

2. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 274 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 274 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "B"** and made a part hereof;

3. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 275 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 275 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "C"** and made a part hereof;

4. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 276 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 276 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "D"** and made a part hereof;

5. PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "E"** and made a part hereof;

(collectively the "Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement"); and

WHEREAS, at an open, public meeting held on February 6, 2025, the Village's General Government Committee ("Committee") reviewed and discussed the Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement, and received input from the Village staff and provided an opportunity for input from the public on the matter. At its February 6, 2025 meeting, the Committee voted to recommend that the President and Board of Trustees of the Village approve the Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement; and

WHEREAS, at open, public meetings held on February 10, 2025 and February 24, 2025, the President and Board of Trustees of the Village reviewed and discussed the Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement, the Village staff's recommendation and the Committee's recommendation regarding the Sidewalk Easement and Related Public Utility

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Easement Agreements and related Plats of Easement, and provided an opportunity for input from the public on the matter, and then accepted the recommendations of Village staff and the Committee; and

WHEREAS, pursuant to the authority set forth in Section 12 (Dedications; Easements) of the Annexation Agreement and 65 ILCS 5/11-15-1 (Approval of Maps and Plats; Prerequisite to Recording), the Village President and Board of Trustees of the Village of Western Springs have determined that it is protective of the health, welfare and safety of and in the best interests of the Village and its residents, the residents of the Timber Trails Subdivision, local businesses, property owners and the public to approve and enter into the attached Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of Sidewalk Easements and Public Utility Easement Agreements and Related Plats of Easement and Other Related Documents. The Village President and Board of Trustees of the Village of Western Springs approve the Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement, copies of which are attached as hereto as **EXHIBIT "A"**, **EXHIBIT "B"**, **EXHIBIT "C"**, **EXHIBIT "D"** and **EXHIBIT "E"** and made a part hereof. The Village President and Board of Trustees of the Village of Western Springs authorize and direct the Village President, Village Clerk, Village Collector, Village Engineer and any other necessary Village officials, or their designees, to sign the attached Sidewalk Easement and Related Public Utility Easement Agreements and related Plats of Easement so that they can be filed with the Cook County Clerk's Office, Recording Division ("CCCORD").

SECTION 3: Recording and Delivery of Certified Copies of Resolution, Public Sidewalk Easements and Public Utility Easement Agreements and Related Plats of Easement. After approval of this Resolution, certified copies of this Resolution and fully executed originals of the attached Public Sidewalk Easements and Public Utility Easement Agreements and related Plats of Easement shall be recorded with the CCCORD by the Village after all of the required signatures are placed on the documents. The Village shall deliver file-stamped copies of the recorded documents to the property owners of the Subject Properties and to the Timber Trails Building Company, Inc. for purposes of record retention.

SECTION 4: Effective Date. This Resolution shall take effect from and after its adoption and approval as provided by law.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Regular Meeting thereof, held on the 24th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

EXHIBIT "A"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

Draft

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane
Suite 301
Westmont, Illinois 60559

Record Against PIN:
18-18-409-001-0000.

AFTER RECORDING RETURN TO:
Attorney Michael T. Jurusik

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Linda L. Huff, as Trustee of Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525 (hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois ("Village"), a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the south side yard and is adjacent to and extends along the southwesterly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

AN EASEMENT OVER THE SOUTHWESTERLY 5.00 FEET MEASURED PERPENDICULAR TO THE SOUTHWESTERLY LINE THEREOF OF LOT 222 IN TIMBER TRAILS SUBDIVISION UNIT 1, BEING A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 27, 2005 AS DOCUMENT NUMBER 0530003135, AND AMENDED BY CERTIFICATE OF CORRECTION RECORDED FEBRUARY 15, 2006, AS DOCUMENT NUMBER 0604634053, ALL IN COOK COUNTY, ILLINOIS;
(hereinafter the "Easement Area");

ADDRESS: 5922 Timber Trails Blvd., Lot 222, Western Springs, Illinois;

PIN: 18-18-409-001-0000.

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided, or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. A sidewalk and public utilities have already been constructed by the Developer of the Timber Trails Subdivision (Timber Trails Building Company, Inc. or its predecessor) within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and are part of the existing Pedestrian Circulation System. The Timber Trails of Western Springs Community Association (the "Homeowners Association") shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Developer shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat exhibit shall be filed by the Owner with the Cook County Clerk's Office, Recording Division, at the Owner's expense. A copy of the Easement Agreement and its Plat exhibit with the Recorder's stamp affixed thereto shall be delivered to the Owner and the Developer by the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, Linda L. Huff, as Trustee of Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525, voluntarily signed this Easement Agreement, and the President and Board of Trustees of the Village of Western Springs and the authorized corporate officer of Timber Trails Building Company, Inc. have taken the appropriate corporate action to approve this Easement Agreement, the authorized signatories of each Party have executed this Easement Agreement, and this Easement Agreement becomes effective on the date the last signatory executes their signature line below.

GRANTOR / OWNER: Linda L. Huff, as Trustee of Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525

By: _____
Linda L. Huff, as Trustee of
Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525

Date: _____, 2025.

DEVELOPER: Timber Trails Building Company, Inc.

By: _____
Brian Taylor, Authorized Corporate Officer

Date: _____, 2025.

VILLAGE OF WESTERN SPRINGS,
an Illinois municipal corporation

By: _____
Heidi Rudolph, Village President

Date: _____, 2025.

ATTEST:

By: _____
Edward Tymick, Village Clerk

Date: _____, 2025.

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Brian Taylor

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Brian Taylor is personally known to me to be the Managing Member of Timber Trails Building Company, Inc., and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such Managing Member, appeared before me this day in person and acknowledged that, as such Managing Member, he signed and delivered the said instrument pursuant to the authority given by the Members of Timber Trails Building Company, Inc., and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this __ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Linda L. Huff, as Trustee of
Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Linda L. Huff, as Trustee of Linda L. Huff Declaration of Trust of 32 N. Edgewood Ave., LaGrange, Illinois 60525, is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, she appeared before me on this day in person and I acknowledge that she signed and delivered the said instrument of her own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

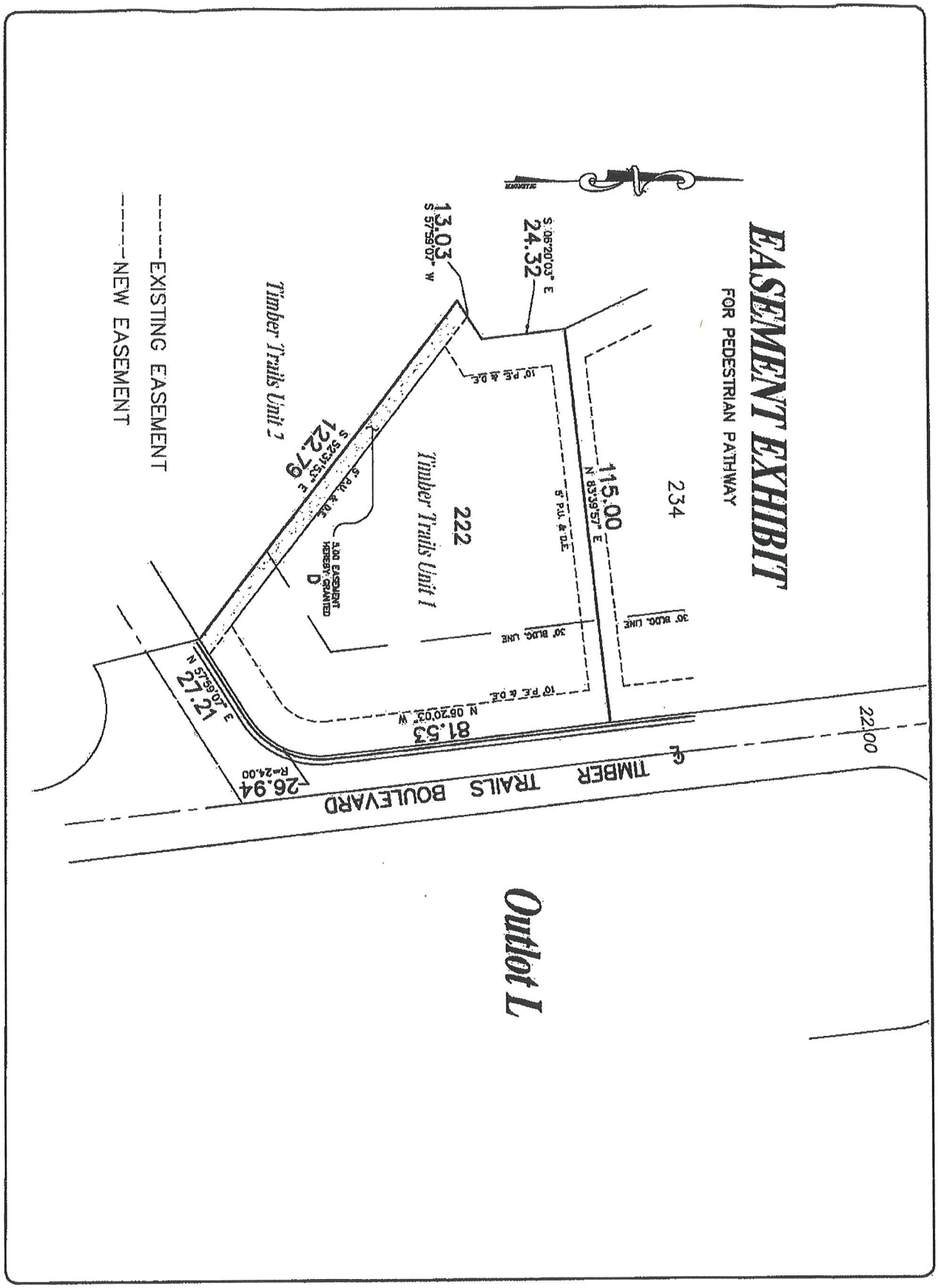
Draft

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 222 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)

Draft



SHEET NO. 1 OF 1

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
311 WEST WACKER DRIVE, SUITE 600
CHICAGO, ILLINOIS 60606
(312) 372-2013 ; FAX (312) 372-2374

TIMBER TRAILS UNIT 1
PREPARED FOR:
RED SEAL DEVELOPMENT CORP.
425 HUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

EASEMENT EXHIBIT
REVISIONS

EXHIBIT "B"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 274 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 274 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

Draft

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane
Suite 301
Westmont, Illinois 60559

Record Against PIN:
18-18-404-006-0000.

AFTER RECORDING RETURN TO:
Attorney Michael T. Jurusik

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 274 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Luke Hofstad and Asmita R. Patel (collectively, hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois ("Village"), a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the north side yard and is adjacent to and extends along the northerly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 274 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

AN EASEMENT OVER THE NORTHERLY 5.00 FEET MEASURED PERPENDICULAR TO THE NORTHERLY LINE THEREOF OF LOT 274 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16, AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS;

(hereinafter the "Easement Area");

ADDRESS: 5923 Timber Trails Blvd., Lot 274, Western Springs, Illinois;

PIN: 18-18-404-006-0000.

Draft

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 274 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided, or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. A sidewalk and public utilities have already been constructed by the Developer of the Timber Trails Subdivision (Timber Trails Building Company, Inc. or its predecessor) within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and are part of the existing Pedestrian Circulation System. The Timber Trails of Western Springs Community Association (the "Homeowners Association") shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Developer shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat exhibit shall be filed by the Village with the Cook County Clerk's Office, Recording Division, at the Developer's expense. A copy of the Easement Agreement and its Plat exhibit with the Recorder's stamp affixed thereto shall be delivered to the Owner and the Developer by the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, Luke Hofstad and Asmita R. Patel have voluntarily signed this Easement Agreement, and the President and Board of Trustees of the Village of Western Springs and the authorized corporate officer of Timber Trails Building Company, Inc. have taken the appropriate corporate action to approve this Easement Agreement, the authorized signatories of each Party have executed this Easement Agreement and this Easement Agreement becomes effective on the date the last signatory executes their signature line below.

GRANTOR / OWNER: Luke Hofstad and Asmita R. Patel

By: _____ By:_____
Luke Hofstad Asmita R. Patel

Date: _____, 2025. Date: _____, 2025.

DEVELOPER: Timber Trails Building Company, Inc.

By: _____
Brian Taylor, Authorized Corporate Officer

Date: _____, 2025.

VILLAGE OF WESTERN SPRINGS,
an Illinois municipal corporation

ATTEST:

By: _____ By: _____
Heidi Rudolph, Village President Edward Tymick, Village Clerk

Date: _____, 2025. Date: _____, 2025.

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Brian Taylor

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Brian Taylor is personally known to me to be the Managing Member of Timber Trails Building Company, Inc., and also known to me to be the same person whose name is subscribed to the foregoing instrument, and as such Managing Member appeared before me this day in person and acknowledged that, as such Managing Member, he signed and delivered the said instrument pursuant to the authority given by the Members of Timber Trails Building Company, Inc., and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this __ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Luke Hofstad

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Luke Hofstad is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, he appeared before me on this day in person and I acknowledge that he signed and delivered the said instrument of his own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Asmita R. Patel

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Asmita R. Patel is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, she appeared before me on this day in person and I acknowledge that she signed and delivered the said instrument of her own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 274 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

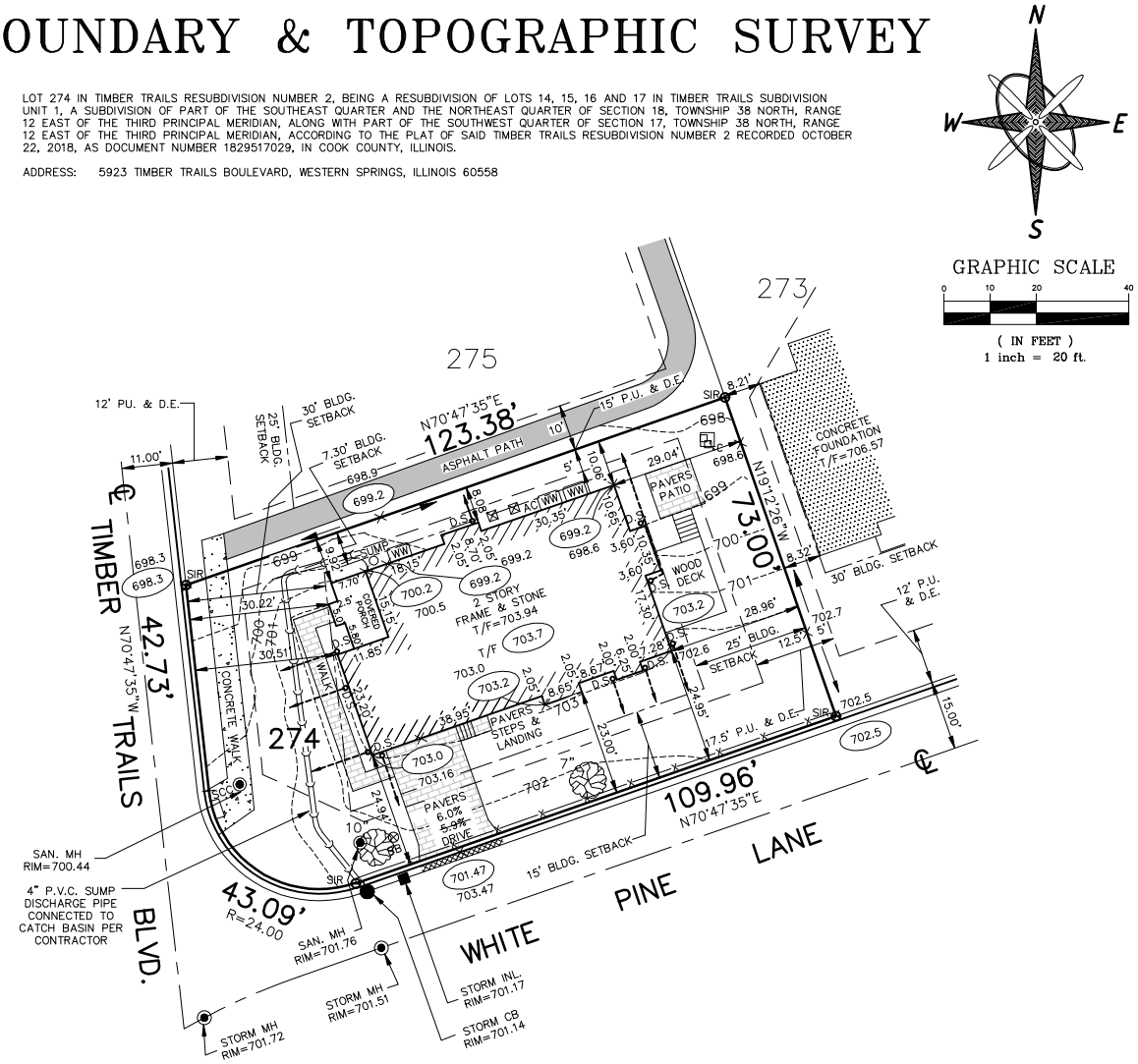
(attached)

Draft

BOUNDARY & TOPOGRAPHIC SURVEY

LOT 274 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16 AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS.

ADDRESS: 5923 TIMBER TRAILS BOULEVARD, WESTERN SPRINGS, ILLINOIS 60558



LEGEND

P.U.	INDICATES PUBLIC UTILITY EASEMENT	SCC	INDICATES SET CROSS-CUT
D.E.	INDICATES DRAINAGE EASEMENT	FPK	INDICATES FOUND P.K. NAIL
P.S.E.	INDICATES PUBLIC WALK EASEMENT	XXX.X	INDICATES PROPOSED SPOT ELEVATIONS
PROP.	INDICATES PROPOSED FEATURE	XXX.X	INDICATES AS-BUILT SPOT ELEVATIONS
EXIST.	INDICATES EXISTING	--812--	INDICATES AS-BUILT CONTOURS
MH	INDICATES MANHOLE	BB	INDICATES BUFFALO BOX
T/F	INDICATES TOP OF FOUNDATION	CO	INDICATES CLEANOUT
CONC.	INDICATES CONCRETE	A/C	INDICATES A/C UNIT
WW	INDICATES WINDOW WELL		INDICATES DRAINAGE FLOW ARROW
M=	INDICATES MEASURED DIMENSION		INDICATES AS-BUILT SANITARY WYE CONNECTION
R=	INDICATES RECORDED DIMENSION		INDICATES WATER VALVE VAULT
BLDG.	INDICATES BUILDING		INDICATES STORM CATCH BASIN/INLET
RAD	INDICATES RADIUS		INDICATES STORM MANHOLE
FIP	INDICATES FOUND IRON PIPE		INDICATES TREE W/ SIZE
SIR	INDICATES SET IRON ROD	E	INDICATES ELECTRIC SPLICE BOX
DS	INDICATES DOWNSPOUT	P	INDICATES TELEPHONE SPLICE BOX
		C	INDICATES CABLE SPLICE BOX

BENCHMARKS/CONTROL

GIVEN: F.E.M.A. BENCHMARK RM303 MAP PANEL NUMBER 0145 LOCATED AT THE SE 1/4 OF THE NORTH 1/4 OF SECTION 30; TOWNSHIP 38 NORTH RANGE 12 EAST; APPROXIMATELY 2400 FEET SOUTH OF I-294 (TOLL WAY) AND 350 FEET SOUTH OF 73rd PLACE; A BOAT SPIKE IN WEST FACE OF A POWER POLE IN NORTHWEST QUADRANT AT INTERSECTION OF WOLF ROAD AND PAVED ROAD WEST, 0.3 FOOT ABOVE CENTERLINE.
ELEVATION PER NGVD OF 1929
ELEVATION: 635.635

SITE: SOUTHEAST CORNER OF I.D.O.T TRAFFIC CONTROL BOX, LOCATED AT THE NORTHWEST CORNER OF WOLF ROAD AND JOLIET ROAD.
ELEVATION: 655.82

SITE: CROSS CUT ON AN I.D.O.T TRAFFIC SIGNAL HAND HOLE, LOCATED AT THE NORTHWEST CORNER OF WOLF ROAD AND PLAINFIELD ROAD.
ELEVATION: 705.40

CP1596 CROSS CUT ON CURB BY HYDRANT AT LOT 1
N: 2524.455
E: 3149.894
ELEVATION: 701.93

CP1597 CROSS CUT ON CURB BY HYDRANT ON LOT 4
N: 2598.696
E: 3364.227
ELEVATION: 703.91

NOTE: ANY AND ALL PARTIES UTILIZING THE VERTICAL DATUM LISTED ABOVE SHALL ALWAYS CHECK INTO AT LEAST TWO (2) BENCH MARKS TO AVOID MISTAKES DUE TO HYDRANT ADJUSTMENTS OR TRANSPOSITIONAL ERRORS. FAILURE TO DO SO WILL BE CONSIDERED TANTAMOUNT TO GROSS NEGLIGENCE AND SUBJECT THE OFFENDING PARTY TO ANY DAMAGES ATTENDANT

GENERAL NOTES:
1. ALL DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF.
2. COMPARE DEED DESCRIPTION AND SITE CONDITIONS WITH THE DATA SHOWN HEREON AND REPORT ANY DISCREPANCIES AT ONCE.
3. NO DIMENSIONS SHALL BE DERIVED FROM SCALED MEASUREMENT.
4. ONLY THOSE BUILDING SETBACK LINES AND EASEMENTS WHICH ARE SHOWN ON THE RECORDED PLAT OF SUBDIVISION ARE SHOWN HEREON, UNLESS INDICATED OTHERWISE. REFER TO DEED, TITLE INSURANCE POLICY AND LOCAL ORDINANCES FOR OTHER RESTRICTIONS WHICH MAY OR MAY NOT EXIST.
5. LEGAL DESCRIPTION SUPPLIED BY CLIENT.
6. BUILDING TIES ARE TO CONCRETE FOUNDATION.

SURVEYOR'S NOTES:
1. BEARINGS BASED ON THE RECORDED PLAT OF SUBDIVISION.
2. DISTANCES ALONG CURVES ARE ARC DISTANCES UNLESS OTHERWISE NOTED.
3. THIS SURVEY WAS PERFORMED ON THE GROUND AND COMPLETED OCTOBER 10, 2018.
4. ONLY THE IMPROVEMENTS THAT WERE VISIBLE FROM ABOVE GROUND AT TIME OF SURVEY AND THROUGH A NORMAL SEARCH AND WALK THROUGH OF THE SITE ARE SHOWN ON THE FACE OF THIS PLAT. LAWN SPRINKLER SYSTEMS, IF ANY, ARE NOT SHOWN ON THIS SURVEY.
5. SURFACE INDICATIONS OF UTILITIES ON THE SURVEYED PARCEL HAVE BEEN SHOWN. UNDERGROUND AND OFFSITE OBSERVATIONS HAVE NOT BEEN MADE TO DETERMINE THE EXTENT OF UTILITIES SERVING OR EXISTING ON THE PROPERTY. PUBLIC AND/OR PRIVATE RECORDS HAVE NOT BEEN SEARCHED TO PROVIDE ADDITIONAL INFORMATION.
6. OTHER THAN VISIBLE OBSERVATIONS NOTED HEREON, THIS SURVEY MAKES NO STATEMENT REGARDING THE ACTUAL PRESENCE OR ABSENCE OF ANY SERVICE OR UTILITY LINE. CONTROLLED UNDERGROUND EXPLORATORY EFFORT TOGETHER WITH J.U.L.I.E. LOCATIONS IS RECOMMENDED TO DETERMINE THE FULL EXTENT OF UNDERGROUND SERVICE AND UTILITY LINES. CONTACT J.U.L.I.E. AT: 1-800-892-0123.
7. LOT WAS NOT SODDED AT TIME OF SURVEY, BLACK DIRT ONLY

STATE OF ILLINOIS } SS
COUNTY OF COOK }

WE, KNIGHT E/A, INC., ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-002141, HEREBY CERTIFY THAT THE PROPERTY HEREON DESCRIBED WAS SURVEYED UNDER THE DIRECT SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR, AND THAT THIS PLAT REPRESENTS THE CONDITIONS FOUND AT THE TIME OF SAID SURVEY.

GIVEN UNDER MY HAND AND SEAL THIS 22 DAY OF OCTOBER, 2018 IN CHICAGO, ILLINOIS.

KNIGHT E/A, INC.

STEVEN BARCZAK, IPLS NO. 035.003269
LICENSE EXPIRES: 11/30/2018

PROFESSIONAL LAND SURVEYOR
STEVEN BARCZAK NO. 3269 CHICAGO
STATE OF ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

THIS PLAT IS VALID ONLY WITH A SIGNATURE AND WITH A RAISED SEAL.

Drawn By: AZ Designed By: SB Scale: 1"=20'

BOUNDARY & TOPOGRAPHIC SURVEY

REVISIONS

1	12/19/18	ADD SUMP DISCHARGE

TIMBER TRAILS SUBDIVISION UNIT 2

PREPARED FOR:

TIMBER TRAILS DEVELOPMENT COMPANY
6114 BURR OAK DRIVE
WESTERN SPRINGS, ILLINOIS 60558
(708) 783-1602

KNIGHT
Engineers & Architects
Knight E/A, Inc.
221 N. LaSalle Street, Suite 300
Chicago, Illinois 60601-1211
Phone (312) 577-3300
Fax (312) 577-3526
knightea.com

LOT 274 FINAL GRADE VERIFICATION

SHEET NO. 1 OF 1

DATE: 10-22-2018
JOB NO. 7332.15

EXHIBIT "C"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 275 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 275 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

Draft

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane
Suite 301
Westmont, Illinois 60559

Record Against PIN:
18-18-404-019-0000.

AFTER RECORDING RETURN TO:
Attorney Michael T. Jurusik

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 275 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that James C. Schwab and Catherine A. Bartell (collectively hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois ("Village"), a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of an eight (8.00) foot wide strip of land that is located in the southeast rear yard and is adjacent to and extends along the southeasterly rear lot line of the below-described property, and a five (5.00) foot wide strip of land that is located adjacent to and extends along the south lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 275 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

AN EASEMENT OVER THE NORTHERLY 8.00 FEET MEASURED PERPENDICULAR TO THE NORTHERLY LINE THEREOF OF LOT 275 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16, AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS;
(hereinafter the "Easement Area");

ADDRESS: 5921 Timber Trails Blvd., Lot 275, Western Springs, Illinois;

PIN: 18-18-404-019-0000.

Draft

Easement Purpose and Terms:

1. Purpose. The purpose of the eight (8.00) foot wide public sidewalk easement and five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the public utility easement, which occupies the Easement Area, is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easements and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 275 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided, or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. A sidewalk and public utilities have already been constructed by the Developer of the Timber Trails Subdivision (Timber Trails Building Company, Inc. or its predecessor) within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and are part of the existing Pedestrian Circulation System. The Timber Trails of Western Springs Community Association (the "Homeowners Association") shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Developer shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat exhibit shall be filed by the Village with the Cook County Clerk's Office, Recording Division, at the Developer's expense. A copy of the Easement Agreement and its Plat exhibit with the Recorder's stamp affixed thereto shall be delivered to the Owner and the Developer by the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, James C. Schwab and Catherine A. Bartell have voluntarily signed this Easement Agreement, and the President and Board of Trustees of the Village of Western Springs, and the authorized corporate officer of Timber Trails Building Company, Inc. have taken the appropriate corporate action to approve this Easement Agreement, the authorized signatories of each Party have executed this Easement Agreement, and this Easement Agreement becomes effective on the date the last signatory executes their signature line below.

GRANTOR / OWNER: James C. Schwab and Catherine A. Bartell

By: _____
James C. Schwab

Date: _____, 2025.

By:_____
Catherine A. Bartell

Date: _____, 2025.

DEVELOPER: Timber Trails Building Company, Inc.

By: _____
Brian Taylor, Authorized Corporate Officer

Date: _____, 2025.

VILLAGE OF WESTERN SPRINGS,
an Illinois municipal corporation

By: _____
Heidi Rudolph, Village President

Date: _____, 2025.

ATTEST:

By: _____
Edward Tymick, Village Clerk

Date: _____, 2025.

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Brian Taylor

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Brian Taylor is personally known to me to be the Authorized Corporate Officer of Timber Trails Building Company, Inc., and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such Authorized Corporate Officer, appeared before me this day in person and acknowledged that, as such Authorized Corporate Officer, he signed and delivered the said instrument pursuant to the authority given by the Timber Trails Building Company, Inc., and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this __ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for James C. Schwab

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that James C. Schwab is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, he appeared before me on this day in person and I acknowledge that he signed and delivered the said instrument of his own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this _____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Catherine A. Bartell

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Catherine A. Bartell is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, she appeared before me on this day in person and I acknowledge that she signed and delivered the said instrument of her own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 275 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)

Draft

BOUNDARY SURVEY

LOT 275 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16 AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS.

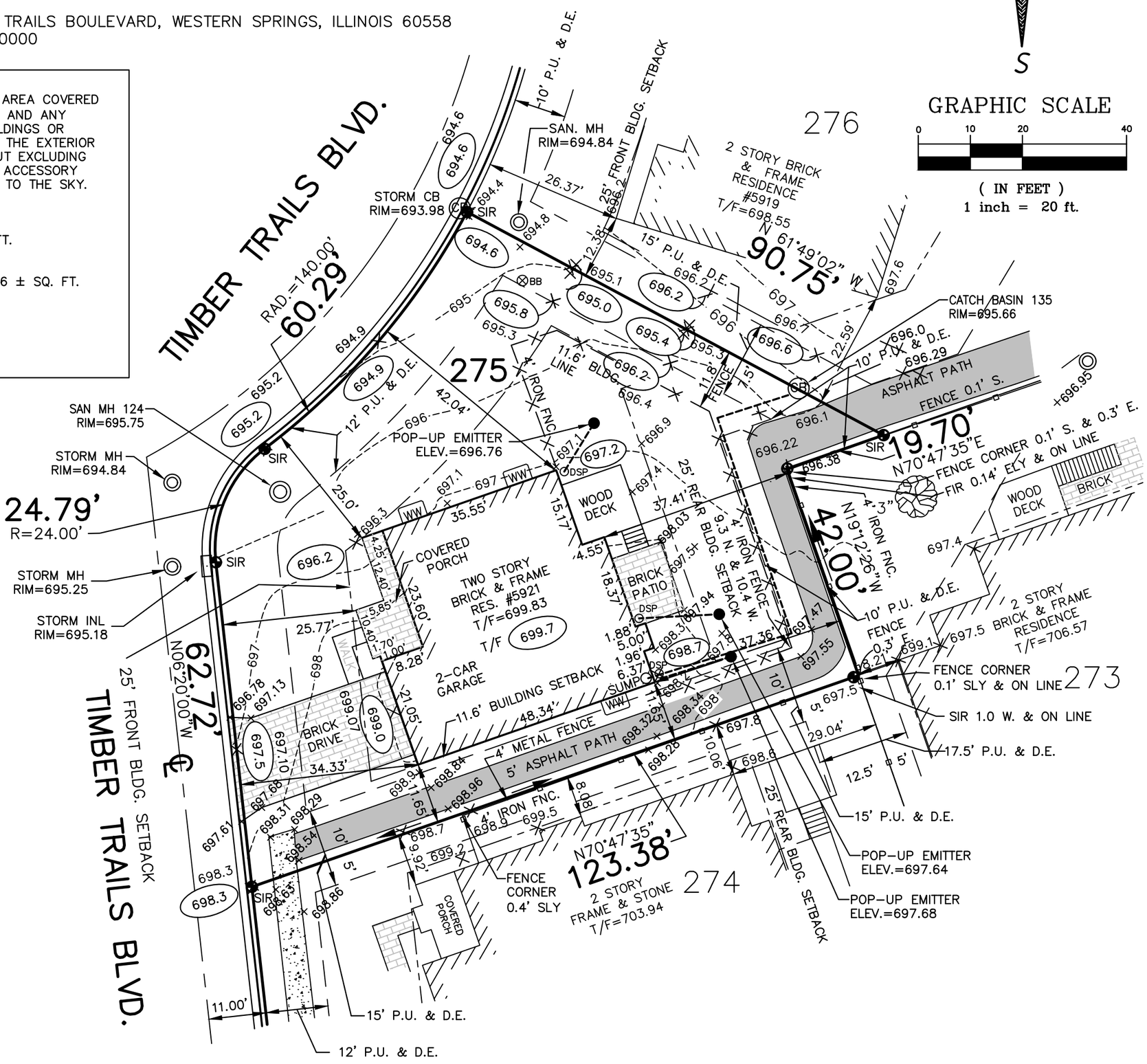
ADDRESS: 5921 TIMBER TRAILS BOULEVARD, WESTERN SPRINGS, ILLINOIS 60558
P.I.N.: 18-18-404-007-0000

BUILDING COVERAGE: THE LOT AREA COVERED BY THE PRINCIPAL BUILDING(S) AND ANY ROOFED OVER ACCESSORY BUILDINGS OR STRUCTURES, MEASURED FROM THE EXTERIOR FACES OF EXTERIOR WALLS, BUT EXCLUDING DECKS, TERRACES AND OTHER ACCESSORY STRUCTURES WHICH ARE OPEN TO THE SKY.

LOT AREA: 10,113 ± SQ. FT

BUILDING AREA: 2,113 ± SQ. FT.
COVERAGE: 20.9%

TOTAL IMPERVIOUS AREA: 2,946 ± SQ. FT.
COVERAGE: 29.5%



GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

LEGEND

BM	BENCHMARK
FCC	FOUND CROSS-CUT
SCC	SET CROSS-CUT
FIP	FOUND IRON PIPE
SIP	SET IRON PIPE
FIR	FOUND IRON ROD
SIR	SET IRON ROD
FPK	FOUND P.K. NAIL
FMN	FOUND MAG NAIL
SPK	SET P.K. NAIL
SCM	SET CONCRETE MONUMENT
	EXISTING TRAFFIC LIGHT
	EXISTING POWER POLE
	EXISTING GUY ANCHOR
TCB	EXISTING TRAFFIC CONTROL BOX
	EXISTING LIGHT STANDARD
TP	EXISTING TRANSFORMER PAD
A/C	EXISTING AIR CONDITIONER UNIT
E	EXISTING ELECTRIC PEDESTAL
T	EXISTING TELEPHONE PEDESTAL
C	EXISTING CABLE PEDESTAL
E	EXISTING ELECTRIC METER
G	EXISTING GAS METER
W	EXISTING WATER METER
	EXISTING HAND HOLE
	EXISTING DOUBLE HAND HOLE
	EXISTING UTILITY FLAGGING
GV	EXISTING GAS VALVE
WV	EXISTING WATER VALVE

	PROPERTY LINE
	CENTERLINE
	EASEMENT
	BUILDING SETBACK
	EXISTING CHAIN LINK FENCE
	EXISTING WOOD FENCE
	EXISTING GUARDRAIL
	EXISTING RAILROAD TRACKS
	EXISTING WATER EDGE
	DEPRESSED CURB
	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	GRAVEL PAVEMENT
	BRICK PAVEMENT

BB	EXISTING WATER BUFFALO BOX
GAS	EXISTING GAS BUFFALO BOX
CO	EXISTING CLEANOUT
W	EXISTING WATER VALVE VAULT
CB	EXISTING STORM CATCH BASIN
	EXISTING STORM CURB INLET
	EXISTING MANHOLE
	EXISTING DECIDUOUS TREE W/ SIZE
	EXISTING CONIFEROUS TREE W/ SIZE
	EXISTING BOLLARDS
	EXISTING FIRE HYDRANTS
	EXISTING STREET SIGN
DSP	EXISTING DOWNSPOUT
W	EXISTING WELL
MW	EXISTING MONITORING WELL
	EXISTING HEADWALL
M	EXISTING MAILBOX
	EXISTING RAILROAD SIGNAL
	EXISTING BUSH
PU	EXISTING POP-UP EMITTER

ABBREVIATIONS

B/C	BACK OF CURB
B/W	BOTTOM OF WALL
BIT.	BITUMINOUS
CALC.	CALCULATED DATUM
CHD	CHORD
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
D.E.	DRAINAGE EASEMENT
D/C	DEPRESSED CURB
DEED	DEED DATUM
DIP	DUCTILE IRON PIPE
E	EAST
E/P	EDGE OF PAVEMENT
EXIST./EX	EXISTING
F/F	FINISHED FLOOR
F/L	FLOW LINE
FES	FLARED END SECTION
I.E.E.	INGRESS EGRESS EASEMENT
INV	INVERT
MEAS./M=	MEASURED DATUM
MH	MANHOLE
N	NORTH
P.U. & D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
PROP.	PROPOSED
PT	POINT OF TANGENCY
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
REC./R=	RECORD DATUM
S	SOUTH
SAN	SANITARY
T/C	TOP OF CURB
T/F	TOP OF FOUNDATION
T/P	TOP OF PIPE
T/W	TOP OF WALL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
W	WEST
WW	WINDOW WELL

GENERAL NOTES:
1. ALL DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF.
2. COMPARE DEED DESCRIPTION AND SITE CONDITIONS WITH THE DATA SHOWN HEREON AND REPORT ANY DISCREPANCIES AT ONCE.
3. NO DIMENSIONS SHALL BE DERIVED FROM SCALED MEASUREMENT.
4. ONLY THOSE BUILDING SETBACK LINES AND EASEMENTS WHICH ARE SHOWN ON THE RECORDED PLAT OF SUBDIVISION ARE SHOWN HEREON, UNLESS INDICATED OTHERWISE. REFER TO DEED, TITLE INSURANCE POLICY AND LOCAL ORDINANCES FOR OTHER RESTRICTIONS WHICH MAY OR MAY NOT EXIST.
5. DISTANCES ALONG CURVES ARE ARC DISTANCES UNLESS OTHERWISE NOTED.
6. PROPOSED IMPROVEMENTS SHOWN AS LIGHT GRAY.

SURVEYOR'S NOTES:
1. BEARINGS BASED ON THE RECORDED PLAT OF SUBDIVISION.
2. THIS SURVEY WAS PERFORMED ON THE GROUND AND COMPLETED JUNE 21, 2021.
3. ONLY THE IMPROVEMENTS THAT WERE VISIBLE FROM ABOVE GROUND AT TIME OF SURVEY AND THROUGH A NORMAL SEARCH AND WALK THROUGH OF THE SITE ARE SHOWN ON THE FACE OF THIS PLAT. LAWN SPRINKLER SYSTEMS, IF ANY, ARE NOT SHOWN ON THIS SURVEY.
4. SURFACE INDICATIONS OF UTILITIES ON THE SURVEYED PARCEL HAVE BEEN SHOWN. UNDERGROUND AND OFFSITE OBSERVATIONS HAVE NOT BEEN MADE TO DETERMINE THE EXTENT OF UTILITIES SERVING OR EXISTING ON THE PROPERTY. PUBLIC AND/OR PRIVATE RECORDS HAVE NOT BEEN SEARCHED TO PROVIDE ADDITIONAL INFORMATION.
5. OTHER THAN VISIBLE OBSERVATIONS NOTED HEREON, THIS SURVEY MAKES NO STATEMENT REGARDING THE ACTUAL PRESENCE OR ABSENCE OF ANY SERVICE OR UTILITY LINE. CONTROLLED UNDERGROUND EXPLORATORY EFFORT TOGETHER WITH J.U.L.I.E. LOCATIONS IS RECOMMENDED TO DETERMINE THE FULL EXTENT OF UNDERGROUND SERVICE AND UTILITY LINES. CONTACT J.U.L.I.E. AT: 1-800-892-0123.
6. BUILDING TIES ARE MEASURED TO CONCRETE FOUNDATION.

STATE OF ILLINOIS } SS
COUNTY OF COOK }

WE, KNIGHT E/A, INC., ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-002141, HEREBY CERTIFY THAT THE PROPERTY HEREON DESCRIBED WAS SURVEYED UNDER THE DIRECT SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR, AND THAT THIS PLAT REPRESENTS THE CONDITIONS FOUND AT THE TIME OF SAID SURVEY.

GIVEN UNDER MY HAND AND SEAL THIS 24TH DAY OF JUNE, 2021 IN CHICAGO, ILLINOIS.

KNIGHT E/A, INC.

STEVEN BARCZAK, IPLS NO. 035.003269
LICENSE EXPIRES: 11/30/2022

PROFESSIONAL LAND SURVEYOR
STEVEN BARCZAK
NO. 3269
CHICAGO
STATE OF ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ORIGINAL COPIES OF THIS PLAT CONTAIN A SIGNATURE AND A RAISED SEAL.

Drawn By: JV Designed By: SB Scale: 1"=20"

BOUNDARY SURVEY

REVISIONS

TIMBER TRAILS RESUBDIVISION #2

PREPARED FOR:

TIMBER TRAILS DEVELOPMENT COMPANY
6114 BURR OAK DRIVE
WESTERN SPRINGS, ILLINOIS 60558
(708) 783-1602

LOT 275 UPDATE SURVEY

KNIGHT
Engineers & Architects
Knight E/A, Inc.
221 N. LaSalle Street, Suite 300
Chicago, Illinois 60601-1211
Phone (312) 577-3300
Fax (312) 577-3526
knightea.com

SHEET NO. 1 OF 1

DATE: 06/14/2021
JOB NO. 7332.16

EXHIBIT "D"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 276 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 276 IN UNIT 1 OF TIMBER TRAILS SUBDIVISION

(attached)

Draft

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane
Suite 301
Westmont, Illinois 60559

Record Against PIN:
18-18-404-020-0000.

AFTER RECORDING RETURN TO:
Attorney Michael T. Jurusik

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 276 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS that Aroldo M. Bethencourt and Lisett J. Resende (collectively hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois ("Village"), a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of an eight (8.00) foot wide strip of land that is located in the rear yard and is adjacent to and extends along the southeasterly rear lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 276 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

AN EASEMENT OVER THE NORTHERLY 5.00 FEET MEASURED PERPENDICULAR TO THE NORTHERLY LINE THEREOF OF LOT 276 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16, AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS;

ADDRESS: 5919 Timber Trails Blvd., Lot 276, Western Springs, Illinois;

PIN: 18-18-404-020-0000.

Easement Purpose and Terms:

1. Purpose. The purpose of the eight (8.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the public utility easement, which occupies the Easement Area, is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easements and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 276 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided, or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. A sidewalk and public utilities have already been constructed by the Developer of the Timber Trails Subdivision (Timber Trails Building Company, Inc. or its predecessor) within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and are part of the existing Pedestrian Circulation System. The Timber Trails of Western Springs Community Association (the "Homeowners Association") shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Developer shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat exhibit shall be filed by the Village with the Cook County Clerk's Office, Recording Division, at the Developer's expense. A copy of the Easement Agreement and its Plat exhibit with the Recorder's stamp affixed thereto shall be delivered to the Owner and the Developer by the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, Aroldo M. Bethencourt and Lisett J. Resende have voluntarily signed this Easement Agreement, and the President and Board of Trustees of the Village of Western Springs and the authorized corporate officer of Timber Trails Building Company, Inc. have taken the appropriate corporate action to approve this Easement Agreement, the authorized signatories of each Party have executed this Easement Agreement and this Easement Agreement becomes effective on the date the last signatory executes their signature line below.

GRANTOR / OWNER: Aroldo M. Bethencourt and Lisett J. Resende

By: _____
Aroldo M. Bethencourt

By: _____
Lisett J. Resende

Date: _____, 2025.

Date: _____, 2025.

DEVELOPER: Timber Trails Building Company, Inc.

By: _____
Brian Taylor, Authorized Corporate Officer

Date: _____, 2025.

VILLAGE OF WESTERN SPRINGS,
an Illinois municipal corporation

ATTEST:

By: _____
Heidi Rudolph, Village President

By: _____
Edward Tymick, Village Clerk

Date: _____, 2025.

Date: _____, 2025.

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Brian Taylor

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Brian Taylor is personally known to me to be the Authorized Corporate Officer of Timber Trails Building Company, Inc., and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such Authorized Corporate Officer, appeared before me this day in person and acknowledged that, as such Authorized Corporate Officer, he signed and delivered the said instrument pursuant to the authority given by the Timber Trails Building Company, Inc., and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Aroldo M. Bethencourt

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Aroldo M. Bethencourt is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, he appeared before me on this day in person and I acknowledge that he signed and delivered the said instrument of his own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Lisett J. Resende

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Lisett J. Resende is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, she appeared before me on this day in person and I acknowledge that she signed and delivered the said instrument of her own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this ____ day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

EXHIBIT "A"

PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 276 OF UNIT 1 IN TIMBER TRAILS SUBDIVISION

(attached)

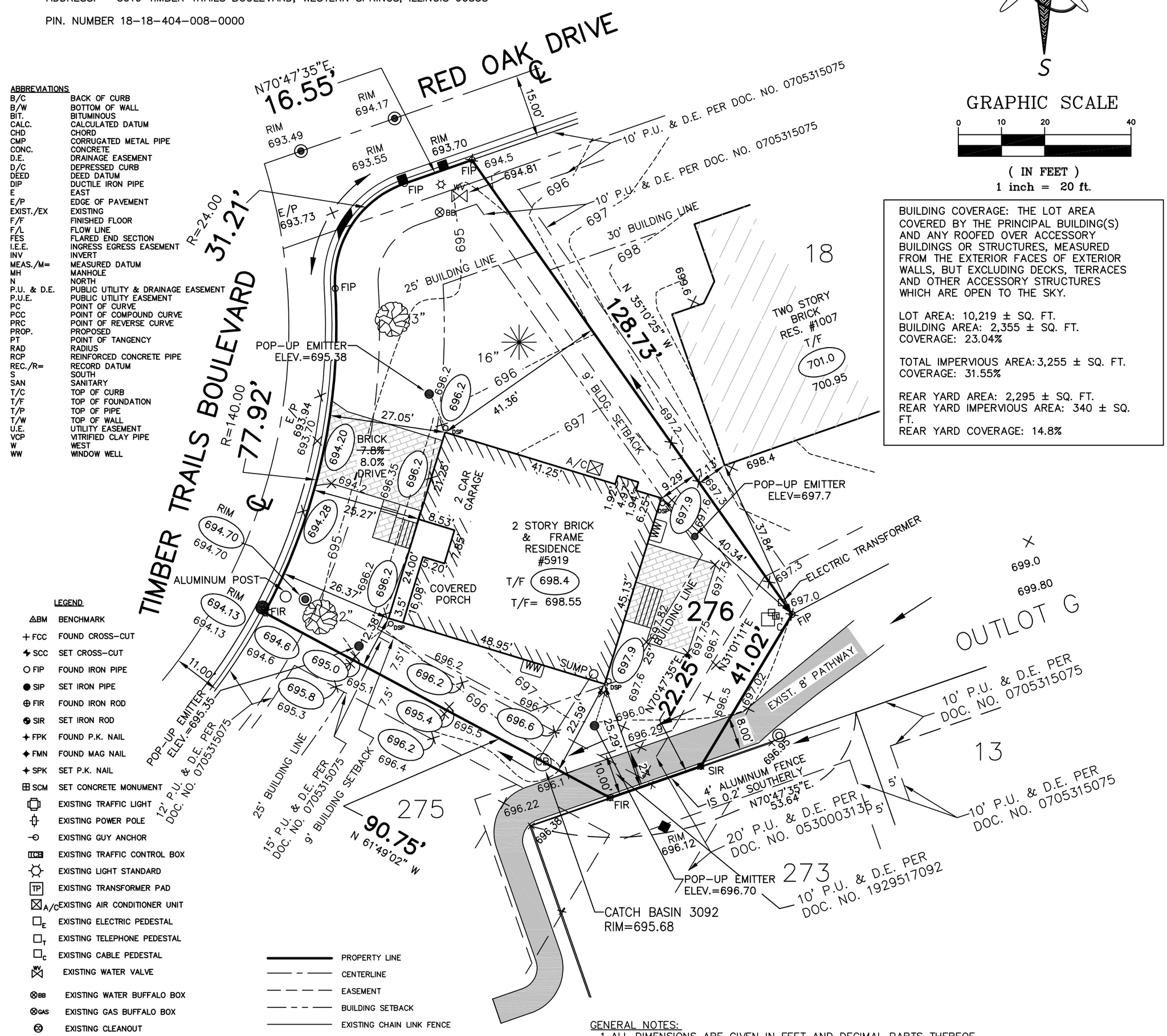
Draft

BOUNDARY & TOPOGRAPHIC SURVEY

LOT 276 IN TIMBER TRAILS RESUBDIVISION NUMBER 2, BEING A RESUBDIVISION OF LOTS 14, 15, 16 AND 17 IN TIMBER TRAILS SUBDIVISION UNIT 1, A SUBDIVISION OF PART OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALONG WITH PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID TIMBER TRAILS RESUBDIVISION NUMBER 2 RECORDED OCTOBER 22, 2018, AS DOCUMENT NUMBER 1829517029, IN COOK COUNTY, ILLINOIS.

ADDRESS: 5919 TIMBER TRAILS BOULEVARD, WESTERN SPRINGS, ILLINOIS 60558

PIN. NUMBER 18-18-404-008-0000



ABBREVIATIONS

B/C	BACK OF CURB
B/W	BOTTOM OF WALL
BIT.	BITUMINOUS
CALC.	CALCULATED DATUM
CHD	CHORD
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
D.E.	DRAINAGE EASEMENT
D/C	DEPRESSED CURB
DEED	DEED DATUM
DIP	DUCTILE IRON PIPE
E	EAST
E/P	EDGE OF PAVEMENT
EXIST./EX	EXISTING
F/F	FINISHED FLOOR
F/L	FLOW LINE
FES	FLARED END SECTION
I.E.E.	INGRESS EGRESS EASEMENT
INV	INVERT
MEAS./M=	MEASURED DATUM
MH	MANHOLE
N	NORTH
P.U. & D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
PROP.	PROPOSED
PT	POINT OF TANGENCY
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
REC./R=	RECORD DATUM
S	SOUTH
SAN	SANITARY
T/C	TOP OF CURB
T/F	TOP OF FOUNDATION
T/P	TOP OF PIPE
T/W	TOP OF WALL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
W	WEST
WW	WINDOW WELL

LEGEND

BM	BENCHMARK
FCC	FOUND CROSS-CUT
SCC	SET CROSS-CUT
FIP	FOUND IRON PIPE
SIP	SET IRON PIPE
FIR	FOUND IRON ROD
SIR	SET IRON ROD
FPK	FOUND P.K. NAIL
FMN	FOUND MAG NAIL
SPK	SET P.K. NAIL
SCM	SET CONCRETE MONUMENT
	EXISTING TRAFFIC LIGHT
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C	EXISTING CABLE PEDESTAL
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DSP	EXISTING DOWNSPOUT
PU	EXISTING POP-UP EMITTER

	PROPERTY LINE
	CENTERLINE
	EASEMENT
	BUILDING SETBACK
	EXISTING CHAIN LINK FENCE
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	EXISTING RAILROAD TRACKS
	EXISTING WATER EDGE
	DEPRESSED CURB
	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	GRAVEL PAVEMENT
	BRICK PAVEMENT

BENCHMARKS/CONTROL

SOURCE: F.E.M.A. BENCHMARK RM303 MAP PANEL NUMBER 0145 LOCATED AT THE SE 1/4 OF THE NORTH 1/4 OF SECTION 30; TOWNSHIP 38 NORTH RANGE 12 EAST; APPROXIMATELY 2400 FEET SOUTH OF I-294 (TOLL WAY) AND 350 FEET SOUTH OF 73rd PLACE; A BOAT SPIKE IN WEST FACE OF A POWER POLE IN NORTHWEST QUADRANT AT INTERSECTION OF WOLF ROAD AND PAVED ROAD WEST, 0.3 FOOT ABOVE CENTERLINE.
ELEVATION (PER NGVD OF 1929) = 635.635

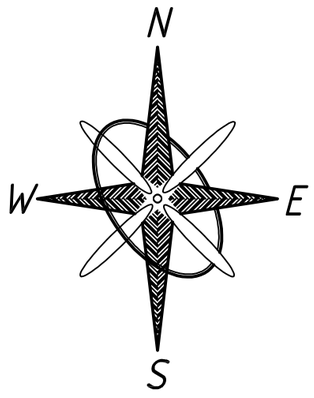
SITE: SOUTHEAST CORNER OF I.D.O.T TRAFFIC CONTROL BOX, LOCATED AT THE NORTHWEST CORNER OF WOLF ROAD AND JOLIET ROAD.
ELEVATION: 655.82

SITE: CROSS CUT ON AN I.D.O.T TRAFFIC SIGNAL HAND HOLE, LOCATED AT THE NORTHWEST CORNER OF WOLF ROAD AND PLAINFIELD ROAD.
ELEVATION: 705.40

CP 1740 CROSS CUT ON CURB BY PC LOT 17
N: 2828.597
E: 3177.18
ELEVATION: 693.852

CP1604 CROSS CUT ON CURB BY HYDRANT ACROSS LOT 59
N: 2987.546
E: 3085.363
ELEVATION: 691.45

NOTE: ANY AND ALL PARTIES UTILIZING THE VERTICAL DATUM LISTED ABOVE SHALL ALWAYS CHECK INTO AT LEAST TWO (2) BENCH MARKS TO AVOID MISTAKES DUE TO HYDRANT ADJUSTMENTS OR TRANSPOSITIONAL ERRORS. FAILURE TO DO SO WILL BE CONSIDERED TANTAMOUNT TO GROSS NEGLIGENCE AND SUBJECT THE OFFENDING PARTY TO ANY DAMAGES ATTENDANT



GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

BUILDING COVERAGE: THE LOT AREA COVERED BY THE PRINCIPAL BUILDING(S) AND ANY ROOFED OVER ACCESSORY BUILDINGS OR STRUCTURES, MEASURED FROM THE EXTERIOR FACES OF EXTERIOR WALLS, BUT EXCLUDING DECKS, TERRACES AND OTHER ACCESSORY STRUCTURES WHICH ARE OPEN TO THE SKY.

LOT AREA: 10,219 ± SQ. FT.
BUILDING AREA: 2,355 ± SQ. FT.
COVERAGE: 23.04%

TOTAL IMPERVIOUS AREA: 3,255 ± SQ. FT.
COVERAGE: 31.55%

REAR YARD AREA: 2,295 ± SQ. FT.
REAR YARD IMPERVIOUS AREA: 340 ± SQ. FT.
REAR YARD COVERAGE: 14.8%

GENERAL NOTES:
1. ALL DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF.
2. COMPARE DEED DESCRIPTION AND SITE CONDITIONS WITH THE DATA SHOWN HEREON AND REPORT ANY DISCREPANCIES AT ONCE.
3. NO DIMENSIONS SHALL BE DERIVED FROM SCALED MEASUREMENT.
4. ONLY THOSE BUILDING SETBACK LINES AND EASEMENTS WHICH ARE SHOWN ON THE RECORDED PLAT OF SUBDIVISION ARE SHOWN HEREON, UNLESS INDICATED OTHERWISE. REFER TO DEED, TITLE INSURANCE POLICY AND LOCAL ORDINANCES FOR OTHER RESTRICTIONS WHICH MAY OR MAY NOT EXIST.
5. DISTANCES ALONG CURVES ARE ARC DISTANCES UNLESS OTHERWISE NOTED.
6. PROPOSED IMPROVEMENTS SHOWN AS LIGHT GRAY.

SURVEYOR'S NOTES:
1. BEARINGS BASED ON THE RECORDED PLAT OF SUBDIVISION.
2. THIS SURVEY WAS PERFORMED ON THE GROUND AND COMPLETED SEPTEMBER 27, 2021 AND APRIL 21, 2022.
3. ONLY THE IMPROVEMENTS THAT WERE VISIBLE FROM ABOVE GROUND AT TIME OF SURVEY AND THROUGH A NORMAL SEARCH AND WALK THROUGH OF THE SITE ARE SHOWN ON THE FACE OF THIS PLAT. LAWN SPRINKLER SYSTEMS, IF ANY, ARE NOT SHOWN ON THIS SURVEY.
4. SURFACE INDICATIONS OF UTILITIES ON THE SURVEYED PARCEL HAVE BEEN SHOWN. UNDERGROUND AND OFFSITE OBSERVATIONS HAVE NOT BEEN MADE TO DETERMINE THE EXTENT OF UTILITIES SERVING OR EXISTING ON THE PROPERTY. PUBLIC AND/OR PRIVATE RECORDS HAVE NOT BEEN SEARCHED TO PROVIDE ADDITIONAL INFORMATION.
5. OTHER THAN VISIBLE OBSERVATIONS NOTED HEREON, THIS SURVEY MAKES NO STATEMENT REGARDING THE ACTUAL PRESENCE OR ABSENCE OF ANY SERVICE OR UTILITY LINE. CONTROLLED UNDERGROUND EXPLORATORY EFFORT TOGETHER WITH J.U.L.I.E. LOCATIONS IS RECOMMENDED TO DETERMINE THE FULL EXTENT OF UNDERGROUND SERVICE AND UTILITY LINES. CONTACT J.U.L.I.E. AT: 1-800-892-0123.
6. BUILDING TIES ARE MEASURED TO CONCRETE FOUNDATION.

STATE OF ILLINOIS } SS
COUNTY OF COOK }

WE, KNIGHT E/A, INC., ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-002141, HEREBY CERTIFY THAT THE PROPERTY HEREON DESCRIBED WAS SURVEYED UNDER THE DIRECT SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR, AND THAT THIS PLAT REPRESENTS THE CONDITIONS FOUND AT THE TIME OF SAID SURVEY.

GIVEN UNDER MY HAND AND SEAL THIS 30TH DAY OF SEPTEMBER, 2021 IN CHICAGO, ILLINOIS.

KNIGHT E/A, INC.

STEVEN BARCZAK, IPLS NO. 035.003269
LICENSE EXPIRES: 11/30/2022

PROFESSIONAL LAND SURVEYOR
STEVEN BARCZAK
NO. 3269
CHICAGO
STATE OF ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

ORIGINAL COPIES OF THIS PLAT CONTAIN A SIGNATURE AND A RAISED SEAL.

BOUNDARY & TOPOGRAPHIC SURVEY

Drawn By: AZ Designed By: SB Scale: 1"=20"

REVISIONS

1	06/06/22	REAR SWALE PER VILLAGE

TIMBER TRAILS RESUBDIVISION #2

PREPARED FOR:

TIMBER TRAILS DEVELOPMENT COMPANY
6114 BURR OAK DRIVE
WESTERN SPRINGS, ILLINOIS 60558
(708) 783-1602

KNIGHT
Engineers & Architects
Knight E/A, Inc.
221 N. LaSalle Street, Suite 300
Chicago, Illinois 60601-1211
Phone (312) 577-3300
Fax (312) 577-3526
knightea.com

LOT 276 FINAL GRADE VERIFICATION

SHEET NO.
1
OF 1

DATE: 09/29/2021
JOB NO. 7332.17

EXHIBIT "E"

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION AND PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 IN UNIT 2 OF TIMBER TRAILS SUBDIVISION

(attached)

Draft

THIS DOCUMENT WAS PREPARED BY:
Michael T. Jurusik, Esq.
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane
Suite 301
Westmont, Illinois 60559

Record Against PIN:
18-18-415-001-0000.

AFTER RECORDING RETURN TO:
Attorney Michael T. Jurusik

PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION

KNOW ALL MEN BY THESE PRESENTS, that Frederick J. Grosskopf and Susan E. Grosskopf (collectively hereinafter "Grantor" or "Owner"), for good and valuable consideration, the receipt of which is acknowledged, GRANTS, RESERVES, CONVEYS, ASSIGNS AND QUIT CLAIMS to the Village of Western Springs, an Illinois municipal corporation, Cook County, Illinois, a permanent and perpetual public sidewalk easement and public utility easement, which are legally described below, consisting of a five (5.00) foot wide strip of land that is located in the east side yard and is adjacent to and extends along the northeasterly lot line of the below-described property, as shown on the PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION, a copy of which is attached hereto as **EXHIBIT "A"** and made a part hereof, for the purposes set forth below under "Easement Purpose and Terms" in, on, upon, over, through, across and under a portion of the real property legally described as follows:

AN EASEMENT OVER THE NORTHEASTERLY 5.00 FEET MEASURED PERPENDICULAR TO THE NORTHEASTERLY LINE THEREOF OF LOT 223 IN TIMBER TRAILS SUBDIVISION UNIT 2, BEING A RESUBDIVISION OF OUTLOT N IN TIMBER TRAILS SUBDIVISION UNIT 1, OF PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED FEBRUARY 22, 2007 AS DOCUMENT NO. 0705315075, ALL IN COOK COUNTY, ILLINOIS;

(hereinafter the "Easement Area");

ADDRESS: 1100 White Pine Lane, Lot 223, Western Springs, Illinois;

PIN: 18-18-415-001-0000.

Draft

Easement Purpose and Terms:

1. Purpose. The purpose of the five (5.00) foot wide public sidewalk easement is to allow for the construction, installation, maintenance, repair, replacement and operation of a portion of an eight (8.00) foot wide asphalt public sidewalk that is also referred to as a "Pedestrian Circulation System" (as defined in the Annexation Agreement for the Timber Trails Subdivision entered into between the Village of Western Springs and Western Springs One, LLC on March 21, 2005 and recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0508203048 (hereinafter "Annexation Agreement") and the Community Declarations for the Timber Trails Subdivision recorded in the Office of the Recorder of Deeds of Cook County, in the State of Illinois, as document number 0703334023, as amended, (hereinafter "Declaration")), within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto. The Easement Area shall also afford access to contractors to perform work on the Pedestrian Circulation System and to the public who use the Pedestrian Circulation System as a recreational amenity and as a means of pedestrian travel. The purpose of the five (5.00) foot wide public utility easement is to allow for the construction, installation, maintenance, repair, replacement and operation of public utilities (electric lines, wires, conduit and light standards, poles and fixtures) within the dedicated Easement Area, together with all the appurtenances and privileges belonging or appertaining thereto, including access by contractors who perform work on the public utilities.
2. Covenant That Runs With the Land. The public sidewalk easement and public utility easement rights, conditions and other obligations that are set forth herein and granted by this PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION (hereinafter the "Easement Agreement") and contained in the attached Plat shall be covenants that run with the land even if the above-described real property or any other portion of Timber Trails Subdivision is consolidated, subdivided or all or some portion thereof is sold, leased or otherwise transferred at some future date, unless the Parties mutually consent to the termination or modification of the easements, covenants and conditions and other obligations set forth herein. The easement rights, covenants and conditions and other obligations set forth in this Easement Agreement shall be binding upon and enforceable against all successors in title or interest, grantees, successor owners, representatives, transferees and assigns of the Easement Area, or any portion thereof.
3. Ownership and Maintenance of the Sidewalk/Pedestrian Circulation System. A sidewalk and public utilities have already been constructed by the Developer of the Timber Trails Subdivision (Timber Trails Building Company, Inc. or its predecessor) within the Easement Area, in accordance with the requirements set forth in the Annexation Agreement, so that the improvements are connected into and are part of the existing Pedestrian Circulation System. The Timber Trails of Western Springs Community Association (the "Homeowners Association") shall be responsible for the future maintenance (including snow removal), repair and replacement of the public sidewalk and the public utilities constructed within the Easement Area in accordance with the applicable terms of the Annexation Agreement and the Declaration, even after the conveyance of title of such improvements to the Village. The Developer shall convey title to the completed sidewalk and public utilities to the Village through a plat of dedication and bill of sale in accordance with the applicable provisions of the Annexation Agreement.
4. No Conveyance of Land. Nothing in this Easement Agreement shall be construed to constitute a conveyance of fee simple title to the above-described real property, or an acceptance thereof, by the Village.

5. Recording. This Easement Agreement and its Plat exhibit shall be filed by the Village with the Cook County Clerk's Office, Recording Division, at the Developer's expense. A copy of the Easement Agreement and its Plat exhibit with the Recorder's stamp affixed thereto shall be delivered to the Owner and the Developer by the Village within thirty (30) days of its filing date.
6. Incorporation. The terms, conditions and obligations set forth in the Annexation Agreement and the Declaration are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, Frederick J. Grosskopf and Susan E. Grosskopf have voluntarily signed this Easement Agreement, and the President and Board of Trustees of the Village of Western Springs and the authorized corporate officer of Timber Trails Building Company, Inc. have taken the appropriate corporate action to approve this Easement Agreement, the authorized signatories of each Party have executed this Easement Agreement, and this Easement Agreement becomes effective on the date the last signatory executes their signature line below.

GRANTOR / OWNER: Frederick J. Grosskopf and Susan E. Grosskopf

By: _____
Frederick J. Grosskopf

Date: _____, 2025.

By: _____
Susan E. Grosskopf

Date: _____, 2025.

DEVELOPER: Timber Trails Building Company, Inc.

By: _____
Brian Taylor, Authorized Corporate Officer

Date: _____, 2025.

VILLAGE OF WESTERN SPRINGS,
an Illinois municipal corporation

By: _____
Heidi Rudolph, Village President

Date: _____, 2025.

ATTEST:

By: _____
Edward Tymick, Village Clerk

Date: _____, 2025.

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Brian Taylor

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Brian Taylor is personally known to me to be the Managing Member of Timber Trails Building Company, Inc., and also known to me to be the same person whose name is subscribed to the foregoing instrument and as such Managing Member appeared before me this day in person and acknowledged that as such Managing Member he signed and delivered the said instrument pursuant to the authority given by the Members of Timber Trails Building Company, Inc., and as his free and voluntary act, and as the free and voluntary act and deed of the Company, for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this __ day of _____, 2025.

_____
Notary Public

Draft

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Frederick J. Grosskopf

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Frederick J. Grosskopf is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, he appeared before me on this day in person and I acknowledge that he signed and delivered the said instrument of his own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this day of _____, 2025.

_____
Notary Public

NOTARY STAMP

STATE OF ILLINOIS)
) ss.
COUNTY OF COOK)

Notary Public Certificate for Susan E. Grosskopf

I, the undersigned, a Notary Public, in and for the County and State aforesaid, CERTIFY that Susan E. Grosskopf is personally known to me, and also known to me to be the same person whose name is subscribed to the foregoing instrument and, as such, she appeared before me on this day in person and I acknowledge that she signed and delivered the said instrument of her own free and voluntary act for the uses and purposes therein set forth.

GIVEN UNDER my hand and Notarial Seal this day of _____, 2025.

_____
Notary Public

NOTARY STAMP

Draft

EXHIBIT "A"

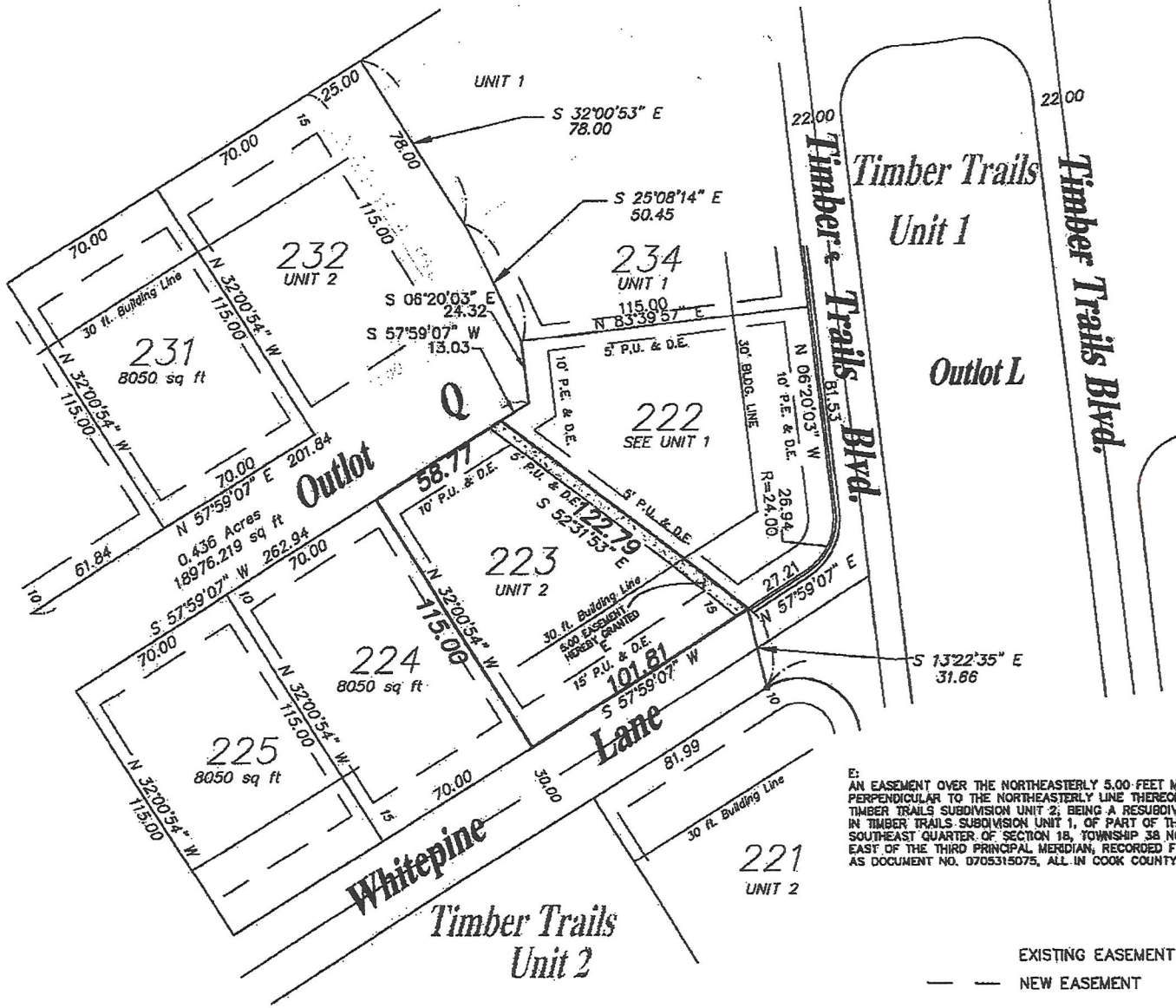
PLAT OF PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT FOR LOT 223 OF UNIT 2 IN TIMBER TRAILS SUBDIVISION

(attached)

Draft

EASEMENT EXHIBIT

FOR PEDESTRIAN PATHWAY



E:
AN EASEMENT OVER THE NORTHEASTERLY 5.00 FEET MEASURED PERPENDICULAR TO THE NORTHEASTERLY LINE THEREOF OF LOT 223 IN TIMBER TRAILS SUBDIVISION UNIT 2; BEING A RESUBDIVISION OF OUTLOT N IN TIMBER TRAILS SUBDIVISION UNIT 1, OF PART OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, RECORDED FEBRUARY 22, 2007 AS DOCUMENT NO. 0705315075, ALL IN COOK COUNTY, ILLINOIS.

EASEMENT EXHIBIT

'TIMBER TRAILS UNIT 2'

PREPARED FOR:
RED SEAL DEVELOPMENT CORP.
425 RUEHL ROAD, BLDG. 18
NORTHBROOK, ILLINOIS 60062
(847) 272-5600

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
211 WEST WACKER DRIVE, SUITE 600
CHICAGO, ILLINOIS 60606
(312) 372-2022 | FAX (312) 372-2174

SHEET NO.
1
OF 1
DATE: 07-19-10
JOB NO. 05-029

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING PUBLIC SIDEWALK EASEMENT AND PUBLIC UTILITY EASEMENT AGREEMENTS AND RELATED PLATS OF SIDEWALK EASEMENTS AND PUBLIC UTILITY EASEMENTS FOR LOTS 274, 276, 222 AND 275 OF UNIT 1 AND LOT 223 OF UNIT 2 WITHIN THE TIMBER TRAILS SUBDIVISION

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 24th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 24th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 24th day of February, 2025.

_____
Edward Tymick, Village Clerk

Draft

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.D.

To: Board of Trustees
From: Heather Valone, Director of Community Development
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager, Jill Izzo, Village Clerk, Michael Jurusik, Village Attorney, Anne Skrodzki, Village Attorney, Kelsey Fawell, Senior Planner
RE: French Market - Sixth Addendum to the Market License Agreement Between the Village of Western Springs and Bensidoun USA, Inc. Relative to Operation of a French Market in the Village (Extended term: February 24, 2025, to December 31, 2028) (Report only)

Recommendation

The Planning and Zoning Committee reviewed this item at their meeting on February 6, 2025, and recommended the approval of the sixth addendum to the French Market License Agreement.

Summary

On January 28, 2008, the Village Board approved Resolution No. 08-1999 titled "A Resolution Approving and Authorizing the Execution of a Market License Agreement Between the Village of Western Springs and Bensidoun, USA, Inc. Relative to Operation of a French Market in the Village." The Village has approved five addendums to the original agreement extending the agreement to the 2024 market season. A sixth addendum to the French Market License Agreement is being proposed for consideration.

The sixth addendum proposes that the French Market season remain from May to September. The location of the French Market on Hillgrove Avenue directly adjacent to the Tower Green and event time of Wednesdays from 4:00 pm to 7:00 pm are proposed to remain the same as this past year. The obligations of Bensidoun, USA, Inc. (Bensidoun) for setup and clean up, coordination, and other tasks are proposed to remain as outlined in the previous agreements.

During the 2024 French Market season, the Village hosted compatible community events on the Tower Green such as early childhood development music demonstrations, bounce houses, story time, yard games, a pet themed day, among other events. The French Market also overlapped with the Western Springs Business Association's (WSBA) Jammin' in July events (Table 1). These events coupled with the Jammin' in July made for a successful market year. The French Market successfully retained existing vendors and recruited new vendors selling cookies, croissants, tacos, dog treats, olive oil, meats, and coffee. The average number of vendors per market was 13-14.

Market Date	Number of Vendors*	Compatible Community Event
8-May	14	
15-May	13	
22-May	16	Mattix Music - Music Together Demonstration Grand Avenue Montessori Children's Performance
29-May	12	Recreation Department - Yard Games
5-Jun	12	Library - Summer Read Program
12-Jun	17	Recreation Department - Yard Games
19-Jun	Holiday - No Market	
26-Jun	12	Recreation Department - Yard Games
3-Jul	No Market	
10-Jul	14	Jammin' In July
17-Jul	19	Jammin' In July
24-Jul	13	Jammin' In July
31-Jul	14	Jammin' In July
7-Aug	16	Recreation Department - Yard Games
14-Aug	16	Mattix Music - Music Together Demonstration
21-Aug	12	Pet Themed Market
28-Aug	12	Bounce House
4-Sep	10	Mattix Music - Music Together Demonstration
11-Sep	12	Story Time with the Village President
18-Sep	8	Bounce House
25-Sep	14	

*Number of vendors is based on confirmation a day prior to the event. If a vendor canceled day-of due to an emergency that is not captured.

Given the success of the 2024, French Market staff is recommended that the agreement be extended to 2028 as proposed in the addendum. If extended, Village staff would propose to continue with the compatible community events and look for opportunities to expand those offerings. Bensidoun USA, Inc. has committed to maintaining Western Springs French Market as a priority through vendor recruitment and advertising. WSBA has indicated support for the French Market to continue to expand their Jammin' in July events. The Planning and Zoning Committee reviewed the sixth amendment to the French Market License Agreement at their meeting on February 6, 2025 and recommended to advance the item for review and discussion by the Village Board. The draft resolution and agreement are included in Attachment 1.

Attachment

---

1. Draft Resolution - A Resolution Approving and Authorizing the Execution of a Sixth Addendum to the Market License Agreement Between the Village of Western Springs and Bensidoun USA, Inc. Relative to Operation of a French Market in the Village (Extended Term: February 24, 2025 to December 31, 2027).

Financial Impact

None.

Recommended Motion

I move to approve the Sixth Addendum to the Market License Agreement Between the Village of Western Springs and Bensidoun USA, Inc. relative to the operation of a French Market in the Village.

Strategic Plan Alignment

Economic Development.

File Attachments

1. Draft Resolution

DRAFT 2.3.2025

RESOLUTION NO. 25-_____

VOTE:
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: February 24, 2025.
OTHER: None.

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A SIXTH ADDENDUM TO THE MARKET LICENSE AGREEMENT BETWEEN THE VILLAGE OF WESTERN SPRINGS AND BENSIDOUN USA, INC. RELATIVE TO OPERATION OF A FRENCH MARKET IN THE VILLAGE (EXTENDED TERM: FEBRUARY 24, 2025 TO DECEMBER 31, 2027).

WHEREAS, the President and Board of Trustees of the Village of Western Springs (the "Village" or "Village Board") passed Resolution No. 08-1999 on January 28, 2008, and entered into a "Market License Agreement" (the "Agreement"), to allow Bensidoun USA, Inc., an Illinois corporation (the "Licensee"), to operate an open-air "French Market" (the "Market") on real property owned by the Village, subject to the terms and conditions set forth in the Agreement; and

WHEREAS, the Village and the Licensee have approved and entered into multiple addenda to the Agreement, as follows: the 2009 Addendum (approved by motion on March 23, 2009); the Second Addendum (approved by Resolution No. 16-2349 dated March 23, 2016); the Third Addendum (approved by Resolution No. 18-2434 dated April 23, 2018); the Fourth Addendum (approved by Resolution No. 19-2475 dated February 25, 2019); and the Fifth Addendum (approved by Resolution No. 22-2666, dated March 21, 2022) (collectively, the "Addenda"); and

WHEREAS, the Village desires to further amend certain of the terms of the Agreement, as amended by the Addenda, by entering into the "Sixth Addendum to the Market License Agreement Between Bensidoun USA, Inc. and the Village of Western Springs, Cook County, Illinois," a copy of which is attached hereto as **Exhibit "1"** and made a part hereof (the "Sixth Addendum"). The amendments relate to extending the term of the Agreement for the period of February 24, 2025 to December 31, 2027; and

WHEREAS, the Licensee desires to enter into the attached Sixth Addendum and to host and provide the Market consistent with the terms, provisions and conditions set forth in the Agreement, as amended by the Addenda and the Sixth Addendum; and

WHEREAS, at an open public meeting held on February 6, 2025, the Planning and Zoning Committee ("Committee") reviewed the terms of the attached Agreement and received input from the Village staff and provided an opportunity for public input on the matter, and then the Committee favorably recommended that the Village Board approve the Agreement; and

WHEREAS, at open public meetings held on February 10, 2025 and February 24, 2025, the Village Board reviewed and discussed the Project, the Agreement and the Committee's recommendation, and received input from Village staff and provided an opportunity for public input on the matter. At its February 24, 2025 meeting, the Village Board accepted the Committee's recommendation to approve and enter into the Agreement; and

WHEREAS, pursuant to the constitutional and statutory authority and intergovernmental cooperation powers set forth at Section 1 (Municipalities and Units of Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental

Cooperation) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970, as well as the Illinois Intergovernmental Cooperation Act (5 ILCS 220/), and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/8-1-2.5), the President and Board of Trustees of the Village of Western Springs are authorized to approve and enter into the attached Sixth Addendum, and find that it is protective of the health, safety and welfare of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the attached Sixth Addendum.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of Sixth Addendum and Other Related Documents. The President and Board of Trustees of the Village of Western Springs approve the Sixth Addendum, substantially in the form attached hereto as **Exhibit "1"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney. The President and Board of Trustees further authorize and direct the Village President and Village Clerk (or their designees) to execute the Sixth Addendum and such other documents as are necessary to fulfill the Village's obligations under the Sixth Addendum.

SECTION 3: Approval of Expenses. The President and Board of Trustees of the Village further approve and authorize the expenditure of Village funds and/or other available funds to pay all budgeted and appropriated costs that are necessary to fulfill the Village's financial obligations under the Sixth Addendum.

SECTION 4: Delivery of Signed Documents. After approval and execution of this Resolution and the Sixth Addendum by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of one (1) certified copy of this Resolution and an executed version of the attached Sixth Addendum to Bensidoun USA, Inc. for record retention purposes.

SECTION 5: Effective Date. This Resolution shall be in full force and effect from and after its approval and adoption in the manner provided by law.

PASSED by the President and Board of Trustees of the Village of Western Springs, Cook County, Illinois on a roll call vote at a Regular Meeting thereof held on the 24th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Draft

Exhibit "1"

Sixth Addendum To The Market License Agreement
Between Bensidoun USA, Inc. And
The Village Of Western Springs, Cook County, Illinois

(attached)

Draft

SIXTH ADDENDUM TO
THE MARKET LICENSE AGREEMENT
BETWEEN BENSIDOUN USA, INC. AND
THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS

THIS SIXTH ADDENDUM (the "Sixth Addendum") is entered into by the Village of Western Springs, Cook County, Illinois, an Illinois municipal corporation (the "Village" or the "Licensor"), and Bensidoun USA, Inc., an Illinois corporation (the "Licensee"), and is dated the ____ day of _____ 2025. The Village and the Licensee shall be referred to collectively as the "Parties" and individually as a "Party."

R E C I T A L S

Among the matters of mutual inducement which have resulted in this Sixth Addendum are the following:

A. The Village is a non-home rule municipality pursuant to Section 1 (Municipalities and Units of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970. Moreover, Section 10(a) (Intergovernmental Cooperation) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970 authorizes municipalities to enter into contracts with individuals, associations and corporations in any manner not prohibited by law or by ordinance.

B. The Village and the Licensee entered into a "Market License Agreement" (the "Agreement") that was approved by the President and Board of Trustees of the Village in Resolution No. 08-1999 on January 28, 2008. The Agreement allows the Licensee to operate an open-air "French Market" (the "Market") on real property owned by the Village, subject to the terms and conditions set forth in the Agreement. The Agreement is on file in the Village Clerk's Office and is incorporated by reference into this Sixth Addendum as **Exhibit "A"** and made a part hereof.

C. The Village and the Licensee have approved and entered into multiple addenda to the Market License Agreement as follows: the 2009 Addendum (approved by motion on March 23, 2009); the Second Addendum (approved by Resolution No. 16-2349 dated March 23, 2016); the Third Addendum (approved by Resolution No. 18-2434 dated April 23, 2018); the Fourth Addendum (approved by Resolution No. 19-2475 dated February 25, 2019), A Fifth Addendum (approved by Resolution 22-2666 dated March 21, 2022) (collectively, the "Addenda"). The Addenda are on file in the Village Clerk's Office and are incorporated by reference into this Sixth Addendum as "**Group Exhibit "B"** and made a part hereof. All references in this Sixth Addendum to the "Agreement" shall mean the Agreement as amended by the Addenda.

D. The Village and the Licensee desire to enter into this Sixth Addendum to amend certain terms and provisions of the Agreement, as set forth below, relative to extending the term

of the Agreement, which shall commence on February 24, 2025 and end on December 31, 2027.

IN CONSIDERATION of the above Recitals, the mutual covenants herein contained, and other good and valuable consideration, the sufficiency and receipt of which is acknowledged, the Village and the Licensee agree as follows:

SECTION 1: Approval of Amended Terms to the Agreement. The Parties agree that Sections 2, 5(a), 5(b), 5(k) and 7 of the Agreement shall be amended to read in their entirety as follows:

2. TERM OF AGREEMENT. The term of this AGREEMENT shall commence on February 24, 2025 and shall continue until December 31, 2027 (the "2025/2027 Extended Term"). The Parties may extend the term of this Agreement for an additional period of time beyond the 2025/20227 Extended Term by mutual agreement set forth in an addendum. The Parties agree as follows:

   A. If the LICENSOR decides not to renew this Agreement at the end of the 2025/2027 Extended Term or if the Agreement is terminated early by the LICENSOR and the LICENSEE is not in material breach of the Agreement at the time of the non-renewal or the termination, then the LICENSOR agrees that it shall be prohibited from allowing an open-air market to operate on the PREMISES for a one (1) year waiting period that commences on the date that the Agreement expires or is terminated.

   B. If the LICENSEE decides not to renew this Agreement at the end of the 2025/2027 Extended Term, or if the Agreement is terminated early by the LICENSEE, or if the Agreement is terminated by the LICENSOR due to the LICENSEE'S material breach of the Agreement, then the one (1) year waiting period imposed on the LICENSOR relative to allowing an open-air market on the PREMISES under subsection 2(A) above shall not apply to the LICENSOR, provided that the LICENSOR does not solicit any of the current vendors of the LICENSEE for a one (1) year period commencing on the termination date of the Agreement.

***

5. USE OF PREMISES.

   (a) MAINTENANCE AND OPERATION. The LICENSEE may use the PREMISES solely for operating an open-air market. The LICENSEE may operate the open-air market on Wednesdays during the months of May, June, July, August, and September, as specified below, between the hours of **3:00 p.m. and 8:00 p.m.** The first MARKET DAY each May shall be conducted on the second Wednesday of that month and the last MARKET DAY each September shall be conducted on the last Wednesday of that month. Each Wednesday during the months of May, June, July, August, and September that the open-air market is operated by the LICENSEE shall also be known as a "MARKET DAY." Additional "MARKET DAYS" may be added with the consent of the Village Manager to

accommodate requests from the LICENSEE or related to special events organized or promoted by the LICENSOR. The hours of a MARKET DAY may be modified by mutual agreement of the LICENSOR and the LICENSEE. The LICENSEE'S use of the PREMISES must comply with all applicable state, federal, county and Village laws, statutes, regulations, and ordinances. In addition, the LICENSEE shall comply with all directives of the Village Manager, the Director of Law Enforcement Services, the Director of Fire and Emergency Medical Services, the Director of Municipal Services and the Director of Community Development, or their designees, regarding the safety of its vendors and all market customers at each MARKET DAY, including perimeter safety/security and seeking shelter from severe weather. Reconfiguration, relocation, or rescheduling of any MARKET DAY due to Village-issued safety/security directives shall not result in any financial payment, concession or contribution from the LICENSOR to the LICENSEE and any financial loss incurred by such Village-issued safety/security directives shall be borne fully by the LICENSEE.

(b) SET UP. For each MARKET DAY, the following three (3) options will be considered and finalized administratively by Village Staff: (a) the LICENSEE shall provide its own labor to set up and take down the tents and poles for the open-air market; or (b) vendors shall provide, install and use their own tents rather than the tents provided by the LICENSEE; or (c) the LICENSOR shall provide labor to set up and take down the LICENSEE'S tents and poles. The LICENSOR agrees to continue to store the LICENSEE'S tents and poles at no charge to the LICENSEE.

For each MARKET DAY, the LICENSOR, at its cost, shall deliver the LICENSEE'S tents and poles to the PREMISES (unless vendor-owned tents are used), and shall close portions of the public streets immediately adjacent to the PREMISES.

If the LICENSEE is unable to procure adequate labor to perform its obligations in this Section 5(b), after using the LICENSEE'S reasonable efforts, the LICENSEE may request that the LICENSOR provide, and the LICENSOR shall provide, the LICENSEE with the labor needed to complete the LICENSEE'S obligations under this Section 5(b), with at least four (4) business days advanced notice of the same. As an alternative to the LICENSOR providing the labor needed to complete the LICENSEE'S obligations under this Section 5(b), the LICENSEE may allow its vendors to use their own tents during the open-air market, rather than the LICENSEE-supplied tents and poles, and, in such case, the LICENSOR shall, before the MARKET DAY begins, outline each vendor space on the PREMISES in chalk.

***

(k) MARKETING. The LICENSEE, at its cost, shall provide marketing for the open-air market through a combination of press releases, bought advertisement and digital marketing. The LICENSOR, at its cost, shall provide marketing for the open-air market through a combination of banners, Village newsletters, digital marketing and the Village cable

access channel. The LICENSOR shall make reasonable efforts to acquire, install and maintain temporary signs during the MARKET SEASON and to acquire, install and maintain permanent signs advertising the open-air market, at a cost to be shared equally by the LICENSEE and the LICENSOR, at locations selected by the LICENSOR, in its sole discretion, along Hillgrove Avenue, Wolf Road and/or Ogden Avenue.

***

7. ALTERATIONS AND ADDITIONS. The LICENSEE shall make no alteration, addition, improvement or change in or to the PREMISES. Gaskets shall be removed and the holes patched by the LICENSOR, at its cost.

   The LICENSOR, in its discretion, may temporarily relocate the PREMISES for the open-air market during any construction project that involves the Hillgrove Avenue or adjacent right-of-ways, including the adjacent streetscape and sidewalk areas, and the commuter train platforms adjacent to the current PREMISES. The LICENSOR shall provide the LICENSEE with at least thirty (30) calendar days advance notice of the need to relocate the PREMISES for the open-air market due to the commencement of any construction project, and the notice will identify the new temporary location. The LICENSOR will provide a new temporary location for the open-air market that provides adequate visibility and has a suitable surface for placement of tents, provided either by the LICENSEE or the vendors. The LICENSOR will not be responsible for the installation of new tent pole anchors. During any temporary relocation, the LICENSEE shall be responsible for installation of new tent anchors, at its cost.

SECTION 2: Miscellaneous Terms. The following terms shall apply to this Sixth Addendum:

A. **Incorporation.** The Parties agree that all capitalized words used in the Agreement shall have the same meaning when capitalized in this Sixth Addendum, unless otherwise defined in this Sixth Addendum. The Agreement and its exhibits are incorporated herein by reference as if set forth in full and are material provisions hereof. In all respects, except as specifically amended by this Sixth Addendum, the Agreement and its exhibits remain in full force and effect. In the event of any conflict between the Agreement and its exhibits and this Sixth Addendum, this Sixth Addendum shall control.

B. **Effective Date.** This Sixth Addendum shall be deemed dated and become effective on the date that the last signatory signs this Sixth Addendum, which date shall be set forth in the first paragraph of this Sixth Addendum.

IN WITNESS WHEREOF, the President and Board of Trustees of the Village of Western Springs have approved this Sixth Addendum to the Agreement by passage of a Resolution at an open public meeting, and the Village President and Village Clerk of the Village of Western Springs, pursuant to the authority granted by the passage of said Resolution, have signed this Sixth Addendum, and the authorized Corporate Officer of Bensidoun USA, Inc. has signed this Sixth Addendum and has had his/her signature attested by a Notary Public.

VILLAGE OF WESTERN SPRINGS,
an Illinois Municipal Corporation

By:_____
Heidi Rudolph
Village President

Date:_____

BENSIDOUN USA, INC.,
an Illinois Corporation

By:_____

Name:_____

Title:_____

Date:_____

ATTEST:

By:_____
Edward Tymick
Village Clerk

Date:_____

Draft

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

ACKNOWLEDGMENT

I, _____, a Notary Public in and for the County and State aforesaid, certify that _____, the authorized Corporate Officer of Bensidoun USA, Inc., is personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me in person and acknowledged that he/she signed and delivered the said instrument as his/her own free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this ___ day of _____, 2025.

NOTARY PUBLIC

_____

Draft

Exhibit "A"

2008 Market License Agreement

(incorporated by reference and on file with the Village Clerk's Office)

Draft

Group Exhibit "B"

2009 Addendum, 2016 Second Addendum, 2018 Third Addendum, Fourth Addendum and Fifth Addendum To Market License Agreement Between Bensidoun USA, Inc. and The Village of Western Springs, Cook County, Illinois

(incorporated by reference and on file with the Village Clerk's Office)

Draft

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, the duly elected and qualified Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A SIXTH ADDENDUM TO THE MARKET LICENSE AGREEMENT BETWEEN THE VILLAGE OF WESTERN SPRINGS AND BENSIDOUN USA, INC. RELATIVE TO OPERATION OF A FRENCH MARKET IN THE VILLAGE (EXTENDED TERM: FEBRUARY 24, 2025 TO DECEMBER 31, 2027)

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 24th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 24th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ___ day of February, 2025.

_____
Edward Tymick, Village Clerk

Draft

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.E.

To: Board of Trustees
From: Heather Valone, Director of Community Development
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager, Michael Jurusik, Village Attorney, Jeff Koza, Director of Engineering Services, Kelsey Fawell, Senior Planner, Anne Skrodzki, Village Attorney
RE: [Previously Discussed] 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Dissolve a Conditional Use Permit (Omnibus Item)

Recommendation

The Planning and Zoning Committee reviewed this item at their meeting on January 9, 2025 and recommended the approval of the 4300 Howard Avenue, First United Methodist Church, Hinsdale First United Methodist Church, Plat of Abrogation for a Public Sidewalk Easement and Dissolve a Conditional Use Permit. The Village Board discussed this item on January 13, 2025 and directed Staff and the Village Attorney to finalize the resolutions and ordinance for consideration.

Summary

On October 25, 2024, the Village was notified that the First United Methodist Church (the "FUMC") located at 4300 Howard Avenue (the "Subject Property") had a pending real estate contract to sell the Subject Property. The notification requested that the Village abrogate (i.e. release) an easement for the public sidewalk located partially on the Subject Property and requested that the existing conditional use approvals be dissolved. The request package is included in Attachment 1.

Background

On May 20, 2024, the Westen Springs and Hinsdale First United Methodist Churches merged. As part of the merger, it was identified that both churches would utilize the Hinsdale location. As a result, the Western Springs FUMC was listed for sale. FUMC has a pending real estate contract with a purchaser that intends to develop the property for single family houses. The property consists of three lots of record (i.e. three platted lots) and is zoned R2 Single Family Residential district (the "R2 District"). The existing lots exceed the minimum requirements for the R2 District. At this time no variations / relief from the Village Code is being requested. The lots would be developed as-of-right by obtaining a building permit(s). There are two existing encumbrances on the property. The first is a conditional use for the church as an early childhood development facility. The second is an easement for a public sidewalk that is located

partially on the Subject Property.

Easement

On April 18, 2014 the Village Board approved Resolution No. 14-2268 (Attachment 2) which granted a plat of easement for public sidewalk and a related agreement between the Village of Western Springs and FUMC. The easement and agreement placed roughly 2.8 feet of public sidewalk on the 43rd Street (north) side of the Subject Property in exchange for the on-street parking spaces within the 43rd Street right-of-way to be converted from parallel spaces in to angled parking. The related agreement detailed future maintenance and restoration work for the installation of the sidewalk. Under the agreement if FUMC decides to redevelop the Subject Property in a manner that removes or relocates the public sidewalk then the Village and FUMC agreed to negotiate changes to the agreement to allow development. The agreement references that if the sidewalk was to be removed or relocated FUMC would be obliged to cover the construction costs.

The proposed development of the property for residential use proposes to redevelop the right-of-way area as a traditional parkway with a five-foot public sidewalk located within the right-of-way separated from the curb with a roughly 13-foot parkway planted with sod and street trees. The stripped parking would be removed and standard on street parking similar to the existing north side of 43rd Street would be permitted.

The attached draft resolutions in Attachments 4 and 5 includes provisions for the release of the easement, the removal and restoration of the right-of-way area as described in the preliminary concept plan included in Attachment 1 and requirements of the current or future property owner related to the construction / restoration.

Conditional Use Permit

On September 24, 2018 the Village Board of Trustees approved Ordinance No 18-2934 approving a conditional use permit for the Subject Property to allow for the La Grange Area Department of Special Education ("LADSE") to operate an early childhood education center. LADSE no longer utilizes the building and FUMC is seeking the conditional use to be dissolved. Attachment 6 contains the draft ordinance resending the conditional use on the property.

Conclusion

The agreement included in Attachment 2 outlines provisions for FUMC or any subsequent property owner must complete for the property to be developed for single family residential purposes. If FUMC or any subsequent property owner wishes to develop the property for another use the property owner would be required to complete the Village's zoning process and the right-of-way redevelopment would be reviewed and determined by the Village Board as part of a larger zoning process. Additionally, there are provisions to ensure that the restoration of the right-of-way area is completed to Village standards or financial obligations if they work is not completed as required.

The Planning and Zoning Committee reviewed the request and submitted documentation at their meeting on January 9 and recommended approval of the request. The Village Board review the item at their regular meeting on January 13, 2025 and directed staff and the Village Attorney to finalize the resolutions and ordinance for consideration.

Attachments

---

1. Ordinance - An Ordinance Rescinding and Repealing the Board Of Trustees' Approval of Ordinance No. 18-2934 (An Ordinance Approving a Conditional Use Permit for the Installation and Operation of an Early Childhood Education Center at the 4300 Howard Avenue Property) to Facilitate the Demolition of a Church Building and Removal of a Public Sidewalk and on-Street Public Parking Spaces, Abrogation of a Public Sidewalk Easement, Installation of a New Public Sidewalk and Restoration of 43rd Street Right Of Way in the Village of Western Springs, Illinois (Lots 1, 8 And 9 in Field Park Subdivision)
2. Resolution - A Resolution Approving a Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois) and Approving the Termination of a Letter of Agreement for Construction and Maintenance of a Public Sidewalk and Abrogation of Easement for a Public Sidewalk to Allow for the Removal of the Public Sidewalk and Public Parking Spaces within the 43rd Street Right of Way Adjacent to Lot 1 And Lot 9 in the Field Park Subdivision, Western Springs, Illinois.
3. Resolution - A Resolution Authorizing the Approval and Execution of an Assignment, Assumption and Consent Agreement for the Removal of a Public Sidewalk and Certain Public Parking Spaces, Installation of a New Public Sidewalk and Restoration of 43rd Street Right of Way at the 4300 Howard Avenue Property in the Village of Western Springs (Lots 1, 8 And 9 In Field Park Subdivision) and a Related Redevelopment Agreement to be Entered into by and Between the Village of Western Springs, Illinois and 4300 Franklin Western Springs, LLC to Allow for the Completion of Such Work.

Financial Impact

None

Recommended Motion

I move to approve the resolutions and ordinance for the 4300 Howard Avenue First United Methodist Church under the items contained in the omnibus.

Strategic Plan Alignment

Economic Development

File Attachments

1. Ordinance

ORDINANCE NO. 25-_____
VOTE:
AYES:
NAYS:
ABSTAIN:
ABSENT:
DATE: February 10, 2025.
OTHER: None.

AN ORDINANCE RESCINDING AND REPEALING THE BOARD OF TRUSTEES' APPROVAL OF ORDINANCE NO. 18-2934 (AN ORDINANCE APPROVING A CONDITIONAL USE PERMIT FOR THE INSTALLATION AND OPERATION OF AN EARLY CHILDHOOD EDUCATION CENTER AT THE 4300 HOWARD AVENUE PROPERTY) TO FACILITATE THE DEMOLITION OF A CHURCH BUILDING AND REMOVAL OF A PUBLIC SIDEWALK AND ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

WHEREAS, Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (the "Church"), is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, and legally described in **Exhibit "A"** attached hereto and made a part hereof (the "Subject Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village President and Board of Trustees (the "Corporate Authorities") of the Village of Western Springs (the "Village") approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Subject Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Subject Property to 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (the "Developer"). The Developer, who is the contract purchaser and prospective developer of the Subject Property, intends to demolish the existing structures on the Subject Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Subject Property and then pursue the redevelopment of the Subject Property. The Developer may redevelop the Subject Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots or the Developer may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Subject Property that is a permitted use under the R2 - Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the construction of single-family homes on the three (3) single family lots or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a

typical plan for a single-family residential development consisting of the three (3) lots as shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan"). A copy of the Developer's Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is on file with the Community Development Department of the Village; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to take certain actions relative to the Subject Property, including the approval of: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; and (c) the repeal of Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"); and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to enter into a redevelopment agreement with the Village to construct the Development, the Church, the Developer and the Village have entered into an "Assignment, Assumption And Consent Agreement For The Demolition Of A Church Building And Certain On-Street Public Parking Spaces, Abrogation Of A Public Sidewalk Easement, Installation Of A New Public Sidewalk And Restoration Of 43rd Street Right-Of-Way In The Village Of Western Springs, Illinois (Lots 1, 8 And 9 In Field Park Subdivision)" (the "Assignment"), in a form and content as approved by the Village Attorney, that requires the Developer to complete the Church Demolition Work and to assume the following obligations of the Church under the Letter of Agreement: (a) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (b) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); and (c) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". The Assignment also requires the Developer to approve and enter into a mutually agreeable Redevelopment Agreement with the Village relative to the completion of the Developer Site Work Obligations and the construction of the Development (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney; and

WHEREAS, the 2018 CUP Ordinance allows for the installation and operation of an early childhood education center facility within the First United Methodist Church of Western Springs by the La Grange Area Department of Special Education, the then-applicant, and any successor in interest; and

WHEREAS, the Church and the Village agree that, even if the Developer does not purchase the Subject Property, the 2018 CUP Ordinance should be repealed and rescinded; and

WHEREAS, at an open public meeting held on January 9, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the Church's request to repeal the 2018 CUP Ordinance as part of its consideration of the Development and the related Redevelopment Agreement and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 9, 2025 meeting, the Committee recommended that the Corporate Authorities of the Village approve the Church's repeal of the 2018 CUP Ordinance; and

WHEREAS, at open public meetings held on January 13, 2025 and February 10, 2025, the Corporate Authorities of the Village reviewed and discussed the Committee's recommendation on the request to repeal the 2018 CUP Ordinance as part of its consideration of the Development and the related Redevelopment Agreement, and received input from the Village staff on the matter and provided an opportunity for public input on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Church's request to repeal the 2018 CUP Ordinance; and

WHEREAS, in accordance with the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 65 ILCS 5/11-13-1.1), and Title 10 (Development Control Ordinance), Chapter 3 (Administrative Bodies and Procedures), Subsection 10-3-14 (Conditional Use) of the Western Springs Municipal Code and the statutory and constitutional authority and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution, the Corporate Authorities of the Village are authorized to pass this Ordinance to rescind and repeal the approval of the 2018 CUP Ordinance No. 18-2934; and

WHEREAS, in order to facilitate the sale of the Subject Property by the Church to the Developer to allow for the construction of the Development, the Corporate Authorities of the Village find that it is protective of the health, welfare and safety of and in the best interests of the Village and its residents to rescind and repeal the approval of the 2018 CUP Ordinance No. 18-2934, provided that the Church approves of the Termination of the Letter of Agreement and the Plat of Sidewalk Easement Abrogation, subject to mutually agreeable conditions of approval agreed to by the Church and the Village, and the Church's and the Developer's compliance with the provisions of the Assignment, and the Developer's and the Village's approval and entry into a mutually agreeable Redevelopment Agreement for the construction of the Development, in a form and content as approved by the Village Attorney.

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each of the Whereas paragraphs set forth above are incorporated into Section 1 of this Ordinance as material provisions.

SECTION 2. Rescind and Repeal of Approval of Ordinance No. 18-2934. Pursuant to Chapter 65

of the Illinois Compiled Statutes, Section 5/11-13, the Corporate Authorities of the Village of Western Springs rescind and repeal the approval of Ordinance No. 18-2934, granting a conditional use permit for the operation of an early childhood education center at the 4300 Howard Avenue Property.

SECTION 3. Filing Ordinance With the Cook County Clerk's Office, Recording Division. The Village shall cause a certified copy of this Ordinance to be recorded with the Cook County Clerk's Office, Recording Division ("CCCORD"), at the cost and expense of the Developer. The Village shall provide the Applicant with a CCCORD-filed stamped copy of this Ordinance.

SECTION 4. Repealer; Severability. All Ordinances or parts of Ordinances in conflict herewith are, to the extent of such conflict, hereby repealed, and each section, paragraph, clause and provision of this Ordinance is separable, and if any provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any part thereof, other than that part affected by such decision.

SECTION 5. Publication; Effective Date. This Ordinance shall be in full force and effect from and after its passage and due publication in pamphlet form according to law.

PASSED by an affirmative vote of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the 10th day of February, 2025, and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the ____ day of February, 2025.

_____
Edward Tymick, Village Clerk

Exhibit "A"

Legal Description of Parcel - 4300 Franklin Avenue, Western Springs, Illinois

LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 PF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-____

AN ORDINANCE RESCINDING AND REPEALING THE BOARD OF TRUSTEES' APPROVAL OF ORDINANCE NO. 18-2934 (AN ORDINANCE APPROVING A CONDITIONAL USE PERMIT FOR THE INSTALLATION AND OPERATION OF AN EARLY CHILDHOOD EDUCATION CENTER AT THE 4300 HOWARD AVENUE PROPERTY) TO FACILITATE THE DEMOLITION OF A CHURCH BUILDING AND REMOVAL OF A PUBLIC SIDEWALK AND ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT OF WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this __ day of February, 2025.

_____

[SEAL] Edward Tymick, Village Clerk

RESOLUTION NO. 25-_____
VOTE:
AYES:
NAYS:
ABSTAIN:
ABSENT:
DATE: February 10, 2025.
OTHER: None.

A RESOLUTION APPROVING A PLAT OF ABROGATION FOR PUBLIC SIDEWALK EASEMENT (ADDRESS: 4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS) AND APPROVING THE TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES WITHIN THE 43RD STREET RIGHT-OF-WAY ADJACENT TO LOT 1 AND LOT 9 IN THE FIELD PARK SUBDIVISION, WESTERN SPRINGS, ILLINOIS.

WHEREAS, Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (the "Church"), is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois (the "Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village President and Board of Trustees (the "Corporate Authorities") of the Village of Western Springs (the "Village") approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Property to 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (the "Developer"). The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots, or the Developer may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the construction of single-family homes on the three (3) single-family lots, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for single-family residential development consisting of the three (3) lots shown on Sheet A.02

of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan"). A copy of the Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached as Exhibit "B" to the "Termination of Letter of Agreement" as described below; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to take certain actions relative to the Property, including the approval of: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk (Address: 4300 Franklin Avenue, Western Springs, Illinois) to terminate the Sidewalk Easement; and (c) the repeal of Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"). A copy of the TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK (4300 Franklin Avenue, Western Springs, Illinois) is attached hereto as **Exhibit "1"** and made a part hereof (the "Termination of Letter of Agreement"). The Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois), with a Survey date of September 27, 2024 and prepared by Kabal Surveying Company, is attached hereto as **Exhibit "2"** and made a part hereof (the "Plat of Sidewalk Easement Abrogation"); and

WHEREAS, the Church and the Village agree that, even if the Developer does not purchase the Property, the 2018 CUP Ordinance should be repealed and rescinded; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to enter into a redevelopment agreement with the Village to construct the Development, the Church, the Developer and the Village have entered into an Assignment, Assumption And Consent Agreement For The Demolition of Church, Abrogation of Easement and Restoration of 43rd Street Right-of-Way In The Village Of Western Springs, Illinois (Lots 1, 8 And 9 In Field Park Subdivision) (the "Assignment"), in a form and content as approved by the Village Attorney, that requires the Developer to complete the Church Demolition Work and to assume the following obligations of the Church under the Letter of Agreement: (a) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (b) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); and (c) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". The Assignment also requires the Developer to approve and enter into a mutually agreeable Redevelopment Agreement with the Village relative to the completion of the Developer Site Work Obligations and the construction of the Development (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney; and

WHEREAS, in order to facilitate the sale of the Property by the Church to the Developer to allow for the construction of the Development, the Corporate Authorities of the Village find that it is protective of the health, welfare and safety of and in the best interests of the Village and its residents to approve the attached Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement, subject to certain conditions of approval, including the Church's and the Developer's compliance with the provisions of the Assignment, and the Developer's and the Village's approval and entry into a mutually agreeable Redevelopment Agreement for the construction of the Development, in a form and content as approved by the Village Attorney; and

WHEREAS, at an open public meeting held on January 9, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the Church's request to approve the Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement, as part of its consideration of the Development and the related Redevelopment Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 9, 2025 meeting, the Committee recommended that the Corporate Authorities of Village approve the Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement; and

WHEREAS, at open public meetings held on January 13, 2025 and February 10, 2025, the Corporate Authorities of the Village reviewed and discussed the Committee's recommendation on the request to approve the Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement, as part of its consideration of the Development and the related Redevelopment Agreement, and received input from the Village staff on the matter and provided an opportunity for public input on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Church's request to approve the Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement; and

WHEREAS, in accordance with the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 65 ILCS 5/11-13-1.1), and in accordance with Section 10-10-20(B) and other applicable provisions of the Village's Development Control Ordinance ("DCO") of the Western Springs Municipal Code and the statutory and constitutional authority and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, the Corporate Authorities of the Village are authorized to pass this Resolution, and find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, businesses and the public to approve and execute the attached Termination of Letter of Agreement and the Plat of Abrogation for Public Sidewalk Easement.

BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each of the Whereas paragraphs set forth above are incorporated into Section 1 of this Resolution as material provisions.

SECTION 2. Approval and Execution of Termination of Letter of Agreement and Other Related Documents. The President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the final version of the TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK (4300 Howard Avenue, Western Springs, Illinois), substantially in the form attached hereto as **Exhibit "1"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Termination of Letter of Agreement and this Resolution.

SECTION 3. Approval and Execution of Plat of Abrogation and Other Related Documents. The President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the final version of the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois), with a survey date of September 27, 2024 and prepared by Kabal Surveying Company, a copy of which is attached hereto as **Exhibit "2"** and made a part hereof, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Termination of Letter of Agreement and this Resolution.

SECTION 4. Termination of Resolution for Failure of Developer to Acquire Title to the Property. The validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 5. Filing Resolution With the Cook County Clerk's Office, Recording Division. After approval and execution of this Resolution and the Termination of Letter of Agreement and the Plat of Abrogation by the Village President and Village Clerk, or their designees, the Village shall cause certified copies of this Resolution and the executed originals of the attached TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK and the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Howard Avenue, Western Springs, Illinois) to be recorded with the Cook County Clerk's Office, Recording Division ("CCCORD"), at the cost and expense of the Developer, after all of the required signatures are placed on the Termination of Letter of Agreement and the Plat. The Village shall provide the Church and the Developer with CCCORD-filed stamped copies of this Resolution and the Termination of Letter of Agreement and the Plat for record retention purposes.

SECTION 6. Repealer; Severability. All Resolutions or parts of Resolutions in conflict herewith

are, to the extent of such conflict, repealed, and each section, paragraph, clause and provision of this Resolution is separable, and if any provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Resolution, nor any part thereof, other than that part affected by such decision.

SECTION 7. Effective Date. This Resolution shall be in full force and effect from and after its passage and approval according to law.

PASSED by a majority vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the 10th day of February, 2025, and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "1"

TERMINATION OF LETTER OF AGREEMENT
FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK
AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK
(4300 Franklin Avenue, Western Springs, Illinois)

(attached)

Prepared by & Return to:
Matthew M. Klein
322 West Burlington Avenue
La Grange, Illinois 60525

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Above Space For Recorder's Use Only

**TERMINATION OF LETTER OF AGREEMENT
FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK
AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR
THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES
WITHIN THE 43RD STREET RIGHT-OF-WAY
ADJACENT TO LOT 1 AND LOT 9 IN THE FIELD PARK SUBDIVISION
(4300 Franklin Avenue, Western Springs, Illinois)**

This **TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK** ("Termination Agreement") is made this __ day of February, 2025, by Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs, ("Church") as owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, and legally described in **Exhibit "A"** attached hereto and made a part hereof (the "Property"), and the Village of Western Springs ("Village"), as the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"). The Village and the Church are at times referred to herein individually as a "Party" and collectively as the "Parties".

RECITALS:

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068; and

WHEREAS, in compliance with the Letter of Agreement, the Village, at its cost, has complied with each of its obligations relative to installation and maintenance of: (a) the new public sidewalk within the Sidewalk Easement created by the above-referenced Plat of Easement for Public Sidewalk; and (b) the new public parking spaces within the south side of the 43rd Street right-of-way between Howard Avenue and Franklin Avenue. The Village, at its cost, also complied with its obligations of restoration and

replacement of the removed or disturbed portions of the landscape vegetation and grass with topsoil and sod, the handicap ramp and related railing, and the exterior landscape lighting and related wiring; and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title to the Property, consisting of three (3) platted lots zoned under the R2 Single-Family Residence District classification, to 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (the "Developer"). The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more the lots, or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the completion of the three (3) single-family detached houses, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for a single-family residential development consisting of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan"). A copy of the Developer's Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to construct the 4300 Howard Avenue Residential Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to take certain actions relative to the Property, including the approval of: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; and (c) the repeal of Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"). A copy of the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue), with a Survey date of September 27, 2024 and prepared by Kabal Surveying Company, is attached hereto as **Exhibit "C"** and made a part hereof (the "Plat of Sidewalk Easement Abrogation"); and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to enter into a redevelopment agreement with the Village to construct the Development, the Church, the Developer and the Village have entered into an Assignment, Assumption And Consent Agreement Entered Into By Hinsdale United Methodist Church, As Successor To The First United Methodist Church of Western Springs, And 4300 Franklin Western Springs LLC for The Demolition of Church, Abrogation of Easement and Restoration of 43rd Street Right-of-Way In The Village Of Western Springs, Illinois (Lots 1, 8 And 9 In Field Park Subdivision) (the "Assignment"), in a form and content as approved by the Village Attorney, that requires the Developer to complete the Church Demolition Work and to assume the following obligations of the Church under the Letter of Agreement: (a) the removal and

disposal of the existing public sidewalk and construction of a new replacement public sidewalk and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (b) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); and (c) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". The Assignment also requires the Developer to approve and enter into a mutually agreeable Redevelopment Agreement with the Village relative to the completion of the Developer Site Work Obligations (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney. Regarding facilitating the Developer and the Village entering into the Redevelopment Agreement, the Church also agrees to sign a document entitled "Written Consent and Waiver Of Hinsdale United Methodist Church, as Successor to the First United Methodist Church of Western Springs, To Allow 4300 Franklin Western Springs, LLC To Enter Into A Redevelopment Agreement And Other Related Documents Regarding The 4300 Howard Avenue Demolition of Church, Abrogation of Easement and Restoration of 43rd Street Right -of -Way Located At 4300 Howard Avenue In The Village Of Western Springs, Cook County, Illinois" (the "Consent and Waiver"). A copy of the executed Assignment is attached hereto as **Exhibit "D"** and made a part hereof; and

WHEREAS, for purposes of allowing the sale of the Property to the Developer to facilitate the Developer's completion of the Developer Site Work Obligations, the Church and the Village each deem that the Sidewalk Easement is no longer needed to serve the interests of the Church or the needs of the Village, and have agreed to: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Sidewalk Easement Abrogation; (c) the completion of the Sidewalk Removal and Replacement/Relocation Work; (d) the completion of the Parking Space Removal Work; (e) the completion of the Parkway Restoration Work; (f) the repeal of the 2018 CUP Ordinance; and (g) the Conditions of Approval set forth below in Section 3 of this Termination Agreement; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Illinois Constitution of 1970, to approve and enter into this Termination Agreement and to approve the Plat of Sidewalk Easement Abrogation and the Assignment, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into this Termination Agreement and to approve the Plat of Sidewalk Easement Abrogation and the Assignment.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein contained and the exchange of adequate consideration and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

SECTION 1. Incorporation. Each of the Recitals set forth above are incorporated by reference into Section 1 of this Termination Agreement as material provisions.

SECTION 2. Approval of the Termination Agreement, the Plat of Sidewalk Easement Abrogation, and the Assignment, Assumption and Consent Agreement. The Church and the Village abrogate,

terminate, and otherwise deem to hold for naught that certain Plat of Easement for Public Sidewalk, dated April 28, 2014, and recorded May 14, 2014 in Cook County, Illinois as Document 1413445068, together with the Letter of Agreement between the Church and the Village dated April 28, 2014 recorded therewith by their approval and entry into this Termination Agreement and their approval of the Plat of Sidewalk Easement Abrogation and the Assignment, SUBJECT TO THE CONDITIONS SET FORTH IN SECTION 3 BELOW:

SECTION 3. Conditions of Approval. The approval of the Corporate Authorities of the Village of this Termination Agreement, the Plat of Sidewalk Easement Abrogation, and the Assignment is conditioned upon and subject to the following:

A. Church Obligations:
    a. The Church shall approve and execute this Termination Agreement, the Plat of Sidewalk Easement Abrogation, the Consent and Waiver and the Assignment, and such other documents necessary to fulfill its obligations under this Termination Agreement, the Plat of Sidewalk Easement Abrogation, the Consent and Waiver and the Assignment.
    b. Prior to the Village's approval of this Termination Agreement, the Church and the Developer shall approve and enter into the Assignment (**Exhibit "D**"), in a form and content as approved by the Village Attorney, with the Developer.
    c. Prior to the Village's approval of this Termination Agreement, the Church shall facilitate the Developer's approval and execution of the Redevelopment Agreement for the completion of the Developer Site Work Obligations (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney, that contains, at a minimum, the Developer's obligation to complete the following Developer Site Work Obligations and such other provisions and obligations as mutually agreed to by the Village and the Developer. After its acquisition of the Property, in the event the Developer fails to commence or commences and then fails to complete the Developer Site Work Obligations, the Village, at the Developer' cost, may, but is not obligated to, complete the Developer Site Work Obligations, subject to the terms, provisions and obligations of the Redevelopment Agreement and the Village may use the security posted by the Developer to ensure the completion of the Developer Site Work Obligations
        i. If there is any conflict between the provisions of this Termination Agreement and the Redevelopment Agreement, the Redevelopment Agreement shall control.
    d. After the Village's approval of this Termination Agreement, the Church shall complete the sale and conveyance of fee simple title to the Property to the Developer.
    e. If the Developer does not purchase the Property, the Church, at its cost, may complete the Church Demolition Work and may also complete the other Developer Site Work Obligations, provided the Plat of Sidewalk Easement Abrogation is approved and filed with the Cook County Clerk's Office, Recordings Division, and the Church secures all required permits, posts with the Village required security to ensure the completion of the work and otherwise complies with all of the requirements set forth in the Redevelopment Agreement to complete the Developer Site Work Obligations.
B. Village Obligations:
    a. Provided the Developer executes the Redevelopment Agreement, the Corporate Authorities agree to:
        i. Pass an ordinance that repeals the 2018 CUP Ordinance.
        ii. Pass one or more resolutions that approve the Plat of Sidewalk Easement Abrogation, the Assignment, this Termination Agreement, and the

Redevelopment Agreement and such other documents necessary to fulfill the obligations set forth in those documents.

SECTION 4. Cooperation; Execution of Documents. The Church and the Village agree to cooperate with each other in the performance of this Termination Agreement, including each Party agreeing at any time, and from time to time, to execute and deliver any and all documents reasonably requested by the other Party to carry out the intent of this Termination Agreement.

SECTION 5. Entire Agreement; Amendment or Modification. This Termination Agreement contains the entire understanding between the Parties and supersedes any prior understanding or written or oral agreements between them with respect to the subject matter of this Termination Agreement. There are no representations, agreements or understandings, oral or written, between and among the Parties hereto relating to the subject matter of this Termination Agreement which are not fully expressed herein. No oral modification, amendment or change shall be allowed to this Termination Agreement. Any modification, amendment or change shall be in writing and approved by the Corporate Authorities of the Village and the governing board of the Church.

SECTION 6. Applicable Law; Venue. This Termination Agreement shall be governed and controlled as to the validity, enforceability, interpretation and construction in effect in all other respects, including, but not limited to, the legality of interest charged hereunder, by the statutory laws and decisions of the State of Illinois. The Parties agree that, for the purpose of any litigation relative to this Termination Agreement and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the Parties consent to the *in personam* jurisdiction of said Court for any such action or proceeding.

SECTION 7. Severability. Every provision of this Termination Agreement is intended to be severable. In the event any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the validity or enforceability of the remaining terms and provisions hereinabove set forth.

SECTION 8. Effective Date; Legal Authority; Binding Effect. The "Effective Date" of this Termination Agreement shall be the date of execution by the last signatory, which date shall be inserted on page 1 of this Termination Agreement. This Termination Agreement shall be in full force and effect, and legally binding, after it is signed by the duly authorized officers of each Party. Each of the signatories to this Termination Agreement are the duly authorized representatives of their respective corporate entity and each such person has signed this Termination Agreement pursuant to the authority duly granted to them by the corporate authorities of said corporate entity, who have acted by motion or approved a Resolution (in the Village's case, at an open public meeting) that authorized and directed the representatives to sign this Termination Agreement. This Termination Agreement shall be binding upon and shall inure to the benefit of the Parties agreeing hereto and to their successor corporations, officers, officials, trustees, successors-in-office, heirs, representatives, and assigns, transferees, successors-in-interest and successor owners.

SECTION 9. Enforcement of this Termination Agreement. If either Party has to file a legal action to enforce the provisions of this Termination Agreement, the prevailing Party shall receive its court filing fees, attorney fees and litigation-related expenses.

SECTION 10. Execution. This Termination Agreement may be executed simultaneously in two (2) or more counterparts, each of which shall be deemed an original, and such counterparts together shall constitute one and the same Termination Agreement.

SECTION 11. Corporate Status of the Church and the Developer. Prior to the approval of this Termination Agreement by the Corporate Authorities of the Village, the Church shall furnish to the Village certificates of good standing issued by the Illinois Secretary of State, or such other applicable governing entity with regulatory jurisdiction, confirming that the Church and the Developer are in good corporate standing.

SECTION 12. Notices. All notices required to be delivered hereunder shall be in writing and shall be deemed sufficient if: (a) personally delivered, (b) sent by a nationally recognized overnight courier, or (c) sent by certified mail, return receipt requested, postage prepaid and addressed to the Parties to this Termination Agreement at the addresses set forth below or at such other addresses as may be designated by the Parties in writing. Notices personally delivered and sent by overnight courier shall be deemed delivered on the date of receipt. Notices mailed by certified mail shall be deemed received on the date of receipt or refusal to accept delivery as evidenced by the return receipt.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Phone: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

William Dvorak 4300 Franklin Western Springs LLC 3941 Clausen Avenue Western Springs, Illinois 60558 Phone: 630-772-0327 Email: bdvorak@kineticpartners.net	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

Notices and communications to the Church shall be addressed to, and delivered at, the following addresses:

Zed Francis Hinsdale United Methodist Church 945 South Garfield Avenue Hinsdale, Illinois 60521 Phone: 630-805-2501 Email: zsf3@aol.com	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

SECTION 13. Filing Ordinance With Cook County Clerk's Office, Recording Division. The Village, at the Church's cost, shall cause a certified copy of this Termination Agreement and its Exhibits (and its approving Resolution) to be recorded with the Cook County Clerk's Office, Recording Division ("CCCORD") upon approval and execution by the Parties. The Village shall provide the Petitioner with CCCORD-filed

stamped copies of this Termination Agreement and its approving Resolution, once available, for record retention purposes.

AGREED:
Hinsdale United Methodist Church,
as successor to the First United Methodist Church of Western Springs

By: _____
Name: _____
Its: _____

Executed this ____ day of February, 2025.

Attest:

By:_____
Name: _____
Its: Secretary

Executed this ____ day of February, 2025.

AGREED:
Village of Western Springs

By: _____
Name: Heidi Rudolph
Its: Village President

Executed this ____ day of February, 2025.

Attest:

By:_____
Edward Tymick
Village Clerk

Executed this ____ day of February, 2025

I, , a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY THAT _____, who is personally known to me to be the _____ of the Hinsdale United Methodist Church, and the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered said instrument as the free and voluntary act of the Church and as their own free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this day of February, 2025.

Notary Public

I, _____, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY THAT _____

and _____ who are personally known to me to be the _____

and _____of the Village of Western Springs, and the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered said instrument as their free and voluntary acts, and the free and voluntary act of the Village, for the uses and purposes therein set forth.

Given under my hand and notarial seal this day of February, 2025.

Notary Public

Exhibit "A"

Legal Description Parcel - 4300 Franklin Avenue, Western Springs, Illinois

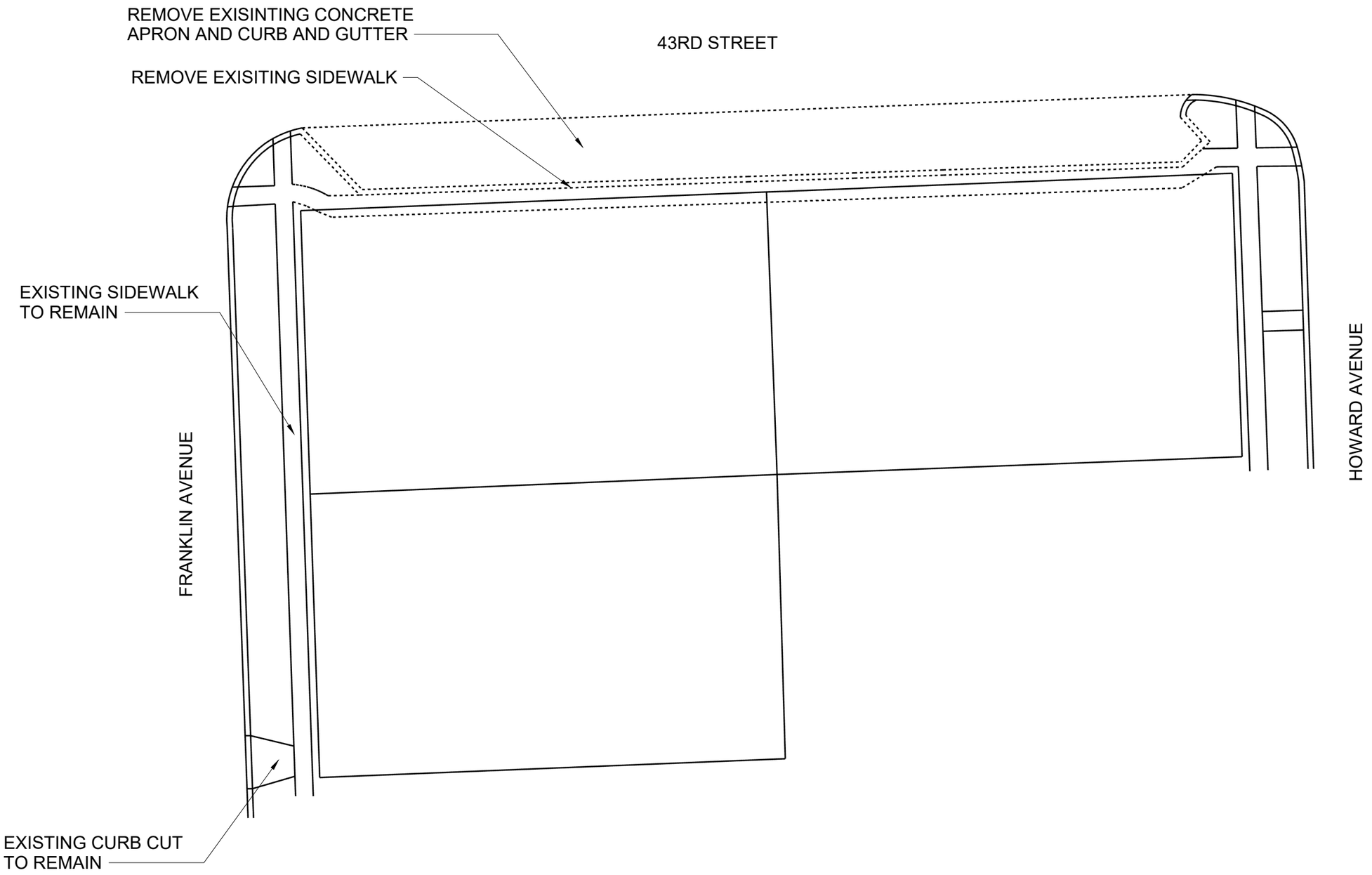
LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 PF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Exhibit "B"

4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan consisting of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024

(attached)



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

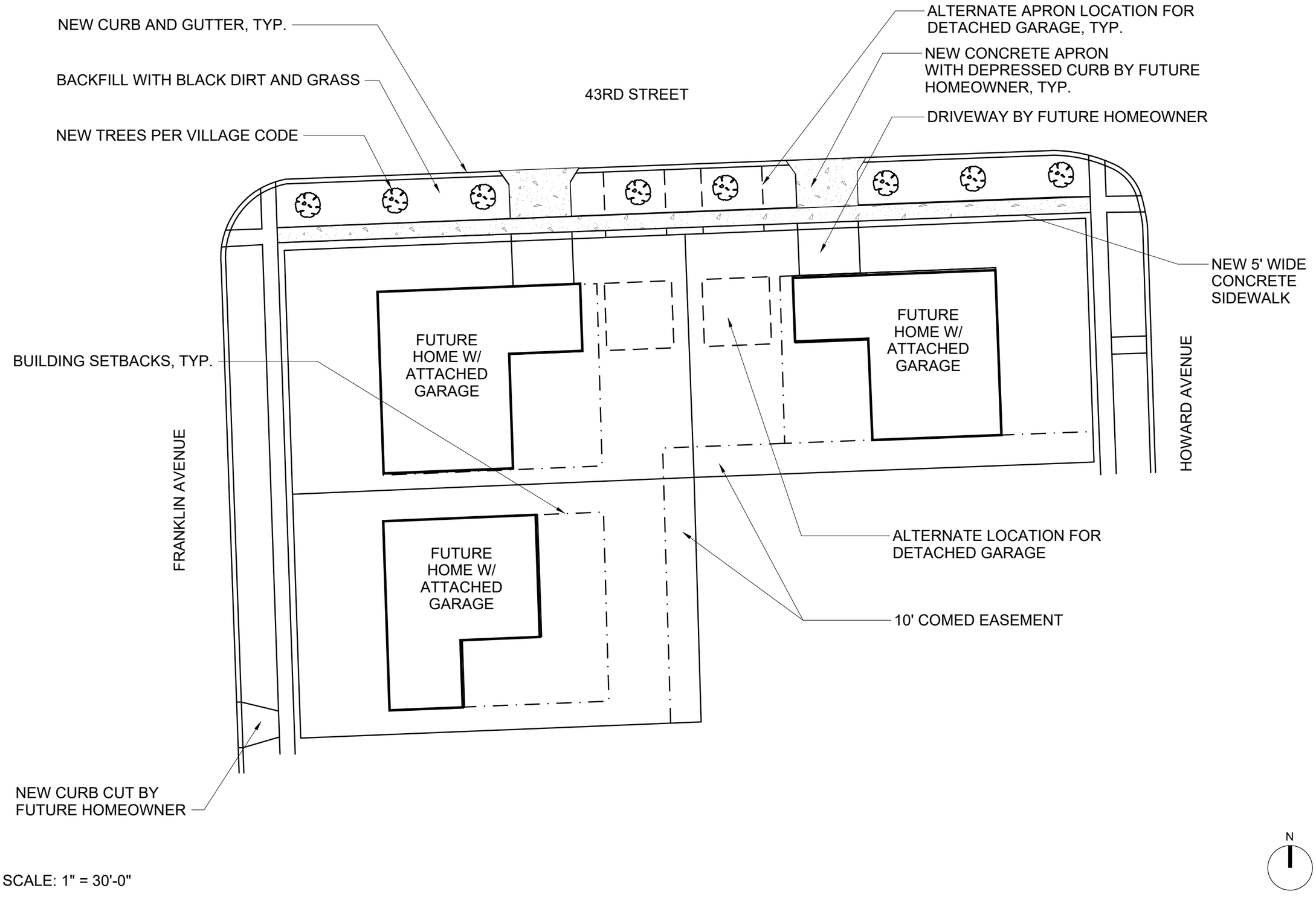
PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY DEMOLITION PLAN

A.01



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY RESTORATION PLAN

A.02

Exhibit "C"

Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue) with a Survey date of September 27, 2024 and prepared by Kabal Surveying Company

(attached)

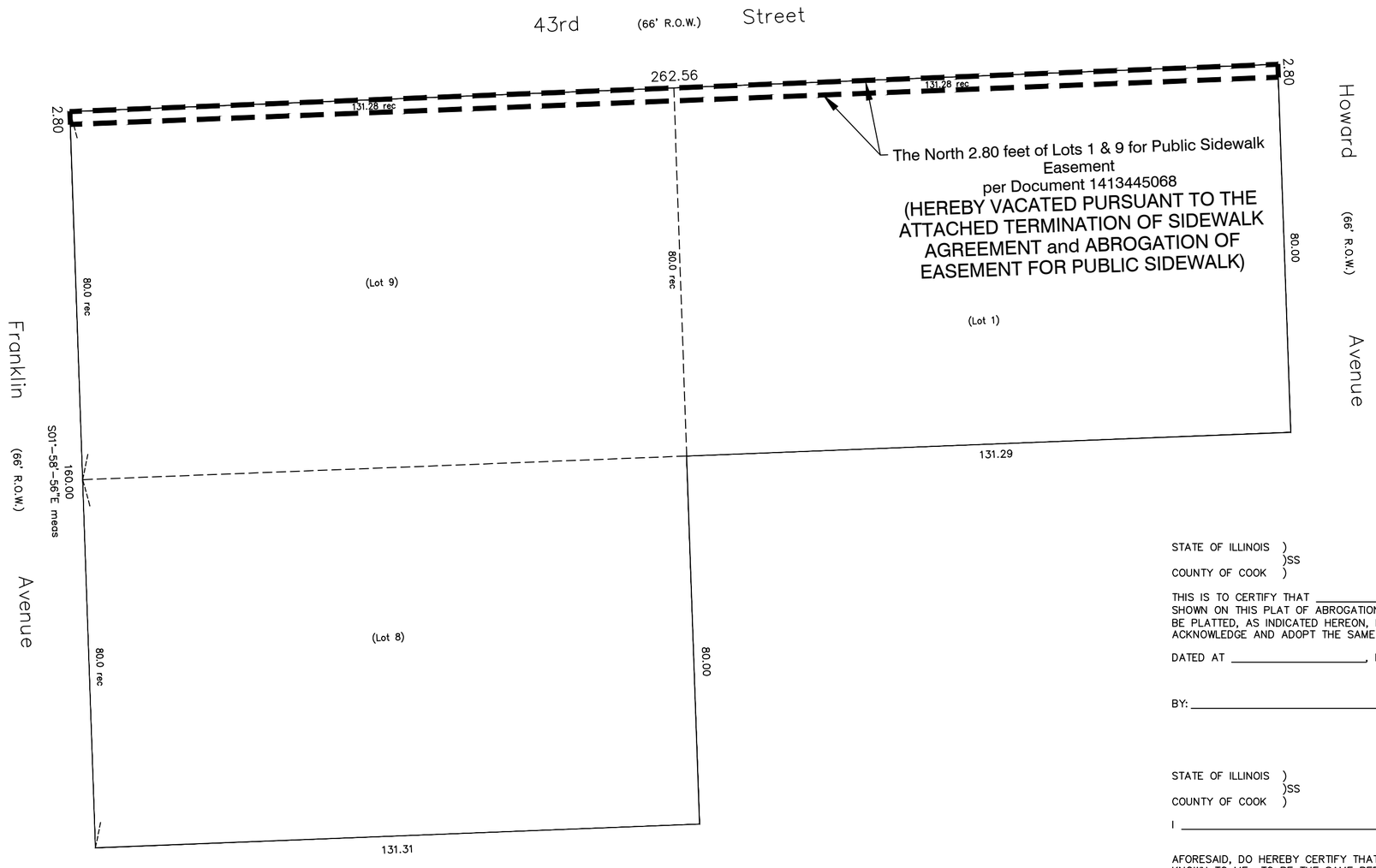
Plat of Abrogation

For Public Sidewalk Easement

Lots 1, 8 and 9 in Block 26 in Field Park, a Subdivision in the West 5/8 of the West 1/2 of Section 5, Township 38 North, Range 12, East of the Third Principal Meridian and part of the Southeast 1/4 of Section 32, Township 39 North, Range 12, East of the Third Principal Meridian, in Cook County, Illinois.

Address: 4300 Franklin Avenue, Western Springs





Measured bearing shown hereon is based on the Illinois East State Plane Coordinate Zone 1201 (NAD83) determined by GPS measurement

LEGEND
R.O.W. = right-of-way, E = East
N = North, W = West, S = South
meas = measured, rec = record
pch = porch, rad = radius
prc = point of reverse curve

Please check Legal Description with Deed and report any discrepancy immediately.

Surveyed September 27 ,20 24

Scale: 1 inch = 20 ft.
Order No. 241854A
Ordered By: Hawbecker & Garver, LLC

Property identification numbers
18-05-302-001-0000 (Lot 9)
18-05-302-018-0000 (Lot 1)
18-05-302-002-0000 (Lot 8)

Kabal Surveying Company
Land Surveying Services
10407 West Cermak Road
Westchester, Illinois 60154
(708) 562-2652
Fax (708) 562-7314
email: kabal-surveying@comcast.net
website: KabalSurveyingCompany.com
Registration No. 184-003061

ORIGINAL SEAL IN RED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS(ARE) THE OWNER(S) OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS(HAVE) CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE PURPOSES THEREIN SET FORTH, AND DOES(DO) HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED AT _____, ILLINOIS, THIS _____ DAY OF _____, _____.

BY: _____ TITLE: _____

NOTARY PUBLIC

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE

AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFOR ME THIS DAY IN PERSONS AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR FREE AND VOLUNTART ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS,

AT A MEETING HELD THIS _____ DAY OF _____, 20_____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, MITCHELL P. BALEK, DO HEREBY CERTIFY THAT I, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY, ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS _____ DAY OF _____, A.D., 20 ____.

Mitchell P. Balek
_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-003250
MY LICENSE EXPIRES ON NOVEMBER 30, 2026

Exhibit "D"

Assignment, Assumption and Consent Agreement
Between Hinsdale United Methodist Church, as successor to
the First United Methodist Church of Western Springs, ("Church")
and 4300 Franklin Western Springs LLC (the "Developer")
as approved by the Village of Western Springs

(attached)

ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT ENTERED INTO BY HINSDALE UNITED METHODIST CHURCH, AS SUCCESSOR TO THE FIRST UNITED METHODIST CHURCH OF WESTERN SPRINGS, AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

This ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT (this **"Assignment"**) is entered into on the ___ day of _____, 2025, by and between Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (hereinafter referred to as the "**Church**" or "**Assignor**"), and 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (hereinafter referred to as "**Developer**" or "**Assignee**"), and the Village of Western Springs, an Illinois non-home rule municipal corporation located in Cook County, Illinois (hereinafter referred to as "**Village**"). The Assignor, the Assignee and the Village are collectively referred to as the "Parties" and individually as a "Party" under this Assignment.

RECITALS

WHEREAS, the Church is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, consisting of three (3) residentially zoned lots zoned under the R2 Single-Family Residence District classification, and legally described in **Exhibit "A"** attached hereto and made a part hereof (the "Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Property to the Developer. The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots, or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the completion of the three (3) single-family detached houses, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for a single-family residential development consisting of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan") submitted by the Developer to the Village. A copy of the Developer's Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to complete the Church Demolition Work and to construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; (c) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk, and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (d) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); (e) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"); and (f) the repeal of the following zoning ordinance approved by the President and Board of Trustees of the Village (the "Corporate Authorities") relative to the Church and activities formerly conducted at the Property: Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". A copy of the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois), with a survey date of September 27, 2024 and prepared by Kabal Surveying Company, is attached hereto as **Exhibit "C"** and made a part hereof (the "Plat of Sidewalk Easement Abrogation"); and

WHEREAS, subject to the President and Board of Trustees of the Village (the "Corporate Authorities") granting approval of this Assignment, the Church and the Developer have approved and entered into this Assignment, the form and content of which have been approved by the Village Attorney, to authorize the Developer to negotiate and enter into the Redevelopment Agreement (as defined below) with the Village prior to completing the purchase of the Property that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations and the other obligations that are part of the Conditions of Approval, as set forth below in Section 4 of this Assignment; and

WHEREAS, under this Assignment and the Redevelopment Agreement, all of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined under the Developer Site Work Obligations and set forth below in Section 4 of this Assignment, are being assigned to and assumed by the Developer, as the Church would be required to fulfill such obligations if the Letter of Agreement was not being terminated by the Village and the Church. The Developer accepts the assignment and assumption of all rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work from the Church, and agrees to complete the other Developer Site Work Obligations as set forth below in Section 4 of this Assignment. As part of its approval of this Assignment, the Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and

Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the statutory and constitutional authority and intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution, to approve and enter into this Assignment with the Church and the Developer, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into this Assignment.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein contained and the exchange of adequate consideration and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

AGREEMENT

1. **Incorporation.** Each of the Recitals set forth above are incorporated by reference into Section 1 of this Agreement as material provisions.

2. **Assignment by Assignor; Consent.** Upon the conveyance of the Property to the Assignee, the Assignor assigns, transfers and sets over to the Assignee all of its rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined in the above Recitals, and which are part of the Developer Site Work Obligations to be performed in anticipation of the Development. The Church consents to the Developer, as contract purchaser of the Property, to negotiate and enter into the Redevelopment Agreement with the Village, prior to completing the purchase of the Property, that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations upon its completion of the purchase of the Property.

3. **Acceptance of Assignment by Assignee.** Upon its completion of the purchase of the Property, the Assignee assumes all of the rights, liabilities and obligations of the Assignor for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, and agrees to complete the other Developer Site Work Obligations that are set forth below in Section 4 of this Assignment.

4. **Developer Site Work Obligations.** The approval of the Corporate Authorities of the Village of the termination of the Letter Agreement, the approval of the Plat of Sidewalk Easement Abrogation, and the approval of this Assignment is conditioned upon and subject to the following:

   A. The Developer shall approve and enter into a Redevelopment Agreement with the Village for the completion of the Developer Site Work Obligations (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney, that contains, at a minimum, the Developer's obligation to complete

the Developer Site Work Obligations and such other provisions and obligations as mutually agreed to by the Village and the Developer.

a. After its acquisition of the Property, in the event the Developer fails to commence or commences and then fails to complete the Developer Site Work Obligations, the Village, at the Developer' costs, may, but is not obligated to, complete the Developer Site Work Obligations, subject to the terms, provisions and obligations of the Redevelopment Agreement and the Village may use the security posted by the Developer to ensure the completion of the Developer Site Work Obligations.
b. If the Developer does not purchase the Property, the Church, at its cost, may complete the Church Demolition Work and may also complete the other Developer Site Work Obligations, provided the Plat of Sidewalk Easement Abrogation is approved and filed with the Cook County Clerk's Office, Recordings Division, and the Church secures all required permits, posts with the Village required security to ensure the completion of the work and otherwise complies with all of the requirements set forth in the Redevelopment Agreement to complete the Developer Site Work Obligations.
c. If there is any conflict between the provisions of this Assignment and the Redevelopment Agreement, the Redevelopment Agreement shall control.

5. **Village Approval of Assignment.** The Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer.

6. **Notices.** Any notice or communication required or permitted to be given under this Assignment shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Assignment, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this Section 6, each Party to this Assignment shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Phone: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

William Dvorak 4300 Franklin Western Springs LLC 3941 Clausen Avenue Western Springs, Illinois 60558 Phone: 630-772-0327 Email: bdvorak@kineticpartners.net	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

Notices and communications to the Church shall be addressed to, and delivered at, the following address:

Zed Francis Hinsdale United Methodist Church 945 South Garfield Avenue Hinsdale, Illinois 60521 Phone: 630-805-2501 Email: zsf3@aol.com	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

7. **Applicable Law; Venue.** This Assignment shall be governed and controlled, as to the validity, enforceability, interpretation and construction, in effect in all other respects, including, but not limited to, the legality of interest charged hereunder, by the statutory laws and decisions of the State of Illinois. The Parties agree that, for the purpose of any litigation relative to this Assignment and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the Parties consent to the *in personam* jurisdiction of said Court for any such action or proceeding.

8. **Entire Agreement; Amendment or Modification.** This Assignment contains the entire understanding between the Parties and supersedes any prior understanding or written or oral agreements between them with respect to the subject matter of this Assignment. There are no representations, agreements or understandings, oral or written, between and among the Parties hereto relating to the subject matter of this Assignment which are not fully expressed herein. No oral modification, amendment or change shall be allowed to this Assignment. Any modification, amendment or change shall be in writing and approved by the Corporate Authorities of the Village, the manager of the Developer and the governing board of the Church.

9. **Severability.** Every provision of this Assignment is intended to be severable. In the event any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the validity or enforceability of the remaining terms and provisions hereinabove set forth.

10. **Counterparts.** This Assignment may be executed in counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument.

11. **Effective Date; Legal Authority; Binding Effect.** The "Effective Date" of this Assignment shall be the date of execution by the last signatory, which date shall be inserted on page 1 of this Assignment. This Assignment shall be in full force and effect, and legally binding, after it is signed by the duly authorized officers of each Party. Each of the signatories to this Assignment are the duly authorized representatives of their respective corporate entity and each such person has signed this Assignment pursuant to the authority duly granted to them by the corporate authorities of said corporate entity, who have acted by motion or approved a Resolution (in the Village's case, at an open public meeting) that

authorized and directed the representatives to sign this Assignment. This Assignment shall be binding upon and shall inure to the benefit of the Parties agreeing hereto and to their successor corporations, officers, officials, trustees, successors-in-office, heirs, representatives, and assigns, transferees, successors-in-interest and successor owners.

SIGNATURE PAGE TO FOLLOW

SIGNATURE PAGE

ASSIGNOR:

Hinsdale United Methodist Church,
as successor to the First United Methodist Church of Western Springs

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

ASSIGNEE:

4300 Franklin Western Springs LLC,
an Illinois limited liability company

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

VILLAGE:

VILLAGE OF WESTERN SPRINGS,
an Illinois non-home rule municipal corporation

By:_____
Name: Heidi Rudolph
Title: Village President

Date:_____, 2025.

ATTEST:

By:_____
Name: Edward Tymick
Title: Village Clerk

Date:_____, 2025.

Exhibit "A"

Legal Description of Parcel - 4300 Franklin Avenue, Western Springs, Illinois

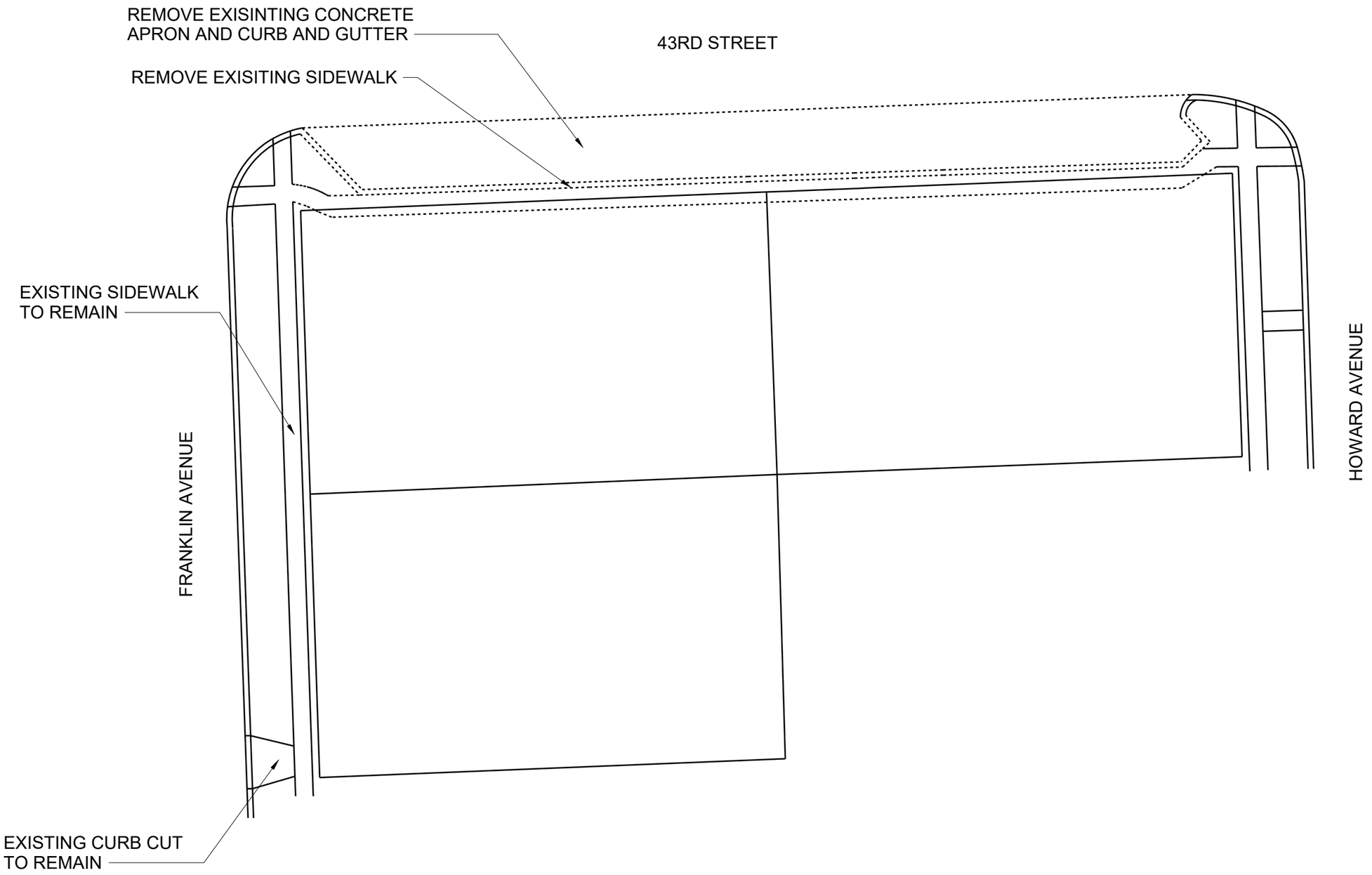
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PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

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4300 Howard Avenue Residential Development Site Plan consisting of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024

(attached)



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

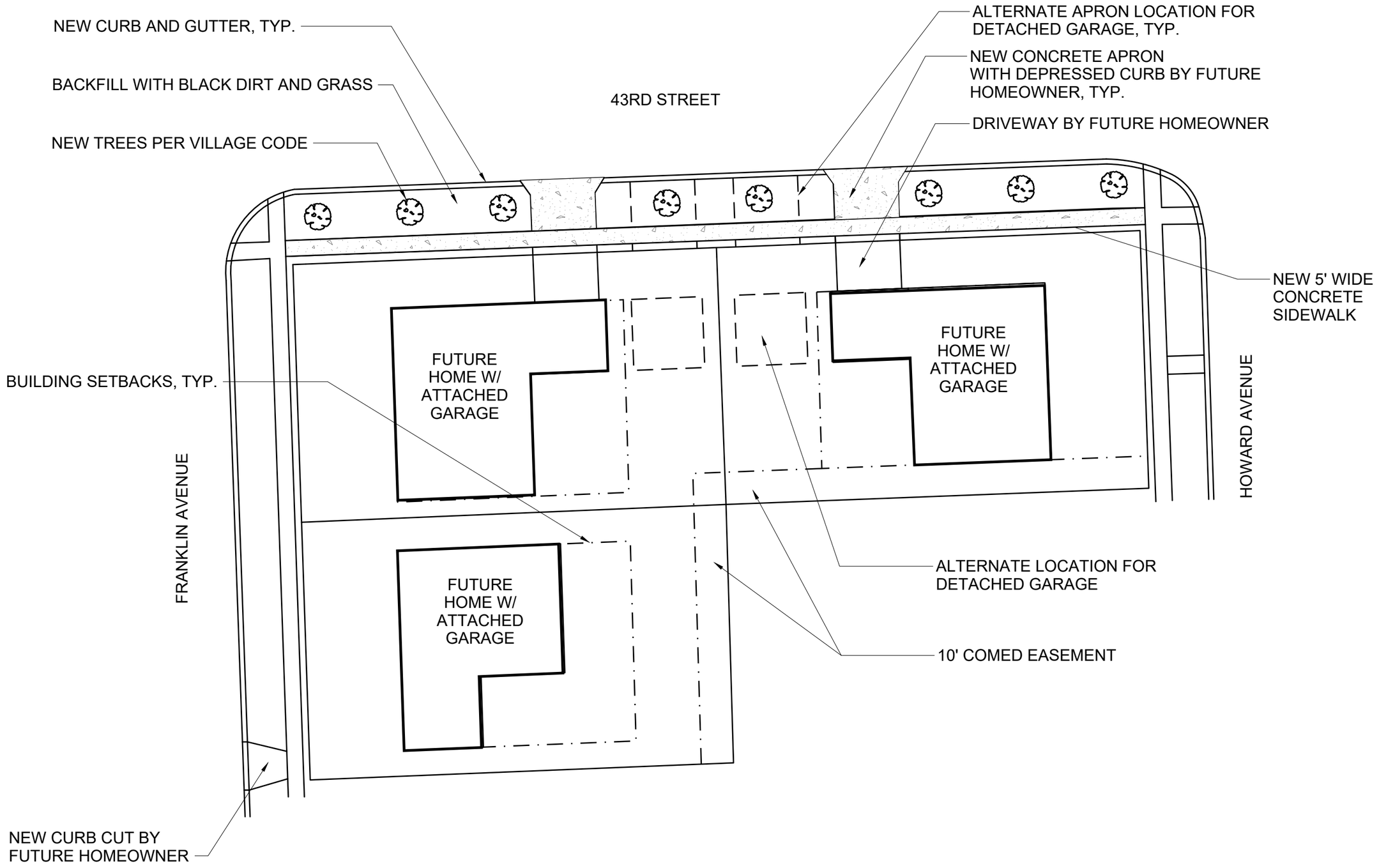
PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY DEMOLITION PLAN

A.01



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY RESTORATION PLAN

A.02

Exhibit "C"

Plat of Abrogation for Public Sidewalk Easement
(Address: 4300 Franklin Avenue, Western Springs, Illinois)
with a survey date of September 27, 2024 and prepared by Kabal Surveying Company

(attached)

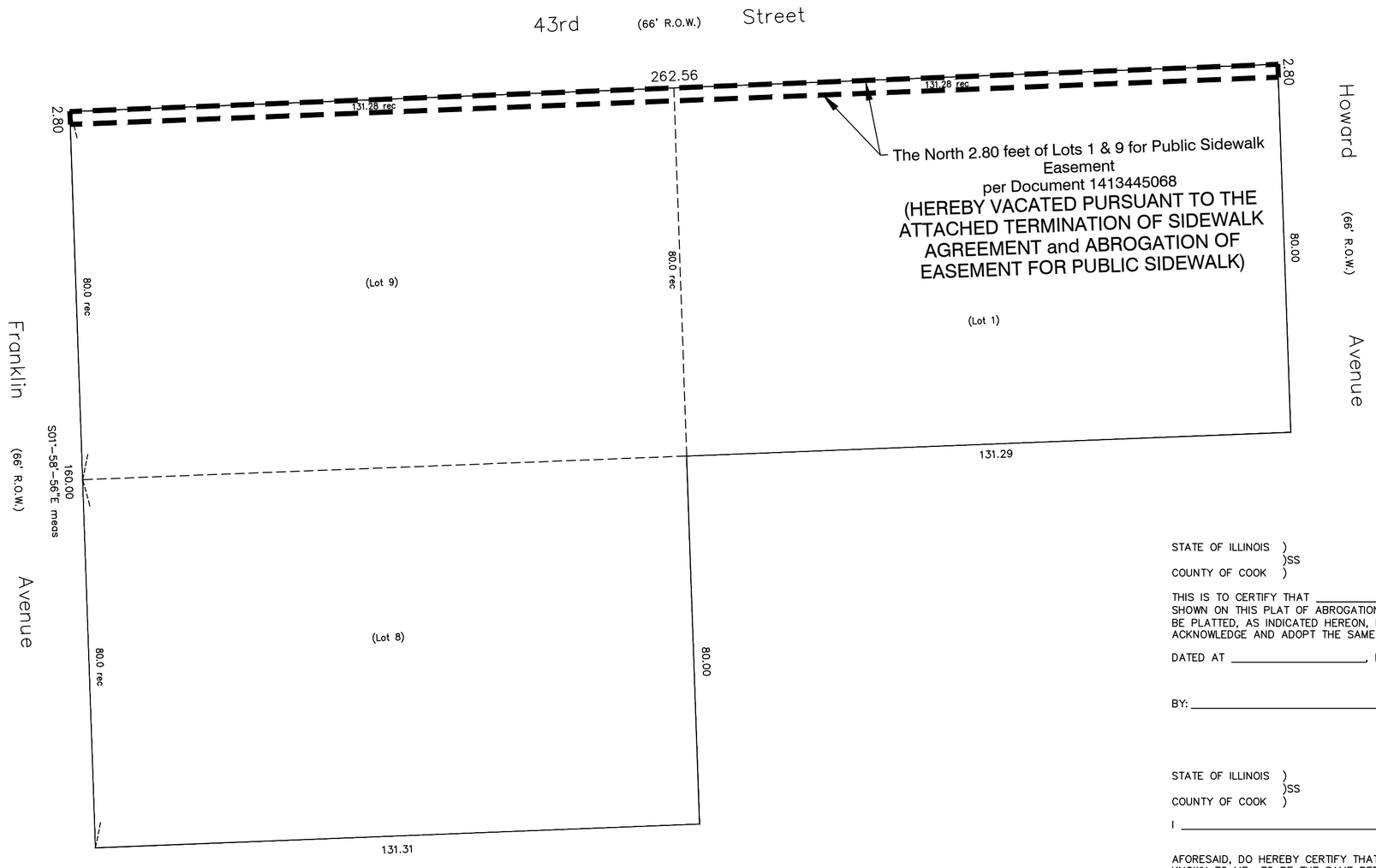
Plat of Abrogation

For Public Sidewalk Easement

Lots 1, 8 and 9 in Block 26 in Field Park, a Subdivision in the West 5/8 of the West 1/2 of Section 5, Township 38 North, Range 12, East of the Third Principal Meridian and part of the Southeast 1/4 of Section 32, Township 39 North, Range 12, East of the Third Principal Meridian, in Cook County, Illinois.

Address: 4300 Franklin Avenue, Western Springs





Measured bearing shown hereon is based on the Illinois East State Plane Coordinate Zone 1201 (NAD83) determined by GPS measurement

LEGEND
R.O.W. = right-of-way, E = East
N = North, W = West, S = South
meas = measured, rec = record
pch = porch, rad = radius
prc = point of reverse curve

Please check Legal Description with Deed and report any discrepancy immediately.

Surveyed September 27 ,20 24

Scale: 1 inch = 20 ft.
Order No. 241854A
Ordered By: Hawbecker & Garver, LLC

Property identification numbers
18-05-302-001-0000 (Lot 9)
18-05-302-018-0000 (Lot 1)
18-05-302-002-0000 (Lot 8)

Kabal Surveying Company
Land Surveying Services
10407 West Cermak Road
Westchester, Illinois 60154
(708) 562-2652
Fax (708) 562-7314
email: kabal-surveying@comcast.net
website: KabalSurveyingCompany.com
Registration No. 184-003061

ORIGINAL SEAL IN RED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS(ARE) THE OWNER(S) OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS(HAVE) CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE PURPOSES THEREIN SET FORTH, AND DOES(DO) HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED AT _____, ILLINOIS, THIS _____ DAY OF _____, _____.

BY: _____ TITLE: _____

NOTARY PUBLIC

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE

AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFOR ME THIS DAY IN PERSONS AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR FREE AND VOLUNTART ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS,

AT A MEETING HELD THIS _____ DAY OF _____, 20_____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, MITCHELL P. BALEK, DO HEREBY CERTIFY THAT I, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY, ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS _____ DAY OF _____, A.D., 20 ____.

Mitchell P. Balek
_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-003250
MY LICENSE EXPIRES ON NOVEMBER 30, 2026

Exhibit "2"

Plat of Abrogation for Public Sidewalk Easement
(Address: 4300 Franklin Avenue, Western Springs, Illinois)
with a Survey date of September 27, 2024 and prepared by Kabal Surveying Company

(attached)

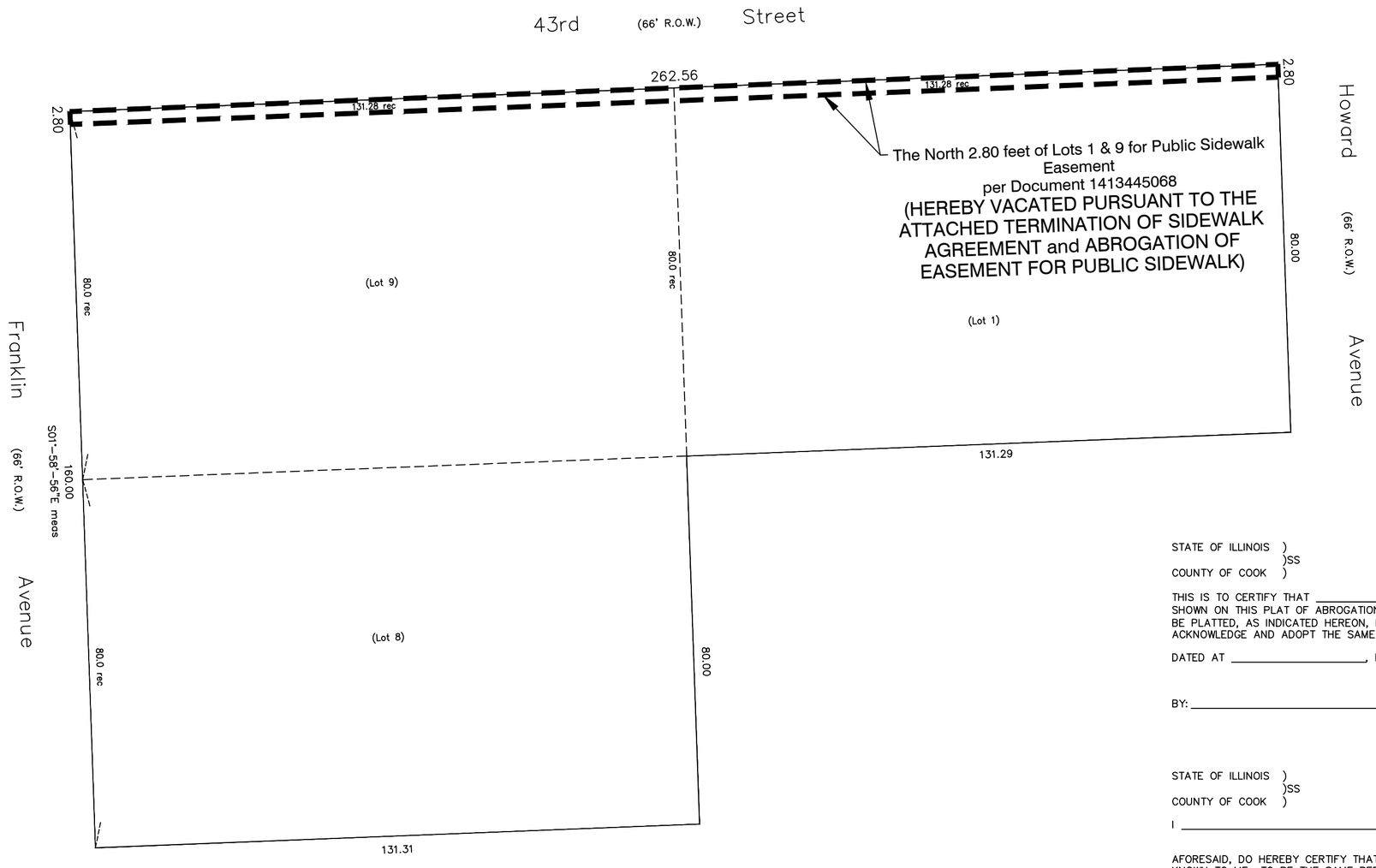
Plat of Abrogation

For Public Sidewalk Easement

Lots 1, 8 and 9 in Block 26 in Field Park, a Subdivision in the West 5/8 of the West 1/2 of Section 5, Township 38 North, Range 12, East of the Third Principal Meridian and part of the Southeast 1/4 of Section 32, Township 39 North, Range 12, East of the Third Principal Meridian, in Cook County, Illinois.

Address: 4300 Franklin Avenue, Western Springs





Measured bearing shown hereon is based on the Illinois East State Plane Coordinate Zone 1201 (NAD83) determined by GPS measurement

LEGEND
R.O.W. = right-of-way, E = East
N = North, W = West, S = South
meas = measured, rec = record
pch = porch, rad = radius
prc = point of reverse curve

Please check Legal Description with Deed and report any discrepancy immediately.

Surveyed September 27 ,20 24

Scale: 1 inch = 20 ft.
Order No. 241854A
Ordered By: Hawbecker & Garver, LLC

Property identification numbers
18-05-302-001-0000 (Lot 9)
18-05-302-018-0000 (Lot 1)
18-05-302-002-0000 (Lot 8)

Kabal Surveying Company
Land Surveying Services
10407 West Cermak Road
Westchester, Illinois 60154
(708) 562-2652
Fax (708) 562-7314
email: kabal-surveying@comcast.net
website: KabalSurveyingCompany.com
Registration No. 184-003061

ORIGINAL SEAL IN RED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS(ARE) THE OWNER(S) OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS(HAVE) CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE PURPOSES THEREIN SET FORTH, AND DOES(DO) HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED AT _____, ILLINOIS, THIS _____ DAY OF _____, _____.

BY: _____ TITLE: _____

NOTARY PUBLIC

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE

AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFOR ME THIS DAY IN PERSONS AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR FREE AND VOLUNTART ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS,

AT A MEETING HELD THIS _____ DAY OF _____, 20_____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, MITCHELL P. BALEK, DO HEREBY CERTIFY THAT I, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY, ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS _____ DAY OF _____, A.D., 20 ____.

Mitchell P. Balek
_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-003250
MY LICENSE EXPIRES ON NOVEMBER 30, 2026

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Resolution now on file in my office, entitled:

RESOLUTION NO. 2025- _____

A RESOLUTION APPROVING A PLAT OF ABROGATION FOR PUBLIC SIDEWALK EASEMENT (ADDRESS: 4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS) AND APPROVING THE TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES WITHIN THE 43RD STREET RIGHT-OF-WAY ADJACENT TO LOT 1 AND LOT 9 IN THE FIELD PARK SUBDIVISION, WESTERN SPRINGS, ILLINOIS

which Resolution was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of said Resolution by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this _____ day of February, 2025.

_____
Edward Tymick, Village Clerk

[SEAL]

RESOLUTION NO. 25-_____
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: February 10, 2025.
OTHER: None.

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION) AND A RELATED REDEVELOPMENT AGREEMENT TO BE ENTERED INTO BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND 4300 FRANKLIN WESTERN SPRINGS LLC TO ALLOW FOR THE COMPLETION OF SUCH WORK.

WHEREAS, Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (the "Church"), is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, and legally described in **Exhibit "1"** attached hereto and made a part hereof (the "Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village President and Board of Trustees (the "Corporate Authorities") of the Village of Western Springs (the "Village") approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Property to 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (the "Developer"). The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots, or the Developer may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the construction of single-family homes on the three (3) single-family lots, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s), are collectively referred to as the "Development"; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to construct the Development, by a letter dated October 25, 2024 issued by the Church to the

Village, the Church and the Developer have requested that the Village agree to take certain actions relative to the Property, including the approval of: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; and (c) the repeal of Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"); and

WHEREAS, the Church and the Village agree that, even if the Developer does not purchase the Property, the 2018 CUP Ordinance should be repealed and rescinded; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to enter into a redevelopment agreement with the Village to construct the Development, the Church, the Developer and the Village desire to enter into an "Assignment, Assumption And Consent Agreement For The Removal Of A Public Sidewalk And Certain Public Parking Spaces, Installation Of A New Public Sidewalk And Restoration Of 43rd Street Right-Of-Way At The 4300 Howard Avenue Property In The Village Of Western Springs (Lots 1, 8 And 9 In Field Park Subdivision)" (the "Assignment"), in a form and content as approved by the Village Attorney, that requires the Developer to complete the Church Demolition Work and to assume the following obligations of the Church under the Letter of Agreement: (a) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (b) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); and (c) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". The Assignment also requires the Developer to approve and enter into a mutually agreeable Redevelopment Agreement with the Village relative to the completion of the Developer Site Work Obligations and the construction of the Development (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney. A copy of the Assignment is attached hereto as **Exhibit "2"**; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow for the construction of the Development, it is necessary for the Village and the Developer to approve and enter into the attached "REDEVELOPMENT AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE DEMOLITION OF A CHURCH BUILDING AND CERTAIN ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)" (the "Redevelopment Agreement") to provide for the redevelopment of the Property, including the construction of certain public improvements on behalf of the Village as described in the Redevelopment Agreement. A copy of the Redevelopment Agreement is attached hereto as **Exhibit "3"** and made a part hereof; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for a single-family residential development consisting of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan"). A copy of the Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached as Exhibit "C" to the Redevelopment

Agreement; and

WHEREAS, at an open public meeting held on January 9, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the Development and the related Assignment and Redevelopment Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 9, 2025 meeting, the Committee recommended that the Corporate Authorities of the Village approve the Assignment and the Redevelopment Agreement; and

WHEREAS, at open public meetings held on January 13, 2025 and February 10, 2025, the Corporate Authorities of the Village reviewed and discussed the Committee's recommendation regarding the Development and the related Assignment and the Redevelopment Agreement, and received input from the Village staff on the matter and provided an opportunity for public input on the matter. At its February 10, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Assignment and the Redevelopment Agreement; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, to approve and enter into the Redevelopment Agreement, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the Assignment and the Redevelopment Agreement.

BE IT RESOLVED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of Assignment and Other Related Documents. The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the Assignment, substantially in the form attached hereto as **Exhibit "2"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Assignment.

SECTION 3: Approval and Execution of Redevelopment Agreement and Other Related Documents. The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the final version of the Redevelopment Agreement, substantially in the form attached hereto as **Exhibit "3"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Redevelopment Agreement.

SECTION 4: Termination of Resolution for Failure of Developer to Acquire Title to the Property. The validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract

entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution, based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 5: Delivery of Assignment and Redevelopment Agreement and Other Documents. After approval and execution of this Resolution and the Redevelopment Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Assignment and the Redevelopment Agreement to the Church and the Developer for record retention purposes.

SECTION 6: Effective Date. This Resolution shall be in full force and effect from and after its passage and approval as provided by State law.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Regular Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "1"

Legal Description of Parcel – 4300 Franklin Avenue, Western Springs, Illinois.

LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 OF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Exhibit "2"

Assignment, Assumption And Consent Agreement
For The Removal Of A Public Sidewalk And Certain Public Parking Spaces,
Installation Of A New Public Sidewalk And Restoration Of 43rd Street Right-Of-Way
At The 4300 Howard Avenue Property In The Village Of Western Springs
(Lots 1, 8 And 9 In Field Park Subdivision)

(attached)

ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT ENTERED INTO BY HINSDALE UNITED METHODIST CHURCH, AS SUCCESSOR TO THE FIRST UNITED METHODIST CHURCH OF WESTERN SPRINGS, AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

This ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT (this **"Assignment"**) is entered into on the ___ day of _____, 2025, by and between Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (hereinafter referred to as the "**Church**" or "**Assignor**"), and 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (hereinafter referred to as "**Developer**" or "**Assignee**"), and the Village of Western Springs, an Illinois non-home rule municipal corporation located in Cook County, Illinois (hereinafter referred to as "**Village**"). The Assignor, the Assignee and the Village are collectively referred to as the "Parties" and individually as a "Party" under this Assignment.

RECITALS

WHEREAS, the Church is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, consisting of three (3) residentially zoned lots zoned under the R2 Single-Family Residence District classification, and legally described in **Exhibit "A"** attached hereto and made a part hereof (the "Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Property to the Developer. The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots, or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the completion of the three (3) single-family detached houses, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for a single-family residential development consisting of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan") submitted by the Developer to the Village. A copy of the Developer's Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to complete the Church Demolition Work and to construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; (c) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk, and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (d) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); (e) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"); and (f) the repeal of the following zoning ordinance approved by the President and Board of Trustees of the Village (the "Corporate Authorities") relative to the Church and activities formerly conducted at the Property: Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". A copy of the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois), with a survey date of September 27, 2024 and prepared by Kabal Surveying Company, is attached hereto as **Exhibit "C"** and made a part hereof (the "Plat of Sidewalk Easement Abrogation"); and

WHEREAS, subject to the President and Board of Trustees of the Village (the "Corporate Authorities") granting approval of this Assignment, the Church and the Developer have approved and entered into this Assignment, the form and content of which have been approved by the Village Attorney, to authorize the Developer to negotiate and enter into the Redevelopment Agreement (as defined below) with the Village prior to completing the purchase of the Property that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations and the other obligations that are part of the Conditions of Approval, as set forth below in Section 4 of this Assignment; and

WHEREAS, under this Assignment and the Redevelopment Agreement, all of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined under the Developer Site Work Obligations and set forth below in Section 4 of this Assignment, are being assigned to and assumed by the Developer, as the Church would be required to fulfill such obligations if the Letter of Agreement was not being terminated by the Village and the Church. The Developer accepts the assignment and assumption of all rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work from the Church, and agrees to complete the other Developer Site Work Obligations as set forth below in Section 4 of this Assignment. As part of its approval of this Assignment, the Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and

Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the statutory and constitutional authority and intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution, to approve and enter into this Assignment with the Church and the Developer, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into this Assignment.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein contained and the exchange of adequate consideration and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

AGREEMENT

1. **Incorporation.** Each of the Recitals set forth above are incorporated by reference into Section 1 of this Agreement as material provisions.

2. **Assignment by Assignor; Consent.** Upon the conveyance of the Property to the Assignee, the Assignor assigns, transfers and sets over to the Assignee all of its rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined in the above Recitals, and which are part of the Developer Site Work Obligations to be performed in anticipation of the Development. The Church consents to the Developer, as contract purchaser of the Property, to negotiate and enter into the Redevelopment Agreement with the Village, prior to completing the purchase of the Property, that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations upon its completion of the purchase of the Property.

3. **Acceptance of Assignment by Assignee.** Upon its completion of the purchase of the Property, the Assignee assumes all of the rights, liabilities and obligations of the Assignor for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, and agrees to complete the other Developer Site Work Obligations that are set forth below in Section 4 of this Assignment.

4. **Developer Site Work Obligations.** The approval of the Corporate Authorities of the Village of the termination of the Letter Agreement, the approval of the Plat of Sidewalk Easement Abrogation, and the approval of this Assignment is conditioned upon and subject to the following:

   A. The Developer shall approve and enter into a Redevelopment Agreement with the Village for the completion of the Developer Site Work Obligations (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney, that contains, at a minimum, the Developer's obligation to complete

the Developer Site Work Obligations and such other provisions and obligations as mutually agreed to by the Village and the Developer.

a. After its acquisition of the Property, in the event the Developer fails to commence or commences and then fails to complete the Developer Site Work Obligations, the Village, at the Developer' costs, may, but is not obligated to, complete the Developer Site Work Obligations, subject to the terms, provisions and obligations of the Redevelopment Agreement and the Village may use the security posted by the Developer to ensure the completion of the Developer Site Work Obligations.
b. If the Developer does not purchase the Property, the Church, at its cost, may complete the Church Demolition Work and may also complete the other Developer Site Work Obligations, provided the Plat of Sidewalk Easement Abrogation is approved and filed with the Cook County Clerk's Office, Recordings Division, and the Church secures all required permits, posts with the Village required security to ensure the completion of the work and otherwise complies with all of the requirements set forth in the Redevelopment Agreement to complete the Developer Site Work Obligations.
c. If there is any conflict between the provisions of this Assignment and the Redevelopment Agreement, the Redevelopment Agreement shall control.

5. **Village Approval of Assignment.** The Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer.

6. **Notices.** Any notice or communication required or permitted to be given under this Assignment shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Assignment, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this Section 6, each Party to this Assignment shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Phone: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

William Dvorak 4300 Franklin Western Springs LLC 3941 Clausen Avenue Western Springs, Illinois 60558 Phone: 630-772-0327 Email: bdvorak@kineticpartners.net	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

Notices and communications to the Church shall be addressed to, and delivered at, the following address:

Zed Francis Hinsdale United Methodist Church 945 South Garfield Avenue Hinsdale, Illinois 60521 Phone: 630-805-2501 Email: zsf3@aol.com	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

7. **Applicable Law; Venue.** This Assignment shall be governed and controlled, as to the validity, enforceability, interpretation and construction, in effect in all other respects, including, but not limited to, the legality of interest charged hereunder, by the statutory laws and decisions of the State of Illinois. The Parties agree that, for the purpose of any litigation relative to this Assignment and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the Parties consent to the *in personam* jurisdiction of said Court for any such action or proceeding.

8. **Entire Agreement; Amendment or Modification.** This Assignment contains the entire understanding between the Parties and supersedes any prior understanding or written or oral agreements between them with respect to the subject matter of this Assignment. There are no representations, agreements or understandings, oral or written, between and among the Parties hereto relating to the subject matter of this Assignment which are not fully expressed herein. No oral modification, amendment or change shall be allowed to this Assignment. Any modification, amendment or change shall be in writing and approved by the Corporate Authorities of the Village, the manager of the Developer and the governing board of the Church.

9. **Severability.** Every provision of this Assignment is intended to be severable. In the event any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the validity or enforceability of the remaining terms and provisions hereinabove set forth.

10. **Counterparts.** This Assignment may be executed in counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument.

11. **Effective Date; Legal Authority; Binding Effect.** The "Effective Date" of this Assignment shall be the date of execution by the last signatory, which date shall be inserted on page 1 of this Assignment. This Assignment shall be in full force and effect, and legally binding, after it is signed by the duly authorized officers of each Party. Each of the signatories to this Assignment are the duly authorized representatives of their respective corporate entity and each such person has signed this Assignment pursuant to the authority duly granted to them by the corporate authorities of said corporate entity, who have acted by motion or approved a Resolution (in the Village's case, at an open public meeting) that

authorized and directed the representatives to sign this Assignment. This Assignment shall be binding upon and shall inure to the benefit of the Parties agreeing hereto and to their successor corporations, officers, officials, trustees, successors-in-office, heirs, representatives, and assigns, transferees, successors-in-interest and successor owners.

SIGNATURE PAGE TO FOLLOW

SIGNATURE PAGE

ASSIGNOR:

Hinsdale United Methodist Church,
as successor to the First United Methodist Church of Western Springs

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

ASSIGNEE:

4300 Franklin Western Springs LLC,
an Illinois limited liability company

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

VILLAGE:

VILLAGE OF WESTERN SPRINGS,
an Illinois non-home rule municipal corporation

By:_____
Name: Heidi Rudolph
Title: Village President

Date:_____, 2025.

ATTEST:

By:_____
Name: Edward Tymick
Title: Village Clerk

Date:_____, 2025.

Exhibit "A"

Legal Description of Parcel - 4300 Franklin Avenue, Western Springs, Illinois

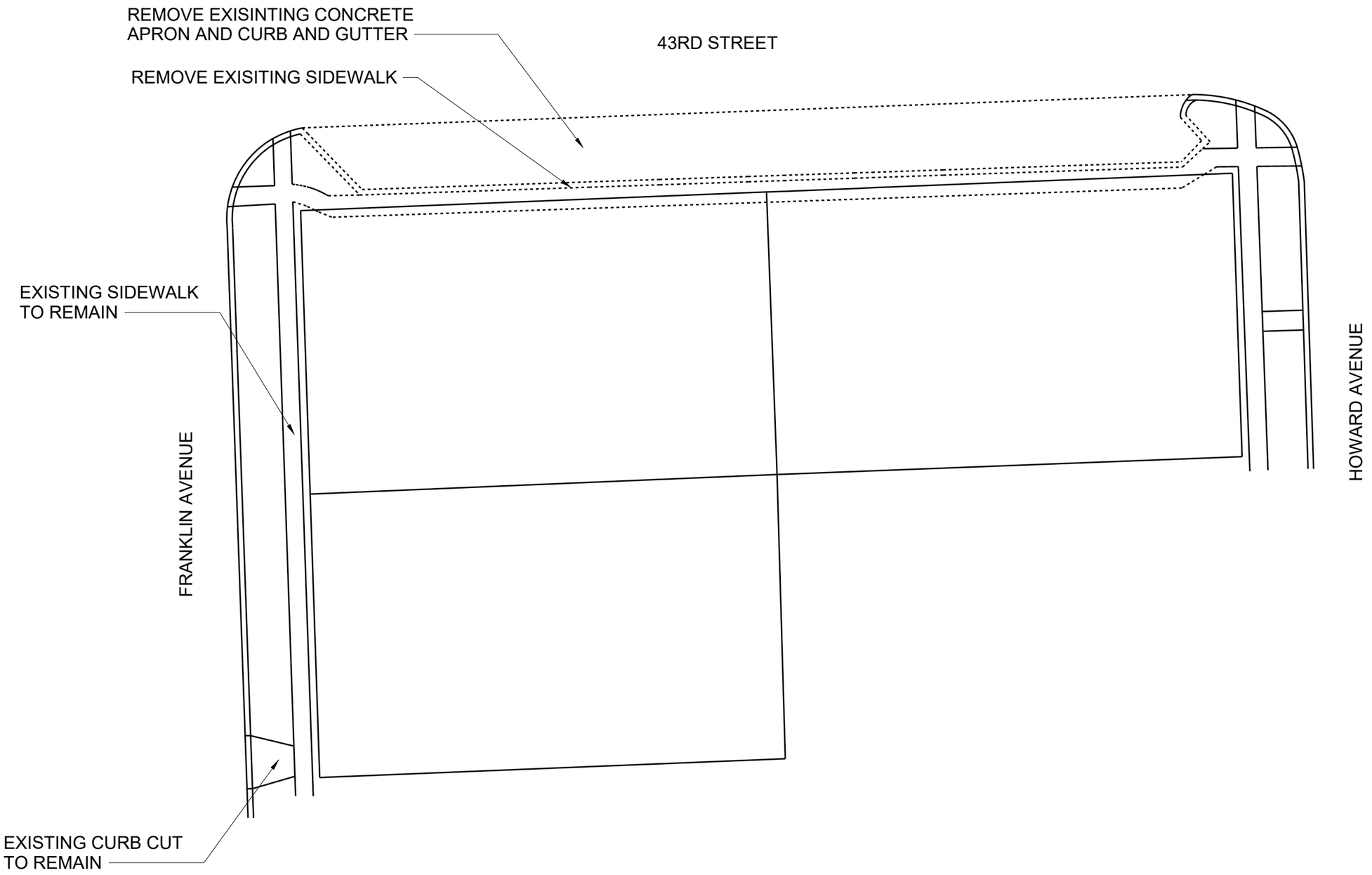
LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 PF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Exhibit "B"

4300 Howard Avenue Residential Development Site Plan consisting of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024

(attached)



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

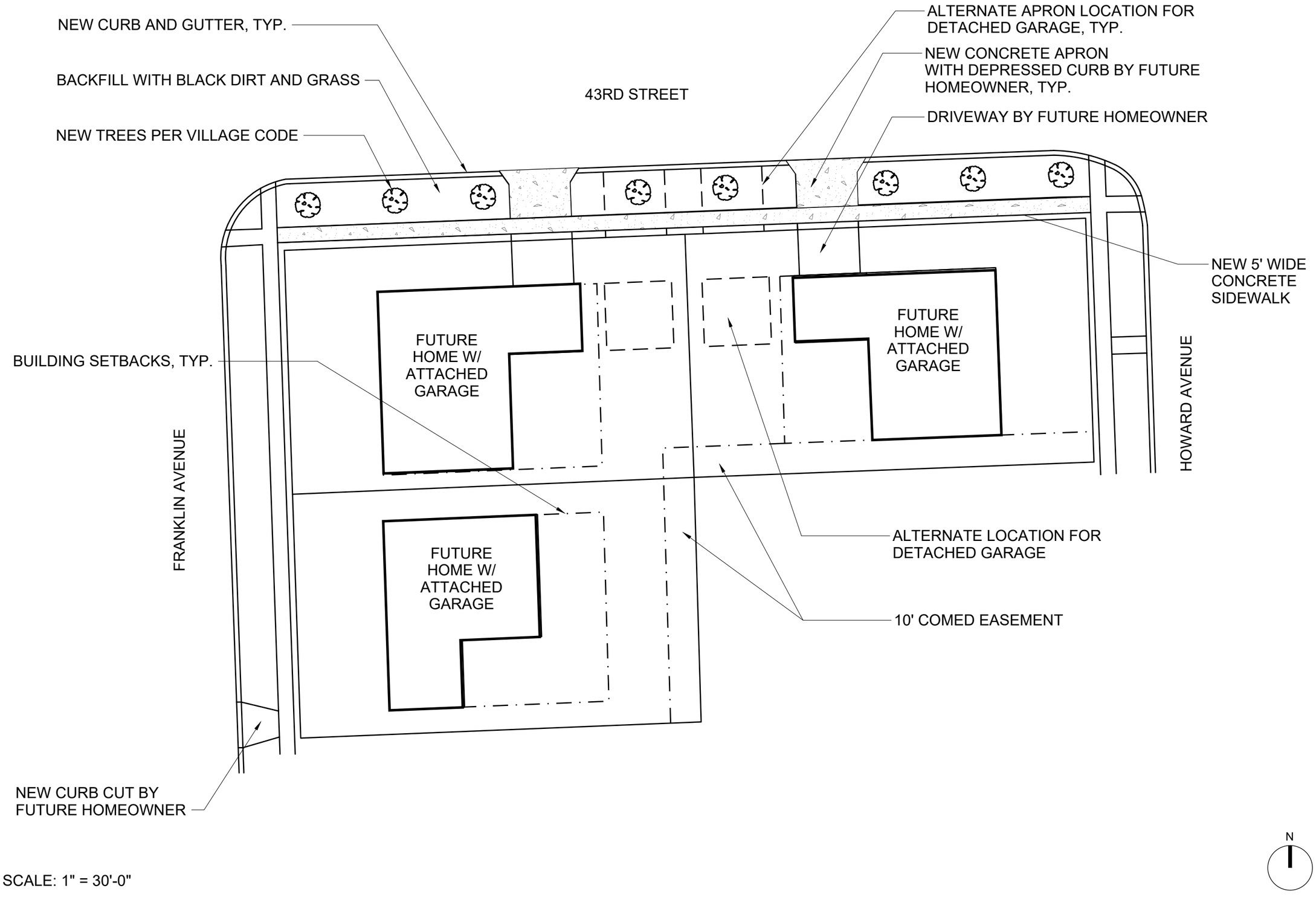
PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY DEMOLITION PLAN

A.01



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY RESTORATION PLAN

A.02

Exhibit "C"

Plat of Abrogation for Public Sidewalk Easement
(Address: 4300 Franklin Avenue, Western Springs, Illinois)
with a survey date of September 27, 2024 and prepared by Kabal Surveying Company

(attached)

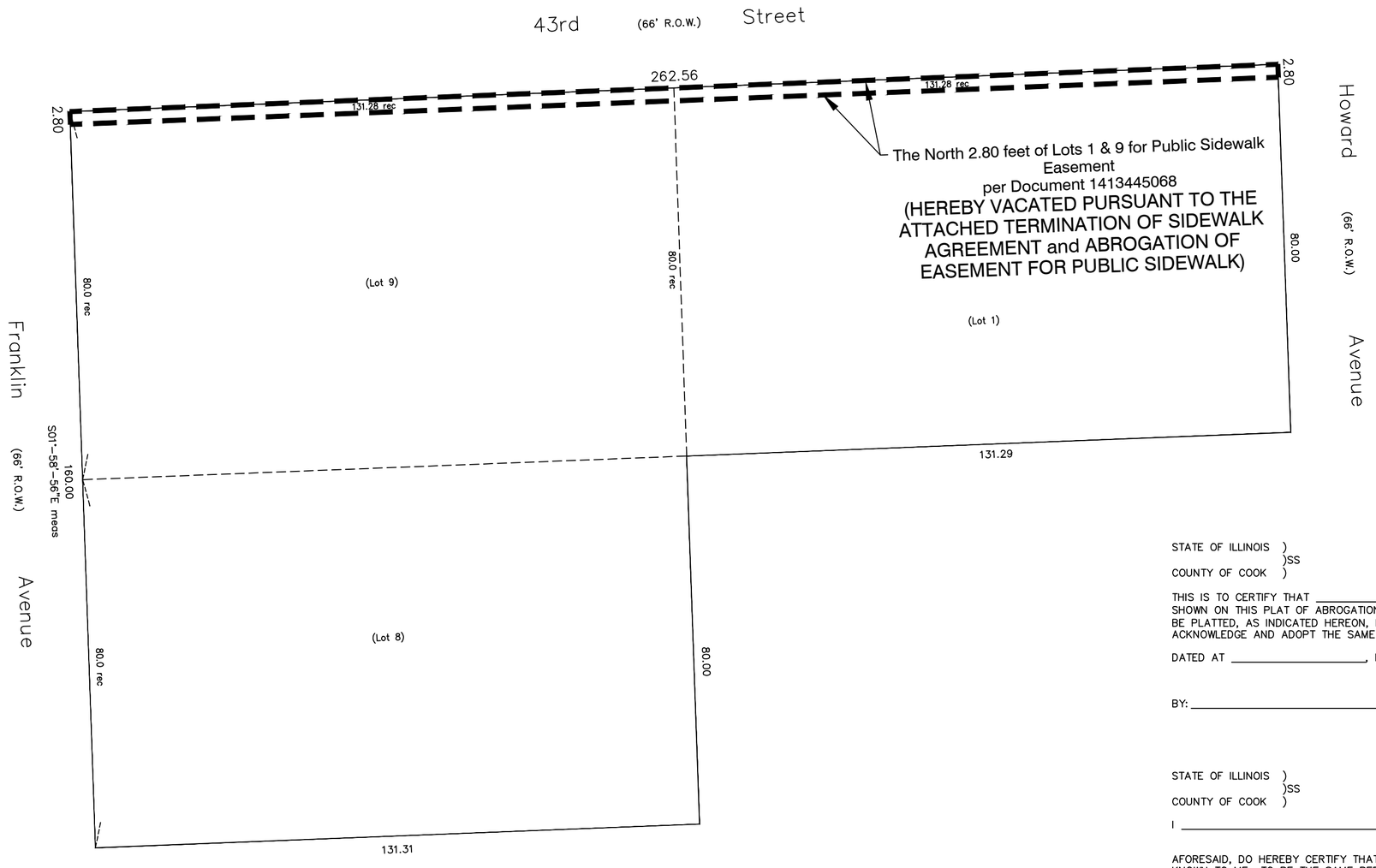
Plat of Abrogation

For Public Sidewalk Easement

Lots 1, 8 and 9 in Block 26 in Field Park, a Subdivision in the West 5/8 of the West 1/2 of Section 5, Township 38 North, Range 12, East of the Third Principal Meridian and part of the Southeast 1/4 of Section 32, Township 39 North, Range 12, East of the Third Principal Meridian, in Cook County, Illinois.

Address: 4300 Franklin Avenue, Western Springs





Measured bearing shown hereon is based on the Illinois East State Plane Coordinate Zone 1201 (NAD83) determined by GPS measurement

LEGEND
R.O.W. = right-of-way, E = East
N = North, W = West, S = South
meas = measured, rec = record
pch = porch, rad = radius
prc = point of reverse curve

Please check Legal Description with Deed and report any discrepancy immediately.

Surveyed September 27 ,20 24

Scale: 1 inch = 20 ft.
Order No. 241854A
Ordered By: Hawbecker & Garver, LLC

Property identification numbers
18-05-302-001-0000 (Lot 9)
18-05-302-018-0000 (Lot 1)
18-05-302-002-0000 (Lot 8)

Kabal Surveying Company
Land Surveying Services
10407 West Cermak Road
Westchester, Illinois 60154
(708) 562-2652
Fax (708) 562-7314
email: kabal-surveying@comcast.net
website: KabalSurveyingCompany.com
Registration No. 184-003061

ORIGINAL SEAL IN RED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS(ARE) THE OWNER(S) OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS(HAVE) CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE PURPOSES THEREIN SET FORTH, AND DOES(DO) HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED AT _____, ILLINOIS, THIS _____ DAY OF _____, _____.

BY: _____ TITLE: _____

NOTARY PUBLIC

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE

AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFOR ME THIS DAY IN PERSONS AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR FREE AND VOLUNTART ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS,

AT A MEETING HELD THIS _____ DAY OF _____, 20_____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, MITCHELL P. BALEK, DO HEREBY CERTIFY THAT I, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY, ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS _____ DAY OF _____, A.D., 20 ____.

Mitchell P. Balek
_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-003250
MY LICENSE EXPIRES ON NOVEMBER 30, 2026

Exhibit "3"

Redevelopment Agreement
By And Between
The Village Of Western Springs And 4300 Franklin Western Springs LLC
For The Demolition Of A Church Building And Certain On-Street Public Parking Spaces, Abrogation Of A Public Sidewalk Easement, Installation Of A New Public Sidewalk And Restoration Of 43rd Street Right-Of-Way In The Village Of Western Springs, Illinois
(Lots 1, 8 And 9 In Field Park Subdivision)

(attached)

After Recording Return To:
Michael T. Jurusik
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane, Suite 301
Westmont, Illinois 60559

Common Address:
4300 Howard Avenue
Western Springs, Illinois 60558

This space for Recorder of Deeds Office use only

Property Identification Numbers:
18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

REDEVELOPMENT AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE DEMOLITION OF A CHURCH BUILDING AND CERTAIN ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT OF WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

THIS REDEVELOPMENT AGREEMENT ("**Agreement**") is dated the ___ day of _____, 2025 ("**Effective Date**"), and is entered into by and between the **VILLAGE OF WESTERN SPRINGS**, an Illinois non-home rule municipal corporation ("**Village**"), and **4300 FRANKLIN WESTERN SPRINGS LLC**, an Illinois limited liability company, with its principal corporate office located at 330 West Chestnut, Hinsdale, Illinois ("**Applicant**" or "**Developer**"), by and through their respective duly authorized agents and/or representatives. The Village and the Developer are at times referred to below individually as a "**Party**" and collectively as the "**Parties**".

IN CONSIDERATION OF the mutual covenants and promises as contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

SECTION 1. RECITALS.

A. The Village, a non-home rule municipality, is a duly constituted and existing municipality within the meaning of Section 1 (Municipalities and Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970.

B. The Village is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the State of Illinois Constitution of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The Village has the statutory authority to promote the health, safety and welfare of the Village and its residents, to encourage private development in order to enhance the local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives.

C. As of September 3, 2024, the Developer is the contract purchaser and prospective developer of the real property commonly known as 4300 Howard Avenue, Western Springs, Illinois ("Property"), consisting of three (3) platted lots zoned under the R2 Single-Family Residence District classification, and has filed a concept plan for the reconfiguration of the 43rd Street right-of-way adjacent to the property addressed 4300 Howard Avenue with Village with supporting documents (the "Application") for the proposed redevelopment of the Property with three (3) new residential homes. Upon acquisition of the Property, the Developer may pursue the development of the Property, either as the primary developer of one or more of the lots, or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Agreement, the construction of single-family homes on the three (3) single-family lots, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s), are collectively referred to as the "Development".

D. Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs, (the "Church" or "Property Owner") is the owner of the Property. The Property Owner has further executed a "Written Consent and Waiver" to allow 4300 Franklin Western Springs LLC to enter into this Agreement, a copy of which is attached hereto as **Exhibit "A"** and made a part hereof. The Property is approximately seventy-two hundreds (.72) acres. The Property Tax Index Numbers for the Property are identified as follows: (1) PIN: 18-05-302-001-0000; (2) PIN: 18-05-302-002-0000; and (3) PIN: 18-05-302-018-0000 (collectively the "**Property PINs**"). The Legal Description of the Property is attached hereto as **Exhibit "B"** and made a part hereof.

E. The Developer desires to purchase the Property to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") and then to construct the Development in conformance with the applicable Village Code provisions, including its DCO and other legal requirements. As a predicate to such Development, the Developer has submitted a typical plan for single family residential development of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Plan" (the "Site Plan") submitted by the Developer to the Village. A copy of the Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan), dated October 22, 2024, is attached hereto as **Exhibit "C"** and made a part hereof; and

F. With the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village President and Board of Trustees (the "Corporate Authorities") of the Village approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Subject Property (the "Sidewalk Easement").

G. To address certain Church obligations in the Letter of Agreement and to allow the Developer to complete the Church Demolition Work and construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that

the Village agree to take certain actions relative to the Property, including the approval of: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; and (c) the repeal of Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance").

H. To address certain Church obligations in the Letter of Agreement and to allow the Developer to enter into this Agreement with the Village, the Church, the Developer and the Village have agreed to enter into an Assignment, Assumption And Consent Agreement For The 4300 Howard Street church demolition, parkway demolition and parkway restoration. In The Village Of Western Springs, Illinois (Lots 1, 8 And 9 In Field Park Subdivision) ("Assignment"), in a form and content as approved by the Village Attorney, that requires the Developer to complete the Church Demolition Work and to assume the following obligations of the Church under the Letter of Agreement: (a) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (b) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); (c) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". A copy of the Assignment is attached hereto as **Exhibit "D"**; and

I. Subject to the condition of approval that the Developer purchase the Property and complete the "Developer Site Work Obligations". At an open public meeting held on February 10, 2025, the Corporate Authorities of the Village approved the following documents:

(1) **ORDINANCE NO. 25-____:** AN ORDINANCE RESCINDING AND REPEALING THE BOARD OF TRUSTEES' APPROVAL OF ORDINANCE NO. 18-2934 (AN ORDINANCE APPROVING A CONDITIONAL USE PERMIT FOR THE INSTALLATION AND OPERATION OF AN EARLY CHILDHOOD EDUCATION CENTER AT THE 4300 HOWARD AVENUE PROPERTY) TO FACILITATE THE DEMOLITION OF A CHURCH BUILDING AND REMOVAL OF A PUBLIC SIDEWALK AND ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION).

(2) **RESOLUTION NO. 25-____:** A RESOLUTION APPROVING A PLAT OF ABROGATION FOR PUBLIC SIDEWALK EASEMENT (ADDRESS: 4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS) AND APPROVING THE TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES WITHIN THE 43RD STREET RIGHT-OF-WAY ADJACENT TO LOT 1 AND LOT 9 IN FIELD PARK SUBDIVISION, WESTERN SPRINGS, ILLINOIS.

(3) **RESOLUTION NO. 25-_____:** A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION) AND A RELATED REDEVELOPMENT AGREEMENT TO BE ENTERED INTO BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC TO ALLOW FOR THE COMPLETION OF SUCH WORK.

J. While there appears to be no zoning relief needed for the Developer to construct the three (3) single-family detached houses on the Property based on the submitted preliminary Site Plan, if zoning relief is determined to be required to construct the Development, the Developer agrees to apply for and use commercially reasonable efforts to secure all required zoning and development permit approvals from the Village and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction of the Development.

The construction of the Developer Site Work Obligations shall be in conformance with the Village-approved Final Site Demolition and Site Restoration Plans and/or Final Development Plans, as amended by any Village-approved zoning relief and development entitlements and any approval conditions and requirements imposed by other governmental oversight agencies. The Developer agrees to actively participate in good faith in all required zoning hearing proceedings and development permit processes and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the completion of the Developer Site Work Obligations.

K. To receive a site development permit or a construction permit for completion of the Developer Site Work Obligations, the Developer is required to submit and obtain the plan approval of a set of Final Site Demolition and Site Restoration Plans for the reconfiguration of the right-of-way by the Village Engineer and the Community Development Department Director, or their designees, and all required amendments issued by any other governmental authority with jurisdiction over the Development, and proof of approval of all necessary development or governmental permits issued by any other governmental authority with jurisdiction over the Developer Site Work Obligations. While the Developer is acquiring the Property with the intention of completing the Development, the Parties agree that Village approval of a site development permit or a construction permit for completion of the Developer Site Work Obligations and plan approval of a set of Final Site Demolition and Site Restoration Plans are not conditioned upon the Developer constructing the Development.

L. In addition to the completion of the Developer Site Work Obligations, the Developer agrees to construct all components of "Infrastructure" and "Public Infrastructure" (as defined below) that are required by the "Requirements of Law" (as defined below) for the completion of the Developer Site Work Obligations.

M. The Developer shall use all commercially reasonable efforts to complete Developer Site Work Obligations and shall work continuously to achieve their completion once such work commences.

N. The foregoing Recitals of this Section 1 are material terms and provisions and are incorporated herein and made a part of this Agreement.

SECTION 2. DEFINITIONS.

Whenever used in this Agreement, the following terms have the following meanings, unless a different meaning is required by the context:

A. "Approval Resolution": Western Springs Resolution No. 25-_____ approving this Agreement.

B. "Approved Plans": See Subsections 4.A. and 4.B. of this Agreement, consisting of the Village-approved Final Site Demolition and Site Restoration Plans and the Final Street/Parkway construction and restoration Plans.

C. "Board of Trustees" or "Corporate Authorities": The President and Trustees of the Village of Western Springs.

D. "Certificate of Completion": Means a certificate, issued by the Village, that confirms: (a) the Development has been completed in substantial conformance with the Approval Ordinance and the Village-approved Final Development Plans; or (b) substantial completion of any significant milestone component of the Development (e.g., completion of the Infrastructure or the Developer Site Work Obligations), as applicable.

E. "Change in Law": Means the occurrence, after the Effective Date, of an event described below in this definition, provided such event materially changes the ability of the Party relying thereon to carry out its obligations under this Agreement and such event is not caused by the Party relying thereon. Change in Law means any of the following: (1) the enactment, adoption, promulgation or modification of any federal, State or local law, ordinance, code, rule or regulation (other than by the Village or with respect to those made by the Village, only if they violate the terms of this Agreement); (2) the order or judgment of any federal or State court, administrative agency or other governmental body (other than the Village); or (3) the adoption, promulgation, modification or interpretation in writing of a written guideline or policy statement by a governmental agency (other than the Village, or, with respect to those made by the Village, only if they violate the terms of this Agreement). Change in Law, for purposes of this Agreement, shall also include the imposition of any conditions on, or delays in, the issuance or renewal of any governmental license, approval or permit (or the suspension, termination, interruption, revocation, modification, denial or failure of issuance or renewal thereof) necessary for the undertaking of the actions to be performed under this Agreement (except any imposition of any conditions on, or delays in, any such issuance or renewal by the Village, except as provided herein).

F. "Developed Lot": Each platted lot, separately designated as Lot 1, Lot 8 and Lot 9 in Field Park Subdivision, which may be developed with a single-family home and other related improvements (e.g., driveway, sidewalk and landscaping) or with another alternate residential development plan or an alternate development plan by the Developer, or its successor owner(s), in accordance with all applicable Village Code provisions, including its DCO, and all required Village and other governmental agency regulatory approvals.

G. "Developed Lot Owners": Each of the initial purchasers of and all successor owners of each Developed Lot.

H. "Development Director": The Village's Community Development Department Director.

I. "Developer": Includes 4300 Franklin Western Springs LLC and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property. The Village understands that 4300 Franklin Western Springs LLC may lodge title to the property with a Land Trust which trust will be included in the definition of Developer, and shall provide a "Collateral Assignment of Beneficial interest" to recognize the obligations of Developer to the Village under this Agreement.

J. "Developer Site Work Obligations": Includes the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined above in Section 1 (Recitals). The Developer Site Work Obligations may also include stubbing of the private water and sewer utilities for the future single-family detached houses.

K. "Developer Site Work Obligations Cost Estimate": See Subsection 4.B. of this Agreement.

L. "Effective Date": The date that the last signatory signs this Agreement, which shall be written in the first paragraph of this Agreement.

M. "Force Majeure": See definition of Uncontrollable Circumstance and Subsection 17.N. of this Agreement.

N. "IDOT": The Illinois Department of Transportation.

O. "IEPA": The Illinois Environmental Protection Agency.

P. "Infrastructure": All utilities including without limitation drinking water, sanitary sewer, storm sewer and detention basins, electric, gas, and telecommunication; stormwater system elements including without limitation detention facilities, streets, drive aisles, driveways, drive aprons, curbs, gutters, street lights, and parking spaces; sidewalks, other pedestrian ways, pedestrian amenities, pedestrian lighting, way-finding signs, and parkway trees, parkway restoration and other parkway landscaping; and all related improvements for the Development, whether private or public, and whether within the Property or within adjacent rights-of-way and property.

Q. "LOC": An irrevocable letter of credit issued by a lending institution licensed to do business in the State of Illinois, on a form approved by the Village Attorney.

R. "MWRD": The Metropolitan Water Reclamation District of Greater Chicago.

S. "Private Infrastructure": All Infrastructure other than Public Infrastructure, including the Stormwater Conveyance System**.**

T. "Property": The real property legally described in **Exhibit "B"** attached to this Agreement.

U. "Public Infrastructure": Infrastructure that is being dedicated to the Village or to other governmental agencies, including without limitation drinking water mains (but not water service lines to buildings), water hydrants, sanitary sewers and parkway trees, parkway restoration and other parkway landscaping and other elements determined by the Village. In the event of any ambiguity, the Village will determine whether an Infrastructure element is public or private.

V. "Director of Engineering Department": The Village's Village Engineer.

W. "Reimbursable Costs": See Section 8. of this Agreement.

X. "Requirements of Law": All applicable federal, County and State of Illinois laws, statutes and administrative regulations, the Zoning Code, the Village Code, and the Village's building, stormwater management, and other codes and regulations. The 2006 International Building Code will apply to architectural and structural plans and specifications for all buildings within the Development unless preempted by State of Illinois or federal law or the Village designates, in writing, other applicable standards. Otherwise, Village-adopted model codes will apply and State of Illinois building codes will apply in the absence of an applicable Village-adopted model code. Accessibility standards of the Americans with Disabilities Act (42 U.S. Code § 12101) will apply to all common areas. The 2006 International Building Code reference to 2009 ICC Accessible and Usable Buildings and Facilities (ANSI) (2003 Safe Harbor of FHA) in conjunction with the standards of the Illinois Accessibility Code will be followed for all residential units.

Y. "Site Work": Grading land, excavating soil and debris, environmental remediation, installation of underground utilities, and similar activities in anticipation of vertical construction on one or more of the Developed Lots. Components of Site Work will be completed as part of the completion of the Developer Site Work Obligations.

Z. "Stormwater Conveyance System": **RESERVED.**

AA. "Uncontrollable Circumstance": An event that is beyond the reasonable control of and occurs without the fault of the involved party, including without limitation the following events: (i) an insurrection, riot, civil disturbance, sabotage act of a public enemy, explosion, nuclear incident, war, or naval blockade; (ii) an epidemic, pandemic, hurricane, tornado, landslide, earthquake, lightning, fire windstorm, or other casualty or act of God, or persistent bad weather that impedes progress; (iii) a government condemnation or taking; (iv) a strike, lockout, or other labor dispute other than those caused by the unlawful acts of the Developer; and (v) a Change in Law. Uncontrollable Circumstance does not include any of the following events or conditions: Economic hardship, impracticability of performance, commercial, economic or market conditions, or a failure of performance by a contractor (except as caused by an event that is an Uncontrollable Circumstance as to that contractor). See Subsection 17.N. regarding Force Majeure.

BB. "Village Code": The Western Springs Code of Ordinances.

CC. "Village Manager": The Western Springs Village Manager, or their designee.

DD. "Zoning Code" or "DCO": The Western Springs Development Control Ordinance.

SECTION 3. PROPERTY ACQUISITION; TERMINATION.

A. **Property Acquisition.** The Developer has entered into a real estate purchase contract with the Property Owner, and, subject to the terms and conditions of this Agreement, intends to acquire fee simple title to the Property on or before May 31, 2025 (the "**Acquisition Deadline Date**"). The closing date at which the Developer obtains fee simple title to the Property is referred to as the "**Acquisition Date**". If the Developer does not acquire fee simple title to the Property by 5:00 p.m. CST on the Acquisition Deadline Date, the Developer shall send written notice to the Village within five (5) calendar days after the expiration of the Acquisition Deadline Date advising that the acquisition of the Property did not occur and providing a status on the acquisition consisting of one of these responses: (i) the Property Owner or the Developer has terminated the real estate purchase contract; or (ii) the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract; or (iii) the Developer and the Property Owner have extended the Acquisition Date and are actively working on matters to complete the acquisition of the Property by the extended Acquisition Date.

B. **Termination of Agreement if Developer Does Not Purchase Property.** If the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract, the Property Owner may complete the Church Demolition Work and all related site restoration work, and may may complete the Developer Site Work Obligations, subject to the Church securing all required permits, posting with the Village required security to ensure the completion of the work and complying with the applicable Requirements of Law. After its acquisition of the Property, in the event the Developer fails to commence or commences and then fails to complete the Developer Site Work Obligations, the Village, at the Developer's cost, may, but is not obligated to, complete the Developer Site Work Obligations, subject to the terms, provisions and obligations of the Redevelopment Agreement and the Village may use the security posted by the Developer to ensure the completion of the Developer Site Work Obligations.

C. **Extension of Acquisition Date; Termination.** If the Developer and the Property Owner extend the Acquisition Date and actively work on matters to complete the acquisition of the Property by the extended Acquisition Date, this Agreement shall remain in effect until either the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer mutually agree to terminate the real estate purchase contract, subject to the next sentence. This Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party, if the Developer does not acquire the Property within twelve (12) months of the approval date of this Agreement. Notwithstanding any other provision or term in this Agreement, each Party expressly agrees that the cure remedy under Section 16 (Default; Cure) of this Agreement shall not apply to the automatic expiration provision.

D. **Extension of 12-Month Automatic Termination Provision.** The Corporate Authorities of the Village, in their sole discretion, may approve an addendum to this Agreement that extends the 12-month automatic expiration provision so that the Developer has additional time to acquire the Property. The Developer agrees to waive any claims or causes of action for damages of any kind that it could file against the Village for not passing an addendum that extends the 12-month automatic expiration provision so that the Developer has additional time to acquire the Property. The Developer also agrees to indemnify, defend and hold harmless the Village and its appointed and elected officials, employees,

engineers, attorneys, agents and representatives from any claims or causes of action or damages of any kind that could be filed against the Village by the Property Owner or any person for not passing an addendum that extends the 12-month automatic expiration provision so that the Developer has additional time to acquire the Property.

SECTION 4. DEVELOPMENT PLANS.

A. **Site Demolition and Site Restoration Plans.** Prior to the issuance by the Village of any site development permit or a construction permit for completion of the Developer Site Work Obligations, as applicable, the Developer is required to submit and obtain the approval of a set of detailed Final Site Demolition and Site Restoration Plans for the Developer Site Work Obligations, which shall be attached to this Agreement as **Exhibit "E"** after Village plan review approval by the Development Director, Director of Law Enforcement, the Director of the Engineering Services, the Village Attorney and other Village consultants (collectively, the "Village Staff") as part of the Village development plan review process. These Plans shall be returned to the Developer for updating and corrections to comply with the Village Staff's development plan review comments and requirements (the "Approved Plans"). The final version of the Approved Plans shall be stamped by a licensed engineer or signed by a licensed architect. The Developer may re-submit updated Final Site Demolition and Site Restoration Plans to address the Village Staff's plan review comments and requirements. If the Developer objects to any of the Village Staff's development plan review comments and requirements, the Developer may file a written request with the Village Board seeking approval of a modification(s) to the Village Staff's development plan review comments and requirements, which may or may not be granted by the Village Board, in its sole discretion, at an open public meeting. The Approved Plans, at a minimum, shall consist of final versions of:

(i) Detailed demolition plans.
(ii) Detailed, dimensioned grading plans.
(iii) Detailed site restoration plans.
(iv) Such other plans and documents reasonably required by the Village Staff.

B. **Development Plans. RESERVED.**

C. **Developer Site Work Obligations Cost Estimate.** The Developer must prepare an estimate of the cost of construction of the Developer Site Work Obligations (the "Developer Site Work Obligations Cost Estimate") and submit the estimate to the Village prior to the issuance by the Village of any permit for demolition, Site Work or other construction activity. The Director of Engineering Services will review, revise as necessary, and approve the Developer Site Work Obligations Cost Estimate.

SECTION 5. DEVELOPMENT AND USE OF THE PROPERTY.

A. Commencement and Completion of Construction.

(i) The Developer intends to commence the Developer Site Work Obligations no later than twelve (12) months after the Village Board's approval of this Agreement (the "**Anticipated Commencement Date**"), subject only to Force Majeure.

(ii) The date the Developer receives a Village site development permit or a construction permit authorizing work to proceed on the Developer Site Work Obligations, shall be the "**Commencement Date**".

(iii) Completion of the Developer Site Work Obligations shall substantially comply with the provisions of this Agreement and each of the conditions of approval set forth in this Agreement.

(iv) Completion of the Developer Site Work Obligations ~~and the~~ shall substantially comply with, and be substantially completed in accordance with, the timeframes outlined on Developer's "Construction Schedule", attached hereto as **Exhibit "G"** and incorporated herein (the "Construction Schedule").

(v) Notwithstanding any other provision in this Agreement or the timeframes outlined in the Construction Schedule, the Developer Site Work Obligations shall be completed no later than twenty-four (24) months after the Commencement Date of such work, subject to Force Majeure, with the actual date of Substantial Completion being the "**Substantial Completion Date**".

(vi) "Substantial Completion" or "Substantially Completed" shall mean that the Developer Site Work Obligations are eligible to receive a Village-issued Certificate of Completion by the Development Director, and the related public improvements are completed to the Village's dedication standard, to the extent applicable to such public improvements.

B. **Substantial Compliance with Approved Plans.** Except for minor alterations due to field conditions approved by the Village Engineer or the Development Director, the completion of the Developer Site Work Obligations shall substantially conform with: (i) this Agreement; (ii) the Approved Plans; (iii) the Requirements of Law; and (iv) were not rejected by the Village during the plan review phase of the Developer Site Work Obligations, within the applicable portion of the Construction Schedule.

C. **Plat of Subdivision; Easement for Public Access.** Lots 1, 8 and 9 are platted lots adjacent to existing, dedicated and improved Village rights-of-way, and, therefore, the Developer is not required to prepare and file with the Village a Plat of Subdivision or a Plat of Easement for Public Access as part of the construction of the Development.

D. **Development – Prior to Property Acquisition or Issuance of Permits.** No work on the Developer Site Work Obligations nor any construction, improvement or development of any kind by the Developer shall be permitted on any portion of the Property unless and until: (a) the Developer acquires title to the Property; and (b) the Developer has been issued either a Village site development permit or a Village demolition permit. The Developer or the Property Owner may request approval for a demolition permit and proceed to demolish the existing structures on the Property, provided that the Developer completes all required site restoration work related to the demolition work. This demolition and site restoration work may be performed independent of commencing work on the other components of the Developer Site Work Obligations.

E. **Development – Failure to Complete.** In the event that the Developer fails to complete the Developer Site Work on or prior to the Substantial Completion Date, or fails to comply with the Construction Schedule (in either case, subject to Force Majeure), and such failure continues for more than thirty (30) calendar days after notice thereof by the Village to the Developer, then:

(i) The Village, by delivery of written notice to the Developer, may require the Developer to submit, within fifteen (15) calendar days, a plan pursuant to which the Developer will: (i) avoid falling further behind the dates set forth in the Construction Schedule; and (ii) complete construction in accordance with the Construction Schedule, as modified, to reflect the "catch-up" plan (a "**Catch-Up Plan**"), for approval by the Village Manager, which approval shall not be withheld unreasonably, provided that the Catch-Up Plan has been approved by the Developer's construction lender (the "**Lender**"). At such time as the Village has approved a Catch-Up Plan, the Developer shall use commercially reasonable efforts to implement, and diligently pursue and complete, the activities of the Catch-Up Plan.

(ii) If the Developer fails to timely: (i) submit a Catch-Up Plan to the Village that has been approved by the Lender, or (ii) implement or complete the Catch-Up Plan; which failure continues for more than thirty (30) calendar days, then the Developer shall be deemed to be in default under the Catch-Up Plan and the Village shall have the right, but not the obligation, to hire a replacement contractor to complete the unfinished Developer Site Work Obligations ("Default Work") and shall have the right to use the Developer Security (as defined below) to pay the contractor to complete such Default Work. Upon such a default by the Developer, subject to and in accordance with the terms and conditions of any construction financing agreement, the Lender will have the right, but not the obligation, to exercise and perform the Developer's rights and obligations under this Agreement, including the hiring of a replacement contractor to complete the Default Work and/or to complete the Developer Site Work Obligations, the unfinished Infrastructure work or any incomplete portion of the Development. If the Village elects to complete the Default Work, then the Developer shall be obligated to pay, or to reimburse the Village for, all costs and expenses of completing such work that are in excess of the proceeds of the construction financing agreement and the Developer's Security.

(iii) The Developer shall be responsible for all costs and expenses to prepare and implement and complete the Catch-Up Plan.

(iv) The rights and remedies set forth in this Subsection 5.E. shall be the sole remedies available to the Village for the failures specified in this Subsection; provided that the Village shall have: (i) the remedy of specific performance to enforce the obligations of Developer pursuant to the terms and conditions of this Subsection; and (ii) the right to recover from the Developer all costs and expenses, including reasonable attorney fees, incurred by the Village in connection with exercising its rights and remedies under this Subsection, together with interest at the rate of eight percent (8%) per annum on any Village funds expended prior to reimbursement from the Developer Security.

F. **Dedication of Land.** Lots 1, 8 and 9 are platted lots adjacent to existing, dedicated and improved Village rights-of-way, and, therefore, the Developer is not required to dedicate any land to the Village or to any other governmental agency within the Village pursuant to Section 10-10-14 (Dedication of Park Lands and Schools Sites or Payment of Fees In Lieu Thereof) of the DCO.

G. **Development Covenants, Conditions, and Restrictions. RESERVED.**

H. **Maintenance of and Damage to Public Property and Off-Site Improvements.** During the performance of the Developer Site Work Obligations, the Developer must: (i) maintain all streets, sidewalks, and other public property adjacent to the Property in a good and clean condition and free of hazards at all times, (ii) promptly clean all mud, dirt, or debris deposited on any street, sidewalk, or other public property in or adjacent to the Property by the Developer or any agent of or contractor hired by, or on behalf of, the Developer, and (iii) repair or replace all damage to any private or public utilities or other private or public improvements of any kind that are located on-site or off-site relative to the Property that may be caused by the activities of, or on behalf of, the Developer or any employees, contractors, subcontractors or agents hired by, or on behalf of, the Developer. The Developer agrees to promptly repair or replace or restore such damaged improvements with like-kind and like-quality materials. If, within twenty-four (24) hours after the Village gives the Developer notice to clean mud, dirt, or debris or to repair damage in compliance with this Subsection, the Developer neglects or fails to clean or repair or to undertake with due diligence to clean or repair the affected public property, then the Village may clean or repair the affected property, either with its own forces or with contracted forces, and recover from the Developer the greater of $500.00 or the sum equal to the total cost incurred by the Village including without limitation administrative costs.

I. **Environmental Conditions.** The Developer must remain in compliance with all applicable federal and State of Illinois environmental laws and regulations while completing the Developer Site Work Obligations and constructing the Infrastructure and the Development.

J. **Building Certification. RESERVED.**

K. **Estimated Development Costs and Construction Budget. RESERVED.**

L. **Development Financing. RESERVED.**

M. **Developer Site Work Obligations.** The Developer shall comply with each of the following Developer Site Work Obligations:

(1) The Developer, at its cost, shall complete the Developer Site Work Obligations in anticipation of the construction of the Development in general conformance with the Site Plan (**Exhibit "C"**), subject to Village plan review amendments and Village approval of the final set of Site Demolition and Site Restoration Plans by the Village Development Director.

(2) After issuance of a Village site development permit or demolition permit for the completion of the Developer Site Work Obligations, the Developer, at its cost, shall promptly complete the Developer Site Work. A demolition permit for the existing structures can be issued independently of the permit for the Developer Site Work Obligations, provided that the Developer complete all required site restoration work related to the demolition work. The Developer is permitted to utilize the angled parking spaces within the 43rd right-of-way directly adjacent to the Property for staging of construction vehicles or materials during the demolition of the existing structures, provided such vehicles and materials do not encroach into the 43rd street right-of-way.

(3) To be eligible for the issuance of a Village site development permit or demolition permit to commence work on the Developer Site Work Obligations, the Developer, at its cost, shall comply with the Director of Engineering Services' Preliminary Comments to the 4300 Howard Avenue & 43rd Street Parcel (United Methodist Church - Hinsdale UMC and Fairfield Properties) dated November 20, 2024, as amended or modified by the Director of Engineering Services.

(4) Pursuant to Section 9 below, the Developer shall post with the Village, at the time the Village issues a site development permit or a construction permit for the Developer Site Work Obligations, an irrevocable letter of credit in the amount of one hundred ten percent (110%) of the Developer Site Work Obligations Cost Estimate, as determined by the Village Engineer (the "Performance LOC") for the benefit of and which may be called by the Village that ensures the completion of the Developer Site Work Obligations. The Performance LOC shall be posted with the Village and then renewed by the Developer, at its cost, prior to the issuance of the Village site development permit or construction permit for the Developer Site Work Obligations through the Village's issuance of the Certificate of Completion for the Developer Site Work Obligations, which shall not be unreasonably withheld nor delayed. The Village shall retain ten percent (10%) of the value of the initial Performance LOC for a two (2) year warranty period after the Village's issuance of the Certificate of Completion (the "Developer Security"). During the 2-year warranty period, the Village agrees to release a portion or all of the Developer Security to the Developer in the event that the Developer sells one or both of the Developed Lots that fronts on 43rd Street, provided replacement security is posted with the Village by the new property owner(s) or commences foundation work as part of vertical construction of the Development. The Developer Security shall be released on a percentage basis that equates to the portion of the Property being developed.

(5) The Developer shall comply with all Requirements of Law that are applicable to the performance of the Developer Site Work Obligations.

SECTION 6. CONSTRUCTION AND MAINTENANCE OF DEVELOPER SITE WORK OBLIGATIONS.

A. **Developer's Duty to Construct the Developer Site Work Obligations.** The Developer, at its cost, must construct and install all of the Developer Site Work Obligations.

B. **Standards Applicable to Infrastructure.** The following standards apply to the construction of the Infrastructure:

(i) General Standards. All of the Developer Site Work Obligations must be constructed in compliance with the standards in this Agreement and all Requirements of Law. All work performed in the construction of the Infrastructure must be conducted in a good and workmanlike manner. All materials used for construction of the Infrastructure must be new and of first-rate quality.

(ii) Special Standards. Construction of the Infrastructure must conform to the applicable standards of the MWRD, IDOT, Cook County and the IEPA.

(iii) Prosecution of the Work. Once Site Work has begun, the Developer and all of its contractors must use commercially reasonable efforts to prosecute work on the Infrastructure in a diligent manner until the work is properly completed.

(iv) Inspection, Engineering, Testing Services. The Developer must provide, at its cost, all inspection, engineering and testing for construction of the Developer Site Work Obligations, including without limitation: (a) on-site construction supervision services, (b) periodic inspections of construction of the Public Infrastructure conducted by a professional engineer, and (c) third-party materials sampling and testing services. The Developer must promptly provide the Village with the names of the project manager and project engineer and telephone numbers at which the project manager and project engineer can be reached at all times.

(v) Village Inspections and Approvals. Village representatives have the right and authority, and the permission of the Developer, to inspect all work on the Developer Site Work Obligations at all times between 8:00 a.m. and 6:00 p.m. weekdays, and at any other time work is taking place within the Property, and in the case of an emergency at any time reasonably determined by the Village, to confirm compliance with all requirements of this Agreement and all Requirements of Law.

(vi) Other Approvals. When the construction of Developer Site Work Obligations requires the permission or approval of a regulatory agency, including without limitation the MWRD, IDOT, Cook County or the IEPA, then the Developer must use all commercially reasonable efforts required to obtain the required permission or approval. The Developer may not commence work requiring the permission or approval of any such agency in advance of receiving that permission or approval.

C. **Approvals of Infrastructure.** When an improvement included in the Developer Site Work Obligations has been completed in accordance with the Approved Plans, the Developer must request final inspection and approval of that improvement by the Village. The Village will inspect that improvement and may prepare a punch list of items requiring repair or correction. The Developer must promptly make all necessary repairs and corrections as specified on the punch list. The Village will promptly approve an improvement only after it has been fully and properly completed in accordance with the Approved Plans, including without limitation completion of all punch list work for that Infrastructure improvement.

D. **Dedication and Acceptance of Public Infrastructure.** The Developer will dedicate to the Village each Public Infrastructure improvement included in the Developer Site Work Obligations after it is approved by the Village. The Village will accept a Public Infrastructure improvement when it has been fully and properly completed, but nothing will constitute an acceptance by the Village of a Public Infrastructure improvement except expressly written acceptance by the Village. Prior to the Village's acceptance, the Developer must execute, or cause to be executed, all documents reasonably requested by the Village to transfer ownership of the Public Infrastructure improvement to the Village, free and clear of all liens, claims, and encumbrances or restrictions that would prevent the Village from operating, maintaining, repairing, or replacing that Public Infrastructure improvement. The documents transferring ownership of a Public Infrastructure improvement to the Village (e.g., Bill of Sale, Affidavit of Title, etc.) must be in substantially the forms attached to this Agreement as **Exhibit "F"**, with minor revisions as may be requested by the issuer and approved by the Village Attorney. The Developer may also request the release of this Agreement in a form that is reasonably acceptable in form and substance to the Village Attorney.

E. **Infrastructure Guarantees.** The Developer guarantees the prompt and satisfactory correction of every defect or deficiency in any Public Infrastructure that occurs or becomes evident within two (2) years after Village approval and acceptance of the Developer Site Work Obligations. If any defect or deficiency occurs or becomes evident during the two (2) year period, then the Village will give notice to the Developer stating the defect or deficiency and the Developer must correct the defect or deficiency within thirty (30) calendar days after receipt of the notice or, if the defect or deficiency cannot reasonably be corrected within that 30-day period, then within a longer period of time as is reasonably necessary to correct the defect or deficiency so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the correction. If the defect or deficiency is not corrected within the required time period, then the Village may undertake the correction and then the Village will have the right to draw from the performance securities deposited pursuant to Section 9. of this Agreement to reimburse itself for all costs and expenses incurred in making the correction. If any Public Infrastructure is repaired or replaced by the Developer pursuant to the demand of the Village, then the guaranty provided by this Subsection 6.E. will be extended, as to the repair or replacement, for two (2) full years after the date of completion of the repair or replacement.

F. Perpetual Maintenance of Private Infrastructure. RESERVED.

G. Abandonment of Construction. If the Developer abandons the Developer Site Work Obligations or any part of the demolition of the existing structures, then the Developer, within ninety (90) calendar days after notice from the Village, must: (i) remove all partially constructed improvements from the Property, (ii) backfill all excavations, and (iii) spread topsoil and plant grass seed throughout the Property, all to the satisfaction of the Village (collectively the "Required Restoration"). If the Developer abandons work on the Developer Site Work Obligations or the Infrastructure prior to completion, then the Village may call the Performance LOC and use those funds to complete the Developer Site Work Obligations and the Infrastructure. For purposes of this Subsection 6.G, "abandons" means cessation of construction for a continuous period of ninety (90) calendar days for any reason other than Force Majeure. If the Developer fails or refuses to complete the Required Restoration within the 90-day period, or such longer period of time as is reasonably necessary to complete the Required Restoration so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the Required Restoration, then the Village will have, and is granted in addition to all other rights afforded to the Village in this Agreement and by law, the right, at the Village's option, to hire a contractor to complete part or all of the Required Restoration. Thereafter, the Village may charge the Developer an amount equal to the Village's actual costs of the Required Restoration including without limitation contractor costs, disposal costs, administrative personnel fees and costs, and legal fees (collectively the "Charged Amount"). If the Charged Amount is not paid by the Developer within thirty (30) calendar days after notice from the Village, then the Charged Amount, and all costs incurred by the Village related to collection of the Charged Amount (the "Collection Costs"), may be deducted from the Developer Security and will become a lien against the Property, and the Village will have the right to collect the Charged Amount and the Collection Costs and to enforce the lien in the same manner as mortgage foreclosure proceedings.

H. **Progress Meetings.** At all times, the Developer and the Village shall each have an individual designated as the Developer's and the Village's primary point of contact for matters related to this Agreement. The Developer shall meet on a monthly basis, or on such other schedule mutually agreeable to the Parties, with the Development Director, or their designee, and other Village staff as appropriate, to provide a comprehensive progress report on the Developer Site Work Obligations.

Appropriate Developer personnel shall attend the meeting on behalf of the Developer and the Village, and shall provide and exchange information regarding the status of construction and occupancy, pending permit requests and other appropriate information.

I. **Village Construction Manager Consultant.** The Village reserves the right to hire a construction manager consultant to assist the Village and its staff with all aspects of the Developer Site Work Obligations, including but not limited to compliance with the terms of this Agreement, the plan review process, inspections, reporting and oversight of the construction of the Development. The compensation and other employment benefits payable to the construction manager consultant for their work relative to the Development qualifies as a charge under the Reimbursable Costs.

J. **"As-Built" Plans.** The Developer, at its cost, shall prepare and provide to the Development Director one (1) electronic copy of the "As-Built" Final Site Demolition and Site Restoration Plans and the "As-Built" Developer Site Work Obligations plan, with all minor modifications and in-field adjustments shown, prior to the scheduling of the final inspection and the Certificate of Completion.

SECTION 7. CONSTRUCTION STAGING, TRAFFIC, PARKING; STREETS.

A. **Construction Staging.** The staging of construction work and materials must be in conformance with the Village-approved construction staging plan. The Developer must submit a staging plan for Village review and approval prior to the issuance of the site development permit or construction permit for the performance of the Developer Site Work Obligations.

B. **Designated Traffic Routes.** The Village, in consultation with the Developer, may designate routes of access to the Property for construction traffic to protect pedestrians and to minimize disruption of traffic and damage to particular streets.

C. **Parking.** All construction-related vehicles, including passenger vehicles and construction equipment, must be parked within the Property or in areas specifically designated in advance in writing by the Village.

D. **Streets, Sidewalks, and Other Rights-Of-Way.** Any work on streets, sidewalks, and other rights-of-way related to the Development, public or private, must meet the following standards:

(i) Compliance with Plans. All work must comply with the Village-approved plans for that work.

(ii) Protection of Final Surface Course; Restoration. Except with the prior express written consent of the Village, no construction traffic may use any improved public right-of-way after installation of the final surface course of that right-of-way. If the Developer uses an improved public right-of-way for construction traffic, then the Developer must keep that right-of-way free and clear of mud, dirt, debris, obstructions and hazards, and must, after the use is no longer necessary, restore and repair that right-of-way to Village standards.

SECTION 8. DEVELOPER PAYABLE COSTS, FEES AND EXPENSES, AND ESCROW RELATED TO THE DEVELOPER SITE WORK OBLIGATIONS.

A. **Negotiation, Review, Inspection Fees.** In addition to all other costs, payments, fees, or other charges required by this Agreement or by the Requirements of Law or by the Village Code, the Developer must pay to the Village, promptly after receipt of a written demand or demands for payment:

(i) All reasonable reimbursable costs, fees, payments, charges, and expenses (collectively "Reimbursable Costs") for outside engineering, outside legal, and other outside consulting or administrative services incurred or accrued in connection with the review and processing of plans filed under this Agreement and in connection with the negotiation, preparation, consideration and review of this Agreement, at the standard rates charged to the Village, as required by the Village Code. All Reimbursable Costs for which demand has been made, but payment has not been received, by the Village prior to execution of this Agreement must be made by a certified or cashier's check contemporaneous with the execution of this Agreement by the Village.

(ii) All Reimbursable Costs for inspections of the Developer Site Work Obligations conducted by outside inspectors.

(iii) All Reimbursable Costs incurred by the Village for publications and recordings required in connection with the Development or the Property.

B. **Other Village Fees.** In addition to all other Reimbursable Costs required by this Agreement, the Developer must pay to the Village or other governmental agency with oversight jurisdiction over the Developer Site Work Obligations: (i) all standard application, plan review, inspection, and permit fees, (ii) all standard water and sewer fees, tap-on fees, and charges, (iii) compensation for trees removed from public parkways or other public right-of-way, (iv) all costs for replacement trees, and (v) all other standard fees, charges, impact fees to the Village and to any other governmental agency with an impact fee ordinance and contributions pursuant to the Requirements of Law and the Village Code, as applicable.

C. **Reimbursement for Village Work on Utilities.** If, during construction of the Developer Site Work Obligations, the Developer discovers a water main, sewer main, or other utility that must be relocated or capped to avoid conflict with the completion of the Developer Site Work Obligations, then the Developer and the Village will determine how, where, and by whom the utility will be relocated or capped and the Developer must pay all costs and expenses of that relocation or capping. The Village shall identify all water, sewer or other applicable utility infrastructure on the Village-approved Final Site Demolition and Site Restoration Plans as part of the plan review approval process.

D. **Developer Escrow.** The Developer shall maintain a "Developer Cash Escrow" with the Village for purposes of payment of the reasonable Reimbursable Costs and other costs payable to the Village by the Developer as required by this Agreement, and shall comply with the funding terms of the Developer Escrow as set forth in this Agreement and Section 9. below.

SECTION 9. PERFORMANCE SECURITY.

A. **Developer Cash Escrow; Letter of Credit ("LOC").** As security to the Village for the performance by the Developer of the Developer's obligations to construct and complete the Developer Site Work Obligations pursuant to and in accordance with this Agreement, the Developer shall deposit with the Village the following:

(i) Developer Cash Escrow. The sum of $15,000.00 cash (the "Developer Cash Escrow") shall be paid by the Developer to be held by the Village and drawn on to reimburse the Village for Reimbursable Costs incurred by the Developer described in Section 8. above. Any interest earned on the Developer Cash Escrow will be added to the escrow, but the Village is not required to cause interest to be earned. If draws on the Developer Cash Escrow reduce the balance in the Escrow to $5,000.00 or below at any time, then the Developer must restore the Developer Cash Escrow to a level determined by the Village (but not exceeding $15,000.00) until the Certificate of Completion is issued by the Village for the Developer Site Work Obligations. Any money remaining in the Developer Cash Escrow will be distributed to the Developer within thirty (30) calendar days after notice from the Developer to the Village requesting release of such funds, after issuance of the Certificate of Completion for the Developer Site Work Obligations.

(ii) Performance and Payment Letter of Credit. A performance and payment letter of credit in an amount equal to one hundred ten percent (110%) of the cost to complete the Developer Site Work Obligations and the Infrastructure Cost Estimate (the "Performance LOC") in the form required in Subsection 9.E. below.

(iii) Condition Precedent. The deposit of the Performance LOC and the Developer Cash Escrow is a condition precedent to issuance of any permit by the Village for work on the Developer Site Work Obligations.

(iv) Draw On Performance LOC. Prior to completion of the Developer Site Work Obligations, if the Village is required to draw on a Performance LOC by reason of the Developer's failure to fulfill its obligations under this Agreement, then the Developer, within twenty (20) calendar days thereafter, must cause the Performance LOC to be increased to its full original amount or such reduced amount, if the dollar value of the Performance LOC had been reduced by agreement of the Parties.

B. **Maintenance of Performance LOC.** The Performance LOC shall be maintained and renewed by the Developer, and will be held in escrow by the Village, until completion of the Developer Site Work Obligations, and the approval by the Village Manager and dedication to the Village of the Public Infrastructure, if any, per Subsection 9.F. below, subject to 10% of the value of the Performance LOC being retained by the Village for the 2-year warranty period and released in accordance with Subsection 5.M.(4) above. After completion of the Developer Site Work Obligations, if the Village is required to draw on the 10% value of Performance LOC by reason of the Developer's failure to fulfill its obligations under this Agreement, then the Developer, within twenty (20) calendar days thereafter, must cause the Performance LOC to be increased to its full original 10% value amount.

C. **Guaranty Letters of Credit.-RESERVED**

D. **Costs of Developer Security.** The Developer is responsible for the full cost of securing and maintaining the Developer Cash Escrow and the Performance LOC.

E. **Forms of Letters of Credit.** The Performance LOC must be in substantially the forms attached to this Agreement as **Group Exhibit "H"**, with minor revisions as may be requested by the issuer and approved by the Village Attorney. Each letter of credit also must be from a bank having capital resources of at least $25,000,000, with an office in the Chicago Metropolitan Area or other location

acceptable to the Village and insured by the Federal Deposit Insurance Corporation. Each letter of credit must, at a minimum, provide that: (i) it will expire no earlier than the later of two (2) years after the date of its issuance or thirty (30) calendar days after delivery to the Village, in the manner provided in Subsection 9.G. below, of written notice that the letter of credit will expire, (ii) it may be drawn on based on the Village Manager's certification that the Developer has failed to fulfill any of the obligations secured by the letter of credit, (iii) it does not require the consent of the Developer prior to any draw on it by the Village, (iv) it cannot be canceled without the prior written consent of the Village, and (v) if at any time it will expire within thirty (30) or any lesser number of calendar days, and if it has not been renewed, and if any obligation of the Developer secured by the letter of credit remains uncompleted or unsatisfactory, then the Village may call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all Developer obligations or employ the proceeds to complete all obligations and to reimburse the Village for any and all costs and expenses, including legal fees and administrative costs, incurred by the Village in connection therewith, as the Village may determine.

After completion of the Developer Site Work Obligations and in accordance with this Agreement, and after reimbursement of the Village for all costs and expenses incurred by the Village, including without limitation legal fees and administrative costs, then the Village will release to the Developer any proceeds remaining on deposit with the Village drawn from the Performance LOC and return the Performance LOC to the Developer. The Performance LOC will provide that the aggregate amount of the Performance LOC may be reduced once, upon joint written direction by the Developer and the Village, to the amount of twenty-five percent (25%) of the cost to complete the Developer Site Work Obligations when at least seventy-five percent (75%) of the Developer Site Work Obligations have been completed and approved by the Village in accordance with Subsection 6.C. above. The reduction to reimburse the Developer for payment of the Developer Site Work Obligations work satisfactorily completed will be allowed only after the Developer has provided certified contractors' sworn statements, a certified schedule of values, partial or final waivers of lien, proof of payment of contractors and subcontractors, bank statements, etc., as may be appropriate, and all additional documentation as the Village may reasonably request to demonstrate satisfactory completion of the Developer Site Work Obligations in question and full payment of all contractors, subcontractors, and material suppliers.

The Performance LOC shall not be reduced to reimburse the Developer for any cost incurred in satisfaction of its obligations under Section 8. or Subsection 9.A. of this Agreement.

F. **Replenishment of Developer Security.** Notwithstanding any other provision in this Agreement, if at any time the Village reasonably determines that the funds remaining in the Developer Cash Escrow or the Performance LOC are not sufficient to pay in full the remaining unpaid cost of the Developer Site Work Obligations and all Infrastructure work and all unpaid or reasonably anticipated Village costs, fees and expenses, or that the funds remaining in a Performance LOC are not, or may not be, sufficient to pay all unpaid costs of correcting any and all defects and deficiencies in the Developer Site Work Obligations and the Infrastructure and all unpaid or reasonably anticipated Village fees, costs and expenses, then, within twenty (20) calendar days after a demand by the Village, the Developer must increase the amount of the Developer Cash Escrow or the Performance LOC to an amount, as determined by the Village Engineer, to be sufficient to pay unpaid costs, fees and expenses. Failure by the Developer to increase the amount of the Developer Security will be grounds for the Village to retain any remaining balance of the Developer Cash Escrow and to receive the proceeds of, or to draw down, as the case may be, the entire remaining balance of the Performance LOC.

The Performance LOC cannot be reduced lower than 25% of the original amount until completion and Village acceptance of the Developer Site Work Obligations. On completion and Village acceptance of the Developer Site Work Obligations pursuant to and in accordance with this Agreement, and after reimbursement of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village, then the Village will release to the Developer any remaining funds in the Developer Cash Escrow and a portion of the proceeds remaining on deposit with the Village from the Performance LOC, subject to retention of 10% of the value of the Performance LOC by the Village for the 2-year warranty period, which shall be released in accordance with Subsection 5.M.(4) above. After the expiration of the two (2)–year warranty period, the Village will return the Performance LOC to the Developer. If the Developer sells either of the Developed Lots with frontage on 43rd Street after the completion and Village acceptance of the Developer Site Work Obligations, the Performance LOC may be reduced on a prorated percentage basis in accordance with Subsection 5.M.(4) above.

G. **Use of Funds in the Event of Breach of Agreement.** If the Developer, after all required notices and cure periods under this Agreement have been provided, fails or refuses to complete the Developer Site Work Obligations in accordance with this Agreement, or fails or refuses to correct any defect or deficiency in the Developer Site Work Obligations as required by Section 6. above or this Section 9, or fails or refuses to clean or repair property in accordance with a demand made pursuant to Subsection 5.E. or Subsection 7.D.(ii) of this Agreement or fails or refuses to pay any amount pursuant to Section 8. above within five (5) business days after demand by the Village, or in any other manner fails or refuses to meet fully any of its obligations under this Agreement secured by a letter of credit, then the Village, in its discretion and after the delivery of a 5-day notice to the Developer and the Developer's failure to cure its failure or refusal within that 5-day period, may retain all or any part of the Developer Cash Escrow and/or draw on and retain all or any of the funds remaining in the appropriate letter of credit.

H. The Village thereafter will have the right to exercise its rights, under Subsection 5.E. above and under this Subsection 9.G., to take any other action it deems reasonable and appropriate to mitigate the effects of any failure or refusal, and to reimburse itself from the proceeds of the Developer Cash Escrow and the appropriate letter of credit for all of its Reimbursable Costs, including legal fees and administrative expenses, resulting from or incurred as a result of the Developer's failure or refusal to fully meet its obligations under this Agreement.

If the funds remaining in the Developer Cash Escrow or the appropriate letter of credit are insufficient to repay fully the Village for all Reimbursable Costs, then the Developer, on demand of the Village therefor, must immediately deposit with the Village any additional funds as the Village reasonably determines are necessary to fully repay such anticipated Reimbursable Costs.

After: (i) completion of the Developer Site Work Obligations in accordance with this Agreement, (ii) correction of all defects and deficiencies in the Developer Site Work Obligations as required by Subsection 6.E. above, (iii) repair of property in accordance with a demand made pursuant to Subsection 5.E. above, (iv) payment of all amounts demanded by the Village pursuant to this Section 9., (v) compliance with all other terms of this Agreement secured by a letter of credit, and (vi) reimbursement of the Village for all fees and all Reimbursable Costs, including legal fees and administrative costs, incurred by the Village; then the Village will release to the Developer any remaining Developer Cash Escrow and any proceeds remaining on deposit with the Village from any letter of credit and return the letter of credit to the Developer, subject to retention of the Performance LOC for the two (2) year warranty period and its return by the Village to the Developer at the expiration of such two (2)–year period or as outlined in Subsection 5.M.(4) and Subsection 9.F. above.

I. **Village Lien Rights.** If any money, property, or other consideration due from the Developer to the Village pursuant to this Agreement is not either recovered from the performance security deposits required in this Section 9. or paid or conveyed to the Village by the Developer within thirty (30) calendar days after a demand for payment or conveyance, then the money, or an amount equal to the Village's reasonable estimate of the value of the property or other consideration, together with interest and costs of collection, including legal fees and administrative expenses, will become a lien upon the Property and the Village will have the right to collect the amount or value, with interest and costs, including legal fees and administrative expenses, and the right to enforce the lien in the same manner as in statutory mortgage foreclosure proceedings.

SECTION 10. RESERVED.

SECTION 11. LIABILITY AND INDEMNITY OF VILLAGE.

A. **No Village Liability.** The Developer acknowledges and agrees that the Village is not, and will not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of: (i) the Village's review and approval of any plan or specification provided by the Developer or the Developer's representatives for the Development; or (ii) the issuance of any approvals, permits, certificates, or acceptances for the Development or use of the Property and that the Village's reviews, approvals and issuances do not, and will not in any way, be deemed to insure the Developer or any of its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, and or any other person, and each and all homeowners associations or their equivalent within the Property, against damage or injury of any kind at any time.

B. **Village Procedures.** The Developer agrees not to challenge the Village's approval of this Agreement or any other Village approved document that relates to the Developer Site Work Obligations and the Development.

C. **Indemnification.** The Developer acknowledges that the accuracy and sufficiency of the Developer Site Work Obligations Plans and related specifications for the Developer Site Work Obligations are entirely the responsibility of the Developer and are not the responsibility of the Village, regardless of whether the Village reviews or approves the Developer's Development Plans and related specifications for apparent consistency with the Village's Codes. The Developer agrees to defend, indemnify and hold harmless the Village and all Village elected or appointed officials, officers, employees, agents, representatives, engineers, and attorneys (collectively the "Indemnitees") from any and all third party claims and causes of action of any kind that may be asserted at any time against the Village and any of the Indemnitees in connection with: (i) any design defect in the plans relating to the Developer Site Work Obligations and related specifications for the Developer Site Work Obligations, regardless of the Village's review and approval of any such plans or related specifications for or the Village's issuance of any approval, permit, certificate, or acceptance for the plans relating to the Developer Site Work Obligations based on the apparent consistency of any plans for Developer Site Work Obligations or related specifications for the Developer Site Work Obligations; or (ii) the design, development, construction, maintenance, or use of any portion of the Property or the Infrastructure (each a "Claim" and collectively "Claims"). This indemnity does not apply or extend to any matter concerning maintenance by the Village of any Public Infrastructure after that Public Infrastructure has been accepted by the Village in accordance with this Agreement.

D. **Defense Expenses.** The Developer agrees to pay all expenses, including without limitation attorney fees, litigation defense fees and costs, consultant fees and administrative expenses incurred by the Village in examining and tendering the defense of any Claim to the Developer in accordance with Subsection 11.C. above.

SECTION 12. BINDING NATURE OF AGREEMENT.

The obligations assumed by the Developer under this Agreement are binding on the Developer, on all of the Developer's transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property and each and all homeowners associations or their equivalent within the Property.

SECTION 13. TERM.

This Agreement will terminate upon the expiration of the applicable continuing obligations of the Parties, such as the warranty periods, set forth herein and the expiration of the applicable statute of limitations that relate to any claim or legal action that is covered under the Indemnification provision set forth in Subsection 11.C. (LIABILITY AND INDEMNITY OF VILLAGE), whichever is later, and will inure to the benefit of and be enforceable by the Developer, its successors, assigns and transferees and the successor owner(s) of the Property and the Village.

SECTION 14. ENFORCEMENT.

Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the Developer agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any Village elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

In addition to every other remedy permitted by law for the enforcement of the terms of this Agreement, the Village will be entitled to withhold the issuance of a building permit or a certificate of occupancy for work or occupancy within the Property at any time when the Developer has failed or refused to comply with a material obligation under this Agreement and has not, after the required notices stated herein, cured that failure or refusal within the cure periods, if any, allowed for that failure or refusal.

A. **Compliance with Laws.** The Developer agrees to comply with all applicable laws, rules and regulations of any federal, State or local entity or agency relating to the Development. The Developer will not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex or national origin. To the fullest extent permitted by law, the Developer will take affirmative action to ensure that applicants are employed and treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rate of pay or other forms of compensation, and selection for training, including apprenticeship.

B. **Conflict of Interest and Prohibited Interest Disclosures.** Upon the Village's request from time to time during the Term of this Agreement, the Developer will provide a list of all entities owning a greater than one percent (1%) interest in the Developer. Based in part on the information provided by the

Developer and in part on information from the Village's independent investigation, the Village will affirm that its Corporate Authorities, and all appropriate Village elected and appointed officials, officers, employees, agents and representatives of the Village, have or will comply with the disclosure and conflict-of-interest provisions of the Public Officer Prohibited Activities Act (50 ILCS 105/3), the TIF Act (65 ILCS 5/11-74.4-4(n)) and the Illinois Governmental Ethics Act (5 ILCS 420). Upon the Village's request, the Developer shall provide the Village with all information required for compliance with the annual TIF report that the Village is required to file with the State of Illinois Comptroller or any such similar financial information, and required for the Village to comply with any disclosure and transparency ordinance or law enacted by the State of Illinois or Cook County. In addition, the Developer shall provide, on an annual basis, the information required by the TIF Act.

C. **Successors and Assigns.** The Developer shall be liable for all of the Developer's obligations under this Agreement. All obligations assumed by the Developer under this Agreement shall be binding on the Developer, and on any and all of the Developer's successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the Developer's successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the Developer shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the Acquisition Date, any consents or other documents necessary to authorize the Village to record a Memorandum of this Agreement, in form and substance reasonably acceptable to the Developer and the Village, in the Office of the Recorder of Deeds of Cook County, Illinois;
2. Until the completion of the demolition of the existing structures and completion and Village approval of the Developer Site Work Obligations, notify the Village in writing at least thirty (30) calendar days prior to any date that the Developer intends to transfer fee title to any portion of the Property to any person not a Party to this Agreement;
3. Include in the Restrictive Covenant a memorandum or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement which will be released by the Village as indicated in Subsection 6.C. above; and
4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the completion of the Developer Site Work Obligations, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "**Transferee Assignment and Assumption Agreement**"), agreeing to be bound by this Agreement, and to provide the Village, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Village and the Developer shall record against the Property a memorandum of this Agreement that obligates the owner of the Property from time to time to perform the obligations of the Developer under this Agreement and shall require notice to the Village of any transfer of the Property, which memorandum shall be in form and substance reasonably satisfactory to the Village and the Developer.

The Village agrees that, after a successor becoming bound to the obligations of the Developer created in the manner provided in this Agreement, and providing the financial assurances required in this Section, the liability of the Developer shall be deemed automatically released. The failure of the Developer to provide the Village with a fully executed copy of a Transferee Assignment and Assumption Agreement before completing the transfer shall result in the Developer remaining fully liable for all of the Developer's obligations under this Agreement, but shall not relieve the transferee of its liability for those obligations as a successor to the Developer.

D. **Representations and Warranties of the Developer.**

1. No Gifts. The Developer covenants that no officer, member, manager, stockholder, employee or agent of the Developer, or any other person connected with the Developer, have made, offered or given, either directly or indirectly, to any member of the Corporate Authorities, or any officer, employee or agent of the Village, or any other person connected with the Village, any money or anything of value as a gift or bribe or other means of influencing their action in their capacity with the Village.
2. Assignment. Prior to the completion of the demolition of the existing structures and the completion and Village approval of the Developer Site Work, the Developer may not assign or transfer some or all of its rights or obligations under this Agreement without the prior written consent of the Village, the granting or denial of which consent shall not be unreasonably withheld by the Village; provided, however, that, without the Village's prior consent, the Developer may assign this Agreement to an entity controlling, controlled by, or under common control with the Developer and/or assign or collaterally assign any of the Developer's rights and/or obligations to the Lender.
3. Prevailing Wage. The Developer and its contractors and subcontractors are required to pay prevailing wages for all or portions of the Development work only if the Illinois Prevailing Wage Act (820 ILCS 130/) (the "IPWA") requires payment of prevailing wages.
4. Property Acquisition. The Developer shall provide the Village with sufficient documentation regarding Developer's ownership of the Property for the Development.
5. Corporate Authorization. This Agreement has been submitted for consideration and review by the board of directors, corporate officers, shareholders, members and/or managers of the Developer, and the Developer's board of directors, corporate officers, shareholders, members and/or managers have taken all actions required to be taken prior to the execution of this Agreement in order to make the same binding upon the Developer according to the terms hereof, and any and all actions of the Developer's board of directors, corporate officers, shareholders, members and/or managers, as the case may be, precedent to the execution of this Agreement have been undertaken and performed in the manner required by law.

E. This Agreement shall be deemed to be the agreement of any official, agent, employee, consultant or attorney of the Village, in their individual capacity, and no official, employee or attorney of the Village shall be liable personally under this Agreement or be subject to any personal liability or

accountability by reason of or in connection with or arising out of the execution, delivery and performance of this Agreement, or any failure in connection therewith.

SECTION 15. INSURANCE AND INDEMNIFICATION.

A. **Liability Insurance Prior to Completion.** Prior to issuance of a demolition permit, site development permit or a construction permit for the performance of the Developer Site Work Obligations, the Developer shall procure and deliver evidence of such policies to the Village, at the Developer's cost and expense, and shall maintain in full force and effect during any period of construction and through completion of the Developer Site Work , for both ongoing and completed operations, the following types of insurance, written on the comprehensive form and as an "occurrence" policy, in not less than the following amounts:

1. Commercial General Liability Insurance (including property damage insurance): $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
2. Contractor's Liability Insurance: $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
3. Automobile Insurance: $1,000,000.00 per occurrence and $1,000,000.00 in the aggregate.
4. Umbrella Coverage or Excess Liability Coverage: $5,000,000.00 in the aggregate.
5. Workers Compensation Insurance: Statutory Amount.

Said insurance shall state that the insurance provided by the Developer and any insurance coverage maintained by its general contractor (if any), shall be primary and that any provision of any contract of insurance or other risk protection benefit or self-insurance policy purchased or in effect or enacted by the Village and any other insurance or benefit of the Village shall be in excess of the Developer's insurance. All such policies shall be in such form and issued by such companies as shall be reasonably acceptable to the Village. Each such policy, including any related insurance certificates, endorsements and riders, shall expressly name "the Village of Western Springs and its appointed and elected officials, mayor and trustees, employees, engineers, attorneys, agents and representatives" as additional insureds.

Prior to commencement of the Developer Site Work Obligations or any other construction work related to the Development, the Developer shall furnish to the Village the above-required certificates of insurance, policies, riders and policy endorsements, with premiums paid in full that contain the insurer(s) written confirmation that the nature, scope, duration and amount of insurance coverage meets the requirements of this Agreement and shall remain in effect for all aspects of the Developer Site Work Obligations and the Development for both ongoing and completed operations. The Developer shall provide the Village with satisfactory proof of the above insurance requirements in the form of a certificate executed by an insurer with no less than an A rating by the most recent "AM Best Insurance Rating Guide."

The Village shall be given written notice at least thirty (30) calendar days prior to any cancellation or material amendment of the Developer's insurance policies required hereunder. Alternatively, the Developer may satisfy its insurance obligations in this Subsection 15.A. by way of a blanket policy or policies, which includes other liabilities, properties and locations meeting the minimum insurance coverage amounts. The Developer shall provide to the Village a replacement certificate prior to expiration, cancellation or material modification of any policy.

B. **Developer's Risk Prior to Completion.** Prior to completion of the Developer Site Work Obligations, as certified by the Village, the Developer shall keep in force at all times builders risk insurance on a completed value basis, in non-reporting form, against all risks of physical loss, including collapse, covering the total value of work performed and equipment, supplies and materials furnished for the Developer Site Work Obligations and demolition of the existing structures (including on-site stored materials), all as to work by the Developer. Such insurance policies shall be issued by companies satisfactory to the Village. The Developer shall provide written notice to the Village at least twenty-one (21) calendar days before any such policy is cancelled or materially modified**.**

C. **Village Review.** The Developer acknowledges and agrees that, except for breaches of this Agreement by the Village, **or acts of the Village,** the Village is not, and shall not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of the Village's review, approval or denial of any plans or failure to review any plans for the Property, or the issuance of any approvals, permits, certificates or acceptances or use of the Property or the Development, and that the Village's review and approval of those plans and the Development and issuance of those approvals, permits, certificates or acceptances does not, and shall not, in any way be deemed to insure the Developer, or any of its heirs, successors, assigns, tenants, invitees and licensees, or any other person, against damage or injury of any kind at any time.

D. **Village Procedure.** The Developer has been advised by the Village that notices, meetings and hearings have been properly given and held by the Village with respect to the approval of this Agreement, and the Developer agrees not to challenge the Village's approval of this Agreement on the grounds of any procedural infirmity or of any denial of any procedural right.

E. **Indemnity and Defense Expense.** The Developer undertakes and assumes all potential liability for any injuries, deaths, losses, damages, claims or judgments of any nature whatsoever resulting from or in connection with its/their redevelopment activities at the Property, and the Developer shall hold harmless, indemnify and defend the Village against any such losses, except to the extent that the same is caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives, or by the breach of this Agreement by the Village.

1. Developer Defense Expense. The Developer shall, and does, agree to pay all reasonable expenses incurred by the Village, the Village's Corporate Authorities, and all Village elected and appointed officials, officers, employees, agents, contractors and representatives in defending against any and all claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties of any kind that may, at any time, be asserted against any of the Parties by any person(s) in connection with the Developer Site Work Obligations, the approval of this Agreement, any terms or provisions of this Agreement, or the Developer's duties, obligations and performance under this Agreement, including, without limitation, any claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties related to or associated with environmental conditions, matters or contaminants concerning or relating to the Property, in each case, except to the extent caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives. These expenses shall include, without limitation,

all reasonable out-of-pocket expenses, such as attorneys' and experts' fees and other litigation costs.

2. Mutual Indemnification. Each Party shall indemnify, hold harmless and defend the other Party and their respective officers, employees, agents, contractors and representatives against all injuries, deaths, losses, damages, claims, suits, liabilities, liens, including mechanic's liens, judgments, costs and expenses, including reasonable attorney fees, which may in any way arise from or accrue against the other Party as a consequence of this Agreement or which may in any way result therefrom, other than those indemnified matters which arise from or relate to the negligence or willful misconduct of the other Party or its officials, officers, employees, agents, contractors and representatives. The provisions of this Subsection and any other indemnification obligations on the part of either Party shall survive the termination or expiration of this Agreement for a period of two (2) years. In any such action against either Party, the other Party shall, at its own expense, appear, defend and pay all charges of reasonable attorney fees and all reasonable costs and other reasonable expenses arising therefrom or incurred in connection therewith; and, if any judgment shall be rendered against the Party in any such action, the other Party shall, at its own expense, satisfy and discharge such judgment. The prevailing Party shall indemnify the other Party for any costs, including reasonable attorney fees, in enforcing the provisions of this Agreement.

SECTION 16. DEFAULT; CURE.

In addition to any other "Event of Default" identified in this Agreement, an "**Event of Default**" shall mean a failure on the part of either Party to comply with any material term, representation, warranty, covenant, agreement or condition of this Agreement, which failure is not cured within thirty (30) calendar days after written notice thereof; provided, however, that if the failure is of a nature that it cannot be cured within thirty (30) days, then the defaulting Party shall have such additional time as is reasonably necessary to cure such failure so long as the defaulting Party commences activities designed or intended to cure such Event of Default within such thirty (30) calendar day period and thereafter diligently pursues activities designed or intended to cure such Event of Default to completion. Upon an Event of Default by the Village in the performance of any of its obligations under this Agreement, the Developer's remedies shall include specific performance (including statutory interest on any sums deemed to be improperly withheld), and any and all rights and remedies available to the Developer at law or in equity, including termination of this Agreement. The Village shall not be liable for punitive damages, consequential damages or lost profits. Upon an Event of Default by the Developer in the performance of any of its obligations under this Agreement, the Village shall be entitled to take such action as authorized by this Agreement and pursue any other remedies available at law or in equity; provided, however, that the Developer shall in no event be liable for punitive or consequential damages. Notwithstanding anything to the contrary in this Agreement, the Developer's defaults, and the Village's remedies upon such defaults, described in **Subsections 3.A.** and **5.E.** and shall be only as expressly set forth in **Subsections 3.A.** and **5.E.**, respectively.

SECTION 17. GENERAL PROVISIONS.

A. **Notice.** Any notice or communication required or permitted to be given under this Agreement shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight courier;

(iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Agreement, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this Subsection 17.A., each Party to this Agreement shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Phone: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

William Dvorak 4300 Franklin Western Springs LLC 3941 Clausen Avenue Western Springs, Illinois 60558 Phone: 630-772-0327 Email: bdvorak@kineticpartners.net	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

Notices and communications to the Church shall be addressed to, and delivered at, the following address:

Zed Francis Hinsdale United Methodist Church 945 South Garfield Avenue Hinsdale, Illinois 60521 Phone: 630-805-2501 Email: zsf3@aol.com	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

B. **Time of the Essence.** Time is of the essence in the performance of this Agreement.

C. **Rights Cumulative.** Unless expressly provided to the contrary in this Agreement, each and every one of the rights, remedies and benefits provided by this Agreement shall be cumulative and shall not be exclusive of any other rights, remedies and benefits allowed by law.

D. **Non-Waiver.** The Village shall be under no obligation to exercise any of the rights granted to it in this Agreement. The failure of the Village to exercise at any time any right granted to the Village shall not be deemed or construed to be a waiver of that right, nor shall the failure void or affect the Village's right to enforce that right or any other right.

E. **Consents**. Unless otherwise provided in this Agreement, whenever the consent, permission, authorization, approval, acknowledgement, or similar indication of consent of any Party to this Agreement, or of any duly authorized officer, employee, agent, or representative of any Party to this Agreement, is required in this Agreement, the consent, permission, authorization, approval, acknowledgement, or similar indication of consent will be in writing. The Property Owner has further executed a "Written Consent of the Property Owner" to allow the Developer to enter into this Agreement, a copy of which is attached hereto as **Exhibit "A"** and made a part hereof.

F. **Facilitation of Agreement**. The Village and the Developer will act in good faith and in a reasonable and cooperative manner with respect to consents, approvals, and other matters contemplated under this Agreement. No consent or approval may be unreasonably delayed, conditioned, or withheld. The Village and the Developer will execute, acknowledge, and deliver reasonable documents and other instruments necessary to fully carry out the terms of this Agreement.

G. **Governing Law.** This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Illinois.

H. **Severability.** It is the intent of the Parties that, should any provision, covenant, agreement or portion of this Agreement or its application to any person or property be held invalid by a court of competent jurisdiction, the remaining provisions of this Agreement and the validity, enforceability and application to any person or property shall not be impaired thereby, but the remaining provisions shall be interpreted, applied and enforced so as to achieve, as near as may be, the purpose and intent of this Agreement to the greatest extent permitted by applicable law.

I. **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties and supersedes any and all prior agreements and negotiations between the Parties, whether written or oral, relating to the subject matter of this Agreement.

J. **Interpretation.** This Agreement shall be construed without regard to the identity of the Party who drafted the various provisions of this Agreement. Moreover, each and every provision of this Agreement shall be construed as though all Parties to this Agreement participated equally in the drafting of this Agreement. As a result of the foregoing, any rule or construction that a document is to be construed against the drafting Party shall not be applicable to this Agreement.

K. **Amendments and Modifications.** No amendment or modification to this Agreement shall be effective until it is reduced to writing and approved and executed by all Parties to this Agreement in accordance with all applicable statutory procedures.

L. **Authority to Execute.** The Village warrants and represents to the Developer that the persons executing this Agreement on its behalf have been properly authorized to do so by the Corporate Authorities of the Village. The Developer warrants and represents to the Village that: (i) the Developer has the full and complete right, power and authority to enter into this Agreement and to agree to the

terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the Developer have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the Developer will: (a) result in a breach or default under any agreement to which the Developer is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the Developer or the Property are subject.

M. **No Third-Party Beneficiaries/No Joint Venture.** Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any other entity other than the Village and the Developer, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third persons to either the Village or the Developer, nor shall any provision give any third parties any rights or subrogation or action over or against either the Village or the Developer. This Agreement is not intended to and does not create any third-party beneficiary rights whatsoever. Nothing in this Agreement, or any actions of the Parties to this Agreement, shall be construed by the Parties or any third-party person to create the relationship of a partnership, agency or joint venture between or among such parties.

N. **Force Majeure**. Either Party will be temporarily excused from the performance of its obligations under this Agreement when and to the extent the non-performing Party's performance is delayed or prevented by any circumstances beyond the non-performing Party's control, including but not limited to fire, flood, explosion, epidemic, pandemic, strikes or other labor disputes, acts of God or public emergency, war, rioting, malicious damage, acts or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment or service from a public utility needed for their performance or action or omission of the other Party (collectively, "Force Majeure"), provided that:

a. The non-performing Party gives the other Party reasonably prompt written notice describing the particulars of Force Majeure including, but not limited to, the nature of the occurrence, and continues to furnish timely reports with respect thereto during the period of Force Majeure;
b. The excuse of performance is of no greater scope and of no longer duration than is required by Force Majeure;
c. No obligations of either Party that arose before Force Majeure causing the excuse of performance are excused as a result of Force Majeure; and
d. The non-performing Party uses commercially reasonable and diligent efforts to remedy its inability to perform.
e. Economic hardship or other financial considerations, including but not limited to increases in the costs of construction materials, equipment or construction labor, of the Developer will not constitute an event of Force Majeure.

O. **Counterparts.** This Agreement may be executed in counterparts, each of which shall constitute an original document, which together shall constitute one and the same instrument.

P. **Enforcement of Agreement.** The provisions of this Agreement shall be enforceable in any action in law or in chancery. The Parties hereto agree that any legal action to enforce any right or obligation contained in or arising out of this Agreement shall be brought in the Circuit Court of Cook County, Illinois.

Q. **Exhibits.** The following Exhibits are attached hereto and made a part hereof or incorporated herein by reference and made a part hereof:

Exhibit "A":	Written Consent and Waiver of the Property Owner to Allow Developer to Enter into the Redevelopment Agreement (attached)
Exhibit "B":	Legal Description of the Property
Exhibit "C":	Site Plan for the Development, dated October 22, 2024 (attached)
Exhibit "D":	Assignment, Assumption And Consent Agreement For The 4300 Howard Avenue Residential Development In The Village Of Western Springs, Illinois (Lots 1, 8 And 9 In Field Park Subdivision) (attached)
Exhibit "E":	Final Site Demolition and Site Restoration Plans (to be attached after Village plan review approval)
Exhibit "F":	Bill of Sale and Form of Agreement Release Document
Exhibit "G":	Construction Schedule (attached)
Group Exhibit "H":	Forms of Letters of Credit (attached)

In the event of a conflict between an Exhibit and the text of this Agreement, the text of this Agreement shall control.

R. **Estoppels.** Within ten (10) business days following request by either Party from time to time, the other Party shall execute and deliver to the requesting Party an estoppel certificate that certifies: (i) that this Agreement is unmodified and in full force and effect or, if there had been modifications, that this Agreement is in full force and effect as modified, (ii) that the Party is not in default of this Agreement or specifying any defaults, and (iii) such other information that may be reasonably requested by the Party.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates set forth below, and the date of the last signatory below shall be inserted on page 1 of this Agreement, as the Effective Date of this Agreement.

4300 FRANKLIN WESTERN SPRINGS LLC,
an Illinois limited liability company

By:_____
Name:_____
Title: Member

Date:_____

ATTEST:

By:_____
Name:_____
Title:_____

Date:_____

VILLAGE OF WESTERN SPRINGS,
an Illinois non-home rule municipal corporation

By:_____
Heidi Rudolph
Village President

Date:_____

ATTEST:

By:_____
Edward Tymick
Village Clerk

Date:_____

Exhibit "A"

**Written Consent and Waiver Of Hinsdale United Methodist Church,
as Successor to the First United Methodist Church of Western Springs,
To Allow 4300 Franklin Western Springs LLC To Enter Into A Redevelopment Agreement
And Other Related Documents Regarding The 4300 Howard Avenue
Residential Development Located At 4300 Howard Avenue
In The Village Of Western Springs, Cook County, Illinois**

(attached)

Exhibit "A"
to
Redevelopment Agreement

Written Consent and Waiver Of Hinsdale United Methodist Church, as Successor to the First United Methodist Church of Western Springs, To Allow 4300 Franklin Western Springs LLC To Enter Into A Redevelopment Agreement And Other Related Documents Regarding The 4300 Howard Avenue Demolition of Church, Abrogation of Easement and Restoration of 43rd Street Right-of-Way Located At 4300 Howard Avenue In The Village Of Western Springs, Cook County, Illinois

Consent: Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (the "Property Owner"), is the fee simple title owner of the real property commonly known as 4300 Howard Avenue consisting of three (3) platted lots zoned under the R2 Single-Family Residence District classification (the "Property"). The Property Owner submits this written authorization to the Village of Western Springs to allow 4300 Franklin Western Springs LLC of 330 West Chestnut Street, Hinsdale, Illinois (the "Developer"), who is the contract purchaser and prospective developer of the Property, to acquire the Property and then pursue the redevelopment of the Property, provided that the Developer agrees to: (a) demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work"); (b) remove and dispose of the existing public sidewalk and construction of a new replacement public sidewalk, and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (c) remove and dispose of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"; and (d) restore the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"). The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO") For purposes of this Consent and Waiver, the construction of single family homes on the three (3) single family lots, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development".

To facilitate the sale of the Property to the Developer, the Property Owner requests that the corporate authorities of the Village of Western Springs (the "Village") approve and enter into or consent to the approval of the following agreements, ordinances, plats, resolutions and other documents (the "Development Documents") in anticipation of the approval of the Development:

1. RESOLUTION NO. 25-_____: A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION) AND A RELATED REDEVELOPMENT AGREEMENT TO BE ENTERED INTO BY

AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC TO ALLOW FOR THE COMPLETION OF SUCH WORK.

2. REDEVELOPMENT AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE DEMOLITION OF A CHURCH BUILDING AND CERTAIN ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION).

3. ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT ENTERED INTO BY HINSDALE UNITED METHODIST CHURCH, AS SUCCESSOR TO THE FIRST UNITED METHODIST CHURCH OF WESTERN SPRINGS, AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE DEMOLITION OF CHURCH, ABROGATION OF EASEMENT AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION).

4. RESOLUTION NO. 25-____: A RESOLUTION APPROVING A PLAT OF ABROGATION FOR PUBLIC SIDEWALK EASEMENT (ADDRESS: 4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS) AND APPROVING THE TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES WITHIN THE 43RD STREET RIGHT-OF-WAY ADJACENT TO LOT 1 AND LOT 9 IN THE FIELD PARK SUBDIVISION, WESTERN SPRINGS, ILLINOIS..

5. PLAT OF ABROGATION FOR PUBLIC SIDEWALK EASEMENT (ADDRESS: 4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS).

6. TERMINATION OF LETTER OF AGREEMENT FOR CONSTRUCTION AND MAINTENANCE OF A PUBLIC SIDEWALK AND ABROGATION OF EASEMENT FOR A PUBLIC SIDEWALK TO ALLOW FOR THE REMOVAL OF THE PUBLIC SIDEWALK AND PUBLIC PARKING SPACES WITHIN THE 43RD STREET RIGHT-OF-WAY ADJACENT TO LOT 1 AND LOT 9 IN THE FIELD PARK SUBDIVISION (4300 FRANKLIN AVENUE, WESTERN SPRINGS, ILLINOIS).

7. ORDINANCE NO. 25-_____: AN ORDINANCE RESCINDING AND REPEALING THE BOARD OF TRUSTEES' APPROVAL OF ORDINANCE NO. 18-2934 (AN ORDINANCE APPROVING A CONDITIONAL USE PERMIT FOR THE INSTALLATION AND OPERATION OF AN EARLY CHILDHOOD EDUCATION CENTER AT THE 4300 HOWARD AVENUE PROPERTY) TO FACILITATE THE DEMOLITION OF A CHURCH BUILDING AND REMOVAL OF A PUBLIC SIDEWALK AND ON-STREET PUBLIC PARKING SPACES, ABROGATION OF A PUBLIC SIDEWALK EASEMENT, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY IN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION).

8. Any other document that is approved by the Corporate Authorities of the Village related to the approval of the construction of the Development by the Developer.

Waiver: If the Developer does not purchase the Property from the Property Owner, the Property Owner agrees to waive all claims, causes of action and damages of any kind that the Property Owner could file against the Village arising out of or related to the termination of the Development Documents. The Developer is required to provide written notice to the Village within five (5) calendar days of the date of this Written Consent And Waiver of the termination of the real estate purchase contract that it has entered into with the Property Owner related to the Property.

Hinsdale United Methodist Church, as successor
to the First United Methodist Church of Western Springs

By: _____
Name:_____
Title:_____
Authorized Corporate Officer

Date: _____, 2025.

Exhibit "B"

Legal Description for 4300 Howard Avenue, Western Springs, Illinois.

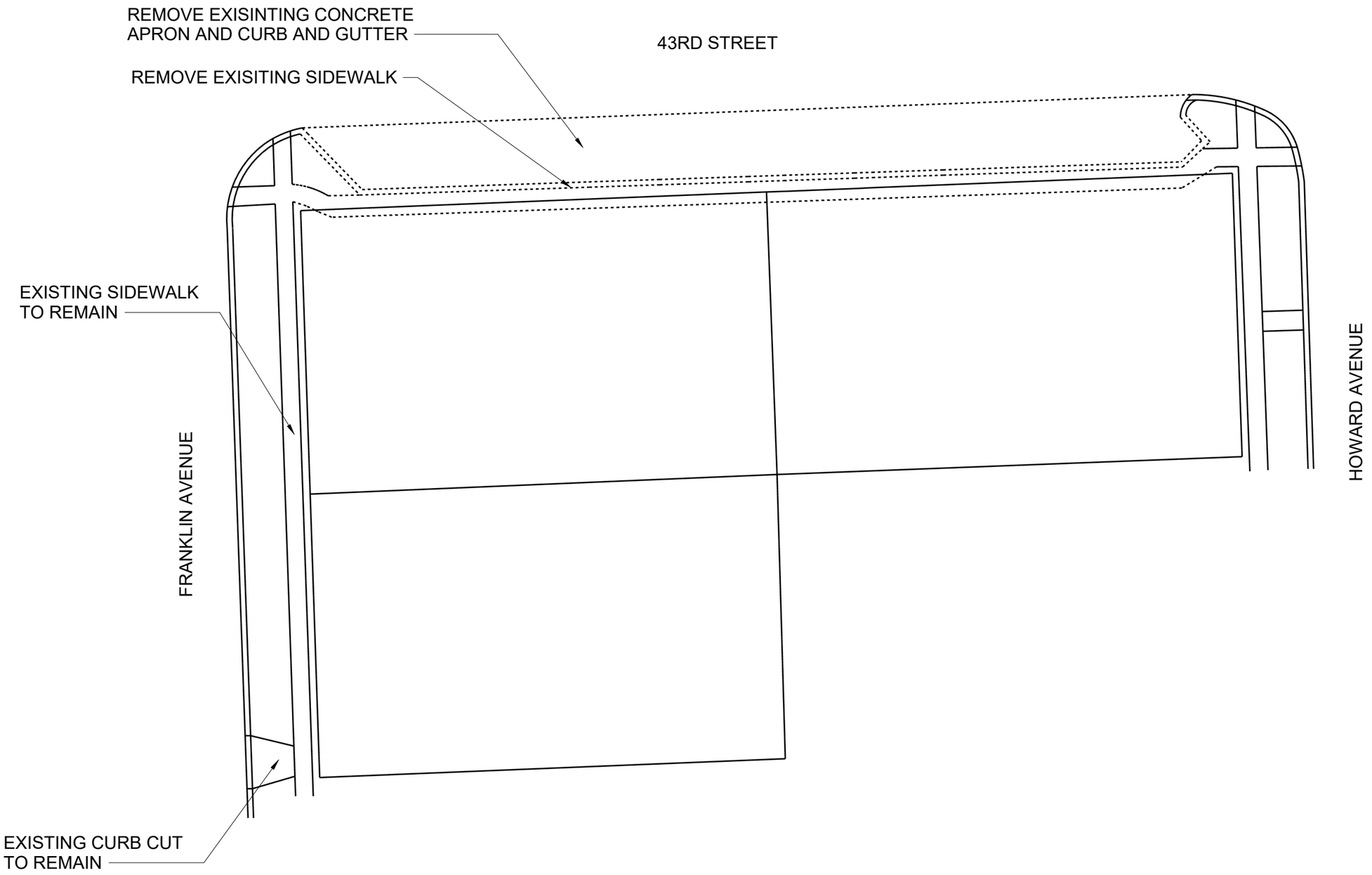
LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 OF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Exhibit "C"

Site Plan for the Development,
dated October 22, 2024

(attached)



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

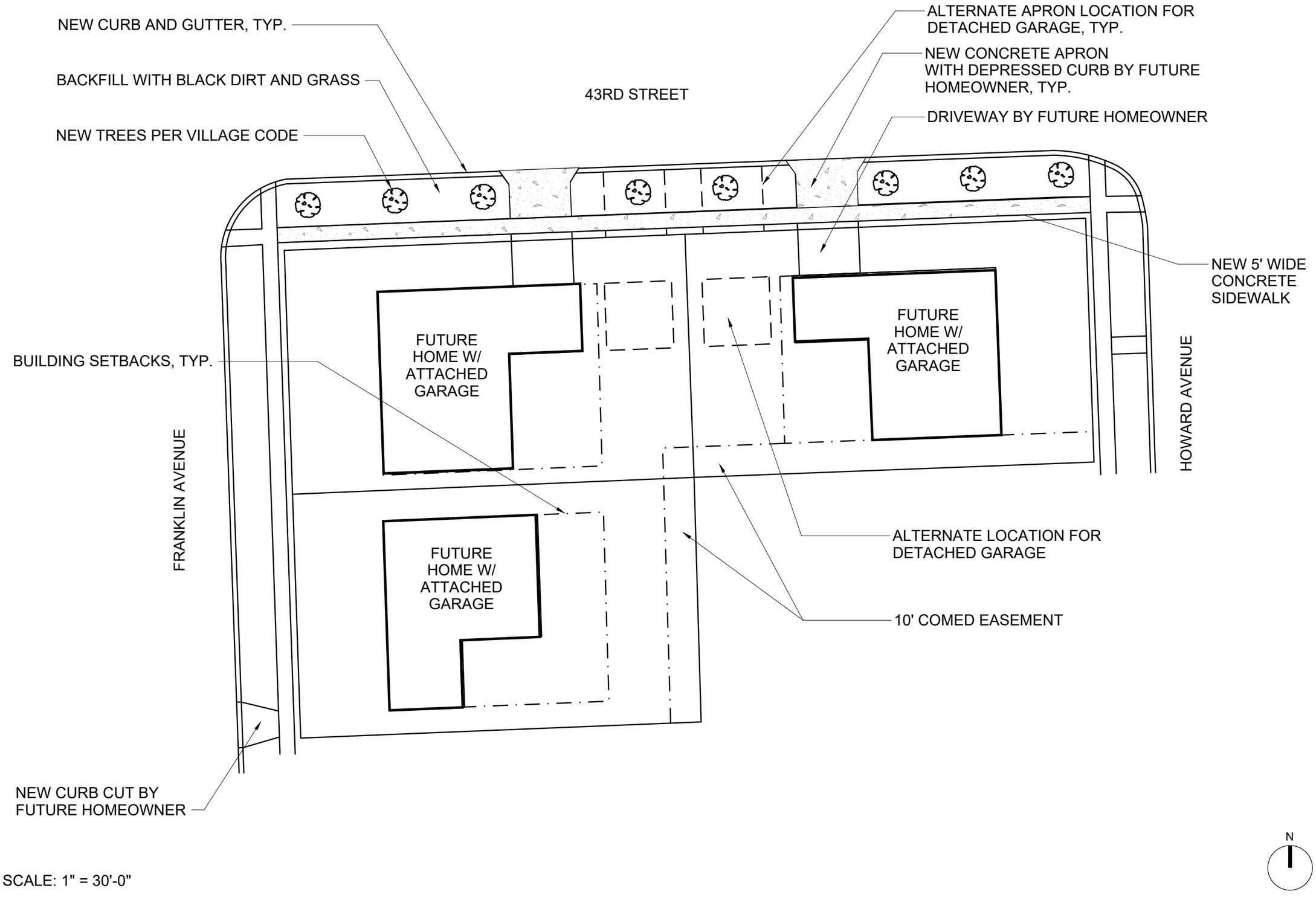
PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY DEMOLITION PLAN

A.01



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY RESTORATION PLAN

A.02

Exhibit "D"

Assignment, Assumption And Consent Agreement
For The 4300 Howard Avenue Residential Development
In The Village Of Western Springs, Illinois
(Lots 1, 8 And 9 In Field Park Subdivision)

(attached)

ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT ENTERED INTO BY HINSDALE UNITED METHODIST CHURCH, AS SUCCESSOR TO THE FIRST UNITED METHODIST CHURCH OF WESTERN SPRINGS, AND 4300 FRANKLIN WESTERN SPRINGS LLC FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION)

This ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT (this **"Assignment"**) is entered into on the ___ day of _____, 2025, by and between Hinsdale United Methodist Church, as successor to the First United Methodist Church of Western Springs (hereinafter referred to as the "**Church**" or "**Assignor**"), and 4300 Franklin Western Springs LLC, an Illinois limited liability company, of Hinsdale, Illinois (hereinafter referred to as "**Developer**" or "**Assignee**"), and the Village of Western Springs, an Illinois non-home rule municipal corporation located in Cook County, Illinois (hereinafter referred to as "**Village**"). The Assignor, the Assignee and the Village are collectively referred to as the "Parties" and individually as a "Party" under this Assignment.

RECITALS

WHEREAS, the Church is the owner of tracts of land with a common address of 4300 Franklin Avenue, Western Springs, Illinois, consisting of three (3) residentially zoned lots zoned under the R2 Single-Family Residence District classification, and legally described in **Exhibit "A"** attached hereto and made a part hereof (the "Property"); and

WHEREAS, with the passage of Resolution No. 14-2268 on April 28, 2014, the Church and the Village approved and entered into a certain Letter of Agreement for the construction and maintenance of a public sidewalk dated April 28, 2014, and the Church, as Grantor, and the Village, as Grantee, approved and executed a related Plat of Easement for Public Sidewalk, dated April 28, 2014, and the Letter of Agreement and the Plat were recorded May 14, 2014 in Cook County, Illinois as Document 1413445068. As a result, the Village is the holder of an easement for the construction and maintenance of a public sidewalk over a portion of the Property (the "Sidewalk Easement"); and

WHEREAS, the Church has entered into a real estate purchase and sale contract for the sale of fee simple title of the Property to the Developer. The Developer, who is the contract purchaser and prospective developer of the Property, intends to demolish the existing structures on the Property consisting of a church and parking facilities (the "Church Demolition Work") after acquisition of the Property and then pursue the redevelopment of the Property. The Developer may redevelop the Property as a three (3) lot single-family residential development, either as the primary developer of one or more of the lots, or may market for sale and development by another contractor one or more of the lots. In addition, the Developer may pursue another alternate residential development plan for the Property that is a permitted use under the R2 Single-Family Residence District classification or may apply for Village zoning approval of an alternate development plan in accordance with the applicable Village Code provisions, including its Development Control Ordinance ("DCO"). For purposes of this Resolution, the completion of the three (3) single-family detached houses, or another alternate residential development plan or an alternate development plan that are pursued by the Developer or its successor owner(s) are collectively referred to as the "Development"; and

WHEREAS, as a predicate to the Development, the Developer has submitted to the Village a typical plan for a single-family residential development consisting of the three (3) lots shown on Sheet A.02 of the "4300 Howard Avenue Parkway Demolition and Parkway Restoration Site Plan" (the "Site Plan") submitted by the Developer to the Village. A copy of the Developer's Site Plan, which consists of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024, is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, to address certain Church obligations in the Letter of Agreement and to allow the Developer to complete the Church Demolition Work and to construct the Development, by a letter dated October 25, 2024 issued by the Church to the Village, the Church and the Developer have requested that the Village agree to: (a) the termination of the Letter of Agreement; (b) the approval of a Plat of Abrogation of Easement for Public Sidewalk to terminate the Sidewalk Easement; (c) the removal and disposal of the existing public sidewalk and construction of a new replacement public sidewalk, and new curb and gutter improvements within the Village's 43rd Street right-of-way by the Developer, at its cost, in a typical parkway placement location, as approved by the Village Engineer (the "Sidewalk Removal and Replacement/Relocation Work"); (d) the removal and disposal of the diagonal public parking spaces from the 43rd Street right-of-way by the Developer, at its cost (the "Parking Space Removal Work"); (e) the restoration of the 43rd Street curb and parkway by the Developer, at its cost (the "Parkway Restoration Work"); and (f) the repeal of the following zoning ordinance approved by the President and Board of Trustees of the Village (the "Corporate Authorities") relative to the Church and activities formerly conducted at the Property: Ordinance No. 18-2934 (Ordinance Approving A Conditional Use Permit For The Installation And Operation Of An Early Childhood Education Center At The 4300 Howard Avenue Property) (the "2018 CUP Ordinance"). The completion of the Church Demolition Work, the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work are collectively referred to as the "Developer Site Work Obligations". A copy of the Plat of Abrogation for Public Sidewalk Easement (Address: 4300 Franklin Avenue, Western Springs, Illinois), with a survey date of September 27, 2024 and prepared by Kabal Surveying Company, is attached hereto as **Exhibit "C"** and made a part hereof (the "Plat of Sidewalk Easement Abrogation"); and

WHEREAS, subject to the President and Board of Trustees of the Village (the "Corporate Authorities") granting approval of this Assignment, the Church and the Developer have approved and entered into this Assignment, the form and content of which have been approved by the Village Attorney, to authorize the Developer to negotiate and enter into the Redevelopment Agreement (as defined below) with the Village prior to completing the purchase of the Property that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations and the other obligations that are part of the Conditions of Approval, as set forth below in Section 4 of this Assignment; and

WHEREAS, under this Assignment and the Redevelopment Agreement, all of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined under the Developer Site Work Obligations and set forth below in Section 4 of this Assignment, are being assigned to and assumed by the Developer, as the Church would be required to fulfill such obligations if the Letter of Agreement was not being terminated by the Village and the Church. The Developer accepts the assignment and assumption of all rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work from the Church, and agrees to complete the other Developer Site Work Obligations as set forth below in Section 4 of this Assignment. As part of its approval of this Assignment, the Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and

Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the statutory and constitutional authority and intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution, to approve and enter into this Assignment with the Church and the Developer, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into this Assignment.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein contained and the exchange of adequate consideration and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

AGREEMENT

1. **Incorporation.** Each of the Recitals set forth above are incorporated by reference into Section 1 of this Agreement as material provisions.

2. **Assignment by Assignor; Consent.** Upon the conveyance of the Property to the Assignee, the Assignor assigns, transfers and sets over to the Assignee all of its rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, as those terms are defined in the above Recitals, and which are part of the Developer Site Work Obligations to be performed in anticipation of the Development. The Church consents to the Developer, as contract purchaser of the Property, to negotiate and enter into the Redevelopment Agreement with the Village, prior to completing the purchase of the Property, that will obligate the Developer, at its cost, to complete the Developer Site Work Obligations upon its completion of the purchase of the Property.

3. **Acceptance of Assignment by Assignee.** Upon its completion of the purchase of the Property, the Assignee assumes all of the rights, liabilities and obligations of the Assignor for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work, and agrees to complete the other Developer Site Work Obligations that are set forth below in Section 4 of this Assignment.

4. **Developer Site Work Obligations.** The approval of the Corporate Authorities of the Village of the termination of the Letter Agreement, the approval of the Plat of Sidewalk Easement Abrogation, and the approval of this Assignment is conditioned upon and subject to the following:

   A. The Developer shall approve and enter into a Redevelopment Agreement with the Village for the completion of the Developer Site Work Obligations (the "Redevelopment Agreement"), in a form and content as approved by the Village Attorney, that contains, at a minimum, the Developer's obligation to complete

the Developer Site Work Obligations and such other provisions and obligations as mutually agreed to by the Village and the Developer.

a. After its acquisition of the Property, in the event the Developer fails to commence or commences and then fails to complete the Developer Site Work Obligations, the Village, at the Developer' costs, may, but is not obligated to, complete the Developer Site Work Obligations, subject to the terms, provisions and obligations of the Redevelopment Agreement and the Village may use the security posted by the Developer to ensure the completion of the Developer Site Work Obligations.
b. If the Developer does not purchase the Property, the Church, at its cost, may complete the Church Demolition Work and may also complete the other Developer Site Work Obligations, provided the Plat of Sidewalk Easement Abrogation is approved and filed with the Cook County Clerk's Office, Recordings Division, and the Church secures all required permits, posts with the Village required security to ensure the completion of the work and otherwise complies with all of the requirements set forth in the Redevelopment Agreement to complete the Developer Site Work Obligations.
c. If there is any conflict between the provisions of this Assignment and the Redevelopment Agreement, the Redevelopment Agreement shall control.

5. **Village Approval of Assignment.** The Village approves of the assignment and assumption of the Church's rights, liabilities and responsibilities for the completion of the Sidewalk Removal and Replacement/Relocation Work, the Parking Space Removal Work and the Parkway Restoration Work to the Developer.

6. **Notices.** Any notice or communication required or permitted to be given under this Assignment shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Assignment, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this Section 6, each Party to this Assignment shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Phone: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

William Dvorak 4300 Franklin Western Springs LLC 3941 Clausen Avenue Western Springs, Illinois 60558 Phone: 630-772-0327 Email: bdvorak@kineticpartners.net	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

Notices and communications to the Church shall be addressed to, and delivered at, the following address:

Zed Francis Hinsdale United Methodist Church 945 South Garfield Avenue Hinsdale, Illinois 60521 Phone: 630-805-2501 Email: zsf3@aol.com	With a copy to: Matthew Klein, Esq. 322 West Burlington LaGrange, Illinois 60525 Direct: 708-354- 8840 / 630-533-3290 Email: matthew.klein55@gmail.com

7. **Applicable Law; Venue.** This Assignment shall be governed and controlled, as to the validity, enforceability, interpretation and construction, in effect in all other respects, including, but not limited to, the legality of interest charged hereunder, by the statutory laws and decisions of the State of Illinois. The Parties agree that, for the purpose of any litigation relative to this Assignment and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the Parties consent to the *in personam* jurisdiction of said Court for any such action or proceeding.

8. **Entire Agreement; Amendment or Modification.** This Assignment contains the entire understanding between the Parties and supersedes any prior understanding or written or oral agreements between them with respect to the subject matter of this Assignment. There are no representations, agreements or understandings, oral or written, between and among the Parties hereto relating to the subject matter of this Assignment which are not fully expressed herein. No oral modification, amendment or change shall be allowed to this Assignment. Any modification, amendment or change shall be in writing and approved by the Corporate Authorities of the Village, the manager of the Developer and the governing board of the Church.

9. **Severability.** Every provision of this Assignment is intended to be severable. In the event any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the validity or enforceability of the remaining terms and provisions hereinabove set forth.

10. **Counterparts.** This Assignment may be executed in counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument.

11. **Effective Date; Legal Authority; Binding Effect.** The "Effective Date" of this Assignment shall be the date of execution by the last signatory, which date shall be inserted on page 1 of this Assignment. This Assignment shall be in full force and effect, and legally binding, after it is signed by the duly authorized officers of each Party. Each of the signatories to this Assignment are the duly authorized representatives of their respective corporate entity and each such person has signed this Assignment pursuant to the authority duly granted to them by the corporate authorities of said corporate entity, who have acted by motion or approved a Resolution (in the Village's case, at an open public meeting) that

authorized and directed the representatives to sign this Assignment. This Assignment shall be binding upon and shall inure to the benefit of the Parties agreeing hereto and to their successor corporations, officers, officials, trustees, successors-in-office, heirs, representatives, and assigns, transferees, successors-in-interest and successor owners.

SIGNATURE PAGE TO FOLLOW

SIGNATURE PAGE

ASSIGNOR:

Hinsdale United Methodist Church,
as successor to the First United Methodist Church of Western Springs

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

ASSIGNEE:

4300 Franklin Western Springs LLC,
an Illinois limited liability company

By:_____

Name:_____

Title:_____

Date:_____, 2025.

Subscribed and Sworn To Before Me
This ____ day of _____, 2025.

By:_____
Notary Public

VILLAGE:

VILLAGE OF WESTERN SPRINGS,
an Illinois non-home rule municipal corporation

By:_____
Name: Heidi Rudolph
Title: Village President

Date:_____, 2025.

ATTEST:

By:_____
Name: Edward Tymick
Title: Village Clerk

Date:_____, 2025.

Exhibit "A"

Legal Description of Parcel - 4300 Franklin Avenue, Western Springs, Illinois

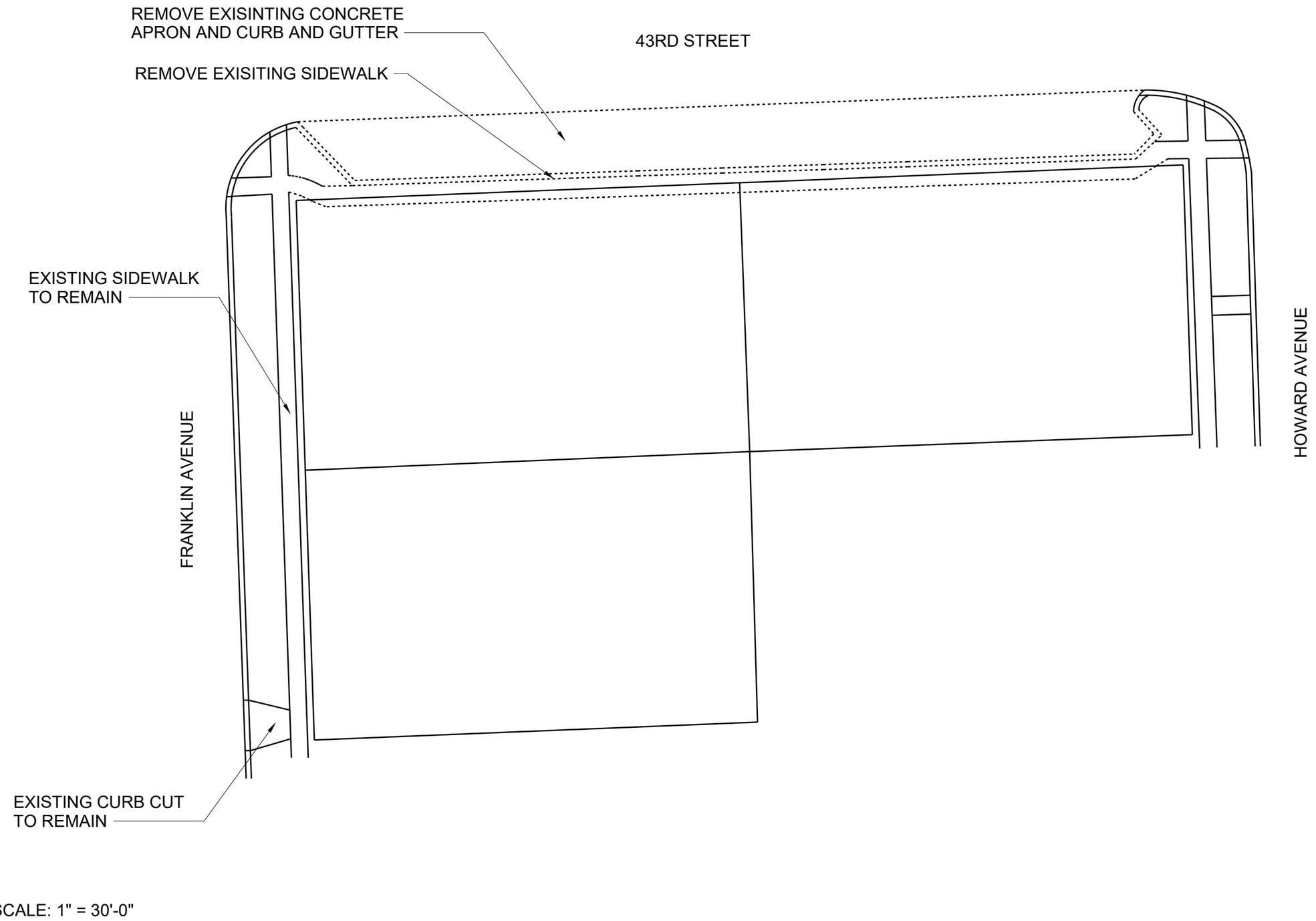
LOTS 1, 8 AND 9 IN BLOCK 26 IN FIELD PARK, A SUBDIVISION IN THE WEST 5/8 OF THE WEST 1/2 OF SECTION 5, TOWNSHIP 38 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN AND PART OF THE SOUTHEAST 1/4 PF SECTION 32, TOWNSHIP 39 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PINs: 18-05-302-001-0000
18-05-302-002-0000
18-05-302-018-0000

Exhibit "B"

4300 Howard Avenue Residential Development Site Plan consisting of Sheet A.01 (Parkway Demolition Plan) and Sheet A.02 (Parkway Restoration Plan) dated October 22, 2024

(attached)



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

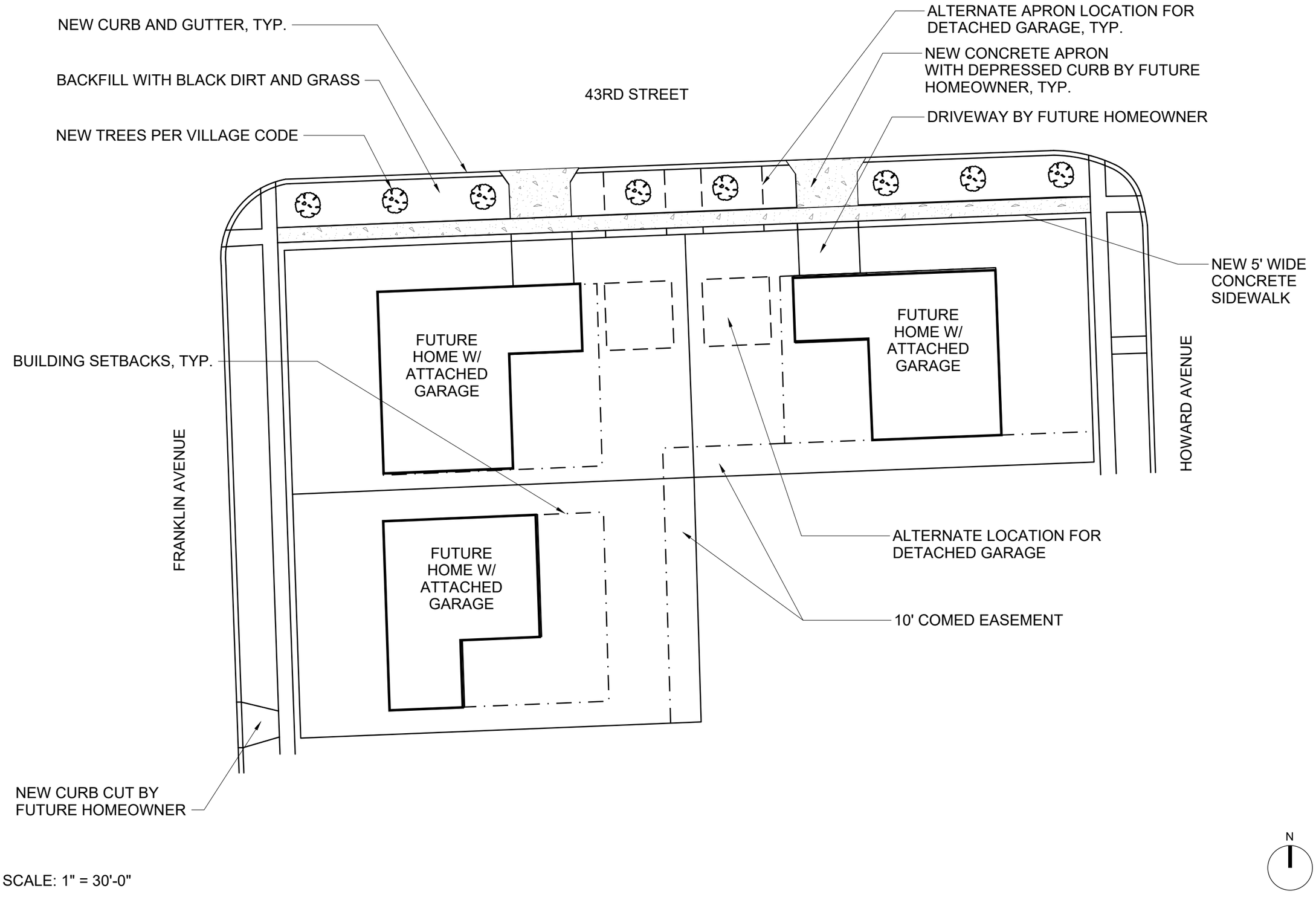
PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY DEMOLITION PLAN

A.01



SCALE: 1" = 30'-0"

CLIENT
Fairfield Properties
330 West Chestnut, Lower Level
Hinsdale, IL 60521

PROJECT
4300 Howard
Western Springs

ISSUE
10/22/2024

DRAWN BY
BD

PARKWAY RESTORATION PLAN

A.02

Exhibit "C"

Plat of Abrogation for Public Sidewalk Easement
(Address: 4300 Franklin Avenue, Western Springs, Illinois)
with a survey date of September 27, 2024 and prepared by Kabal Surveying Company

(attached)

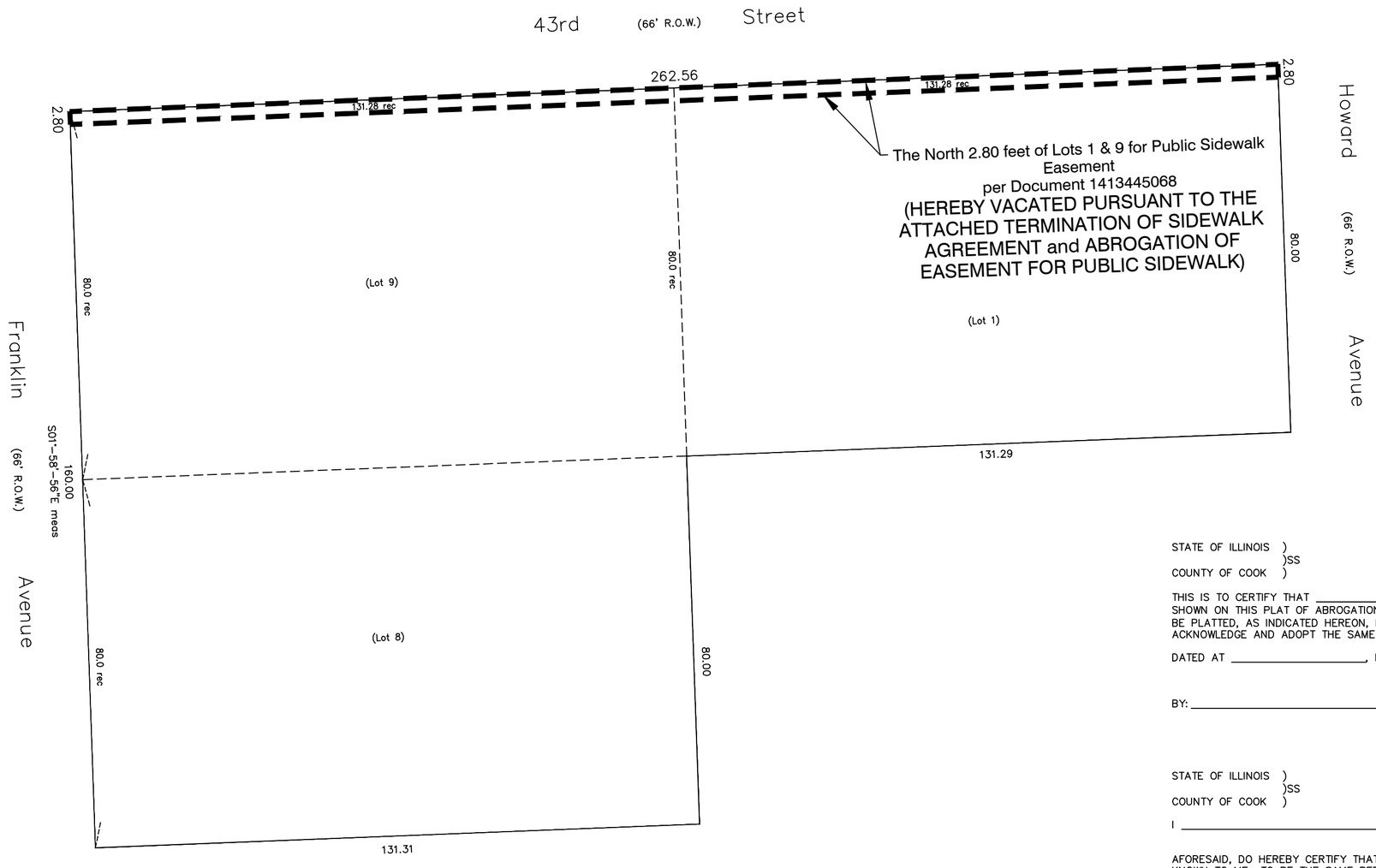
Plat of Abrogation

For Public Sidewalk Easement

Lots 1, 8 and 9 in Block 26 in Field Park, a Subdivision in the West 5/8 of the West 1/2 of Section 5, Township 38 North, Range 12, East of the Third Principal Meridian and part of the Southeast 1/4 of Section 32, Township 39 North, Range 12, East of the Third Principal Meridian, in Cook County, Illinois.

Address: 4300 Franklin Avenue, Western Springs





Measured bearing shown hereon is based on the Illinois East State Plane Coordinate Zone 1201 (NAD83) determined by GPS measurement

LEGEND
R.O.W. = right-of-way, E = East
N = North, W = West, S = South
meas = measured, rec = record
pch = porch, rad = radius
prc = point of reverse curve

Please check Legal Description with Deed and report any discrepancy immediately.

Surveyed September 27 ,20 24

Scale: 1 inch = 20 ft.
Order No. 241854A
Ordered By: Hawbecker & Garver, LLC

Property identification numbers
18-05-302-001-0000 (Lot 9)
18-05-302-018-0000 (Lot 1)
18-05-302-002-0000 (Lot 8)

Kabal Surveying Company
Land Surveying Services
10407 West Cermak Road
Westchester, Illinois 60154
(708) 562-2652
Fax (708) 562-7314
email: kabal-surveying@comcast.net
website: KabalSurveyingCompany.com
Registration No. 184-003061

ORIGINAL SEAL IN RED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT _____ IS(ARE) THE OWNER(S) OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS(HAVE) CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE PURPOSES THEREIN SET FORTH, AND DOES(DO) HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED AT _____, ILLINOIS, THIS _____ DAY OF _____, _____.

BY: _____ TITLE: _____

NOTARY PUBLIC

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE

AFORESAID, DO HEREBY CERTIFY THAT _____ PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFOR ME THIS DAY IN PERSONS AND ACKNOWLEDGE THAT THEY SIGNED THE ANNEXED PLAT AS THEIR FREE AND VOLUNTART ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20_____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS,

AT A MEETING HELD THIS _____ DAY OF _____, 20_____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF COOK)

I, MITCHELL P. BALEK, DO HEREBY CERTIFY THAT I, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY, ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS _____ DAY OF _____, A.D., 20 ____.

Mitchell P. Balek
_____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-003250
MY LICENSE EXPIRES ON NOVEMBER 30, 2026

Exhibit "E"

Final Site Demolition and Site Restoration Plans

(to be attached after Village plan review approval)

Exhibit "F"

Bill of Sale and Form of Agreement Release Document

(attached)

BILL OF SALE

FOR THE PUBLIC IMPROVEMENTS IN

the Redevelopment Agreement by and Between
The Village of Western Springs, Illinois and
4300 Franklin Western Springs LLC for the Demolition of Church,
Abrogation of Easement
and Restoration of 43rd Street Right-of-Way
("43RD STREET RIGHT-OF-WAY RECONFIGURATION")

The Developer, 4300 FRANKLIN WESTERN SPRINGS LLC, an Illinois limited liability company (the "Developer"), improved the below-described real property within the Village of Western Springs ("Village") based on a Village-approved amended site plan for the reconfiguration of the right-of-way adjacent to the property known as 4300 Howard Avenue. The Development is located on real property commonly known as the southern portion of the 43rd Street right-of-way between Franklin Avenue and Howard Avenue, and generally described as follows:

[INSERT LEGAL DESCRIPTION] (hereinafter referred to as the "Subject Property").

In 2025, the Village issued a certificate of completion for the Subject Property per the Redevelopment Agreement approved in Western Springs Ordinance No. 25-_____.

In accordance with the applicable provisions of Section 10-10-19 (Land Dedications and Completion, Maintenance and Acceptance of Improvements) of the Western Springs Municipal Code and the provisions of Western Springs Ordinance No. 25-_____, the Developer has constructed and installed certain infrastructure and other public improvements, consisting of the Subject Property, Creek Drive, 49th Court North, 49th Court South, the 53rd Street bridge, and certain curb gutter, parkway, parkway trees, and sidewalk parkway trees along and within the Subject Property, as further described in Western Springs Ordinance No. 25-_____ (collectively the "Accepted Public Improvements"), as part of the four-phased Development, and now agrees to transfer title, ownership, maintenance and rights use to the Accepted Public Improvements to the Village.

The Developer, in consideration of Ten and No/100 Dollars ($10.00), receipt whereof is acknowledged as adequate, good and valuable consideration, does sell, assign, transfer and set over title and ownership, maintenance and rights use to the Village of Western Springs, an Illinois municipal corporation, of the Accepted Public Improvements located within the Development in accordance with the provisions of Western Springs Ordinance No. 25-_____. The Accepted Public Improvements shall be owned, used and maintained by the Village as Village-owned public improvements in accordance with the provisions of Western Springs Ordinance No. 25-_____.

The Developer covenants to the Village that: (1) the Developer is the lawful owner of the Accepted Public Improvements; (2) the Accepted Public Improvements are free from all liens and encumbrances; (3) the Developer has the right to convey title to the Accepted Public Improvements; (4) the Developer will defend and hold the Village and its appointed and elected officials, president and trustees, employees,

engineers, attorneys, volunteers and representatives harmless against the claims and demands of all persons with regard to ownership of and payment for construction of the Accepted Public Improvements; and (5) the execution of this Bill of Sale by the Developer has been properly authorized by the required corporate actions.

IN WITNESS WHEREOF, the Developer, pursuant to the corporate authority and direction given to it, has signed and sealed this Bill of Sale this ___ day of _____, 20_____.

DEVELOPER:

By:_____ Date: ___ day of _____, 20__.
NAME and Title
authorized representative of INSERT

Signed and Sworn to Before Me this _____ day of _____, 20____.

By:_____
Notary Public

Village of Western Springs Acceptance

The Village of Western Springs, by action of its Corporate Authorities, accepts the conveyance of title to and ownership of and maintenance responsibility for the Accepted Public Improvements identified above, and consents to the terms, provisions and obligations set forth in this Bill of Sale.

ATTEST:

By:_____
Heidi Rudolph, Village President
Village of Western Springs

By:_____
INSERT, Village Clerk
Village of Western Springs

Dated this ___ day of _____, 20__.

Dated this ___ day of _____, 20___.

Exhibit "G"

Construction Schedule

(attached)

Group Exhibit "H"

Forms of Letters of Credit

(attached)

REQUIRED FORM OF PERFORMANCE IRREVOCABLE LETTER OF CREDIT

NO.
AMOUNT: $
EXPIRATION DATE: Two years after issuance

DATE OF ISSUE: _____, 202___.

[Name of Bank]
[Address]

TO: Village of Western Springs (Beneficiary)
740 Hillgrove Avenue
Western Springs, Illinois 60558
Attention: Village Manager

_____ BANK HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the _____ UP TO AN AGGREGATE AMOUNT OF _____ United States Dollars ($_____) for the account of [Developer], a _____ limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words:

Drawn under _____.
Credit No. Dated: _____, 202___.

Drafts may be for all or any portion of the amount of this Letter of Credit, and shall be generally in the form of the sample draft attached hereto as Exhibit "1", and shall be accompanied by one of the following documents executed by the Western Springs Village Manager:

(a) A written statement on the form attached hereto as Exhibit "2" stating that, conditioned upon proper notice to the Western Springs Village Manager, Letter of Credit No. ___ will expire within thirty (30) calendar days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No. ___; or

(b) A written statement on the form attached hereto as Exhibit "3" stating that all or any part of the Infrastructure as defined in and required to be constructed by the Customer / [Developer] pursuant to "An Agreement _____" (the "Development Agreement") have not been constructed in accordance with the Development Agreement and any cure period has expired; or

(c) A written statement on the form attached hereto as Exhibit "4" stating that all or any part of the costs, payments, permit fees, or other fees required to be paid to the Village of Western Springs by the Customer / [Developer] pursuant to the Development Agreement have not been paid in accordance with the Development Agreement and any cure period has expired; or

(d) A written statement on the form attached hereto as Exhibit "5" stating that all or any portion of the maintenance, repair, or restoration required to be performed by the

Customer / [Developer] pursuant to the Development Agreement has not been performed in accordance with the Development Agreement and any cure period has expired; or

(e) A written statement on the form attached hereto as Exhibit "6" stating that the aggregate amount of the Letter of Credit may be reduced under Subsection __ of the Development Agreement in a certain amount.

_____[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Irrevocable Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated Expiration Date or presented at the [BANK] office located at [ADDRESS], together with the original of this Irrevocable Letter of Credit on or before that date. Further, one or more drafts may be presented at the [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Irrevocable Letter of Credit is presented to [BANK] in conformance with the terms of this Irrevocable Letter of Credit, and [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, litigation and court costs, and other expenses incurred by the Village of Western Springs in enforcing the terms of this Irrevocable Letter of Credit.

3. This Irrevocable Letter of Credit shall expire on _____, 20___, (two (2) years from issuance) as stated hereinabove; provided, however, this Irrevocable Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Irrevocable Letter of Credit is about to expire (the "30-Day Expiration Notice).

4. In no event will this Irrevocable Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Irrevocable Letter of Credit.

6. The aggregate amount of this Irrevocable Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager as provided in Paragraph (e) above stating that the aggregate amount of this Irrevocable Letter of Credit may be reduced in a specified amount as provided in Subsection ___ of the Development Agreement.

7. This Irrevocable Letter of Credit is irrevocable.

This Irrevocable Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform

Customs"). In the event of a conflict between this Irrevocable Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Irrevocable Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term "banking day" means any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed, and a day on which payments can be effected on the Fedwire Network.

_____ _____

[Signature of Bank Officer] [Signature of Bank Officer]
[Officer's Title] [Officer's Title]

EXHIBIT "1" TO FORM OF IRREVOCABLE LETTER OF CREDIT

DRAFT (sample)

, 20___

$

(place) (date) (amount in figures USD)

PAY TO THE ORDER OF: _____
US DOLLARS (amount in words) for value received and charge to the account of:

(Letter of Credit applicant name and address)

TO:

(name of Drawee Bank)

(address)

By: _____

EXHIBIT "2" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ------
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that Letter of Credit No. _____ dated _____, 20___ in the amount of $_____ will expire within thirty (30) days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No.____.

The Funds of this LOC that are being drawn upon by the Village of Western Springs as a consequence of the failure of the Customer / [Developer] to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC relative to above-referenced Project that are defined in more detail in the LOC.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC, in an amount agreed upon by the Beneficiary and the Customer [Developer], at least thirty (30) days prior to the Expiration Date of the LOC.

2. [Bank] has not delivered to the Village by registered letter, return receipt requested, or other courier service addressed to the attention of the Village President, any notice of expiration of the LOC as required under the SPECIAL CONDITIONS at Page 2 of the LOC.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,
Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Department Director
Village Engineer
Village Attorney

EXHIBIT "3" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and [Developer], and has not been constructed in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Department Director
Village Engineer
Village Attorney

EXHIBIT "4" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. _____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Department Director
Village Engineer
Village Attorney

EXHIBIT "5" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Department Director
Village Engineer
Village Attorney

EXHIBIT "6" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Reduction of Dollar Amount of Letter of Credit No.
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Customer / [Developer] has satisfactorily completed and the Village of Western Springs has accepted certain Infrastructure work and, under Subsection __ of the Development Agreement, the aggregate amount of the Letter of Credit may be reduced in the following amount to reimburse the Developer for payment of that work: $_____.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Department Director
Village Engineer
Village Attorney

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF AN ASSIGNMENT, ASSUMPTION AND CONSENT AGREEMENT FOR THE REMOVAL OF A PUBLIC SIDEWALK AND CERTAIN PUBLIC PARKING SPACES, INSTALLATION OF A NEW PUBLIC SIDEWALK AND RESTORATION OF 43RD STREET RIGHT-OF-WAY AT THE 4300 HOWARD AVENUE PROPERTY IN THE VILLAGE OF WESTERN SPRINGS (LOTS 1, 8 AND 9 IN FIELD PARK SUBDIVISION) AND A RELATED REDEVELOPMENT AGREEMENT TO BE ENTERED INTO BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS AND 4300 FRANKLIN WESTERN SPRINGS LLC TO ALLOW FOR THE COMPLETION OF SUCH WORK

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this ___ day of February, 2025.

_____
Edward Tymick, Village Clerk

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.H.

To: Board of Trustees
From: Heather Valone, Director of Community Development , Kelsey Fawell, Senior Planner
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager
RE: [Previously discussed] Downtown Western Springs Market Assessment Update (Omnibus Item)

Recommendation

The Planning and Zoning Committee reviewed the preliminary findings of the Downtown Western Springs Market Assessment Update at their meeting on January 9, 2025 and recommended advancement to the Village Board for review and discussion. The Village Board reviewed the preliminary findings at their meeting on January 13, 2025 and the draft market assessment update at their January 27, 2025 meeting and directed staff and the consultant to finalize the item for consideration.

Summary

On March 26, 2007, the Village Board approved Resolution 07-1957 accepted a market assessment of the downtown prepared by Business Districts, Inc. titled “Western Springs: Downtown Market Assessment”. The 2007 assessment identified the market demand for specific types of retail and projects that would be both appropriate and financially feasible for Western Springs’ Downtown. It also provided recommended strategies and actions that realize Downtown’s sales potential and improve retail service to all residents.

As part of the 2024 fiscal year budget, an update to this plan was included in the Community Development Department Budget. On October 14, 2024, the Village Board approved Resolution No. 24-2844 accepting a proposal from Teska Associates, Inc. (“Teska”) to complete an update to the assessment.

The market assessment update includes interviews with valuable stakeholders in the downtown, such as business owners, property owners, residents, and Village Officials, an inventory of the downtown’s existing conditions, analyses on the characteristics of the area and how visitors frequent and utilize the downtown. Interviews with business owners / representatives were conducted in October and November of 2024. A Joint meeting of the Economic Development Commission and the Village Board was held on November 6, 2024. Surveys to businesses and residents were conducted and concluded on December 20, 2024. The preliminary findings were presented to the Planning and Zoning Committee at their meeting on January 9, 2025. The Planning and Zoning Committee recommended advancing the preliminary

findings to the Village Board for review and discussion. The Village Board reviewed the preliminary findings at their meeting on January 13, 2025. With the feedback received on the findings the Community Development Department and Teska have drafted the report which was reviewed by the Village Board on January 27, 2025.

Attachment

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1. Resolution - Resolution Authorizing the Acceptance and Approval of the Downtown Western Springs Market Assessment Dated February 10, 2025 and Prepared by Teska Associates, Inc. for the Village of Western Springs.

Financial Impact

None.

Recommended Motion

I move to approve the resolution adopting the downtown market assessment update under the items contained in the omnibus.

Strategic Plan Alignment

Economic Development

File Attachments

1. Resolution

Draft 1.16.2025
RESOLUTION NO. 25-____
VOTE:
AYES:
NAYS:
ABSENT:
ABSTAIN:
DATE: February 10, 2025.
OTHER: None.

RESOLUTION AUTHORIZING THE ACCEPTANCE AND APPROVAL OF THE DOWNTOWN WESTERN SPRINGS MARKET ASSESSMENT DATED FEBRUARY 10, 2025 AND PREPARED BY TESKA ASSOCIATES, INC. FOR THE VILLAGE OF WESTERN SPRINGS.

WHEREAS, with the passage of Resolution No. 24-2844 on October 14, 2024, the Village President and Board of Trustees of the Village of Western Springs (the "Village Board" or "Village") approved an agreement entitled "Agreement Between the Village of Western Springs and Teska Associates, Inc." (the "Agreement"), a copy of which is on file with the Village Clerk's Office, to retain Teska Associates, Inc. (the "Consultant") to prepare a Downtown Western Springs Market Assessment for the Village; and

WHEREAS, the Consultant has prepared a Downtown Western Springs Market Assessment dated February 10, 2025 (the "Assessment") for the Village, a copy of the Assessment is attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, at an open, public meeting held on November 6, 2024, the Village's Economic Development Commission (the "Commission") reviewed and discussed the content, provisions, findings and recommendations of the Assessment and received input from the Village staff, and provided an opportunity for public input on the matter, and then the Commission recommended that the Village Board accept and approve of the Assessment for use by the Village, its officials, its boards, committees and commissions and Village staff; and

WHEREAS, at an open, public meeting held on January 9, 2025, the Planning and Zoning Committee (the "Committee") reviewed and discussed the content, provisions, findings and recommendations of the Assessment and received input from the Village staff, and provided an opportunity for public input on the matter, and then the Committee recommended that the Village Board accept and approve of the Assessment for use by the Village, its officials, its boards, committees and commissions, and Village staff; and

WHEREAS, at open public meetings held on January 13, 2025, January 27, 2025, and February 10, 2025, the President and Board of Trustees of the Village reviewed and discussed the content, provisions, findings and recommendations of the Assessment and considered the recommendations of the Commission and the Committee, and received input from Village staff and provided an opportunity for public input on the matter. At its February 10, 2025, meeting, the President and Board of Trustees of the Village accepted the recommendations of the Commission and the Committee to accept and approve of the Assessment for use by the Village, its officials, its boards, committees and commissions, and Village staff; and

WHEREAS, pursuant to the statutory authority set forth in the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including but not limited to 65 ILCS 5/8-1-2.5 (Expenses for Economic Development), and the Illinois Tax Increment Allocation Redevelopment Act, 65 ILCS 5/11-74.4 ("TIF Act"), and the constitutional powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970, the President

and Board of Trustees of the Village find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to accept and approve of the Assessment for use by the Village, its officials, its boards, committees and commissions, and Village staff.

NOW, THEREFORE BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2. Acceptance and Approval of the Assessment. The Board of Trustees of the Village of Western Springs accept and approve the attached Assessment (see attached **Exhibit "A"**), which as been prepared by the Consultant, for use by the Village, its officials, its boards, committees and commissions, and Village staff.

SECTION 3. Effective Date. This Resolution shall be in full force and effect from and after its adoption and approval in the manner provided by law.

PASSED by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the 10th day of February, 2025 and approved by me as Village President, and attested by the Village Clerk, on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

Downtown Western Springs Market Assessment
dated February 10, 2025 and prepared by Teska Associates, Inc.

(attached)



VILLAGE OF WESTERN SPRINGS

DOWNTOWN MARKET ASSESSMENT

FEBRUARY 10, 2025

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ACKNOWLEDGMENTS

VILLAGE STAFF

Ellen Baer, Village Manager
Heather Valone, AICP, Director of Community Development
Kelsey Fawell, Senior Planner

VILLAGE BOARD OF TRUSTEES

Heidi Rudolph, Acting President
Amy Avakian, Trustee
Nicole Chen, Trustee
Al Fink, Trustee
Scott Lewis, Trustee
Phil Nawrocki, Trustee
James Tyrrell, Trustee
Ed Tymick, Village Clerk

VILLAGE ECONOMIC DEVELOPMENT COMMISSION

Dr. Irene Combs, Member
Andrew Ariens, Member
Rene Cozzi, Member
Tom Holewczynski, Member
Tony Holmes, Member
Mark Mitchell, Member

SPECIAL THANKS

Western Springs Business Association (WSBA)
Downtown Business & Property Owners

CONSULTANT

Teska Associates, Inc.



1 INTRODUCTION

The Village of Western Springs is a thriving west suburban community with a traditional downtown centered around a commuter rail station, single-family neighborhoods, and a high level of public services and amenities exemplified by its quality schools, a comprehensive park network, and nearby natural amenities. The Village is situated along regional transportation corridors such as the Tri-State Tollway (Interstate 294) and the Metra BNSF (Burlington Northern Santa Fe) rail line, allowing residents access to the region and making downtown businesses available to a potential customer base and labor pool.

Purpose

The Village of Western Springs last commissioned a market assessment of its downtown area in 2007 to better position itself economically in the face of emerging trends and changing markets. That assessment informed the Village's economic development policies, which sought to support the strength of its historic downtown. With much of the economic development policy implemented over the past 15 years, the Village of Western Springs will utilize this Market Assessment to gain a better understanding of shifting trends following the Great Recession of 2008 and the COVID-19 pandemic, downtown's competitive alignment, and desirable businesses. This Market Assessment will likewise lay the foundation for an update of the economic development policy for the downtown and work to provide a strategy for investment, development, and partnerships.

Town and Downtown at a Glance

A longtime seasonal campground for the Potawatomi people due to its springs and hunting grounds, the area around Western Springs began to develop with the construction of the Aurora-Chicago Railroad in 1864. The community incorporated in 1886, and a new railroad depot opened in 1890; three years later, the iconic Western Springs Water Tower was constructed for the community's waterworks system after the springs (located at current day Spring Rock Park) dried. By the 1930s, many of the familiar storefronts along Burlington Avenue had been constructed. Western Springs' downtown remains the commercial and office center of the Village, as the Village does not have large-scale suburban style office parks or commercial centers within its boundaries, aside from the Garden Market shopping center at 47th Street and Willow Springs Road.

Downtown Western Springs is largely comprised of one- to two-story buildings, both old and new, that share a common design language of red brick, stone, and other traditional, durable materials. The four-story, mixed-use Foxford Station development bookends the eastern edge of downtown at Burlington Avenue and Wolf Road. Though Foxford Station is newer and taller than much of the downtown building stock, the Water Tower remains the largest feature in the downtown area at 112 feet in height, creating an iconic landmark that is visible from many vantage points in the central business district. In addition to the distinct design language of the downtown, longstanding local businesses are fundamental to the downtown Western Springs identity. Downtown mainstay Village True Value Hardware celebrated its 70-year anniversary in 2024 and local businesses, such as Casey's Market, BB's Baby Donuts, Kirschbaum's Bakery, and others remain commercial institutions. These businesses have cultivated a loyal customer base, some of which grew up in Western Springs and return for the familiarity and quality offerings of these classic stores.

Process and Methodology

The Market Assessment employed a holistic approach to understanding national and local real estate trends, customer and business actions and perceptions, and the physical conditions of local commercial space. To gain local insights, the project team conducted 14 stakeholder interviews at the project outset with key businesspeople, property owners, and leaders in the downtown area. An interactive workshop with the Village Board and Village Economic Development Commission (EDC) was held following the interview process to gain their perspective of the downtown. To further understand the benefits and challenges of operating a business downtown, an online survey was prepared, and downtown business owners were invited to respond. Lastly, to learn about community preferences, behaviors, and visions for downtown Western Springs, a consumer survey was posted online for residents and visitors; this survey was advertised through established Village social media channels and outreach practices.

Quantitative data about the Village, surrounding areas, and the downtown were sourced primarily from Esri Business Analyst and Moody's. Esri Business Analyst data is drawn from a variety of datasets, including the US Census Bureau Decennial Census and American Community Survey Five-Year Estimates, Bureau of Labor Statistics Consumer Preference Surveys, MRI-Simmons Preference Surveys, and Esri proprietary projections. Moody's information on local real estate markets is drawn from primary data on local leasing and sales. Aggregated Illinois Department of Revenue sales tax data was reviewed to understand recent trends in sales.

- **Existing Conditions** describe business conditions, qualitative and quantitative background data, interview findings, and performance of the downtown to date.
- **Market Assessment** considers consumer sentiment, market potential, real estate trends, and competitive alignments.
- **Summary** presents findings and includes possible next steps for consideration.



Commercial Fundamentals

The national and regional commercial real estate market is ever-changing, requiring consistent monitoring and adaptation of local policy to keep business districts successful. Recently, these impacts included significant shifts from the COVID-19 pandemic. Downtown businesses, and the Village as a whole, adapted to address that event, and they continue to evaluate operations to maintain a favorable position in the market. The fundamentals of commercial real estate and retail that form the current market realities facing downtown Western Springs are outlined below.



E-commerce is a fact of life. Online retail sales make up an estimated 23% of all retail sales in the United States, with many local and national retailers maintaining an online presence. While e-commerce has not surpassed traditional retail, its market share continues to increase, requiring prospective retailers to employ innovative techniques to compete. Successful retailers offer unique items, convenience, high levels of customer service, and oftentimes offer an online component.



Dining and entertainment are resilient to e-commerce. Experiences, such as entertainment and restaurants, cannot be replicated by e-commerce. The shift from traditional brick-and-mortar retail to experience-focused commercial can be observed in various shopping areas and downtowns across the region. Many have leaned into dining, unique activities, and entertainment-based commercial uses to attract visitors. While this transition is seen in many areas, it may be challenging to fit such uses into the smaller spaces common in historic business districts.



Experiential retail is an emerging and exciting brand of retail. Experiential shopping refers to a retail approach that focuses on creating an immersive and engaging experience for customers, beyond simply purchasing goods. This can involve interactive displays, galleries, showrooms, entertainment, events, or unique environments that appeal to customers' emotions and senses, making the shopping experience more enjoyable and memorable. In real estate, experiential shopping is becoming increasingly important as it helps attract foot traffic to retail spaces, particularly in malls and shopping centers. Experiential retail may be a permanent fixture in a shopping area, like a showroom, or may be a rotating retail offering.



Mixed-use development creates a built-in customer base. Downtowns, shopping centers, and other traditional commercial areas across the nation have employed mixed-use development to increase foot traffic in commercial areas. Mixed-use development often consists of ground floor retail with residential, office, or hospitality uses above, usually within a singular building. On larger sites, horizontal mixed use is more common, with residential, retail, dining, and service uses found side by side with available parking. In suburban communities, mixed-use development also provides diverse housing types, allowing communities to attract and retain empty-nesters, singles, new families, and seniors, each bringing disposable income to support businesses in the immediate area. In established communities like Western Springs, adjacent neighborhoods can be understood as a residential component of the mixed-use district.



Zoning Regulation. Local zoning regulations direct the real estate development that is allowed in a community. They typically designate specific areas for certain types of development or activities, such as residential, commercial, industrial, agricultural, or mixed-use. These laws establish parameters such as building heights, setbacks from property lines, density (how many buildings or units can be developed on a parcel), and the types of businesses or services allowed in each district. By defining these regulations, zoning controls how land is utilized, influencing not only the physical landscape but also the economic structure and overall livability of a community. Understood as a tool to implement local economic development policies, zoning laws must be regularly reviewed and refined to ensure they support community goals and are realistic under current market conditions.



2 EXISTING CONDITIONS

Downtown Business Environment

The physical layout of Western Springs' downtown affects how it is used by patrons. It is generally located along Burlington and Hillgrove Avenues, bisected by the Metra BNSF railroad tracks. As a result, the downtown is relatively narrow from north to south (roughly one block on either side of the tracks at its widest point) and wide from east to west, with commercial land uses present for about eight block faces. While the design and public infrastructure create a highly walkable environment, the long and narrow layout creates a distance between businesses that leads some visitors to drive between destinations, rather than parking once and walking to multiple stops. The layout also precludes the "traditional" downtown retail street, with retail uses fronting both sides of a street.

The downtown is surrounded by low-density single-family residential neighborhoods, parks, and institutions such as Field Park Elementary School and the Western Springs Theater. The historic Water Tower is situated on the north side of the railroad tracks in the center of downtown. These facilities add to an attractive, memorable, and desirable business district. Nearby attractions, like the Cook County Forest Preserves are also potential draws to the community.

As with all suburban business areas, parking is an important need in downtown Western Springs and always being evaluated by businesses and the Village to maximize utility to visitors, commuters, and employees. Diagonal parking spaces on Hillgrove and Burlington Avenues account for much of the public parking in the area, though a number of spaces are restricted for permit-holding commuters; private parking lots exist south of the BMO Bank Building, south of the Heartland Bank & Trust Building, and north of Davanti.

While the business district has low vacancy, desirable businesses, and an attractive environment, the linear form of downtown and its tight proximity to residential uses presents constraints to creating more business space, such as discontinuity of commercial streets, challenging circulation, non-traditional parking locations, and mitigating potential impacts of new development on adjacent residential neighborhoods. Nearby competing downtowns and business areas have

less linear downtowns that allow for a more traditional downtown commercial space and more flexibility for new development and a variety of business types.

Two tax increment financing (TIF) districts are coterminous with the downtown boundaries. These districts follow the Metra BNSF rails along Burlington Avenue; the north TIF district extends from Howard Avenue to the east to Interstate 294 at its westernmost point, the south TIF district is less extensive, ranging from Johnson Avenue to its east to Central Avenue at its west. Revenues generated by these districts help to define the downtown and support its continued development, beautification, and maintenance of its building stock (Figure 1).

Five primary zoning districts are present in the downtown area (excluding districts that underlie parks and public spaces), each of which includes a purpose statement that makes note of the legislative intent of the district designation, its regulations, and its relationship to the community's identity and goals. Zoning districts present in the downtown area are enumerated on the following page, accompanied by their respective purpose statements, and shown in Figure 2.

FIGURE 1

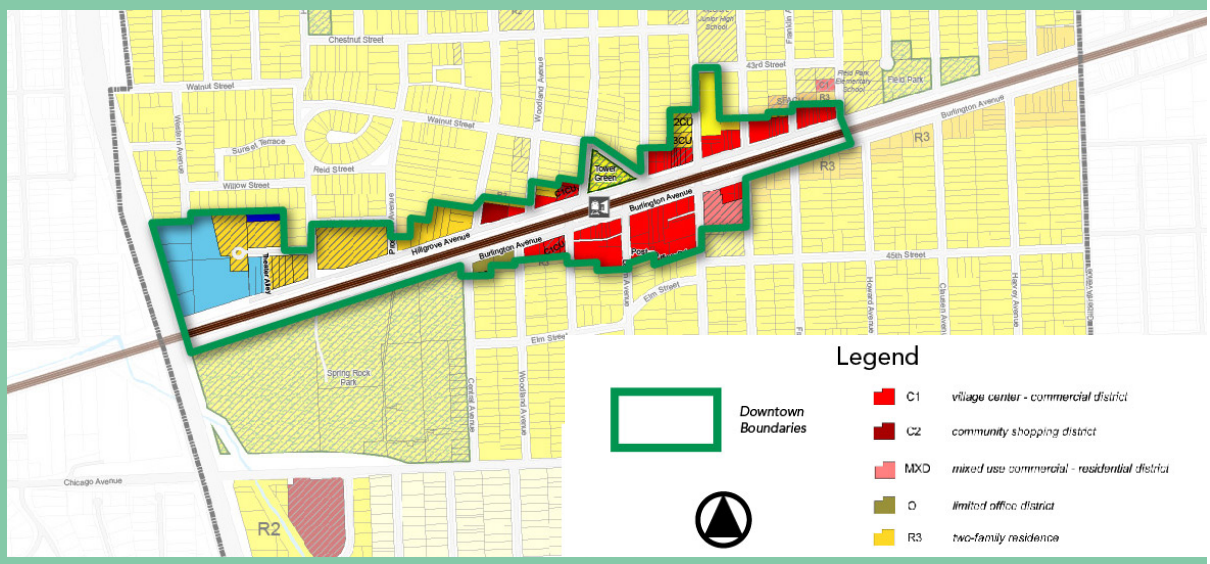
DOWNTOWN TIF DISTRICTS



1 Downtown TIF North Distirct 2 Downtown TIF South Distirct

FIGURE 2

DOWNTOWN ZONING DISTRICTS



Images: Village of Western Springs

Downtown Western Springs Zoning Districts

C1 - Village Center Commercial District
This district constitutes the town center or downtown of Western Springs and is intended to accommodate a range of compatible retail, financial, service, governmental, professional and residential uses in a setting conducive to and safe for pedestrian activity. This district is intended principally for retail commercial uses.

C2 - Community Shopping District
This district is intended to provide for those commercial activities that require locations along arterial or collector streets with larger lots and greater vehicular access.

MXD - Mixed Use Commercial-Residential District
This district is intended to provide opportunities for development of sites with new or rehabilitated buildings that contain a mix of commercial and residential uses. The first floor of such buildings should provide space for commercial, office, retail and service uses that are easily accessible to the public.

O Limited Office District
This district is intended to provide an environment for small office facilities that generate minimal vehicular traffic and require little visibility from the streets on which they are located. It is intended that this district be located principally to function as a buffer between commercial and residential districts. This district must be located adjacent to a commercial district. A single residential dwelling is permitted above the first floor.

R3 – Two-Family Residence District
This district is intended to provide a residential environment for two-family dwellings and shall be located on the fringe of single-family neighborhoods along arterial and collector streets or adjacent to the downtown area. "Two-family units" may be defined either as side-by-side separated by a common wall or stacked units with one unit on top of the other.

An understanding of the potential customers for downtown Western Springs and nearby central districts is provided by comparing the population within a five-minute drive time radius of the downtowns, measured from each community's Metra station. A five-minute drive time is considered typical for customers to purchase convenience goods and everyday items, and much of the radius can be considered a reasonable walking distance. While the five-minute drive time applies to many retail goods, there are unique businesses in the downtown area that draw from across the region such as legacy commercial businesses and acclaimed restaurants and retailers; however, this pattern of consumer behavior is difficult to quantify through drive-time analysis, but these patterns are worthy of acknowledging.

The five-minute drive time radii for Western Springs, La Grange, Hinsdale, and Clarendon Hills are shown in Figure 3 on the following page; it is worth noting that there is considerable overlap between the drive time and adjacent communities, well past established municipal boundaries. Overall population, daytime population, and housing units in the Western Springs area are lower than its neighbors of La Grange and Clarendon Hills, but consistent with Hinsdale. Household income and disposable income are highest in Western Springs and Hinsdale. This is partially explained by the higher proportion of single-family homes within the five-minute drive time of downtown Western Springs and Hinsdale. This comparison is shown in Table 1 on the next page.

TABLE 1: *DEMOGRAPHIC COMPARISON OF WESTERN SPRINGS AND NEARBY DOWNTOWNS (FIVE-MINUTE DRIVE-TIME RADII)*

	2024 Population	2024 Daytime Population	Median Household Income	Housing Units	Disposable Income	Median Age
La Grange	35,916	33,291	$124,664	14,370	$101,524	41.4
Clarendon Hills	25,418	25,044	$124,374	10,242	$101,092	41.0
Hinsdale	18,838	23,979	$200,001	6,445	$162,092	41.1
Western Springs	**20,739**	**23,500**	**$196,174**	**7,391**	**$146,288**	**41.6**

Data: Esri Business Analyst 2024, US Census Bureau ACS (2018-2023) Five-year Estimates

FIGURE 3: *FIVE-MINUTE DRIVE-TIME RADII FROM EACH COMMUNITY'S METRA STATION*

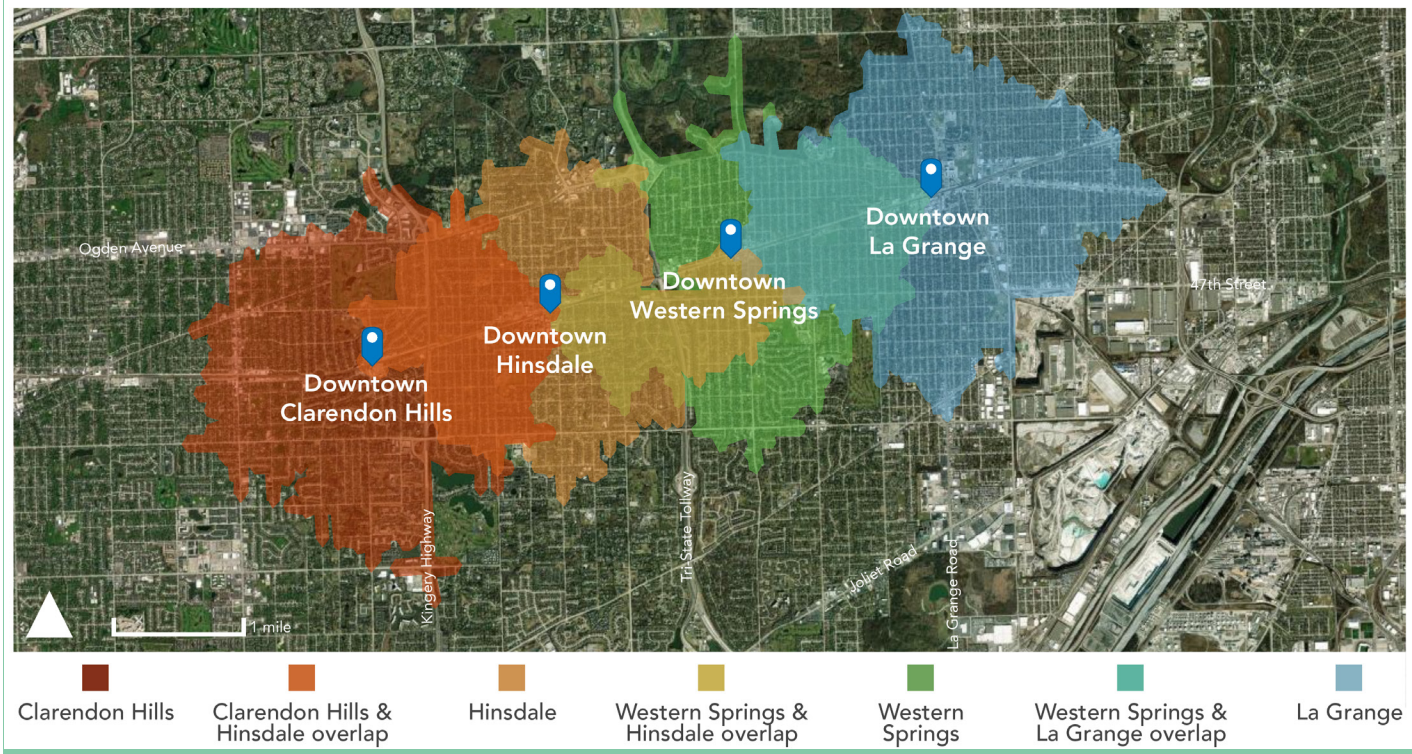


Image: Esri Business Analyst

Business Composition

Downtown Western Springs is home to approximately 98 businesses. Just over 20% of these businesses are classified as retail, dining, or food service (21 businesses). Office uses constitute the majority of downtown businesses, with 58% classified as either professional or medical office use (56 businesses). This data was derived through a walking tour to verify and categorize businesses downtown. The categorization and business breakdown from walking tour findings are represented in Figure 4.

Looking closely at the office landscape downtown, there are distinct patterns in how these office spaces are distributed across the area, particularly concerning the use of ground-floor versus upper-floor spaces. Ground-floor office space is a consideration for the area's non-retail businesses, especially for offices seeking visibility and easy client access. While some office users may prefer first floor space, most can be adequately served with upper floors; due to low overall vacancy, prospective office tenants may rent the first available space that meets their size and budget requirements.

Western Springs' zoning code allows for a range of ground floor uses, including offices, on the first floor of buildings downtown. Some suburbs restrict office uses from ground floor spaces in at least a portion of their downtown through zoning, including Clarendon Hills, Hinsdale, and La Grange. In Western Springs, the flexibility in zoning accommodates office uses in a high-demand commercial district with few vacancies. However, ground floor offices can reduce foot traffic in the downtown district compared to traditional retailers using that space and can also limit available space for prospective retailers. Second-floor office space also plays a role in shaping the downtown Western Springs business mix. Professional and medical offices typically are located on the upper floors of mixed-use buildings, providing for quieter, more private settings or more affordable office space options. The availability of second-floor office space offers flexibility for businesses that may not require the foot traffic or visibility of ground-floor locations yet still want to be in a central location within walking distance of downtown amenities.

Among the various businesses operating in the downtown area, 21% (retail, specialty grocers, and food service) are those that typically generate sales tax, as shown in Figure 5. This number is a lower proportion than in 2007 (30%), but the number of businesses remains similar, with 23 businesses in 2007 and 21 in 2024. While other uses, such as banks, offices, and services draw people to the downtown area, sales tax producing businesses are desirable in that they provide revenue to the Village and create destinations within the downtown area.

FIGURE 4: *BUSINESS TYPES IN DOWNTOWN WESTERN SPRINGS*

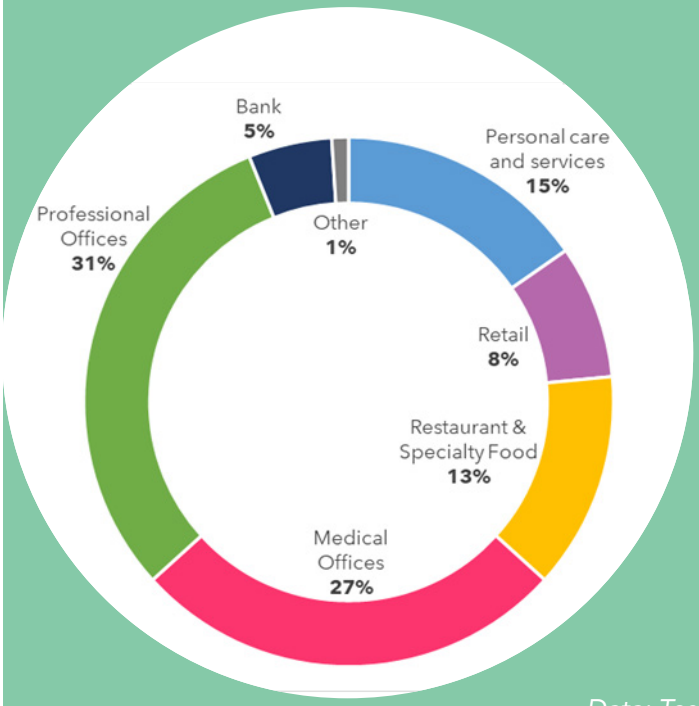
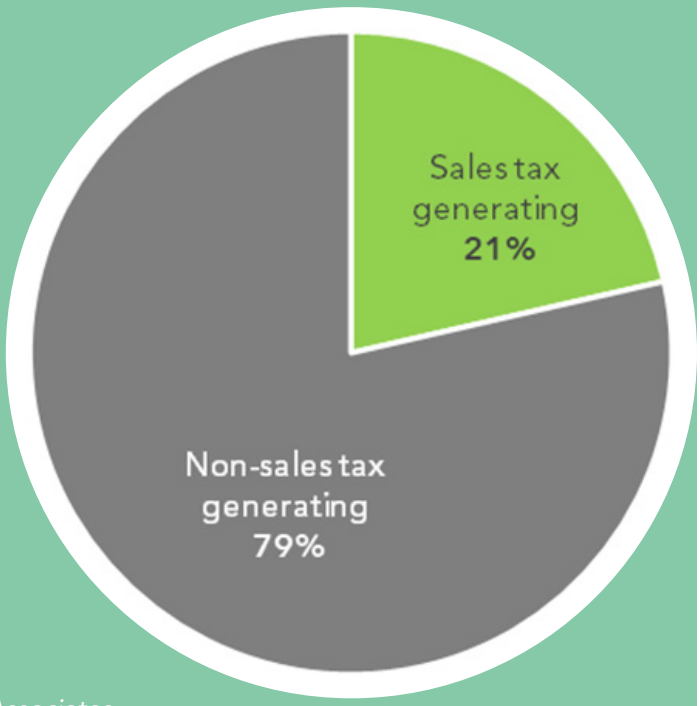


FIGURE 5: *PROPORTION OF SALES-TAX GENERATING BUSINESS IN DOWNTOWN AREA*



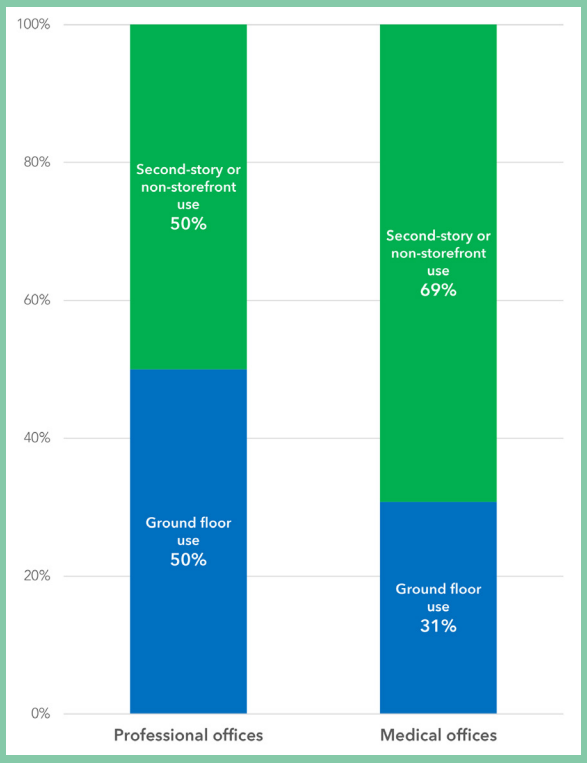
Data: Teska Associates

Office uses currently occupy a large portion of traditional storefront spaces in the downtown area. Medical and professional services are the primary use of the office spaces found in Western Springs. Over a third of medical offices (31%) are ground floor use while the remaining 69% are located on the second-floor level, or situated in a non-storefront property, as shown in Figure 6. Professional offices are divided evenly between ground floor/storefront locations and second floor tenancy. Many of these spaces are in older Class C buildings, which typically are older buildings with limited amenities.

The predominance of Class C office space may also influence business owners' location decisions. The lack of amenities in upper floor spaces may drive offices to storefront locations where these businesses may take advantage of opportunities to alter the storefront appearance to create a more welcoming space for guests, ability to redesign interior space tailored to the activities of the use, comply with the Illinois Accessibility Code, and visibility from the street.

The low level of vacancy in the downtown area is also a notable consideration. Many prospective business owners seeking to obtain space in the downtown area may be less concerned about the type of space rather than the availability of space in general. In other words, "getting into" the downtown district could be more important than "finding the perfect space" for some.

FIGURE 6: *PROPORTION OF GROUND FLOOR MEDICAL AND PROFESSIONAL OFFICES*



Data: Teska Associates





Retail Sales

In 2023, downtown Western Springs accounted for about 25% of all sales tax-generating sales in the Village. Much of the sales tax in the community can be attributed to high volume sales at larger chain stores outside of downtown. Total downtown sales were roughly $29.5 million in 2023; of that, about 37% of all downtown sales were at downtown restaurants. Other tax-generating sales in the downtown area can be attributed to traditional retail, grocers, and occasional sales of devices at medical offices. These figures are presented in Table 2.

Sales in Western Springs increased slightly from 2022 to 2023 (based on data available from the Illinois Department of Revenue). Dining sales in the downtown area experienced a most dramatic increase between 2022 and 2023 (18% increase), potentially the result of increased public comfort with in-person interactions after the pandemic and/or the restaurants' adaptability to a new environment for restaurants. Non-dining sales downtown essentially remained flat, decreasing slightly during that same period. These data reflect the increasing popularity of dining downtown.

TABLE 2: *VILLAGE AND DOWNTOWN PHYSICAL RETAIL SALES**

	2022 Total Sales	2023 Total Sales	Percent Change
Village-wide Sales	$115,284,090	$117,114,175	+2%
Downtown Sales	**$28,584,464**	**$29,546,205**	**+3%**
Downtown Dining	$9,345,866	$11,017,230	+18%
Downtown Other	$19,238,598	$18,528,975	-4%

Data: Illinois Department of Revenue
**Sales figures do not include online sales*



Village Parking

Permit parking spaces are located along the Metra tracks and in other portions in and near the downtown; these spaces are intended for commuter or employee parking, other spaces are available for downtown customers. The Village controls these spaces through distribution of permits. Despite a significant drop-in activity during the COVID-19 pandemic, the number of Village parking permits downtown has remained relatively stable between 2017 and 2024. 2019 saw the highest number of parking permits issued and 2021 was the lowest (Table 3). The number of parking permits issued has gradually increased toward pre pandemic levels; this signals increasing demand for commuter parking, increasing instances of downtown workers commuting by car, or a combination of the two.

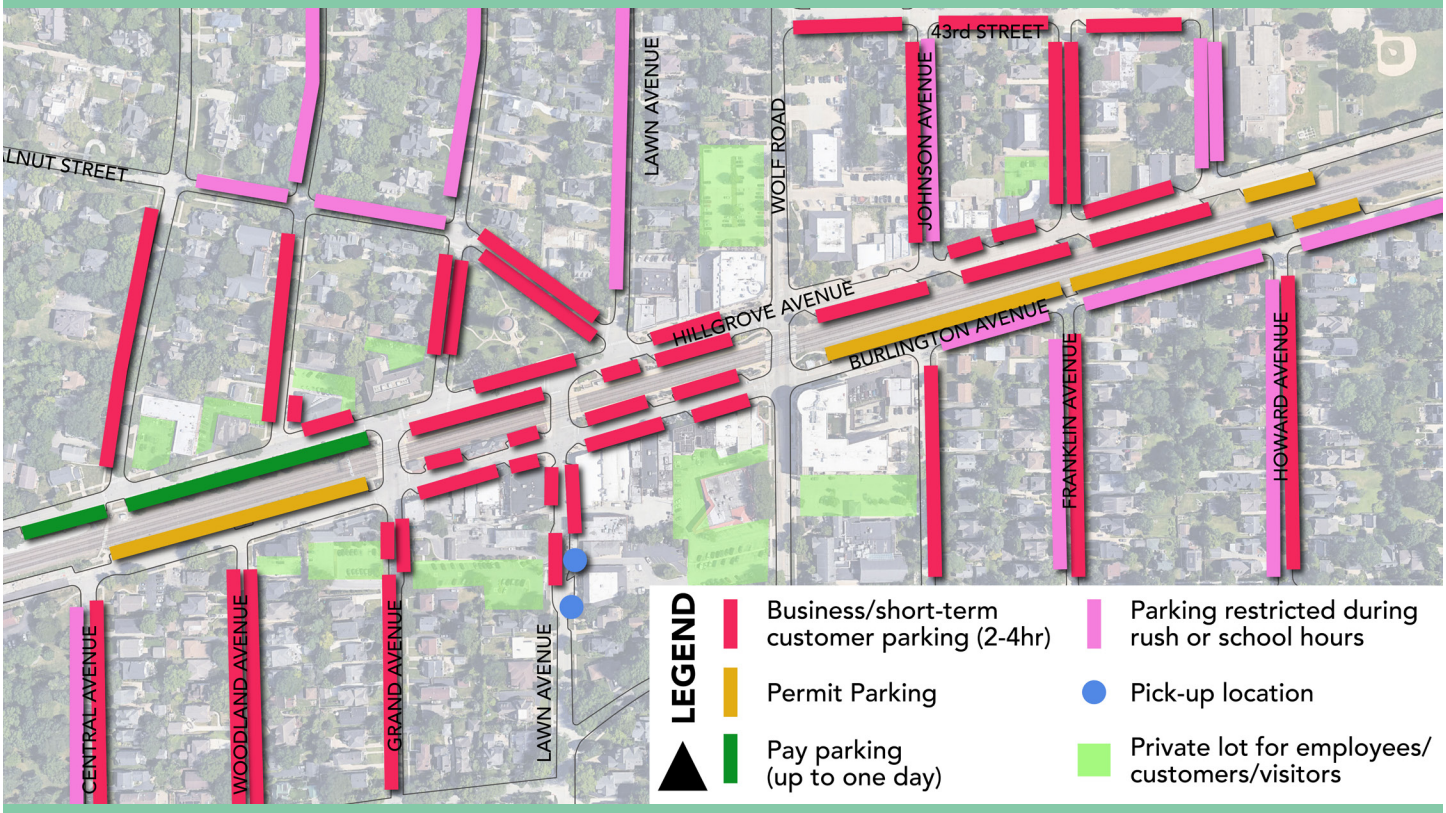
Feedback from business owners has generally signaled satisfaction with the quantity of employee and commuter spaces in the downtown area. Parking available for customers, however, was a concern for some business owners. Roughly three-quarters of responses to the customer survey believed parking in the downtown district to be "average" or better. Figure 7 shows parking options in downtown Western Springs.

TABLE 3: *DOWNTOWN PARKING PERMITS ISSUED*

	2017	2018	2019	2020	2021	2022	2023	2024
Parking Permits Sold along Tracks	310	305	311	268	236	254	264	270

Data: Village of Western Springs

FIGURE 7: *PARKING ACCOMMODATIONS IN DOWNTOWN WESTERN SPRINGS*



Data: Village of Western Springs

Strengths, Weaknesses, Opportunities, Challenges

Stakeholder interviews and online surveys provided deeper understanding of the downtown business environment. The Strengths, Weaknesses, Opportunities, and Challenges (SWOC) list below, derived from that input and the consultant team's observations, summarize what aspects of downtown Western Springs are advantages to be built upon and what are areas for possible enhancement.

Strengths:

- High incomes in Western Springs support downtown businesses
- Connectivity to and visibility from the Metra BNSF Line and Wolf Road
- Proximity to Interstate 294
- Longstanding businesses with deep connections to the community
- Presence of legacy businesses (bakeries, delis, restaurants, hardware stores) that can draw repeat customers
- Loyal customer base, some of whom grew up in the community and either still live in Western Springs or return for familiar businesses
- On-premises business owners that foster a personal connection with customers
- Historic architecture and attractive streetscaping
- Office and service businesses that draw potential customers to the area
- Village provided support for continued building maintenance, streetscape enhancement, and new development

Weaknesses:

- High levels of ground floor offices that can disrupt foot traffic
- Parking challenges balancing customer, employee, and commuter parking (real and perceived)
- Proximity to larger downtowns in La Grange and Hinsdale with more dining, entertainment, and shopping options
- Limited hours of operation for many businesses
- Older interior spaces requiring regular maintenance and upkeep
- Basement flooding in certain commercial structures due to downtown's location near historic springs
- Commuters often move through downtown without stopping at businesses
- Low population density surrounding the downtown
- Lack of quick serve dining options

Opportunities:

- Interest for more entertainment uses
- Wayfinding signage to communicate parking areas
- Secondary market attraction to retail development
- Western Springs Business Association (WSBA) is refocusing its goals and purpose
- Joint marketing efforts with businesses
- Recent and continued downtown beautification
- Continued downtown event programming
- Mixed-use development to add residents, retail and office space
- Quick-serve breakfast options to cater to commuters and locals
- Expand branding to reflect historic, small town, walkable identity

Challenges:

- External impact on business owners, such as State/ County taxes, cost of labor, rising supply costs
- Limited space to increase diversity in dining options
- Customers' tendency to drive between downtown stores, rather than walk, reducing downtown foot traffic
- Keeping the scale of new development in the district from overwhelming existing character
- Lack of vacant storefronts for new businesses to find space



Existing Conditions Summary

- The existing physical form of downtown Western Springs has its business district conveniently located near commuter rail and the core of the community. However, its long and narrow format creates challenges for expanding the space for additional businesses and makes parking less convenient.
- Loyal customer base, high incomes of the area residents, and high-quality customer services of downtown business, are considered by businesses and customers alike to be significant strengths of downtown commerce.
- Office space downtown is largely Class C, creating affordable office stock for a range of users. This creates a desirable office market and office users are quick to lease upper floor space and available storefronts.
- Restaurant spending in the downtown area jumped by nearly 20% from 2022 to 2023, signaling a potential demand for experiential businesses downtown.





3 MARKET ASSESSMENT

Exploring Comparable Towns

To provide a meaningful comparison of downtown Western Springs and competitively aligned business areas, neighboring districts were identified based on proximity, market characteristics, and the nature of their downtown areas. The most relevant areas are downtowns in La Grange, Hinsdale, and Clarendon Hills. This competitive alignment was selected to explore locations that share similar demographics, are geographically close, or serve as potential alternatives for visitors or customers to Western Springs, while also offering contrasting attributes that highlight the unique aspects of the Western Springs community.

La Grange and Hinsdale are larger business districts with a wider variety of retail and service offerings, serving a broader customer base. Clarendon Hills, while smaller, still provides an interesting contrast due to its business mix and proximity to Western Springs. Each of these towns differs from downtown Western Springs in terms of business density, parking availability, and overall size. Despite competitively aligned downtowns' differing business mix and scale, Western Springs remains competitive with these areas in attracting new businesses and investment. By comparing these areas, a better understanding of how Western Springs stands apart and how to capitalize on its strengths emerges. A map locating the comparable downtowns is shown in Figure 8.

FIGURE 8: *DOWNTOWN WESTERN SPRINGS AND COMPETITIVELY-ALIGNED DOWNTOWNS*

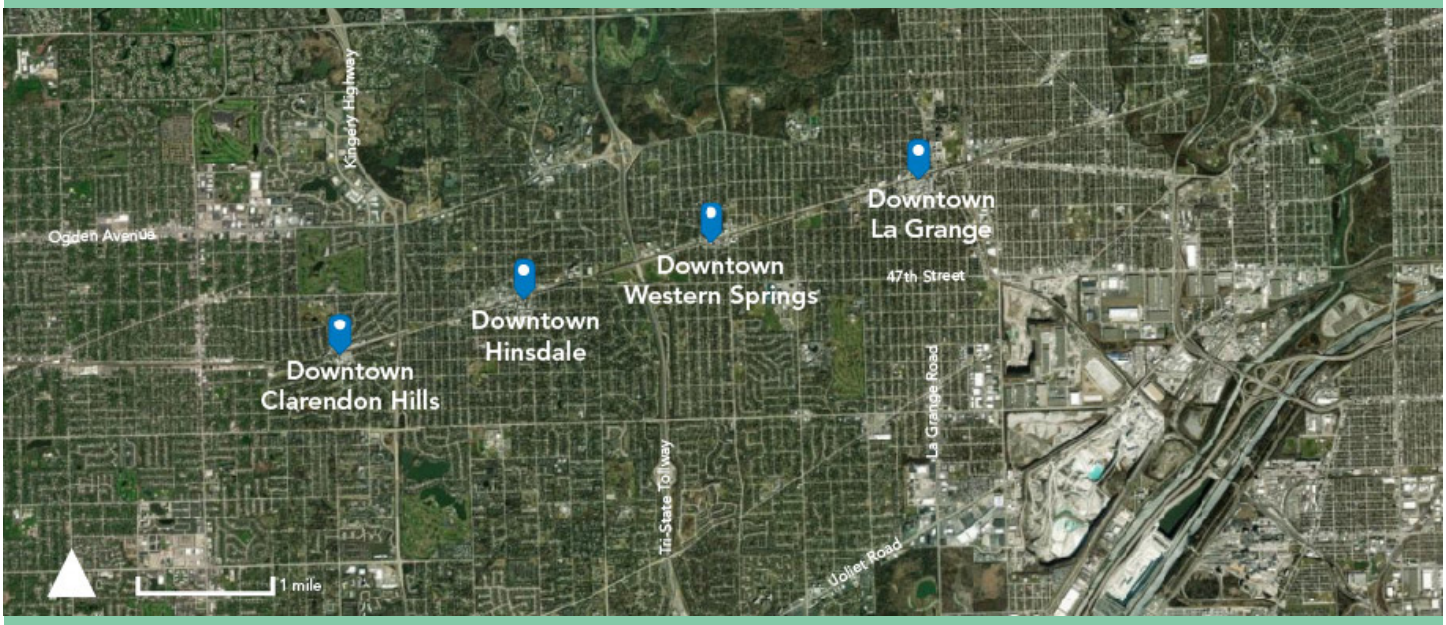


Image: Esri Business Analyst

Competitive Alignment

A key question in the Market Assessment is to understand how downtown Western Springs compares to and competes with other areas where its potential visitors may shop, dine, or use services. Each of these areas presents clear differences to Western Springs. Therefore, a one-to-one comparison of retail square footage, vehicle traffic, number of restaurants is an apple to oranges analysis and not an appropriate approach. It also would not consider the unique characteristics of the business areas. Ultimately, the Village's goal is to make downtown Western Springs the best downtown Western Springs it can be, not to mimic the policies or development strategies of adjacent downtowns. Nonetheless, comparisons can show relative strengths and opportunities for enhancement in downtown Western Springs and certain takeaways from other communities can be applied to the Village, where applicable; those are considered in this section of the Assessment. Brief reasoning behind the selection of comparable communities is noted below.

- **Clarendon Hills** is a comparably sized downtown located along the same Metra service line. Stakeholder interviews revealed that downtown Western Springs businesses draw customers from Clarendon Hills, and the environment and feel of the downtowns is considered similar.
- **Hinsdale** and **La Grange** present similar characteristics in regard to competitive alignment. Each of these neighboring communities has a downtown larger than Western Springs, though Western Springs remains competitive for attracting businesses and stakeholder interviews pointed to both as the Village's primary competition. Each has the advantage of a large commercial presence and a variety of dining and business options that attract customers. The consumer survey indicated that visitors preferred the variety of stores and dining options in these downtowns.

The data provided in this section are derived from the Esri index, a widely recognized tool used to analyze consumer behavior and demographics. Specifically, the Esri index in this context measures the likelihood of residents within a certain area to engage in specific activities, such as dining at restaurants or other food service establishments. Esri compiles this data from a combination of consumer behavior research, the MRI-Simmons Consumer Survey, and other sources that track spending patterns, preferences, and lifestyle activities. The MRI-Simmons Consumer Survey provides detailed information about U.S. consumer behaviors based on a broad range of variables.

Within this section, consumer behaviors are examined on a five-minute drive time basis from each community's Metra station, representing the "market" of the downtown area, as five minutes is considered a typical driving time for convenience goods. Downtown businesses are examined on a five-minute walk time basis from each community's Metra station, as this radius captures the vast majority of businesses in Western Springs' and comparable communities' downtown areas.

In 2024, downtown Western Springs' five-minute drive time market stands out as a strong customer base for its downtown. Residents within this market area average more meals at restaurants than residents of its peer communities except Hinsdale. According to the Esri restaurant index, the Western Springs market scores a 229, indicating that residents are 2.29 times more likely to visit a restaurant than the average American (100 is the baseline) per MRI Simmons Consumer Surveys, shown in Figure 9. However, it has the fewest food service/drinking establishments among comparable downtowns with only seven, and the second-lowest total number of businesses at 123 (Figure 10*). In comparison, downtown La Grange has 38 food service/drinking establishments and a relatively moderate meals index of 160, but it has a significantly higher number of total businesses (444). Hinsdale has 19 food service/drinking establishments and the highest meals index of 289, Hinsdale also has a large business presence (353 total businesses), making it the most active location overall in terms of both food service establishments and total businesses. Clarendon Hills has five food service/drinking establishments, a meals index of 202, and the smallest business base with only 79 total businesses. Overall Western Springs scores high in regard to the meals index, suggesting a strong market for dining and food away from home. However, its relatively low number of businesses and establishments compared to Hinsdale and La Grange suggest that some potential Western Springs diners are going to the other locations and that there can be capacity for more dining options in Western Springs. (Figure 11).

FIGURE 9 (left)

MEALS INDEX (five-minute drive time)

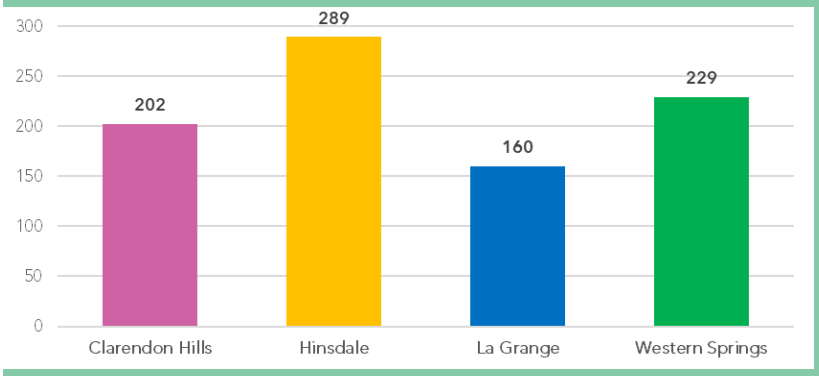


FIGURE 10 (right)

DOWNTOWN BUSINESSES COUNTS (five-minute walk time)

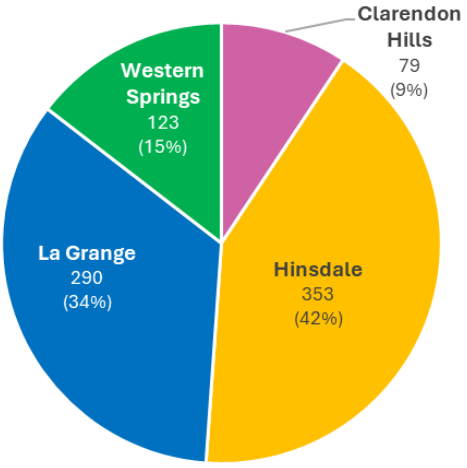
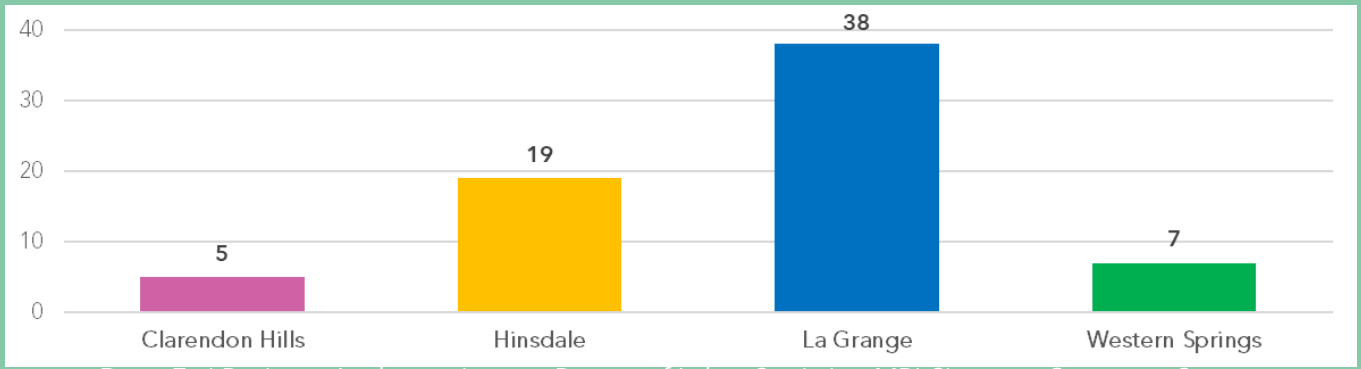


FIGURE 11: *DOWNTOWN RESTAURANT/FOOD SERVICE BUSINESSES (five-minute walk time)*



Data: Esri Business Analyst estimates, Bureau of Labor Statistics, MRI-Simmons Consumer Surveys

**Note: Esri business categorization includes home businesses and other less-traditional business uses*

Western Springs' strong meals index reflects the number of dining options in the community and in surrounding business districts. The efficiency of Western Springs' smaller but high-demand food service sector is more nuanced when compared to larger downtown areas. While larger districts may offer a wider variety of food businesses, the sheer concentration of restaurants in Western Springs may work to attract more customers who are specifically drawn to the area for dining. In larger districts, like La Grange, customers may choose to go there for lunch and then decide where to eat once they arrive, which spreads customer traffic across a broader range of establishments. In contrast, Western Springs' more concentrated food service sector fosters a situation where people are more likely to visit the area for a specific dining option. The quality of local dining options in Western Springs is a large part of what helps to ensure strong engagement with each establishment. Based on interviews, downtown Western Springs appears to be approaching the level of attraction seen in the larger downtowns, creating a similar draw where customers are motivated to visit its downtown for a focused, high-demand dining experience; this finding is supported by the community survey wherein a majority of respondents cited dining as a factor for why they visit downtown.

The availability of parking plays a role in competitive alignment. Areas where suburban visitors feel they can more easily park will have an advantage. As noted in interviews with local business owners, parking remains a challenge in the area, with perception that it has worsened in recent years. The limited parking availability, exacerbated by commuter/long-term parking spaces, has become a barrier (real and perceived) to potential customers and additional foot traffic. Parking was not cited as an advantage for competitively-aligned downtowns, and the parking situation in Hinsdale was noted as more challenging; however, Hinsdale and La Grange have prominent public and private garages and lots which can improve the perception of parking availability.

What makes downtown Western Springs distinctive is its loyal customer base and charming atmosphere, which contribute to its unique appeal. While hard to quantify, the frequency with which this characteristic was raised in conversations is notable. Per stakeholder findings, business owners note the community's strong sense of connection, and the success of local shops are key factors that contribute to the town's retail resilience. This highlights the value of fostering long-term relationships and the advantages to the Village of strategic succession planning, ensuring the continued presence of downtown businesses that are beloved by the community.

In terms of business activity, Western Springs may have a smaller overall business base, but its strength lies in the deep loyalty of its community. This loyalty, coupled with relatively higher income levels, helps sustain the downtown area despite its small size, non-traditional parking, and unconventional layout and street presence with office spaces mixed in. Unlike larger commercial districts that benefit from more competition and diversification, Western Springs thrives because of the strong, consistent support from its highly engaged and loyal customer base. Downtown Western Springs' resilience comes from the commitment of local residents and their continued patronage, not from trying to match the size or number of businesses in other areas. Understanding and supporting these strengths is critical for maintaining the vitality of downtown Western Springs and growing the district in a manner that reflects community priorities.





Competitive Alignment

Primary data collected from customers and business is as valuable to the Market Assessment as third-party quantitative data. To capture and understand public sentiment and shopping patterns, an online survey was conducted regarding the use and opinion of downtown Western Springs and surrounding areas. The customer survey was paired with a business owner survey that helped provide understanding of the realities of running a business and to find overlap between business and customer goals. Primary findings of these surveys are summarized below, with the full survey results provided in the appendix to this report.

Customer Survey

174 participants responded to the downtown Western Springs Customer Survey in the months of November and December 2024 (a sizable response for this type of survey). The intent of the survey was to understand what draws people to the downtown area and what sort of improvements would attract new users and keep people coming back more often. Nearly all the survey respondents were Village residents.

- For survey respondents, Western Springs was the most commonly visited business district among regional competitors (Oakbrook, downtown La Grange, Burr Ridge Town Center, etc.), with over 90% of respondents making at least a few purchases monthly within the district. Garden Market was the second most popular. Even with regional competition like the Quarry in Countryside or neighboring downtowns, this presents evidence that residents prefer to support businesses within the boundaries of Western Springs.

- Downtown Western Springs and downtown La Grange were the most commonly visited dining areas among respondents, while Garden Market, downtown Western Springs, and the internet were the most common locations for shopping generally. This suggests that downtown Western Springs is already capturing the spending of many of its residents.

- Dining was selected by 76% of respondents as a reason they visit downtown Western Springs, and shopping was cited as a reason by 71% of respondents. Events (44%) and commuting (27%) were also notable draws, shown in Figure 12.

- Variety and quality of goods and dining options are important to survey respondents and was frequently mentioned as a reason why they elect to shop or dine elsewhere. This is in keeping with qualitative feedback heard from stakeholder interviews about larger nearby downtowns attracting customers due to a broader range of businesses. Hours of business operation and parking were also listed among the reasons why respondents decided to dine elsewhere. This is depicted in Figure 13.
  - Increased variety of dining and shopping options may capture more resident spending that currently leaks into neighboring communities. Over half of the survey respondents said they would spend more time in the downtown area with the addition of more casual and sit-down restaurants, entertainment options, taverns or breweries, specialty food stores, coffee shops, cafes, and convenience items. Over half of respondents also stated that they would visit local restaurants more often if they had longer hours of operation.

- An open-ended question asking for additional comments about the downtown area garnered many responses wishing for a breakfast restaurant downtown to fill the gap left by the closing of Hash Stacks. The lack of a quick-serve breakfast business in the downtown area was also noted as a restaurant gap (and potential opportunity) in stakeholder interviews.

- Despite a desire for longer hours of business operation, nearly half (48%) of respondents noted that daytime (10am-5pm) was the most convenient time for them to shop. Saturday received the second most responses at 26%. With most downtown businesses open during the day on weekdays and on Saturdays, downtown Western Springs generally caters to the preferences of 75% of survey participants in regard to hours of operation. With flexible post-pandemic work schedules, it is not possible to determine whether business hours meet consumer preference or consumers have adapted to existing business hours. (Figure 14).

FIGURE 12: *REASONS LISTED FOR VISITING DOWNTOWN WESTERN SPRINGS*

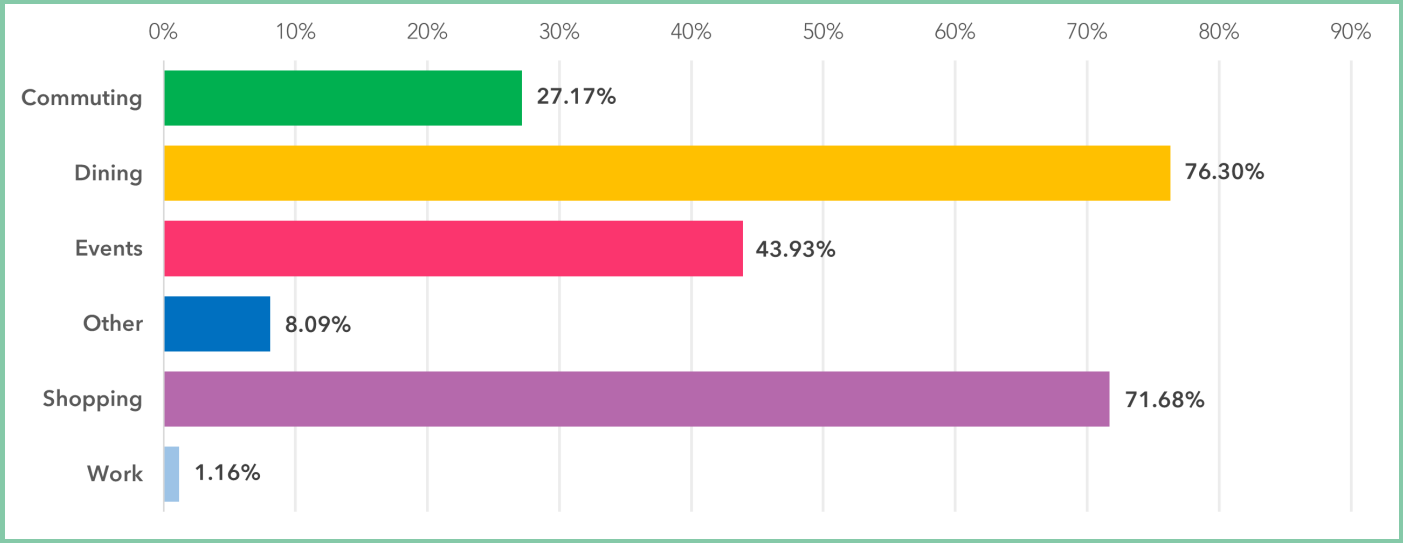


FIGURE 13: *FACTORS THAT DRAW RESPONDENTS TO DINE IN BUSINESS DISTRICTS OUTSIDE OF DOWNTOWN WESTERN SPRINGS*

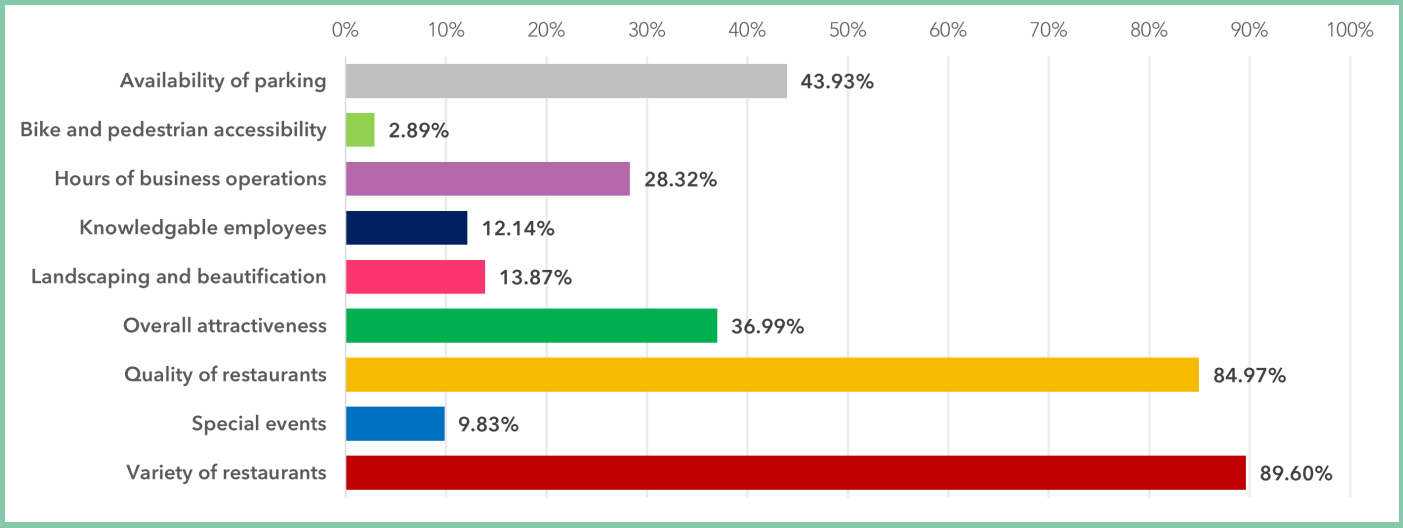
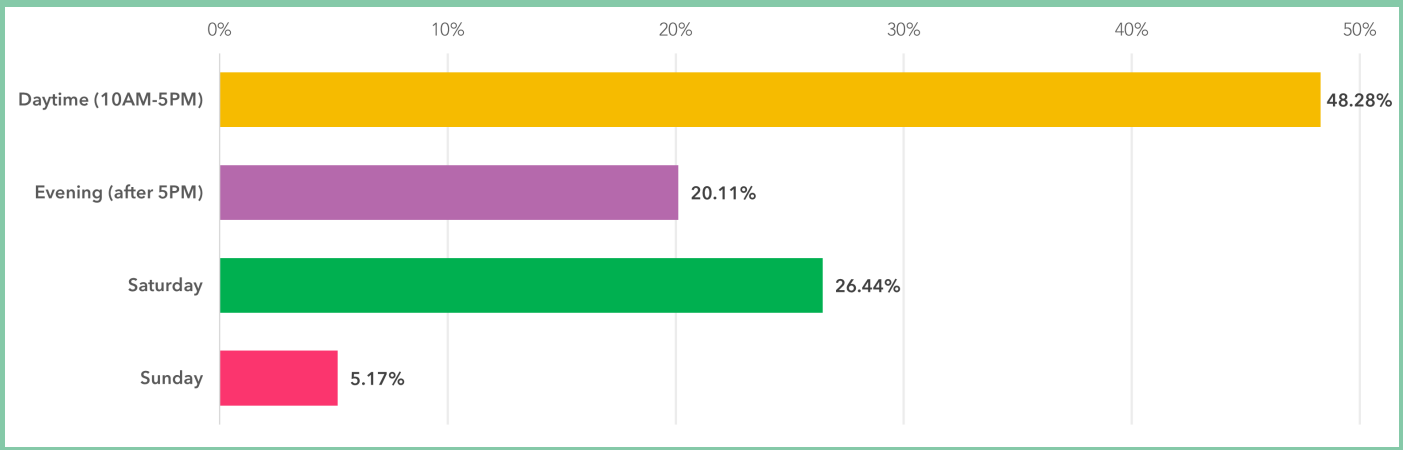


FIGURE 14: *SHOPPING PREFERENCES BY TIME AND DAY OF THE WEEK*



Data: Customer survey data

Business Owner Survey

Though responses to the business owner survey were limited, responses largely echoed the sentiments expressed at stakeholder interviews (12 responses were received). Many of the positive attributes of the Village, such as loyal customers, safety, and community involvement, were acknowledged in the survey:

- Western Springs was chosen as a place for business because it was close to home; many business owners are Village residents or live nearby and other adjacent suburbs were contemplated by business owners.
- Business owners characterize the community as welcoming, accessible, and sporting a loyal customer base. These reasons were also cited as why they moved to the community as an individual or family, later starting a business.
- Safety, community events, beautification, and a cooperative business environment were generally considered at least "above average" by the majority of respondents.
- Parking availability and the need for a wider variety of stores and restaurants were selected as concerns that business owners heard from their customers.



Retail Market Potential

The market potential in Western Springs is most clearly observed within the five- and ten-minute drive-time radius from the Metra station, which serves as a common central point for the downtown area. These radii are used to analyze the local consumer base and determine the economic stability and spending power of the population that can easily access the downtown. Retail spending growth is analyzed at the five-minute drive time level, which is typical travel time for convenience goods, and generally also a walkable distance. A ten-minute drive time represents the consumer habits and demographics of potential customers the Village may attract but may not capture due to competition with other business districts at a similar driving time. For example, a resident in the northern portion of the Village would likely choose downtown Western Springs for convenience goods, but for specialty goods, one may choose to travel farther than five minutes, which opens up different downtowns and commercial centers with which downtown Western Springs must compete at the ten-minute drive time.

The five-minute drive-time radius from downtown Western Springs shows particularly strong indicators, with a median household income of $196,466 in 2024, projected to increase to $200,001 by 2029. This high level of income provides a foundation for retail, services, and luxury goods, suggesting that businesses targeting such households can be positioned to succeed. Similarly, the ten-minute drive-time radius, which expands the market reach, also reveals a robust median household income of $132,455 in 2024, with an increase to $153,356 by 2029. This demonstrates a broader, and still higher-income, customer base, further highlighting the area's economic stability and strong consumer spending power. Figure 15 highlights these findings.

Demographically, the five-minute radius shows a stable population, with a slight decline from 20,859 people in 2024 to 20,163 by 2029, along with a small reduction in households and the population aged 18 and older. Despite this fluctuation, the relatively high household count indicates a steady local residential market. Similarly, the ten-minute radius shows a more populous area, with a slight decrease in population from 99,660 in 2024 to 96,514 in 2029, along with a small dip in number of households. Although these numbers reflect modest declines, they are not indicative of a larger trend of instability, which can be seen in Figure 16. The consistency in population and household income is important because it aligns with qualitative insights from stakeholder interviews, which highlighted that Western Springs retains strong consumer loyalty, driven by high-

quality customer service, owner involvement, and a tight-knit community atmosphere. This connection between demographic stability and the qualitative feedback from local business owners reinforces the idea that the area continues to provide a strong customer base, especially for businesses offering premium goods and services. The data and feedback together paint a consistent picture of an economically stable market.

FIGURE 15: *MEDIAN HOUSEHOLD INCOME (five- and ten-minute drive time radii from Western Springs)*

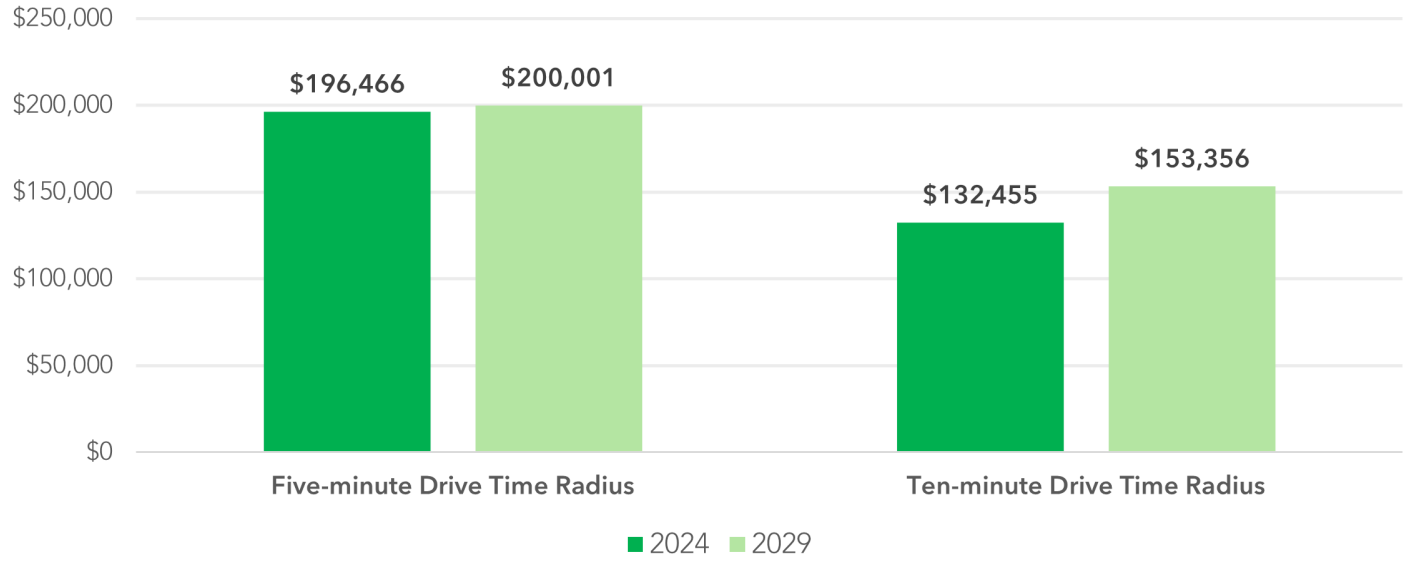
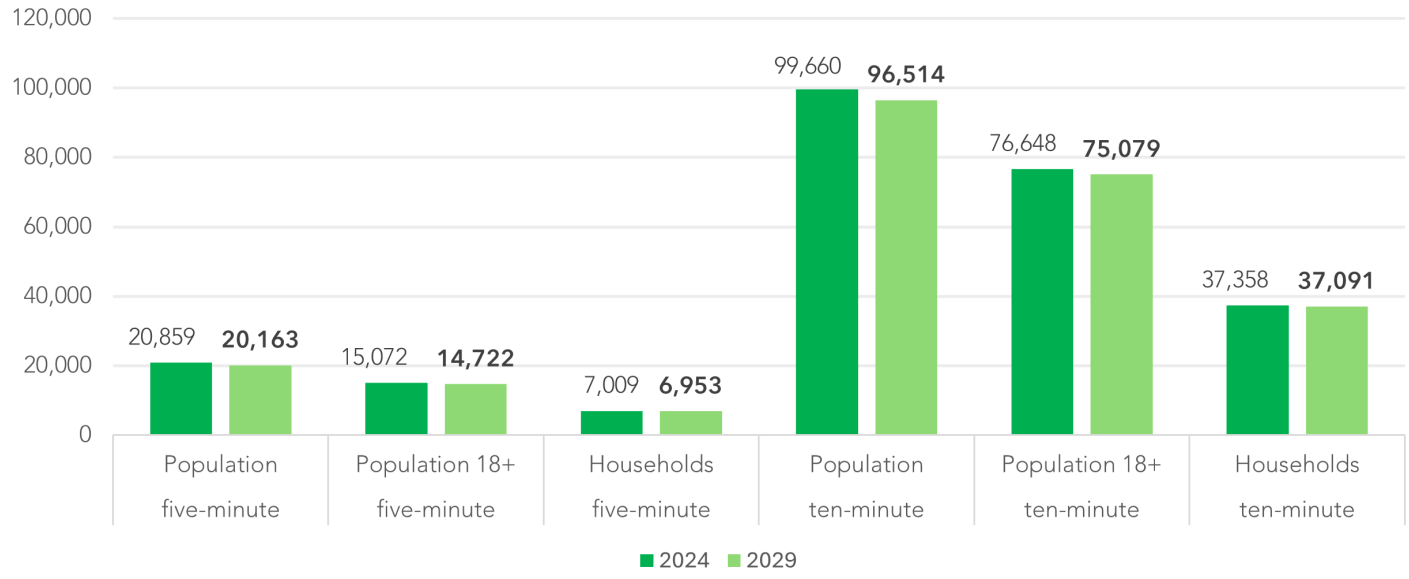


FIGURE 16: *DEMOGRAPHIC SNAPSHOT (five- and ten-minute drive time radii from Western Springs)*



Data: Esri Business Analyst 2024, US Census Bureau ACS (2018-2023) Five-year Estimates

Based on Esri analysis of American Community Survey & Bureau of Labor of Statistics (ACS & BLS, respectively) data, the retail potential of downtown Western Springs is promising, particularly in the areas of apparel, entertainment, and food, based on consumer spending data from 2024 to 2029. The projected demand for these sectors shows steady growth, signaling a positive retail outlook for the region; projected demand is shown in Figures 17, 18, 19, and 20.

At a five-minute drive time, the apparel and services sector, consumer spending is expected to grow by approximately $3.7 million, from $35.4 million in 2024 to $39.1 million by 2029. This growth rate aligns with the 10% projected increase over the five years, suggesting a stable and expanding market for clothing, accessories, and related services. Entertainment and recreation spending is expected to grow at a similar rate with a $6.7 million increase from 2024 to 2029, grocery spending is expected to grow by $11.2 million and dining spending is expected to grow by $6.3 million. These figures signify a healthy and growing market for traditional downtown retail goods; however, the Village can also pursue capturing spending at a ten-minute drive time. Though this drive-time radius presents more competition for the Village, Western Springs can endeavor to introduce new commercial offerings downtown and attract prospective customers from outside the Village.

The ten-minute drive time radius mirrors the trends and projected growth of the five-minute drive time radius; however, planning for this increase in spending at a subregional level will allow the Village to pursue business types that can take a portion of this projected growth. Based on a ten-minute drive time, the apparel and services sector, consumer spending is expected to grow by approximately $16.7 million. This growth rate mirrors the projections for the smaller five-minute drive time radius. Given the relatively high median household incomes in the area, there is an opportunity for both mid-range and premium apparel retailers to meet the demands of local consumers. While national retailers will likely choose to move to more established premium commercial areas like Oakbrook Center, local entrepreneurs can meet the local demand with locally focused boutiques, in keeping with the small business nature of the downtown area.

The entertainment and recreation sectors are other areas with growth potential. Consumer spending is forecasted to increase by about $30.1 million, from $258.4 million in 2024 to $288.5 million by 2029. This growth highlights an expanding appetite for entertainment services such as movie theaters, recreational facilities, music venues, and leisure activities. The 10.4% increase in spending over the five-year period signals a sustained interest in recreational experiences, making it an attractive sector for both local businesses and larger entertainment brands. The Opry in downtown Western Springs serves as an example of entertainment-oriented small businesses; however, spatial constraints in the downtown may limit the scale and type of entertainment there.

The food sector shows the largest forecasted growth, with consumer spending projected to increase by $79.6 million, from $683.7 million in 2024 to $763.3 million in 2029; comprised of a $51.2 million increase in grocery spending and $28.3 increase in spending on dining and food away from the home. The consistent 10.4% increase in food spending points to a strong and growing demand for dining establishments, grocery stores, and other food-related services. This is a critical sector for the region, driven by the area's higher income population and local demand for dining out and purchasing food products. Importantly, restaurants, specialty grocers, and other food service operations are flexible and have shown the ability to be accommodated within the older, smaller storefront spaces already present in downtown Western Springs.







FIGURE 17: *PROJECTED SPENDING GROWTH (five-minute drive time from Western Springs Metra)*

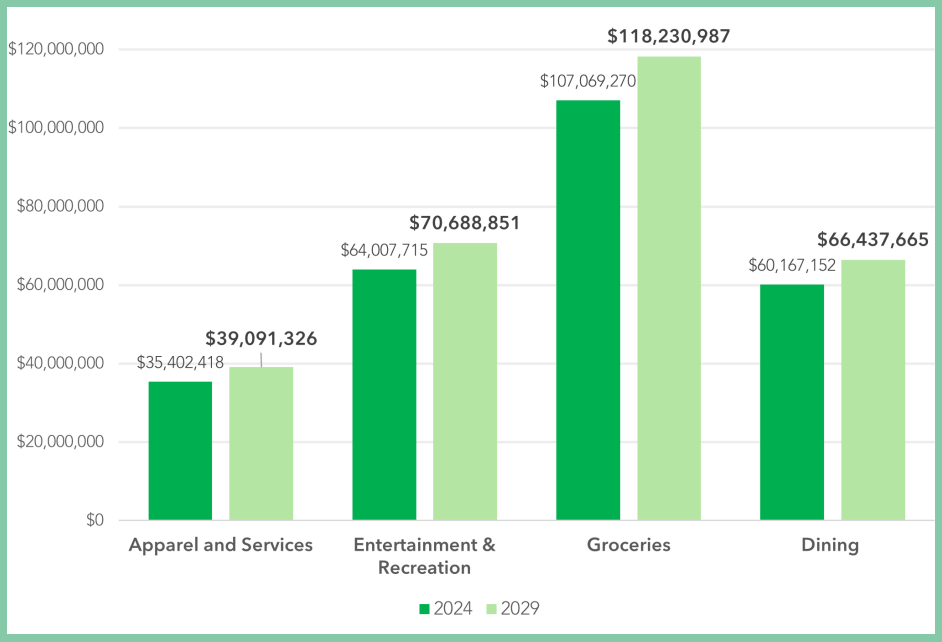
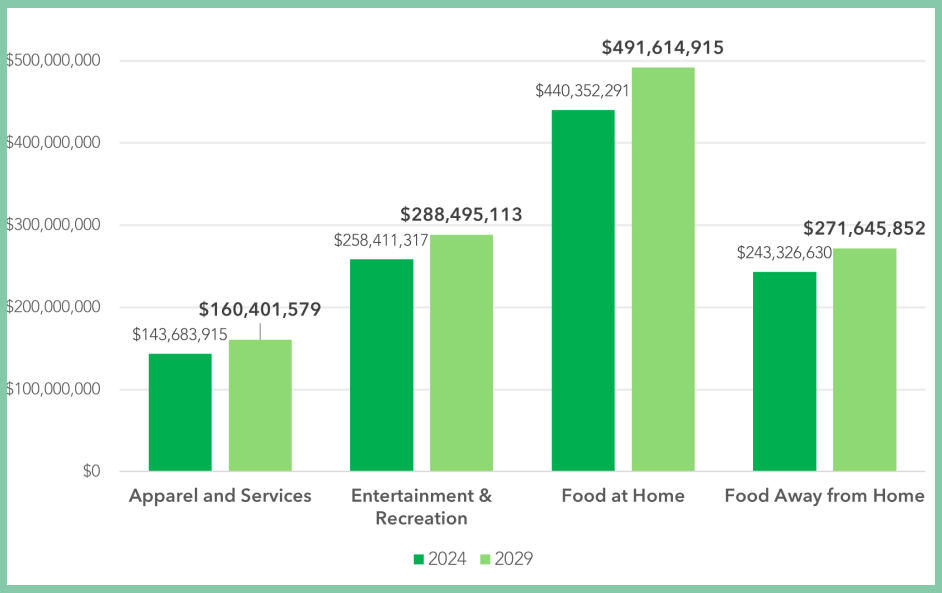


FIGURE 18: *PROJECTED SPENDING GROWTH (ten-minute drive time from Western Springs Metra)*



Data: Esri, Bureau of Labor Statistics, MRI Simmons Consumer Surveys 2024

Overall, Western Springs presents healthy retail potential across key sectors, driven by consistent spending growth and a higher income, steady population. The favorable demographic trends support this potential, particularly in food, entertainment, and apparel and sustained demand. In keeping with this information, local restaurant owners have shared positive feedback about the business environment, noting a desire for more dining options to attract additional traffic to the area. This aligns with customer and business owner interest in expanding the culinary offerings in Western Springs.

On balance, this demand is tempered by the limited availability of retail space, parking configurations, and challenges related to accessibility, which are factors that can impact the ability to fully capitalize on the area's potential. While there is clear demand for more businesses, particularly in food service, the lack of space for new stores, non-traditional customer parking, and challenges with foot traffic and access stand as ongoing challenges to the area's retail success. Survey data highlights the importance of adding more retail offerings, as when customers were asked about their preferences for choosing grocery and specialty food stores, variety of goods available was rated the highest priority. Availability of parking was also considered a factor in choosing where to shop. These findings highlight the challenge of balancing demand with infrastructure limitations. Striking a balance between fostering growth in retail and service sectors, while continuing to address these physical constraints, will be needed to make downtown Western Springs the best version of itself.

FIGURE 19: *PROJECTED SPENDING INCREASES*
(five-minute drive time from Western Springs Metra)

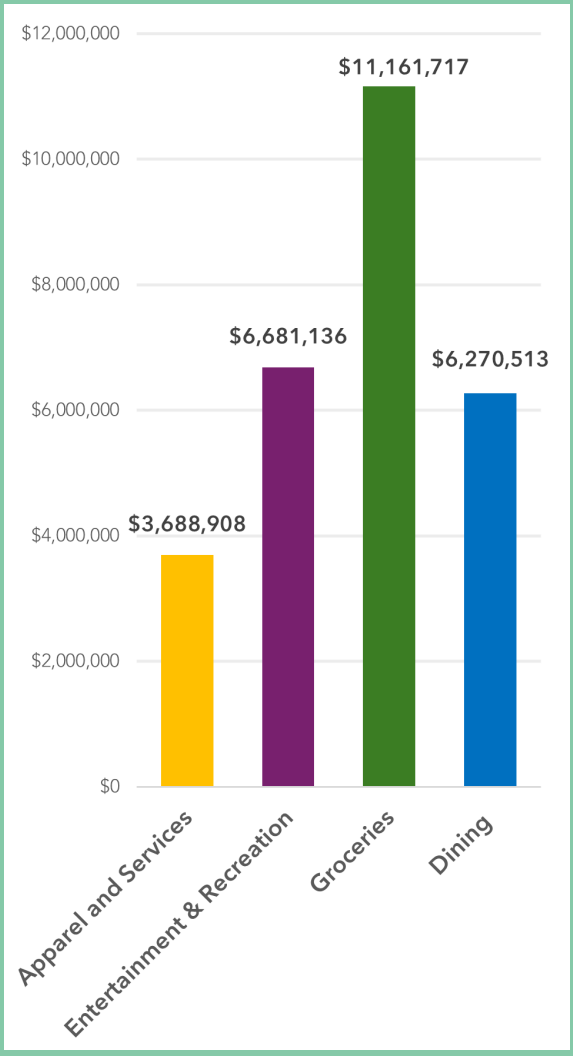
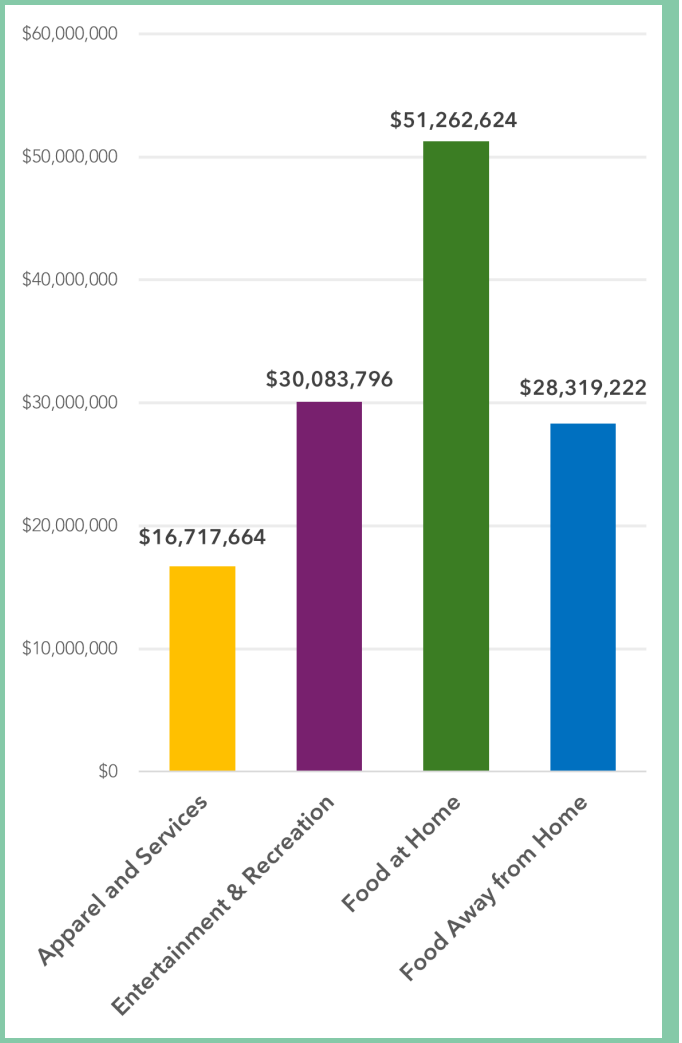


FIGURE 20: *PROJECTED SPENDING INCREASES*
(ten-minute drive time from Western Springs Metra)



Data: Esri, Bureau of Labor Statistics, MRI Simmons Consumer Surveys 2024

Retail Market Potential

Rent, vacancy, and market insights are sourced from Moody's Analytics, a leading provider of economic, financial, and market data, along with comprehensive analysis and forecasting tools. To better understand the office market dynamics in Western Springs, it's necessary to define several key terms: "Subject Property Rent," "Comp Group Rent," and "West Rent" that are applied in Figures 20 and 21.

The **Subject Property Rent** refers to the rental rates of a specific office property under analysis—in this case, the Berkshire Hathaway and Edward Jones office on Hillgrove Avenue, which serves as a geographic focal point for the study of Western Springs' office market. This property is strategically located at or near the center of downtown Western Springs, making it a representative example of the area's office rental market.

Comp Group Rent compares the rent levels and vacancy trends for typical office spaces in Western Springs to those in nearby areas such as La Grange, Hinsdale, and Clarendon Hills. By examining rental rates and vacancy data across these comparable communities, how Western Springs' office market stands in relation to its neighbors and whether it is more competitive or faces challenges in terms of pricing and demand can be better understood.

West Rent encompasses the broader submarket (**West**) in which Western Springs is located, which includes surrounding suburbs and villages. This data is used to analyze the overall office rental trends within a larger geographical region, capturing a wider scope of economic conditions, demand, and availability across neighboring areas. Understanding "West Rent" helps contextualize Western Springs within a larger market area, providing insight into regional trends that might influence office rent and vacancy rates locally. Submarkets vary based on real estate product, and Western Springs is located in the **Near West** submarket for retail.

Office

According to aggregate real estate data, the asking rent for office space in Western Springs is listed at $19.97 per square foot in 2024, compared to an average of $18.62 per square foot in the Comp Group (La Grange, Hinsdale, and surrounding areas). In contrast, the submarket Western Springs is in had a higher asking rent of $24.66 per square foot. This suggests that office spaces in Western Springs are more affordable than those in the West Suburban market; this is likely a function of Western Springs' older office stock in comparison to newer, high amenity offices found in suburban office parks and along interstates. The higher rent in Western Springs reflects stronger demand for office space in the downtown area compared to its neighbors, which is driven by the limited supply of office spaces. The difference in rent is indicative of the demand for space in the area, where businesses are willing to pay a premium to secure office locations in the vibrant downtown environment.

Western Springs' office market is reflective of national and regional trends in the wake of the COVID-19 pandemic. High office space vacancy rate remains a major issue in the U.S. post-pandemic, with the trend of remote and hybrid work reducing demand for traditional office spaces. Western Springs resides in a market that has a high office vacancy rate of 25.4%, depicted below by the West Vacancy line. This reflects reduced demand as many businesses have shifted to remote or hybrid work models, which significantly lowers the need for physical office spaces. Suburban areas also face unique challenges, as they often rely on small and older offices in small-to-medium-sized buildings that are more vulnerable to economic downturns. The low vacancy rate and higher rent in downtown Western Springs stands in contrast to that economic trend. Additionally, companies are increasingly opting for central urban locations or flexible office spaces, leaving suburban offices struggling to fill vacancies. In Chicago, the vacancy rate is slightly lower at 19% but still signals significant challenges for the office market overall. Figure 21 on the following page highlights these trends.

Retail

The complexity of retail rent and vacancy rates can vary significantly from one location to another. Much like the office space market, retail vacancy rates are influenced by factors such as local demand and market conditions. Retail spaces can either thrive dramatically or face significant downturns, depending on the specific area and its market trends.

For the nearby comparable group – including Western Springs, La Grange, Hinsdale, and Clarendon Hills — the average asking rent is $22.47 per square foot. The asking rent in Western Springs is slightly lower than the surrounding comparable villages, at $21.79 per square foot. This indicates that Western Springs offers somewhat more affordable retail spaces compared to some neighboring areas. This affordability may be a function of older space compared to new commercial centers as well as lower foot traffic compared to neighboring La Grange and Hinsdale; it is also affected by the low vacancy rates of downtown Western Springs.

In 2024, the Near West submarket of Western Springs has a vacancy rate of 13.2%, which is slightly higher than the Chicago region's overall rate of 12.8%. However, this rate does not reflect the downtown area, which is largely leased. While the vacancy rate has decreased slightly from 2023, it is expected to continue declining, indicating a healthier retail market in suburban areas like Western Springs. As demand increases and vacancies continue to decrease, the retail market in suburban villages is likely to strengthen further in the coming years. For a community like Western Springs with a network of largely leased downtown storefronts, a recovering market could signal more demand for downtown storefront space for retail uses (Figure 22).

FIGURE 21: *OFFICE RENT AND VACANCY TRENDS*

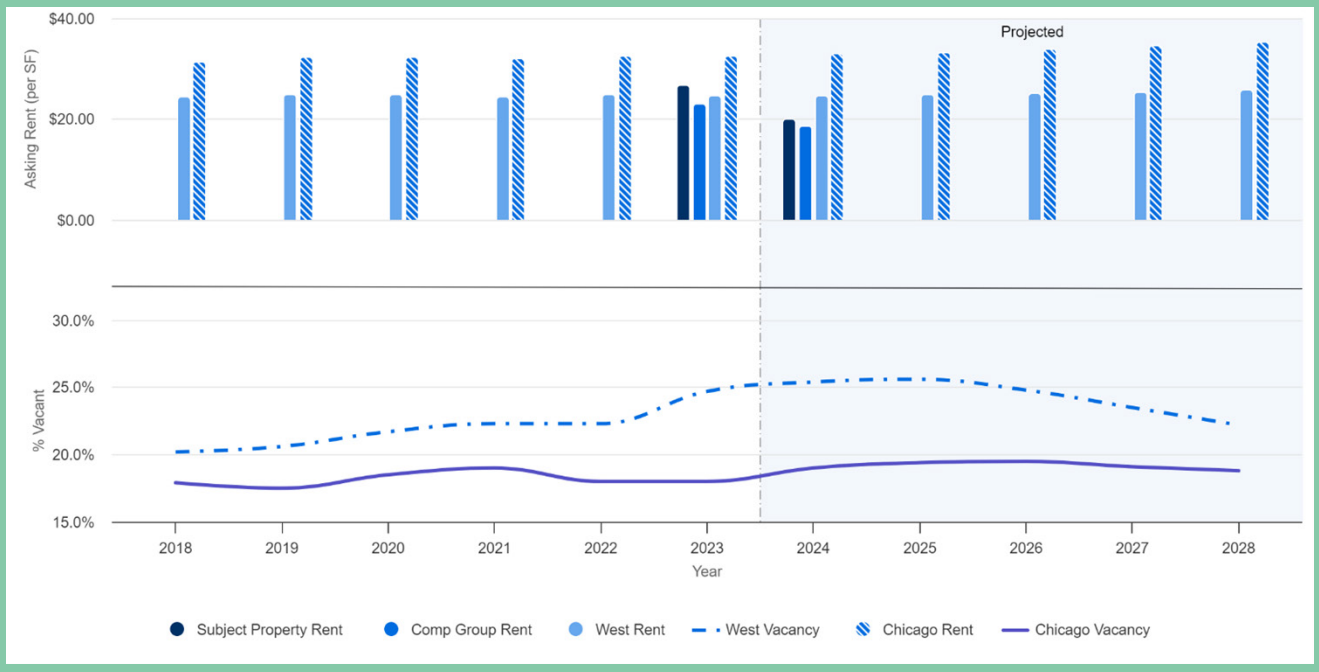
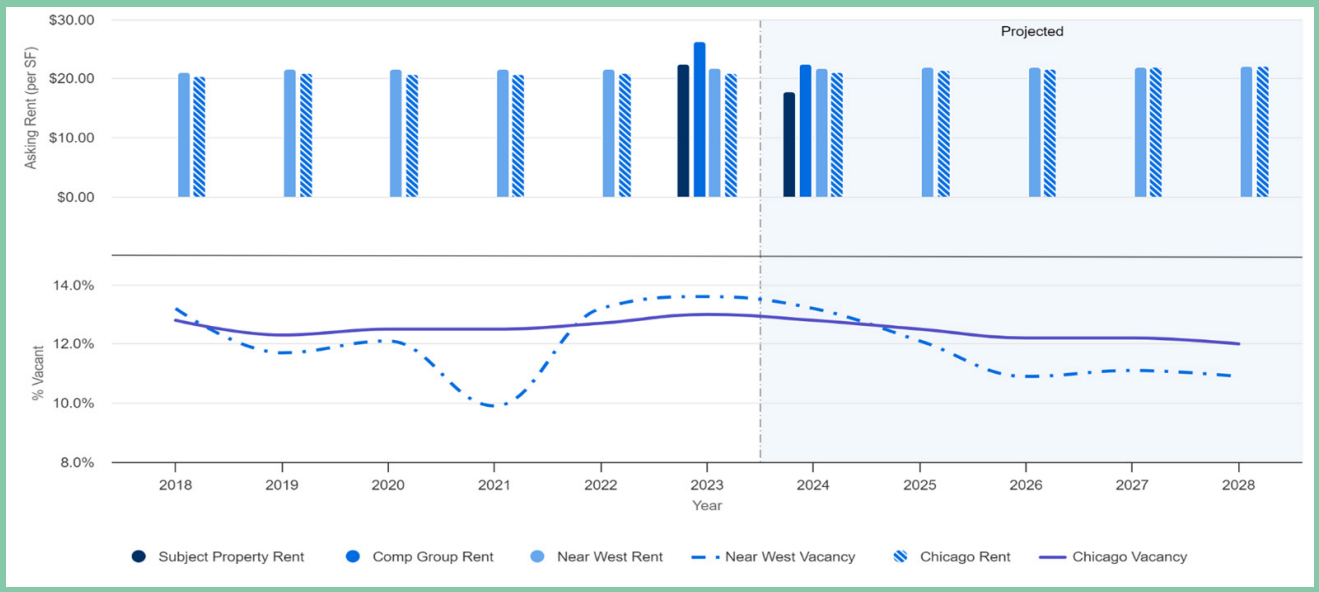


FIGURE 22: *RETAIL RENT AND VACANCY TRENDS*



Data: Moody's Analytics

Socioeconomic Findings

Though a five-minute drive time analysis can help better understand the nearby market of the downtown, it is also beneficial to look to the Village as a whole, particularly since downtown still manages to capture a high amount of its spending from Western Springs residents. The presence of "conscious consumers" in the Village also signals that many residents are likely to prefer shopping in local stores and supporting community merchants, therefore it is important to examine the Village as a whole. According to the US Census Bureau's 2023 American Community Survey (ACS) five-year estimates, Western Springs has a highly educated population. The chart below provides an overview of the educational attainment levels of the Village's residents. 47.3% of the population holds at least a bachelor's degree, while 34.8% have earned a graduate or professional degree. Figure 23 depicts the high level of educational attainment, which is often associated with higher income levels, greater career opportunities, and a higher quality of life.

Based on the 2023 ACS data, the median household income in the Village has increased steadily over the last five years. This tracks with residents' high level educational attainment. In just five years, the median household income increased from $174,760 to $218,839. This is a $44,079 increase (25.2% Increase over five years). The workforce in Western Springs is well-equipped for higher-paying careers, which contributes to the overall increase in household income. Figure 24 illustrates the growth in household income.

American Community Survey data regarding median home values show a consistent and healthy increase. Over the last ten years, the median housing value increased from $535,300 to $720,800. This equates to a 35% increase over ten years, illustrated in Figure 25. As a community of mostly single-family homes, median home prices may be higher than other nearby communities with more townhome and multifamily stock. Nonetheless, these figures alongside income statistics point to a consumer base with incomes to support existing and new businesses.

FIGURE 23: *EDUCATIONAL ATTAINMENT*
(25+ population, Village of Western Springs)

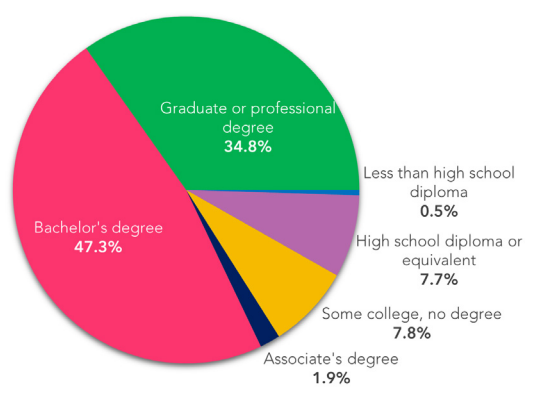


FIGURE 24: *MEDIAN HOUSEHOLD INCOME (Village of Western Springs)*

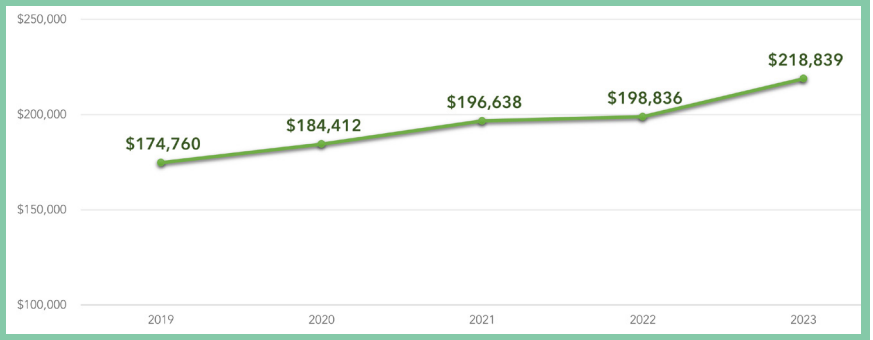
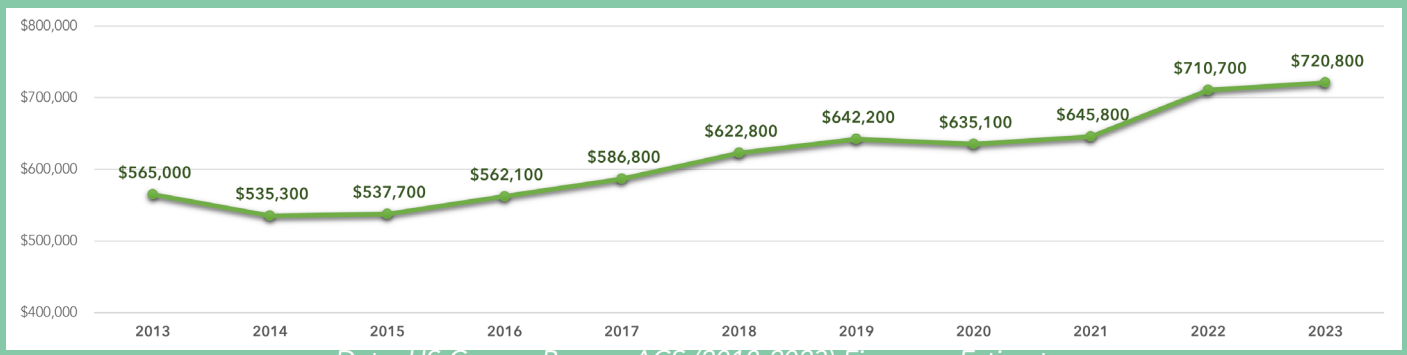


FIGURE 25: *TEN-YEAR MEDIAN HOME VALUE (Village of Western Springs)*



Data: US Census Bureau ACS (2018-2023) Five-year Estimates



4 ASSESSMENT SUMMARY

Though competing with larger neighbors, the commercial business market in downtown Western Springs remains healthy for dining, retail, and office uses. This market condition is supported by the Village's continuing support of the area beautification and maintenance efforts, coordination with local businesses, and ongoing economic development policies. These help to address the structural market challenges in the downtown:

- High demand for downtown space and very low vacancies.
- Striking a balance between retail, offices, and services on the first floor.
- Attracting new retailers and eateries while maintaining convenient parking access.
- Drawing residents to the downtown more frequently and attracting potential customers from neighboring communities.
- Maintaining a unique identity to remain competitive with nearby downtowns.

These findings are expanded in this section, which summarizes demographics, market realities, and consumer sentiment. Based on those findings, next steps for consideration are also outlined.

Findings

Supportive Demographics

- The population of Western Springs and surrounding communities is highly educated. Nearly half of the Village's residents hold a bachelor's degree and a third possess graduate or professional degrees, which supports a skilled workforce and higher disposable incomes.
- Demographics support a stable and growing demand for retail, luxury goods, and services, despite little projected population increases, making Western Springs an appealing market for premium businesses and potential entrepreneurs.
- Village has a seemingly high presence of "conscious consumers," who prefer shopping local.

Strong Focus on Food Service

- Western Springs has a notably high meals index, reflecting a strong and focused food service market. Despite fewer establishments, the demand is more concentrated, leading to strong potential sales per restaurant and food business.
- There is a loyal customer base, with residents making focused, strategic visits to local establishments.

Retail Market with Growth Potential

- Retail spending in key sectors like food, apparel, and entertainment is projected to grow, reflecting a steady increase in consumer demand. This presents potential for continuing to attract / increasing expenditures through longer, multi-visit trips to the Downtown.
- **Food:** Strong demand for dining establishments, expected to see a $79.6 million increase in consumer spending by 2029.
- **Apparel and Entertainment:** Both sectors are expected to grow, driven by an affluent local population seeking higher-end products and experiences.

Spatial Challenges and Limitation

- **Parking Issues:** Non-traditional parking availability (real and perceived) reduces foot traffic and can be a barrier for customers.
- **Vacancy in Retail and Office Space:** Low vacancies downtown reflect strong demand for space by businesses but create challenges for attracting new ventures.

Commercial Space Market

- **Affordable Commercial Rent:** Western Springs offers relatively affordable office and retail space compared to the region, with office rents lower than La Grange and Hinsdale.

Real Estate Appreciation

- The housing market has seen consistent growth, with the median housing value rising 35% over the past decade, indicating a healthy real estate market and a stable investment environment.

Compact Business Community

- While Western Springs has fewer businesses compared to larger nearby areas like Hinsdale or La Grange, the tight-knit community allows for stronger customer relationships and higher engagement with local shops and restaurants.





Next Steps for Consideration

The Village and the Western Springs Business Association have worked to engage and support downtown businesses. The next steps for Village consideration below acknowledge those existing efforts and suggest continuation of related programs. These next steps may be contemplated in future Village programs and plan making, such as the zoning code, small-area plans, comprehensive plans, and economic development policies.

- Consumer survey data, existing building layouts, and retail trends suggest the Village may pursue "target business types," which include:
  - Restaurants of all types, with a special focus on breakfast and/or cuisines not presently available in the downtown area.
  - Microbrewery, distillery, or taproom.
  - Apparel stores, boutiques, and other specialty locally oriented retailers.
  - Unique groceries.
  - Small scale entertainment, such as concert venues.
  - Children's play center, perhaps through the community facilities to the west of downtown.
  - Mixed-use development, considering retail on the first floor in central locations but allowing for offices near the downtown fringes.
  - Development which can support additional public parking for the downtown area.

- With a steady and growing population and income base, the market holds potential for growth, particularly in retail, food service, and other consumer-focused sectors.

- Increase joint marketing with events like the French Market or other Western Springs Business Association (WSBA) signature events.
  - Continue to advertise the Village's Property Improvement Grant Program via WSBA channels and other direct business and property owner connections.
  - Continue to collaborate with WSBA and expand opportunities for advertising, where feasible. Partnerships between the Village and WSBA can be continued in the form of events or co-marketing in newsletters, social media, and other outlets. This partnership may be effective in engaging legacy businesses to develop resiliency and succession plans can help maintain the iconic storefronts that keep visitors coming back.
  - Continuing hosting local business-focused events to drive local engagement.
  - Address business concerns with community events through improved signage or pop-up events.

- Evaluate zoning ordinances to designate "retail streets" or refine zoning to guide retail development to areas with existing retail clusters, while supporting commercial office spaces.

- Continue and expand downtown property improvement programs through TIF or special service area (SSA). Upgrading the downtown building stock can create a more attractive and desirable downtown for businesses and visitors alike.

- Improving the quality of or expanding second floor office space or developing new spaces may help reduce the number of ground floor offices.

- Consider pop-up style businesses or incubators to attract more foot-traffic downtown and support entrepreneurs in the community.


WESTERN SPRINGS
ROTARY CLUB



STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, the Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION AUTHORIZING THE ACCEPTANCE AND APPROVAL OF THE DOWNTOWN WESTERN SPRINGS MARKET ASSESSMENT DATED FEBRUARY 10, 2025 AND PREPARED BY TESKA ASSOCIATES, INC. FOR THE VILLAGE OF WESTERN SPRINGS

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this 10th day of February, 2025.

_____
Edward Tymick, Village Clerk

[Seal]

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 8.I.

To: Board of Trustees
From: Heather Valone, Director of Community Development , Kelsey Fawell, Senior Planner
CC: Ellen Baer, Village Manager, Michael Jurusik, Village Attorney, Casey Biernacki, Deputy Village Manager
RE: [Previously discussed] PC-2024-02 – A Waiver of the Five Acre Minimum Area and Reduction of Certain Planned Development Submission Materials - 5600 Wolf Road, McNaughton Development, LLC (Old Business)

Recommendation

The Plan Commission recommended approval of the application with conditions on November 18, 2024. The Planning and Zoning Committee reviewed the application on January 16, 2025 and recommended the application be advanced to the Village Board for review and discussion. The Village Board reviewed the application on January 27, 2025 and directed staff to finalize the ordinances and resolutions for consideration.

Summary

McNaughton Development, LLC (the "Applicant") submitted an application for a comprehensive plan amendment, map amendment, conditional use permit for a planned development, variations, and subdivision for the property located at 5600 Wolf Rd (the "Subject Property"). The Subject Property is one of few sites in the Village zoned O-1 Limited Office District. The Applicant is seeking a comprehensive plan amendment and zoning map amendment to rezone the property to R4 Multiple-Family Residence District. This project also entails the request of the vacation of Village-owned Lawn Avenue right-of-way, immediately adjacent to the site.

The Applicant is proposing a development of 29 townhome units, comprised of nine buildings. There will be seven three-unit buildings and two four-unit buildings. Each unit will have a front-loading two-car attached garage, driveway, front and rear balconies, and rear patios. The Applicant proposes constructing a continuation of the existing Heritage Court to the southeast through the site to the development's access driveway proposed along Wolf Road Heritage Court connects to 55th Street to the north. The existing Heritage Court is a private drive, maintained by the Heritage Springs Homeowner's Association. An automatic gate will be separating the proposed development and Heritage Springs, access will only be granted to residents of the two developments. The gate will be constructed with an Opticom system that will allow access to emergency services. It should be noted that some Heritage Springs planned development approvals will need to be amended to adequately reflect the proposed Heritage Crossing development, if approved.

The Applicant's request also includes variations/relief from the Village's Development Control Ordinance ("DCO"), which are detailed in the below Table 1.

Table 1

Requested Zoning Relief		
Code Section	**Requirement**	**Proposed**
10-4-4(F)3a: Fences, Height Restrictions	Rear & side yards: 6 ft.	8 ft.
10-6-5(D): Minimum Development Parcel Size	5 ac.	2.76 ac.
10-6-5(E)(1): Minimum Front Yard	25 ft.	7 ft.
10-6-5(E)(2): Minimum Corner Side Yard	25 ft.	14.48 ft.
10-6-5(E)(3): Minimum Interior Side Yard	30 ft.	6.67 ft.
10-6-5(E)(4): Minimum Rear Yard	30 ft.	12.75 ft.
10-8-4(B)(1)(e): Maximum Building Height	35 ft.	36.33 ft.
10-10-7: Street Design Criteria	Pavement width of 27 ft.	23 ft.
10-10-7: Street Design Criteria	Minium horizontal curve radius of 150 ft.	Less than 150 ft.
10-10-7: Street Design Criteria	Minimum vertical curves 100 ft. in length	40 ft.
10-11-11(C)2: Detention	Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than 3' on the adjacent traffic lane and shall not remain flooded for more than 8 hours for any event less than or equal to the 100-year event	Allow for storage of 1.5 ft on the entire street width from the northern property line to a point roughly 36.5 ft. south along the Heritage Court.

Requested Zoning Relief		
Code Section	**Requirement**	**Proposed**
10-4-4(F)3a: Fences, Height Restrictions	Rear & side yards: 6 ft.	8 ft.
10-6-5(D): Minimum Development Parcel Size	5 ac.	2.76 ac.
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10-6-5(E)(4): Minimum Rear Yard	30 ft.	12.75 ft.
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A comparison of the proposed development to other past planned developments approved by the Village is shown in Table 2 below.

Table 2

Development Description	Minimum Yards				Development Parcel Size (ac.)	Height (ft.)
	Front	Interior Side	Corner Side	Rear		
Heritage Estates	20 ft.	8.2 ft.	20 ft.	20 ft.	2.53	Estimation 2 stories
Timber Trails	25 ft.	10% or 10 ft., whichever is lesser on one side and 10 ft. to 25 ft. between buildings	20 ft.	30 ft.	105.91*	30
17 Ogden Ave.	15 ft.	15 ft.	15 ft.	30 ft.	0.32	36
Foxford	0 ft.	7.33 ft.	0 ft.	2.08 ft.	0.95	49.5
Requested	7 ft.	6.67 ft.	14.48 ft.	12.75 ft.	2.76	36.33

** includes both single family and townhome acreage.*

The application was heard by the Plan Commission on August 13, 2024, September 24, 2024,

and November 18, 2024. Over 30 members of the public submitted public comment on the case. The Plan Commission continued the case both at their August and September meetings. At the August meeting, the Commission continued the application, requesting additional information on stormwater engineering information, as well as of changing the location of the main entrance to the development, which was originally proposed off Park Place to the south. At the September meeting, the application was continued, with the Commission requesting additional information on potential storage of stormwater in the proposed street and updating plans to reflect the proposed Wolf Road access. The Applicant revised the plans per the discussion of the Plan Commission and the public comments and submitted revised plans.

On November 18, 2024, the Plan Commission reviewed the revised plans and voted to recommend approval with conditions of application. The Plan Commission recommended the plans with a total of 73 conditions, some of which had multiple sub-requirements. Roughly half of the conditions were conditions that had been included in previous recommendations for planned developments. The remaining half were generally technical updates to the plans. The Applicant submitted revised plans that address the conditions recommended by the Plan Commission as well as comments provided by Village Staff. The plans were reviewed by Village staff and consultants. Plan review comments from the Village's consulting engineer were provided in the January 27, 2025 Village Board agenda packet. All outstanding comments from the Village's consulting landscape architect and traffic engineer have been addressed. The remaining conditions are technical in nature and can be addressed prior to permitting. These conditions have also been incorporated into the ordinances and resolutions.

The Planning and Zoning Committee reviewed the application on January 16, 2025 and recommended the application be advanced to the Village Board for review and discussion. At the meeting six members of the public provided public comment. Of those six commenters, five commented with concerns related to stormwater management and / or the number of proposed units. One spoke in favor of the application.

The Village Board of Trustees reviewed the application on January 27, 2025. At the meeting seven members of the public provided public comment. Of those seven commenters, six provided comments related to stormwater management concerns. Two comments included concerns regarding the development's proposed number of guest parking, and three comments also included traffic concerns. Concerns were also expressed about the development's proposed density and number of units, as well as potential construction impacts of the development. Two public comments have been received since the January 27, 2025 Village Board meeting and prior to the publishing of this report, which can be found in Attachment 1.

Attachments

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1. Public Comment - Public Comment Received Following the January 27, 2025 Village

2. Resolution – A Resolution Approving a Waiver of the Five (5) Acre Minimum Land Area Requirement Under Section 10-8-3 (Guidelines) of the Western Springs Village Code and the Reduction of Certain Planned Development Submission Materials Under Section 10-8-8 (Submittal Requirements) of the Western Springs Village Code as Requested by Applicant / Contract Purchaser McNaughton Development, LLC for Approval of a Conditional Use for a Planned Development to Construct the Proposed 29 Unit Heritage Crossing Townhome Development at the Property Commonly Known as 5600 South Wolf Road, Western Springs, Illinois
3. Ordinance - An Ordinance Approving and Adopting an Updated Long Range Land Use Map to the Western Springs Official Comprehensive Land Use Plan for Purposes of Reclassifying the Zoning Designation of the 5600 South Wolf Road Property, Western Springs, Illinois From the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District to Allow for the Construction the Proposed Heritage Crossing Townhome Development by Applicant / Contract Purchaser McNaughton Development, LLC.
4. Ordinance – An Ordinance Approving a Map Amendment to Rezone the 5600 South Wolf Road Property, Western Springs, Illinois, from the O – Limited Office Zoning District to the R4 – Multiple-Family Residence District; Approving an Application for a Conditional Use Permit for a Planned Development for the Construction and Operation of the Proposed 29 Unit Heritage Crossing Townhome Development Located at the 5600 South Wolf Road Property, Including the Approval of the Combined Preliminary / Final Development Plans, Subject to Village Plan Review Process, and Approval of Certain Development Allowances, Exceptions and Variations from the Village Zoning Regulations, Including a Waiver of the Five (5) Acre Minimum Lot Area Requirement and a Reduction of Certain Planned Development Requirements
5. Ordinance – An Ordinance Approving and Authorizing the Vacation of the 66.00 Feet by 225.00 Feet Portion of the Lawn Avenue Right-of-Way Adjacent to and West of the 5600 South Wolf Road Property Located in Western Springs, Illinois and Lot 5 and Lot 6 of Maxted Subdivision, and Approving a Plat of Vacation and Reservation of a Stormwater Drainage Easement (Applicant: McNaughton Development, LLC)
6. Ordinance – An Ordinance Authorizing the Approval and Execution of a Plat of Abrogation for Storm Sewer Easement and Public Utility Easement Located Within the Property Commonly Known as 5600 South Wolf Road, Western Springs, Illinois for the Construction of the Proposed 29 Unit Heritage Crossing Townhome Development by Applicant / Contract Purchaser McNaughton Development, LLC
7. Ordinance – An Ordinance Authorizing the Approval and Execution of a Final Plat of Heritage Crossing Resubdivision for the Proposed 29 Unit Heritage Crossing Townhome Development to be Constructed at 5600 South Wolf Road, Western Springs, Illinois by Applicant/Contract Purchaser McNaughton Development, LLC
8. Resolution – A Resolution Authorizing the Approval and Execution of Redevelopment and Maintenance Agreement by and Between the Village of Western Springs, Illinois and McNaughton Development, LLC for the Heritage Crossing Residential Townhome Development (5600 South Wolf Road, Western Springs, Illinois)

9. Ordinance – An Ordinance Approving a Minor Amendment to the Conditional Use Permit for a Planned Development Issued for the Western Springs Townhomes Subdivision (the "Heritage Springs Subdivision") Located South of 55th Street and West of Wolf Road in Western Springs, Illinois Relative to Construction of On-Street Parking Spaces within Heritage Court

Financial Impact

None.

Recommended Motion

I move to approve the ordinances and resolutions related to this application under the items contained in Old Business.

Strategic Plan Alignment

Econonomic Development

File Attachments

1. Public Comment
2. Resolution

Heather Valone Attachment 1.

From: Deb David <deb.david@gerbercollision.com>
Sent: Monday, February 3, 2025 10:05 AM
To: Heather Valone
Subject: Follow up to Monday night's meeting(January 27, 2025)

Heather and Kelsey,

Some of this will be a repeat of comments/points already made across the board. I'd like to reiterate! Many are points made by not only me, but all others who attended.

1) I am 100% opposed to the project. It is way out of character for our beautiful subdivision of residential homes. I haven't come across anyone who is in favor of it.
It doesn't belong there. It is massive. Our beautiful community of Western Springs has been labeled one of the best places to live in America. This is not good for one of the best subdivisions in Western Springs...let alone the entire community of Western Springs. No one wants it. Isn't that enough? How would you like it if that was going in across from your beautiful homes. Many of you have beautiful homes in Western Springs.

2) The development is way too dense for that amount of space.
Cramming 29-30 units in that amount of space is ridiculous. They are way too tall, too.

3) Let's take into consideration the points made by Barry regarding the actual figures connecting to revenue, as well as additional charges regarding water usage. We are already paying excessive charges at the village level and county level due to the water issues
around here.

4) The flooding is such a big concern to many of the current homeowners. We cannot be certain that there won't be a problem with storm water regardless of what they aim to do with the retention basins. During the last heavy rain the recycling bins were floating all the way up and down Longmeadow. We are making an existing problem worse! I am reiterating what happened to us. There was approval for that massive house to the south of us to be built. It changed the grade and we got socked with water pouring into our basement...even through the windows. No help from the village and we had to spend $16,000.00 to have our yard swaled to get the water away from the house. I tried to get some help. Janet Dahl even came over and tried to help at the village level. The Larkins who were there before the Nawrockis spent $10,000.00 at the same time with Country Landscaping.

5)There is already a big problem with water pressure. Adding 29-30 units is really going to influence water pressure in a negative way.

5) The development as it looks is not attractive at all. They are all the same with no variation. They are too high. They will stick out like a sore thumb in an otherwise beautiful neighborhood. That is just not the location for the development. The homes in Ridgewood have character and each has its own unique variation. This development has zero character. The appearance is nothing like those built in Timber Trails. I'm not for it at all, but at least the ones in Timber Trails are brick and are a little more attractive.

6) The length of time for construction is unimaginable. Two years is a long time for those of us close by to contend with the view of that mess and worry about safety.
We will be worrying about the safety of the children who are traveling by foot or riding bicycles to and from school. With the large construction vehicles coming and going, there is too much risk involved with the operators not being able to see pedestrians. The neighborhood currently is congested with cars coming and going, not even counting the additional cars with adding 30 units.

7) The parking is a real problem when you consider the lack of space in between driveways etc. as the development stands now. Six parking spaces is NOT enough and will end bleeding onto Park Place and the other close streets. The area near the park is already very busy with activities, events and games and terribly congested at times.

8) So the townhomes are supposed to appeal to the empty nesters. The steps are a concern. If wanting an elevator, then you are adding another $45,00.00 to 50,000.00. That is a lot of money. Will they really sell to young people and aging folks? There is no yards for the kids.

9) We have all said it. Rachel Muldowney said it. No one wants it. Do something else with that property. Nice individual residential homes would be appropriate or turn it back into a wetland.

10) There is heresay that this spring or summer, there might be a booster pump put in near the park to assist with water pressure? Can the underground pipes handle all of that? The addition of all of those townhomes is going to take an existing problem and make it worse.
How many water main breaks have
there been in just in the month of January?

Deborah David
903 Park Place
Western Springs
Cell: (773) 617-7143
Email: deb.david@gerbercollision.com
https://www.glassusa.com/agents/agent-submissions/

Kelsey Fawell

From: Diana MacGillis <deemacgillis@gmail.com>
Sent: Tuesday, January 28, 2025 12:08 PM
To: Kelsey Fawell; Heather Valone
Subject: Opposition to Townhomes at 5600 Wolf Road

Kelsey and Heather,

Unfortunately, I was unable to attend last night's meeting but I wanted to send another e-mail in regards to my opposition to the townhome development being proposed for 5600 Wolf Road.

The work done recently on 55th caused enough of a headache for morning commuters and for rush hour commuters that I can't even imagine how inconvenient the building of 30 new townhomes would be for both the residents of Ridgewood and those who take Wolf on the daily. Both entrances to Ridgewood will be no doubt be a mess. This is not only a danger to those of us driving, but also to the children who ride their bikes to other neighborhoods. Having 3 grade school aged boys myself, they love Western Springs because they are able to ride their bikes to friends' houses - not only in Ridgewood but in neighboring communities as well. I already worry about them crossing Wolf and 55th, but the development of these townhomes and the increased traffic will take that to a whole new level.

I don't have data to prove reasons as to why the townhomes shouldn't be built. But I do know that we have a great community as is and the people of Ridgewood would happily support an endeavor that made sense to those in our community. Expensive townhomes just doesn't fit the bill.

I believe the next meeting is 2/10, but please confirm so I can hopefully attend.

Thank you for your consideration.

Diana MacGillis
5627 Lawn Dr.

RESOLUTION NO. 25-_____
Roll Call Vote.
VOTE:_____
AYES:_____
NAYS:_____
ABSTAIN: _____
ABSENT: _____
DATE: _____, 2025.
OTHER: None.

A RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS.

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the

Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights; and

WHEREAS, the requested zoning relief consists of: (1) approval of a conditional use permit for a planned development in accordance with Chapter 3 (Conditional Uses) and Chapter 8 (Planned Developments) of the DCO to construct the Development, subject to the requested exceptions, variations and zoning relief from the DCO regulations; (2) a waiver of the five (5) acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO; (3) the reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO as set forth below; (4) approval of a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to the reduction in the submittal requirements and other exceptions authorized by this Resolution; (5) a Comprehensive Plan Amendment to the Long-Range Land Use Map that reclassifies the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District; (6) a map amendment to re-zone the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District; (7) an Exception (Variations) from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO applicable only to the Development to provide: "Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that in the R4 - Multiple-Family Residence District variations of not more than 61% to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development."; (8) Exception (Variations) from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: "Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development."; (9) Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:

i. Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet); and Requested: 2.76 acres;
ii. Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25'); and Requested: Seven Feet (7');
iii. Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25'); and Requested: fourteen feet and five inches (14.42');
iv. Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30'); and Requested: six feet and eight inches (6.67');
v. Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30'); and Requested: Twelve feet and nine inches (12.75'); and
vi. Any additional exception(s) or variation(s) identified at the Public Hearing from the other use, bulk and site design requirements contained in the DCO that are necessary to

permit the construction of the Development and allow the above real Property to be used for its intended purposes in accordance with the filed Application shall also be considered for Village approval; and

(10) a Variation from Subsection 10-11-11(C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40') south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units. The standards for consideration and approval of the proposed map amendment and text amendments are set forth in Section 10-3-12 (Amendments) of the DCO; and

WHEREAS, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). Prior to conducting the Public Hearing, a notice of Public Hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a notice of Public Hearing was mailed to those persons who are required to be mailed the notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the Public Hearing sessions were held were posted as required by the Open Meetings Act; and

WHEREAS, pursuant to Section 10-8-3 (Guidelines) of the DCO, the Village Board, upon finding just cause, may waive the five (5) acre minimum land area requirement for planned developments; and

WHEREAS, pursuant to Section 10-8-8(B) (Submittal Requirements; Preliminary Plan Stage) of the DCO, the Village Board may "modify and/or reduce the required submission materials for any proposed planned development by resolution upon request of the Applicant and after receiving the recommendation of the Village Manager". The Applicant has requested that the following required submission materials for the planned development be waived (the "Waiver Requests"):

(1) Subsection 10-8-8(B)(4)(d): Market Study prepared by a qualified, independent market research firm. [This waiver is supported by the fact that the Applicant has submitted a report with supporting market and financial data relative to other recent, active townhouse developments in the Village to demonstrate the market demand for the housing type and base cost.]
(2) Subsection 10-8-8(B)(3)(g): "Site lighting plan". [Due to the relatively small size of the Development, the site lighting details and specifications are identified on the submitted development plans and will be reviewed and approved by Village Staff as part of the plan review process.]; and

WHEREAS, pursuant to the applicable provisions of the DCO, the Village Board may grant the following requests of the Applicant ("Zoning Process Allowances"):

(1) Approval of a combined Preliminary Plan / Final Plan as part of the Final Plan stage per Subsection 10-8-5(C) of the DCO to allow a single simultaneous submission per the Final Plan stage requirements and exemptions to specific requirements of Subsection 10-8-8 of the DCO deemed unnecessary due to the small size of the Development;
(2) Pursuant to Subsection 10-3-6(B) of the DCO, ratifying direction to the Plan Commission to conduct a review of this Application and associated documents, to conduct the required public hearing and to make a recommendation to the Village Board, which has the final authority to grant approval of a map amendment and requested zoning relief; and

WHEREAS, Village Manager Ellen Baer has issued a recommendation dated December 26, 2024 in support of the waiver of the five (5) acre minimum land area requirement and the Waiver Requirements ("Village Manager Recommendation"), a copy of which is attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, in accordance with the authority granted by the applicable provisions of the DCO, the President and Board of Trustees of the Village of Western Springs make the following just cause findings and determinations in regard to the Waiver Requests and the Zoning Process Allowances:

(a) It is reasonable and justified to approve the waiver of the five (5) acre minimum land area requirement because the Village Board has consistently waived this requirement for other in-fill planned developments involving the construction of residential townhomes;
(b) It is reasonable and justified to approve the Waiver Requests and the Zoning Process Allowances, given the limited scope of the proposed Development to be constructed at the Property;
(c) The absence of certain limited submission materials will not hinder or prejudice the Plan Commission's or the Village Board's ability to evaluate and take action on the requested zoning relief in the Application;
(d) For this specific Development, the costs associated with preparing the submission materials that are the subject of the Waiver Requests are unduly burdensome when compared to the public benefit that such materials will provide;
(e) Certain portions of the submission materials already exist in various formats and are public information that is available via the Freedom of Information Act; and

WHEREAS, at open public meetings held on **January 9, 2025 and January 16, 2025**, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the Waiver Requests and the Zoning Process Allowances and the Village Manager Recommendation, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its **January 16, 2025 meeting,** the Committee recommended that the Corporate Authorities of Village **consider** the Waiver Requests and the Zoning Process Allowances; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025,** the Corporate Authorities of Village reviewed and discussed the Committee's Recommendation and the Village Manager Recommendation regarding the Waiver Requests and the Zoning Process Allowances, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. **At its _____, 2025 meeting**, the Corporate Authorities of the Village accepted the Committee's Recommendation and the Village Manager Recommendation regarding approval of the Waiver Requests and the Zoning Process Allowances; and

WHEREAS, for the above-stated reasons, the President and Board of Trustees of the Village of Western Springs find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local business owners and the public to approve the waiver of the five (5) acre minimum land area requirement and the Waiver Requests and the Zoning Process Allowances as set forth in this Resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each of the Whereas paragraphs set forth above are incorporated by reference into Section 1 of this Resolution.

SECTION 2. Approval of Waiver Requests and Zoning Process Allowances; Acceptance of Village Manager Recommendation. The President and Board of Trustees of the Village of Western Springs approve and grant the above-requested Waiver Requests and Zoning Process Allowances, and further accept the Village Manager Recommendation and approve the waiver of the five (5) acre minimum land area guideline requirement for the Development under Section 10-8-3 (Guidelines) of the DCO, with the Village Board having found just cause to grant this waiver based the five (5) acre area requirement being outdated for the development of infill parcels within the Village and there is consistent past precedent of other Village Boards waiving this requirement for other recent planned developments recognizing that Section 10-8-3 states "it is not intended that each and every one of these guidelines be rigidly conformed to, provided that just cause for any departure from these guidelines is demonstrated".

SECTION 3. Termination of Resolution for Failure of Developer to Acquire Title to the Property. This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 4. Recording; Covenants That Run With The Land. Upon approval by the President and Board of Trustees of the Village of Western Springs, a certified copy of this Resolution shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a file stamped copy of this Resolution after it is filed with the County Clerk. The terms, provisions and conditions set forth in this Resolution, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the President and Board of Trustees of the Village of Western Springs.

SECTION 5. Effective Date. This Ordinance shall be in full force and effect from and after its adoption and approval as provided by law.

PASSED by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a **Regular Meeting** thereof, held on the ____ day of _____, 2025 and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

Village Manager Ellen Baer Recommendation
dated December 26, 2024 in Support of
the Waiver of the Five (5) Acre Minimum Land Area Requirement
and the Waiver of Certain Planned Development Submittal Requirements

(attached)

VILLAGE OF WESTERN SPRINGS
740 Hillgrove Avenue • Western Springs, IL 60558 • 708.246.1800
wsprings.com

VILLAGE PRESIDENT
Heidi Rudolph

VILLAGE TRUSTEES
James Tyrrell
Nicole Chen
Alan Fink
Scott Lewis
Amy Avakian
Philip Nawrocki

VILLAGE CLERK
Edward Tymick

VILLAGE MANAGER
Ellen Baer

DEPUTY MANAGER
Casey Biernacki

DIRECTORS
Patrick Schramm
Matthew Supert
Aleks Briedis
Jeff Koza
John Mastandona
Sean Gilhooley
Heather Valone
Brian Scott

To: **President Heidi Rudolph and the Board of Trustees**
From: **Ellen Baer, Village Manager**
Subject: **Heritage Crossing Townhome Development, 5600 South Wolf Road: Recommendation Regarding Request for Waiver of Planned Development Submittal Requirements**
Date: **December 26, 2024**
CC: **Heather Valone, Director of Community Development**

McNaughton Development, LLC, the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The application and proposed site plan have been processed as a planned development. The Village's Plan Commission has held and completed the required public hearing (conducted on August 13, 2024, September 24, 2024 and November 18, 2024) and has issued Recommendation No. 24-02, which favorably recommends Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development, subject to a number of development conditions including the vacation of a portion of the Lawn Avenue right-of-way ("Lawn Avenue ROW Area") to transfer legal title to that real property to the Developer as part of the Developer's completion of certain stormwater drainage enhancements at the Property. In a separate memo provided in the Village Board packet, Director Heather Valone has outlined the Developer's request for a waiver of certain submittal requirements required by the Village Code. The requested waivers are also listed below.

Waivers of submittal requirements are not uncommon, since planned developments can vary in acreage, complexity, land use, and other features. The Development Control Ordinance of the Village Code ("DCO") states the following:

"10-8-8: SUBMITTAL REQUIREMENTS:
B. Preliminary Plan Stage: Required submission materials for the preliminary plan stage are outlined below. The village board may modify and/or reduce the required submission materials for any proposed planned development by resolution upon request of the petitioner and after receiving the recommendation of the village manager. The village manager shall inform the petitioner in writing of any such modification or reduction."

Proposed Planned Development Submittal Waivers

- Simultaneous Preliminary and Final Submission:

Exemption from separate submissions for Preliminary Plan stage per DCO 10-8-8(B) and Final Plan stage per DCO 10-8-8 (C) to allow a single simultaneous submission per the Final Plan stage requirements.

- **Waiver of the 5 acre minimum land area guideline under Section 10-8-3**

(Guidelines) of the DCO. [The Property, with the inclusion of the Lawn Avenue ROW Area, meets the minimum lot area requirement of the R4 – Multiple-Family Residence District regulations. The most recent planned developments (Field Park 17 Ogden Avenue Townhomes and Foxford Station) have been granted waivers from this guideline.]

- **Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO:**

DCO Subsection 10-8-8(B)(4)(d): Market study (financial information) prepared by a qualified, independent market research firm. [The Applicant submitted fiscal impact projections showing that the Development will positively impact all taxing districts and generate impact fees. While the Applicant has requested a waiver from the market study submittal, the Applicant has submitted data on other townhouse developments in Western Springs to demonstrate the market demand for the housing type and base cost.] Although the applicant is requesting waivers, they are requests that have historically been granted to other infill developments. Additionally, although the applicant has requested waivers to the submittal requirements, the applicant has used other types of submittals to provide the same information that is required by the Village Code. I am in agreement with Director Valone that the waivers are reasonable and should be granted by the Village Board.

If you have any questions regarding this matter, please feel free to contact Director Valone or me.

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING A WAIVER OF THE FIVE (5) ACRE MINIMUM LAND AREA REQUIREMENT UNDER SECTION 10-8-3 (GUIDELINES) OF THE WESTERN SPRINGS VILLAGE CODE AND THE REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION MATERIALS UNDER SECTION 10-8-8 (SUBMITTAL REQUIREMENTS) OF THE WESTERN SPRINGS VILLAGE CODE AS REQUESTED BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC FOR APPROVAL OF A CONDITIONAL USE FOR A PLANNED DEVELOPMENT TO CONSTRUCT THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT AT THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the ____ day of _____, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the ___ day of _____, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this _____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

ORDINANCE NO. 25-____
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: _____, 2025.
OTHER: Published in pamphlet form.

AN ORDINANCE APPROVING AND ADOPTING AN UPDATED LONG RANGE LAND USE MAP TO THE WESTERN SPRINGS OFFICIAL COMPREHENSIVE LAND USE PLAN FOR PURPOSES OF RECLASSIFYING THE ZONING DESIGNATION OF THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT TO ALLOW FOR THE CONSTRUCTION THE PROPOSED HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.

WHEREAS, Sections 11-12-5, 11-12-6 and 11-12-7 of the Illinois Municipal Code (65 ILCS 5/11-12-5, 11-12-6 and 11-12-7) authorize the Village President and Board of Trustees of the Village of Western Springs ("Village") to adopt an official comprehensive plan or any amendments to an official comprehensive plan, but only after a public hearing on the plan or amended plan has been held; and

WHEREAS, after the required public hearing process was completed, the Village President and Board of Trustees of the Village of Western Springs approved and adopted the Village's Official Land Use Plan with the passage of Ordinance No. 03-2226 on February 24, 2003 (the "2003 Land Use Plan). The 2003 Land Use Plan has been amended as follows: (i) by Ordinance No. 11-2643 dated August 22, 2011, as part of the adoption of the "2011 Western Springs Downtown Redevelopment Plan" (the "2011 Downtown Plan"); and (ii) by Ordinance No. 21-3046 dated June 28, 2021, as part of the adoption of the "2021 Concept Plans for Townhome Project at 17 West Ogden Avenue Property"; and

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"); and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached,

front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights; and

WHEREAS, using information gathered during the public hearing process, including a report and data submitted by the Applicant on other townhouse developments recently constructed and/or currently under construction in the Village to demonstrate the market demand for the housing type and base cost, the Applicant's Development Plans, submitted as part of the Application, were presented as an amendment to the Village's existing 2003 Land Use Plan to amend the Property's Long Range Land Use from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District in order to allow for the construction and operation of the Development. **A copy of the updated version of the Long Range Use Map of the Village's Comprehensive Land Use Plan showing the zoning classification amendment for the Property is attached as Exhibit "A" and made a part hereof and a copy of the Long Range Plan shall be produced by the Village in conjunction with the printing of the Village's Official Zoning Map in March 2025 (the "Updated Long Range Use Map");** and

WHEREAS, the Village's 2003 Land Use Plan, like all comprehensive land use plans, is an advisory document that contains recommendations for the implementation of new land uses, design standards, and zoning changes within the Village. Upon Village Board approval of this Ordinance, the Applicant's proposed amendment of the Property's Long Range Land Use from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for a planned development overlay approval, will allow provide a planning basis for the map amendment (rezoning) of the Property to the R4 - Multiple-Family Residence District allow for the construction and operation of the Development. Once the Property is rezoned, it will expand the types of other possible adaptive uses that could be developed on the Property under the R4 - Multiple-Family Residence District classification, if the Development is not constructed, subject to Village approval of another conditional use permit for a planned development after the conducting of the required public hearing; and

WHEREAS, on August 13, 2024, September 24, 2024 and November 18, 2024, the Plan Commission conducted public hearings at which it reviewed the Application, the requested zoning relief and the requested amendment to the **Long Range Use Map** for its compliance with the applicable DCO provisions. Prior to conducting the public hearing, a notice of public hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a public hearing notice was mailed to those persons who are required to be mailed the public hearing notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings

where the public hearing sessions were held were posted as required by the Open Meetings Act. At the November 18, 2024 public hearing, the Plan Commission heard statements from representatives of the Applicant, Village staff and the Village Attorney, Interested Parties and the public and provided an opportunity for public input regarding the Application, the requested zoning relief and the requested amendment to the Long Range Use Map and the applicable DCO provisions. The Plan Commission reviewed and considered a **Village Staff Memorandum dated November 15, 2024** and prepared by Director of Community Development Heather Valone and Village Senior Planner Kelsey Fawell regarding the requested amendment to the Long Range Use Map. A copy of the Village Staff Memorandum is incorporated herein by reference and is on file with the Community Development Department; and

WHEREAS, on November 18, 2024, the Plan Commission, after finding that sufficient evidence was presented at the public hearing to conclude that the applicable standards relating to the requested zoning relief were met, voted to approve Recommendation No. 24-02, which contains the Plan Commission's report of findings and recommendations relative to its favorable recommendation to the Village Board on the adoption and implementation of the requested amendment to the Long Range Land Use Map to change the Property's current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for a planned development overlay approval, in order to allow for the construction and operation of the Heritage Crossing Townhome Development. Recommendation No. 24-02 has been filed with the Village President and Board of Trustees, who have taken the report's findings and recommendations under advisement and have incorporated by reference Recommendation No. 24-02 into this Ordinance; and

WHEREAS, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed the Updated Long Range Use Map and Plan Commission Recommendation No. 24-02 and received input from the Village staff and provided an opportunity for public input on the Updated Long Range Use Map. At its January 16, 2025 meeting, the Committee voted to recommend that the Village Board consider the Updated Long Range Use Map; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025,** the Village Board discussed the Updated Long Range Use Map and Plan Commission Recommendation No. 24-02 and the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the Updated Long Range Use Map. At the **_____, 2025 public meeting**, the Village Board considered the findings and recommendations of the Plan Commission and the Committee, and the input from the Village staff and the public, and agreed to **approve / deny** the Updated Long Range Use Map; and

WHEREAS, pursuant to the authority contain in Sections 11-12-5, 11-12-6 and 11-12-7 of the Illinois Municipal Code (65 ILCS 5/11-12-5 11-12-6 and 11-12-7), the Village President and Board of Trustees of the Village of Western Springs, after finding that sufficient evidence was presented at the public hearing to conclude that the applicable standards relating to the requested zoning relief were met, further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local business owners and the public to approve and adopt the Updated Long Range Use Map, as an amendment to certain portions of the Village's 2003 Land Use Plan, a copy of which is attached hereto as **Exhibit "A"** and made a part hereof.

BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Ordinance.

SECTION 2. Approval of Updated Long Range Use Map. The Village President and the Board of Trustees of the Village of Western Springs adopt and approve the Updated Range Use Map, a copy of which is attached hereto as **Exhibit "A"** and made a part hereof, as an amendment to certain portions of the Village's Official Comprehensive Land Use Plan.

SECTION 3. Amendment of the 2003 Official Comprehensive Land Use Plan; Superseding Effect and Validity of Updated Long Range Use Map. The provisions of the Updated Long Range Use Map supplements, amends and supersedes the provisions of the 2003 Official Comprehensive Land Use Plan, as amended. In particular, where provisions of the Updated Long Range Use Map are inconsistent with or in conflict with similar provisions of the 2003 Official Comprehensive Land Use Plan, as amended, the Updated Long Range Use Map shall control. To the extent that the Updated Long Range Use Map contains provisions not found in the 2003 Official Comprehensive Land Use Plan, as amended, the provisions of the Updated Long Range Use Map shall control. The remainder of the 2003 Official Comprehensive Land Use Plan, as amended, shall be valid, enforceable and in full effect until amended or repealed by action of the Village President and the Board of Trustees.

SECTION 4. Publication, Website Posting and Availability of Updated Long Range Use Map. The Village Clerk is authorized and directed to publish this Ordinance in pamphlet form as provided by law, and to make available to the public copies of the Updated Long Range Use Map in accordance with the Freedom of Information Act and to arrange for the posting of the Updated Long Range Use Map on the Village's website.

SECTION 5. Effective Date. This Ordinance shall be in full force and effect from and after its adoption, approval and publication in pamphlet form as provided by law.

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois on a roll call vote at a Regular Meeting thereof held on the _____ day of _____, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

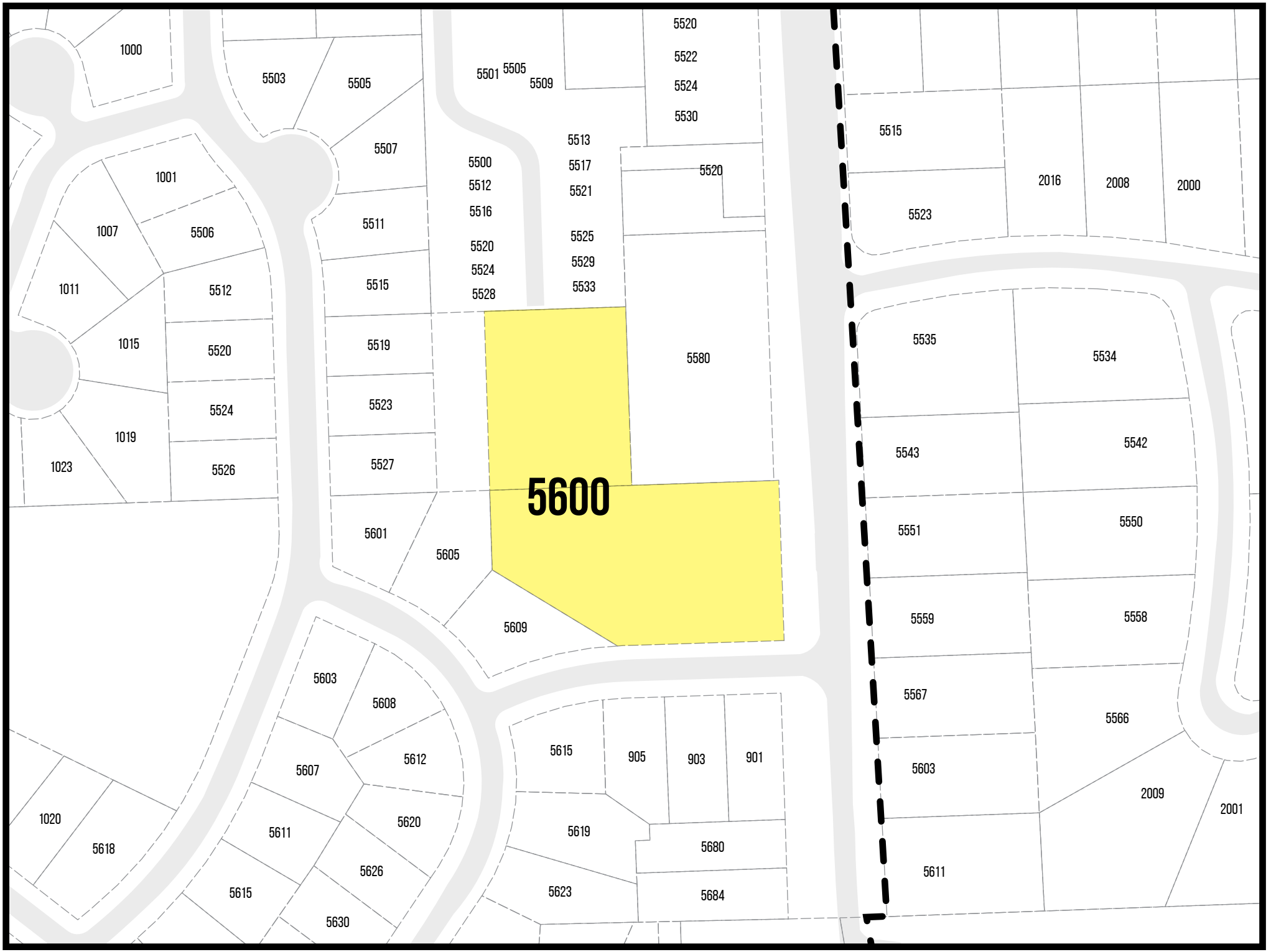
Published by me in pamphlet form, by Order of the Village President and the Board of Trustees of the Village of Western Springs, Cook County, Illinois, on this _____day of _____, 2025.

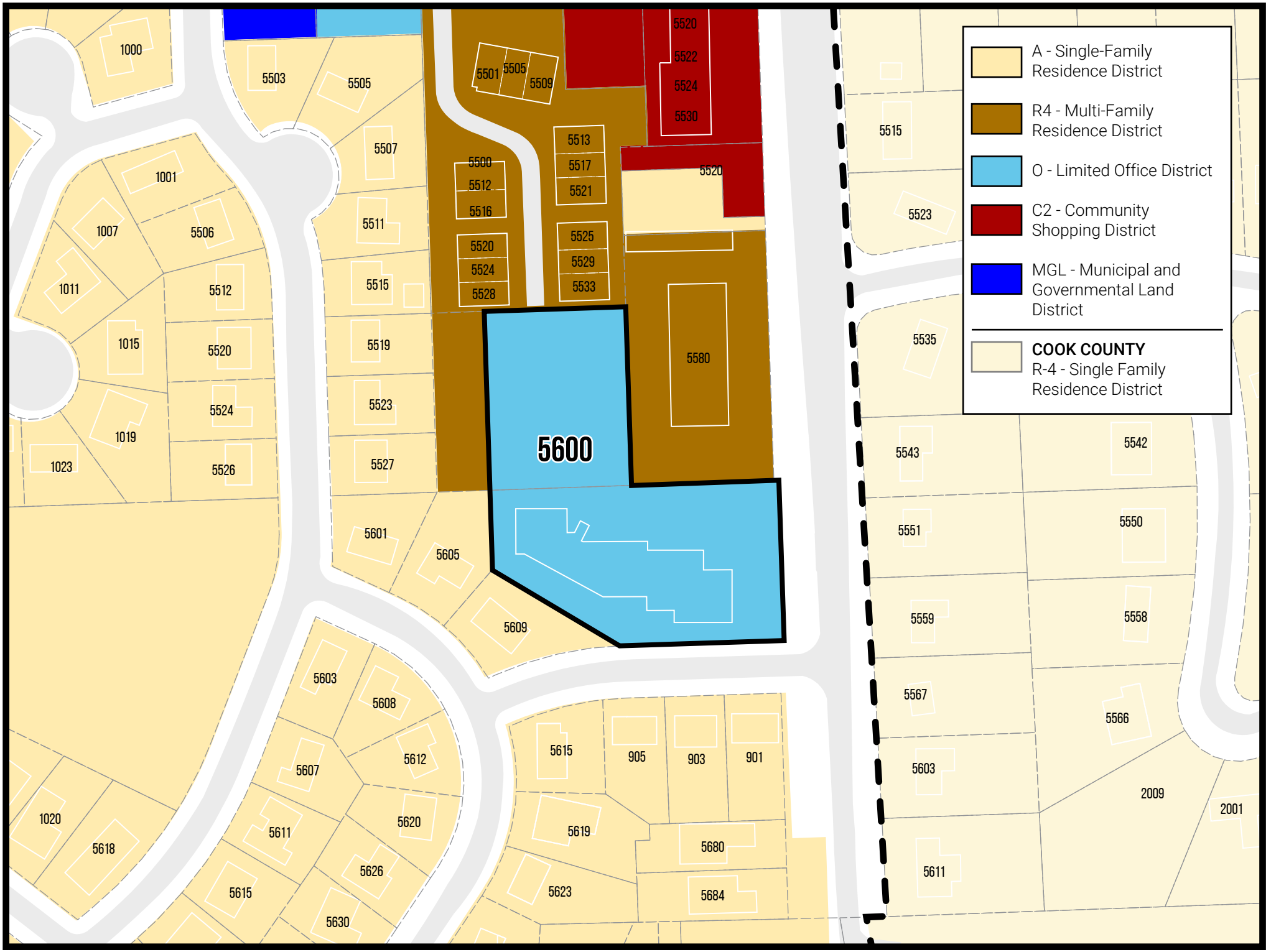
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Edward Tymick, Village Clerk

EXHIBIT "A"

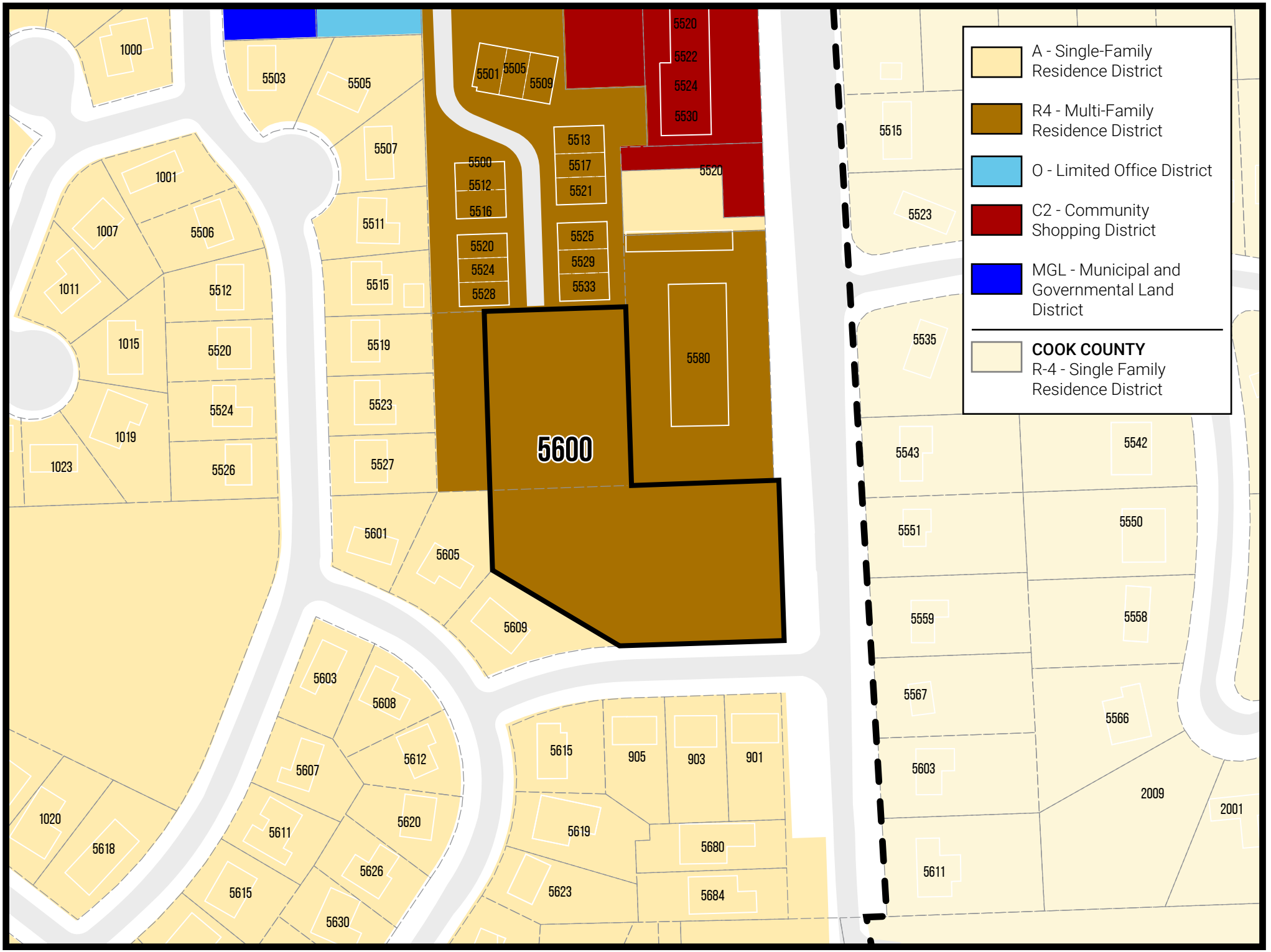
Updated Long Range Land Use Map To
The Western Springs Official Comprehensive Land Use Plan
Reclassifying The Zoning Designation For The 5600 South Wolf Road Property From
The O – Limited Office Zoning District To The R4 - Multiple-Family Residence District

(attached)

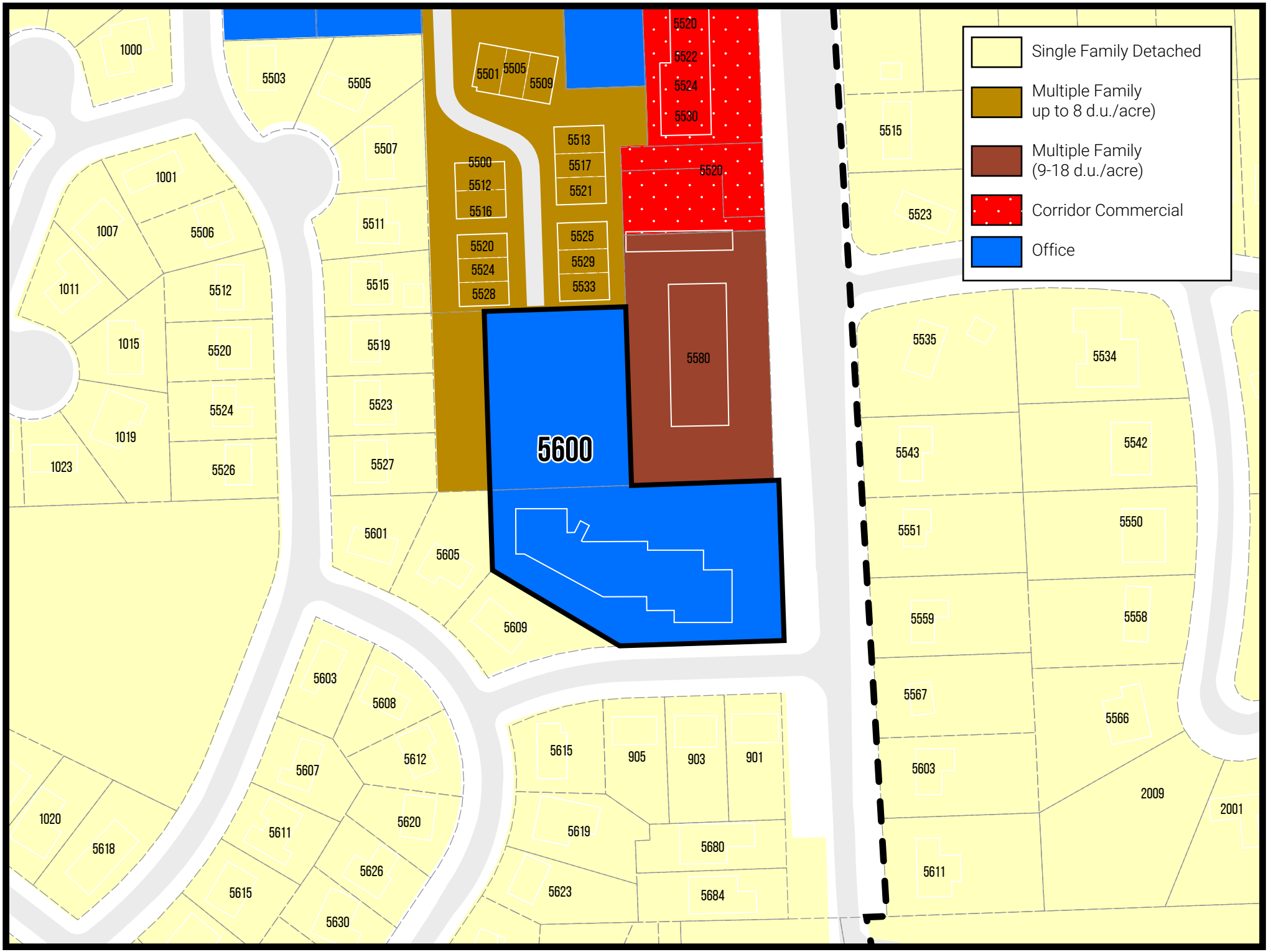

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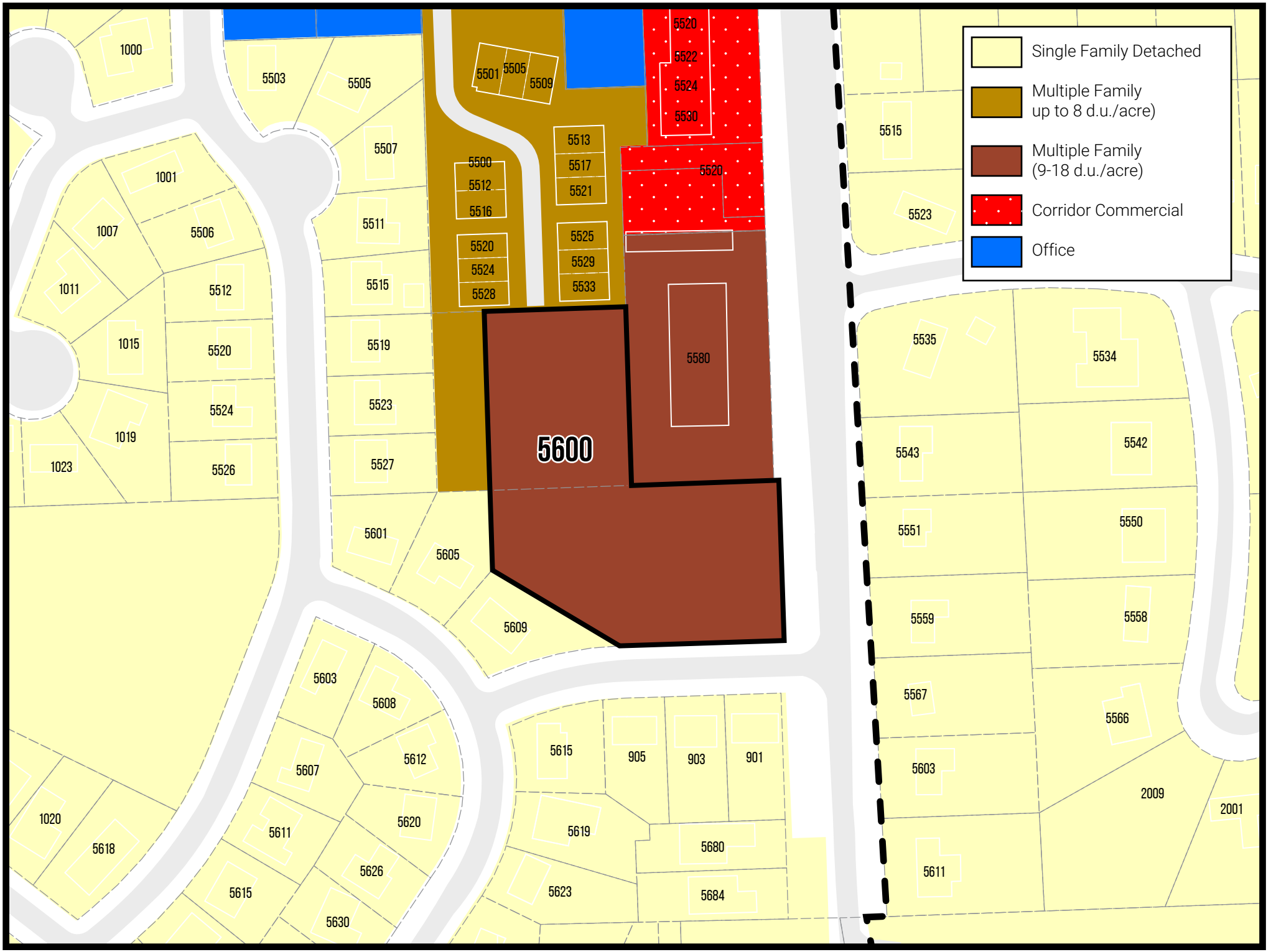
ZONING MAP (2023) | *EXISTING*



ZONING MAP (2023) | *PROPOSED*



LONG RANGE LAND USE PLAN MAP (2003) | *EXISTING*



LONG RANGE LAND USE PLAN MAP (2003) | *PROPOSED*

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-_____

AN ORDINANCE APPROVING AND ADOPTING AN UPDATED LONG RANGE LAND USE MAP TO THE WESTERN SPRINGS OFFICIAL COMPREHENSIVE LAND USE PLAN FOR PURPOSES OF RECLASSIFYING THE ZONING DESIGNATION OF THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT TO ALLOW FOR THE CONSTRUCTION THE PROPOSED HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the ____ day of _____, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the _____ day of _____, 2025.

I further certify that the vote on the question of the passage of the said Ordinance by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this _____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

ORDINANCE NO. 25-_____
VOTE:_____
AYES:_____
NAYS:_____
ABSENT:_____
ABSTAIN:
DATE:_____, 2025.
OTHER: Published in Pamphlet Form.

AN ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS.

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application

is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

WHEREAS, as part of the Application and its Exhibits, the Applicant requested one-stage final approval of the submitted "Development Plans" for the Development, which have been revised by the Developer since their initial filing and which are listed at the end of this Ordinance as part of **Group Exhibit "1"** and made a part hereof. The Application and other documents that comprise **Group Exhibit "1"** are on file with the Village Clerk's Office and the Community Development Department and are incorporated by reference into this Ordinance and made a part hereof. The Applicant shall submit a set of "Final Development Plans" (i.e., architectural plans and engineering plans) for Village staff review and Village Engineer review prior to those Plans being considered for final approval by the President and Board of Trustees of the Village (the "Corporate Authorities") at a public meeting in order for the Developer to be eligible to receive a site development permit or building permit to commence site work on the Property or construction of the Development; and

WHEREAS, the Property is legally described as follows:

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN,

ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

Legal Description for the Lawn Avenue ROW Parcel is as follows:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

Common Address: 5600 South Wolf Road, Western Springs, Illinois

P.I.N.S: Parcel 1: 18-18-200-017-0000, Parcel 2: 18-18-200-038-0000 and Parcel 3: 18-18-200-001-0000 (Lawn Avenue ROW Parcel); and

WHEREAS, with the passage of **Resolution No. 25-_____ on _____, 2025**, the Corporate Authorities of the Village approved the following relief from certain DCO submittal requirements for planned developments for this Development:

a. Waiver of the five (5) acre minimum land area requirement for planned developments.
b. Waiver of the submittal requirement of a "Market Study" prepared by a qualified, independent market research firm per Subsection 10-8-8(B)(4)(d) of the DCO. This waiver is supported by the fact that the Applicant has submitted a report with supporting market and financial data relative to other recent, active townhouse developments in the Village to demonstrate the market demand for the housing type and base cost.
c. Waiver of the submittal requirement of a "Site lighting plan" per Subsection 10-8-8(B)(3)(g) of the DCO, due to the relatively small size of the Development. There will be site lighting details and specifications provided by the Applicant; and

WHEREAS, the remaining zoning relief necessary for the Applicant to construct the Development is set forth in Section 3 below of this Ordinance; and

WHEREAS, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). Prior to conducting the Public Hearing, a notice of Public Hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a notice of Public Hearing was mailed to those persons who are required to be mailed the notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the Public Hearing sessions were held were posted as required by the Open Meetings Act; and

WHEREAS, at the November 18, 2024, Public Hearing session, the Western Springs Plan Commission, after finding that sufficient evidence was presented at the Public Hearing to conclude that the applicable standards relating to the requested zoning relief were met, passed a motion approving Report and Recommendation No. 24-02, which recommended approval of the zoning relief needed for the Applicant to construct the Development, subject to certain conditions related to the Development (See, Section V (Conditions) of Report and Recommendation No. 24-02). A copy of Report and Recommendation No. 24-02 is on file with the Village Clerk's Office and is incorporated into this Ordinance by reference; and

WHEREAS, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and Plan Commission Report and Recommendation No. 24-02 and this Ordinance, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village consider the Development and this Ordinance; and

WHEREAS, the Village Board, at open public meetings held **on January 13, 2025, January 27, 2025 and February 10, 2025,** reviewed and discussed the Applicant's Application and its request for zoning relief, the findings, recommendations and conditions of the Plan Commission as set forth in Report and Recommendation No. 24-02, received input from Village staff and provided an opportunity for public input. At the **_____, 2025** public meeting, the Village Board considered the findings, recommendations and conditions of the Plan Commission as set forth in Report and Recommendation No. 24-02 and, with the passage of this Ordinance, the Village Board, after finding that sufficient evidence was presented at the Public Hearing to conclude that the applicable standards relating to the requested zoning relief were met, then accepted, adopted and approved the findings, recommendations and conditions set forth in Report and Recommendation No. 24-02, subject to the approvals and conditions of this Ordinance; and

WHEREAS, in accordance with the authority granted by Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 11-13-1.1) and the applicable provisions of the DCO, the Village President and Board of Trustees of the Village of Western Springs approve the zoning relief, as requested by the Applicant, relative to the issuance of the Conditional Use Permit for a Planned Development for the construction, operation and maintenance of the Development, subject to the Village-approved zoning relief contained in Section 2 below and the conditions contained in Section 3 below in this Ordinance.

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. The above recitals are incorporated by reference into Section 1 of this Ordinance as material terms and provisions.

SECTION 2. Approval of Requested Zoning Relief. Pursuant to the applicable provisions of Title 10 (Development Control Ordinance) of the Western Springs Municipal Code, the President and Board of Trustees approve the following zoning relief and development approvals relative to the Property in order to allow the construction and operation of the Development under a Conditional Use Permit for Planned Development, subject to the conditions set forth in Section 4 below:

A. Approval of a conditional use permit for a planned development in accordance with Chapter 3 (Conditional Uses) and Chapter 8 (Planned Developments) of the DCO to construct the Development, subject to the requested exceptions, variations and zoning relief from the DCO regulations;
B. A waiver of the five (5) acre minimum land area requirement under Section 10-8-3 (Guidelines) of the DCO, with the Village Board having found just cause to grant this waiver based the five (5) acre area requirement being outdated for the development of infill parcels within the Village and the consistent past precedent of other Village Boards waiving this requirement for other recent planned developments recognizing that Section 10-8-3 states "it is not intended that each and every one of these guidelines be rigidly conformed to, provided that just cause for any departure from these guidelines is demonstrated";
C. Reduction of certain planned development submission materials under Section 10-8-8 (Submittal Requirements) of the DCO as set forth below; approval of a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to the reduction in the submittal requirements and other exceptions authorized by this Ordinance;
D. A Comprehensive Plan Amendment to the Long-Range Land Use Map that reclassifies the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District;
E. A map amendment to re-zone the Property and the Lawn Avenue ROW Parcel from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District;
F. An Exception (Variations) from Subsection 10-8-4(B)(1)(d) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO applicable only to the Development to provide: "Along the periphery of such planned developments, set back yards shall be provided as required by the regulations of the underlying zoning district, except that in the R4 - Multiple-Family Residence District variations of not more than 61% to the front yard regulation and the corner side yard regulation may be allowed as part of the approval of the planned development.";
G. An Exception (Variations) from Subsection 10-8-4(B)(1)(e) (Exceptions From District Regulations; Site Design Regulations; Exceptions From District Regulations) of the DCO to provide: "Building height shall comply with the Zoning District regulations approved by the Village for the planned development, except that a variation of not more than 9% above the maximum height of buildings and structures may be allowed as part of the approval of a planned development.";
H. Exceptions (Text Amendments / Variations) from requirements of Section 10-6-5 (R4 - Multiple-Family Residence District) regulations, including:
    i. Subsection 10-6-5(D): Minimum Development Parcel Size: Required: five (5) acres (217,800 square feet); and Requested: 2.76 acres;
    ii. Subsection 10-6-5(E)(1): Minimum Yards Requirements: Front Yard: Required: Twenty-five feet (25'); and Requested: Seven Feet (7');
    iii. Subsection 10-6-5(E)(2): Minimum Yards Requirements: Corner Side Yard: Required: Twenty-five feet (25'); and Requested: fourteen feet and five inches (14.42');
    iv. Subsection 10-6-5(E)(3): Minimum Yards Requirements: Interior Side Yard: Required: Thirty feet (30'); and Requested: six feet and eight inches (6.67');

v. Subsection 10-6-5(E)(4): Minimum Yards Requirements: Rear Yard: Required: Thirty feet (30'); and Requested: Twelve feet and nine inches (12.75’); and

vi. Any additional exception(s) or variation(s) identified at the Public Hearing from the other use, bulk and site design requirements contained in the DCO that are necessary to permit the construction of the Development and allow the above Property to be used for its intended purposes in accordance with the filed Application shall also be considered for Village approval; and

I. A variation from Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40’) south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder of Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units. The standards for consideration and approval of the proposed map amendment and text amendments are set forth in Section 10-3-12 (Amendments) of the DCO; and

SECTION 3. Conditions of Approval of Requested Zoning Relief. The above zoning relief and development approvals granted for the Development as contained in Section 2 above are subject to the following conditions:

1. General

a. The Applicant shall comply with all of the applicable federal, state, county, local and special district laws, ordinances and regulations, including the provisions of the Village’s Municipal Code, relative to the construction and maintenance of the Development, except as otherwise modified by Village approvals.

b. The uses generally approved for this Conditional Use Permit for Planned Development for the Development are limited to residential uses and uses ancillary to the foregoing uses. Such ancillary uses shall comply with the requirements for accessory uses established under the DCO. The approval of the Conditional Use Permit for Planned Development for the Development does not authorize the Applicant or any other tenant or occupant to use the Property without applying for and obtaining any required temporary use permit, conditional use permit, or any other Village or other governmental approval. Such specific use approval shall be obtained by the Applicant, tenant or occupant of the Property before commencing such use.

c. In regard to the construction, operation and maintenance of the Development, these conditions shall be the only conditional use and planned development conditions applicable to that use of the Property, unless amended by mutual agreement of the Applicant and the Village, or unless amended by ordinance approved by the Village Board after the required public hearing.

d. The Applicant shall pay the required impact fees (i.e., school site / school improvement impact fee; and park and recreation site impact fee) to the Village in lieu of land dedication, as calculated by the Village, in accordance with the formula set forth in Section 10-10-14 of the DCO, at the time it applies for a building permit

e. In the event that the Applicant does not obtain a site development permit or a building permit and commence and actively perform construction of the Development within twelve (12) months of the approval of the Conditional Use Permit for Planned Development for this Project, the Conditional Use Permit for Planned Development for this Project shall expire in accordance with Section 10-3-14(L) of the DCO, unless the 12-month period is extended by approval of an ordinance by the President and Board of Trustees of the Village. Any extension of the above 12-month period to avoid an expiration of the Conditional Use Permit for Planned Development for this Project shall be approved by an ordinance passed by the President and Board of Trustees of the Village, in their discretion. Approval of such an extension does not require a public hearing, but such ordinance must be approved by the President and Board of Trustees of the Village at a public meeting in accordance with the Open Meetings Act. The Applicant shall use all commercially reasonable efforts to secure all necessary governmental permits needed to complete the Development and to actively and diligently pursue completion of the Development. The Applicant shall use all commercially reasonable efforts to hire an adequate number of experienced contractors, subcontractors and other skilled labor, and provide for adequate equipment and building materials to ensure that construction of the Development is actively and diligently pursued.

f. The Applicant shall revise the Declaration of Covenants, Conditions and Restrictions for the Homeowners Association (the "Declaration") in accordance with comments provided by the Village Attorney and shall file the Declaration with the Cook County Clerk's Office, Recording Division ("CCCORD") prior to the sale of any portion of the Property to any other person. The Declaration shall require that, at the closing of each dwelling unit, the Applicant shall allocate $600.00 (or an amount equal to three (3) months' Community Assessment) and pay said amount into a "Capital Reserve" fund, as defined and required by the Declaration, for the maintenance reserve account for the benefit of and use of the Homeowners Association for maintenance purposes consistent with the Declaration. In addition, the Declaration shall provide for adequate building reserve funds to pay for operating expenses (insurance, building maintenance and cleaning vendors, utilities, security) and short-term and long-term maintenance, repair and replacement expenses for the exterior and interior of the building and its common areas, and also contain all necessary cross access easements for driveway use and garage access for the benefit of each of the dwelling units as well as common area easements for use, repair, replacement and maintenance of common areas and common elements (driveway, fencing, landscaping, roof and exterior building materials) of the building.

g. The Village and the Applicant shall execute the Final Plat of Heritage Crossing and the Declaration, which shall be filed against title to the above-described property with the CCCORD. The Plat shall be filed by the Village, at the Developer's cost, along with a certified copy of the Ordinance approving the Development. The Declaration shall be filed by the Developer, at its cost, with the CCCORD after the townhome units are constructed but prior to the sale and conveyance of legal title to any townhome. The Declaration shall

contain provisions that are enforceable against the Applicant, and any successor owners, property managers, associations, lessees, licensees, transferees, receivers or successors in interest, which, in part, provides for the future installation, maintenance, repair and replacement of all stormwater management and other drainage structures, public utilities, water and sewer mains and related structures, including without limitation fire hydrants, driveway and parking lot improvements, parking lot and landscape lighting, and landscaping and retaining wall improvements. The Plat and the Declaration shall be in a form and content approved by the Village Engineer and the Village Attorney. The Plat and the Declaration shall impose on the Applicant, and any successor owners, lessees, licensees, transferees, receivers or successors in interest, at their cost, the obligation and responsibility of performing all future maintenance, repair and replacement work in regard to the above-described development improvements as reasonably deemed necessary by the Director of Code Enforcement and the Village Engineer in order to comply with the Village Code, as amended, and shall grant to the Village a non-exclusive easement for entry upon and access to all parts of the Property, for purposes of providing the Village with the right but not the obligation to perform such maintenance, repair and replacement work, in its sole, reasonable discretion, along with the right to recover the cost of such work directly from the owners, successor owners or successors in interest or to lien the property and take all other action provided for in 65 ILCS 5/11-31-2, as amended, or similar applicable law, including any law contained in the Illinois Municipal Code, as amended. The Applicant, and any successor owners, property managers, associations, lessees, licensees, transferees, receivers or successors in interest, at their cost, shall repair pavement, concrete, landscaped areas or other areas damaged by the Village if the Village performs such future installation, maintenance, repair and replacement work.

h. Prior to the issuance of a building or development permit, the Applicant shall submit a construction schedule, routing, construction staging, restoration plan and phasing plan with map and plan exhibits, which are in conformance with the final set of Village approved engineering and construction plans for the Development. These plans shall identify construction access routes, temporary detours, regular street cleaning intervals and refuse removal, and other appropriate safety, restricted access and “good neighbor” practices. Standard Village construction hours shall apply, except as otherwise permitted by the Village Manager.

i. Prior to the issuance of a building or development permit, the Applicant shall enter into a Maintenance and Development Agreement with the Village, as prepared by the Village Attorney and approved by the Village Board, which includes conditions for the construction and long-term maintenance of the Development, consisting generally of the following items:

   i. The posting of an irrevocable letter of credit or other form of security with the Village to secure the completion of the required SSA Maintained Improvements and the landscape improvements for the Development (the “Developer Security”). The Developer Security shall be in a form acceptable to the Village Attorney and of a dollar amount to be determined by the Village Engineer and shall be managed by the Village in accordance with Subsection 10-10-19(2) (Land Dedications and Completion,

Maintenance and Acceptance of Improvements; Posting of a Bond, Cash, or Other Securities) of the Municipal Code;

ii. The posting of a two-year maintenance bond (performance and payment bond) for the SSA Maintained Improvements and the landscape improvements;

iii. The submittal of construction access plans for the Development requiring the Applicant and all of its employees, consultants and development and construction crews to use Wolf Road as the sole point of ingress and egress to the Development. It is the Applicant's responsibility to ensure that access to the site is maintained during all Development construction activities;

iv. The Applicant shall either enter into a private tow company contract to enforce the community parking spaces with the Development or enter into a private parking / private street enforcement agreement with the Village that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Crossing Subdivision;

v. At the request of the Applicant and the Homeowners Association for Heritage Springs Subdivision, the Village will consider approving an amendment to the planned development ordinance granted for the Heritage Springs Subdivision to allow for additional on-street parking spaces and the operation of the swing gate and such other requested amendments that are necessitated by the Development, and the Village will also consider entering into a private parking / private street enforcement agreement that will allow for the posting of appropriate parking regulation signs and vehicle speed signs to enable Village police officers to issue parking tickets and traffic citations to enforce the parking and traffic regulations of Heritage Court within the Heritage Springs Subdivision;

vi. Prior to the issuance of a building or development permit, the submittal to the Village of a fully executed agreement with Cook County for perpetual maintenance of the Project-related roadway structures and all infrastructure improvements within the portion of the Wolf Road right-of-way, as required by Cook County;

vii. Per Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO, prior to obtaining any type of building or site development permit for the Project, the Applicant shall execute and enter into a stormwater management facilities maintenance agreement ("stormwater maintenance agreement") with the Village, as prepared by the Village Attorney and approved by the Village Board, relative to the stormwater drainage facilities located on the Property, which facilities shall be the responsibility of the Applicant and its successor owners (i.e., the Homeowners Association). Within the stormwater maintenance agreement, the Applicant shall guarantee that the Applicant and all of the successor owners of the Property will maintain the stormwater management facilities and the stormwater drainage system and provide to the Village periodic written reports on the stormwater management facilities' monitoring and maintenance. The stormwater maintenance agreement shall also specifically authorize representatives of the Village

to enter onto the Property for the purpose of inspections of the stormwater drainage system. Such agreement shall be recorded with the CCCORD. The stormwater maintenance agreement shall include a schedule for regular maintenance of each aspect of the Property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The stormwater maintenance agreement shall also stipulate that, if the appropriate authorized personnel of the Village notify the property owner in writing of maintenance problems which require correction, the property owner shall make such corrections within thirty (30) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner.

viii. Revise the Declaration to exclude/prohibit charcoal grills on the proposed balconies.

j. Prior to the sale of any portion of the Property by the Developer or the issuance of any occupancy permits for the Development, the Developer shall participate in good faith in the formation process, and not object to the formation, of a dormant "Special Service Area" ("SSA") to be established by the Village, at the Developer's cost, pursuant to 35 ILCS 200/27-5, et seq. The SSA shall govern the Property for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the "SSA Maintained Improvements". The SSA Maintained Improvements shall include those public and privately-owned and developed improvements within the Development or within utility easements outside of the Property that are necessary to support and serve some or all of the Development including, but not limited to, new or the replacement, maintenance, extension or upsizing of existing public or private stormwater detention and drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin (each detention basin shall be privately-owned and maintained by the Homeowners Association), privately-owned Heritage Court, the Heritage Court Gate Access Improvements and its Opticom sensor system, other roads or pathways, drive aisles, curbs, light poles and light fixtures for roads, sidewalk and pedestrian pathways, and access drives, sanitary sewer mains and service lines and other sanitary sewer system facilities and equipment (i.e., lift stations), water mains and service lines and other water system facilities and equipment (i.e., pump and/or booster stations, vaults, generators, water storage tank or tower), and electric, telecommunications, cable and gas service lines and facilities.

k. The individual dwelling units and platted lots within the Development shall not be permitted to request variations from the Village's Municipal Code that are unique and specific to the individual dwelling unit and lot owner. Amendments to the planned development ordinance that are not unique and specific to an individual dwelling unit and a specific lot owner may be applied for and presented to the Village in accordance with the applicable provisions of the Municipal Code.

l. The residential buildings must comply with the architecture approved by the Village's Planned Development Ordinance.

m. The exterior of the newly constructed buildings and other above grade structures of the Project shall be constructed primarily of high quality brick, brick veneer that is a minimum

of three-fourths inches and individually adhered, stone, masonry, architectural-faced concrete block, stamped concrete panels, cement fiber board (i.e., Hardies or LP cement board products), architectural metals, and synthetic architectural products to provide a high quality aesthetic appearance. Sidewalks and pedestrian pathways shall be constructed of concrete. Vinyl siding shall not be permitted. Exterior Insulation and Finish Systems (EIFS) materials (i.e., Dry-vit materials) shall not be permitted. The Applicant agrees to take all commercially reasonable steps to ensure that the building design, building materials and exterior color schemes of the proposed building and its related landscaping are designed to blend in and complement the adjacent residential uses.

n. The Applicant shall prepare and submit to the Village final versions of the Plat of Heritage Crossing Subdivision, the Plat of Abrogation for Storm Sewer Easement and Public Utility Easement, and the Plat of Vacation of Public Right-of-Way that have been revised to address the review comments of the Village Engineer and the Village Attorney. The Plat of Heritage Crossing Subdivision shall be revised to specifically identify all terms and conditions associated with the road and driveway usage and maintenance, including cleanliness standards, snow removal and other required reasonable terms. These Plats, and any other plats that may be required for this Development, are subject to approval by the Village Board (or the Trustees), and, if approved, then said Plats will be filed with the CCCORD, by the Village Attorney, at the Applicant's cost prior to the sale of any dwelling unit.

o. In accordance with Subsection 9-1A-1 (Plan Review Deposits and Fees) and Subsection 9-1B-5: (Additional Deposit Required) of the Municipal Code, within five (5) business days of Village Board approval of the Requested Zoning Relief, the Applicant shall provide to the Village a developer-reimbursable costs / plan review escrow deposit of $58,000.00 to defray the Village's cost of plan reviews and payment of other developer-reimbursable costs incurred by the Village relative to the processing of the Application and the plan reviews by the Village staff and Village consultants of the development plans submitted for development permit approval. The developer-reimbursable costs / plan review escrow deposit shall always maintain a positive cash balance of not less than $10,000.00 and the Applicant shall provide the Village with additional funds to replenish the escrow within five (5) business days upon written demand from the Village.

p. Once the Property is rezoned from its current designation of O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for planned development overlay approval, to allow for the construction and operation of the Development, it will expand the types of other possible adaptive uses that could be developed on the Property under the R4 - Multiple-Family Residence District classification, if the Development is not constructed, subject to Village approval of another conditional use permit for a planned development after the conducting of the required public hearing.

q. The conditional use permit for planned development ordinance and its conditions shall be covenants of record that run with the land and shall be placed in a recordable format, acceptable to the Village Attorney, and then recorded by the Village against title to the Property with the Cook County Clerk's Office – Recording Division, at the Applicant's cost.

r. The approval of the Requested Zoning Relief is subject to the Developer purchasing the Property from the Property Owner.

s. Execution by the Applicant of the ACKNOWLEDGMENT Page that is part of the conditional use permit for planned development ordinance.

2. Engineering

a. The Applicant, at its cost, shall install a new eight inch (8.00") ductile iron watermain and new fire hydrants to service the Development. The Developer shall obtain an IEPA permit for the new watermain. The Village, at the Applicant's cost, shall have a water system engineering inspection performed and an assessment report prepared by a licensed professional water system engineer to verify the condition and capacity of the existing adjacent water main located in the Heritage Springs Subdivision and to provide a recommendation for the sizing of the water main that will service the Development. The Applicant, at its cost, shall be responsible for any repairs and/or replacement related to its connection to and extension of the existing water main that are determined by the water system engineer to be necessary to provide adequate water main and service line connections to the Development.

b. The Applicant shall be responsible to pay for any damage to any public improvements caused by any activities related to the Development. The Village will be the sole arbiter of determining if the damage was caused by the Applicant's actions. Within seven (7) calendar days of inspecting any damage, the Village will notify the Applicant in writing and define the scope of the damage and expected repairs. The Village and the Applicant will discuss whether the damage is to be repaired by the Applicant or if the estimated costs of repairs are paid to the Village.

c. The existing drainage pattern for the Property will not be altered by the construction of the Development, the stormwater drainage system, the landscaping or any of the related improvements.

d. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated geometric plan that shows not only the location of a safety rail on top of the retaining walls, as shown on the current geometric plan, but also contains a detailed and structural design and calculations for the safety rail, which are needed to ensure the rail is adequate and meets applicable codes.

e. The Applicant's engineer shall submit to the Village, as part of the Village plan review and approval process, accurate calculations showing that the stormwater management system is able to manage bypass stormwater appropriately as determined by the Village Engineer.

f. The Applicant shall submit to the Village, as part of the Village plan review and approval process, accurate calculations that show that the rate of flow of the stormwater drainage bypass system is equal to or less than the current rate of all bypass flows (low flow and

overland). This submittal must demonstrate that the bypass stormwater does not reach the Lawn Avenue Detention Basin faster than it currently does under the existing conditions.

g. The Village will not accept the twin 54" aluminum pipes that are proposed by the Applicant to be installed in the rear yard of Units 1 through 7. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that utilizes reinforced concrete pipes or precast reinforced concrete box culverts to convey the stormwater. The Applicant shall submit to the Village design calculations that demonstrate the proposed pipes meet all relevant design criteria for capacity and velocity of stormwater.

h. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a detailed operations and maintenance ("O&M") plan for the enclosed stormwater drainage bypass system. The O&M plan is required to be incorporated into the final plat of subdivision, the Declaration, and the Maintenance and Development Agreement.

i. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated design plan that shows:

   i. All components of the stormwater bypass system (open channel and piping) are secured and not accessible to the public.

   ii. The Applicant shall install infrastructure to ensure that the stormwater bypass system is not a danger to the public.

j. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a wetland plantings plan for the stormwater basins to be used with the volume control retention system needed to be designed by a licensed / certified ecologist and reviewed by the Village prior to the issuance of any site development permit. This plan must also include a maintenance plan.

k. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of structural design plans sealed by an Illinois licensed structural engineer for the retaining walls.

l. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an O&M plan for the stormwater detention basins. The Applicant shall create an O&M plan for the stormwater detention basins and create a mechanism to fund all required maintenance activities for the establishment period of three (3) to five (5) years. A licensed / certified ecologist with experience in wetland basins shall produce this type of O&M plan for Village review and approval prior to the issuance of any site development permit.

m. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an exhibit showing that the street light photometrics conform with the Village Code for Village review prior to the issuance of any site development permit.

n. The plans have been updated to show new retaining walls along the west edge of the Lawn Avenue Detention Basin which will require the removal of the existing walls. However, the structural design of this new retaining wall and the other proposed retaining walls are not complete and are not provided. The Applicant shall submit to the Village, as part of the Village plan review and approval process, complete retaining wall details, elevations, and signoff approval by an Illinois licensed structural engineer.

o. Since the structural design is not complete, it is not known if tiebacks or over excavation needed to construct the walls will be contained within the Property. Work needed to construct the new retaining walls cannot take place on private property unless temporary or permanent easements are acquired. Construction limits behind the retaining walls shall be identified and contained within the Property or copies of executed easements are to be provided prior to the issuance of any site development permit.

p. Neighboring properties cannot be flooded as a result of any interim construction conditions or activities by the Applicant that could occur if the old retaining wall is torn down and the new retaining wall is not yet complete. The development plans shall contain provisions that temporarily protect the west property line to a pre-project elevation. The development plans shall identify a stormwater management plan that the Applicant shall comply with to address stormwater management issues during the site development phase and construction phase of the Development.

q. The retaining wall design of the detention area between Units 20 and 21 shall be constructed and maintained to accommodate for overland flows that may occur if the twin 54" sewers are overwhelmed or not functioning properly

r. Replace the existing flat grate that is part of the existing Heritage Springs stormwater system, which is prone to clogging, with a vaulted frame and grate. A vaulted grate will be much less prone to clogging and will improve performance and reliability of both developments' stormwater management systems.

s. The plans show inlets proposed to be located on the Heritage Springs property. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated plan that relocates the inlets to the south so they are located on the Heritage Crossing's property and adjusts the location of the inlets directly under the proposed swing gate to be fully located on Heritage Crossing property. The plans also need to be updated so that the Heritage Court roadway vertical curve is adjusted so the low point is moved south, which will result in the inlets being placed on the Heritage Crossing property and relocate the depressional area from Heritage Springs to Heritage Crossing.

t. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of street lighting plans for the Development, which include all lighting conduits, cables, controllers, and service location. Also, these plans shall include light pole foundation and controller foundation details, and the street lighting plans shall be signed and sealed by an Illinois licensed structural engineer.

u. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the development of the HEC-HMS modeling and results.

v. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a report that discusses how the hydraulic modeling impacted the subdivision grading plan.

w. The Applicant's narrative report shall be updated and resubmitted to the Village with a section discussing the worst-case flooding scenario. This updated report shall include exhibits sent to Engineering on October 31, 2024, which illustrate stormwater storage in this worst-case scenario. The updated report shall clearly state there is a net increase in stormwater storage despite the removal of the existing parking lot area and the back-filling of that parking lot area with soil as part of the site development work and lot grading work.

x. The proposed design of the dual culverts suggests a full-flowing velocity of 14 ft/s, well above the acceptable maximum velocity. The Applicant's next plan submittal shall contain documentation that confirms 11 ft/s is the maximum flow velocity through these culvert stormwater pipes.

y. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of calculations for the riprap sizing at the outfall of the dual culverts. The current riprap gradation, shape and area do not appear to match the design provided by the Illinois Urban Manual. Furthermore, the detail provided (IL-610 on Sheet 6) is missing dimensions and shall be updated by the Applicant.

z. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated grading plan for the Property line north of Unit 14 that demonstrates that the final re-grading of the area will prevent overland flow from continuing onto the Heritage Springs property.

aa. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated Stormwater Management Report and HEC-HMS Model that includes:

    i. An updated Stormwater Management Report's narrative revised to include a discussion of modeling results, reference and a discussion of the supporting modeling documentation, and also shall include a set of inundation maps.

    ii. Clarification on how the discharge flows are defined between stormwater detention basins. The HEC-HMS files provided indicate that the discharge curves for all stormwater detention basins are turned off in both existing and proposed scenarios. Additionally, many of the nodes do not have discharge functions defined.

    iii. Clarification on the distinction between the nodes "Storage East of Wolf Road" and "Box Inlet East Side Wolf Rd". Pages 71 and 72 of the report show stage-storage tables for these nodes, but the areas for elevations 664.0 and 665.0 match for these two, suggesting some volume may be double-counted. Furthermore, the "Box Inlet-

East Side Wolf Rd" node table differs significantly from that shown in the HEC-HMS model.

iv. Provide a set of HEC-HMS results that match the conservative scenario displayed in the inundation maps because: (i) The inundation maps provided are for the scenario where the Ashbrook Subdivision ponds are not modeled, and the 2-hour duration storm is the critical duration., (ii) However, the HEC-HMS results provided are for the scenario where the ponds are modeled, and the 1-hour duration is critical.

v. Revise the inundation maps to reflect flood elevations upstream of Basin "C". For example, the "Storage West Side Wolf Road" node has critical duration elevations in excess of 660, which need to be shown on the inundation maps. This would include surcharging inlets along the dual culverts under proposed conditions.

bb. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a written response to each of the initial plan review comments from the Village Engineer and Village's consulting engineer contained in Attachment 4 of the Village Staff Memo dated November 18, 2024.

cc. The Applicant shall submit to the Village, as part of the Village plan review and approval process, a set of final engineering plans that include the location of all utilities and light poles that demonstrate there are no conflicts between utilities, light poles, and the proposed landscape areas.

3. Landscaping

a. The Applicant (and any successor owners, property managers, property associations), at its cost, shall be required to maintain each building façade and long-term lawn and landscape maintenance of the green spaces for the Development, which obligations shall be set forth in a combined Property Maintenance Plan / Landscaping Plan for the Village's plan review approval and final Village Board approval. Maintenance standards, tree replacement standards and other appropriate landscaping standards shall be part of the Applicant's Property Maintenance Plan / Landscape Plan for the Project, and the Applicant shall comply with the obligations and standards contained in the Property Maintenance Plan.

4. Right-Of-Way, Road, and Traffic

a. The Applicant proposes to maintain the current Wolf Road access point as the primary point of ingress and egress for the Development, subject to Cook County Department of Transportation and Highways approval of certain Wolf Road right-of-way modifications (i.e., required Project-related reconfiguration work to Wolf Road that may include a deceleration / turning lane) and modifications to the existing drainage culvert improvements that will allow it to construct the Development consistent with the current Site Plan. The Village's consideration of approval of the Development is conditioned on the Cook County Department of Transportation and Highways' approval of the current Wolf Road access point as the primary point of ingress and egress for the Development based on the current Site Plan and the Applicant's agreement to abide by the conditions

of approval required of the Applicant by the Cook County Department of Transportation and Highways relative to the Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements. The Applicant, at its cost, shall be responsible for entering into all easements, maintenance agreements and other binding documents with the Cook County Department of Transportation and Highways, and completing the Wolf Road right-of-way modifications and any modifications to the existing drainage culvert improvements. Other than the Village's plan review process, the Village shall not be obligated to participate in the Cook County Department of Transportation and Highways' required Wolf Road right-of-way modifications and modifications to the existing drainage culvert improvements that are necessary to construct the Development under the current Site Plan and that will allow the Applicant to construct the Development consistent with the current Site Plan. In the event the Cook County Department of Transportation and Highways does not approve of the current Wolf Road access point as the primary point of ingress and egress for the Development, the Applicant will have to petition for an amendment to the planned development ordinance and present a revised Site Plan with a modified point of ingress and egress for the Development for review and consideration by the Plan Commission at a public hearing and then review and consideration by the Village Board.

b. The Applicant, at its cost, shall construct a fence and swing gate across Heritage Court at the north lot line where the new Heritage Court meets the existing Heritage Court that serves the Heritage Springs Subdivision. The swing gate shall be operated by an Opticom sensor that shall be taller than the proposed fence/gate. The design of the swing gate shall ensure that gate electrical and control equipment is elevated one foot (1.0') above flood elevation. The swing gate must work at all times and shall have a battery backup system capable of operating the gate for at least 24 hours after loss of power to ensure operation during power outages. The swing gate must have appropriate sensors on both sides to ensure the gate can operate in either direction for emergency vehicles. Design plans, operational details, and loss of power procedure for the swing gate and the Opticom system must be submitted by the Applicant for review and approval by the Village's Director of Fire and EMS before any permit is issued for site development. The Applicant shall enter into an operations and maintenance agreement with the Homeowners Association for the Heritage Springs Subdivision relative to the swing gate and the Opticom sensor(s).

c. Vehicles parked in the driveway of Units 8, 15 and 21 may not overhang the curb or the sidewalk (if present).

d. New sidewalks installed by the Applicant are required along the west side of Wolf Road and the north side of Park Place frontage per the Village Code. Replacement of existing sidewalks along the west side of Wolf Road as needed as a result of the new access to Wolf Road is required by the Applicant. Placement of sidewalks must be as far from the paved roadways as practical, but the Village will defer to the Cook County Department of Transportation and Highways, as they will review and approve sidewalk placement and issue the permit for the work. On Park Place, placement of the sidewalk shall be one foot (1.0') inside the public right-of-way along the southern edge of the Development, except where it conflicts with the existing Ridgewood sign and the sidewalk shall dead end at west termini point. All new sidewalks shall comply with IDOT and Illinois Accessibility Code

standards for slopes. The northwest corner of the Park Place and Wolf Road sidewalk ramp shall be removed and replaced by the Applicant.

e. As part of the Maintenance and Development Agreement and the Declaration, the Applicant and the Heritage Crossing Homeowners Association shall be obligated to maintain the swing gate on a regular basis and to repair the swing gate, as needed, to ensure that the swing gate operates at all times.

f. The Applicant shall submit to the Village, as part of the Village plan review and approval process, updated plans that Convert the turnaround area north of Unit 15 to grasscrete or similar material.

g. The Applicant shall submit to the Village, as part of the Village plan review and approval process, an updated version of the color site plan prepared by BSB Design (revised November 5, 2024) with the crosswalk shown perpendicular (not angled) to Heritage Court, consistent with the Final Engineering Plans for Heritage Crossing, prepared by DesignTek Engineering, Inc. (revised November 4, 2024).

5. Signage

a. Provide information on any roadway vehicle traffic signage related to Heritage Court and other proposed subdivision signage type (private) for Village review for the Development for Village Board approval as part of its consideration of the planned development ordinance. All approved and required on-site parking restriction signage that pertains to the Development shall be installed and maintained by the Applicant, at its cost, or the Homeowners Association, at its cost.

b. Provide for the Ridgewood monument sign, in its current location, or in an alternate location in close proximity to its current location, as agreed upon by the Ridgewood Subdivision Civic Association and Cook County. If the Ridgewood monument sign remains in its current location, the Developer, at its cost, shall provide to the Ridgewood Subdivision Civic Association an easement over the portion of the Property that the sign is partially located on. If the sign is relocated, the Developer, at its cost, will make the required legal arrangements (i.e., easement agreement or land dedication) with either the Ridgewood Subdivision Civic Association or Cook County, or both, to provide for the long-term placement and maintenance of the monument sign.

c. The placement of the sidewalk on Park Place will require the movement of the Ridgewood subdivision sign. The relocation of the subdivision sign must be addressed by the Applicant as part of the Village plan review and approval process. The Applicant is required to provide the written approval from the Ridgewood Civic Association of the subdivision sign design and sign placement.

SECTION 4. Acknowledgement and Agreement to Comply With the Obligations, Conditions, Terms and Provisions Set Forth in This Ordinance. The Applicant agrees to comply with all of the obligations, conditions, terms and provisions of this Ordinance. The Applicant acknowledges and agrees that the Village is not and will not be, in any way, liable for any damages or injuries that may be sustained as a result of the Village's approval of this Ordinance or its review and approval of any plans for the

Development or the issuance of any permits for the Development, and that the Village's review and approval of any such plans and issuance of any such permits do not and will not, in any way, be deemed to insure the Applicant against third party claims, causes of action and damages or injuries of any kind at any time. The Applicant consents to the approvals granted in the Approval Ordinance and all conditions of those approvals and also to the recordation of this Ordinance with the CCCORD against title to the Property for the purpose of providing notice that the Applicant, and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property, are subject to the obligations, conditions, terms and provisions of this Ordinance.

SECTION 5. Termination of Ordinance for Failure of Developer to Acquire Title to the Property. This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 6. Severability. The sections, terms, provisions and conditions of this Ordinance shall be severable, and if any section, term, provision or condition is found to be invalid or unenforceable for any reason by a court of competent, final jurisdiction, the remaining sections, terms, provisions and conditions shall remain in full force and effect.

SECTION 7. Repealer; Covenants that Runs With the Land. Any Ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only by mutual agreement of the Applicant and the Village, or unless amended by ordinance approved by the Village Board after the required public hearing.

SECTION 8. Filing with Cook County Recorder of Deeds Office. A certified copy of this Ordinance shall be recorded against title to the Property with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a stamped copy of this Ordinance after it is filed with the CCCORD. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the Village Board.

SECTION 9. Effective Date. This Ordinance shall be in full force and effect from and after its adoption, approval and publication, as provided by law.

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the ____ day of _____, 2025, and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the ____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

Group Exhibit "1"

The Application consists of information supporting the requested zoning relief, a description of the proposed improvements to be constructed as part of the Development, and the proposed Preliminary Development Plans, as follows:

Code Section	Requirement	Proposed
10-4-4(F)3a: Fences, Height Restrictions	Front yard: 3.5 ft. Rear & side yards: 6 ft.	8 ft.
10-6-5(D): Minimum Development Parcel Size	5 ac.	2.76 ac.
10-6-5(E)(1): Minimum Front Yard	25 ft.	7 ft.
10-6-5(E)(2): Minimum Corner Side Yard	25 ft.	14.48 ft.
10-6-5(E)(3): Minimum Interior Side Yard	30 ft.	6.67 ft.
10-6-5(E)(4): Minimum Rear Yard	30 ft.	12.75 ft.
10-8-4(B)(1)(e): Maximum Building Height	35 ft.	36.33 ft.
10-10-7: Street Design Criteria	Pavement width of 27 ft.	23 ft.
10-10-7: Street Design Criteria	Minium horizontal curve radius of 150 ft.	40 ft.
10-10-7: Street Design Criteria	Minimum vertical curves 100 ft. in length	50 ft.
10-11-11(C)2: Detention	Streets are not to be used for the storage of excess stormwater, ponding depths shall not encroach more than 3' on the adjacent traffic lane and shall not remain flooded for more than 8 hours for any event less than or equal to the 100-year event	Allow for storage of 1.5 ft on the entire street width from the northern property line to a point roughly 36.5 ft. south along the Heritage Court.

(incorporated herein by reference and with copies on file at
the Village Clerk's Office and the Community Development Department)

h. Variation from Subsection 10-11-11 (C)(2) (Stormwater Management Requirements For All Developments; Detention; Streets) of the DCO to allow the portion of the north end of Heritage Court (a private street) between the north lot line of the Property to a point approximately forty feet (40') south of the north lot line of the Property, which is not intended to be used for primary ingress and egress vehicle access to the Property, to be designed and constructed to temporarily hold stormwater during certain infrequent rain events to facilitate the movement of excess stormwater from the Property to the on-site stormwater detention basins and to draw stormwater off of the remainder Heritage Court and away from the private driveways of northerly dwelling units so that there is no ponding of stormwater in front of the dwelling units.

6. The Village's Official Land Use Plan, adopted by Ordinance No. 03-2226 dated February 24, 2003, was amended in 2021 in order to allow for the redevelopment of the 17 West Ogden Avenue Property with a higher density residential development. The Land Use Plan Amendment was approved on June 28, 2021, with the passage of Ordinance No. 21-3046. Similar to the Village's approval of the 17 West Ogden Avenue development, the proposed rezoning of the Property from O – Limited Office Zoning District to the R4 - Multiple-Family Residence District, with a conditional use permit for a planned development overlay approval, will follow the guidelines as set forth in Subsection 10-5-2(A)(6) (Purpose Statements) of the DCO:

> "R4 - Multi-Family Residence District: This district is intended to provide for a multiple-family residential environment of moderate density. The R4 district is intended to accommodate existing apartment buildings which have developed over time within the village. While this district will be applied to existing multi-family development built on a lot by lot basis, it is intended that new multi-family dwelling units shall be constructed as part of a planned development. (Ord. 01-2158, 1-22-2001)"

7. Based on the regulations set forth in the Village's DCO, the Requested Zoning Relief has to be considered by the Plan Commission at a public hearing and then the Village Board must consider approval of the Requested Zoning Relief.

8. As a supplement to its Application, the Applicant provided the following revised or supplemental documents:

a. On July 12, 2024, a set of revised or supplemental documents were filed.
b. On July 24, 2024, revised or supplemental documents were filed.
c. On August 1, 2024, a set of revised or supplemental documents were filed.
d. On August 26, 2024, a set of revised or supplemental documents were filed.
e. On September 10, 2024, a set of revised or supplemental documents were filed.
f. On September 16, 2024, a set of revised or supplemental documents were filed.
g. On September 20, 2024, a set of revised or supplemental documents were filed.
h. On September 24, 2024, a set of revised or supplemental documents were filed.
i. On September 25, 2024, a set of revised or supplemental documents were filed.
j. On October 3, 2024, a set of revised or supplemental documents were filed.
k. On October 18, 2024, a set of revised or supplemental documents were filed.
l. On October 22, 2024, a set of revised or supplemental documents were filed.
m. On October 24, 2024, a set of revised or supplemental documents were filed.
n. On November 6, 2024, a set of revised or supplemental documents were filed.

Group Exhibit A

GENERAL INFORMATION APPLICATION
For Land Use and
Development in the Village

Applicant(s)

Name: McNaughton Development LLC

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

E-mail johnb@mcnaughtondevelopment.com

Property Owner(s)

Name: Casey & Fran Gaik

Address: 8541 Pavia Way

Lakewood Ranch, Florida 34202

Telephone: 630-408-8833

E-mail: ibitmog@gmail.com

Agent/Attorney

Name: John Barry

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

Engineer

Name: DesignTek Engineering & Survey

Address: 9930 W. 190th Street

Mokena, Illinois 60448

Telephone: (708) 326-4961

Fax: (708) 3264962

If the property is in a trust, provide name, address and number of trust. Also provide name, address and percentage ownership of trust beneficiaries.
____N/A_____

I hereby make application for the following (check as appropriate).

Annexation	_____	Map Amendment	___X___
Subdivision	_____	Resubdivision	___X___
Planned Development	X_____	Conditional Use	___X___
Variation(s)	_____	Outdoor dining	_____
Other: Comp. Plan Amendment to the Long-Range Land Use Map	X_____	Appeal	_____

Briefly describe your request (or attach a cover letter/narrative): Refer to the attached Application for Development Approval and Zoning Relief

DocuSign Envelope ID: 22C151EA-279C-4841-A603-1B35A92C1BF3

GENERAL INFORMATION APPLICATION (continued)

1. Common address or location of subject property: 5600 S. Wolf Road, Western Springs, Illinois 60558

2. Legal Description (Attach additional sheet if necessary): Refer to the attached Application for Development Approval and Zoning Relief

3. Permanent Index Number: 18-18-200-038, 18-18-200-017 & 18-18-200-001

4. Parcel Size (sq. ft. or acres): 2.755

5. Applicant is (check one):
___ Property Owner __ Attorney ___ **Contract Purchaser X** Agent ____ Other (specify)

* Provide one copy of the executed sales contract or written permission from the current owner to petition the Village

6. What are the current land uses and zoning on and around the site?

	Current Zoning	Land Uses
On Site	O-Limited Office	Office Building
North of Site	C2-Community Shop	Gas Station/ Community Shops
	A-Single Family	ComEd Facility
	R4-Multi-Family	Condominiums and Townhomes
South of Site	A-Single Family	Single Family Homes
East of Site	Unincorporated R4	Single Family Homes
West of Site	A-Single Family	Single Family Homes

7. Describe any existing structures and the site: The property is improved with a 24,000 square foot with its associated parking lots.

I hereby certify that all information contained in this application and accompanying documentation is true and correct to the best of my knowledge.

Date 5/13/2024 Signature _____
(Applicant or Contract Purchaser)

Date 5/9/2024 Signature DocuSigned by: Fran Gaik 2DDB531924AB443...
(Property Owner)

5/9/2024 DocuSigned by: CASEY Gaik 95445F2250CF41A...

APPLICATION FOR DEVELOPMENT APPROVAL AND ZONING RELIEF;

MAP AMENDMENT AND CONDITION USE PERMIT FOR PLANNED DEVELOPMENT

To: Heather Valone
Director of Community Development
Village of Western Springs
4353 Wolf Road
Western Springs, IL 60558

By: Paul R. McNaughton
John Barry
McNaughton Development, LLC
11S220 Jackson Street
Burr Ridge, Illinois 60527

Project Summary: McNaughton Development LLC, as the contract purchaser of the property at 5600 S. Wolf Road in Western Springs is making the following application to allow for the demolition of the existing underutilized office building and its associated parking lots and for the construction of twenty-nine new three-story townhome units. The current 24,000 square foot office building and the parking lot sit on two parcels of land that total 2.414 acres. The final development will also include 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. This Lawn Area right-of-way is currently being maintained by the Heritage Estates Townhome Association as a detention facility. The Heritage Crossing townhome development would require the vacation of the Lawn Avenue right-of-way and the consolidation of it and the two existing parcels creating a 2.755-acre parcel to be rezoned under a Planned Development with an underlaying zoning district of R4 – Multi Family Residence District.

Applicant: McNaughton Development LLC, will be the owner and general contractor for the new twenty-nine three-story for sale townhome units within the Heritage Crossing development.

Subject Property Address: 5600 S. Wolf Road, Western Springs, Illinois 60558

Legal Description:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

LAWN AVENUE: THAT PART OF THE 66 FEET WIDE VACATED LAWN AVENUE (VACATED PER DOCUMENT NO. 96138577), LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PIN:

PARCEL 1:	18-18-200-038
PARCEL 2:	18-18-200-017
LAWN AVENUE RIGHT-OF-WAY:	18-18-200-001

Lot Size: Approximately 2.755 Acres

Current Zoning District:

PARCELS 1 & 2: O – Limited Office District
LAWN AVENUE
RIGHT-OF-WAY: R4PUD – Residential Planned Unit Development

Zoning Approval & Relief Requested:
Comprehensive Land Use Plan Amendment: Amend the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

Zoning Map Amendment: Amend to rezone the property to R4 – Multiple Family Residence District (Chapter 10-6-5) allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building

Plat of Consolidation: Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development

Resubdivision: Approval of a Plat of Resubdivision (10-10-3) to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road

Conditional Use for a Planned Development: Approval of Conditional Use for a Plan Development with requested deviations from the R4 – Multi Family Residence District as reflected in the following exhibits.

Vacation of Right-of-Way: Approval of the Vacation of the existing Lawn Avenue as depicted in the preceding legal description and included in the following plat of consolidation.

PROJECT NARRATIVE DESCRIPTION
McNaughton Development LLC is the contract purchaser and Casey & Fran Gaik are the owners of the property located at 5600 S. Wolf Road, Western Springs. The property is currently zoned O – Limited Office District. It is one of just five properties within the Village of Western Springs with this zoning designation. The site is improved with a 24,000 square foot office building with its associated parking lots. The property, originally developed as a private school in the 1960's was later converted into and expanded for its current office use in the early 1990's. In recent years the tenant base has vacated the property to the point where the building is at five percent occupancy due to the building's obsolescence. The owners have aggressively marketed the property to other prospective tenants with no success. In addition, it has not been attractive to owner users for any other permitted or conditional use under the O – Limited Office District. It was then decided by the owner, at the suggestion of their real estate broker, that after great effort, the property value would most likely be found in redevelopment for multi-family residential use.

The proposed multi-family residential use will continue to provide for an orderly zoning transition from the intersection of 55th Street and Wolf Road. The existing zoning classification at that corner is C2 – Community Shopping District surrounded by a small A – Single Family Residence parcel

improved with a ComEd facility, a R4 – Multi-Family Residence District improved with condominium units and a R4 – Multi-Family Residence District Planned development improved with townhome units.

The proposed zoning request would permit the resubdivision of and the redevelopment of the property into twenty-nine three-story townhome units. The twenty-nine units will be constructed in eight different buildings ranging from duplex units to four, five and six wide unit buildings. The units will be three stories tall with a two-car garage and recreation room on the ground level, the main living areas on the middle level and the bedrooms on the third level. There are no roof top deck options being offered at this time. The buildings will be 38 feet tall as measured from the proposed final grade to the midpoint of the roof. The living area within the units will range from 2,400 to 2,600 square feet. All of the units will have three bedrooms, two full and two one-half bathrooms and two-car garages. None of the units will have a basement.

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place, and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. By offsetting the access to Park Place, providing entry monumentation and proposing offsite landscaping site access has been proposed in such a way to lessen the impact on the current property owners along the south side of Park Place. A preliminary application was made to the Cook County Highway Department and their response noted that they agreed with the above noted reasoning for the applicant's decision to provide access from Park Place and not directly from Wolf Road. The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

The property will comply with the stormwater ordinances of both the Metropolitan Water Reclamation District (MWRD) and the Village of Western Springs. The proposed redevelopment will result in a reduction in the site's impervious surface as compared to the existing conditions, volume control storage and stormwater detention storage. The applicant is aware of the downstream flooding issue that are a result of approximately one hundred eighty acres of undetained stormwater from the LaGrange Highlands area east of Wolf Road which is directed through this site and ultimately reaching Flagg Creek. The proposed development will have no detrimental effect to downstream owners and the stormwater improvements will provide for marginal improvements to the area.

The proposed development is a for sale townhome development with private improvements that will be managed by its homeowner's association. The expected base purchase price is anticipated to be between $800,000.00 and $850,000.00. The exterior and interior finishes will be of the utmost quality to support the anticipated base pricing. At the same time, interior finish upgrades will be offered to the purchaser. It is anticipated that the target market will be young professionals with no or very young children and active adult move down buyers native to Western Springs and the surrounding communities. Elevator options will be possible in at least fifty percent of the units. The private improvements to be owned and maintained by the association will include the common area landscaping, stormwater improvements and the extended Heritage Crossing. Water main improvements will be turned over to Village of Western Springs and the sanitary sewer improvements to the La Grange Highlands Sanitary District.

I. PETITION FOR REQUESTED ZONING RELIEF

The applicant is requesting the following zoning relief and approvals as part of this applications:

(1) Amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

(2) Zoning Map Amendment

Existing Zoning and Land Use:	O – Limited Office District / 24,000 square foot office building	
Adjacent Zoning and Land Use:	**North**	C2 – Community Shopping District/ gas station and community shopping, A – Single Family Residence parcel / ComEd facility, R4 – Multi-Family Residence District / condominium units and R4 – Multi-Family Residence District Planned development / townhome units.
	South	A – Single Family Residence
	East	Unincorporated Cook County Single-Family Residence District R4
	West	A – Single Family Residence
Proposed Zoning and Land Use:	R4 – Multi Family Residence District allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building	

(3) Plat of Consolidation
Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development. The consolidation of the parcels will allow for an orderly redevelopment of the property, particularly as it relates to stormwater management.

(4) Resubdivision
Approval of a Final Plat of Resubdivision to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road on a parcel of less than the five acres minimum requirement. The applicant is requesting to bypass the Resubdivision requirement to submit preliminary plans and simply request final plan approvals in light of the size of the property.

(5) Conditional Use Permit
Approval of a Conditional Use to allow for a Planned Development with the following deviations from the requirements R4 – Multi Family Residence District and per the following plans and exhibits.

R4 – Multiple Family Residence District Requirements vs Requested Relief:

Minimum Development Parcel Size
Required: 5 Acres
Requested: 2.755 Acres

Front Yard Setback
Required: Twenty-Five Feet (25)
Requested: Twenty Feet (20) Garage Face to the Closer of the Sidewalk or Curb with the permitted encroachment of the Middle Level Deck and Third Level Living Area

Interior Sideyard Yard Setback
Required: Thirty Feet (30)
Requested: Eight Feet (8) with the permitted encroachment of bay windows

Corner Sideyard Yard Setback
Required: Twenty Feet (25)
Requested: Twenty Feet (25) with the permitted encroachment of bay windows

Rear Yard Setback
Required: Thirty Feet (30)
Requested: Twenty-Five Feet (25) with the permitted encroachment of Middle and Third Level Projections and Balconies

Multiple – Family Dwelling Height
Required: Thirty-Five (35) Feet
Requested: Thirty-Eight (38) Feet

Maximum Building FAR
Required: 54,311.51 SF
Requested: 126,008.40 SF

Vacation of Right-of-Way

Approval of the vacation of the 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. The applicant is requesting that the acquisition cost of this vacation be made at no cost to the applicant. The applicant feels that its offer to make stormwater improvements to the site, including to the detention facility, and its commitment and its successors commitment of perpetual care and maintenance is sufficient compensation.

(1) MAP AMENDMENT STANDARDS

Pursuant to Section 10-3-12(F)(1) (Map Amendments) of the DCO, the Applicant must provide the information relative to each of the Standards that are to be used by the Plan Commission and the Village Board to evaluate the suitability of a map amendment.

a. Existing uses of property within the general area of the property in question. The property is currently zoned O – Limited Office District and is along Wolf Road which is under the jurisdiction of the Cook County Highway Department.

North Parcels: Gas station and community shopping, ComEd facility, condominium units and townhome units.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: Single Family Home

b. The zoning classification of property within the general area of the property in question.

North Parcels:
C2 – Community Shopping District
A – Single Family Residence
R4 – Multi-Family Residence District
R4 – Multi-Family Residence District Planned Development.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: A- Single Family Residence

c. The suitability of the property in question to the uses permitted under the existing zoning classification.

The property is not suitable for uses permitted under the O – Limited Office District. This zoning district permits for professional offices, including, but not limited to, offices for attorneys, physicians, dentists, architects, consulting engineers, insurance agents, and village government offices. This use has proven to have failed in light of the current building occupancy being at 5% for an extended period of time. The zoning district does permit for multi-family however, when placed on the second floor of the other permitted uses within the development.

d. **The trend of development, if any, in the general area of the property in question, including changes, if any, which have taken place in its present zoning classification.**

The trend of development is for multi-family residential construction. In fact, the existing office building is not compatible to the trend of development. The existing office uses and commercial developments are all located along 55th Street. Wolf Road in the southwest portion of Western Springs is dominated by residential development. This property is bounded of the north with a three-story condominium building and two-story townhomes. Due to the unique shape of this parcel and its size, the continuation of a multi-family product is an appropriate transition to the single-family development to the west and south

e. **The suitability of the property in question for permitted uses listed in the proposed zoning classification.**

The property is suitable for the uses within the R4 – Multi-Family Residence District Planned Development.

The compatibility of the surrounding property with the permitted uses listed in the proposed zoning classification.

Being residential in nature, the proposed R4 – Multi-Family Residence District Planned Development is compatible with the surrounding residential uses.

The objectives of the current comprehensive plan for the village and the impact of the proposed amendment on the said objectives.

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). This amendment will not result in any detrimental effects within the village or the neighborhood. The amendment will allow for the demolition of an underperforming building, orderly redevelopment of the site providing a positive tax generating use for the village, school districts and other taxing bodies.

(2) CONDITIONAL USE PERMIT STANDARDS

Pursuant to Section 10-3-14(G) of the DCO, the following Standards need to be satisfied in order for the Village Board to approve the Conditional Use Permit establishing the Planned Development.

1. **That the establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare.**

The granting of the conditional use permit to allow for a R4 – Multi-Family Residence District Planned Development on a site less than 5 acres will not be detrimental to or, endanger the public health, safety, morals, comfort or general welfare or injurious to other nearby property or improvements. The proposed conditional use permit will allow for the development of a well-designed townhome development that reduces current impervious services and provides storm management facilities which results in downstream benefits. According to

a traffic study prepared by KLOA, no significant negative impacts on the surrounding road network would result from the development. Given the foregoing, granting the conditional use permit will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located.

2. **That the conditional use will not be injurious to the uses and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located.**

The proposed conditional use will allow a well-designed townhome development that minimizes impact on natural areas and is well separated from existing development with the use of landscaping fencing and setbacks. Setbacks within the development allow adequate light and air while preserving views across the site. Density is consistent with surrounding multi-family developments and according to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated. Site engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so as to provide marginal improvements to the overall area.

As represented in the applicant's materials, a fiscal analysis indicates a positive impact on property values and real estate taxes. Given the foregoing, the proposed conditional use permit will not impair an adequate supply of light and air to adjacent property or substantially increase the congestion of the public streets, or increase the danger of fire, or impair natural drainage or create drainage problems on adjacent properties, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.

3. **That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The subject property is in an immediate area dominated by commercial development, multi-story attached single family, attached single family and detached single-family residential development. The anticipated density of the proposed development is consistent with the requested comprehensive plan amendment and is appropriate in light of the intensity of the surrounding uses and the local roadway system.

Given the foregoing, the proposed development will not impede the normal and orderly development of surrounding property but will in fact be complimentary to existing and future uses.

Those adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.

There is an adequate supply of public utilities in the vicinity of the property. The property can be served easily by public sewer and public water. The development will cause no substantial impact on the surrounding street system. Site

engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so to provide marginal improvements to the overall area.

4. **That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.**

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. The access to Park Place has been engineered in such a way to lessen the impact on the current property owners along the south side of Park Place.

The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

According to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated.

5. **That the proposed conditional use is not contrary to the objectives of the current comprehensive plan for the Village of Western Springs.**

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). However, the proposed amendment and the proposed plan do meet the goals set forth in the of the Comprehensive Land Use Plan for residential areas. The proposal enhances and protects the overall single family residential feel of the village. The product provides variety in housing types available in the village to entice new residents to the village and also allow for long-term residents to remain in the community. The proposal is compatible with the commercial and multi-family uses to the north and provides for an orderly transition to the south and west.

6. **That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the plan commission and approved by the village board.**

The proposed development will conform with the R4 – Multi-Family Residence District except for the requested deviations requested for approval by the Village Board.

(3) ADDITIONAL SUBMITTAL REQUIREMENTS

Pursuant to DCO 10-8-8, the Applicant would like to specifically address the following submittal requirements.

3. Project Design Features:

a. A detailed site plan has been provided illustrating street and pedestrian ways, typical building layouts, setbacks building heights, open spaces and site data

b. Final engineering plans are provided with complete topographical information and stormwater calculations

c. Final engineering plans are provided indicating the feasibility of providing utility service to the site via water mains, sanitary, and storm sewers and storm water detention facilities.

d. Final landscape plans are provided depicting project signage. Project marketing signage has not been developed as of this submittal. Any public facing signage shall be submitted for review to village staff for comment and approval.

e. Final landscape plans are provided indicating the location, number and desired effect of proposed landscaping.

f. Character elevations are provided along with floor plans and exterior color pallets

g. Final engineering plans are provided indicating street lighting

h. Final engineering plans are provided including a sediment and erosion control plan indicating methods to control erosion and sedimentation on and adjacent to the site.

4. Other Requirements: Applications for planned developments shall also include the submission of the following:

a. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the Village of Western Springs and School Districts 106 & 204

b. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the school districts from a fiscal and population standpoint

c. Traffic impact study has been provided by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA)

d. The applicant has provided comparable sales research and a letter from a local real estate professional in lieu of a full market study report.

e. Final engineering plans are provided indicating how construction activity will be controlled by addressing contractor ingress/egress, construction parking, street cleaning and pest control.

f. The applicant has a forty-year track record of custom development and construction will provide financial references upon request.

g. Proposed covenants are provided.

i. The applicant is a contract purchaser of the property and has included a letter from the owner authorizing the applicant to make this application.

j. Notification list for public hearing to be provided by the village.

k. Development schedule.
- Application submittal 5/10/2024
- Community meeting 6/5/2024
- Plan Commission meeting 6/19/2024
- Planning and Zoning Committee Meeting 7/2/2024
- Village Board Workshop / Village Board Meeting 7/22/2024
- Site demolition 8/19/2024
- Site grading and underground utilities 9/2/2024
- Start construction on model building 9/16/2024
- Site pavement 9/30/2024
- Model grand opening 3/1/2025

l. Final engineering plans are provided with this submittal, which complies with of all applicable plans and materials required in Chapter 11 of this Ordinance, "Flood Plain and Storm Water Management".

DEVELOPER/BUILER & PROJECT TEAM INFORMATION

McNaughton Development LLC is a custom home builder and land development company that builds architecturally exciting high-end, distinctive homes. It has extensive experience in the construction of high-end residential product. It has developed numerous properties from one to three hundred acres. McNaughton Development is a family owned and operated company that is deeply rooted in Chicagoland area since 1981 and believes that a custom home is the product of the customers ideas and dreams and our commitment to making it a reality.

DesignTek Engineering has been an established civil engineering design and consulting firm servicing the Chicagoland region, surrounding suburbs, and northwest Indiana for over 20 years. Founded in 2003, DesignTek has expanded its services and client base by providing personalized attention to the needs and expectations of their clients. Their team of professional engineers, surveyors, and support staff tackle a wide variety of diverse projects in all fields of land development including residential, commercial, industrial, institutional, and municipal projects.

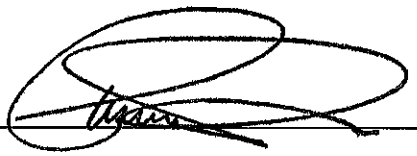
BSB Design, founded in 1966 by Jack Bloodgood, began as a one-man shop operating out of a barn in Des Moines, Iowa. Today, it has grown into a renowned architectural and design firm,

making an impact on much more than just the single-family home market. With offices coast to coast, they offer national experience with regional sensitivity. As a preeminent design firm, it has leveraged its unique abilities to see the future more clearly and to create environments that transform lives.

Kenig, Lindgren, O'Hara, Aboona, Inc. was formed in 1995 by Neil Kenig, Gerald Lindgren, Donald O'Hara and Luay Aboona. Today, Luay Aboona continues with his partner Michael Werthmann to lead the firm in providing quality traffic, transportation, and parking consulting services to its clients. KLOA, Inc.'s staff of transportation engineers and planners represent over 150 years of professional experience. Their high standards, commitment to the industry, and concern for each client assure the KLOA, Inc. mission to provide superior service in a timely and cost-effective manner. They approach each project as a special assignment that requires critical analysis, detailed research, creative thinking, and communicative interaction to develop practical solutions.

VII. CONCLUSION

McNaughton Development LLC is pleased to submit this application and is confident, with the approval of the village board, that the development will be an excellent addition to the Village of Western Springs.

By: 

Date: May 15, 2024.

5/10/2024

McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

With Over 40 Years of Experience

McNaughton Development LLC is Proud to Have Developed and/or Built in All of These Superior Location and Premier Communities

* not all communities are represented with a site plan

Waterfall Glen Executive Office Center
11S220 Jackson Street, Suite 100, Burr Ridge, Illinois 60527
P: 630.325.3400 F: 630.325.3402 W: mcnaughtondevelopment.com

Burr Ridge:
- Devon Woods (2)
- Longwood (1)
- Madison Estates II
- Briddle Path
- Waterfall Glen Executive Office Center
- Lakeside Pointe
- Burr Ridge Estates
- Waterview Estates

Darien:
- Rolling Knolls

Downers Grove:
- Copper Leaf
- Longfellow

Frankfort:
- Butternut Creek (10)
- Charrington
- Georgetown
- Settlers Pond
- Crystal Brook

Flossmoor:
- Ballantrae

Highland Park:
- The Highlands
- Hidden Oak

Hinsdale:
- Heather Highlands

Homer Glen:
- Meadows Edge
- Silver Leaf

Joliet:
- Deer Crossing

Killdeer:
- Preserves of Kildeer at Kemper Lakes

LaGrange Park:
- Heatherdale
- Kensington Place

Lake Forest:
- Amberly Woods

Lakewood:
- Red Tail

Lemont:
- Equestrian Estates (5)
- Equestrian Woods (5)
- Ruffled Feathers
- Briarcliffe Estates

Lockport:
- Steeplechase Farms

Long Grove:
- Royal Melbourne (2)

Mokena:
- Whispering Creek
- Foxborough Estates

Naperville:
- Silverleaf

Orland Park:
- Crystal Tree
- Cascade Ridge
- Cedar Crossing (6)
- Brittney Glen (10)
- Mallard Landings
- Fawn Creek I and II
- Evergreen View
- Meadowbrook
- Orland Woods III
- Muirfield
- Park Corners II
- Bluff Pointe
- Cascade Ridge
- Timber Lake

Oswego:
- Saddlebrook

Palos Heights:
- One Palos Place (4)
- Misty Meadows
- Keystone Crossing
- Westgate Valley Estates

Palos Park:
- Woodland Shores (5)
- Misty Harbour
- McCord Place

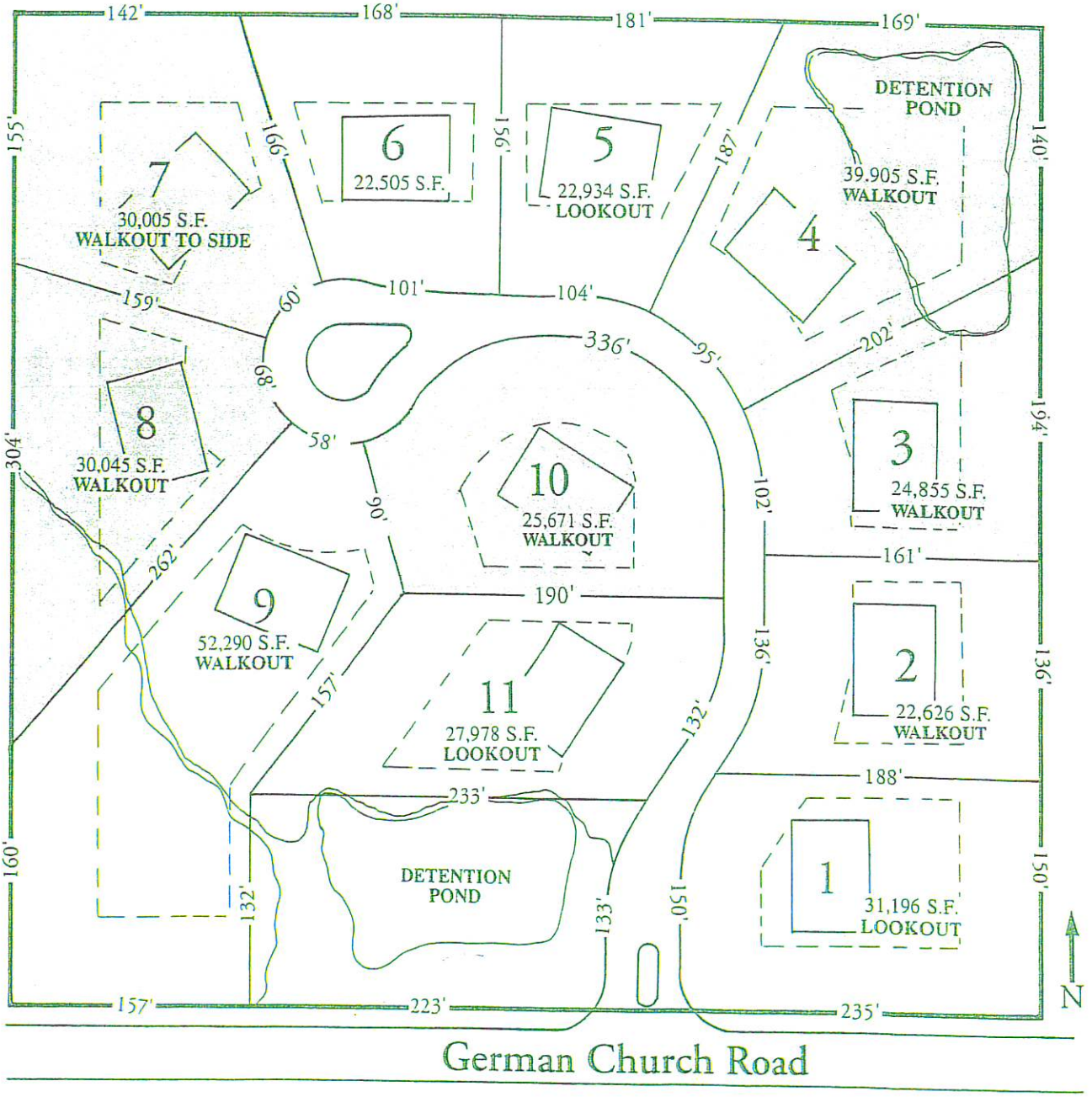
Tinley Park:
- Pheasant Lake

Western Springs:
- Timber Trails

Westmont
- Kaila's Crossing

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

BRIDLE PATH

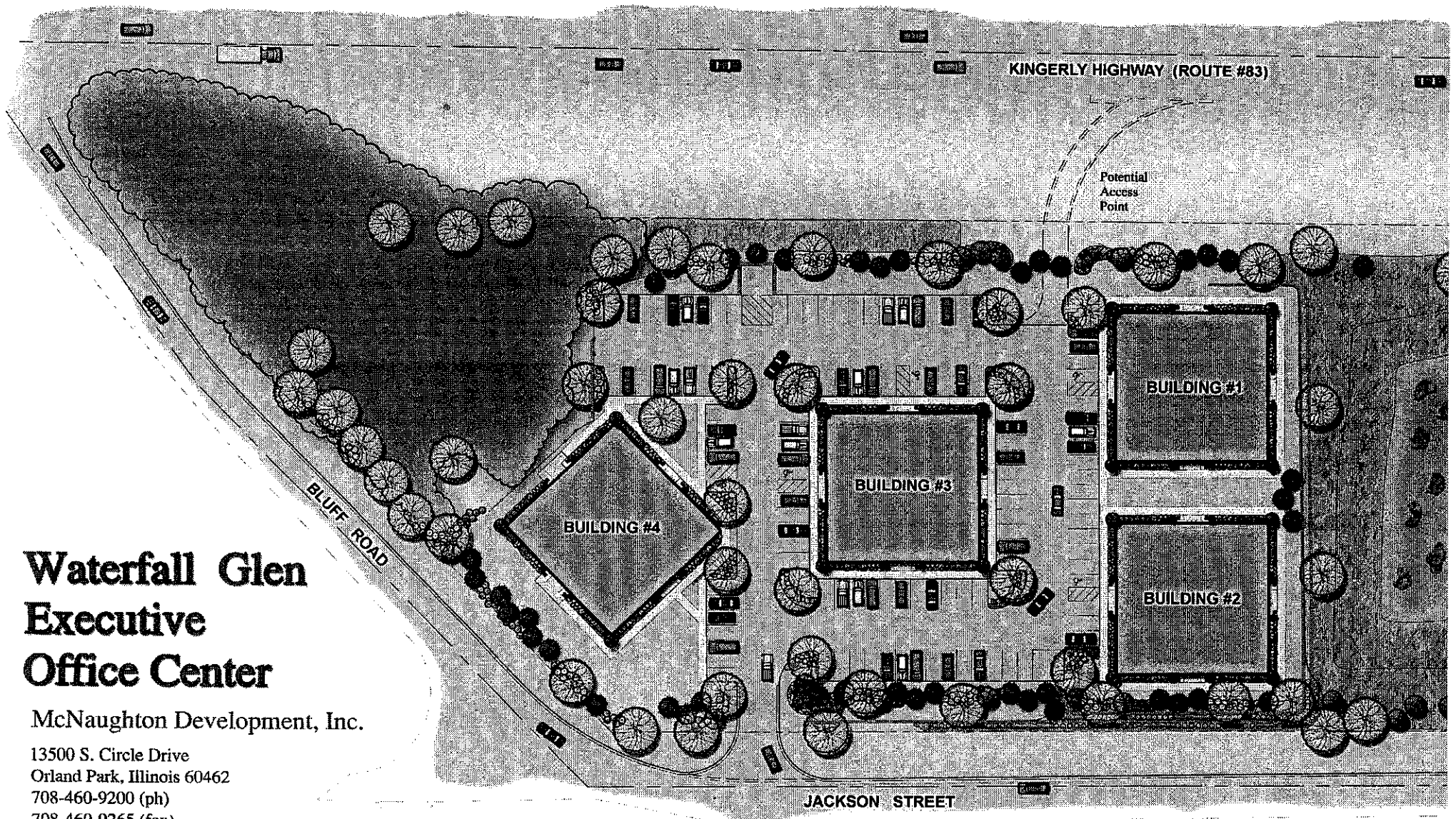


German Church Road

Located 1500 feet east of County Line Road on German Church Road
Burr Ridge, Illinois

NOTE:
THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

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Phone: (708) 361-8300 Fax: (708) 361-6754



Waterfall Glen Executive Office Center

McNaughton Development, Inc.

13500 S. Circle Drive
Orland Park, Illinois 60462
708-460-9200 (ph)
708-460-9265 (fax)

McNaughton DEVELOPMENT, INC.

LAND DEVELOPMENT – CUSTOM CONSTRUCTION

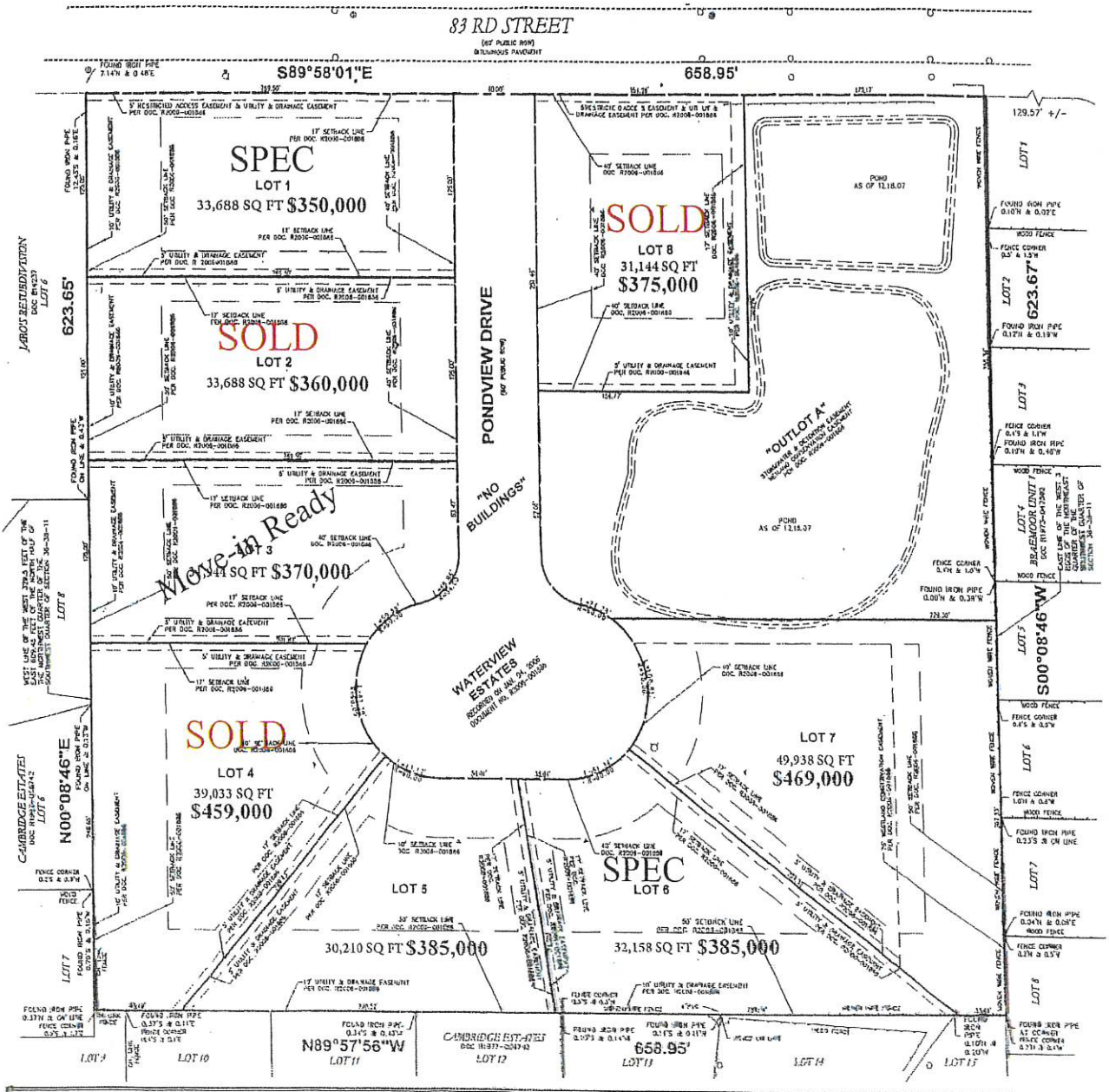
Waterview Estates

of Burr Ridge

Lot Pricing for 8

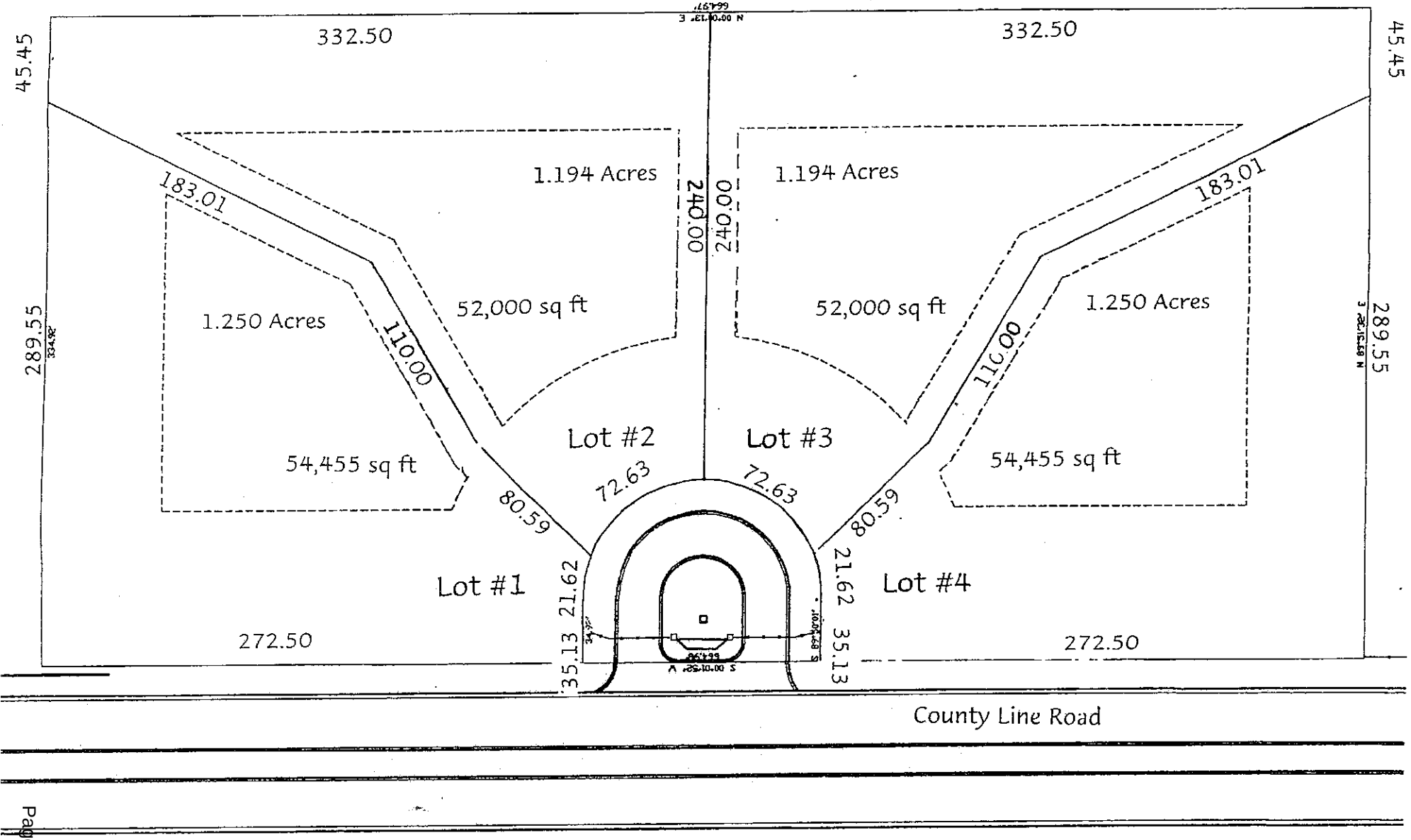
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Burr Ridge Estates

McNaughton DEVELOPMENT, INC.
CUSTOM DESIGNED HOMES



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LAKESIDE POINTE

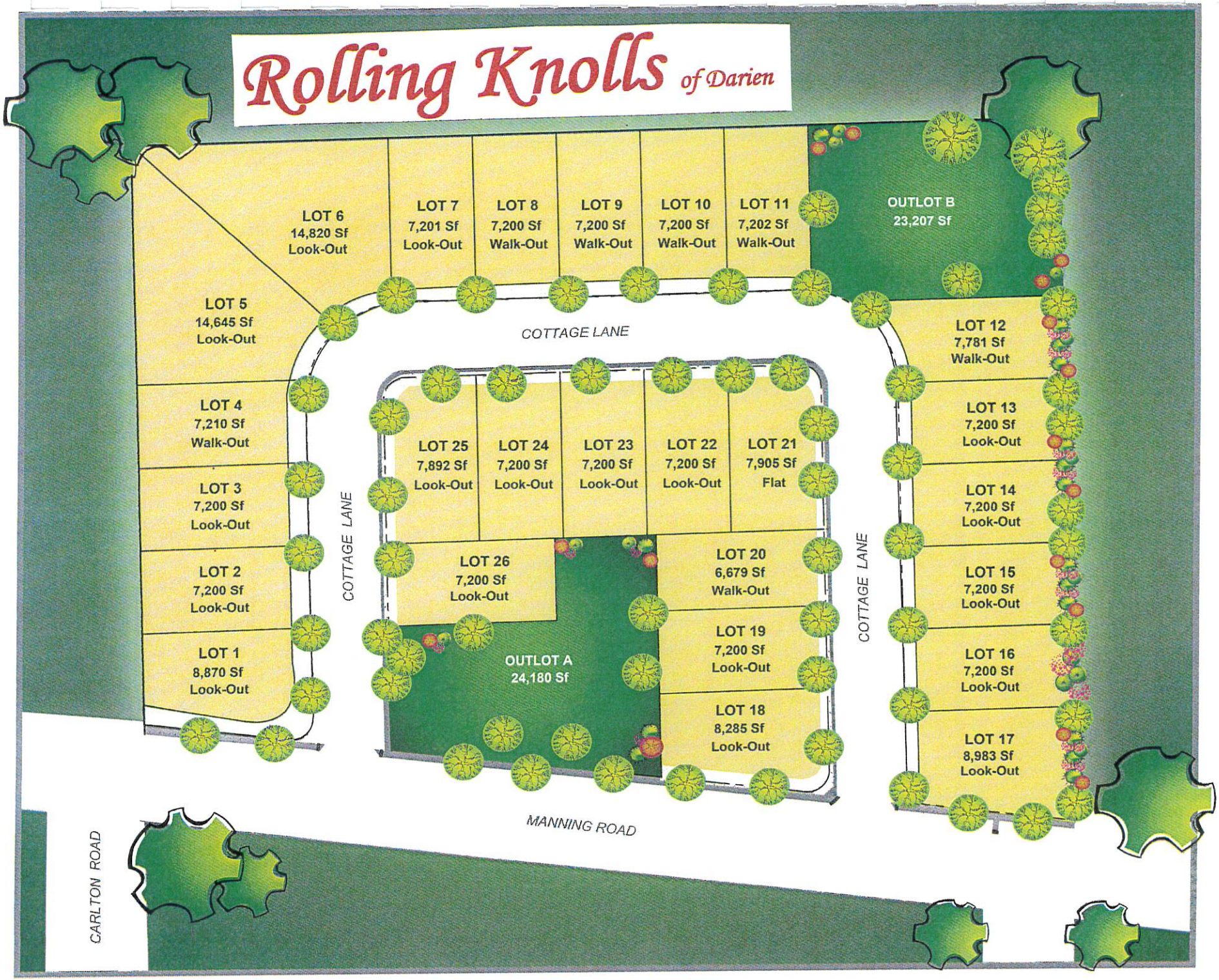
BURR RIDGE, ILLINOIS



LEGEND

B = BRICK THROUGHOUT
L/O = LOOKOUT
W/O = WALKOUT
G = THIRD CAR GARAGE

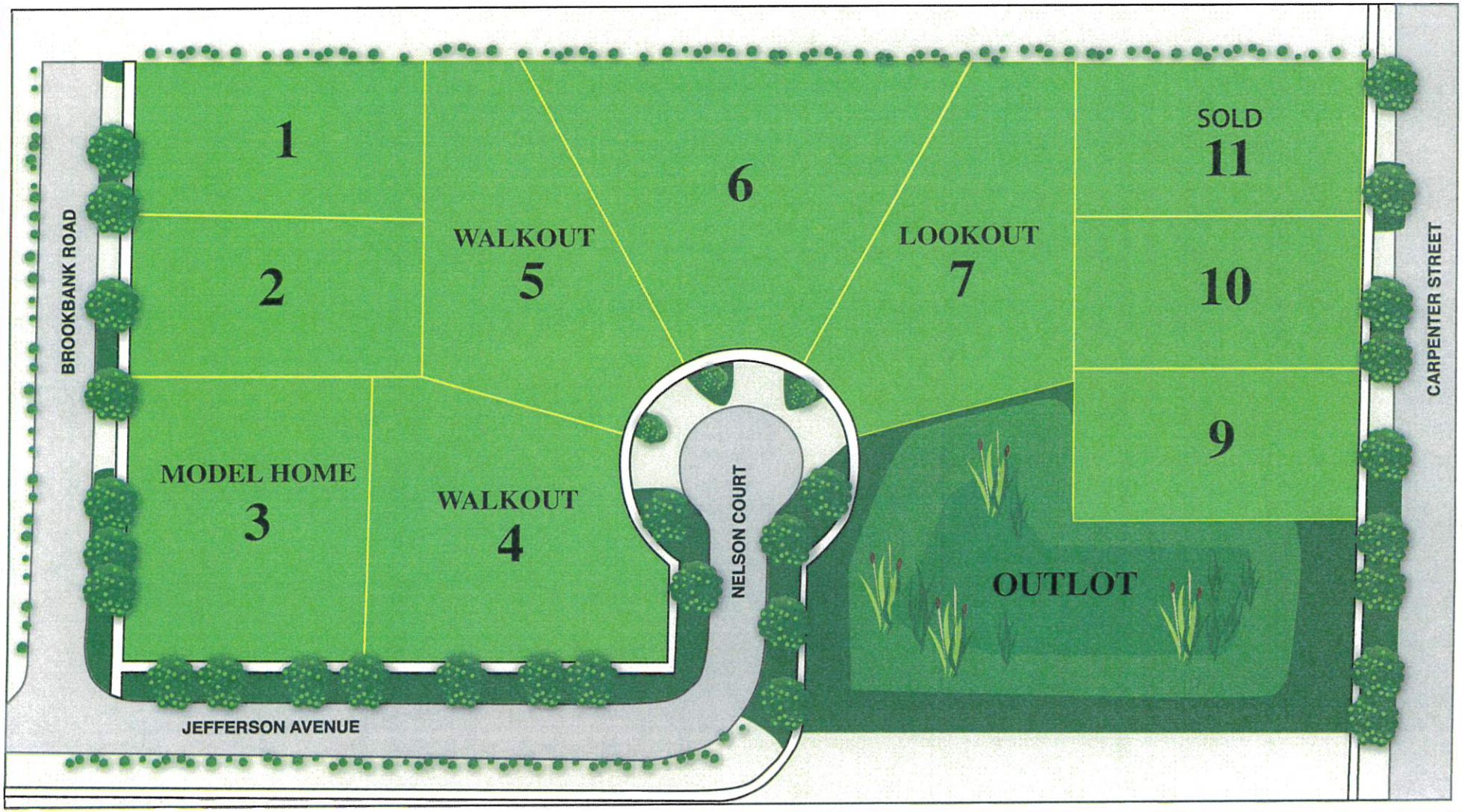
McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT – CUSTOM CONSTRUCTION


Rolling Knolls of Darien
LOT 6
14,820 Sf
Look-Out
LOT 7
7,201 Sf
Look-Out
LOT 8
7,200 Sf
Walk-Out
LOT 9
7,200 Sf
Walk-Out
LOT 10
7,200 Sf
Walk-Out
LOT 11
7,202 Sf
Walk-Out
OUTLOT B
23,207 Sf
LOT 5
14,645 Sf
Look-Out
LOT 4
7,210 Sf
Walk-Out
LOT 3
7,200 Sf
Look-Out
LOT 2
7,200 Sf
Look-Out
LOT 1
8,870 Sf
Look-Out
COTTAGE LANE
LOT 25
7,892 Sf
Look-Out
LOT 24
7,200 Sf
Look-Out
LOT 23
7,200 Sf
Look-Out
LOT 22
7,200 Sf
Look-Out
LOT 21
7,905 Sf
Flat
LOT 26
7,200 Sf
Look-Out
OUTLOT A
24,180 Sf
LOT 20
6,679 Sf
Walk-Out
LOT 19
7,200 Sf
Look-Out
LOT 18
8,285 Sf
Look-Out
COTTAGE LANE
LOT 12
7,781 Sf
Walk-Out
LOT 13
7,200 Sf
Look-Out
LOT 14
7,200 Sf
Look-Out
LOT 15
7,200 Sf
Look-Out
LOT 16
7,200 Sf
Look-Out
LOT 17
8,983 Sf
Look-Out
MANNING ROAD
CARLTON ROAD

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT CUSTOM CONSTRUCTION

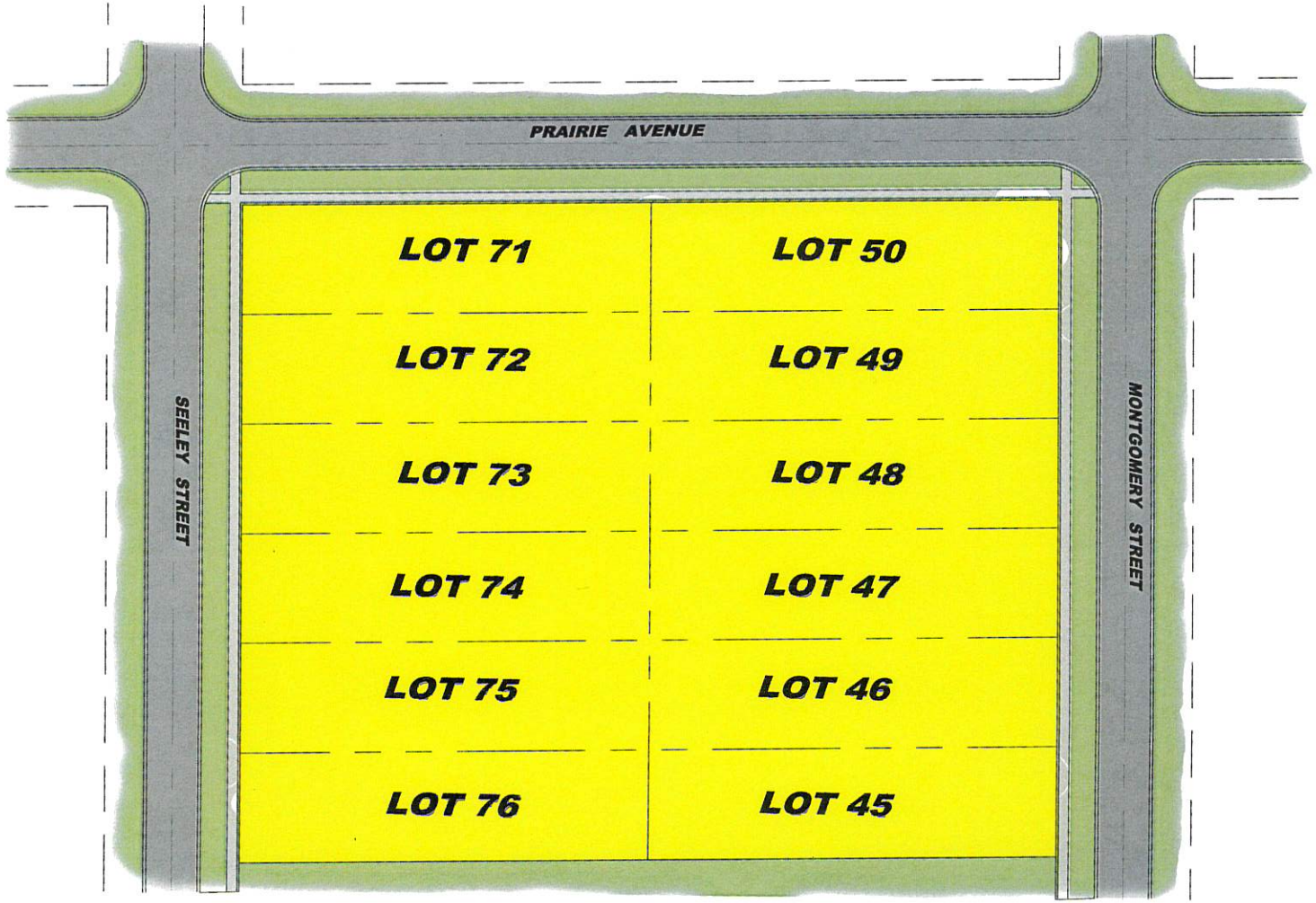
Copper Leaf

Downers Grove



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

LONGFELLOW
ON PRAIRIE

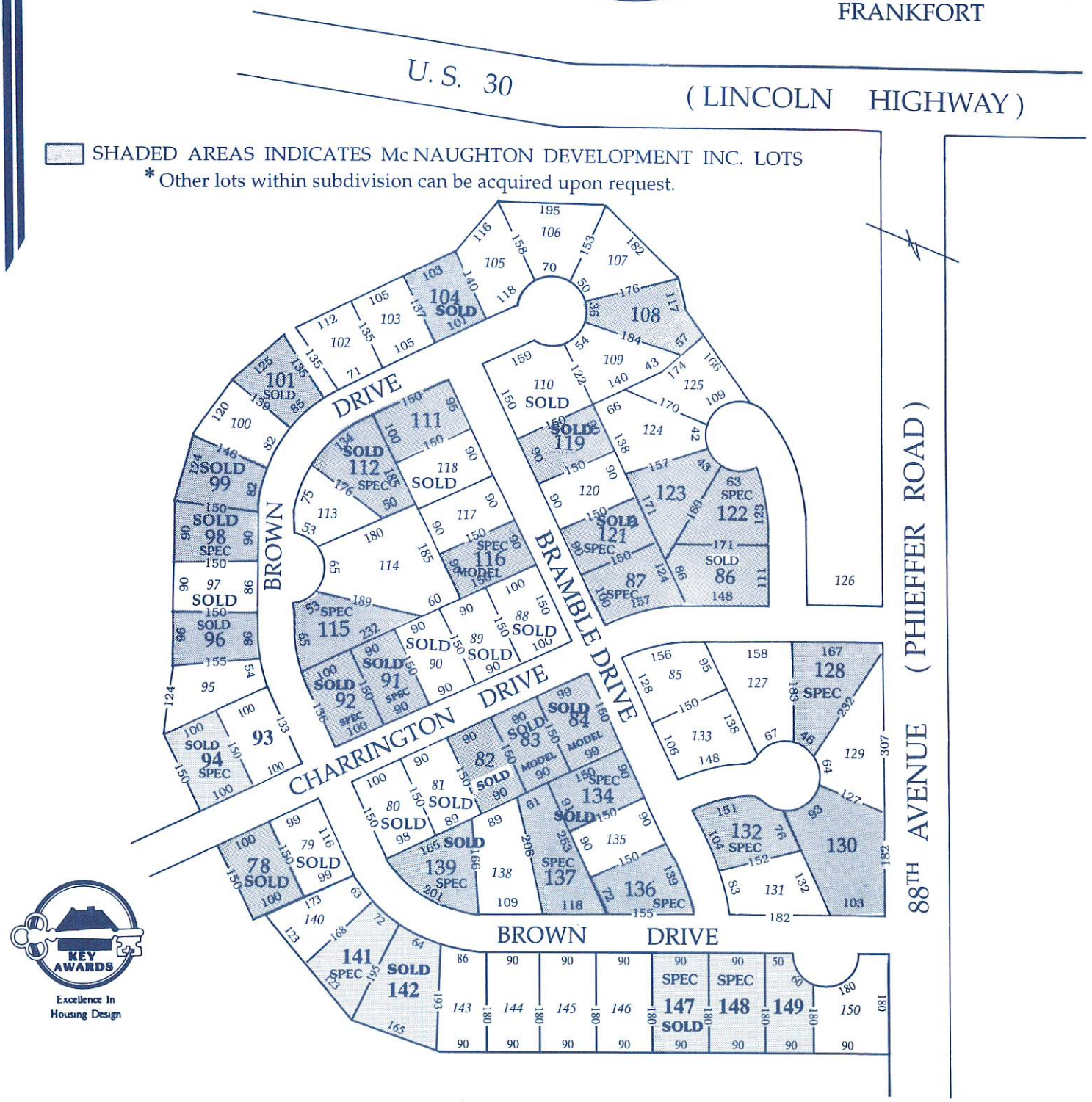


Mc Naughton Development Inc.

General Contractor • Builder
Custom Designed Homes **708/361-8300**

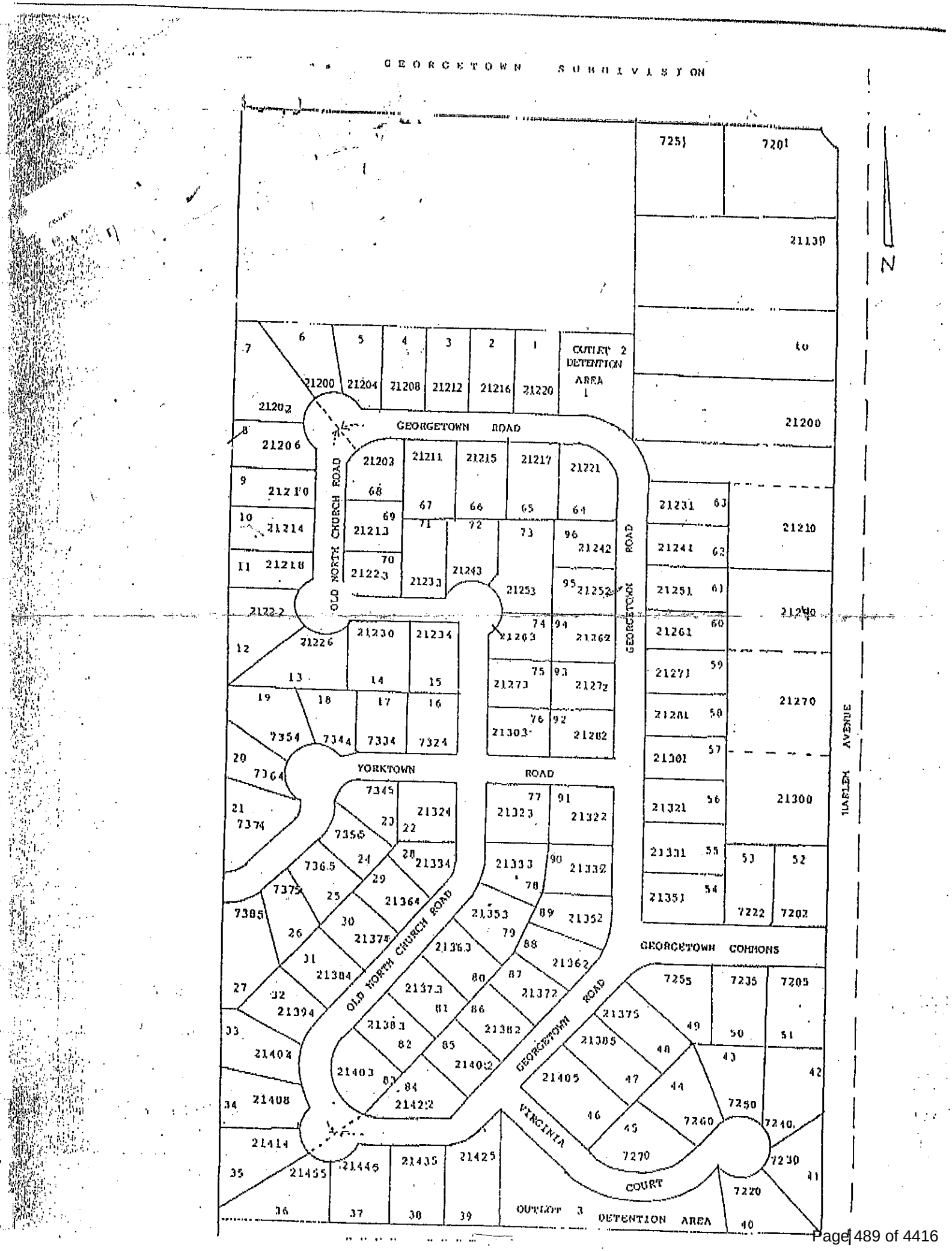
Charrington

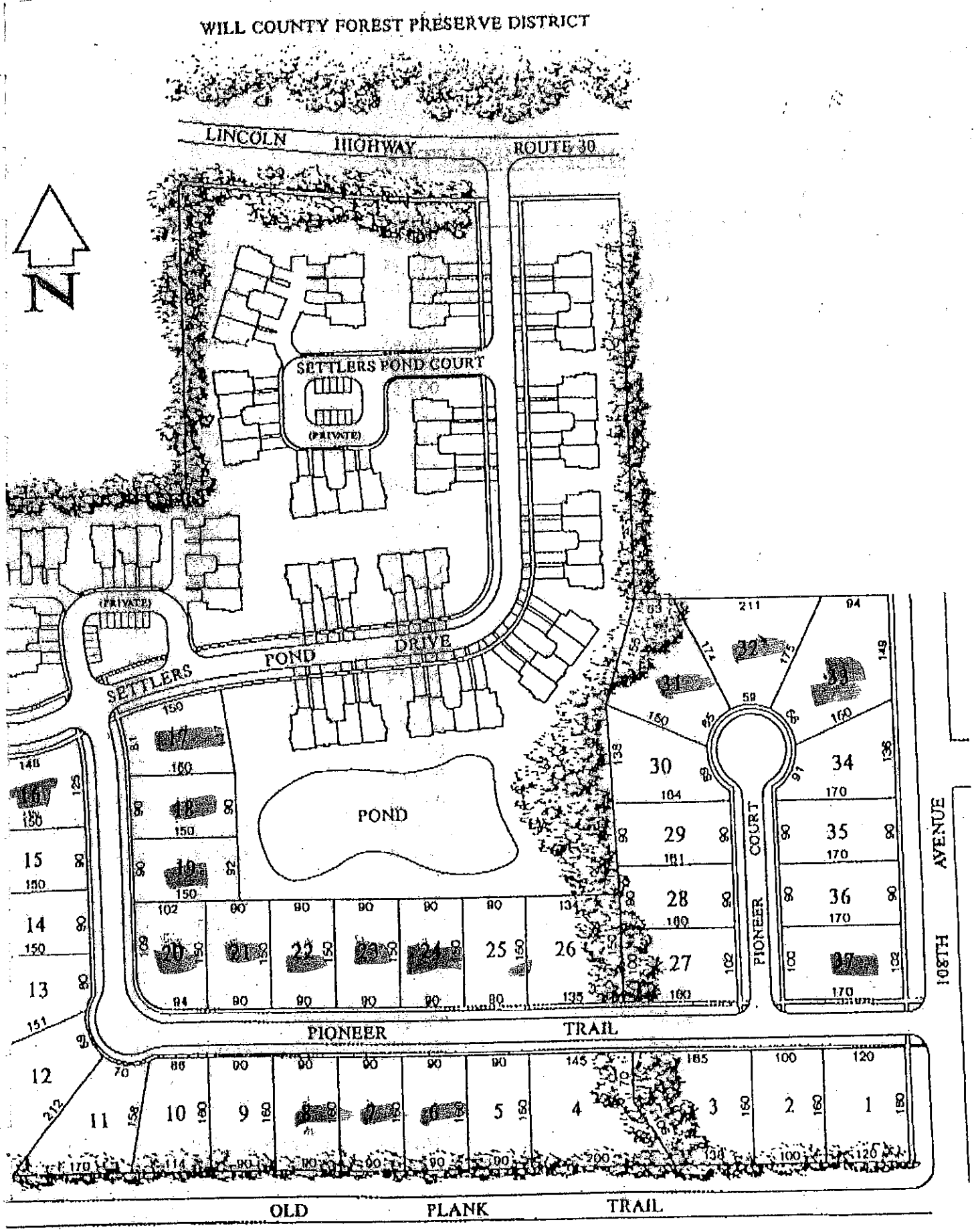
ROUTE 30 & 88TH AVENUE,
FRANKFORT



Park Corners Office Centre • 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464

McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.


GEORGETOWN SUBDIVISION
7251
7201
21139
to
21200
OUTLET 2 DETENTION AREA 1
GEORGETOWN ROAD
OLD NORTH CHURCH ROAD
21200
21204
21208
21212
21216
21220
21202
21206
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21218
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7202
YORKTOWN ROAD
7354
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GEORGETOWN COMMONS
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7205
7250
7240
7230
7220
7260
7270
21375
21385
21405
GEORGETOWN ROAD
VIRGINIA COURT
OUTLOT 3 DETENTION AREA
HARLEM AVENUE
N



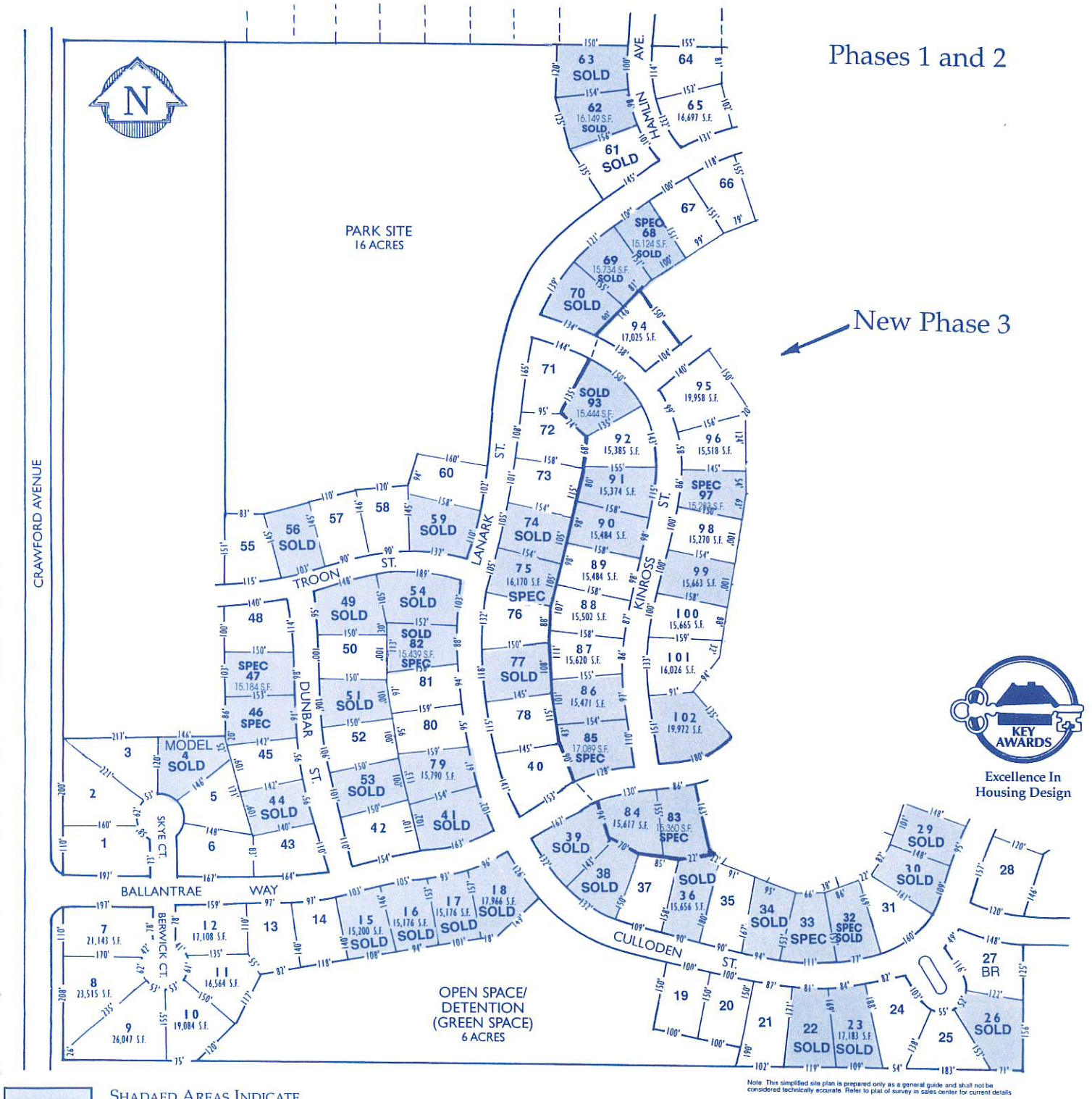
Seller's Pond of Frankfort

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Ballantrae of Flossmoor



Note: This simplified site plan is prepared only as a general guide and shall not be considered technically accurate. Refer to plat of survey in sales center for current details

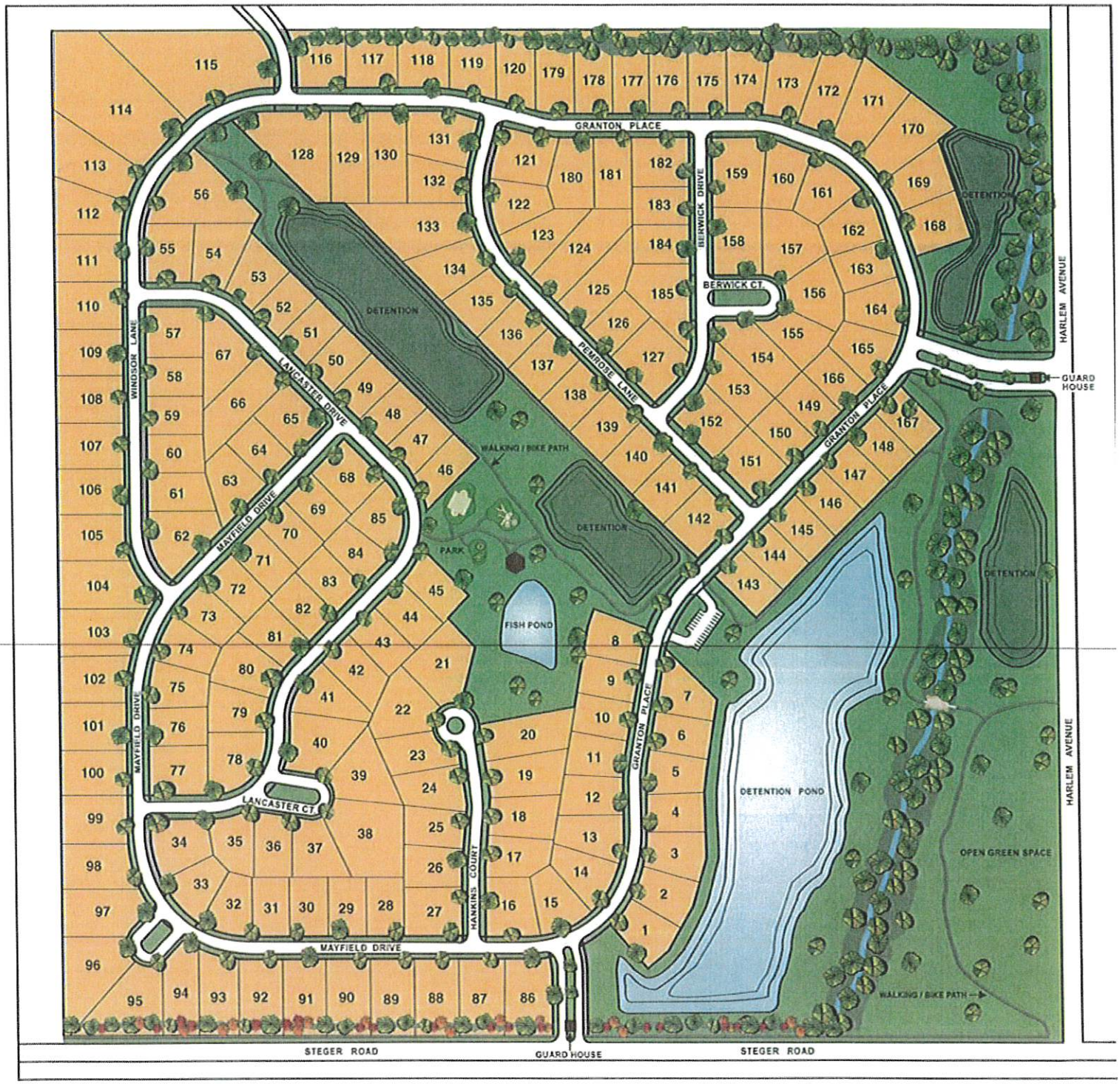
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Site Map

CRYSTAL BROOK OF FRANKFORT



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HIDDEN OAK SUBDIVISION

HIGHLAND PARK, ILLINOIS

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

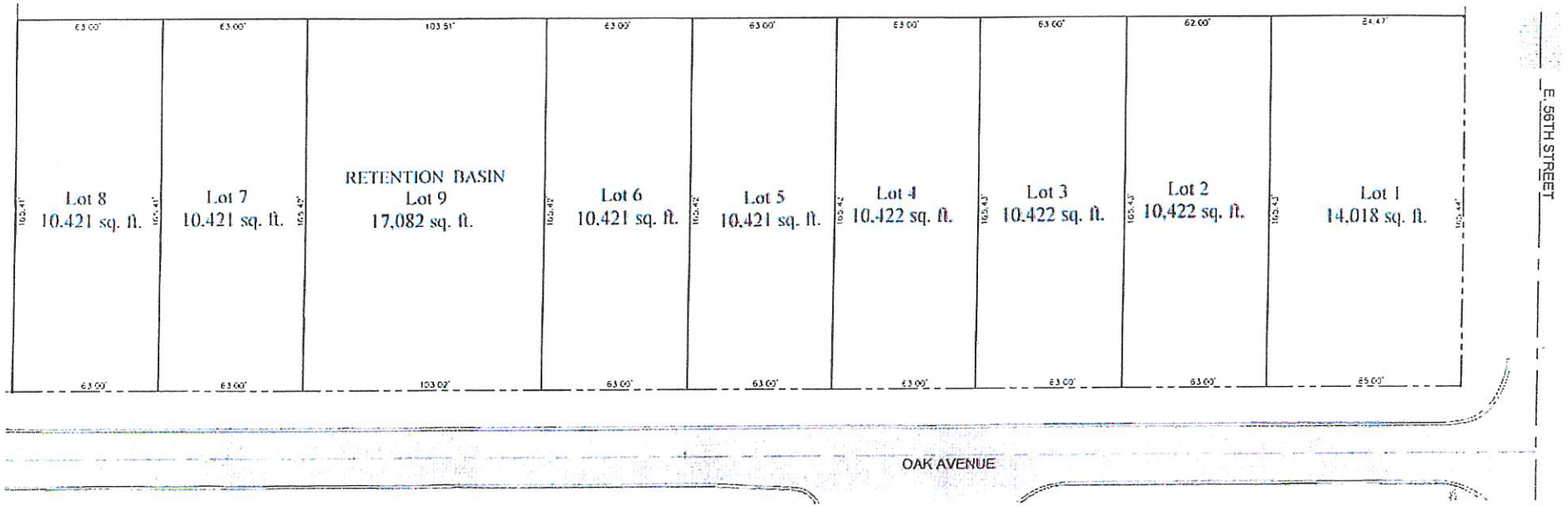
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Kaila's Crossing

56th & Oak Avenue



- 8 Single Family Lots
- Will Design & Build to Suit
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- 2013 Availability

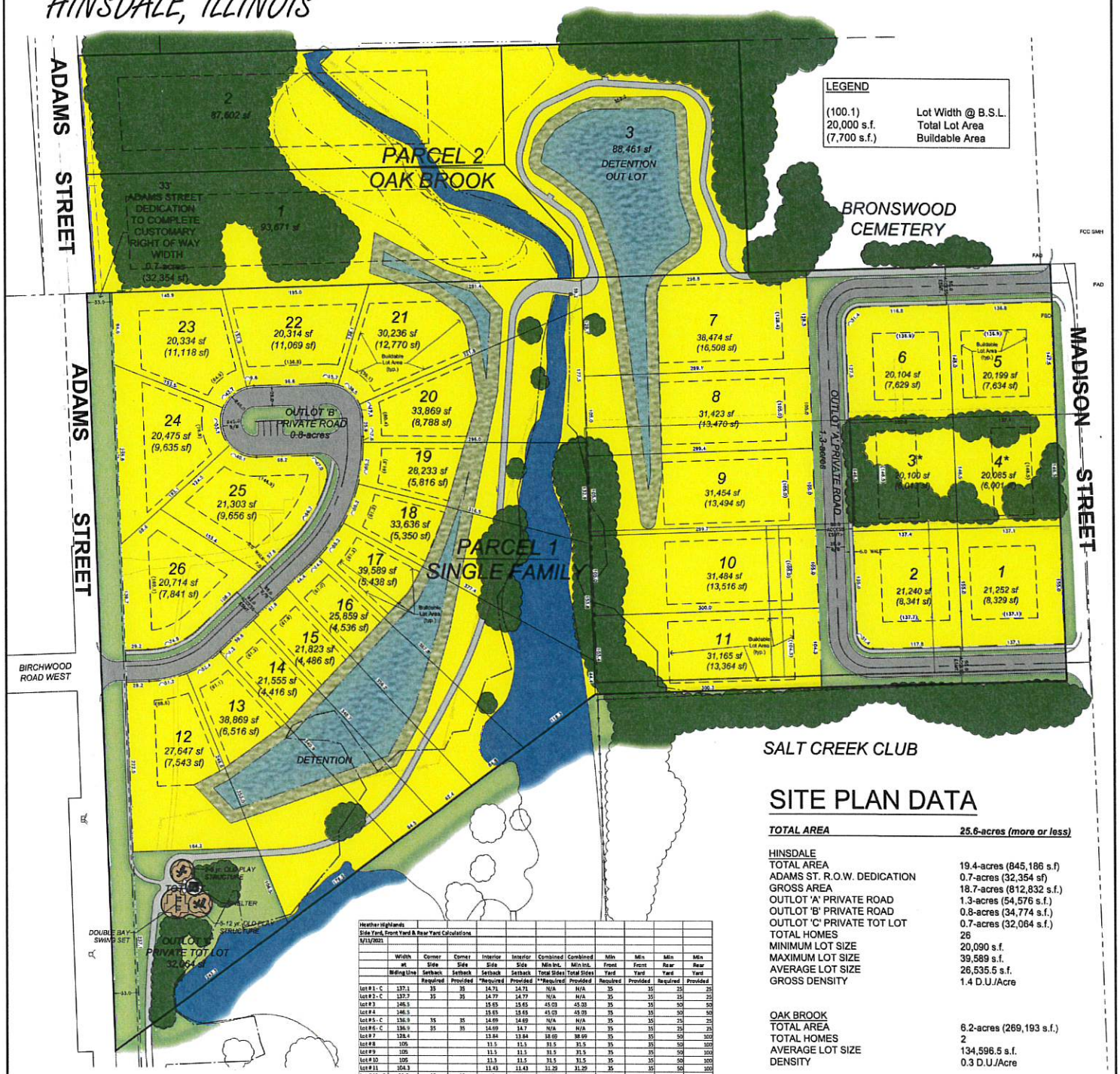
Call Today for Details and More Information

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Site Plan

HEATHER HIGHLANDS

HINSDALE, ILLINOIS



SITE PLAN DATA

TOTAL AREA	***25.6-acres (more or less)***
HINSDALE	
TOTAL AREA	19.4-acres (845,186 s.f)
ADAMS ST. R.O.W. DEDICATION	0.7-acres (32,354 sf)
GROSS AREA	18.7-acres (812,832 s.f.)
OUTLOT 'A' PRIVATE ROAD	1.3-acres (54,576 s.f.)
OUTLOT 'B' PRIVATE ROAD	0.8-acres (34,774 s.f.)
OUTLOT 'C' PRIVATE TOT LOT	0.7-acres (32,064 s.f.)
TOTAL HOMES	26
MINIMUM LOT SIZE	20,090 s.f.
MAXIMUM LOT SIZE	39,589 s.f.
AVERAGE LOT SIZE	26,535.5 s.f.
GROSS DENSITY	1.4 D.U./Acre
OAK BROOK	
TOTAL AREA	6.2-acres (269,193 s.f.)
TOTAL HOMES	2
AVERAGE LOT SIZE	134,596.5 s.f.
DENSITY	0.3 D.U./Acre

* The existing home and garage at 942 N. Madison, on the proposed Lots #3 & #4 are to remain.

Lots #3 & #4 are made up of the existing property at 942 Madison plus an additional ten (10) feet from the properties along Brook Place.

The bulk regulations for Lots #3 & #4 shall be determined prior to the plan commission.

Heather Highlands
Side Yard, Front Yard & Rear Yard Calculations
8/11/2021

	Width at Bldng Line	Corner Side Setback Required	Corner Side Setback Provided	Interior Side Setback *Required	Interior Side Setback Provided	Combined Min Int. Total Sides **Required	Combined Min Int. Total Sides Provided	Min Front Yard Required	Min Front Yard Provided	Min Rear Yard Required	Min Rear Yard Provided
Lot # 1 - C	137.1	35	35	14.71	14.71	N/A	N/A	35	35	50	25
Lot # 2 - C	137.7	35	35	14.77	14.77	N/A	N/A	35	35	25	25
Lot # 3	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 4	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 5 - C	136.9	35	35	14.69	14.69	N/A	N/A	35	35	25	25
Lot # 6 - C	136.9	35	35	14.69	14.7	N/A	N/A	35	35	25	25
Lot # 7	128.4			13.84	13.84	38.69	38.99	35	35	50	103
Lot # 8	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 9	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 10	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 11	104.3			11.43	11.43	31.29	31.29	35	35	50	103
Lot # 12 - C	88.6	35	35	10	8	N/A	N/A	35	25	33.38	85
Lot # 13	61.1			10	8	20	16	35	25	50	212.3
Lot # 14	61.2			10	8	20	16	35	25	50	218.7
Lot # 15	61.9			10	8	20	16	35	25	50	219.8
Lot # 16	63			10	8	20	16	35	25	50	244.3
Lot # 17	61.2			10	8	20	16	35	25	50	268.7
Lot # 18	61.2			10	8	20	16	35	25	50	214.1
Lot # 19	61.3			10	8	20	16	35	25	50	177.4
Lot # 20	60.4			10	8	20	16	35	25	50	144.7
Lot # 21	59.1			10	8	20	16	35	25	50	25
Lot # 22	136.8			14.68	8	41.03	16	35	25	50	25
Lot # 23	64.9			10	8	20	16	35	25	50	25
Lot # 24	76.9			10	8	20	16	35	25	50	33
Lot # 25 - C	146.9	35	25	15.69	15.69	N/A	N/A	35	25	25	25
Lot # 26 - C	169.1	35	25	17.91	17.91	N/A	N/A	35	35	33.65	25

*INTERIOR SIDE YARD REQUIRMENT FIGURED AS 8 FEET PLUS 10% OVER 50 FEET
**COMBINED INTERIOR SIDE YARDS FIGURED AS 30% OF THE FIRST 125 FEET IN WIDTH & THEN 35% OF EVERYTHING OVER 125 FEET
***Lots # 13 - # 25 LOT WIDTH IS BASED ON THE MEASUREMENT AT THE PROPOSED 25 FOOT FRONT YARD

McNaughton DEVELOPMENT
LAND DEVELOPMENT – CUSTOM CONSTRUCTION

0' 25' 50' 100'
SCALE: 1" = 50'-0"
April 23, 2021
Rev. May 11, 2021

NORTH

CIVIL ENGINEER:
V3 COMPANIES
7325 JANES AVE.
WOODRIDGE, IL 60517
T: (630) 724-9200
www.v3co.com

METZ & COMPANY
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

This plan was prepared to illustrate the development potential for the site. As a Site Plan, it is conceptual in nature. Therefore, all dimensions are subject to verification and the Site Plan is subject to modification pending a final planning, engineering, architecture and municipal approval.

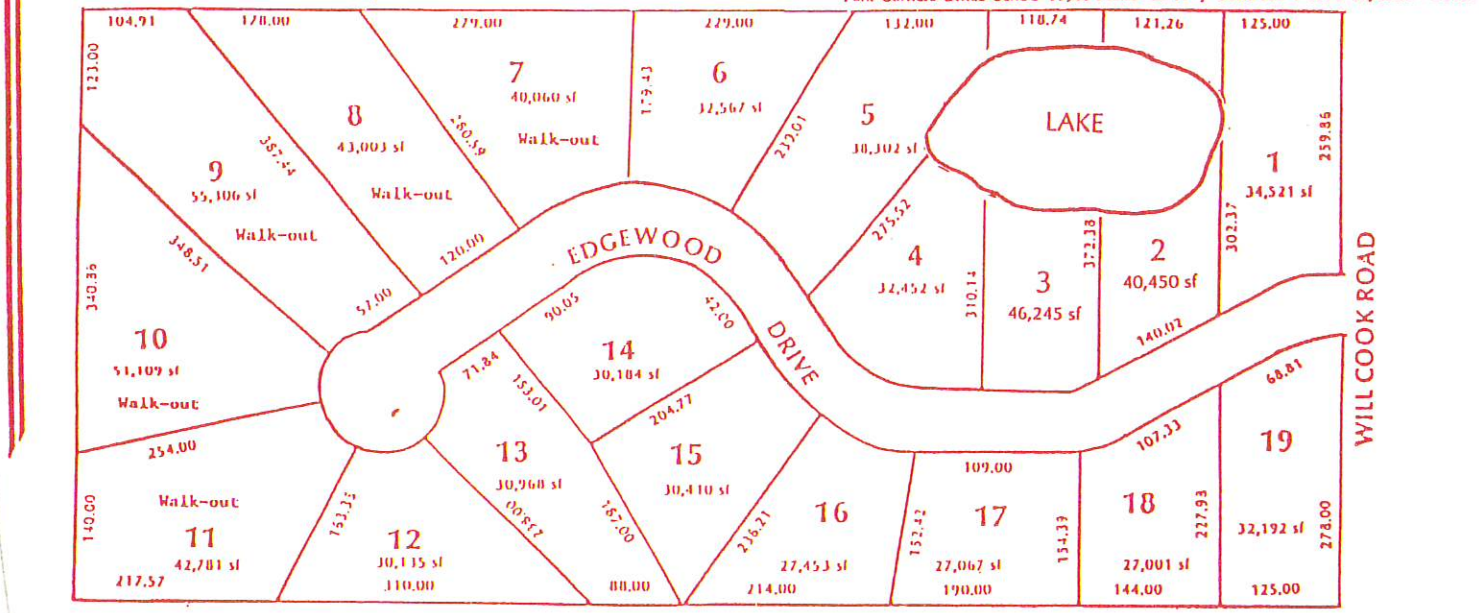


MEADOWS EDGE

McNaughton Development Inc.

General Contractor • Builder
Custom Designed Homes 708/361-8300

McNAUGHTON REALTY GROUP INC.
Park Corners Office Centre 11900 Southwest Hwy Suite 101 Palos Park, Illinois 60464



"MEADOWS EDGE" is a planned development consisting of 19 rolling homesites, many of which are wooded "walk-outs". This exclusive development provides the home owner with the serenity of a country setting with city conveniences only minutes away.

These choice lots range in size from 3/4 acre to over 1 acre. A scenic private lake will compliment this beautiful serene community. Located on Will cook Road at 14900 South, just 3 miles west of LaGrange Road (Route 45) makes this the location for your dream home!

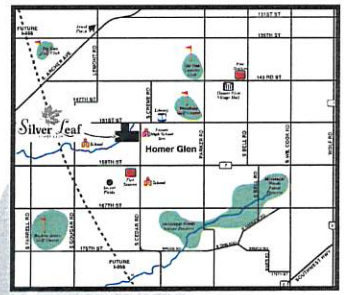
LOT #1	SPEC. HOME
LOT #2	$130,000
LOT #3	SOLD
LOT #4	$120,000
LOT #5	SOLD
LOT #6	SOLD
LOT #7	$125,000
LOT #8	$130,000
LOT #9	$135,000
LOT #10	$135,000
LOT #11	$130,000
LOT #12	$125,000
LOT #13	$120,000
LOT #14	$120,000
LOT #15	$115,000
LOT #16	SOLD
LOT #17	SOLD
LOT #18	$90,000
LOT #19	SOLD

— Prices subject to change without notice —

OVERALL SITE PLAN

Silver Leaf
HOMER GLEN





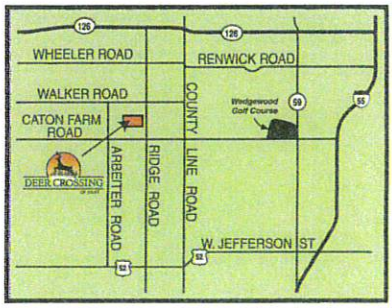
McNaughton Development, Inc.
708-361-8300
E-mail: sales@mcnaughtondevelopment.com | www.mcnaughtondevelopment.com

This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering. Refer to approved plans for specific details.

DEER CROSSING
OF JOLIET



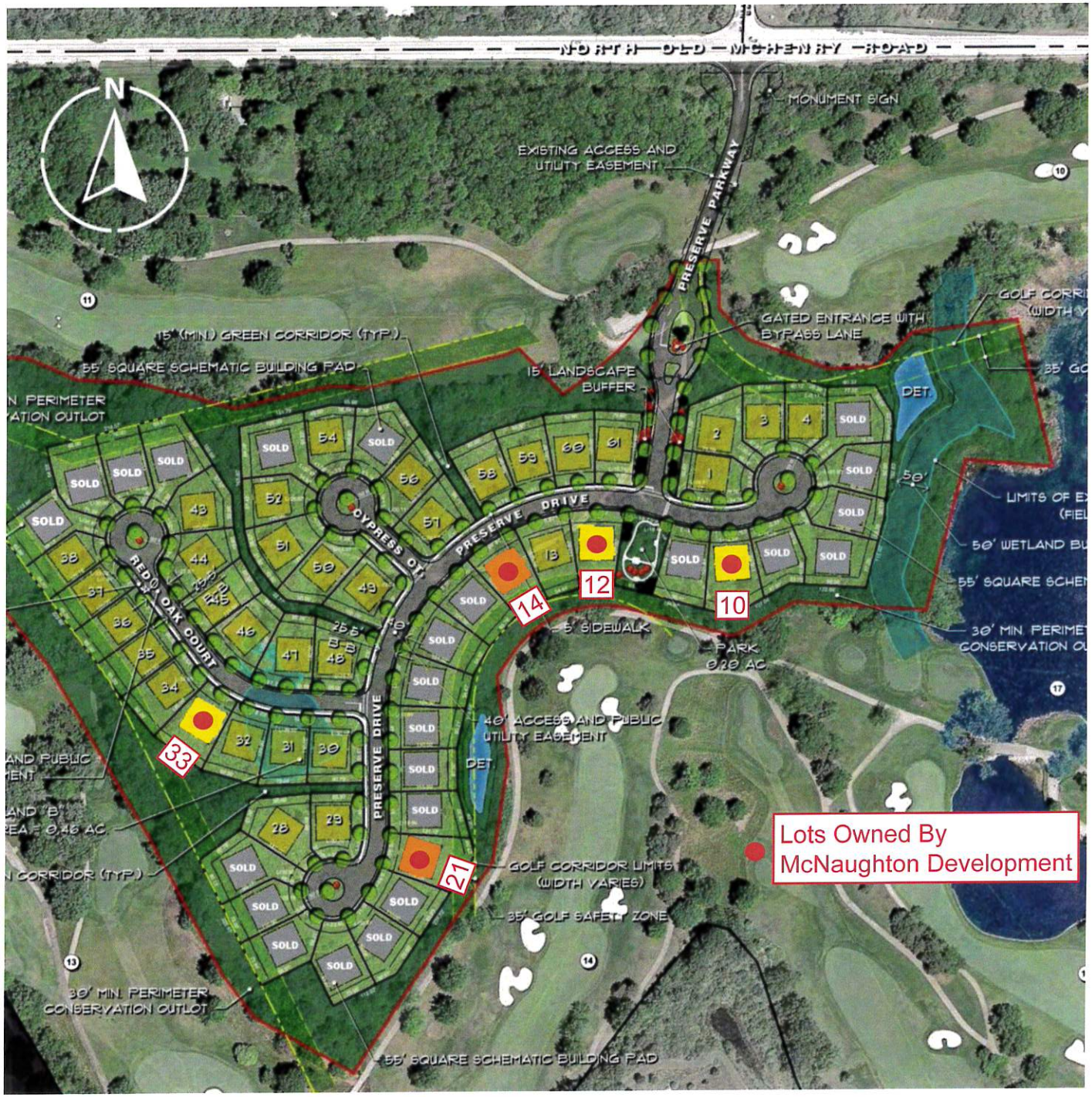




McNaughton Development, Inc.
708-361-8300
E-mail: sales@mcnaughtondevelopment.com
www.mcnaughtondevelopment.com

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A PROUD MEMBER OF SSHBA



PRESERVES OF KILDEER AT

KEMPER LAKES

LEGEND

- Available Lots
- Sold

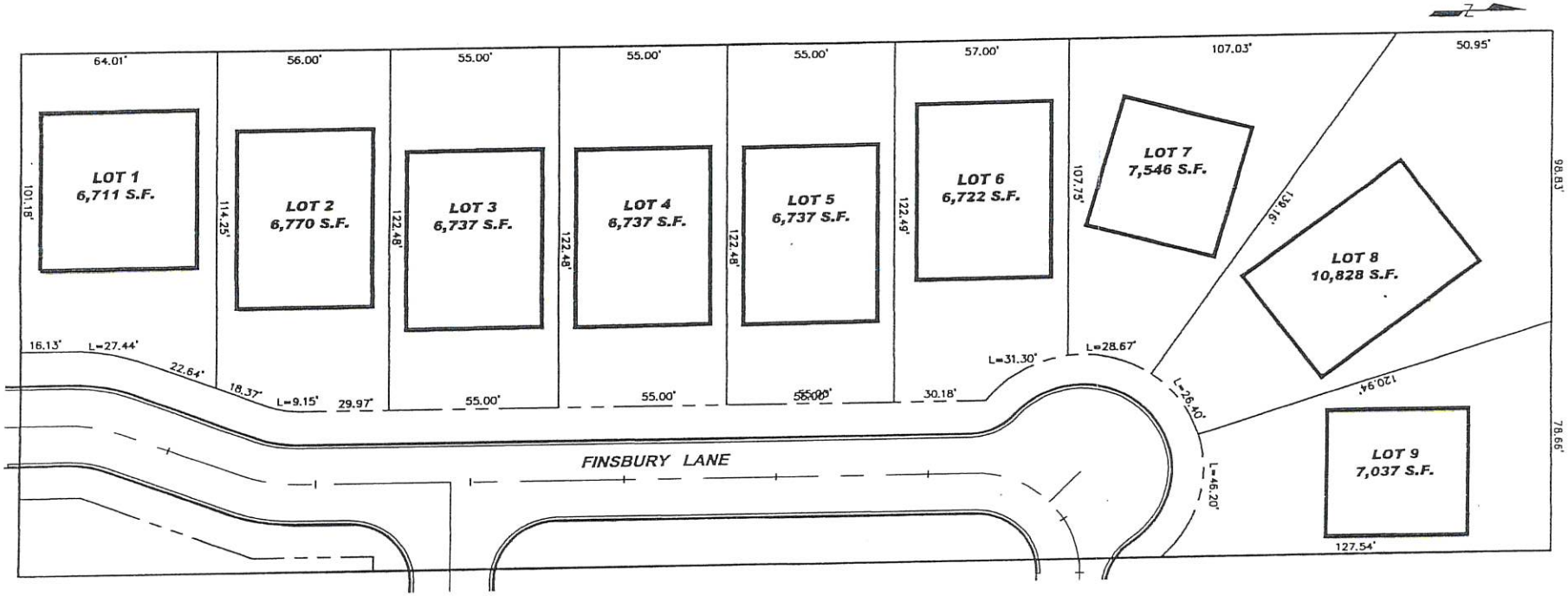
McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT — CUSTOM CONSTRUCTION

Coming Soon...

Heatherdale *of LaGrange Park*



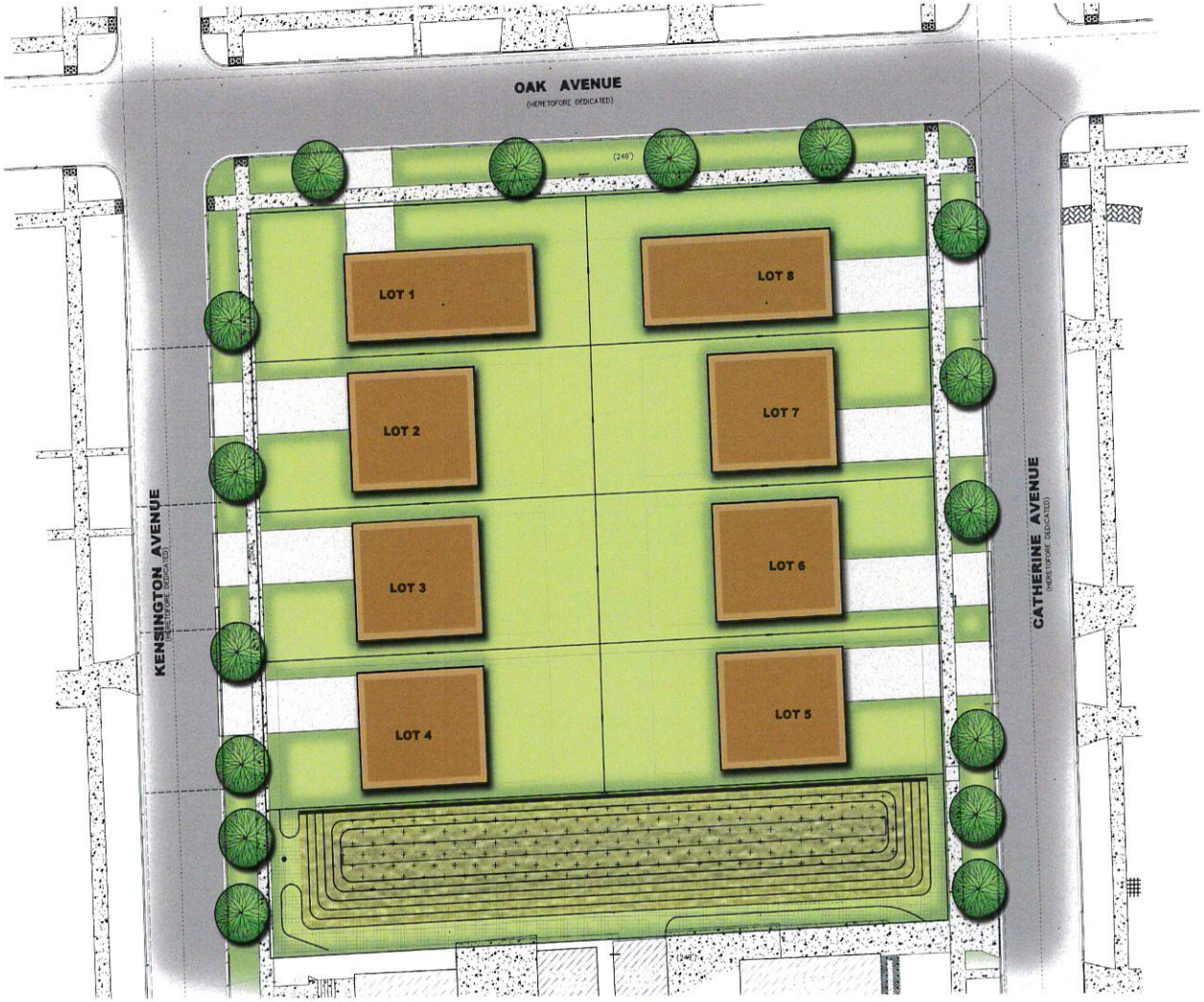
- 9 Single Family Lots
- Will design & build to suit
- Rare new construction opportunity in the desirable Village of LaGrange Park
- Lyons Township High School
- Forest Preserve views

Call Today for Details and More Information

(630) 325-3400

KENSINGTON PLACE

LaGrange Park, Illinois



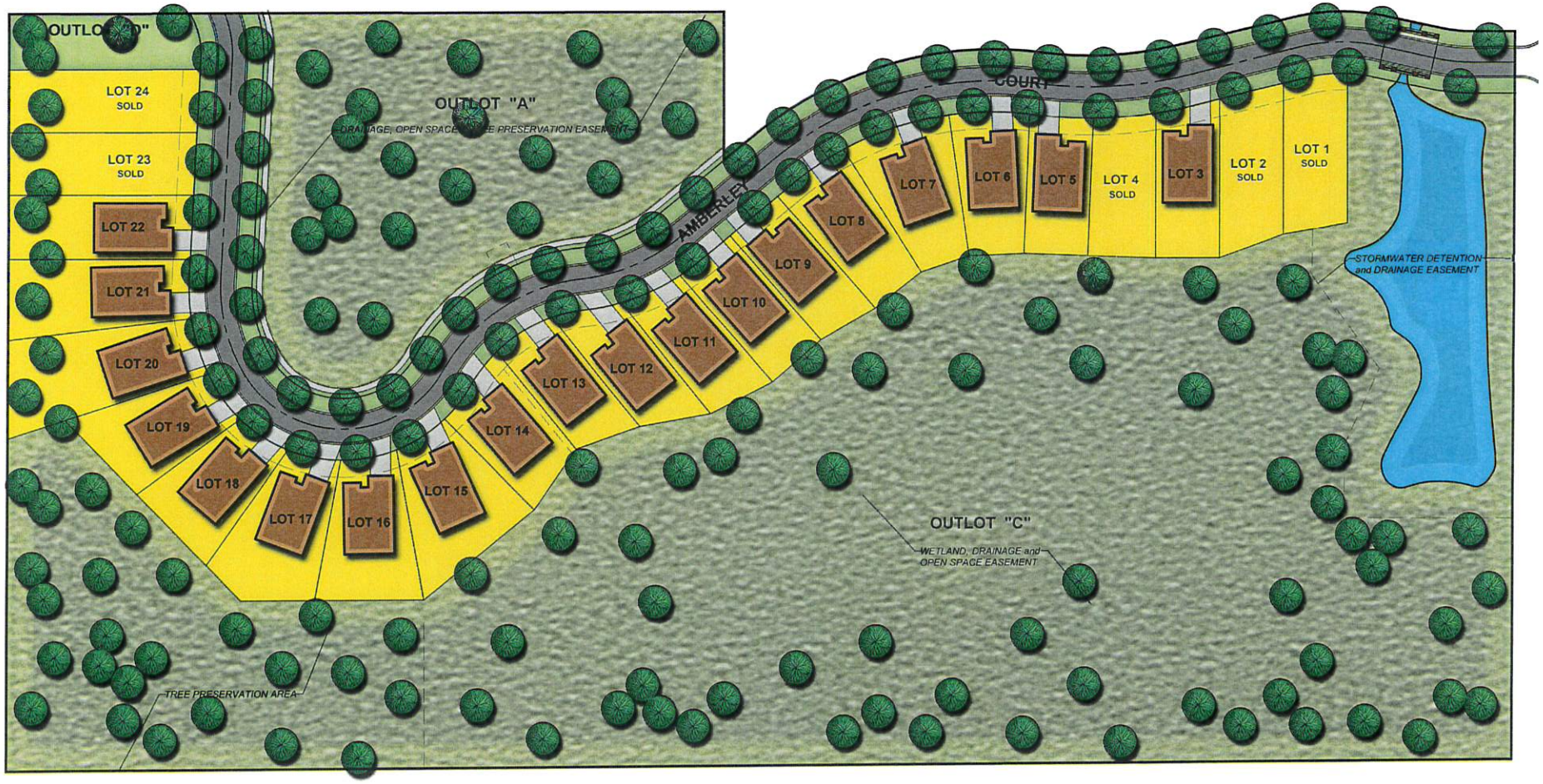
McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

SITE PLAN

AMBERLEY WOODS

LAKE FOREST, ILLINOIS

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

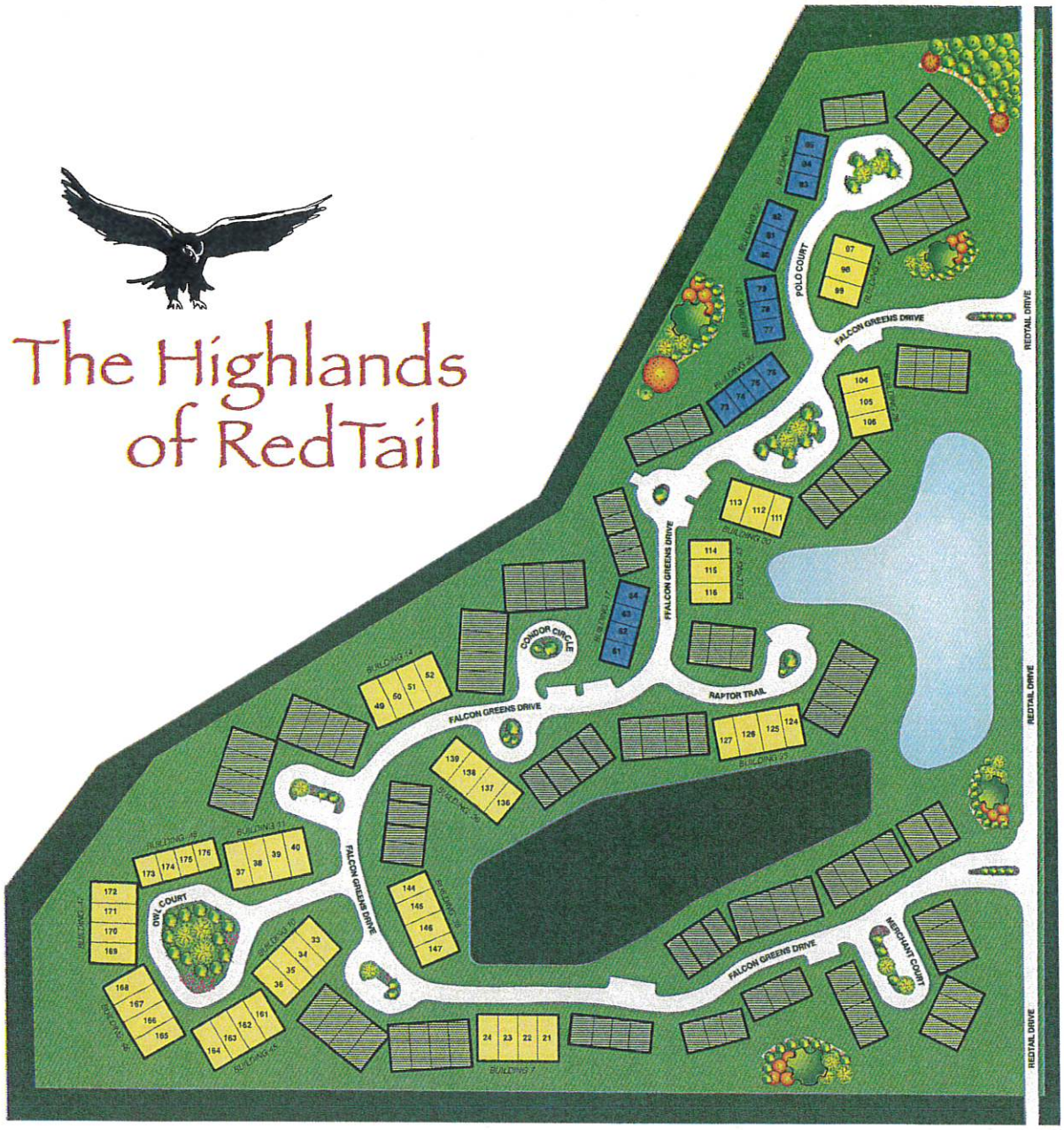




AMBERLEY WOODS - BRIDGE



The Highlands of RedTail





TOWNHOME UNITS | WALK-UP UNITS | SOLD UNITS

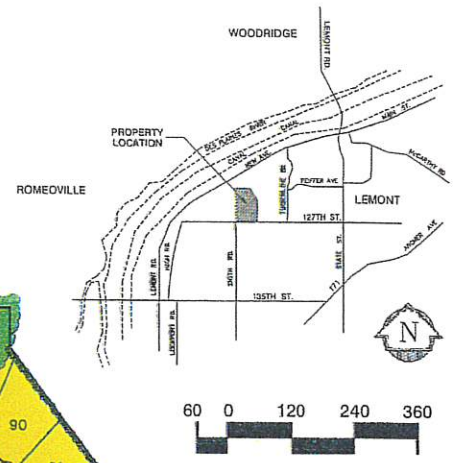
McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT – CUSTOM CONSTRUCTION

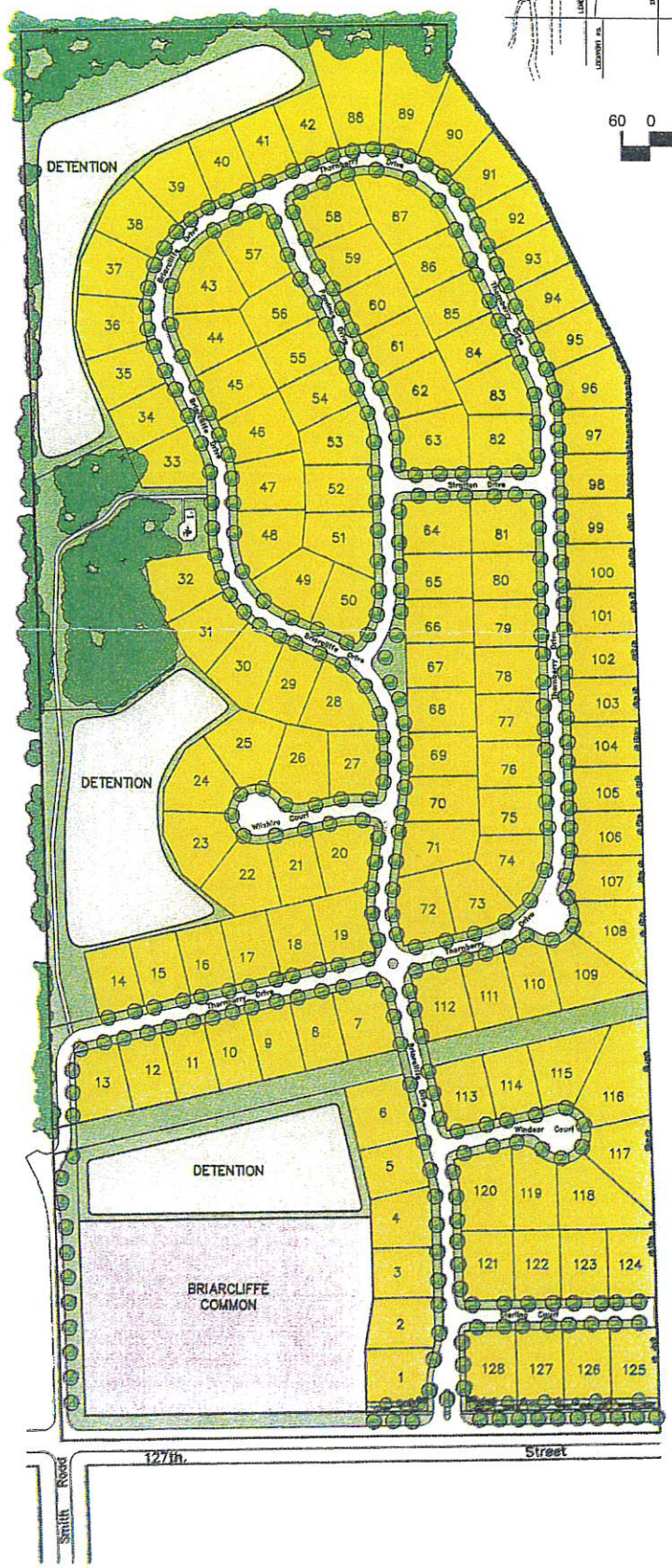
630.325.3400
sales@mcnaughtondevelopment.com
mcnaughtondevelopment.com

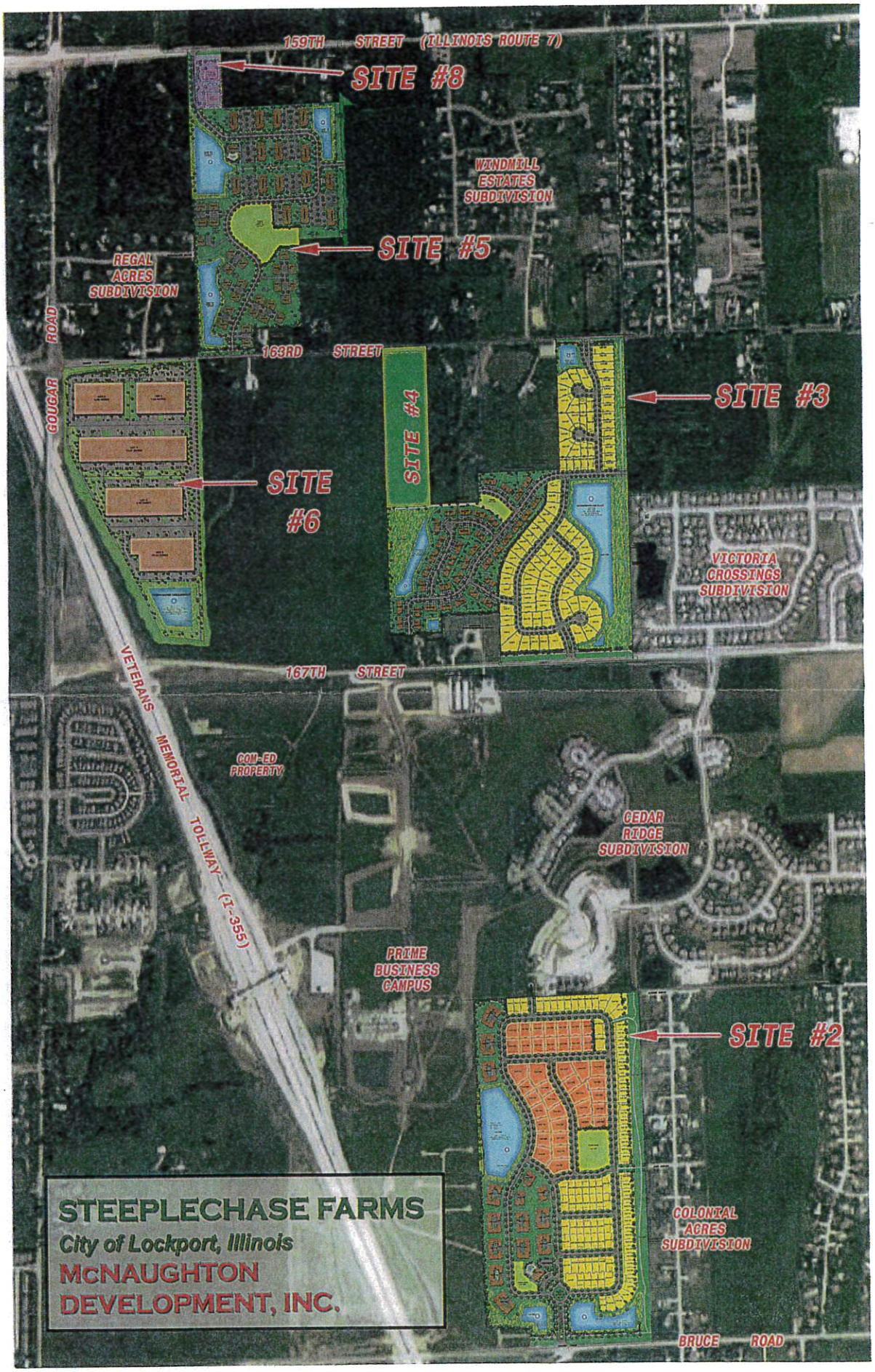


This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering. Refer to approved plans for specific details. 12/2014.

BRIARCLIFFE ESTATES






159TH STREET (ILLINOIS ROUTE 7)
SITE #8
WINDMILL ESTATES SUBDIVISION
SITE #5
REGAL ACRES SUBDIVISION
COUGAR ROAD
163RD STREET
SITE #4
SITE #3
SITE #6
VICTORIA CROSSINGS SUBDIVISION
167TH STREET
VETERANS MEMORIAL TOLLWAY (I-355)
COM-ED PROPERTY
CEDAR RIDGE SUBDIVISION
PRIME BUSINESS CAMPUS
SITE #2
COLONIAL ACRES SUBDIVISION
BRUCE ROAD
STEEPLECHASE FARMS
City of Lockport, Illinois
McNAUGHTON DEVELOPMENT, INC.

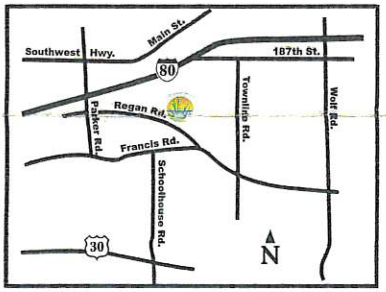
Overall Site Plan



Single Family Homes
Mokena Elementary School Dist. 159
Lincoln-Way High School Dist. 210

Single Family Homes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210

Townhomes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210





Whisper Creek
MOKENA

REGAN ROAD FARM DEVELOPMENT I, LLC
708-361-8300 | 815-485-8500
E-mail: sales@mcnaughtondevelopment.com

This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering.

A PROUD MEMBER OF SSHBA

MOKENA

FOXBOROUGH ESTATES

"Mokena's Premier Master-Planned Community"

Overall Site Plan



- **PHASE I** THE MEADOWS OF FOXBOROUGH ESTATES
- **PHASE II** THE LAKES OF FOXBOROUGH ESTATES
- **PHASE III** THE PRESERVES OF FOXBOROUGH ESTATES
- **PHASE IV** THE DEN OF FOXBOROUGH ESTATES

Note: This simplified site plan and landscaping are artist's conception, and are prepared only as a general guide not to be considered technically accurate. Refer to sales center for current details.

GRUBB FARM DEVELOPMENT, LLC

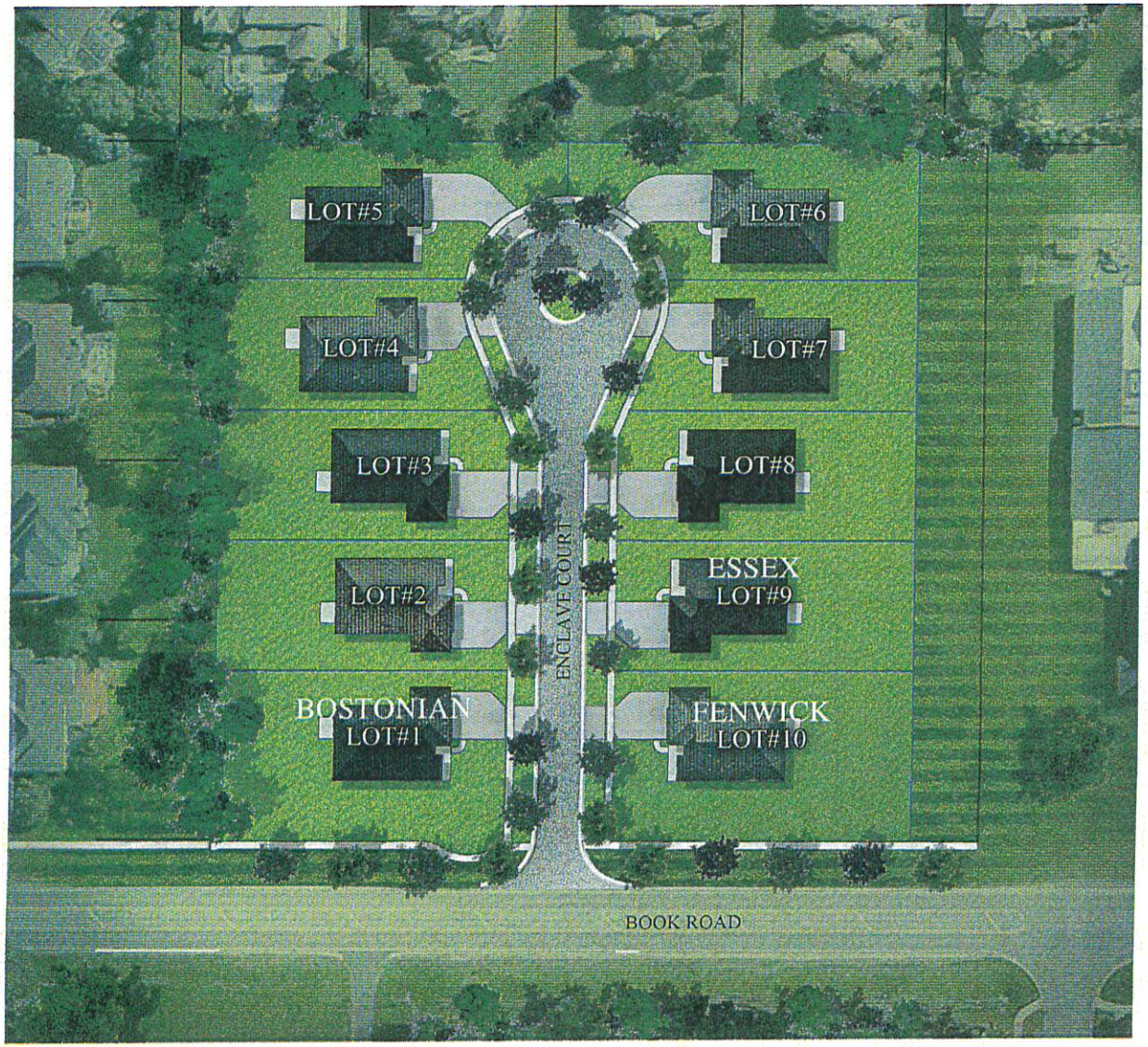
708-361-8300 | 815-485-8500

EQUAL HOUSING OPPORTUNITY

A PROUD MEMBER OF SSHBA

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SILVER LEAF
OF NAPERVILLE



CRYSTAL TREE
ORLAND PARK



SCORECARD

HOLE	GOLD	WHITE	BLUE	RED	PAR
1	410	395	370	315	4
2	375	370	305	275	4
3	350	330	295	255	4
4	515	495	480	425	5
5	170	160	135	85	3
6	430	405	375	335	4
7	165	145	115	90	3
8	425	375	340	285	4
9	490	480	445	385	5
	3330	3155	2860	2450	36

HOLE	GOLD	WHITE	BLUE	RED	PAR
10	425	415	345	305	4
11	210	180	145	120	3
12	405	390	355	295	4
13	410	395	345	300	4
14	510	495	450	405	5
15	185	165	140	105	3
16	575	550	495	440	5
17	155	135	105	95	3
18	530	515	465	400	5
	3405	3240	2845	2465	36
	3330	3155	2860	2450	36
TOTAL	6735	6395	5705	4915	72

Golf Course Designed by
Robert Trent Jones Jr.

Prepared by: The Ives/Ryan Group, Inc.
for Corley Real Estate and Financial.
Golf course design by Robert Trent Jones Jr.

This is an artist's conception and subject to modification pending final engineering.

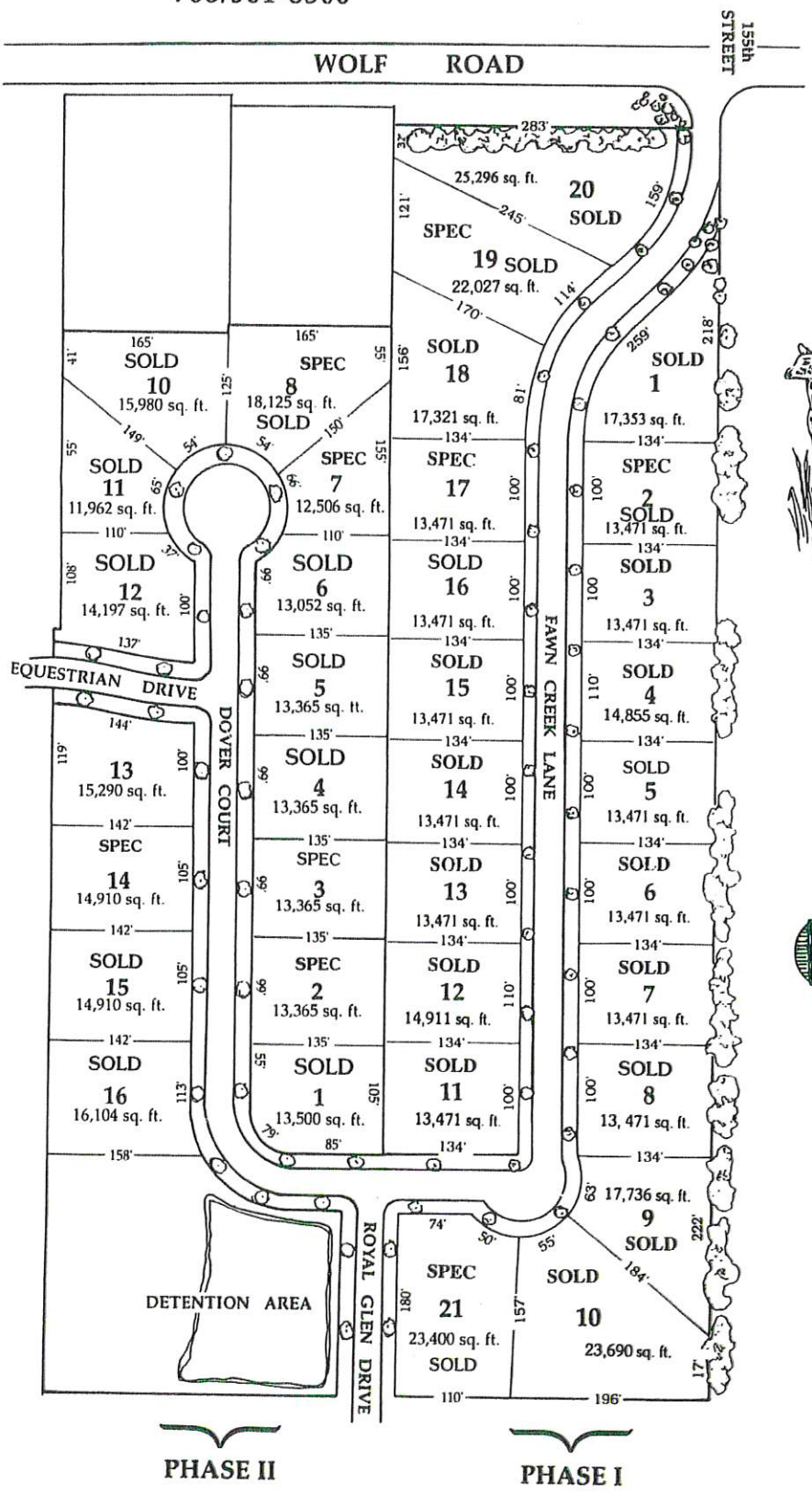
McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

KEY AWARDS

Excellence in Housing Design



FAWN CREEK OF ORLAND PARK

PHASE I and II

EQUAL HOUSING OPPORTUNITY

N

PHASE I

Lots 11 through 18 Walkouts

Lots 19 and 20 Lookouts or Walkouts

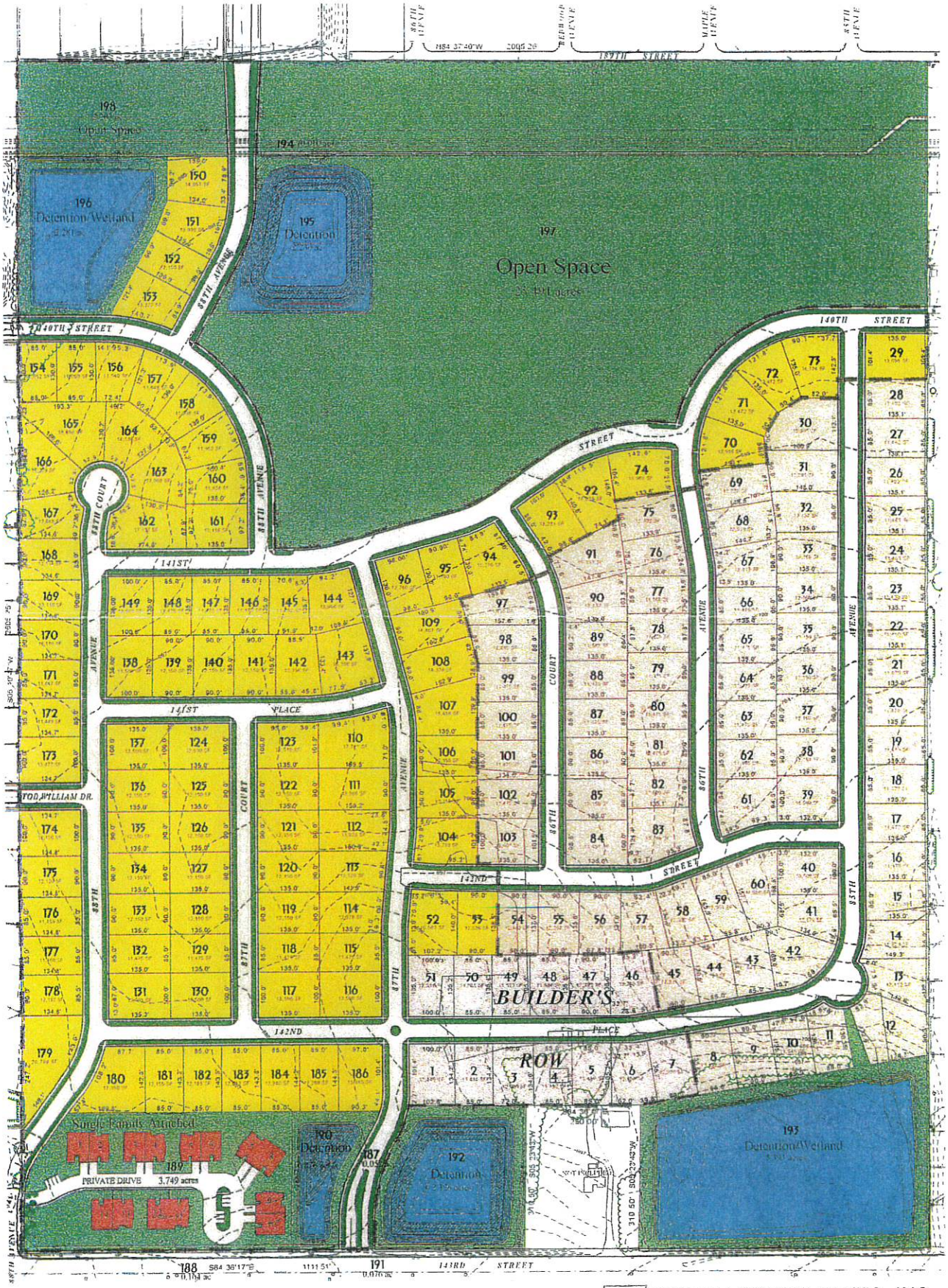
NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALES CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway - Suite 101 • Palos Park, IL 60464

EVERGREEN VIEW SUBDIVISION

Park Enterprises & McNaughton Development

Orland Park, Illinois



PHASE I | PHASE II | BUILDER'S ROW

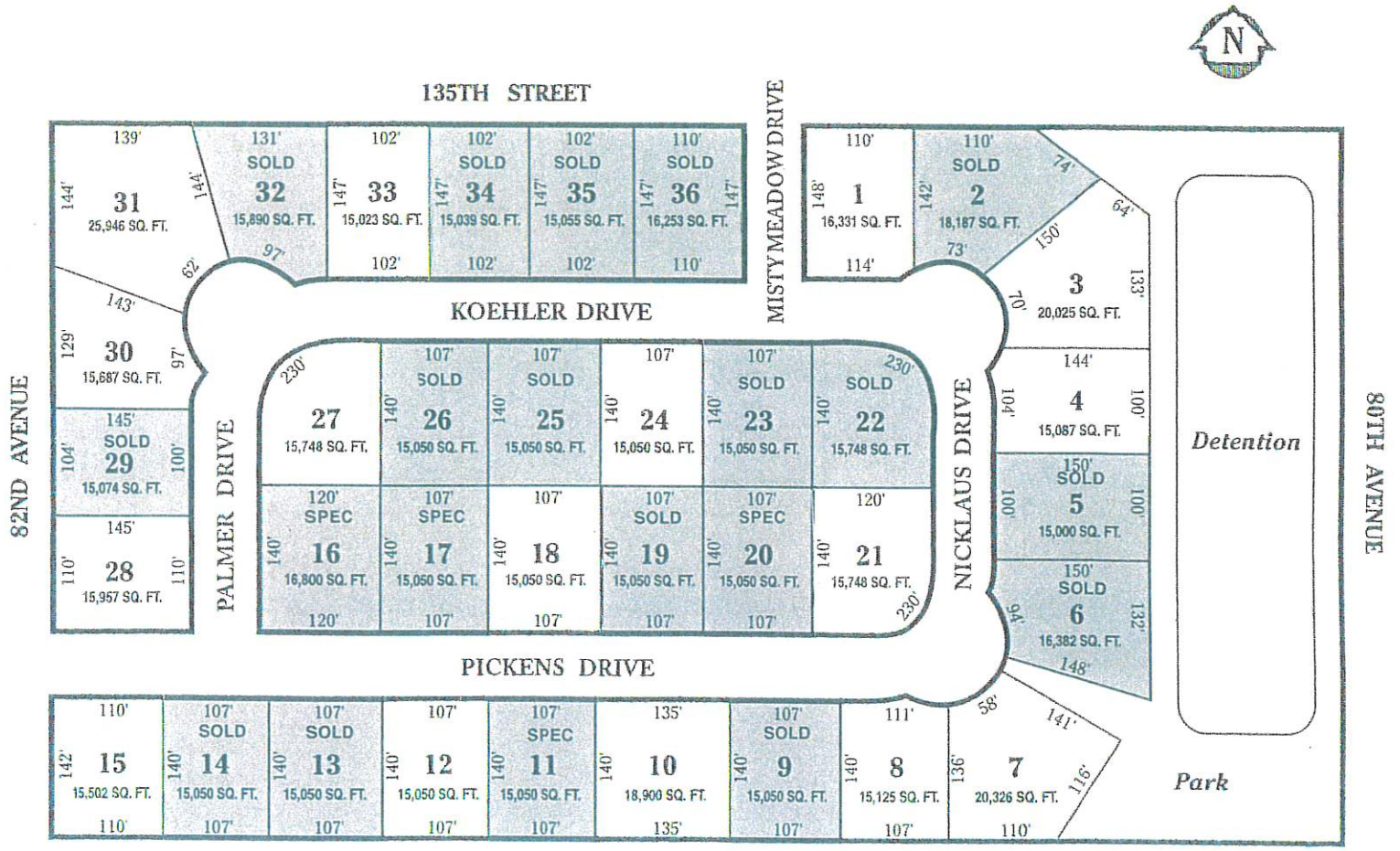
INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Meadowbrook Estates Of Orland Park



SHADED AREAS INDICATE MCNAUGHTON DEVELOPMENT INC. LOTS

KEY AWARDS

Excellence In Housing Design

NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

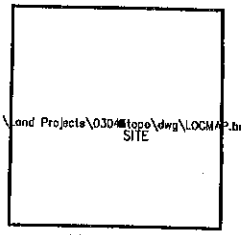
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www.mcnaughtondevelopment.com

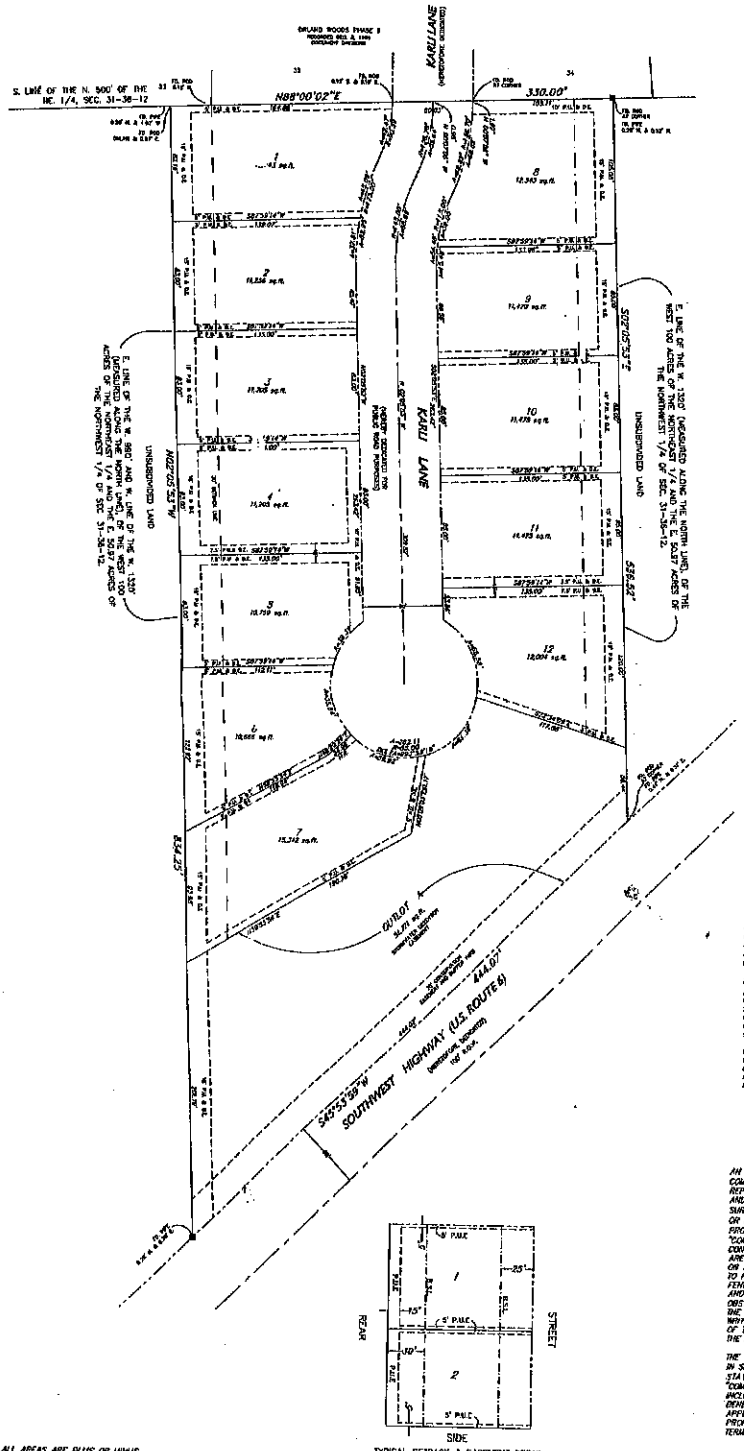
FINAL PLAT
OF
ORLAND WOODS III

BEING A SUBDIVISION IN THE NORTHEAST QUARTER OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN COOK COUNTY, ILLINOIS.

CLK 27-31-200-005

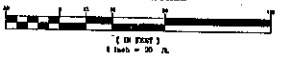


LOCATION MAP



BASIS OF BEARINGS
ASSUMED

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

LEGEND

● FIP	FOUND IRON PIPE
● FIR	FOUND IRON ROD
○ SIP	SET IRON PIPE
○ SMN	SET MAG. NAIL
■	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	PROFF-OF-WAY LINE
	CENTERLINE
	EASEMENT LINE
	BUILDING SETBACK LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(100.00')	RECORD DIMENSION	S	SOUTH
100.10'	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
FIR	FOUND IRON ROD OR PIN		
A	ARC DIMENSION		
R	RADIUS		
CH.	CHORD DIMENSION		
CB	CHORD BEARING		
D	DELTA		
P.C.	POINT OF CURVE		
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		

TYPICAL SETBACK & EASEMENT DETAIL
(UNLESS OTHERWISE SHOWN)

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL EASEMENTS ARE HEREBY GRANTED.
3. ALL DISTANCE ARE IN FEET AND DECIMAL PARTS THEREOF.
4. THERE SHALL BE NO INGRESS OR EGRESS FROM OUTLOT "A" TO SOUTHWEST HIGHWAY.

EASEMENT PROVISIONS

Easements are hereby reserved for and granted to the Village of Orland Park, Illinois and to those public utility companies operating under franchise from the Village of Orland Park, including, but not limited to Ameritech, Northern Illinois Gas Company (NICOR), Commonwealth Edison Company, Cable Television and their successors and assigns, over all the areas marked "Public Utilities and Drainage Easement" (P.U. & D.E.) on the plat for the perpetual right, privilege and authority to construct, reconstruct, repair, inspect, maintain and operate various utility transmission and distribution systems, community antenna television systems and including storm and/or sanitary sewers, together with any and all necessary manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said village, over, upon, along, under and through said indicated easements, together with right of access across the property for necessary men and equipment to do any of the above work.

No right is also granted to trim or remove fences, trees, shrubs or other plants on the easements that interfere with the operation of the sewers or other utilities. No permanent buildings shall be placed on said easements, but same may be used for gardens, shrubs, landscaping and other purposes that do not harm or later interfere with the aforesaid uses or rights, where an easement is used both for sewers and other utilities, the other utility installation shall be subject to the ordinances of the Village of Orland Park.

Easements are hereby reserved for and granted to the Village of Orland Park and other governmental authorities having jurisdiction of the land platted hereby over the entire easement area for ingress, egress and the performance of municipal and other governmental services, including water, storm, and sanitary sewer services and maintenance.

NICOR GAS COMPANY

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR, REPLACE AND REMOVE FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT," "COMMON AREA OR AREAS" AND STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS," TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, ON OR ADJACENT LOTS, AND COMMON AREA OR AREAS, AND TO SERVE OTHER PROPERTY, ADJACENT OR OTHERWISE, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS' FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NICOR. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THAT MEANING SET FORTH FOR SUCH TERM IN SECTION 605/2(e) OF THE "CONDOMINIUM PROPERTY ACT" (ILLINOIS COMPILED STATUTES, CH. 765, SEC. 605/1(e)), AS AMENDED FROM TIME TO TIME, THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH AREAS MAY BE DESIGNED ON THIS PLAT BY OTHER TERMS.

PROFESSIONAL LAND SURVEYOR
STEVEN J. LAMB
STATE OF ILLINOIS
035-003160
BELVIDERE, IL

DIGITAL SURVEY & DESIGN, LTD. 5249 Stone Quarry Road Belvidere, IL 61008 Phone: 815-547-1130 Fax: 815-547-0430	PREPARED FOR: McNAUGHTON DEVELOPMENT, INC. 11900 SOUTHWEST HIGHWAY PALOS PARK, ILLINOIS 60464 (708) 361-8300	REVISIONS NO. DATE DESCRIPTION 2 11/5/03 SHIFTED FRONT SETBACK LINES 1 10/31/03 ADDED EASEMENT

FINAL PLAT
ORLAND WOODS III

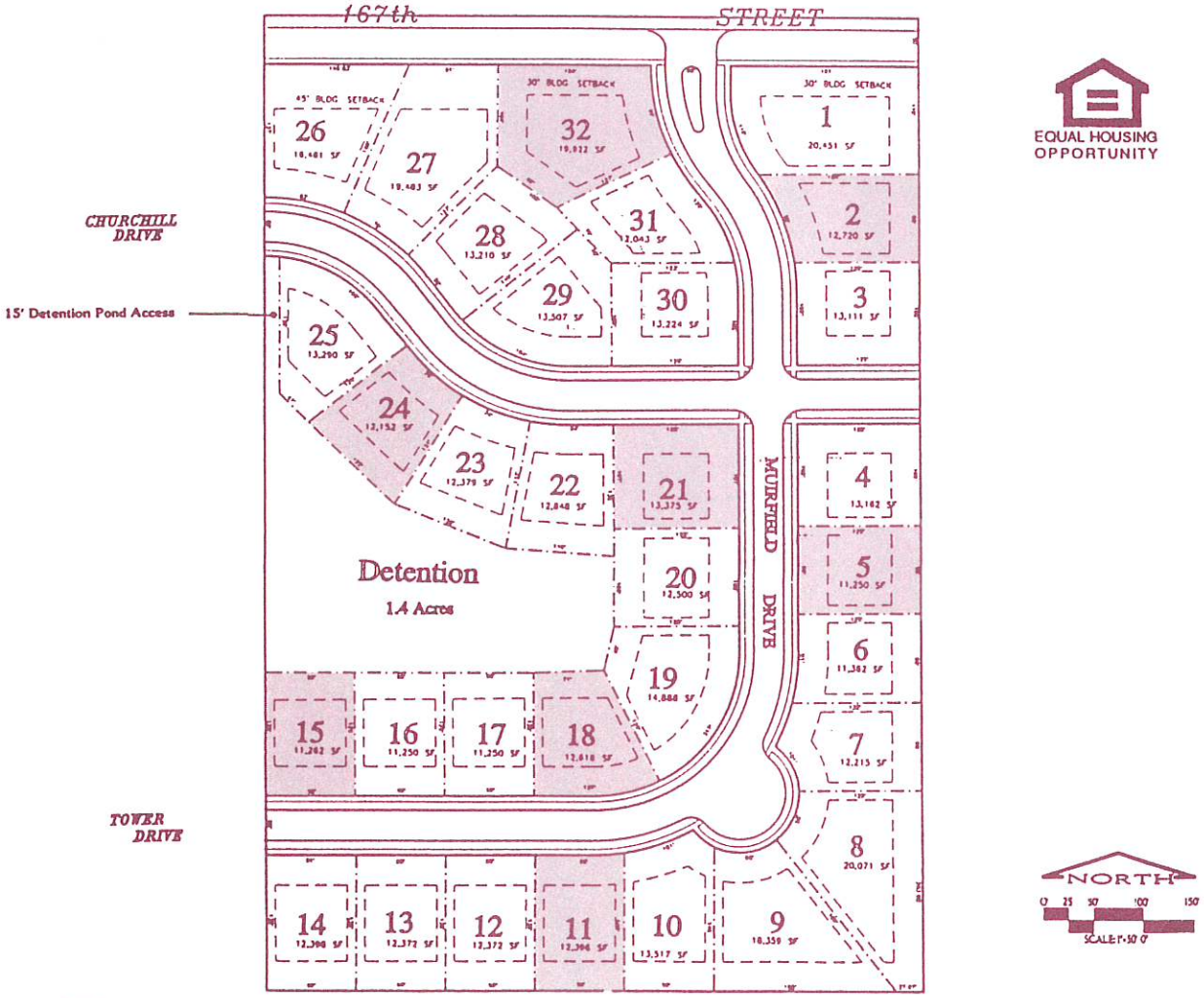
DRAFTING COMPLETED: 08/22/03 DRAWN BY: S.J. PROJECT MANAGER: S.J.
FIELD WORK COMPLETED: 08/29/03 CHECKED BY: SCALE: 1" = 40'

Project No: 03045
Group No: 03
SHEET NO. 1 of 2

MUIRFIELD

167th & 106th Avenue
ORLAND PARK

** wooded / walk-out lots



SHADED AREAS INDICATE McNAUGHTON DEVELOPMENT LOTS

*Other lots within subdivision can be acquired upon request.

PLAN DATA	
TOTAL AREA	+/-15.0 ACRES
EXTERIOR R.O.W.	0.8 ACRES
DETENTION	1.4 ACRES
NET AREA	12.8 ACRES
TOTAL HOMES	32
MIN. LOT SIZE	11,250 SF
AVERAGE LOT SIZE	13,889 SF
NET DENSITY	2.5 DU/AC.
PROPOSED ZONING	R-3

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
phone (708) 361-8300 fax (708) 361-6754

This plan is preliminary in nature and was prepared to illustrate design intent, therefore it is subject to modification pending final planning, engineering and landscape design.

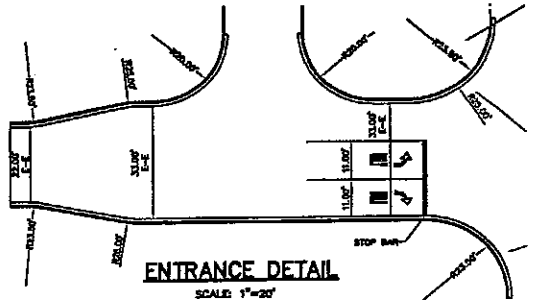
FINAL SITE PLAN

FOR

PARK CORNERS II

ORLAND PARK, ILLINOIS

SITE ADDRESS:
13510 CIRCLE DRIVE, ORLAND PARK, ILLINOIS 60462
ORLAND TOWNSHIP



END

PROPOSED

BY OWNER.

MENTS BY I.D.O.T.

(S1) STOP R1-1

(S2) NO OUTLET W14-2 36"X36" BACKGROUND - YELLOW

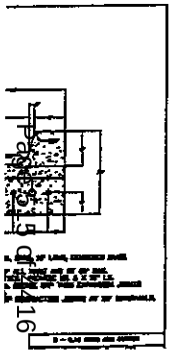
NOTES:
1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS BOOK.
2. THE PLACEMENT AND SPACING OF SIGNS SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

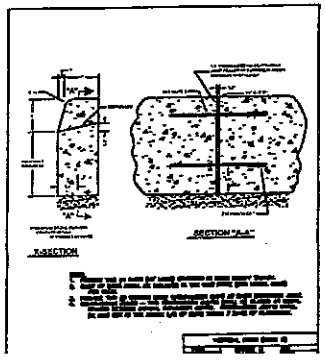
= 0.99 ac = 43,164 SF
= 0.13 ac = 5,659 SF
= 0.86 ac = 37,523 SF
= 0.40 ac = 17,233 SF
STORY) = 11,420 SF
= 0.30
= 38 SPACES
= 38 SPACES

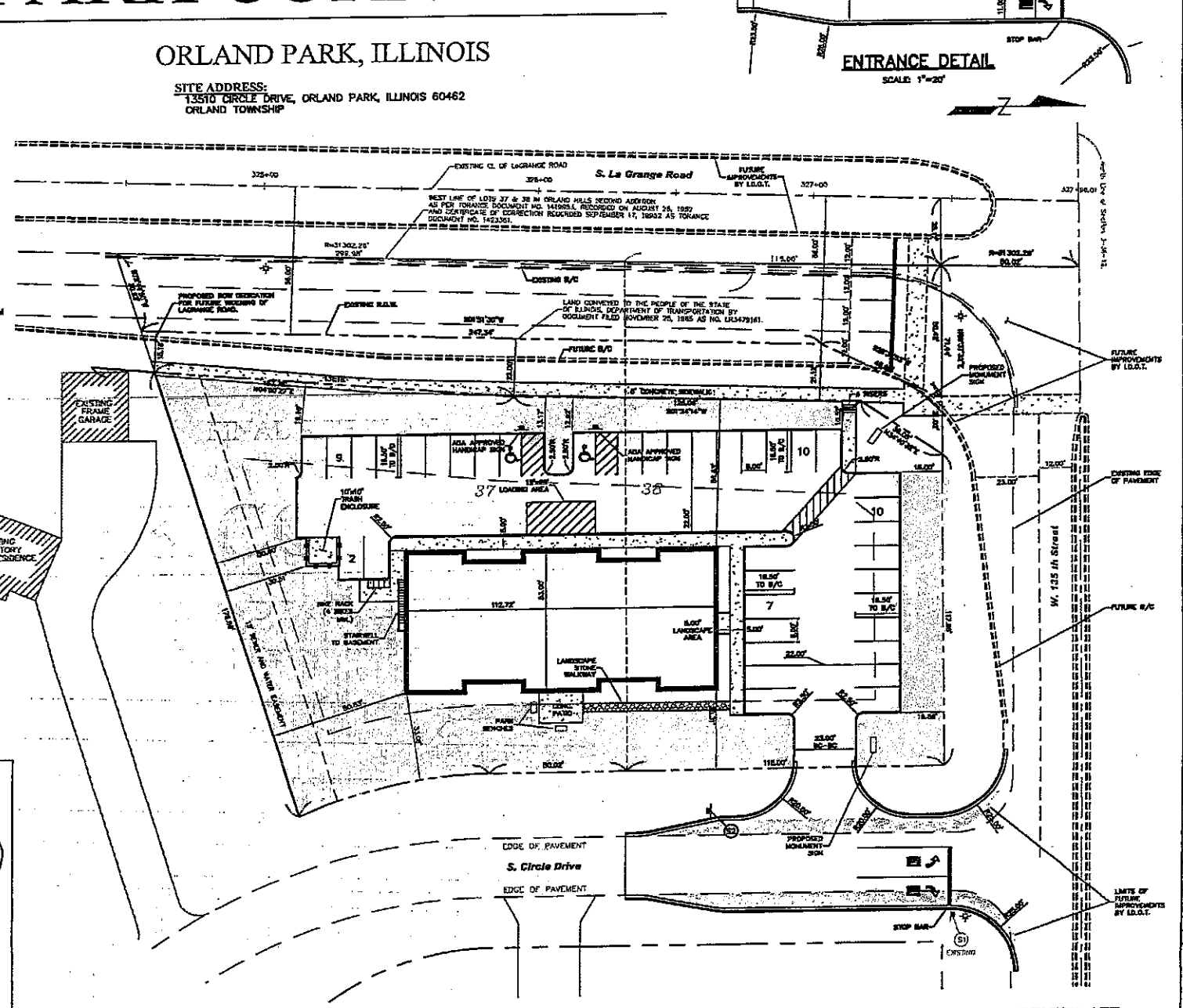
= 5,632 SF (15%)
REA = 14,640 SF (39%)
= 1
= 1 (BIZ ZONED)

ALL BE PLANTED WITH MATERIALS TO BE
OF ORLAND PARK. THESE SWALES
TANDARDS NECESSARY TO MEET BMP

THAT PART OF SAID LOTS 37 AND 38 CONVEYED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, BY DOCUMENT AS NUMBER LR3479161, MORE PARTICULARLY DESCRIBED AS THE NORTHWEST CORNER OF SAID LOT 38; THENCE ON AN TH 89 DEGREES 37 MINUTES 32 SECONDS EAST, ALONG THE 38, A DISTANCE OF 56.42 FEET; THENCE SOUTH 56 DEGREES WEST 96 FEET; THENCE SOUTH 1 DEGREE 01 MINUTES 30 ET TO THE SOUTHERLY LINE OF SAID LOT 37; THENCE SOUTH 50 SECONDS WEST, ALONG SAID SOUTHERLY LINE, 30.63 FEET R OF SAID LOT 37, SAID POINT BEING A 31,302.28 FEET R OF CIRCLE OF SAID CURVE BEARS NORTH 89 DEGREES 13 T FROM SAID POINT; THENCE NORTHERLY 300.22 FEET, ALONG T LINE OF SAID LOTS 37 AND 38 THROUGH A CENTER ANGLE 5 37 SECONDS, TO THE POINT OF BEGINNING) IN BLOCK 4 IN DITION, BEING A SUBDIVISION OF PART OF THE WEST HALF OF NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN







REVIEW SET

REVISIONS

MCNAUGHTON DEVELOPMENT
11900 SOUTHWEST HIGHWAY
PALOS PARK, ILLINOIS 60464

FINAL SITE PLAN
FOR
PARK CORNERS II

DESIGNTEK ENGINEERING, INC.
CONSULTING AND SITE DESIGN ENGINEERS
9500 BORNHIT DRIVE, SUITE 304
MOKENA, ILLINOIS 60448

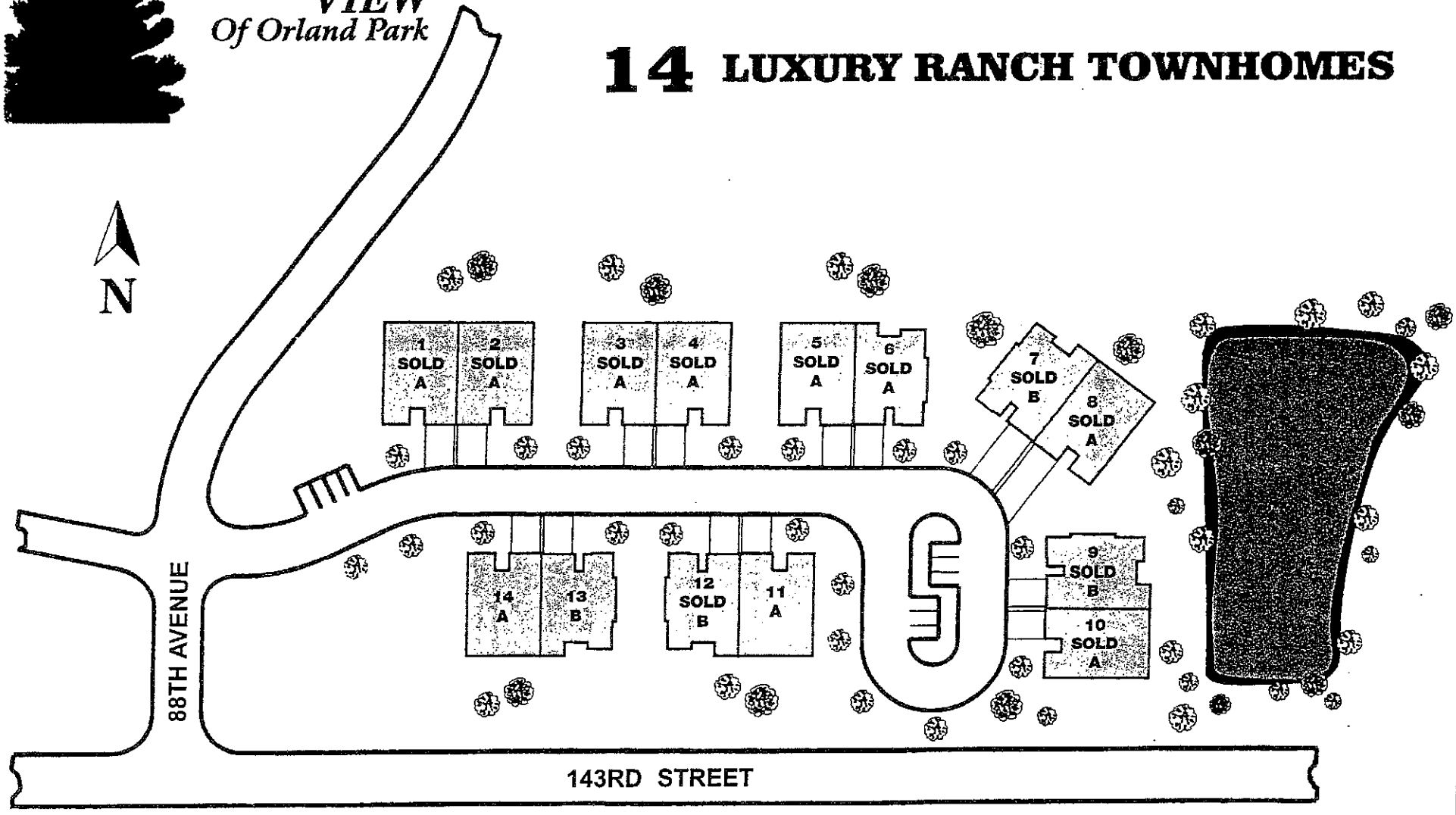
PROJECT INFO
Project No.: 07
Scale: 1"=20'
Date: 03-27-0
Design By: ADM
Drafted By: ADM
Checked By: SD

1 OF


6
7
5
8
4
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J
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STREET
WOLF
ROAD
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49
BLUFF POINTE
Orland Park, Illinois
McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER
N

Evergreen VIEW Of Orland Park

14 LUXURY RANCH TOWNHOMES



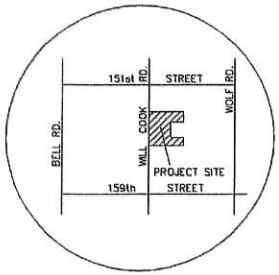
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
708/361-8300

This site plan in an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

SSHBA

EQUAL HOUSING OPPORTUNITY

PRELIMINARY SITE PLAN
TIMBERLAKE
ORLAND PARK, ILLINOIS



LOCATION MAP
N.T.S.



REVISIONS

NO.	DATE	DESCRIPTION

McNAUGHTON DEVELOP, INC.
11900 SOUTHWEST HIGHWAY
PALOS PARK, IL. 60464

TIMBERLAKE
PRELIMINARY SITE PLAN
ORLAND PARK, ILLINOIS

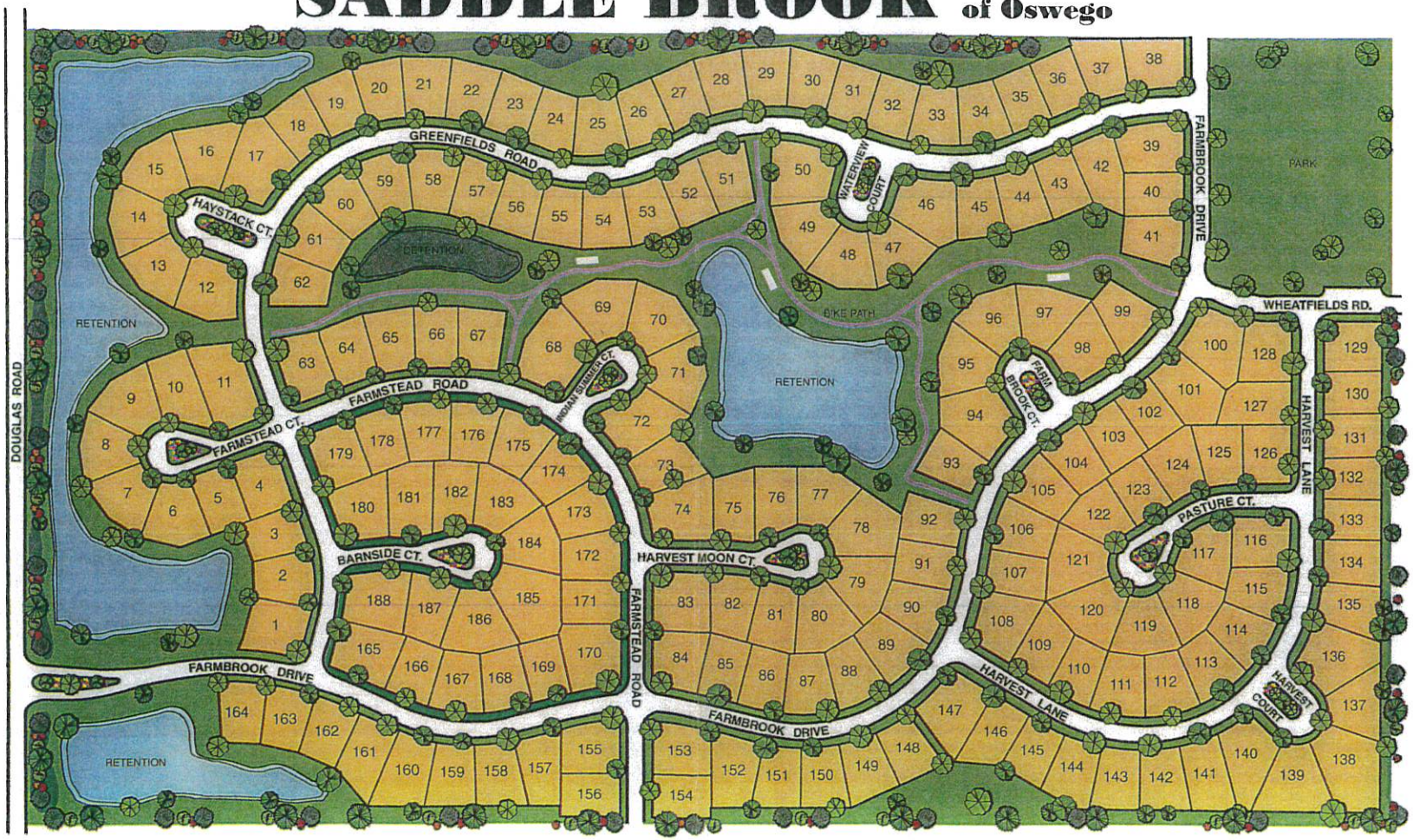
Design Tech Associates, Inc.
ENGINEERING • REAL ESTATE DEVELOPMENT
13159 West 143rd Street
Homer Glen, Illinois 60441
Phone: 708-301-0311
Illinois Professional Design Firm #184-002201

PROJECT INFORMATION

Project No.:	02-115C
File:	COLOR.DWG
Scale:	1"= N.T.S.
Date:	07-18-02
Design By:	SDS
Drafted By:	RSM
Checked By:	SDS

SHEET No.
1
of
1

SADDLE BROOK of Oswego



McNaughton DEVELOPMENT, INC

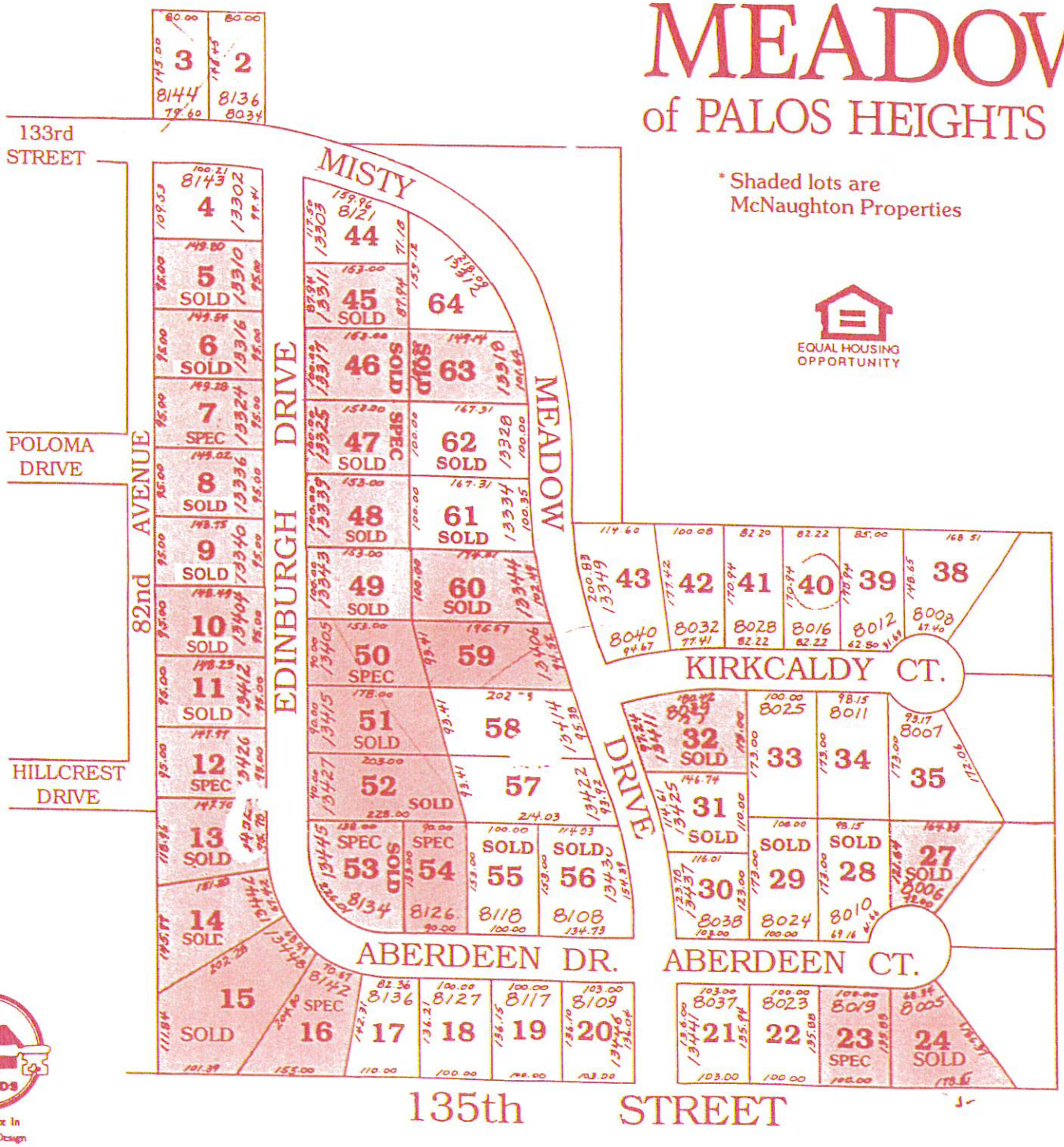
CUSTOM DESIGNED HOMES

708/361-8300

MISTY MEADOW of PALOS HEIGHTS

* Shaded lots are McNaughton Properties

EQUAL HOUSING OPPORTUNITY



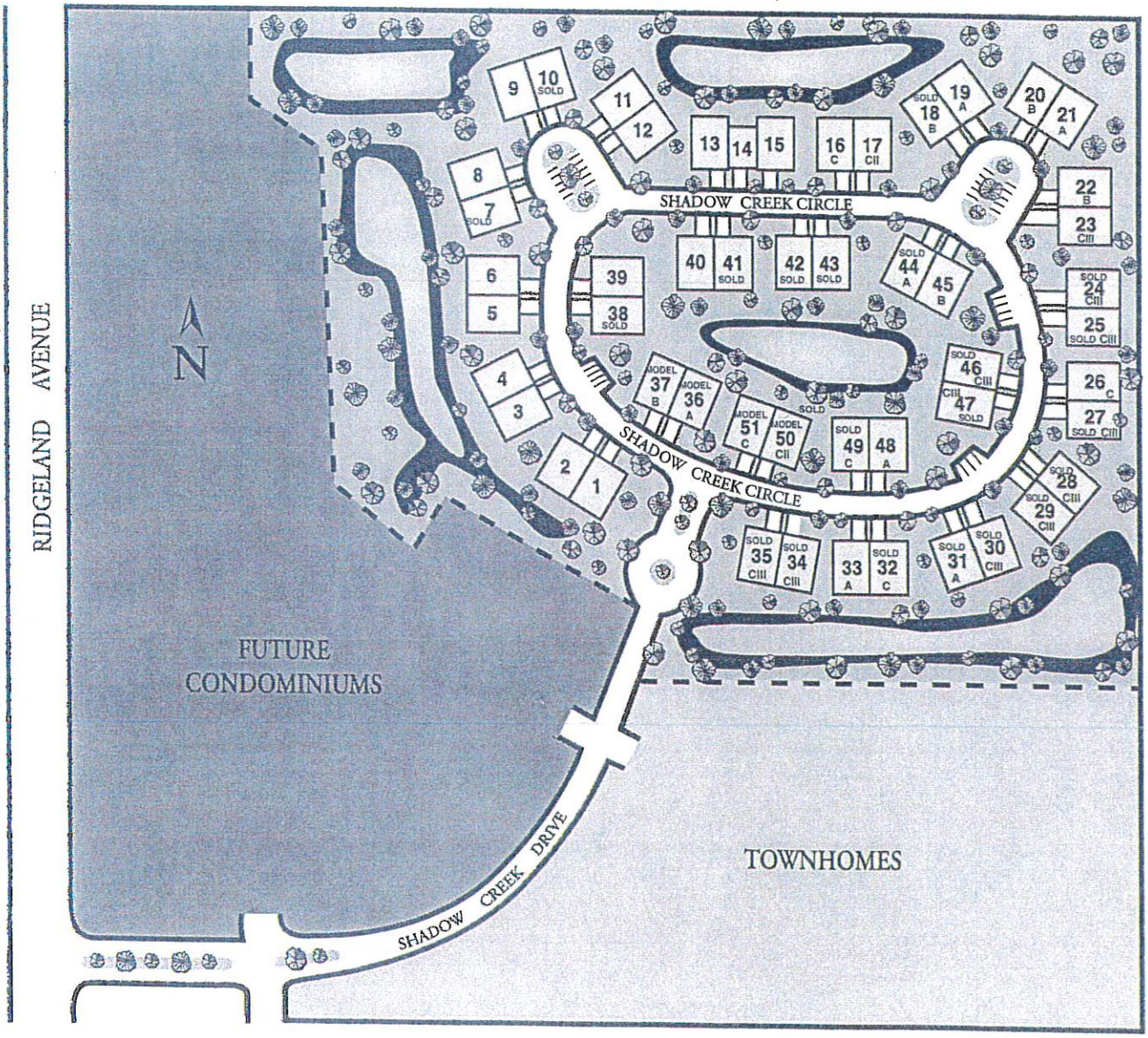
KEY AWARDS
Excellence In Housing Design

Park Corners Office Centre • 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464

McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.

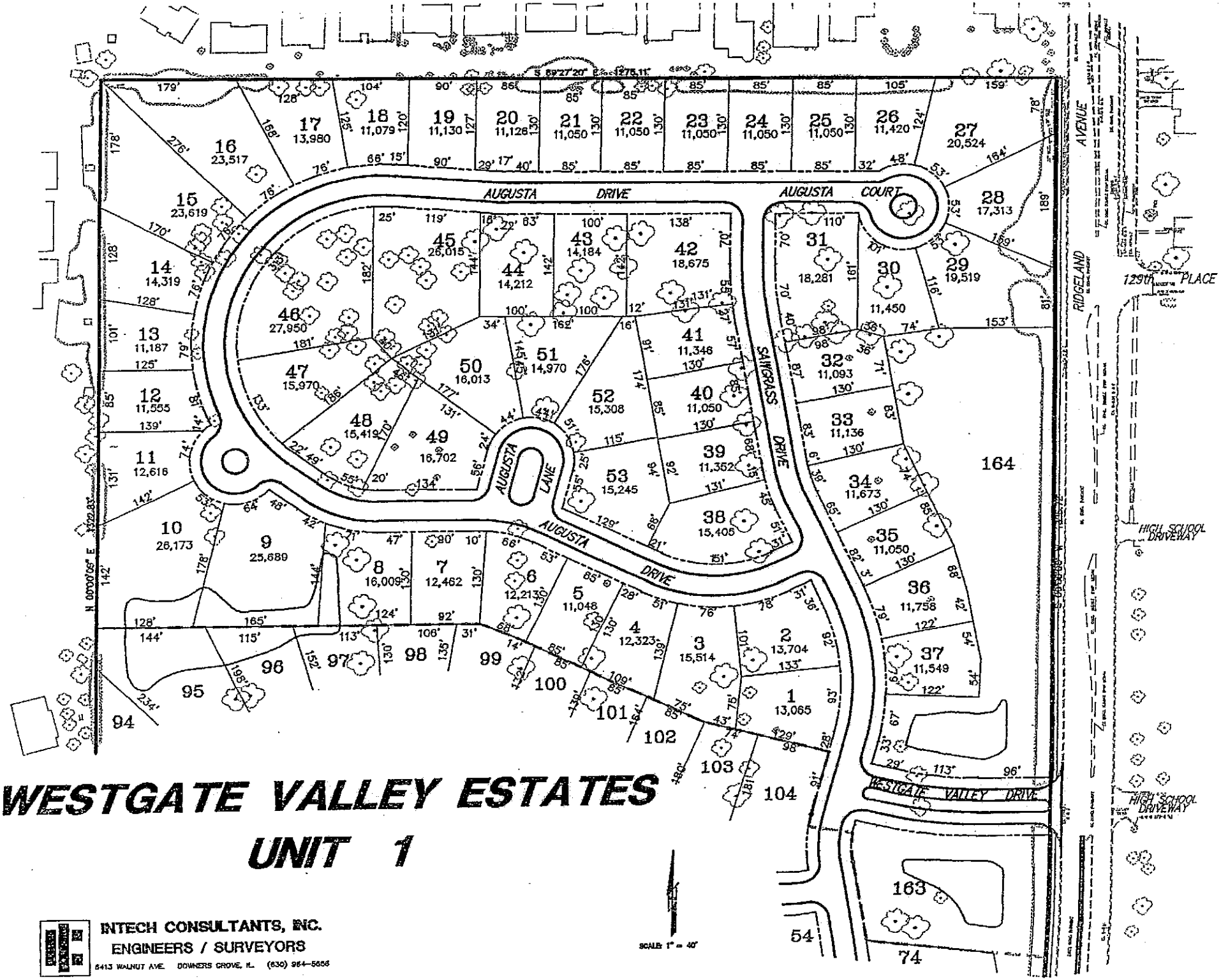
KEYSTONE CROSSING

Of Westgate Valley



This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES



WESTGATE VALLEY ESTATES

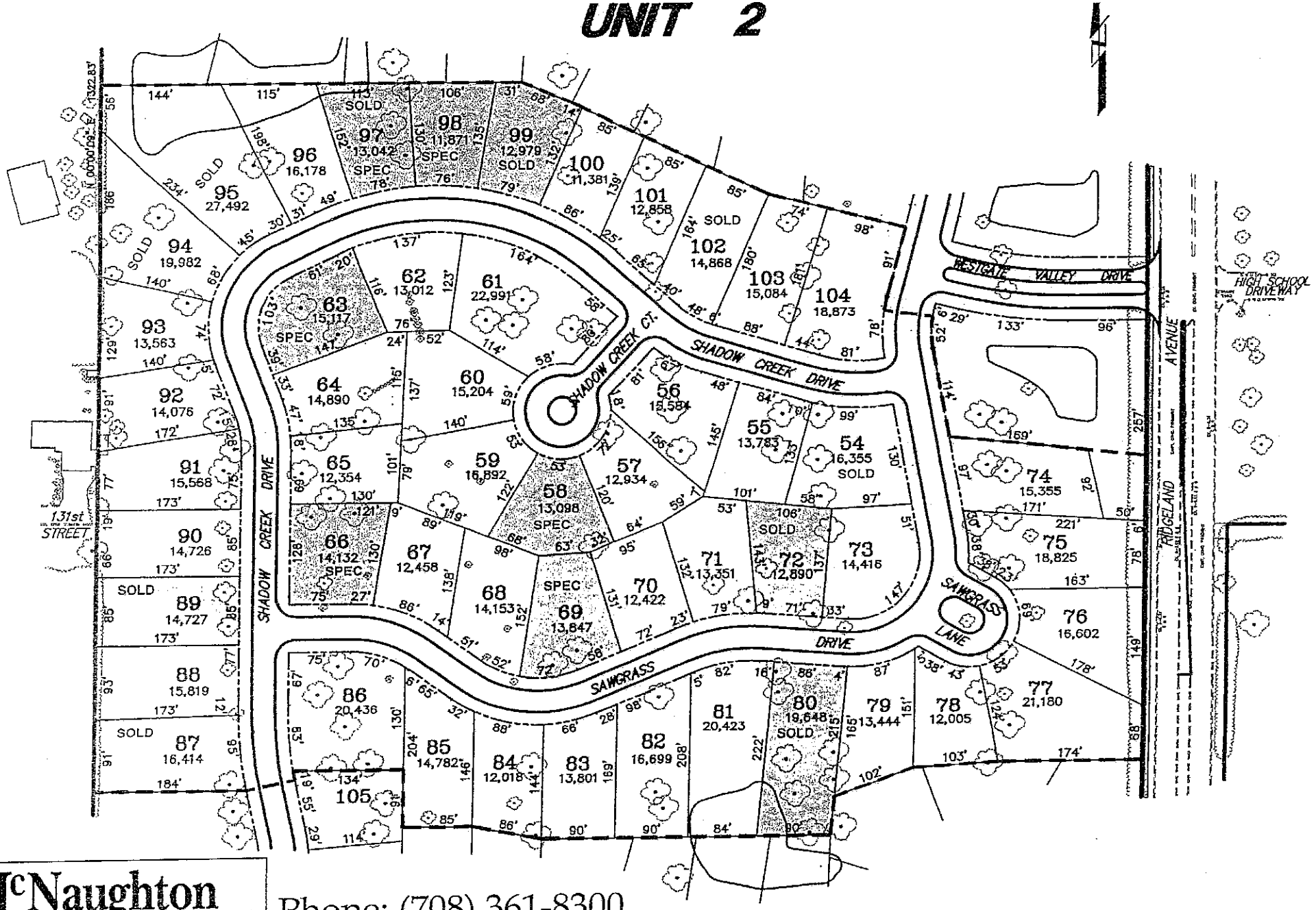
UNIT 1

INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS
5413 WALNUT AVE. DOWNERS GROVE, IL. (630) 964-5656

SCALE: 1" = 40'

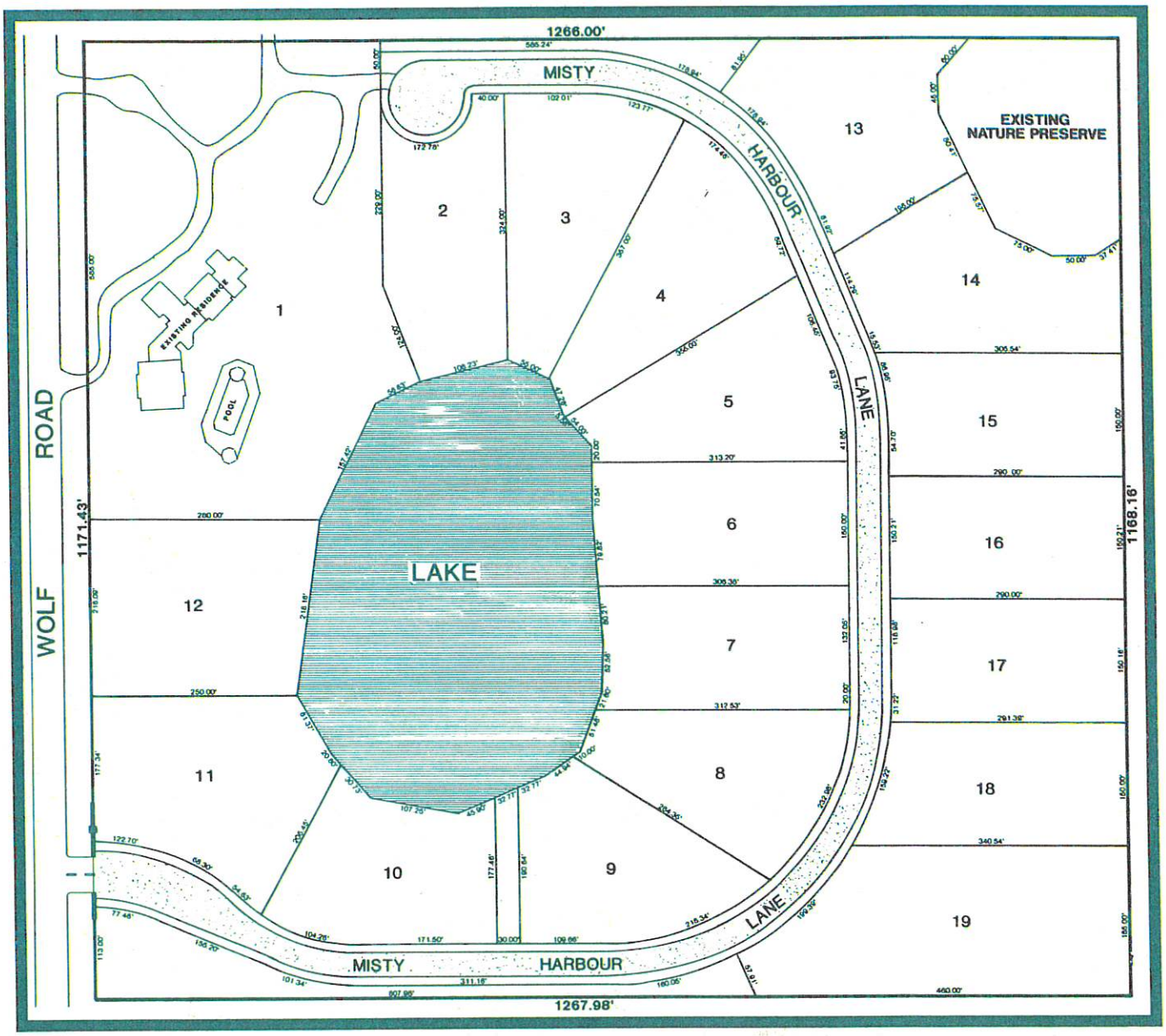
WESTGATE VALLEY ESTATES

UNIT 2



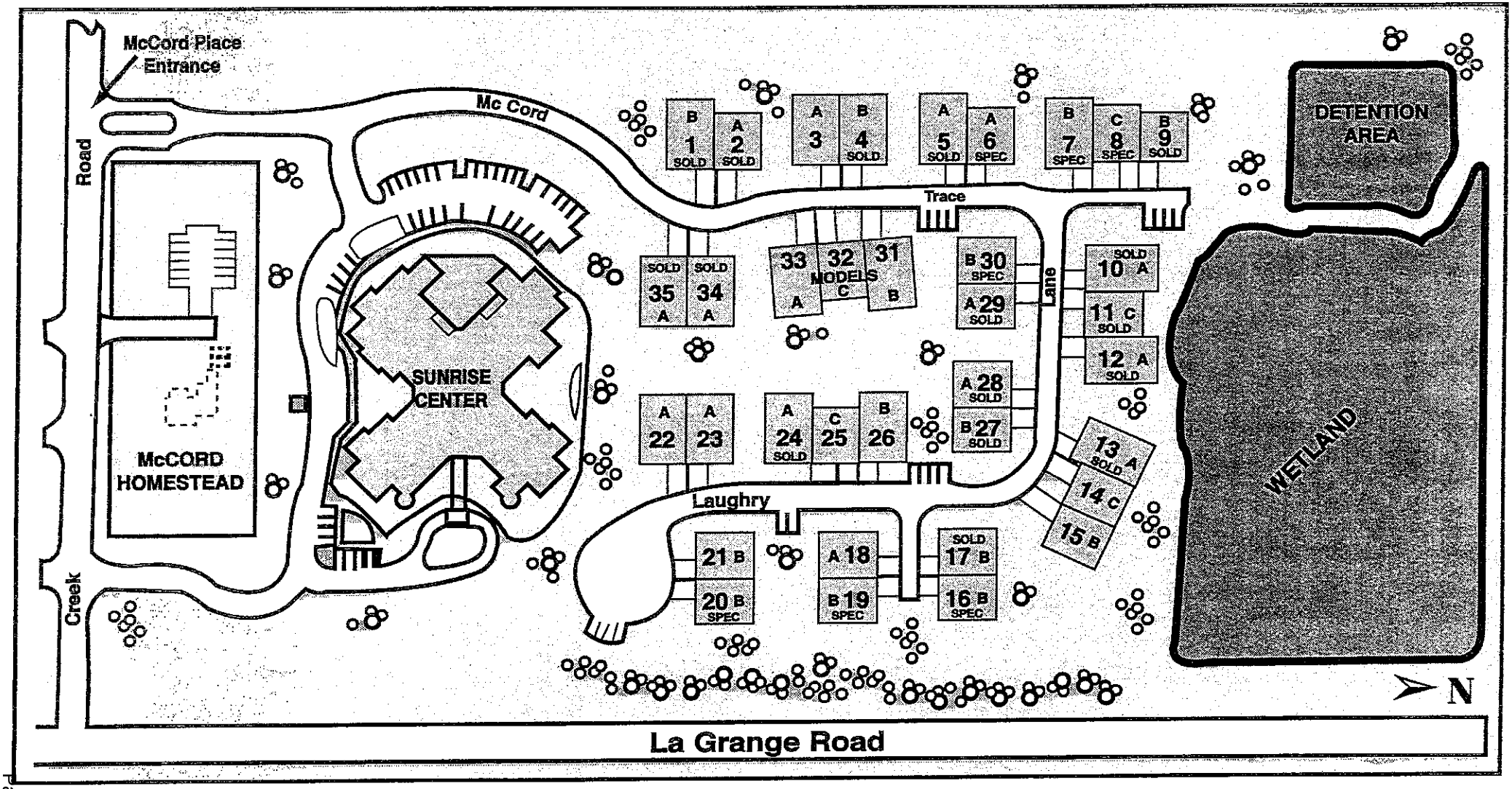
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
Phone: (708) 361-8300
www.mcnaughtondevelopment.com

MISTY
HARBOUR



Homesite Offerings

McCord Place
OF PALOS PARK



This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

EQUAL HOUSING OPPORTUNITY

TIMBER TRAILS
of WESTERN SPRINGS



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

McNaughton Development, Inc.

Burr Ridge, IL

BAB Building Front Perpective

Park Place Townhomes

Western Springs, IL

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November 6, 2024

BSB DESIGN

BSBDesign.com



Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

BAB Elevations
Park Place Townhomes
Western Springs, IL

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McNaughton Development, Inc.
Burr Ridge, IL

4-Unit Building Front Perpective

Park Place Townhomes
Western Springs, IL

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Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

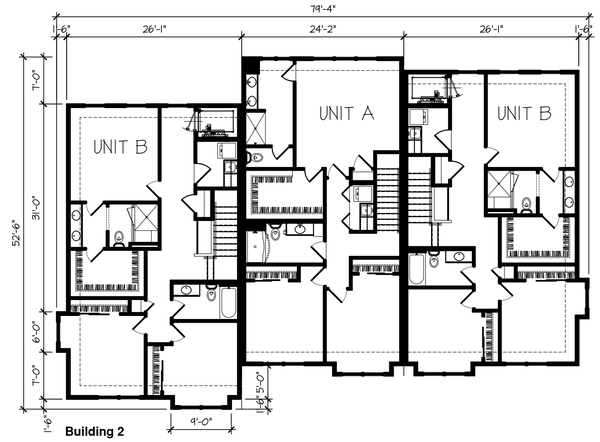
McNaughton Development, Inc.
Burr Ridge, IL

Building Type 2 Elevations
Park Place Townhomes
Western Springs, IL

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November 6, 2024

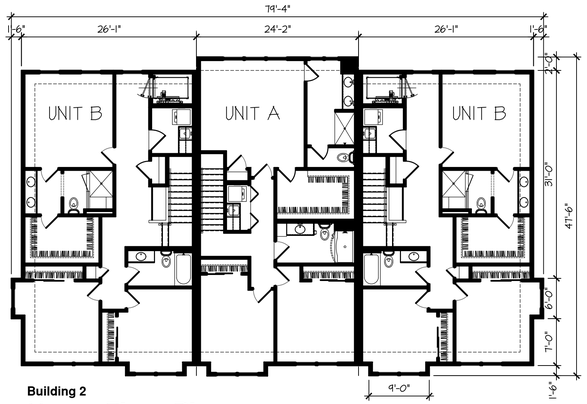
BSB DESIGN
BSBDesign.com



Building 2

Upper Floor Plan

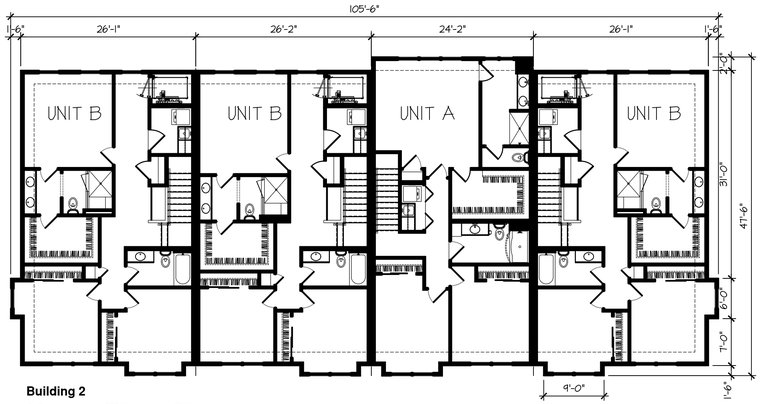
SCALE: 1/8" = 1'-0"



Building 2

Upper Floor Plan

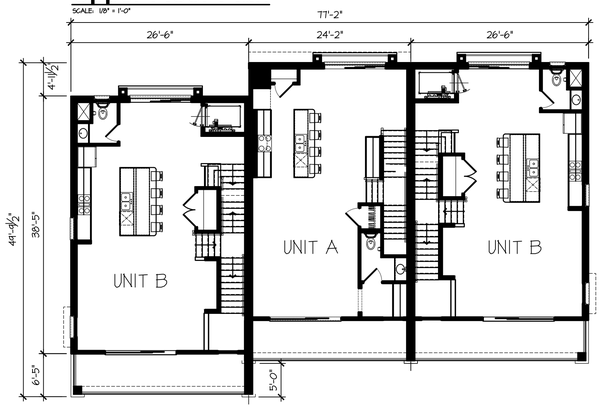
SCALE: 1/8" = 1'-0"



Building 2

Upper Floor Plan

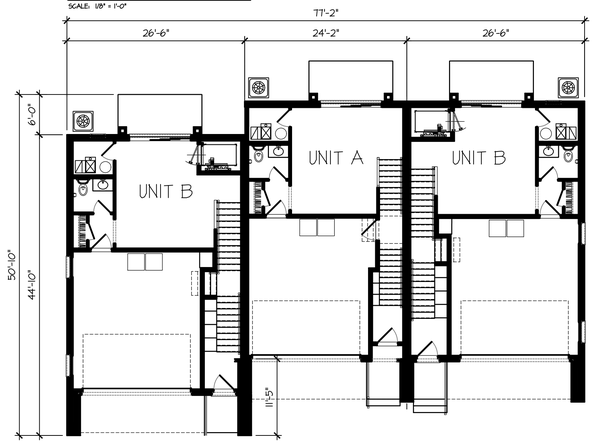
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

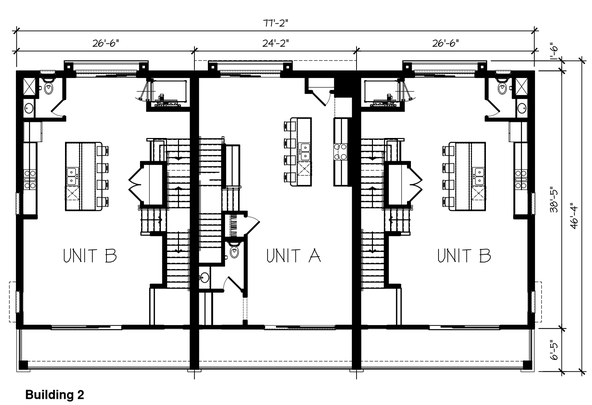
SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

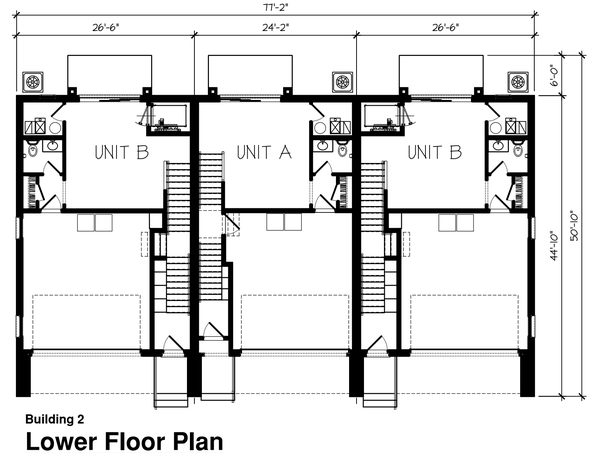
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

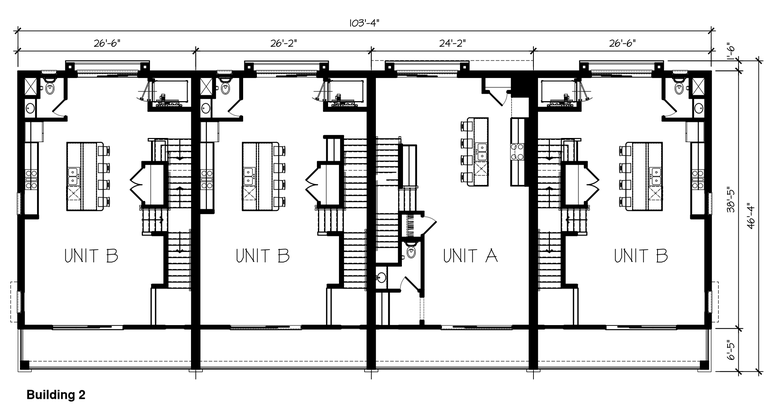
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Building 2

Lower Floor Plan

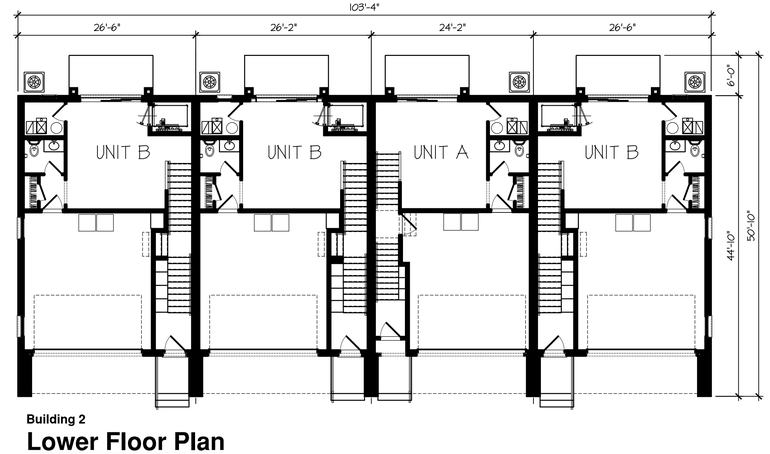
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

SCALE: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

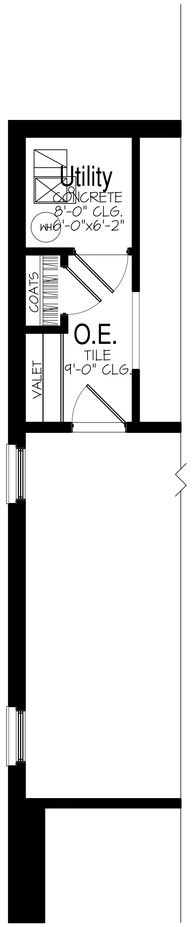
3 Unit & 4 Unit Building Assemblies

Park Place Townhomes
Western Springs, IL

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BSBDESIGN.COM

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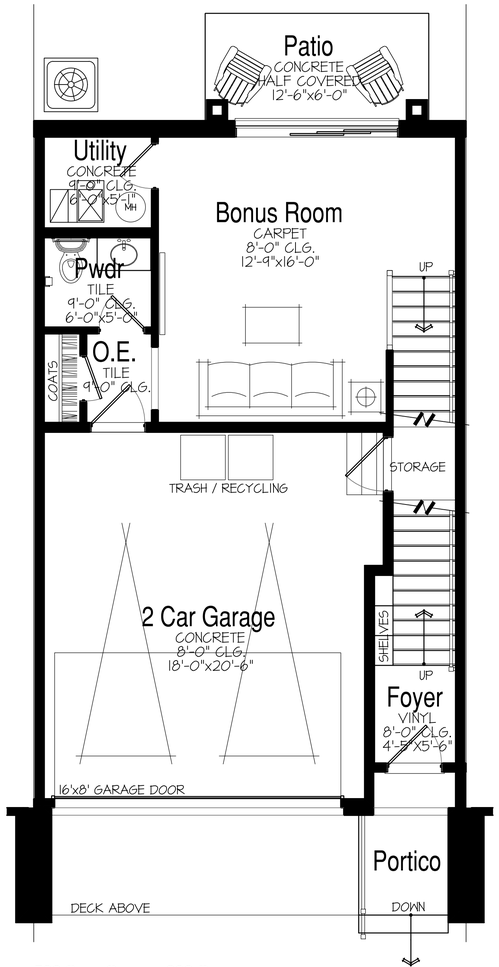
November 6, 2024



506 SF + Garage 399 SF

End Cond.

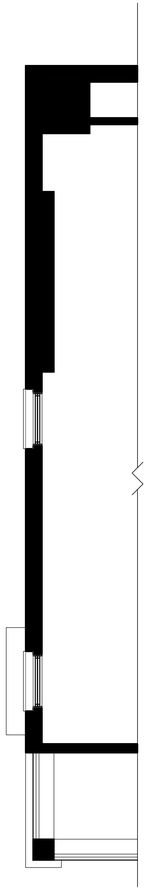
SCALE: 1/4" = 1'-0"



506 SF + Garage 399 SF

Lower Floor Plan

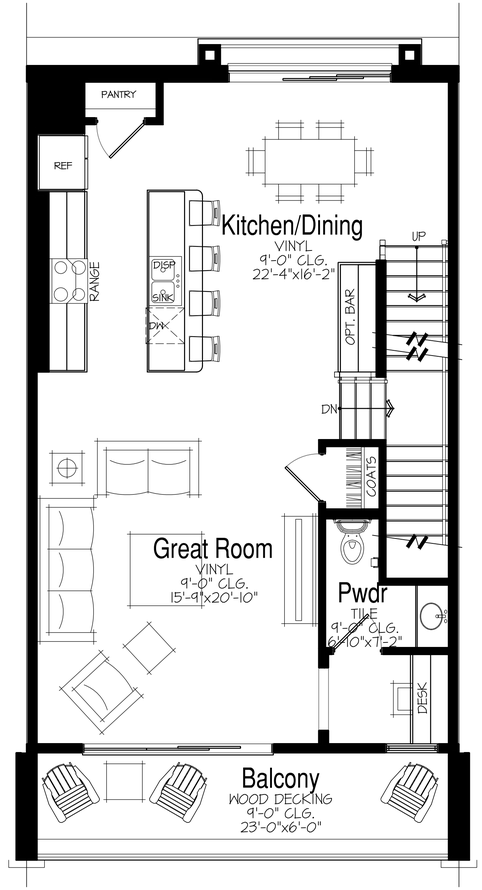
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889 SF

End Cond.

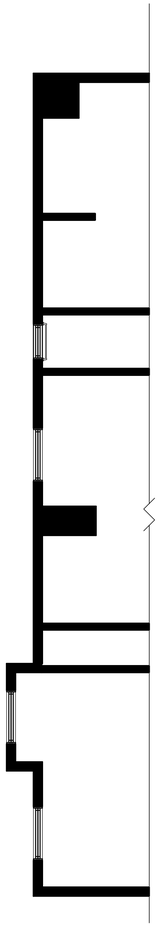
SCALE: 1/4" = 1'-0"



866 SF

Main Floor Plan

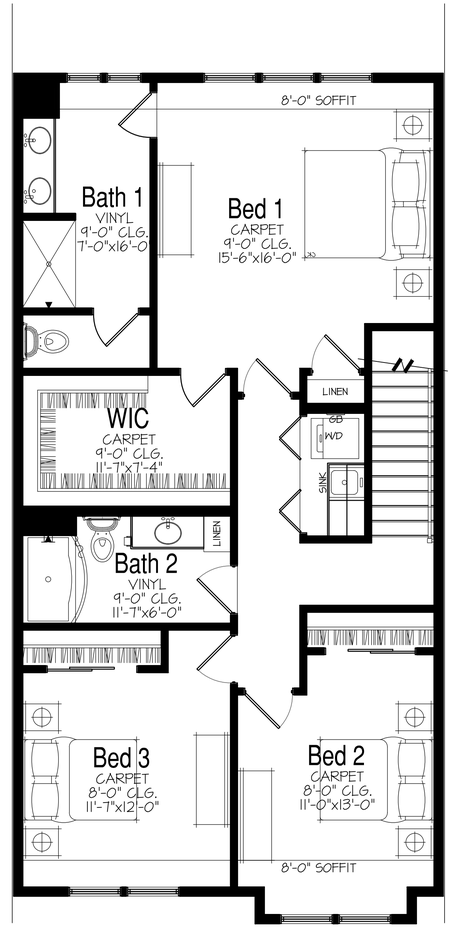
SCALE: 1/4" = 1'-0"



1080 SF

End Cond.

SCALE: 1/4" = 1'-0"



1071 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

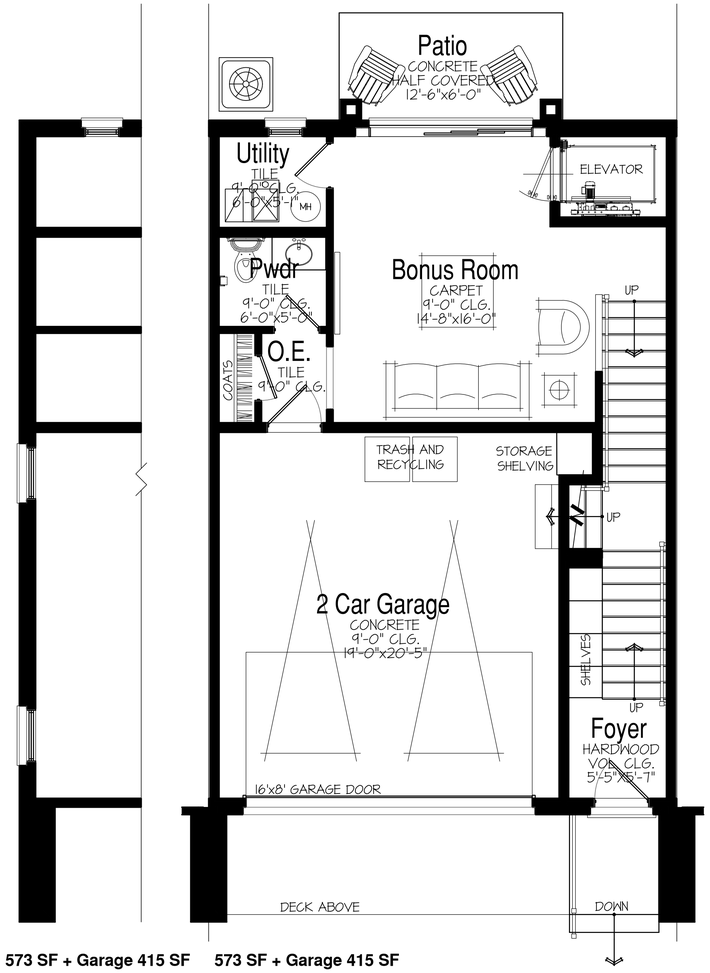
Townhome Unit A: 2,443 Total SF

Park Place Townhomes
Western Springs, IL

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BSBDESIGN.COM

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November 6, 2024



573 SF + Garage 415 SF

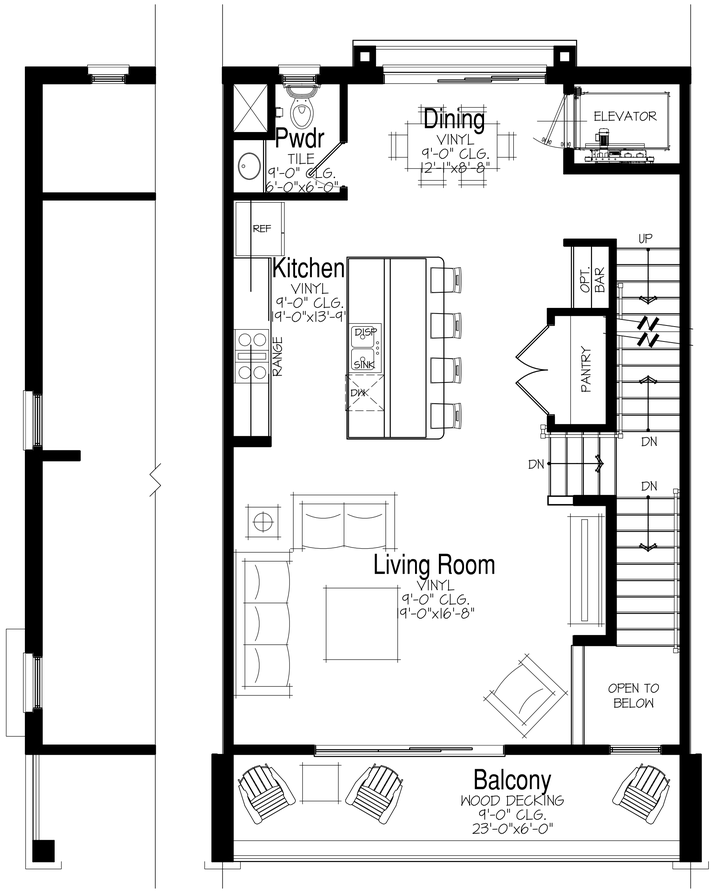
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

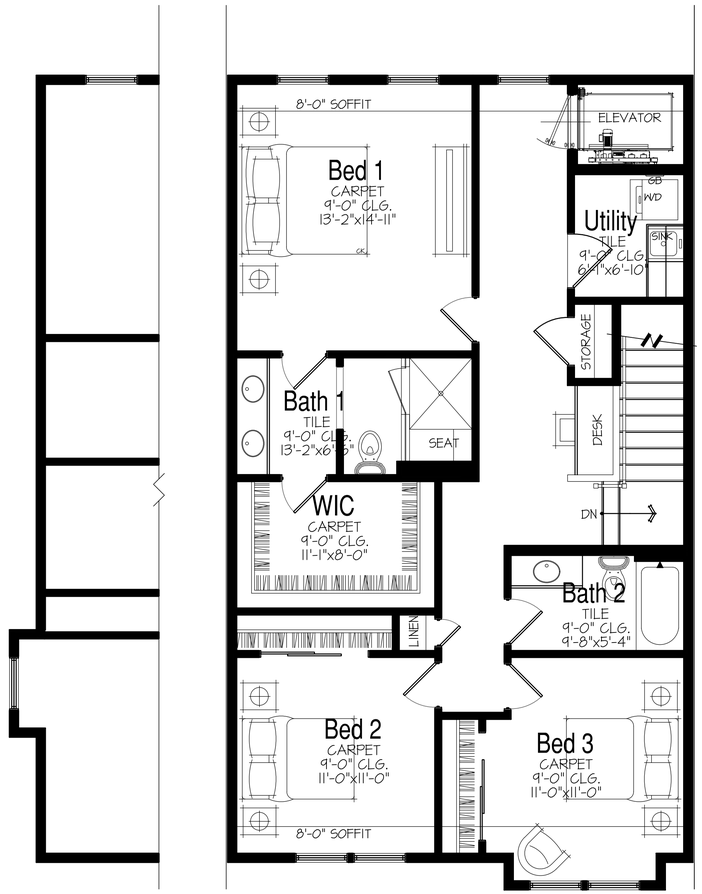
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

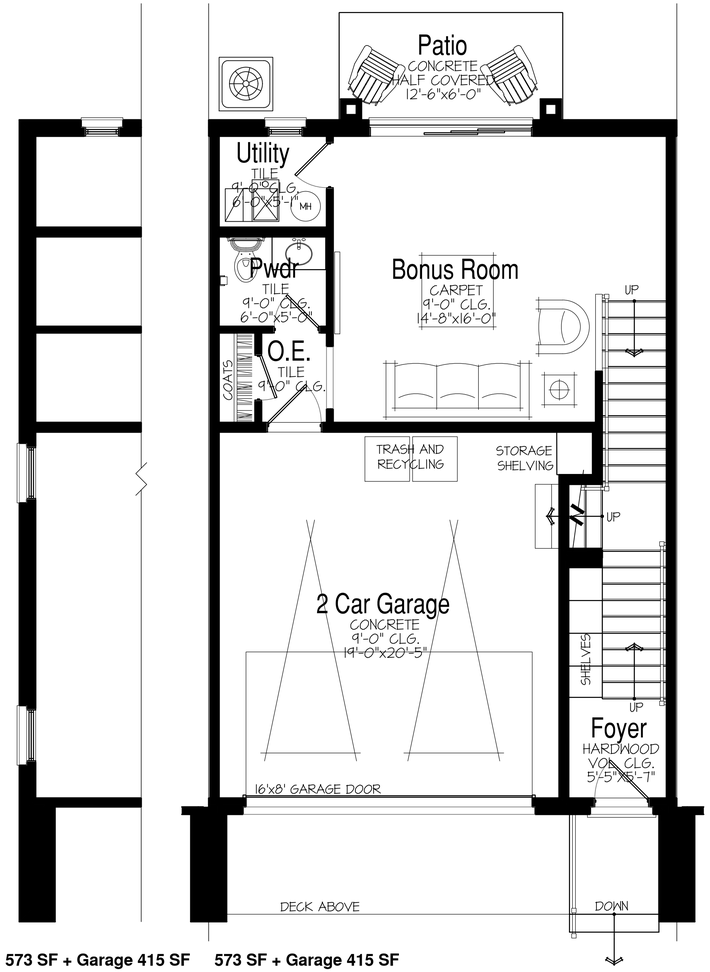
Townhome Unit B: 2,561 Total SF

Park Place Townhomes
Western Springs, IL

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BSBDESIGN.COM

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November 6, 2024



573 SF + Garage 415 SF

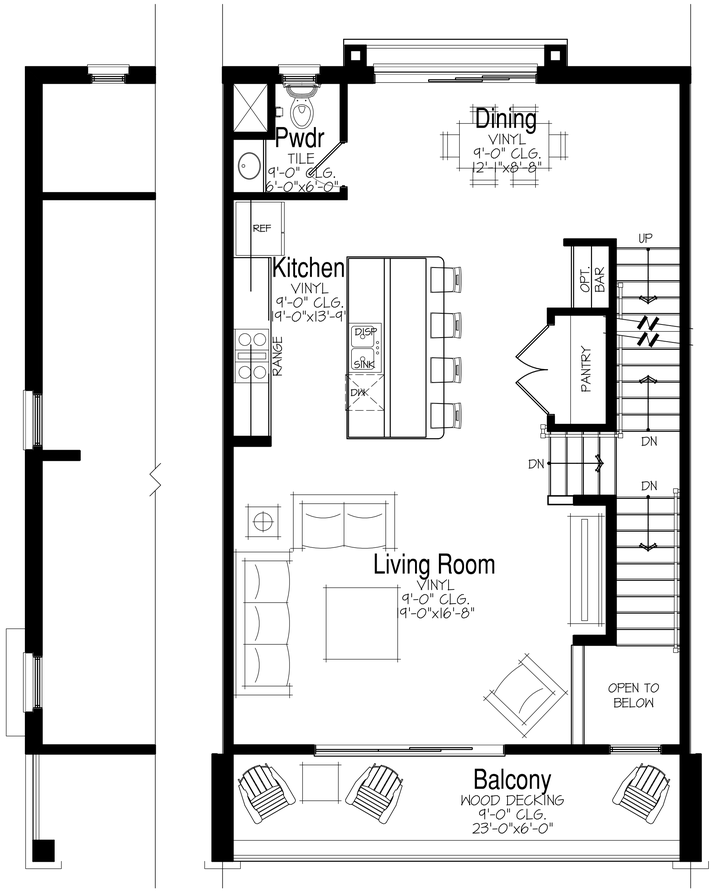
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

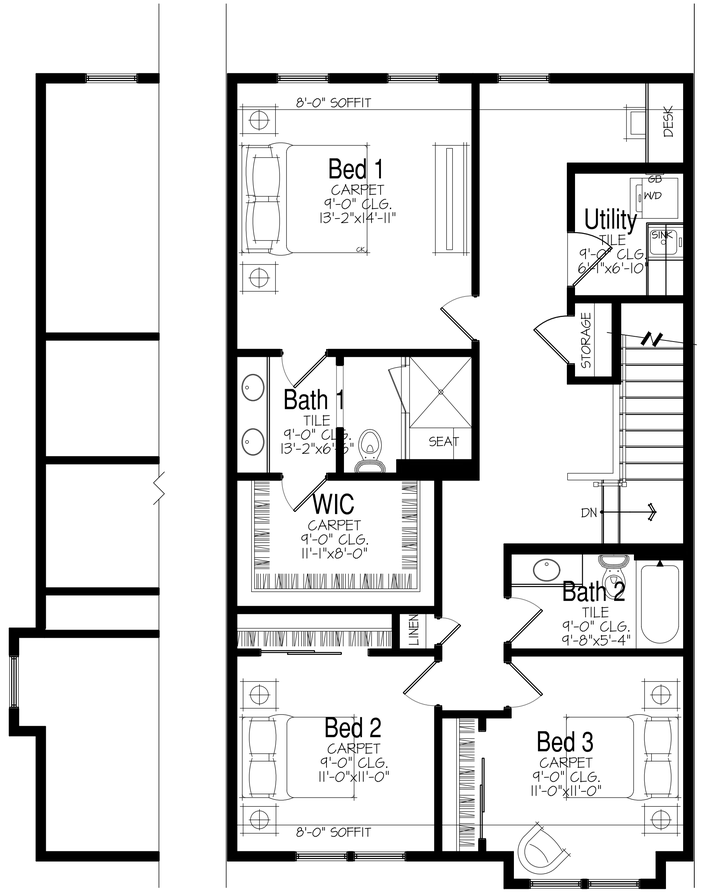
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

Townhome Unit B - No Elevator: 2,561 Total SF

Park Place Townhomes
Western Springs, IL

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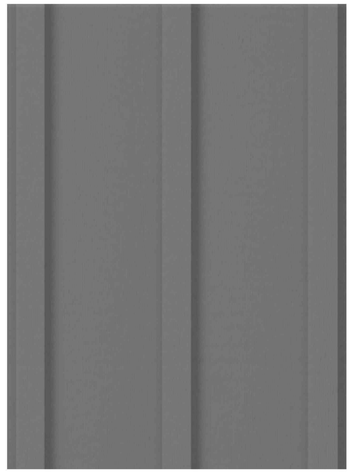
November 6, 2024



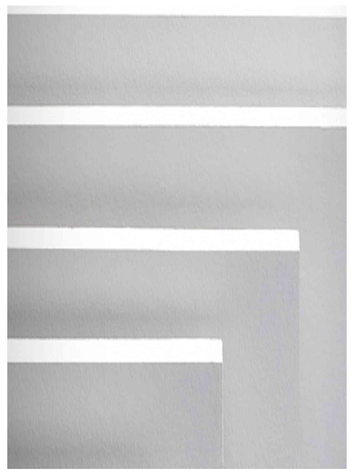
Architectural Asphalt Shingles
Owens Corning Duration
“Onyx Black”



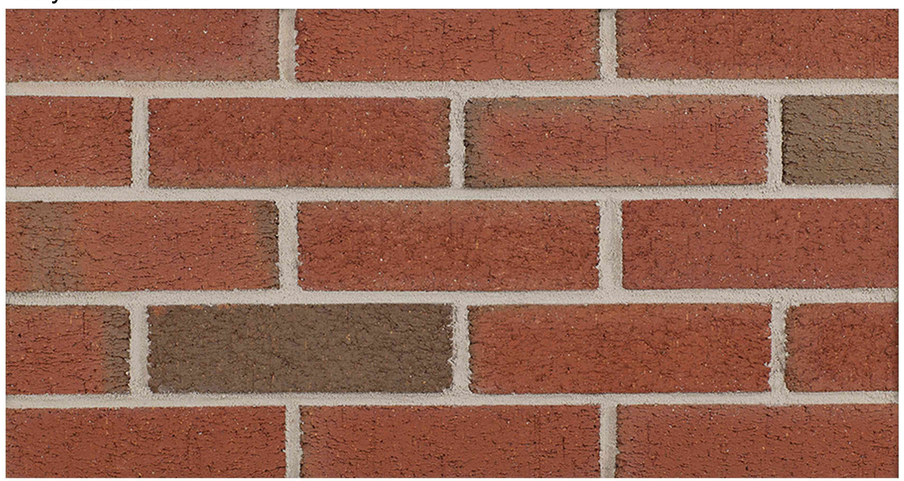
Standing Seam Metal Roof
PAC-CLAD “Black Aluminum”



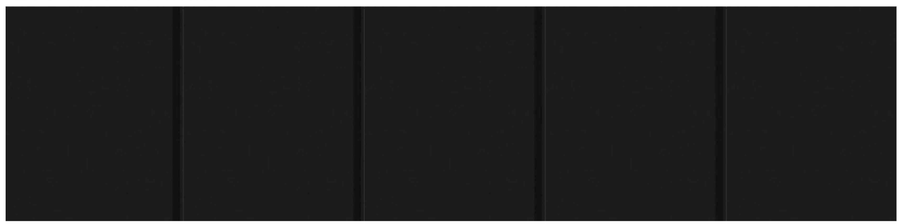
LP Smartside Vertical Siding
“SW7067 Cityscape”



Engineered Trim & Wood Columns
“SW7666 Fleur De Sel”



Glen-Gery Brick
Brick Veneer - 3-5/8 “ Standard Brick
“200 Flashed Matt”



Standing Seam Metal Roof
PAC-CLAD “Traditional Black”

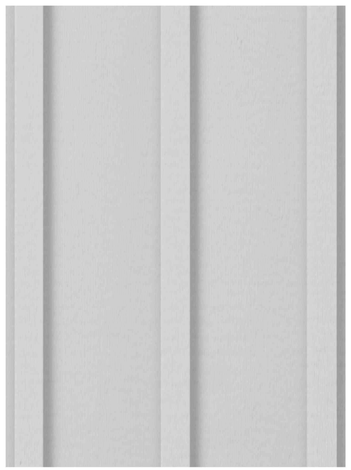


LP SmartSide Shake Siding
“SW1015 Skyline Steel”



Pre-Finished Trex Railings
“Black”

Vinyl Garage Doors
“SW6258 Tricorn Black”



LP Smartside Vertical Siding
“SW7666 Fleur De Sel”

Aluminum Gutters,
Downspouts & Soffits “White”

“White” Vinyl Single-Hung Windows

“White” Vinyl Patio Doors



Vinyl Front Entry Doors
“SW2839 Roycroft Copper Red”



Vinyl Front Entry Doors
“SW7018 Dovetail”



Vinyl Front Entry Doors
“SW2739 Charcoal Blue”



LP Smartside Panel Siding
“SW7666 Fleur De Sel”

Exterior Materials, Colors & Products

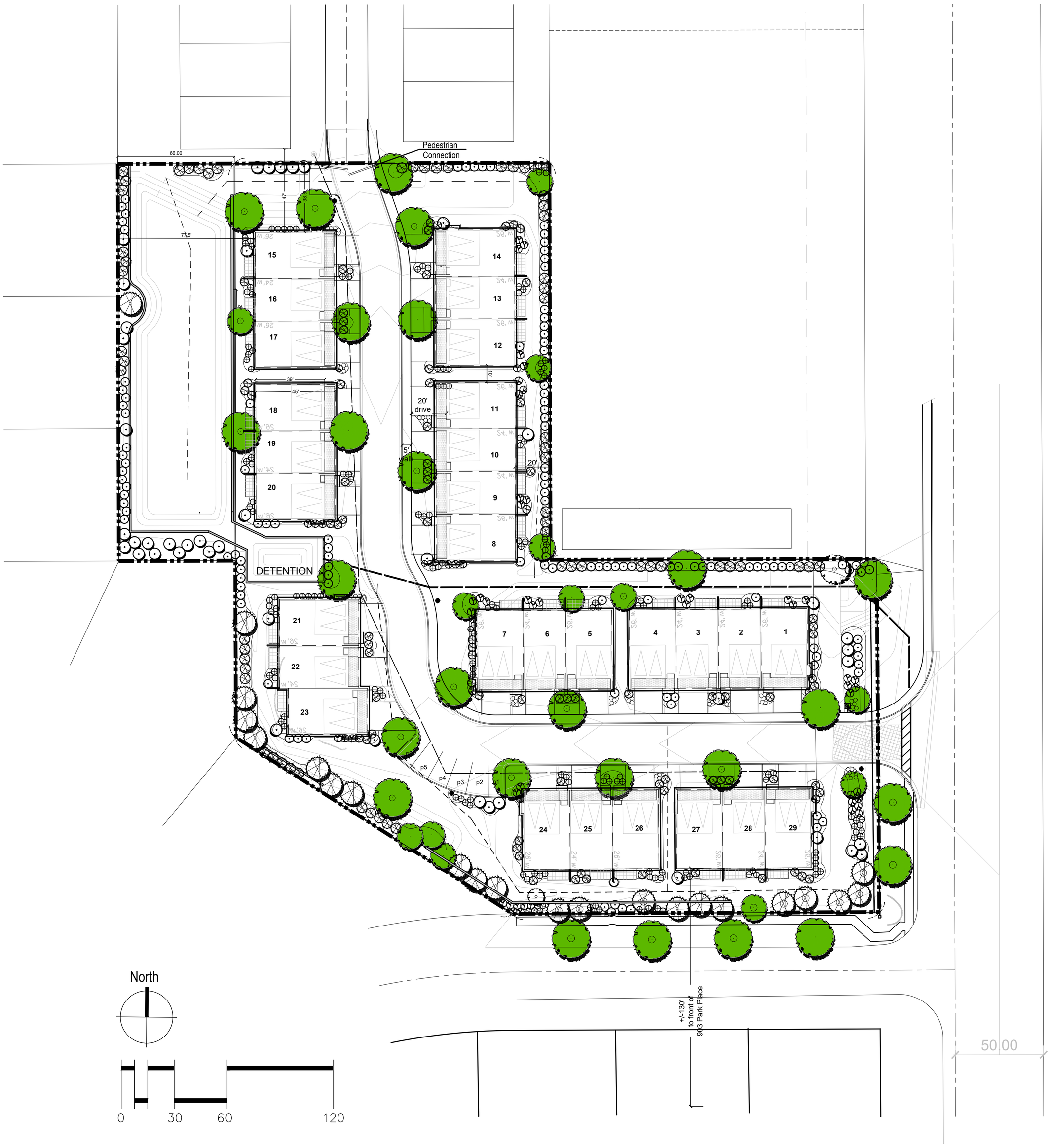
Park Place Townhomes

Western Springs, IL

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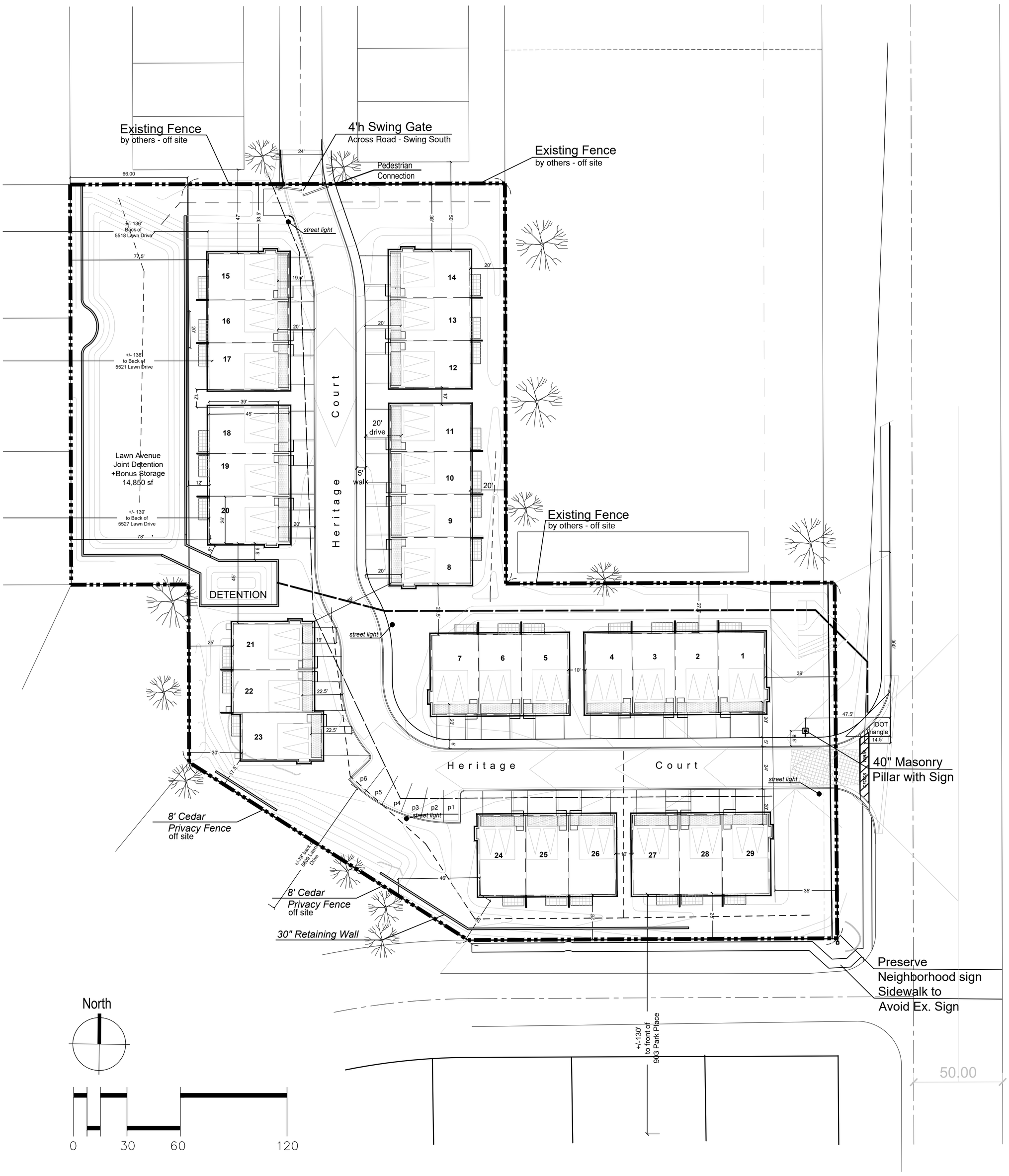
SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

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L0.01
Site Plan

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SITE DIMENSION PLAN

Heritage Crossing

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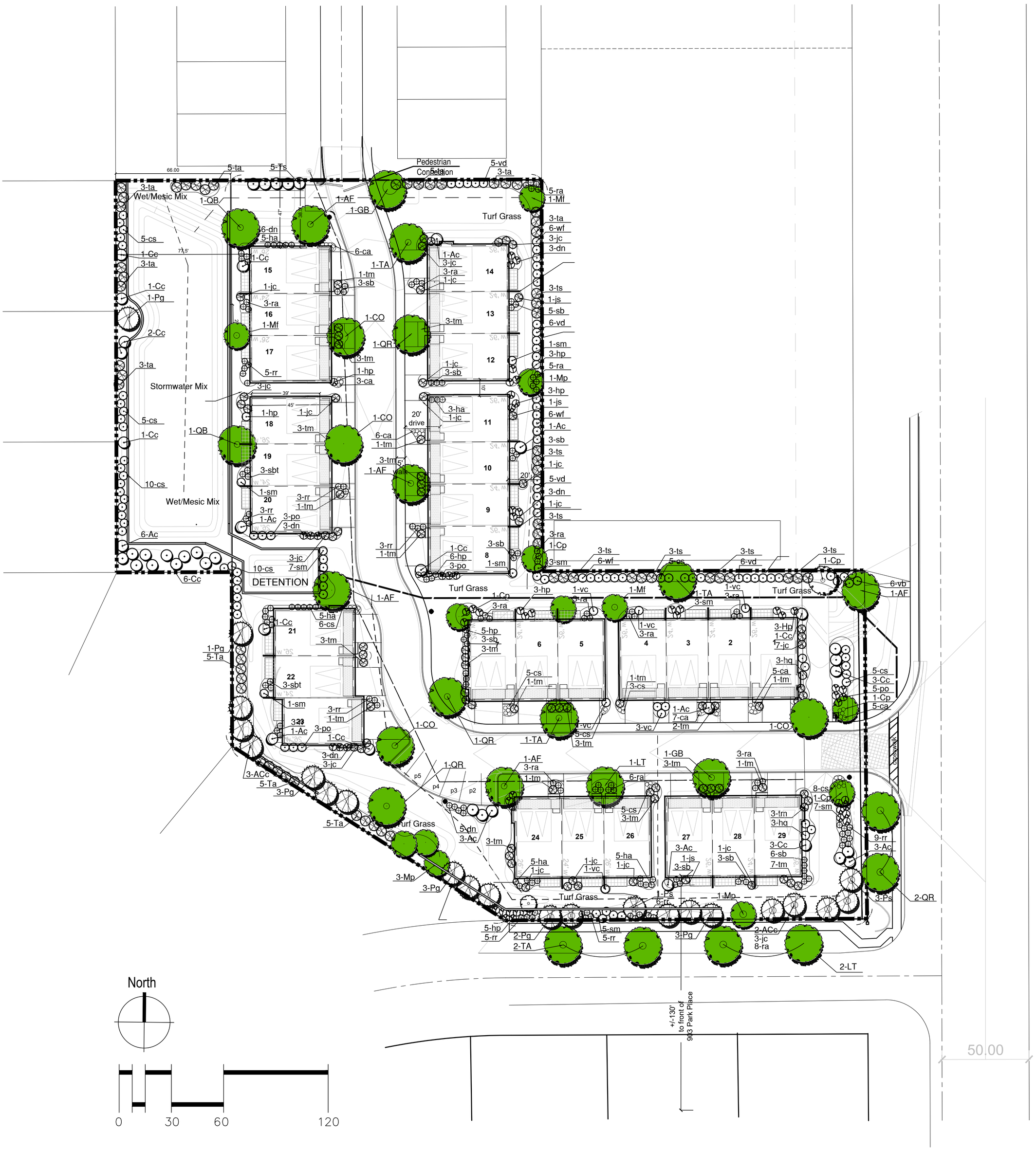
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L0.02

Dimension Plan

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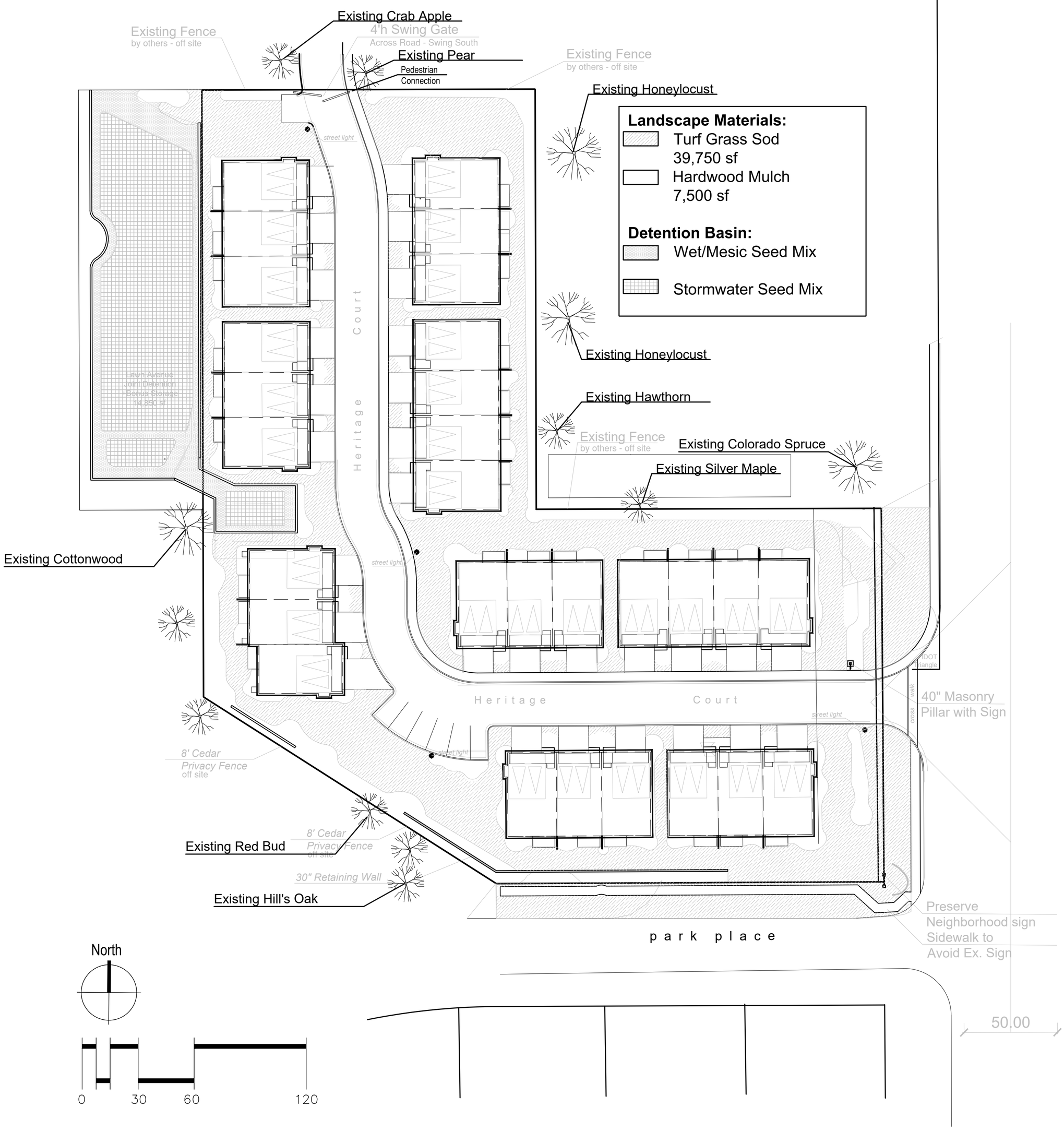
PLANTING PLAN
Heritage Crossing
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L0.03
Planting Plan

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SITE MATERIAL PLAN
Heritage Crossing
Western Springs, Illinois

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L0.04
Material Plan

CONCEPT PLANT SCHEDULE

SHADE TREE		Size	Quant.
AF	Acer x freemanii 'Marmo' Red Maple	2.5" Cal.	5
CO	Cercis Occidentalis / Hackberry	2.5" Cal.	4
GB	Gingko biloba 'Autumn Gold' / Male var. Gingko	2.5" Cal.	2
LT	Liriodendron tulipifera / Tulip Poplar	2.5" Cal.	3
QB	Quercus bicolor / Swamp White Oak	2.5" Cal.	2
QR	Quercus rubrum / Red Oak	2.5" Cal.	6
TA	Tilia americana/Redmond Linden	2.5" Cal.	4
ORNAMENTAL TREE			
ACc	Abies concolor / Concolor Fir	6' Ht.	5
Ac	Amelanchier canadensis / Canadian Serviceberry	7' clump	17
Cc	Cercis canadensis / Eastern Redbud	1.5" Cal.	27
Cp	Crataegus phaenopyrum/Washington Hawthorn	1.5" Cal.	5
Mp	Malus x 'Prairiefire' / Prairiefire Crabapple	1.5" Cal.	5
Mf	Malus floribunda / Flora Crab	1.5" Cal.	3
Pg	Picea glauca 'Densata' / Black Hills White Spruce	6' Ht.	13
Ps	Pinus strobus / Eastern White pine	6' Ht	4
SHRUBS			
cs	Cornus sericea / Red Twig Dogwood	5 gal.	74
dn	Deutzia x 'NCDX1' / Yuki Snowflake® Deutzia	3 gal.	23
ha	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	3 gal.	23
hp	Hydrangea paniculata 'Jane' / Little Lime® Panicle Hydrangea	5 gal.	31
hq	Hydrangea quercifolia / Oak leaved Hydrangea	5 gal.	6
jc	Juniperus chinensis 'Sea Green' / Sea Green Juniper	5 gal.	39
po	Physocarpus opulifolius 'Monlo' / Diabolo® Ninebark	3 gal.	14
ra	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	51
rr	Rosa rugosa 'Purple Pavement;'	3 gal.	45
sb	Spiraea betulifolia 'Tor' / White Frost™ Birchleaf Spirea	3 gal.	34
sm	Syringa meyeri 'Palibin' / Dwarf Korean Lilac	3 gal.	29
ta	Thuja americana 'Dark Green' Dark American Arborvitae	10 gal.	40
ts	Thuja smoragd 'Pyramidal' Arborvitae	10 gal.	26
tm	Taxus x media 'tautoni' / Tauton Yew	5 gal.	47
vc	Viburnum carlesii 'Compactum' / Compact Koreanspice Viburnum	3 gal.	7
Vd	Viburnum dentatum / Arrowwood Viburnum	5 gal.	28
wf	Weigela florida 'Red Prince' / Red Prince Weigela	3 gal.	18
ORNAMENTAL GRASS			
ca	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	3 gal.	27
SOD			
Poa pratensis / Kentucky Bluegrass			28,500 sf
GROUNDCOVER/PERENNIALS			
Echinacea purpurea / Coneflower		1 qt.	25
Hemerocallis x 'Mary Todd' / Mary Todd Daylily		1 qt.	25
Hosta x 'Guacamole' / Guacamole Hosta		1 qt.	25
Hosta x 'Hadspen Blue' / Hadspen Blue Hosta		1 qt.	25
Monarda fistulosa / Bergamot		1 qt.	20
Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint		1 qt.	20
Rudbeckia newmanii 'Summer Blaze' / Coneflower		1 qt.	30

DETENTION BASIN

* See Accompanying Stormwater Basin Plan by Gary Weber and Associates

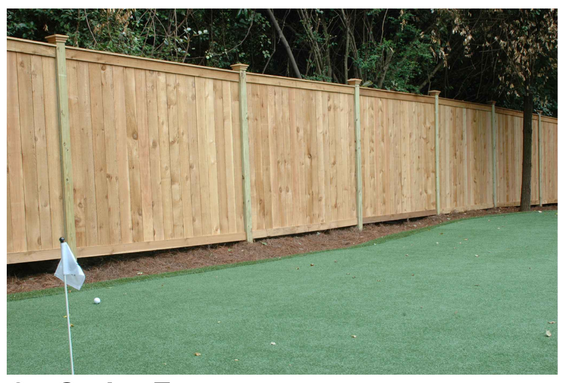
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY
1	Glen Gery Jamestown 3.5"x9.5" pavers	As Shown
2	48"h x 28" square brick pillar with limestone cap & 4' Sign Post (Brick to match residence)	
3	96"h Vertical Cedar Fence with 4" horizontal cap	AS
4	Unilock Concord Wall in Granite Blend	AS
5	Safety Gate	1



1 - Jamestown Pavers

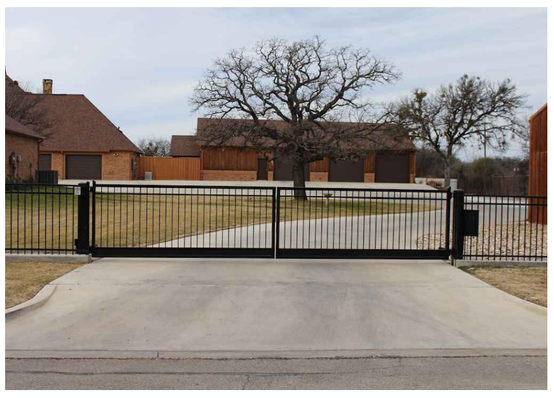
2 - Brick Sign Pillar



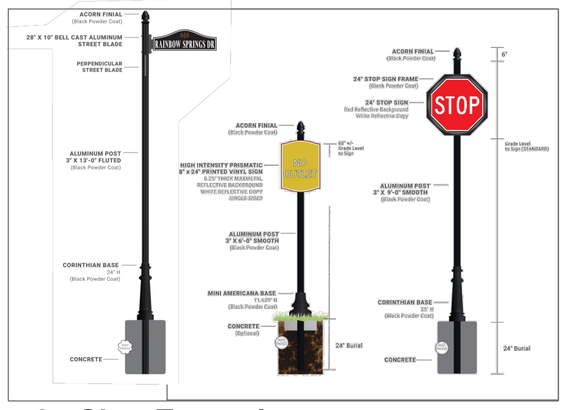
3 - Cedar Fence



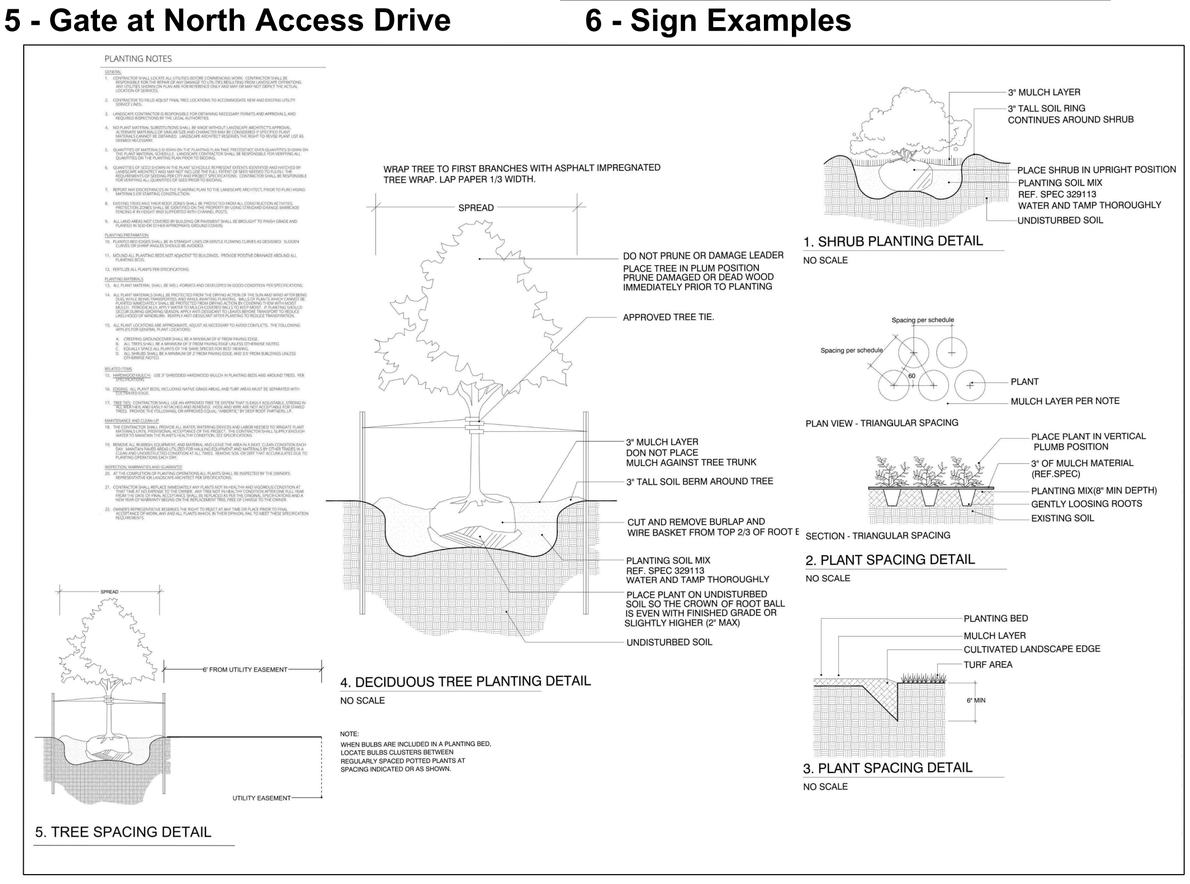
4 - Concord Retaining Wall



5 - Gate at North Access Drive



6 - Sign Examples



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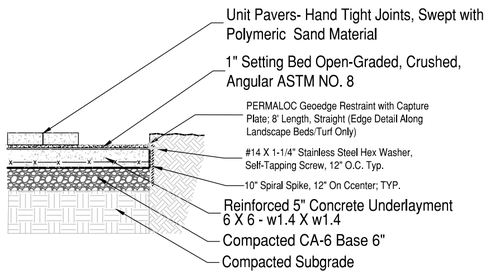
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PLANT LIST
Heritage Crossing
Western Springs, Illinois

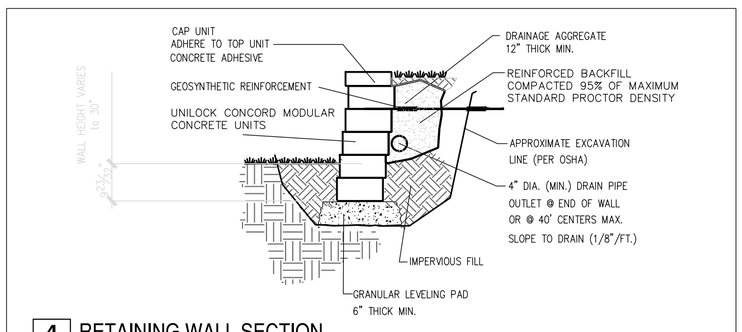
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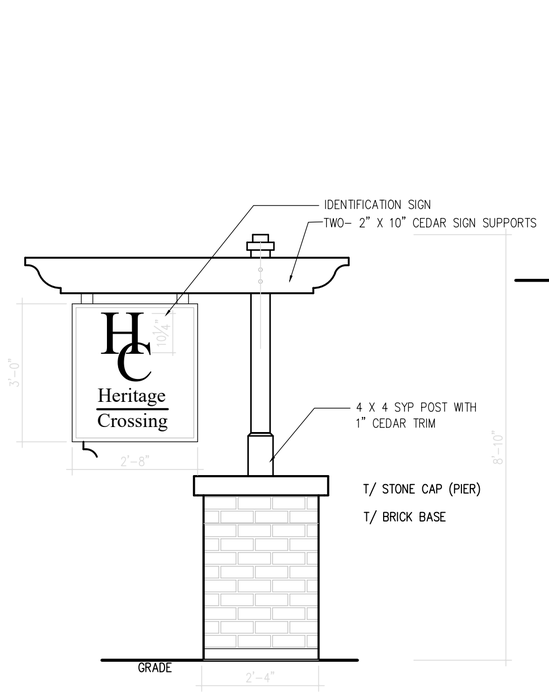
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Plant List/ Details



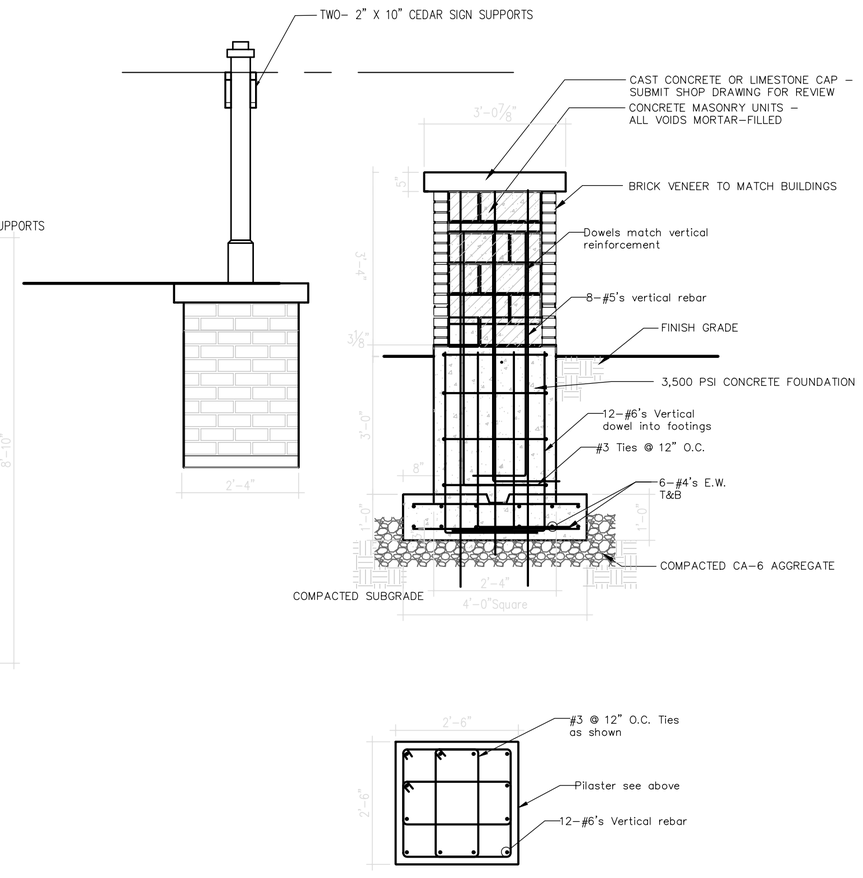
1 SIDEWALK PAVER SECTION



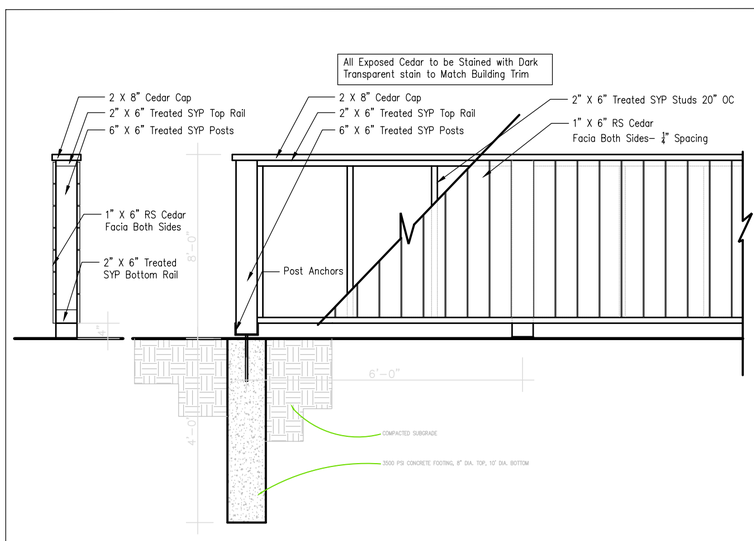
4 RETAINING WALL SECTION



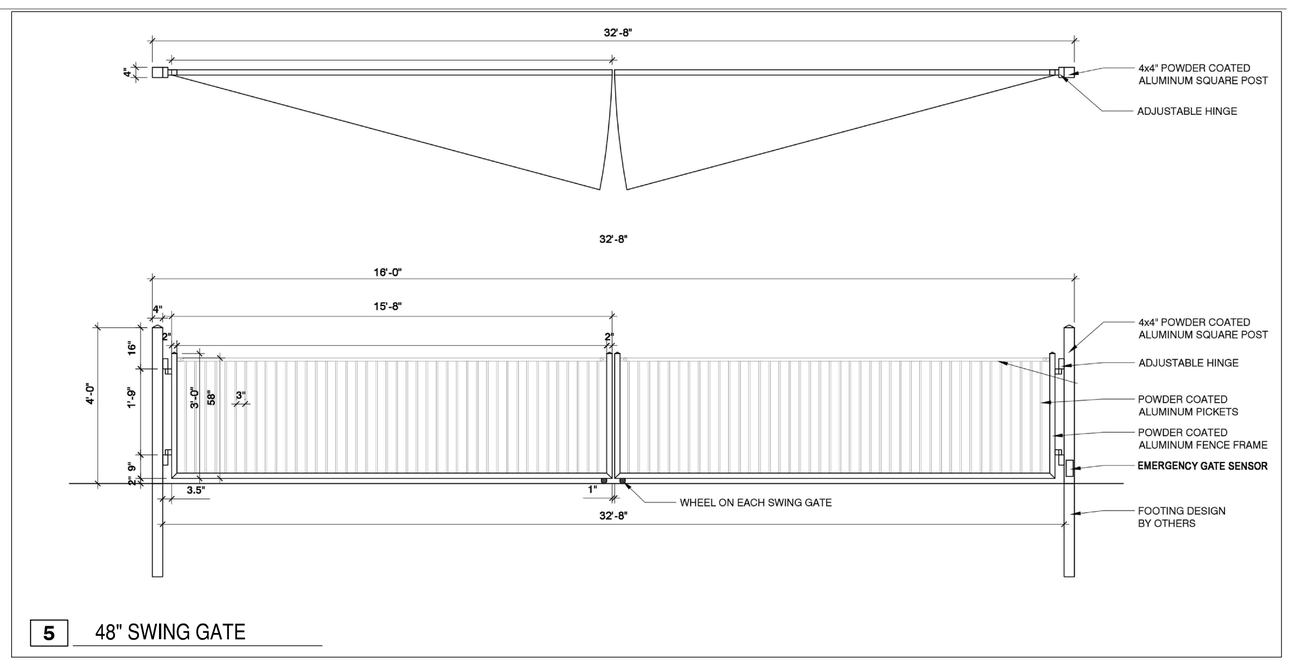
2 40" SIGN PILLAR SECTION



2 40" SIGN PILLAR SECTION



3 96" CEDAR FENCE



5 48" SWING GATE

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DETAILS
Heritage Crossing
Western Springs, Illinois

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Details

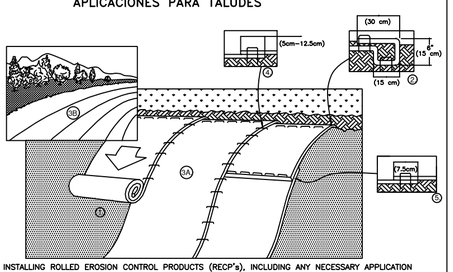
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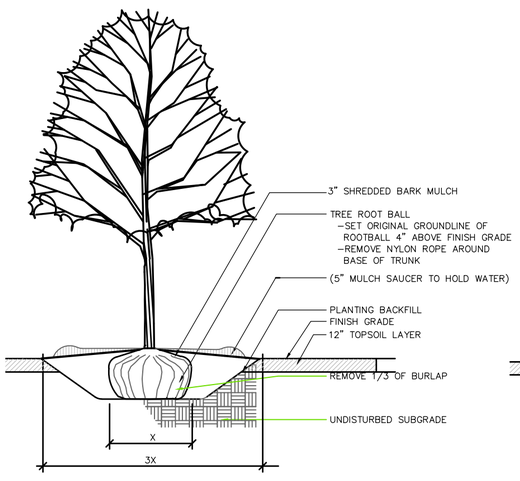


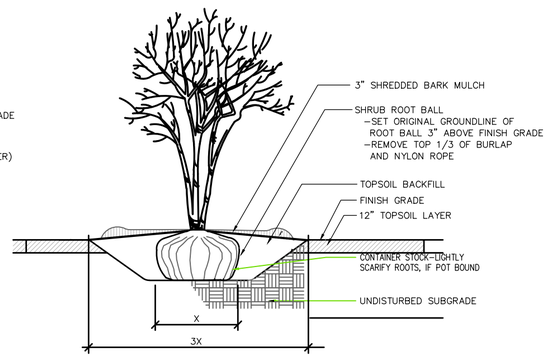
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

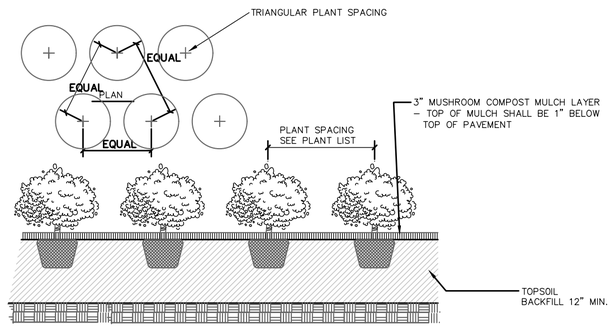
1. PREPARE EL TERRENO ANTES DE INSTALAR LAS MANTAS, INCLUYENDO LA APLICACION DE CAL, FERTILIZANTE Y SEMILLA.
   NOTA: CUANDO ESTE USANDO CELL-O-SEED NO SIEMBRE EL AREA PREPARADA. CELL-O-SEED TIENE QUE INSTALARSE CON EL LADO DE PAPEL HACIA ABAJO.
2. COMIENCE EN LA CABECERA DEL TALUD SUJETANDO LA MANTA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD FOR 6" (15 CM) DE ANCHO CON APROXIMADAMENTE 12" (30 CM) DE LA MANTA EXTENDIDA MAS ALLA DE LA PENDIENTE ALTA DE LA ZANJA. SUJETE LA MANTA AL FONDO DE LA ZANJA CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA. RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE. RIEGE LA SEMILLA EN EL SUELO COMPACTADO Y DOBLE LAS 12" (30 CM) REMANENTES DE MANTA SOBRE LA SEMILLA EL SUELO COMPACTADO. ASEGURE LA MANTA SOBRE EL SUELO CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA A TRAVES DEL ANCHO DE LA MANTA.
3. DESENROLLE LAS MANTAS (3A) HACIA ABAJO U (3B) HORIZONTALMENTE A TRAVES DEL TALUD CON EL LADO APROPIADO HACIA LA SUPERFICIE DEL SUELO. TODAS LAS MANTAS DEBERAN ASEGURARSE A LA SUPERFICIE DEL SUELO POR MEDIO DE GRAPAS O ESTACAS EN LUGARES APROPIADOS TAL Y COMO SE INDICA EN EL PATRON GUIA DE ENGRAPADO. CUANDO ESTE USANDO EL DOT SYSTEM™, LAS GRAPAS O ESTACAS DEBEN COLOCARSE A TRAVES DE CADU UNDO DE LOS PUNTOS CON COLOR CORRESPONDIENTES AL PATRON DE ENGRAPADO APROPIADO.
4. LOS BORDES DE LAS MANTAS PARALELAS TIENEN QUE ENGRAPARSE CON UN TRASLAPE DE APROXIMADAMENTE 2" – 5" (5 CM – 12.5 CM) DEPENDIENDO DEL TIPO DE MANTA.
5. MANTAS CONSECUTIVAS UNIDAS EN LA BAJADA DE LOS TALUDES, DEBEN COLOCARSE ORILLA SOBRE ORILLA (TIPO ESCALONADO) CON UN TRASLAPE DE APROXIMADAMENTE 3" (7.5 CM). ENGRAPE EL AREA TRASLAPADA CON UNA SEPARACION DE APROXIMADAMENTE 12" (30 CM) A TRAVES DE TODO EL ANCHO DE LA MANTA.

   NOTA:
   * EN CONDICIONES DE SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

REV. 01/05







LANDSCAPE SPECIFICATIONS

1.11 GENERAL LANDSCAPE NOTES

A. Unless stated otherwise herein, all seeding, sodding and landscape planting work shall be performed in accordance with the Iowa Department of Transportation (IDOT) Standard Specifications for Highway and Bridge Construction (latest edition) as specified in Section 200 (Earthwork, Landscaping and Erosion Control).

B. Unless stated herein, all materials shall meet the requirements of the following Articles of Standard the Iowa DOT Specifications for Road and Bridge Construction Section 1000 – Materials:

Item	Section
Erosion Control	2601
Furnish Install Trees Shrubs/Warranty	2611
Erosion Control Materials	4169
Landscape Plant Materials	4170

1.12 TOPSOIL/FINE GRADING

A. Approved topsoil shall be supplied and installed at the following depths:
Seeded and sodded areas – 8-12" depth
Shrub bed areas and landscaped islands – 12" depth
Groundcover/perennial areas – 12" depth (amended soil mix as shown in detail)

B. Approved topsoil shall be free of roots, noxious weed seeds, sticks, rocks or miscellaneous debris which may impair plant growth. Topsoil shall not be worked or graded while frozen or in an excessively wet or dry condition. Topsoil shall not be accessibly acidic or alkaline and shall not contain any herbicide residue. The Owner reserves the right to have representative samples of the topsoil tested by a qualified soil testing laboratory at no cost to the Owner.

C. All top-soiled areas shall be fine graded to elevations indicated on the grading plan prior to receiving sod or landscaping. All areas shall drain properly so that there are no puddles or standing water in any lawn or plant bed areas. Areas improperly graded shall be regarded at the Contractor's expense.

D. Remove rocks, stones and other foreign debris while spreading and grading. If necessary, had spread topsoil around buildings, structures, walks, drives or trees to avoid damage.

E. Where graded areas interface with non-graded undisturbed edges, remove turf along edge to create a straight smooth transition line between graded and non-graded areas. Fine grade transition area so that finis grades of graded and non graded areas are flush.

1.13 SEEDING/SODDING

A. Seeding work shall conform to Section 4169 of the IDOT Standard Specifications for Highway and Bridge Construction.

B. Seed mix for seeded turf grass areas shall be the following:

1. Type A Seed Mix (General Lawn Area). Field of Dreams Reseeder Seed Mix- Blend

25% Accent Perennial Ryegrass
25% Caddieshack Perennial Ryegrass
25% Blue Chip Kentucky Bluegrass
25% Freedom III Kentucky Bluegrass

Apply at the rate of five pounds per 1,000 SF. Supplier- National Seed Company,4720 Yender Avenue, Lisle, Illinois (630) 417-9055

C. Prior to work, submit three copies of seed vendor's certificate for grass seed mixture, indicating weight, and percentages of purity, germination and weed seed.

D. Sodding work, if provided, shall conform to Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

E. Prior to work, submit three copies of sod grower's location for approval. Sod shall be from a locally grown source. Sod shall be in healthy growing condition, free of weeds, pests and cut to the specified thickness. The Owner has the right to reject unacceptable sod at the growing site.

F. All fine grading for seeded and sodded areas shall be approved by the Owner prior to work.

G. Install seeding on prepared, finished graded areas and in favorable weather conditions within the following periods: April 1st through May 31st; and August 15th through October 15th.

H. Install sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

I. Fertilize seeded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction. Fertilizer shall be a 10-10-10 Max Lawn mix (or Equal) and applied to 14.4 pounds per 1,000 square feet.

J. Fertilize sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

K. Apply seed blanket to all lawn seeded areas per the details indicated on the drawings.

L. Guarantee all seeding and sodding work for a period of one year following final acceptance. Areas not accepted upon completion of the guarantee period shall be resodded to fill in voids and areas not covered in seed or sod.

M. Maintain seeded and sodded areas for a period of 45 days following installation. Maintenance shall consist of watering, mowing and weeding. Repair and reseed bare spots or seeded and sodded areas that have not established or have washed out due to erosion.

N. Initial mowing shall be done at a 3" cutting height so than not more than 33% of the grass is removed in a single mowing. Cutting heights on follow up mowings can be readjusted to a 2.5" grass blade height.

1.14 TREE, SHRUB AND GROUNDCOVER PLANTING

A. The Owner reserves the right to inspect all material at the nursery. Only nursery grown stock will be permitted to be used on the Project.

B. All tree, shrub and groundcover planting shall be performed between the dates of March 15 and May 31, and August 15 and October 15. Actual planting shall be performed only during periods within this season when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the Owner's Representative.

A. Location for all trees, intermediate trees and evergreen trees shall be staked and outlines of bed areas shall be clearly marked on the ground by a qualified landscape representative of the Contractor, and shall be subject to approval by the Owner's Representative prior to commencement of planting.

B. All shrub beds shall be mulched with 3" of shredded hardwood bark mulch. Groundcover beds shall be mulched with 2" of mushroom compost. Provide shredded hardwood bark mulch rings (3" depth) for all shade and flowering trees. Diameter of mulch rings shall be equal to diameter of root ball.

C. Mulch shall comprise partially decomposed shred hardwood bark. Mulch shall be a brown-black color, and, free of oversized pieces (1/2" x4") and fine particles. Prior to work, Contractor shall submit three mulch samples for approval for use prior to work.

D. Imported topsoil, if necessary, shall consist of fertile, friable natural topsoil typical for this locality. It shall not contain a mixture of subsoil or slag and free of lumps, stones, plants and their roots, stalks and other extraneous matter and shall not be used while in a frozen or muddy condition. Topsoil shall have a pH range of 6.0-7.0 and shall not contain less than 12 percent organic matter.

E. Tree, Shrub and Groundcover Establishment Period, Inspections and Guarantees.

1. Establishment Period. For a period of 60 days after planting of trees, shrubs, and groundcovers, (not including dormancy periods), the Contractor shall properly care for all plants, and planning beds including watering, weeding fertilizing, cultivating, adjusting or bracings or other maintenance work which is necessary to keep the plants in a healthy condition and in a plumb position. All plants shall be watered as season conditions require, and as directed by the Owner, until provisional acceptance of the planting.

2. Provisional Acceptance. At the end of the Establishment period, the planting shall be inspected by the Owner for provisional acceptance of the planting. Any plant material which is dead, damaged, untrue to natural form of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense. The Owner shall accept maintenance responsibilities of the planting after the provisional acceptance.

3. Guarantee and Final Acceptance. The Contractor shall guarantee that all plants shall be in a healthy and vigorous condition one full growing season after the provisional acceptance. The planting shall be inspected by the Owner at the end of the guarantee period. Any plant material which is dead, damaged, untrue to natural for of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense.

4. Provisional acceptance and guaranteed periods of landscaped plantings may be in part or whole.
NATIVE PLANTING SPECIFICATIONS

2.0 PURPOSE

These specifications, and the plan drawing, detail the standards and procedures required to successfully establish native plant communities within and adjacent to the on-site stormwater detention basin (SDB). Upon successful establishment, the native vegetation will provide water quality benefits to the surrounding area by filtering sediments and pollutants from stormwater runoff generated on-site. Additionally, the floral diversity created by these plantings will provide a valuable source of wildlife habitat, as well as a unique and aesthetically pleasing landscape.

2.01 CONTRACTOR QUALIFICATIONS

The Native Landscape Contractor chosen for the establishment and enhancement of the natural areas must be experienced in the restoration, installation, and management of said areas. They must have a minimum of five years experience in the field. There shall be a supervisor available at all times that can identify non-native and native plants by genus and species. The goal of installing successful native plant communities is a long-term process. Therefore, it is imperative that a qualified Native Landscape Contractor perform the initial installation and maintenance.

2.02 QUALITY AND CONDITION

1. Native seed shall be obtained from sources east of the Mississippi River, within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Plant origins outside of the Ecoregion shall be approved by the Wetland Consultant.

2. Native seeds shall be blended by the vendor, and the mixture and ratio shall be guaranteed in writing to be as specified. The amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre for all species listed. It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.

3. Native Landscape Contractor shall provide the Wetland Consultant with the name and location of the seed supplier, origin of the various kinds of plants, and a statement of the purity of the seed.

4. Seed shall conform to applicable State and Federal regulations as in effect on the date of letting. Unless otherwise specified, seed shall not contain in excess of 1 percent weed seeds; 0 percent is desirable.

5. All storage requirements, stratification, and scarification considerations shall be the sole responsibility of the Native Landscape Contractor.

6. Mycorrhizal inoculants shall be palletized and mixed at 1 lb. per acre with the fine seeds before installation. The inoculants shall contain a diverse mixture of Glomales fungal species (Glomus spp.) in palletized form.

2.03 HANDLING

1. Native Landscape Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.

2. All native seeds shall be packed and covered in such a manner as to ensure adequate protection against damage and maintain dormancy while in transit, storage, or during planting operations.

3. Seed shall be kept dry and unopened until needed for use. Seed shall not be stored or temporarily stored in locations or vehicles where the temperature will be in excess of 90 degrees F.

Table 4. Erosion Control Blanket Details
See Plans

2.04 SITE PREPARATION

1. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Underground utility location maps and plans should be reviewed prior to work. Equipment having low unit pressure ground contact shall be utilized within the planting areas.

2. Unless the Landscape Architect agrees to another approach, the seedbed shall be prepared by working the topsoil to a depth of 3 inches. Site preparation equipment shall be of a design that can be utilized efficiently by the Native Landscape Contractor to meet the requirements for the work specified. The equipment proposed for use by the Native Landscape Contractor for disking and herbicide applications shall be subject to approval by the Landscape Architect.

3. Prior to seeding, at least 6 inches of topsoil shall be present and free of all clods, stones, roots, sticks, rivulets, gullies, crusting, and cracking. The soil aggregate size will be no greater than 2 inches in the largest diameter.

4. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to disking. If compaction is not a concern and the seedbed needs to be loosened prior to seeding to ensure good seed-soil contact, disking or raking shall be performed using equipment and the approach recommended by the Native Landscape Contractor, subject to approval by the Wetland Consultant.

5. If needed, cultivation shall occur within 24 hours prior to seeding. Seeding should occur immediately after the last cultivation preferably before a rain.

2.05 PLANT MATERIALS

See accompanying storm water Basin Plan
by Gary Weber and Associates

2.12 MANAGEMENT PLAN

See accompanying storm water Basin Plan
by Gary Weber and Associates

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

DETAILS
Heritage Crossing
Western Springs, Illinois

January 29, 2025

BSB DESIGN
BSBDESIGN.COM

L0.07
Details

The drawings presented are illustrative of character and design intent only,
and are subject to change based upon final design considerations
(i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)
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FIRE STROBE 2OOO

EMERGENCY VEHICLE STROBE DETECTOR

The FIRE STROBE 2OOO provides rapid access to automatic gates and secured areas. The FIRE STROBE 2OOO opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (14Hz).

Now with STROBEWATCH™.





FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2OOO can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2OOO is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

DISTRIBUTED BY:

FIRE STROBE 2OOO Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2OOO signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately .5 seconds.

The FIRE STROBE 2OOO is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM* STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2OOO for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2OOO system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2OOO transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM* emitters, double, quad flash strobes 140-170 fpm. 100 % digital.
2. The FIRE STROBE 2OOO is fully compatible with the OPTICOM* priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2OOO has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2OOO has been abused, over voltaged, or altered in any way, The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

ACCESS PRODUCTS, INC. • (858) 292-1561 • www.firestrobe.com

FINAL ENGINEERING PLANS

FOR

HERITAGE CROSSING

WESTERN SPRINGS, ILLINOIS

LEGEND

EXISTING		PROPOSED
	SANITARY SEWER	
SS	SANITARY SERVICE	SS
	SANITARY MANHOLE	
	STORM SEWER	
	STORM SERVICE	
	CATCH BASIN	
	OPEN LID STORM MANHOLE	
	CLOSED LID STORM MANHOLE	
	STORM INLET	
	FLARED END SECTION	
WM	WATER MAIN	WM
WS	WATER SERVICE	WS
	VALVE VAULT	
	B-BOX	
	HYDRANT	
	VALVE BOX	
	STREET LIGHT	
	UTILITY POLE	
	RETAINING WALL	
	SILT FENCE	
XXX	CONTOUR	XXX
FM	FORCE MAIN	FM
XXX.X x	SPOT GRADES	XXX.XXx
	OVERFLOW ARROW	
TF XXX.XX	TOP OF FOUNDATION	TF=XXX.XX
FG XXX.XX	FINISH GRADE	FG=XXX.XX
FF XXX.XX	FINISH FLOOR	FF=XXX.XX
GF XXX.XX	GARAGE FLOOR	GF=XXX.XX

LEGAL DESCRIPTION

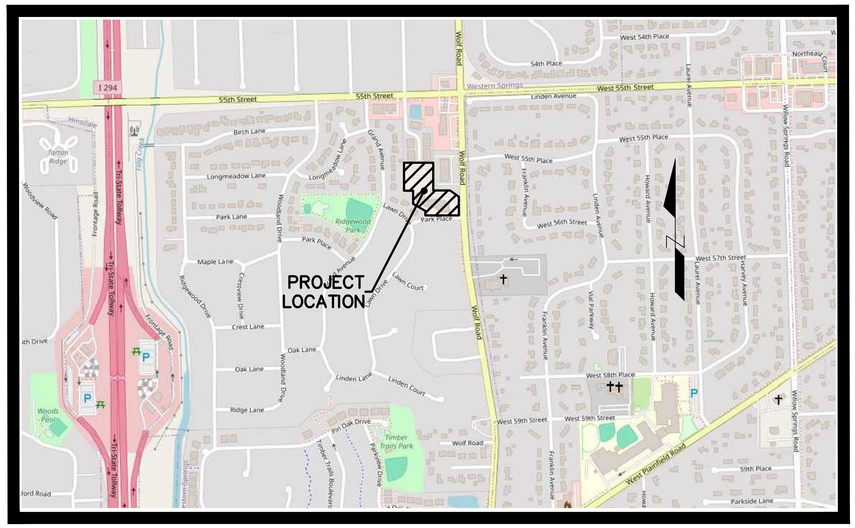
PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

OWNER:
McNAUGHTON DEVELOPMENT
11S220 JACKSON STREET
SUITE #101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

ENGINEER:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961

SURVEYOR:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961



LOCATION MAP
NOT TO SCALE

INDEX OF PLAN SHEETS

1. COVER SHEET
2-3. PROJECT SPECIFICATIONS, GENERAL NOTES & EXHIBITS
4. EXISTING CONDITIONS & REMOVAL
5. SOIL EROSION & SEDIMENT CONTROL PLAN , NOTES & SPECIFICATIONS.
6. SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET
7. GEOMETRIC PLAN
8. GRADING PLAN
9. UTILITY PLAN
10. UTILITY SERVICES PLAN
11. PLAN & PROFILE
12. INTERIM BY-PASS DRAINAGE SWALE PLAN
13-16. PROJECT CONSTRUCTION DETAILS
17-18. CROSS SECTION WOLF ROAD
19. ADA INTERSECTION DETAILS
20. WOLF ROAD DETAILS

BENCHMARKS

BENCHMARK: (INITIAL) NGS PID: ME1716

BRASS DISK SET IN TOP OF CONCRETE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF 55TH STREET AND WOLF ROAD. MONUMENT IS 80' NORTH OF THE CENTERLINE OF 55TH STREET AND 40' WEST OF THE CENTERLINE OF WOLF ROAD.

ELEVATION = 662.19' (NAVD 88)

BENCHMARK: (ON-SITE)

CROSS CUT IN TOP OF CURB LOCATED 47.71' SOUTH AND 3.55' EAST OF THE SOUTHEAST CORNER OF PARCEL 2 AS SHOWN HEREON.

ELEVATION = 665.70' (NAVD 88)

NOTES:

1. THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, ELECTRIC, CABLE TV AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123 OR 811) AND ALL OTHER UTILITY OWNERS WHICH ARE IN THE PROJECT LIMITS BEFORE COMMENCING EXCAVATION.

2. THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI / ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILTIY DATA."

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

THE TOPOGRAPHY AND BOUNDARY SHOWN HEREON WAS PREPARED BY WOLFPAK CONSULTING, LLC AND SUPPLIED BY THE CLIENT STATED HEREON.

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

SUPPLEMENTAL TOPOGRAPHY SHOWN HEREON WAS PREPARED BY DESIGNTEK ENGINEERING, INC.

SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
TOTAL AREA =	105,159 SQ. FT. OR 2.41 ACRES

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000

PERMIT TABLE

AGENCY	PERMIT #	APPROVAL DATE
MWRD	XXXXXXX	XX-XX-24
IEPA - WATER	XXXXXXX	XX-XX-24
IEPA - SANITARY	XXXXXXX	XX-XX-24
LaGRANGE HIGHLANDS - SANITARY SEWER MAIN	XXXXXXX	XX-XX-24
NPDES AND APPROPRIATE SCD	XXXXXXX	XX-XX-24
CCDOTH	XXXXXXX	XX-XX-24

Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.
P (708) 588-4055
E WMOJobStart@mwrd.org

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF WILL)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THESE LOT IMPROVEMENTS.

DATED 13TH DAY OF DECEMBER, 2024

LICENSED PROFESSIONAL ENGINEER
DENISE M. VIETH
062-062947
STATE OF ILLINOIS
Exp 11/30/2025

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
CALL 1-800-892-0123 or 811
AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE YOU DIG
WWW.ILLINOIS1CALL.COM

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS DESCRIPTION	BY
1	08-26-24	PER LOCAL LANDS SD	DMV
2	09-26-24	PER WESTERN SPRINGS REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS NOTED
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

1 OF 20

COVER SHEET

EARTHWORK

1. Topsoil Excavation Includes:
   a. Excavation of topsoil and other structurally unsuitable materials within those areas that will require earth excavation or compacted earth fill material, in order to achieve the plan subgrade elevations. The amount of topsoil to be stripped shall be verified in the field by a soils engineer.
   b. Placement of the excavated material in OWNER designated areas for future use within areas to be landscaped, and those areas not requiring structural fill material.
   c. Compaction of the excavated material where placed in areas not requiring structural fill material, shall be moderate.
   d. Excess materials, if not utilized as fill or if not stockpiled for future landscaping, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
2. Earth Excavation Includes:
   a. Excavation of earth and other materials which are suitable for use as structural fill. The excavation shall be to within a tolerance of 0.3 feet (+) of the plan subgrade elevations. The (+) tolerance within pavement areas shall be such that the earth material shall "balance" as part of the fine grading operation.
   b. Placement of the earth and other suitable materials shall be within those areas requiring structural fill in order to achieve the plan subgrade elevations to within a tolerance of 0.3 feet (+). The fill material shall be placed in loose lifts that shall not exceed eight (8) inches in thickness, and the water content shall be adjusted in order to achieve the required compaction. Earth material may be placed within those portions of the building site not requiring structural fill, to within four (4) inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by a Soils Engineer with the concurrence of the OWNER.
   c. Compaction of the earth and other suitable materials, shall be to at least 95% of the maximum dry density as determined by the Modified Proctor Test, ASTM D1557 laboratory procedure within proposed pavement areas and building areas, an rear yards abutting to the proposed lakes. Moderate compaction is required elsewhere. All fill shall be placed in 8" lifts, loose measure.
   d. Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
3. Unsuitable Material
   a. Unsuitable material shall be considered as material which is not suitable for the support of pavement and building construction, and is encountered below normal topsoil depths and the proposed subgrade elevation. The decision to remove said material, and to what extent, shall be made by a Soils Engineer with the concurrence of the OWNER in writing.
4. General

   The Grading CONTRACTOR shall:
   a. Maintain proper site drainage at all times during the course of construction, and prevent storm water from running into or standing in excavated areas.
   b. Spread and compact uniformly to the degree specified all excess trench spoil after completion of the underground improvements.
   c. Scarify and compact to the degree specified the upper twelve (12) inches of the suitable subgrade material, in all areas that may be soft due to excess moisture content. This applies to cut areas as well as fill areas.
   d. Provide water to add to dry material in order to adjust the moisture content for the purpose of achieving the specified compaction.
5. Testing and Final Acceptance
   a. The CONTRACTOR shall provide as a minimum, a fully loaded tri-axle dumptruck or similar equipment for proof rolling the pavement subgrade prior to the placement of the curb and gutter and the base material. In addition, the pavement aggregate base course shall also be proof rolled. The Village Engineer shall be notified 48 hours in advance of any proof roll.
   b. Specific compaction testing may be required by the OWNER in selected fill areas. The CONTRACTOR shall bear the cost of any compaction testing which does not meet specification as well as the responsibility and cost for the necessary correction(s).
   c. Approval of the pavement subgrade by the OWNER shall be required prior to the placement of the pavement materials.
   d. The subgrade soil shall be tested by a professional geotechnical engineer at the developer's expense and shall have a minimum designated Illinois Bearing Ratio (IBR equal to three (3).
   e. A soil investigation report shall be provided to the Village to verify the in situ IBR value. Pavement structures with subgrade soil having an IBR value less than three (3) shall have an increased pavement structure as necessary to carry the design traffic loading.
6. Method of Measurement
   a. As-built measurements of earthwork for the purpose of payment shall not apply. the quantities shown in the engineer's "quantity estimate" shall be utilized unless said quantities are adjusted by mutual consent of the owner and contractor prior to the signing and acceptance of a contract.
   b. The quantities as shown in the engineer's "quantity estimate" are those estimated by the engineer and are provided solely for the convenience of the contractor. the contractor by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. the contractor is therefore encouraged to make his own independent earthwork calculation, and to visit the site prior to the preparation of his bid.
   c. Prior to the removal of unsuitable material, the contractor shall notify the owner for authorization to remove said material, upon authorization and removal, the contractor shall request that the unsuitable material shall be field measured by the engineer in place.
7. Basis of payment
   a. Payment for all earthwork shall be "lump sum". the contractor shall provide unit prices for earthwork for the purpose of contract adjustment, if required.
   b. Payment for the removal of unsuitable material shall be based on the quantities as field measured by the engineer. the contractor shall provide as part of his bid a unit price per cubic yard for the removal of unsuitable material. said unit price shall include the complete removal of the material, replacement with a suitable material obtained by the contractor from a borrow source, and compaction to the required specification.

UNDERGROUND UTILITIES - GENERAL

1. The Underground CONTRACTOR Shall:
   a. Adhere to the criteria for the separation between water mains and sanitary sewers, storm sewers, combined sewers, sewer services and septic fields according to the requirements stated in the IEPA Rules for Public Water Supplies (the formal citation is Title 35, Subtitle F, Chapter II, Parts 651–654). All sewer water main separations shall be constructed per the "Standard Specifications for Water and Sewer Main Construction in Illinois".
   b. Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.
   c. Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements. Should unforeseen conflicts be found, the CONTRACTOR shall contact the ENGINEER prior to constructing the proposed improvements.
   d. Adjust or reconstruct any existing utility structure to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than two adjusting rings within a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   e. Provide poured concrete fillets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.
   f. Be responsible for maintaining the top of any utility trench at least three (3) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.
   g. Be responsible for the dewatering of utility trenches during construction and providing the necessary trench bracing that may be required to assure safe working conditions.
   h. Remove soft material that may be encountered at the pipe invert elevation to a depth of at least one (1) ft. below the bottom of the pipe, and backfill with compacted bedding material.
   i. No damage to the road subgrade with excessive water saturation from hydrant flushing or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).
   j. Repair any existing field drainage tile damaged during construction, and properly reroute and/or connect said tile to the nearest storm sewer outlet. All locations of encountered field drainage tile shall be properly indicated on the CONTRACTOR'S record drawing.
   k. Furnish one (1) set of Record drawings to the ENGINEER upon completion of the sanitary sewers and water mains. Drawings (or table of locations) shall indicate the location of all sanitary sewer wyes (measured from the nearest downstream manhole), sewer stubs, water service along main and b–boxes. The CONTRACTOR shall also furnish linear distance along water main from appurtenances to appurtenance (valve vault to tee, tee to bend, etc.).
   l. Be responsible for implementation of the "Soil Erosion and Sedimentation Control Measures" as applicable.
   m. Maintain erosion control measures (straw bales and filter fabric) until grass is established.
2. Method of Measurement
   a. All sanitary sewer, storm sewer, and water main pipe shall be measured in the field after its installation. Payment shall be based on these field measurements.
   b. All appurtenances such as manholes, catchbasins, inlets, valves and valve vaults, valve boxes, and fire hydrants, shall be paid for on the basis of in–place quantities.
   c. Trench backfill material shall be measured by multiplying the as–constructed length of pipe (where applicable) by the average depth of the pipe by the "Payment Quantities per foot of Conduit" listed in Table 1, pg. 138 and "Typical Detail of Conduit Installation", pg. 137 of the Standard Specification for Sewer and Water in Illinois. If requested, the CONTRACTOR shall provide load tickets to the ENGINEER for verification of the trench backfill material delivered to the construction site. Load tickets for bedding material shall be submitted separately.
3. Basis of Payment
   a. All sanitary sewer, water main, and storm sewer pipe shall be paid for at the contract unit price per LINEAL FOOT. The price shall include the necessary labor and material for a complete in–place installation, as well as all incidental construction, testing, bedding material, and connections to existing utilities.
   b. All appurtenances for the underground improvements shall be paid for at the contract unit price EACH, said price to include the necessary labor and material for a complete in–place installation. The price for manholes, inlets, and catchbasins shall also include the frame and grate and all incidental construction. The price for fire hydrants shall also include a six (6) inch valve and box, and all incidental construction.
   c. Trench backfill material shall be paid for at the contract unit price per CUBIC YARD. Compaction must be made by mechanical methods.
4. As–Built Water & Sanitary Services
   a. As–built locations shall be provided for all water and sanitary sewer stubs. They shall also be stamped on the curb.
5. Structure Castings
   a. Frames and lids (or grates) for sanitary, watermain and storm sewer structures shall be as indicated on the plans, and the cost of same shall be integrated into the representative structure costs. Each structure lid shall be cast with text identifying the type of structure (storm, sanitary, water).
   b. Manhole castings shall be adjusted to finished grade using precast adjusting rings set on bitumastic material. All structures shall have no more than two adjusting rings w/ a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   c. All frames shall be set on a mastic bed with all gaps tuck pointed.
   d. All castings shall be made in the U.S.A. with U.S.A. materials.
6. Trench Backfill
   a. Bedding, haunching and the initial backfill shall consist of IDOT CA–7, CA–11 OR CA–19 aggregate. The initial backfill shall be placed to at least 12" above the pipe.
   b. Final backfill of the trench shall be accomplished by careful replacement of the excavated material. Any pipe installed under or within a 45 degree angle of repose (1:1) from the top of pipe to the edge of pavement, driveway (when driveway location is known) or curb and gutter shall be backfilled to the top of the trench with compacted IDOT CA–7, CA–11 or CA–19 material.
   c. Compaction shall be in achieved using 8" lifts (uncompacted) and mechanical compaction to 95% density. All costs for compaction and testing shall be paid for by the Developer or Contractor. Results shall be copied to the Village Engineer.

SANITARY SEWER

1. Material shall be:
   a. Green polyvinyl chloride pipe (PVC) SDR 26.
   b. PVC SDR 26 or D.I.P. CL 52.
   c. sewer pipe and fittings shall be in accordance with ASTM D–3034 for sizes 4"–15" (100–375 mm).
2. Joints shall be:
   a. for PVC; flexible elastomeric seal joints, ASTM D–3139, pressure joint.
   b. for DIP; rubber gasket joints, ANSI A21.11
3. Bedding shall be as detailed on the Engineering Plan.
4. Minimum size for mains shall be eight inches (8") and the minimum size for services shall be 6".
5. Wyes or Tees shall be provided on the new sanitary sewers for proposed building services.
6. "Band Seal" or similar couplings shall be used when joining pipes of dissimilar materials.
7. All sanitary structures shall have an external wrap, MAC or approved equal.
8. Polyethylene encasement shall be provided for all DIP sanitary sewer in accordance with AWWA latest standards.
9. Prior to pipe laying and jointing, the trench shall be sufficiently dewatered to maintain the water level in the trench at or below the base of the bedding. State / Federal permits, license agreements or other required approvals shall be obtained prior to dewatering.
10. Where separation from water main cannot be maintained as required per Illinois specifications, the sanitary sewer shall be mechanical joint PVC pressure pipe meeting C–900 or C–905.
11. Sewers shall be laid straight in both horizontal and vertical planes between manholes with a minimum cover of 4 feet.
12. Sanitary sewers shall be located a minimum of 10 feeet from any building and meet separation requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
13. Services shall be a minimum 6 inches and extend to the property line or beyond any utility located in the front yard of a lot being served (single–family development), or to within five (5) feet from the face of a proposed building being served (multi–family and commercial development). The termination points shall be clearly located with a green–topped 4 inch x 4 inch stake extending a minimum 3 feet above final grade. The service lines shall be connected to the sewer using a wye at the 10:00 and 2:00 positions. Service lines not immediately connected to the building to be served shall be tightly plugged, using a plug provided by the pipe manufacturer for such use.
14. Testing and Final Acceptance
   a. Sanitary sewer mains and services shall be tested for exfiltration of air under pressure and deflection for flexible thermoplastic pipe in accordance with the Standard Specifications for Water and Sewer Construction in Illinois prior to their final acceptance. Allowable testing limits shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. Service stubs must be properly plugged and sealed and clearly located at their termination points prior to testing. All sewer mains, service lines and manholes shall be clean and free of debris prior to their final acceptance. Sanitary Sewer shall be inspected and tested in accordance with the local jurisdictional requirements for television inspection and reviewed by the Village Engineer. Two copies of all test results shall be provided to the Municipality.
   b. Sanitary Manhole structures shall be tested, prior to acceptance, for watertightness by either of the following methods in conformance with the requirements specified: ASTM C 969: "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines." OR ASTM C 1244: "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test."
   c. All public sanitary sewer extensions shall be internally video taped by remote camera. Tapes shall be in color using VHS or CD–ROM format and submitted with written reports to the Village Engineer for review and approval priot to acceptance of the sewer improvements by the Village.
   d. LaGrange Highlands will be the agency responsible for sewer main acceptance.

WATER MAIN

1. The Village of Western Springs is the agency responsible for the water main.
2. All installations shall conform to the requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
3. Material for main pipe and fittings shall be class 52 ductile iron pipe with poly wrap for the public water main per AWWA C–151, with mechanical and push–on joints complying with AWWA C–111.
4. Material for the services shall be soft temper, Type K, copper water tubing, conforming to ASTM latest standard w/ compression fittings, unless otherwise noted on the plans.
5. Sizes for main & service lines shall be as indicated on the Engineering Plan.
6. Connections to Village water system shall be made under full water service pressure. Unless noted on plans and Village approval granted for shutdown. Shutdown requests need to be made to municipal services department 4 days prior to desired shutdown date. Contractor required to distribute shutdown notices to any impacted customers 2 business days prior. Village to provide notice text.
   a. Tapping sleeves shall include two piece bolted sleeve type with mechanical joints, Mueller–H615, or equal with joint accessories.
   b. Tapping valves shall include fully ported gate valves complying with AWWA C500 and mechanical joints type, Mueller–H667 or equal. Tapping valves shall be placed in precast concrete vaults.
7. The shut–off valve or curb stop for services shall be located as shown on the plans and shall be installed with a valve box of design approved by the Municipality. The termination point shall be clearly located with a blue–topped 4 inch x 4 inch stake extending a minimum of 3 feet above and below final grade.
8. Valves: Mueller, Clow or equal mechanical joint, resilient wedge seat, cast iron, bronze–mounted, O–ring seal, bronze non–rising stems, gate valves. Valvesshall open left and be tested to 500 psi with a 250 psi working pressure.
9. Water services, where indicated on the "Quantity Estimate" as "long" or "short", shall include the necessary length of Type "K": copper water tube of the size shown on the plans, corporation stop, curb stop, and service box, and all necessary labor, tools, equipment, excavation & backfill, for a complete installation as shown on the Engineering plans. Trench backfill will be paid for separately, when required.
10. Valve Boxes
    a. Valve boxes shall be adjustable, 3–piece cast iron, 5–1/4 inch shaft roadway–type and no–tilit drop cover with "WATER" cast into it.
    b. Valve box stabilizer of PVC manufactured by Valve Box Stabilizer, Inc. for six–inch (6") and eight–inch (8") valve boxes shall be provided.
    c. Valve box must have additional upward or downward travel when adjusted to finished grade.
11. Valve Vaults
    a. All valve vaults shall be precast reinforced concrete only.
    b. All valve vaults shall have no more than two adjusting rings with a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
    c. All lifting holes, joints between precast reinforced concrete sections, rubber gaskets cast into concrete structures need to be water tight and shall be tuckpointed with hydraulic cement.
    d. All castings shall be set on bitumastic material.
    e. Bitumastic material shall be placed between precast reinforced concrete sections.
    f. All valve vaults shall have neoprene coated or fiberglass steps.
    g. Vaults and boxes shall not be allowed under streets, sidewalks or driveways.

WATER MAIN

11. Fire Hydrants
    a. Fire Hydrants shall be Mueller super centurian 250. Factory painted safety red with 5–1/4 inch valve opening and shall be painted red.
    b. The hydrant shall be for a five foot (5') bury with mechanical joint shoe and have two 2–1/2 inch hose connections and one four and one–half inch (4–1/2") male pumper connection. Thread shall be National Standard.
    c. The hydrant shall have a break–away traffic flange and connections.
    d. All fire hydrants not in service shall be bagged.
    e. Hydrants leads shall be six–inch (6") swivel anchoring coupling. Hydrant tees shall be used in lieu of swivel anchoring coupling pipe where required to meet plan locations.
    f. The maximum distance between fire hydrants shall be 350 feet.
    g. All fire hydrants shall be kept clear of obstructions within three (3) feet in all directions. This shall include posts, fences, vehicles, growth, trash, storage, and any other material or objects.
    h. All fire hydrants to have a 10 pound anode bag attached to the hydrant.
12. Pipe Cover and Separation
    a. Cover over water pipes shall be a minimum of 5.5 feet.
    b. Horizontal and vertical separation shall meet requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois." Locations requiring alternative materials are noted on the plans.
13. Pipe Laying
    a. The contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Village Engineer.
    b. Adequate provisions shall be made for the safety, storage, and protection of all water pipe prior to installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or other debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying of the pipe. Proper equipment shall be used for the safe handling, conveying, and laying of the pipe so as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.
    c. In making joints, all portions of the jointing materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the jointing shall be in accordance with the manufacturer's installation instructions. During construction, until jointing operations are complete, the open ends of all pipes shall at all times be protected and sealed with temporary watertight plugs.
    d. During water main installation, to make a closure between two pipe ends, or between pipe end fittings, or between pipe end and valve, short lengths shall be used with proper connections or couplings. Repair sleeves shall not be used to make closures during new construction.
    e. All pipe and trenching shall be viewed and approved by the Municipality prior to cover and backfill.
    f. All bends of 22–1/2 degrees or greater, and all tees and plugs shall be thrust protected to prevent movement of the line under pressure. Thrust protection may also be attained by the use of a combination or retaining glands and threaded rods. All locations of thrust blocking or retaining glands/rods need to be marked on the as built drawing.
14. Testing and Disinfection
    a. Water main shall be tested in accordance with AWWA C–600 & the local jurisdictional requirements prior to it final acceptance. A 24 hour system pressure test needs to be performed as per the Standard Specifications. The pressure and leakage tests and disinfection of the mains shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. All valve vaults shall be clean and free of debris and water, and individual service boxes shall be visible and clearly located prior to their final acceptance.
    b. The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The injector for delivering the chlorine gas into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.
    c. Water from the existing distribution system or any other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine–gas. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty parts–per–million (50ppm), or enough to meet the requirements during the retention period.
    d. Valves shall be manipulated so that the strong chlorine solution in the line being treated shall not flow back into the line supplying the water. The pipe section being chlorinated shall be kept at a lower pressure than the water system pressure.
    e. Treated water shall be retained in the pipe long enough to destroy all spore–forming bacteria. This retention period shall be at least twenty–four (24) hours. After the chlorine–treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least twenty five parts–per–million (25ppm).
    f. In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.
    g. After all mains have been pressure tested, they shall be disinfected and tested according to the requirements of the Standards for Disinfecting Water Mains, AWWA C–601 and C–651, and as required by this Section. All disinfection, as required by this Section, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the Village Public Works Department. The contractor shall obtain two samples of water from the main for bacteriological testing. A second series of samples shall be collected no less than 24 hours after the first set of samples has been collected. The contractor and the Village will be furnished with copies of the bacteriological report for their records.

STORM SEWER

1. All storm sewer shall conform to the requirements of The Standard Specifications for Water and Sewer Main Construction in Illinois
2. Storm sewers shall be reinforced concrete pipe conforming to ASTM C76 minimum Class III with O–ring joints conforming to ASTM C443.
3. Bedding shall be minimum of 6" of CA–7.
4. Minimum size shall be twelve inches (12").
5. Storm Structures
   a. Rear yard catch basins are not allowed.
   b. All storm structures shall be precast reinforced concrete only.
   c. All storm structures shall be set on a six–inch (6") CA–7 cushion.
   d. All storm structures shall have no more than two adjusting rings within a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
   e. All lifting holes, joints between precast reinforced concrete sections, gaps between pipes and structures shall be tuckpointed with hydraulic cement.
   f. Bitumastic material shall be placed between precast reinforced concrete sections.
   g. All steps shall be fiberglass or neoprene coated.
   h. All structure connections shall be concrete sewer pipe, ASTM C14 for extra strength pipe
6. Storm sewer and all storm structures shall be clean and free of debris prior to their final acceptance. Storm Sewer shall be inspected and tested in accordance with the local jurisdictional requirements including television inspection for review by the Village Engineer.
7. All flared end sections less than 48" (effective diameter) require grates in accordance with IDOT specifications.
8. All castings shall be made in the USA with USA materials. Closed covers shall be stamped per Exhibit 2B. Open covers shall have the grates as specified in the plans.

PAVING CURBS AND SIDEWALK

1. Fine Grading
   a. Prior to the construction of the curb and gutter and the placement of the base material, the streets shall be fine graded to within 0.1 feet + of final subgrade elevation, to a point two (2) feet beyond the back of the proposed curb.
2. Curb and Gutter
   a. The curb and gutter shall be the type as detailed on the Engineering Plans.
   b. The curbs shall be backfilled after their construction and prior to the placement of the base course.
3. Pavement
   a. The pavement materials shall be as detailed on the Engineering Plans. Thickness specified shall be considered to be the minimum compacted thickness.
4. General. The Paving Contractor shall:
   a. Repair any base course and binder course failures prior to the installation of the final bituminous concrete surface course.
   b. Sweep clean the binder course prior to the installation of the final bituminous concrete surface course. Excessive cleaning of the binder course that may be required, and is not the fault of the Paving CONTRACTOR, shall be paid for on a time and material basis by prior agreement with the OWNER.
   c. Permit the bituminous concrete binder course to weather one (1) winter season prior to the installation of the bituminous concrete surface course.
   d. Street signs & Traffic signs.
5. Testing and Final Acceptance
   a. Prior to the placement of the base course, the subgrade must pass a proof roll test to be approved by the local jurisdictional authority. The Village shall be contacted at least 2 business days in advance of the proof roll. (See "Testing and Final Acceptance for Earthwork")
   b. Prior to placement of the bituminous concrete surface course, the CONTRACTOR if requested by the OWNER, shall obtain specimens of the binder course with a core drill where directed by the ENGINEER, for the purpose of thickness verification. Coring shall be in accordance with the applicable provisions of ART.406.15 of the Standard Specification entitled "Standard Specifications for Road and Bridge Construction". The cost for obtaining cores, which meet or exceed the specification, shall be borne by the OWNER.
   c. Deficiencies in the bituminous concrete binder course shall be adjusted for by increasing the plan thickness of the surface course with no additional cost to the OWNER.
   d. A nuclear density test must be conducted on asphalt pavement in accordance with IDOT standards.
   e. Final acceptance of the total pavement installation shall be subject to the testing and checking requirements cited above.
6. Method of Measurement
   a. Curb and Gutter, and base course shall be measured in the field by the CONTRACTOR. The quantities shall be submitted to the OWNER for verification.
   b. When requested by the OWNER, documentation for the installed base course, bituminous concrete binder, and surface, shall be submitted to the ENGINEER for verification. Deficiencies in total bituminous concrete pavement thickness shall be adjusted for in accordance with the requirements of the jurisdictional authority.
7. Basis of Payment
   a. Curb and Gutter will be paid for at the contract unit price per LINEAL FOOT.
   b. Prime Coat material will be paid for at the contract unit price per GALLON.
   c. Base Course will be paid for at the contract unit price per SQUARE YARD.
   d. Bituminous Concrete will be paid for at the contract unit price per SQUARE YARD.

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DMV
2	08–19–24	PER VILLAGE REVIEW	SDD
3	10–17–24	PER VILLAGE REVIEW	SDD
4	11–04–24	PER CDDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

DEI

PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

PROJECT SPECIFICATIONS

L:\Projects\2024\24–0001\Engineering\DWG\Final\24–0001 FE.dwg Plot Date:1/27/2025 2:44:45 PM By:dvath

GENERAL NOTES

1. Definition of Terms
   a. The CONTRACTOR is the individual, firm, partnership or corporation contracting with the OWNER for performance of the prescribed work.
   b. The OWNER is the individual, firm, partnership or corporation having the authority to award the contract for the prescribed work.
   c. The ENGINEER where specifically referred to in the Specifications shall be the OWNER'S representative.
2. All CONTRACTORS shall be responsible for the following, which shall also be incidental to the cost of construction:
   a. Examination of the Engineering Plans and Specifications and the existing site conditions prior to submitting a bid, and notifying the ENGINEER at once of any discrepancies.
   b. The obtaining of any necessary permits not previously applied for by the OWNER, and posting of the necessary bonds.
   c. The notification of the start of construction to theVillage of WESTERN SPRINGS Public Services Dept. at (708) 246–8540, utility companies, and the ENGINEER at least two (2) working days prior to said start. All existing utilities must be staked prior to construction. All construction, including equipment startup, shall be between the hours of 7:00 a.m. to 8:00 p.m. weekdays, and 8:00 a.m. to 7:00 p.m. weekends and holidays.
   d. Calling attention to the OWNER of any errors or discrepancies, which may be suspected in lines and grades, which are established by the OWNER. The CONTRACTOR shall not proceed with the work until the lines and grades which are believed to be in error have been verified or corrected by the OWNER. Additional staking that may be required due to CONTRACTOR negligence shall be paid for by the CONTRACTOR.
   e. The providing of safe and healthful working conditions throughout the prosecution of the construction work. This shall include, but not be limited to: the removal of debris, the protecting of construction hazards with barricades and the keeping of public street pavements clean of construction dirt and debris.
   f. The restoration to the original condition or better of any areas that are damaged by the CONTRACTOR during construction.
   g. The testing of materials, if required by the OWNER and/or the jurisdictional agencies.
   h. The guarantee of all materials and workmanship for a period of one (1) year upon final acceptance by the OWNER and other jurisdictional agencies.
   i. Trees shall be installed a minimum of five (5) feet horizontally from sanitary sewers, sanitary services, watermains, and water services. Trees and light poles shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including but not limited to manholes, valve vaults, valve boxes and fire hydrants.
   j. The contractor shall be responsible for implementation & maintenance of all soil erosion & sedimentation control measures throughout the entire project.
   k. Contractors are required to obtain applicable permits from the Municipality.
3. The OWNER shall be responsible for the following:
   a. Scheduling the necessary preconstruction meeting(s) with the jurisdictional agencies at least two (2) working days prior to the commencement of work.
   b. Insurance certificates from all contractors, naming the Village of WESTERN SPRINGS as additional insured, prior to preconstruction meeting being set.
   c. Providing the CONTRACTOR with one (1) set of control line and grade stakes (at offsets mutually agreed upon) for the proper prosecution and control of the work.
   d. Applying for IEPA, IDOT, and all applicable County, Municipal and Sanitary District Permits. Other necessary permits shall be the responsibility of the CONTRACTOR.
4. The ENGINEER shall be responsible for the following:
   a. To periodically visit the construction site in order to better carry out the duties and responsibilities assigned by the OWNER and undertaken by the ENGINEER.
   b. The ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR(S)' work in progress, supervise, direct or have control over the CONTRACTOR(S)' work nor shall the ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by the CONTRACTOR(S)', for safety precautions and programs incident to the work of the CONTRACTOR(S) or for any failure of the CONTRACTOR(S) to comply with laws, rules, regulations, ordinances, codes or orders applicable to the CONTRACTOR(S) furnishing and performing their work. Accordingly, the ENGINEER can neither guarantee the performance of the construction contracts by the CONTRACTOR(S) nor assume responsibility for the CONTRACTOR(S)' failure to furnish and perform their work in accordance with the Contract Documents.
5. Except where modified by the contract documents, all work proposed herein shall be in accordance with the following specifications, which are hereby made a part hereof:
   a. "Standard Specifications for Road and Bridge Construction", and "Supplemental Specifications and Recurring Special Provisions", latest edition, prepared by the Illinois Department of Transportation (IDOT Standard Specifications).
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as adopted by the Illinois Society of Professional Engineers, etal.
   c. Illinois Urban Manual, latest edition.
   d. Village of WESTERN SPRINGS Codes and Ordinances, current edition when these plans were approved.
   e. American With Disabilities Act, Standards for Accessible Design, latest ed.
6. In the event of a conflict between statements, which apply to the construction work, the OWNER should contact the Public Works Director for direction.

MWRD SPECIFICATIONS

A. Referenced Specifications

1. All construction shall be in accordance with the applicable sections of the following, except as modified herein or on the plans;
   a. Sstandard Sspecifications for Road and Bridge Construction (latest edition), by the Illinois Department of Transportation (IDOTt SS) for all improvements except sanitary sewer and water main construction;
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition (SSWS) for sanitary sewer and water main construction;
   c. Village of WESTERN SPRINGS municipal code (latest edition);
   d. The Metropolitan Water Reclamation District of Greater Chicago (NWRD) Watershed Management Ordinance and Technical Guidance Manual (latest edition);
   e. In case of conflict between the applicable ordinances noted, the more stringent shall take precedence and shall control all construction.

B. Notifications

1. The MWRD local sewer systems section field office must be notified at least two (2) working days prior to the commencement of any work (call 708–588–4055).
2. The Village of WESTERN SPRINGS Engineering Department and Public Works must be notified at least 24 hours prior to the start of construction and prior to each phase of work. Contractor shall determine items requiring inspection prior to start of construction or each work phase.
3. The Contractor shall notify all utility companies prior to beginning construction for the exact locations of utilities and for their protection during construction. If existing utilities are encountered that conflict in location with new construction, immediately notify the engineer so that the conflict can be resolved. call J.U.L.I.E. at 1–800–892–0123.

C. General Notes

1. All elevations shown on plans reference the north american vertical datum of 1988 (NAVD88). Conversion factor is XXXX ft.
2. MWRD, the Municipality and the Owner or Owner's Representative shall have the authority to inspect, approve, and reject the construction improvements.
3. The Contractor(s) shall indemnify the Owner, Engineer, Municipality, MWRD, and their Agents,from all liability involved with the construction, installation, or testing of this work on the project.
4. The proposed improvements must be constructed in accordance with the engineering plans as approved by mwrd and the municipality unless changes are approved by MWRD, the Municipality, or authorized agent. The construction details, as presented on the plans, must be followed. Proper construction techniques must be followed on the improvements indicated on the plans.
5. The location of various underground utilities which are shown on the plans are for information only and represent the best knowledge of the Engineer. Verify locations and elevations prior to beginning the construction operations.
6. Any existing pavement, sidewalk, driveway, etc., damaged during construction operations and not called for to be removed shall be replaced at the expense of the Contractor.
7. Material and compaction testing shall be performed in accordance with the requirements of the Municipality, MWRD, and Owner.
8. The Underground Contractor shall make all necessary arrangements to notify all inspection agencies.
9. All new and existing utility structures on site and in areas disturbed during construction shall be adjusted to finish grade prior to final inspection.
10. Record drawings shall be kept by the Contractor and submitted to the Engineer as soon as underground improvements are completed. Final payments to the Contractor shall be held until they are received. Any changes in length, location or alignment shall be shown in red. All wyes or bends shall be located from the downstream manhole. All valves, B–Boxes, tees or bends shall be tied to a fire hydrant.

D. Sanitary Sewer

1. The Contractor shall take measures to prevent any polluted water, such as ground and surface water, from entering the existing sanitary sewers.
2. A water–tight plug shall be installed in the downstream sewer pipe at the point of sewer connection prior to commencing any sewer construction. the plug shall remain in place until removal is authorized by the Municipality and/or MWRD after the sewers have been tested and accepted.
3. Discharging any unpolluted water into the sanitary sewer system for the purpose of sewer flushing of lines for the deflection test shall be prohibited without prior approval from the Municipality or MWRD.
4. All sanitary sewer construction shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition).
5. All floor drains shall discharge to the sanitary sewer system.
6. All downspouts and footing drains shall discharge to the storm sewer system.
7. All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to the following:

Pipe Material	Pipe Specifications	Joint Specifications
Vitrified Clay Pipe	ASTM C–700	ASTM C–425
Reinforced Concrete Sewer Pipe	ASTM C–76	ASTM C–443
Cast Iron Soil Pipe	ASTM A–74	ASTM C–564
Ductile Iron Pipe	ANSI A21.51	ANSI A21.11
Polyvinyl Chloride (PVC) Pipe 6–inch to 15–inch Diameter SDR 26 18–inch to 27–inch Diameter F/DY=46	ASTM D–3034 ASTM F–679	ASTM D–3212 ASTM D–3212
High Density Polyethylene (HDPE)	ASTM D–3350 ASTM D–3035	ASTM D–3261, F–2620 (heat fusion) ASTM D–3212, F–477 (gasketed)
Water Main Quality PVC 4–inch to 36–inch 4–inch to 12–inch 14–inch to 48–inch	ASTM D–2241 AWWA C900 AWWA C905	ASTM D–3139 ASTM D–3139 ASTM D–3139

The following materials are allowed on a qualified basis subject to District review and approval prior to permit issuance. A special condition will be added to the permit when the pipe material below is used for sewer construction or a connection is made.

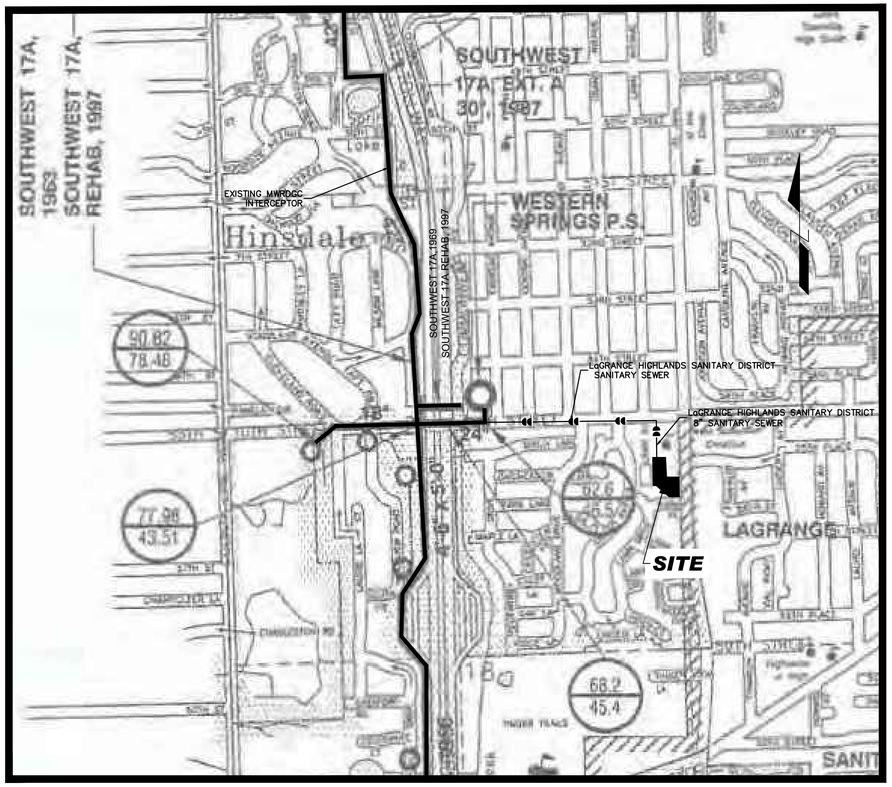
Pipe Material	Pipe Specification	Joint Specification
Polypropylene (PP) Pipe		
12–inch to 24–inch Double Wall	ASTM F–2736	ASTM D–3212,F–477
30–inch to 60–inch Triple Wall	ASTEM F–2764	ASTM D–3212, F–477

8. All sanitary sewer construction (and storm sewer construction in combined sewer areas), requires stone bedding with stone ¼" to 1" in size, with minimum bedding thickness equal to ¼ the outside diameter of the sewer pipe, but not less than four (4) inches or more than eight (8) inches. Material shall be CA–7, CA–11 or CA–13 and shall be extended at least 12" above the top of the pipe when using PVC.
9. Non–shear flexible–type couplings shall be used in the connection of sewer pipes of dissimilar pipe materials.
10. All manholes shall be provided with bolted, watertight covers. Sanitary lids shall be constructed with a concealed pickhole and watertight gasket with the word "sanitary" cast into the lid.
11. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
    a. A circular saw–cut of sewer main by proper tools ("shewer–Tap" machine or similar) and proper installation of hubwye saddle or hub–tee saddle.
    b. Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
    c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "band seal" or similar couplings to hold it firmly in place.
12. Whenever a sanitary/combined sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the bottom of the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, the sewer shall be constructed to water main standards or it shall be encased with a water main quality carrier pipe with ends sealed.
13. All existing septic systems shall be abandoned. Abandoned tanks shall be filled with a granular material or removed.
14. All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or pre–cast reinforced concrete.
15. All sanitary manholes, (and storm manholes in combined sewer areas), shall have precast "rubber boots" that conform to ASTM C–923 for all pipe connections. Precast sections shall consist of modified groove tongue and rubber gasket type joints.
16. All abandoned sanitary sewers shall be plugged at both ends with at least 2 feet long non–shrink concrete or mortar plug.
17. Except for foundation/footing drains provided to protect buildings, or perforated pipes associated with volume control facilities, drain tiles/field tiles/underdrains/perforated pipes are not allowed to be connected to or tributary to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers in combined sewer areas. Construction of new facilities of this type is prohibited, and all existing drain tiles and perforated pipes encountered within the project area shall be plugged or removed, and shall not be connected to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers.
18. A backflow preventer is required for all detention basins tributary to combined sewers. Required backflow preventers shall be inspected and exercised annually by the property owner to ensure proper operation, and any necessary maintenances shall be performed to ensure functionality. In the event of a sewer surcharge into an open detention basin tributary to combined sewers, the permittee shall ensure that clean up and wash out of sewage takes place within 48 hours of the storm event.

MWRD SPECIFICATIONS CONT'D

E. Erosion and Sediment Control

1. The contractor shall install the erosion and sediment control devices as shown on the approved erosion and sediment control plan.
2. Erosion and sediment control practices shall be functional prior to hydrologic disturbance of the site.
3. All design criteria, specifications, and installation of erosion and sediment control practices shall be in accordance with the Illinois urban manual.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Inspections and documentation shall be performed, at a minimum:
   a. Upon completion of initial erosion and sediment control measures, prior to any soil disturbance.
   b. Once every seven (7) calendar days and within 24 hours of the end of a storm event with greater than 0.5 inch of rainfall or liquid equivalent precipitation.
6. Soil disturbance shall be conducted in such a manner as to minimize erosion. If stripping, clearing, grading, or landscaping are to be done in phases, the co–permittee shall plan for appropriate soil erosion and sediment control measures.
7. A stabilized mat of crushed stone meeting the standards of the illinois urban manual shall be installed at any point where traffic will be entering or leaving a construction site. Sediment or soil reaching an improved public right–of–way, street, alley or parking area shall be removed by scraping or street cleaning as accumulations warrant and transported to a controlled sediment disposal area.
8. Concrete washout facilities shall be constructed in accordance with the Illinois Urban Manual and shall be installed prior to any on site construction activities involving concrete.
9. Mortar washout facilities shall be constructed in addition to concrete washout facilities for any brick and mortar building envelope construction activities.
10. Temporary diversions shall be constructed as necessary to direct all runoff from hydrologically disturbed areas to an appropriate sediment trap or basin. Volume control facilities shall not be used as temporary sediment basins.
11. Disturbed areas of the site where construction activities have temporarily or permanently ceased shall be stabilized with temporary or permanent measures within seven (7) days.
12. All flood protection areas and volume control facilities shall, at a minimum, be protected with a double–row of silt fence (or equivalent).
13. Volume control facilities shall not be constructed until all of the contributing drainage area has been stabilized.
14. Soil stockpiles shall, at a minimum, be protected with perimeter sediment controls. Soil stockpiles shall not be placed in flood protection areas or their buffers.
15. Earthen embankment side slopes shall be stabilized with appropriate erosion control blanket.
16. Storm sewers that are or will be functioning during construction shall be protected by appropriate sediment control measures.
17. The contractor shall either remove or replace any existing drain tiles and incorporate them into the drainage plan for the development. Drain tiles cannot be tributary to a sanitary or combined sewer. Drain tiles allowed in combined sewer area for green infrastructure practices.
18. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion and sedimentation. Dewatering systems should be inspected daily during operational periods. the site inspector must be present at the commencement of dewatering activities.
19. The contrctor shall be responsible for trench dewatering and excavation for the installation of sanitary sewers, storm sewers, watermains as well as their services and other appurtenances. Any trench dewatering, which contains sediment shall pass through a sediment settling pond or equally effective sediment control device. Alternatives may include dewatering into a sump pit, filter bag or existing vegetated upslope area. sediment laden waters shall not be discharge to waterways, flood protection areas or the combined sewer system.
20. All permanent erosion control practices shall be initiated within seven (7) days following the completion of soil disturbing activities.
21. All erosion and sediment control measures shall be maintained and repaired as needed on a year–round basis during construction and any periods of construction shutdown until permanent stabilization is achieved.
22. All temporary erosion and sediment control measures shall be removed within thirty (30) days after permanent site stabilization.
23. The erosion and sediment control measures shown on the plans are the minimum requirements. additional measures may be required, as directed by the Engineer, Site Inspector, or MWRD.



SANITARY ROUTING EXHIBIT



STORM ROUTING EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DMV
2	10–17–24	PER WSPRINGS REVIEW	SDD
3	10–29–24	PER VILLAGE REVIEW	SDD
4	11–04–24	PER CDDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

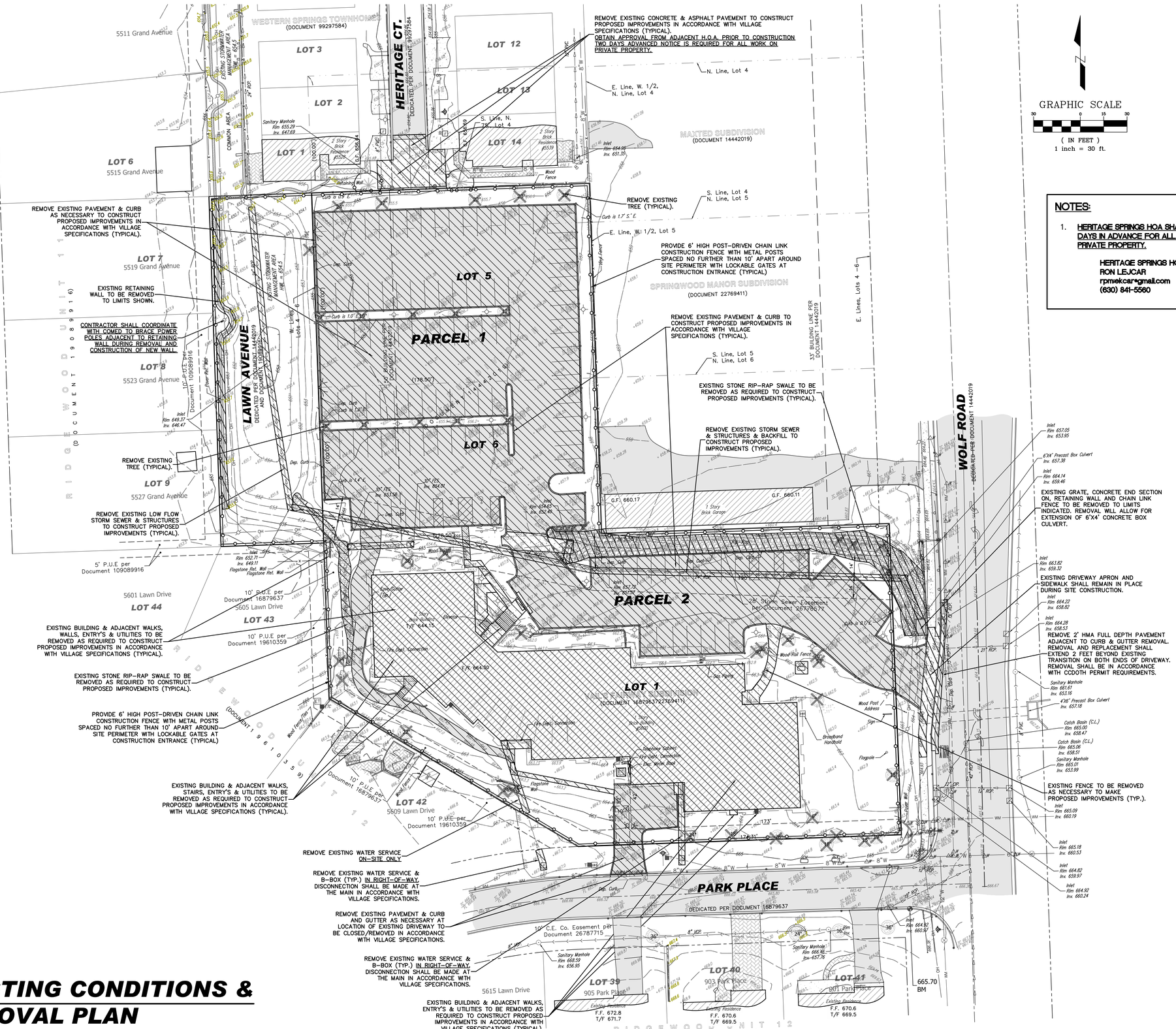
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PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

3 OF 20

PROJECT SPECIFICATIONS & GENERAL NOTES

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NOTES:

1. HERITAGE SPRINGS HOA SHALL BE NOTIFIED AT LEAST 2 DAYS IN ADVANCE FOR ALL WORK TO BE COMPLETED ON PRIVATE PROPERTY.

HERITAGE SPRINGS HOA
RON LEJCAR
rpmrekcar@gmail.com
(630) 841-5560

EXISTING CONDITIONS & REMOVAL PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
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DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
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Design By: SDD
Drawn By: DEI
Checked By: SDS

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OF
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EXISTING CONDITIONS AND REMOVAL PLAN

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EROSION CONTROL & SEDIMENTATION NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL, LATEST EDITION, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. THE APPLICANT AND/OR CONTRACTOR IS RESPONSIBLE FOR INSURING THE OBTAINED PERMIT WITH THE COMPLETED SWPPP IS POSTED ON SITE IN A PROMINENT LOCATION BEFORE COMMENCEMENT OF ANY WORK ON SITE AND SHALL CONTACT THE VILLAGE AT LEAST 2 WORKING DAYS BEFORE THE START OF CONSTRUCTION, INSTALLATION OF SEDIMENT AND EROSION MEASURES AND COMPLETION OF FINAL LANDSCAPING.
3. THE VILLAGE SHALL BE PROVIDED WITH A COPY OF THE IEPA LETTER OF NOTIFICATION OF COVERAGE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE DEVELOPER IS RESPONSIBLE FOR HAVING THE SWPPP AND A STAMPED AND SIGNED COPY OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN ON SITE AT ALL TIMES AND BE PRESENTED WHEN REQUESTED BY ANY AUTHORIZED AGENCY.
5. THE DEVELOPER SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES EVERY SEVEN (7) DAYS AND AFTER 0.5" OR MORE RAINFALL. IMMEDIATE REPAIR SHALL BE MADE OF ANY DAMAGED EROSION CONTROL ELEMENTS THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
6. ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE ONLY AT PROPOSED STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON PLANS.
7. ALL DIRT, MUD, OR DEBRIS THAT REACHES THE PUBLIC ROADS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR.
8. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
9. SILT FENCE, SILT BASINS, AND STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE CONSTRUCTED AS DETAILED ON THE FINAL ENGINEERING PLANS PRIOR TO THE START OF CONSTRUCTION AND SHALL REMAIN IN PLAN UNTIL THE DISTURBED AREA IS STABILIZED. IN ADDITION, SILT FENCE SHALL BE PROVIDED FOR AREAS DRAINING 200' AND GREATER IN ACCORDANCE WITH NRCS CODE 920.
10. SCHEDULE OF CONTROL MEASURE IMPLEMENTATION:
    A. CONSTRUCT THE APPLICABLE PORTIONS OF THE EROSION AND SEDIMENTATION CONTROLS PRIOR TO SITE CLEARING.
    B. CONTROL SITE DEVELOPMENT IN ACCORDANCE WITH THE SPECIFICATIONS.
    C. MAINTAIN INLET PROTECTION, CONSTRUCTION TRAFFIC SURFACES, CLEANING OF STORM STRUCTURES AND THE LIKE ON A REGULAR BASIS AFTER EACH HEAVY RAIN OR AS OTHERWISE REQUIRED.
11. THE ESTIMATED CONSTRUCTION SCHEDULE IS AS FOLLOWS:

DEMOLITION	WINTER	2025
MASS EARTHWORK	SPRING	2025
TEMPORARY BASIN STABILIZATION	SPRING	2025
UNDERGROUND IMPROVEMENTS	SPRING/SUMMER	2025
ROADWAY (CURB & PAVEMENT)	SUMMER	2025
BUILDING CONSTRUCTION	SUMMER	2025
FINAL GRADING	SUMMER	2025
BASIN STABILIZATION	SUMMER	2025
FINAL LANDSCAPING	SUMMER	2026

    THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD AT THE CLOSE OF THE CONSTRUCTION SEASON.
12. DISTURBED AREAS WITHIN ALL PUBLIC R.O.W.'S SHALL BE RESTORED W/ 6" MIN. TOPSOIL & SOD. RESTORATION SHALL OCCUR IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION, WEATHER PERMITTING. ALL OTHER DISTURBED AREAS SHALL BE RESTORED WITH 4" TOPSOIL & SEED.
13. STRAW BALES ARE NOT PERMITTED IN AREAS OF CONCENTRATED FLOW. ROCK CHECK DAMS SHALL BE USED IN THESE AREAS. TECHNIQUES THAT DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED.
14. THE PROTECTION OF THE OPEN LID DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AS SPECIFIED IN DETAILS. ALL OPEN LID DRAINAGE STRUCTURES LOCATED IN YARD AREAS AND THE SEDIMENTATION BASIN MUST BE PROTECTED PER INLET PROTECTION DETAILS UNTIL SUCH A TIME THAT THE LANDSCAPING IS IN PLACE AND EFFECTIVELY PREVENTING POTENTIAL SILTATION OF THESE STRUCTURES. ALL OPEN LID DRAINAGE STRUCTURES IN PAVED AREAS SHALL HAVE FILTER BASKETS INSTALLED UNDER THE LIDS. IN THE EVENT THE GRAVEL BASE IS NOT IN PLACE UPON INSTALLATION, INLET PROTECTION SHALL BE PROVIDED AS INDICATED PER INLET PROTECTION DETAIL.
15. EROSION CONTROL BLANKET (ECB) SHALL BE INSTALLED TO ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 5H:1V AND IN CRITICAL AREAS (EX: DETENTION BASIN PERIMETERS, STREAMBANKS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING. S175 NORTH AMERICAN GREEN (OR SIMILAR) ECB SHALL BE USED. ECB WITH GREEN DYE IS NOT ACCEPTABLE.
16. SOIL STOCKPILES SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.
17. DURING DEWATER OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
18. AN INCIDENT OF NON-COMPLIANCE (ION) MUST BE COMPLETED AND SUBMITTED BY THE OWNER TO THE IEPA AND COPIED TO THE VILLAGE IF, AT ANY TIME, AN EROSION OR SEDIMENT CONTROL DEVICE FAILS.
19. A NOTICE OF TERMINATION (NOT) SHALL BE COMPLETED BY THE OWNER IN COMPLIANCE WITH THE NPDES PHASE II REQUIREMENTS WHEN ALL PERMANENT EROSION CONTROL MEASURES ARE IN PLACE WITH A 70% ESTABLISHED RATE OF VEGETATION. THE NOTICE OF TERMINATION SHALL BE SENT TO THE IEPA AND THE VILLAGE.
20. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

EROSION CONTROL LEGEND

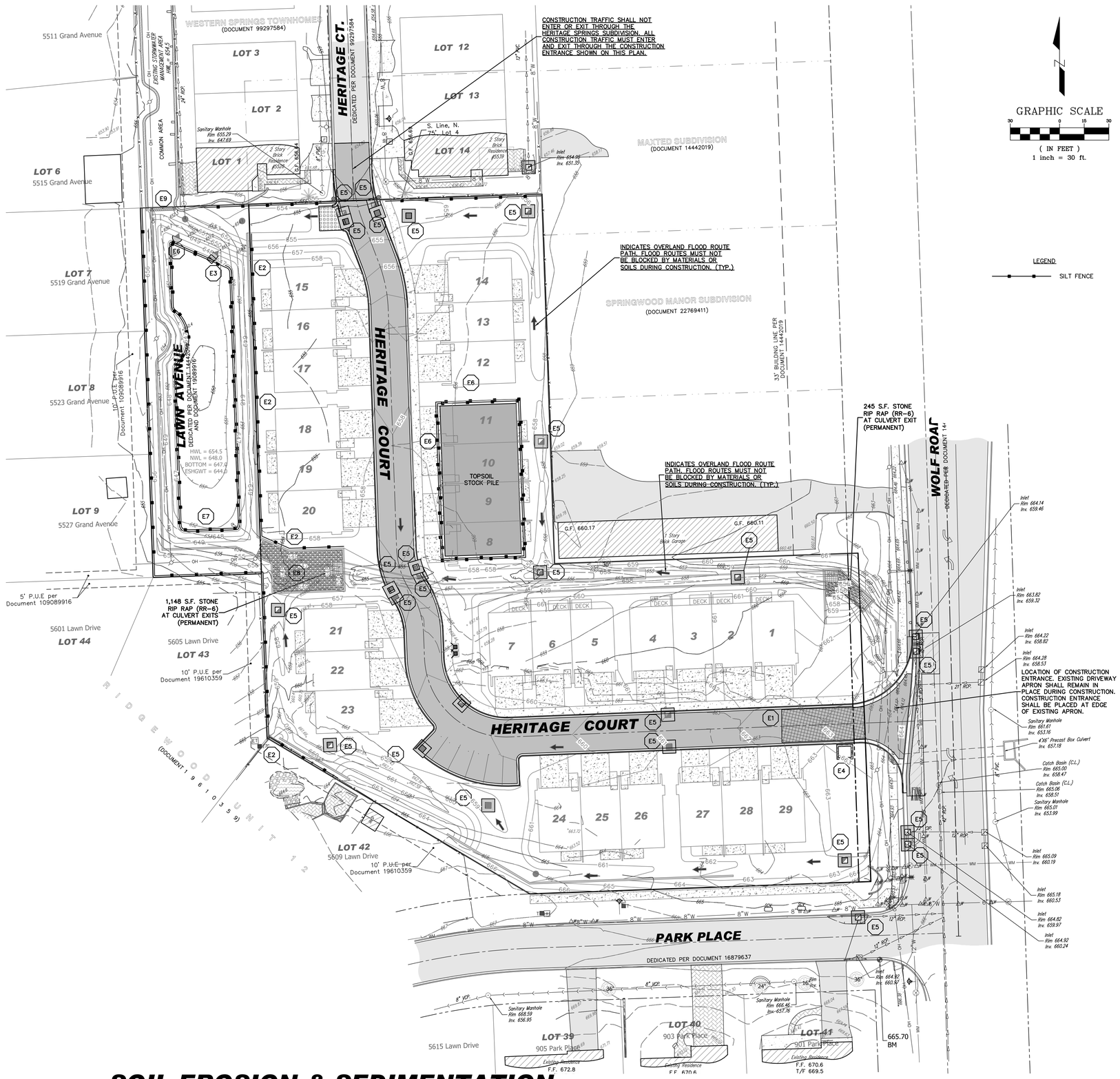
- E1 — CONSTRUCTION ENTRANCE PER NRCS SPECIFICATIONS
- E2 — SILT FENCE PER NRCS SPECIFICATIONS
- E3 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-610
- E4 — CONCRETE WASHOUT AREA
- E5 — INLET PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS
- E6 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-508SF
- E7 — DOUBLE ROW OF SILT FENCE PER NRCS SPECIFICATIONS
- E8 — SEDIMENT FOREBAY (SEE MWRD DETAIL SHEET XX)
- E9 — ROLLED EROSION CONTROL

STABILIZATION TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C			*	D*					
SODDING			E**									
MULCHING	F											

A. KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYEGRASS 30 LBS/AC
B. KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYEGRASS 45 LBS/AC + 2 TONS STRAW MULCH/AC
C. SPRING OATS 100 LBS/AC
D. WHEAT OR CEREAL RYE 150 LBS/AC
E. SOD
F. STRAW MULCH 2 TONS/AC

* IRRIGATION NEEDED DURING JUNE AND JULY.
** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SOIL PROTECTION CHART



SOIL EROSION & SEDIMENTATION CONTROL PLAN

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
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6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
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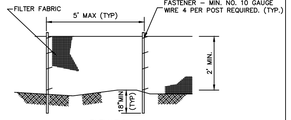
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

5 OF 20

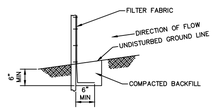
SOIL EROSION SEDIMENTATION & CONTROL PLAN

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SILT FENCE PLAN



ELEVATION

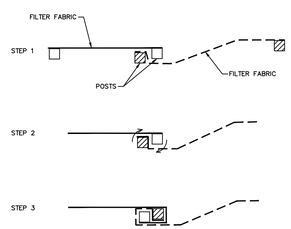


FABRIC ANCHOR DETAIL

NOTES:
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 509 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
3. FENCE POSTS SHALL BE WITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS–SECTIONAL AREA OF 3.0 SQ. IN.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 11-20-01
Approved Date		

SILT FENCE

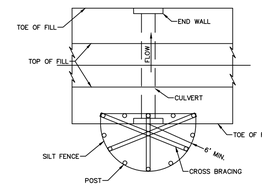


ATTACHING TWO SILT FENCES

NOTES:
1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 18 INCHES INTO THE GROUND AND BURY THE FLAP.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620(W)
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 1-29-99
Approved Date		

CULVERT INLET PROTECTION - SILT FENCE

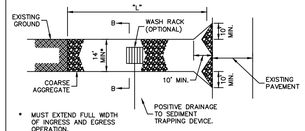


PLAN VIEW

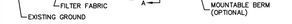
NOTES:
1. THE SILT FENCE SHALL MEET THE REQUIREMENTS AS SHOWN ON STANDARD DRAWING IL-620 SILT FENCE EXCEPT THE MINIMUM POST SPACING SHALL BE 3 FEET AND THE TOPS OF POSTS SHALL BE CROSS BRACED.
2. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE HEIGHT OF THE SLT FENCE.
3. THE MAXIMUM DRAINAGE AREA TO THE CULVERT BEING PROTECTED IS 1 ACRE.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-508SF
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 1-29-99
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW

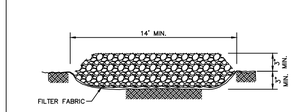


SIDE ELEVATION

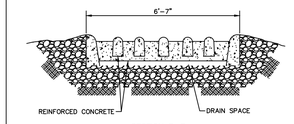
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I,II OR IV AND SHALL BE PLACED OVER CLEARED AREA PRIOR TO THE PLACING OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATION, CA–1, CA–2, CA–3, OR CA–4 AND BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 25 ROCKFILL USING PLACEMENT METHOD 1 AND CLASS III COMPACTION.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 8-15-94
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A–A



SECTION B–B

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 2
Checked Date		DATE 8-15-94
Approved Date		

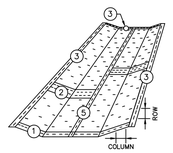
PIPE OUTLET SEDIMENT TRAP - ST I

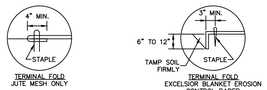
NOT TO SCALE

6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH 1/2" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SLIT AND 6" BELOW THE LOWEST SLIT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND–COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER AND 12" DEEP WITH THE RISER EMBEDDED 9". STEEL PLATE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, 1/4" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.
15. ANTI SEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 16 AND DETAILS 13 AND 14).
16. CONCENTRIC TRASH RACK AND ANTI–VORTEX DEVICE DESIGN DETAILS ARE ON DETAIL 16.
17. REFER TO SECTION D FOR DEWATERING REQUIREMENTS OF SEDIMENT TRAPS.
18. OUTLET – AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.
19. WHERE DISCHARGE OCCURS AT THE PROPERTY LINE, LOCAL ORDINANCES AND DRAINAGE EASEMENT REQUIREMENTS SHALL BE MET.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE D–15–8	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

EROSION BLANKET PLAN



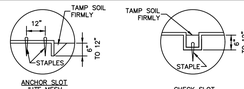


DETAIL 1

DETAIL 2

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 5-24-94
Approved Date		

EROSION BLANKET PLAN



DETAIL 3 DETAIL 4

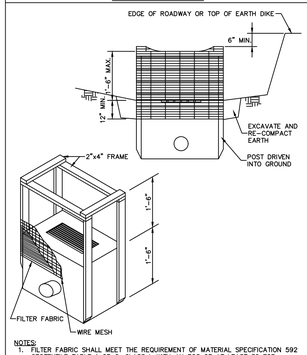


DETAIL 5

NOTES:
1. ON EROSION CONTROL PAPER, CHECK SLOTS, IN DITCH CHANNEL SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6% ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'x 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'x 150 ROLL OF MATERIAL.
3. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
4. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 2
Checked Date		DATE 3-11-95
Approved Date		

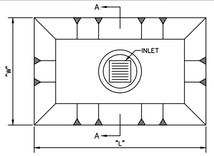
INLET PROTECTION - FABRIC DROP PLAN



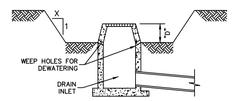
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENT OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, WITH AN EOS OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. THE WIRE MESH SHALL HAVE A MAXIMUM OPENING OF AT LEAST 6 INCHES.
3. LIMIT DRAINAGE AREA TO THE INLET PROTECTION TO 1 ACRE.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-560
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 6-29-93
Approved Date		

INLET PROTECTION - EXCAVATED DRAIN PLAN



PLAN VIEW



TYPICAL SECTION A–A

NOTES:
1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED ON A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
2. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
3. ALL CUT SLOPES SHALL BE 2:1 OR FLATTER.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-555
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 3-11-93
Approved Date		

TABLE 1

ROCK RIPRAP SIZES AND THICKNESS

IDOT Gradation Number	d50 (in.)	dmax (in.)	Minimum Blanket Thickness (in.)
RR-3 1/	5	10	15
RR-4	9	14	20
RR-5	12	19	28
RR-6	15	22	32
RR-7	18	27	32

1/ Concrete block may be used to replace RR-3.

TABLE 2

MINIMUM IDOT ROCK SIZES AND APRON LENGTH FOR MAXIMUM AND MINIMUM TAILWATER CONDITIONS

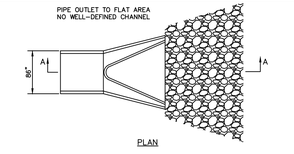
Culvert Dia. (in.)	Minimum Tailwater				Maximum Tailwater			
	5 fps 1/		10 fps 1/		5 fps 1/		10 fps 1/	
	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)
12	No. 3	10	No. 3	12	No. 3	12	No. 3	15
18	No. 3	14	No. 4	16	No. 3	12	No. 3	16
24	No. 3	16	No. 4	20	No. 3	14	No. 4	17
30	No. 3	18	No. 4	22	No. 3	16	No. 4	20
36	No. 4	20	No. 5	24	No. 3	16	No. 4	22
48	No. 4	24	No. 6	28	No. 4	20	No. 4	24
60	No. 5	32	No. 6	36	No. 4	22	No. 5	26
72	No. 6	40	No. 6	44	No. 5	24	No. 5	29
96	No. 7	50	No. 7	54	No. 5	26	No. 5	32

1/ Maximum conduit velocity fps.

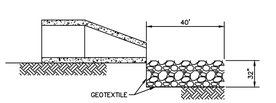
Rock Gradation source: Illinois Department of Transportation, 1997.

910-5

4'X6' " PIPE OUTLET TO FLAT AREA



PLAN



SECTION A–A

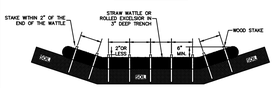
NOTES:
1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II OR III.
2. THE ROCK RIPRAP SHALL MEET THE IDOT REQUIREMENTS FOR THE FOLLOWING GRADATION: RR R–$\frac{6}{7}$, QUALITY A.
3. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-610
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 9-15-93
Approved Date		

ROLLED EROSION CONTROL PRODUCTS

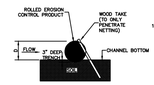
NOT TO SCALE

STAKING PATTERN GUIDE



NOTES:
1. OVERLAP MINIMUM IS THE DIAMETER OF THE ROLL.
2. 4' SPACING FOR MATTLES.
3. 2' SPACING FOR ROLLED EXCELSIOR.
4. OR SPACE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

STAKE DETAIL



COMPOST FILTER SOCK DETAIL



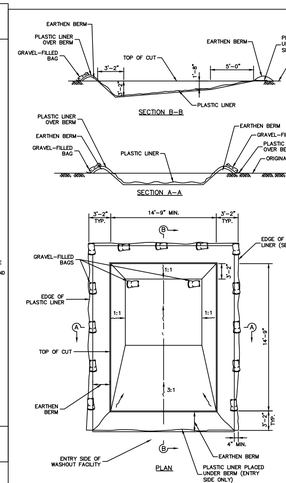
WHEN COMPOST FILTER SOCK DITCH CHECK IS USED, PLACE A COMPOST BERM UPSTREAM OF THE FILTER SOCK (SEE IUM 805). A TRENCH IS NOT REQUIRED.

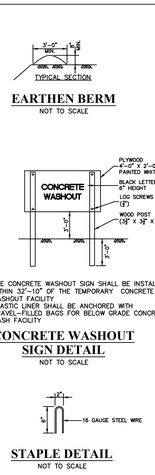
NOTES:
1. DRAWINGS ARE NOT TO SCALE
2. ENDS OF MATTLES OR ROLLED EXCELSIOR SHALL BE TURNED AT LEAST 6" UPSLOPE.
3. ROLLED EXCELSIOR SHALL BE PLACED IN 4' WIDE STRIPS.
4. STAKES SHALL NOT EXTEND ABOVE THE STRAW MATTLE MORE THAN 2".
5. SPACING THE TOE OF THE UPSTREAM DITCH CHECK SHALL CREATE A HORIZONTAL LINE WITH THE TOP OF THE DOWNSTREAM DITCH CHECK.
6. WHEN COMPOST FILTER SOCK DITCH CHECK IS USED, PLACE A COMPOST BERM UPSTREAM OF THE FILTER SOCK (SEE IUM 805). A TRENCH IS NOT REQUIRED.

REFERENCE		STANDARD DWG. NO.
Project		IUM-514
Designed Date		SHEET 1 OF 1
Checked Date		DATE 8-19-11
Approved Date		

TEMPORARY CONCRETE WASHOUT FACILITY

(BELOW GRADE)





NOTES:
1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 32"–10" OF THE TEMPORARY CONCRETE WASHOUT FACILITY
2. PLASTIC LINER SHALL BE ANCHORED WITH GRAVEL–FILLED BAGS FOR BELOW GRADE CONCRETE WASH FACILITY

CONCRETE WASHOUT SIGN DETAIL

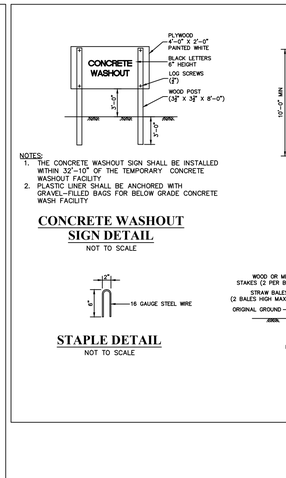
NOT TO SCALE

STAPLE DETAIL

NOT TO SCALE

TEMPORARY CONCRETE WASHOUT FACILITY

(ON GRADE)



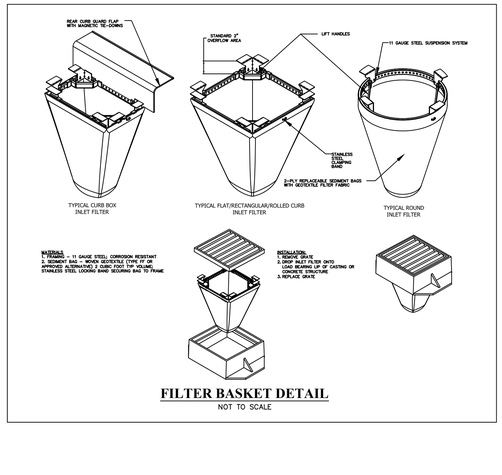
NOTES:
1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 32"–10" OF THE TEMPORARY CONCRETE WASHOUT FACILITY
2. PLASTIC LINER SHALL BE ANCHORED WITH GRAVEL–FILLED BAGS FOR BELOW GRADE CONCRETE WASH FACILITY

CONCRETE WASHOUT SIGN DETAIL

NOT TO SCALE

STAPLE DETAIL

NOT TO SCALE



FILTER BASKET DETAIL

NOT TO SCALE

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WILL COUNTY REVIEW	SDD
3	10-29-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

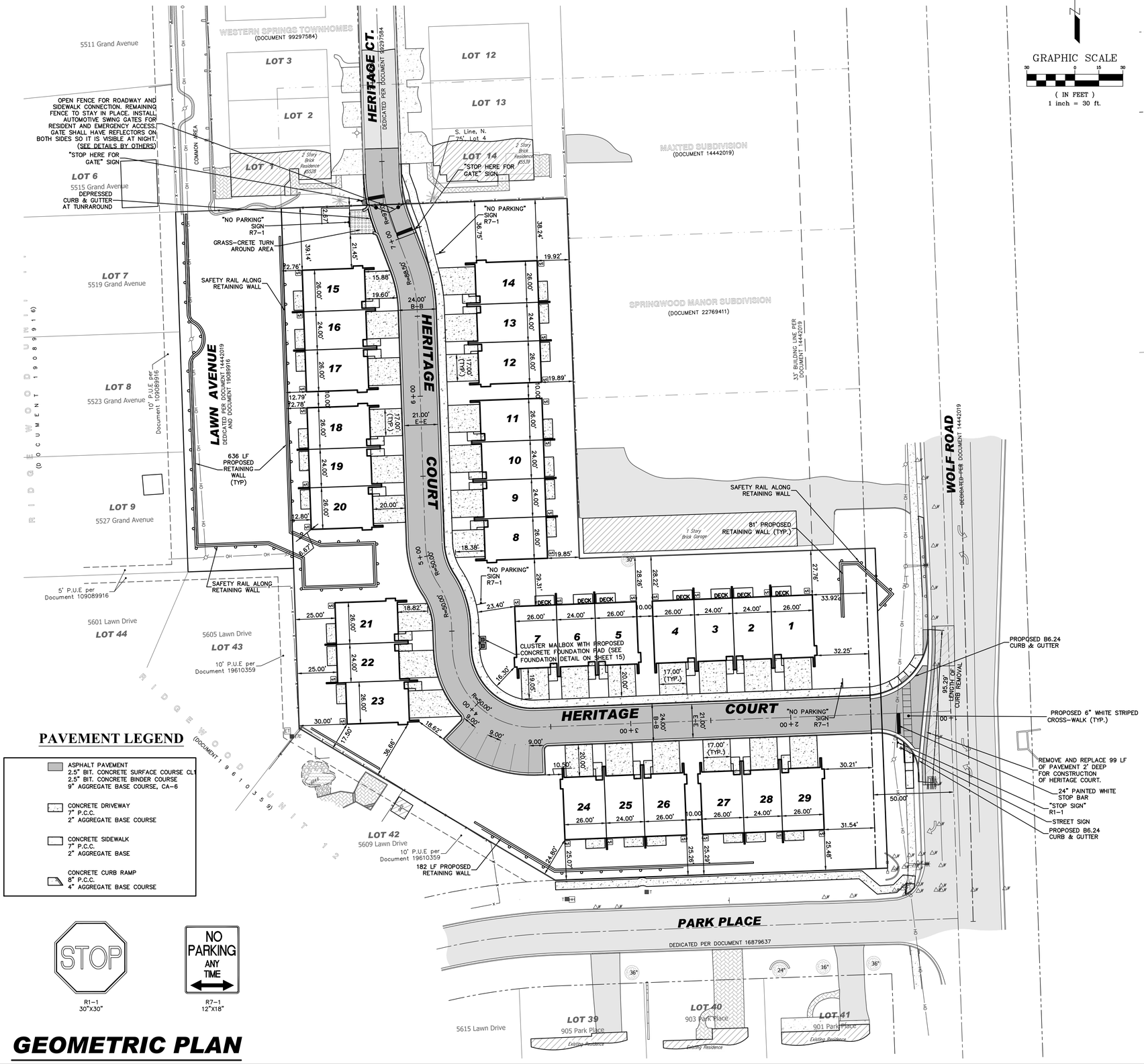
DEI

PROJECT INFORMATION
Project No.: 24–0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

6
OF
20

SOIL EROSION SEDIMENTATION & CONTROL DETAILS

L:\Projects\2024\24-0001\Engineering\IGMD\Plan\24-0001 TE.dwg Plot Date: 1/27/2025 2:44:56 PM By: dmh



PAVEMENT LEGEND

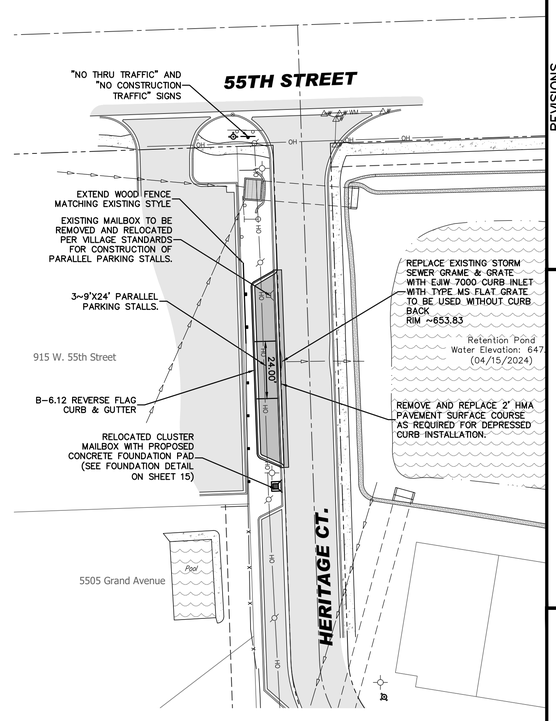
- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

R1-1
30"X30"

R7-1
12"X18"

GEOMETRIC PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
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FINAL ENGINEERING PLANS
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DESIGNTEK ENGINEERING, INC.
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MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

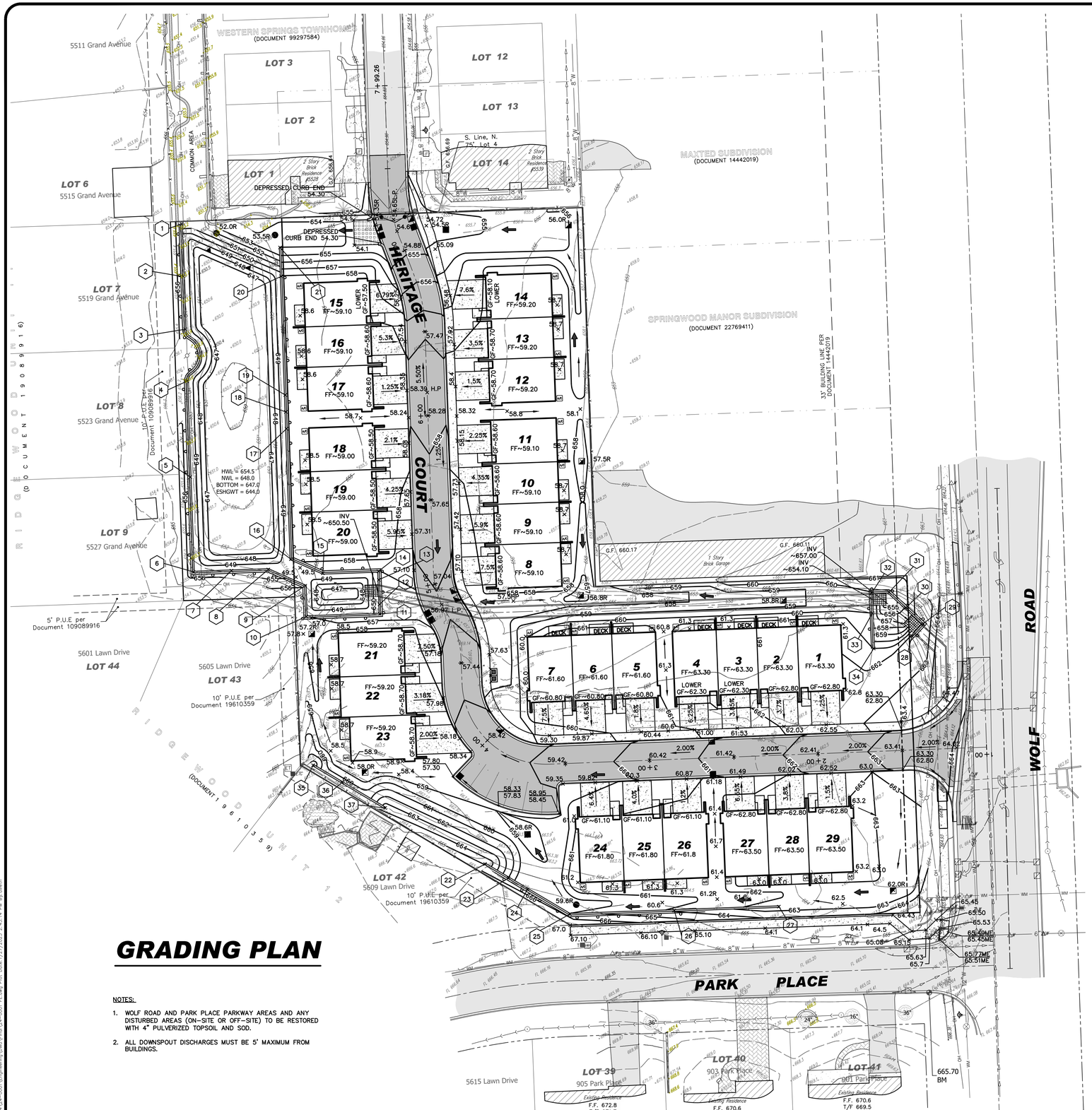
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

7
OF
20

GEOMETRIC PLAN

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GRADING PLAN

NOTES:

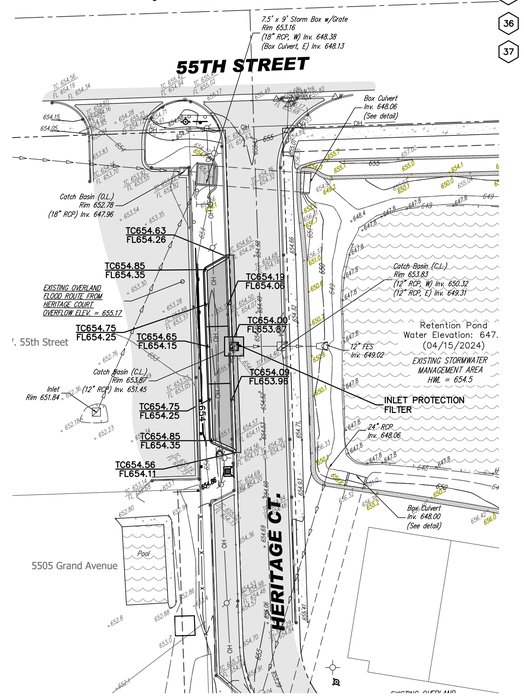
1. WOLF ROAD AND PARK PLACE PARKWAY AREAS AND ANY DISTURBED AREAS (ON-SITE OR OFF-SITE) TO BE RESTORED WITH 4" PULVERIZED TOPSOIL AND SOD.
2. ALL DOWNSPOUT DISCHARGES MUST BE 5' MAXIMUM FROM BUILDINGS.

REVIEW SET
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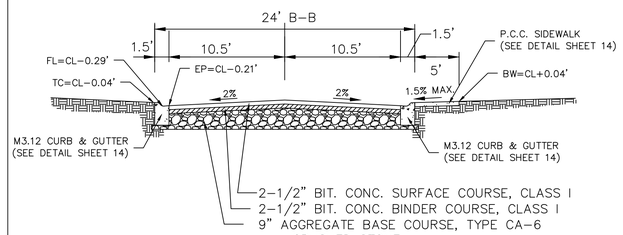
RETAINING WALL (XX)

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

(1)	TW=656.00 BW=652.00 EX TW=655.99	(12)	TW=656.00 BW=650.50	(23)	TW=665.00 BW=660.00
(2)	TW=656.50 BW=650.00 EX TW=655.98	(13)	TW=656.00 BW=650.50	(24)	TW=655.50 BW=660.00
(3)	TW=656.50 BW=650.00 EX TW=656.26	(14)	TW=657.00 BW=650.50	(25)	TW=666.00 BW=660.00
(4)	TW=656.50 BW=650.00 EX TW=656.25	(15)	TW=657.00 BW=650.00	(26)	TW=664.00 BW=661.00
(5)	TW=656.50 BW=650.00 EX TW=656.16	(16)	TW=658.00 BW=650.00	(27)	TW=662.50 BW=662.50
(6)	TW=656.50 BW=650.00 EX GND=656.00	(17)	TW=658.00 BW=650.00	(28)	TW=662.50 BW=662.50
(7)	TW=655.00 BW=650.00	(18)	TW=658.00 BW=650.00	(29)	TW=662.50 BW=662.50
(8)	TW=654.00 BW=650.00	(19)	TW=656.50 BW=650.00	(30)	TW=661.00 BW=656.00
(9)	TW=656.00 BW=650.00	(20)	TW=658.50 BW=650.00	(31)	TW=660.00 BW=654.10
(10)	TW=657.50 BW=65000	(21)	TW=654.00 BW=654.00	(32)	TW=660.00 BW=654.10
(11)	TW=656.50 BW=650.50	(22)	TW=665.00 BW=665.00	(33)	TW=660.00 BW=658.00
				(34)	TW=661.00 BW=661.00
				(35)	TW=662.50 BW=662.50
				(36)	TW=663.00 BW=660.50
				(37)	TW=663.50 BW=663.50



OFFSITE PARKING PLAN



TYPICAL ROADWAY SECTION

NOT TO SCALE

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

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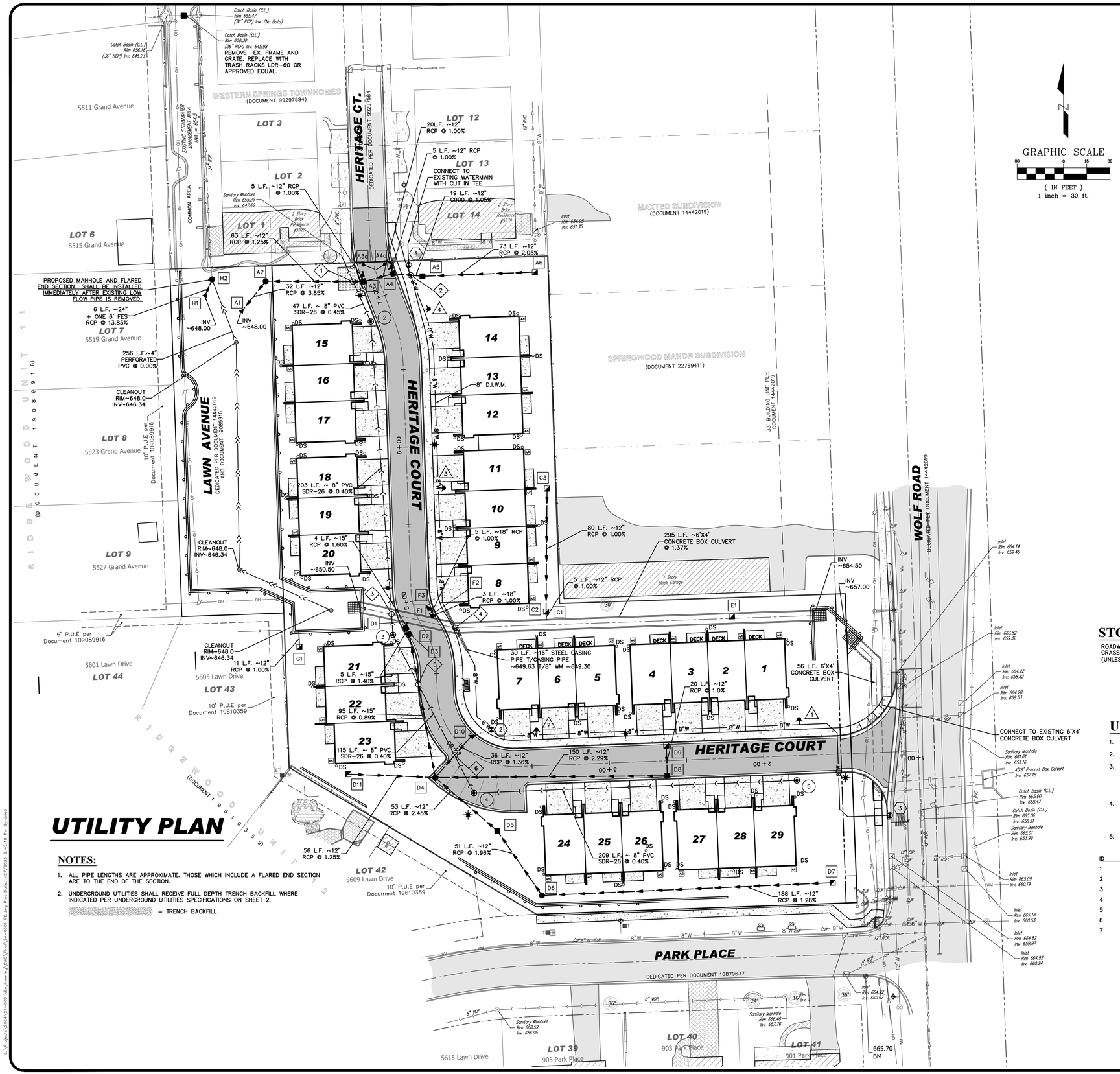
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PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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GRADING PLAN

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UTILITY PLAN

NOTES:

1. ALL PIPE LENGTHS ARE APPROXIMATE. THOSE WHICH INCLUDE A FLARED END SECTION ARE TO THE END OF THE SECTION.
2. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.

= TRENCH BACKFILL

SANITARY STRUCTURES (XX)

1. EX. 48" M.H., C.L. EX. RIM 655.29 EX. INV 647.69 PR. INV 647.69
2. 48" M.H., C.L. RIM 656.00 INV 647.90
3. 48" M.H., C.L. RIM 657.00 INV 648.71
4. 48" M.H., C.L. RIM 656.90 INV 649.17
5. 48" M.H., C.L. RIM 663.10 INV 650.01

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

WATER VALVE VAULTS (XX)

1. 8" VALVE IN 60" VAULT RIM 657.00
2. 8" VALVE IN 60" VAULT RIM 658.00
3. 8" PRESSURE CONNECTION IN 60" VAULT RIM 665.00

FIRE HYDRANTS (XX)

1. FIRE HYDRANT ASSEMBLY GRADE RING 662.90
2. FIRE HYDRANT ASSEMBLY GRADE RING 660.00
3. FIRE HYDRANT ASSEMBLY GRADE RING 658.20
4. FIRE HYDRANT ASSEMBLY GRADE RING 656.50

STORM SEWER STRUCTURES (XX)

- A1: 12" FES W/ GRATE INV 648.00
- A2: 48" DIA. MH., C.L. RIM 653.50 INV 650.30 (E, 12") INV 649.00 (SW, 12")
- A3: 48" DIA. CATCHBASIN, O.L. RIM 654.37 (FL) INV 651.09 (W&E, 12") INV 651.30 (N, 12")
- A3d: 24" DIA. INLET RIM 654.35 (FL) INV 651.35 (N, 12")
- A4: 48" DIA. MH., O.L. RIM 654.37 (FL) INV 651.29 (N,W&E 12")
- A4d: 24" DIA. INLET RIM 654.35 (FL) INV 651.35 (S 12")
- A5: 48" DIA. MH., O.L. RIM 654.50 INV 651.50 (E&W, 12")
- A6: 24" DIA. INLET RIM 656.00 INV 653.00 (W 12")
- C1: CONNECT TO 4'X6' BOX CULVERT INV 653.65 (N, 12")
- C2: 24" DIA. INLET RIM 656.80 INV 653.70 (S, 12")
- C3: 24" DIA. INLET RIM 657.50 INV 654.50 (S, 12")
- D1: CONNECT TO 4'X6' BOX CULVERT INV ~653.05 (S, 15")
- D2: 48" DIA. CATCHBASIN RIM 656.68 (FL) INV 653.13 (SW, 15")
- D3: 60" DIA. M.H., O.L. RIM 656.68 (FL) INV 653.20 (NW&SE, 15")
- D4: 72" DIA. M.H., O.L. RIM 657.30 INV 654.20 (NW, 15") INV 654.45 (NE,W, E&SE, 12")
- D5: 48" DIA. M.H., C.L. RIM 659.60 INV 655.60 (NW&SE, 12")
- D6: 48" DIA. M.H., C.L. RIM 659.60 INV 656.60 (NW&E, 12")
- D7: 24" DIA. INLET RIM 662.00 INV 659.00 (W, 12")
- D8: 48" DIA. M.H., O.L. RIM 660.93 (FL) INV 657.73 (N&W, 12")
- D9: 24" DIA. INLET RIM 660.93 (FL) INV 657.93 (S, 12")
- D10: 24" DIA. INLET RIM 658.17 (FL) INV 655.17 (S, 12")
- D11: 24" DIA. INLET RIM 658.00 INV 655.00 (E, 12")
- E1: 24" PVC RISER RIM 658.80
- F1: CONNECT TO 4'X6' BOX CULVERT INV 653.10 (N, 12")
- F2: 24" DIA. INLET RIM 656.99 (FL) INV 653.13 (N&S, 12")
- F3: 24" DIA. INLET RIM 656.69 (FL) INV 653.18 (S, 12")
- G1: CONNECT TO 4'X6' BOX CULVERT INV 653.24 (N, 12")
- G2: 24" DIA. INLET RIM 657.20 INV 654.20 (N, 12")
- H1: 24" FES W/ GRATE INV 648.00
- H2: 48" DIA. MH., C.L. RIM 652.00 EX INV 646.34 (N, 24") PR INV 646.34 (SW, 24")

STORM SEWER GRATES

ROADWAY: EJIW 7525Z & EJIW 7525M
GRASS: EJIW 6527
(UNLESS OTHERWISE NOTED ON PLANS)

UTILITY CROSSING INFORMATION (XX)

1. MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN WATERMAIN AND STORM/SANITARY SEWERS.
2. DEPTHS OF EXISTING WM ARE ASSUMED AND MUST BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION.
3. WHEN THE WM CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS THAT COMPLY WITH 35 IAC 653.119 OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WM TO THE SEWER IS AT LEAST 10 FEET. IN ADDITION, THE WM MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER. THIS 18 INCHES IS A STRUCTURAL PROTECTION TO PREVENT THE SEWER FROM SETTLING AND BREAKING THE WM.
4. WHEN THE WM CROSSES ABOVE A SEWER AND IT IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHERE THE PIPE CROSSES, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS (COMPLIANCE SAME AS ABOVE) OR A CASING PIPE CAN BE INSTALLED AROUND THE WM OR THE SEWER. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WM. CONCRETE IS NOT AN ACCEPTABLE ENCASEMENT.
5. WHEN THE ENCASEMENT OPTION IS USED, IT SHALL BE ONE CONTINUAL SECTION (NO JOINTS).

(XX)

ID	BOTTOM OF PIPE	TOP OF PIPE	VERTICAL SEPARATION	CROSSING INFO.
1	650.83	648.47	2.36'	STORM OVER SANITARY
2	651.24	649.18	2.06'	STORM OVER WATERMAIN (STORM SEWER TO BE C900 PIPE)
3	650.20	649.37	0.83'	STORM OVER SANITARY
4	650.83	649.30	1.53'	STORM OVER WATERMAIN (LOWER AND ENCASE WATERMAIN)
5	653.39	649.55	3.84'	STORM OVER SANITARY
6	654.58	649.75	4.83'	STORM OVER SANITARY
7	654.76	649.83	4.93'	STORM OVER SANITARY

REVIEW SET
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REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER VILLAGE REVIEW	SDD
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4	12-12-24	PER VILLAGE REVIEW	DMV
5	01-27-25	PER REVISED GEOMETRY	DMV
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5600 SOUTH WOLF ROAD
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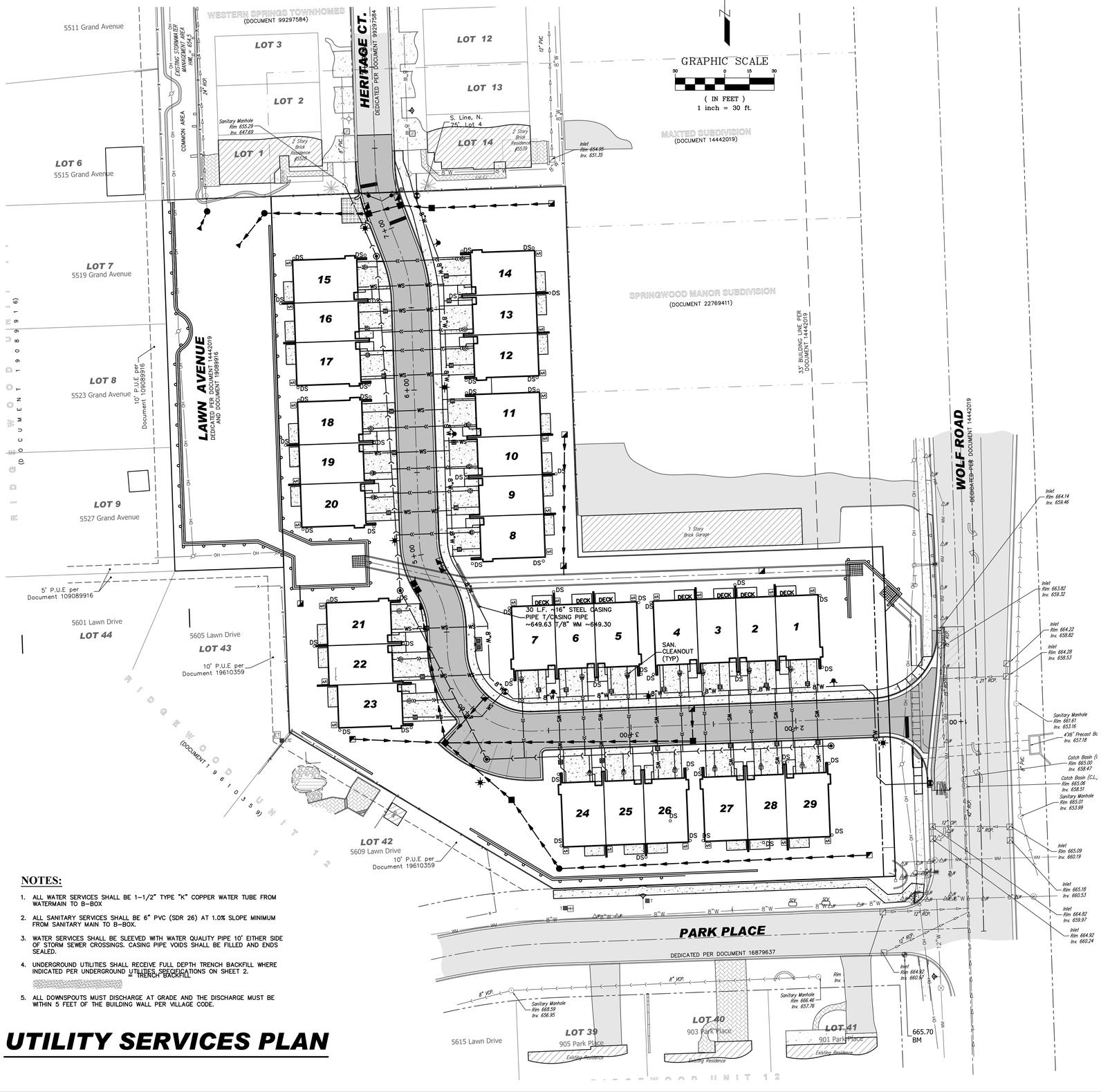
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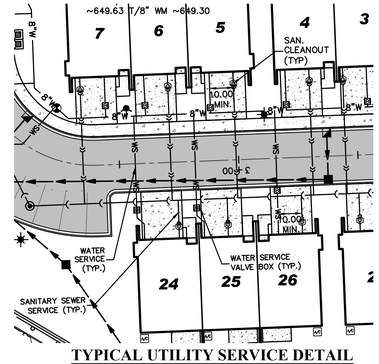
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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UTILITY PLAN

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TYPICAL UTILITY SERVICE DETAIL

NOTES:

1. ALL WATER SERVICES SHALL BE 1-1/2" TYPE "K" COPPER WATER TUBE FROM WATERMAIN TO B-BOX
2. ALL SANITARY SERVICES SHALL BE 6" PVC (SDR 26) AT 1.0% SLOPE MINIMUM FROM SANITARY MAIN TO B-BOX.
3. WATER SERVICES SHALL BE SLEEVED WITH WATER QUALITY PIPE 10' EITHER SIDE OF STORM SEWER CROSSINGS. CASING PIPE VOIDS SHALL BE FILLED AND ENDS SEALED.
4. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.
   = TRENCH BACKFILL
5. ALL DOWNSPOUTS MUST DISCHARGE AT GRADE AND THE DISCHARGE MUST BE WITHIN 5 FEET OF THE BUILDING WALL PER VILLAGE CODE.

UTILITY SERVICES PLAN

REVIEW SET
NOT FOR
CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
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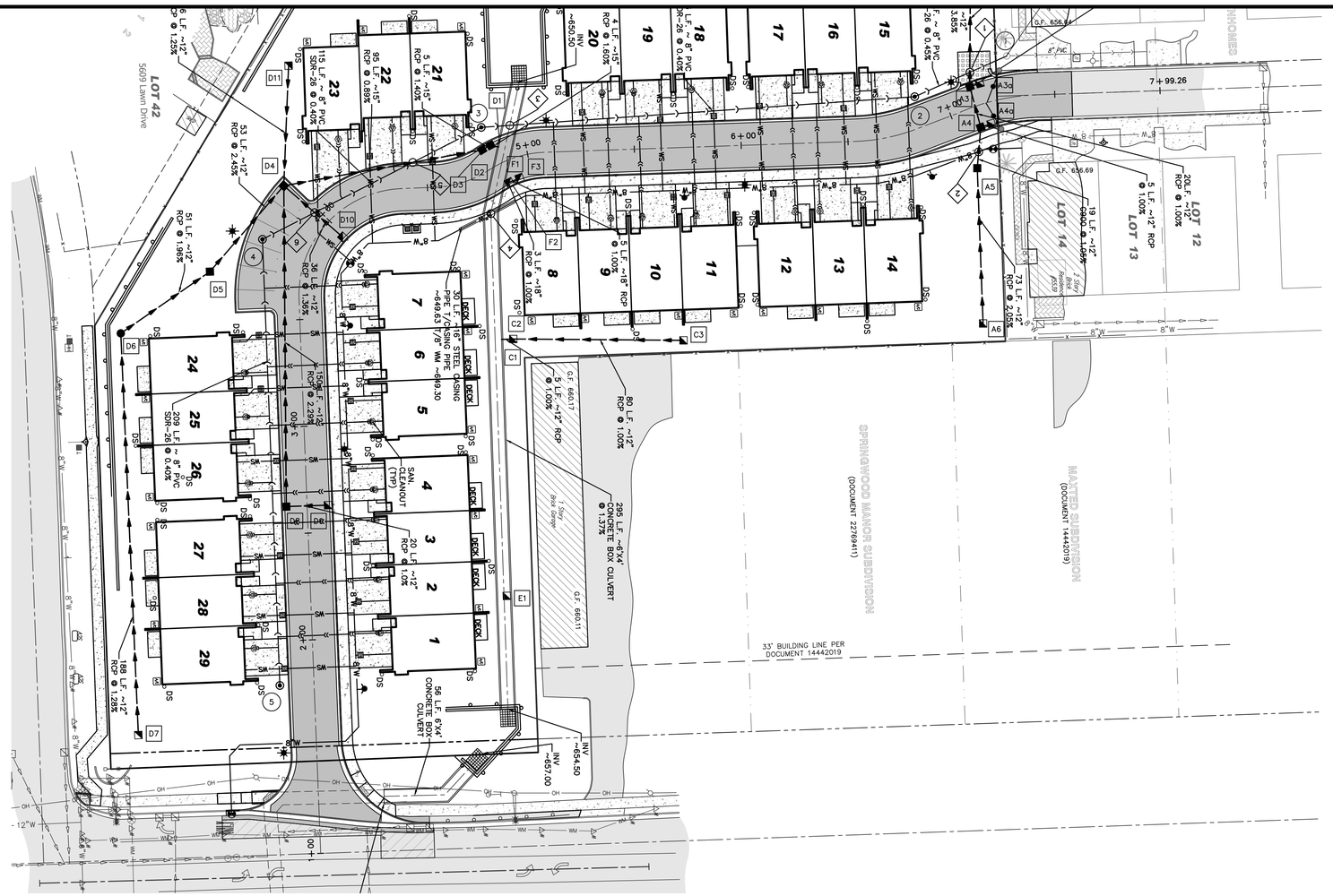
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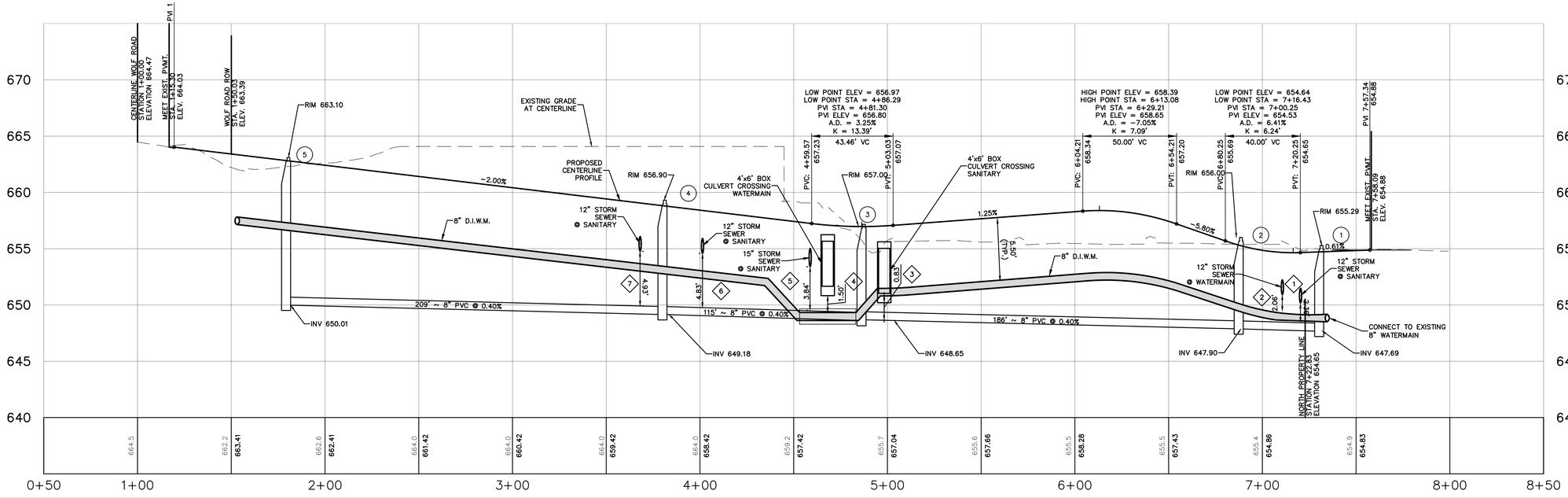
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Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22 2024
Design By: SDD
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OF
20

UTILITY SERVICES PLAN

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HERITAGE COURT
STATION: 0+50.00 TO 8+50.00

PROFILE SCALE
H: 1" = 30'
V: 1" = 5'

REVIEW SET NOT FOR CONSTRUCTION

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WOLF ROAD REVIEW	SDD
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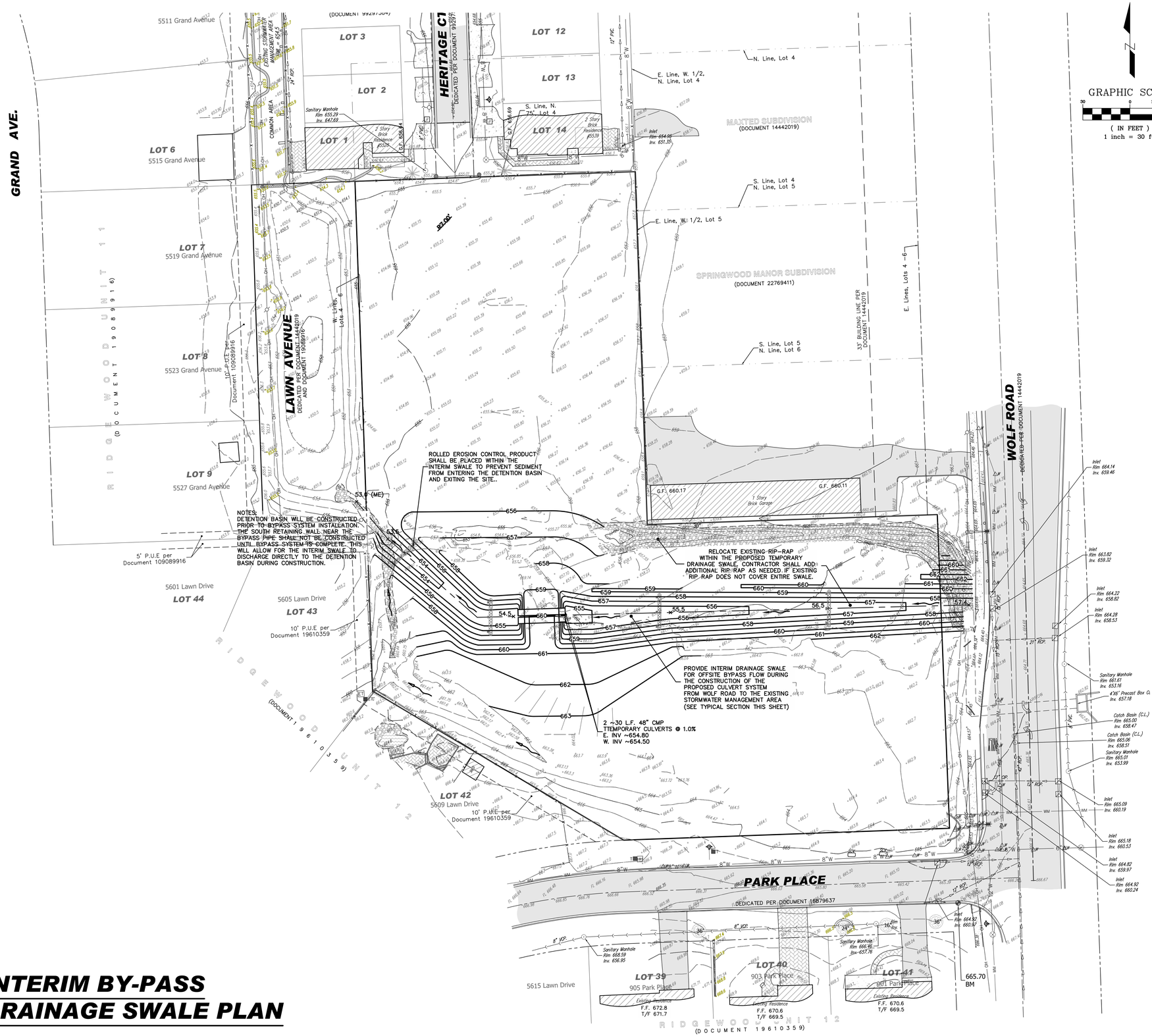
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PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

HERITAGE COURT PLAN & PROFILE 1+00 TO 8+50

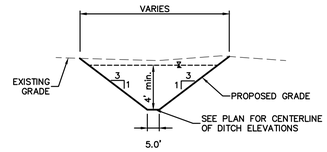
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GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.



TEMPORARY DRAINAGE SWALE SECTION
NOT TO SCALE

INTERIM BY-PASS DRAINAGE SWALE PLAN

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REVISIONS			
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1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
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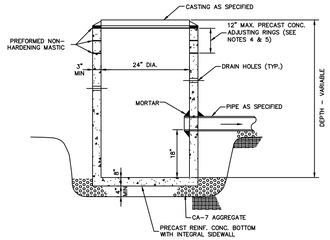
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PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
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Drawn By: DEI
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OF
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INTERIM BY-PASS DRAINAGE SWALE PLAN

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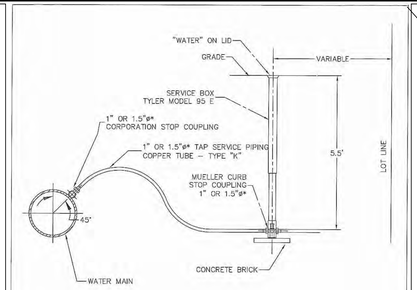


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA- 11 AROUND CATCH BASIN TO SUBGRADE IN PAVED AREAS
2. ALTERNATE INLET BOTTOM – PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON-SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (RUB-R-NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

CATCH BASIN TYPE C

NOT TO SCALE

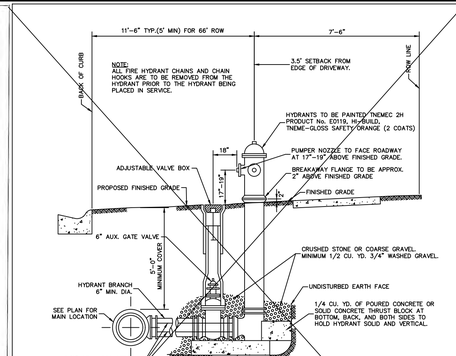


NOTES:

1. ALL FITTINGS SHALL BE COMPRESSION TYPE.
2. TRENCH BACKFILL (CA–7 CRUSHED LIMESTONE) SHALL BE USED UNDER AND WITHIN 2 FEET OF ALL PAVED AREAS (SIDEWALK, DRIVEWAY AND ROADWAY).
3. NO OPEN CUTTING OF PAVEMENT WILL BE PERMITTED. AUGER AND PUSH OR DIRECTIONAL BORE TO RECEIVING PIT IF MAIN IS UNDER PAVEMENT. SEE VILLAGE STANDARD DETAILS FOR PAVEMENT, SIDEWALK OR DRIVEWAY REPLACEMENT. ALL PAVEMENT, SIDEWALK, CURB AND DRIVEWAYS MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
4. ON 4" WATER MAINS, AN ALL STAINLESS STEEL TAPPING CLAMP SHALL BE USED. IN ADDITION, THE HOLE DRILLED IN THE MAIN SHALL NOT EXCEED 1". EXCEPT FOR THE HOLE DRILLED IN THE MAIN, ALL HARDWARE FOR A 1.5" SERVICE SHALL BE SIZED FOR 1.5"ø.
5. Abandonment of existing water service requires removal of the corporation stop and placement of a stainless solid sleeve repair clamp.
6. NEW SERVICES SHALL BE TAPPED MIN. OF 2 FT. FROM EXISTING TAP.
7. RESTORATION OF PARKWAY SHALL BE MINIMUM 4" OF TOPSOIL AND SOD.
8. ANY DEVIATION FROM THIS PLAN SHALL BE APPROVED IN WRITING BY THE DEPARTMENT OF PUBLIC WORKS (708)246–1800 EXT. 200

**SIZE DETERMINED BY FIXTURE LOAD PER ILLINOIS PLUMBING CODE*

VILLAGE OF WESTERN SPRINGS WATER SERVICE revised 6/28/2002

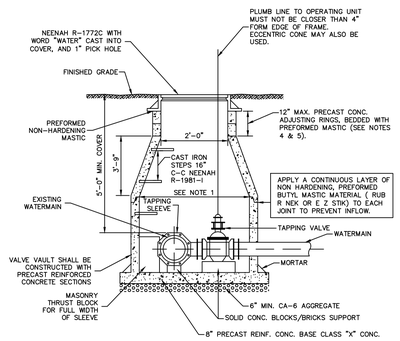


PERMITTED TYPES

FOR RESIDENTIAL AREAS ON 6" OR 8" MAINS	FOR ALL OTHER AREAS
WATEROUS TREND WB–77 4–3/4" VALVE OPENING	WATEROUS PACER WB–67 5–1/4" VALVE OPENING
CLOW F–2900 4–1/2" VALVE OPENING	CLOW F–2500 6–1/4" VALVE OPENING
MUELLER CENTURION A–421 4–1/2" VALVE OPENING	MUELLER CENTURION A–423 5–1/4" VALVE OPENING

FIRE HYDRANT

NOT TO SCALE

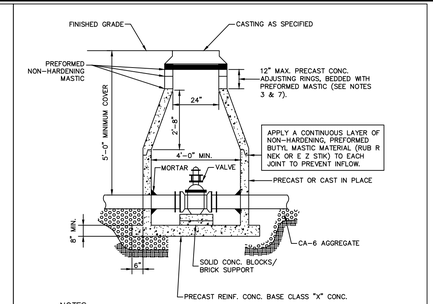


NOTES:

1. 60" DIA FOR ALL PRESSURE CONNECTIONS.
2. PIPE OPENINGS TO BE CAST INTO WALL.
3. PROVIDE CA–6 AGGREGATE BACKFILL AROUND WAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
4. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED;HOWEVER NO MORE THAT ONE TWO INCH ADJUSTING RING OR NO MORE THAN TWO RINGS IN TOTAL MAY BE USED.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PERFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT FOR PRESSURE CONNECTION

NOT TO SCALE



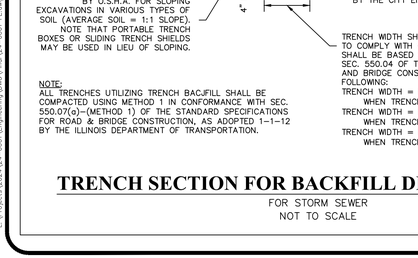
NOTES:

1. VAULT DIAMETER TO BE ONE FOOT LARGER, WHERE VALVE IS LOCATED AT TEE CONNECTION OF MAIN.
2. PROVIDE CA–6 AGGREGATE BACKFILL AROUND VAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
3. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED. HOWEVER NO MORE THAN ONE, TWO INCH ADJUSTING RING OR NO MORE TAN TWO RINGS IN TOTAL MAY BE USED.
4. VALVE MUST BE ALIGNED WITH CENTER OF VAULT OPENING.
5. CONES MUST BE CONCENTRIC WITH VALVES 12" AND SMALLER.
6. BUTTERFLY VALES REQUIRE ECCENTRIC CONES.
7. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT TYPE A

(WATER TIGHT)

NOT TO SCALE

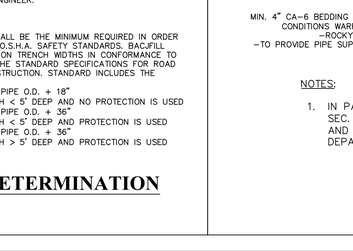


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE MANHOLE BOTTOM – PRECAST REINFORCED CONCRETE
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL MANHOLES IN PAVED AREAS.

STORM MANHOLE TYPE A

NOT TO SCALE

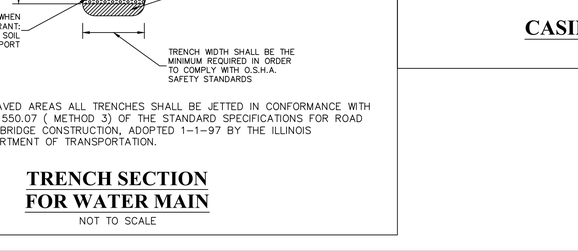


NOTES:

1. CATCH BASINS ARE TO BE USED IN PAVED AREAS ONLY.
2. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND CATCH BASIN TO SUBGRADE ELEVATION.
3. ALTERNATE CATCH BASIN BOTTOM – PRECAST REINFORCED CONCRETE BASE.
4. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
6. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
7. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE CATCH BASIN WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL CATCH BASINS.

CATCH BASIN TYPE A

NOT TO SCALE



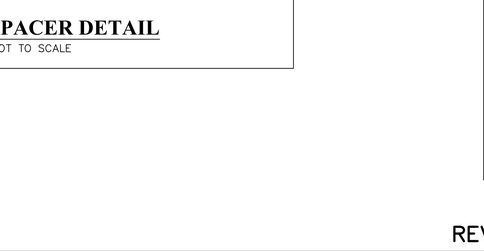
STEEL PIPE CASING		
WM DIA	STEEL CASING PIPE DIA	MIN. THICKNESS STEEL CASING
6"	12"	0.188"
8"	16"	0.219"
10"	18"	0.250"
12"	20"	0.281"
14"	24"	0.344"
16"	24"	0.344"
18"	30"	0.406"
20"	30"	0.406"
24"	30"	0.406"

NOTES:

1. IN LIEU OF 45 DEGREE BENDS, WATER MAIN DEPRESSION MAY BE CONSTRUCTED BY DEFLECTING WATERMAIN PER MANUFACTURERS RECOMMENDATION TO ACHIEVE THE MINIMUM 18" OF VERTICAL SEPARATION.
2. ALL FITTINGS AND JOINT RESTRAINTS ARE INCIDENTAL TO COST OF WATERMAIN.
3. THIS TYPE OF CROSSING CASING SHALL BE INSTALLED WHENEVER THE WATERMAIN IS CONSTRUCTED BELOW SEWERS.
4. THE STEEL CASING SHALL BE ONE CONTINUAL SECTION (NO JOINTS).
5. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

WATERMAIN DEPRESSION WITH CASING PIPE

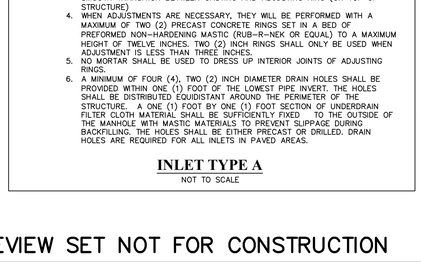
NOT TO SCALE



TYPICAL WATER MAIN THRUST BLOCKING

NOT TO SCALE

PIPE DIA.	APPROX. WT.(LBS)	WALL	A	B	C	D	E	G	R	SLOPE
12"	530	2"	4"	24"	4'–0 7/8"	6'–0 7/8"	24"	2"	9"	1:2.4
15"	740	2 1/4"	6"	27"	3'–10"	6'–1"	30"	2 1/4"	11"	1:2.4
18"	990	2 1/2"	9"	27"	3'–10"	6'–1"	36"	2 1/2"	12"	1:2.4
21"	1280	2 3/4"	9"	35"	38"	6'–1"	3'–6"	2 3/4"	13"	1:2.4
24"	1520	3"	9 1/2"	3'–7 1/2"	30"	6'–1 1/2"	4'–0"	3"	14"	1:2.5
30"	2190	3 1/2"	12"	4'–6"	19 3/4"	6'–1 3/4"	5'–0"	3 1/2"	15"	1:2.5
36"	4100	4"	15"	5'–3"	34 3/4"	8'–1 3/4"	6'–0"	4"	20"	1:2.5
48"	6530	5"	24"	6'–0"	28"	8'–2"	7'–0"	5"	22"	1:2.5
60"	8730	6"	35"	5'–0"	39"	8'–3"	8'–0"	5"	*	1:1.9



* RADIUS AS FURNISHED BY MANUFACTURER ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICLE DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H)

NOTES:

1. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M–170 CLASS III, WALL "B" REINFORCED CONCRETE PIPE.
2. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
3. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS ADOPTED 7–1–94. COST INCIDENTAL TO END SECTION.
4. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD 2449–1.
5. ALL FLARED END SECTIONS FOR PIPE GREATER THAN 12" IN DIAMETER SHALL BE PROVIDED WITH A GRATE.

PRECAST REINFORCED CONCRETE FLARED END SECTION

NOT TO SCALE

NOTE:
ALL TRENCHES UTILIZING TRENCH BACJFILL SHALL BE COMPACTED USING METHOD 1 IN CONFORMANCE WITH SEC. 550.07(a)–(METHOD 1) OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, AS ADOPTED 1–1–12 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR BACKFILL DETERMINATION

FOR STORM SEWER

NOT TO SCALE

NOTES:

1. IN PAVED AREAS ALL TRENCHES SHALL BE JETTED IN CONFORMANCE WITH SEC. 550.07 (METHOD 3) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED 1–1–97 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR WATER MAIN

NOT TO SCALE

NOTES:

1. SPACERS TO BE SIZED TO ALLOW CARRIER PIPE TO BE CENTERED IN CASING LOCATE SPACERS 2' FROM END OF CASING AND EVERY 6' EACH PIPE LENGTH
2. CASING TO BE SEALED AT BOTH ENDS WITH WATERTIGHT BITUMINOUS PLUG.
3. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

CASING SPACER DETAIL

NOT TO SCALE

NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA–11 AROUND INLET TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE INLET BOTTOM: PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE)
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

INLET TYPE A

NOT TO SCALE

REVIEW SET NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–27–24	PER LAGRANGE HIGHLANDS SD	DNV
2	10–17–24	PER VILLAGE REVIEW	SDD
3	11–04–24	PER CCDOTH REVIEW	DMV
4	11–04–24	PER VILLAGE REVIEW	DMV
5	12–12–24	PER REVISED GEOMETRY	DMV
6	01–27–25		DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

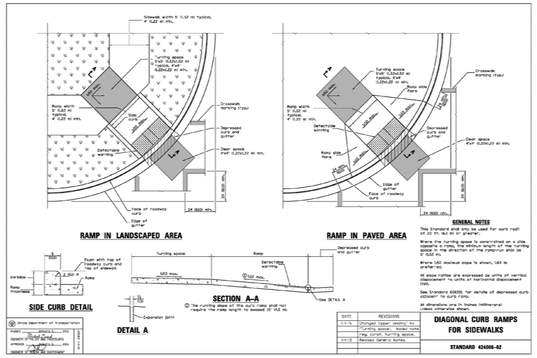
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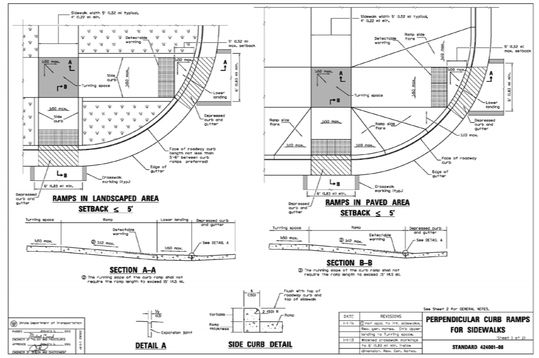
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Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

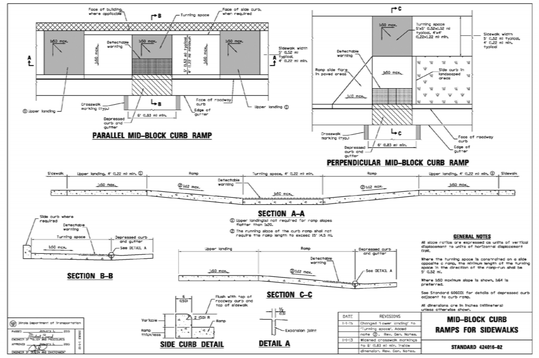
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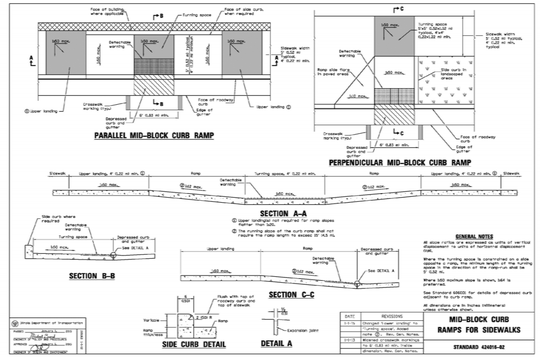
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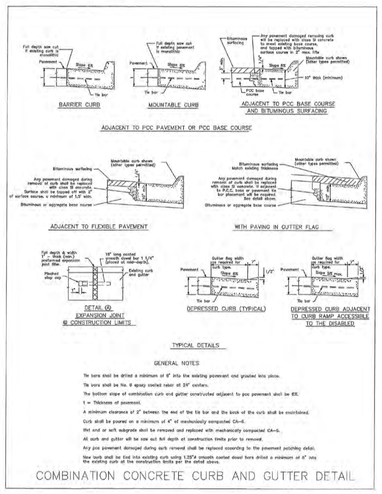
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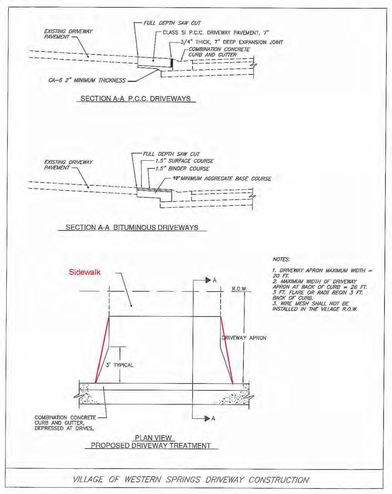


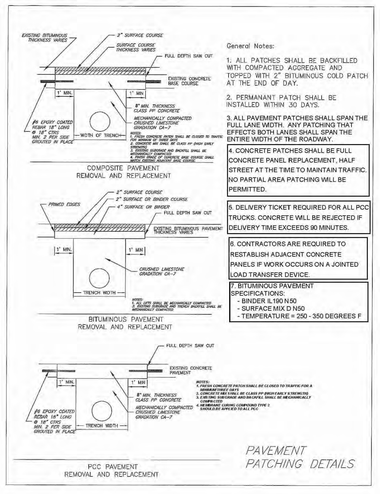


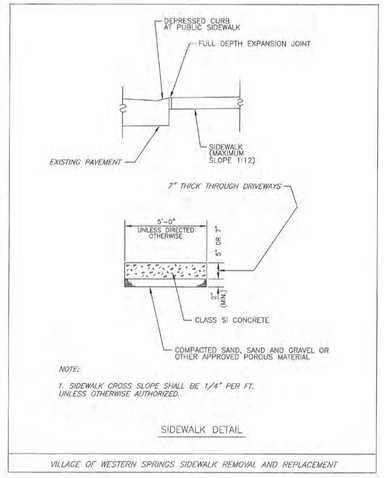


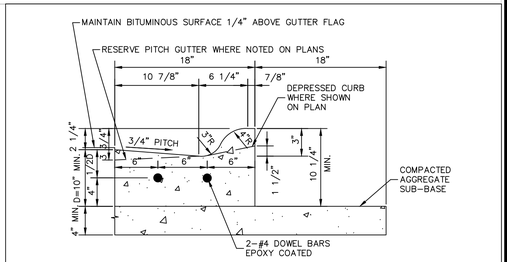






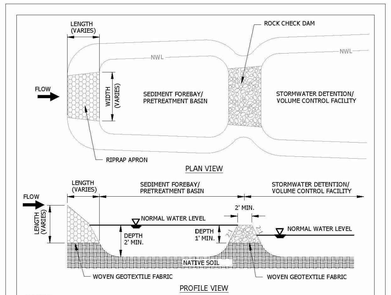


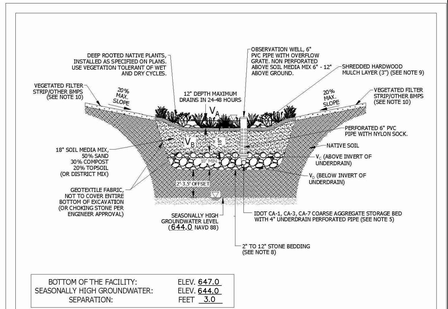


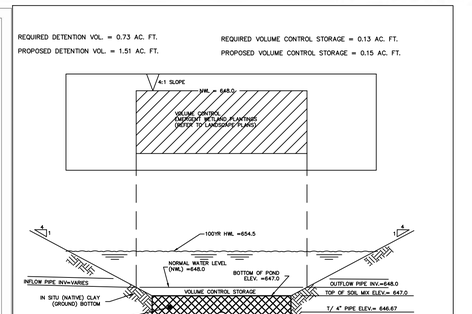


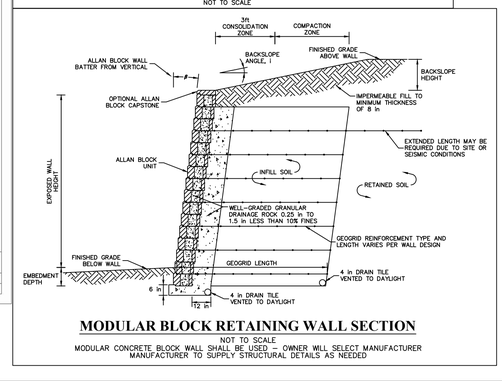
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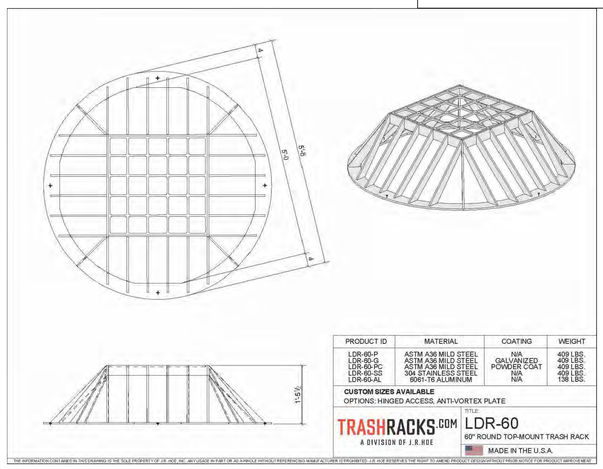
NOT TO SCALE











REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WOLF ROAD REVIEW	SDD
3	10-29-24	PER VILLAGE REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

FINAL ENGINEERING PLANS
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HERITAGE CROSSING
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DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION

Project No.: 24-0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

14
OF
20

PROJECT DETAILS

REVIEW SET
NOT FOR CONSTRUCTION

L:\Projects\2024\24-0001\Engineering\GWD\Final\24-0001 TC.dwg Plot Date: 1/27/2025 2:45:34 PM By: dmoh

HADCO by @ignify | Outdoor | Poles and Brackets | P4030 Straight Round Smooth

P4030 Poles and Brackets

Straight Round Smooth



Project:
Location:
QM NO.
Type:
Catalog #:
Notes: QTY:

example: P4030 S 4 F1

Order guide

Product Code	Pole Height	Finish	Outlet Location	Outlet Options
P4030	14	A		
	12'	A Black	T 12" Down from Top - Aligned with Hole Side	D Standard Duplex
	14'	W White	B 6" Up from Top of Base - Aligned with Hole Side	S GFI Duplex
	16'	N Bronze		
		G Green		

EPA calculated based on deductive break loading. For AASHTO clothing, contact factory.

Pole Data

Pole Model	Pole Shape	Pole Type	Shaft Dimensions	Pole Fluted	Anchor Base Shape	Bolt Circle	Base Dim (in)	Hand Hole Dim (in)
P4030	Round	Straight	4	Smooth	round	8 to 12	15 x ø0.125	6 x 12

Pole Family	Catalog Number	Nominal Height (ft)	Tenon Section (in)	Wall Thickness (in)	EPA Rating 90 MPH (sq. ft)	EPA Rating 100 MPH (sq. ft)	Anchor Bolts (in)
P4030	P4030-12	12	3	0.125	10.69	11.61	3/4-10 by
P4030	P4030-14	14	3	0.125	12.16	7.16	3/4-39 by
P4030	P4030-16	16	3	0.125	12.71	6.00	3/4-10 by
P4030	P4030-18	18	3	0.125	11.40	4.83	3/4-39 by

Specifications

HOUSING:
16GI HH high-strength, low-copper, proprietary cast aluminum alloy. 6000-T5 extruded aluminum. Anchor rods are hot dipped galvanized steel. Tenon is 356 HM sand cast aluminum.

FINISH:
A durable polyurethane enamel finish is applied after assembled use shot blasted to create a surface profile which allows for the highest level of paint adhesion. Laboratory tested for superior weatherability and fade resistance in accordance with ASTM B-117-64 and ANSI/ASTM G53-77 specifications. For larger projects where a custom color is required, contact the factory for more information.

WARRANTY:
Please visit **www.signify.com/warranties** for more details on structural and finish warranty.

OUTLET:
Standard Duplex Outlet has universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant. GFI Duplex Outlet has built-in function indicator light, universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant.

The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract.

Signify

HADCO by @ignify | Urban | Hagerstown | TX03 Post top

TX03 Hagerstown

Post top



Project: HERITAGE CROSSING
Location: WESTERN SPRINGS
QM NO.
Type: SM
Catalog #:
Notes: QTY: 1

Hadco's Hagerstown LED post top gives you the ability to create a unique style through our modular post top concepts to blend into any residential and historic urban settings. With the latest LED technology you can seamlessly replace traditional HID technology to maximize energy savings and significantly reduce total cost of ownership. The Hagerstown luminaire provides excellent uniformity, traditional cosmetics look, with the benefits of modern technology.

Ordering guide

example: TX03-32-120-3-4-A-E-N-363-A-E-SP1

Series	LEDs	Gen.	Pods	Finials	Fasteners	Finishes	Optical System	Photo controls
TX03 Hagerstown LED post top	20 32 40 48 64 64*	03 Gen3	B	A A-Finial B Ball C Orbital D Flame E Tribal F Finial G Urn H Urn w/ Ring N No Finial	1 Hex head bolts 2 Allen head bolts	A Black B White N Bronze G Green	2 Type 2 3 Type 3 4 Type 4 5 Type 5 RWM Type 3 Wide w/ HSS	E Button eye photo controls 1 120 VAC 2 208-240/277 VAC 3 347 VAC R Twist-lock receptacle* N None

Ordering guide (continued)

Future Proof controls	Color Temps	Voltages	Drivers	Driver Options	Surge protection
N	740	A	S	N	SP1
R7 7-Pin Receptacle* N None	T30 3000K T40 4000K	120-277 VAC 347-480 VAC	3 350mA 4 530 mA 7 700mA 8 1000mA 9 1050mA	4 4 hrs 25% reduction* 5 4 hrs 50% reduction* 6 4 hrs 75% reduction* 7 4 hrs 100% reduction* DE 6 hrs 15% reduction* DF 6 hrs 25% reduction* DG 6 hrs 50% reduction* DL Compatible with DALI DN No dimming R Dim to night adjustable wattage selector SRD Sensor ready driver (standard configuration)** SRDT Sensor ready driver (Tamper Proof)**	SP1 10kV/10kA (standard) SP2 20kV/20kA (optional)

1. Configuration arrows with 4 LEDs and 64 LEDs (32 array) board are not compatible with the 1050mA (9) driver current.
2. HALEDs are limited to 18C ambient rating with 1050mA driver current.
3. (Closed Fasteners)
4. * Twist-lock receptacle with CLEAR photocells are not compatible with the Twist-Lock receptacle (R) photocontrol.
5. ** Without an ordering of the roof, NEMA fitter is required.

Dimensions



Max. EPA: 1.72 sq. ft.
Max. Weight: 37 lbs.

Finials



Decorative Pods



TX03 Hagerstown

Post top

Lumen Charts

LED module 3000K	LED qty	System current	Color Temp.	Average System Wattage**	Type 2 Lumens Output	Type 2 B.U.G. Rating	Type 2 Efficacy	Type 3 Lumens Output	Type 3 B.U.G. Rating	Type 3 Efficacy	Type 3W Lumens Output	Type 3W B.U.G. Rating	Type 3W Efficacy
TX0332-Gb-w740-3	32	350	4000	35.4	4284	B1-U2-G1	121	4261	B1-U2-G1	120	4403	B1-U2-G1	124
TX0332-Gb-w740-5	32	530	4000	51.8	6377	B1-U3-G2	116	6372	B1-U3-G1	116	6158	B2-U2-G2	119
TX0332-Gb-w740-7	32	700	4000	71.9	7829	B2-U3-G2	109	8125	B2-U3-G2	109	8066	B2-U3-G2	112
TX0332-Gb-w740-8	32	900	4000	93.9	8536	B2-U3-G2	92	9521	B2-U3-G2	101	9825	B2-U3-G2	105
TX0332-Gb-w740-1	32	1050	4000	107.7	10814	B2-U3-G2	100	10806	B2-U3-G2	100	11141	B3-U3-G3	103
TX0348-Gb-w740-5	48	350	4000	51.4	6247	B2-U3-G2	122	6241	B2-U3-G2	121	6438	B2-U3-G2	125
TX0348-Gb-w740-7	48	530	4000	75.5	8142	B2-U3-G2	118	8135	B2-U3-G2	118	8213	B2-U3-G2	122
TX0348-Gb-w740-8	48	700	4000	93.9	11458	B3-U3-G3	122	11458	B3-U3-G3	122	11784	B3-U3-G3	125
TX0348-Gb-w740-9	48	900	4000	136.8	14169	B3-U3-G3	103	14165	B3-U3-G3	103	14624	B3-U3-G3	106
TX0348-Gb-w740-1	48	1050	4000	139.4	16667	B3-U3-G3	120	16658	B3-U3-G3	120	16939	B3-U3-G3	121
TX0364-Gb-w740-3	64	350	4000	51.4	6247	B2-U3-G2	122	6241	B2-U3-G2	121	6438	B2-U3-G2	125
TX0364-Gb-w740-5	64	530	4000	75.5	8142	B2-U3-G2	118	8135	B2-U3-G2	118	8213	B2-U3-G2	122
TX0364-Gb-w740-7	64	700	4000	93.9	11458	B3-U3-G3	122	11458	B3-U3-G3	122	11784	B3-U3-G3	125
TX0364-Gb-w740-8	64	900	4000	136.8	14169	B3-U3-G3	103	14165	B3-U3-G3	103	14624	B3-U3-G3	106
TX0364-Gb-w740-9	64	1050	4000	139.4	16667	B3-U3-G3	120	16658	B3-U3-G3	120	16939	B3-U3-G3	121

LED module 4000K	Type 4 Lumens Output	Type 4 B.U.G. Rating	Type 4 Efficacy	Type 5 Lumens Output	Type 5 B.U.G. Rating	Type 5 Efficacy
TX0332-Gb-w740-3	4284	B1-U2-G1	121	4261	B1-U2-G1	120
TX0332-Gb-w740-5	6377	B1-U3-G2	116	6372	B1-U3-G1	116
TX0332-Gb-w740-7	7829	B2-U3-G2	109	8125	B2-U3-G2	109
TX0332-Gb-w740-8	8536	B2-U3-G2	92	9521	B2-U3-G2	101
TX0332-Gb-w740-1	10814	B2-U3-G2	100	10806	B2-U3-G2	100
TX0348-Gb-w740-5	6247	B2-U3-G2	122	6241	B2-U3-G2	121
TX0348-Gb-w740-7	8142	B2-U3-G2	118	8135	B2-U3-G2	118
TX0348-Gb-w740-8	11458	B3-U3-G3	122	11458	B3-U3-G3	122
TX0348-Gb-w740-9	14165	B3-U3-G3	103	14165	B3-U3-G3	103
TX0348-Gb-w740-1	16667	B3-U3-G3	120	16658	B3-U3-G3	120
TX0364-Gb-w740-3	6247	B2-U3-G2	122	6241	B2-U3-G2	121
TX0364-Gb-w740-5	8142	B2-U3-G2	118	8135	B2-U3-G2	118
TX0364-Gb-w740-7	11458	B3-U3-G3	122	11458	B3-U3-G3	122
TX0364-Gb-w740-8	14165	B3-U3-G3	103	14165	B3-U3-G3	103
TX0364-Gb-w740-9	16667	B3-U3-G3	120	16658	B3-U3-G3	120

Lumen charts continue on next page.

* Configurations with 64 (64 LED array boards are limited to a 25C ambient rating with the 900mA (8) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Experience should always be confirmed by a photometric report.

Note: Experience should always be confirmed by a photometric report. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

TX03 Hagerstown

Post top

Lumen Charts

LED module 3000K	LED qty	System current	Color Temp.	Average System Wattage**	Type 2 Lumens Output	Type 2 B.U.G. Rating	Type 2 Efficacy	Type 3 Lumens Output	Type 3 B.U.G. Rating	Type 3 Efficacy	Type 3W Lumens Output	Type 3W B.U.G. Rating	Type 3W Efficacy
TX0332-Gb-w730-3	32	350	3000	35.4	4003	B1-U2-G1	113	4001	B1-U2-G1	113	4135	B1-U2-G1	117
TX0332-Gb-w730-5	32	530	3000	51.8	5981	B2-U3-G2	108	5981	B1-U3-G1	108	5781	B2-U2-G2	111
TX0332-Gb-w730-7	32	700	3000	71.9	7317	B2-U3-G2	102	7311	B2-U3-G2	102	7539	B2-U3-G2	105
TX0332-Gb-w730-8	32	900	3000	93.9	8013	B2-U3-G2	86	8935	B2-U3-G2	95	9182	B2-U3-G2	98
TX0332-Gb-w730-1	32	1050	3000	107.7	10107	B2-U3-G2	94	10098	B2-U3-G2	94	10412	B2-U3-G2	97
TX0348-Gb-w730-5	48	350	3000	51.4	5838	B2-U3-G2	114	5833	B2-U3-G2	113	6016	B2-U3-G2	117
TX0348-Gb-w730-7	48	530	3000	75.5	8357	B2-U3-G2	111	8350	B2-U3-G2	111	8610	B2-U3-G2	114
TX0348-Gb-w730-8	48	700	3000	104.7	10671	B3-U3-G3	102	10662	B2-U3-G2	102	11394	B3-U3-G3	109
TX0348-Gb-w730-9	48	900	4000	136.8	12997	B3-U3-G3	93	12985	B3-U3-G3	93	13393	B3-U3-G3	96
TX0348-Gb-w730-1	64	350	4000	68.7	7637	B2-U3-G2	111	7635	B2-U3-G2	111	7861	B2-U3-G2	114
TX0364-Gb-w730-3	64	530	3000	100.5	10932	B3-U3-G3	104	10923	B2-U3-G2	104	11263	B3-U3-G3	107
TX0364-Gb-w730-5	64	700	3000	139.4	13990	B3-U3-G3	101	13948	B3-U3-G3	101	14382	B3-U3-G3	104
TX0364-Gb-w730-7	64	900	3000	179.8	16903	B3-U3-G3	84	16871	B3-U3-G3	83	17394	B3-U3-G3	86

LED module 4000K	Type 4 Lumens Output	Type 4 B.U.G. Rating	Type 4 Efficacy	Type 5 Lumens Output	Type 5 B.U.G. Rating	Type 5 Efficacy
TX0332-Gb-w730-3	4135	B1-U2-G1	117	4129	B2-U2-G1	116
TX0332-Gb-w730-5	5781	B2-U2-G2	111	5772	B2-U2-G1	111
TX0332-Gb-w730-7	7539	B2-U3-G2	105	7527	B3-U3-G2	107
TX0332-Gb-w730-8	9182	B2-U3-G2	98	9170	B3-U3-G2	100
TX0332-Gb-w730-1	10412	B2-U3-G2	97	10401	B3-U3-G2	100
TX0348-Gb-w730-5	6016	B2-U3-G2	117	6008	B3-U3-G2	117
TX0348-Gb-w730-7	8610	B2-U3-G2	114	8598	B3-U3-G2	114
TX0348-Gb-w730-8	11394	B3-U3-G3	109	11378	B4-U3-G2	109
TX0348-Gb-w730-9	13393	B3-U3-G3	96	13377	B4-U3-G2	96
TX0348-Gb-w730-1	7861	B2-U3-G2	114	7850	B3-U3-G2	114
TX0364-Gb-w730-3	11263	B3-U3-G3	107	11247	B4-U3-G2	107
TX0364-Gb-w730-5	14382	B3-U3-G3	104	14362	B4-U3-G2	104
TX0364-Gb-w730-7	17394	B3-U3-G3	86	17369	B4-U3-G2	86

* Configurations with 64 (64 LED array boards are limited to a 25C ambient rating with the 900mA (8) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Experience should always be confirmed by a photometric report.

Note: Experience should always be confirmed by a photometric report. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

TX03 Hagerstown

Post top

Specifications

Roof
Roof (0.0.090" thick spun aluminum (12"x7/8" 16"x7/8). Easy fixture replacement of either roof or bottom globe section if required.

Globe
Narrow body globe is constructed of clear injection-molded vertically ribbed UV stabilized acrylic globe. Globe is secured to the fitter with a heavy cast aluminum gasketed ring at the bottom diameter of 9". Globe (wasroof) has a 13"x11"x 14"x14"W".

Cage
Cage for narrow body globes (10" dia.) is constructed of die-cast 360 aluminum alloy with hinged door providing 180° entry into the fitter housing. Solid rectangular bars on each side of cage, height of cage is 17" and width of cage is 10". Finish is powder coated to match pole color.

Pods
Wrong block to accept three #8 solid or stranded wires key cast aluminum post adapter. Pod is secured to the fitter with four stainless steel set screws (hex head or Allen head as specified) for mounting to 3" O.D. post tenon. Glass holder has an interference water trap to prevent water from entering ballast compartment. Glass is secured to holder with 5/16-18 black cadmium stainless steel fasteners (Hex head or Allen head as specified). All hardware to be stainless steel and captive.

Optional Decorative Pods
Octagonal fitter (A) is constructed of die-cast 360 aluminum alloy with bottom-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (3"H x 1"W x 1"W).

Round fitter with sculpted petals (B) is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (3"H x 1"W x 1"W).

Fluted tapered hourglass fitter (C) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (3"H x 1"W x 1"W).

Smooth tapered hourglass fitter (D) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (3"H x 1"W x 1"W).

Tapered fluted fitter with scalloped flower petals (E) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell (10"H x 1"W x 1"W).

Tall round fluted fitter (G) is constructed of die-cast 360 aluminum alloy with removable door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (14"H x 1"W).

Round contemporary fitter (H) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Two-piece access to photo eye through top/mess door on pod (10"H x 1"W).

Round fluted long fitter (L) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with a side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"H x 1"W).

Decorative leaf fitter with scalloped petals (T) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"H x 1"W).

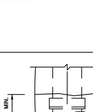


Tall round fluted fitter (G) is constructed of die-cast 360 aluminum alloy with removable door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Two-piece access to photo eye through top/mess door on pod (10"H x 1"W).

Round contemporary fitter (H) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Two-piece access to photo eye through top/mess door on pod (10"H x 1"W).

Round fluted long fitter (L) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with a side-hinged door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"H x 1"W).

Decorative leaf fitter with scalloped petals (T) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"H x 1"W).



Finials
All finials are cast aluminum mounted with 1/4-20 stainless steel threaded studs. Standard finial is Ball. Optional finials feature finials as specified. Finials N (Nonmetal) is optional.



Fasteners
Used to secure post fitter to post tenon and globe to globe holder. Hex Head (T) and Allen Head (A) are standard. Factory Black cadmium stainless steel.

Light Engine
LED light is composed of five plain components: Board, Sink, Lens, LED lamp, Optical System, and Driver. Electrical components are RoHS compliant.

LED Engine
Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA (on - Neutral White, 4000 kelvin nominal (3985K to 4509K) and 3000K (2895K to 3465K). Minimum CRI of 70 (Typical 75). Typical CCT of 3000K, 4000K or 5000K.

Heat Sink
Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Future Proof Control
R7 - Receptacle with 7 pin enabling dimming and additional functionality (to be determined). Can be used with a twist lock nute or a shorting cap. Will ship with a shorting cap installed for ease of ordering. Purchase shorting caps when you're ready to install your node.

Optical System
2 - Type 2
3 - Type 3
3L - Type 3 with House side shield
3HL - Type 3 with House side shield
3W - Type 3 Wide
3WHL - Type 3 Wide with House side shield
4 - Type 4
5 - Type 5

Above options are all composed of high performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is designed for 70 CRI minimum and Correlated Color Temperature (CCT) of 3000K, 4000K or 5000K.

Surge Protection
Surge protector tested in accordance with ANSI/IEEE C62.41 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-0-ruund, Line-Neutral and Neutral-Ground. Surge protector tested to DOE (US Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) solid state lighting (SSL) recommended practice for electrical immunity requirements for High Test Level 10kV / 10kA. Option for SP2 20kV/20kA.

Finish
Color in accordance with the ASMA 2603 standard. Application of polyester powder coating. Super durable TGIC polyester. 2.5 mil minimum of tolerance. The Thermoset TGIC resins provides a discoloration resistant finish, superior gloss and color retention. The finish as well as outer retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 1000 hours salt spray resistance rating in accordance with testing performed and per ASTM B117 standard.

Luminaire Useful Life
DLL, factor for long term energy consumption and delivered lumens for each option. Based on IESNT in situ thermal testing in accordance with LM-80 and LM-80, using LM-80 data from LED manufacturers and engineering projections, the useful life of the luminaire is expected to reach 70,000+ hours with >L70 lumen maintenance @ 25°C. Luminaire useful life accounts for LED lumen maintenance and additional factors, including LED life, driver life, PCB substrate, solder joints and thermal cycles and burning hours for normal applications.

Predicted Lumen Performance Data

Predicted lumen maintenance data*			
Ambient Temperature (°C)	Driver Hrs	Calculated L(p)hours^	Lp per TM-21^^	Lumen Maintenance % at 60,000 hours
25°C	up to 1050 mA	>100,000 hrs	>60,000 hrs	92.49%

1. Predicted performance derived from LED manufacturer's lumen engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
2. Projected performance for 60,000 hours of operation per IESNA TM-21 guidelines.
3. Calculated per IESNA TM21-11 Published by Illuminating Engineering Society of North America.

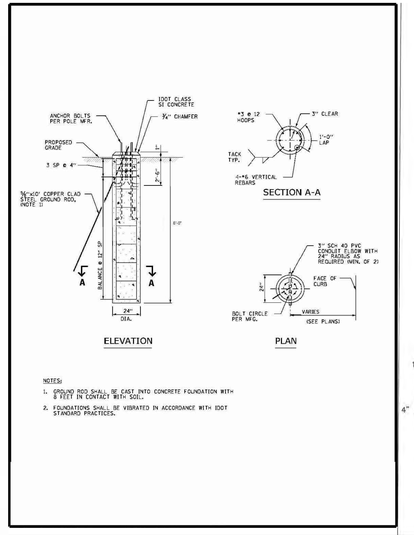
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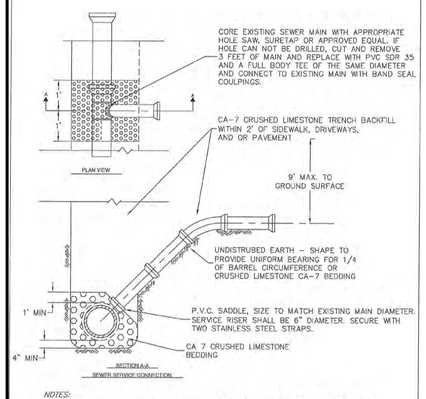
Signify Holding
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www.hadco.com



NOTES:

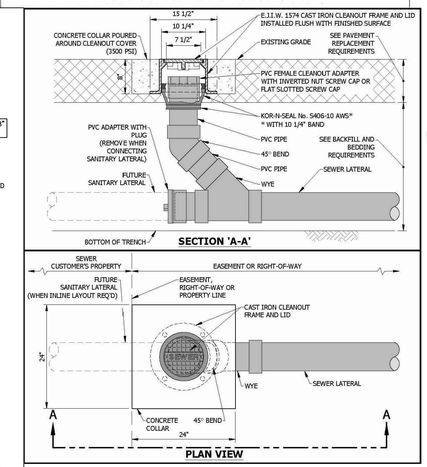
1. GROUND ROD SHALL BE CAST INTO CONCRETE FOUNDATION WITH 8 FEET IN CONTACT WITH SOIL.
2. FOUNDATIONS SHALL BE VIBRATED IN ACCORDANCE WITH IDOT STANDARD PRACTICES.

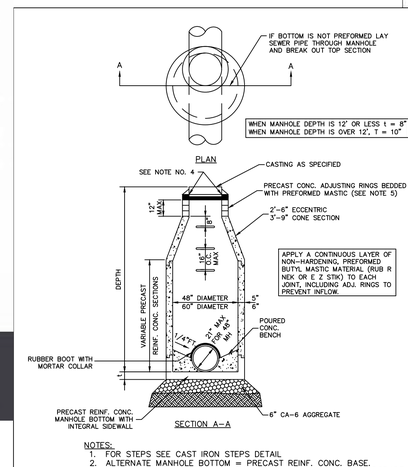


NOTES:

1. ALL PAVEMENT, SIDEWALK, DRIVEWAYS, AND CURB MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
2. UNDER NO CIRCUMSTANCES SHALL AN EXTERNAL CLEANOUT BE PLACED IN VILLAGE RIGHT OF WAY.

SANITARY SEWER SERVICE DETAIL



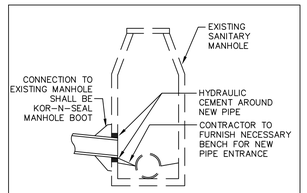


NOTES:

1. FOR STEPS SEE CAST IRON STEPS DETAIL
2. ALTERNATE MANHOLE BOTTOM = PRECAST REINF. CONC. BASE.
3. PROVIDE CA-6 AGGREGATE BACKFILL AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
4. CONCRETE FILLETS SHALL BE MADE WITH MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN CASTING, RINGS OR TOP OF STRUCTURE.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO PRECAST CONCRETE RINGS SET IN A BED OF PREFORMEDNON-HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES.
6. TWO INCH ADJUSTING RINGS SHALL ONLY BE PERMITTED WHEN THE HEIGHT OF THE ADJUSTMENT IS LESS THAN 3 INCHES.

SANITARY MANHOLE

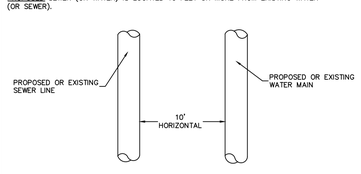
NOT TO SCALE



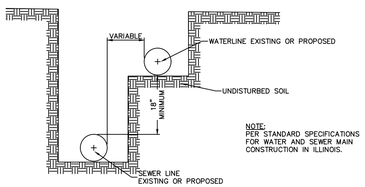
CONNECT TO EXIST. SANITARY MANHOLE

NOT TO SCALE

PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR MORE FROM EXISTING WATER (OR SEWER).



PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER (OR SEWER).



NOTE:
PER STANDARD SPECIFICATIONS FOR WATER AND SEWER MAI

FIRE STROBE 2000

EMERGENCY VEHICLE STROBE DETECTOR

The FIRE STROBE 2000 provides rapid access to automatic gates and secured areas. The FIRE STROBE 2000 opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (1.4Hz).

Now with STROBEWATCH™.





FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2000 can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2000 is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

DISTRIBUTED BY:

FIRE STROBE 2000 Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2000 signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately 5 seconds.

The FIRE STROBE 2000 is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM® STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2000 for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed.

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2000 system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2000 transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM® emitters, double, quad flash strobes 140-170 fpm. 100% digital.
2. The FIRE STROBE 2000 is fully compatible with the OPTICOM® priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2000 has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2000 has been abused, over voltaged, or altered in any way. The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

INSTALLATION

⚠CAUTION

- *To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging more than 18 inches (46 cm) deep.*
- ALWAYS wear protective gloves and eye protection when changing the battery or working around the battery compartment.

Installation Tips

Do's

- Weld a horizontal bar across entire gate on any installation for strength. Make sure that the operator is mounted level or it will not function properly.
- Make sure there is slack in the operator cable.
- The operator can be mounted on top of the gate frame.
- The operator must be installed at least 12" (30 cm) from the ground.





Don'ts

- DO NOT install upside-down.
- DO NOT install next to sprinklers or any area that may expose the bottom of operator to water.
- DO NOT install on uphill or downhill gates.
- DO NOT install on ANY pedestrian passageways, doorways, or gates.
- DO NOT over-bend the operator cable. Doing this will cause the wires to eventually break.
- DO NOT weld the crossbar on just a few pickets, or they could bend.

INSTALLATION

Large Metal Control Box

The control box MUST be mounted within 5 feet (1.52 m) of the gate operator. Mount the control box as high as possible for best radio reception. Make sure the control box is level.
NOTE: *The Large Metal Solar Control Box (Model XLSOLARCONTUL) does not have the electrical outlets or the expansion board shown in the images.*

Wall or Column Mount

1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. Remove the toroid assembly from the control box by loosening the three screws and lifting the assembly up and out.
3. Use knock outs located at the 4 corners of the control box and knock out using a screwdriver and hammer.
4. Secure the control box to mounting surface using the provided screws (4).

Post Mount

NOTE: *The post mount option is not recommended for the 33AH battery application.*

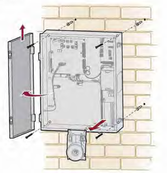
1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. The control box can be mounted to a post with 1/2" bolts (refer to chart). The knock out will accommodate a 3/8" diameter 1/2" bolt. Select center mounting holes (top and bottom) and knock out using a screwdriver and hammer.
3. Secure the control box to mounting surface with U-bolts and rubber washers (not provided) to ensure a watertight seal.

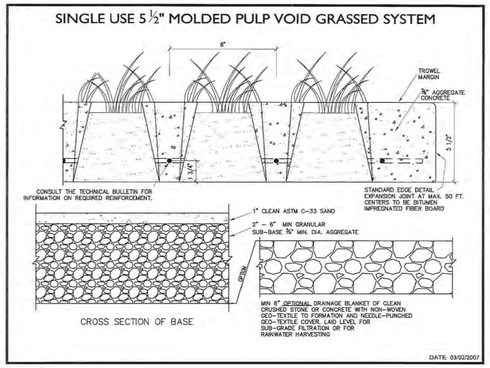
TYPE AND SIZE	"U" BOLT OPENING
Standard 2" Round Pipe	3-1/2"
Standard 4" Square Post	4"
Standard 6" Square Post	6"

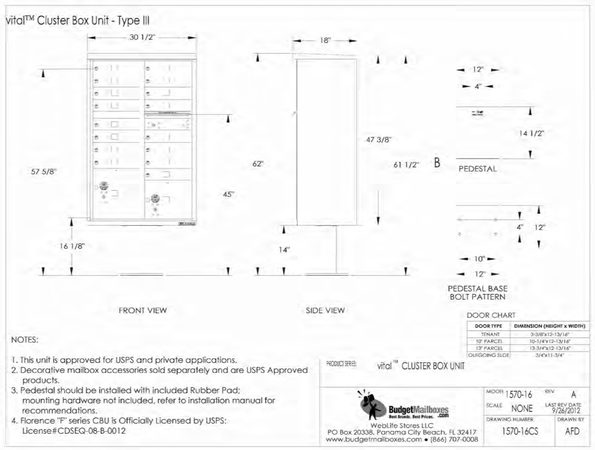
Wall or Column Mount

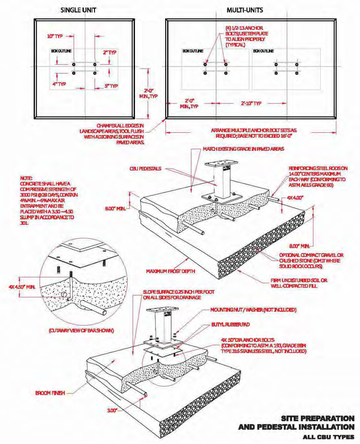


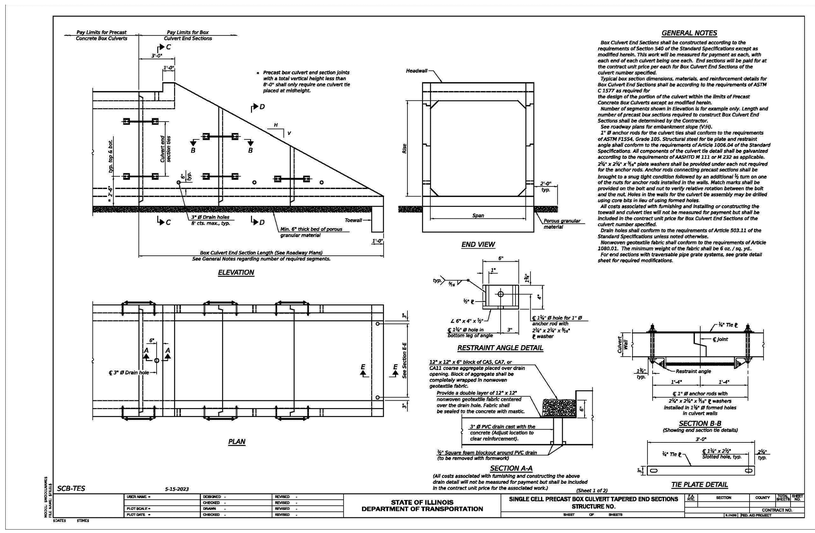
Post Mount

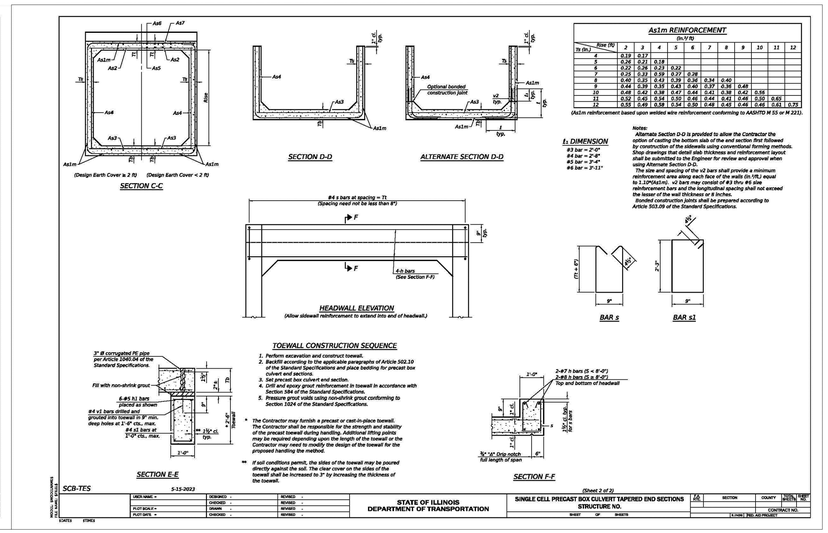












REVIEW SET
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NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WILLAGE REVIEW	SDD
3	10-19-24	PER CDDOTH REVIEW	DMV
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

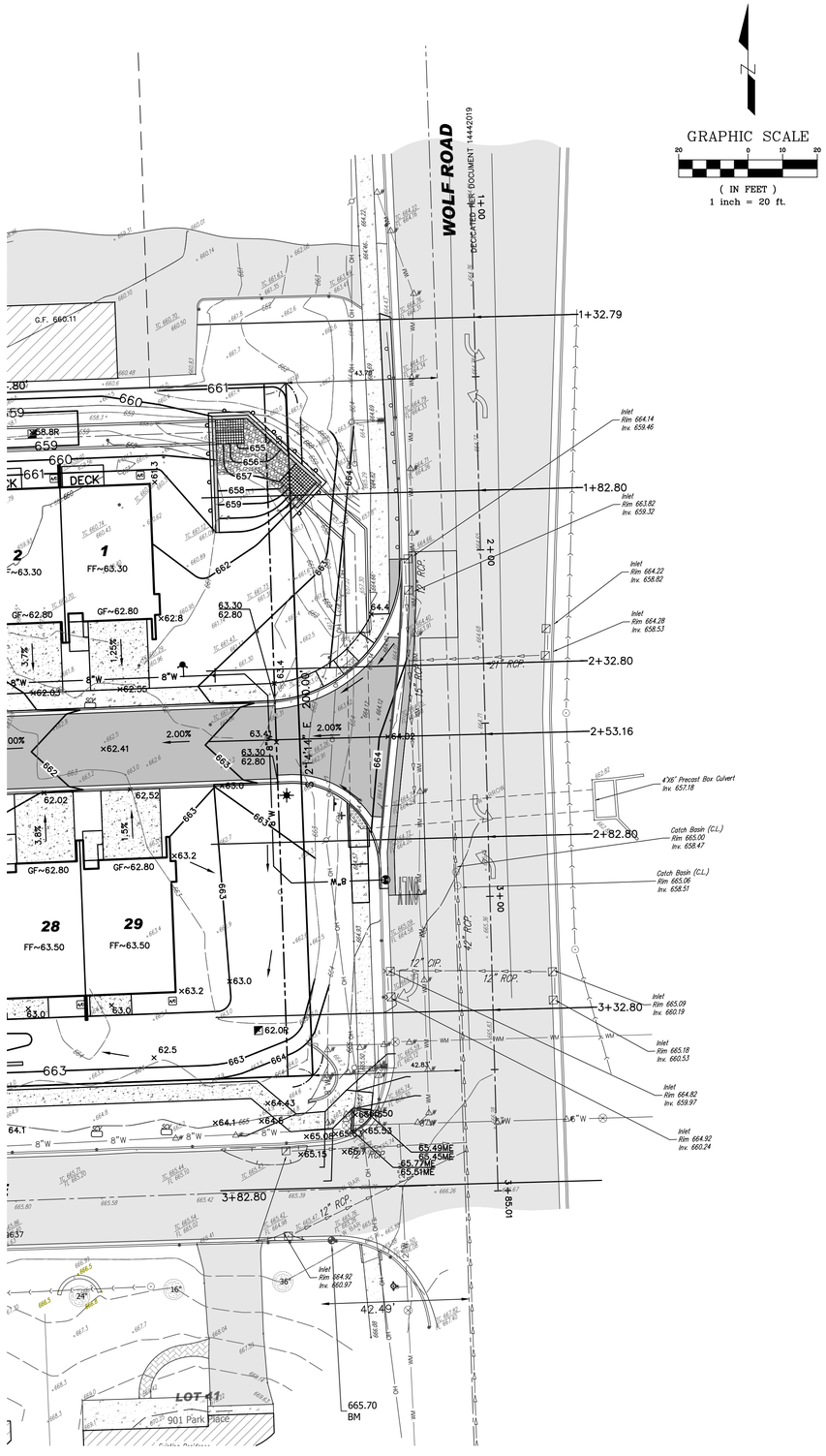
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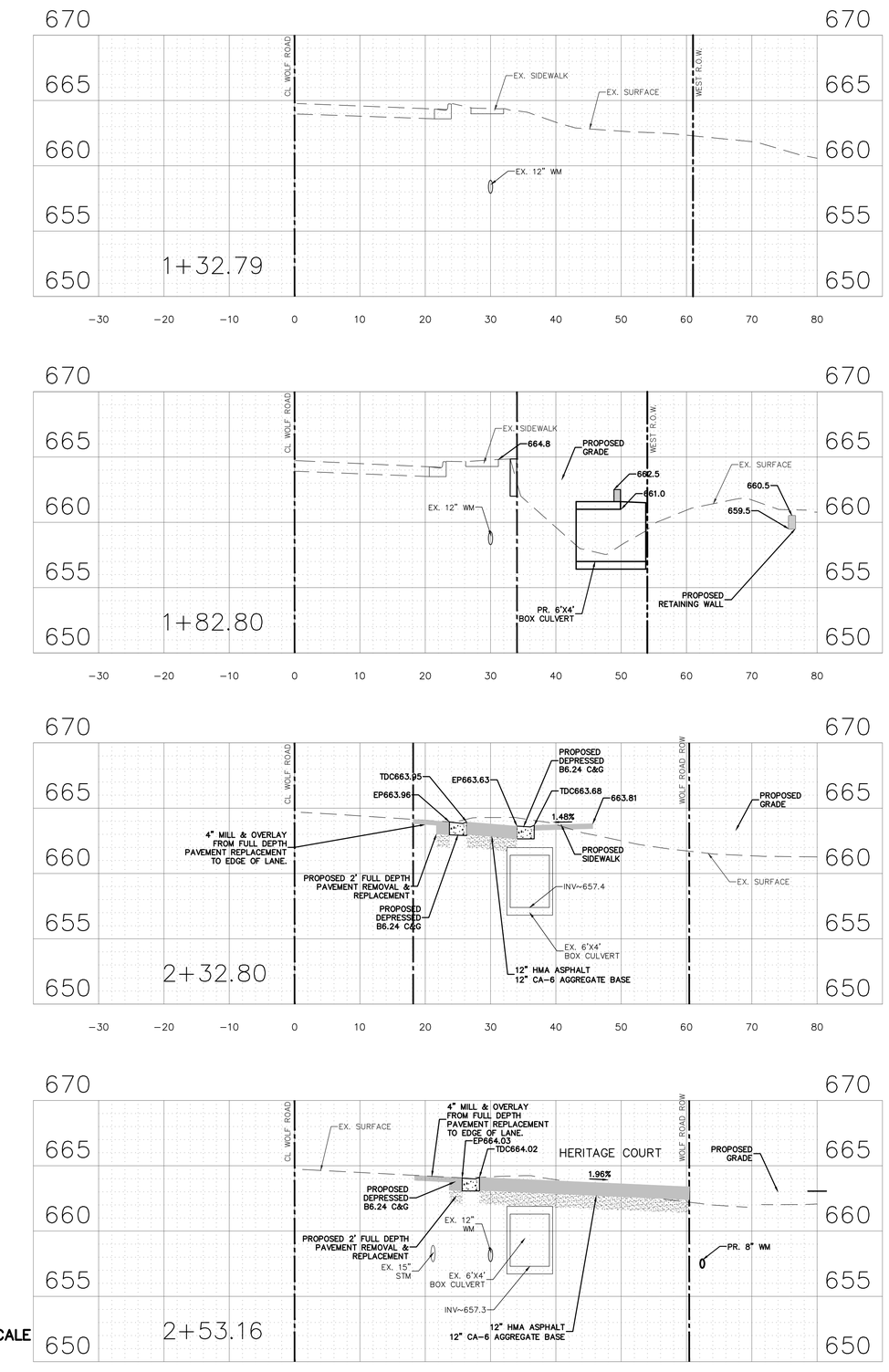
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Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
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PROJECT DETAILS

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CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
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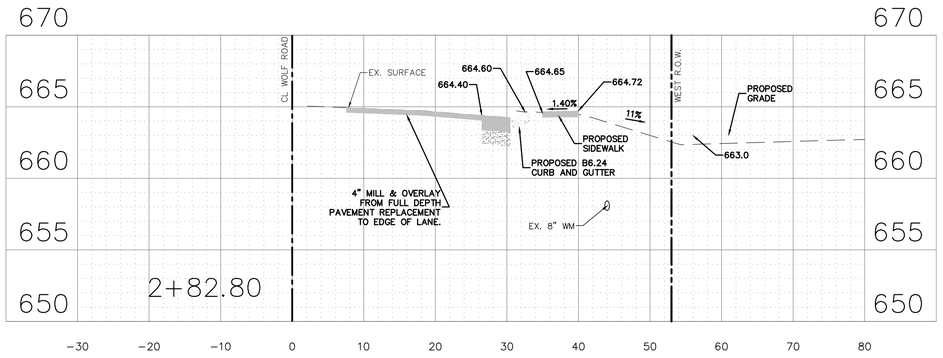
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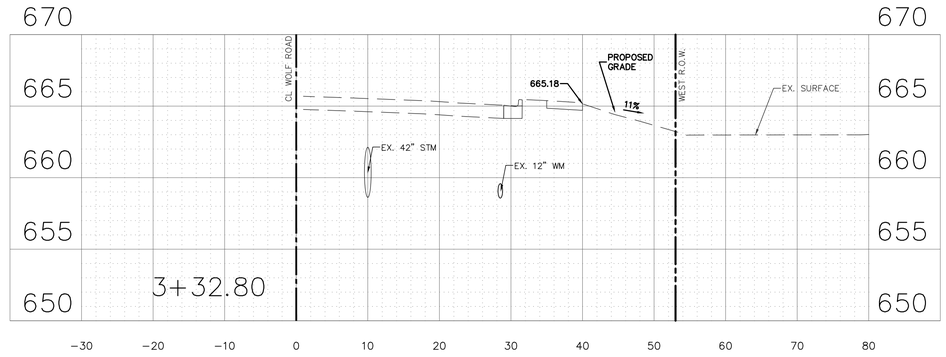
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Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

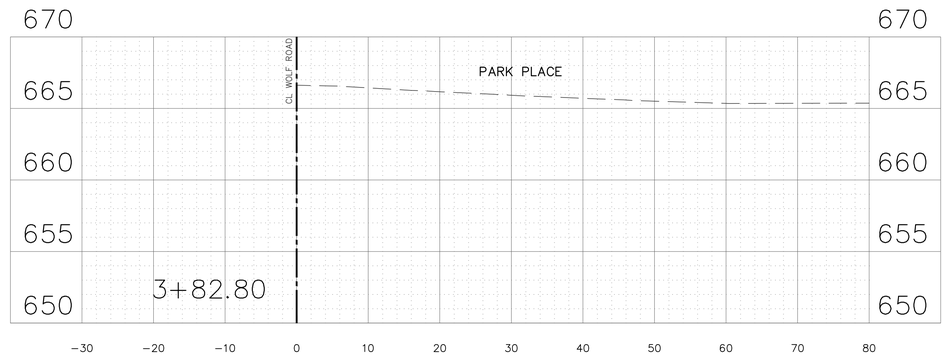
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OF
20

CROSS SECTIONS STA. 1+32.79 TO 2+53.16

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CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-26-24	PER WSPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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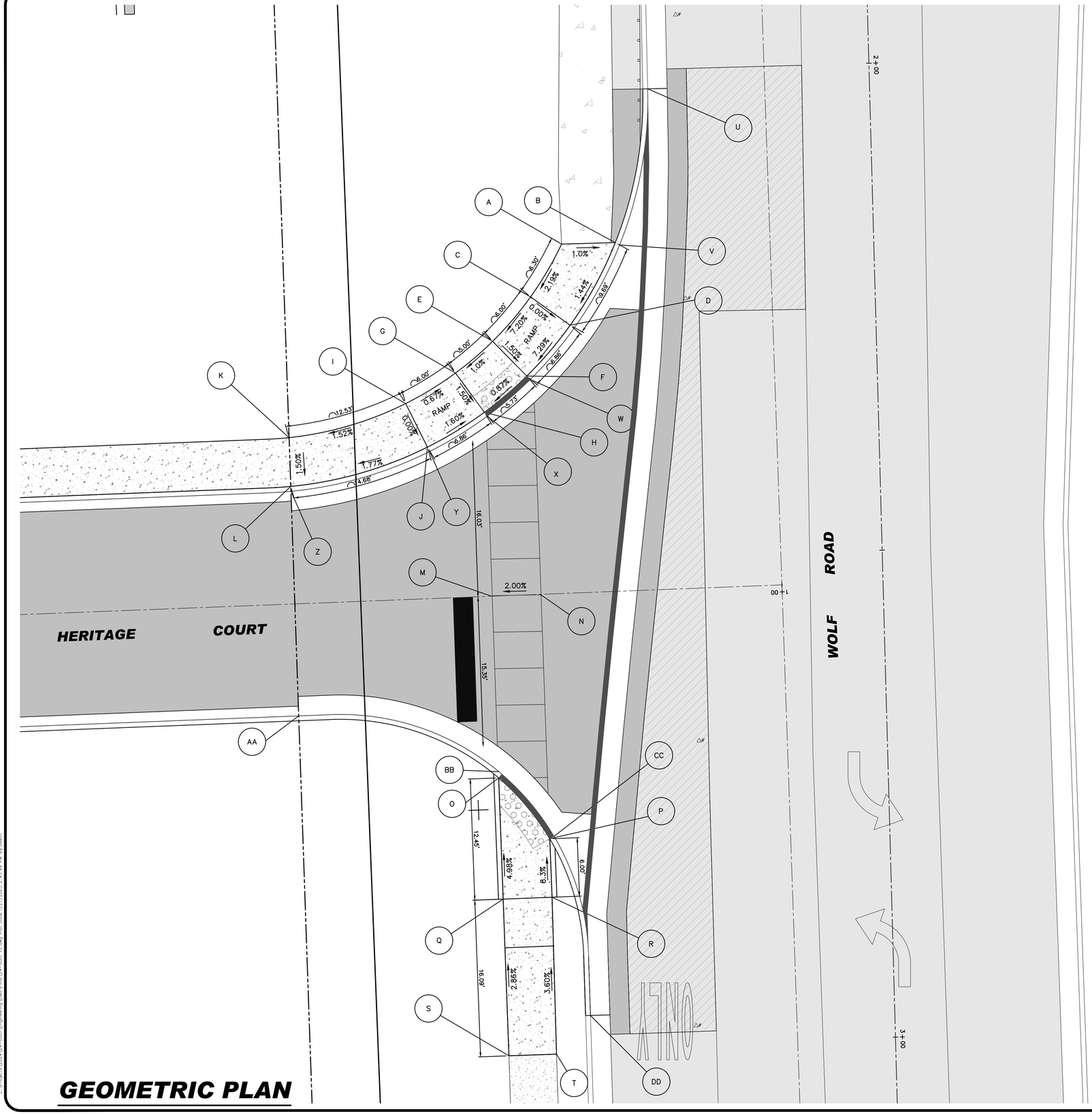
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

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OF
20

CROSS SECTIONS STA. 2+82.80 TO 3+82.80

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GEOMETRIC PLAN

	STATION	OFFSET	ELEV.
A	2+17.70	32.03' R.	664.47ME
B	2+17.70	26.96' R.	664.42ME
C	2+23.03	33.37' R.	664.21
D	2+26.03	31.40' R.	664.21
E	2+27.48	39.38' R.	663.85
F	2+31.14	35.97' R.	663.78
G	2+30.63	43.28' R.	663.78
H	2+34.74	40.42' R.	663.71
I	2+33.62	48.48' R.	663.82
J	2+38.14	46.37' R.	663.82
K	2+36.79	60.53' R.	663.63
L	2+41.80	60.50' R.	663.56
M	2+53.63	40.21' R.	664.15
N	2+53.57	35.20' R.	664.05
O	2+72.59	39.99' R.	663.69
P	2+78.55	34.99' R.	663.81
Q	2+84.61	39.84' R.	664.31
R	2+84.56	34.93' R.	664.31
S	3+00.83	39.71' R.	694.77ME
T	3+00.79	34.82' R.	664.89ME
U	2+02.01	22.76' R.	664.14ME
V	2+17.98	26.08' R.	663.92
W	2+31.50	35.63' R.	663.65
X	2+35.15	40.14' R.	653.58
Y	2+38.61	46.15' R.	663.32
Z	2+42.30	60.49' R.	663.06
AA	2+65.37	60.33' R.	663.06
BB	2+71.65	39.96' R.	663.56
CC	2+78.44	34.48' R.	663.78
DD	2+96.92	31.23' R.	664.36ME

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

PAVEMENT LEGEND

- 4" MIL AND OVERLAY
- ASPHALT PAVEMENT CCDOTH ROW
  12" HMA CONCRETE SURFACE COURSE CL1
  12" AGGREGATE BASE COURSE, CA-6
- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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FINAL ENGINEERING PLANS
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(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

ADA DETAIL

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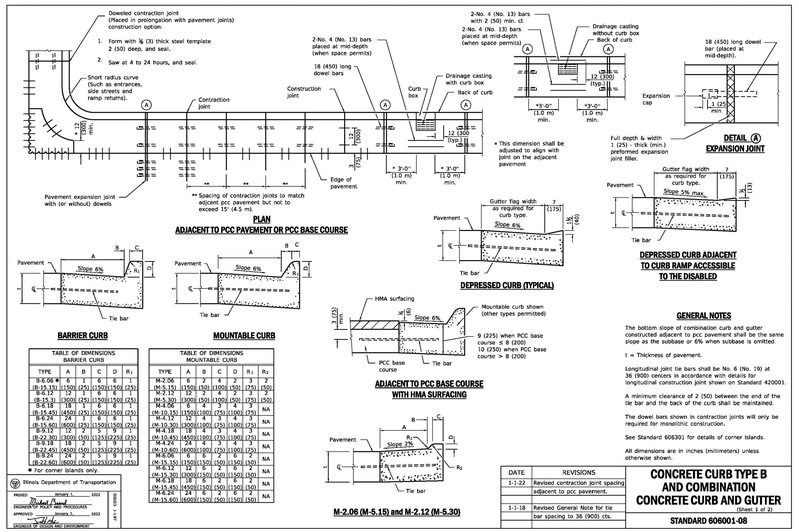


TABLE OF DIMENSIONS BARRIER CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06 ● (M-5.15)	12 (150)	6 (150)	6 (150)	1 (25)	3 (75)	3 (75)
M-2.12 (M-5.30)	12 (300)	6 (150)	6 (150)	1 (25)	3 (75)	3 (75)
M-2.06 (M-10.15)	18 (450)	6 (150)	6 (150)	1 (25)	3 (75)	NA
M-2.12 (M-10.30)	24 (600)	6 (150)	6 (150)	1 (25)	3 (75)	NA
M-4.18 (M-10.45)	18 (450)	12 (300)	6 (150)	1 (25)	3 (75)	NA
M-4.24 (M-10.60)	24 (600)	12 (300)	6 (150)	1 (25)	3 (75)	NA
M-6.18 (M-15.45)	18 (450)	12 (300)	6 (150)	2 (50)	6 (150)	NA
M-6.24 (M-15.60)	24 (600)	12 (300)	6 (150)	2 (50)	6 (150)	NA

● For corner islands only.

TABLE OF DIMENSIONS MOUNTABLE CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06 (M-5.15)	12 (150)	6 (150)	6 (150)	1 (25)	3 (75)	3 (75)
M-2.12 (M-5.30)	12 (300)	6 (150)	6 (150)	1 (25)	3 (75)	3 (75)
M-2.06 (M-10.15)	18 (450)	6 (150)	6 (150)	1 (25)	3 (75)	NA
M-2.12 (M-10.30)	24 (600)	6 (150)	6 (150)	1 (25)	3 (75)	NA
M-4.18 (M-10.45)	18 (450)	12 (300)	6 (150)	1 (25)	3 (75)	NA
M-4.24 (M-10.60)	24 (600)	12 (300)	6 (150)	1 (25)	3 (75)	NA
M-6.18 (M-15.45)	18 (450)	12 (300)	6 (150)	2 (50)	6 (150)	NA
M-6.24 (M-15.60)	24 (600)	12 (300)	6 (150)	2 (50)	6 (150)	NA

Illinois Department of Transportation
PASSED January 1, 2022
Engineer of Bridges and Concrete
APPROVED January 1, 2022
Engineer of Design and Environment
BDE 2406 (1/22)

DATE	REVISIONS
1-1-22	Revised contraction joint spacing adjacent to pcc pavement.
1-1-18	Revised General Note for tie bar spacing to 36 (900) ctr.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 1 of 2)

STANDARD 606001-08

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

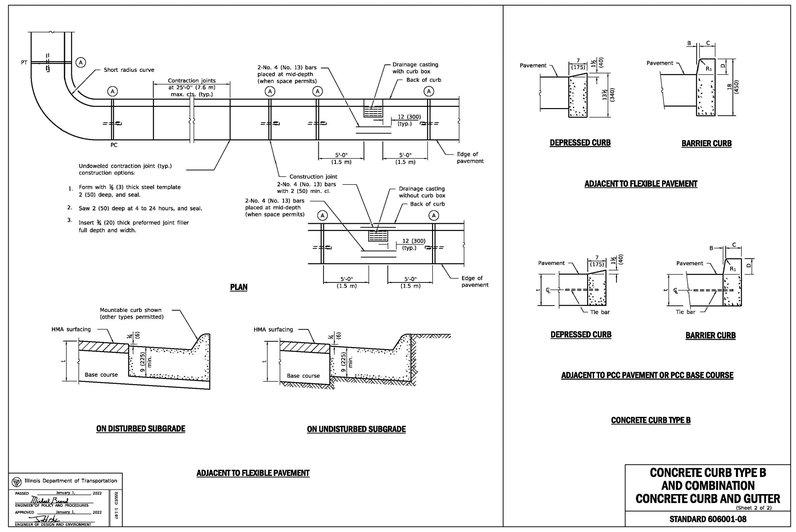
Longitudinal joint tie bars shall be No. 6 (No. 19) at 36 (900) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands.

All dimensions are in inches (millimeters) unless otherwise shown.



Illinois Department of Transportation
PASSED January 1, 2022
Engineer of Bridges and Concrete
APPROVED January 1, 2022
Engineer of Design and Environment
BDE 2406 (1/22)

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 2 of 2)

STANDARD 606001-08

SPECIAL PROVISION FOR DETECTABLE WARNINGS (SPECIAL)

Effective: *10/01/18* (Modification of IDOT D1 Special Provision for Detectable Warnings (Special) in City of Chicago)
Revised: *4/13/21 (added Galvanized and Stainless Steel material options)*

Description:

Work under this item shall consist of installing cast iron or steel detectable warning tiles as shown on the plans. Work shall be performed according to Section 424 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, except as herein modified.

Materials:

Detectable warning tiles shall be of uniform quality, and free of surface defects. The detectable warnings shall be constructed out of one of the following:
1) Cast iron meeting requirements of ASTM A 48 Class 30 or better.
2) Galvanized steel – 10 gauge, C90 galvanization or better
3) Stainless steel – 10 gauge or better

The dome size and spacing of the detectable warnings shall meet all requirements of sections R305.1.1 and R305.1.2 of PROWAG.

The color of the detectable warning tiles is to be approved by the Engineer unless otherwise specified in the plans and comply with the requirements of section R305.1.3 of PROWAG.

If a concrete border is required for installation of the detectable warnings, it shall comply with section R305.2 of PROWAG.

Responsibility of the Contractor:

The contractor shall verify all dimensions with the product manufacturer. If using radial units, the contractor shall verify that the radius of the detectable warnings supplied by the manufacturer matches that of the curb radius.

The contractor shall ensure that the supplied detectable warnings allow placement of the rows of domes that are aligned parallel with the path of travel. Where detectable warnings are radial, dome orientation is not significant.

The contractor shall ensure a maximum vertical transition of ¼" between the edge of the detectable warnings and adjacent concrete.

Measurement and Payment:

This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).

MUNICIPALITY, IL MUNICIPALITY, IL MAINE TOWNSHIP	COUNTY HIGHWAY	XXX	COUNTY OF COOK DEPARTMENT OF TRANSPORTATION AND HIGHWAYS	COMPUTED: XXX	REVISIONS	DATE
	FISCAL YEAR	XXXX		DRAWN: XXX	1) DATE	
	SECTION	XX-XXXXX-XX-XX		CHECKED: XXX	NEW SEWARD SCHOOL CO	11/2022

PORTLAND CEMENT CONCRETE SIDEWALK CONSTRUCTION DETAIL
COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS
STANDARD C-003

C-XXX
NOT TO SCALE SHEET 2

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NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WILL CO. REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

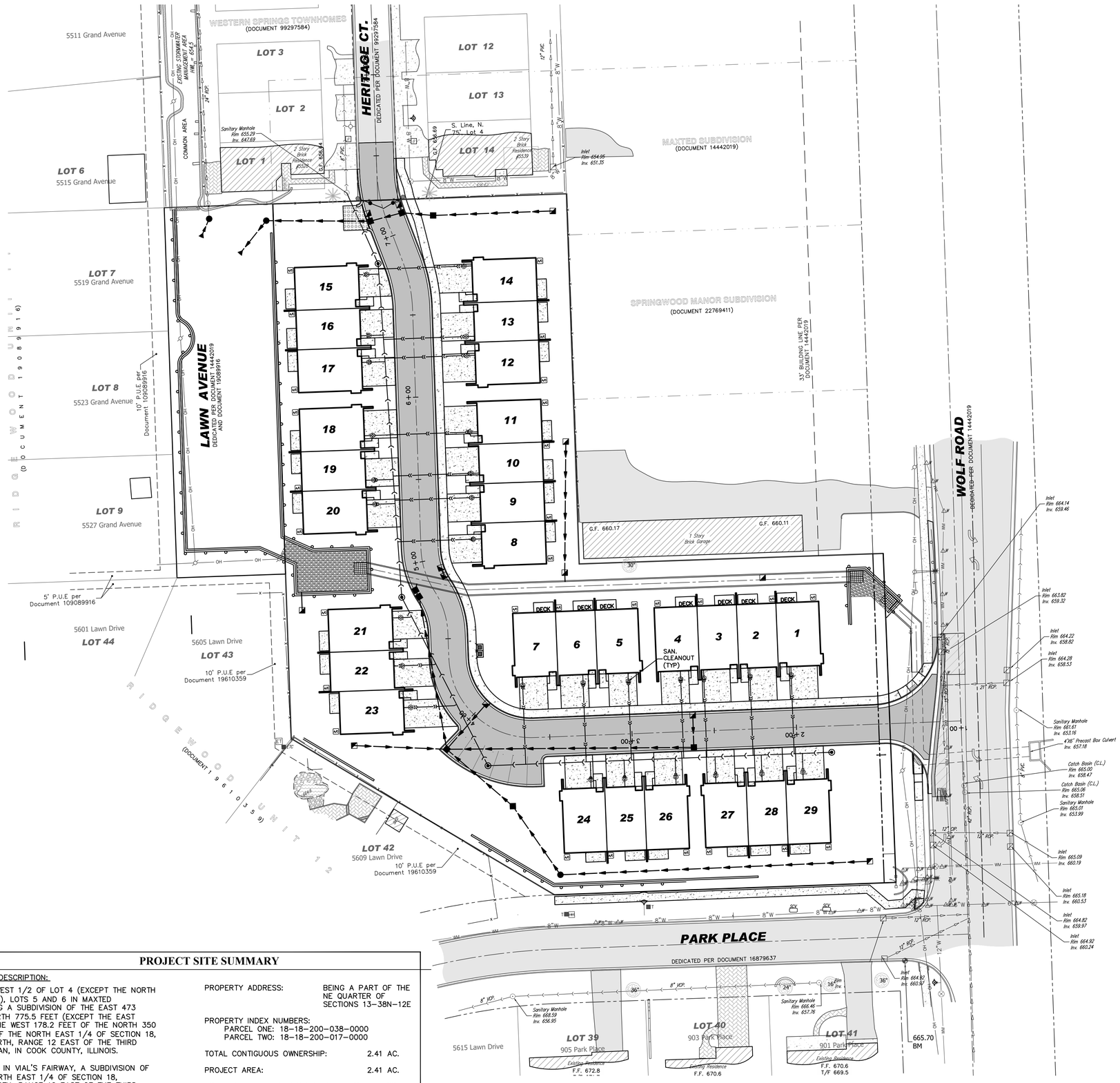
DEI

PROJECT INFORMATION

Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

20 OF 20

CCDOTH DETAILS



THE OWNER OF HERITAGE CROSSING SUBDIVISION, MCNAUGHTON DEVELOPMENT, LLC. WITH FACILITIES AS SHOWN ON THIS EXHIBIT (EXHIBIT R), SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING MAINTENANCE ACTIVITIES, UNTIL SUCH TIME WHERE CERTAIN REQUIREMENTS ARE MET. STORM WATER RETENTION AND DETENTION FACILITIES SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (H.O.A.)

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

1. General
Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
- X Litter and debris shall be controlled
- X Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- X Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- X Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- X Roads shall be swept, vacuumed and/or washed on a regular basis

2. Stormwater Management Facilities
All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

Side Slopes/Embankment/Emergency Overflow Structure
- X Inspect embankments for settlement and erosion
- X Remove woody growth from the embankment
- X Any breaks, hire Registered Professional Engineer for design resolution
- X Seed and sod any eroded areas
- X Signs of piping (leakage) or seepage, repair
- ___ Stabilize emergency overflow structure if erosion observed
- ___ Remove obstructions blocking emergency overflow spillway

Vegetated Areas
- X Regular mowing to control vegetation, no cutting of native vegetation
- X Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes or other vehicles, repair
- X Check for invasive vegetation, remove where possible
- X All vegetation must be maintained per the approved planting plan

Outlet Control Structure
- ___ Inspect restrictor and remove debris if clogged or discharge reduced
- ___ Remove accumulated sediment at outlet
- ___ Scour and erosion at outlet, repair and reseed
- ___ Any ice damage to outlet of pipe, repair if necessary
- ___ Condition of trash tracks, remove debris
- ___ Outlet channel conditions downstream

Access for Maintenance Equipment
- X Remove any obstructions placed in maintenance easements

Safety Features
- ___ Access controls to hazardous areas
- X Fences
- X Loose or damaged posts
- X Loose or broken wires
- X Condition of gates
- X Signs

Detention Volume
- X Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

3. Volume Control Facility
Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
- ___ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
- ___ Surface of permeable pavement shall be cleaned with low-pressure power washer.
- X Accumulated sediment from surface shall be vacuumed out and disposed of properly.
- X Appropriate signage shall be repaired if damaged or illegible.

4. Stormwater Collection System
The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
- X Remove accumulated leaves and other debris from grates
- X Reset covers/lids on as-needed basis
- X Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers/Culverts
- X Visually inspect pipes by removing manhole lids, make repairs as necessary
- X Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- X Restore riprap at outfalls if erosion observed
- X Restore riprap at outfalls
- X Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)
- X Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
- X Remove any obstructions that have been placed in the drainage path
- X Seed and sod any eroded areas
- X Restore riprap as necessary
- X Regrade to provide positive drainage as necessary
- X Regular mowing to control vegetation

5. Vegetated Areas
- X Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes, or other vehicles, repair.
- X Check for invasive vegetation, remove when possible.
- X Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
- X Dead or damaged non-native grassy areas – repair with seeding with fertilization or seeding with mulch.
- ___ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

6. Qualified Sewer Construction
- X Perform manhole inspections once every five years, make repairs as necessary.
- X Perform sewer inspections once every five years, make repairs as necessary.
- X Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
- X Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

PROJECT SITE SUMMARY

PROPERTY LEGAL DESCRIPTION:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PROPERTY ADDRESS: BEING A PART OF THE NE QUARTER OF SECTIONS 13-38N-12E

PROPERTY INDEX NUMBERS:
PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000

TOTAL CONTIGUOUS OWNERSHIP: 2.41 AC.

PROJECT AREA: 2.41 AC.

TOTAL MULTI FAMILY RESIDENTIAL UNITS: 29

STORMWATER SUMMARY

	REQUIRED (AC. FT.)	PROVIDED (AC. FT.)
VOLUME CONTROL STORAGE	0.13	0.15
DETENTION VOLUME	1.51	0.729

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WRSC REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

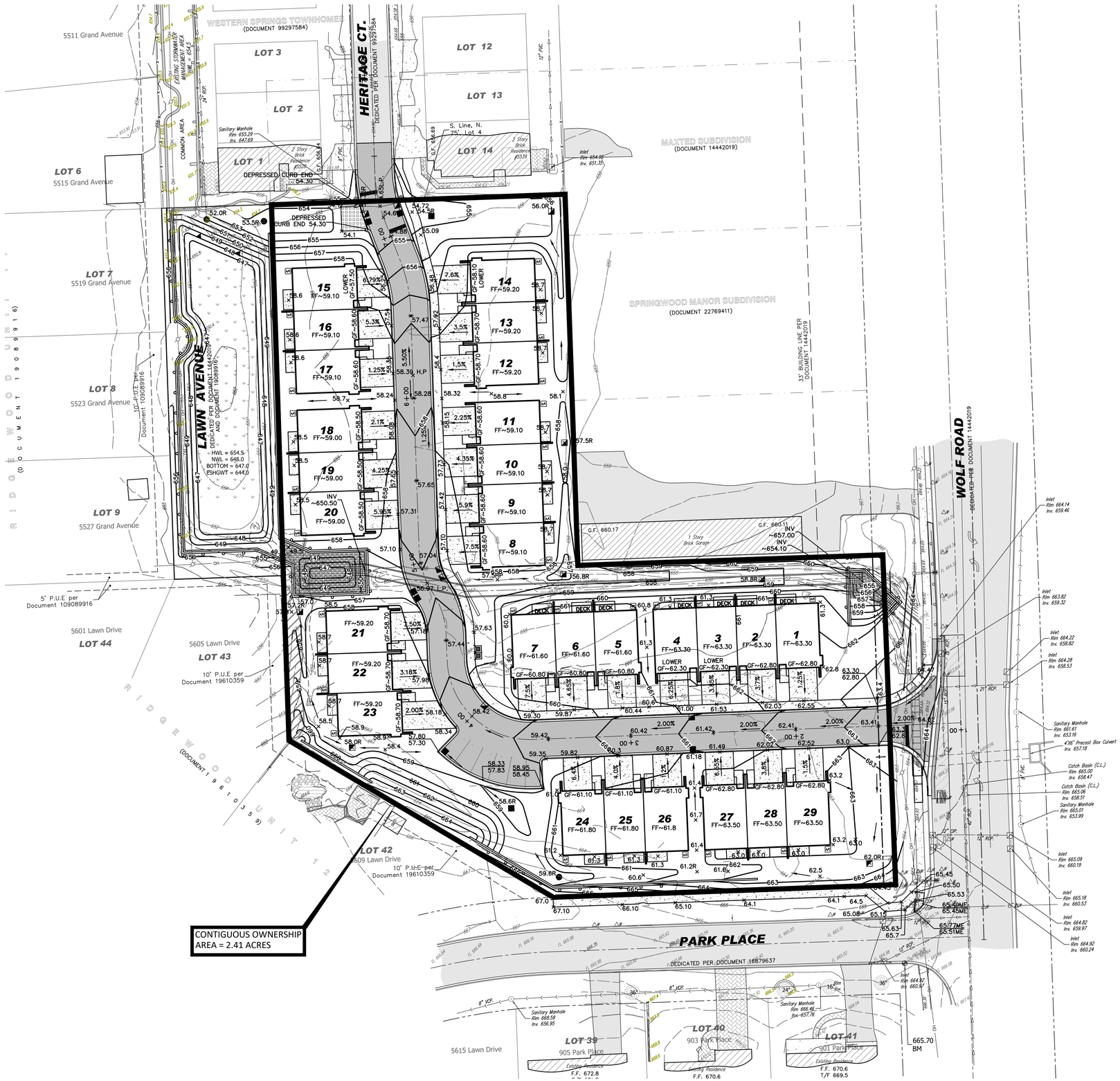
PROJECT INFORMATION

Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

MW1
OF
MW1

MWRD EXHIBIT R

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GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

TRIBUTARY
IMPERVIOUS AREA =1.50 ACRES

TRIBUTARY
PERVIOUS AREA = 0.89 ACRES

VOLUME CONTROL

DEVELOPMENT AREAS NOT
TRIBUTARY TO POND = 0.02 ACRES

STORM WATER REQUIREMENTS

VCBMP:
VOLUME REQUIRED = 0.13 Ac. Ft.
OR
65,114 x (1"/12) = 5,426 Cu. Ft.

VCBMP VOL. PROVIDED = 0.15 Ac. Ft.
648–647 = 1.0' x (6,621) = 6,621 Cu. Ft.
(STORM WATER LOT)

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAKE FOREST HIGHLANDS SD	DNV
2	10-17-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

MW2
OF
MW2

MWRD DRAINAGE EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

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N

GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

LEGEND

EXISTING EMERGENCY OVERFLOW ROUTE

LIMITS OF EXISTING FLOODING PER DETAILED FLOOD ANALYSIS PREPARED BY DESIGNTEK ENGINEERING, INC. (CRITICAL DURATION STORM EVENT: WHICH IS THE 100-YEAR, 1-HOUR RAINFALL EVENT)

Heritage Crossing - Western Springs, IL 12/17/2024

Existing Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 1hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			2.90	38	0.001	
	649.37	13				0.0009
			0.63	126	0.003	
	650.00	506				0.0038
			1.00	2,614	0.060	
	651.00	5,647				0.0638
			1.00	8,338	0.191	
	652.00	11,358				0.2552
			1.00	12,572	0.289	
	653.00	13,827				0.5439
			1.00	14,929	0.343	
	654.00	16,059				0.8866
			0.50	8,275	0.190	
Design HWL	654.50	17,045				1.0765
			0.50	11,383	0.261	
	655.00	29,013				1.3379
			0.70	27,797	0.638	
Overflow at Heritage Ct.	655.70	51,472				1.9760
			0.30	16,943	0.389	
	656.00	61,632				2.3649
			0.10	6,357	0.146	
Top of Existing Wall	656.10	65,528				2.5109

NO	DATE	DESCRIPTION	BY
1	9/27/24	PER VILLAGE REVIEW	SMW

REVISIONS

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

EXISTING FLOODING EXHIBIT
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4601
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1"=30'
Date: 09-05-2024
Design By: SDD
Drawn By: SDD
Checked By: DMV

1 OF 1

EXISTING CONDITIONS FLOODING EXHIBIT



GRADING PLAN

N

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING EMERGENCY OVERFLOW ROUTE
- PROPOSED EMERGENCY OVERFLOW ROUTE
- LIMITS OF PROPOSED FLOODING PER DETAILED FLOOD ANALYSIS PREPARED BY DESIGNTEK ENGINEERING, INC. (CRITICAL DURATION STORM EVENT WHICH IS THE 100YR, 1-HOUR RAINFALL EVENT)

Heritage Crossing - Western Springs, IL

12/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 1hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

REVISIONS		
NO.	DATE	DESCRIPTION
1	12/17/24	PER VILLAGE REVIEW

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

PROPOSED FLOODING EXHIBIT
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1"=30'
Date: 09-05-2024
Design By: SDD
Drawn By: SDD
Checked By: DMV

1 OF 1

PROPOSED CONDITIONS FLOODING EXHIBIT

DESIGNTEK ENGINEERING, INC.
CONSULTING AND SITE DESIGN ENGINEERS
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
PHONE: (708) 326-4961
FAX: (708) 326-4962

FINAL STORMWATER MANAGEMENT REPORT



FOR:

HERITAGE CROSSING
WSTERN SPRINGS, ILLINOIS

Prepared For:

McNaughton Development
11S220 Jackson Street – Suite 101
Burr Ridge, Illinois 60527
(630) 325-3400

December 13, 2024

TABLE OF CONTENTS

Summary

FEMA FIRM

USDA Soils Report

Soil Investigation Report – Estimated Seasonal High Groundwater Level

Existing Detention Basins – Stormwater Storage Volume Verification

On-Site Existing & Proposed Conditions Summary Analysis Tables

Off-Site Existing & Proposed Conditions Summary Analysis Tables

Off-Site Upstream Tributary Area Analysis Documentation

Stormwater Management Analysis Existing Conditions

- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)

Stormwater Management Analysis Proposed Conditions

- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)
- Bypass System Capacity calculations
- Interim Swale Capacity Calculation

SUMMARY

The Heritage Crossing re-development is approximately 2.41 gross acres with the current use being professional office buildings and associated parking lot areas. An existing stormwater detention basin is located adjacent to the site in a 0.34-acre parcel dedicated as Lawn Avenue. The proposed re-development consists of twenty-nine residential single family attached units with related roadway, utilities, and a stormwater management area. The existing stormwater management facility (South Detention Pond) owned by the Village of Western Springs and maintained by the Heritage Springs HOA will be enhanced to provide the MWRD required volume control elements and will include increased stormwater storage volume to provide additional detention to attenuate more of the off-site upstream stormwater run-off prior to being released downstream. The FEMA FIRM map 17031CO467J effective 8/19/2008 indicates that there are no special flood hazard areas (floodplain) on the subject property (Zone "X"). The intent of this report is to convey the existing site conditions along with the final planning development and calculations that have been completed to support Final Engineering.

The existing site is not located in the FEMA mapped floodplain. Evidence has shown that the existing site and the Heritage Springs subdivision experience flooding during large storm events. DesignTek Engineering was contracted to complete a detailed flood analysis for the detention system maintained by the Heritage Springs HOA. An off-site area of approximately172.3 acres, to the east of Wolf Road was determined to be tributary to the subject site via an existing 4'x6' concrete box culvert that crosses under Wolf Road. The upstream off-site area is developed, and the area was divided into two sub-areas. They were delineated as Ashbrook Subdivision and LaGrange Highlands offsite with areas 42.90 acres and 129.40 acres, respectively. Time of concentrations and curve numbers were calculated for each area. MWRD permit number 99-0525 was obtained for the Ashbrook Subdivision. This information was used in HEC HMS computer modeling software to analyze the system and determine a 100-year critical duration peak flowrate of 359.61 cfs. This occurs during the 1-hour event. The high-water level (HWL) for the existing detention basin (basin C) was determined to be 655.16.

To allow for the required Cook County DOTH site distance requirements the existing box culvert under Wolf Road will be extended 66 feet away from the proposed Heritage Court intersection. A bypass system will be constructed to collect and convey the peak discharge through a proposed 4'x6' concrete box culvert. The box culvert matches the upstream condition. The calculated peak HWL was determined to be 655.11 for the proposed condition. This is a reduction of 0.05'. The site will be inundated with water at the north end of Heritage Court, near the property line. Under existing conditions this area was also inundated with water. The proposed condition will have no significant impacts when compared to existing conditions. An interim swale will be constructed on site to convey the discharge during rainfall events during the construction of the bypass system. The swale was designed to carry the peak discharge.

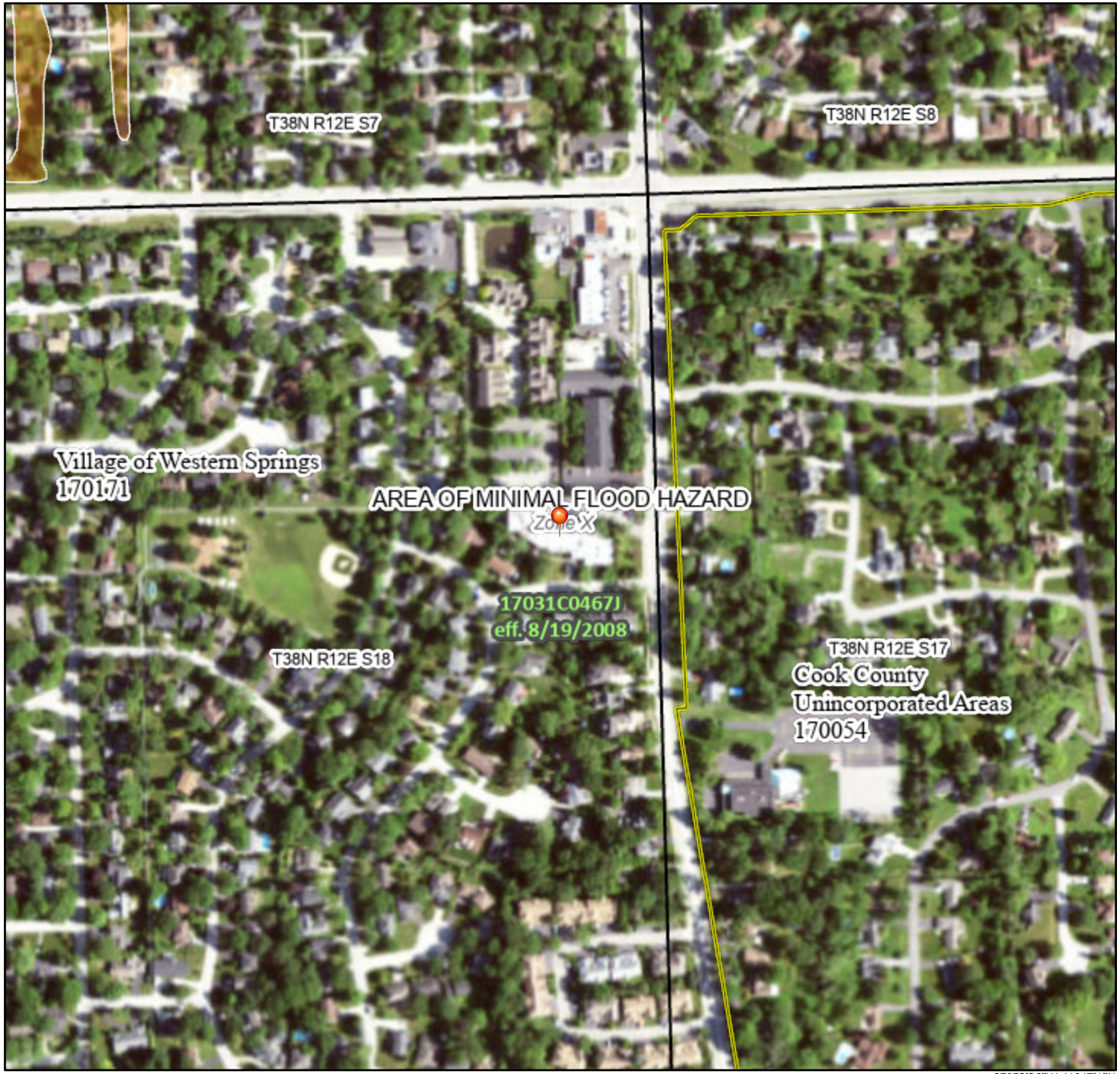
The existing condition (professional office buildings) has a total impervious area of 1.67 acres with the proposed re-development (residential) consisting of 1.50 acres equating to a total reduction in impervious area of 0.17 acres or 10%. Utilizing the proposed impervious area within the re-development site, the required MWRD volume control storage has been calculated to be 0.13 ac-ft. This volume is proposed as surface storage (elevations 647.0 – 648.0) below the NWL in the stormwater management pond and has a proposed volume of 0.15 ac-ft. A PVC underdrain is proposed below the volume control area. Recent soil investigation for the existing south detention pond revealed that the Estimated Seasonal High Groundwater Table (ESHGWT) is at

elevation 644.0, 3’ feet below the proposed pond bottom. See enclosed Soil Investigation Report within the appendix section of this report for reference.

The previously issued MWRD permit (99-228) for the original development was obtained and is included in the appendix for reference. Upon examination the detention review sheet within the permit does not depict any detention volume requirements for the original development. Although the as-built plan dated (09-29-2007) for the original development depicts the volume provided for the subject “South Detention Pond” as 0.729 Ac-Ft. and based on the recent topographic survey for the proposed re-development we have calculated the South Detention Pond storage volume to currently be 0.76 Ac-Ft. which appears to match the original intent. Initial conversations with Village staff revealed that even though the re-development has a decrease in impervious area they have experienced stormwater flooding issues off-site and further downstream within the same tributary of the subject site and expansion of the existing stormwater facility, if possible, would be a regional benefit. Taking this into account the proposed re-development will include an expansion of the South Detention Pond volume to 1.64 Ac-Ft increasing the storage volume by 0.85 Ac-Ft which essentially doubles the volume. The 100-year peak flowrate for the development site will also be reduced to 13.96 cfs from the existing condition of 15.64 cfs (+/- 11% reduction). The proposed residential buildings also will not have basements and therefore no sump pump discharges will be tributary to the stormwater management area.

National Flood Hazard Layer FIRMette

87°54'14"W 41°47'28"N



87°53'36"W 41°47'1"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/22/2024 at 1:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cook County, Illinois

Heritage Crossing



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 17, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 13, 2020—Jul 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
854B	Markham-Ashkum-Beecher complex, 1 to 6 percent slopes	3.0	100.0%
Totals for Area of Interest		**3.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cook County, Illinois

854B—Markham-Ashkum-Beecher complex, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 28shj
Elevation: 510 to 930 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Markham and similar soils: 40 percent
Ashkum and similar soils: 30 percent
Beecher and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Markham

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 21 inches: silty clay loam
H3 - 21 to 32 inches: silty clay loam
H4 - 32 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 55 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Description of Ashkum

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium and in the underlying till

Typical profile

H1 - 0 to 12 inches: silty clay loam
H2 - 12 to 29 inches: silty clay
H3 - 29 to 54 inches: silty clay loam
H4 - 54 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

Description of Beecher

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 24 inches: silty clay loam
H3 - 24 to 36 inches: silty clay loam
H4 - 36 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 24 to 45 inches to densic material
Drainage class: Somewhat poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Minor Components

Orthents, clayey

Percent of map unit: 5 percent
Landform: Lake plains, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

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CONFIDENTIAL

SOIL INVESTIGATION REPORT
5600 S. Wolf Road
(North of Park Place & S. Wolf Road)
Western Springs, IL 60480

AET Project Number: Geo – 9951
April 29, 2024

Prepared for:

McNaughton Development

Mr. John Barry
McNaughton Development
11S220 Jackson Street, Suite # 101
Burr Ridge, Illinois 60527

April 29, 2024

Soil Investigation Report
5600 S. Wolf Road
Western Springs, IL

AET Project Number: Geo – 9951

Gentleman / Madam,

Associated Engineering & Technology, Inc. (AE&T) has completed two (2) soil borings and sampling of soils to determine the Estimated Seasonal High Groundwater Level (ESHGWL) at the above referenced site in Western Springs, IL. The borings were done at the existing detention pond area and the locations are shown in the appendix of this report. The soil samples were analyzed in the laboratory for soil description, visual classification and moisture content by a geotechnical engineer. Munsell Chart and FEMA maps were also used to estimate the seasonal high groundwater elevations. Based upon our investigation the ESHGWL was noted to be at six (6) feet below the bottom of existing pond.

If you have any questions regarding this report, please contact us.

Sincerely,
Associated Engineering & Technology, Inc.



Ashok Medhi, M.S.
Geotechnical Engineer

Toby C. Mickey, P.E.
Senior Engineer

1.0 SOIL BORING

A total of two (2) soil borings were done were done at the proposed development to 10 feet depth each in accordance with American Society for Testing and Materials procedure for Standard Penetration Test and Split Barrel Sampling of Soils (ASTM 1586). The borings were done with a CME 45 drill rig mounted on All-Terrain Vehicle.

The soil samples were collected at 2-1/2 feet interval to a depth of 10 feet and thereafter at 5 feet interval. The boreholes were backfilled with auger cuttings after completion of drilling.

The soil samples were placed in glass containers and brought to our laboratory. A site plan showing the approximate soil boring locations is included in appendix. Log of the soil borings along with lab classifications are included in Appendix B.

2.0 LABORATORY TESTING

All samples were visually classified according to the Unified Soil Classification System (ASTM D-2488) by a geotechnical engineer. The Auger boring samples are disturbed and were generally used for classification testing (D2487, D2488), moisture content and pocket penetrometer test (ASTM D 854) to evaluate unconfined compressive strength for clayey and clayey silt soils. The primary purpose of this investigation was to determine the Estimated Seasonal High Groundwater Elevation. The boring logs with soil description are included in the Appendix.

3.0 SOIL DESCRIPTION & ANALYSIS

The sub-surface materials in the borings (B-1 & B-2) comprised 8 to 10 inches of black topsoil with roots.

It was underlain by very stiff to hard moist **brown silty Clay** with fine sand and gravel (CL) to depths of about 6.0 feet. Beneath it, medium dense moist **brownish gray fine to medium Sand** trace small gravel (SP) was noted to depths of 8 feet and changed color to **gray** Fine Sand trace small gravel (SP) to the boring depths of 10 feet.

Groundwater was **not** encountered during and after completion of the borings.

3.1 Estimated Seasonal High Ground Water Level

The Estimated seasonal high groundwater level (ESHGWL) at Borings B-1 and B-2 located at existing Detention Pond is at about (six) 6 feet. It is based upon visual classification of the soil samples, existing groundwater levels, site topography, soil conditions, color description and change of color from brown to brownish gray at 6 feet, FIRM maps and Munsell chart (10 YR**).**

Note: Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles.

Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

5.0 Warranty / Limitations of liability

Associated Engineering & Technology, Inc. understands that the Boring log depicts conditions disclosed at the particular location and date indicated and may vary within 5 feet of vertical and lateral distance from the borings.
If significant variations or changes are in evidence during construction, it may then be necessary to re-evaluate the recommendations of this report.
In no event shall Associated Engineering & Technology, Inc. be liable for any indirect, special, consequential or incidental damages, of any kind or nature however caused and based on any theory of liability, arising out of or relating to this report, whether or not such party has been advised of the possibility of such damages.

APPENDICES

BORING LOCATION

BORING LOGS

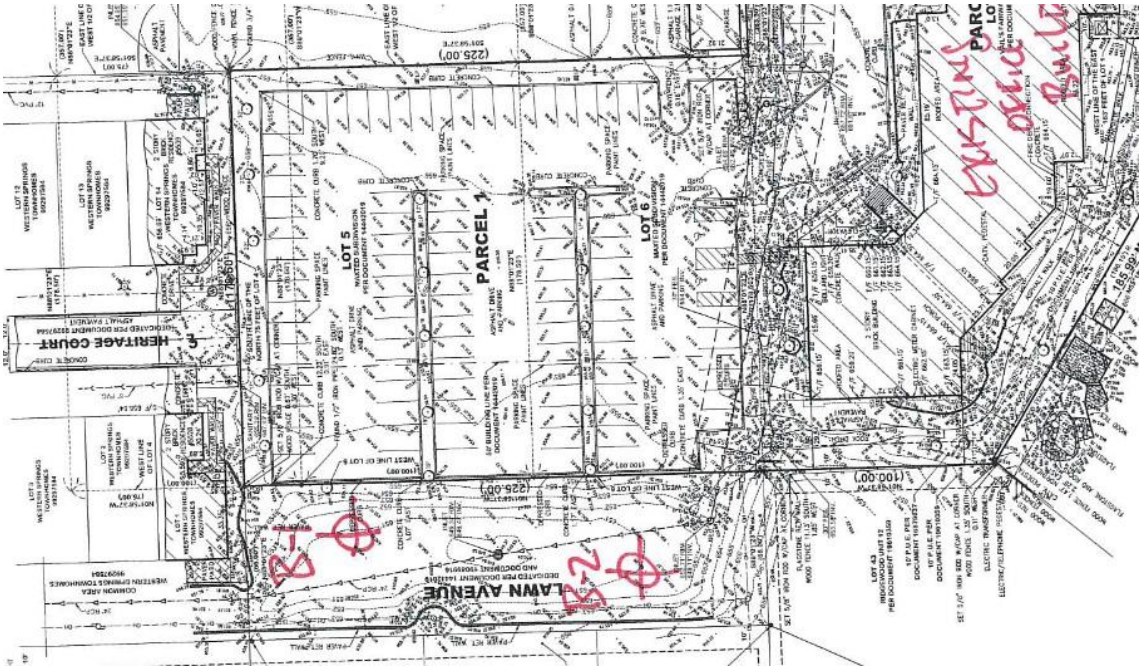
GENERAL NOTES &

USCS CLASSIFICATION CHART

MUNSELL CHART (10 YR)

BORING LOCATION PLAN

(Not to Scale)



BORING LOG

BORING NO. **B – 1**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Very stiff to hard Brown Silty Clay Sand and gravel (CL) -		2.5	1	AU		16.5	3.0	8	
None			5	2	AU		16	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

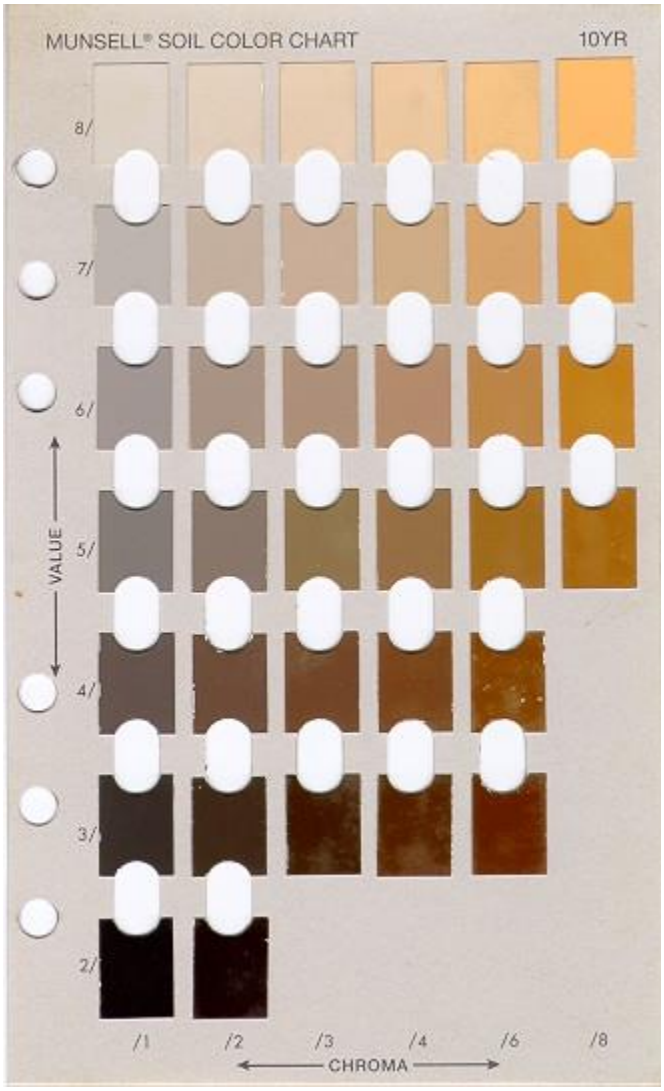
BORING LOG

BORING NO. **B – 2**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Hard moist Brown Silty Clay Trace fine sand And gravel (CL)		2.5	1	AU		15	4.0	8	
None			5	2	AU		15.5	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

MUNSELL SOIL COLOR CHART



Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles. Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

GENERAL NOTES

In order to provide uniformity throughout our project, the following system has Been adopted to describe each soil sample. Rock Shale and other materials will be described in detail as encountered.

CONSISTENCY OF COHESIVE SOIL		RELATIVE DENSTY OF GRANULAR SOIL	
UNCONFINED COMPRESSIVE STRENGTH **QU(TSF)**	**CONSISTENCY**	**"N" VALUE (Blows/foot)**	**RELATIVE DENSITY**
<0.25	VERY SOFT	0 – 3	VERY LOOSE
0.26 – 0.49	SOFT	4 – 9	LOOSE
0.50 – 0.99	MEDIUM STIFF	10 – 29	MEDIUM DENSE
1.00 – 1.99	STIFF	30 – 49	DENSE
2.00 – 3.99	VERY STIFF	50 – 80	VERY DENSE
4.00 – 8.00	HARD	>80	EXTREMELY DENSE
> 8	VERY HARD		

- **Number of blows per foot required to drive a 2" O.D. split-spoon sampler using a140lb. Weight falling free for 30 inches, except where otherwise noted.**

COLOR AS DETERMINED ON THE FRESH, MOST SAMPLES

PREDOMINATE COLORS		SHADES	MODIFYING ADJECTIVE
Black	Yellow	Light	Vari-colored
Brown	Red	Dark	Streaked
Gray	Blue		Mottled

GRADATION DESCRIPTION AND TERMINOLOGY

COMPONENTS	SIZE RANGE
BOULDER	OVER 8 INCHES
COBBLE	8 INCHES TO 30 INCHES
GRAVEL	3 INCHES TO #4 SIEVE (4.75 mm)
SAND	#4 SIEVE TO #200 SIEVE (0.075 mm)
SILT	PASSING # 200 SIEVE (0.075 mm)
CLAY	SMALLER THAN 0.005 mm.

DESCRIPTION OF COMPONENT ALSO PRESENT IN SAMPLE	PERCENT OF DRY WEIGHT
TRACE	1 – 9
LITTLE	10 –19
SOME	20 - 34
AND	35 - 50

GROUND WATER LEVEL

Water levels are those observed when boring were made, or as noted. Porosity of soil strata, variation of rainfall, Site topographic, ect., may cause changes on these levels.

Associated Engineering & Technology, INC.

MAJOR DIVISIONS			GROUP SYMBOL	TYPICAL NAMES	UNIFIED SOIL CLASSIFICATION SYSTEM
COARSE- GRAINED SOILS More than 50 % of coarse retained on # 4	GRAVEL 50% or more of coarse fraction Related of # 4 Sieve	LEAN GRAVEL	GW	WELL GRADED GRAVELS AND GRAVELS. SAND MIXTURES LITTLE OR NO FINE	CLASSIFICATION ON BASIS OF PERCENTAGE OF FINES GW,GP,SW, GM,GC,SM,SC borderline cases requiring use of dual symbols. Less than 5% passing sieve No.200 sieve More than 12% passing No.200 sieve 5% To 12% passing No.200 sieve
			GP	POORLY GRADED GRAVELS AND GRAVEL – SAND MIXT--URE LITTLE OR NO FINES	
		GRAVELS WITH FINE	GM	SILTY GRAVELS AND GRAVELS-SAND-SILT MIXTURE	
			GC	CLAYEY GRAVELS GRAVEL – SAND – CLAY MIXTURE	
	SAND > 50 % of coarse fraction < # 4 sieve		SW	WELL GRADED SAND AND GRAVELY SAND, LITTLE OR NO FINES	
			SP	POORLY GRADED GRAVEL AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	
			SM	SILTY – SANDS SAND SILT MIXTURE	
			SC	CLAYEY SANDS SAND-CLAY MIXTURE	
FINE – GRAINED SOIL More than 50% passes on # 200 sieve	SILTS AND CLAY Liquid limit 50% or less		ML	INORGANIC SILTS,VERY FINE SAND,ROCKS,FLOUR SILTY OR CLAYEY FINE SANDS	
			CL	INORGANIC CLAYS, OF LOW TO HIGH PLASTICITY,GRAVELY CLAY, SANDY CLAYS, SILTY CLAYS, LEAN CLAY	
			OL	ORGANIC SILT AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAY Liquid limit Grater than 50%		MH	INORGANIC SILTS,MICACEOUS DIATOMACEOUS FINE SAND OR SILTS, ELASTIC SILTS	
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY	
HIGHLY ORGANIC SOIL			PT	PEAT, HIGHLY ORGANIC SOIL	

$$CU = \frac{D60}{D10} \quad \text{GREATER THAN 4} \quad Cc = \frac{(D30)^2}{D10 \times D60} \quad \text{Between 1 and 3}$$

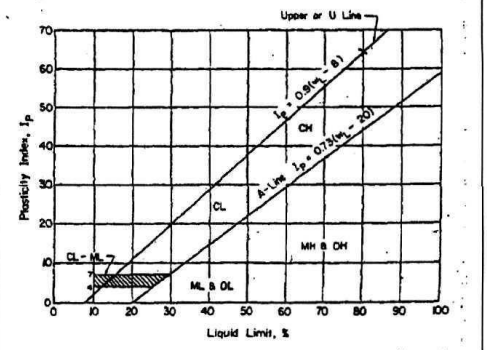
NOT MEETING BOTH CRITERIA FOR GW

ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4	ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7	

$$CU = \frac{D60}{D10} \quad \text{GREATER THAN 4} \quad Cc = \frac{(D30)^2}{D10 \times D60} \quad \text{Between 1 and 3}$$

NOT MEETING BOTH CRITERIA FOR GW

ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4	ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7	



PLASTICITY CHART(USCG)

Associated Engineering & Technology, INC.

Existing Detention Basins
Stormwater Storage Volume Verification

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "A" (Siebert Engineers) & East Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.6	0				0.0000
			0.45	10	0.000	
	650.0	65				0.0002
			1.00	383	0.009	
	651.0	849				0.0090
			1.00	1,371	0.031	
	652.0	1,970				0.0405
			1.00	2,288	0.053	
	653.0	2,622				0.0930
			1.00	3,004	0.069	
	654.0	3,402				0.1620
			0.50	1,919	0.044	
Design HWL	654.5	4,292				0.2060

2007 As-Builts (Kudrna & Associates, LTD) = 0.212 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "B" (Siebert Engineers) & North Retention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.8	10,543				0.0000
			0.20	2,139	0.049	
	648.0	10,848				0.0491
			1.00	11,883	0.273	
	649.0	12,948				0.3219
			1.00	14,312	0.329	
	650.0	15,720				0.6504
			1.00	16,448	0.378	
	651.0	17,186				1.0280
			1.00	17,186	0.395	
	652.0	17,186				1.4226
			1.00	17,186	0.395	
	653.0	17,186				1.8171
			1.00	17,186	0.395	
	654.0	17,186				2.2116
			0.50	8,593	0.197	
Design HWL	654.5	17,186				2.4089
			0.50	8,826	0.203	
	655.0	18,123				2.6115
			1.00	18,123	0.416	
	656.0	18,123				3.0276
			0.30	5,437	0.125	
Overland Flow Out Elevation	656.3	18,123				3.1524

2007 As-Builts (Kudrna & Associates, LTD) = 2.201 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & South Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.4	0				0.0000
			0.60	101	0.002	
	650.0	506				0.0023
			1.00	2,244	0.052	
	651.0	4,685				0.0538
			1.00	5,880	0.135	
	652.0	7,163				0.1888
			1.00	8,277	0.190	
	653.0	9,443				0.3788
			1.00	10,449	0.240	
	654.0	11,489				0.6187
			0.50	5,962	0.137	
Design HWL	654.5	12,366				0.7556

2007 As-Builts (Kudrna & Associates, LTD) = 0.729 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & West Channel Between Retaining Walls (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	650.3	0				0.0000
			0.70	224	0.005	
	651.0	962				0.0052
			1.00	2,389	0.055	
	652.0	4,195				0.0600
			1.00	4,289	0.098	
	653.0	4,384				0.1585
			1.00	4,477	0.103	
	654.0	4,570				0.2612
			0.50	2,312	0.053	
Design HWL	654.5	4,679				0.3143

2007 As-Builts (Kudrna & Associates, LTD) = 0.309 AC-FT

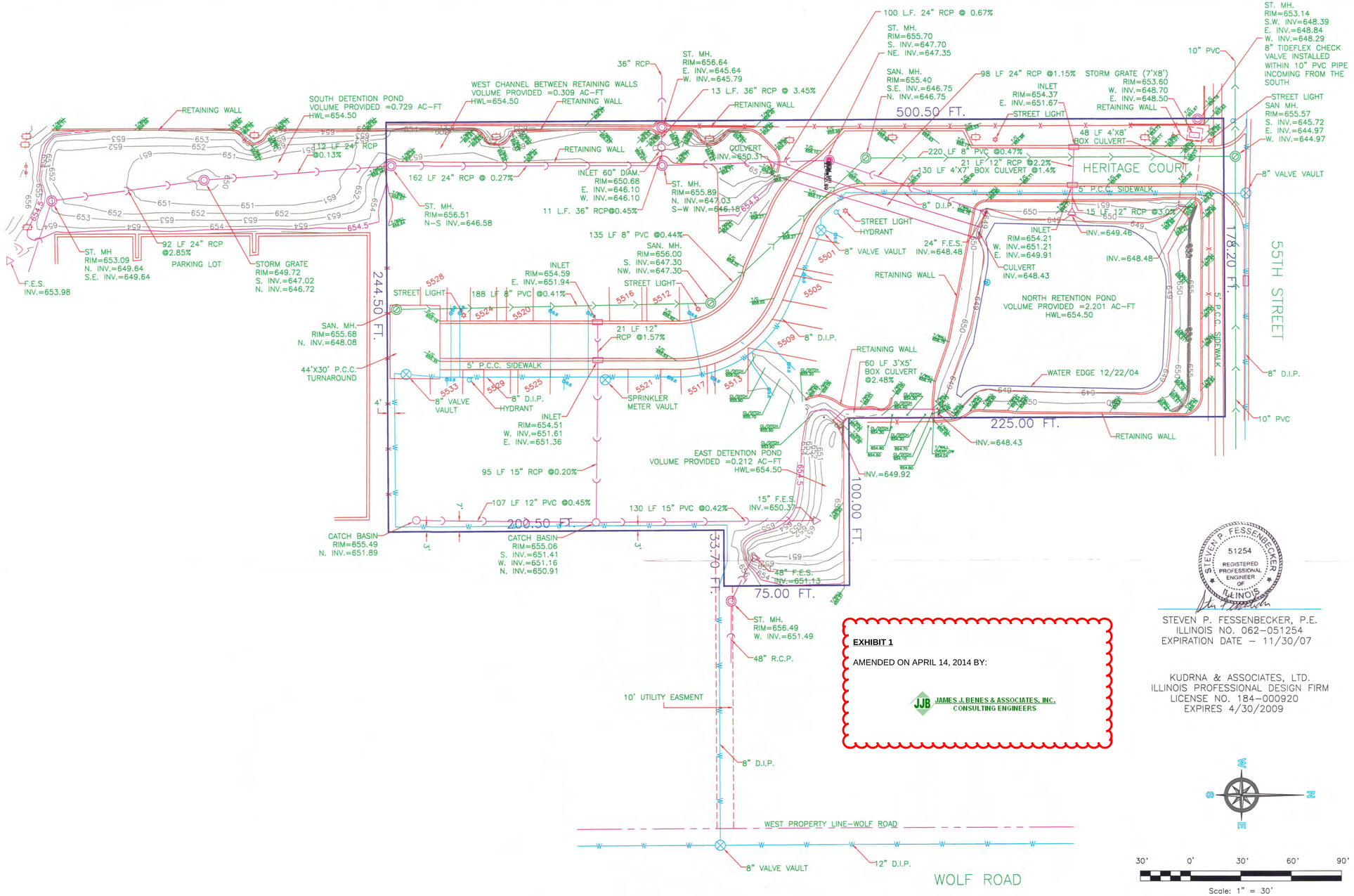


EXHIBIT 1

AMENDED ON APRIL 14, 2014 BY:

JAMES J. BENES & ASSOCIATES, INC.
CONSULTING ENGINEERS

LEGEND	ITEM	OWNERSHIP (MAINTENANCE RESPONSIBILITY)
W	8" WATER MAIN (Including Hydrants)	VILLAGE OF WESTERN SPRINGS
☼	STREET LIGHTS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	SANITARY SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	WATER SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	STORM SEWER	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	DETENTION PONDS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	RETENTION POND	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	8" SANITARY SEWER	LAGRANGE HIGHLANDS SANITARY DISTRICT

VILLAGE OF WESTERN SPRINGS

STEVEN P. FESSENBECKER
51254
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

STEVEN P. FESSENBECKER, P.E.
ILLINOIS NO. 062-051254
EXPIRATION DATE - 11/30/07

KUDRNA & ASSOCIATES, LTD.
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000920
EXPIRES 4/30/2009

30' 0' 30' 60' 90'
Scale: 1" = 30'

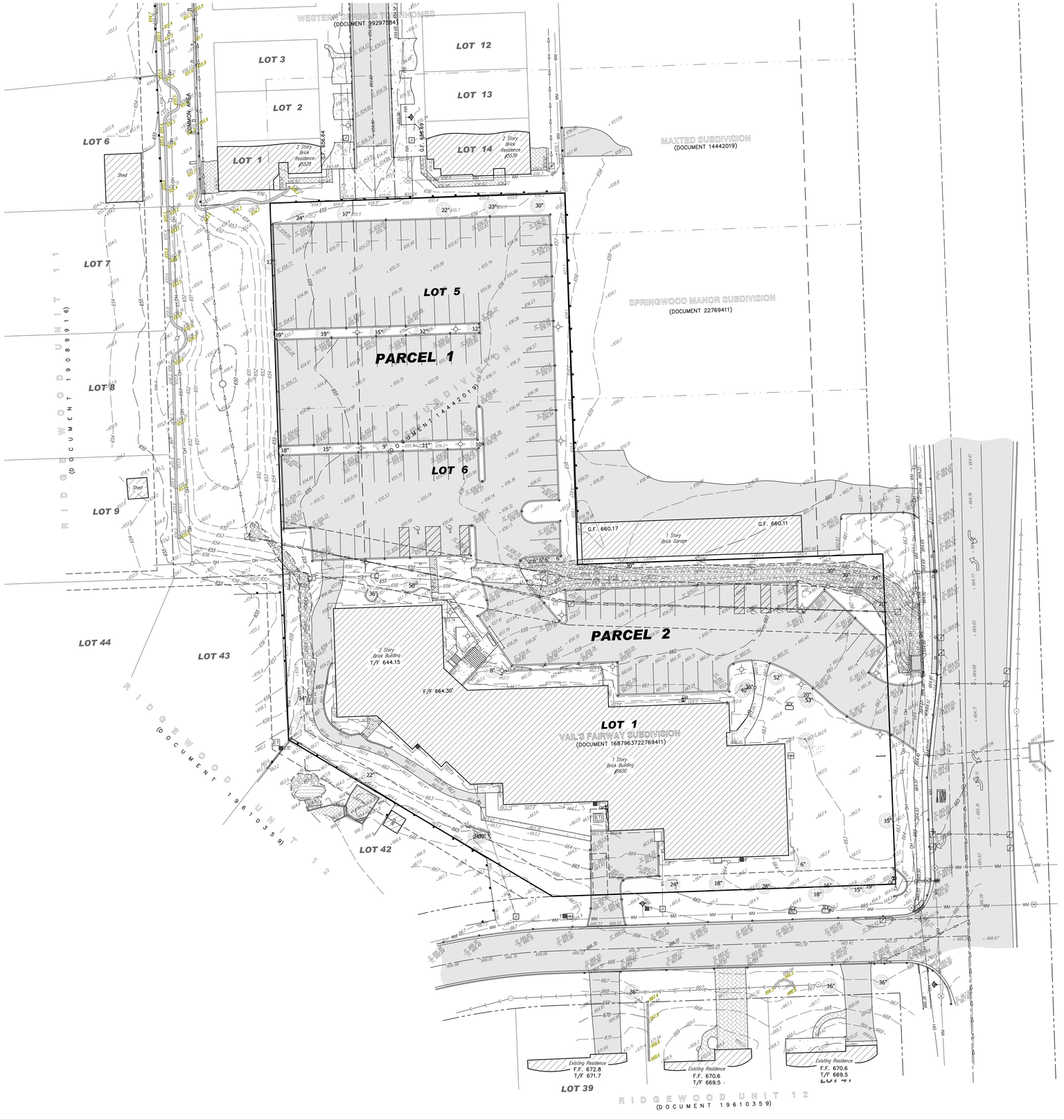
UTILITY AND GRADING AS-BUILT PLAN
HERITAGE SPRINGS TOWNHOMES
WESTERN SPRINGS, ILLINOIS

REVISIONS

KUDRNA & ASSOCIATES, LTD.
CIVIL ENGINEERING
PLANNING • DESIGN • LAND SURVEY • CONSTRUCTION MANAGEMENT
203 NORTH CASS AVENUE • WESTMONT, ILLINOIS • 60559 • (630) 969-3060
400 SOUTH GREEN STREET • SUITE 304 • CHICAGO, ILLINOIS • 60607 • (312) 738-1522

Checked By: GDL
Drawn By: AJP/FJS
Date: SEPTEMBER 29, 2007
Scale: 1"=30'
Job Number: 5294
Title: HERITAGE SPRINGS TOWNHOMES
Sheet: 1 of 1

P:\5294 00 - Community 55th and Wolf\dwg\5294-rev.dwg, 9/27/2007 2:53:11 PM



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

LEGEND

- ANCHOR
- B-BOX
- BENCHMARK
- GROUND FLOOD LIGHT
- POWER POLE
- SIGN
- SPRINKLER CONTROL VALVE
- HANDHOLD
- TRANSFORMER PAD
- CATCH BASIN
- STORM INLET
- FLARED END SECTION
- CLOSED LID MANHOLE
- WATER VALVE
- HYDRANT
- C CABLE TV PEDESTAL
- E ELECTRIC PEDESTAL
- T TELEPHONE PEDESTAL
- C E T TEL., ELEC., CABLE PEDESTALS
- E ELECTRIC METER
- G GAS METER
- FIP FOUND IRON PIPE
- 10" DECIDUOUS TREE W/ TRUNK SIZE
- LIGHT POLE W/MAST ARM
- PARKING LOT LIGHT (1)

HATCHING

- ASPHALT SURFACE
- ADA DETECTABLE WARNING
- BRICK SURFACE
- BUILDING LIMITS
- CONCRETE SURFACE
- RIP-RAP
- WATER

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- WOOD FENCE
- GUARDRAIL
- OH OVERHEAD WIRES
- WM WATER MAIN
- SANITARY SEWER
- SS SANITARY SERVICE
- STORM SEWER
- EDGE OF WATER
- BARRIER CURB
- DEPRESSED CURB
- CURB & GUTTER
- DEPRESSED CURB & GUTTER
- RETAINING WALL
- ### CONTOUR LINE

ABBREVIATIONS

◦ ###	EXIST. SPOT ELEVATION
CMP	CORRUGATED METAL PIPE
D.E.	DRAINAGE EASEMENT
DIP	DUCTILE IRON PIPE
F.F.	FINISHED FLOOR
INV	INVERT
MH	MANHOLE
P.U.E.	PUBLIC UTILITY EASEMENT
RCP	REINFORCED CONCRETE PIPE
T/F	TOP OF FOUNDATION
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
N	NORTH
S	SOUTH
E	EAST
W	WEST
(###.##')	RECORD/DEED
###.##	MEASURED

REVISIONS

NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

TOPOGRAPHIC MAP
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. NO.: 184-003740

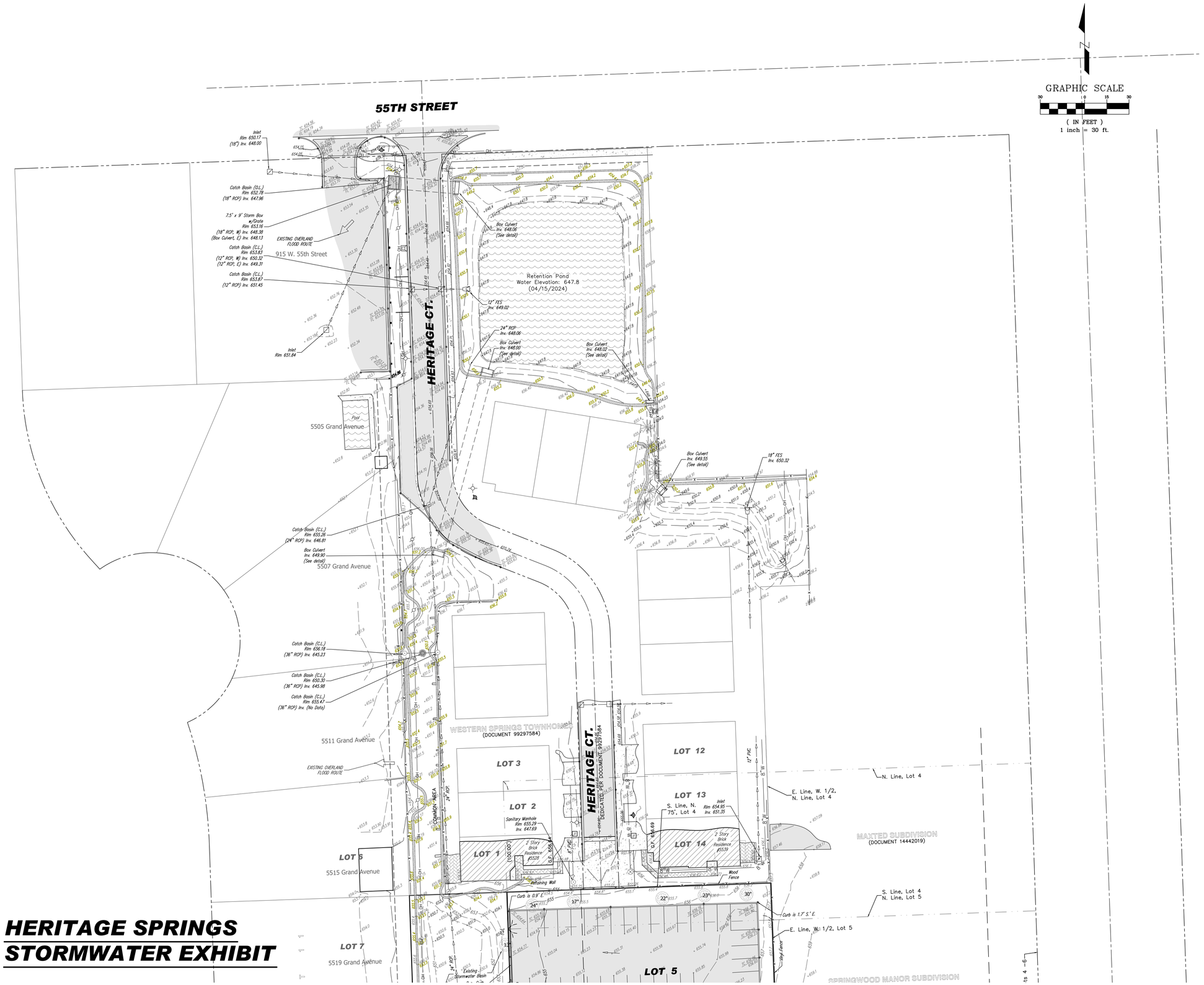
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 04/02/2024
Field Date: BY OTHERS
Drawn By: SJL
Checked By: SDS

2 OF 2

EXISTING CONDITIONS - GRADING

L:\Projects\2024\24-0001\Survey\dwg\Topography\24-0001 Topo.dwg Plot Date:4/26/2024 8:47:08 AM By: SJL



HERITAGE SPRINGS STORMWATER EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-26-24	PER WESTERN SPRINGS REVIEW	SDD

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

1
OF
1

HERITAGE SPRINGS STORMWATER EXHIGIT

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date: 7/12/2024 2:18:09 PM By dsteh

On-Site & Off-Site
Existing & Proposed Conditions
Summary Analysis Tables

Heritage Crossing
On-Site Reservoir & Peak Flow Rate Summary Analysis

Storage West Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	658.86	656.77	-2.09
2YR - 2HR	658.88	656.81	-2.07
2YR - 3HR	658.84	656.72	-2.12
2YR - 6HR	658.72	656.38	-2.34
2YR - 12HR	658.58	656.00	-2.58
2YR - 24HR	658.41	655.62	-2.79
2YR - 48HR	657.56	655.35	-2.21
10YR - 1HR	659.44	658.54	-0.90
10YR - 2HR	659.44	658.55	-0.89
10YR - 3HR	659.38	658.36	-1.02
10YR - 6HR	659.17	657.70	-1.47
10YR - 12HR	658.93	656.96	-1.97
10YR - 24HR	658.69	656.28	-2.41
10YR - 48HR	658.52	655.84	-2.68
100YR - 1HR	660.32	660.39	0.07
100YR - 2HR	660.30	660.36	0.06
100YR - 3HR	660.15	660.20	0.05
100YR - 6HR	659.84	659.82	-0.02
100YR - 12HR	659.42	658.47	-0.95
100YR - 24HR	659.11	657.52	-1.59
100YR - 48HR	658.85	656.75	-2.10

Basin "C"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET	Existing Discharge C.F.S.	Proposed Discharge C.F.S.
2YR - 1HR	650.72	650.61	-0.11	59.54	58.39
2YR - 2HR	650.78	650.71	-0.07	60.13	59.40
2YR - 3HR	650.67	650.61	-0.06	59.05	58.35
2YR - 6HR	650.27	650.22	-0.05	54.59	54.05
2YR - 12HR	649.51	649.49	-0.02	45.02	44.70
2YR - 24HR	648.76	648.75	-0.01	32.26	32.16
2YR - 48HR	648.31	648.31	0.00	23.95	23.89
10YR - 1HR	652.46	652.44	-0.02	75.73	75.49
10YR - 2HR	652.49	652.47	-0.02	75.96	75.77
10YR - 3HR	652.31	652.30	-0.01	74.48	74.37
10YR - 6HR	651.70	651.69	-0.01	69.14	69.03
10YR - 12HR	650.95	650.94	-0.01	61.89	61.82
10YR - 24HR	650.13	650.13	0.00	52.97	52.92
10YR - 48HR	649.15	649.14	-0.01	39.37	39.28
100YR - 1HR	655.16	655.11	-0.05	95.49	95.13
100YR - 2HR	655.14	655.08	-0.06	95.38	94.97
100YR - 3HR	654.64	654.50	-0.14	92.00	91.08
100YR - 6HR	653.74	653.74	0.00	85.65	85.64
100YR - 12HR	652.47	652.46	-0.01	75.75	75.72
100YR - 24HR	651.52	651.51	-0.01	67.42	67.38
100YR - 48HR	650.71	650.71	0.00	59.43	59.42

Basin "A" & "B"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	649.47	649.07	-0.40
2YR - 2HR	650.20	649.85	-0.35
2YR - 3HR	649.81	649.48	-0.33
2YR - 6HR	648.54	648.33	-0.21
2YR - 12HR	647.80	647.80	0.00
2YR - 24HR	647.80	647.80	0.00
2YR - 48HR	647.80	647.80	0.00

10YR - 1HR	653.41	653.39	-0.02
10YR - 2HR	653.41	653.41	0.00
10YR - 3HR	653.39	653.38	-0.01
10YR - 6HR	653.33	653.32	-0.01
10YR - 12HR	653.29	653.29	0.00
10YR - 24HR	648.95	648.90	-0.05
10YR - 48HR	647.80	647.80	0.00
100YR - 1HR	654.19	654.18	-0.01
100YR - 2HR	654.19	654.18	-0.01
100YR - 3HR	654.07	654.01	-0.06
100YR - 6HR	653.72	653.72	0.00
100YR - 12HR	653.41	653.41	0.00
100YR - 24HR	653.31	653.31	0.00
100YR - 48HR	653.28	653.28	0.00

2.41 Acre Developmental Site (Peak Flow Rates)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Reduction %
2YR - 1HR	3.91	2.97	-24.04%
2YR - 2HR	3.15	2.53	-19.68%
2YR - 3HR	2.53	2.10	-17.00%
2YR - 6HR	1.63	1.41	-13.50%
2YR - 12HR	1.05	0.93	-11.43%
2YR - 24HR	0.65	0.60	-7.69%
2YR - 48HR	0.45	0.43	-4.44%
10YR - 1HR	7.75	6.45	-16.77%
10YR - 2HR	5.91	5.14	-13.03%
10YR - 3HR	4.59	4.08	-11.11%
10YR - 6HR	3.01	2.62	-12.96%
10YR - 12HR	1.78	1.66	-6.74%
10YR - 24HR	1.05	1.02	-2.86%
10YR - 48HR	0.72	0.70	-2.78%
100YR - 1HR	15.64	13.96	-10.74%
100YR - 2HR	11.43	10.41	-8.92%
100YR - 3HR	9.07	8.21	-9.48%
100YR - 6HR	5.72	5.31	-7.17%
100YR - 12HR	3.14	3.04	-3.18%
100YR - 24HR	1.81	1.78	-1.66%
100YR - 48HR	1.21	1.19	-1.65%

Heritage Crossing
Off-Site Reservoir & Peak Flow Rate Summary Analysis

Box Inlet East Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	660.51	660.47	-0.04
2YR - 2HR	660.55	660.51	-0.04
2YR - 3HR	660.46	660.42	-0.04
2YR - 6HR	660.11	660.08	-0.03
2YR - 12HR	659.73	659.70	-0.03
2YR - 24HR	659.35	659.32	-0.03
2YR - 48HR	659.08	659.05	-0.03
10YR - 1HR	662.29	662.24	-0.05
10YR - 2HR	662.30	662.25	-0.05
10YR - 3HR	662.11	662.06	-0.05
10YR - 6HR	661.45	661.40	-0.05
10YR - 12HR	660.70	660.66	-0.04
10YR - 24HR	660.02	659.98	-0.04
10YR - 48HR	659.57	659.54	-0.03
100YR - 1HR	664.98	664.94	-0.04
100YR - 2HR	664.96	664.92	-0.04
100YR - 3HR	664.86	664.78	-0.08
100YR - 6HR	663.86	663.57	-0.29
100YR - 12HR	662.23	662.17	-0.06
100YR - 24HR	661.27	661.22	-0.05
100YR - 48HR	660.49	660.45	-0.04

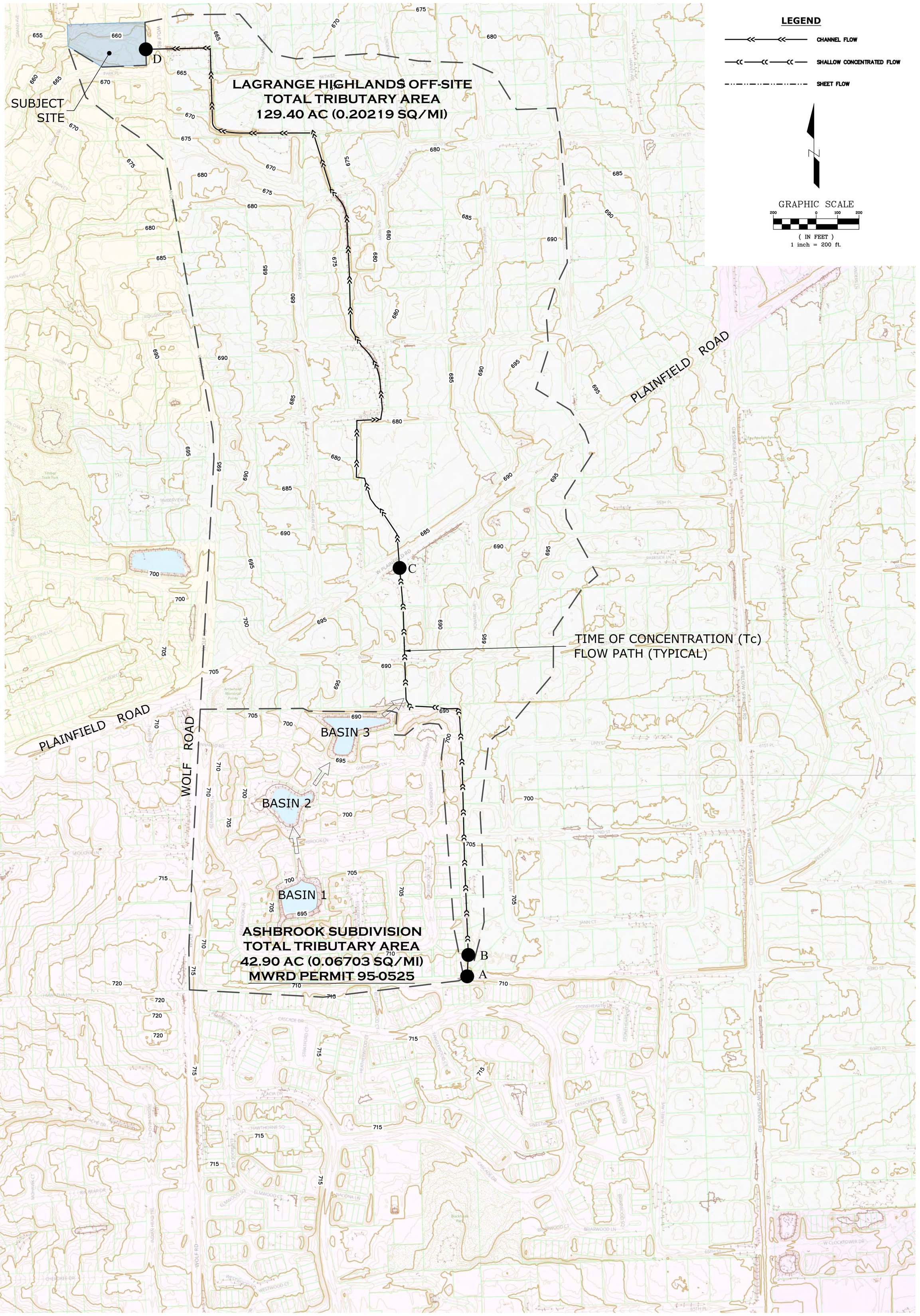
Storage East Side of Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	661.95	661.95	0.00
2YR - 2HR	662.02	662.02	0.00
2YR - 3HR	661.86	661.86	0.00
2YR - 6HR	661.18	661.18	0.00
2YR - 12HR	660.28	660.28	0.00
2YR - 24HR	659.53	659.53	0.00
2YR - 48HR	659.08	659.08	0.00
10YR - 1HR	663.56	663.56	0.00
10YR - 2HR	663.56	663.56	0.00
10YR - 3HR	663.53	663.53	0.00
10YR - 6HR	663.09	663.09	0.00
10YR - 12HR	662.20	662.20	0.00
10YR - 24HR	660.98	660.98	0.00
10YR - 48HR	659.92	659.92	0.00
100YR - 1HR	664.00	664.00	0.00
100YR - 2HR	663.98	663.98	0.00
100YR - 3HR	663.91	663.91	0.00
100YR - 6HR	663.72	663.72	0.00
100YR - 12HR	663.54	663.54	0.00
100YR - 24HR	662.90	662.90	0.00
100YR - 48HR	661.92	661.92	0.00

Off-Site Tributary Area East of Wolf Road (LaGrange Highlands)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Differential CFS
2YR - 1HR	74.30	74.30	0.00
2YR - 2HR	75.98	75.98	0.00
2YR - 3HR	72.01	72.01	0.00
2YR - 6HR	58.07	58.07	0.00
2YR - 12HR	44.10	44.10	0.00
2YR - 24HR	31.65	31.65	0.00
2YR - 48HR	23.52	23.52	0.00
10YR - 1HR	163.13	163.13	0.00
10YR - 2HR	162.60	162.60	0.00
10YR - 3HR	150.72	150.72	0.00
10YR - 6HR	116.39	116.39	0.00
10YR - 12HR	81.52	81.52	0.00
10YR - 24HR	54.17	54.17	0.00
10YR - 48HR	38.67	38.67	0.00
100YR - 1HR	359.61	359.61	0.00
100YR - 2HR	349.64	349.64	0.00
100YR - 3HR	317.93	317.93	0.00
100YR - 6HR	257.01	257.01	0.00
100YR - 12HR	154.46	154.46	0.00
100YR - 24HR	106.91	106.91	0.00
100YR - 48HR	72.59	72.59	0.00

Off-Site Upstream Tributary Area Analysis Documentation



EX1
OF
EX1

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 200'
Date: 04-11-24
Design By: SSD
Drawn By: AJS
Checked By: SSD

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326 - 4962
DEI
IL PROF. LIC. NO.: 184 - 003740

TRIBUTARY AREA EXHIBIT
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 S. JACKSON STREET
BURR RIDGE, ILLINOIS
(630) 325-3400

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	07-12-24	PER VILLAGE REVIEW	SSD

UPSTREAM TRIBUTARY AREA EXHIBIT

Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t)

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

Conditions (i.e. Present / Developed) Existing conditions - LaGrange Highlands Off-Site 129.4 Acre

NOTES: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet Flow: (Applicable to T_c only)		Segment ID	AB			
1 Surface Description (Table 3-1)			grass			
2 Manning's Roughness Coeff., '**n**' (Table 3-1)			0.24			
3 Flow Length, **L** (Total < 300 ft)		ft	100			
4 Two-year, 24-hour Rainfall, P_2		in	3.34	3.34		
5 Land slope, **S**		ft / ft	0.0200	0.0100		
6 $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}S^{0.4}}$	Compute T_t	hr	0.23	+ 0.00	=	0.23

Shallow Concentrated Flow:		Segment ID	BC			
7 Surface Description (paved or unpaved)			unpaved			
8 Flow Length, **L**		ft	2028			
9 Watercourse slope, **S**		ft / ft	0.0180			
10 Average Velocity, **V** (Figure 3-1)		ft / s	2.2			
11 T_t = **L** / 3600**V**	Compute T_t	hr	0.26	+	=	0.26

Channel Flow:		Segment ID	CD			
12 Cross Sectional Flow Area, **a**		ft^2				
13 Wetted Perimeter, p_w		ft				
14 Hydraulic Radius, **R** = **a**/p_w		ft				
15 Channel Slope, **S**		ft / ft				
16 Manning's Roughness Coeff., '**n**'						
17 **V** = [1.49$R^{2/3}S^{1/2}$]/**n**		ft / s	3	3		
18 Flow Length, **L**		ft	3436	0		
19 T_t = **L** / 3600**V**	Compute T_t	hr	0.32	+ 0.00	=	0.32
20 Watershed or Subarea T_c or T_t (add T_t in steps 6, 11, and 19)					hr	**0.81**

L:\Projects\2024\24-0001\Engineering\Storm Water\Reports - Preliminary\Initial Submittal\Tributary Area Calcs\[24-0001 Tc Calc.xls]Trib. to Site 129

Curve Number

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

Conditions (i.e. Present / Developed): Existing conditions - Tributary

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	School / Church	94			23.1100	2172.34
C	Residential (town houses)	90			30.1400	2712.60
C	Residential 1/4 acre lots	83			31.5300	2616.99
C	Residential 1/2 acre lots	80			44.6200	3569.60
				Totals =	129.4000	11071.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{11071.53}{129.4000} =$ 85.56 ; use CN = **85.56**



ASHBROOK SUBDIVISION

1" = 50'
10/31/95

STORM WATER MANAGEMENT PLAN

LEGEND

BASIN BOUNDARY

STORM STRUCTURE
DRAINAGE AREA LIMIT

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVE. NORTHFIELD, IL 60093 PH. (708) 446-1000 FAX (708) 446-1002

NOTE:
REFER TO SEPARATE MODEL AND SALES CENTER EXHIBIT BY DONVEN HOMES FOR MORE INFORMATION REGARDING MODEL PHASE SITE PLAN.

NOTE:
REFER TO SEPARATE PLANS FOR PROPOSED WOLF ROAD IMPROVEMENTS

EXISTING GRAVEL PARKING LOT TO BE REMOVED. GRAVEL TO BE REUSED ON-SITE AT TEMPORARY CONSTRUCTION ENTRANCE.

PROPOSED 5' WIDE P.C.C. SIDEWALK

18' WIDE EMERGENCY ACCESS DRIVE (SEE PAVEMENT DETAIL ON SHEET CE-21)

EXISTING BUILDINGS TO BE DEMOLISHED. EXSISTING SEPTIC TANK AND FIELD TO BE REMOVED.

MODEL PHASE

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #1
(5.1 Ac-Ft)
NWL = 694.5
HWL = 701.0

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #2
(5.2 Ac-Ft)
NWL = 691.5
HWL = 698.0

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #3
(4.5 Ac-Ft)
NWL = 688.5
HWL = 695.0

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EXISTING PLEASANT VIEW ESTATES SUBDIVISION

ASHBROOK LANE

GLENBROOK LANE

EDGEBROOK LANE

EDGEBROOK COURTYARD

MATCH LINE

MATCH LINE

SEE SHEET CE-4 FOR CONTINUATION

SECTION A-A

SECTION B-B

SECTION C-C

TOP OF BERM ELEV. = 696.2 (TYP.)
5' WIDE BERM AT TOP
3:1 MAXIMUM SLOPE (TYP.)
POND #3 NWL
10'
MATCH EXISTING GRADE
BERM TO BE CONSTRUCTED OF COMPACTED CLAY W/ 6" TOPSOIL

GRADING PLAN (WEST)

REVISIONS

DATE	DESCRIPTION
2/21/95	PER VILLAGE, SAN. DIST. FIRE DEPT., & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

DESIGN: T.M.L. | DRAFTING: M.J.
SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-3

SEE SHEET CE-3 FOR CONTINUATION

MATCH LINE

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EDGEBROOK

EDGEBROOK COURT

LANE

ASHBROOK LANE

GLENBROOK LANE

GLENBROOK COURT

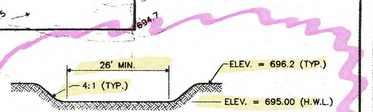
POND #3
LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)
(4.5 Ac-Ft)
NWL = 688.5
HWL = 695.0

TOP OF BERM ELEV. = 696.2 (TYP.)

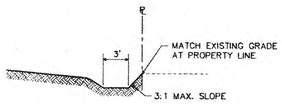
EXISTING PLEASANT VIEW ESTATES SUBDIVISION

EXISTING ACACIA ACRES SUBDIVISION

SECTION D-D



NOTE:
DOWNSPOUTS FOR HOMES ON LOTS 66 & 67 ARE TO BE CONNECTED TO STORM SEWER.



SECTION E-E

TYPICAL SWALE SECTION ALONG EAST PROPERTY LINE

GRADING PLAN (EAST)

REVISIONS

DATE	DESCRIPTION
12/21/95	PER VILLAGE, SAN. DIST., FIRE DEPT., & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

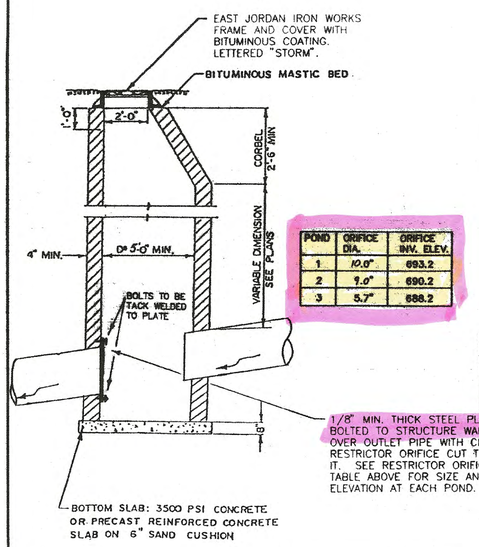
GRADING PLAN (EAST)

DESIGN: T.M.L. | DRAFTING: M.J.
SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

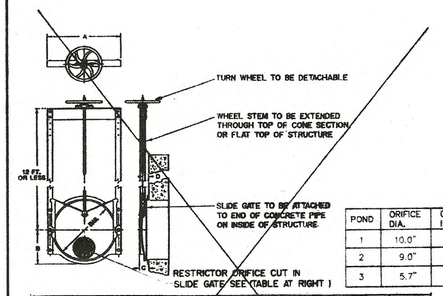
PROJECT No. 95233

CE - 4



POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

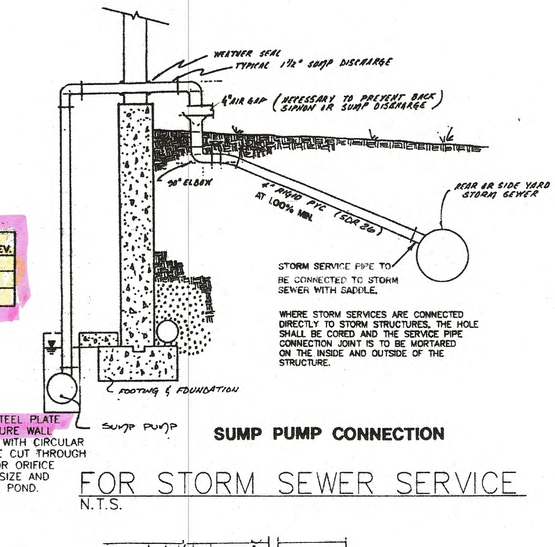
CATCH BASIN W/RESTRICTOR
N.T.S.



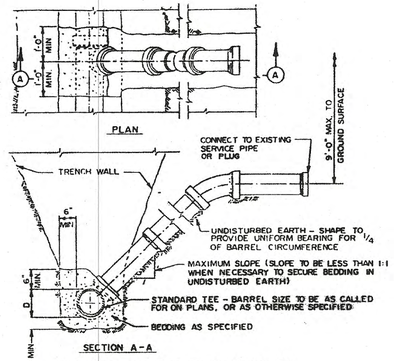
POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

GATE SIZE (mm)	A	SPIGOT BACK GATE B	C	D	FLAT BACK GATE B	C	D	MINIMUM FRAME WEIGHT (KT)	STEM DIA.	TYPE LIFT	MAXIMUM WORKING HEAD (FT)
6	9.37	4.37	4.12	2.50	4.37	4.12	2.50	2	⅜	H1-10	20
8	11.37	5.12	3.37	1.75	5.37	4.12	2.50	2	⅜	H1-10	20
10	13.37	6.12	3.37	1.75	6.37	4.12	2.50	2	⅜	H1-10	20
12	15.37	7.12	3.37	1.75	7.37	4.12	2.50	3	⅜	H1-10	20
15	18.37	8.62	3.37	1.75	8.87	4.12	2.50	3	⅜	H1-10	20
18	22.87	10.50	3.37	2.25	10.75	5.12	3.12	3	1¼	H1-14	20
21	25.87	12.00	4.85	2.25	12.25	5.12	3.12	4	1¼	H1-14	16
24	28.87	13.50	4.25	2.25	13.75	5.12	3.12	4	1¼	H1-14	12
30	35.87	17.37	5.12	3.00	17.12	5.87	3.75	5	1¼	H1-14	10
36	41.87	20.37	5.75	3.00	20.12	6.50	3.75	6	1½	H2-24	8
42	47.87	23.40	5.75	3.00	23.12	6.50	3.75	6	1½	H2-30	8
48	53.87	26.75	5.75	3.00	26.12	6.87	4.12	7	1½	H8-24	7
54	61.0	29.25	7.75	4.87	29.25	7.75	4.87	8	2"	H8-30	5
60	68.0	32.25	9.0	5.50	32.25	9.0	5.50	8	2"	H8-30	4

SLIDE GATE RESTRICTOR DETAIL



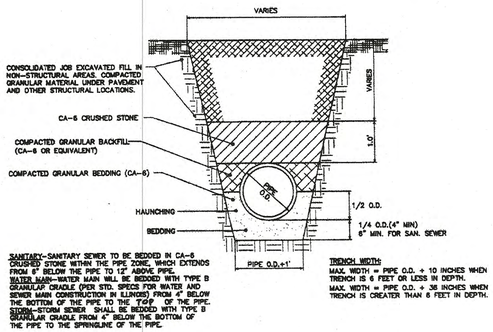
SUMP PUMP CONNECTION
FOR STORM SEWER SERVICE
N.T.S.



SANITARY SERVICE PIPE TO BE 6" MIN. DIA. SDR-26 PVC OR APPROVED EQUIVALENT.

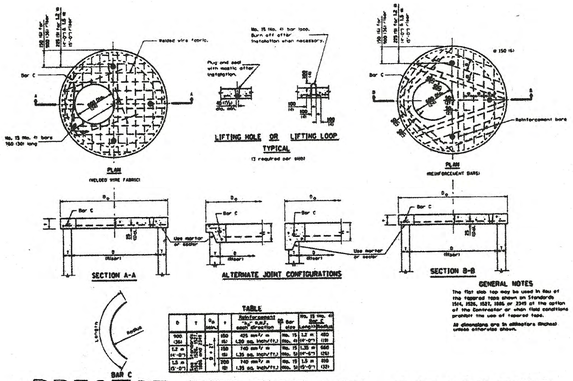
NOTES:
1. RISERS TO BE CONSTRUCTED IN LIEU OF WYES WHERE SEWER DEPTH EXCEEDS 12'-0" FOR PIPE MATERIAL AND CONCRETE. SEE SPECIFICATIONS.
2. ALL SANITARY SERVICES SHALL BE INSPECTED BY THE LA GRANGE HIGHLANDS SANITARY DISTRICT OR THE VILLAGE OF INDIAN HEAD PARK PRIOR TO THE TRENCH BEING BACKFILLED.

SANITARY SEWER SERVICE



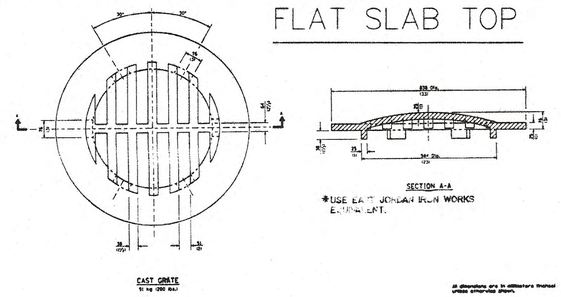
SANITARY-SANITARY SEWER TO BE BEDDED IN CA-6 CRUSHED STONE WITHIN THE PIPE ZONE, WHICH EXTENDS FROM 6" BELOW THE PIPE TO 12" ABOVE PIPE.
WATER MAIN-WATER MAIN WILL BE BEDDED WITH TYPE B GRANULAR CRADLE (PER STD. SPECS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS) FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE TOP OF THE PIPE.
STORM-STORM SEWER SHALL BE BEDDED WITH TYPE B GRANULAR CRADLE FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE OF THE PIPE.

PIPE BEDDING AND BACKFILL

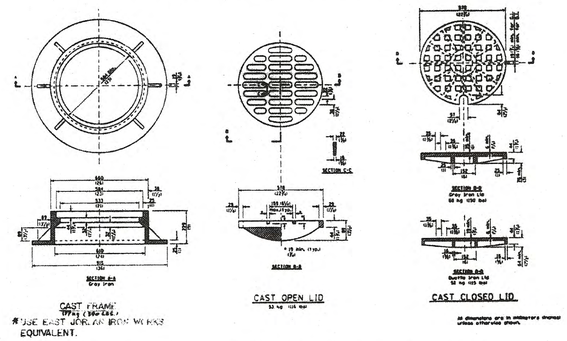


D	t	t_1	t_2	Reinforcement Wire Fabric Quantity per Manhole	Bar Reinforcement Quantity per Manhole
1200 (4'-0")	150	200	150	405 mm²/m (.192 sq. inch/ft.)	No. 15 (5/8") @ 450 c/c
1500 (5'-0")	150	200	150	540 mm²/m (.255 sq. inch/ft.)	No. 15 (5/8") @ 450 c/c
1800 (6'-0")	150	200	150	675 mm²/m (.319 sq. inch/ft.)	No. 15 (5/8") @ 450 c/c
2400 (8'-0")	200	250	200	945 mm²/m (.446 sq. inch/ft.)	No. 15 (5/8") @ 450 c/c
3000 (10'-0")	200	250	200	1215 mm²/m (.574 sq. inch/ft.)	No. 15 (5/8") @ 450 c/c

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

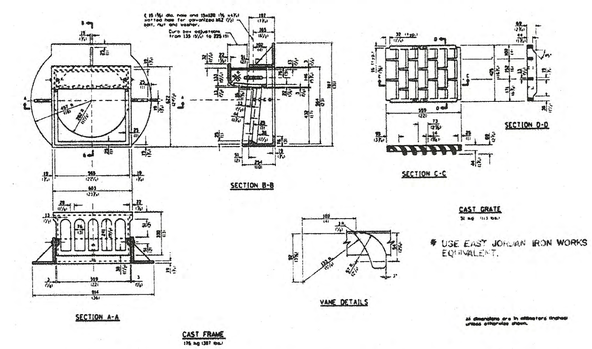


TYPE 8 GRATE *
(FOR ALL OPEN LID STORM STRUCTURES IN GRASS AREAS)



* USE EAST JORDAN IRON WORKS EQUIVALENT.

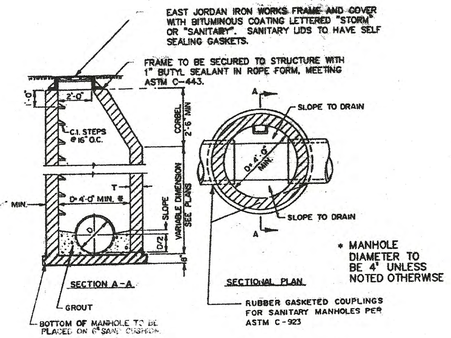
TYPE 1* FRAME AND LIDS
(FOR ALL CLOSED LID STRUCTURES OR STRUCTURES IN PAVEMENT AREAS OUTSIDE OF CURB AND GUTTER)



* USE EAST JORDAN IRON WORKS EQUIVALENT.

TYPE 3V* FRAME AND GRATE
(FOR ALL STORM STRUCTURES WITHIN B-6.12 CURB AND GUTTER)

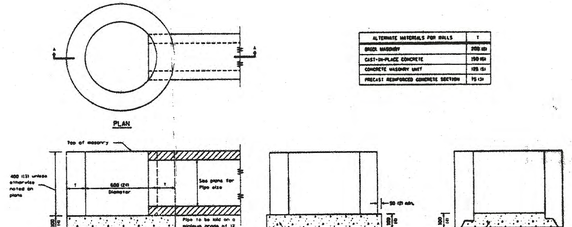
MATERIAL WALL THICKNESS
PRE-CAST CONC. MIN. 1/12 "D"
CONC. MASONRY UNITS MIN. 3"
CAST-IN-PLACE CONC. MIN. 6"
BRICK MASONRY UNITS MIN. 8"



* MANHOLE DIAMETER TO BE 4' UNLESS NOTED OTHERWISE

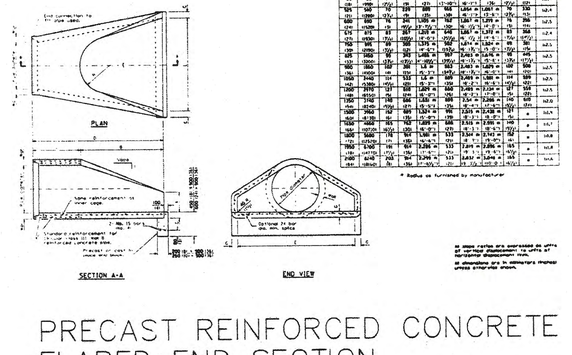
NOTE:
1. MANHOLE BARREL SECTIONS SHALL BE SEALED WITH 1" BUTYL JOINT SEALANT IN ROPE FORM, MEETING ASTM C-443.
2. SANITARY MANHOLES SHALL HAVE MONOLITHICALLY CAST BOTTOM SECTIONS.

STORM & SANITARY MANHOLE STRUCTURE



ALTERNATE MATERIALS FOR WALLS	f'c
BRICK MASONRY	3900 KPa
CAST-IN-PLACE CONCRETE	350 KPa
CONCRETE MASONRY UNIT	105 KPa
PRECAST REINFORCED CONCRETE SECTION	70 KPa

STORM INLET STRUCTURE



PIPE DIA.	APPROX. WT. (kg)	WALL	A	B	C	D	L	S	APPROX. SLOPE
200	136	32	500	600	1,219	1,829	600	51	10.5%
250	159	32	500	600	1,219	1,829	762	51	8.0%
300	182	32	500	600	1,219	1,829	914	51	6.5%
375	227	32	500	600	1,219	1,829	1,143	51	5.0%
400	254	32	500	600	1,219	1,829	1,219	51	4.5%
450	295	32	500	600	1,219	1,829	1,372	51	4.0%
525	1100	38	600	700	1,524	2,134	1,600	51	3.5%
600	1250	38	600	700	1,524	2,134	1,829	51	3.0%
675	1400	38	600	700	1,524	2,134	2,057	51	2.5%
750	1550	38	600	700	1,524	2,134	2,286	51	2.5%
825	1700	38	600	700	1,524	2,134	2,515	51	2.5%
900	1850	38	600	700	1,524	2,134	2,743	51	2.5%
1050	2150	38	600	700	1,524	2,134	3,200	51	2.5%
1200	2450	38	600	700	1,524	2,134	3,658	51	2.5%
1350	2750	38	600	700	1,524	2,134	4,115	51	2.5%
1500	3050	38	600	700	1,524	2,134	4,572	51	2.5%
1650	3350	38	600	700	1,524	2,134	5,029	51	2.5%
1800	3650	38	600	700	1,524	2,134	5,486	51	2.5%
1950	3950	38	600	700	1,524	2,134	5,944	51	2.5%
2100	4250	38	600	700	1,524	2,134	6,401	51	2.5%
2250	4550	38	600	700	1,524	2,134	6,858	51	2.5%
2400	4850	38	600	700	1,524	2,134	7,315	51	2.5%
2550	5150	38	600	700	1,524	2,134	7,772	51	2.5%
2700	5450	38	600	700	1,524	2,134	8,230	51	2.5%
2850	5750	38	600	700	1,524	2,134	8,687	51	2.5%
3000	6050	38	600	700	1,524	2,134	9,144	51	2.5%

* Radius as furnished by manufacturer

PRECAST REINFORCED CONCRETE FLARED END SECTION

REVISIONS

DATE	DESCRIPTION
12/20/95	PER VILLAGE, SAN. DIST., FIRE DEPT., AND DEVELOPER.
1/3/96	POND RESTRICTORS PER WMRD
1/24/96	PER VILLAGE, I.E.P.A., M.W.R.D. & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
405 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (847) 446-1000 FAX (847) 446-1002

DESIGN: T.L. | DRAFTING: V.B. G.F. | DATE: 10/31/95 | SCALE: NONE

CONSTRUCTION STANDARDS

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-23

ASHBROOK SUBDIVISION

Indian Head Park, Illinois

FINAL
STORM WATER MANAGEMENT
CALCULATIONS

October 31, 1995
REVISED 1/22/96 (per MWRD) OFFICE COP

95-525

Prepared By:

INFRACON, Inc.
495 Central Avenue
Northfield, IL 60093
(708) 446 - 1000

LOCAL SEWER SYSTEMS SECTION
96 FEB -1 AM 10: 32
M.W.R.D. OF GRT. CHGO.

CONTENTS

Section

1. Storm Water Management Summary

2. HydroCAD 100-Year Storm Routing Calculations

3. Bypass Flow, Pond Overflow Weir Sizing, and Downstream Sewer Calculations

4. Proposed Storm Sewer Sizing Calculations

5. Miscellaneous Technical Reference Data

Exhibit: Storm Water Management Plan

SECTION 1

Storm Water Management Summary

Storm Water Management Summary

Existing Conditions:

The subject 37.9 acre property is located along the east side of Wolf Road between 60th and 63rd Streets in Indian Head Park, Illinois (refer to the location map included in this section). The site is lightly wooded and currently consists of a par three golf course with a small clubhouse building and gravel parking lot. It is bounded by single family homes to the west, north and east and the Acacia multi-family development along its entire southern border. Except for approximately one half acre in the southeast corner of the property, the parcel drains unrestricted in a northerly direction to a pair of 12" diameter storm sewer pipes at the north boundary which in turn discharge to an existing 24" x 18" corrugated metal pipe under 60th street. This culvert then conveys storm water to a drainage swale which flows northerly to Plainfield Road.

There are approximately 6.2 acres of tributary watershed to the west and south of the site (refer to the USGS map copies in section 3). This upstream area is comprised of three separate drainage areas. The first two are approximately 3.4 and 1.3 acres in size and drain to the property through separate 18" diameter culverts under Wolf Road. The third off-site area consists of an estimated 1.5 acres of rear yards of the adjacent Acacia development along the south boundary of the property. Record drawings for the Acacia development indicate that the majority of that site now drains to the southeast and away from the proposed Ashbrook Subdivision.

Proposed Development Conditions:

The proposed Ashbrook Subdivision will occupy 36.4 acres of the 37.9 gross acreage, with 1.5 acres being dedicated to the Wolf Road right-of-way. The development will consist of 25 multi-family buildings containing a total of 112 townhome units and 54 single family home sites. Wolf Road will be widened to provide a left turn lane into the site.

A proposed storm sewer system and drainage swales will convey storm water to three on-site storm water retention ponds which will provide the necessary detention storage in the event of a 100-year frequency storm event. The high water level on each of the three retention ponds has been designed at a minimum of 1.5 feet below the lowest adjacent proposed foundation elevation. Each pond will contain an overflow weir to accommodate the appropriate off-site 100-year bypass flow without exceeding a flow depth of 0.5 feet. The discharge from each pond will be restricted by a circular orifice cut into a metal plate permanently mounted (in accordance with MWRD regulations) over the outflow pipe inside of a downstream catch basin. The site release has been reduced beyond typical allowable rates so that only one of the two existing downstream 12" diameter storm sewer pipes will be needed to convey it. Finally, the existing 24" x 18" culvert under 60th Street, which is in poor condition, will be replaced with a brand new pipe of the same material and size.

Storm Water Management Calculations:

HydroCAD storm water modeling software, which employs the SCS TR-20 and TR-55 methods, was utilized along with Bulletin 70 rainfall intensities in determining the 100-year storm runoff hydrographs for the site and routing the resultant flows through the proposed retention ponds. Section 2 includes all data calculated for basin characteristics, times of concentration, runoff hydrographs, detention storage, and pond routing. The off-site bypass flows were calculated using the rational method and Bulletin 70 rainfall intensities and are shown in Section 3. Storm sewers on the site have been designed, utilizing the rational method and the Bulletin 70 rainfall data to convey a 10-year frequency storm flow. The calculations for these are in Section 4. Supporting technical reference data can be found in Section 5.

The primary calculated hydrologic information is as follows:

POND	TRIBUTARY BASIN AREA (Ac)	N.W.L. ELEV.	H.W.L. ELEV.	STORAGE VOLUME (Ac-Ft)	RESTRICTOR ORIFICE DIAMETER (in)	MAX.100-YR STORM RELEASE (cfs)
1	17.57	694.5	701.0	5.1	10.0	4.2
2	11.02	691.5	698.0	5.2	9.0	3.5
3	8.07	688.5	695.0	4.5	5.7	2.2

Total Development Area = 36.4 Ac

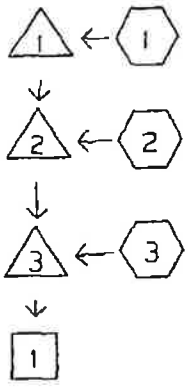
Total Proposed Detention Volume = 14.8 Ac-Ft

Proposed Site Release = 2.2 cfs (0.06 cfs/Ac)

SECTION 2

HydroCAD 100-Year Storm Routing Calculations

WATERSHED ROUTING ==========



SUBCATCHMENT REACH POND LINK

SUBCATCHMENT 1	= BASIN NO. 1	-> POND 1
SUBCATCHMENT 2	= BASIN NO. 2	-> POND 2
SUBCATCHMENT 3	= BASIN NO. 3	-> POND 3
REACH 1	= EXISTING 12" DIA. STORM PIPE	->
POND 1	= RETENTION POND NO. 1	-> POND 2
POND 1 secondary	= RETENTION POND NO. 1	-> POND 2
POND 2	= RETENTION POND NO. 2	-> POND 3
POND 2 secondary	= RETENTION POND NO. 2	-> POND 3
POND 3	= RETENTION POND NO. 3	-> REACH 1
POND 3 secondary	= RETENTION POND NO. 3	-> REACH 1

RUNOFF BY SCS TR-20 METHOD: TYPE II 24-HOUR RAINFALL= 7.4 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	17.57	35.5	1%98 3%99 34%98 2%98 9%98 52%74 - -	86	-	76.4	12.25	7.41
2	11.02	34.4	1%98 4%99 20%98 11%98 64%74 - - -	83	-	46.4	12.24	4.42
3	8.07	35.0	0%98 5%99 21%98 11%98 63%74 - - -	83	-	33.6	12.25	3.23

POND 3 INFLOW PEAK= 37.1 CFS @ 12.25 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.8
11.00	2.0	2.3	2.6	3.0	3.4	4.0	4.8	6.2	8.8	13.8
12.00	21.5	30.7	36.4	36.2	31.7	25.7	20.4	16.7	14.0	12.0
13.00	10.5	9.5	8.7	8.1	7.6	7.2	6.9	6.7	6.4	6.3
14.00	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.4
15.00	5.3	5.3	5.3	5.2	5.2	5.1	5.1	5.1	5.0	5.0
16.00	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7
17.00	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6
18.00	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4
19.00	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3
20.00	4.3									

POND 3 TOTAL OUTFLOW PEAK= 2.2 CFS @ 20.00 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	.1	.2
11.00	.2	.3	.3	.4	.5	.6	.7	.7	.8	.8
12.00	1.0	1.1	1.2	1.4	1.5	1.6	1.6	1.7	1.7	1.7
13.00	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9
14.00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
15.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
17.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19.00	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2
20.00	2.2									

SECTION 3

Off-site Bypass Flow, Overflow Weir Sizing, and Downstream Sewer Calculations

INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY DATE
SCALE

SITE BYPASS FLOW

1. OFF-SITE AREA A ≈ 3.4 Ac ON WEST SIDE OF WOLF RD. (SEE ATTACHED USGS MAP'S)

ASSUME T_c = 20 MIN & C = 0.60

Q_{100} = C · I · A = 0.60 × 6.9"/HR × 3.4 ≈ 14.1 cfs

2. OFF-SITE AREA B ≈ 1.3 Ac ON WEST SIDE OF WOLF ROAD (SEE ATTACHED USGS MAPS)

ASSUME T_c = 20 min & C = 0.60

Q_{100} = 0.60 × 6.9"/HR × 1.3 ≈ 5.4 cfs

3. OFF-SITE AREA C ≈ 1.5 Ac ALONG ACACIA DEVELOPMENT TO SOUTH (BASED ON 1275' × 50' AVG BACK YARD AREA. REMAINING PORTION OF ACACIA DRAINS TO SOUTH PER SITE RECORD DRAWINGS.)

ASSUME T_c = 10 min & C = 0.50

Q_{100} = 0.50 × 10.02"/HR × 1.5 ≈ 7.5 cfs

∴ BYPASS FLOW THROUGH POND #1 = 5.4 + 7.5
= 12.9 cfs

BYPASS FLOW THROUGH POND #'S 2 & 3 = TOTAL BYPASS FLOW
= 27.0 cfs

PRODUCT 204-1 (Single Sheets) 205-1 (Packets) ACCO Inc., Gilroy, Mass. 01471. To Order PHONE TOLL FREE 1-800-225-6380

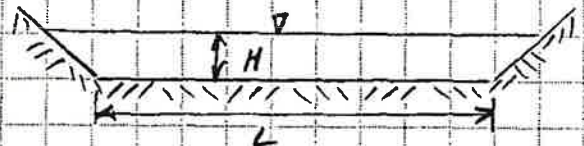
INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY _____ DATE _____
SCALE _____

POND OVERFLOW WEIRS (FOR 100-YR BYPASS FLOWS)

POND #1:

100-YR BYPASS FLOW = 12.9 CFS



LET H = 0.5' (LEAVING 1.0' FREEBOARD TO T/F'S)

$Q = 3LH^{3/2}$

$12.9 = 3L(0.5^{3/2}) \Rightarrow L = 12.2'$ MIN.

POND #'S 2 & 3:

100-YR BYPASS FLOW = 27.0 CFS

$Q = 3LH^{3/2}$

$27 = 3L(0.5)^{3/2} \Rightarrow L = 25.5'$ MIN.

PRODUCT 204-1 (Single Sheets) 205-1 (Padded) NEBS, Inc., Groton, Mass. 01471 To Order PHONE TOLL FREE 1-800-225-6380

Stormwater Analysis
Existing Conditions

Curve Number

Project: Western Springs By: AJS Date: 1/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 1/26/2024

Conditions (i.e. Present / Developed): Existing

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi^2 ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			0.6635	49.10
C	Pavement, parking, Curb and Gutter	98			1.6663	163.30
C	Rock Ditch	89			0.0802	7.14
				Totals =	2.4100	219.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{219.53}{2.4100} = 91.09$; use CN = **91.09**

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			2.90	38	0.001	
	649.37	13				0.0009
			0.63	126	0.003	
	650.00	506				0.0038
			1.00	2,614	0.060	
	651.00	5,647				0.0638
			1.00	8,338	0.191	
	652.00	11,358				0.2552
			1.00	12,572	0.289	
	653.00	13,827				0.5439
			1.00	14,929	0.343	
	654.00	16,059				0.8866
			0.50	8,275	0.190	
Design HWL	654.50	17,045				1.0765
			0.50	11,383	0.261	
	655.00	29,013				1.3379
			0.70	27,797	0.638	
Overflow at Heritage Ct.	655.70	51,472				1.9760
			0.30	16,943	0.389	
	656.00	61,632				2.3649
			0.10	6,357	0.146	
Top of Existing Wall	656.10	65,528				2.5109

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081

Heritage Crossing - Western Springs, IL

8/20/2024

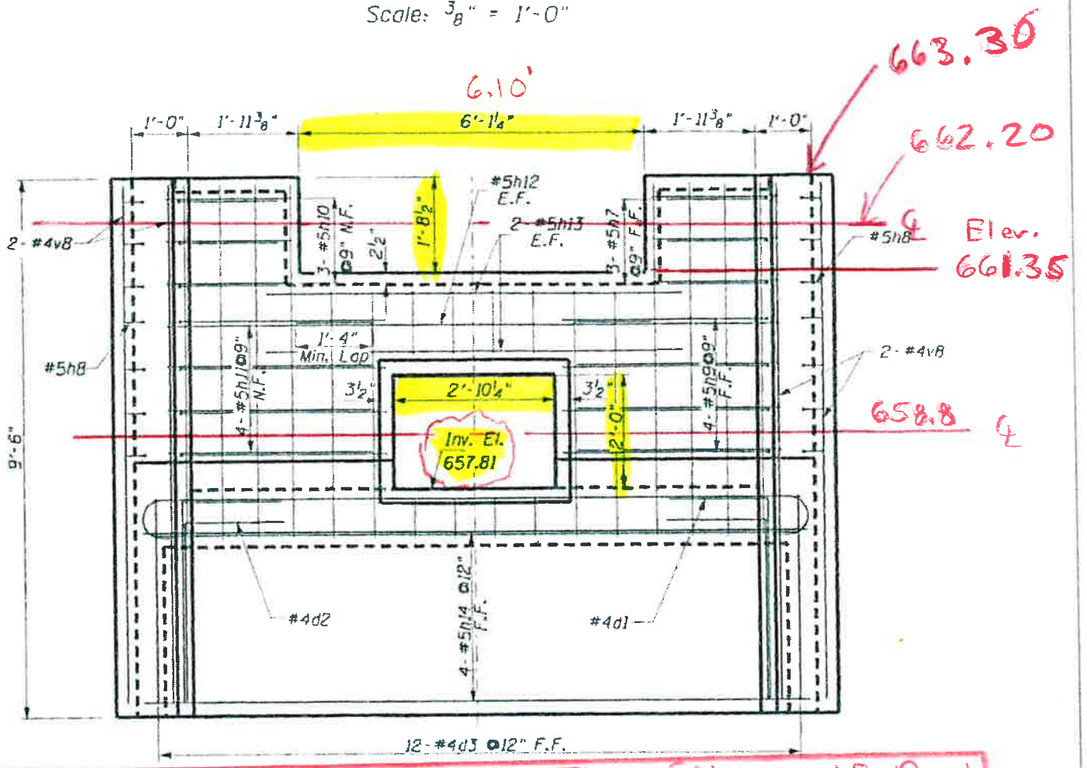
Existing Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	653.95	13				0.0000
			0.05	1	0.000	
	654.00	13				0.0000
			1.00	13	0.000	
	655.00	13				0.0003
			1.00	13	0.000	
	656.00	13				0.0006
			1.05	14	0.000	
	657.05	13				0.0009
			0.95	183	0.004	
	658.00	484				0.0051
			1.00	702	0.016	
	659.00	946				0.0212
			1.00	1,156	0.027	
	660.00	1,379				0.0478
			1.00	2,051	0.047	
	661.00	2,806				0.0948

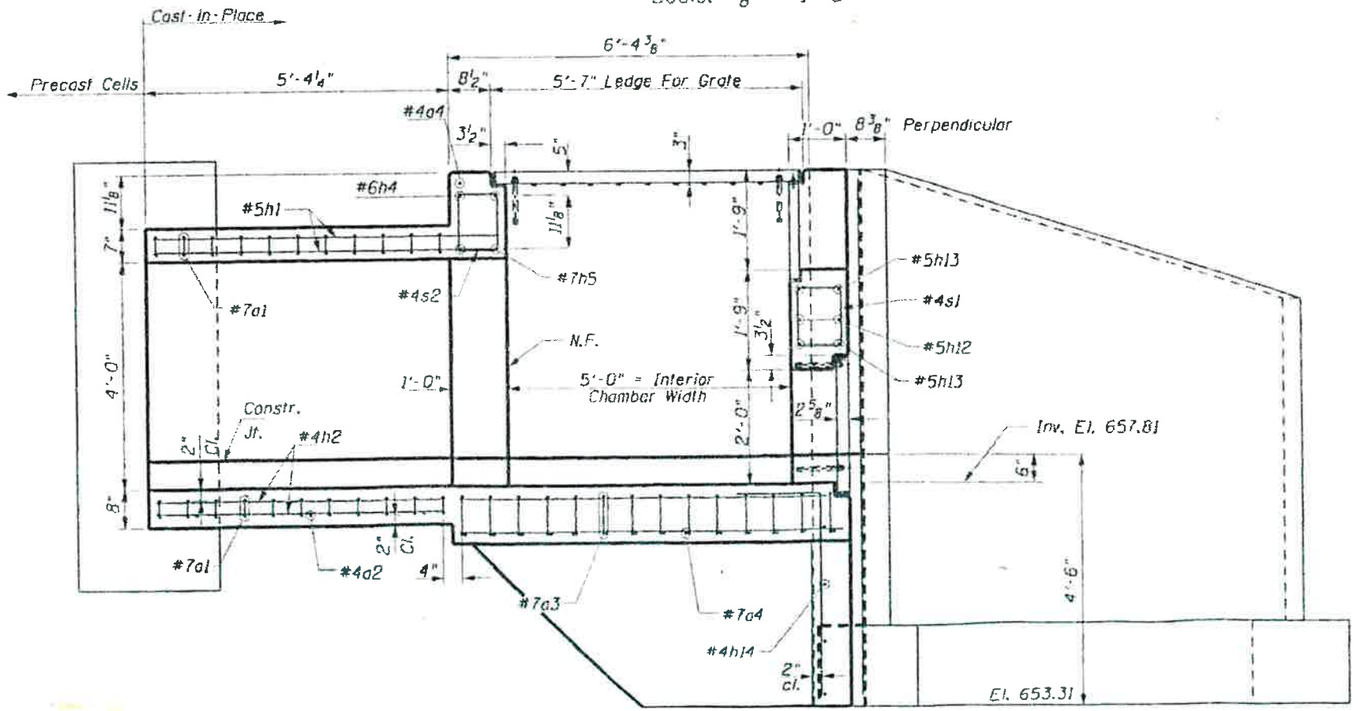
Showing Top Slab Reinforcement
Scale: $\frac{3}{8}$" = 1'-0"

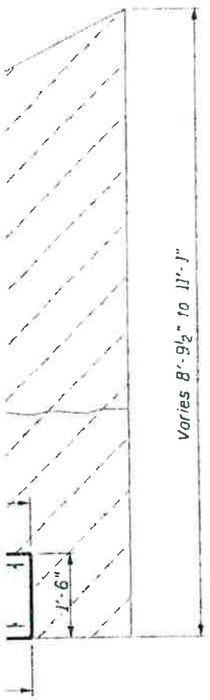


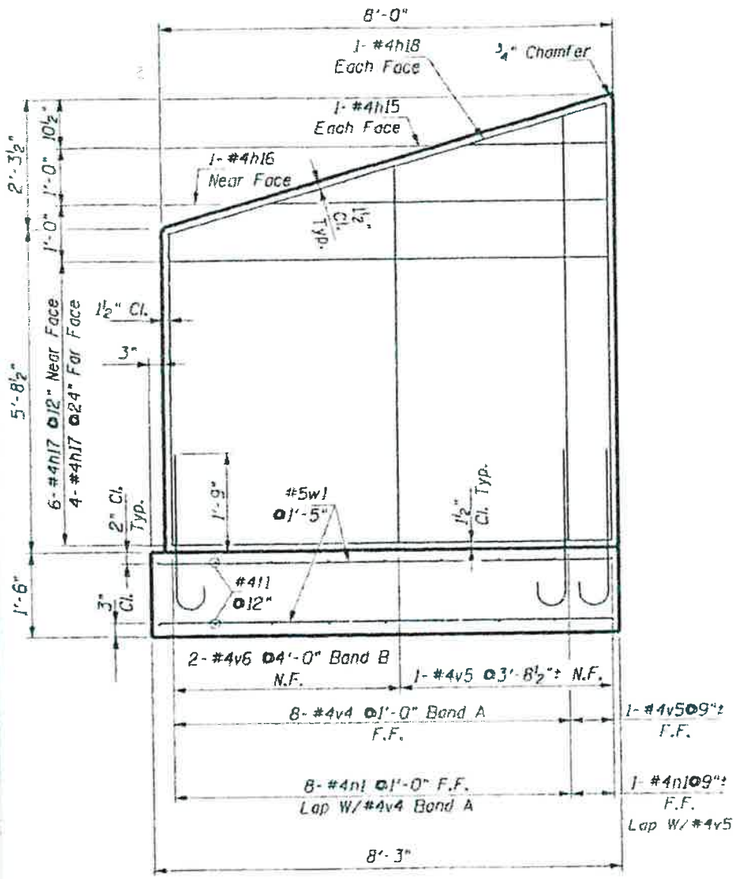
Flood Control Box Inlet East Side Wolf Road

HEADWALL ELEVATION VIEW F-F

Scale: $\frac{3}{8}$" = 1'-0"







WINGWALL ELEVATION VIEW G-G

Scale: $\frac{3}{8}$" = 1'-0"

Concret
Reinfor
Fine or
Concret

JOHI
PRESIDE

(REVISION)
DATE BY

Heritage Crossing- Western Springs, IL

8/21/2024

East Side of Wolf Road - Flood Control Structure / Box Inlet
Stage-Discharge Tables

1) Tributary Areas:

Tributary Area

Delineated Area: 172.30 acres
0.2692188 Square Miles

2) Curve Numbers:

See attached Worksheet 2 for each area.

3) Time of Concentration:

See attached Worksheet 3 for each area.

Notes	Elevation	Bottom Orifice Flow (cfs)	Rectangular Weir Flow (cfs)	Inlet Box Structure Flow (cfs)	Total Flow (cfs)
Orifice	657.80	0.00			0.00
	658.00	3.67			3.67
	659.00	22.00			22.00
	659.80	36.66			36.66
	660.00	40.16			40.16
	661.00	54.37			54.37
Weir	661.35	58.54			58.54
	662.00	65.58	8.63		74.21
	663.00	75.13	34.91		110.03
Inlet Box Grate	663.30	77.76	44.85		122.61
	663.40	78.62	48.34	1.90	128.86
	663.50	79.47	51.92	5.37	136.76
	663.60	80.31	55.59	9.86	145.76
	663.70	81.15	59.33	15.18	155.66
	663.80	81.97	63.16	21.21	166.34
	663.90	82.79	67.07	189.59	339.44
	664.00	83.59	71.05	204.78	359.42
	664.10	84.39	75.11	218.92	378.42
	664.20	85.19	79.24	232.20	396.63
	664.30	85.97	83.45	244.76	414.18
	664.40	86.75	87.73	256.71	431.19
	664.50	87.52	92.08	268.12	447.72

1) Bottom Orifice Flow

C = 0.80
Rectangular Orifice 2.0' x 2.85'
Area = 5.71 feet

Centerline of Orifice = 658.80

2) Rectangular Weir

Weir Flow

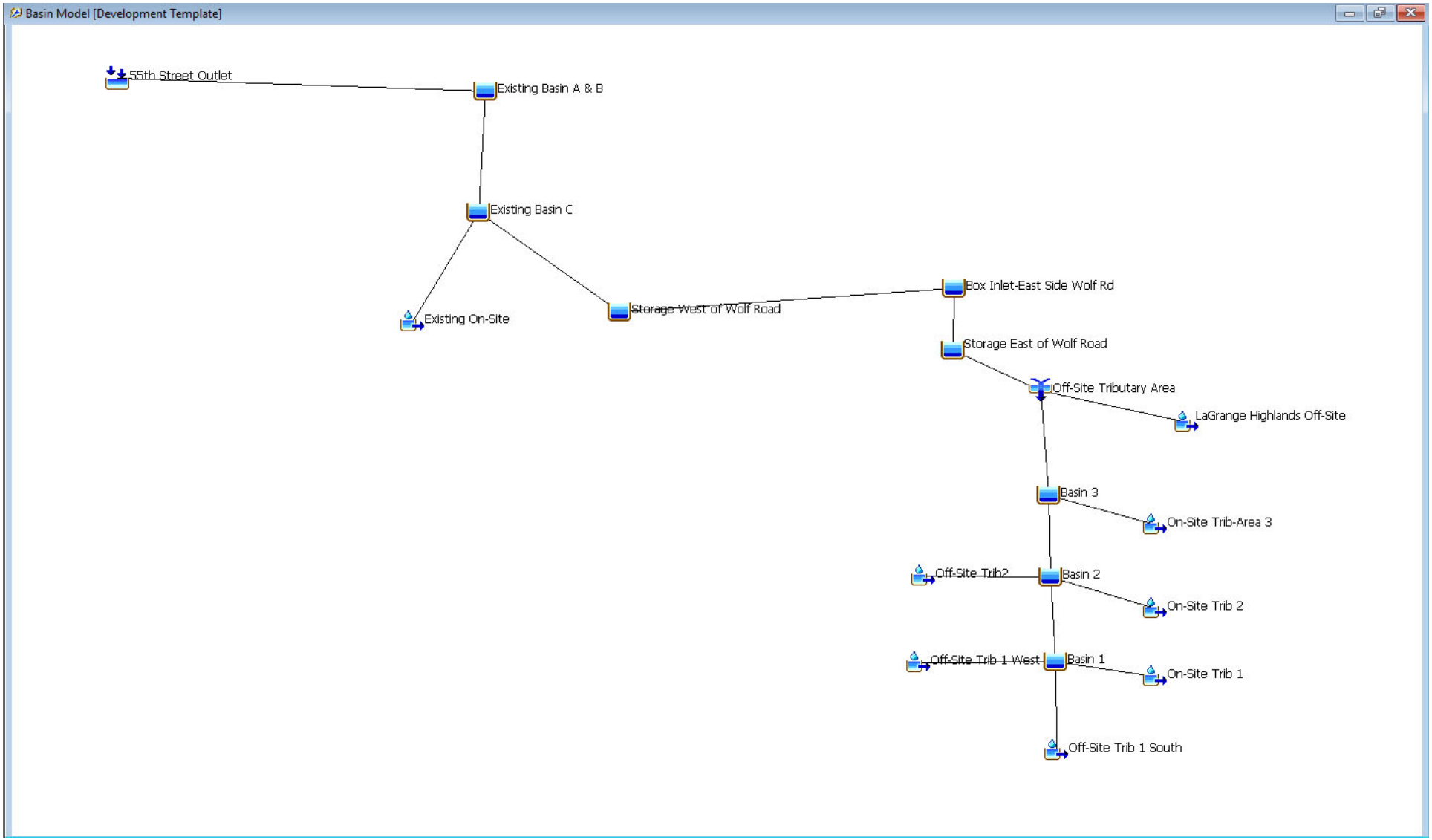
C = 2.700
Length = 6.1
Elevation = 661.35

3) Inlet Box Structure

10'x5' Grate

Water Elevation (feet)	Head (feet)	Weir Flow (cfs)	Orfice Flow (cfs)
663.30	0.00	0.00	
663.40	0.10	1.90	
663.50	0.20	5.37	
663.60	0.30	9.86	
663.70	0.40	15.18	
663.80	0.50	21.21	
663.90	0.60		189.59
664.00	0.70		204.78
664.10	0.80		218.92
664.20	0.90		232.20
664.30	1.00		244.76
664.40	1.10		256.71
664.50	1.20		268.12

Weir Formula	Orfice Formula
Q = CLH^3/2	Q = AC √64.4(H)
Q = (3)(20)H^3/2	Q = (50)(0.61) √64.4(H)
Q = (60)H^3/2	Q = (30.5) √64.4(H)


Basin Model [Development Template]
55th Street Outlet
Existing Basin A & B
Existing Basin C
Existing On-Site
Storage West of Wolf Road
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:29

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Storage West of Wolf Road	0.27	75.02	01Jan2000, 01:10	0.77
Existing On - Site	0	3.15	01Jan2000, 00:33	1.12
Existing Basin C	0.27	60.13	01Jan2000, 01:11	0.72
Existing Basin A & B	0.27	60.11	01Jan2000, 01:12	0.57

55th Street Outlet	0.27	60.11	01Jan2000, 01:12	0.57

Subbasin: On-Site Trib 1

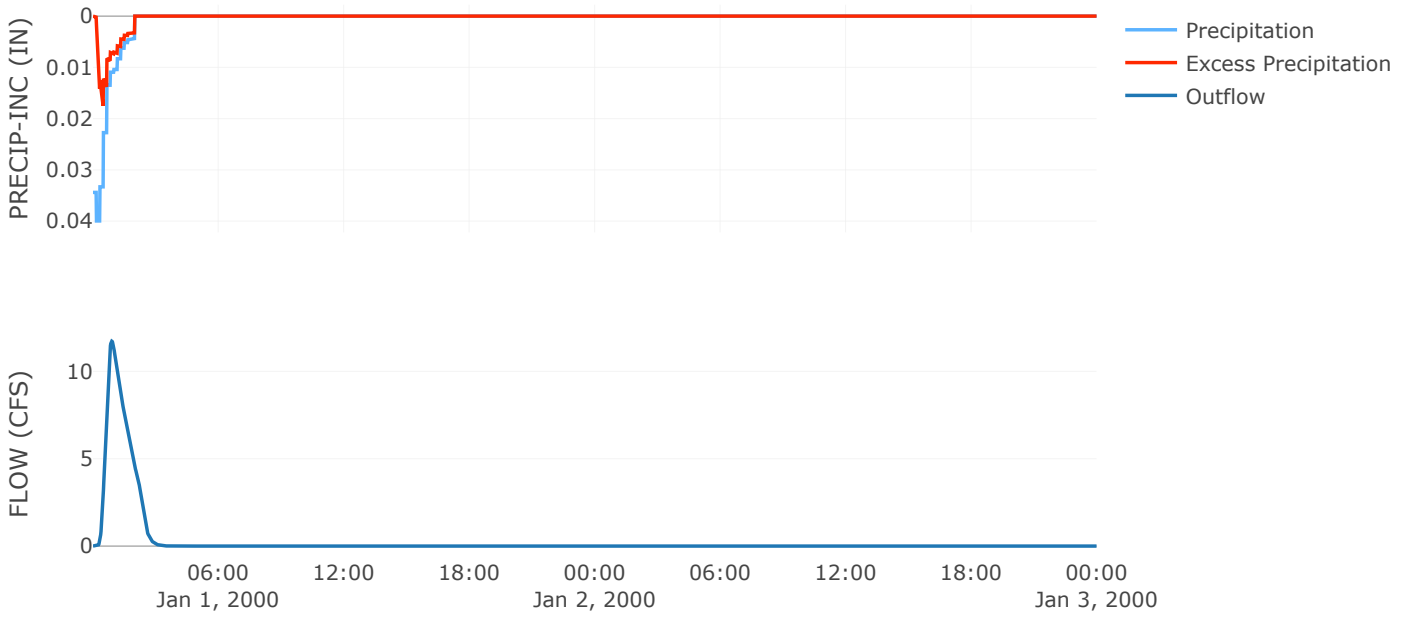
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

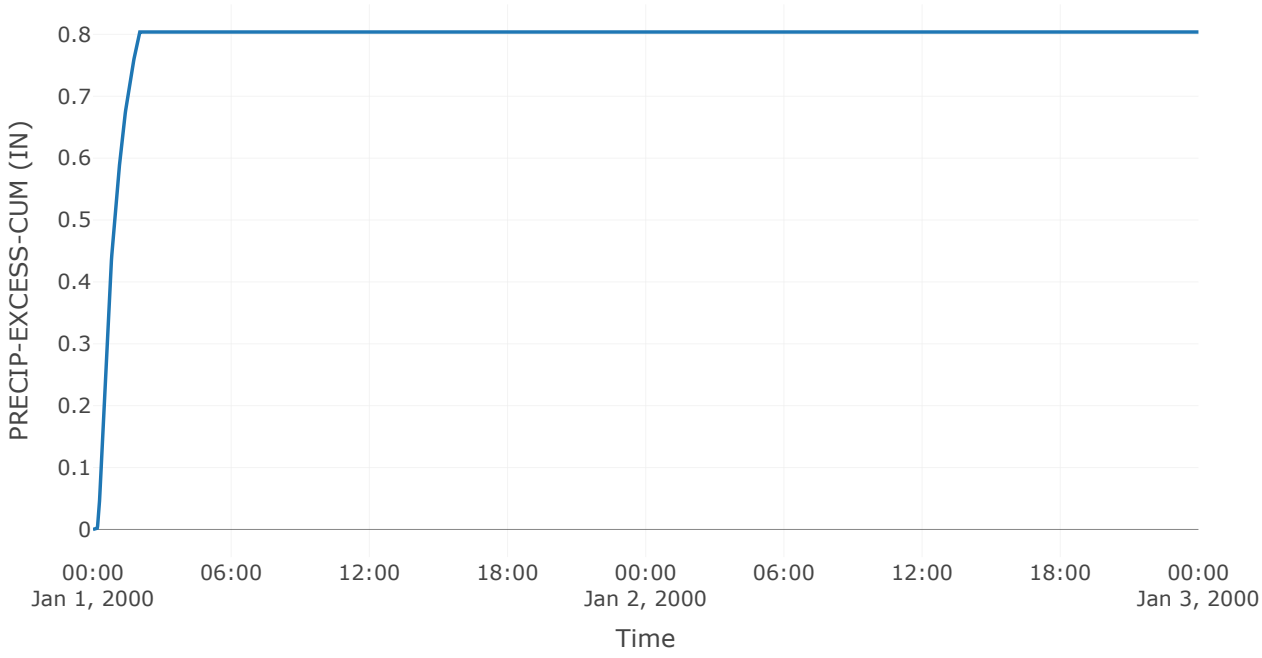
Transform: Scs	
Lag	21
Unitgraph Type	Standard

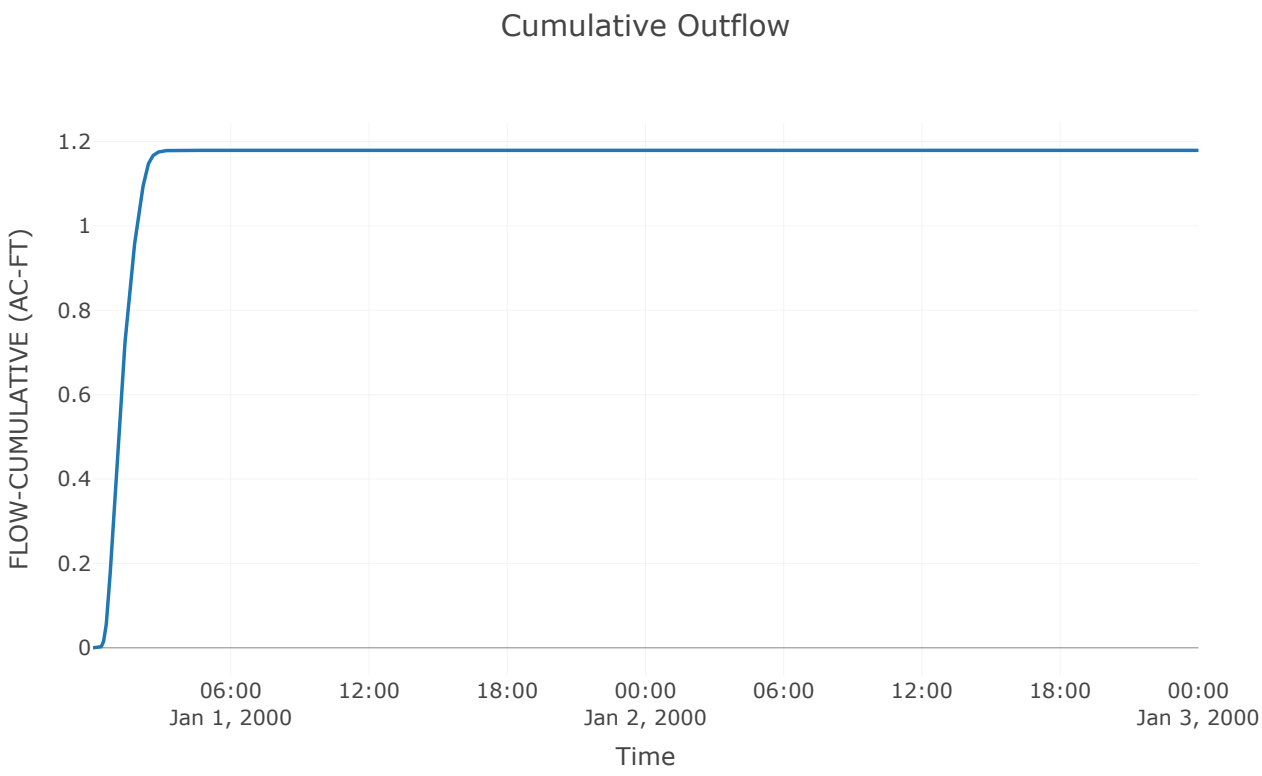
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

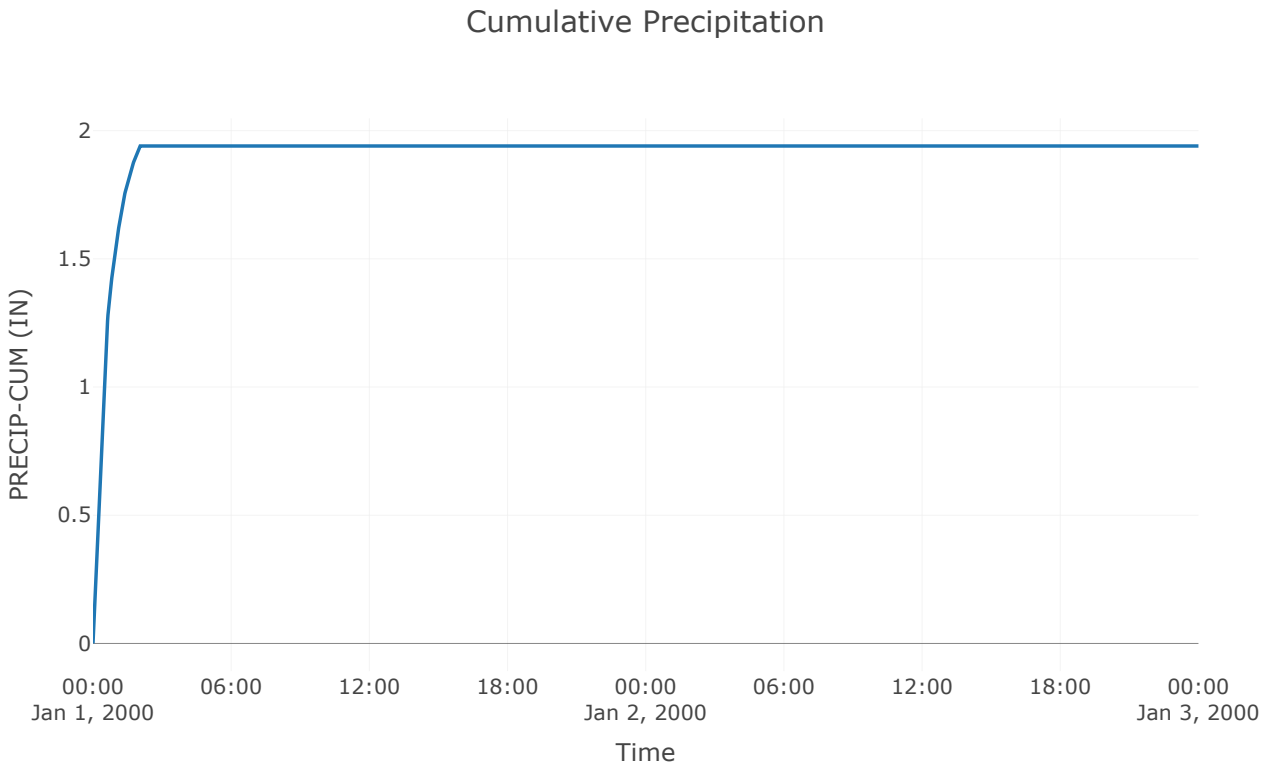
Precipitation and Outflow

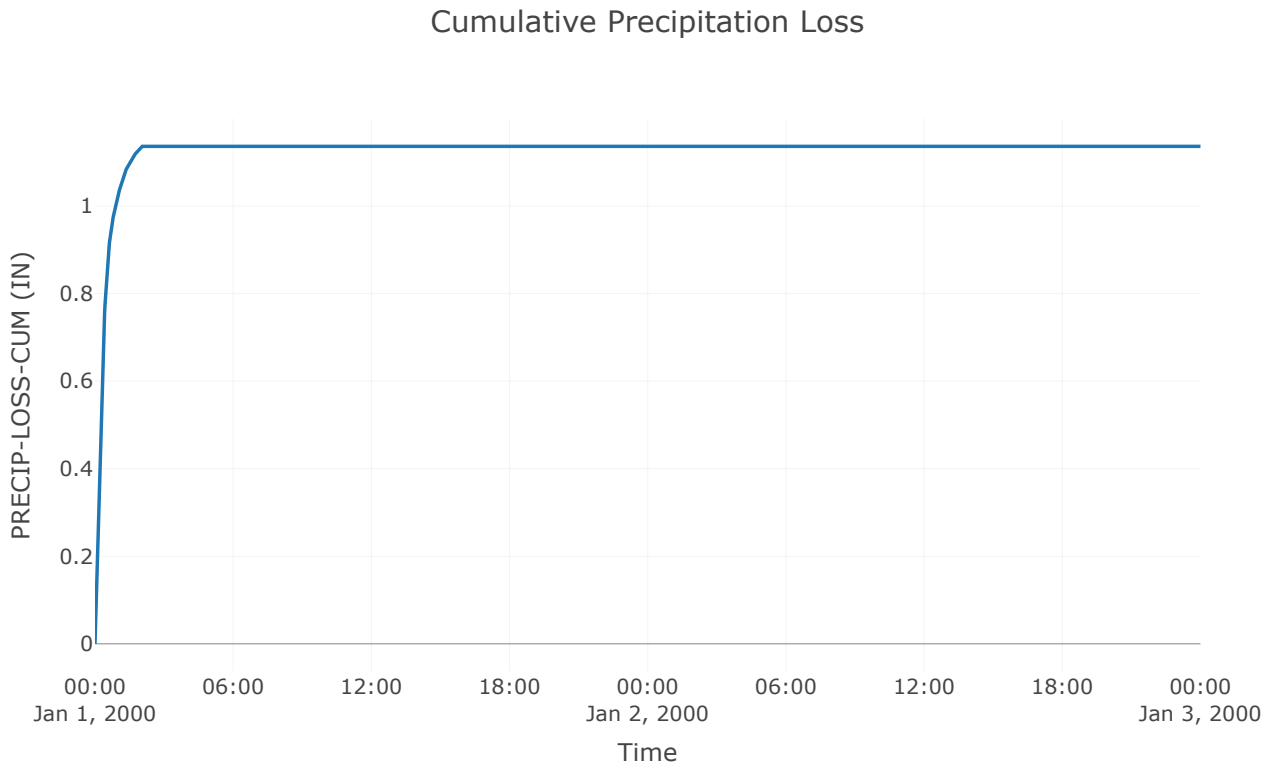


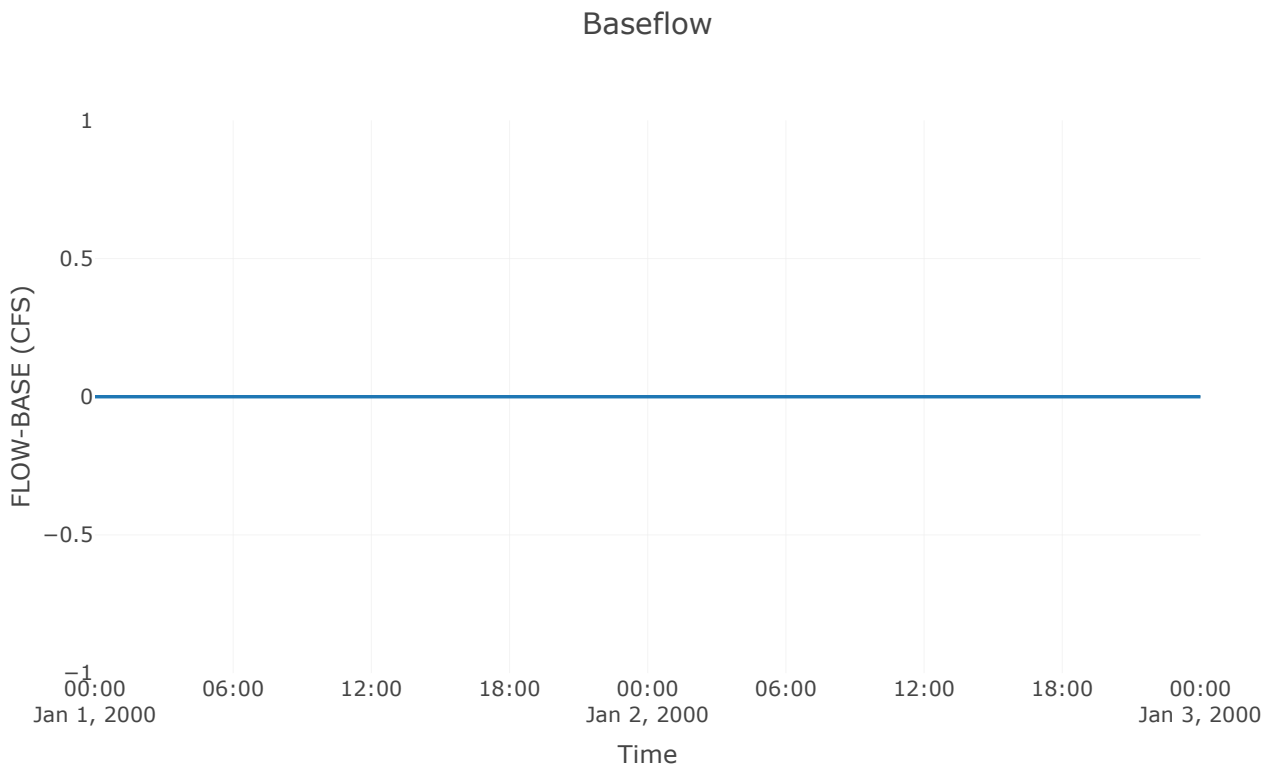
Cumulative Excess Precipitation

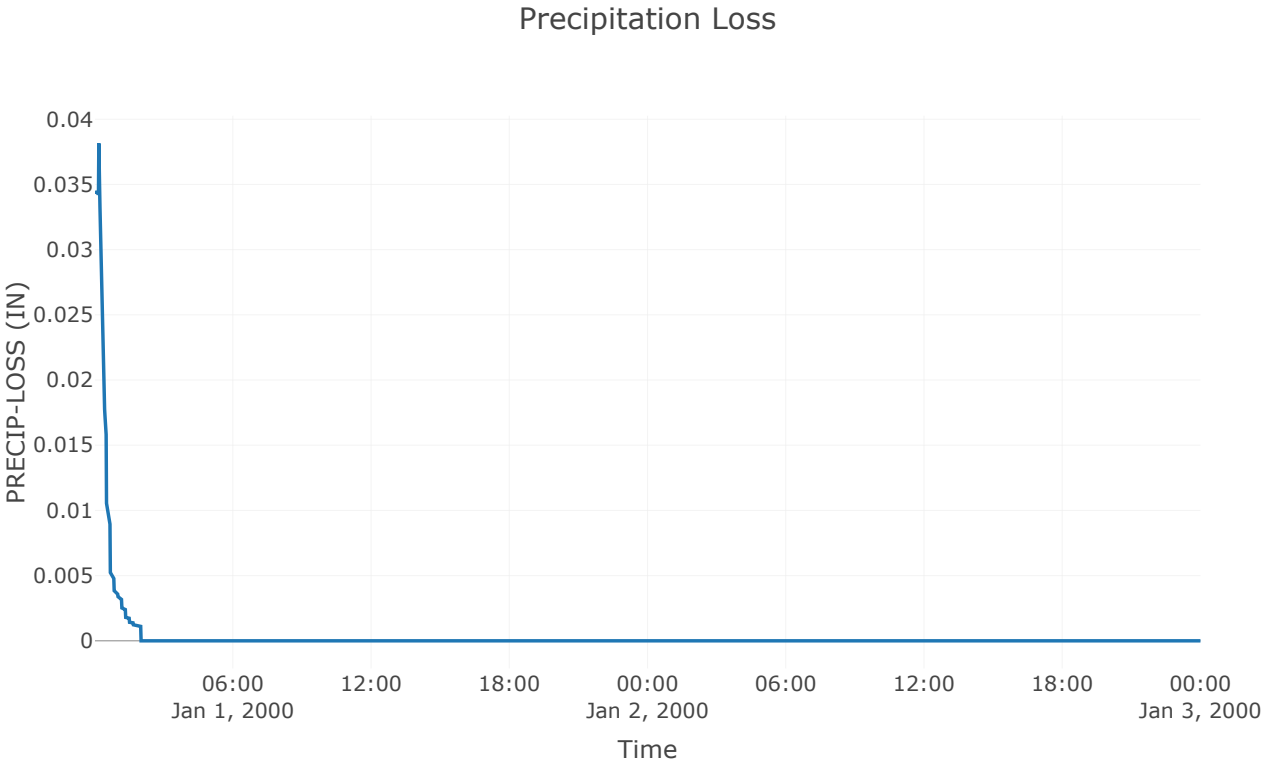


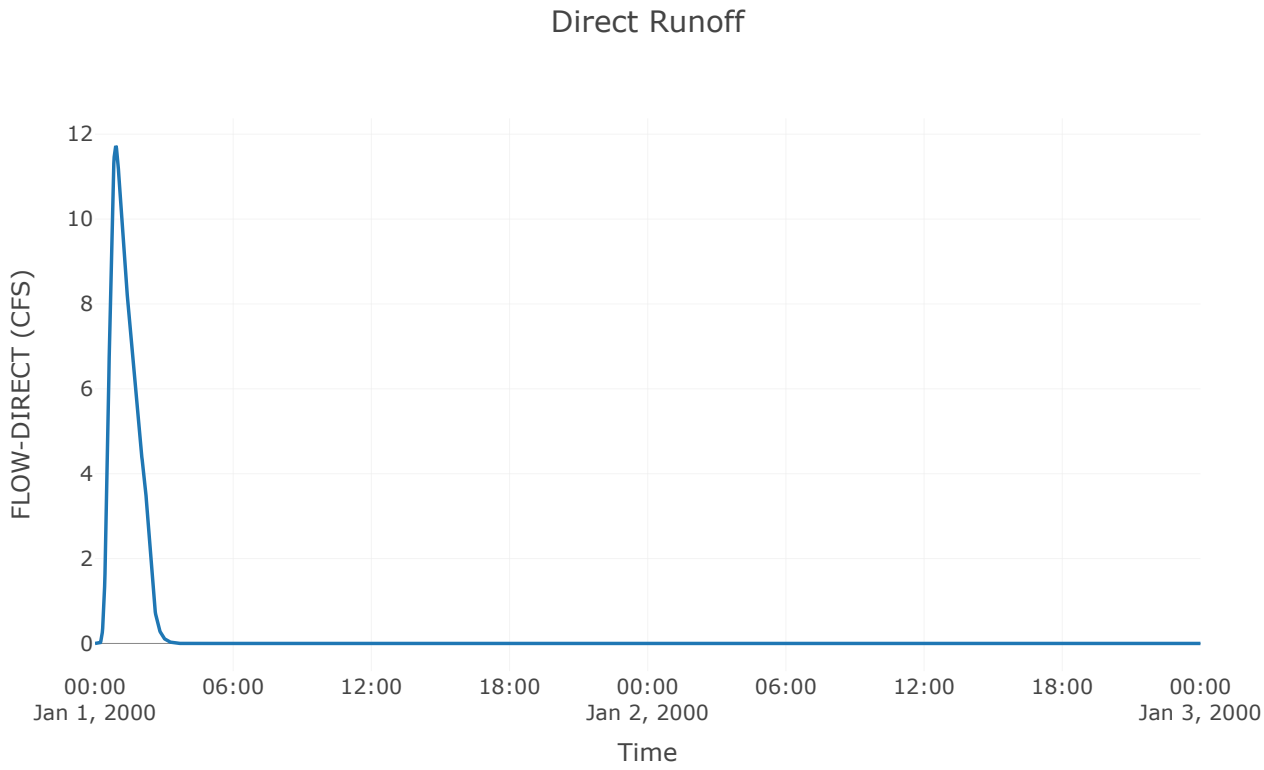

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

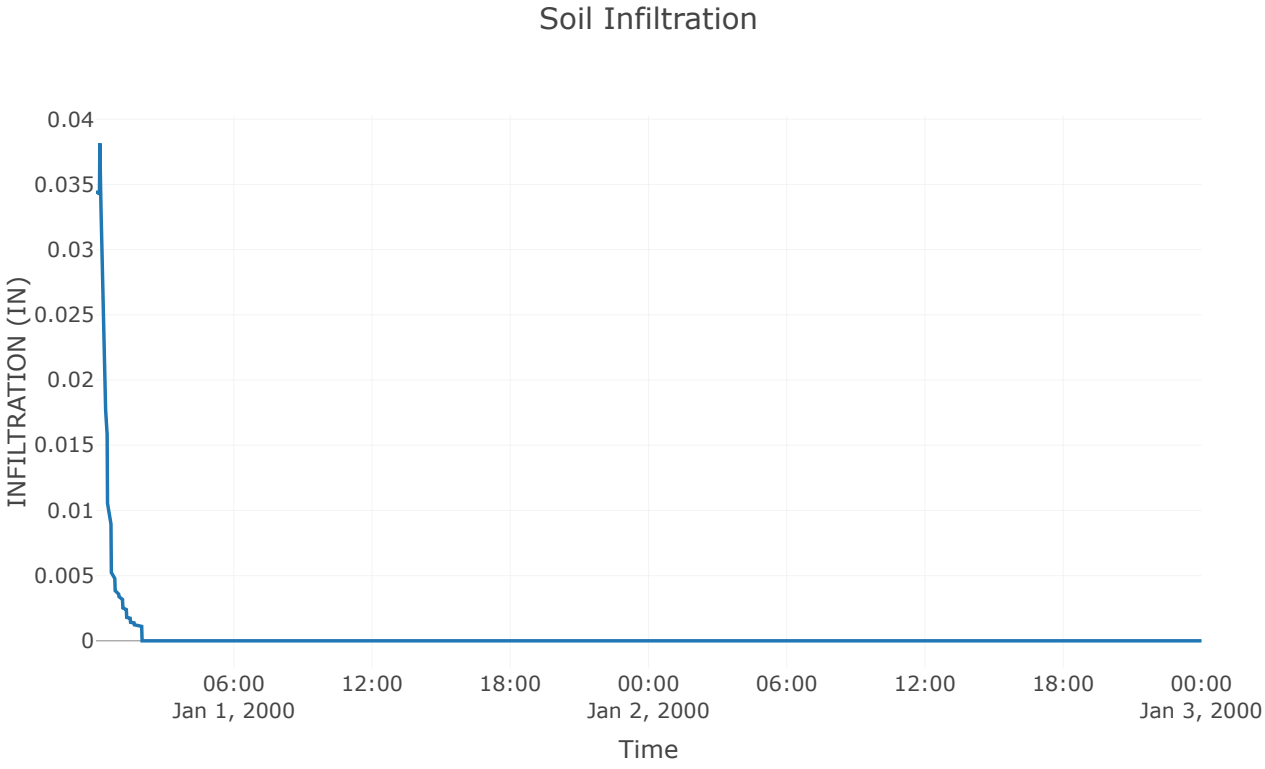

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

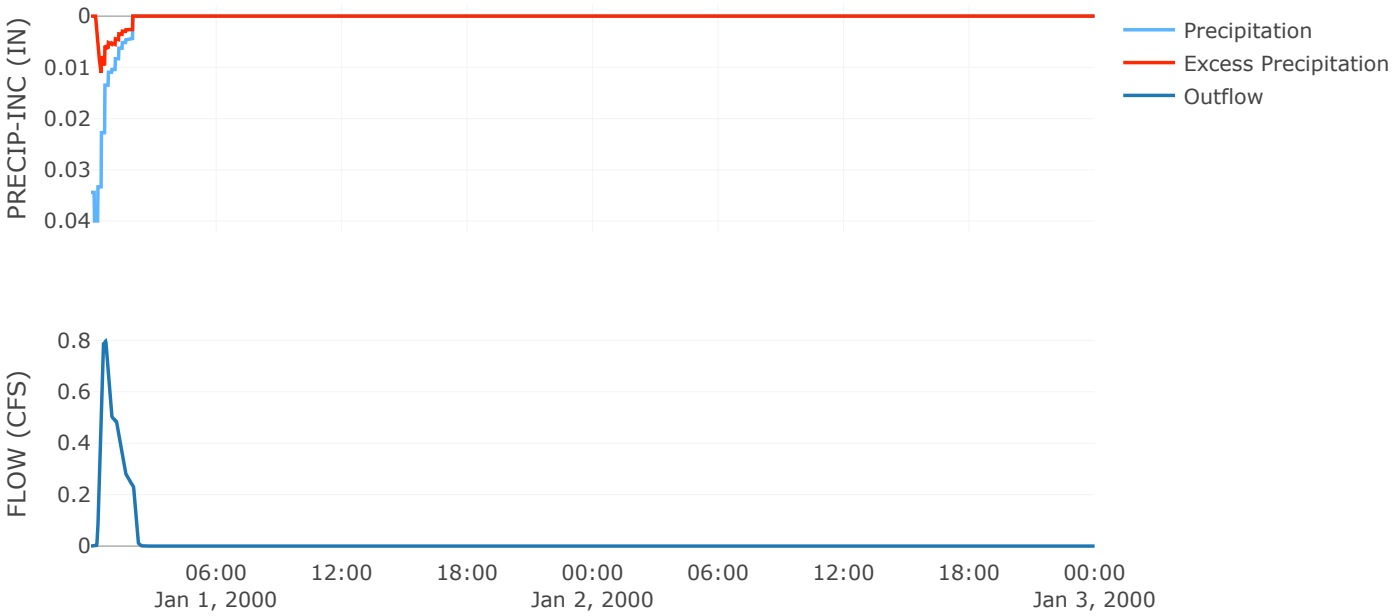
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

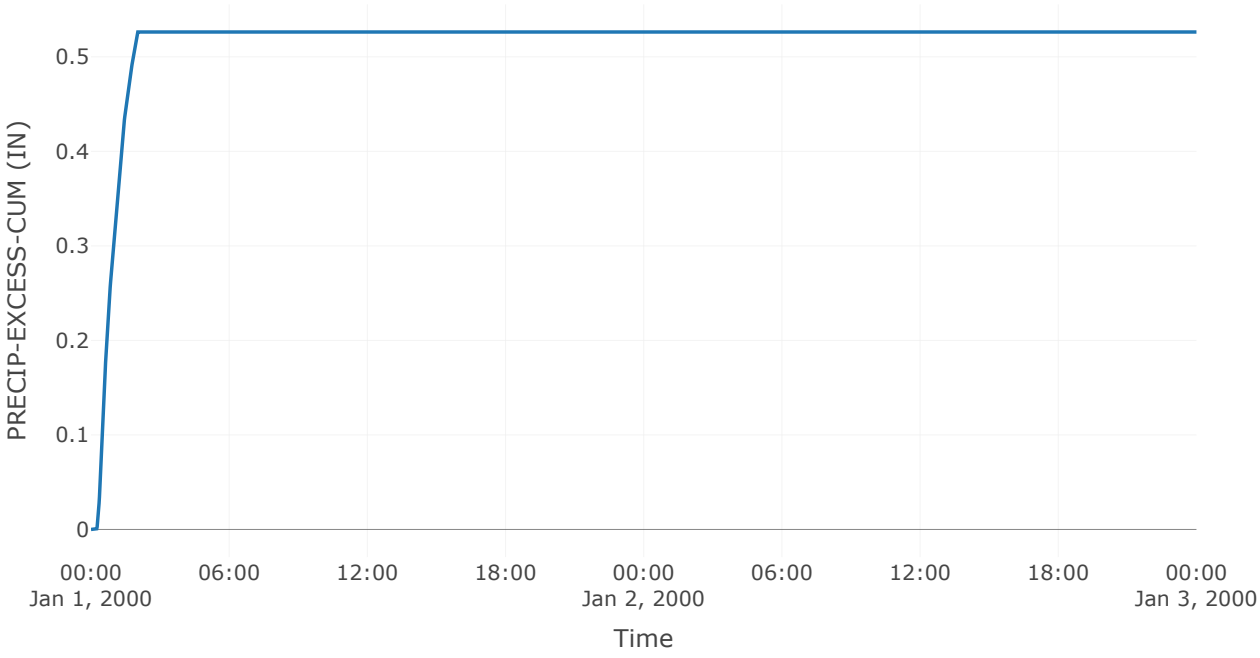
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

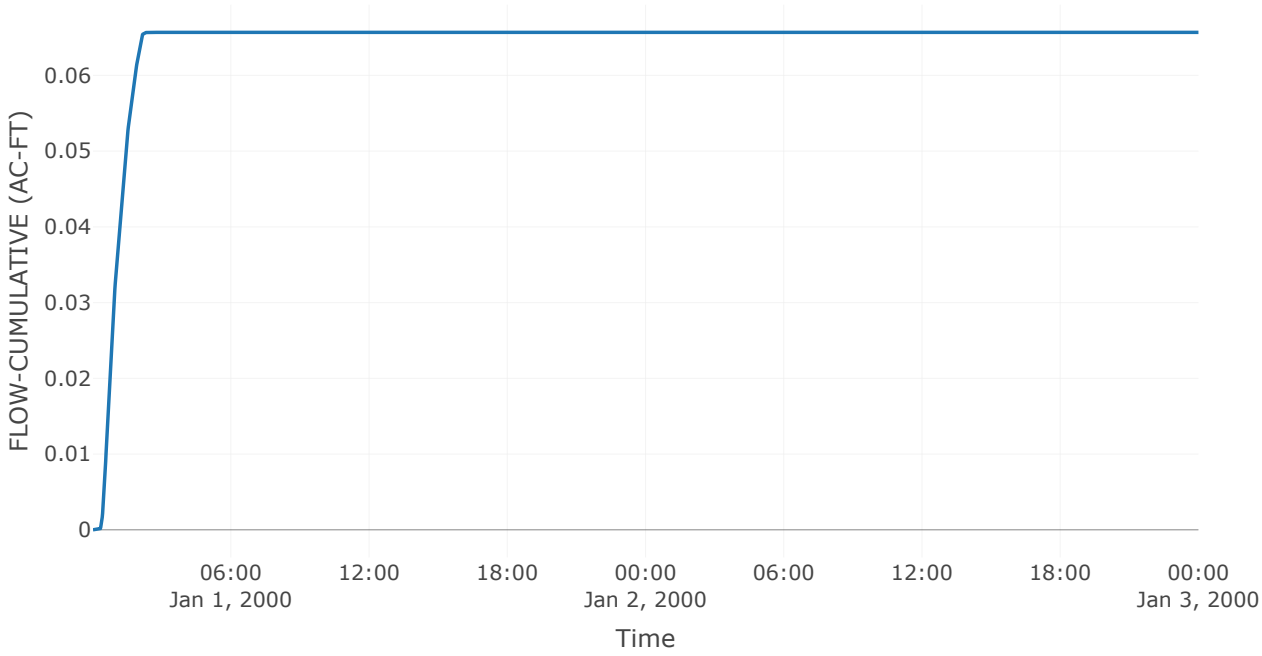
Precipitation and Outflow



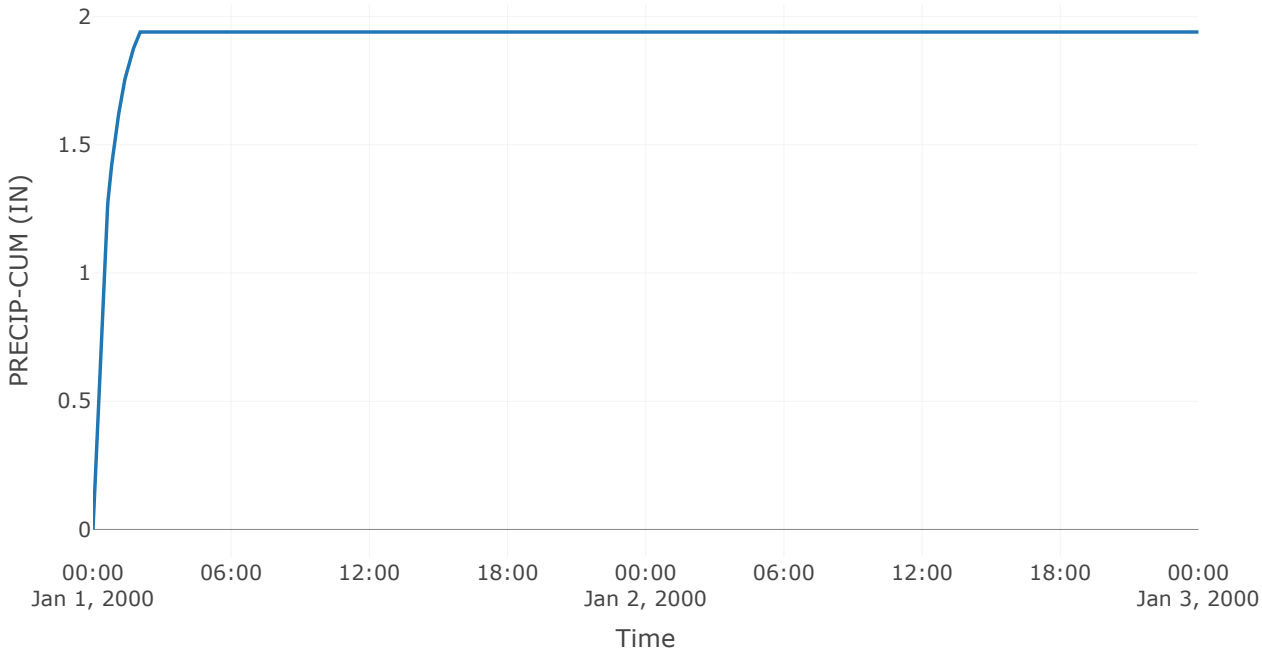
Cumulative Excess Precipitation

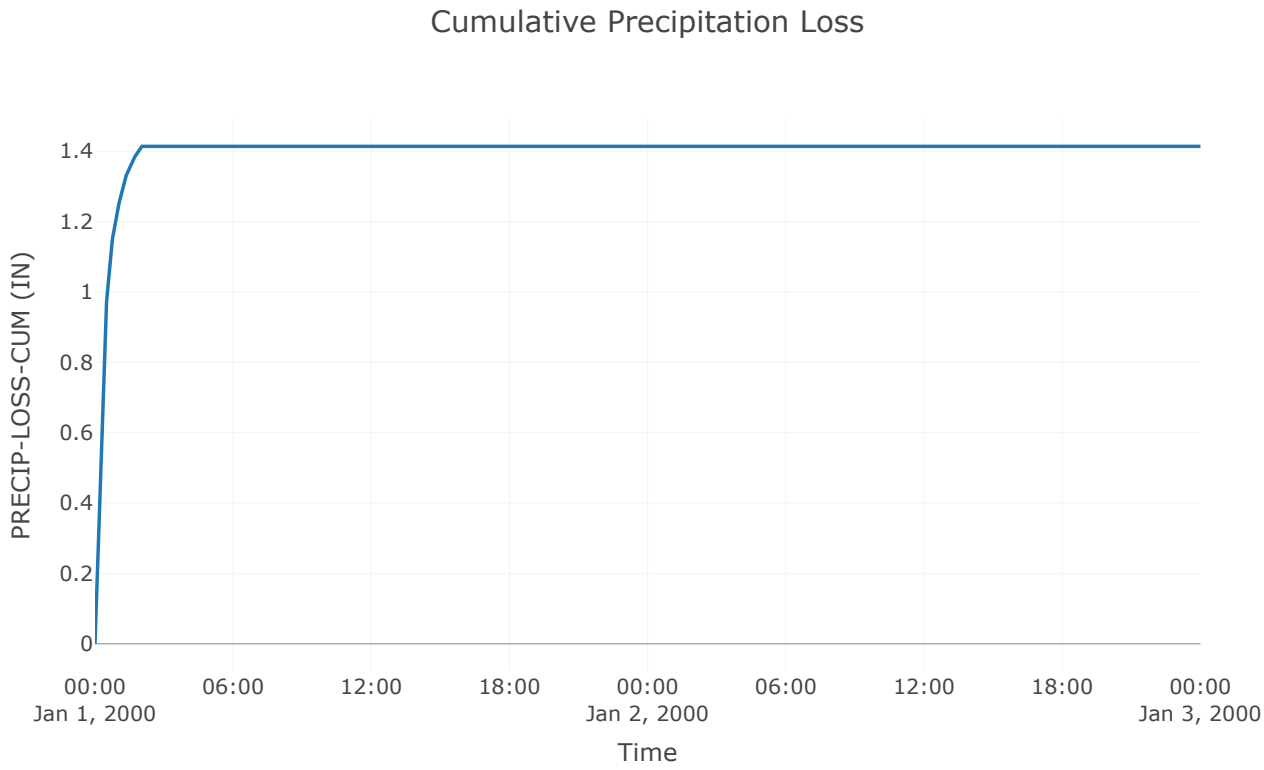


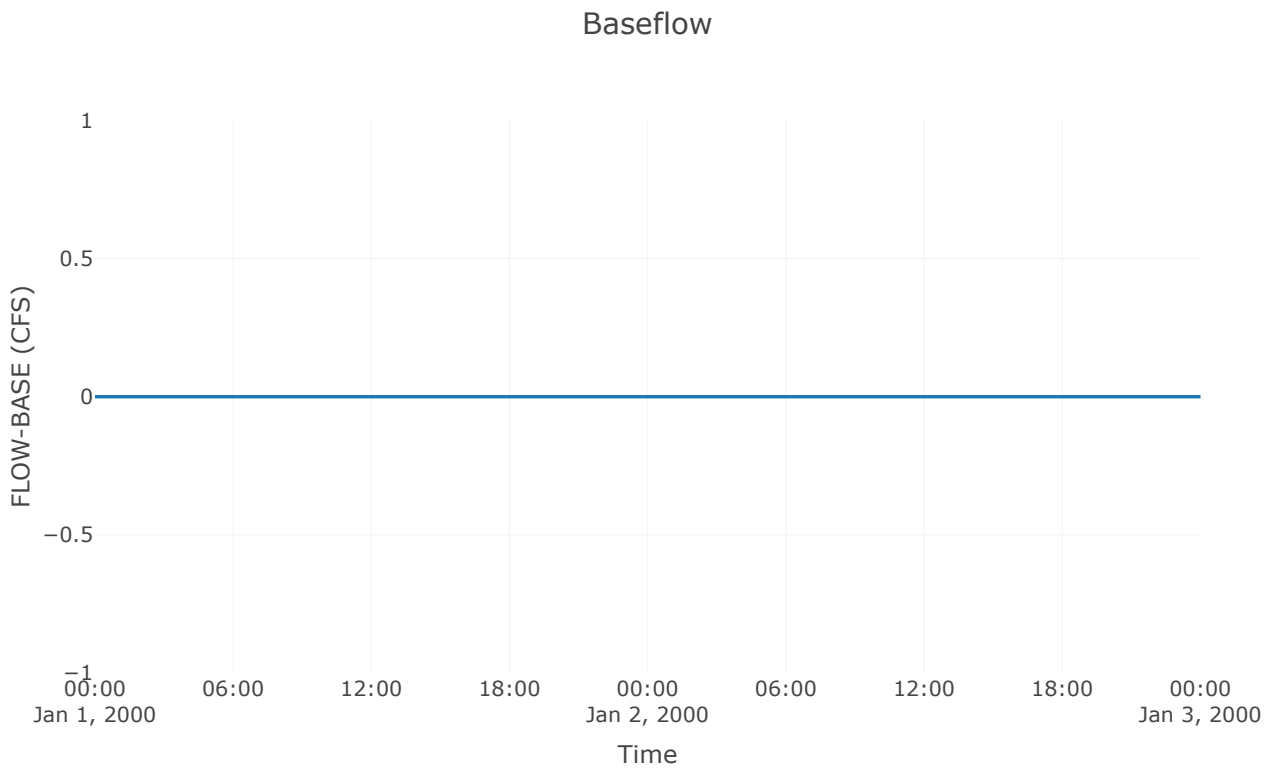
Cumulative Outflow



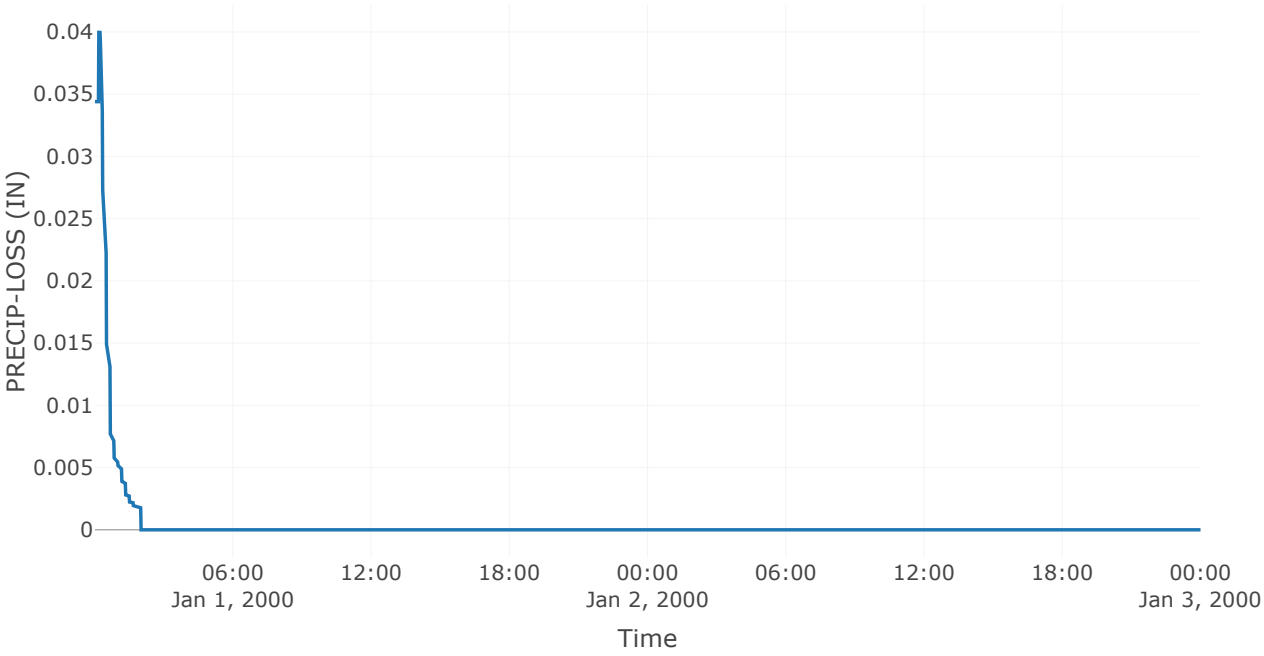
Cumulative Precipitation



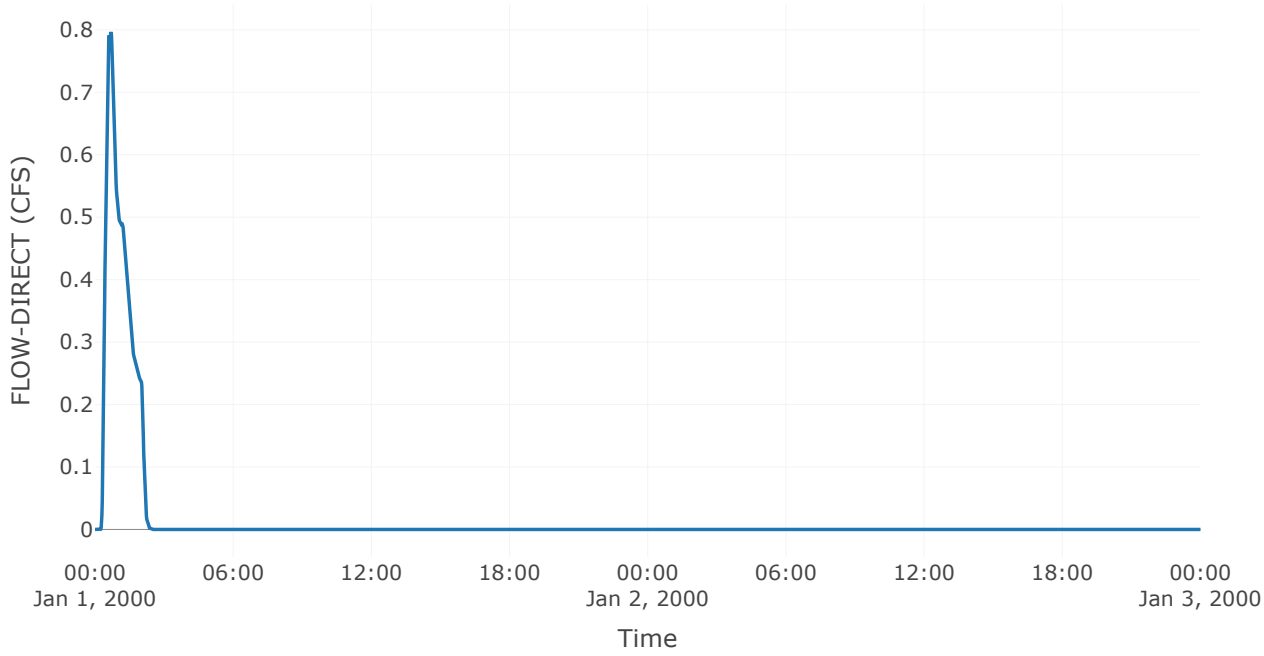

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

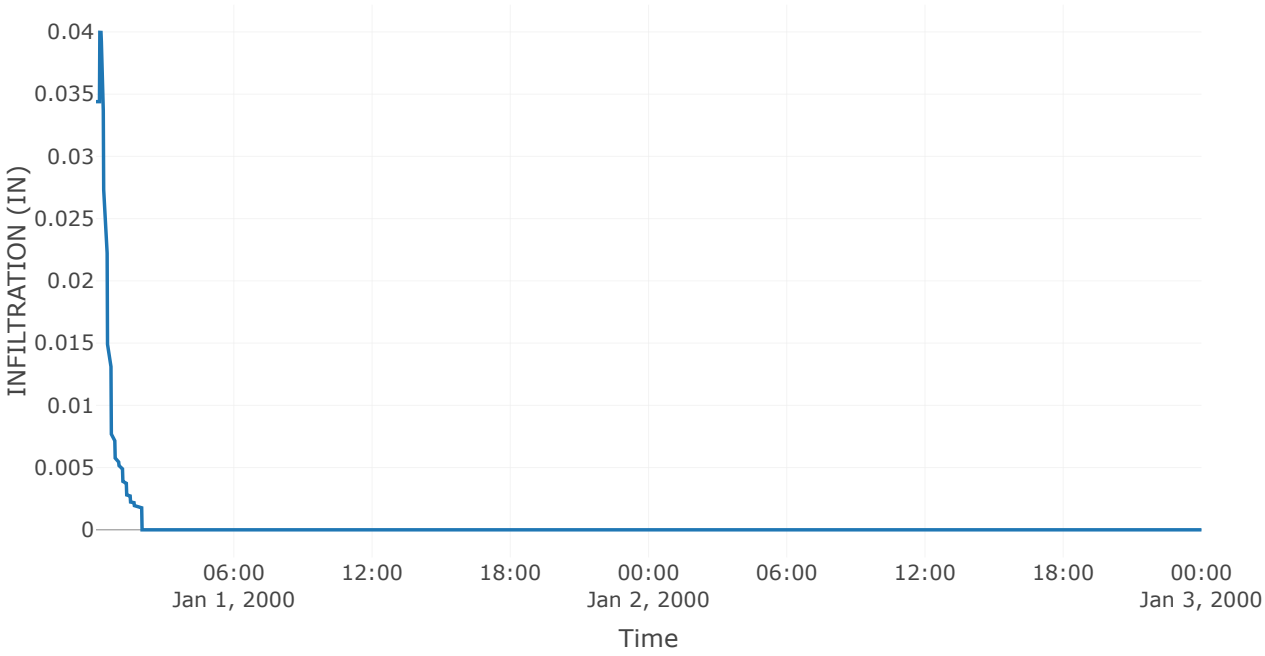

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

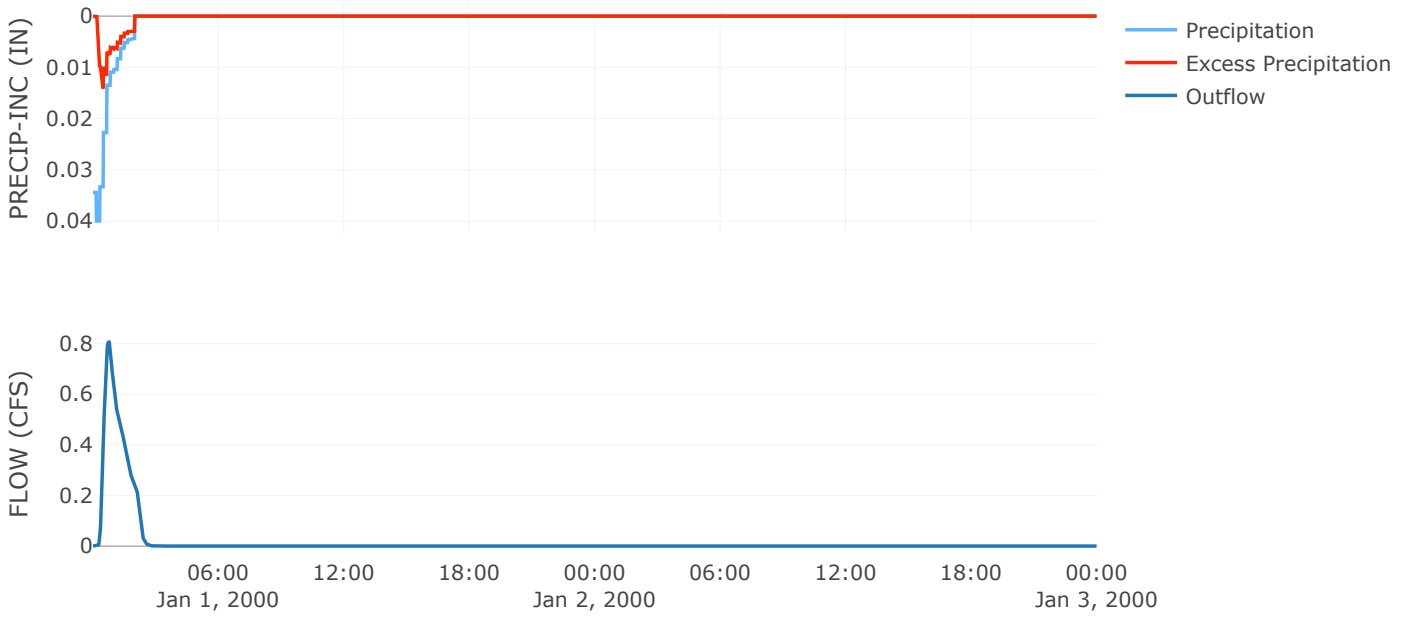
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

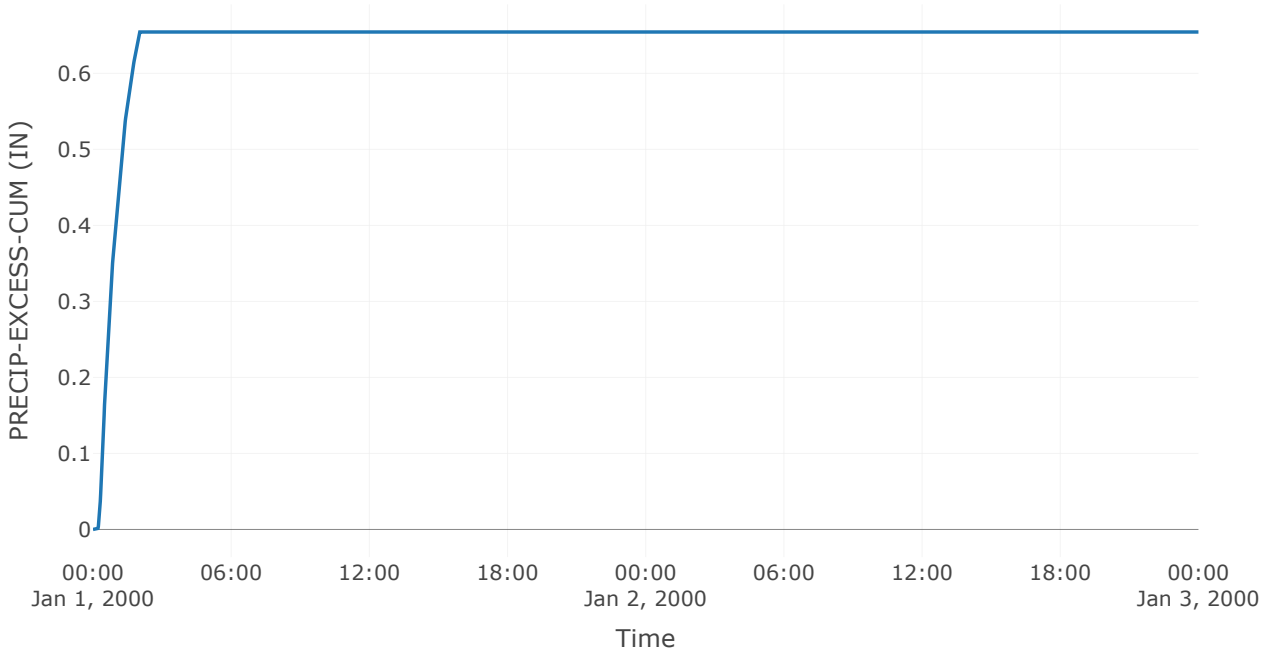
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

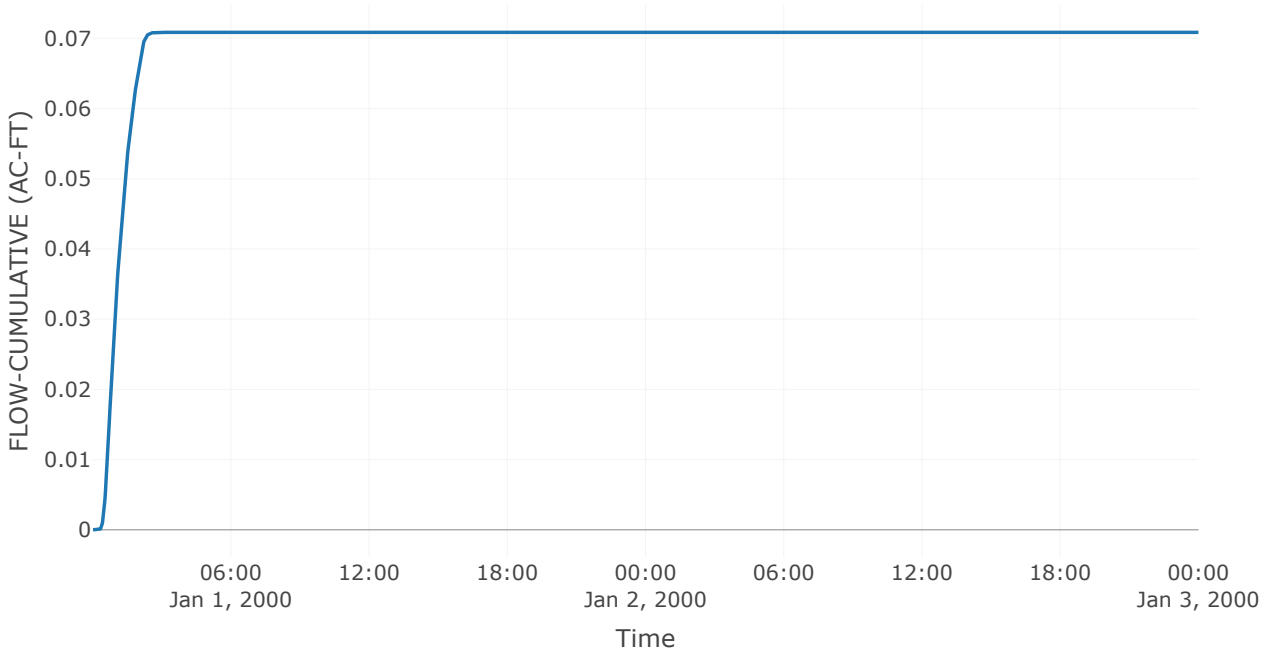
Precipitation and Outflow



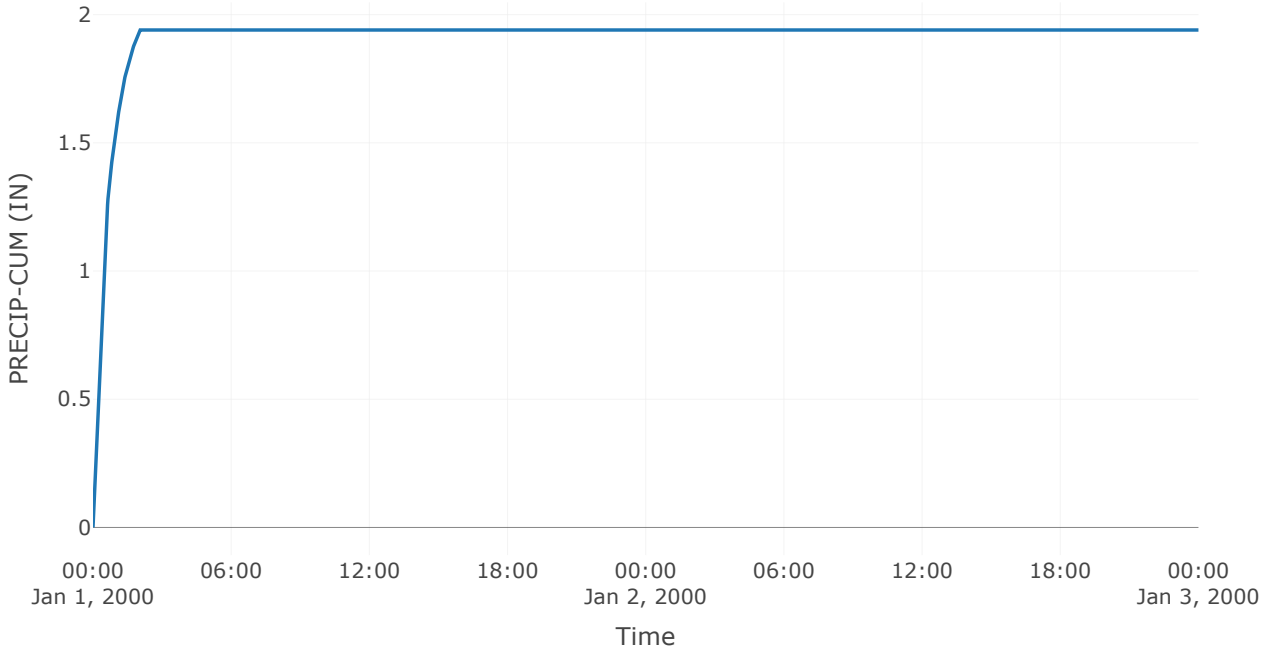
Cumulative Excess Precipitation

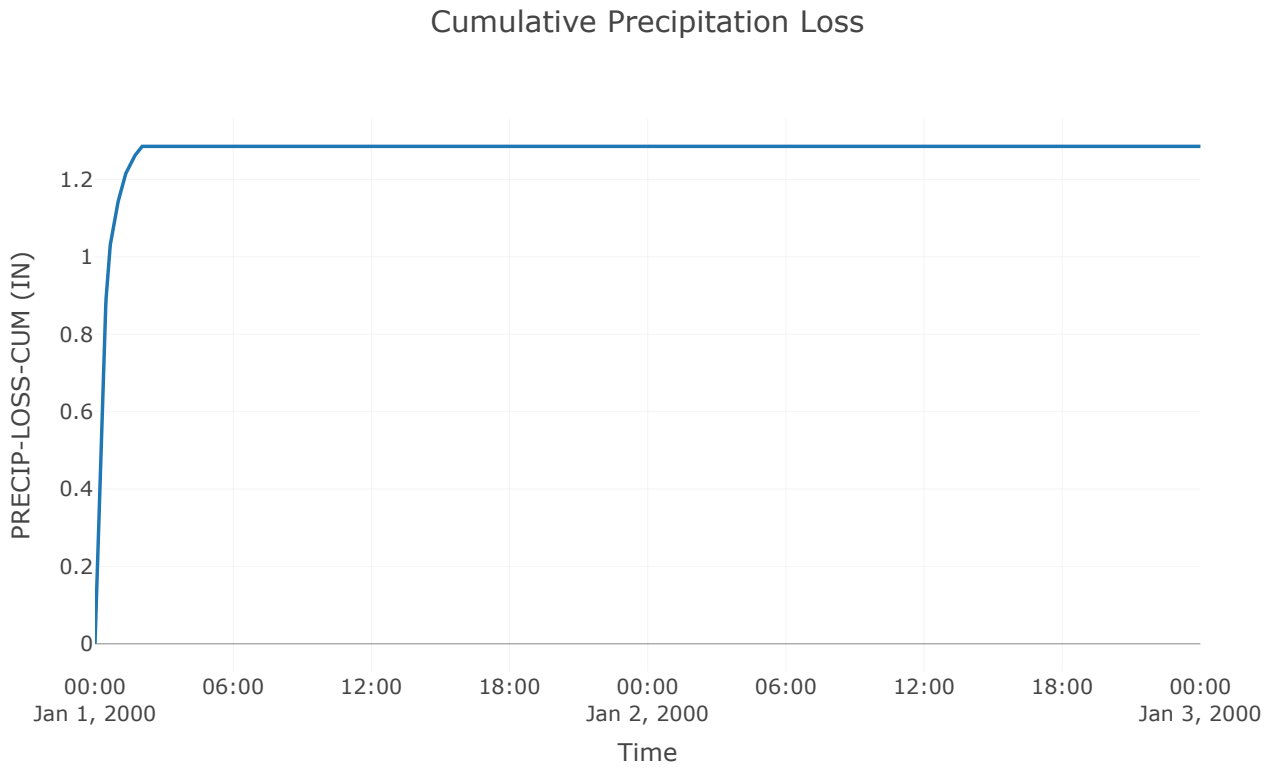


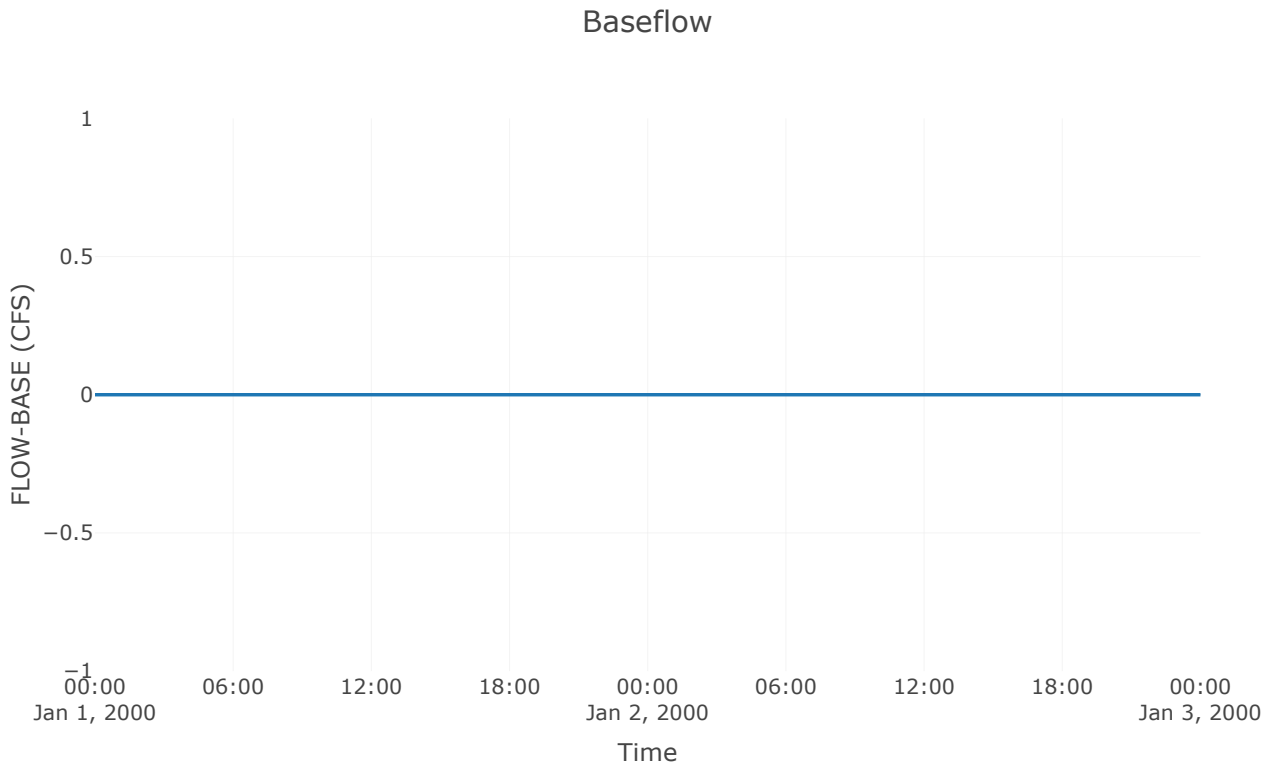
Cumulative Outflow



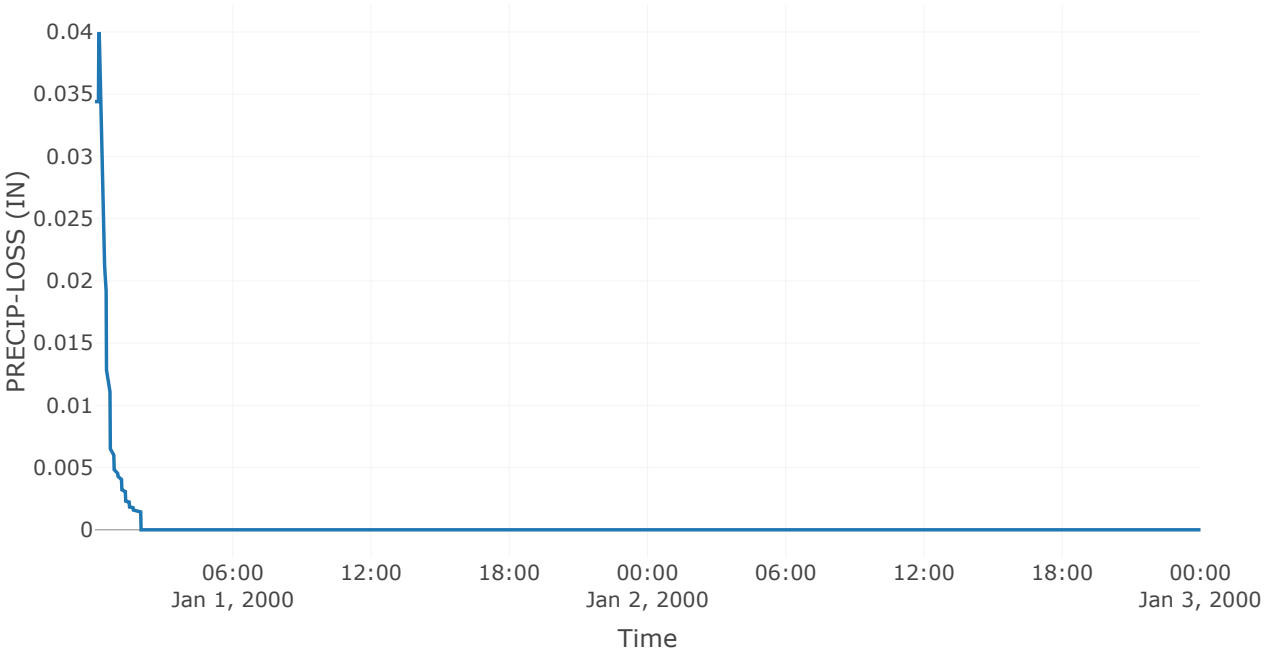
Cumulative Precipitation



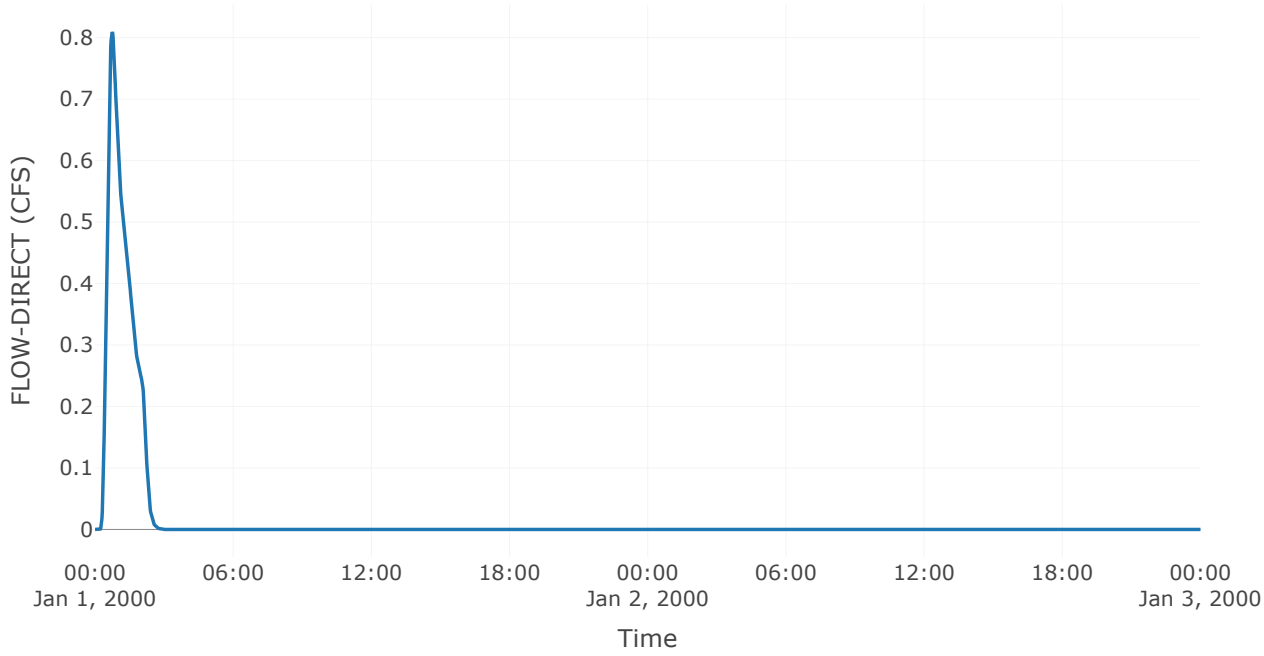

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

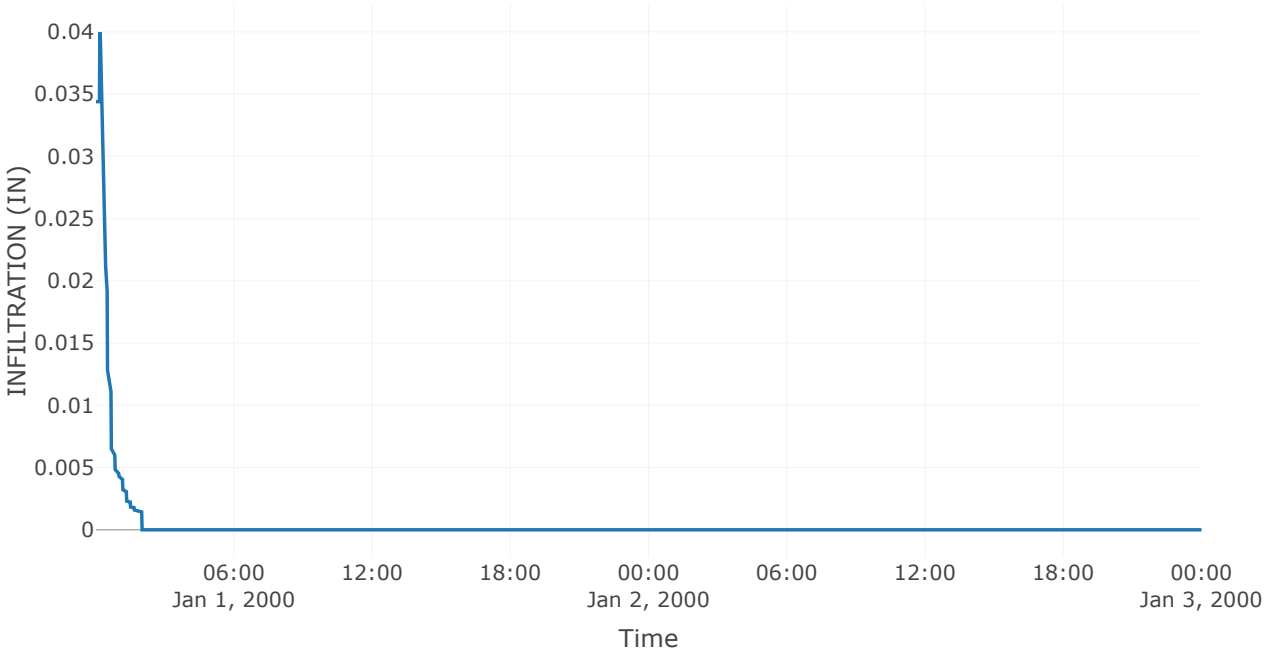

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



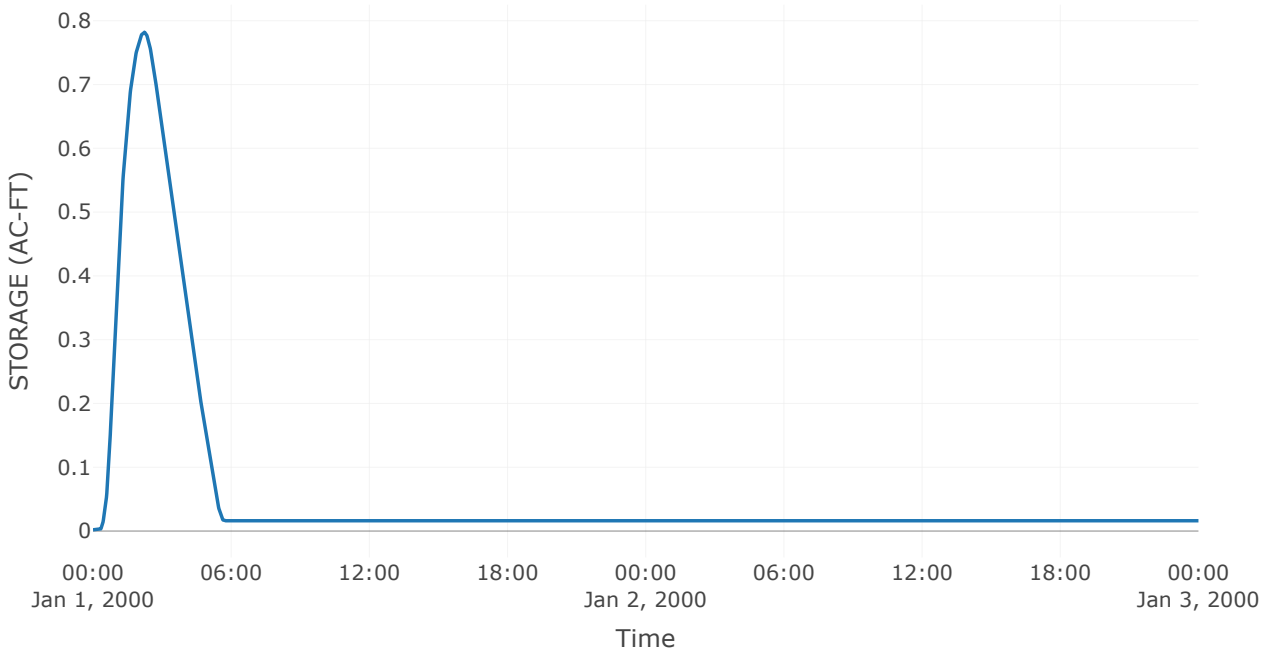

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

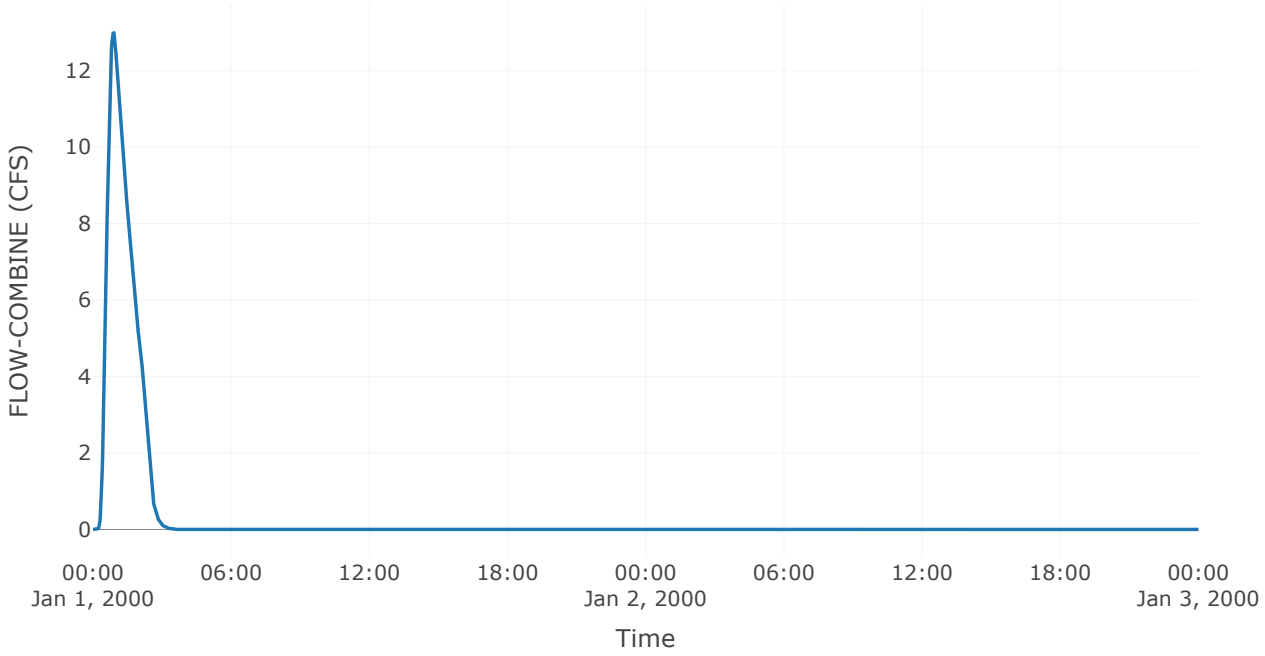
Downstream : Basin 2

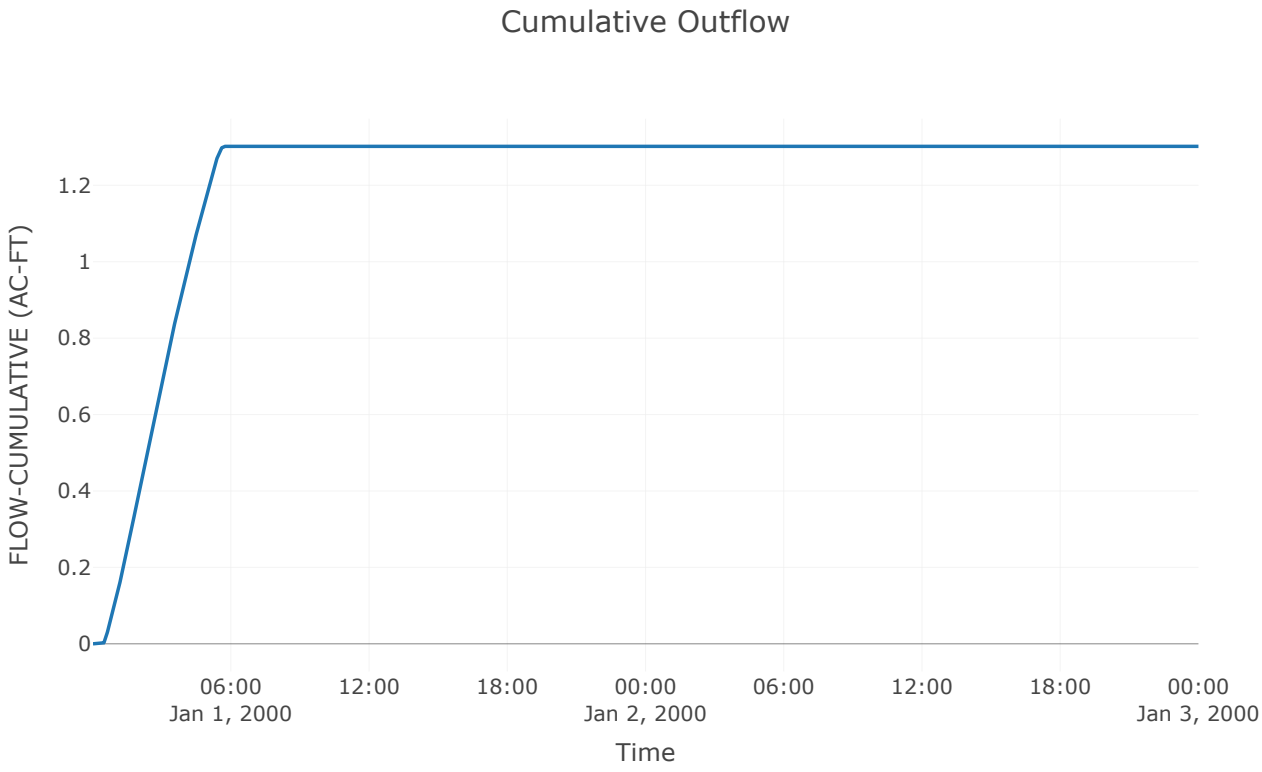
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

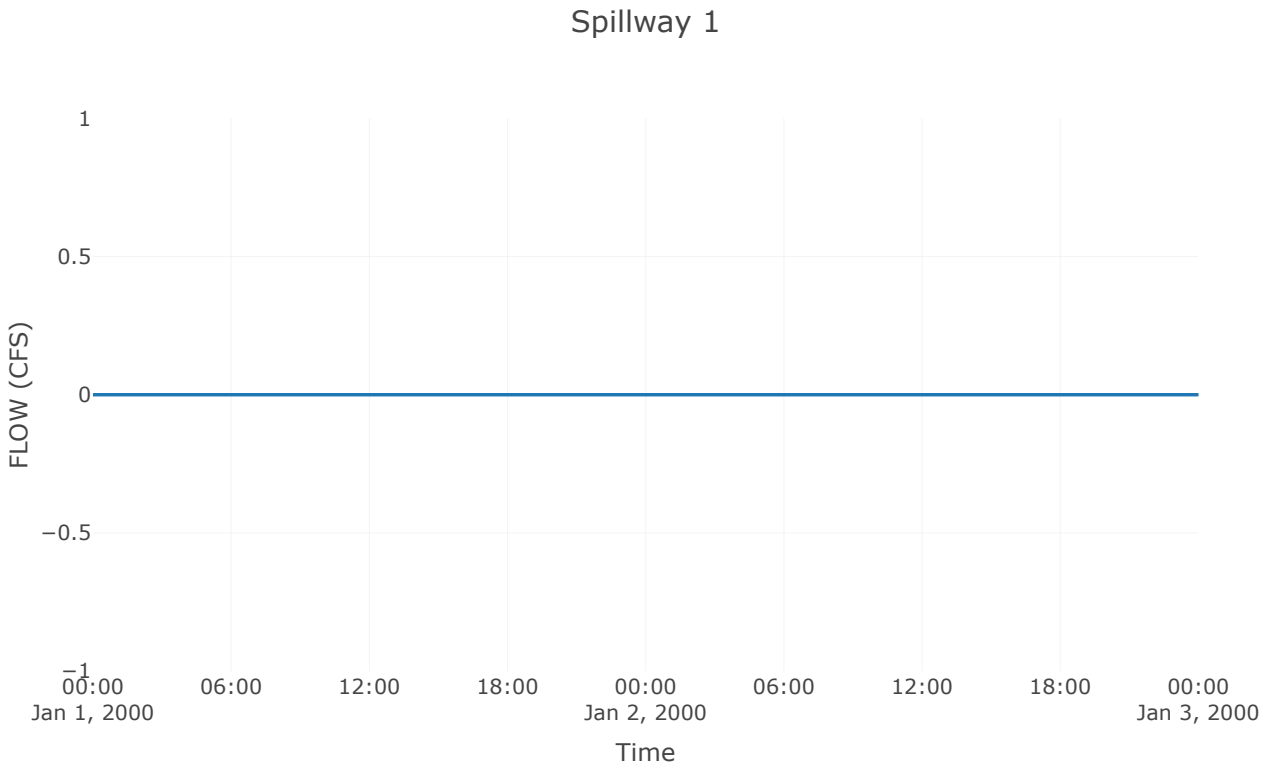
Storage

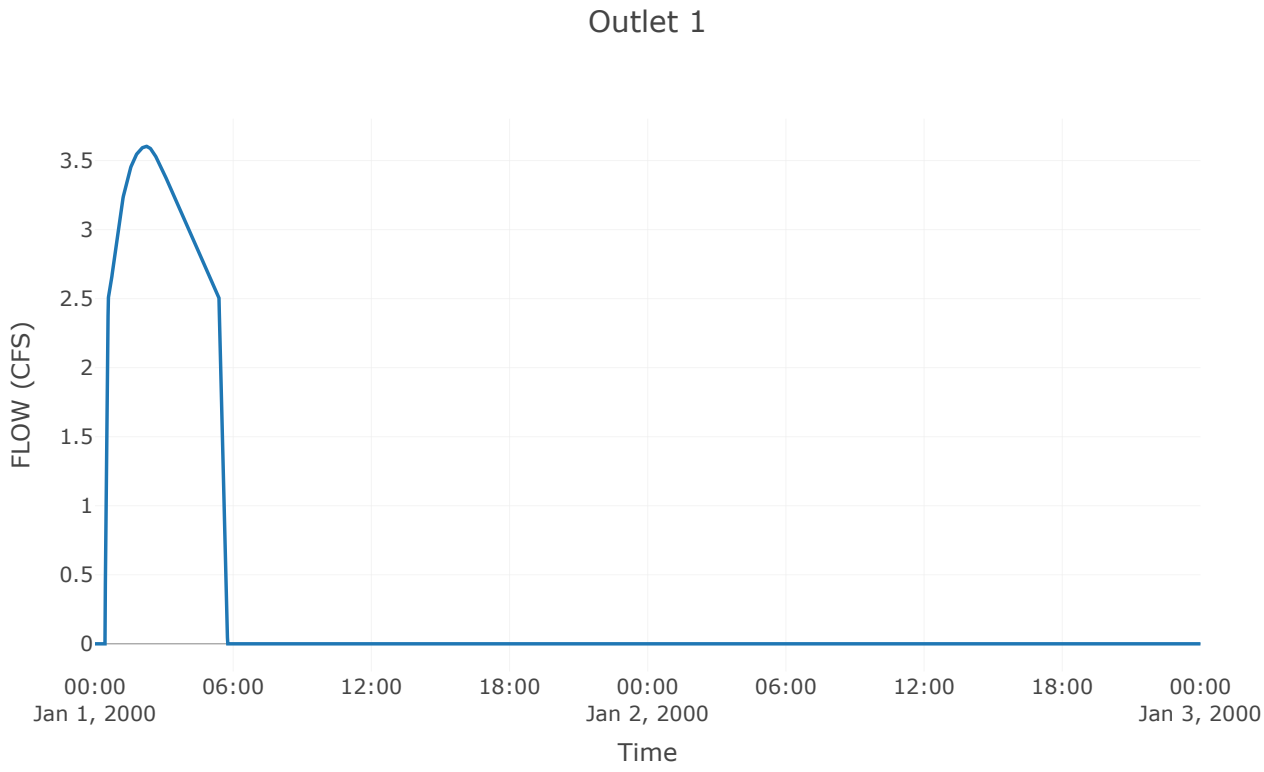


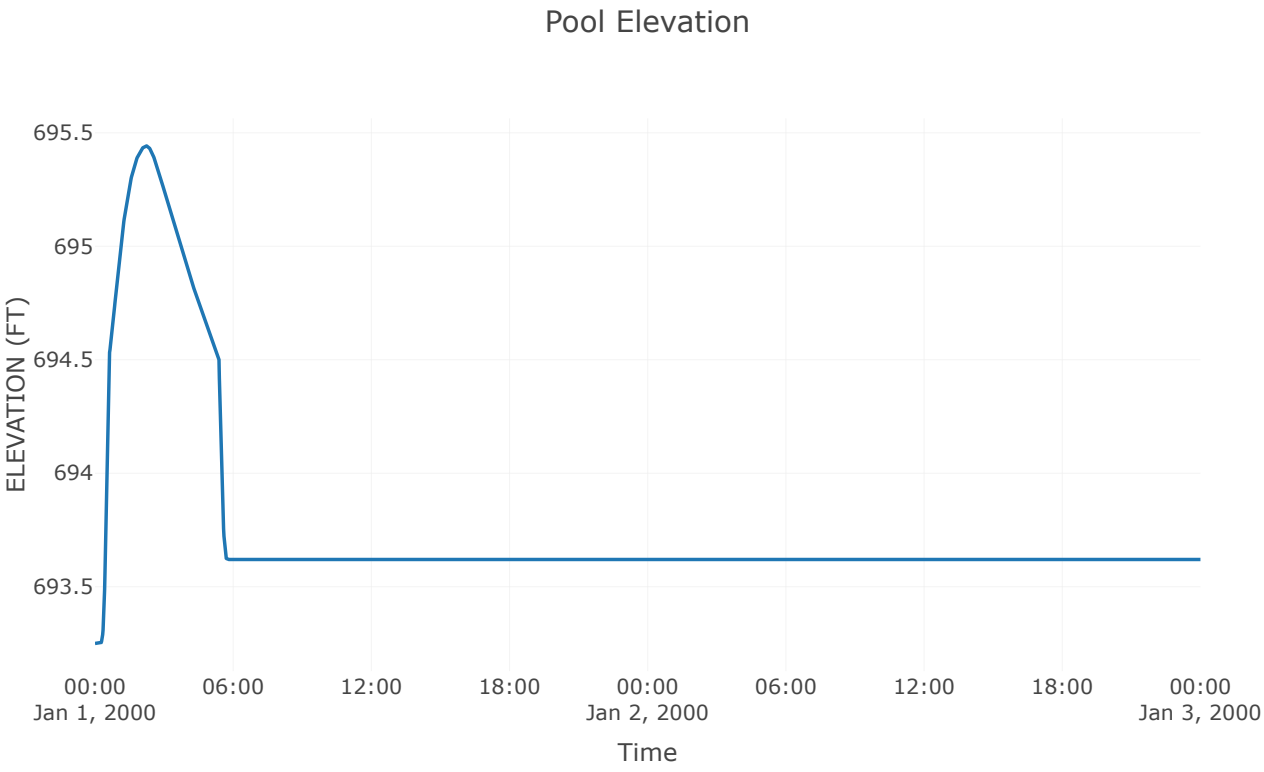
Combined Inflow

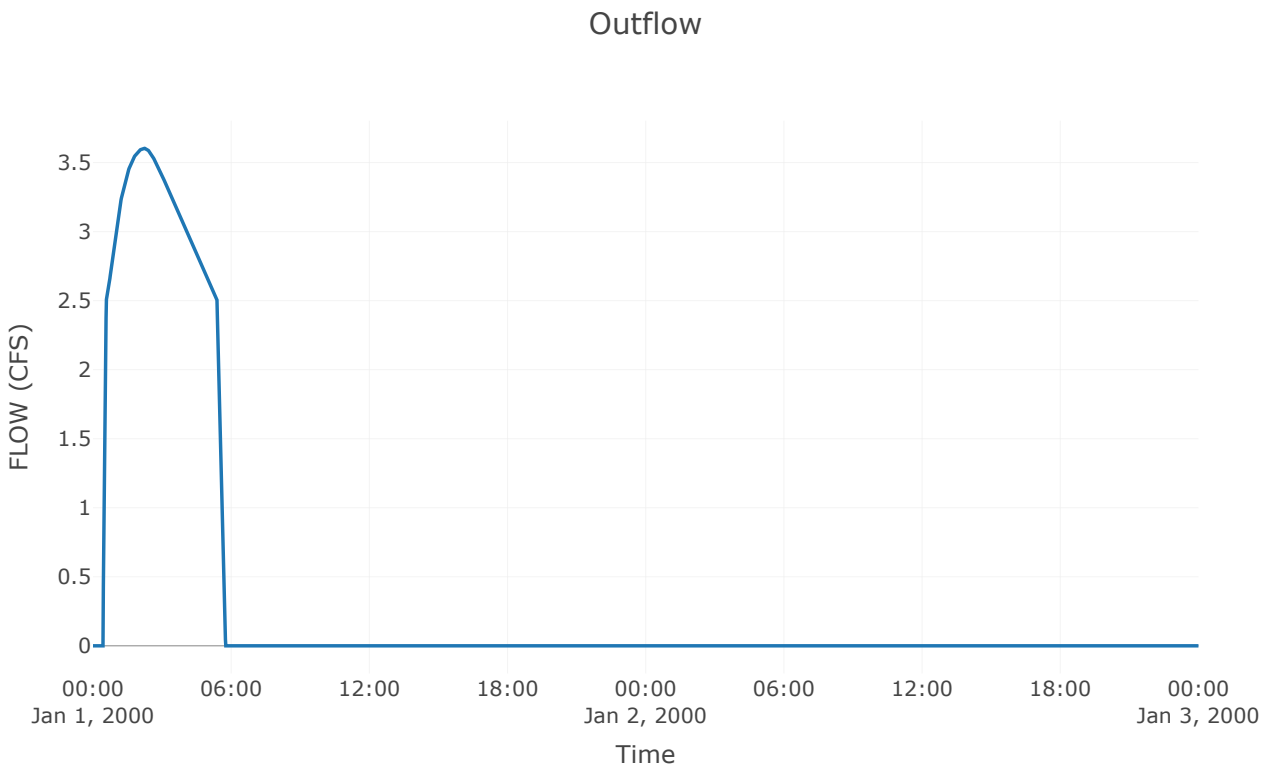



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695.5
695
694.5
694
693.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

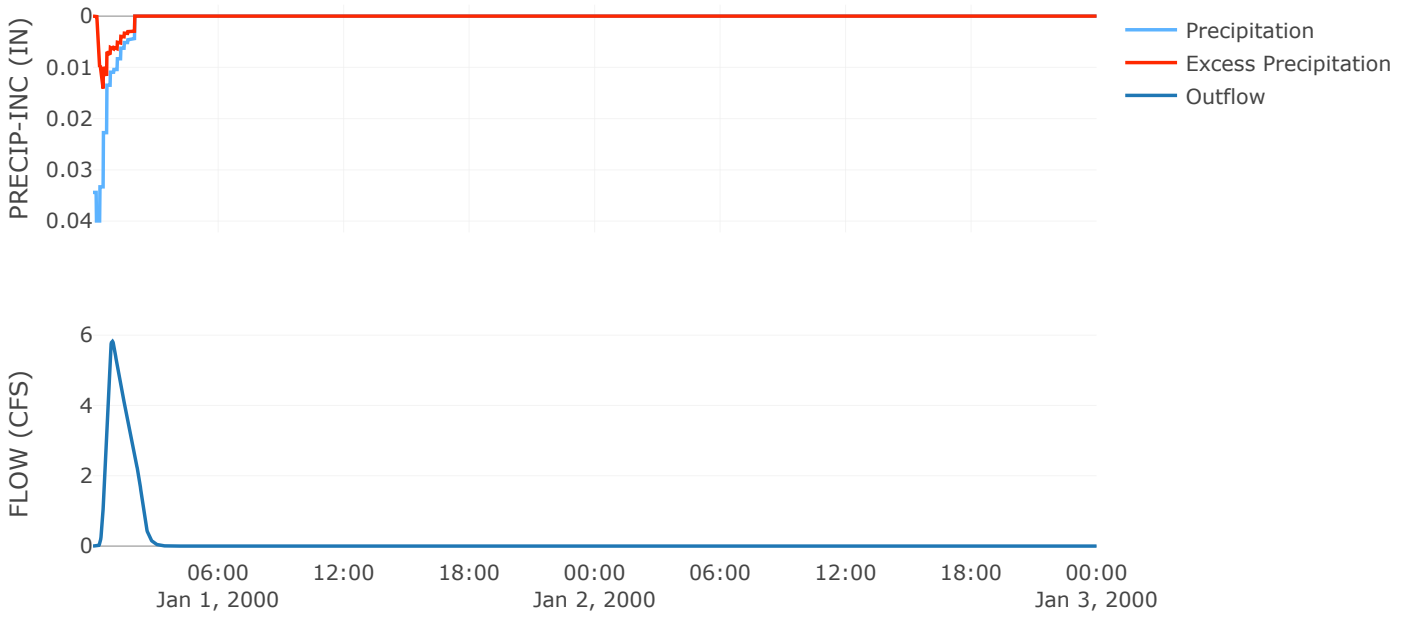
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

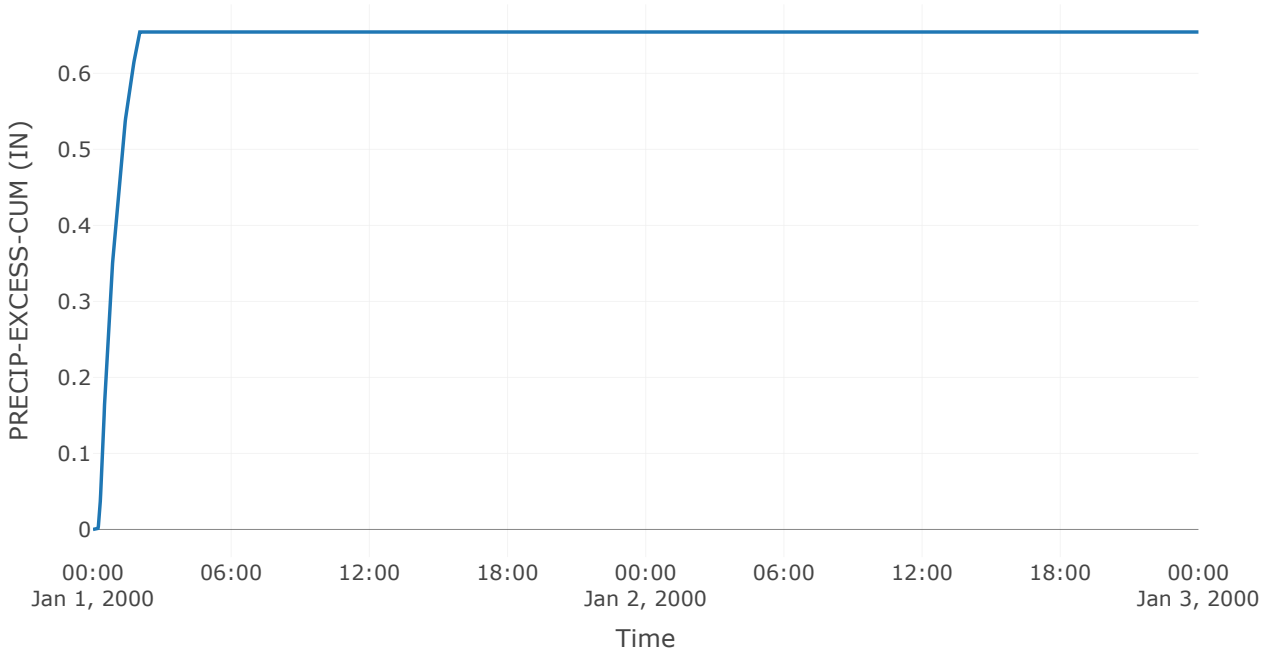
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

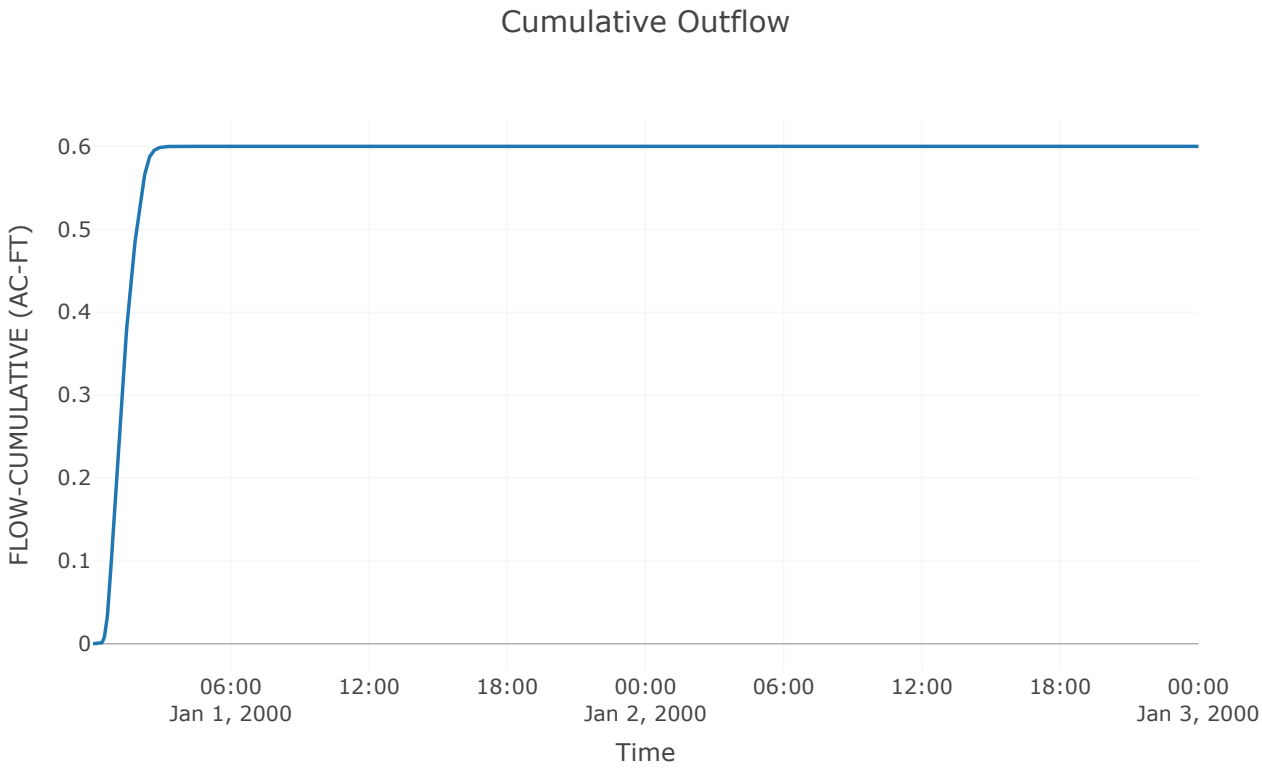
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

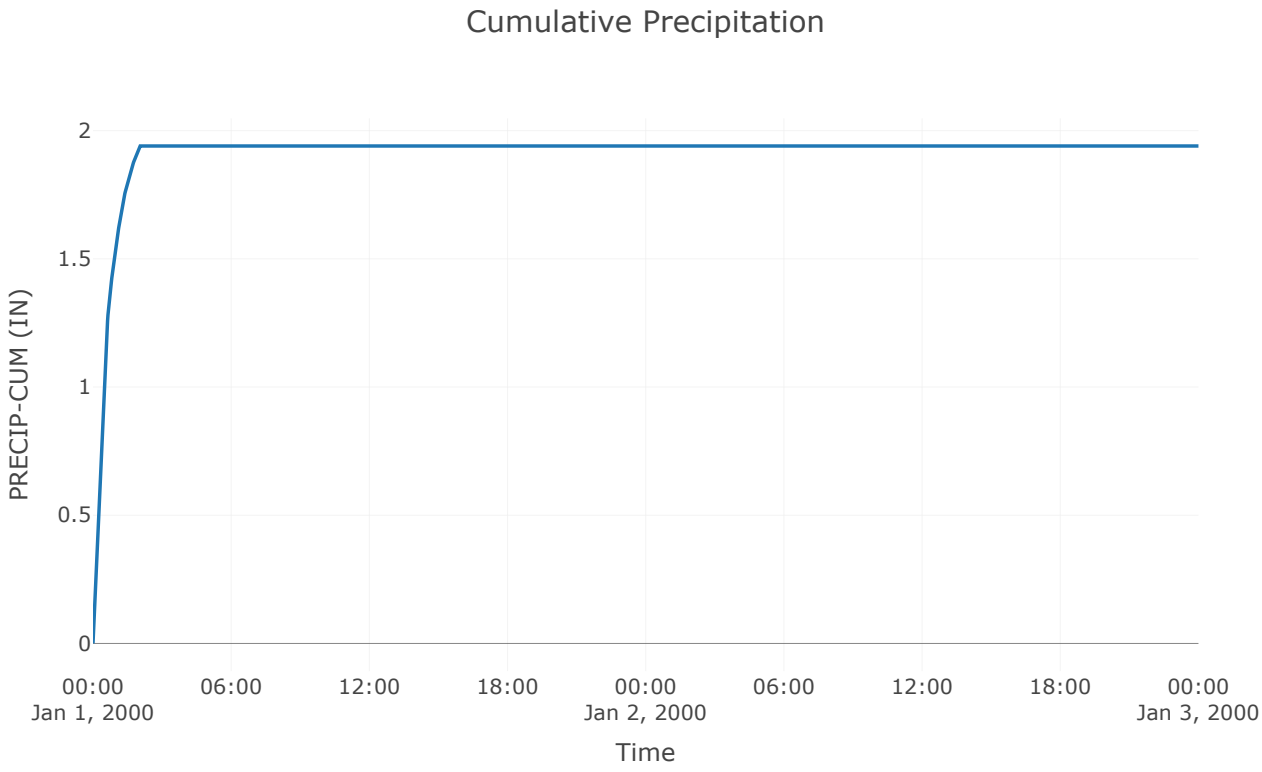
Precipitation and Outflow

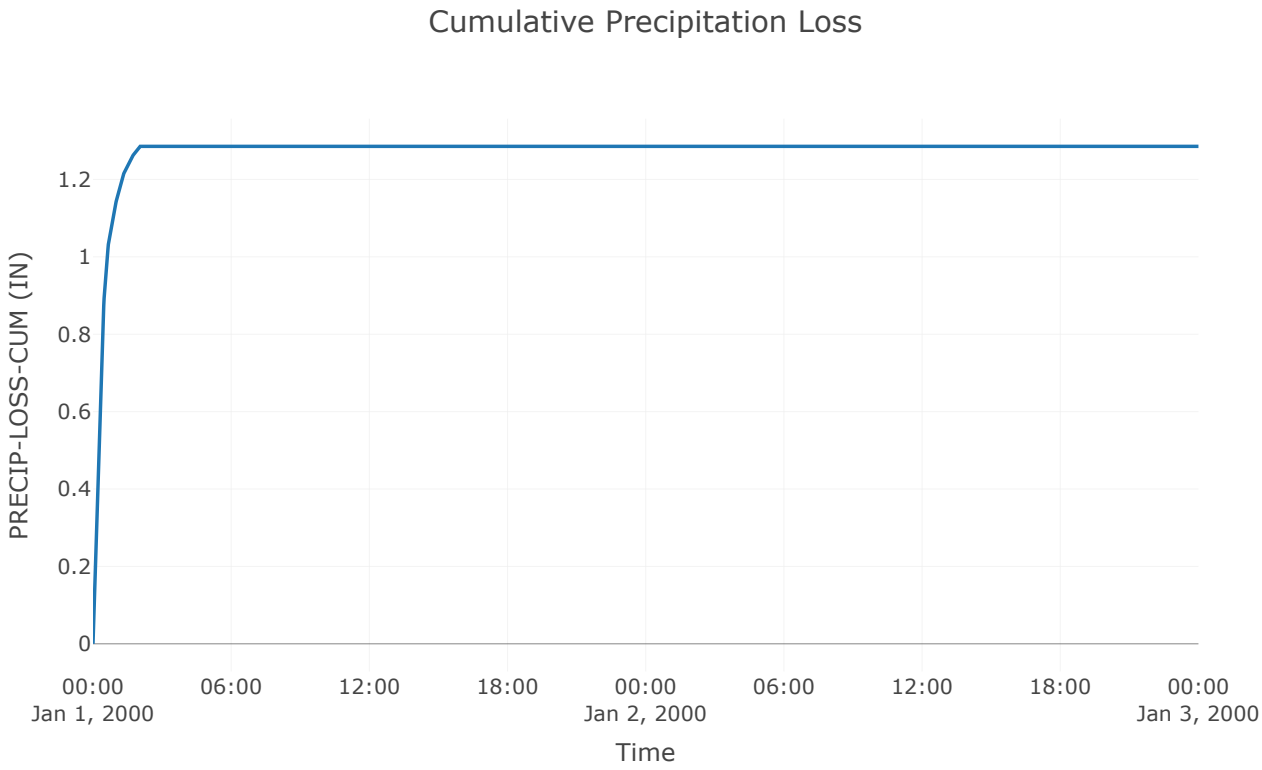


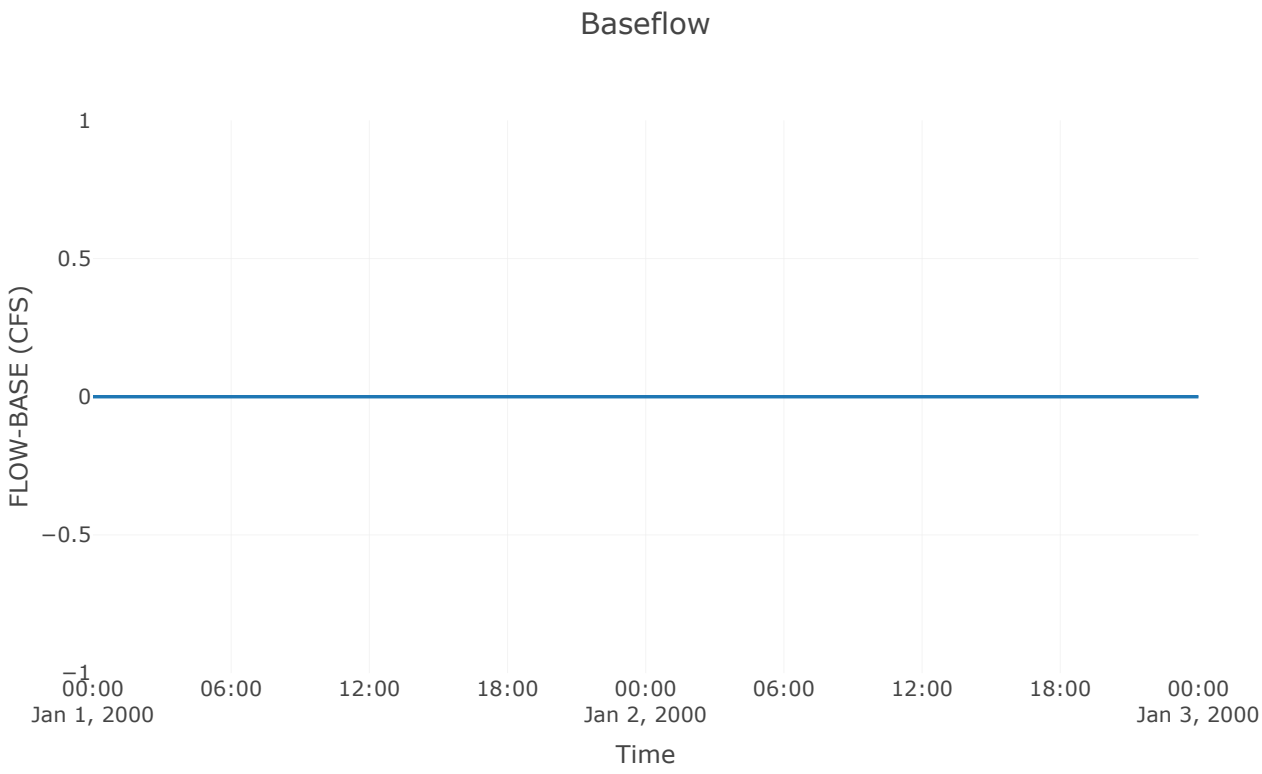
Cumulative Excess Precipitation



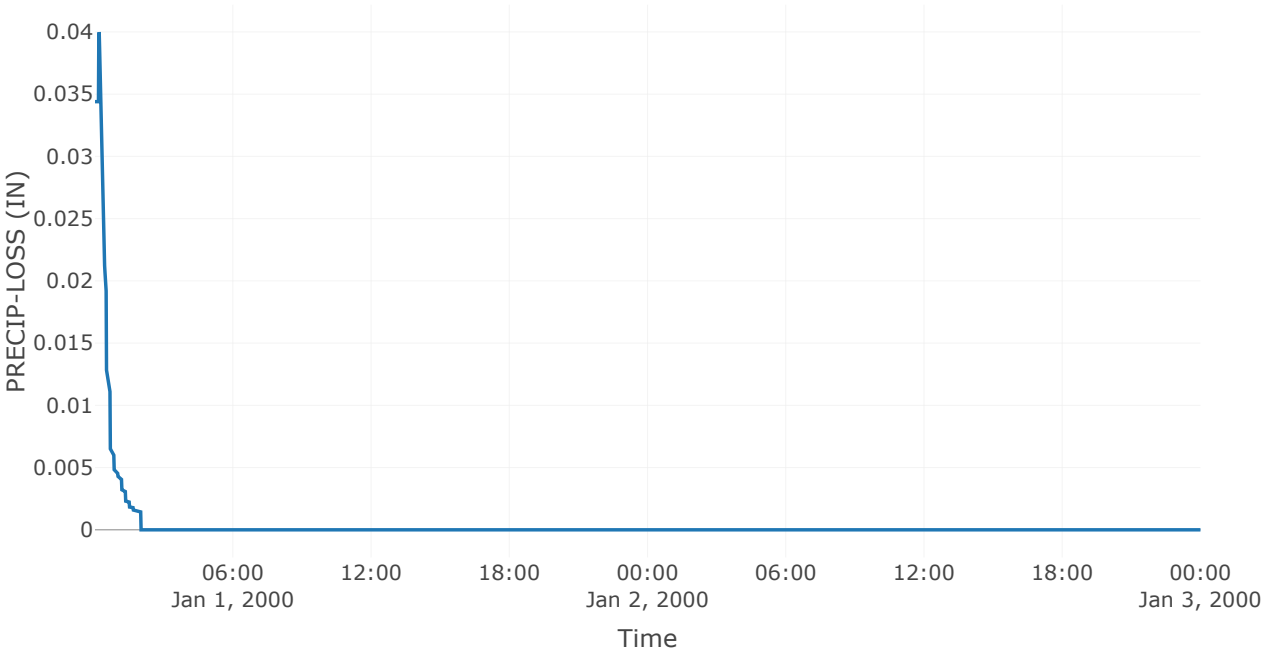

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

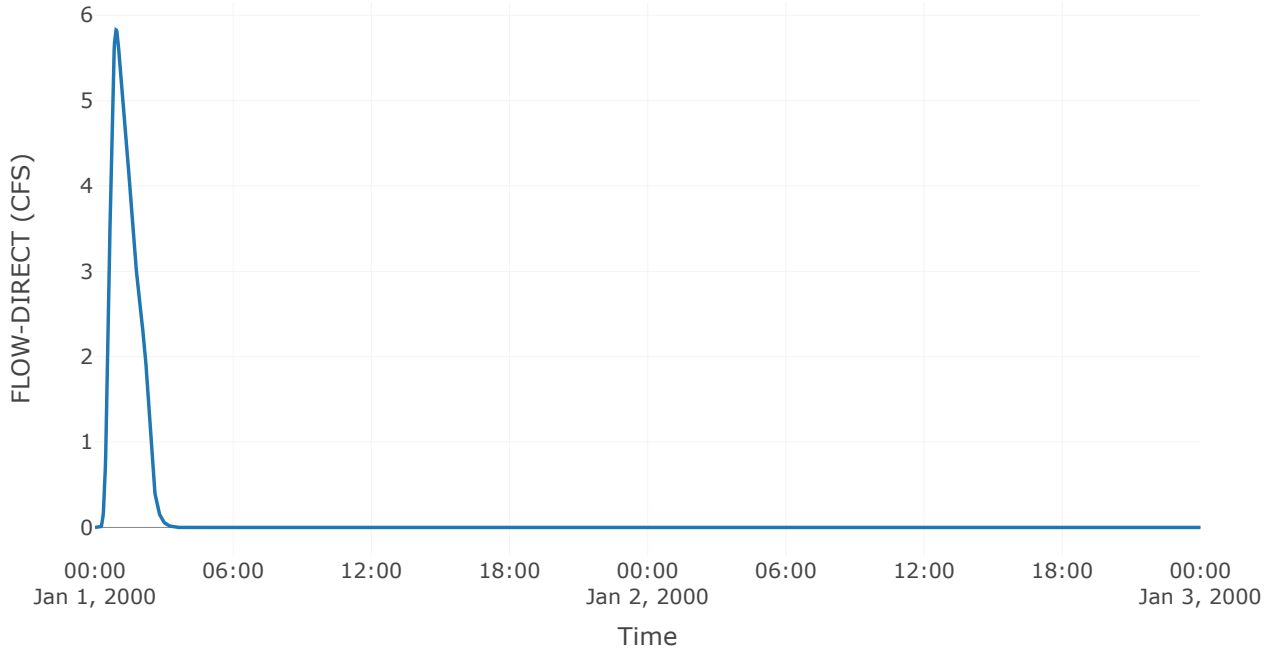

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

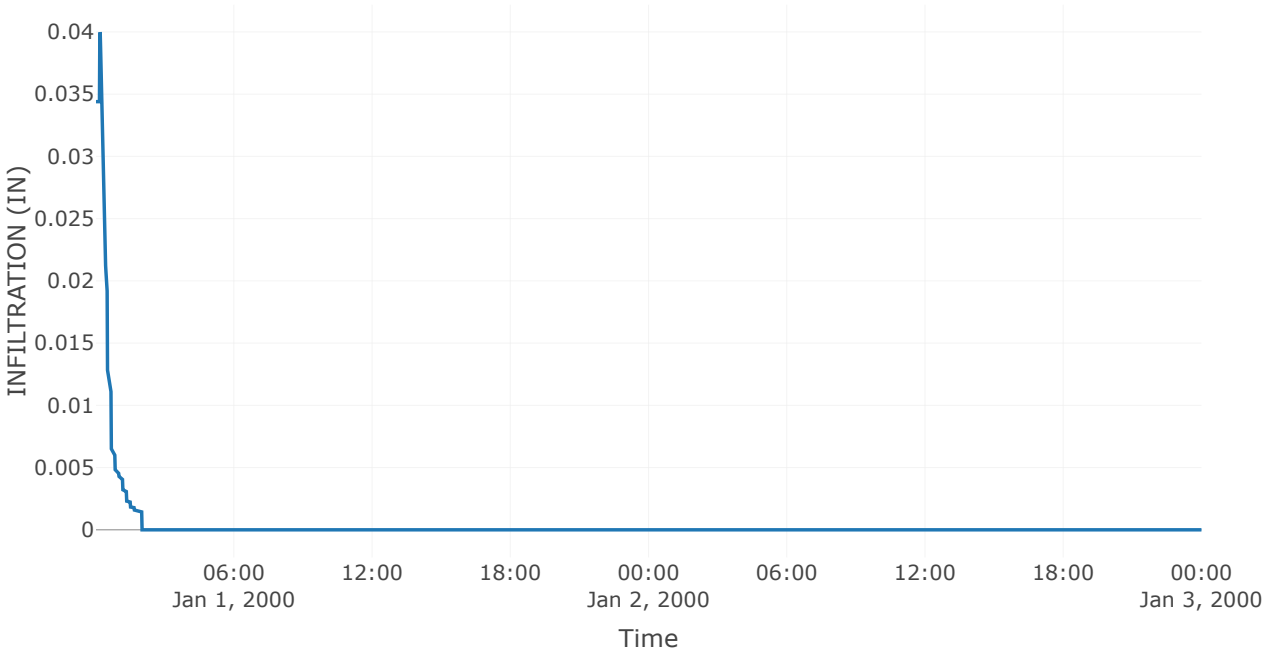

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

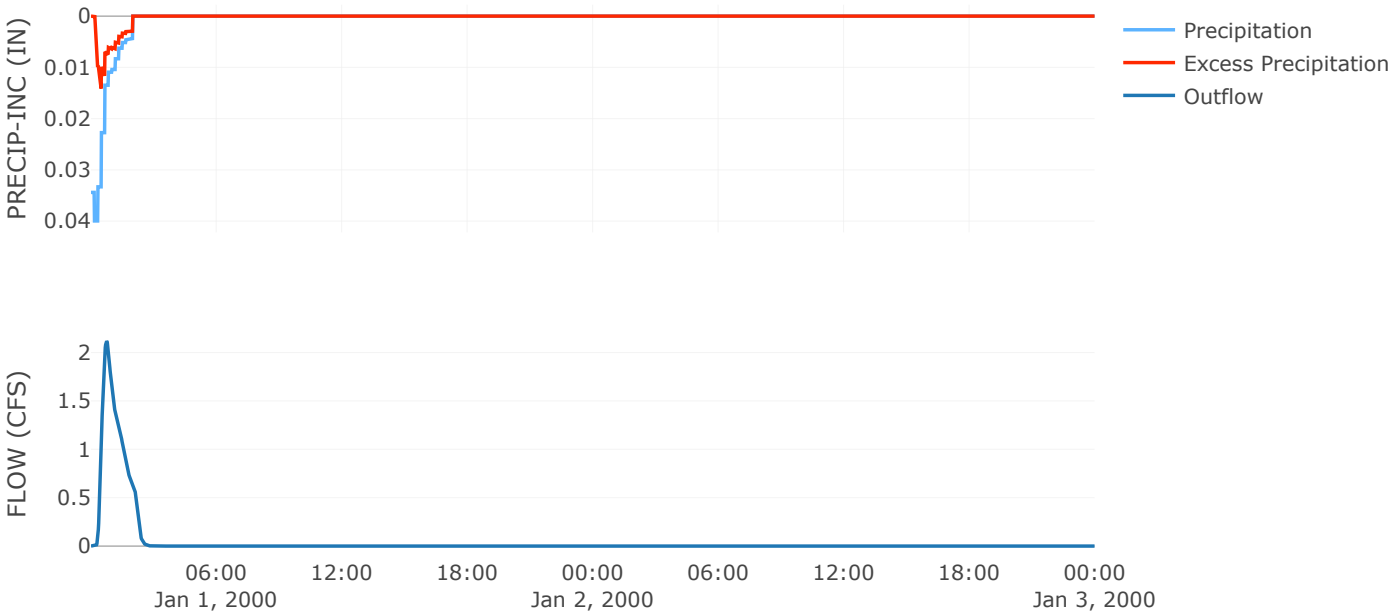
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

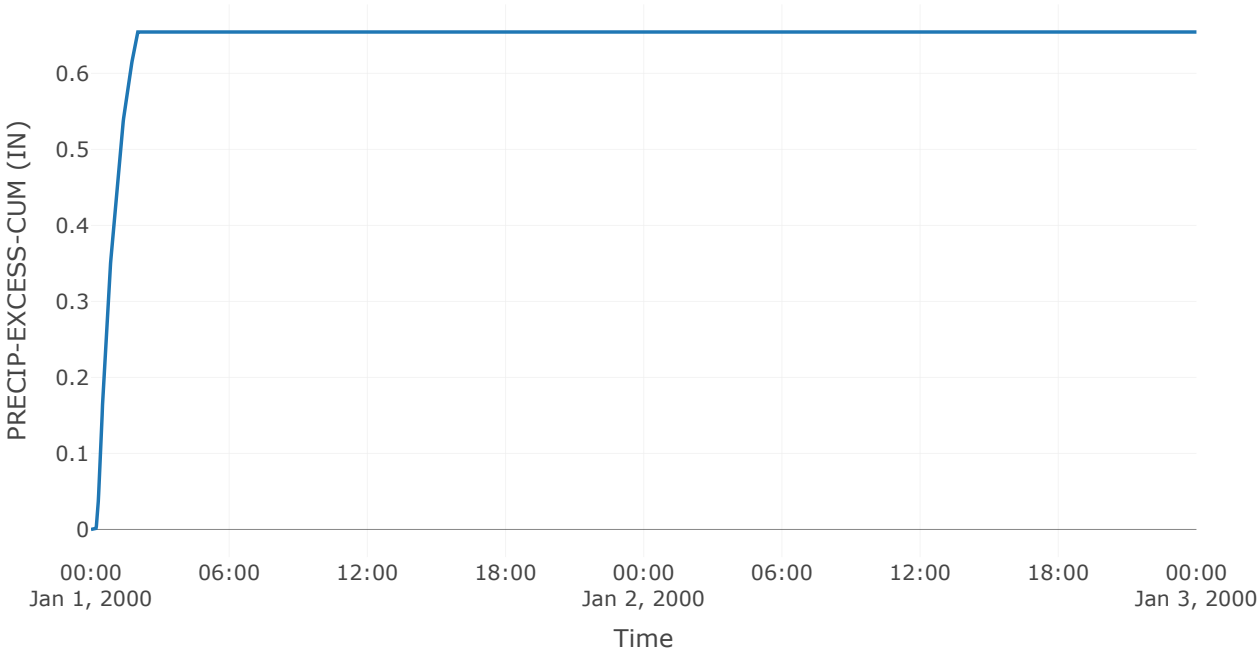
Transform: Scs	
Lag	12
Unitgraph Type	Standard

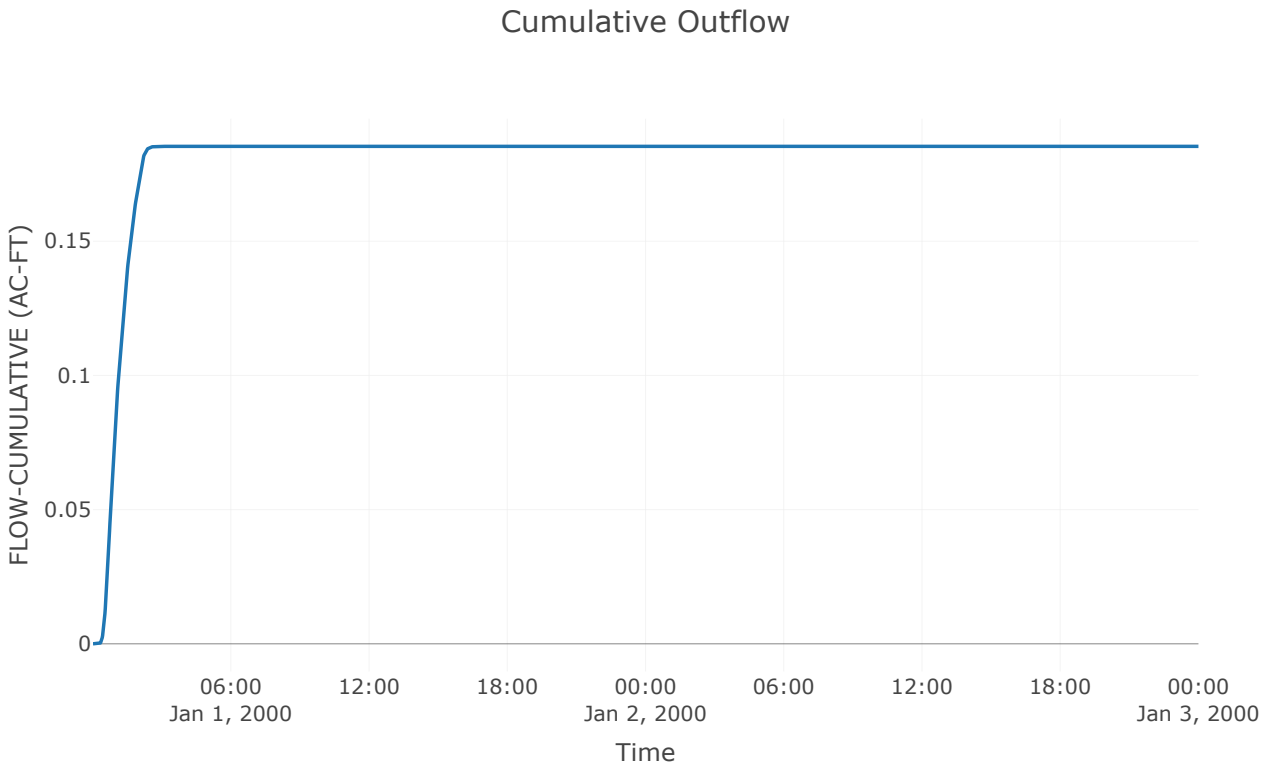
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

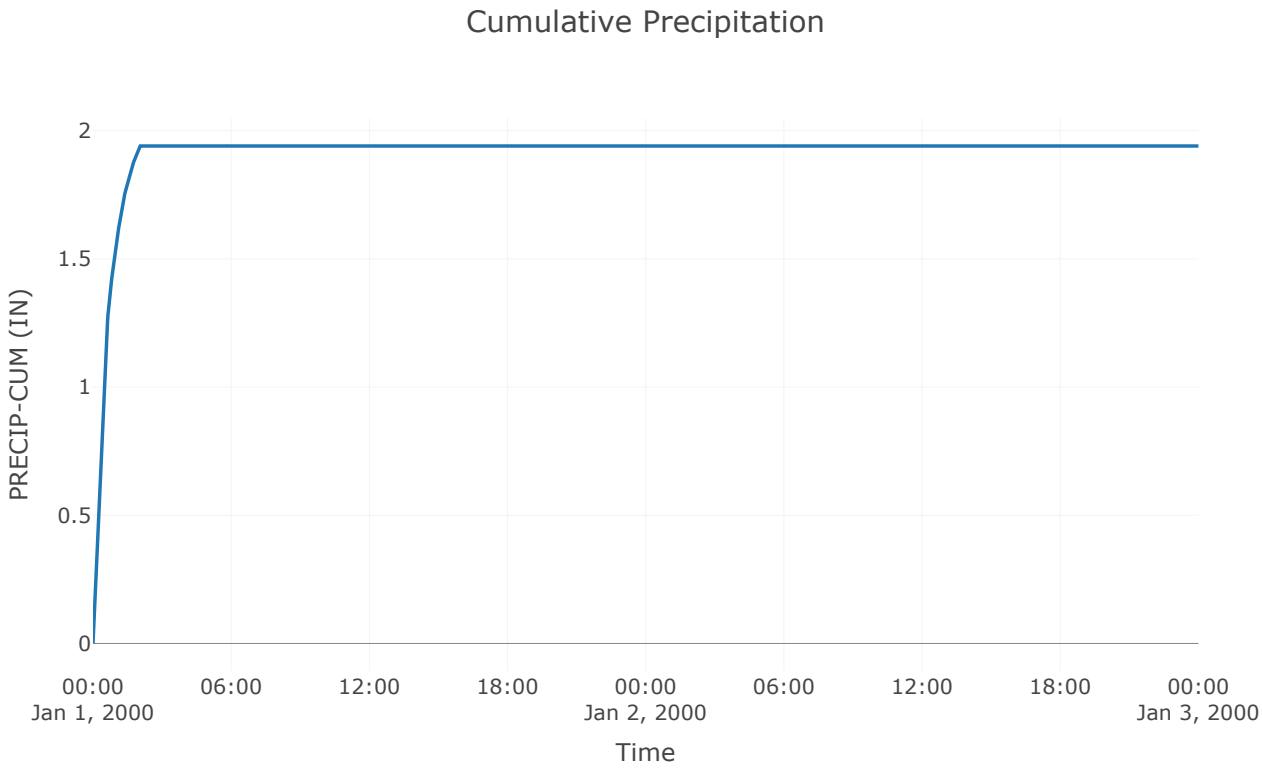
Precipitation and Outflow

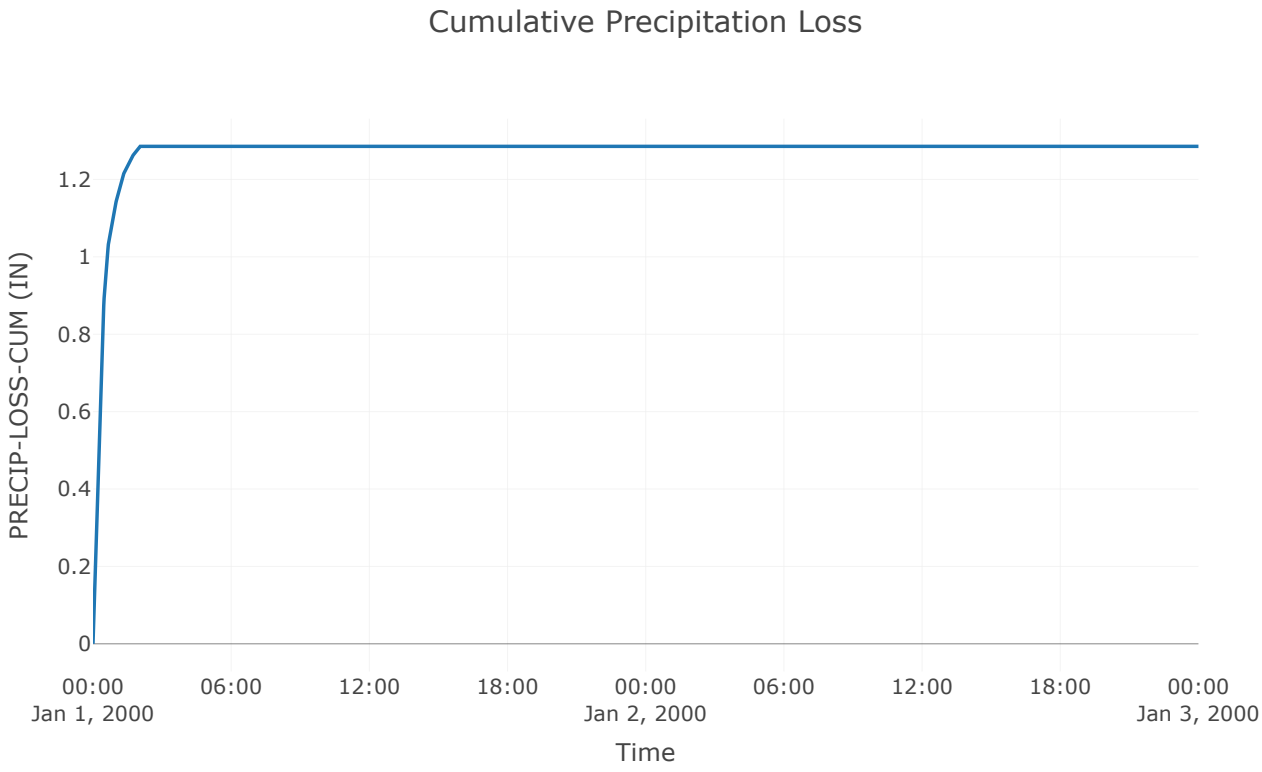


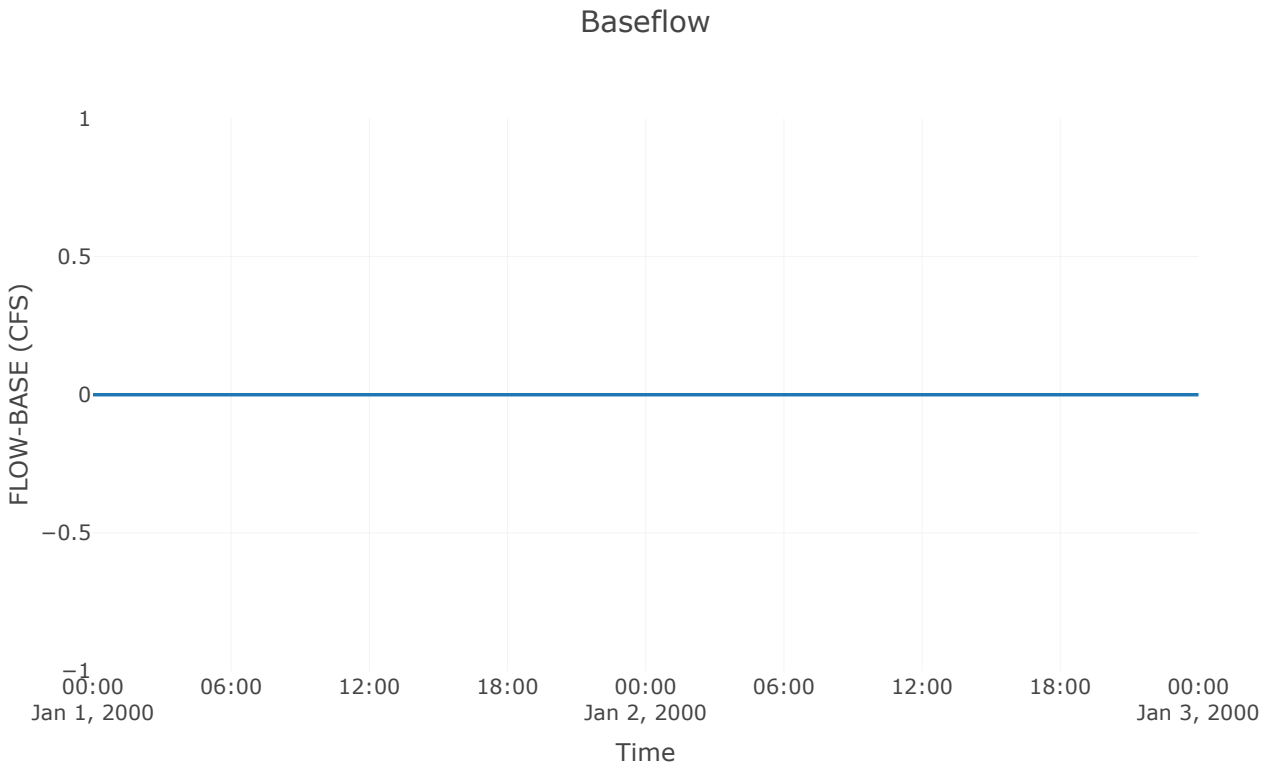
Cumulative Excess Precipitation



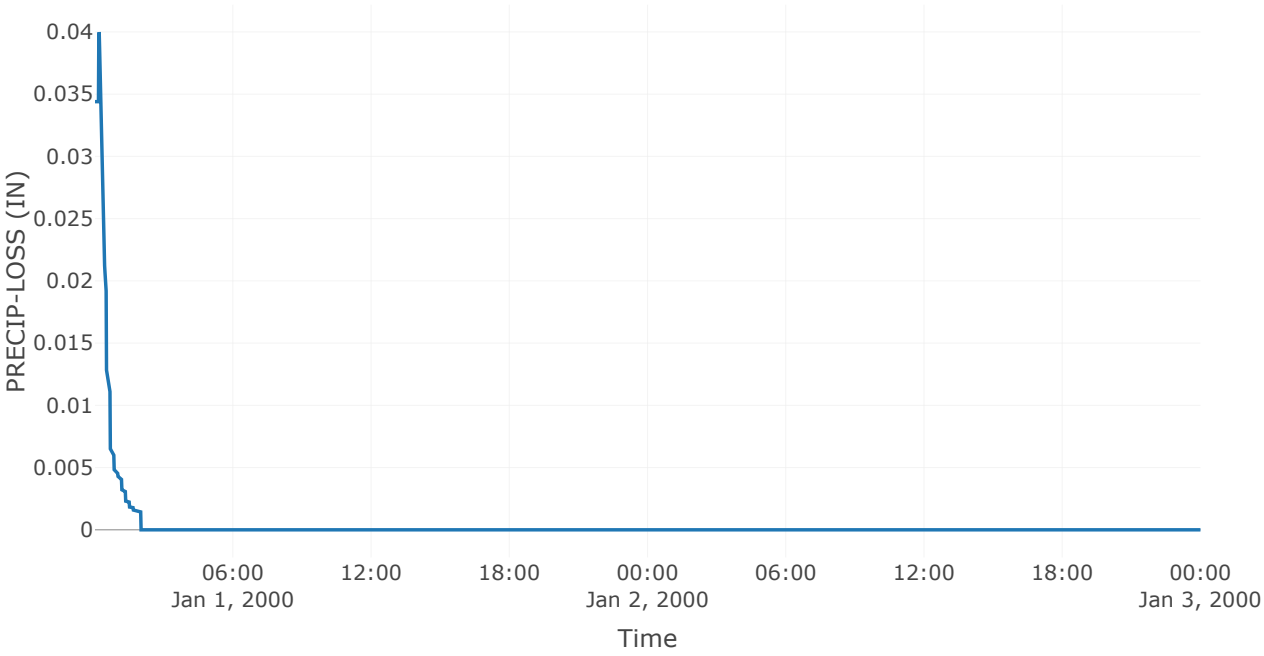

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

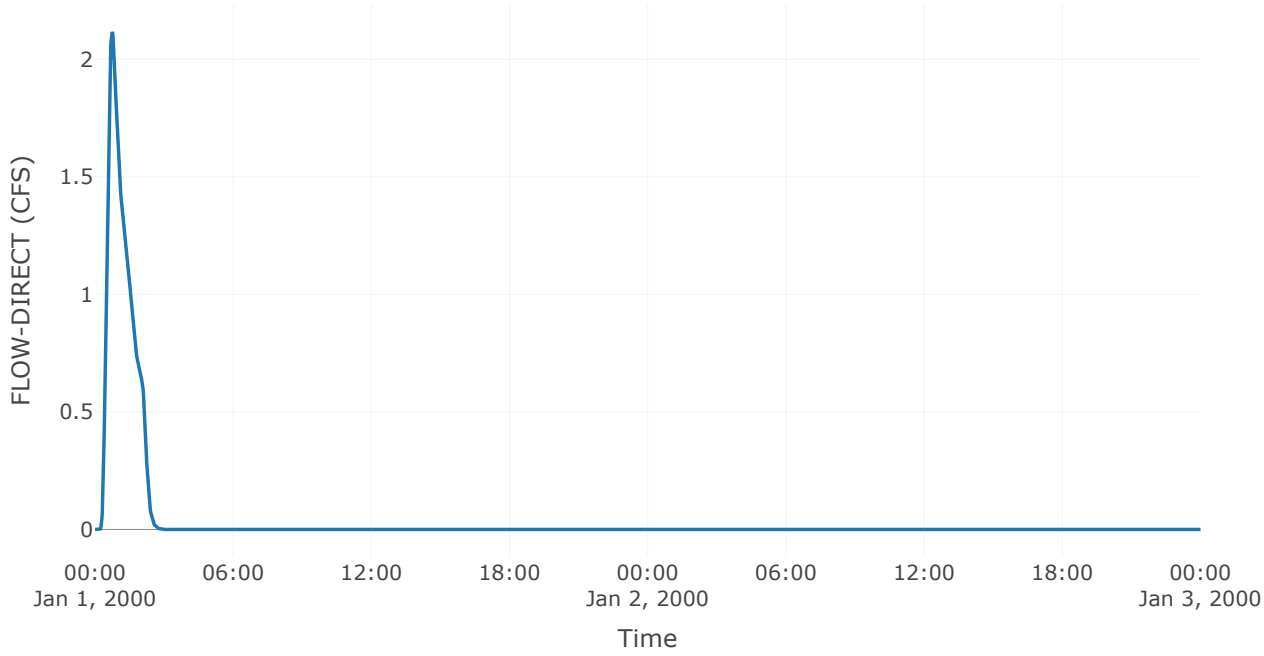

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

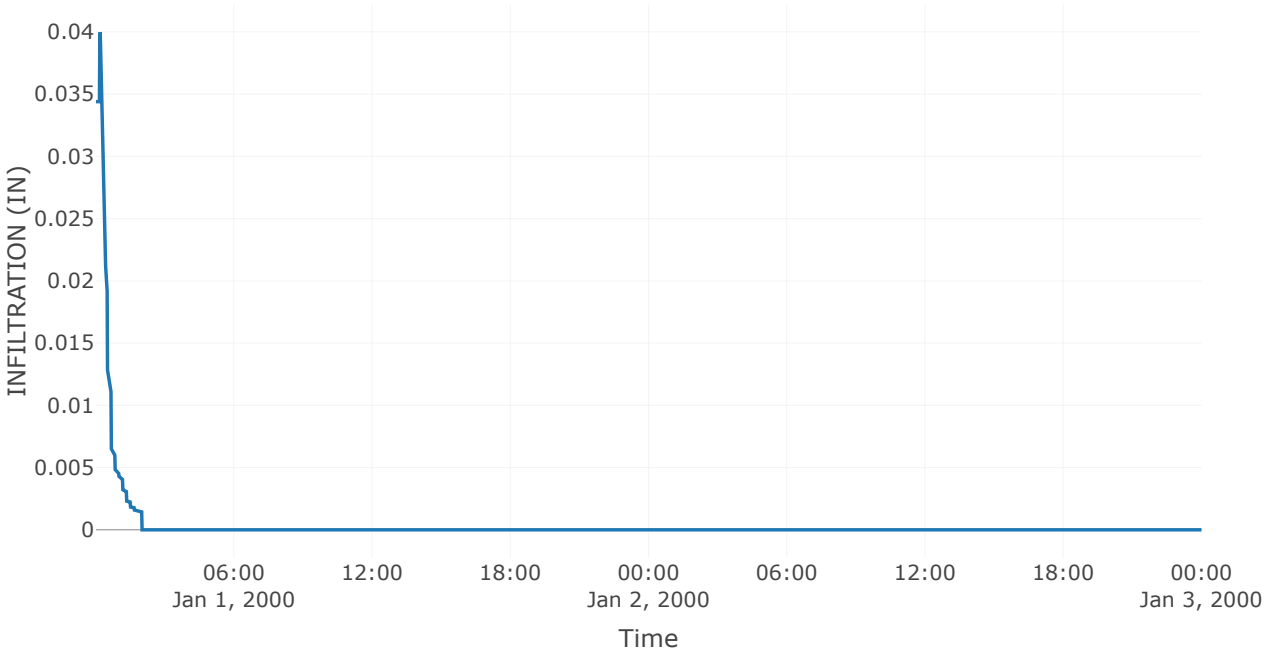

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



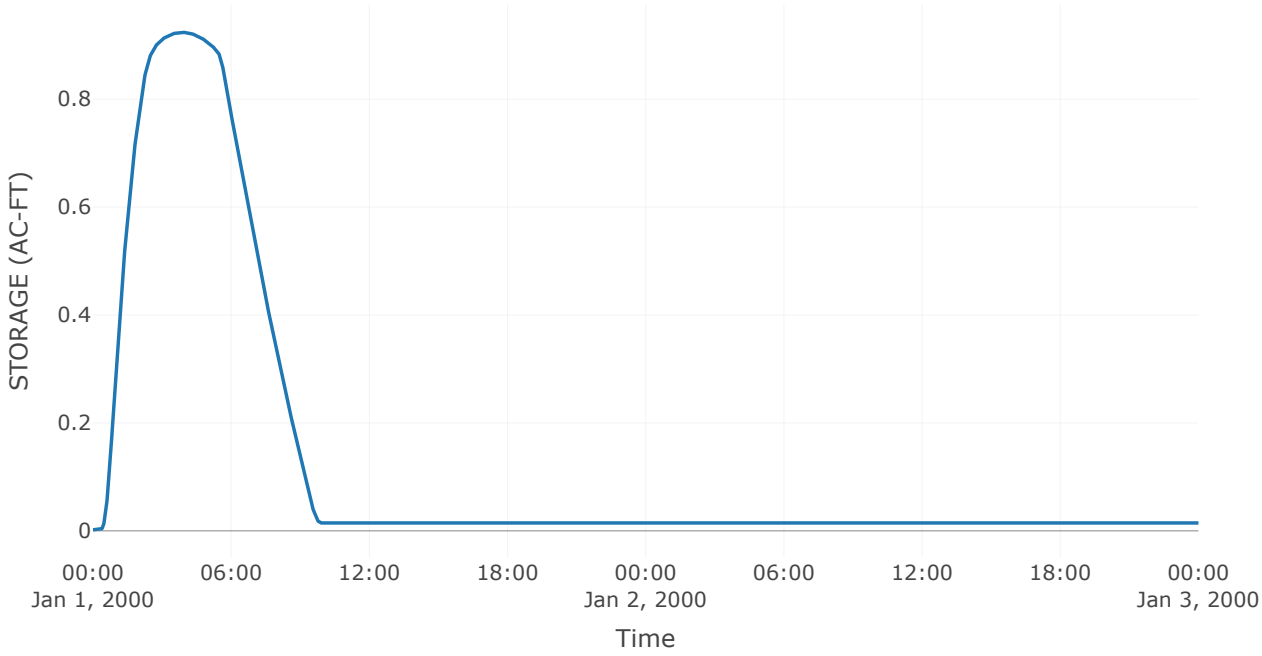

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

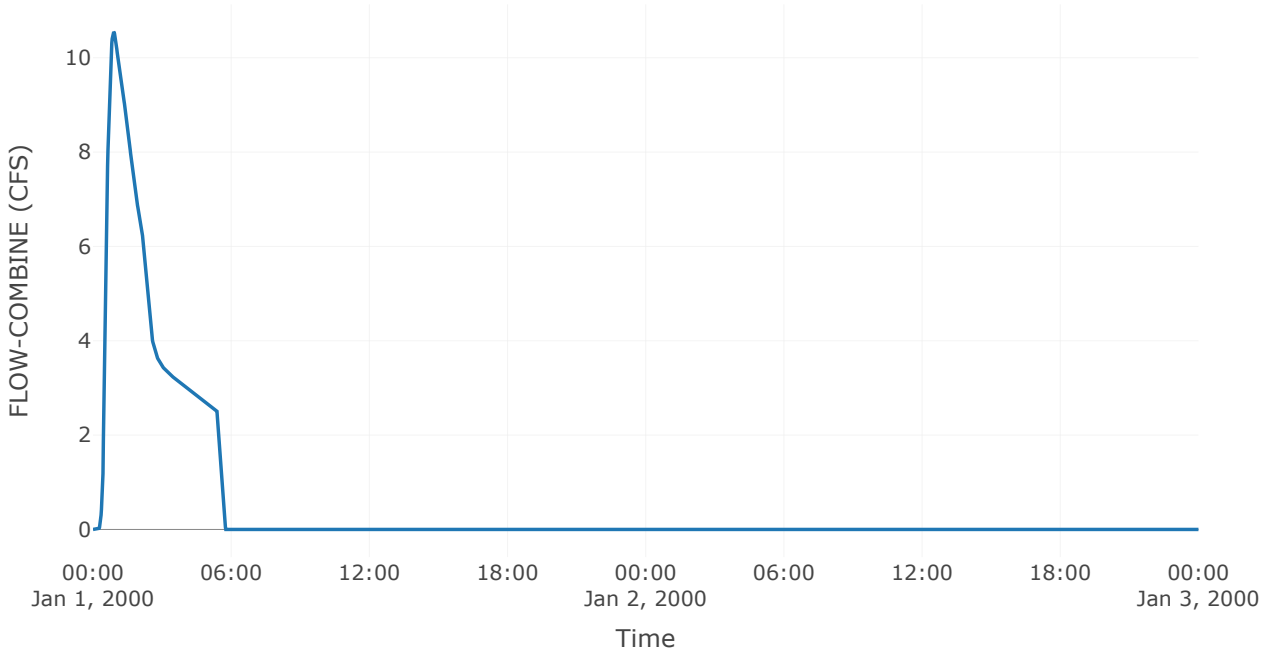
Downstream : Basin 3

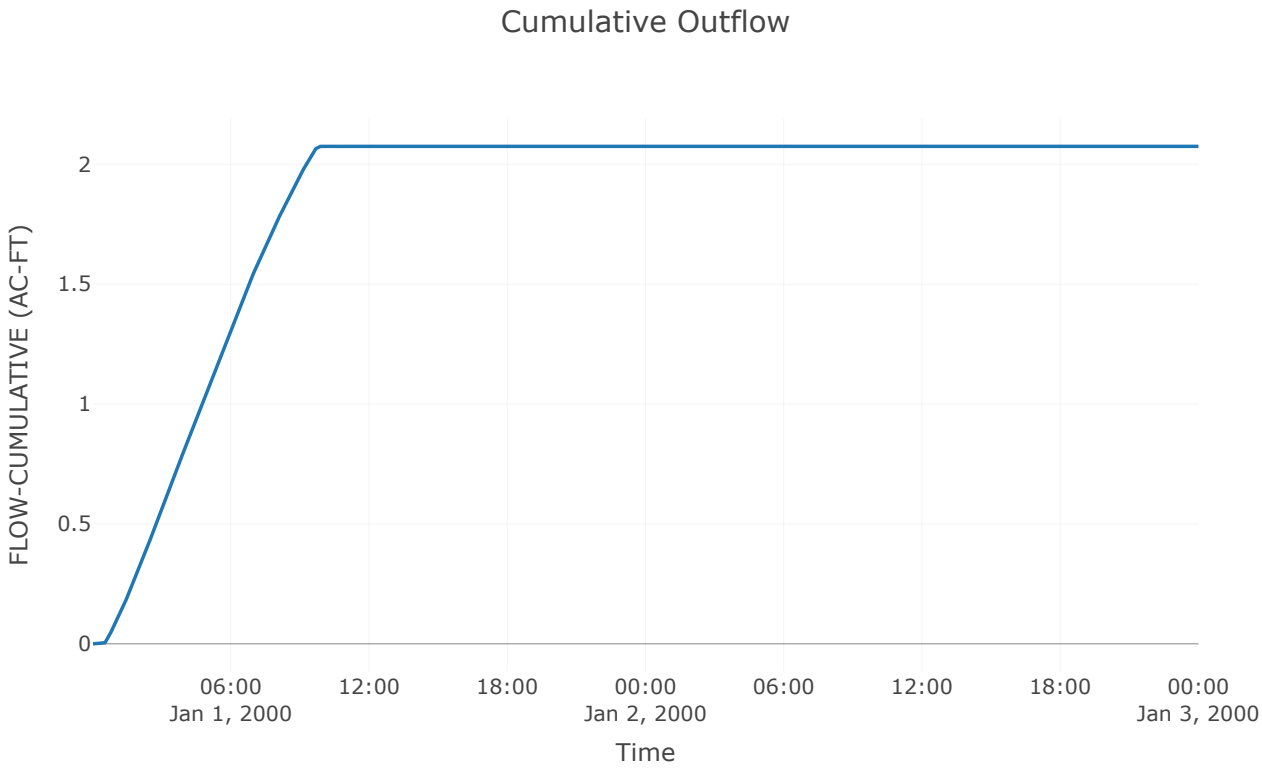
Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

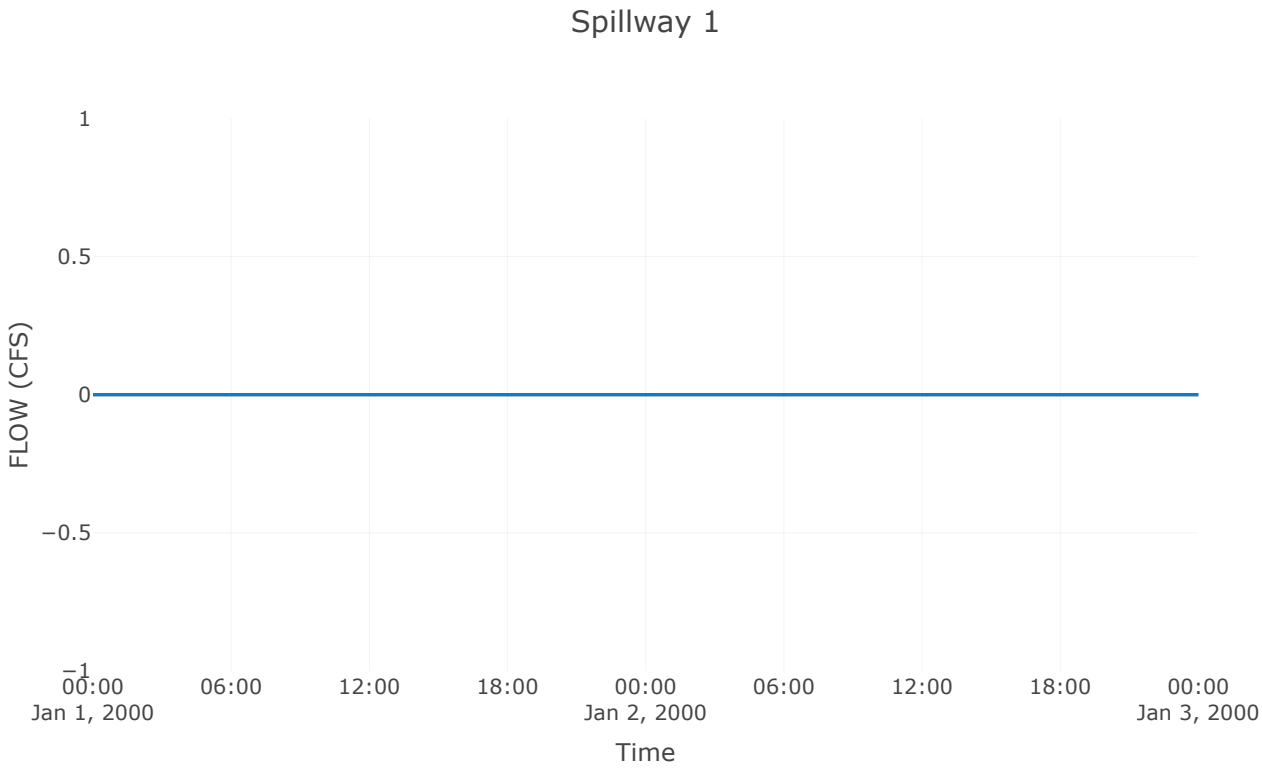
Storage



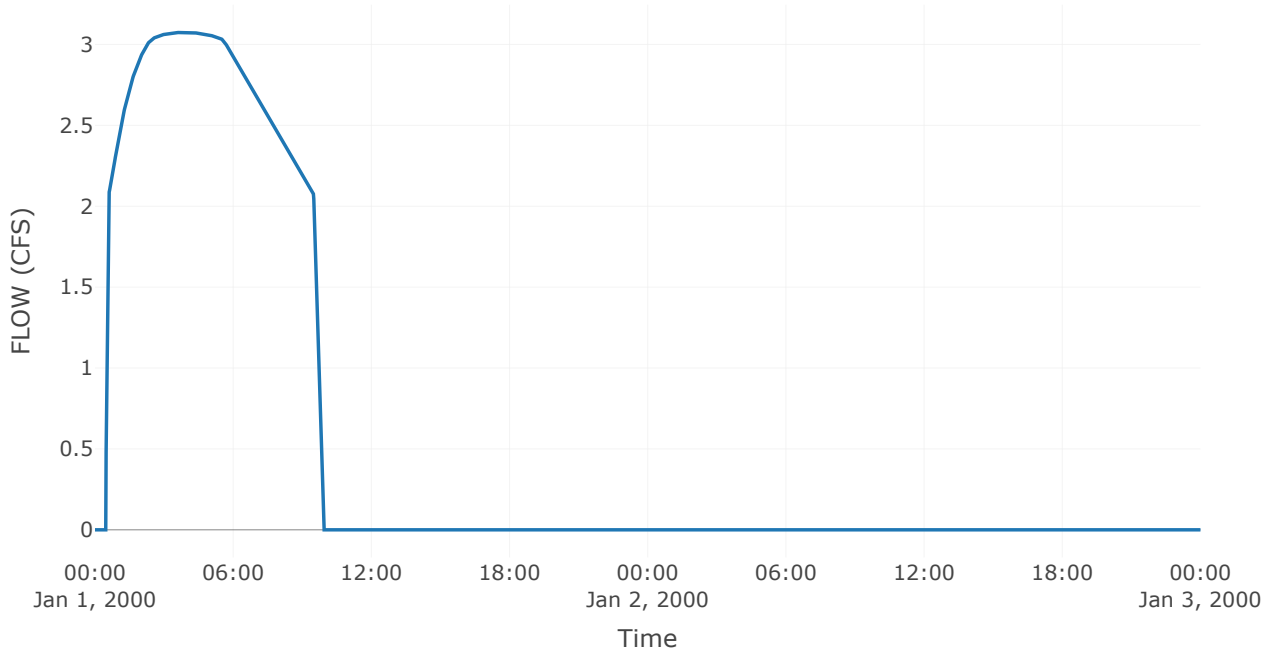
Combined Inflow



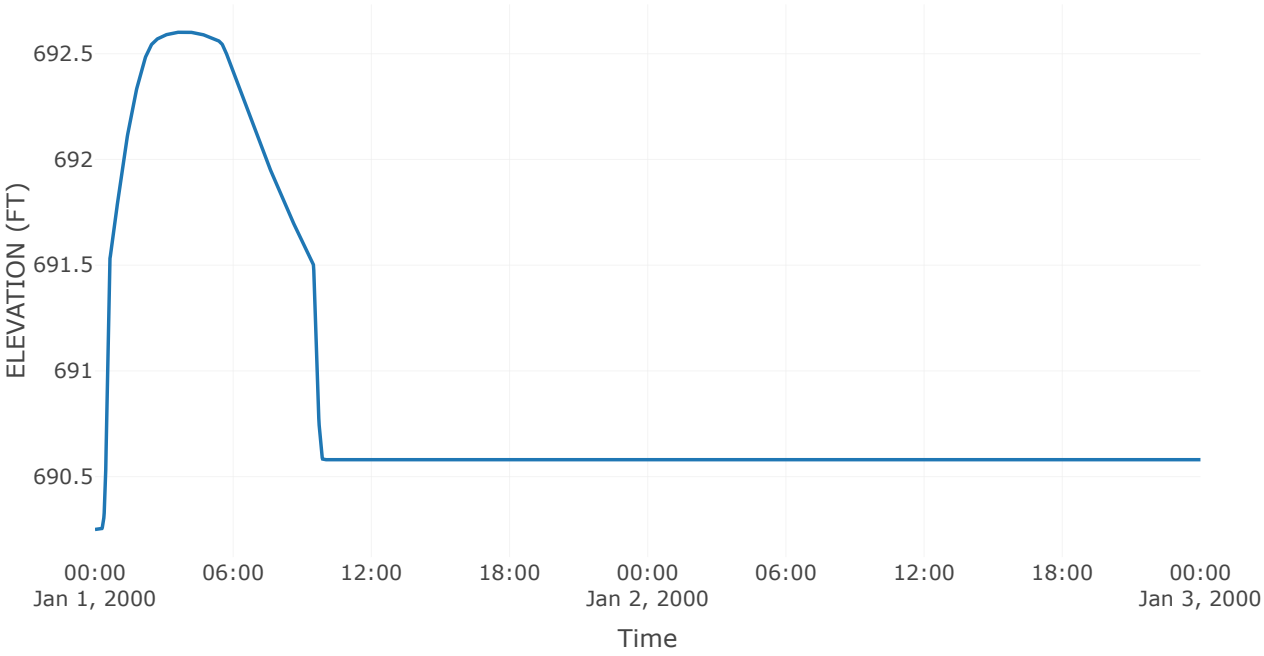

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

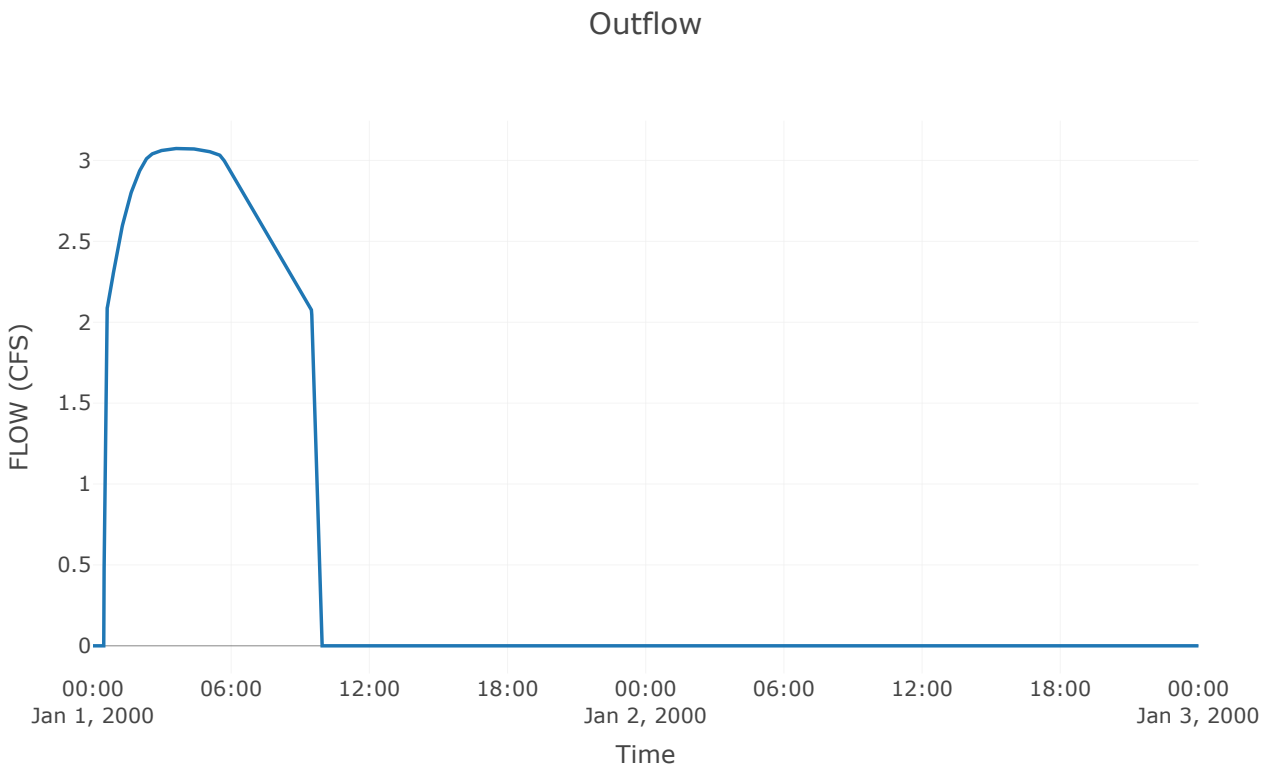

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

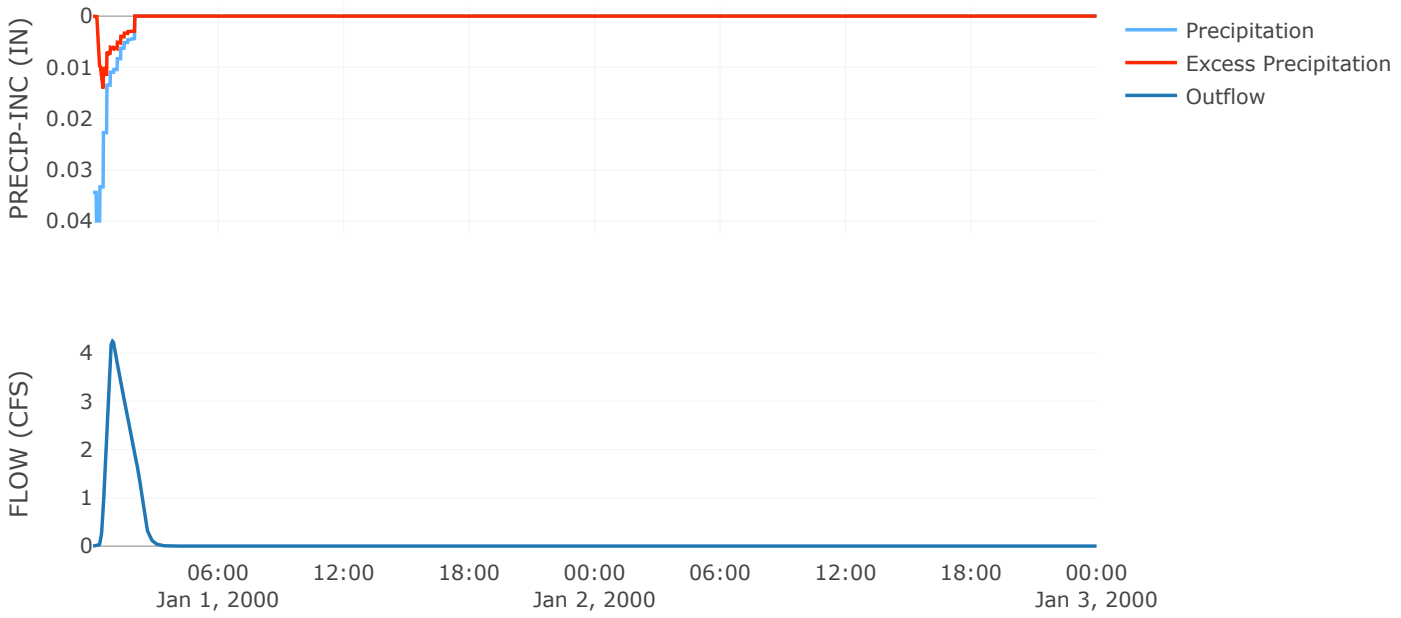
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

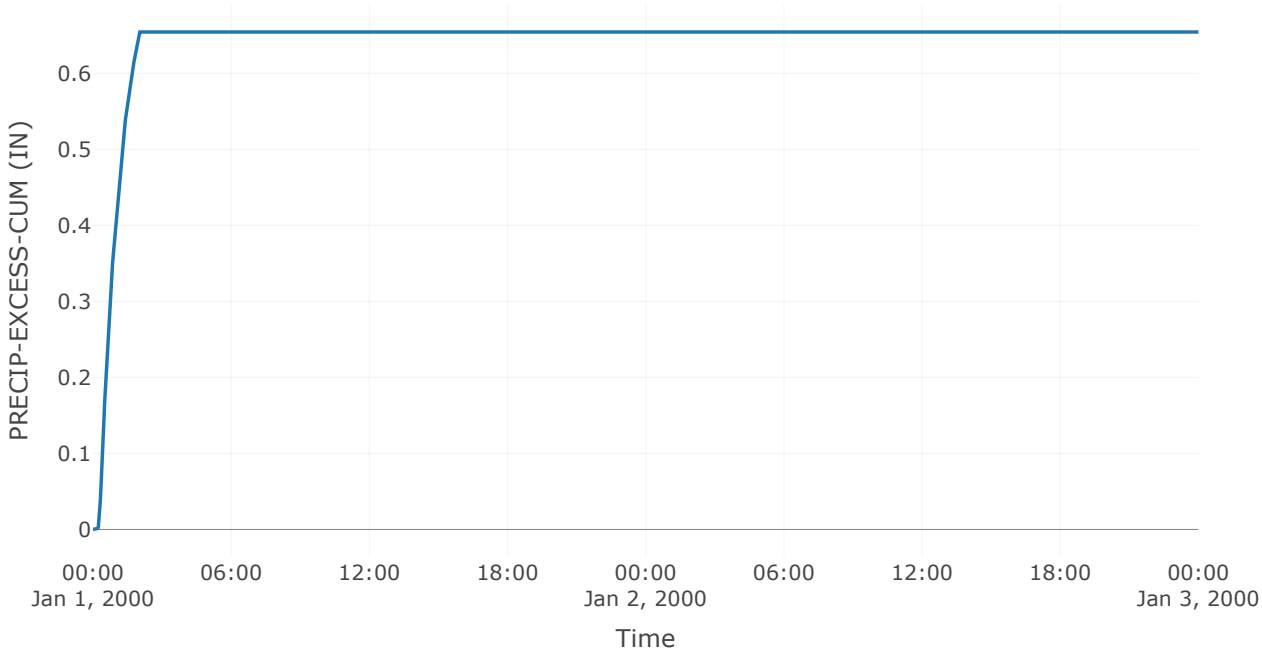
Transform: Scs	
Lag	21
Unitgraph Type	Standard

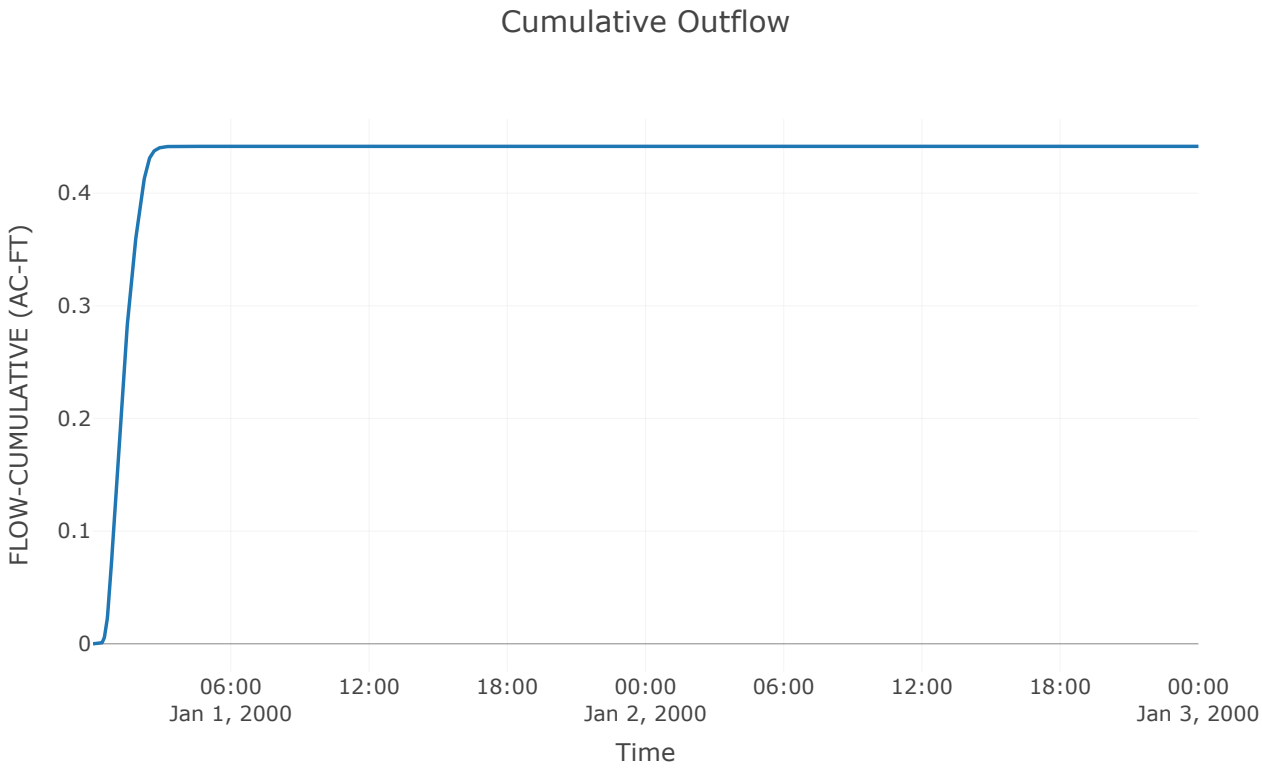
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

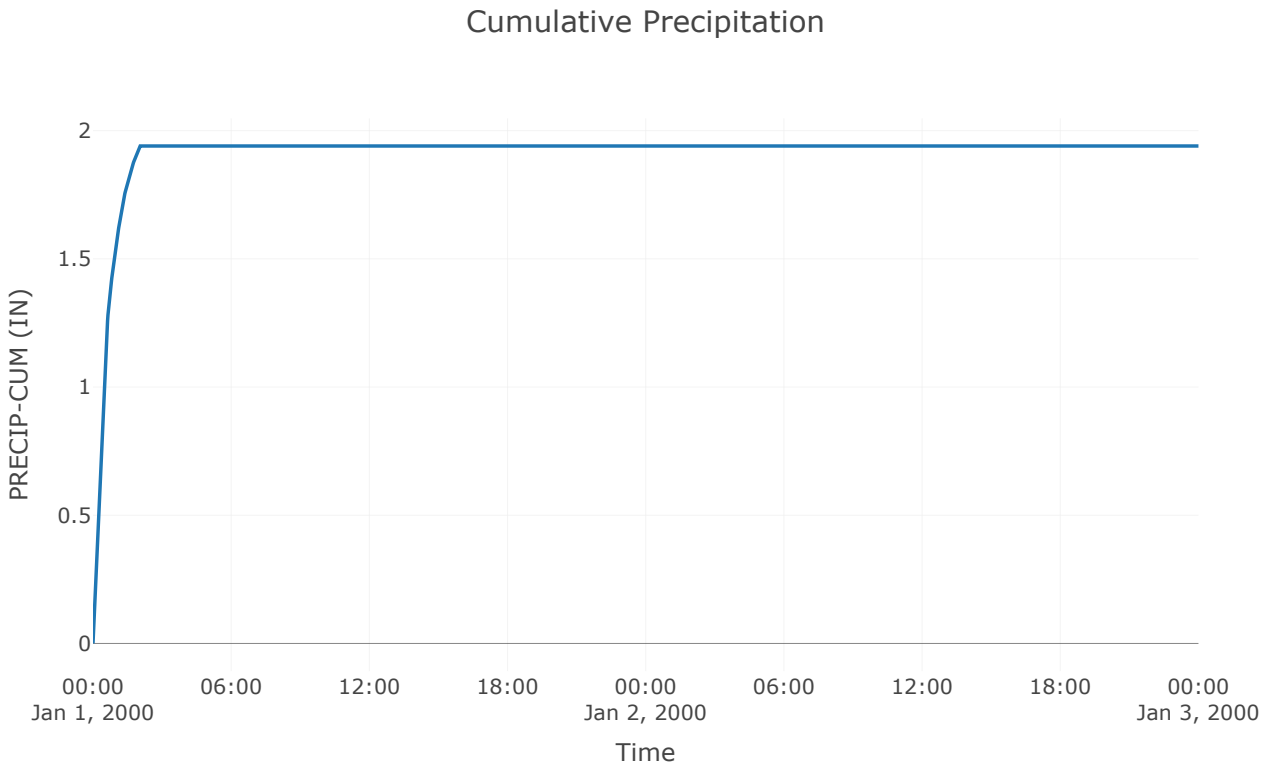
Precipitation and Outflow

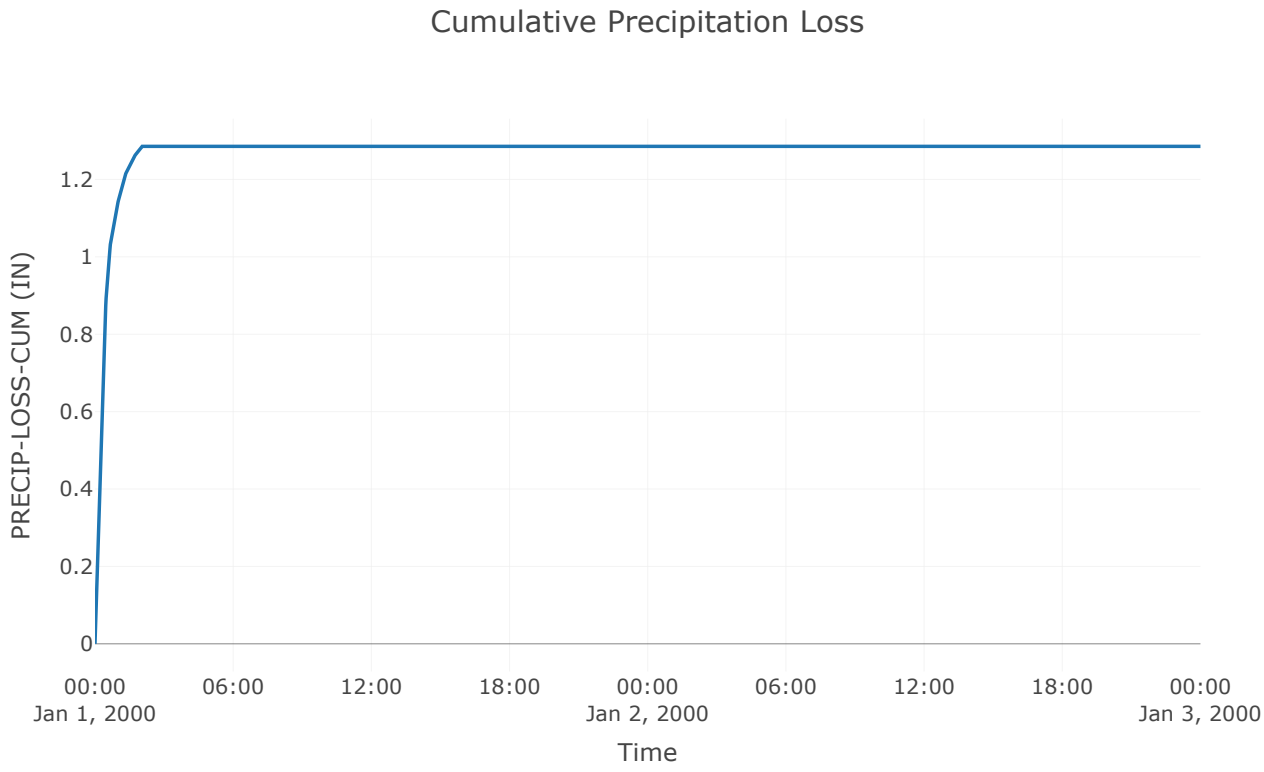


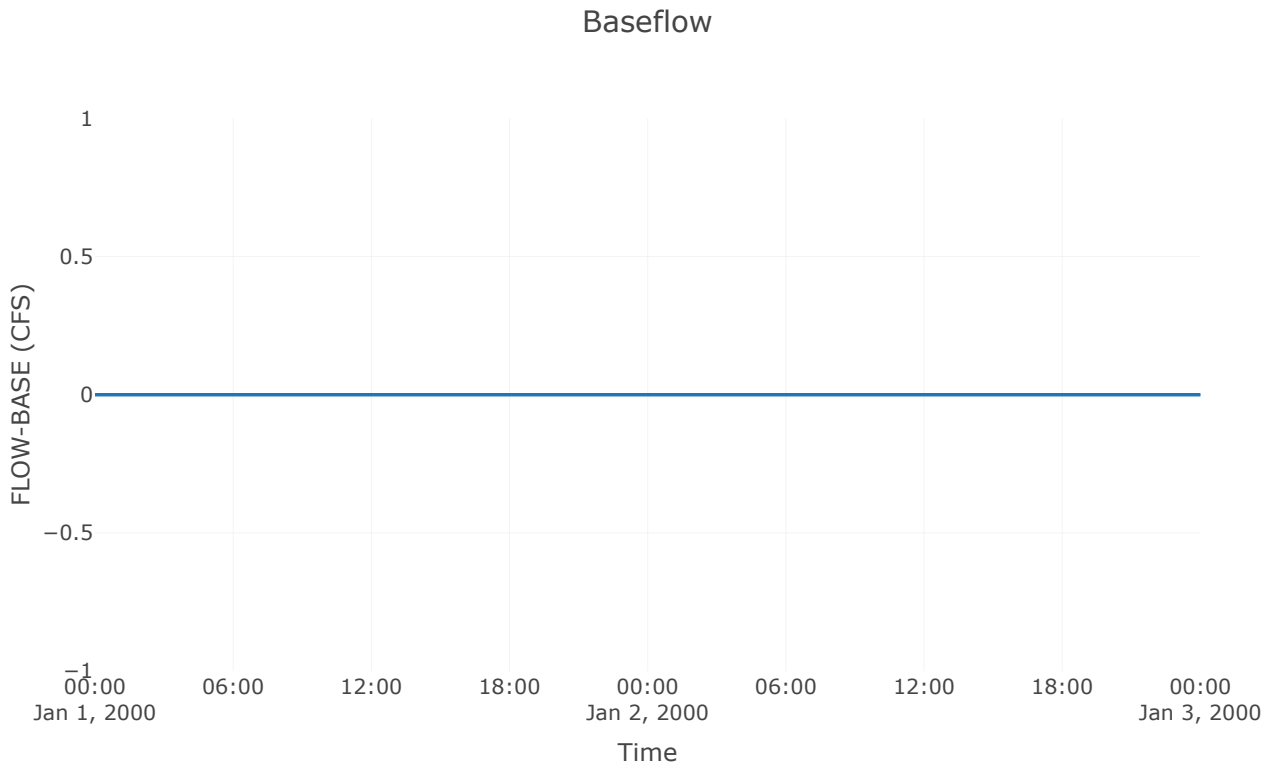
Cumulative Excess Precipitation



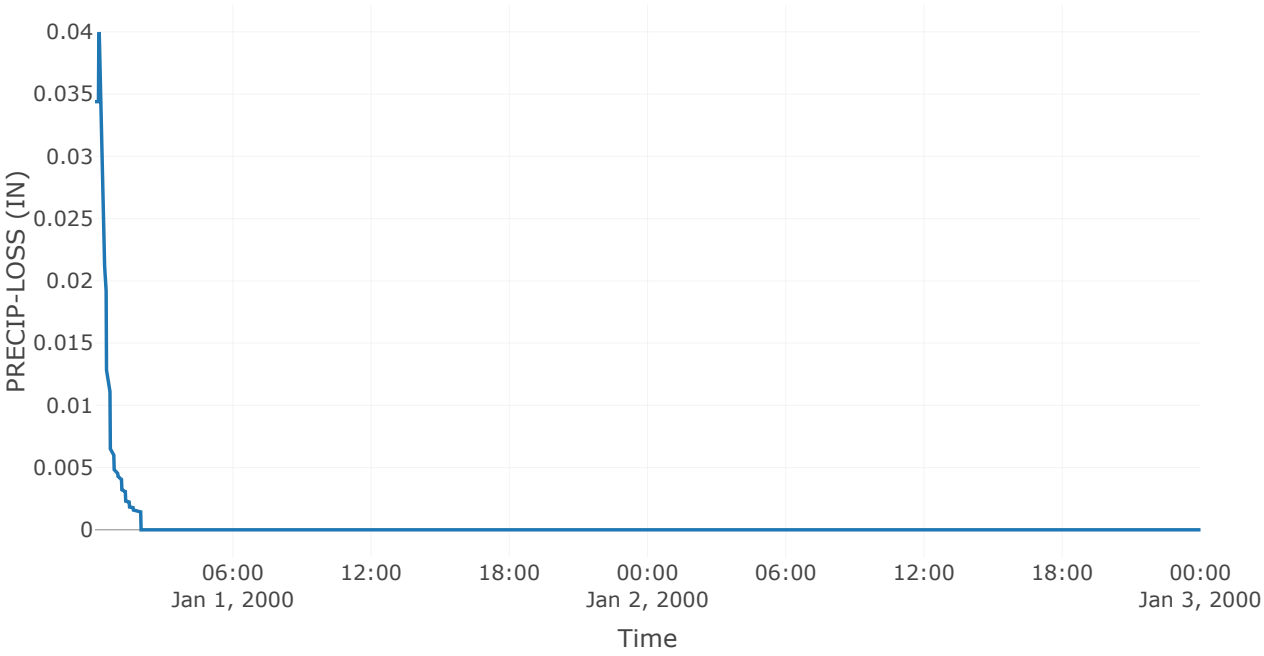

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

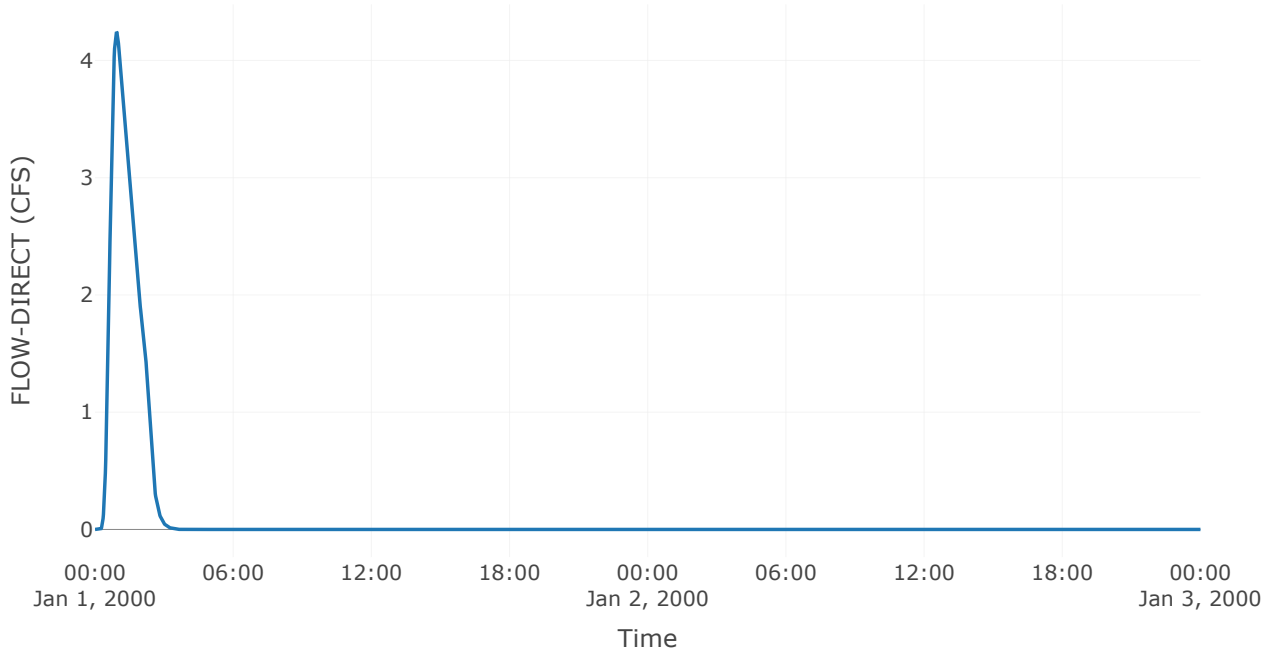

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

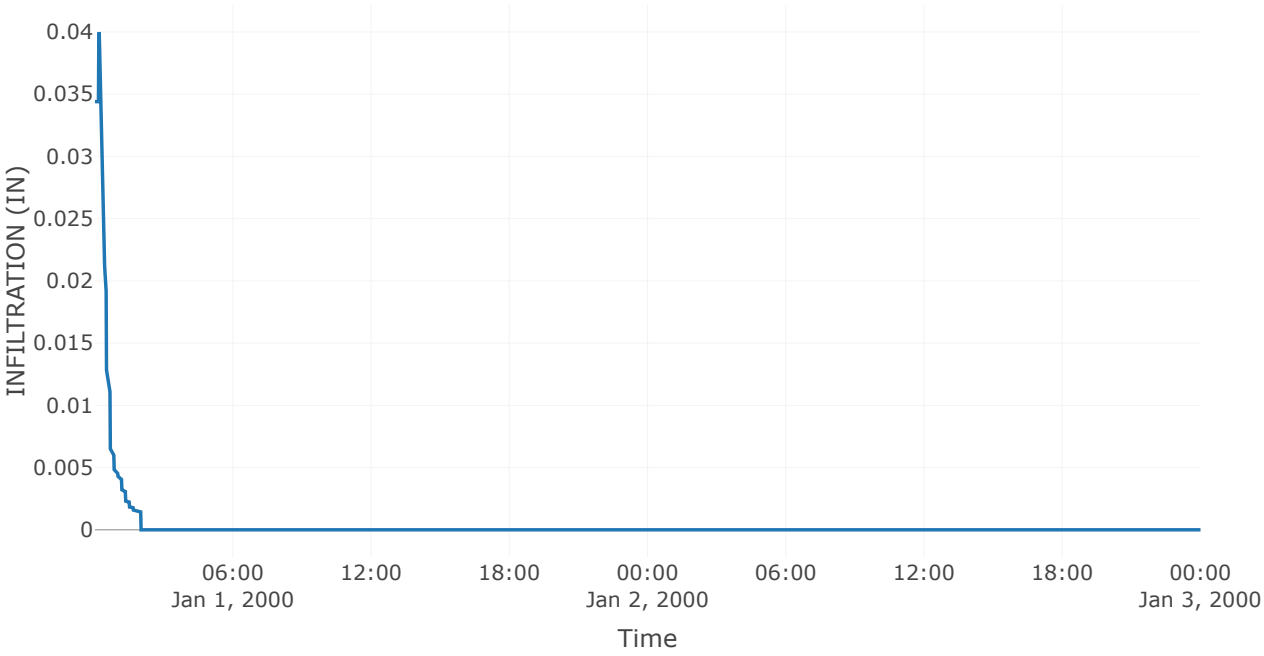

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

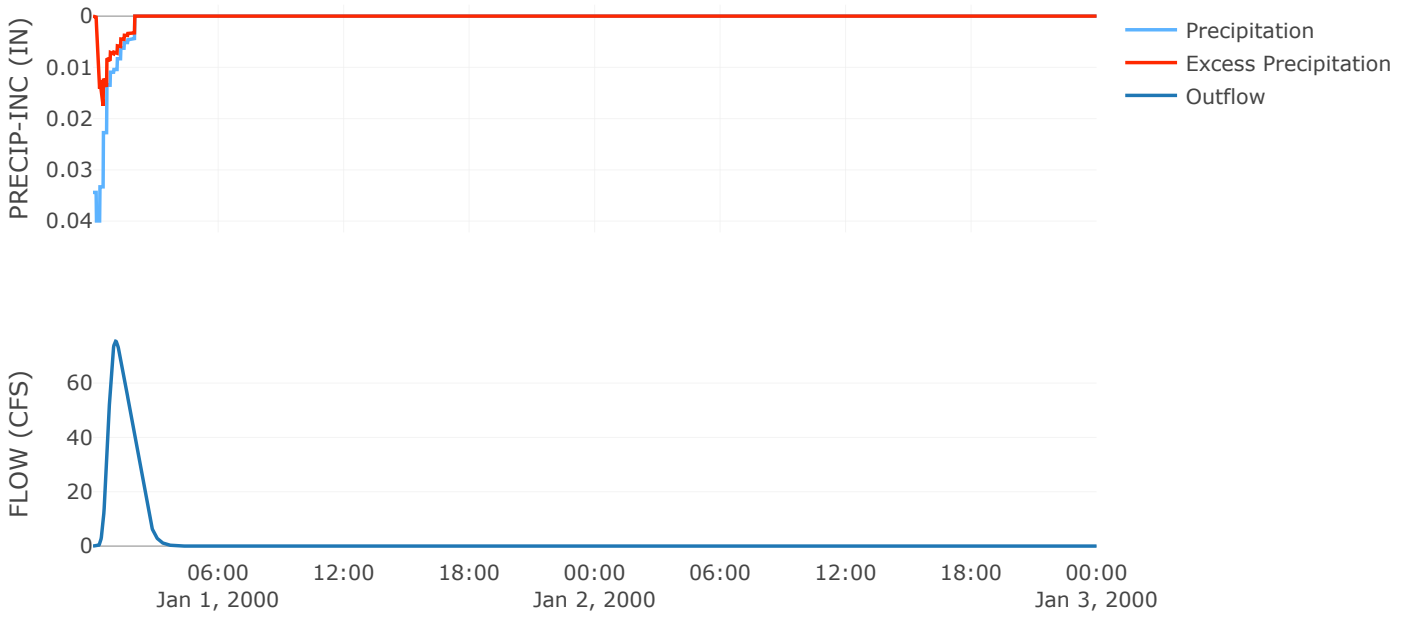
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

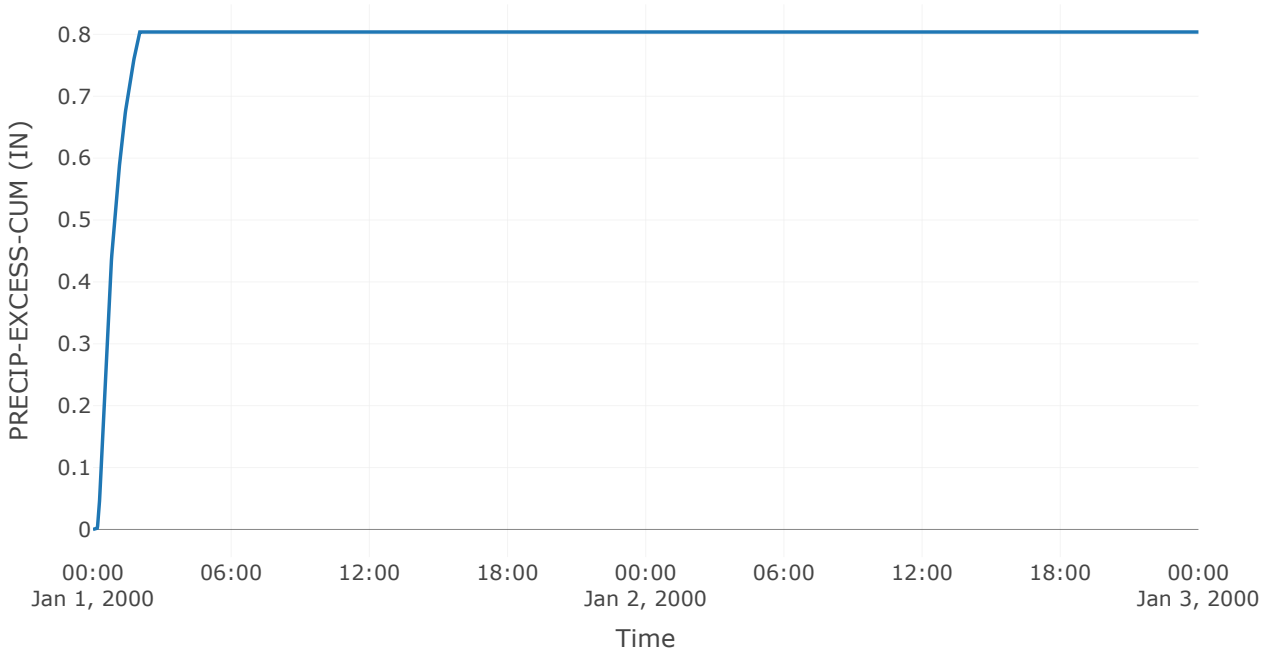
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

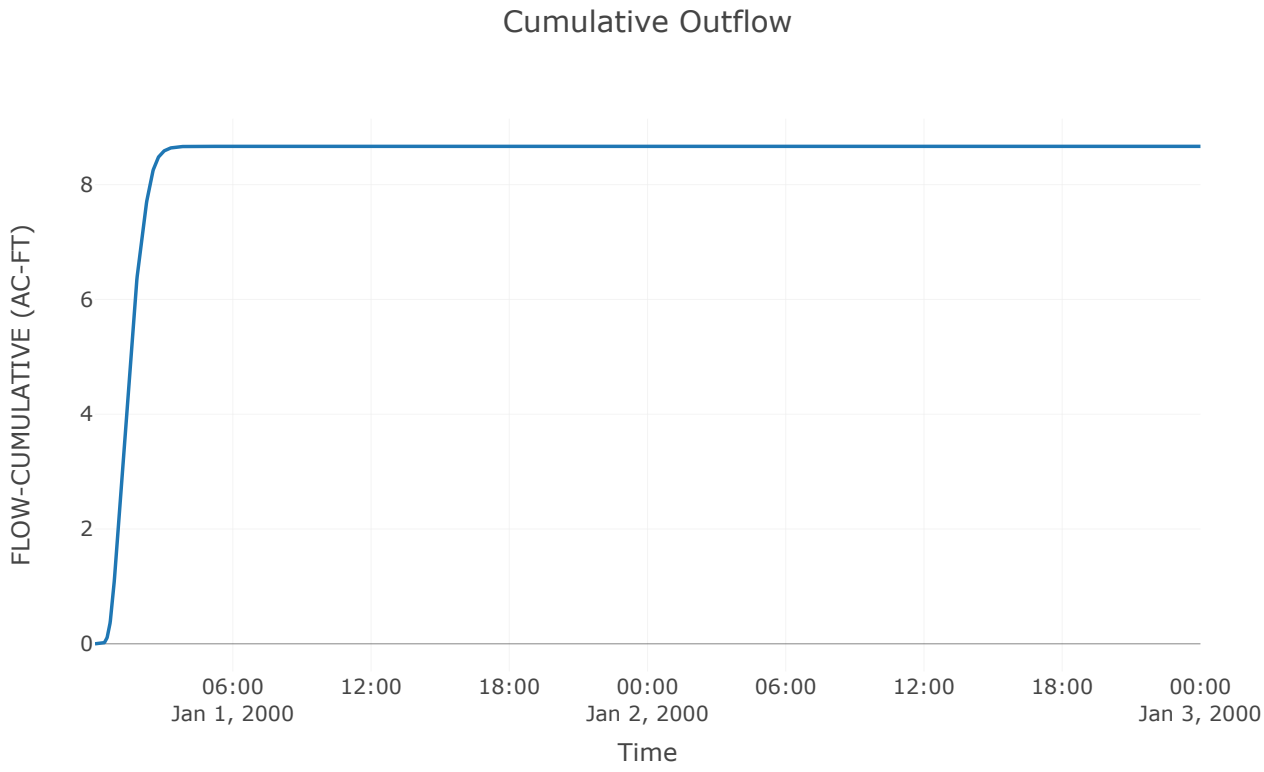
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

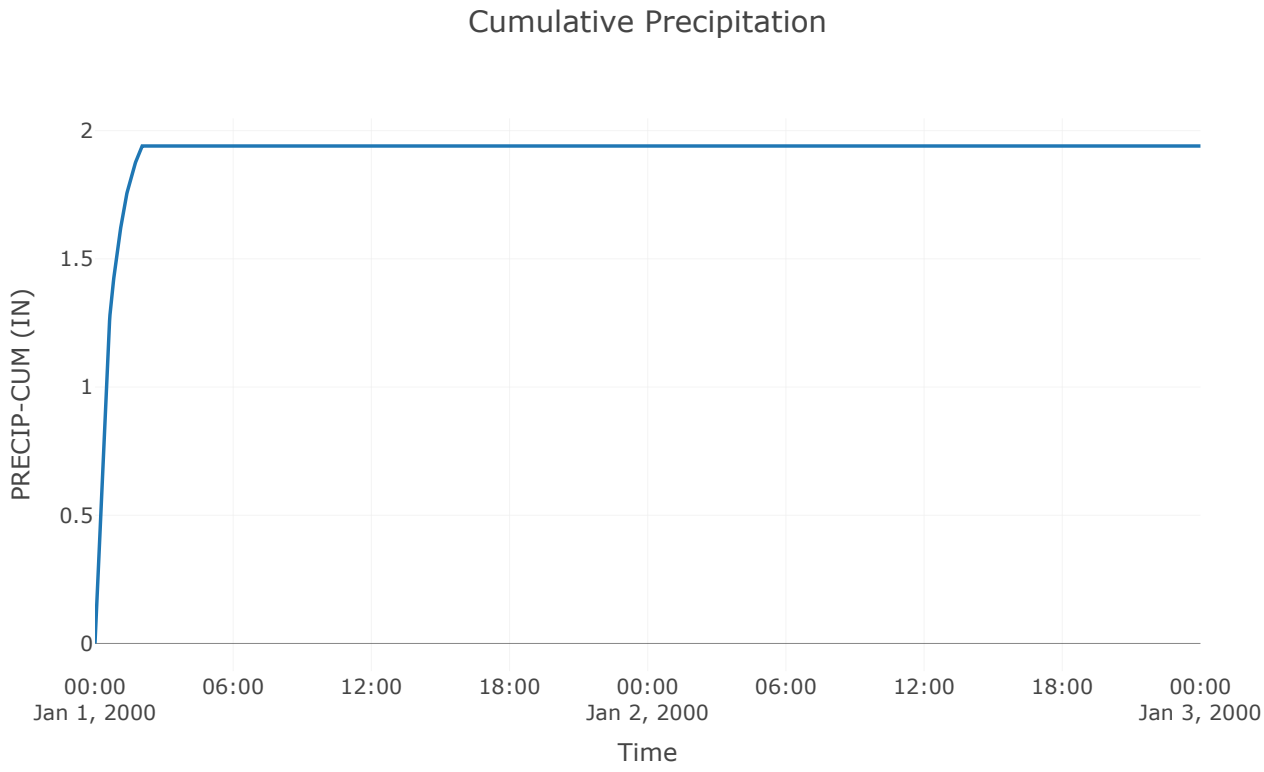
Precipitation and Outflow

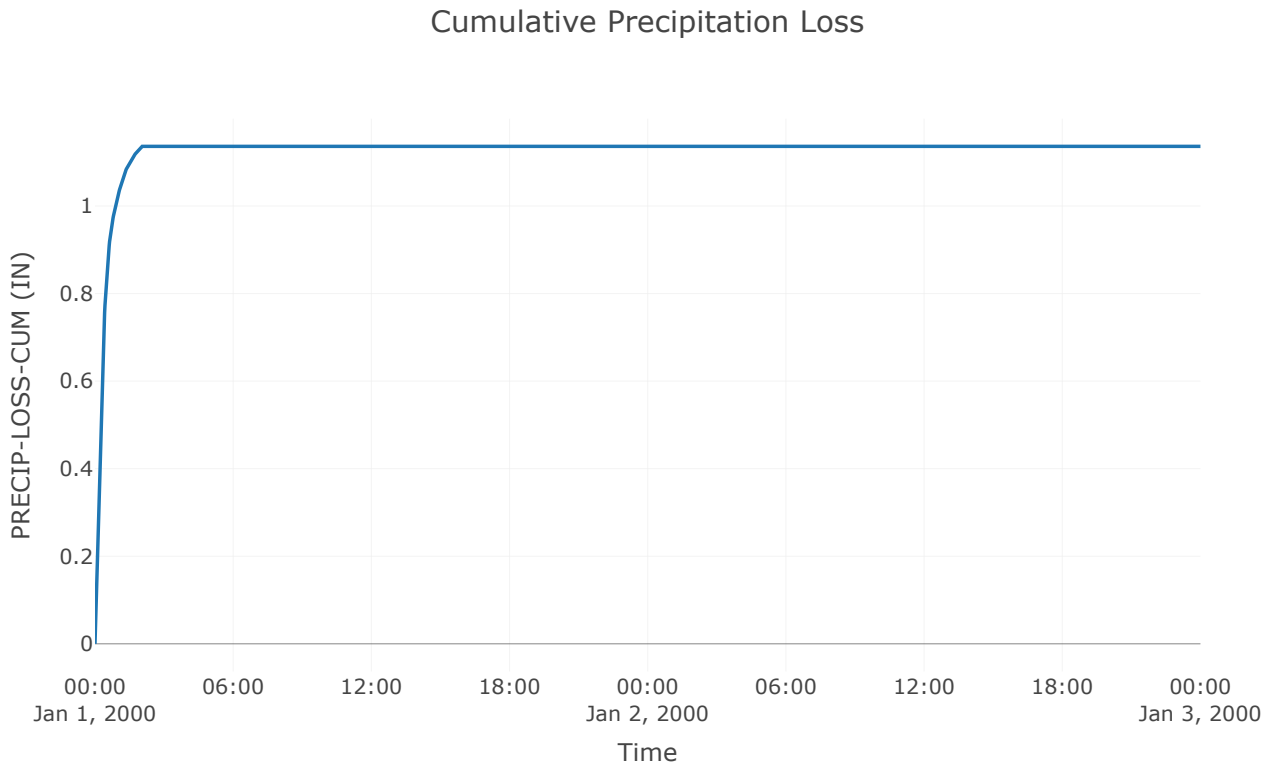


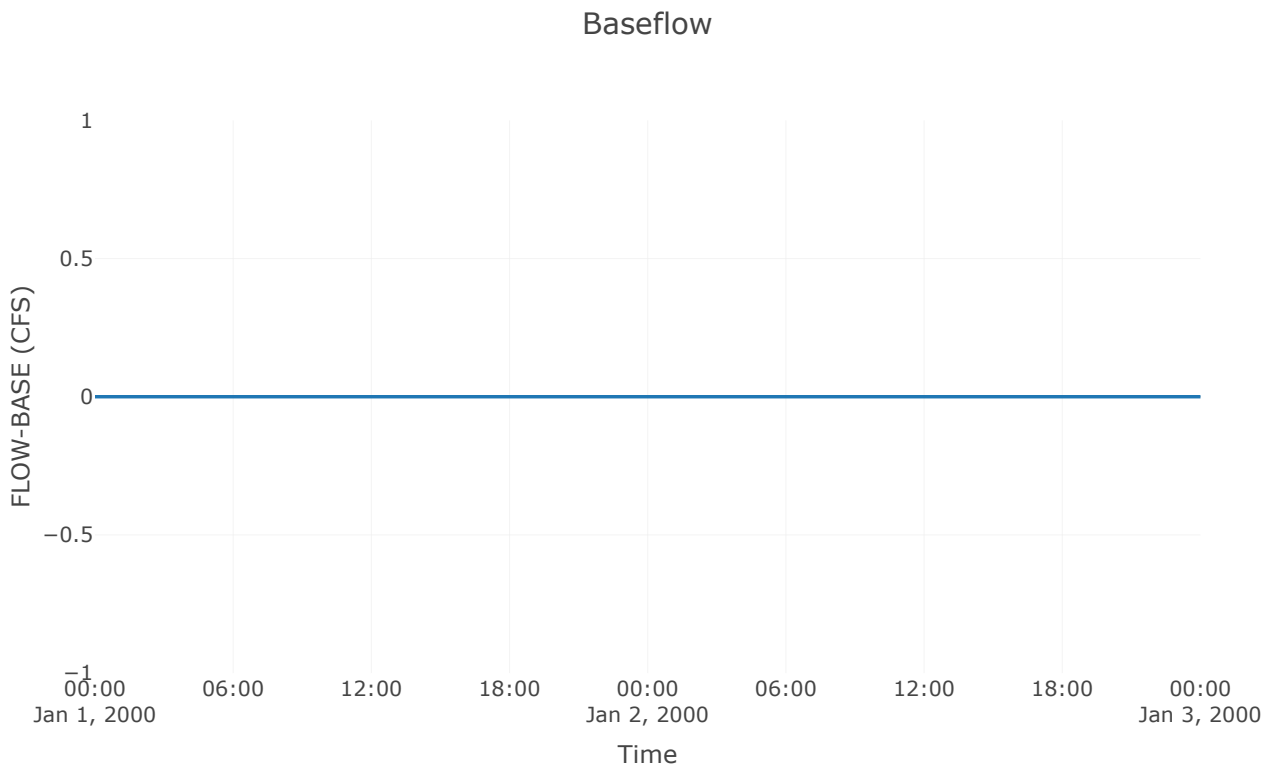
Cumulative Excess Precipitation

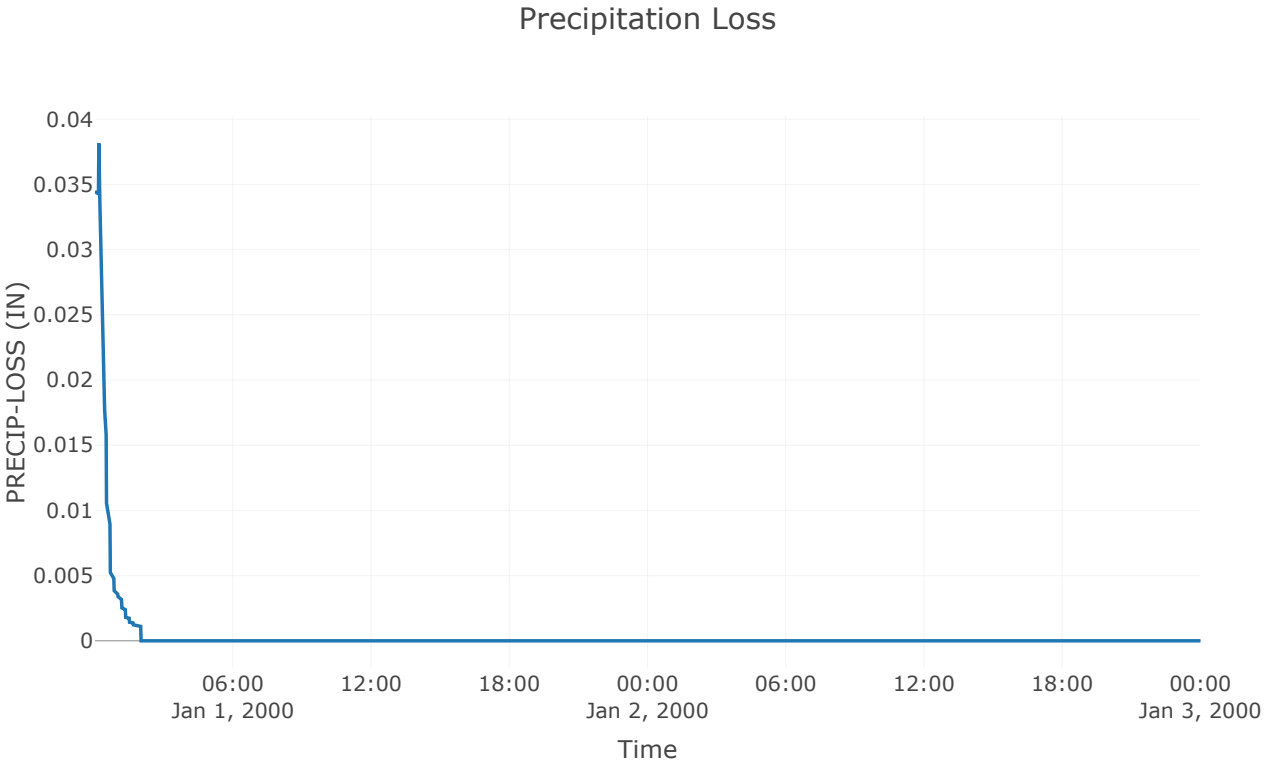


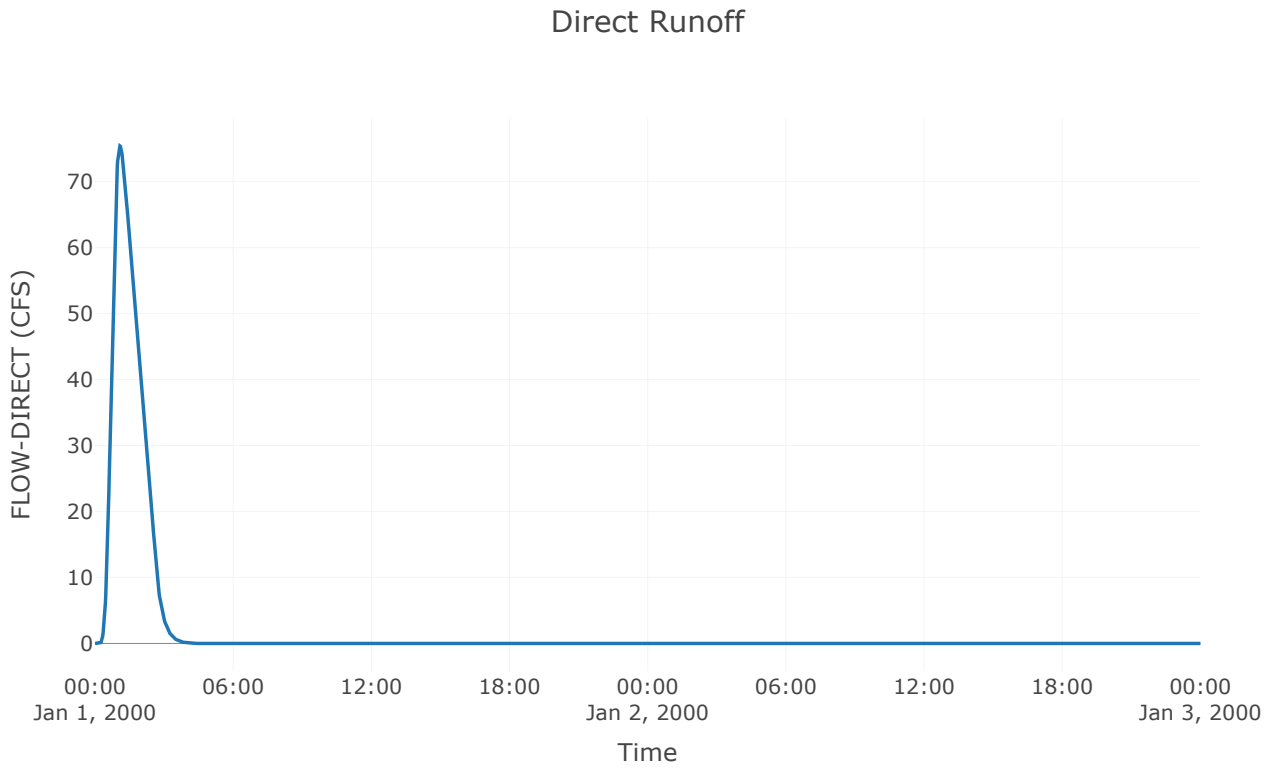

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

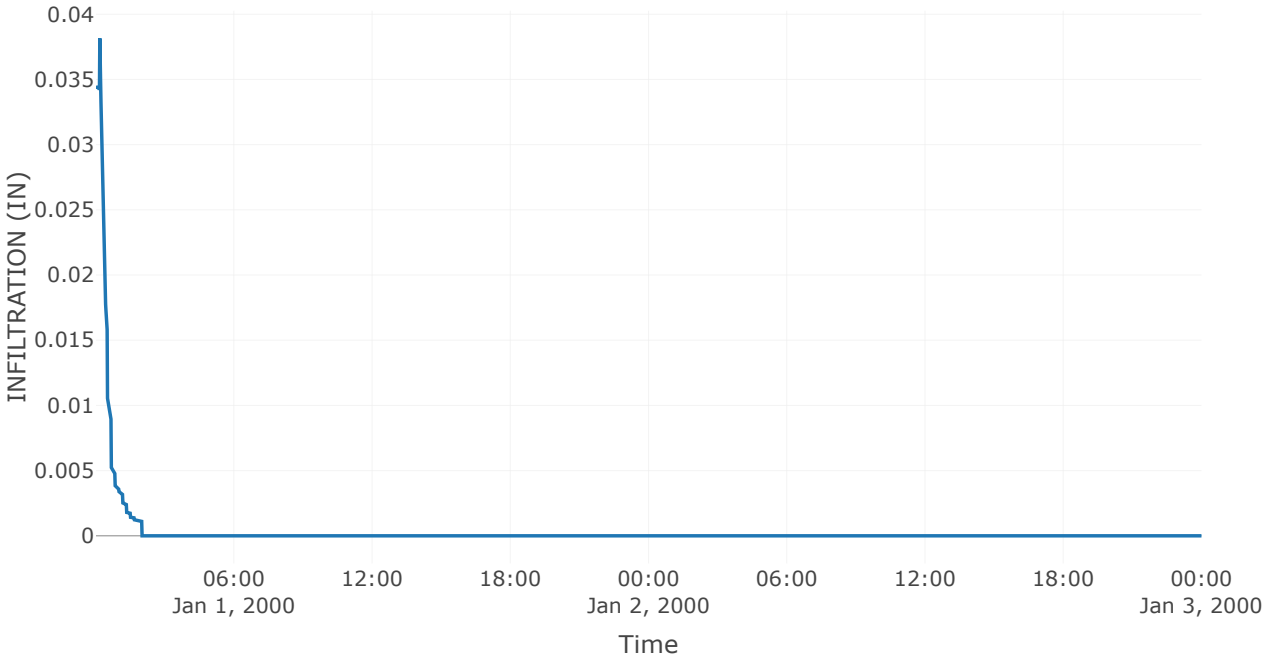

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

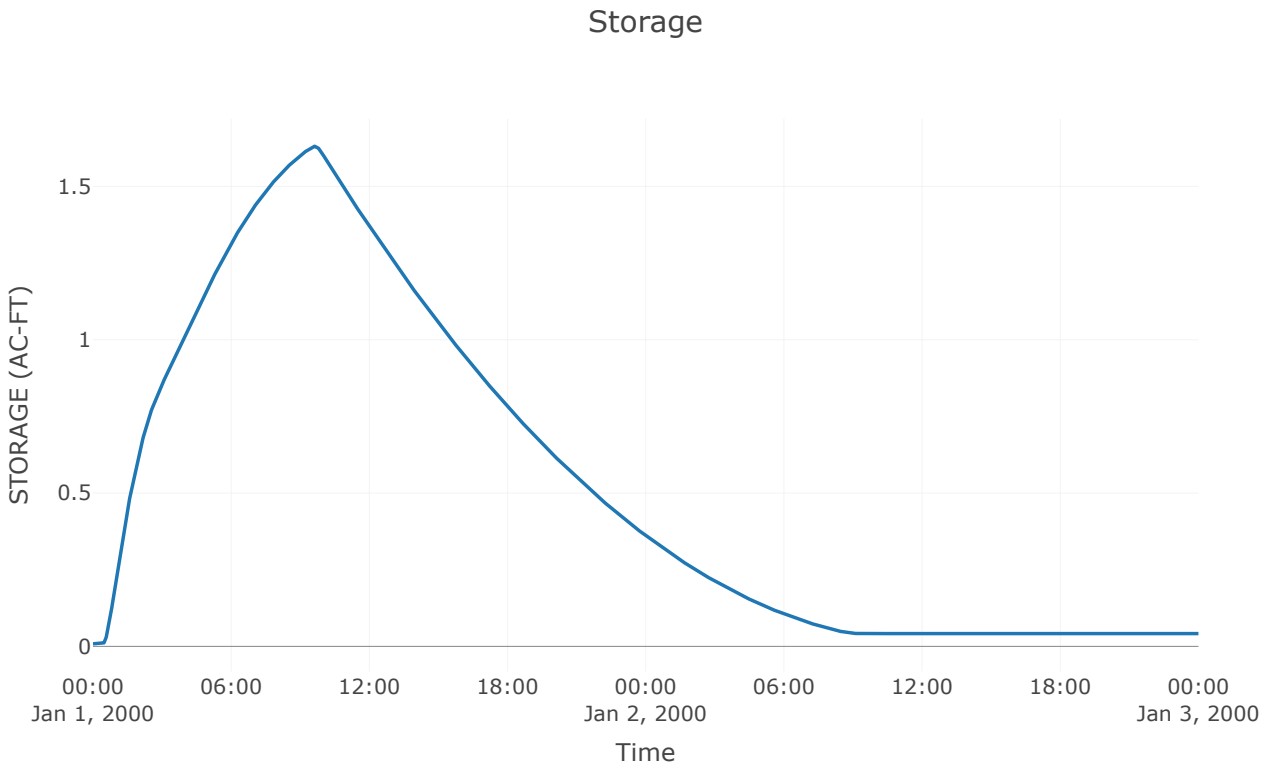

Direct Runoff
FLOW-DIRECT (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

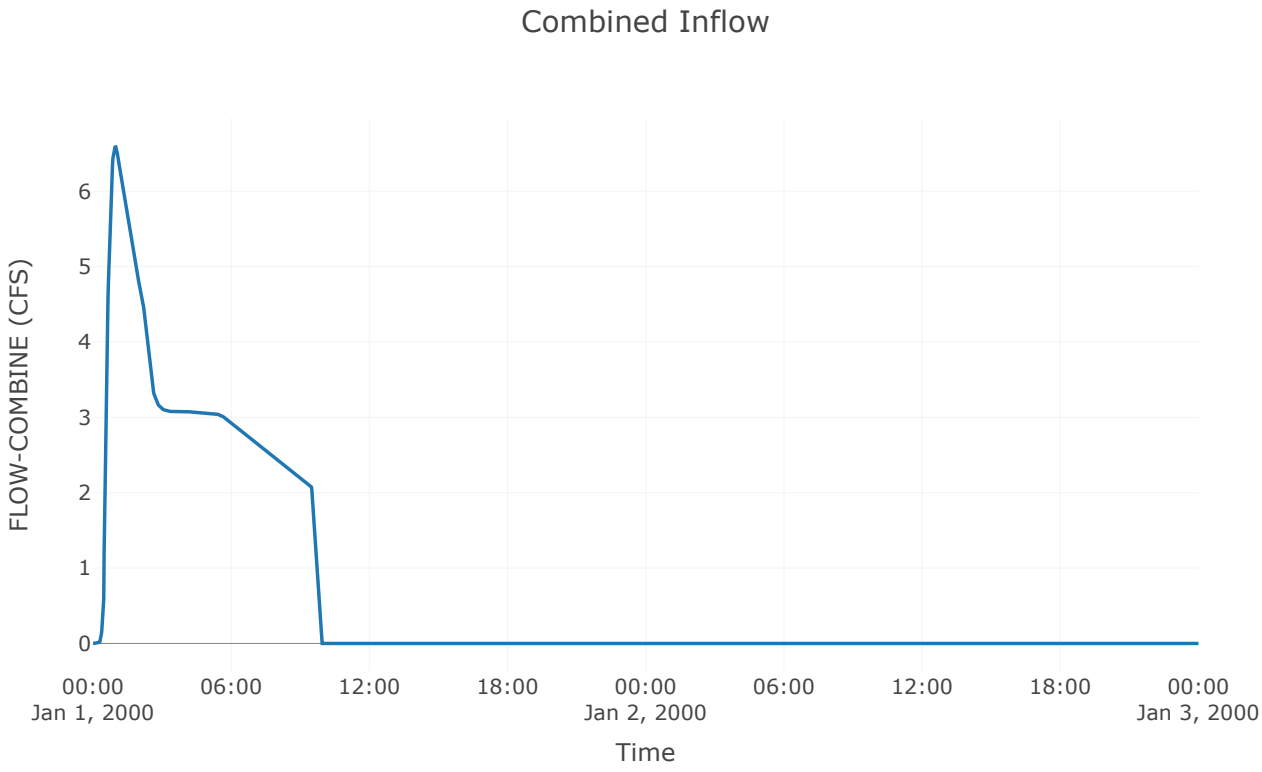

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

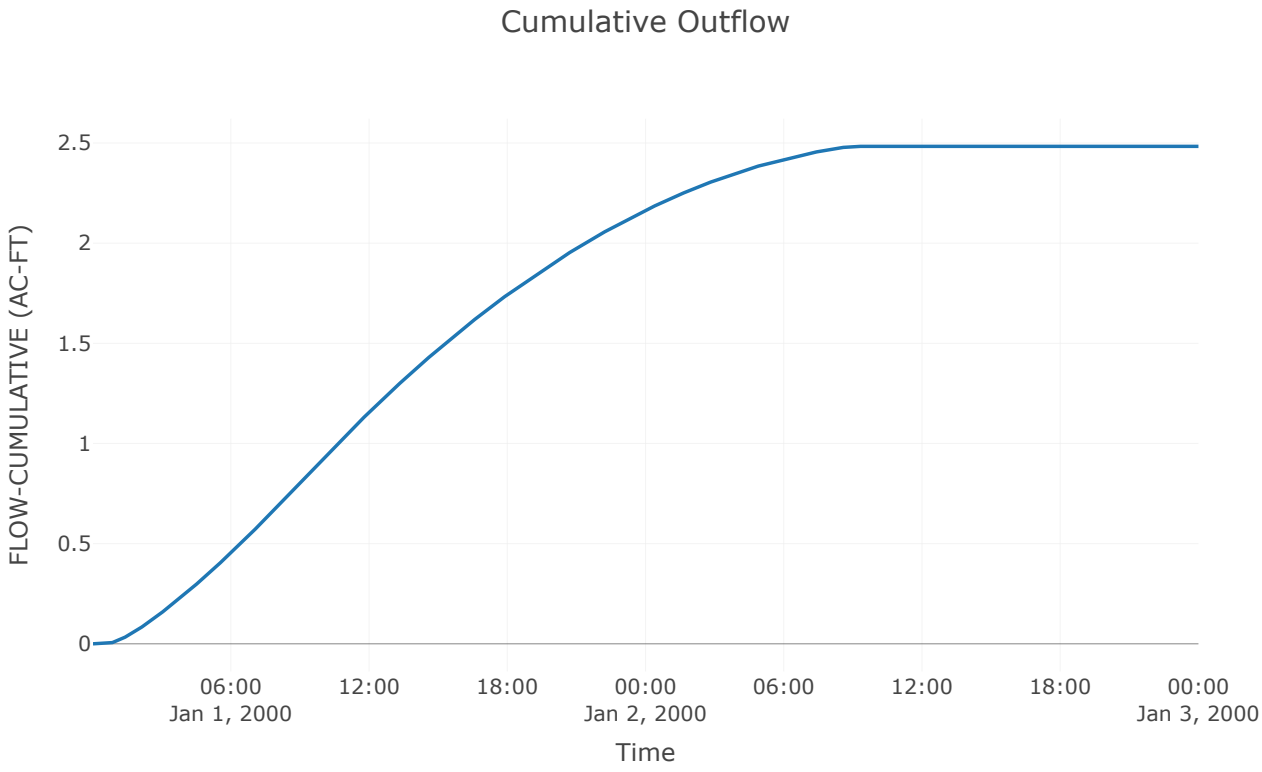
Reservoir: Basin 3

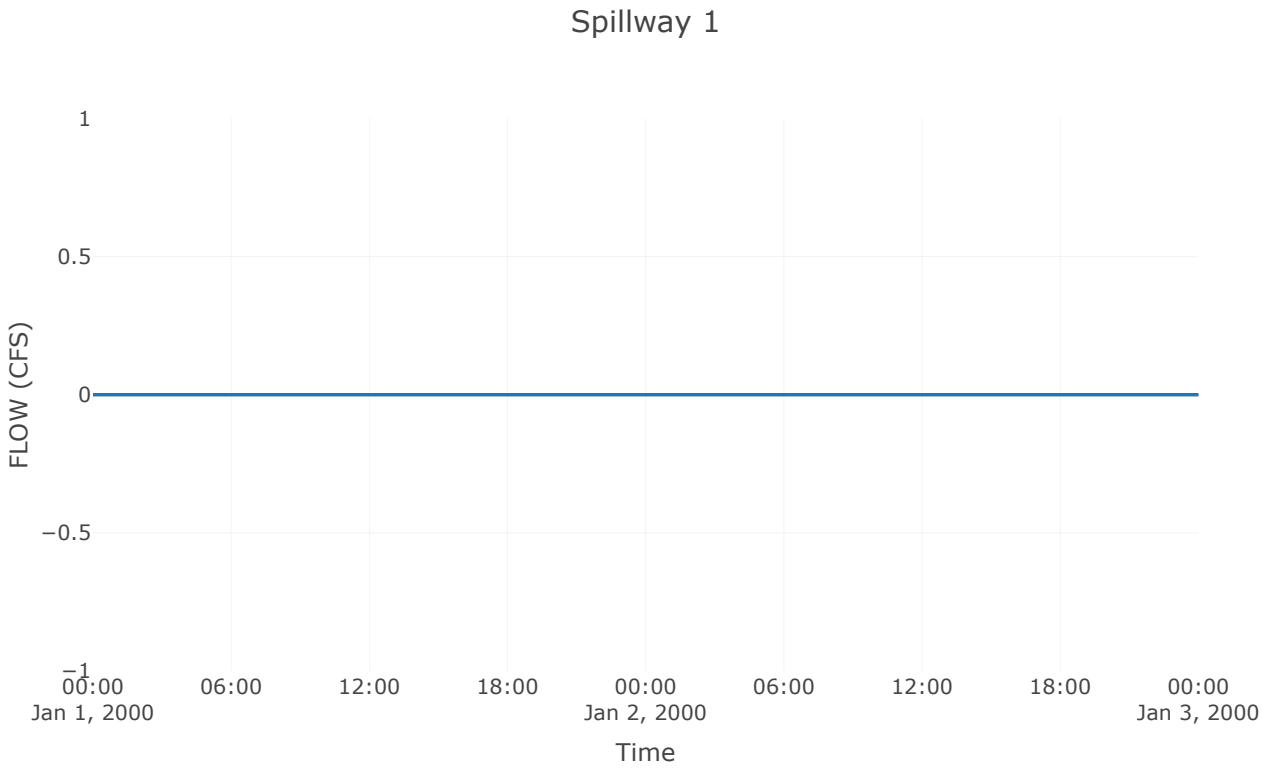
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

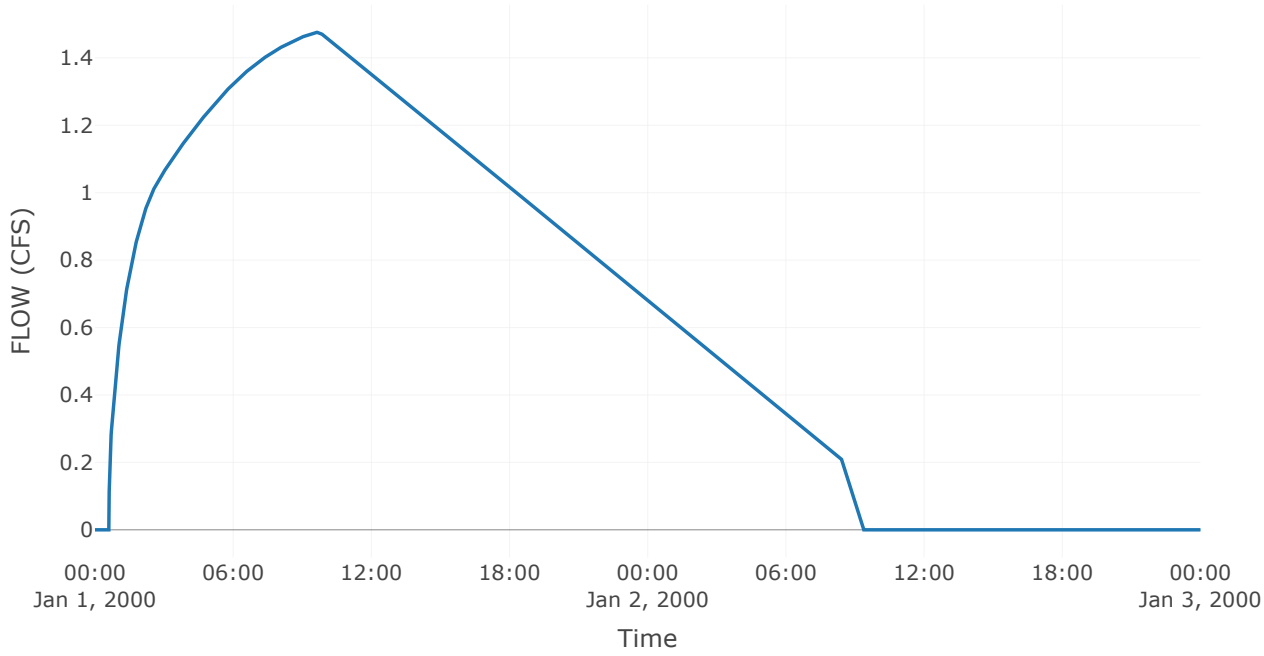

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

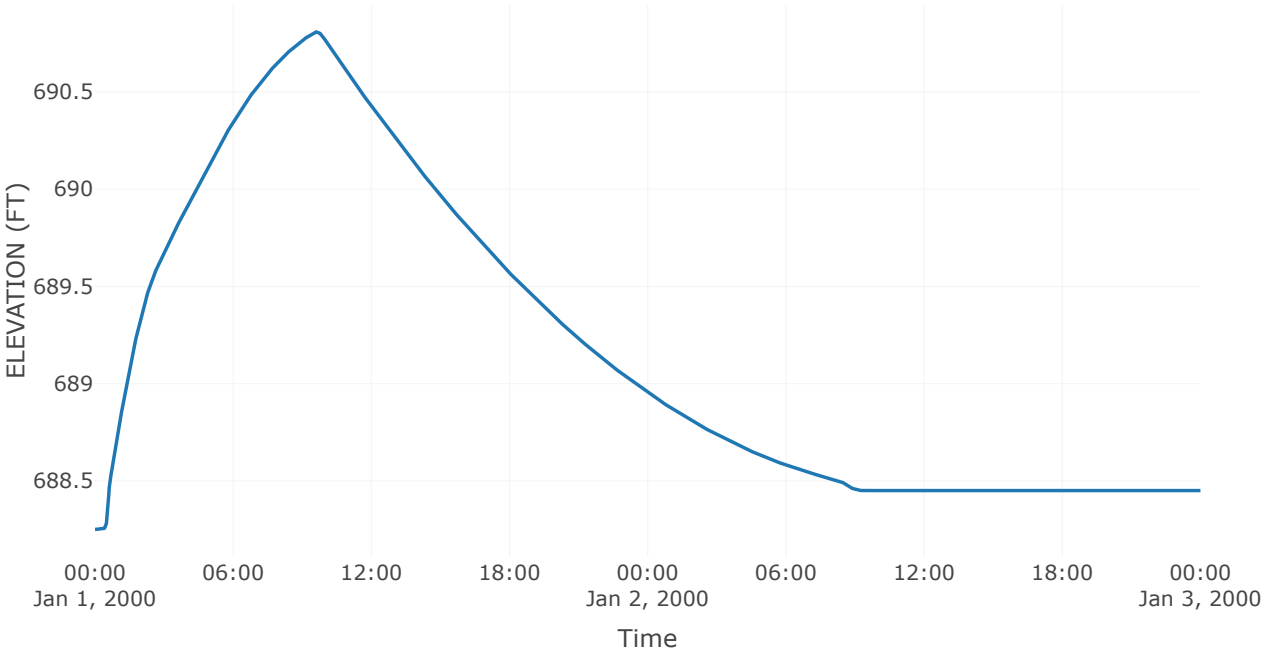

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

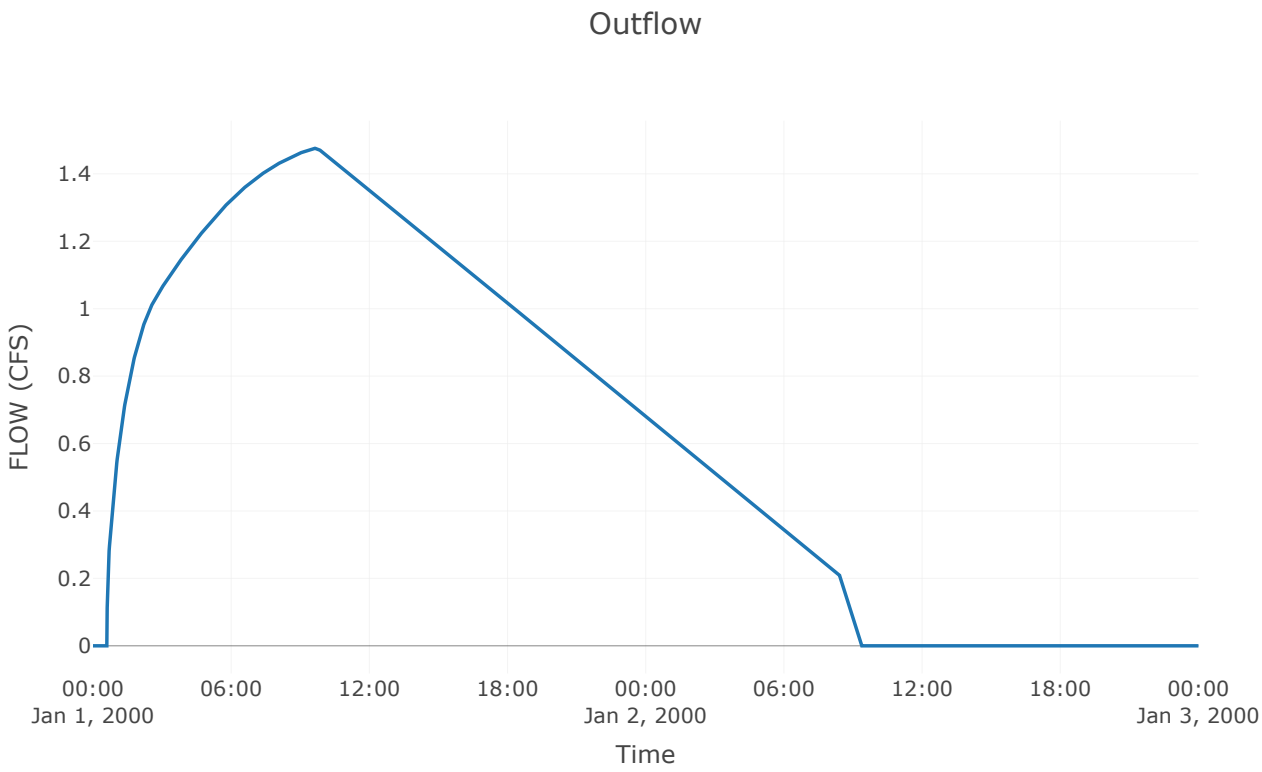

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

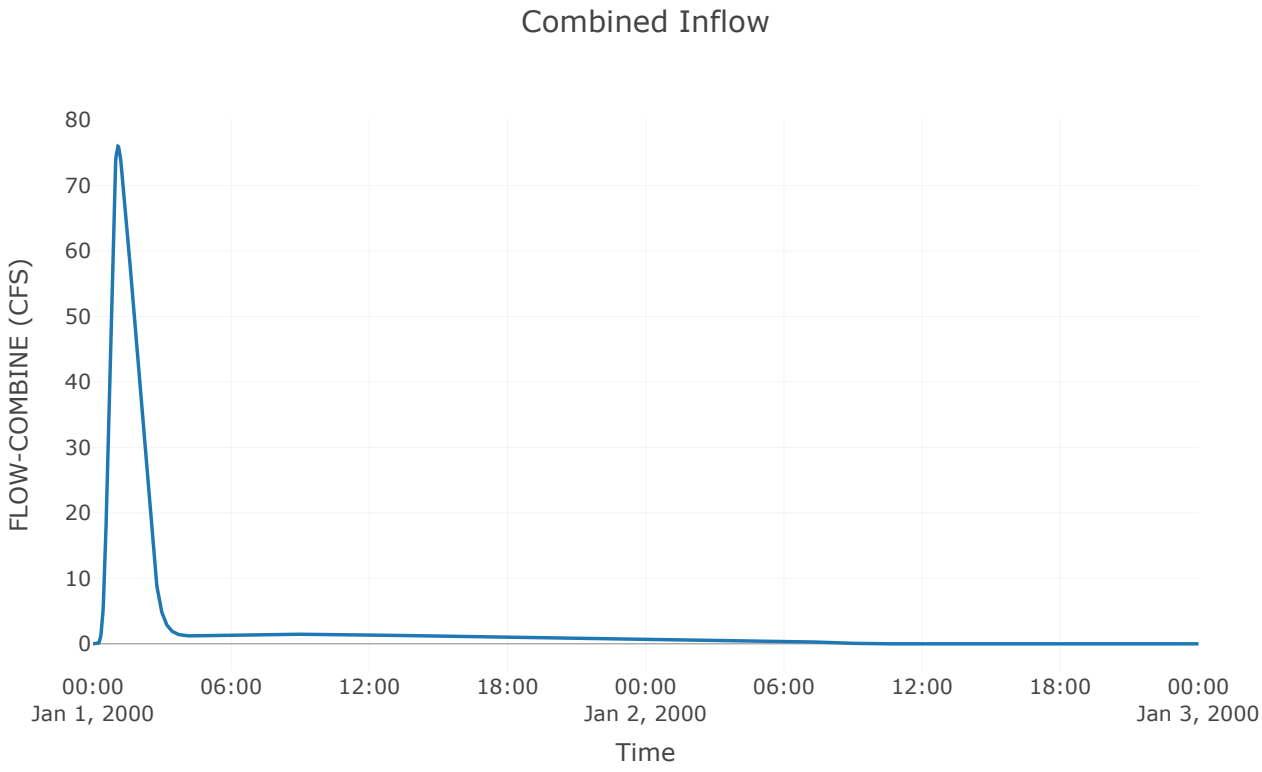


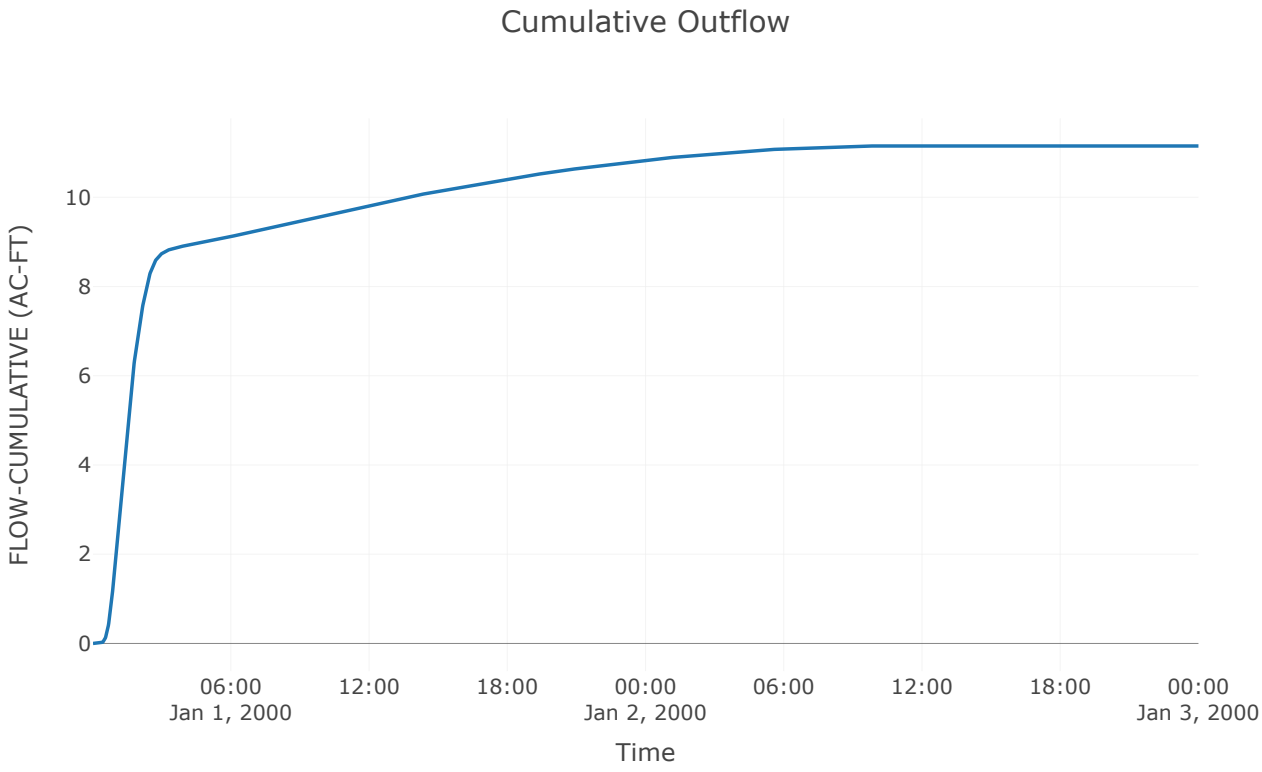

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

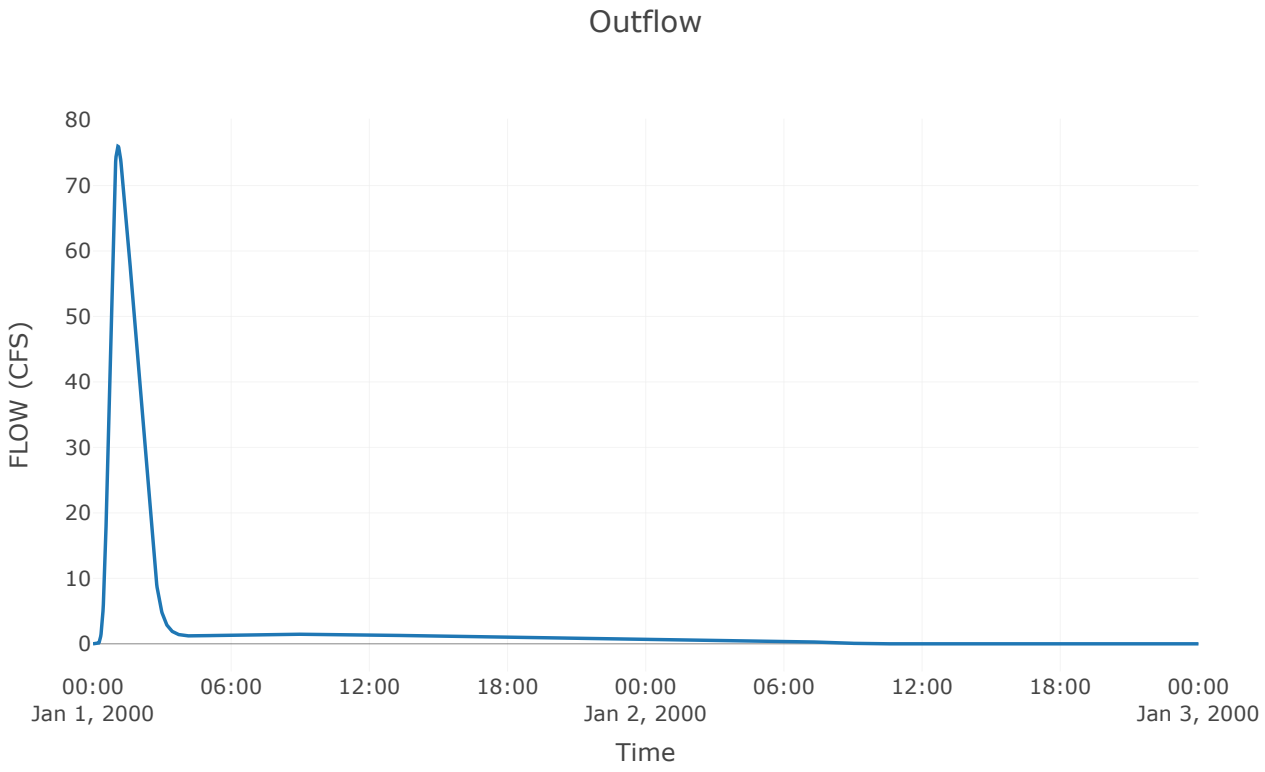
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

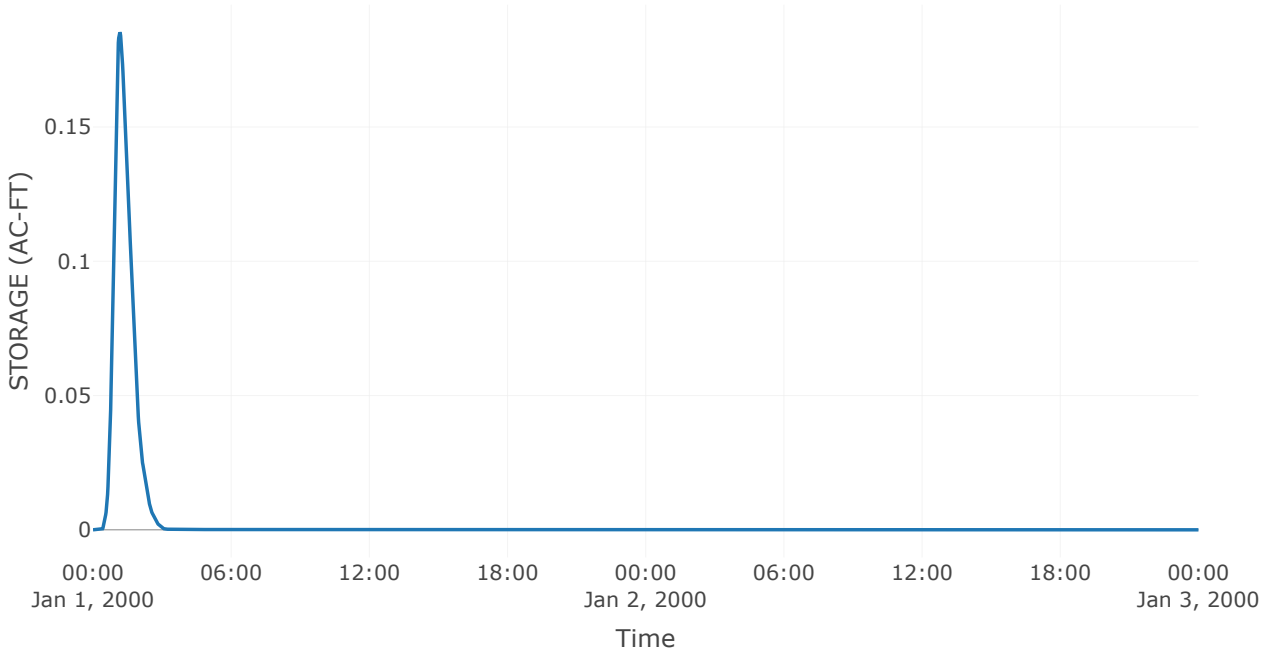

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

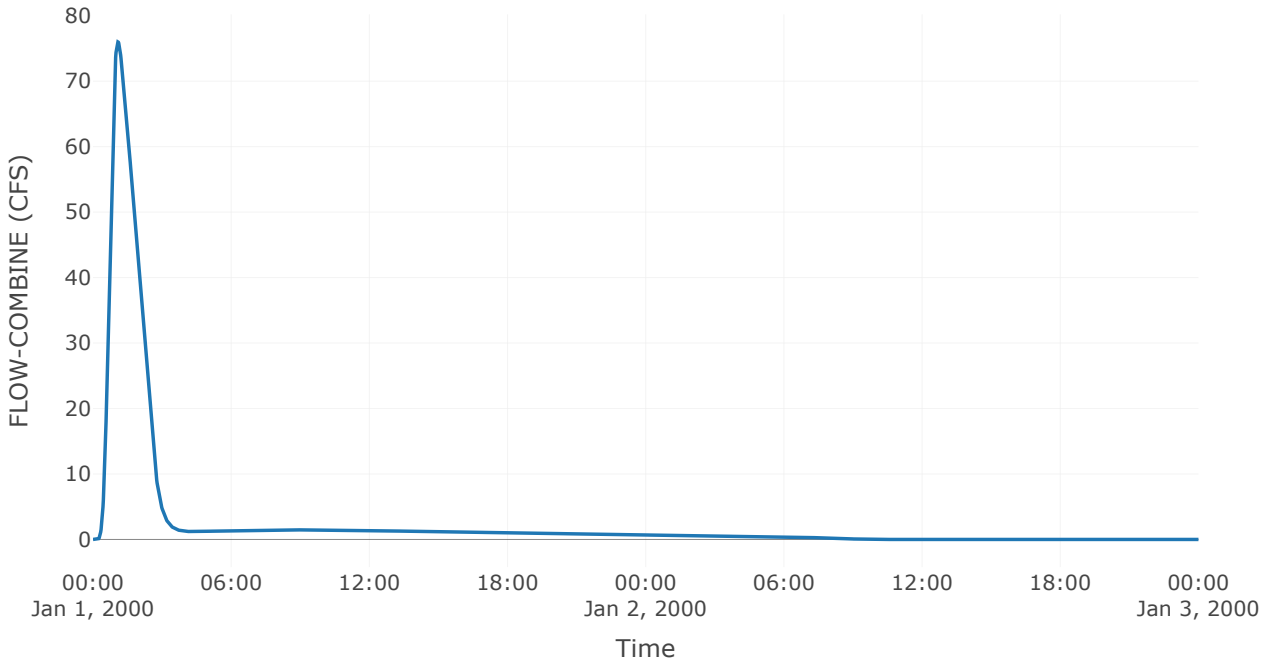
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

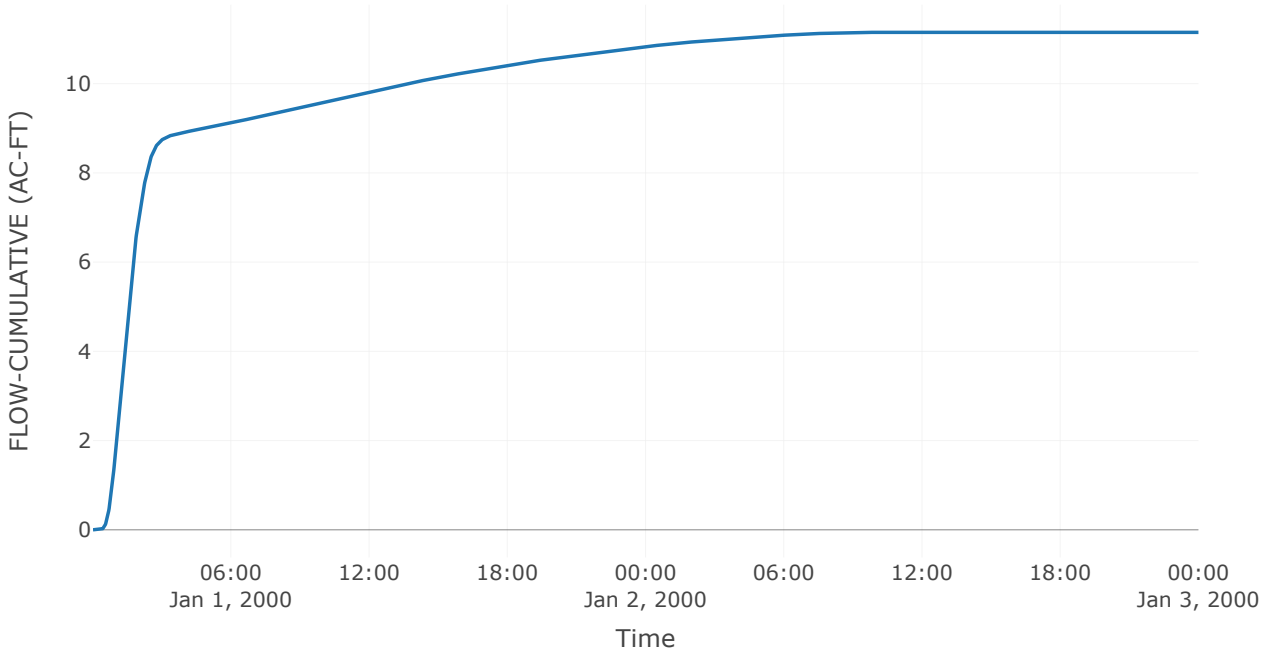
Storage



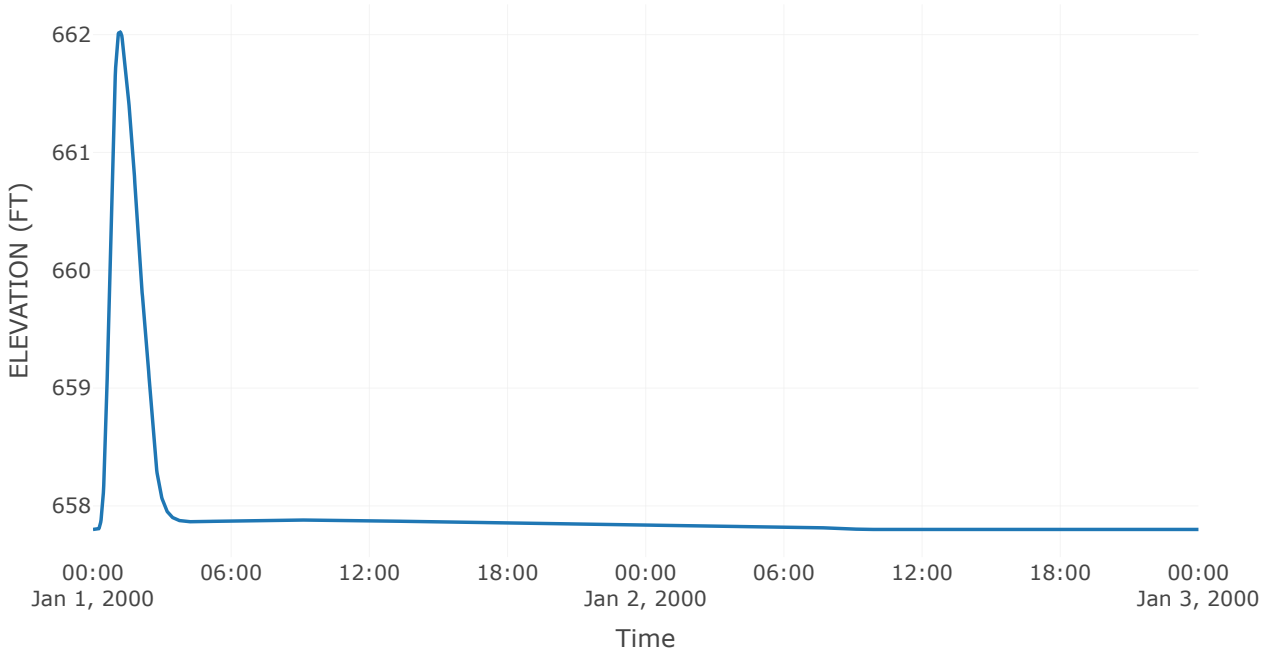
Combined Inflow

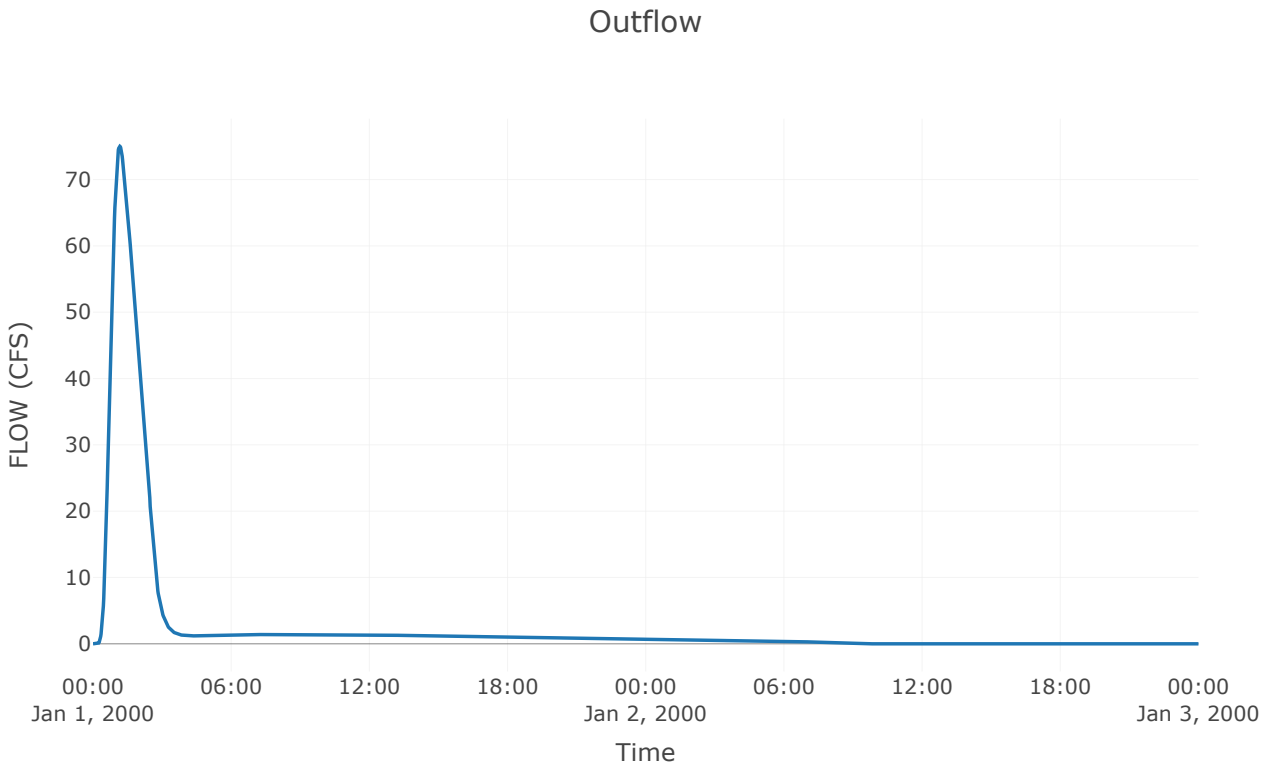


Cumulative Outflow



Pool Elevation



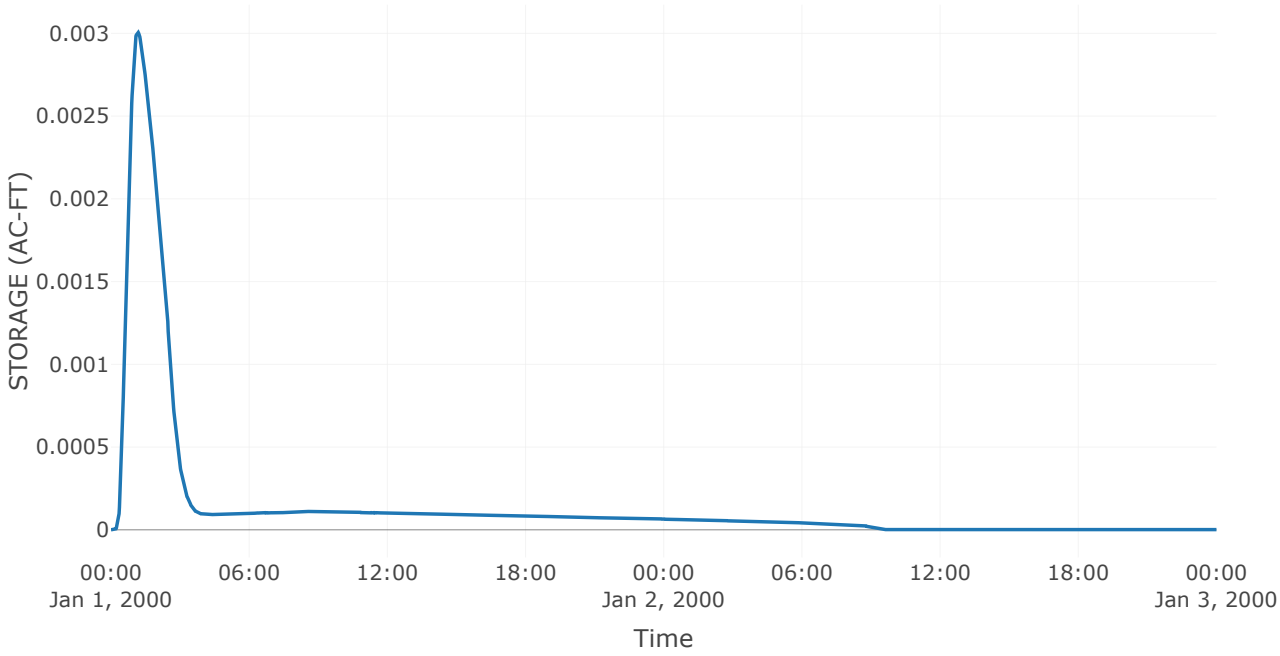

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

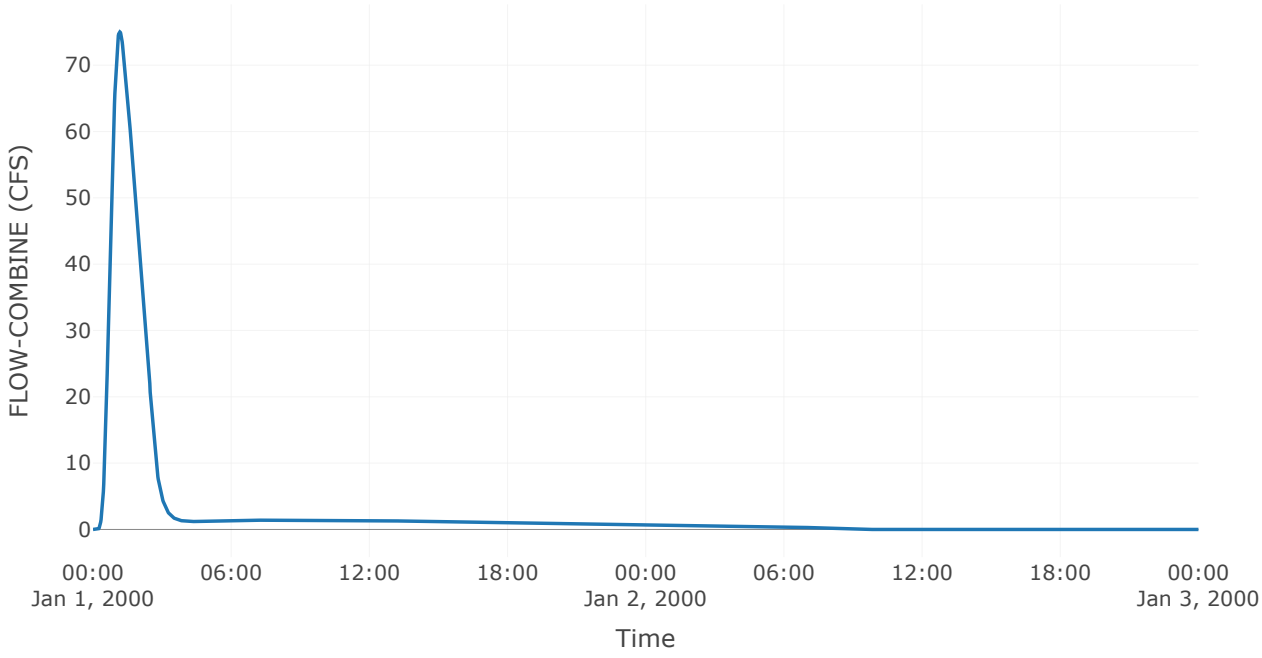
Downstream : Storage West of Wolf Road

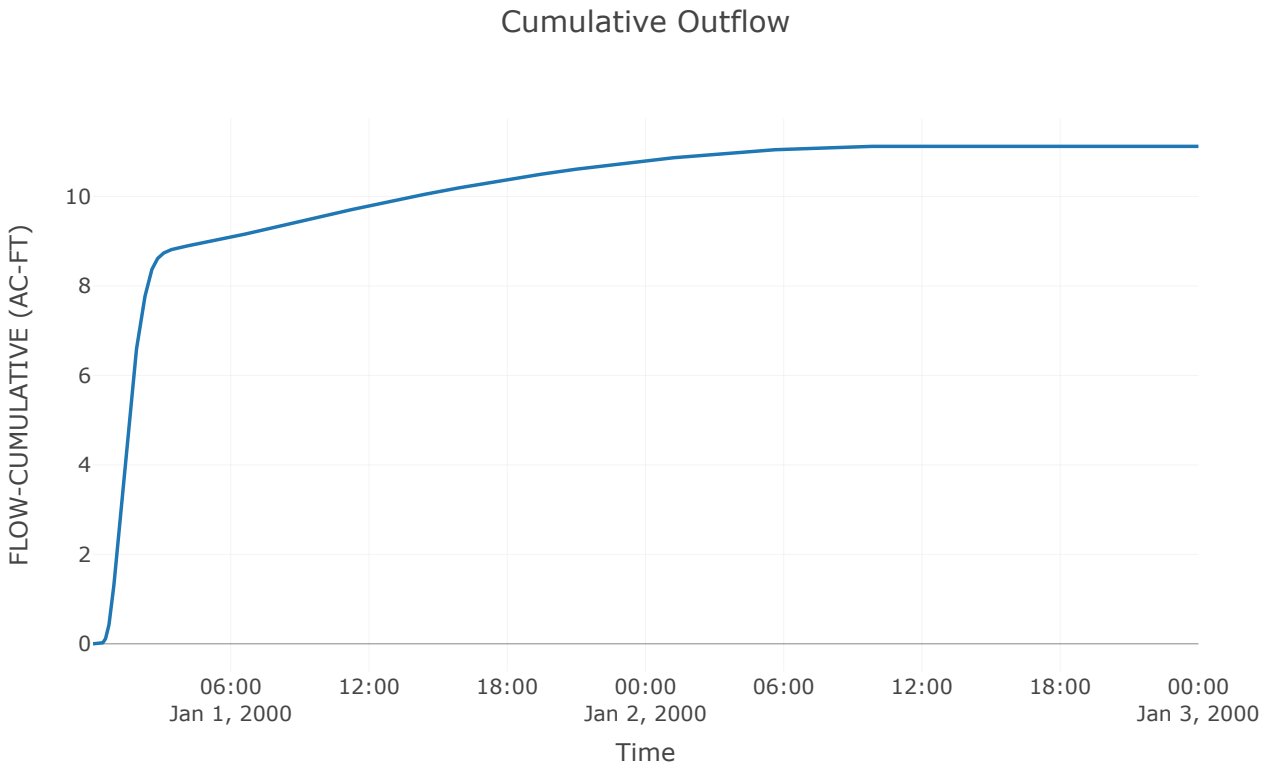
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.55
Discharge Volume (AC - FT)	11.12

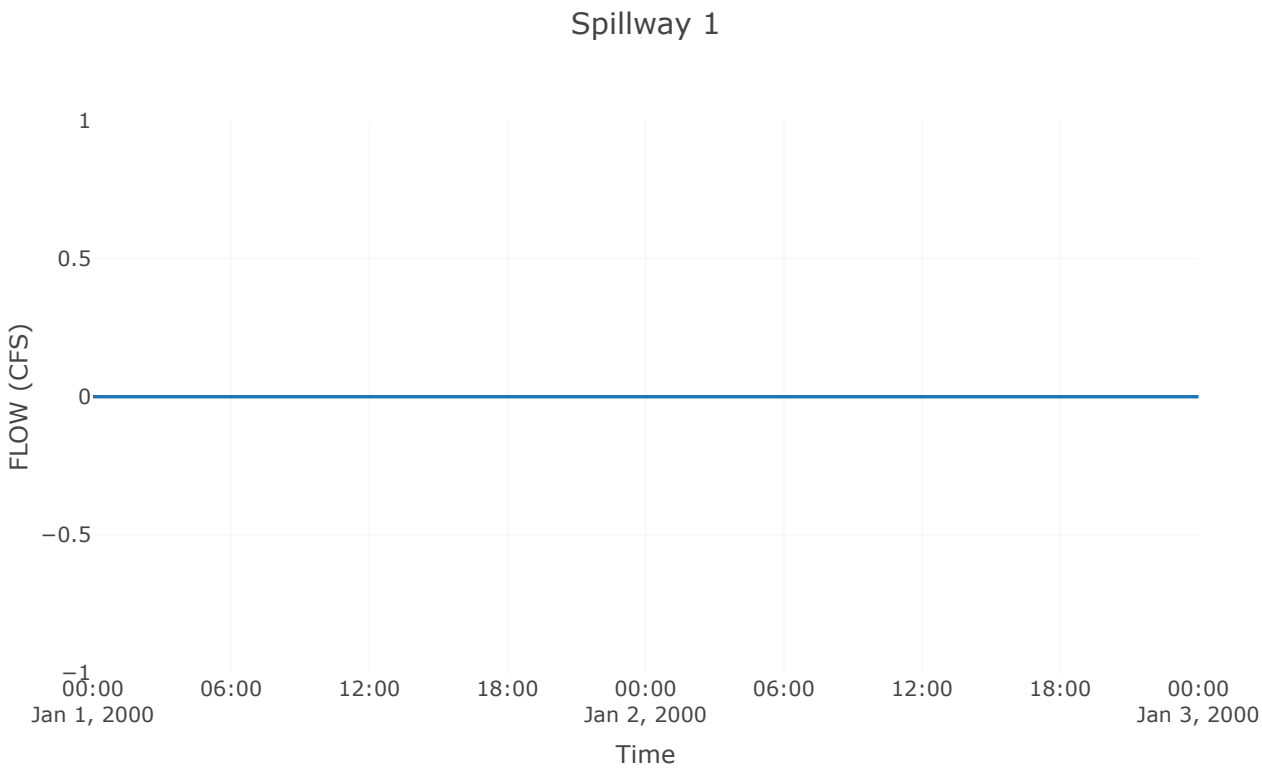
Storage



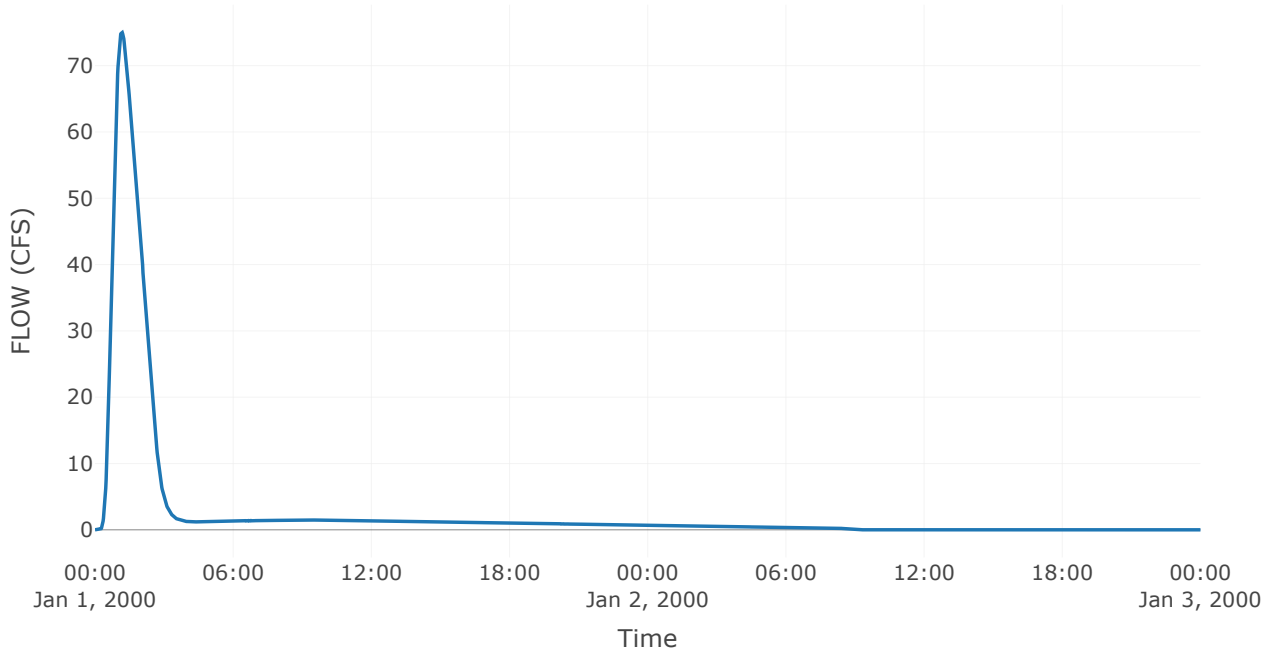
Combined Inflow



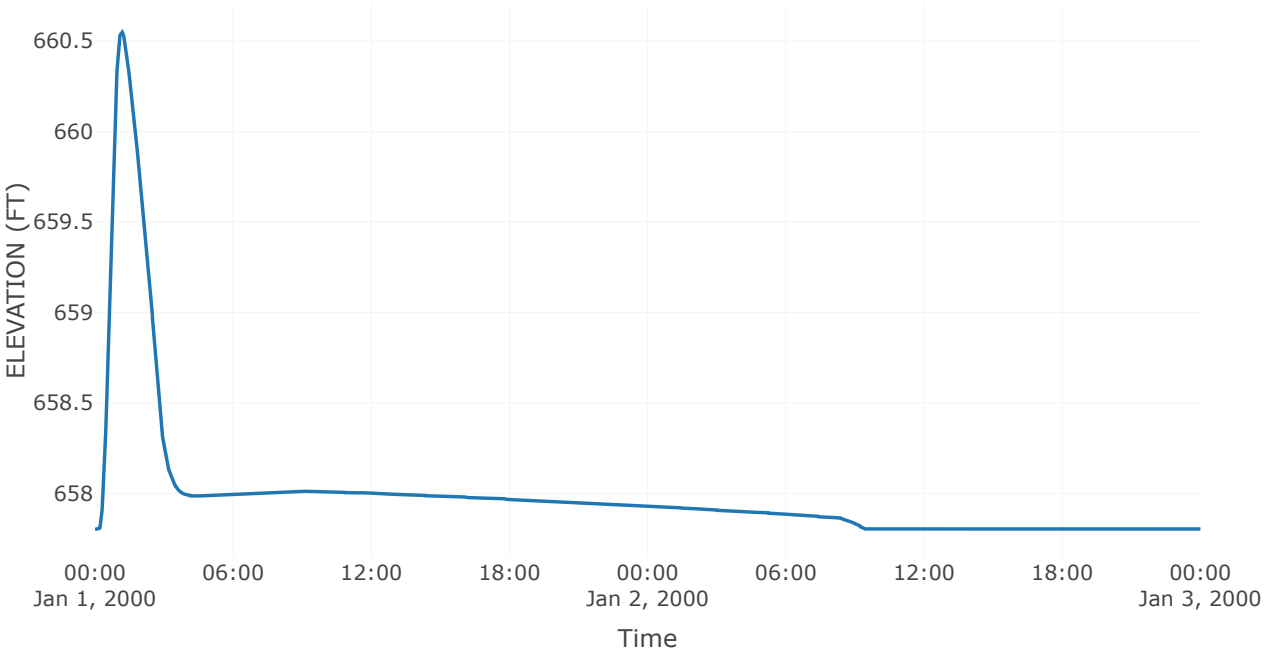

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

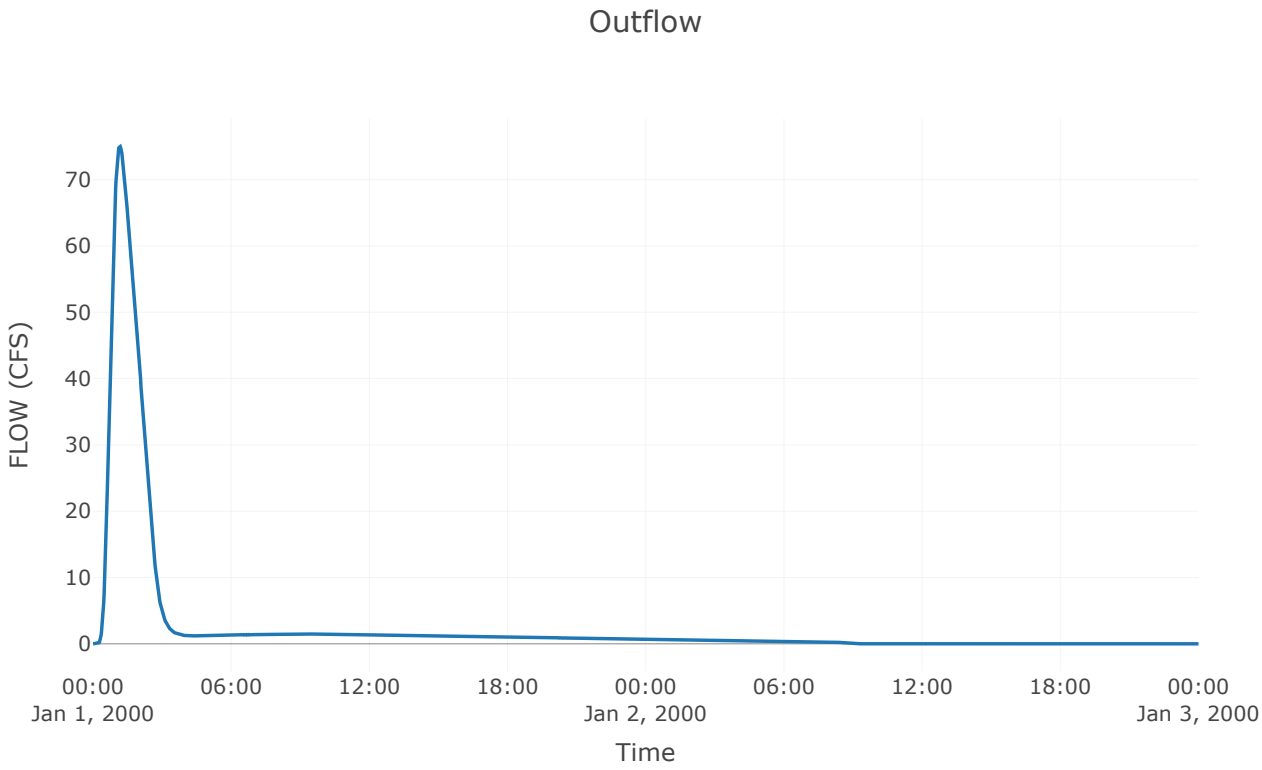

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



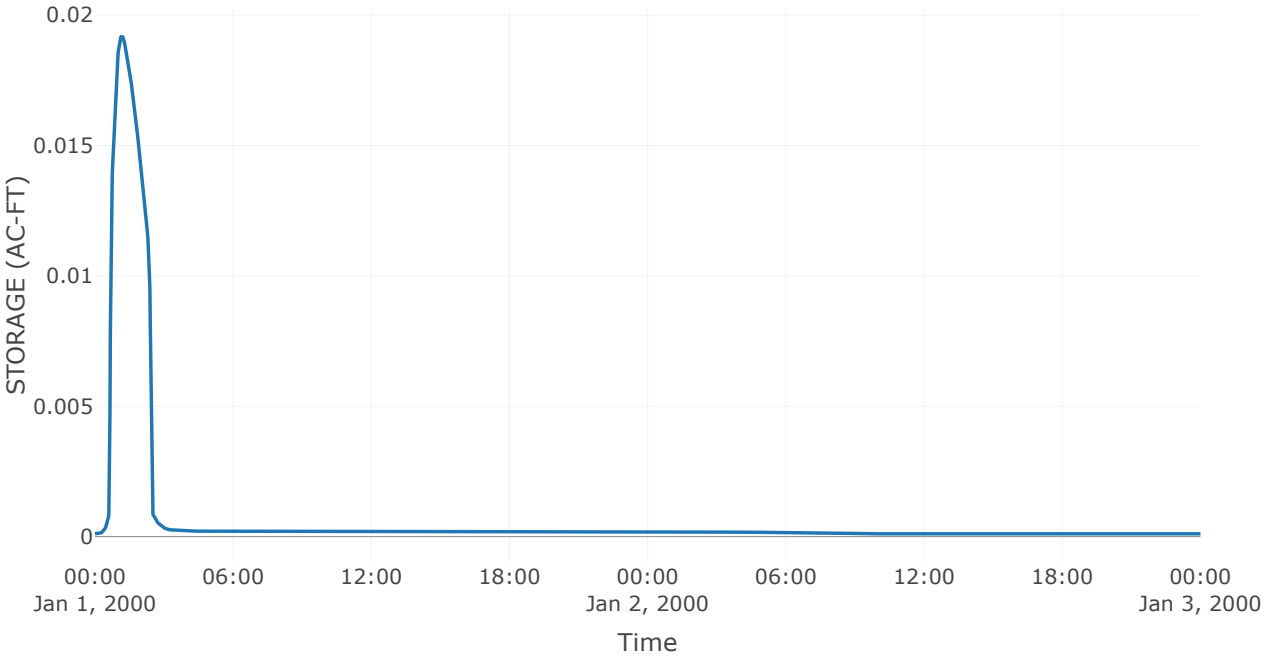

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

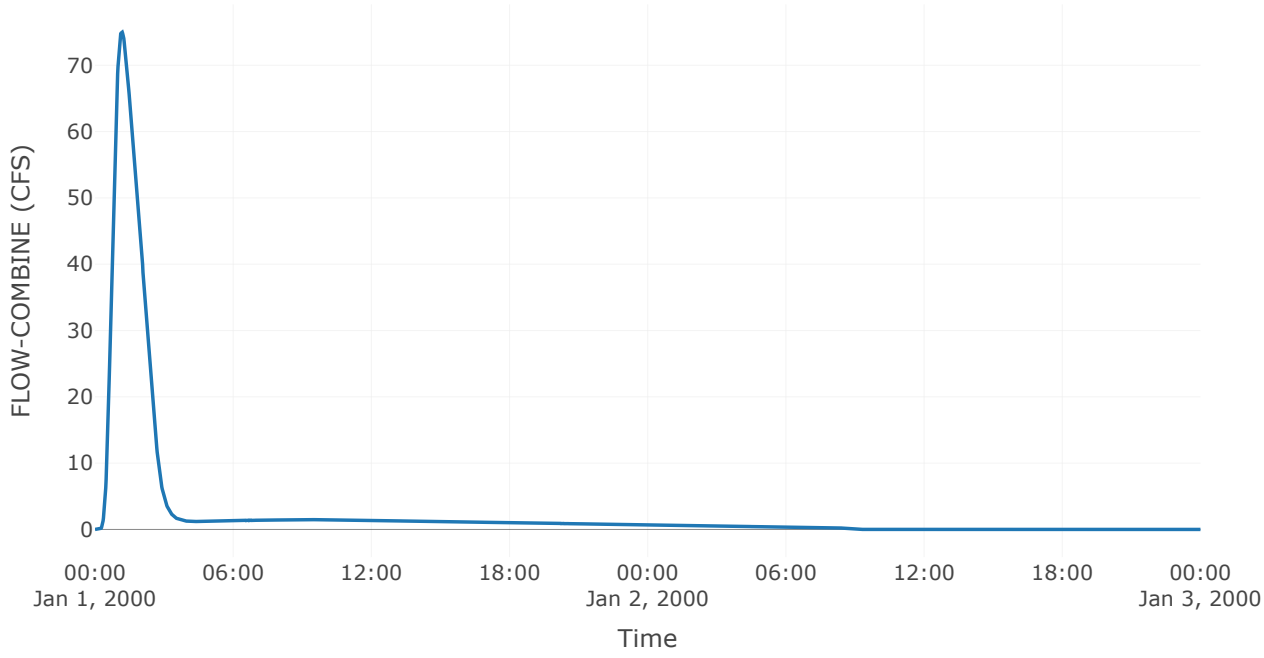
Downstream : Existing Basin C

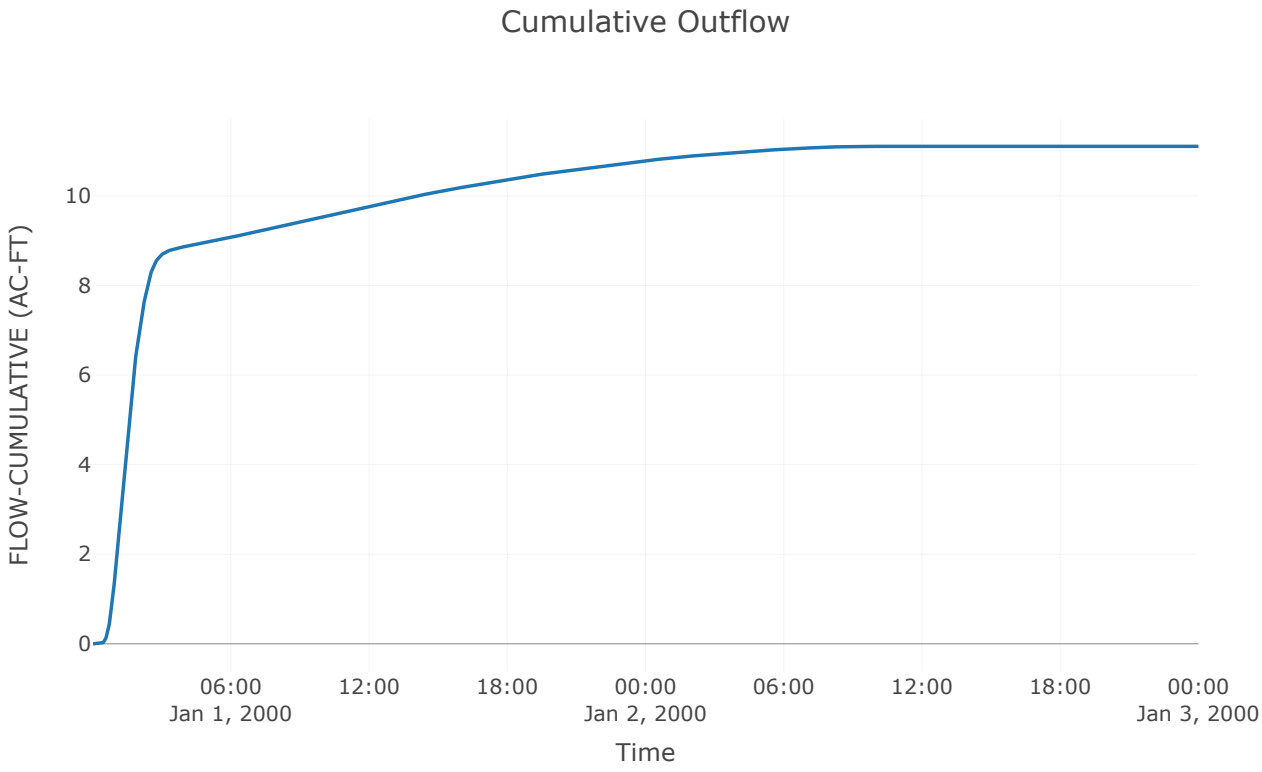
Results: Storage West of Wolf Road	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	658.88
Discharge Volume (AC - FT)	11.1

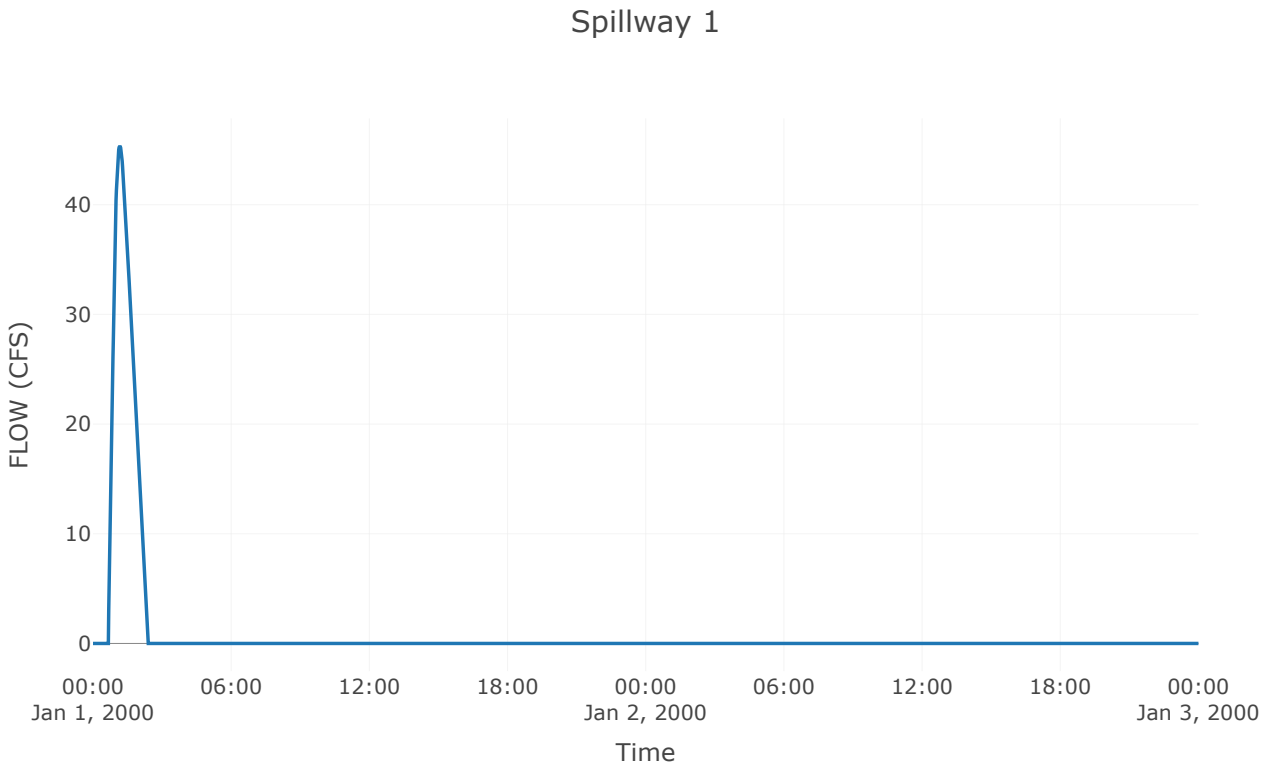
Storage



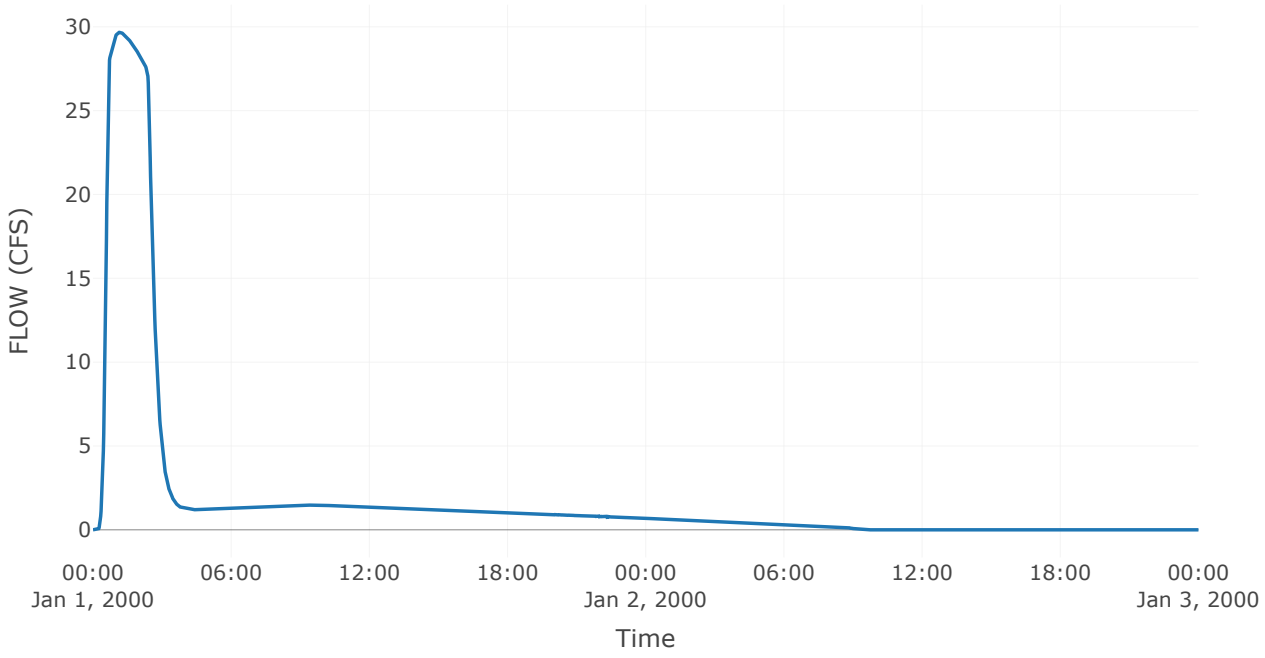
Combined Inflow



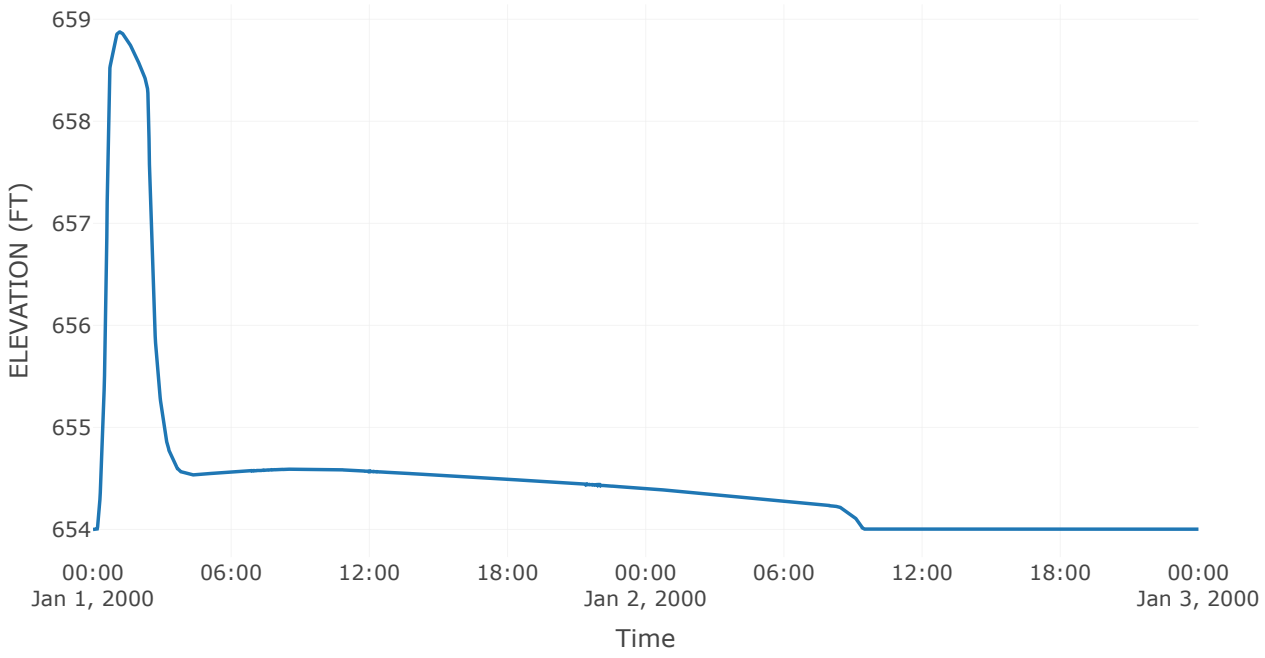

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0
2
4
6
8
10
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

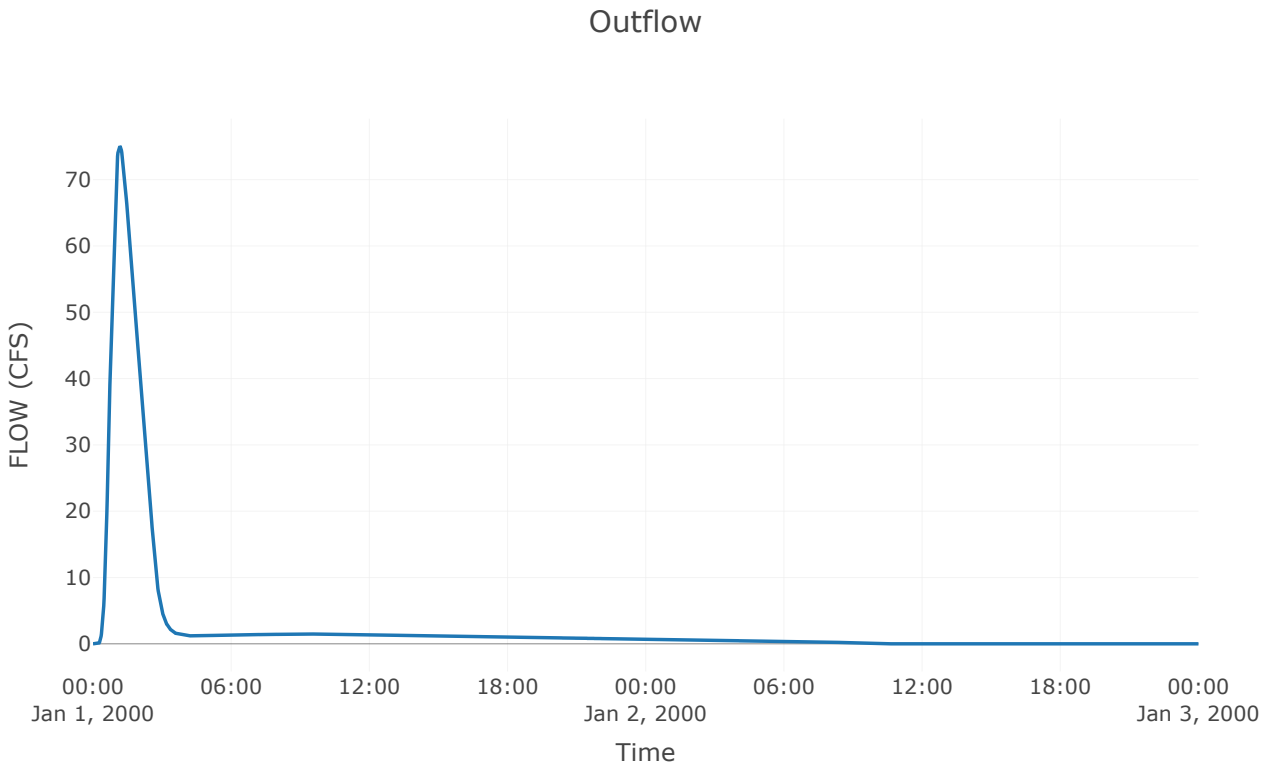

Spillway 1
FLOW (CFS)
0
10
20
30
40
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

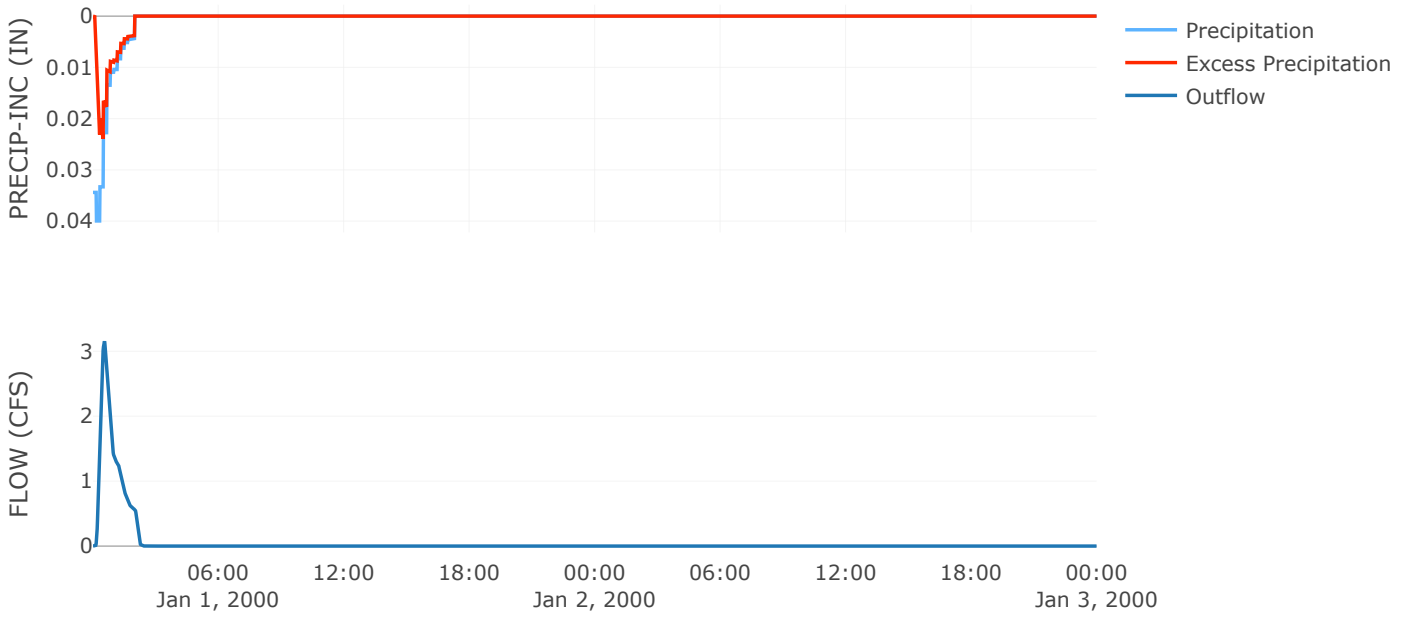
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

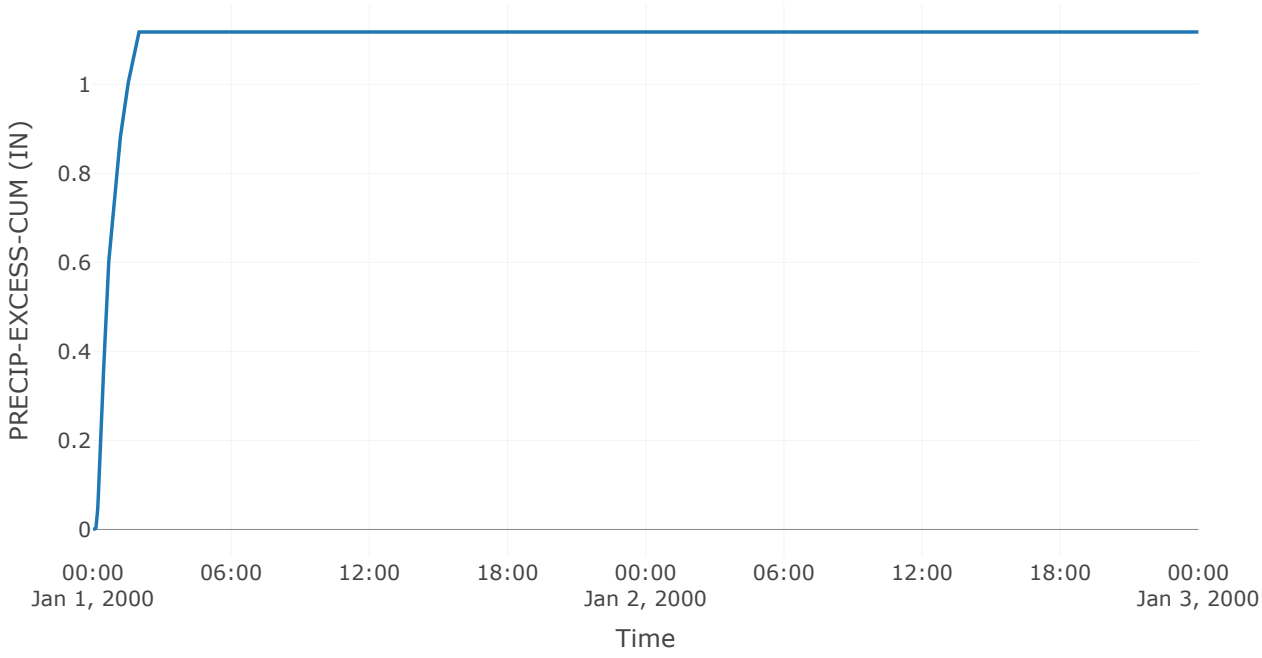
Transform: Scs	
Lag	6
Unitgraph Type	Standard

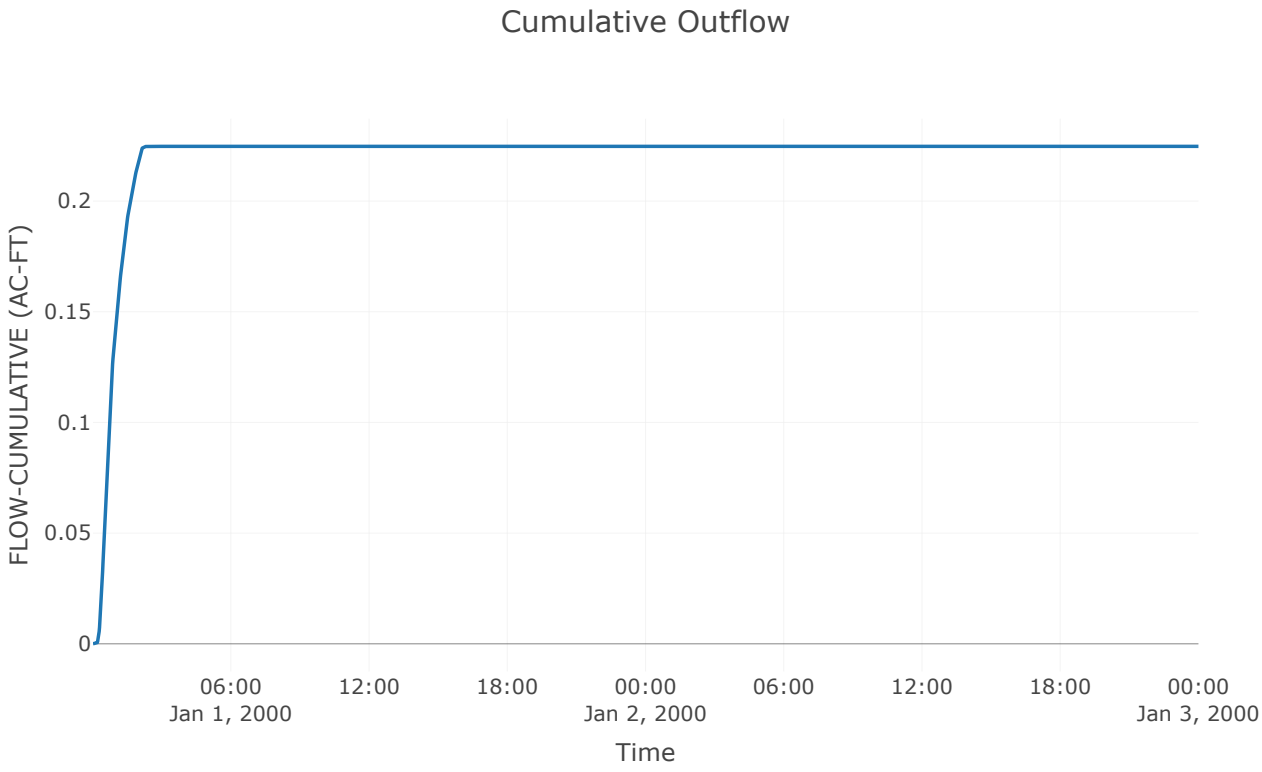
Results: Existing On-Site	
Peak Discharge (CFS)	3.15
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	1.12
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.22
Direct Runoff Volume (AC - FT)	0.22
Baseflow Volume (AC - FT)	0

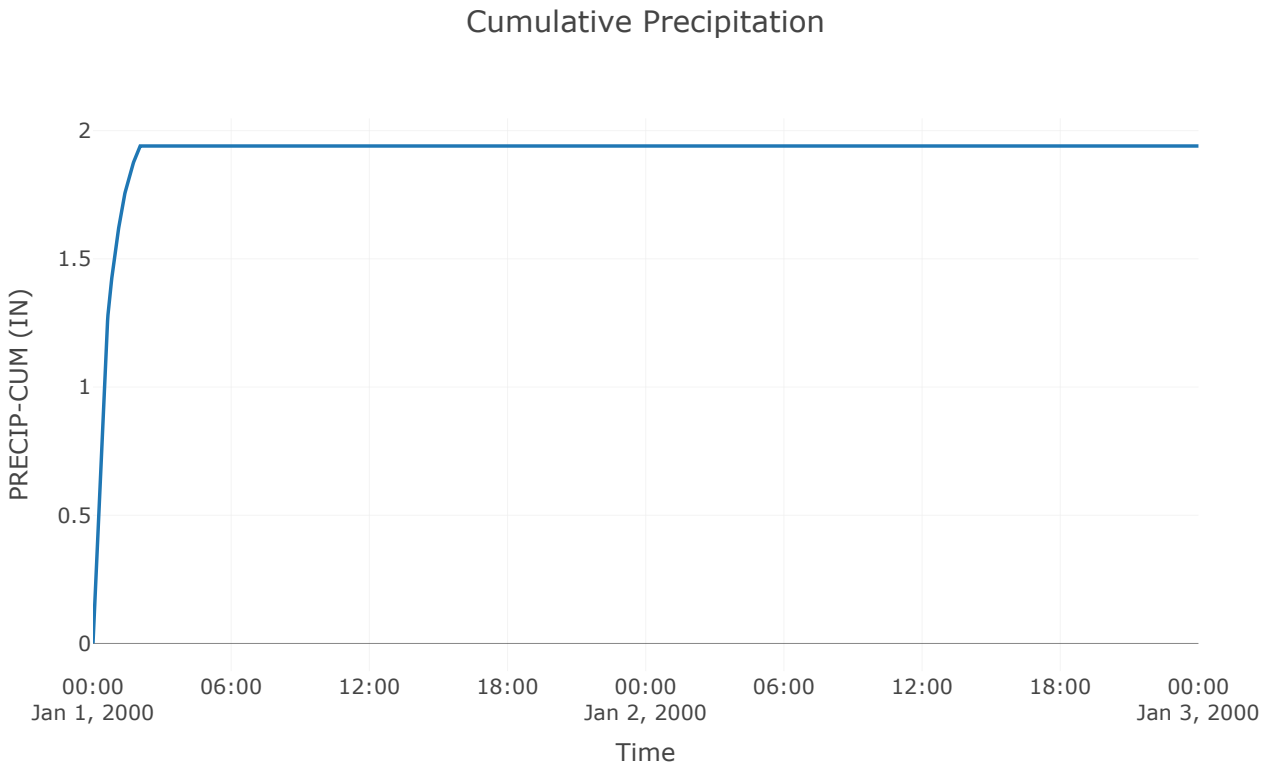
Precipitation and Outflow

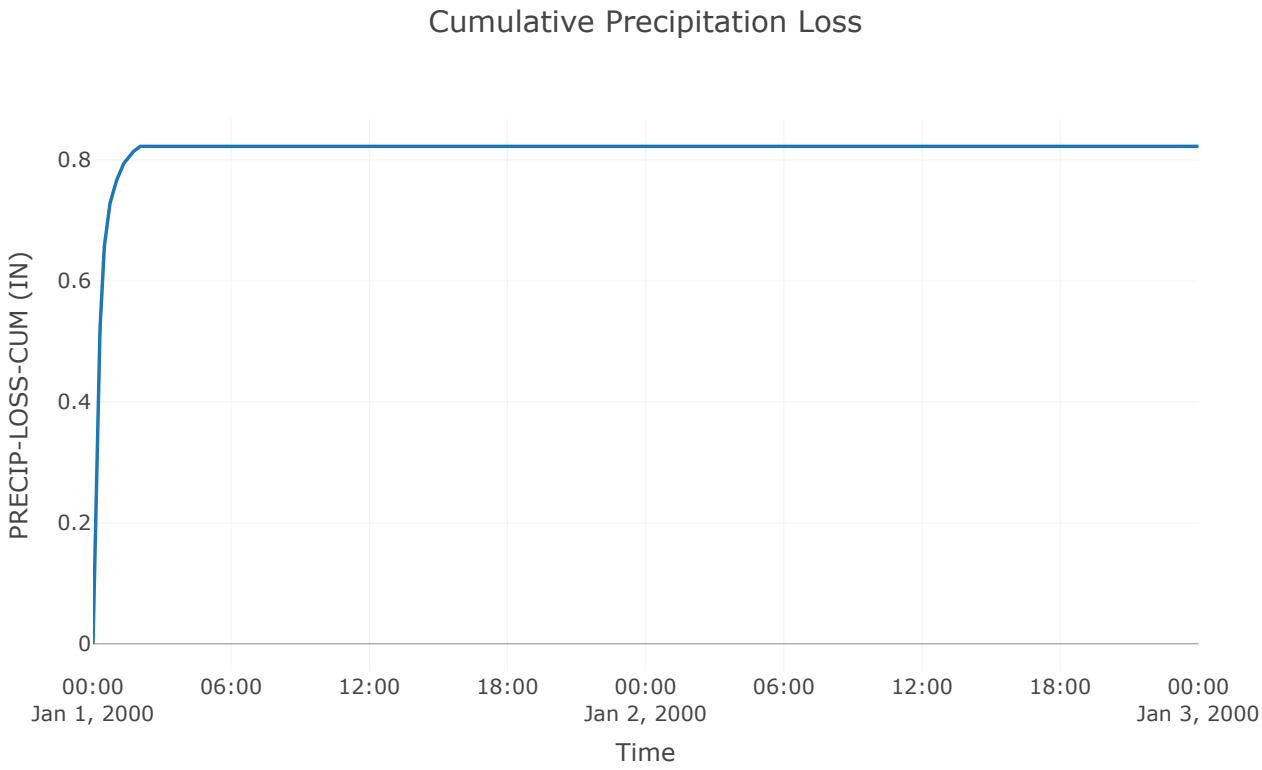


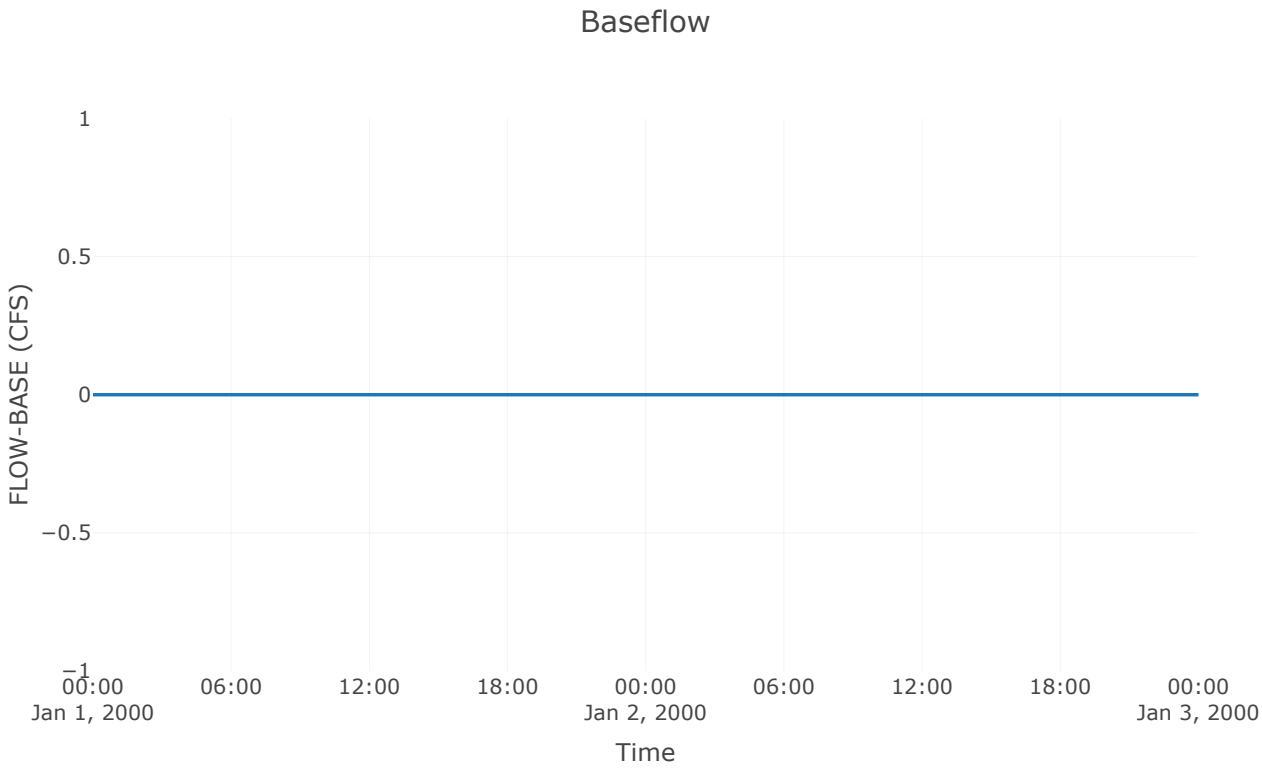
Cumulative Excess Precipitation



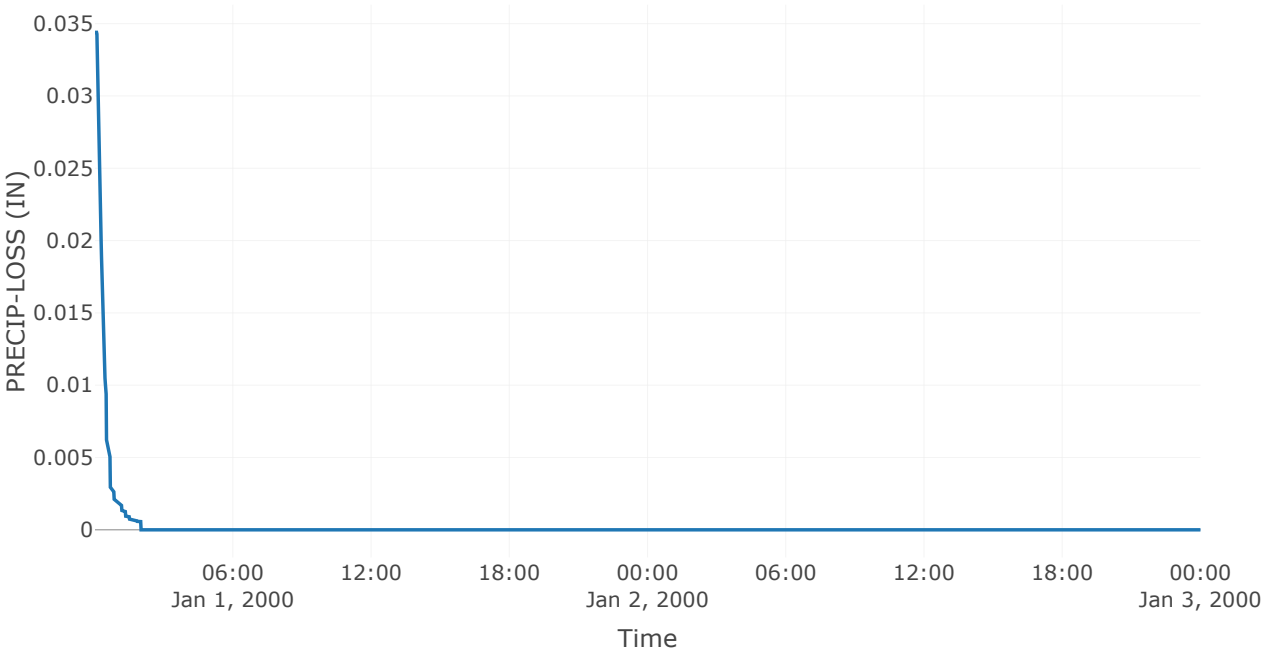

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.2
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

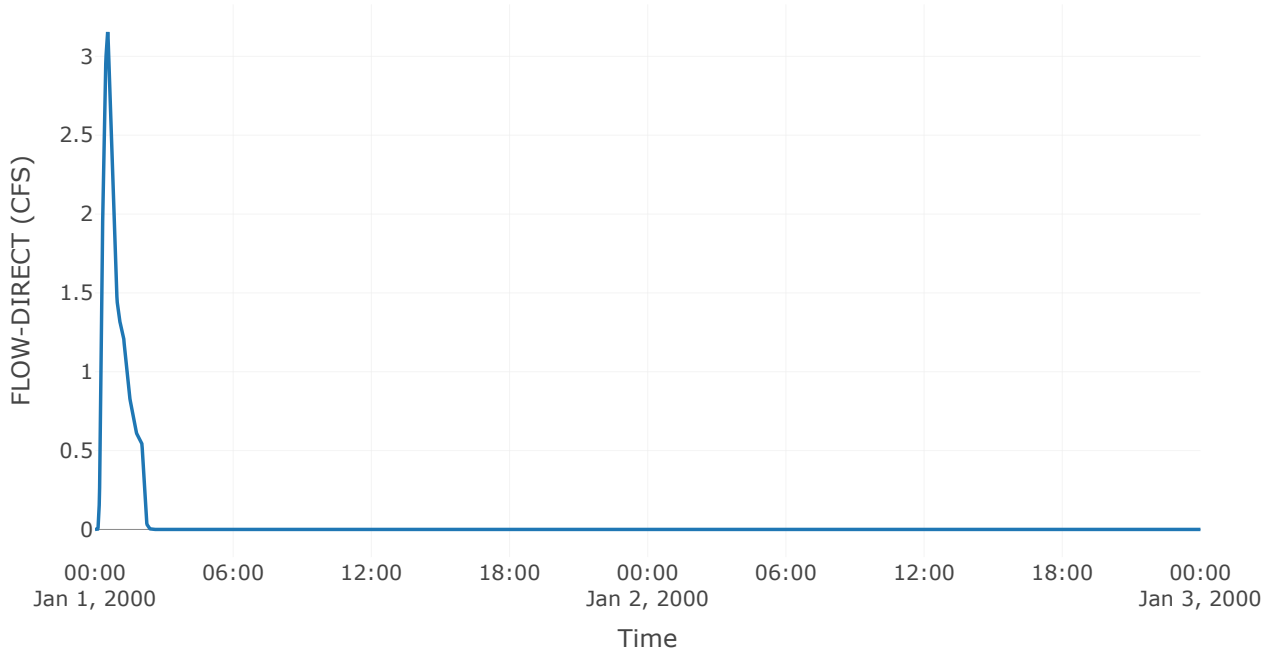

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

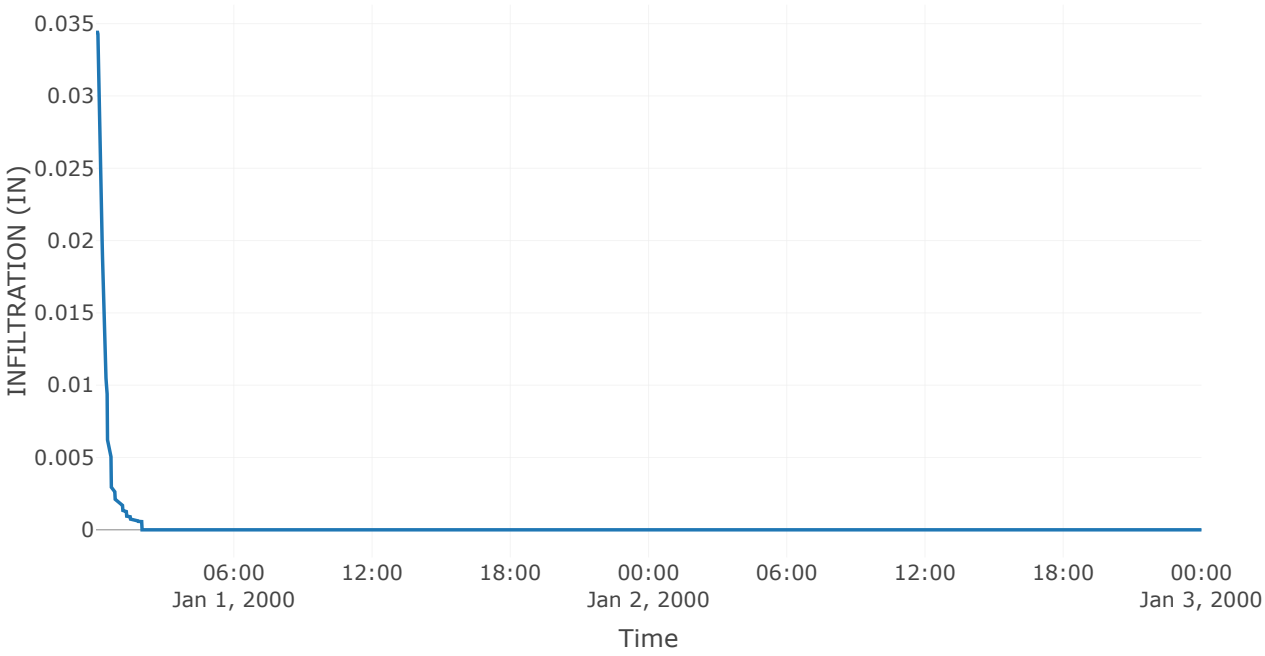

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



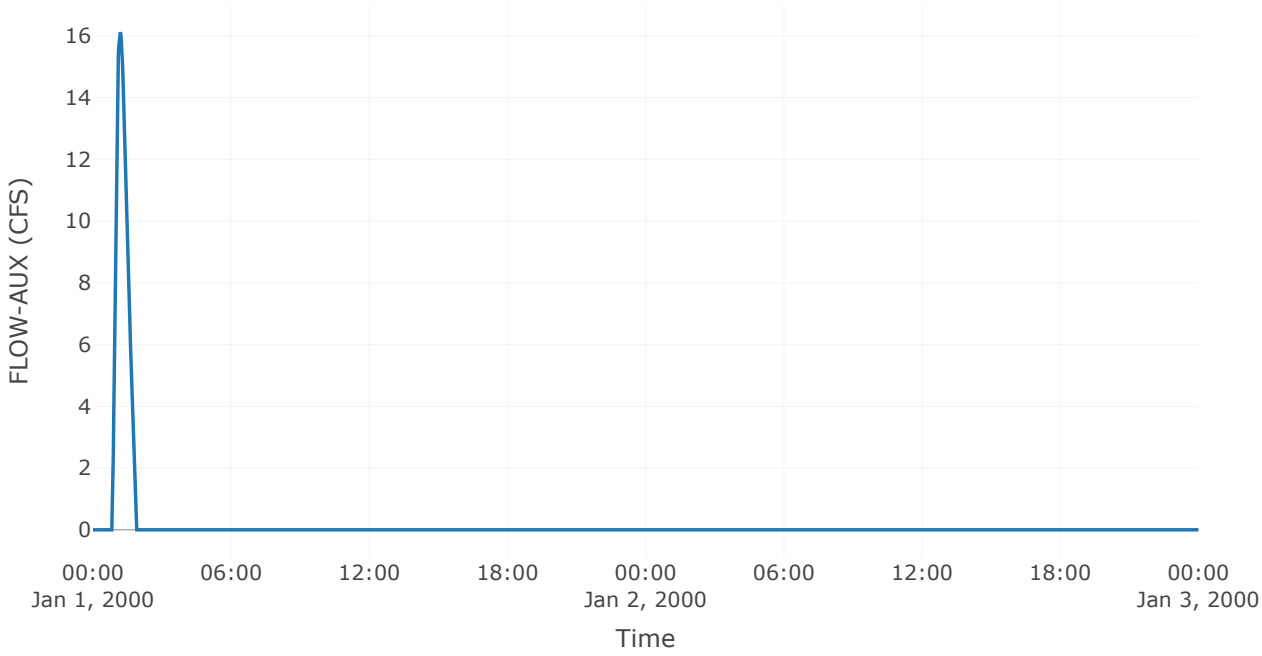

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

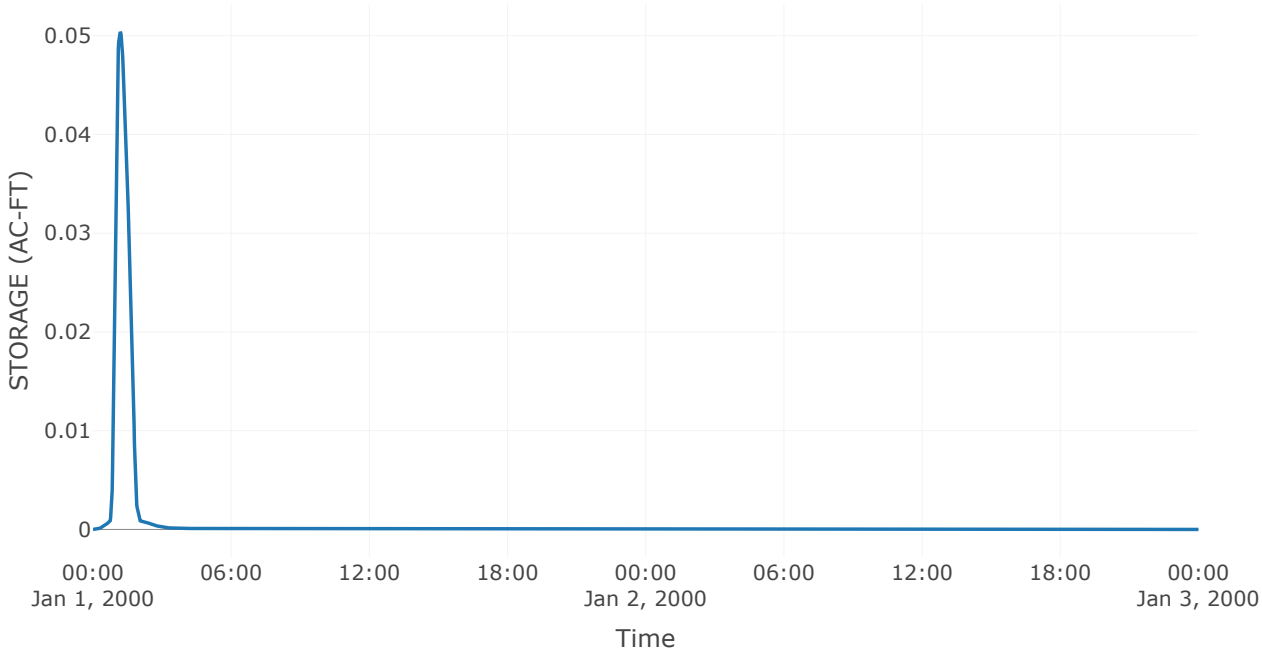
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	60.13
Time of Peak Discharge	01Jan2000, 01:11
Volume (IN)	0.72
Peak Inflow (CFS)	76.3
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.33
Maximum Storage (AC - FT)	0.05
Peak Elevation (FT)	650.78
Discharge Volume (AC - FT)	10.53

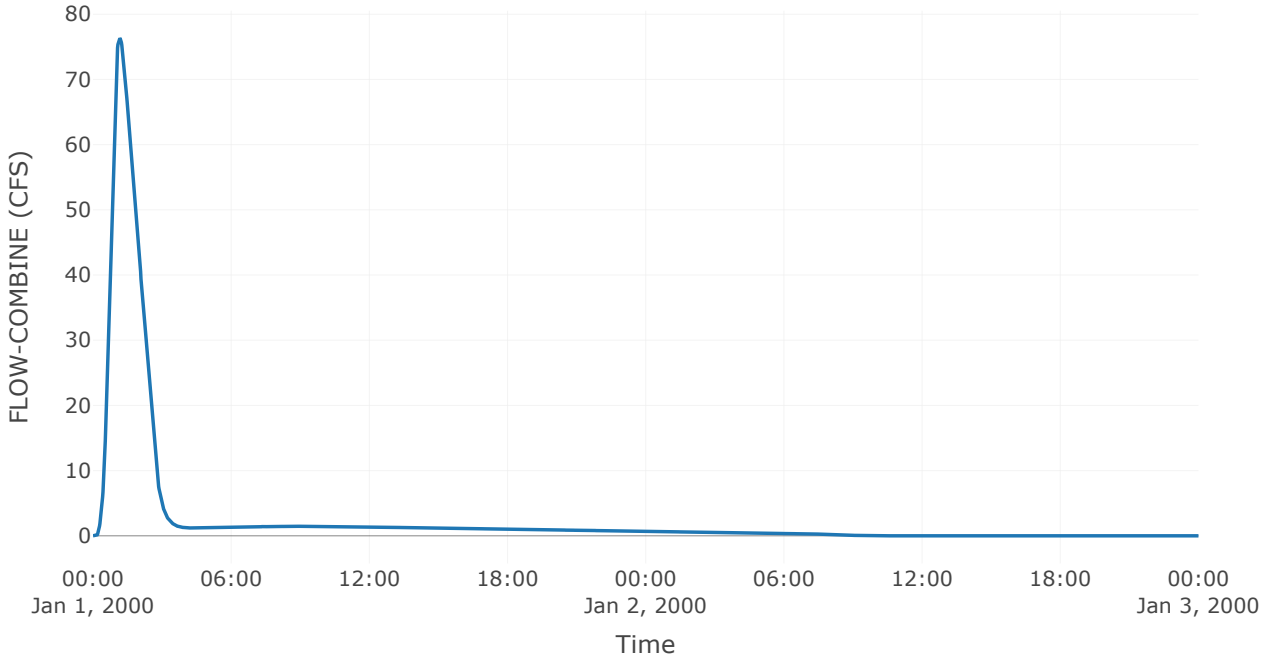
Auxiliary Outflow



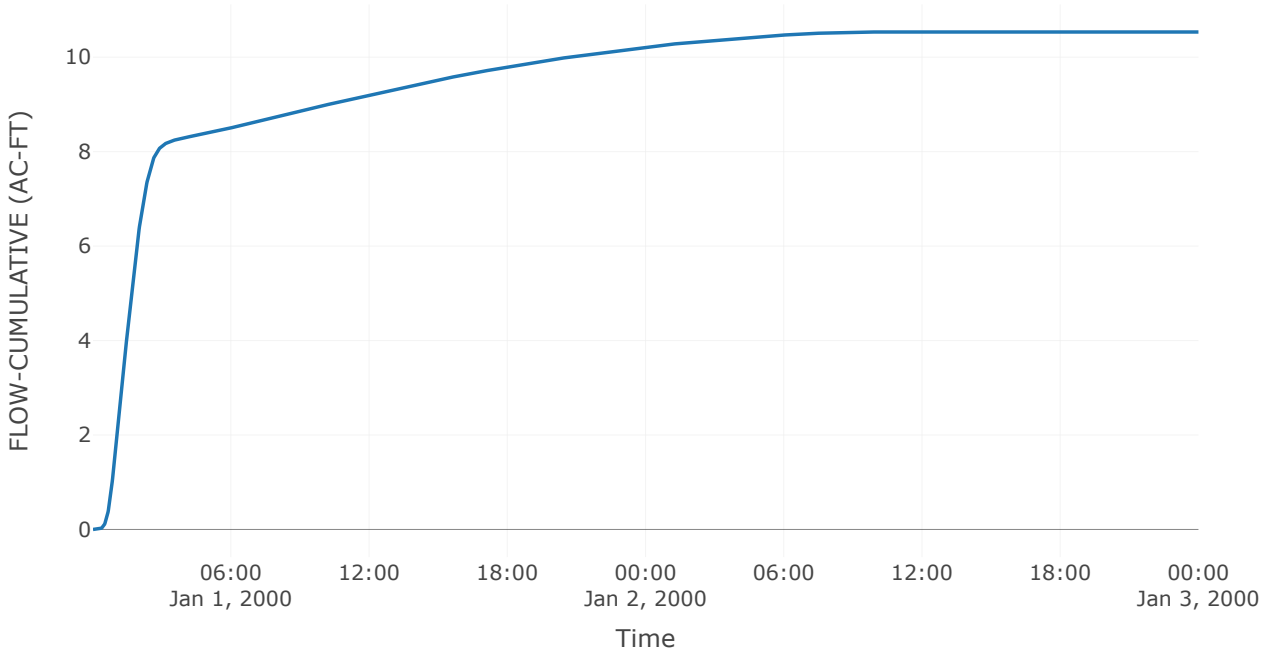
Storage

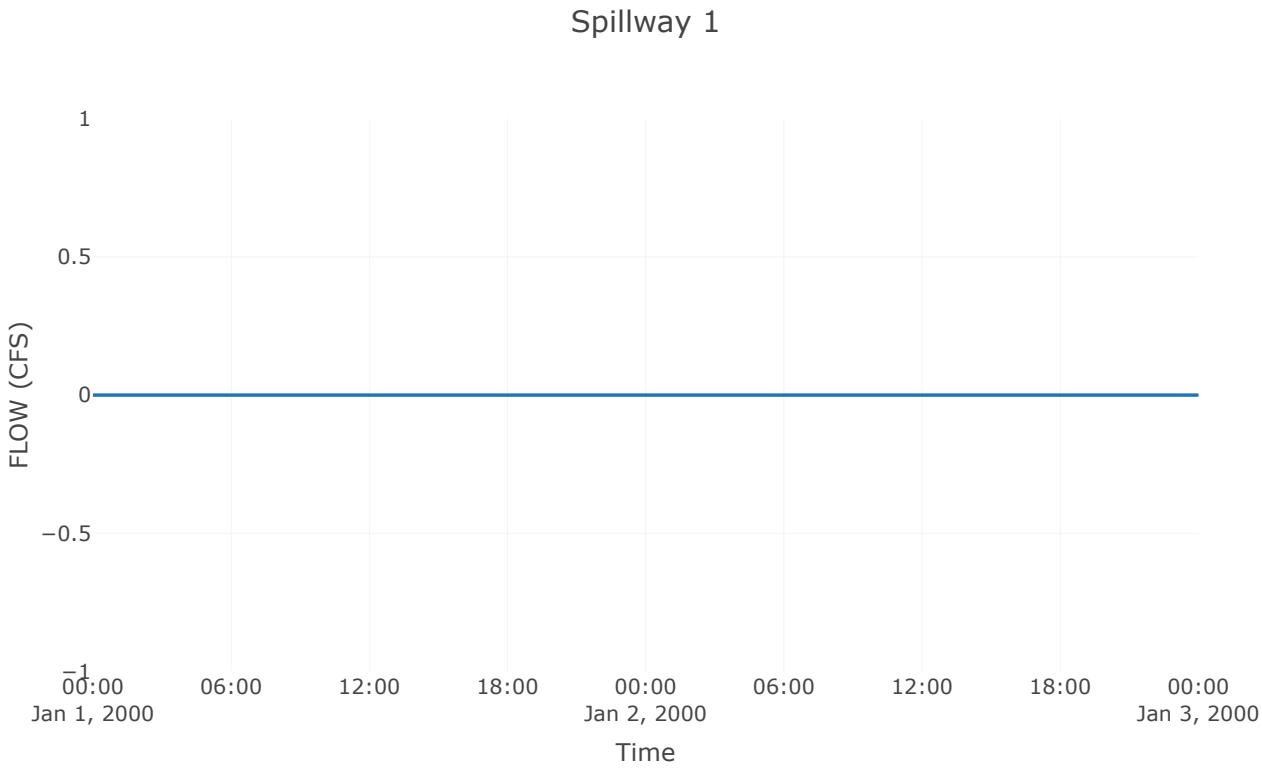


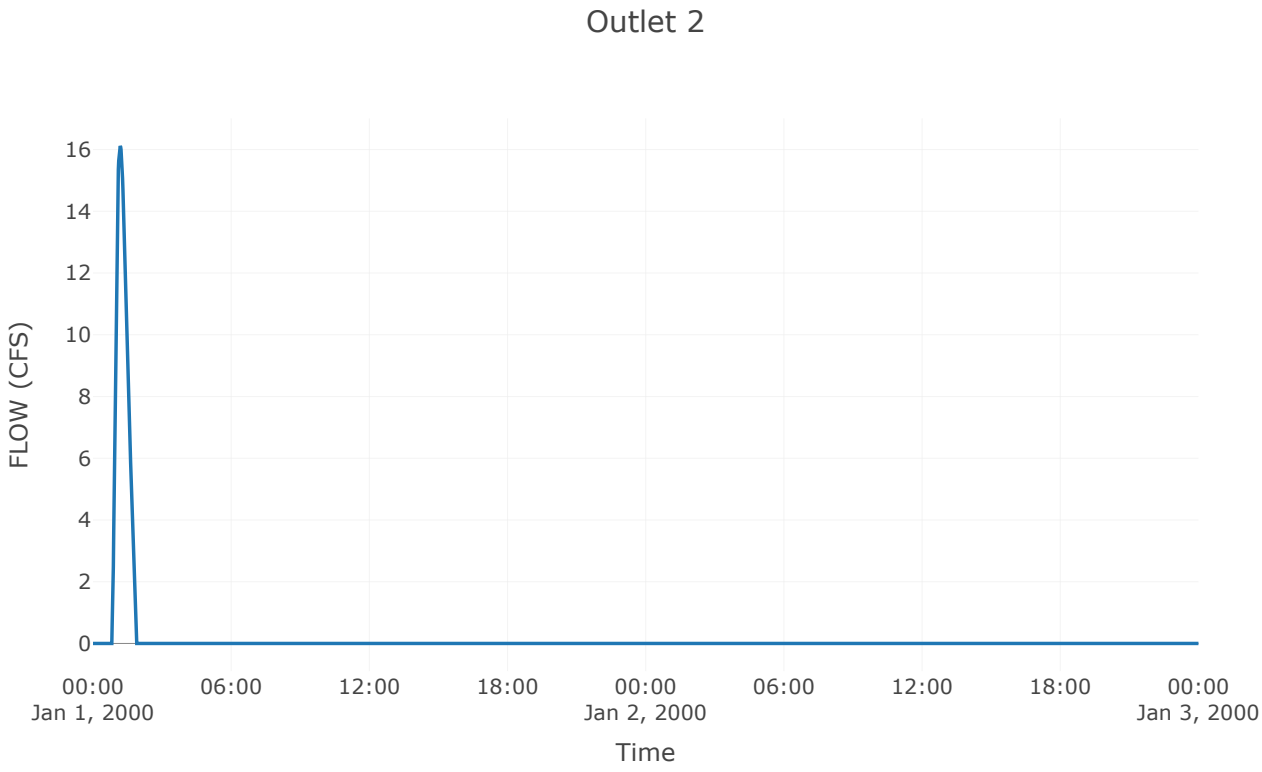
Combined Inflow



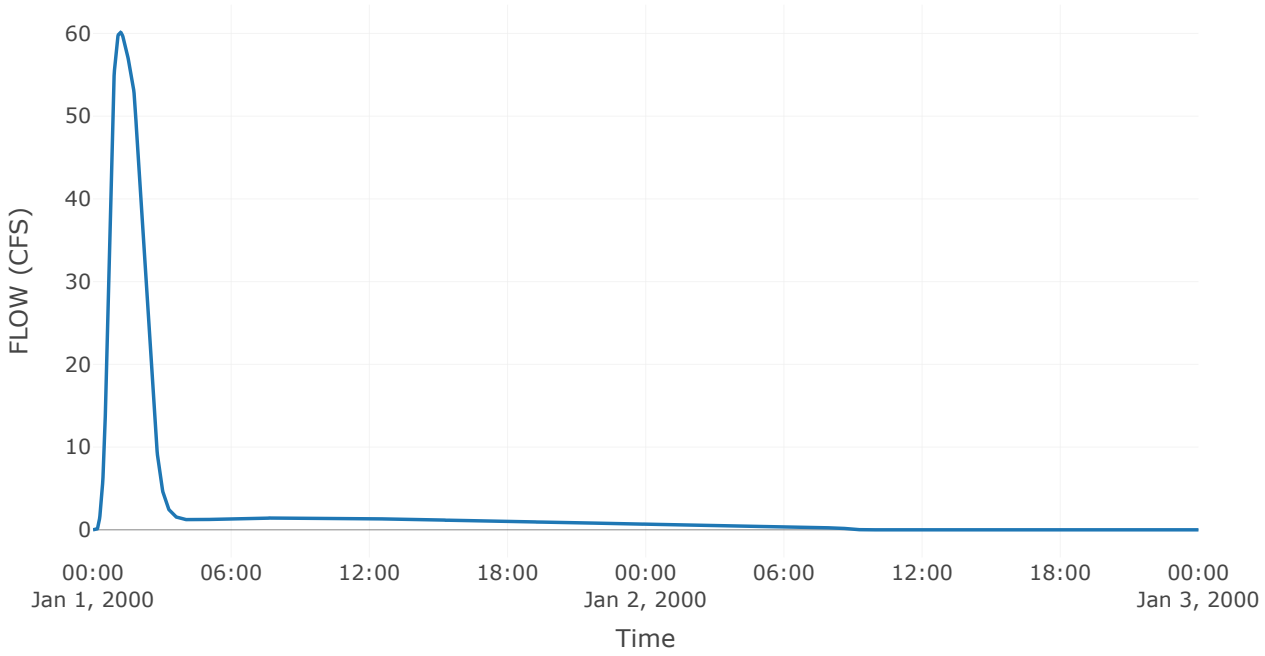
Cumulative Outflow



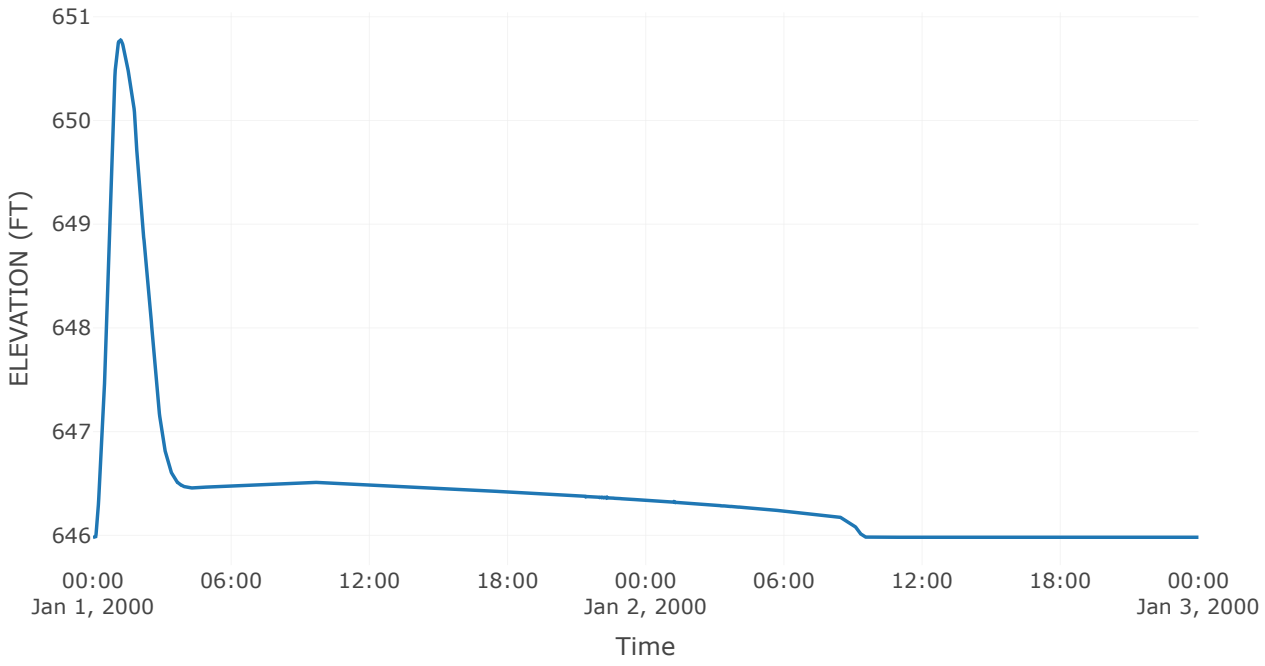

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

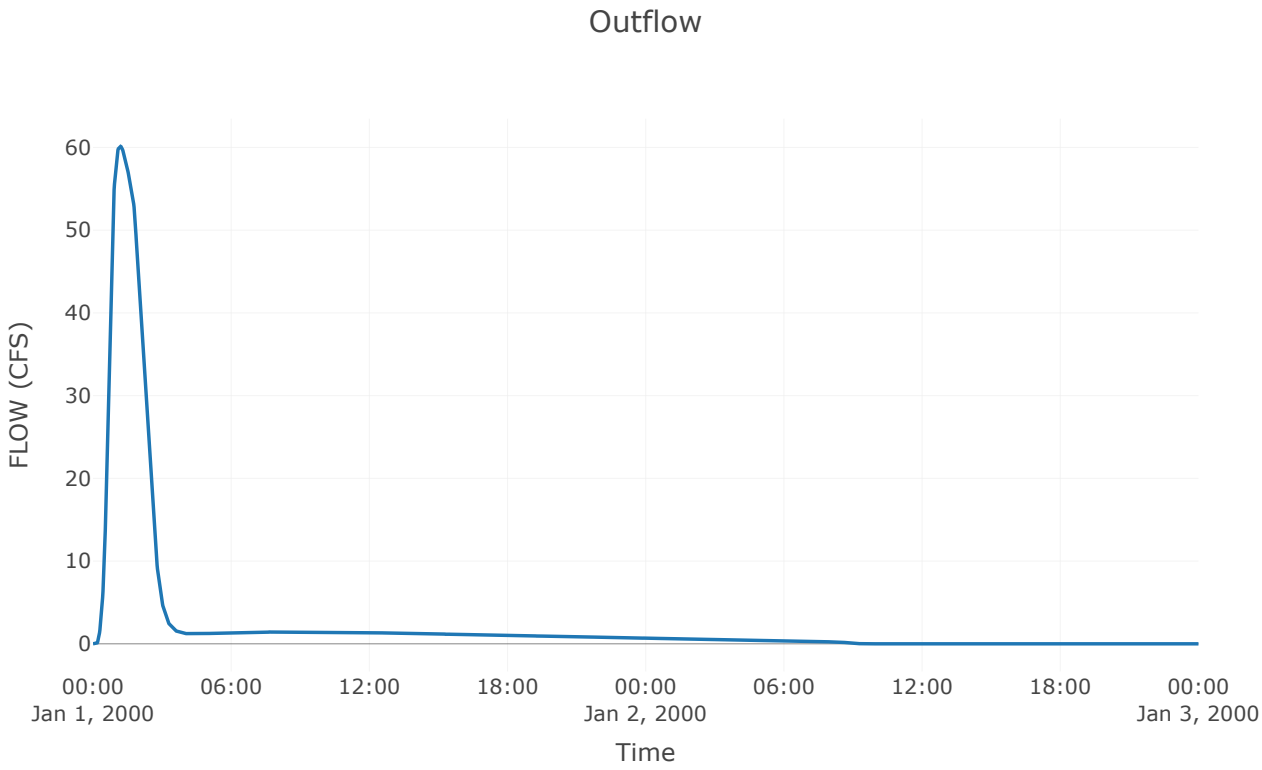

Outlet 2
16
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

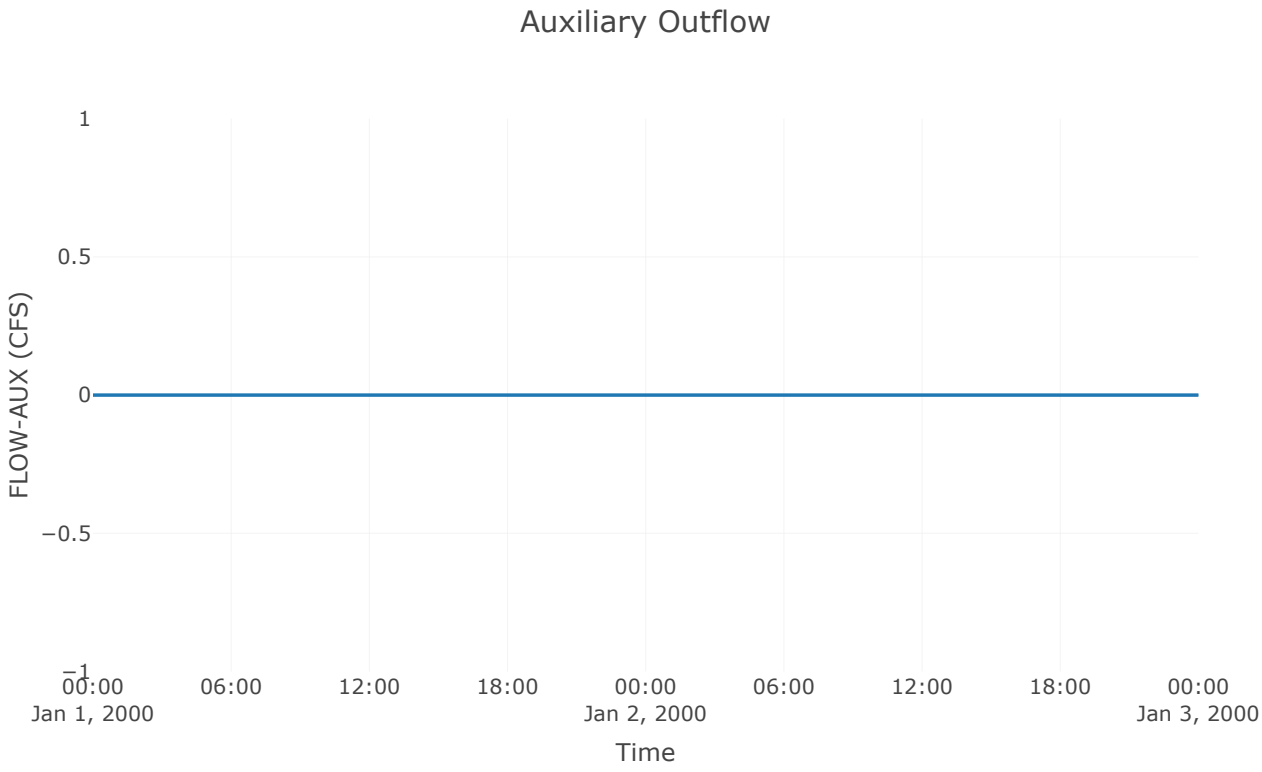


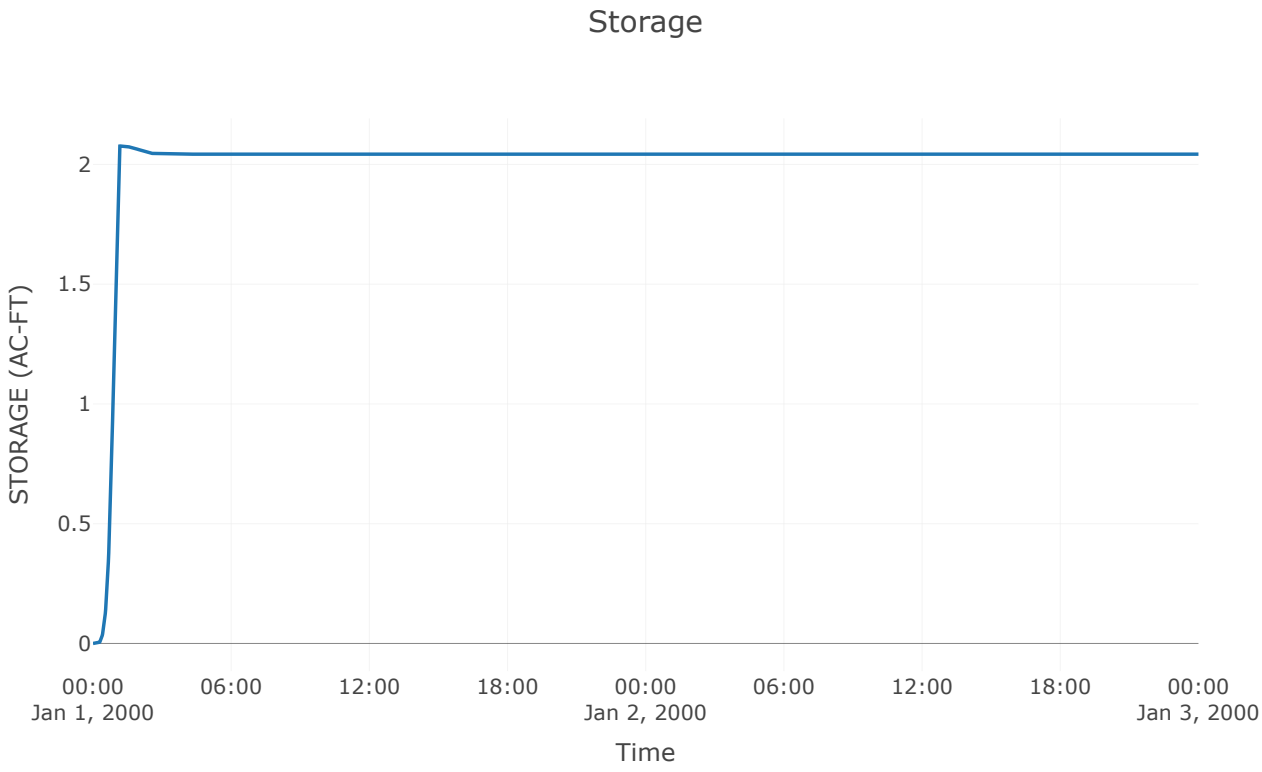

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

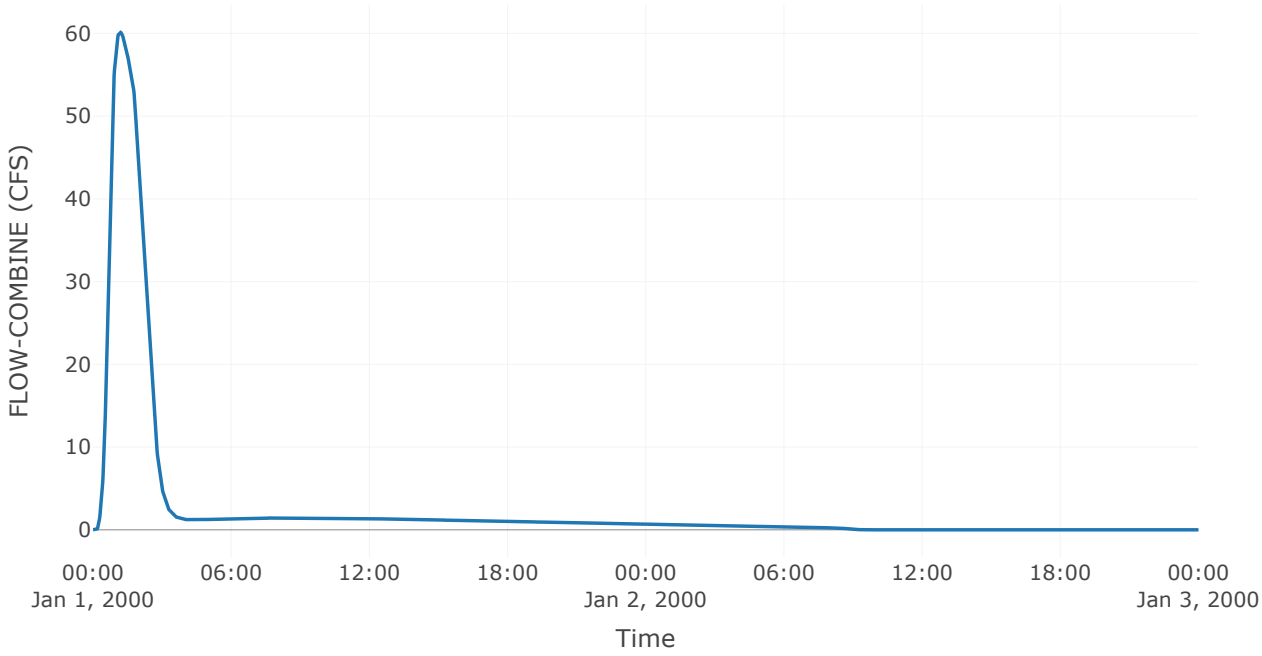
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57
Peak Inflow (CFS)	60.13
Time of Peak Inflow	01Jan2000, 01:11
Inflow Volume (AC - FT)	10.53
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.3

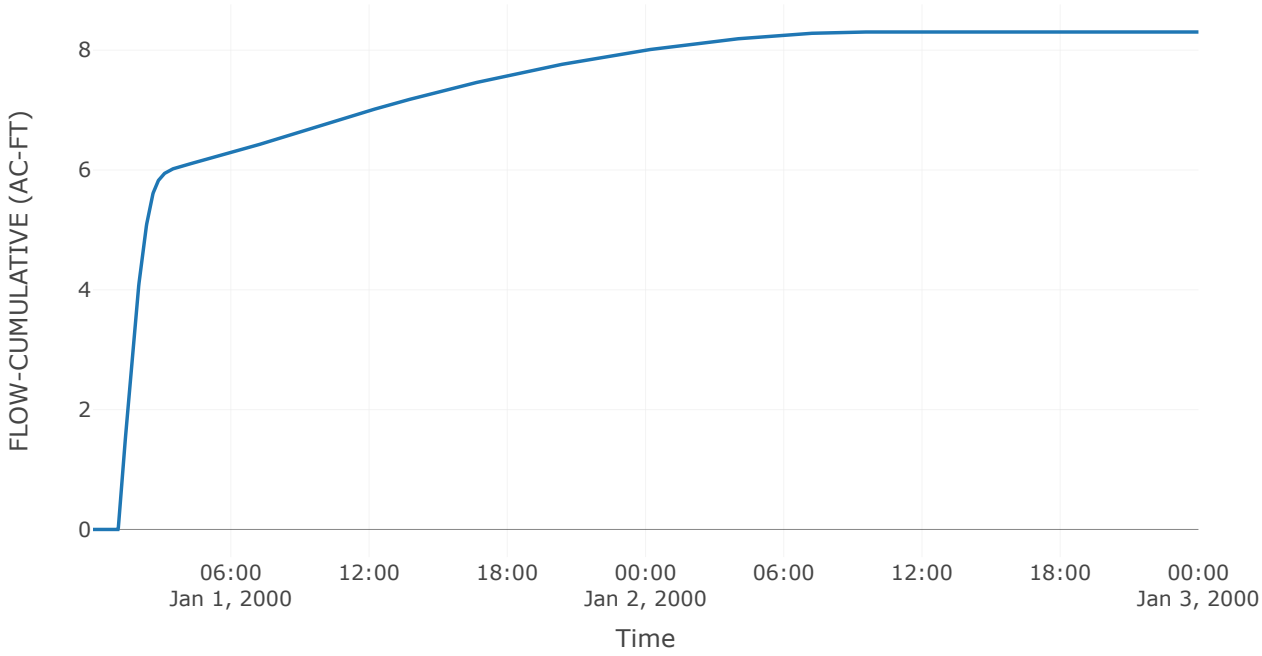

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

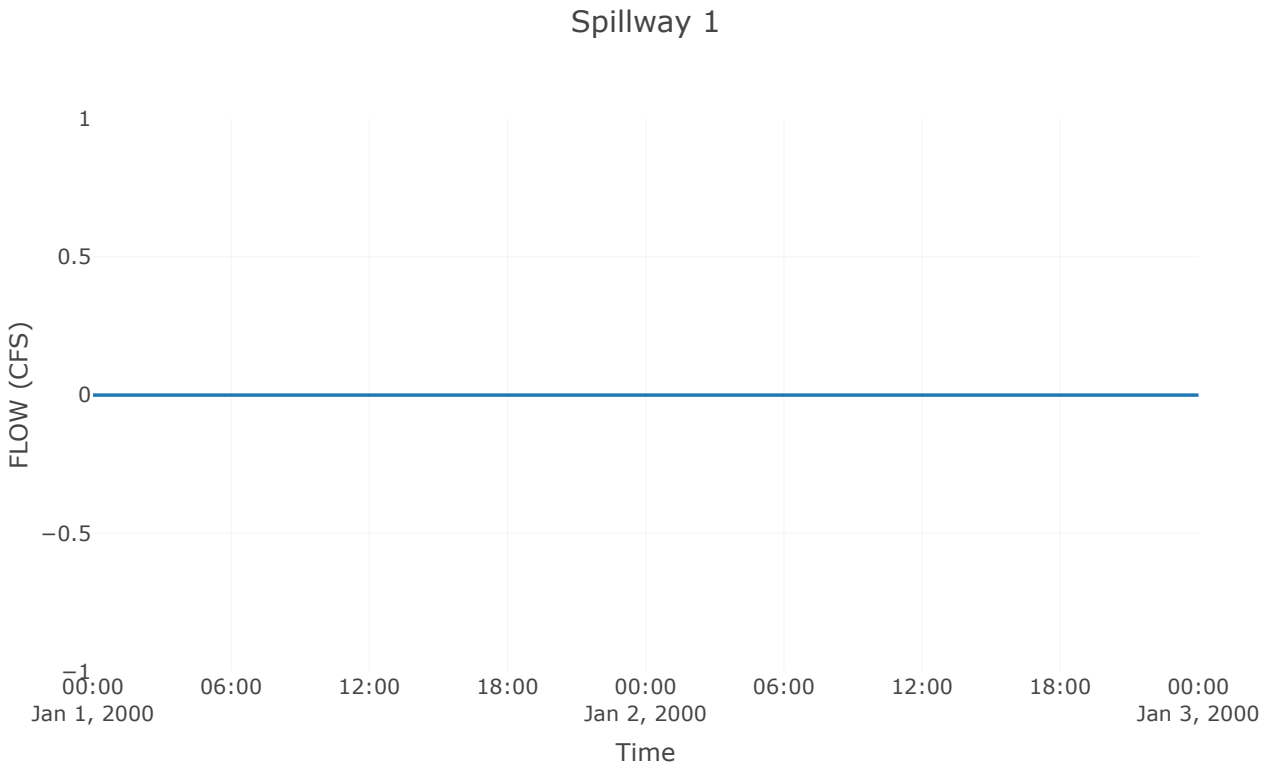

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

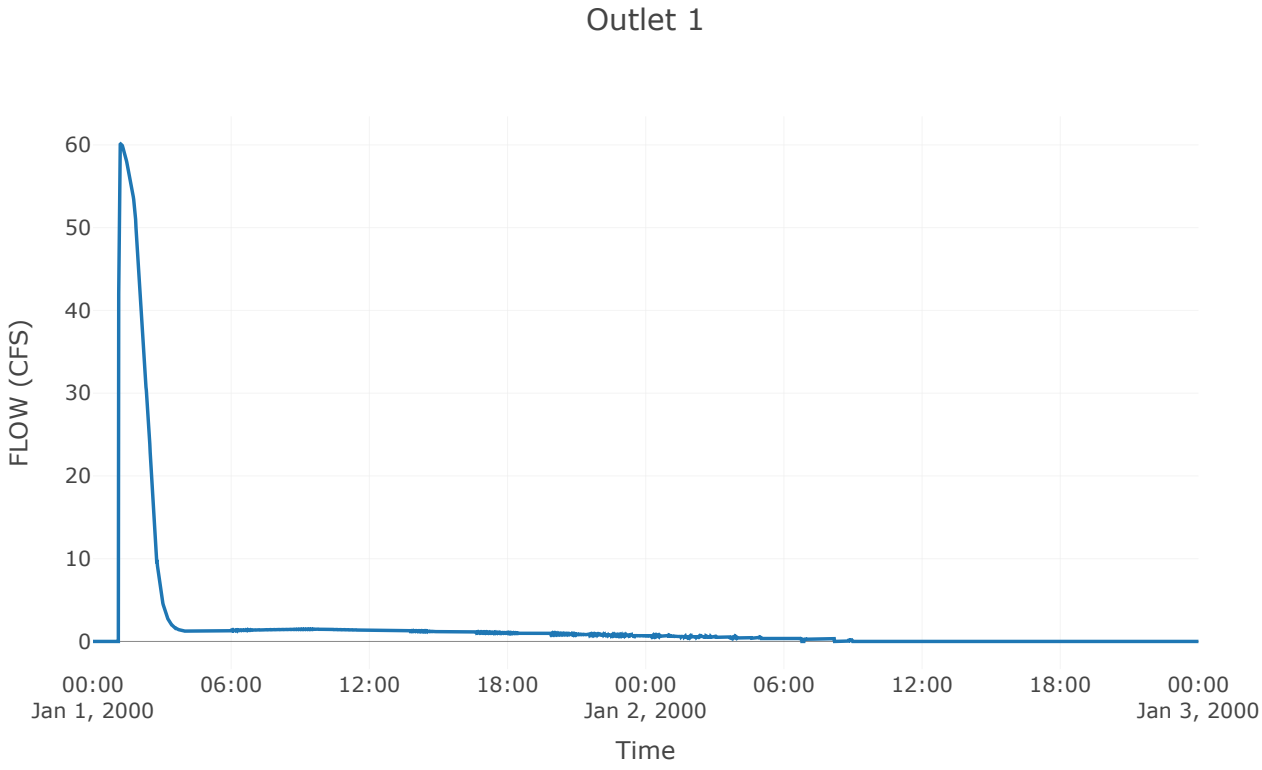
Combined Inflow



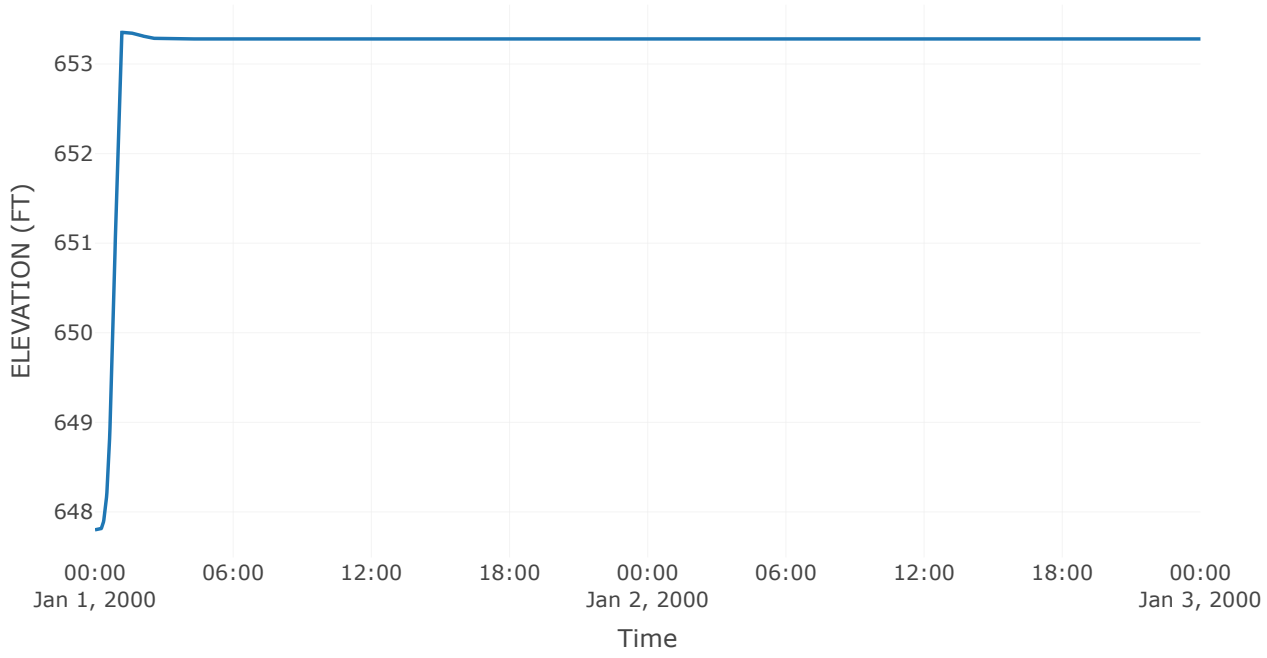
Cumulative Outflow



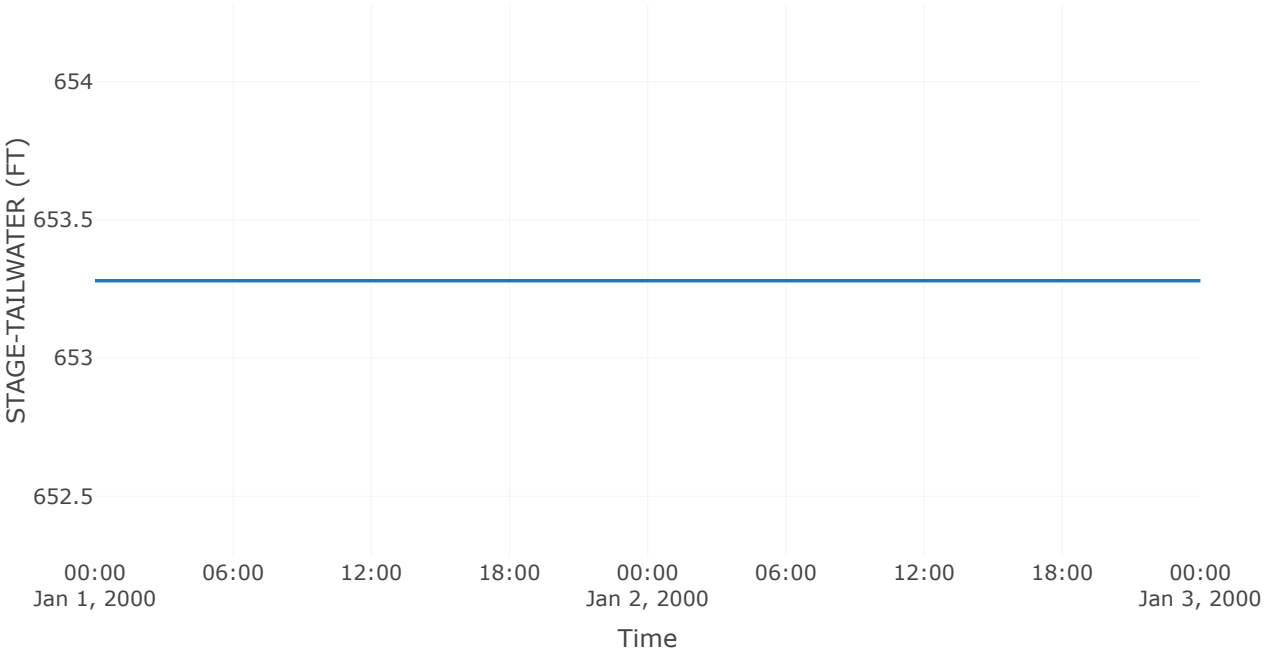

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

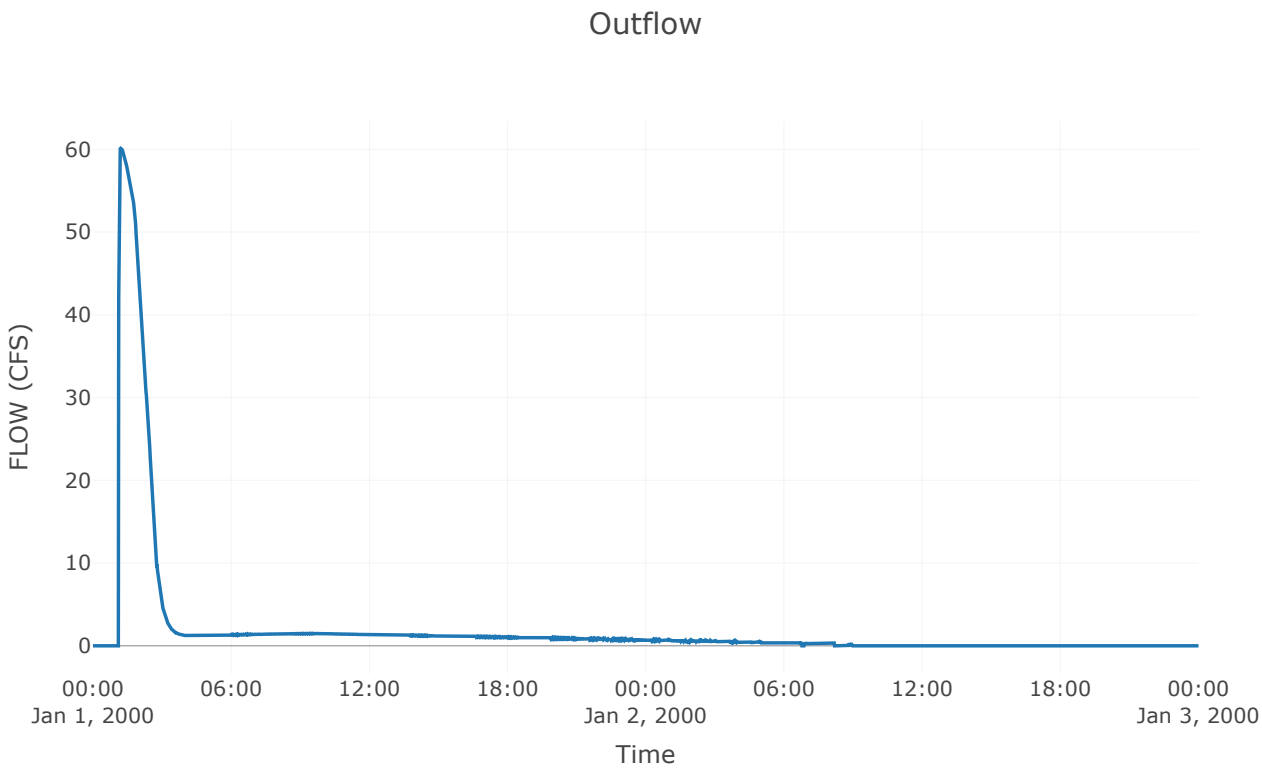

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

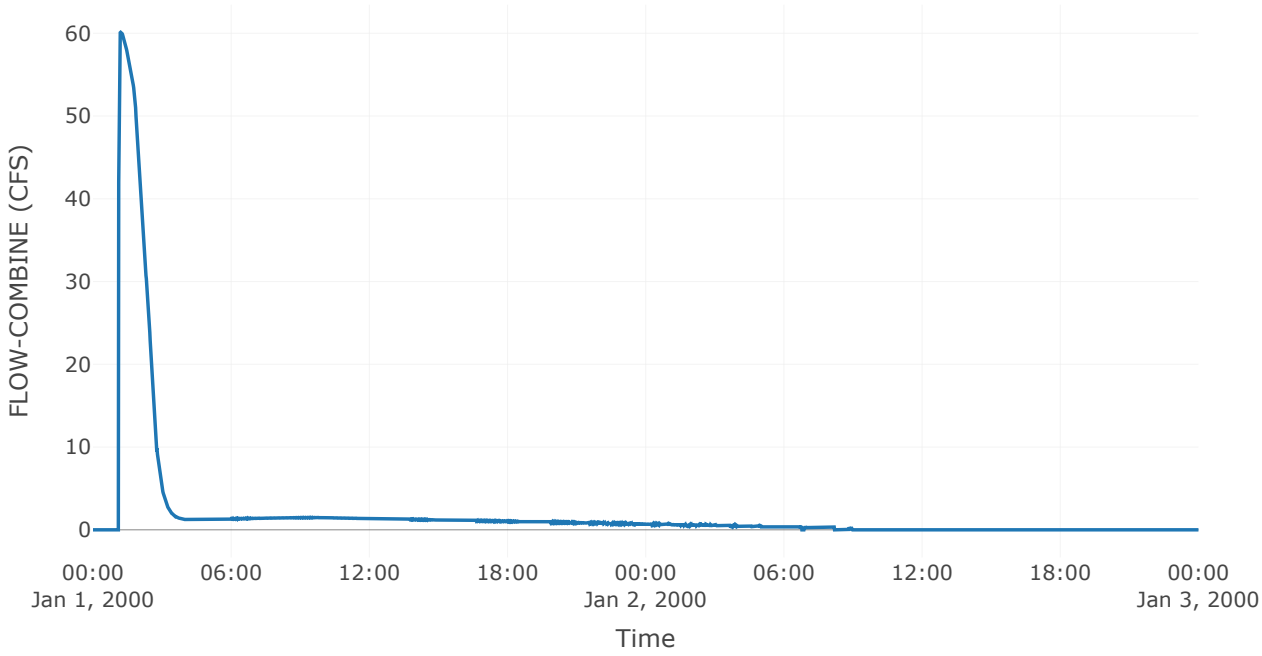



Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

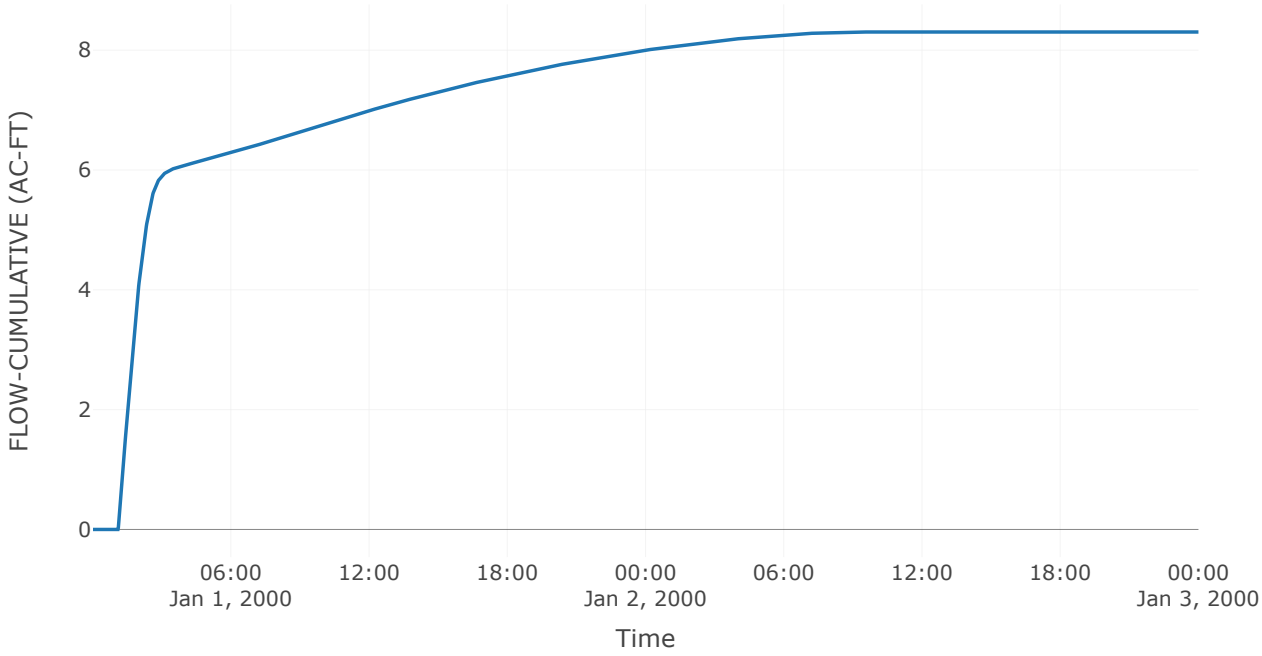
Sink: 55th Street Outlet

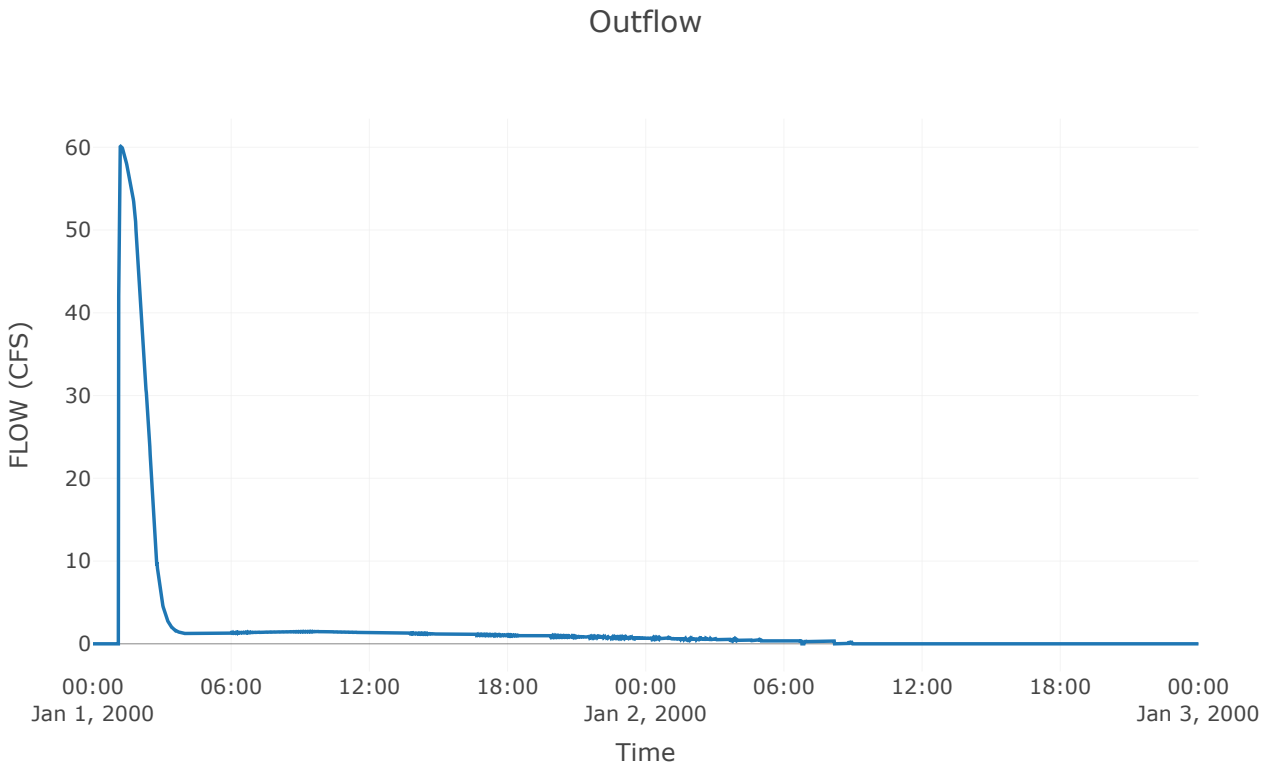
Results: 55th Street Outlet	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57

Combined Inflow



Cumulative Outflow




Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:34

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.38	01Jan2000, 01:10	1.61
Storage West of Wolf Road	0.27	157.38	01Jan2000, 01:10	1.6
Existing On - Site	0	5.91	01Jan2000, 00:32	2.07
Existing Basin C	0.27	75.96	01Jan2000, 01:14	1.17
Existing Basin A & B	0.27	75.95	01Jan2000, 01:15	1.02

55th Street Outlet	0.27	75.95	01Jan2000, 01:15	1.02

Subbasin: On-Site Trib 1

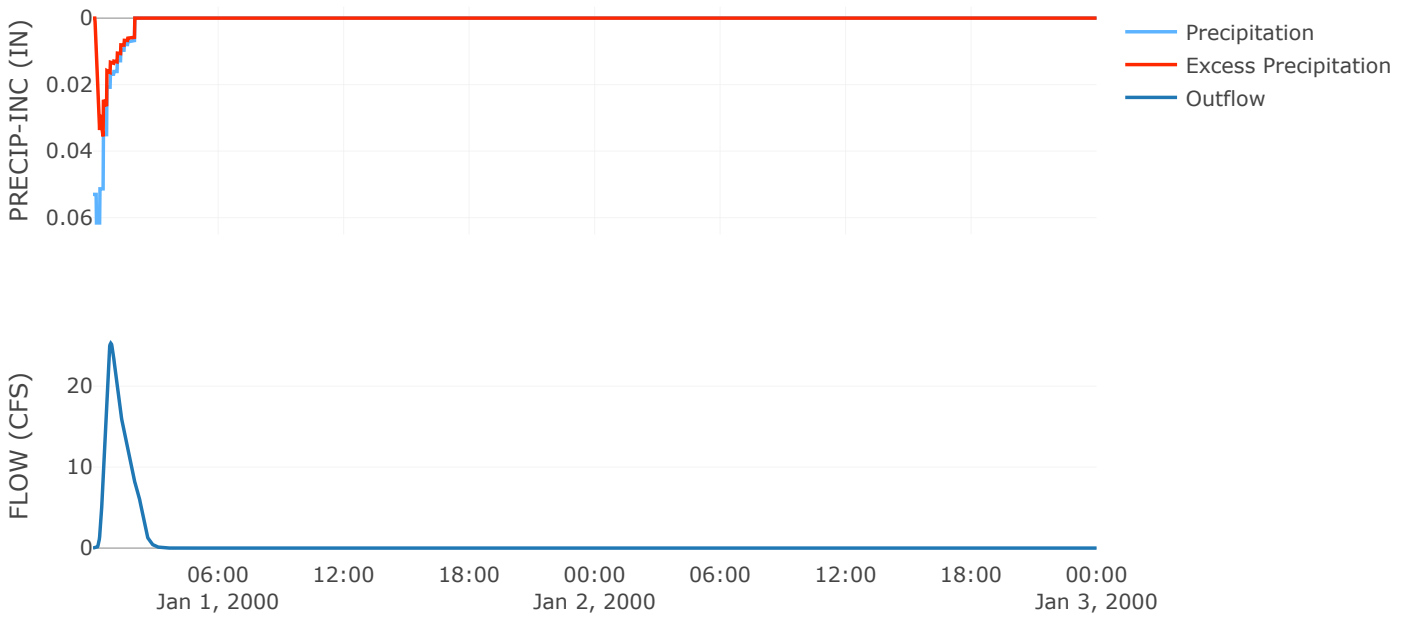
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

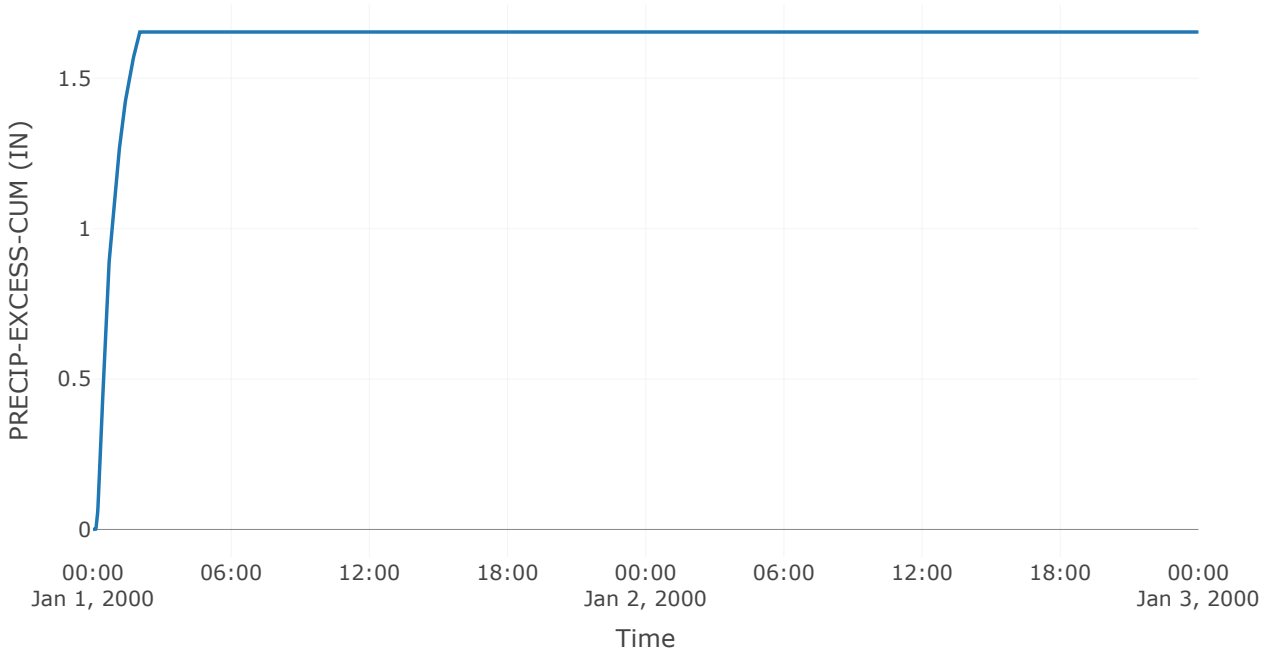
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

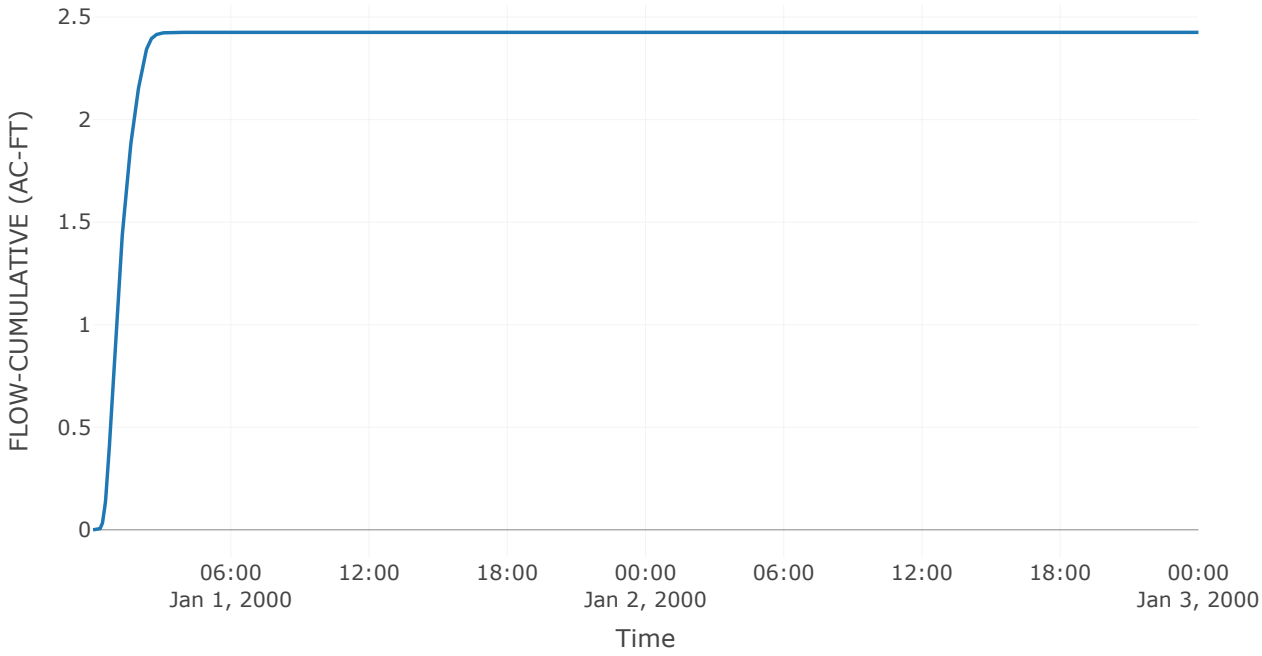
Precipitation and Outflow



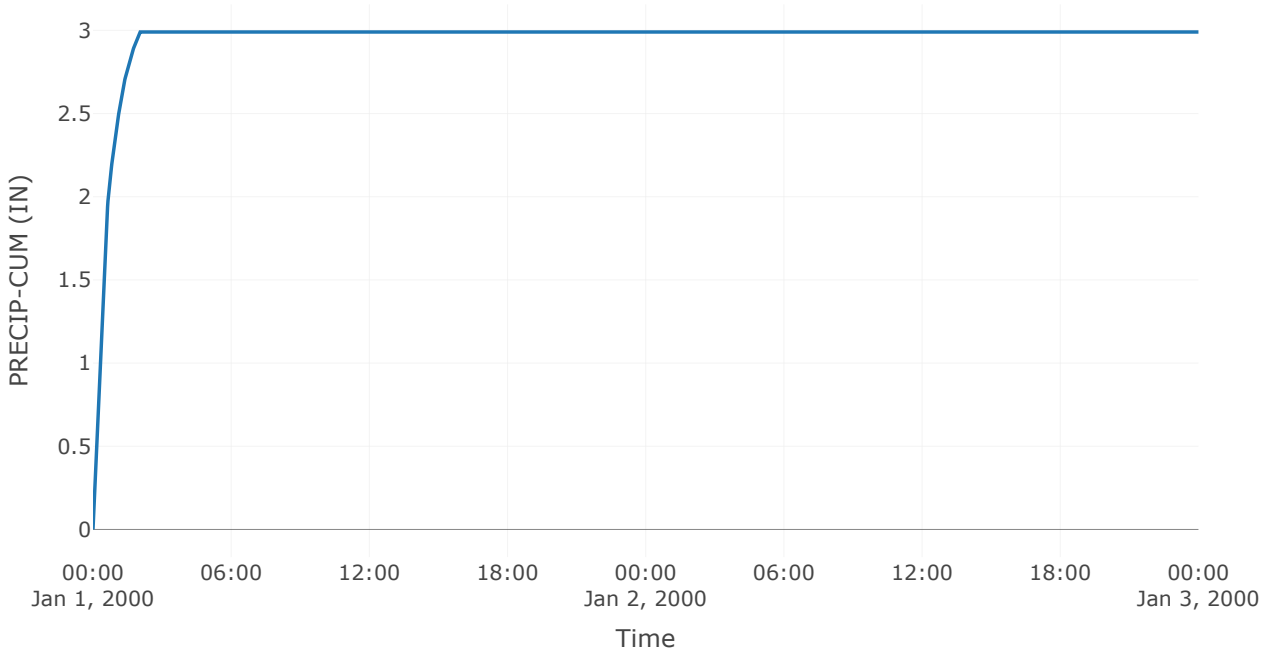
Cumulative Excess Precipitation

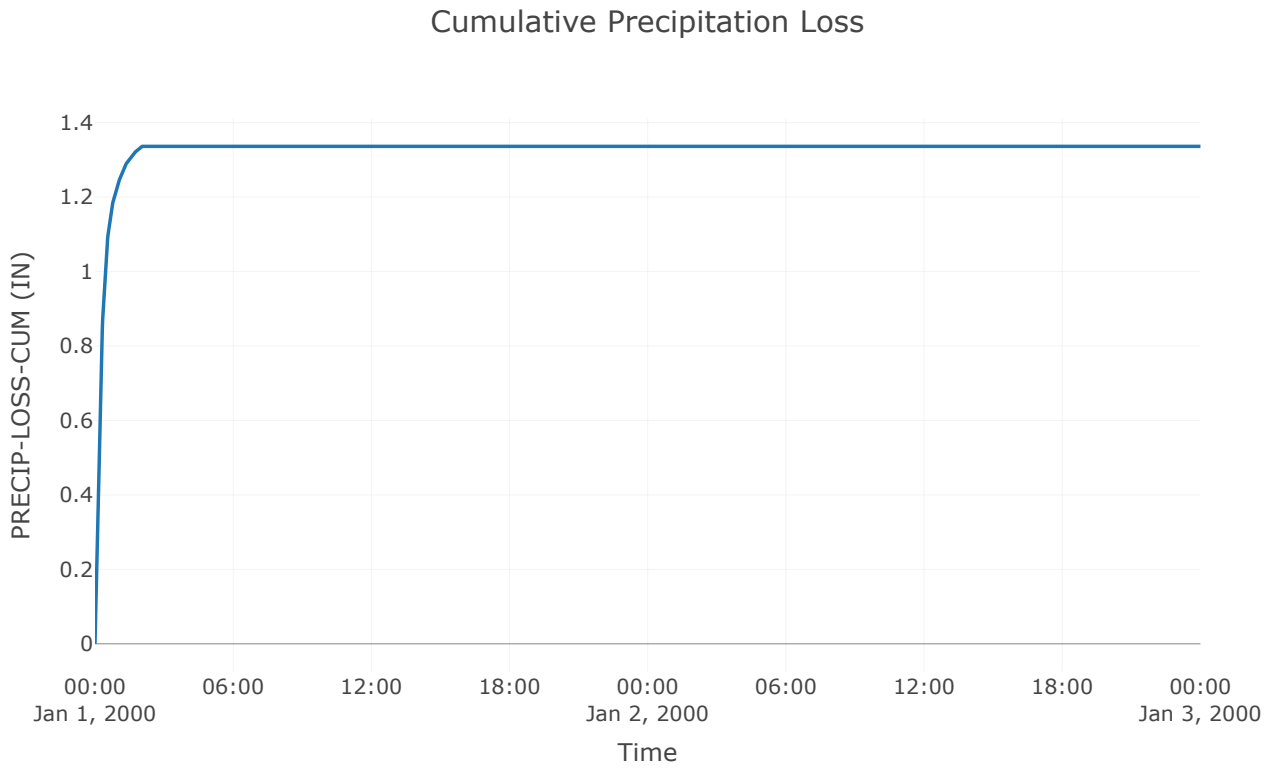


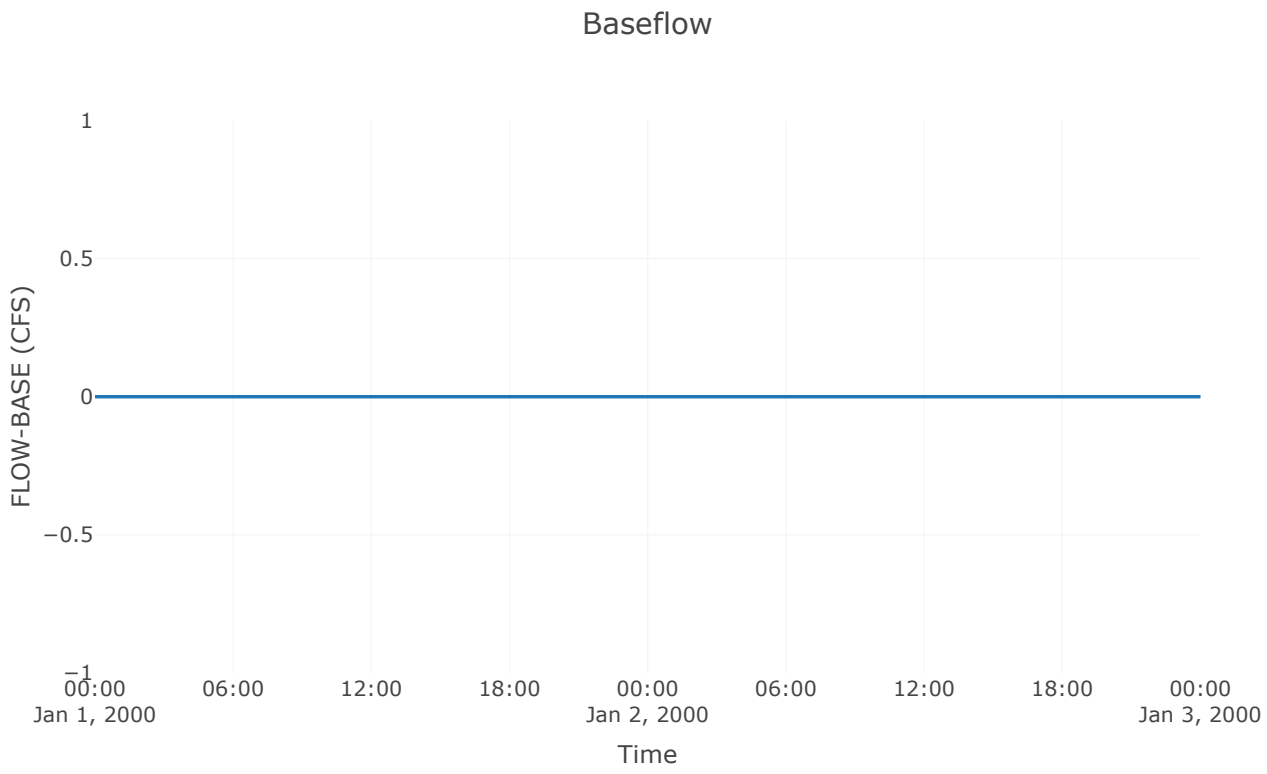
Cumulative Outflow



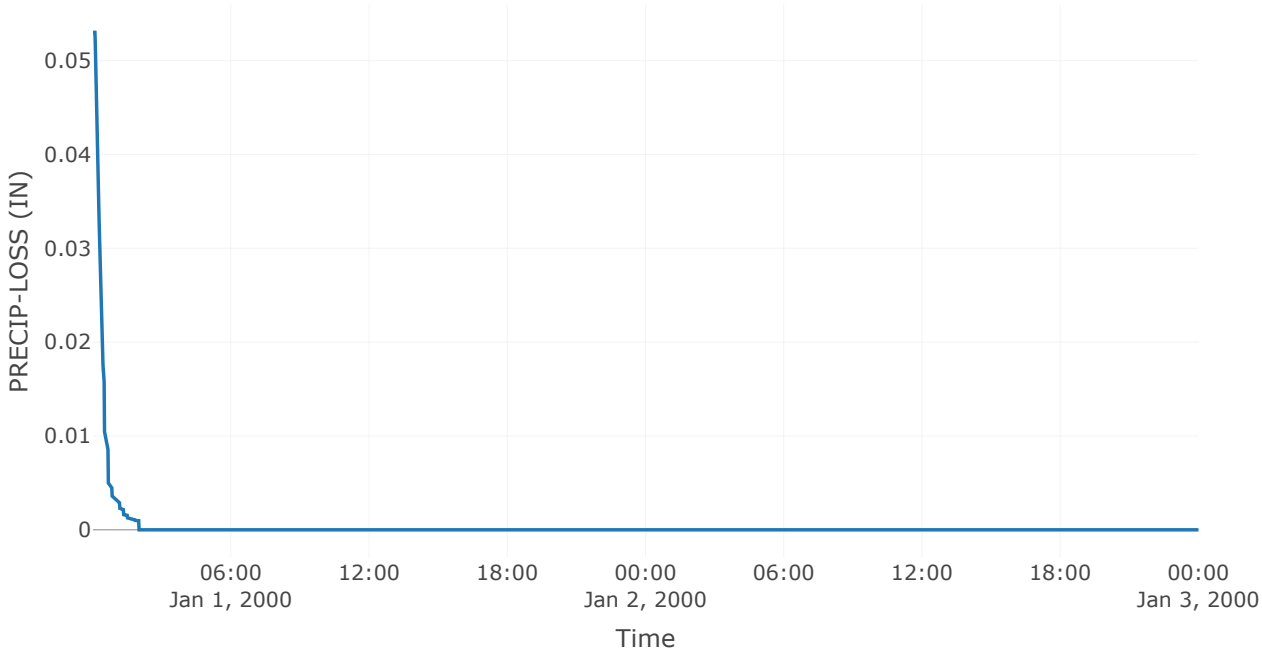
Cumulative Precipitation



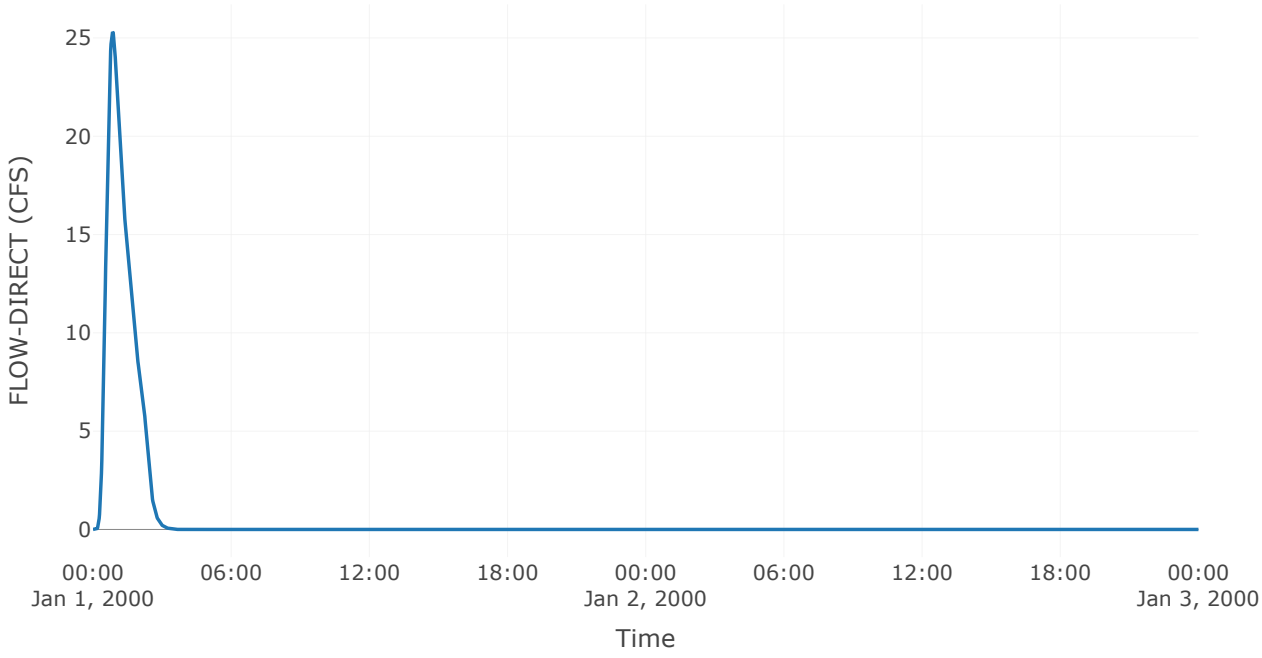

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

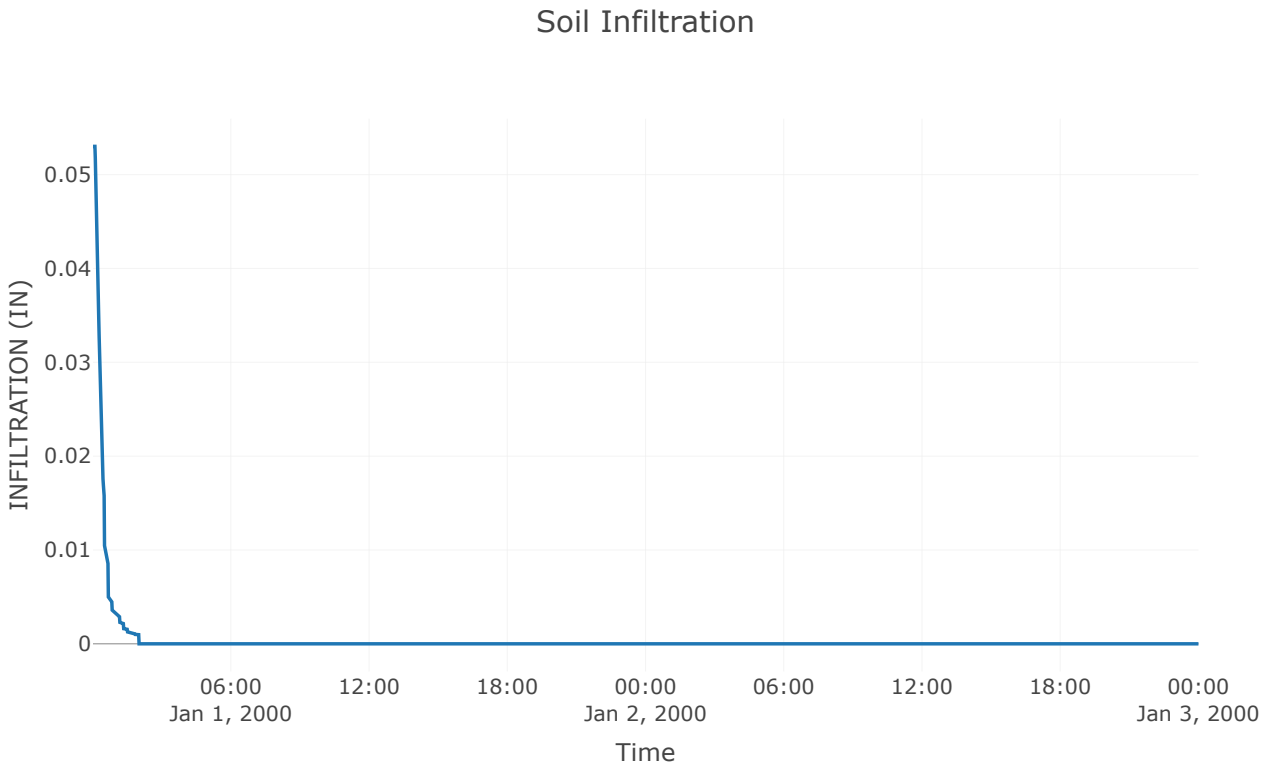

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

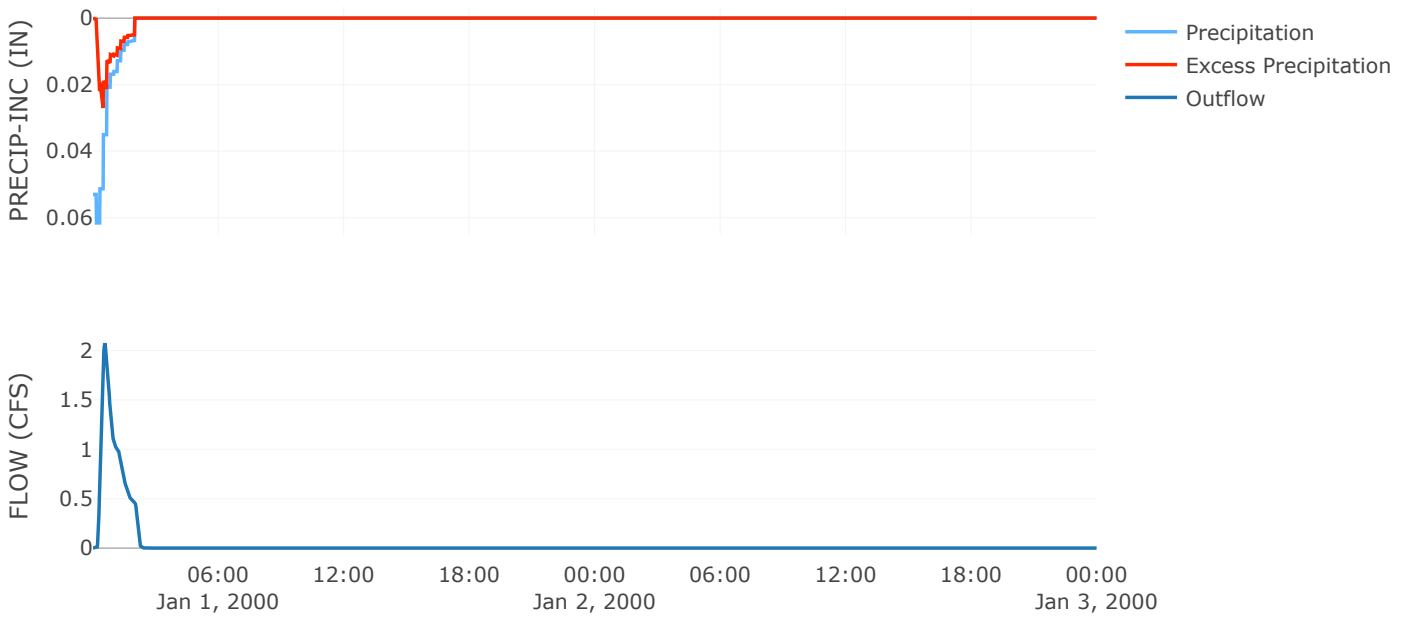
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

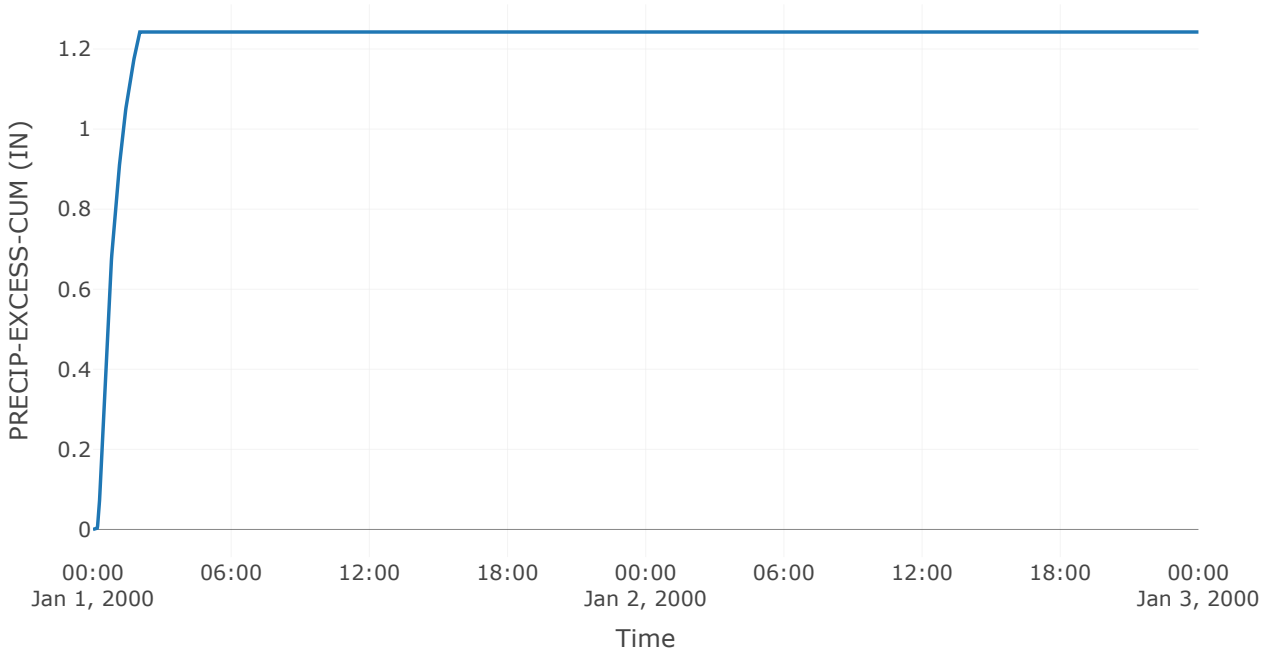
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

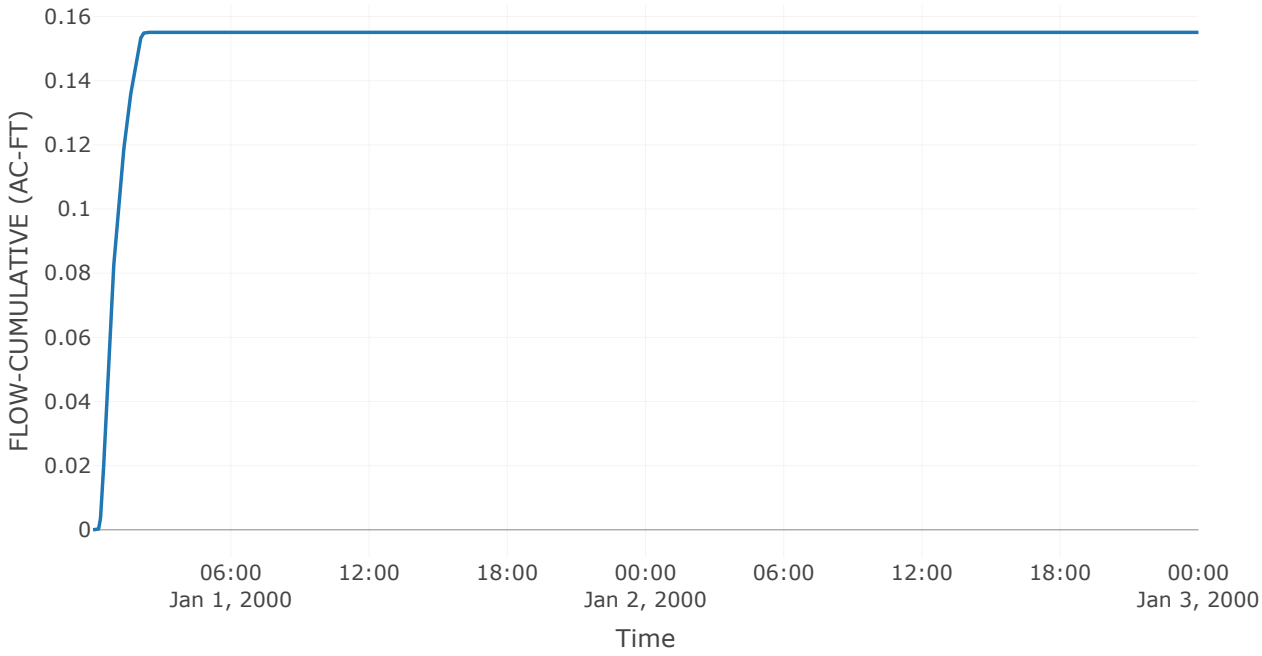
Precipitation and Outflow



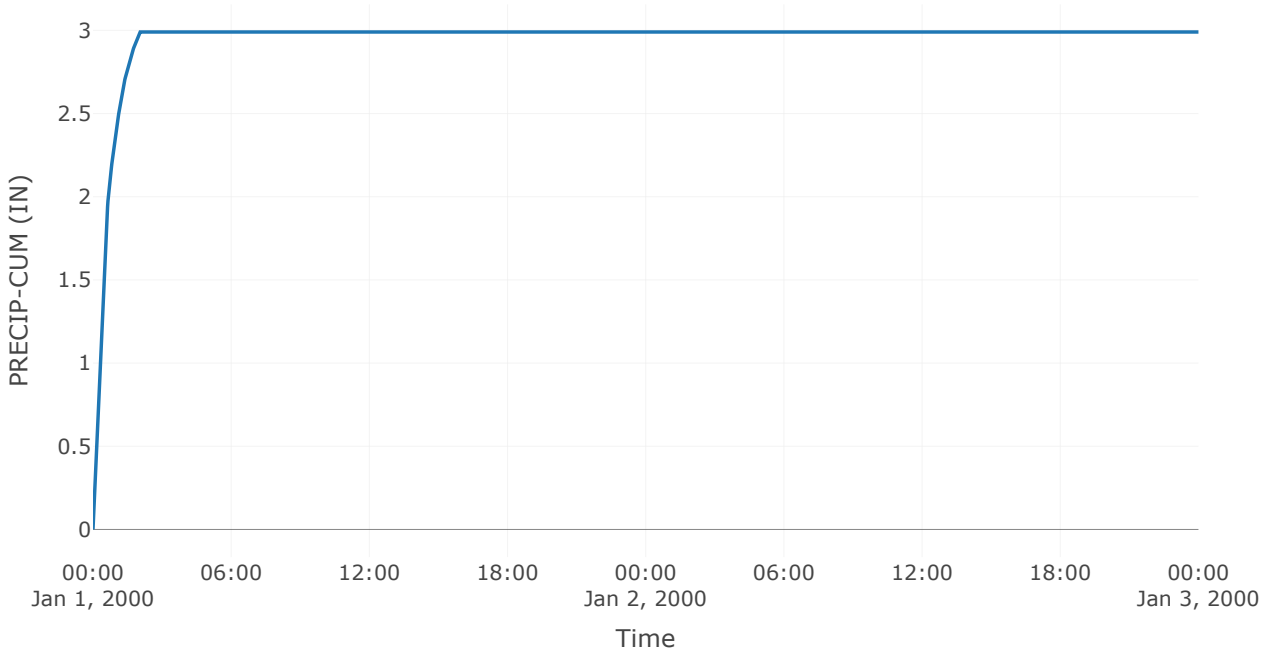
Cumulative Excess Precipitation

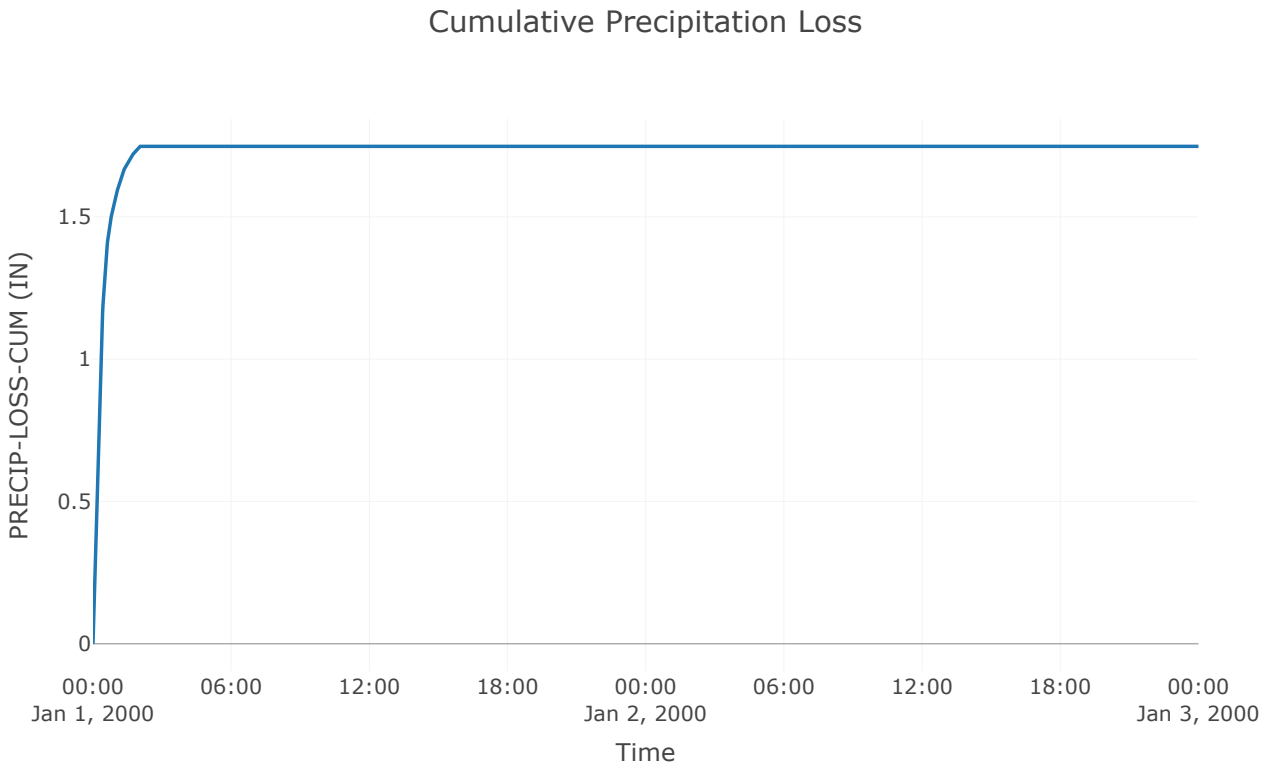


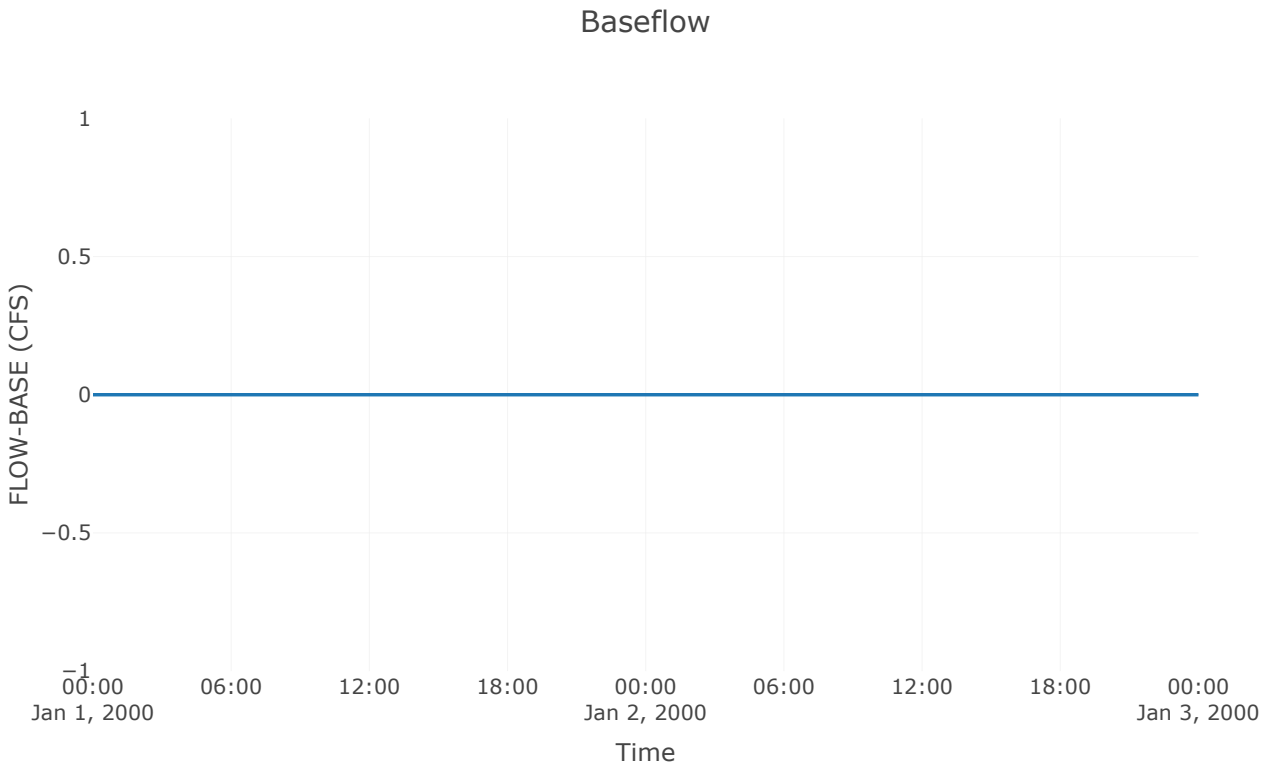
Cumulative Outflow



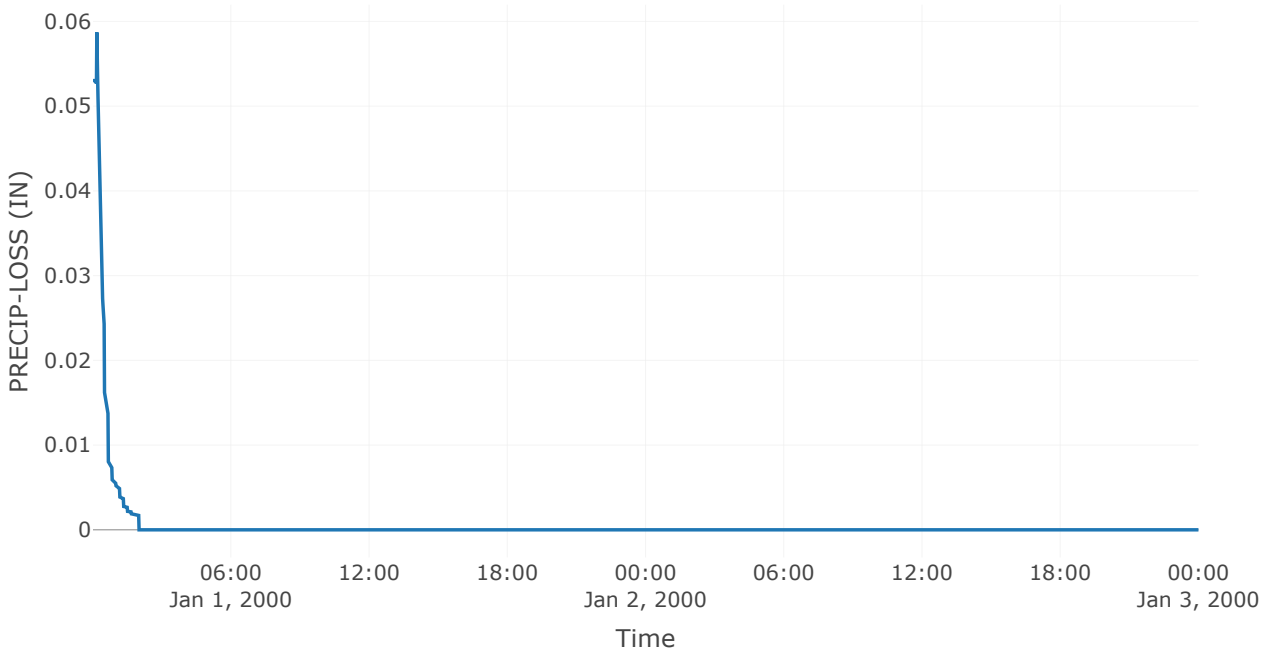
Cumulative Precipitation



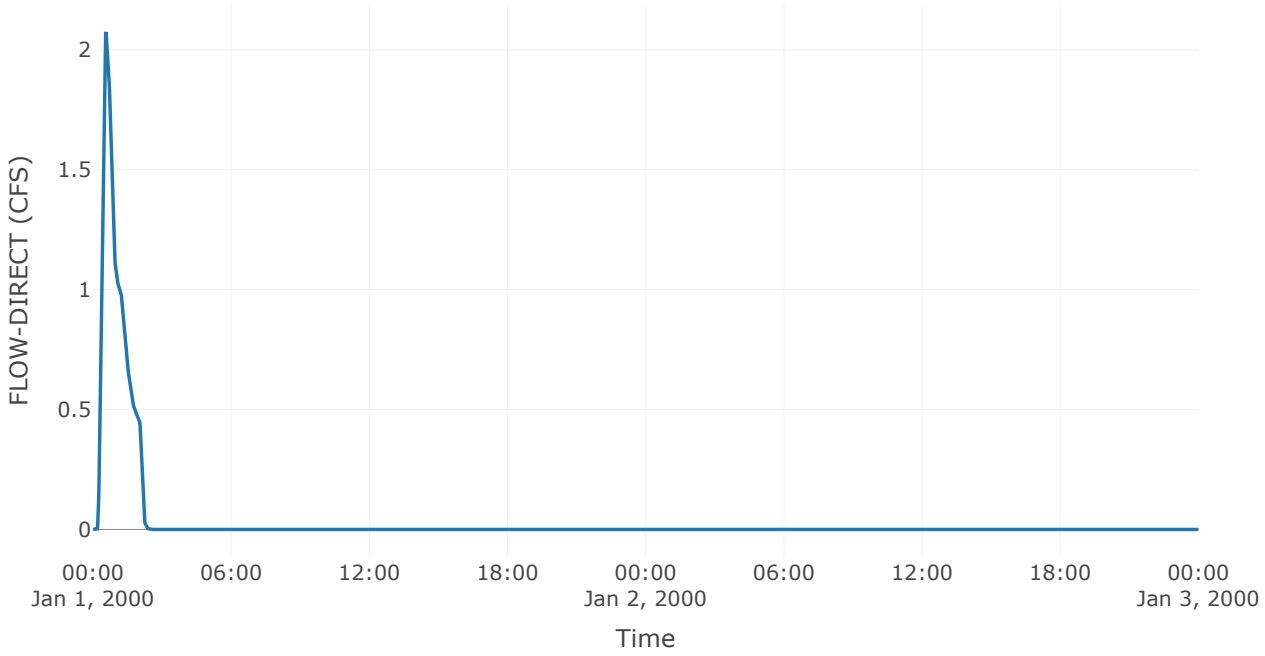

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

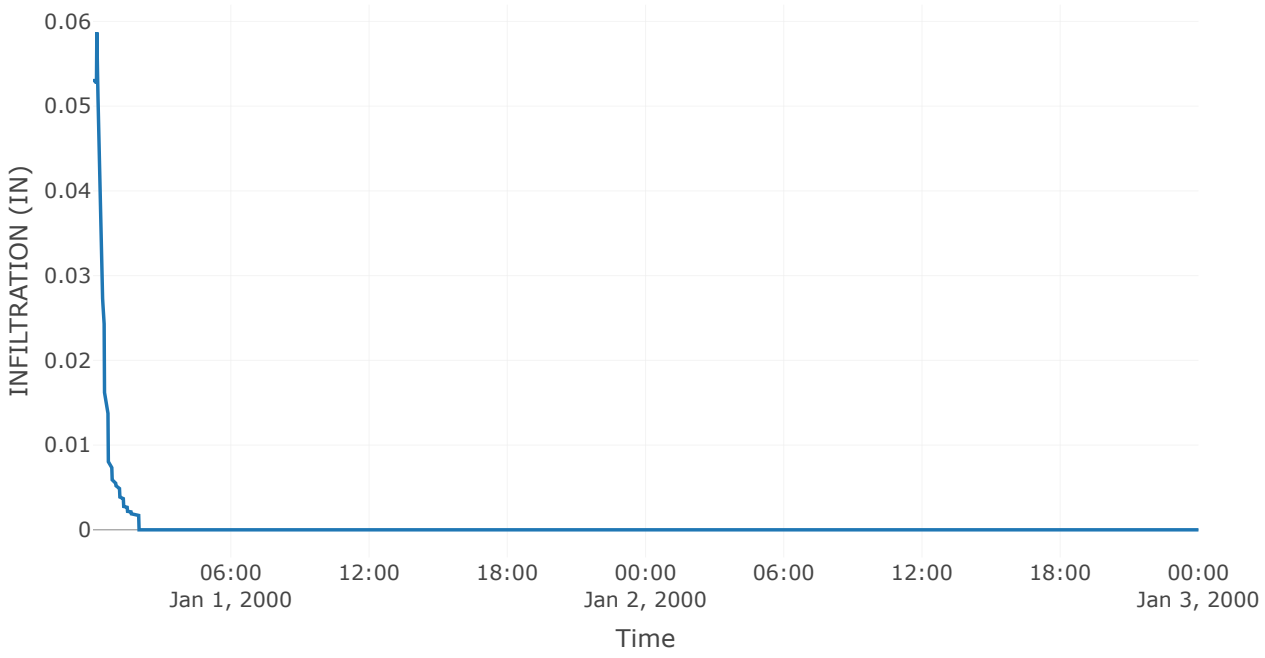

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

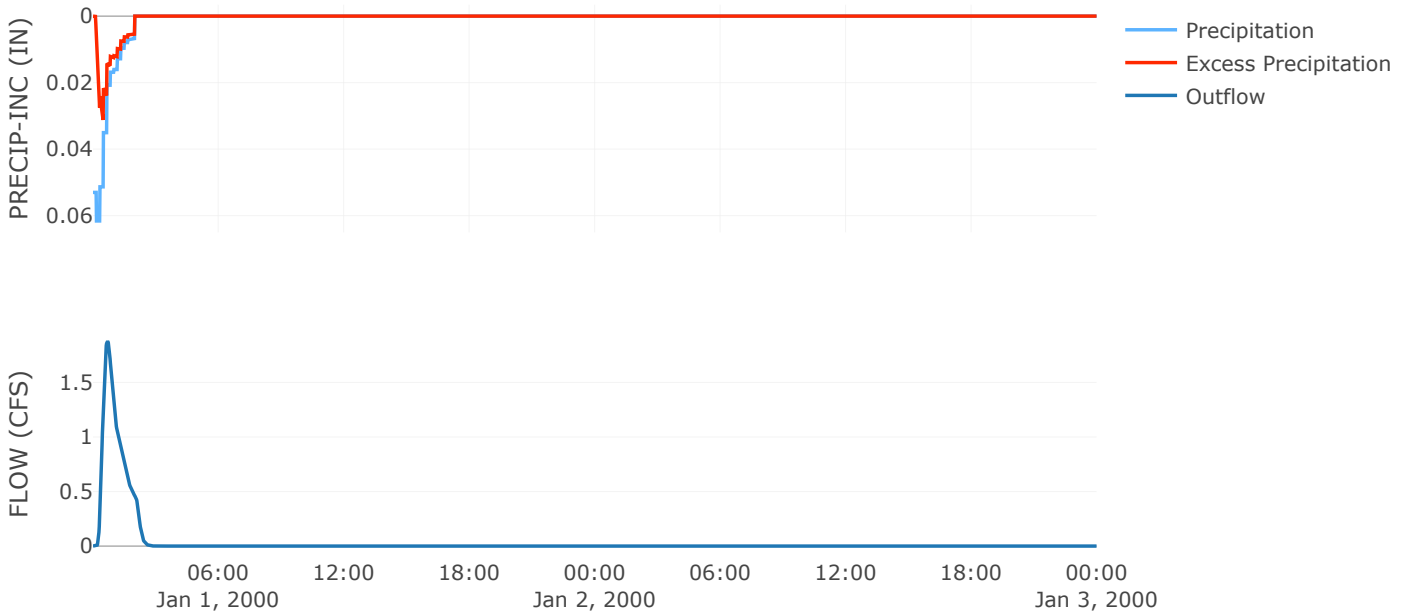
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

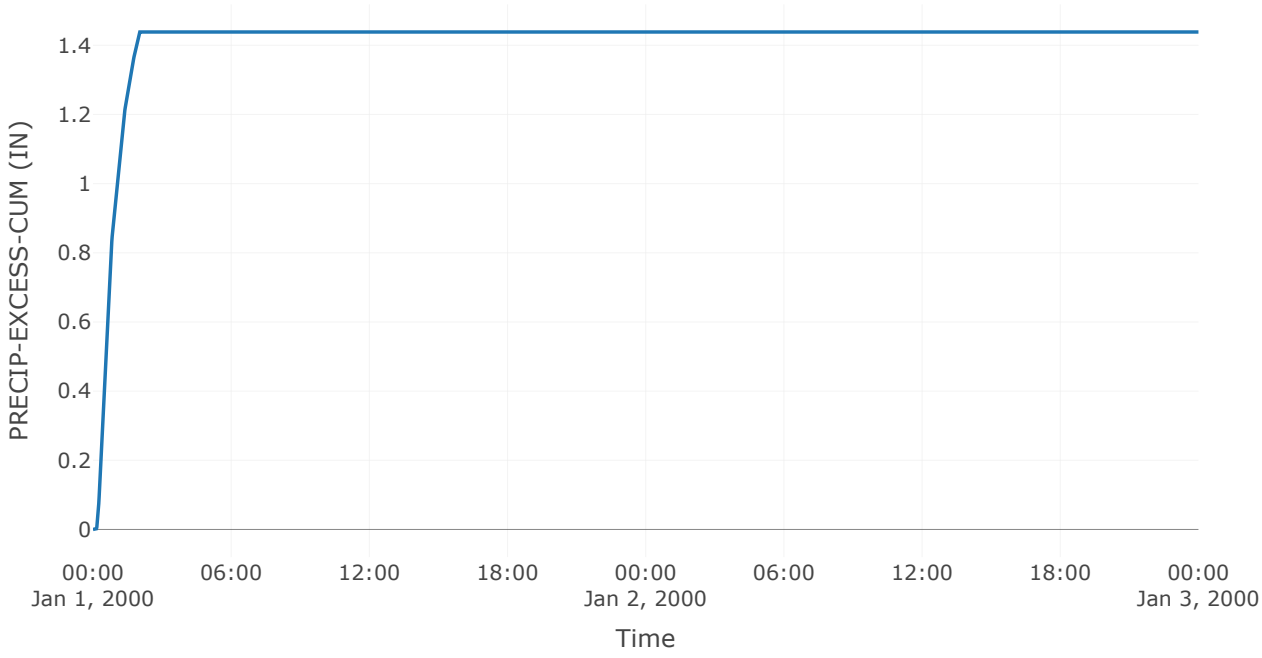
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

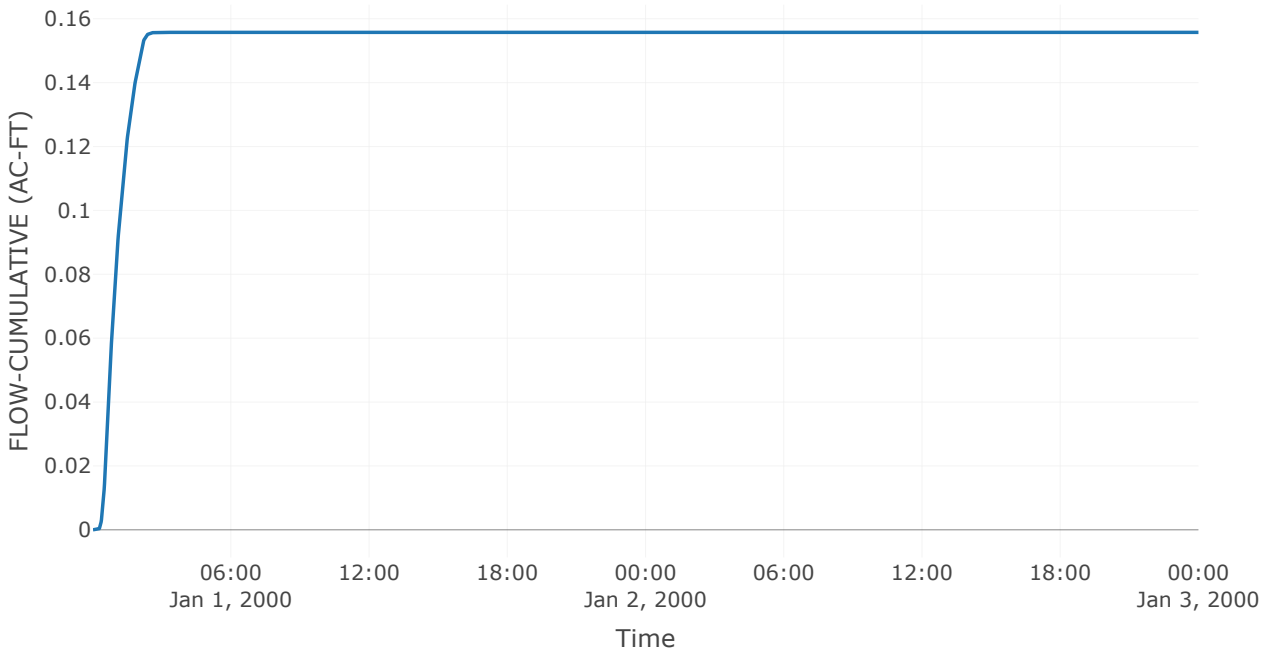
Precipitation and Outflow



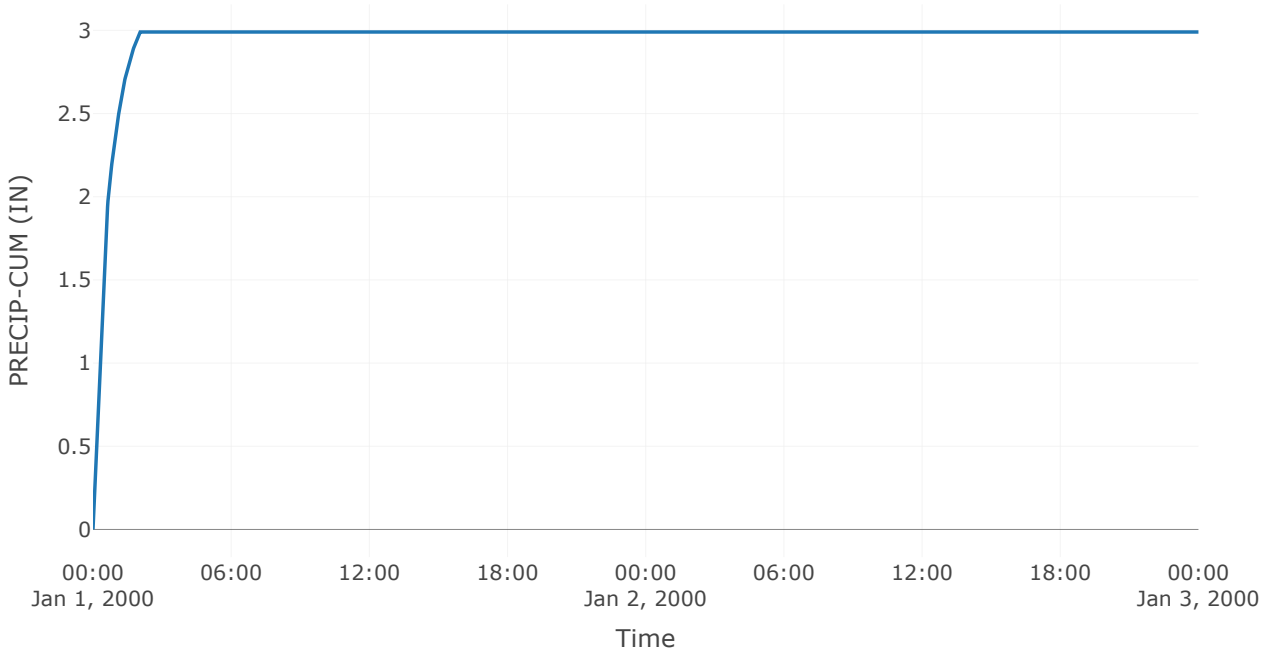
Cumulative Excess Precipitation

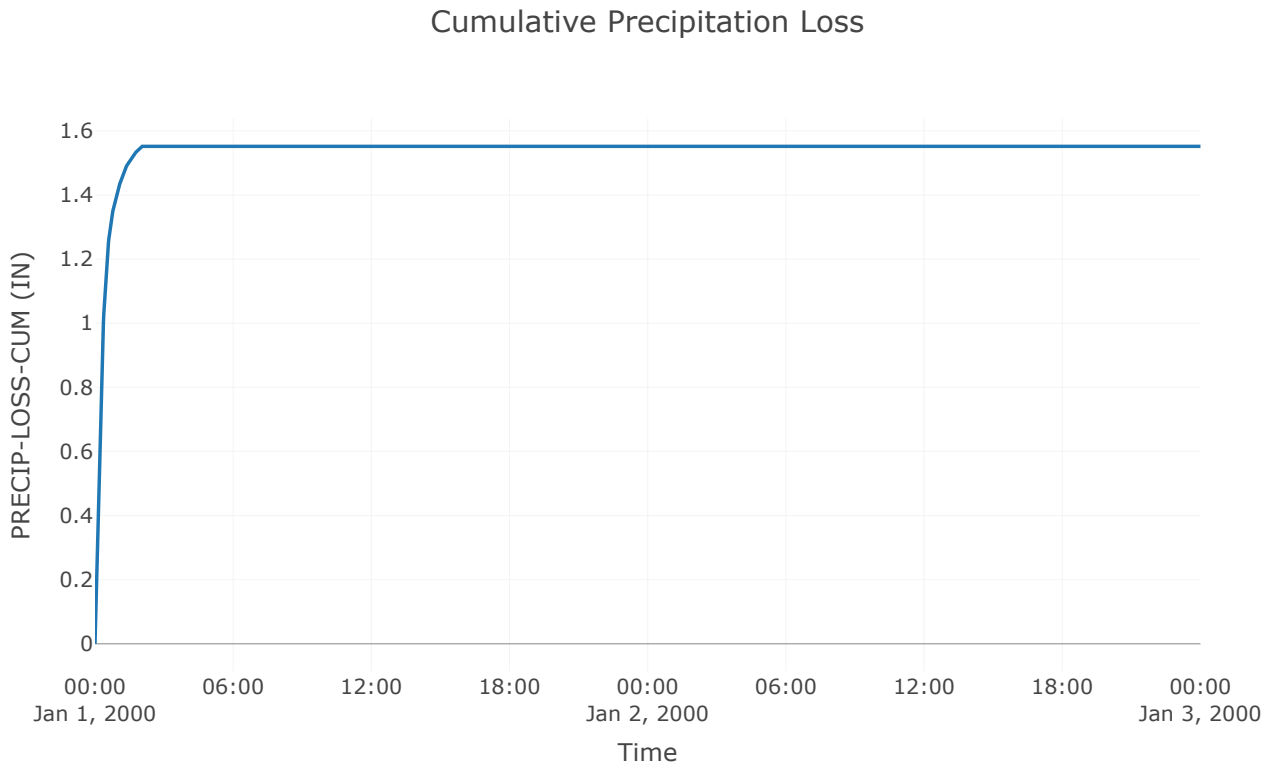


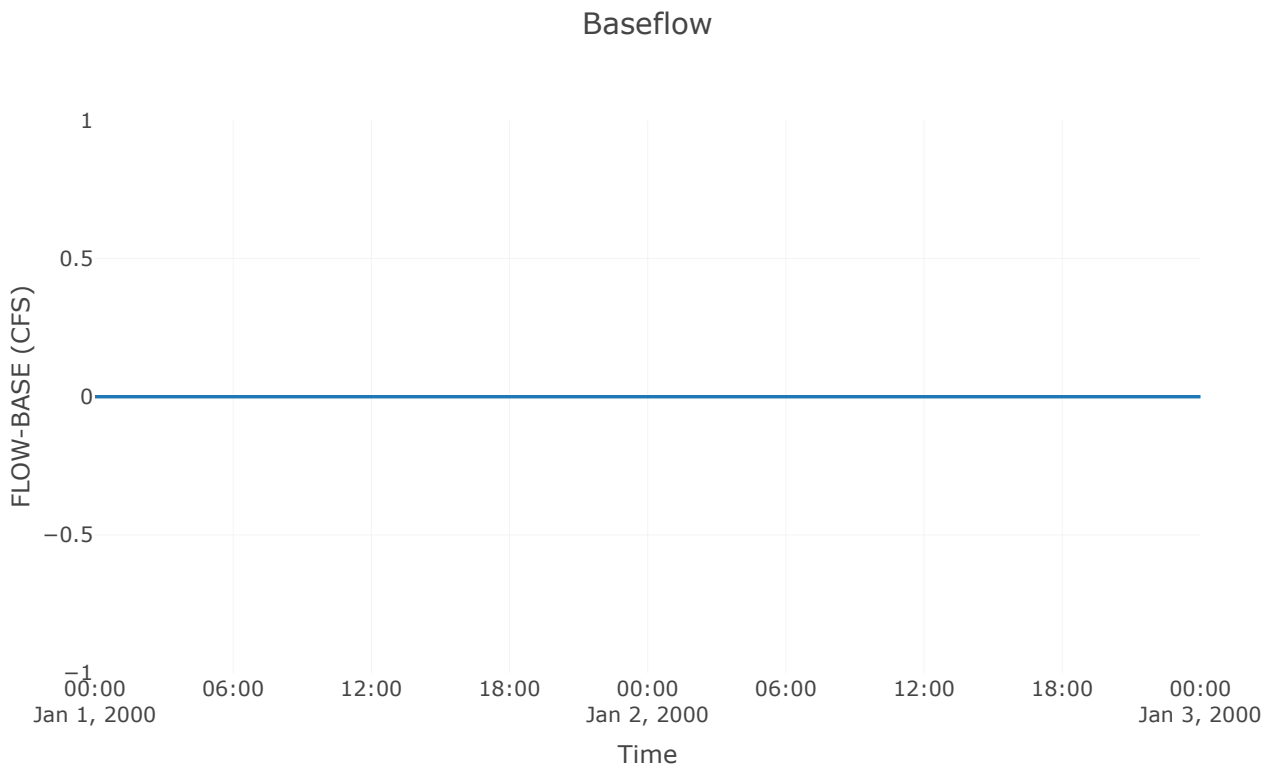
Cumulative Outflow

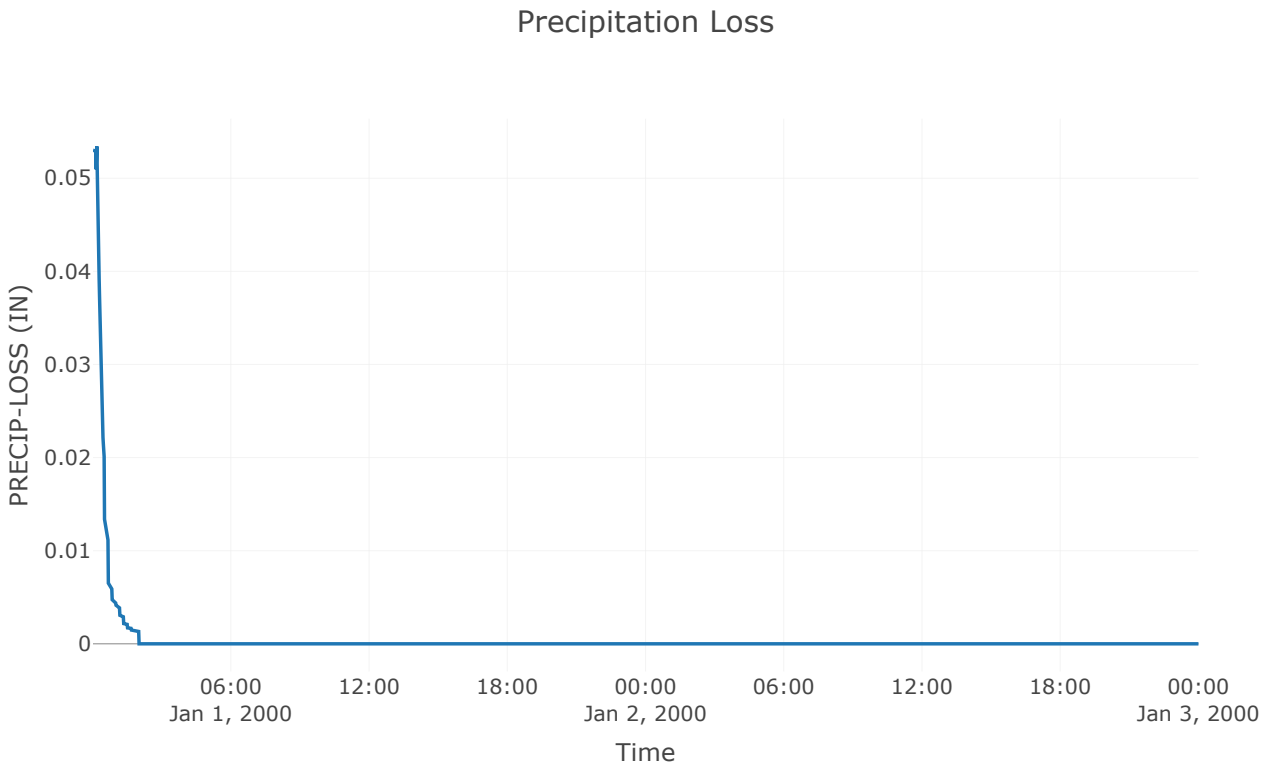


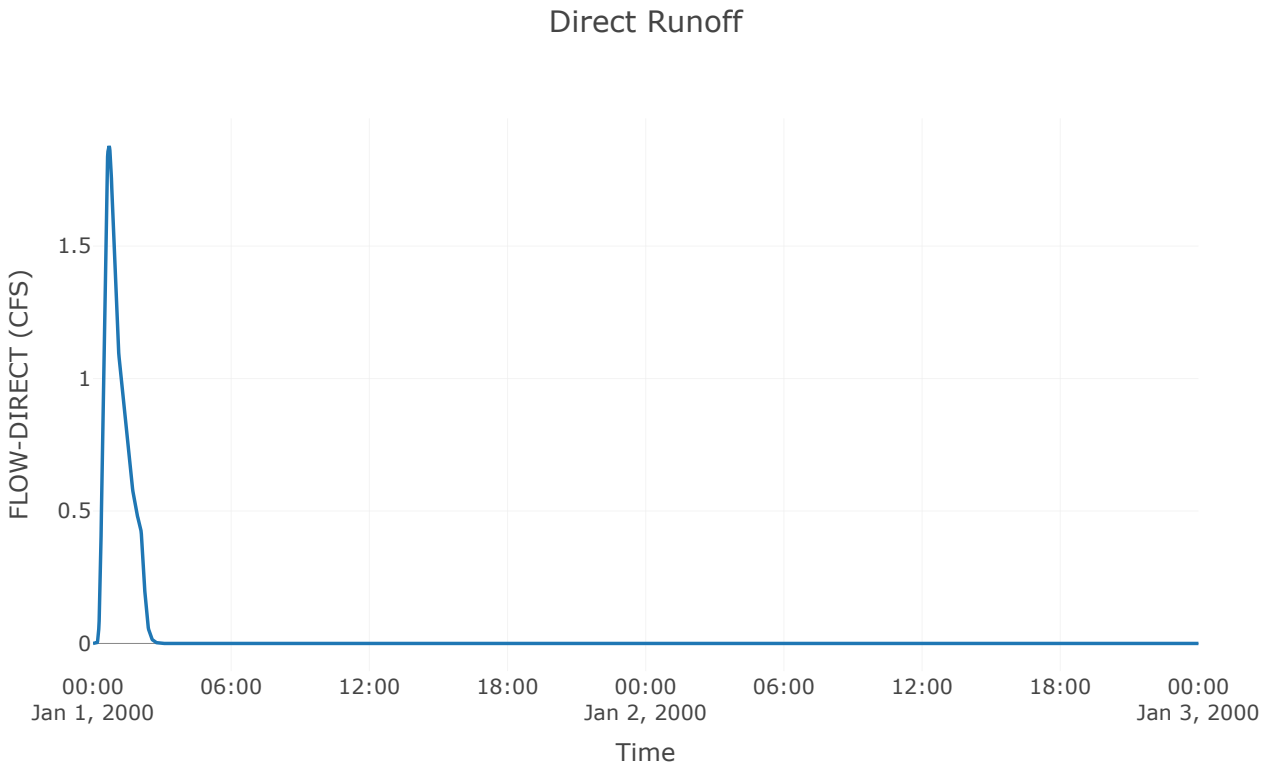
Cumulative Precipitation

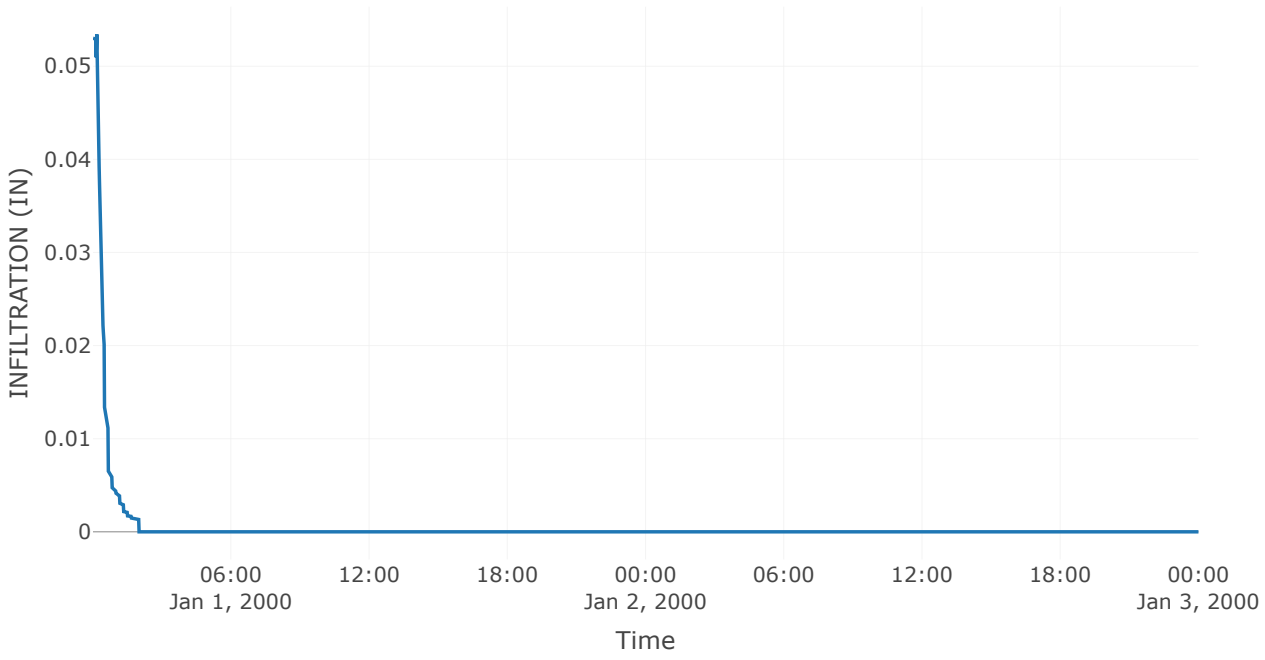



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

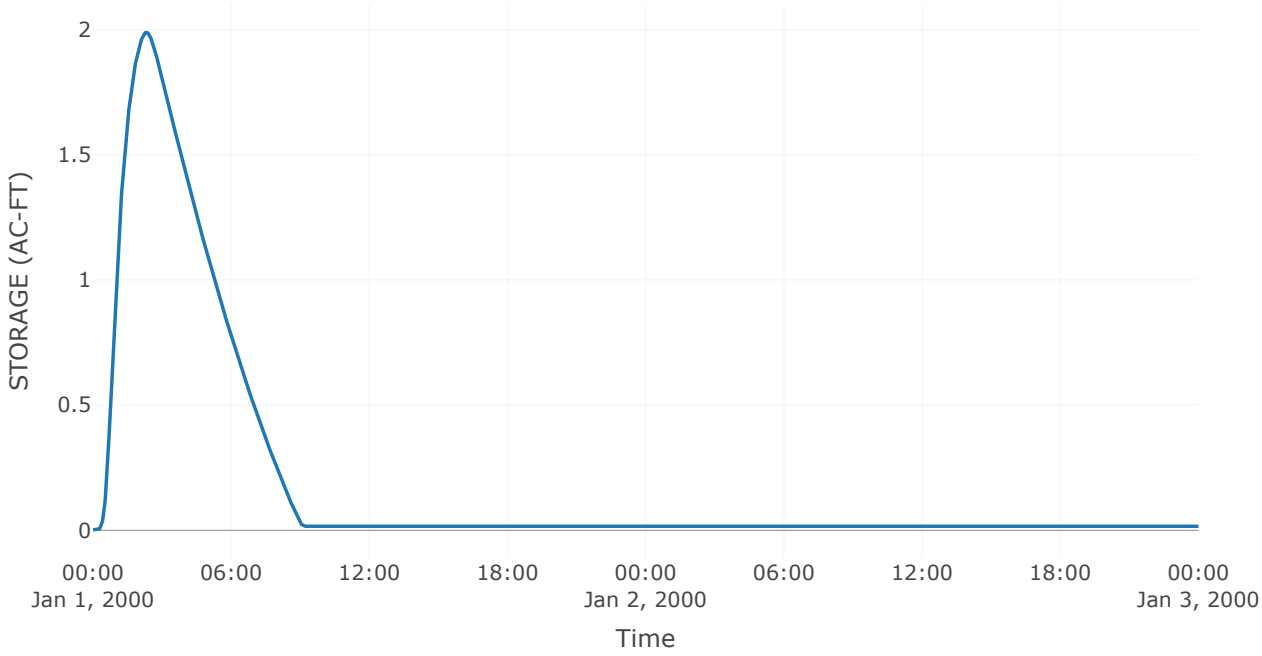

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

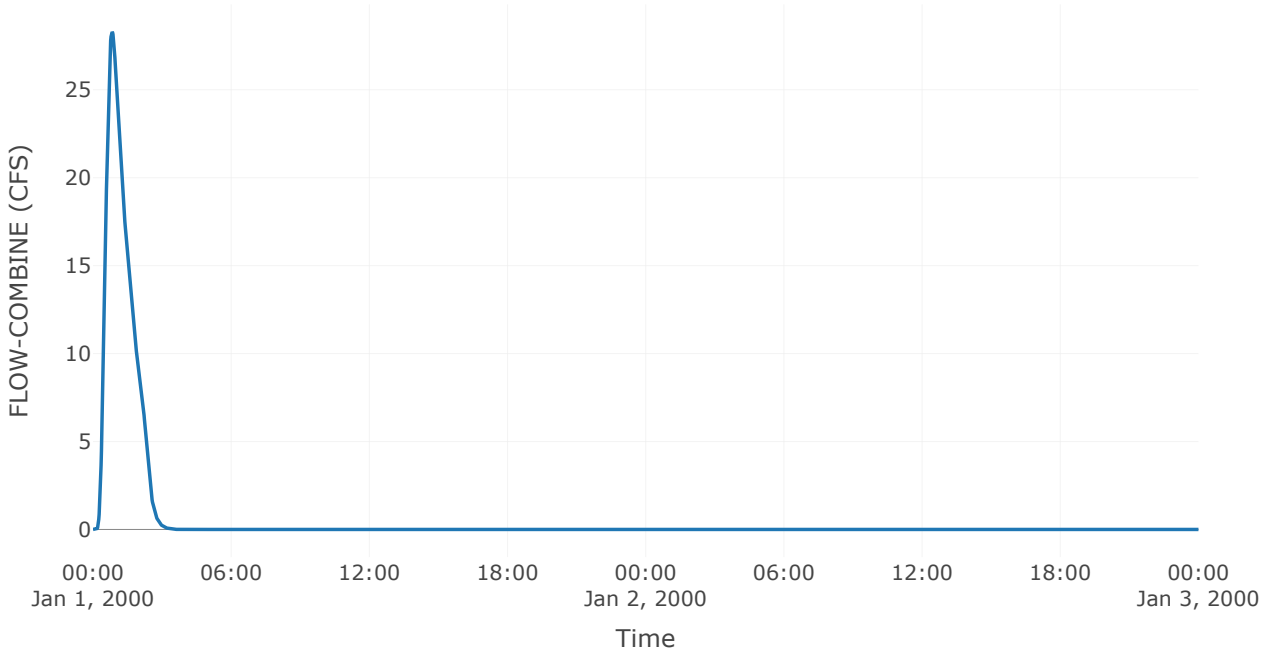
Downstream : Basin 2

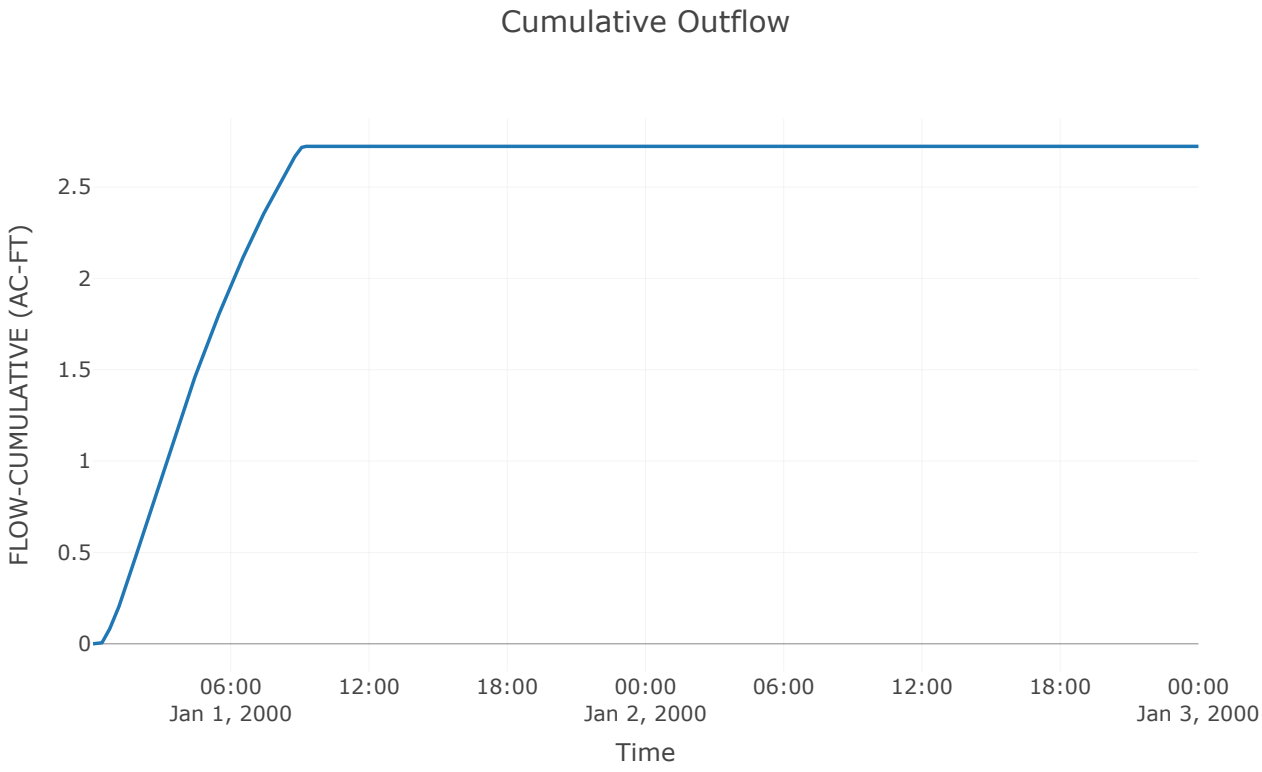
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

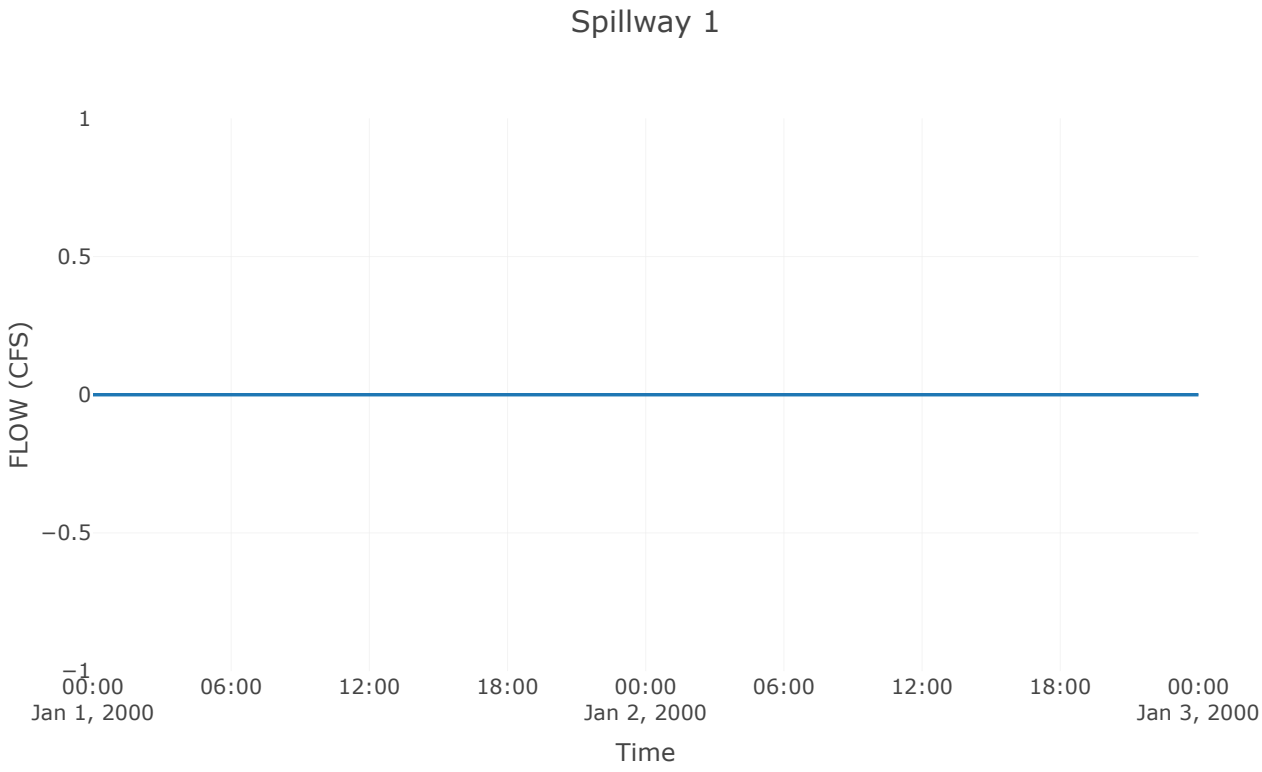
Storage



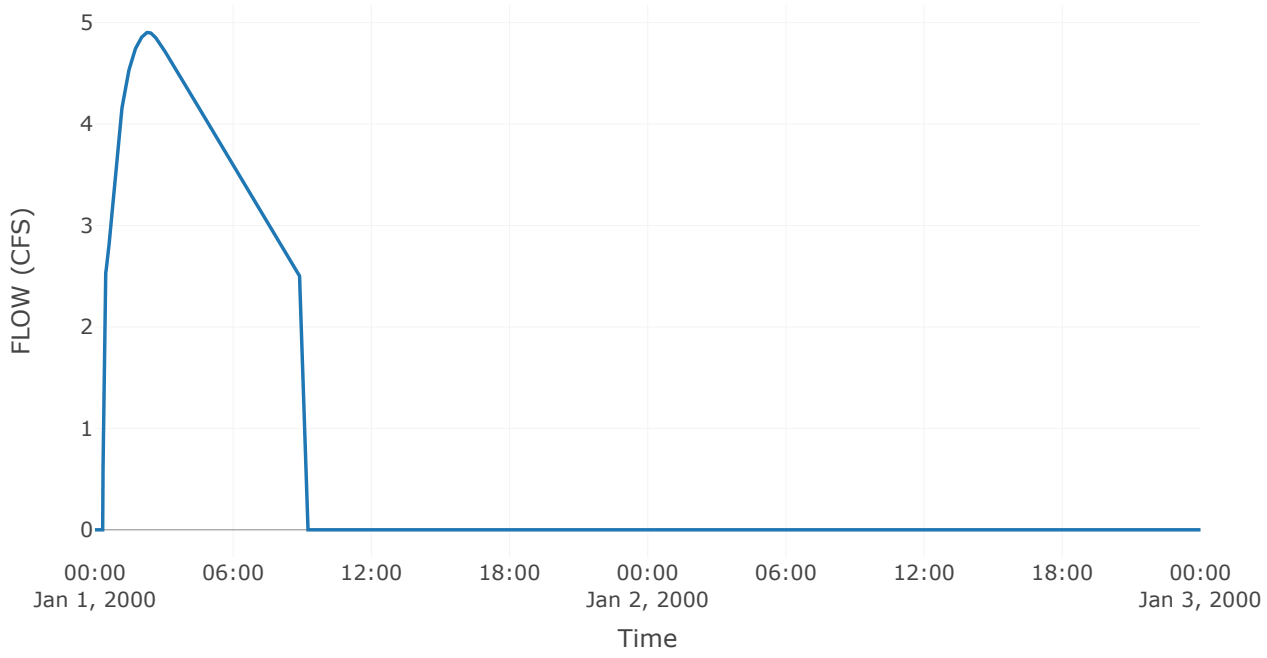
Combined Inflow



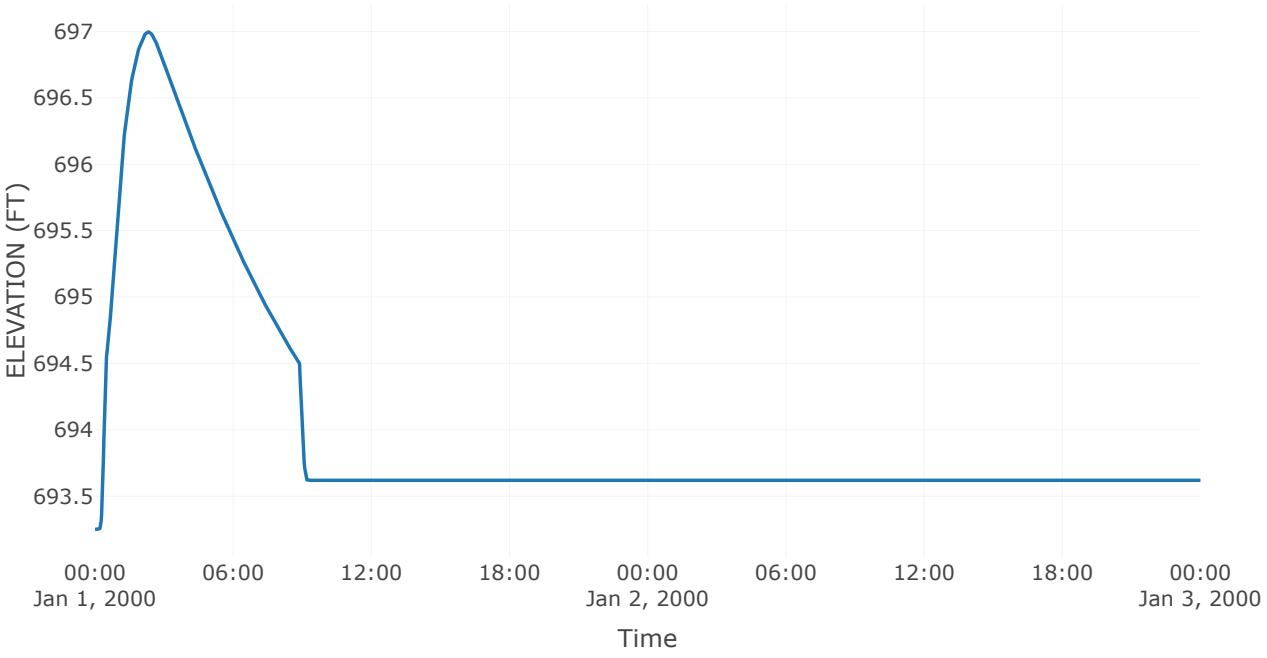

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

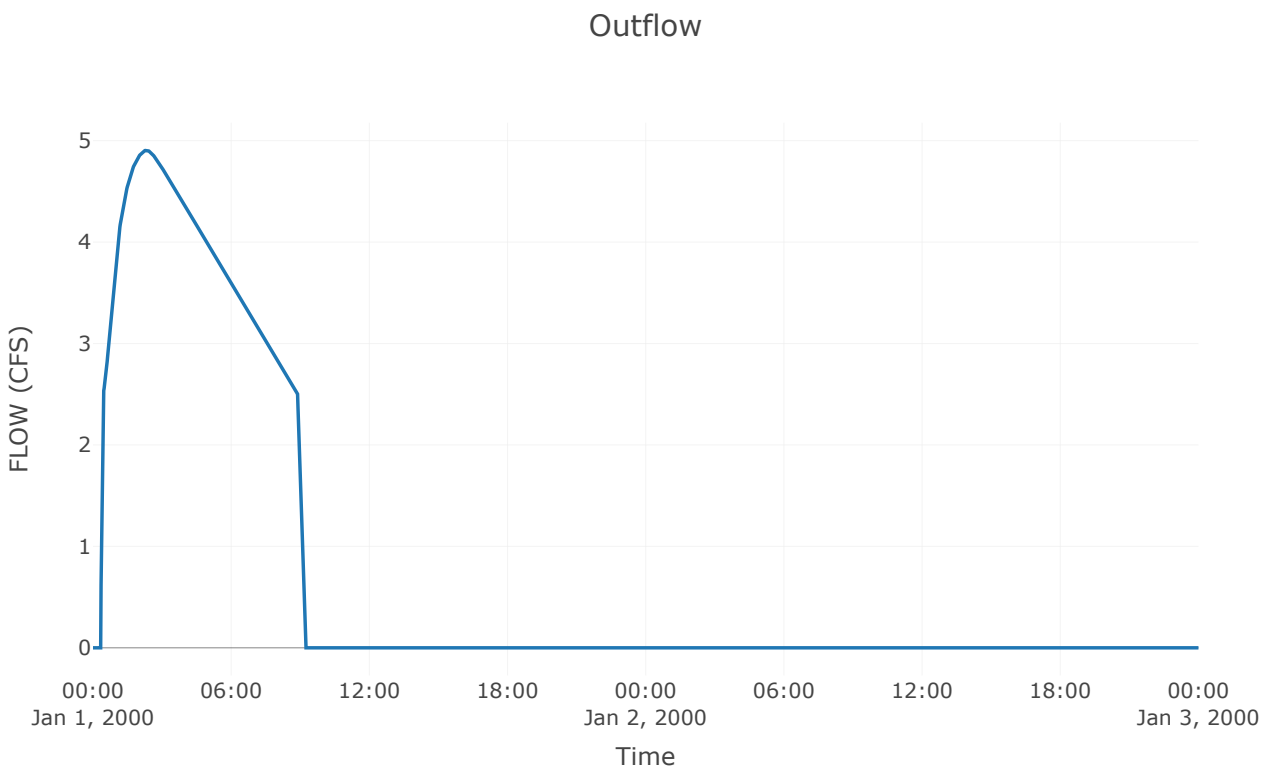

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

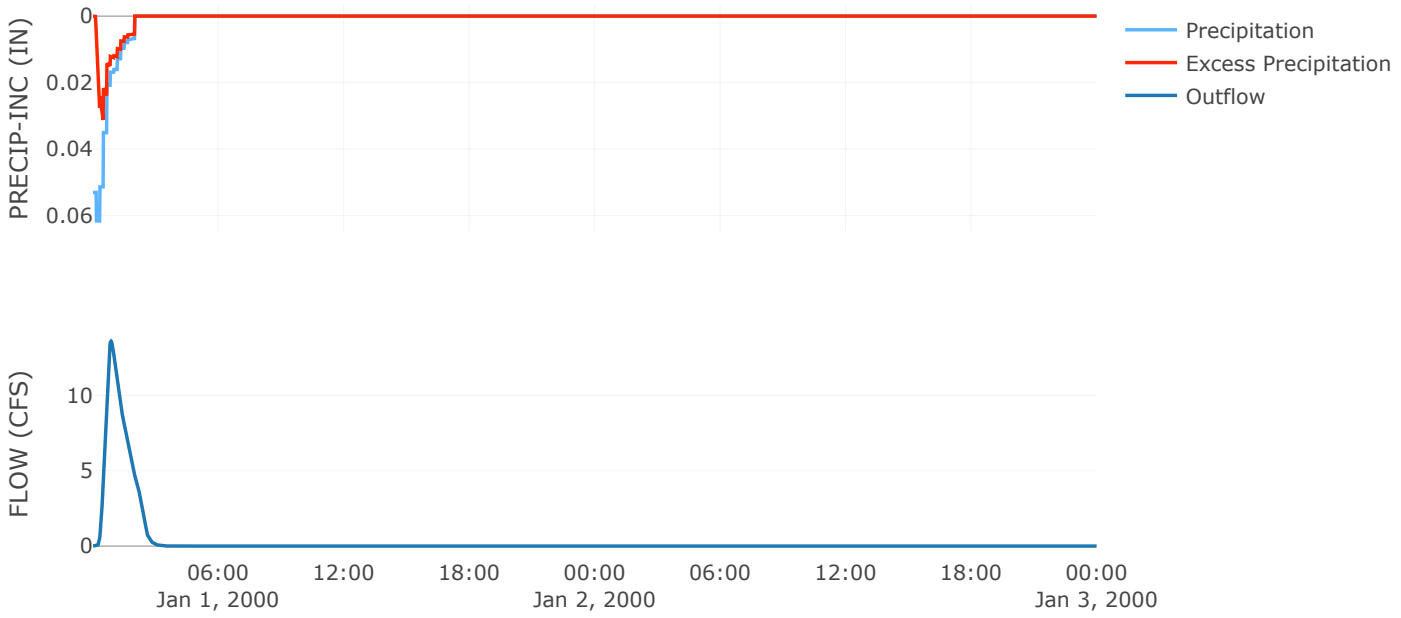
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

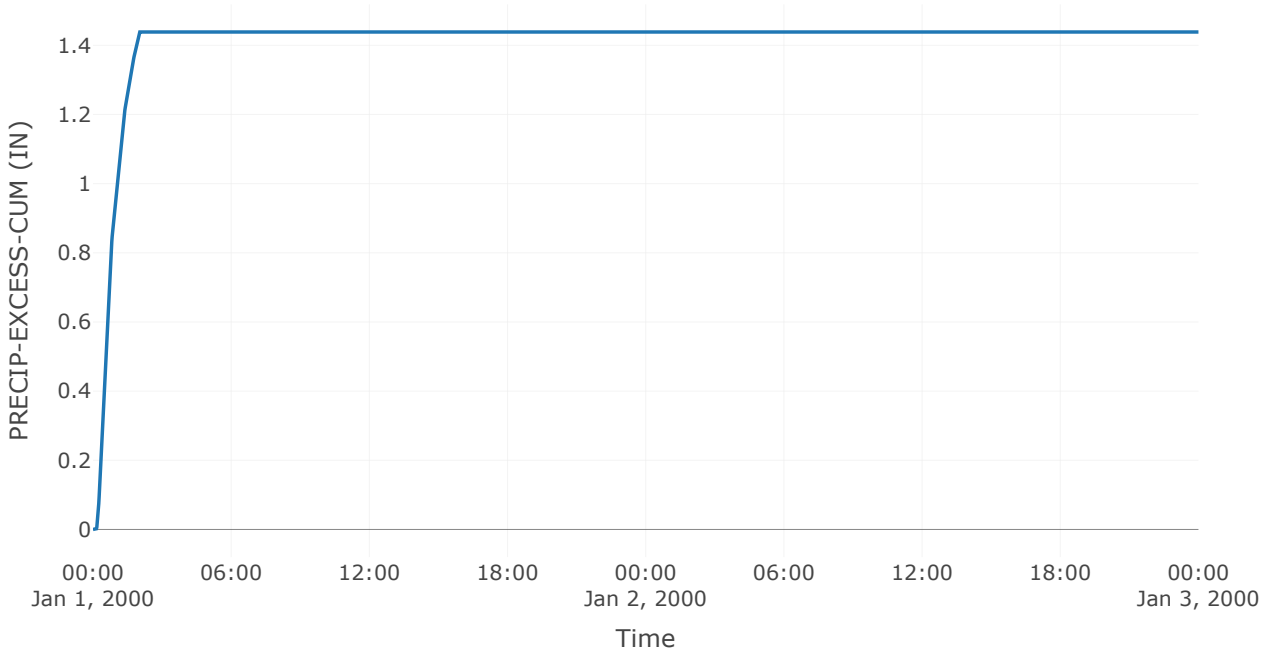
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

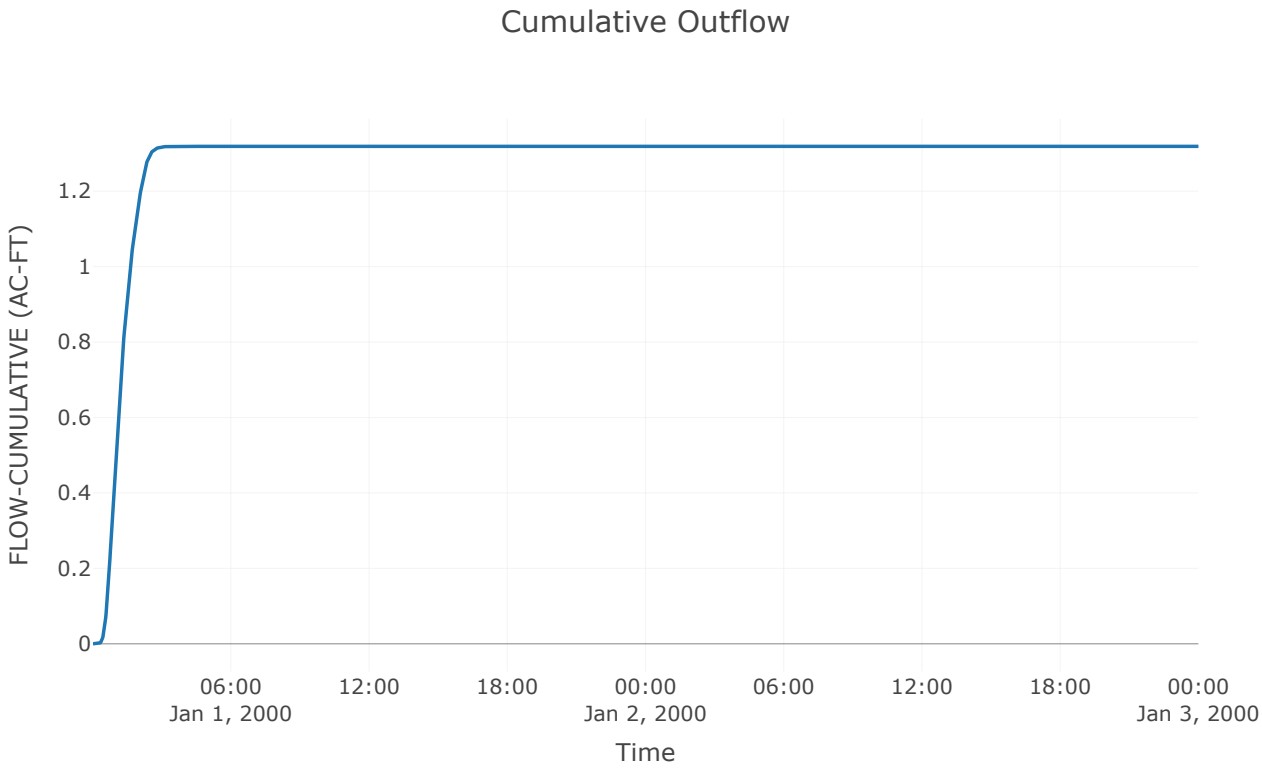
Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

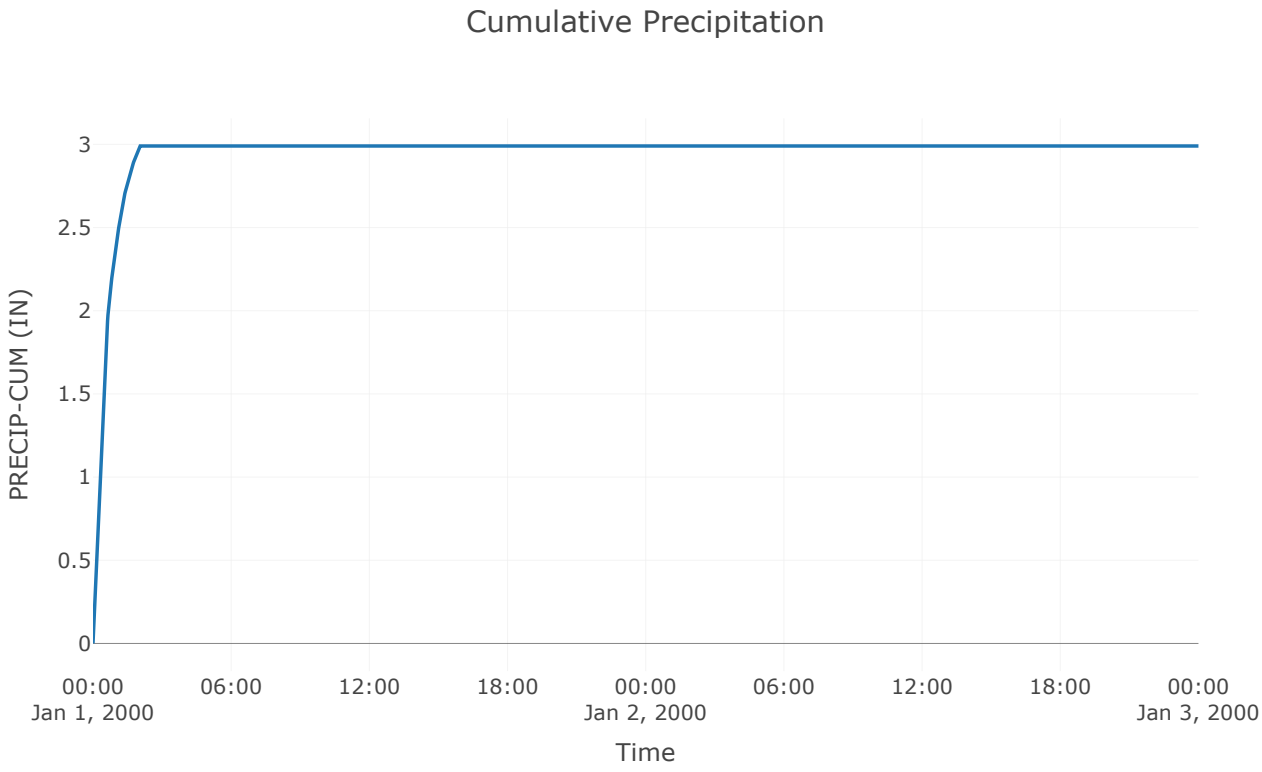
Precipitation and Outflow

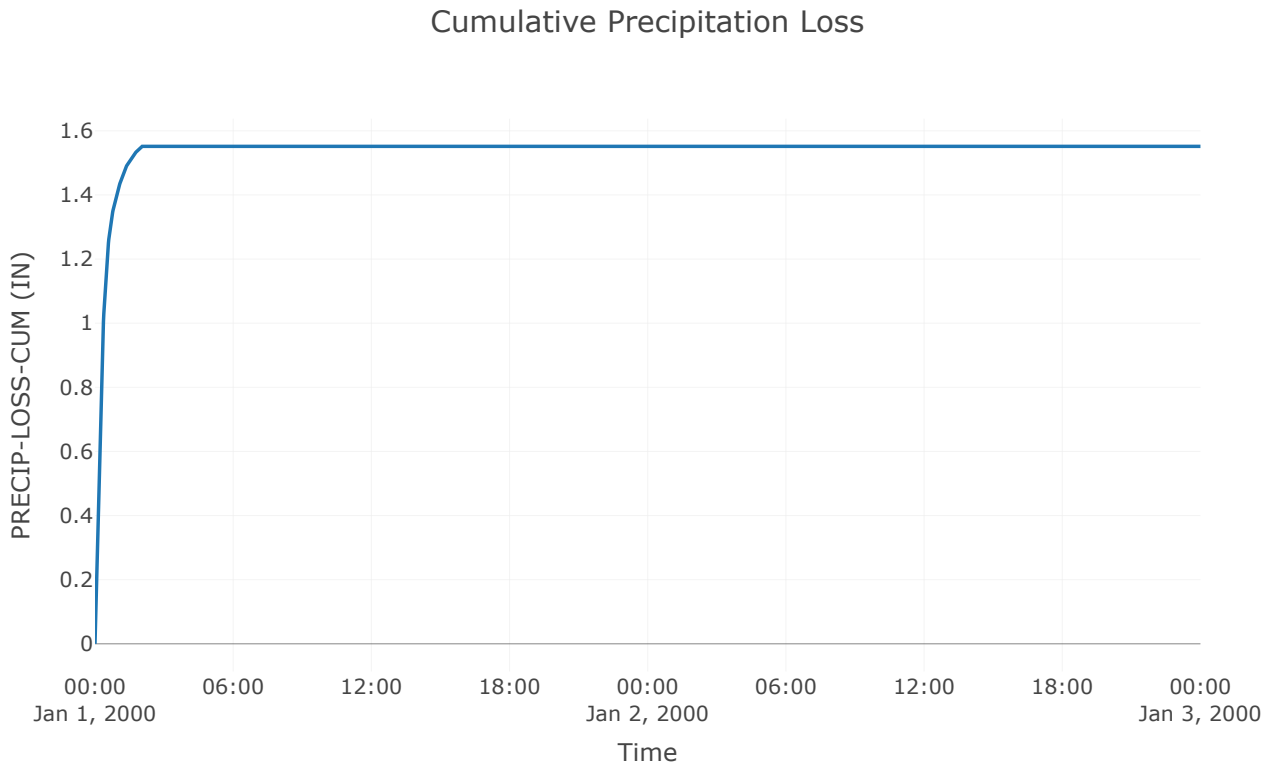


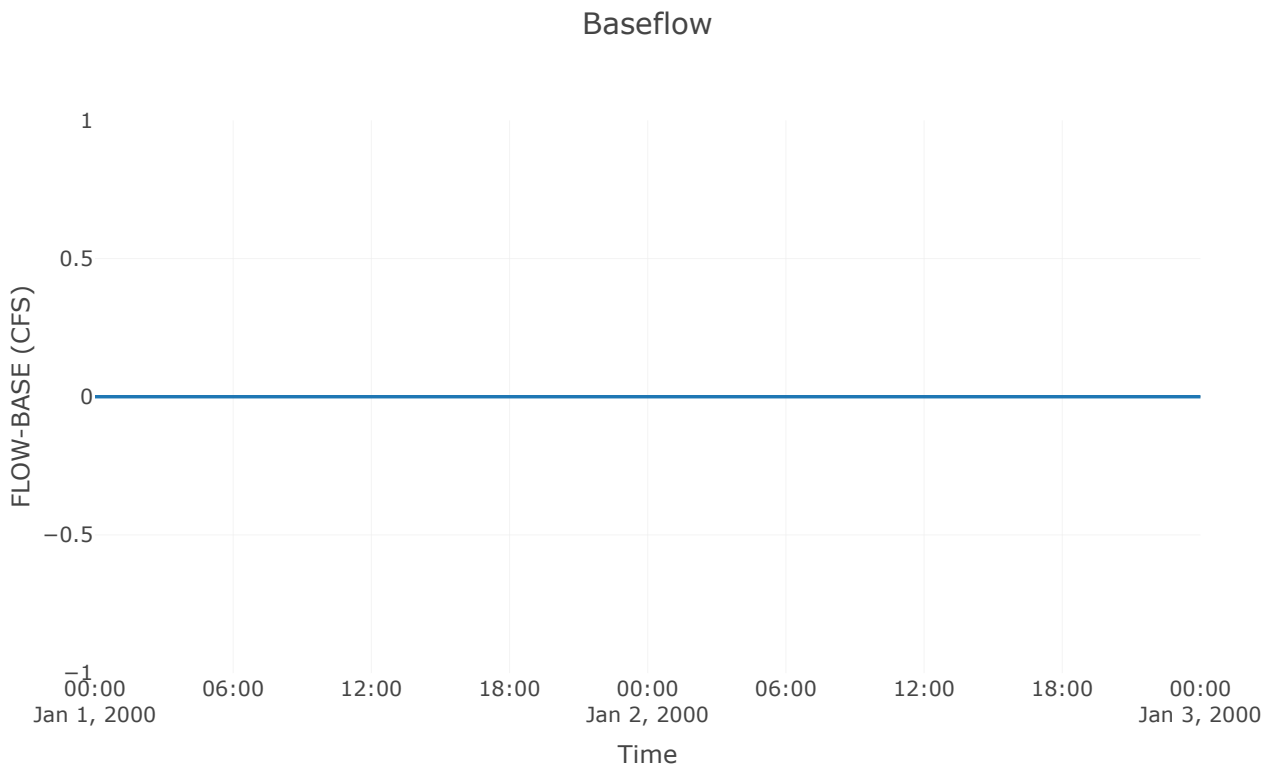
Cumulative Excess Precipitation

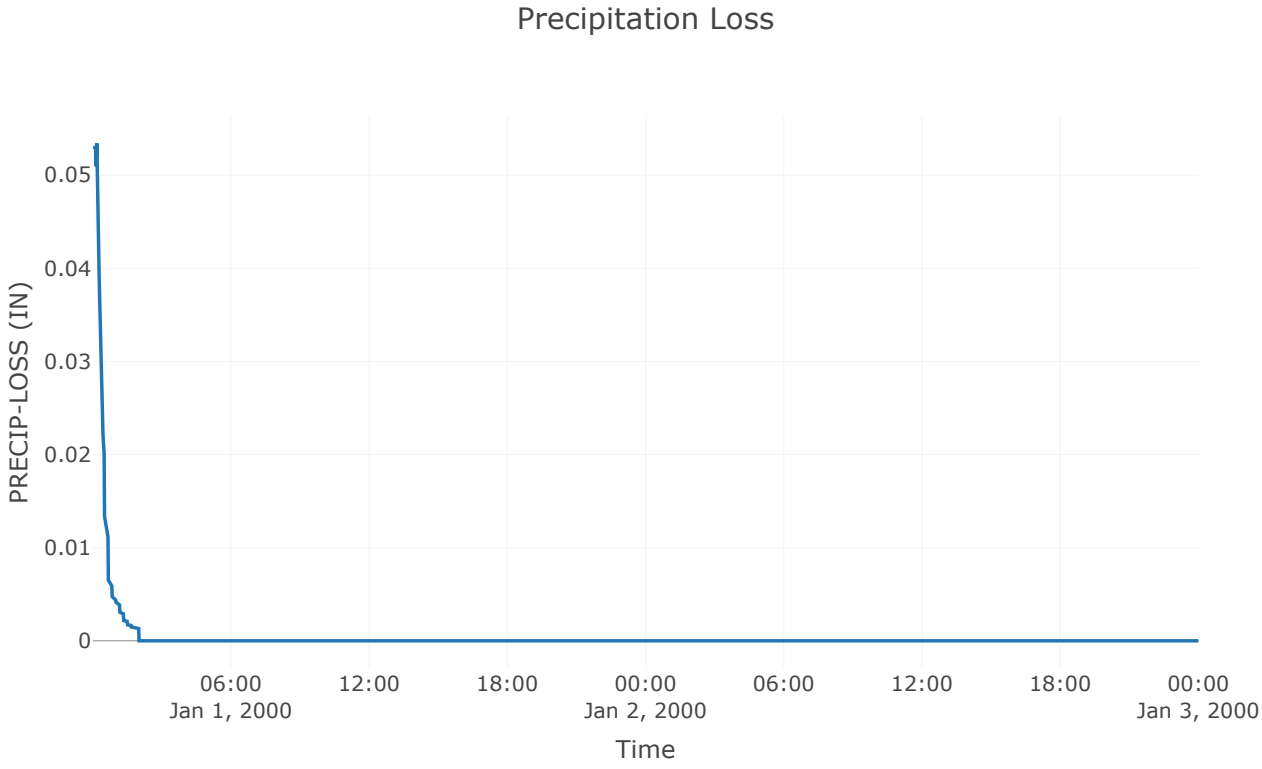


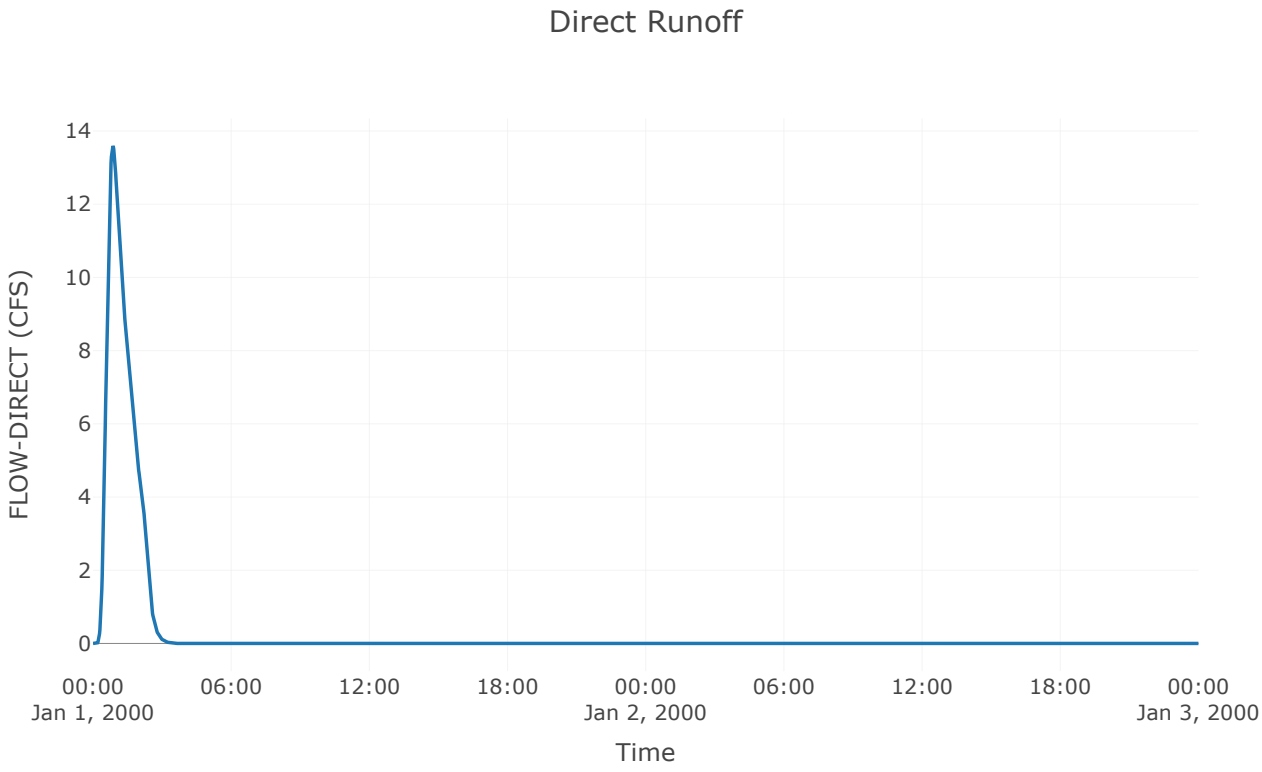

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

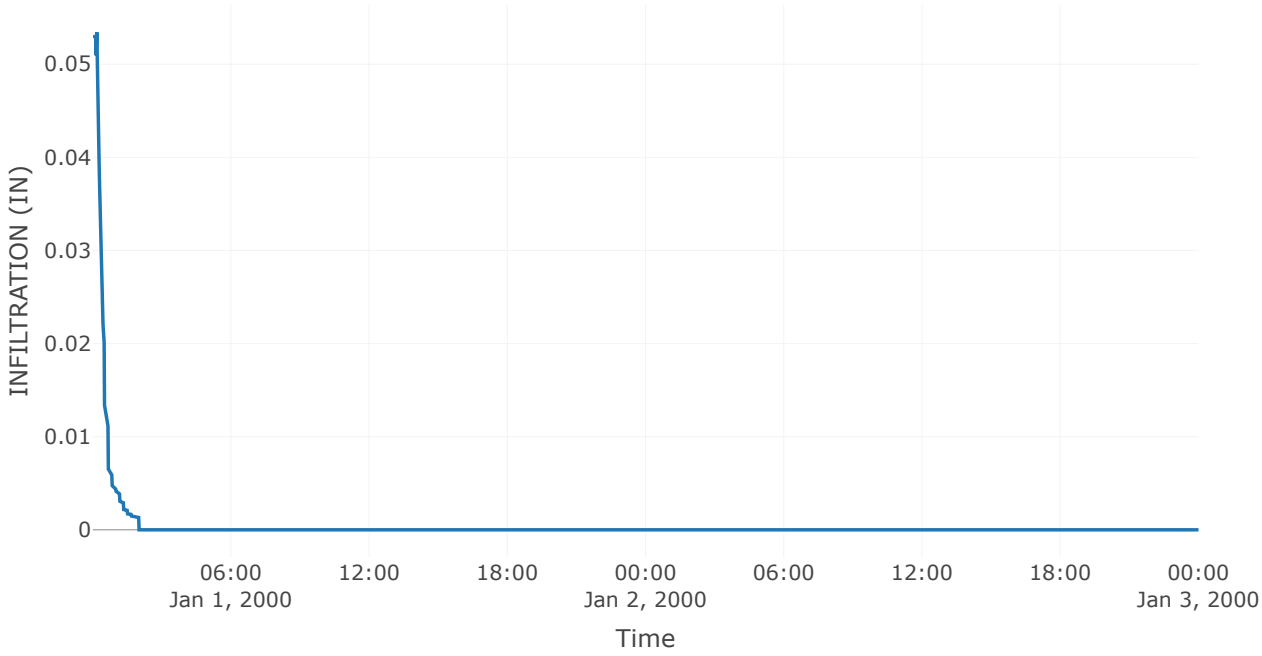

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

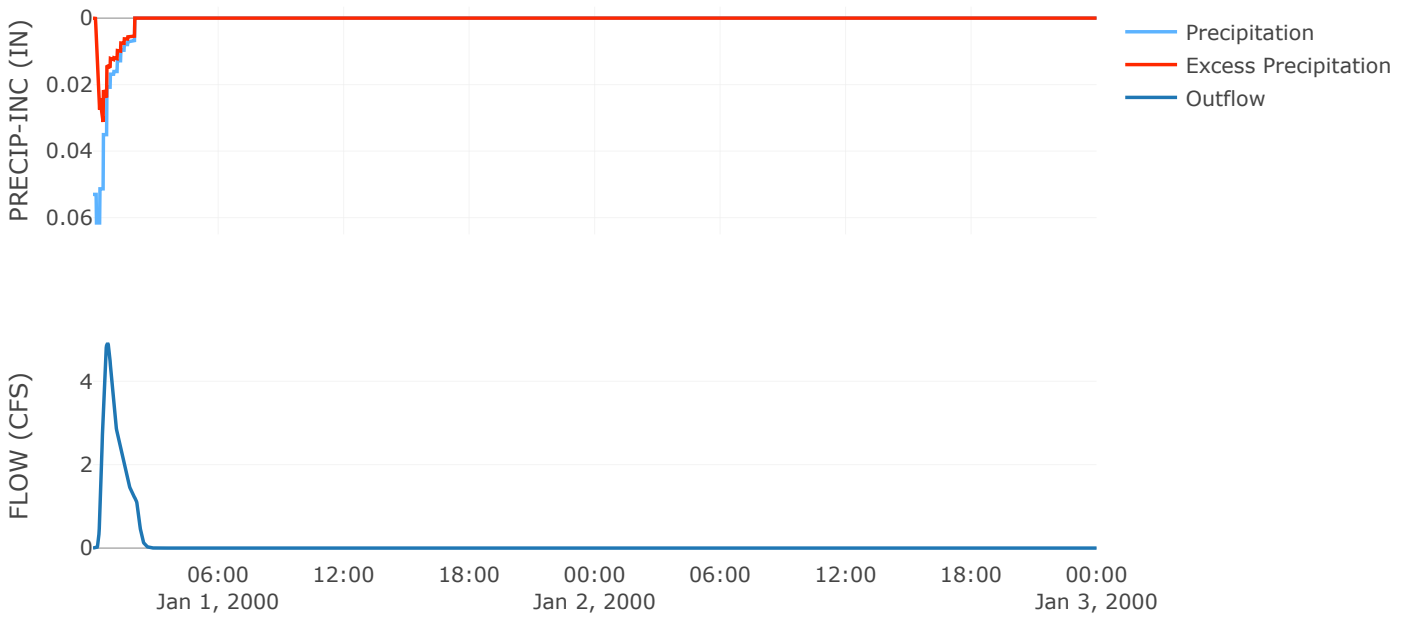
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

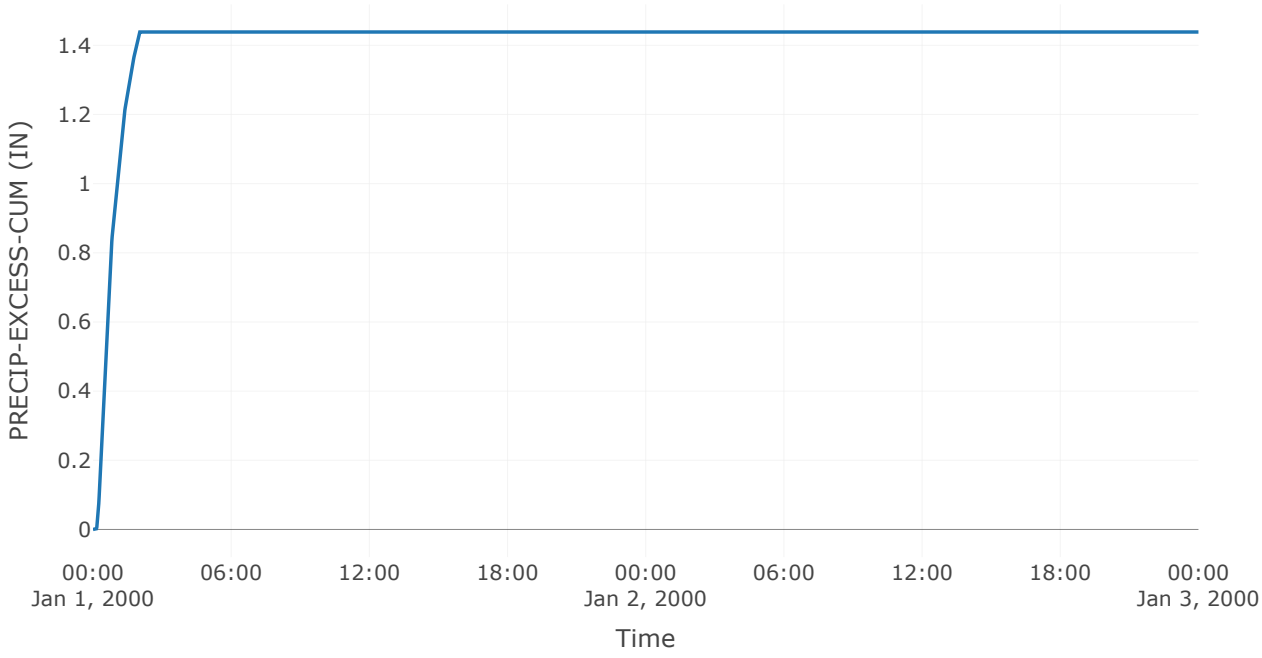
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

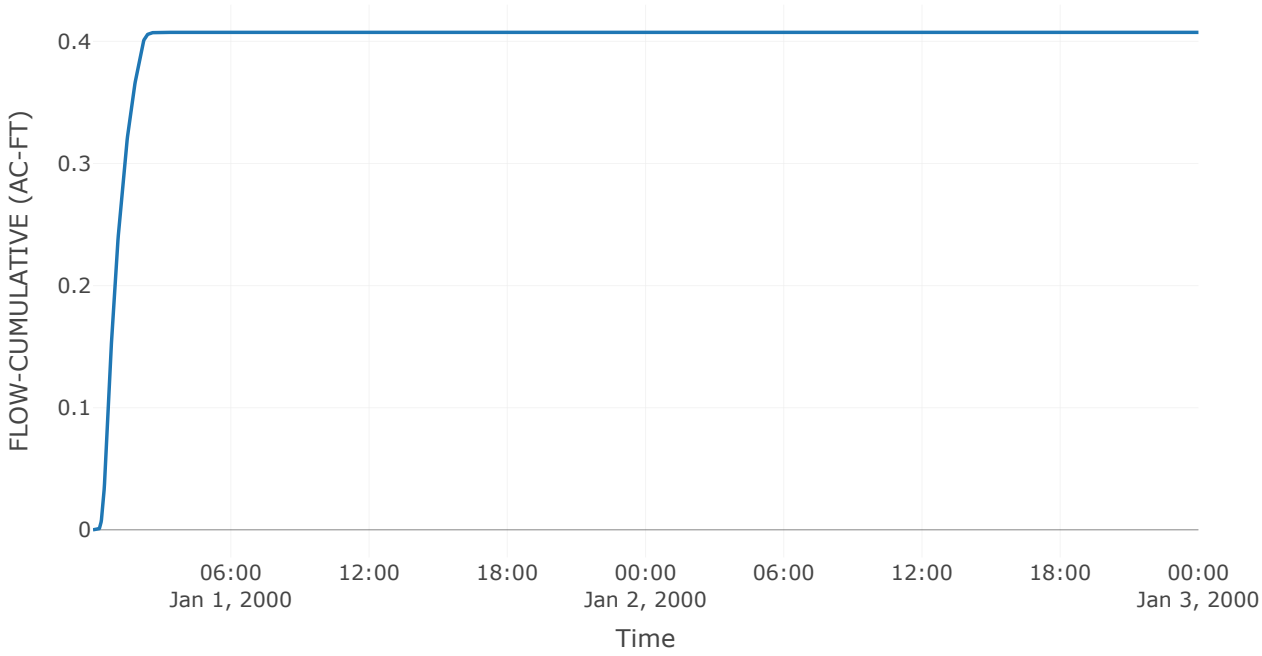
Precipitation and Outflow



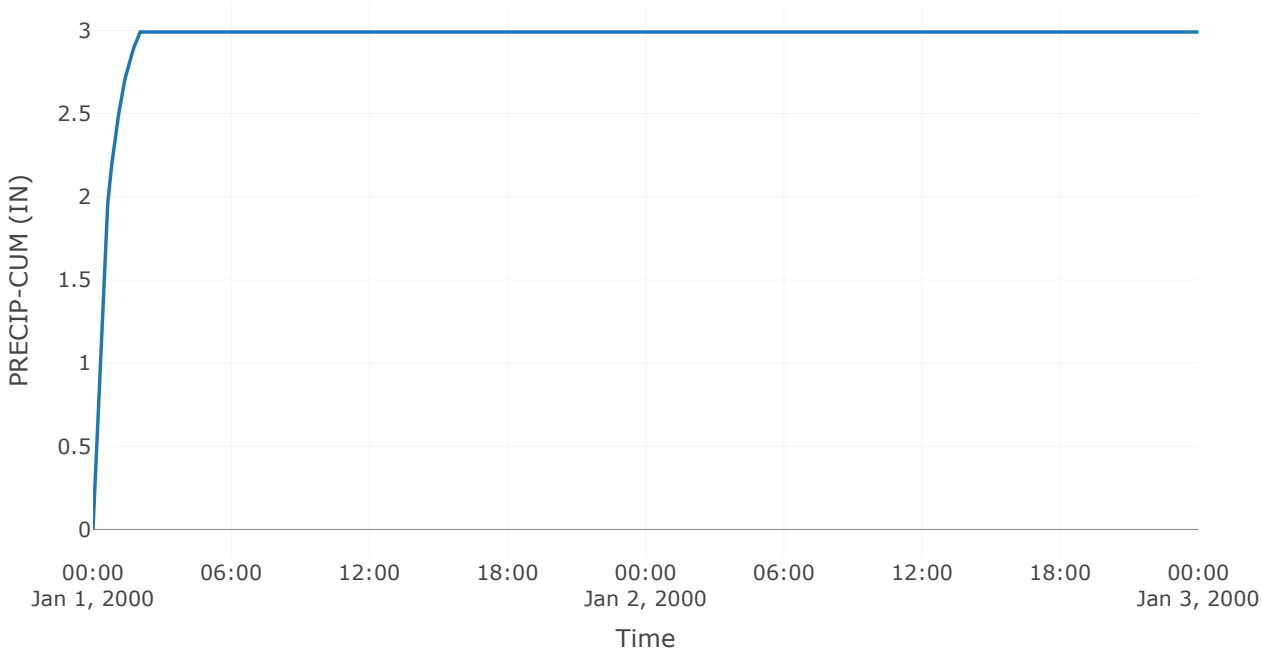
Cumulative Excess Precipitation

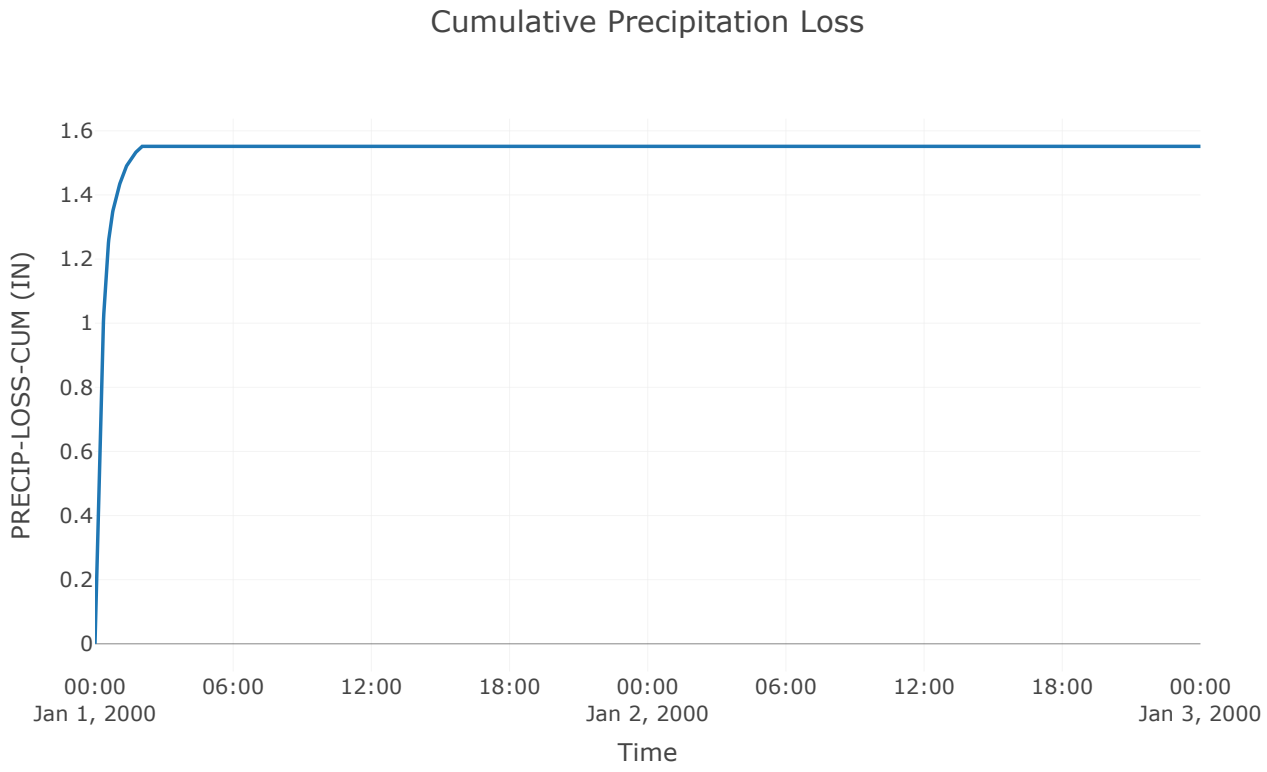


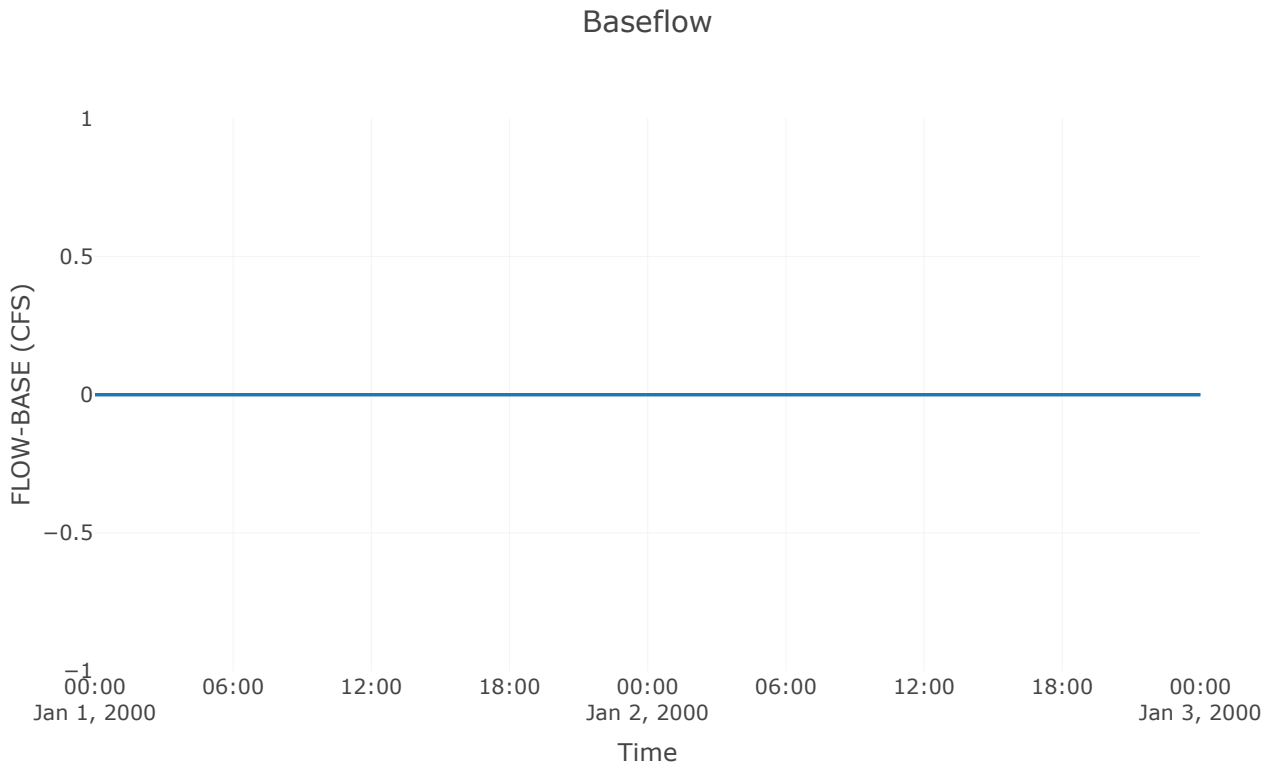
Cumulative Outflow



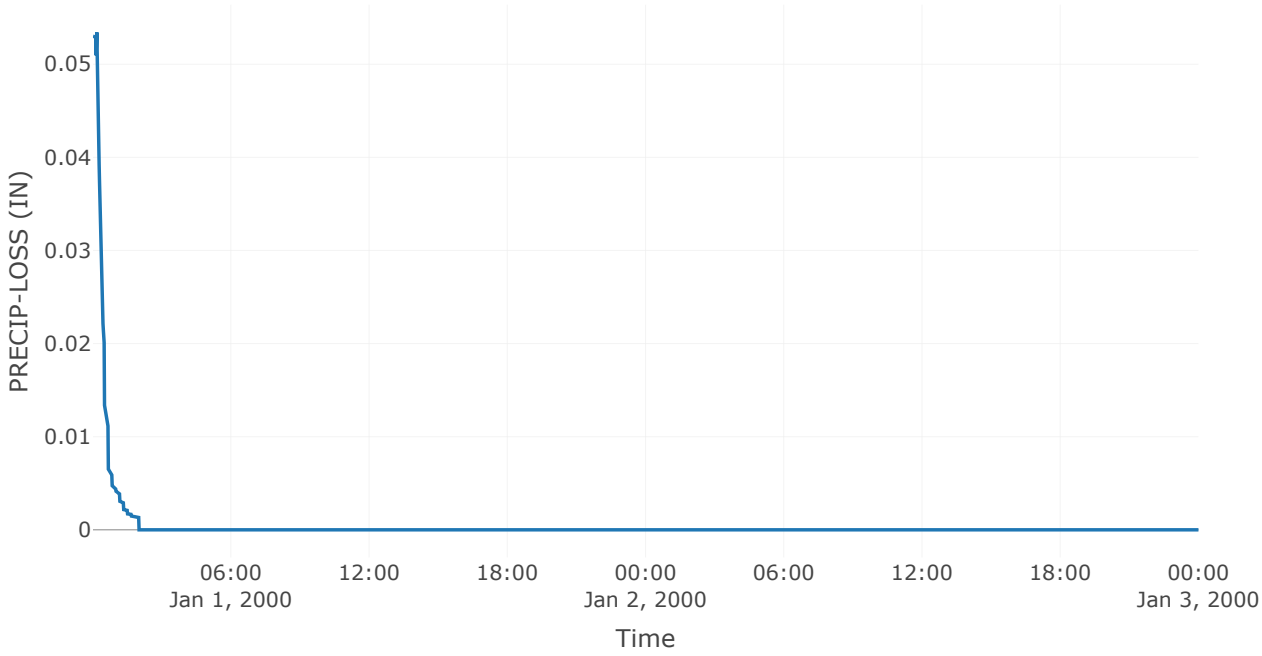
Cumulative Precipitation



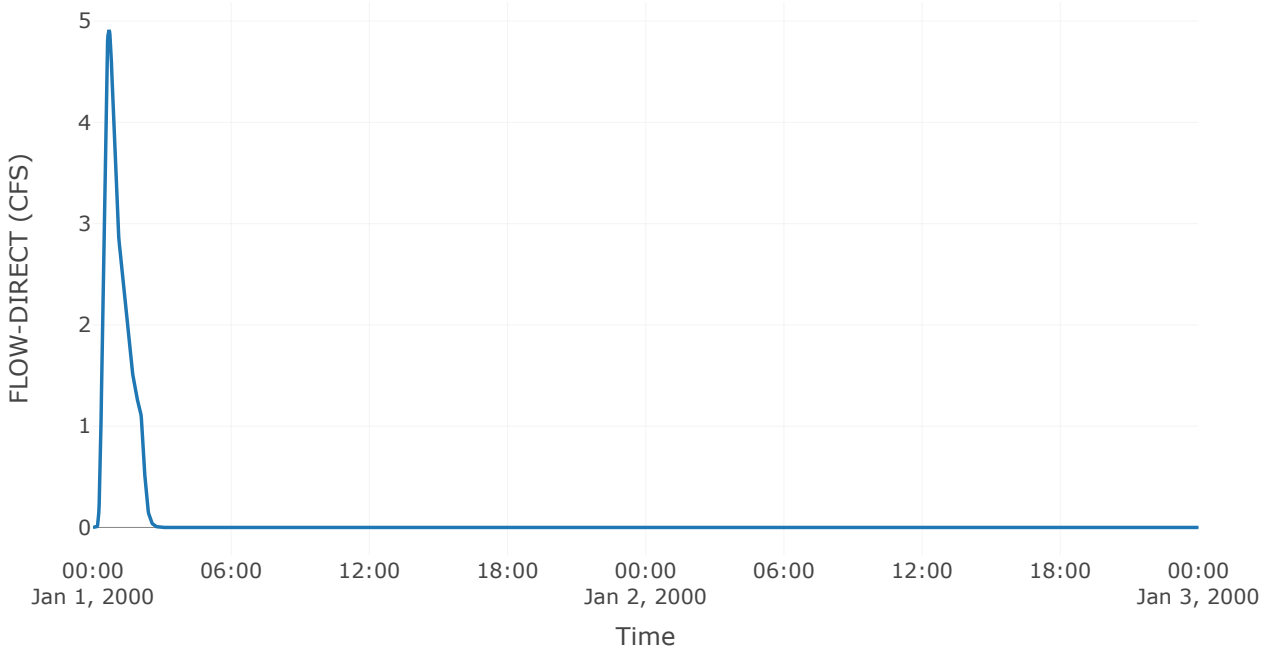

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

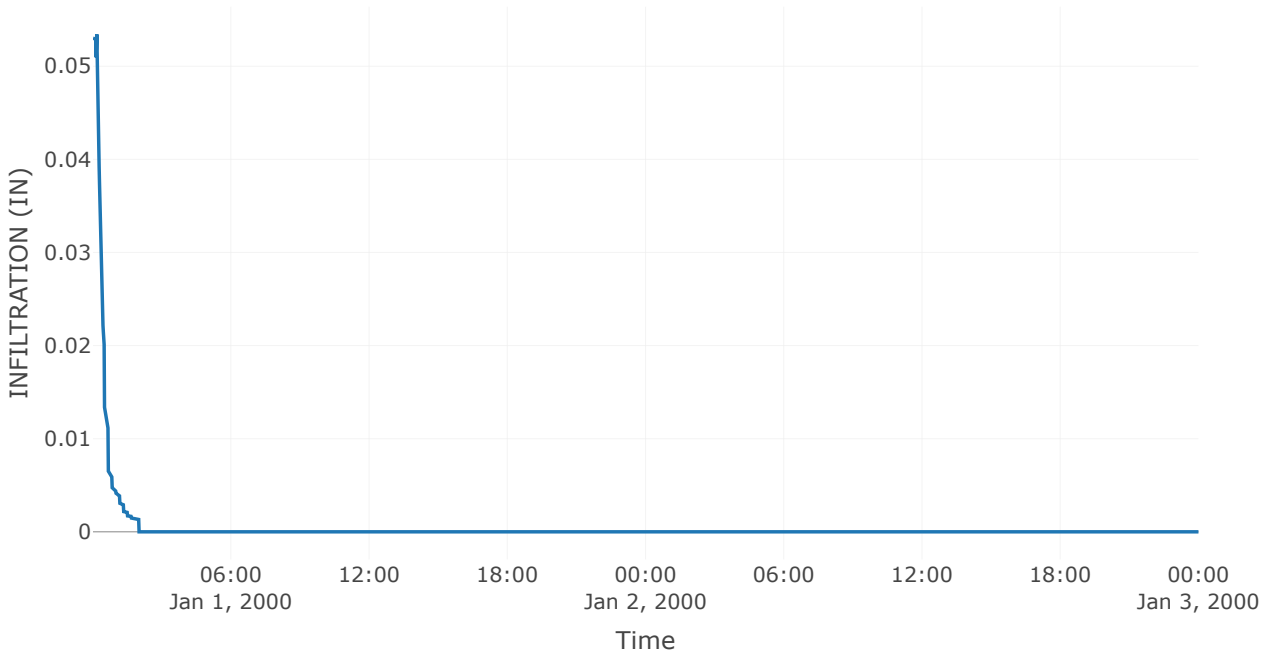

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



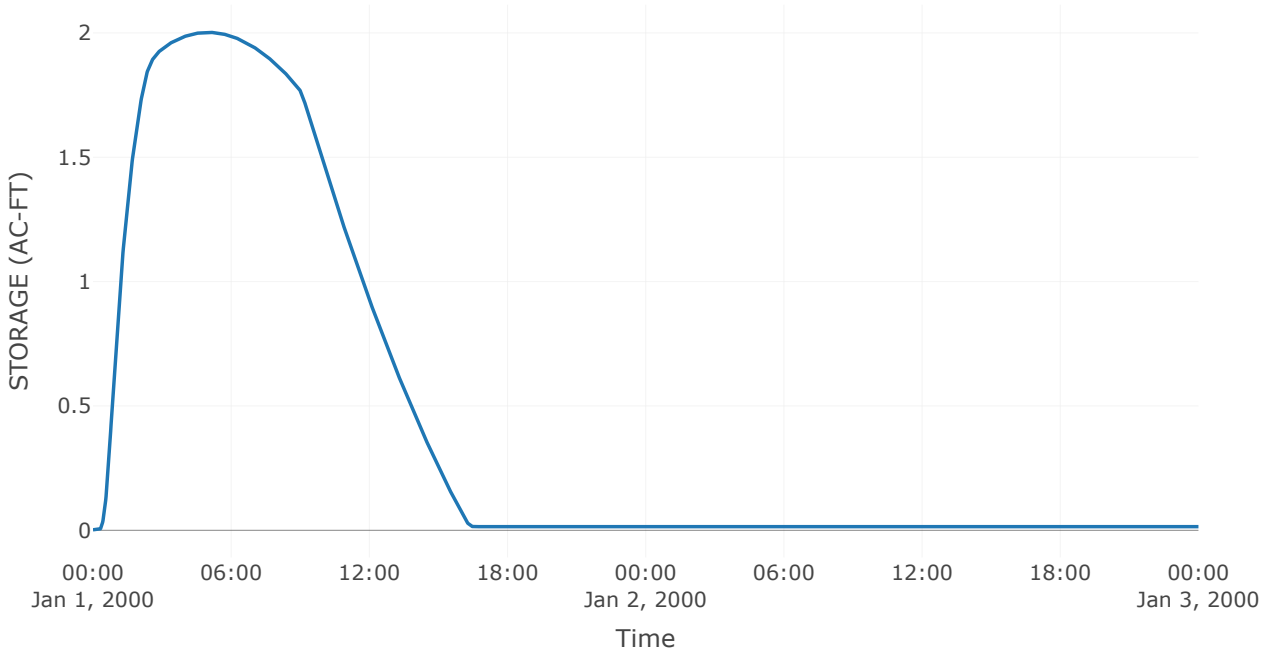

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

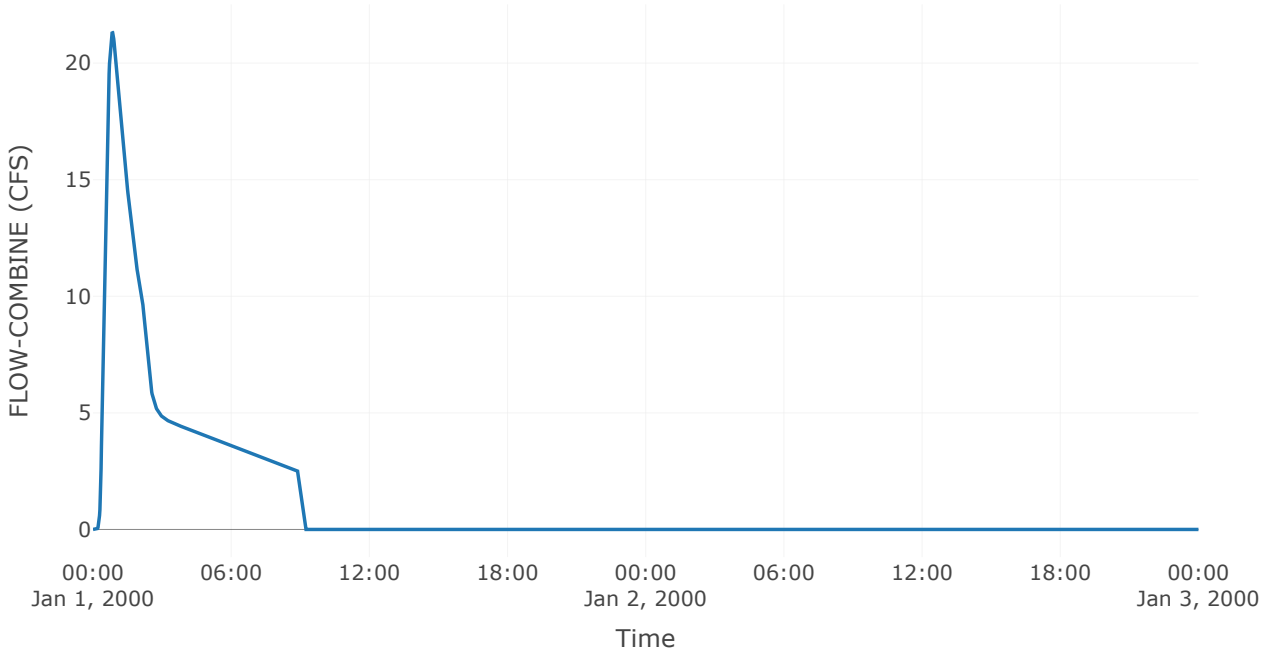
Downstream : Basin 3

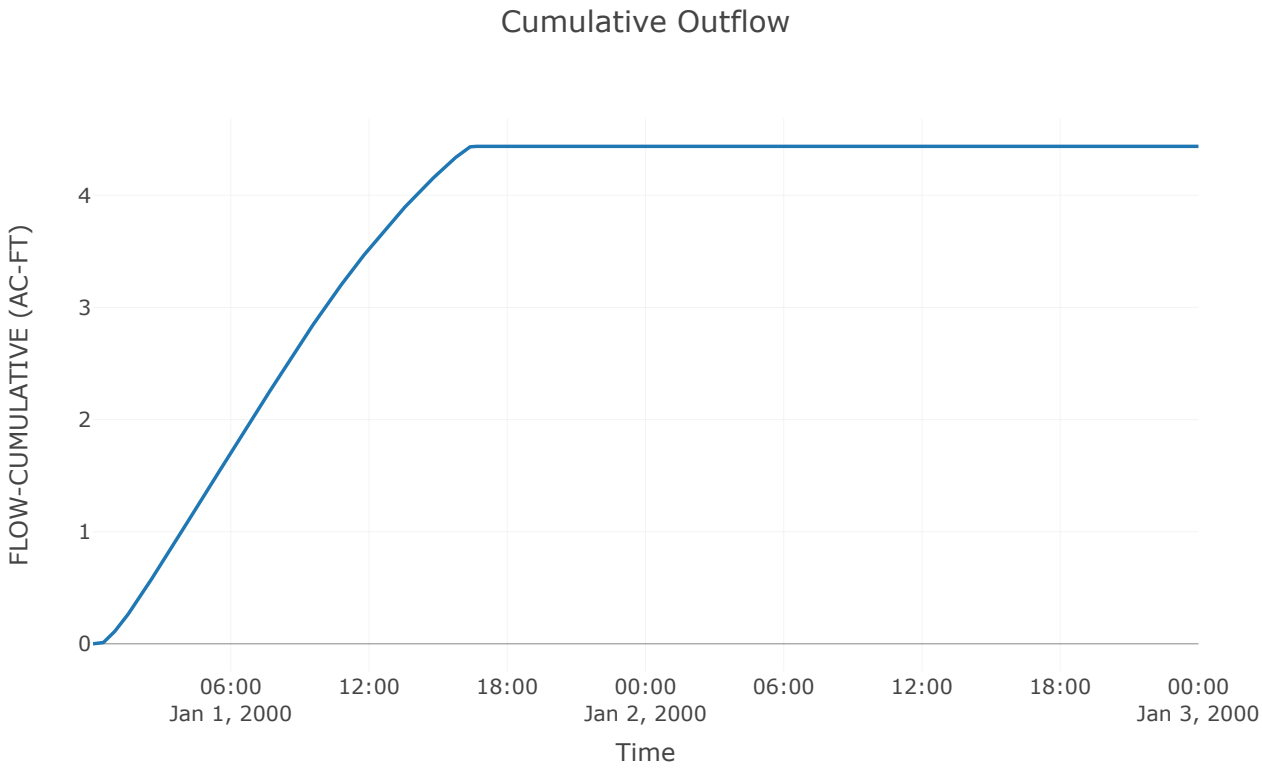
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

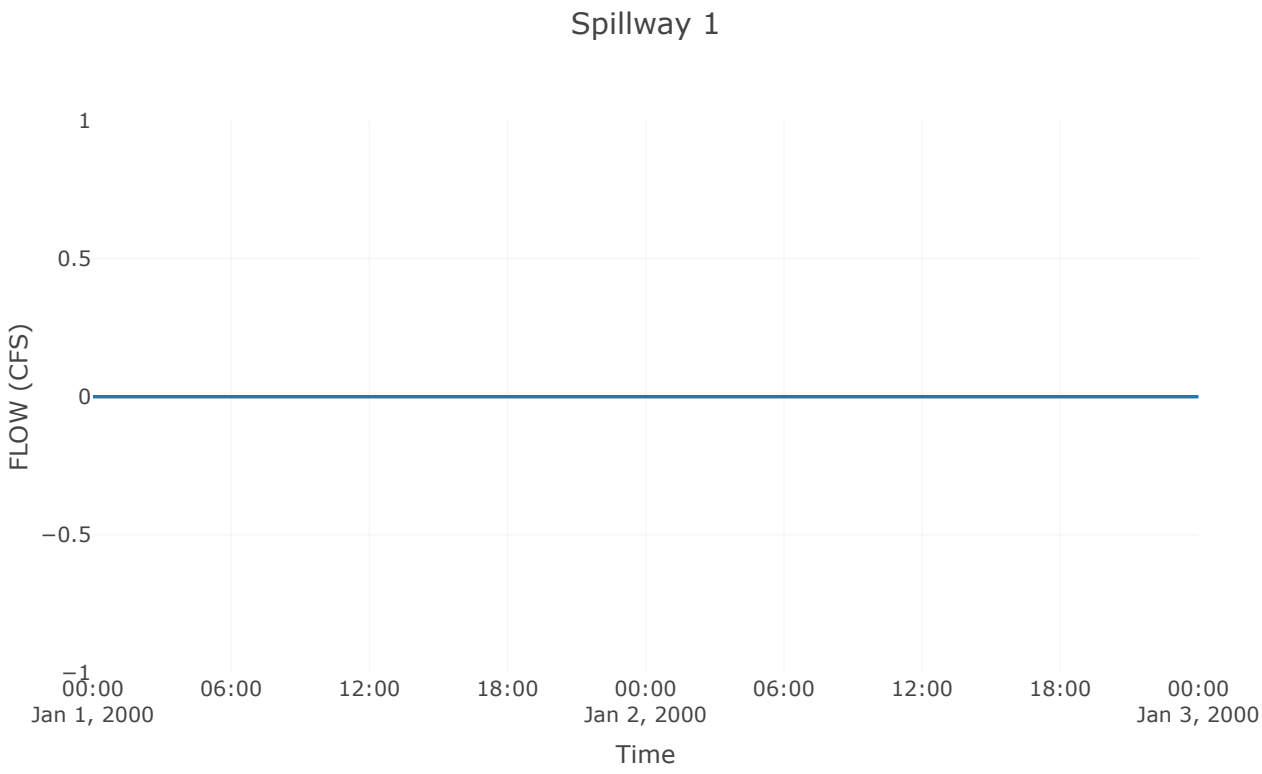
Storage



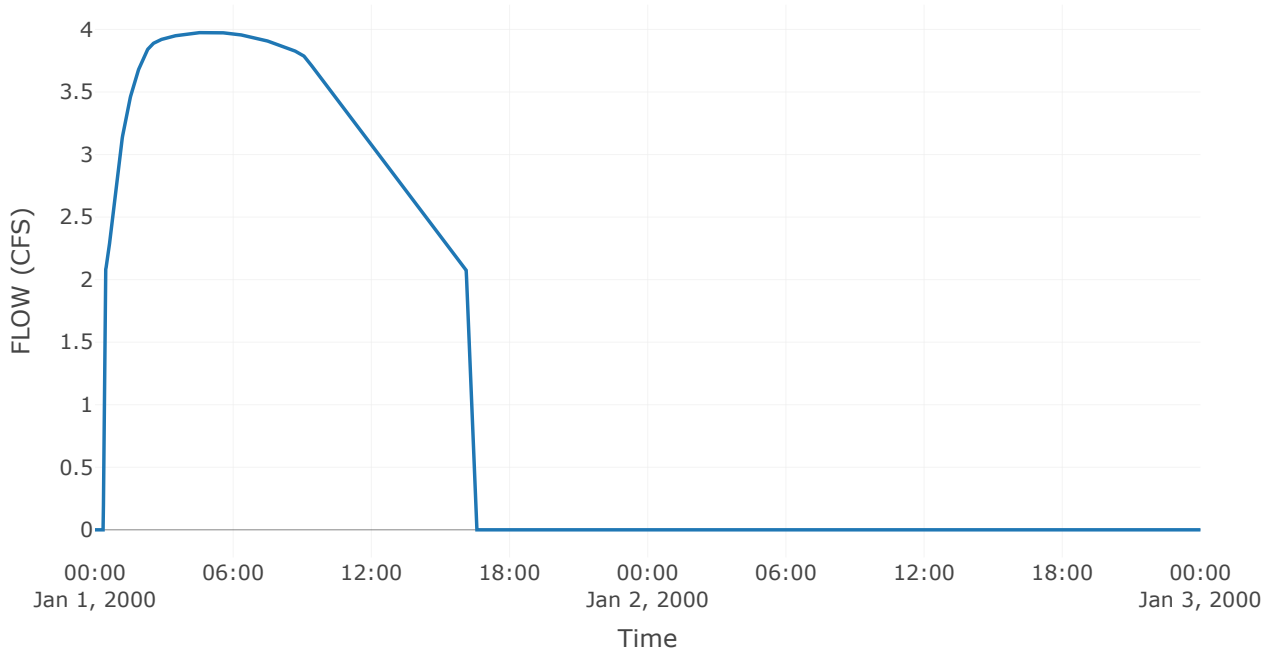
Combined Inflow



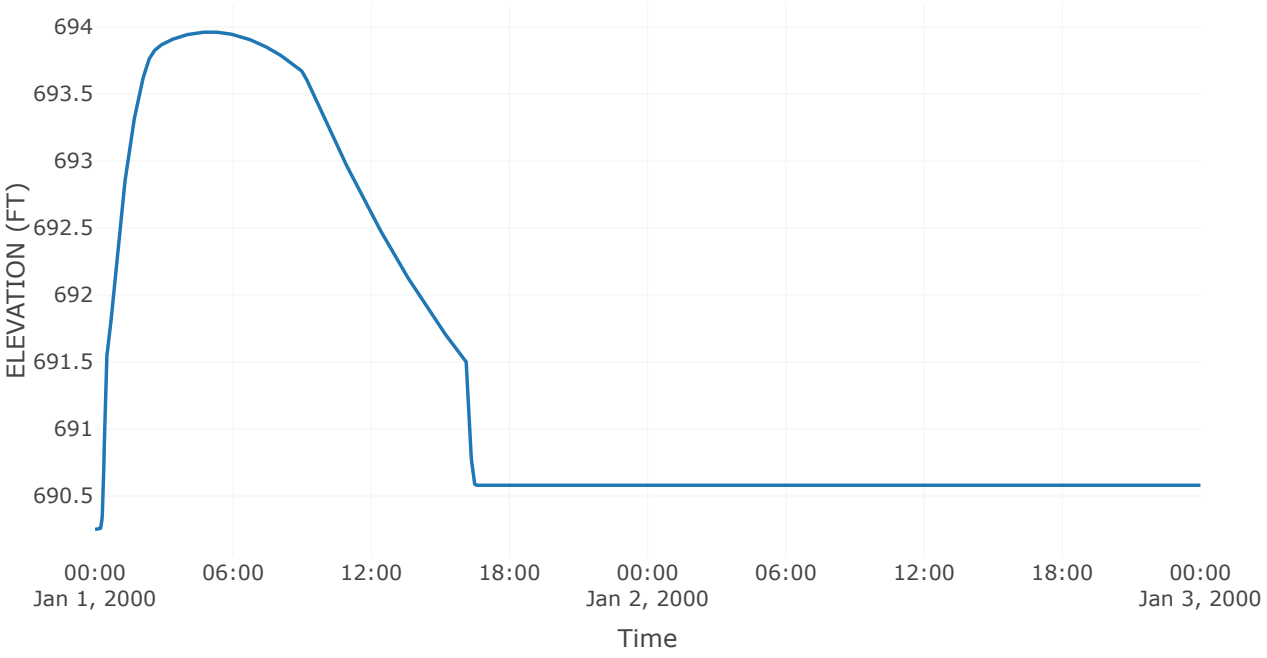

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

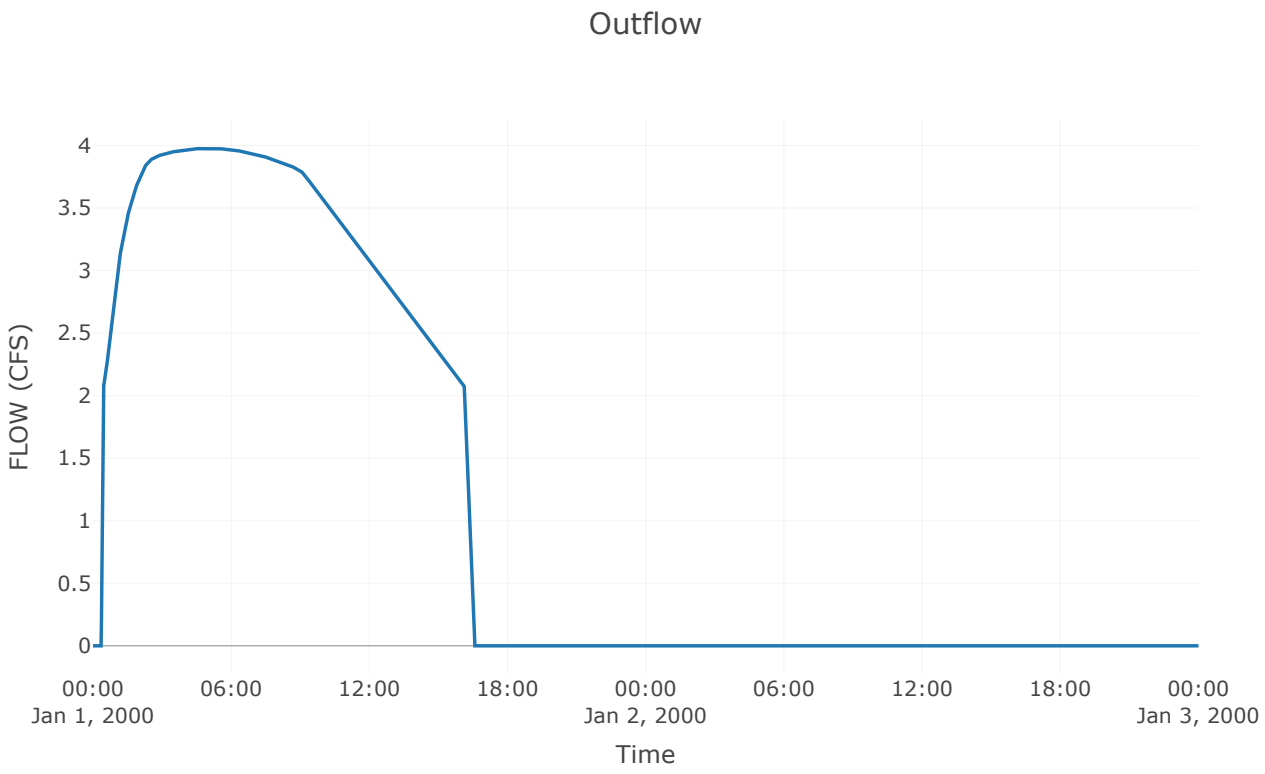

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

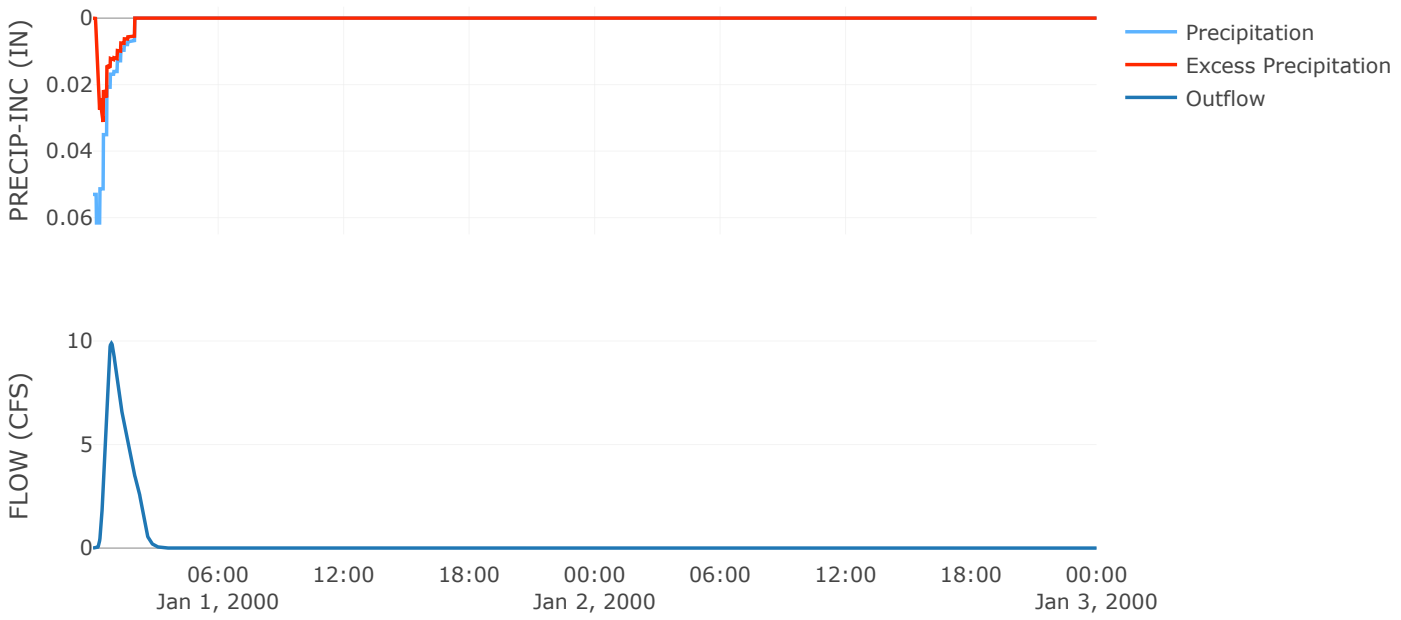
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

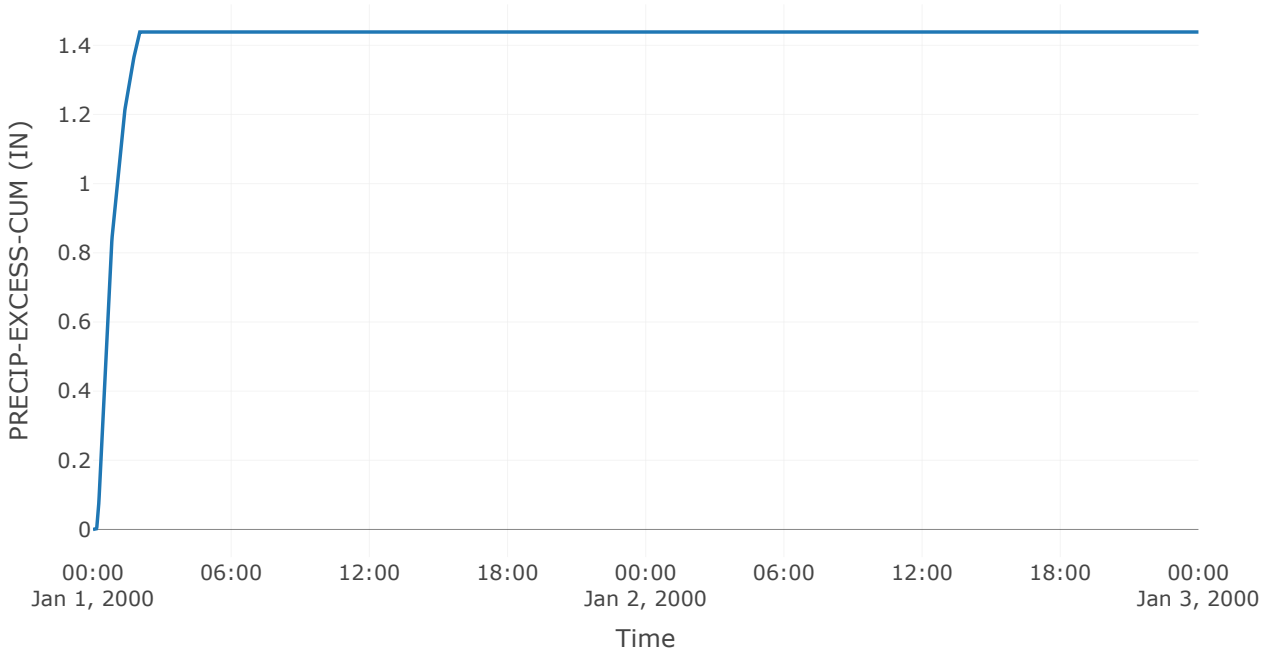
Transform: Scs	
Lag	21
Unitgraph Type	Standard

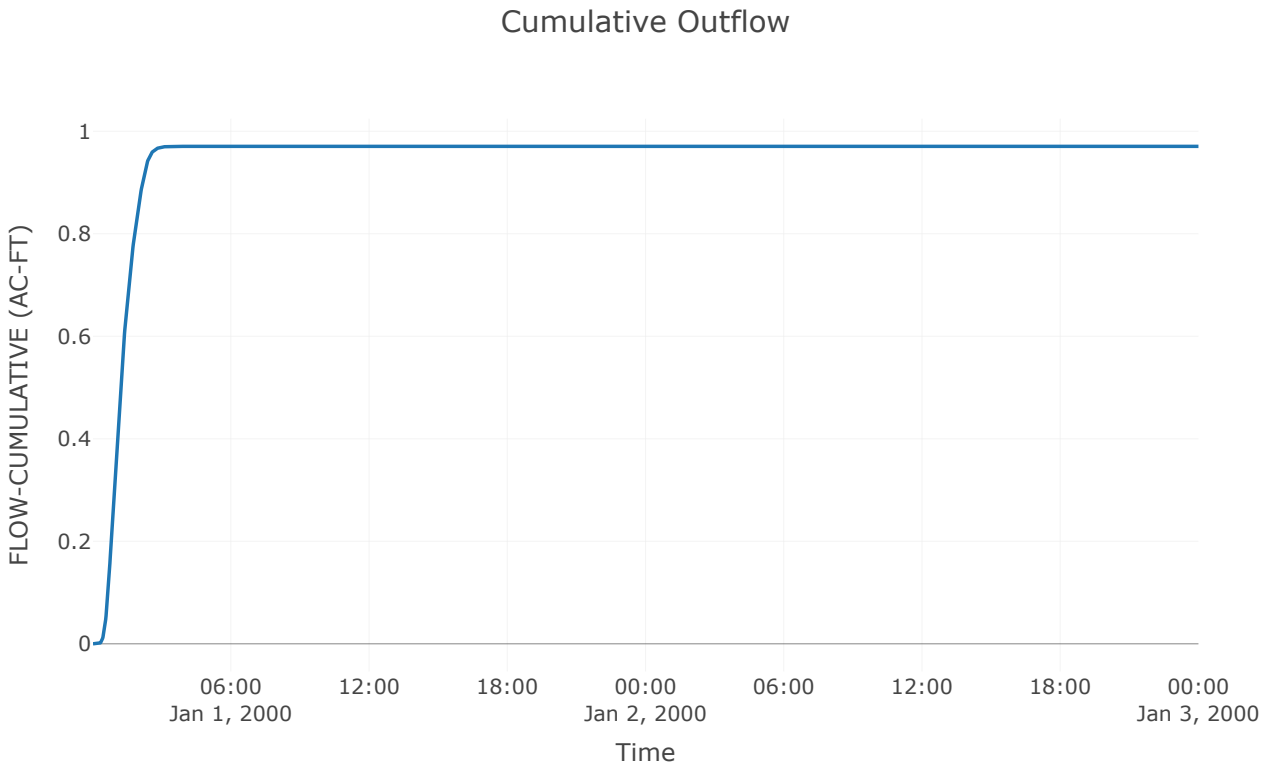
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

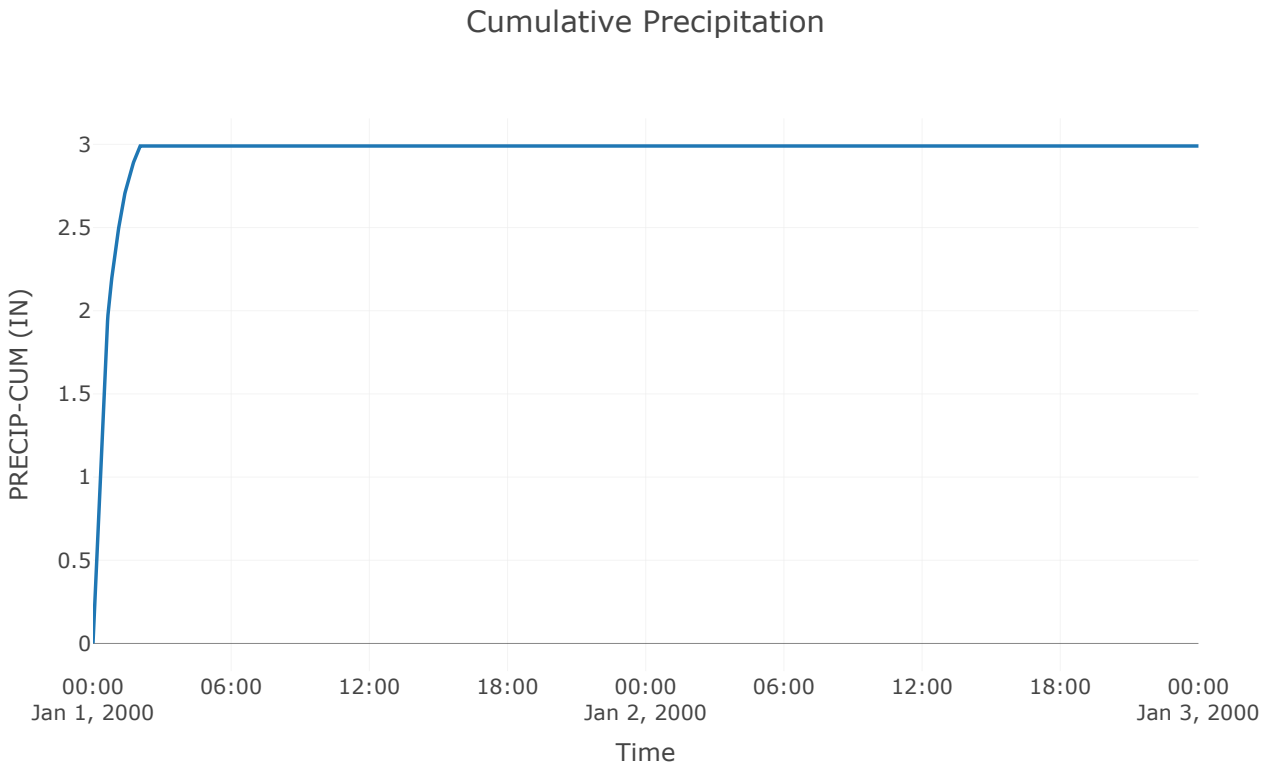
Precipitation and Outflow

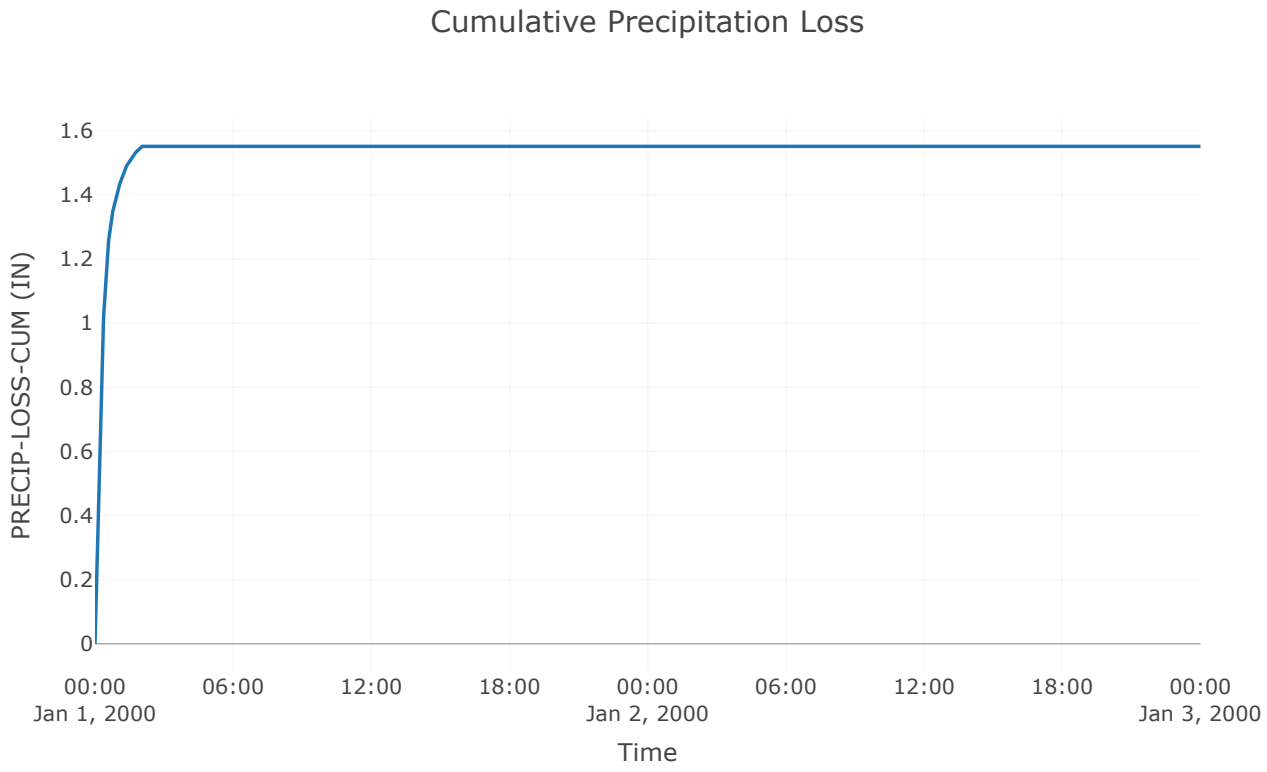


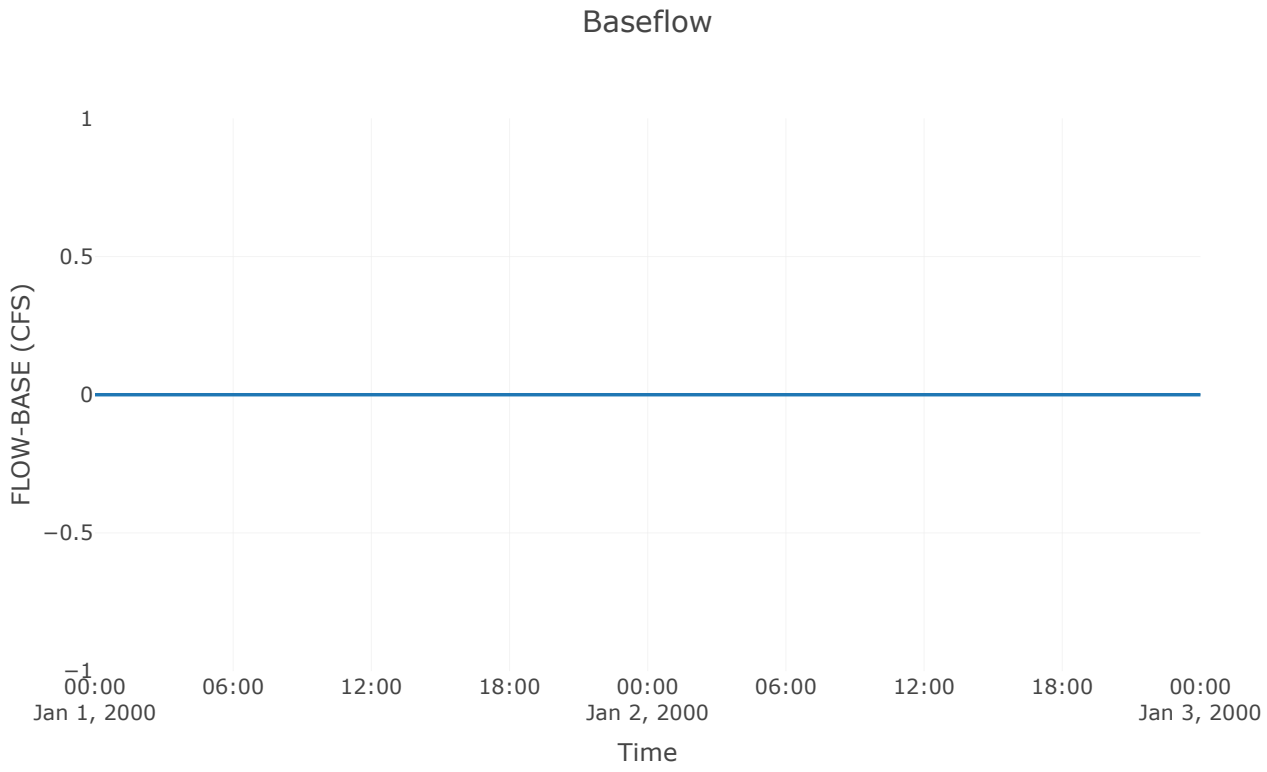
Cumulative Excess Precipitation



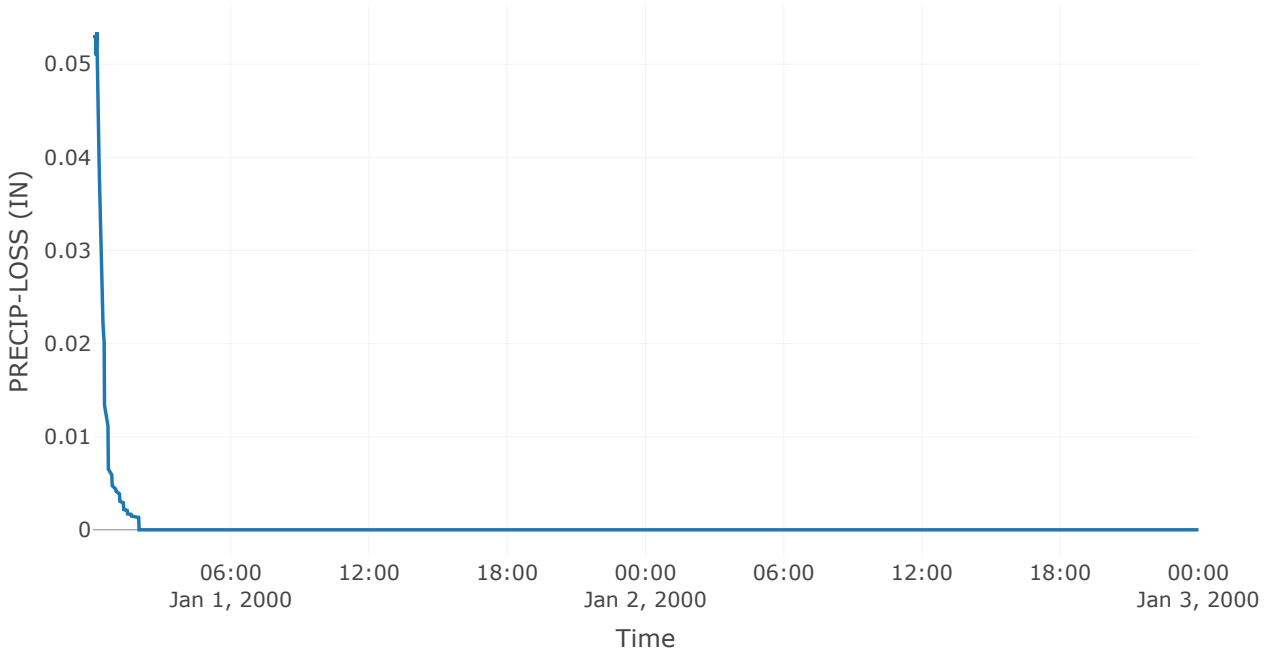

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

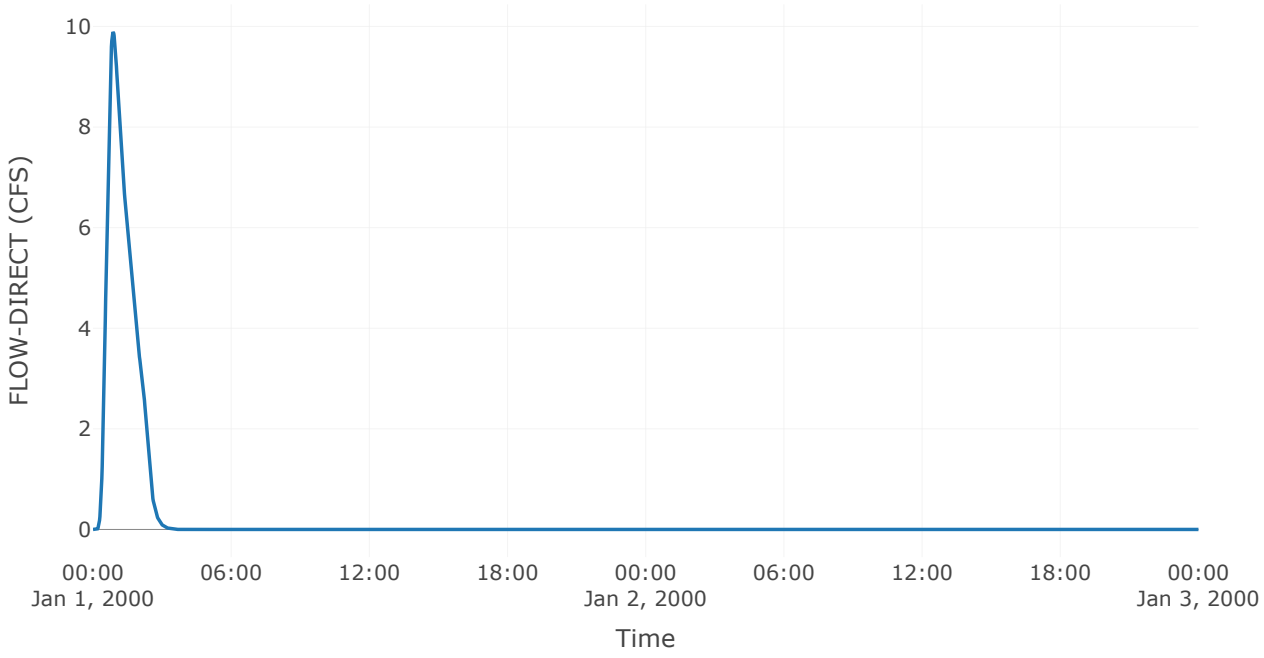

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

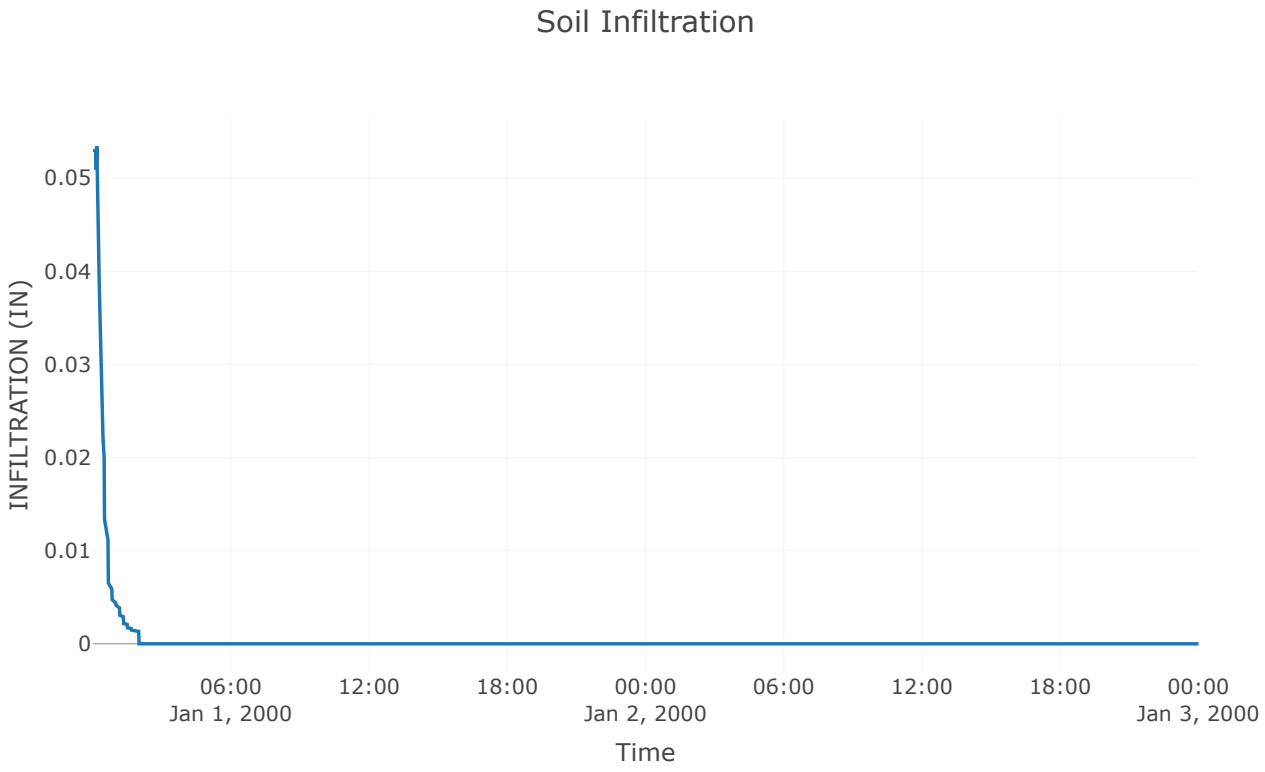

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

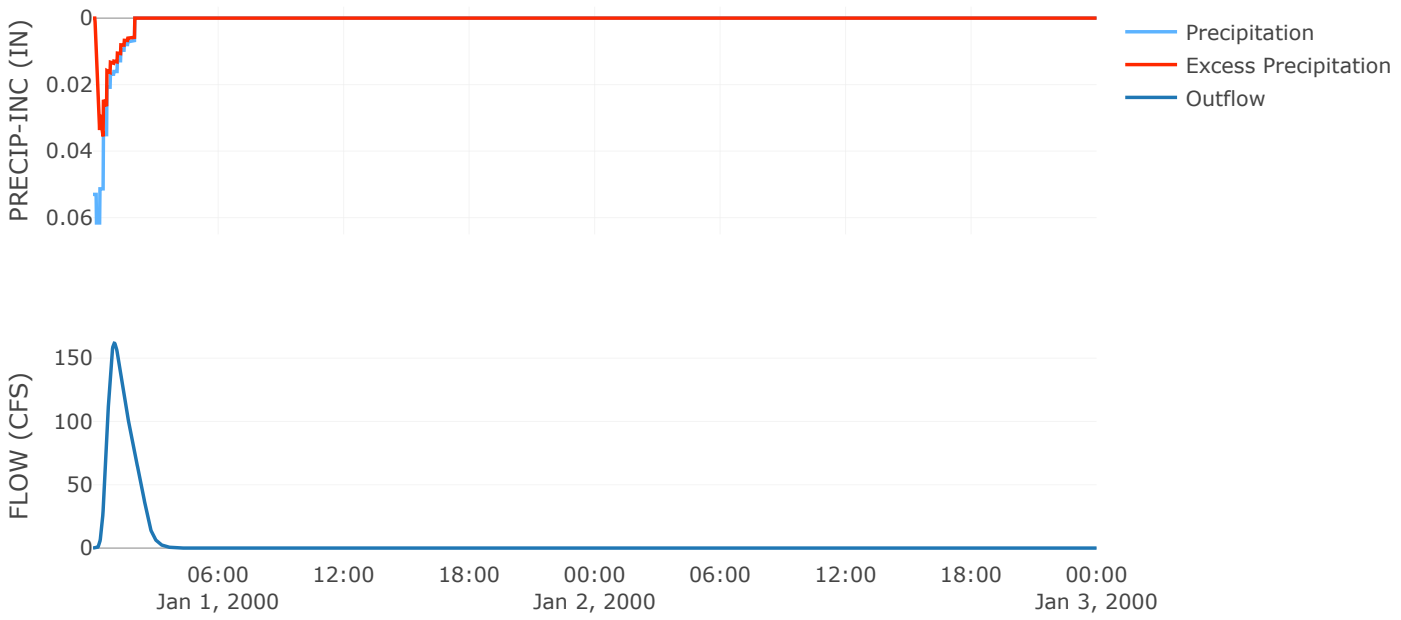
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

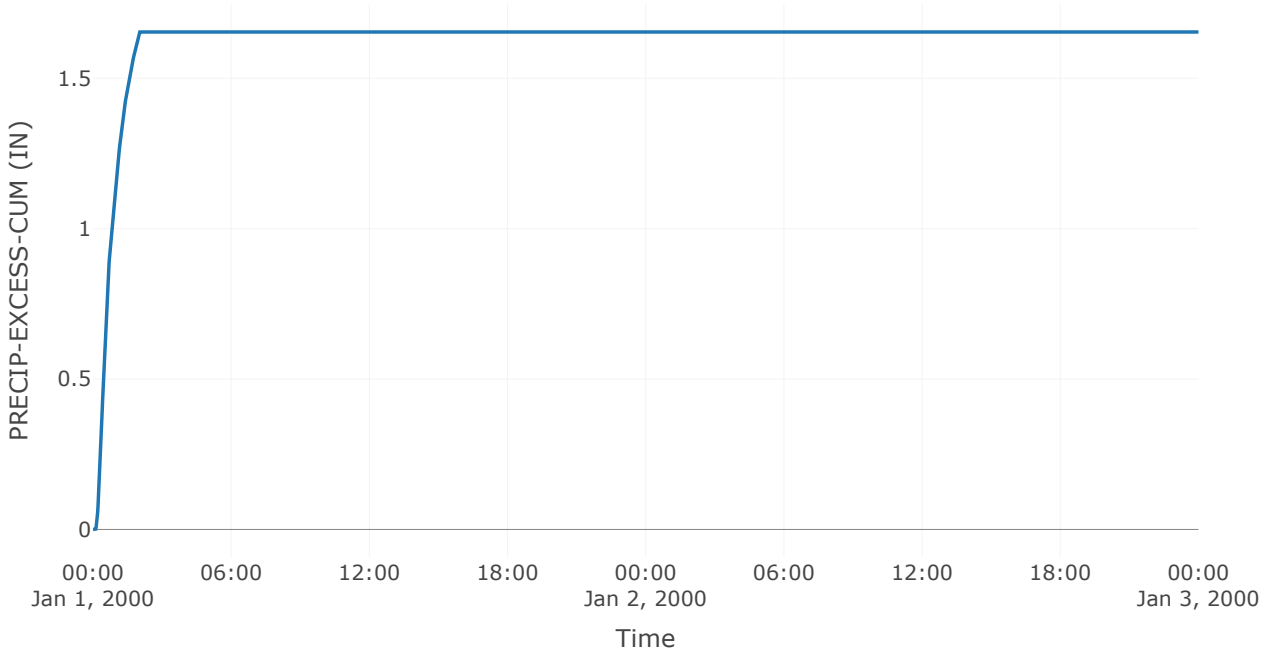
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

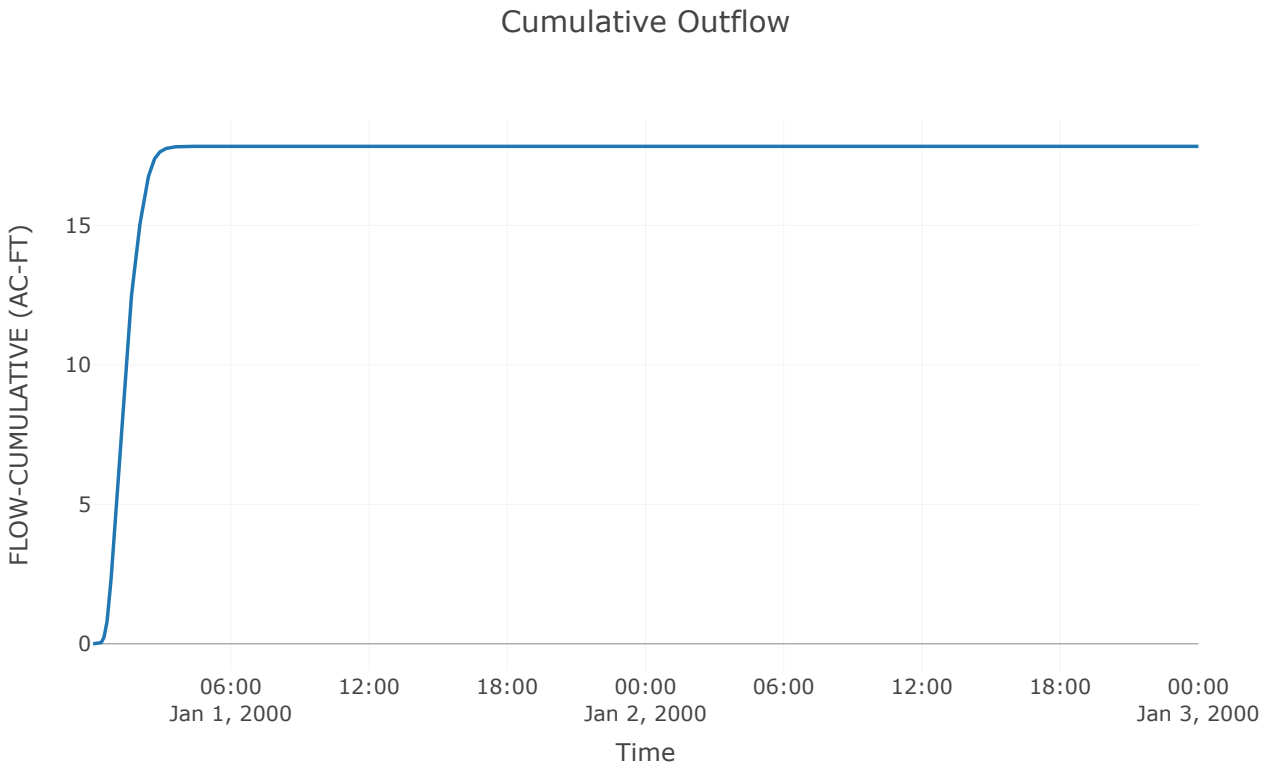
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

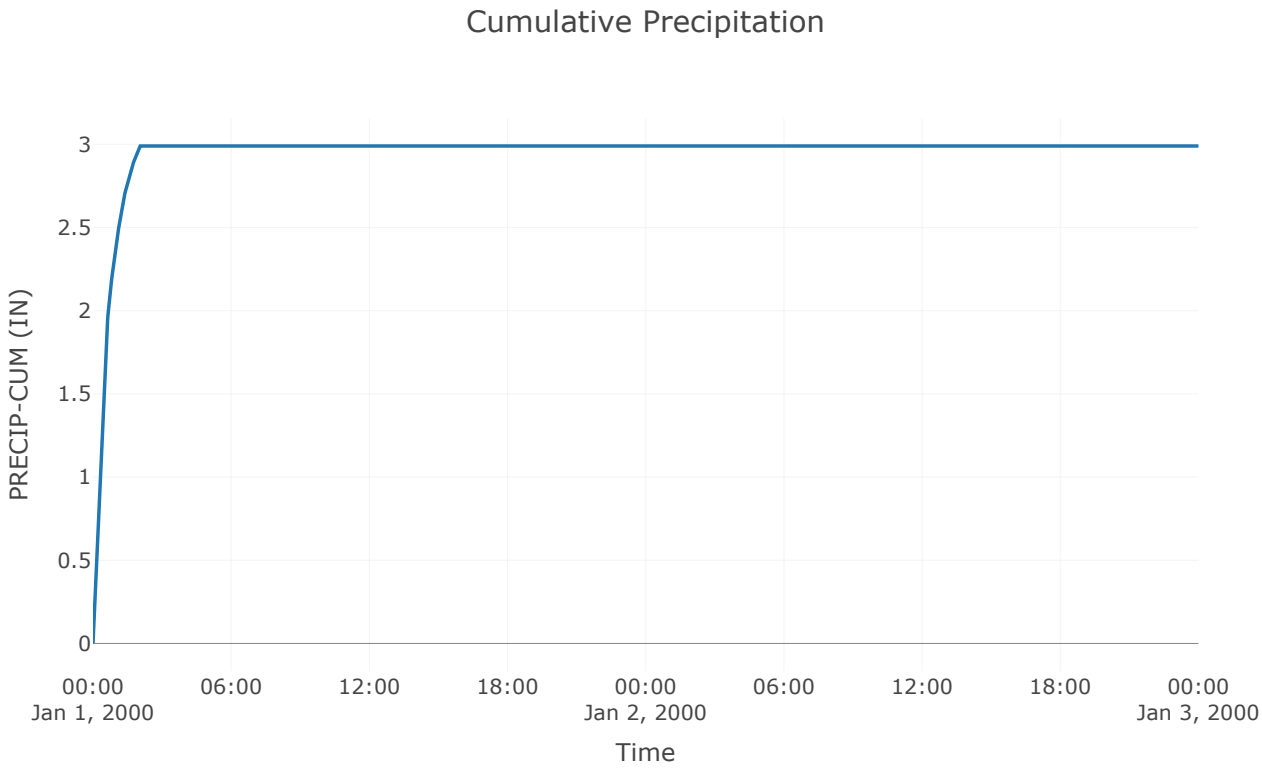
Precipitation and Outflow

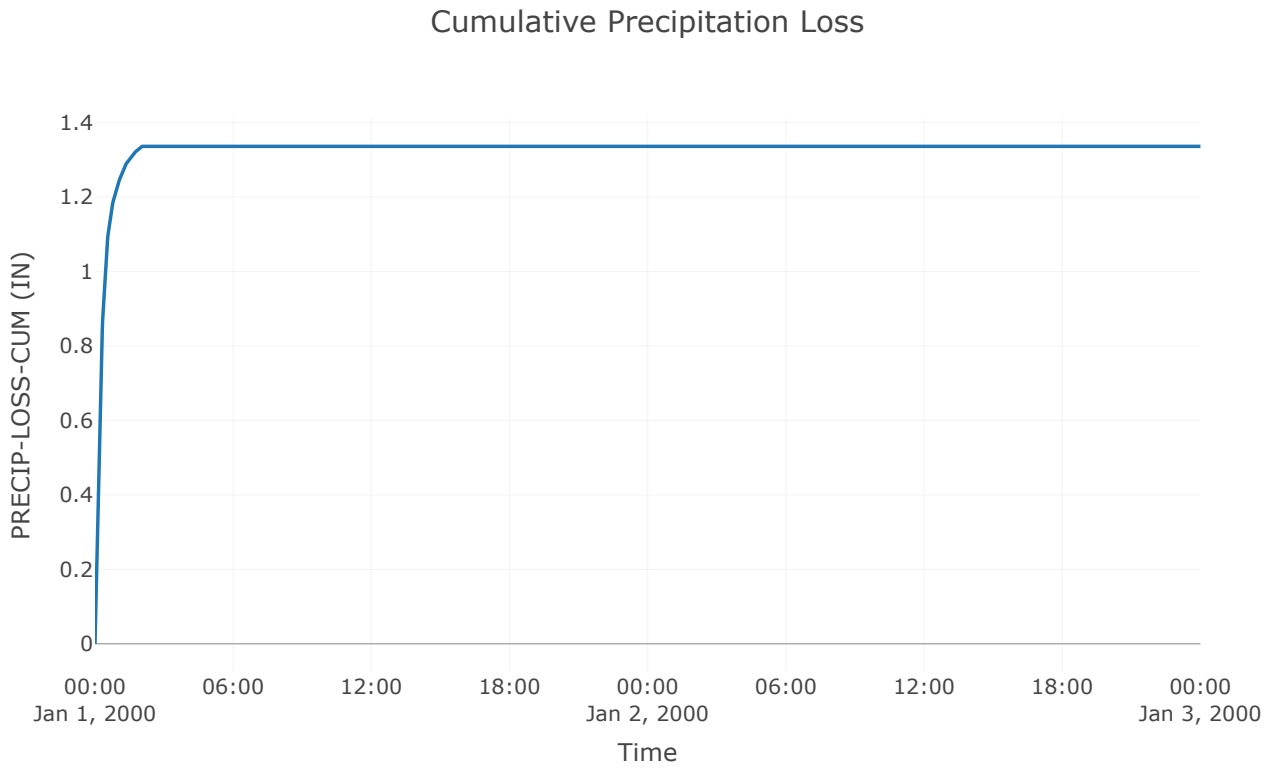


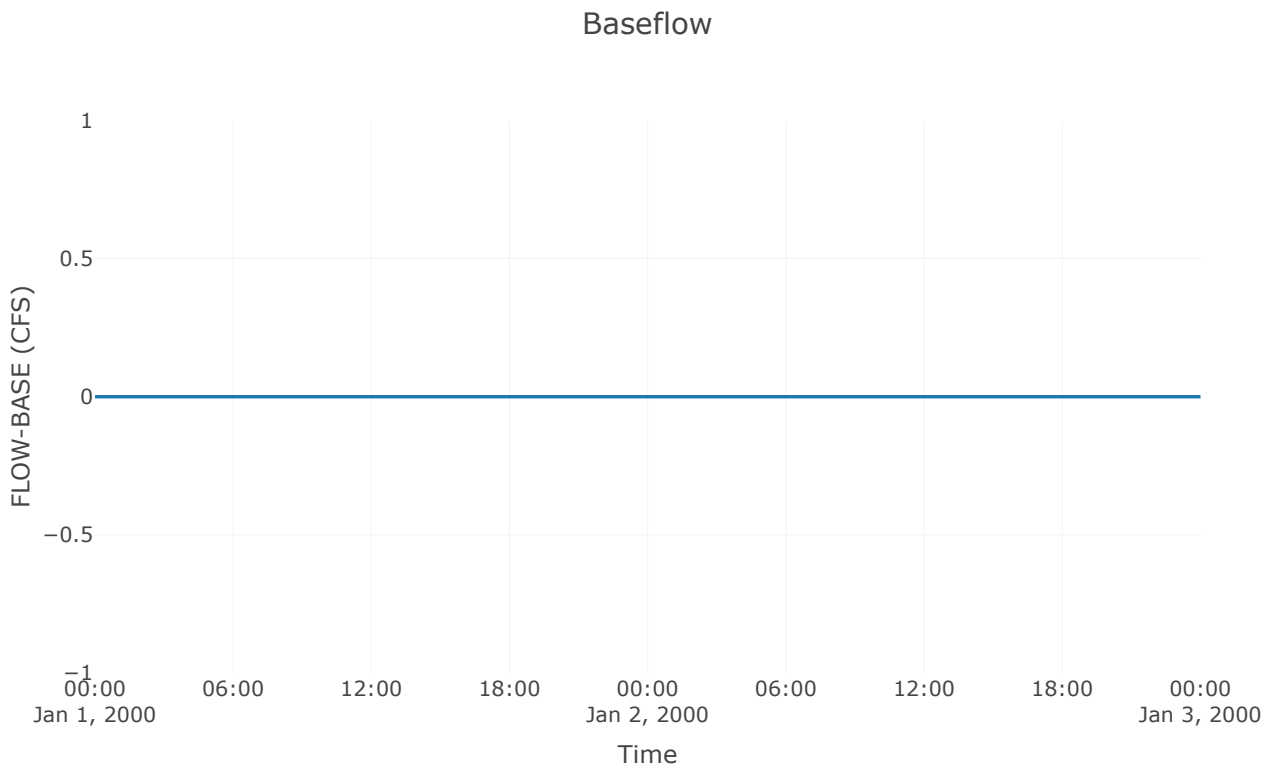
Cumulative Excess Precipitation



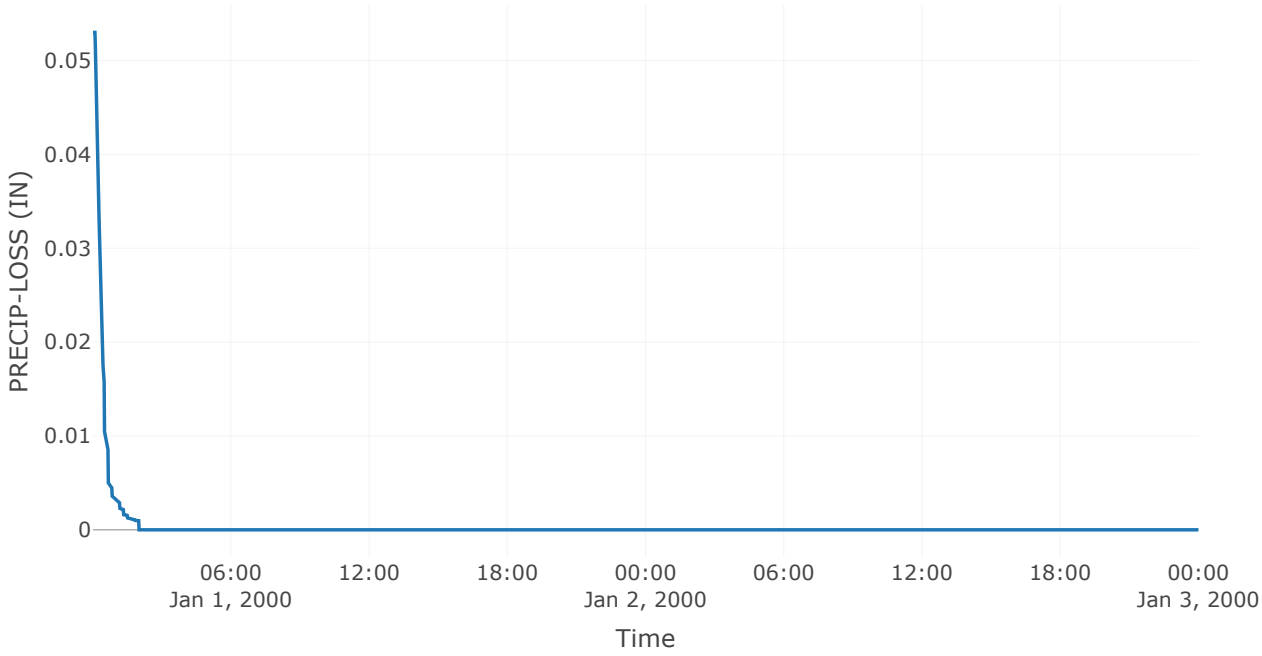

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

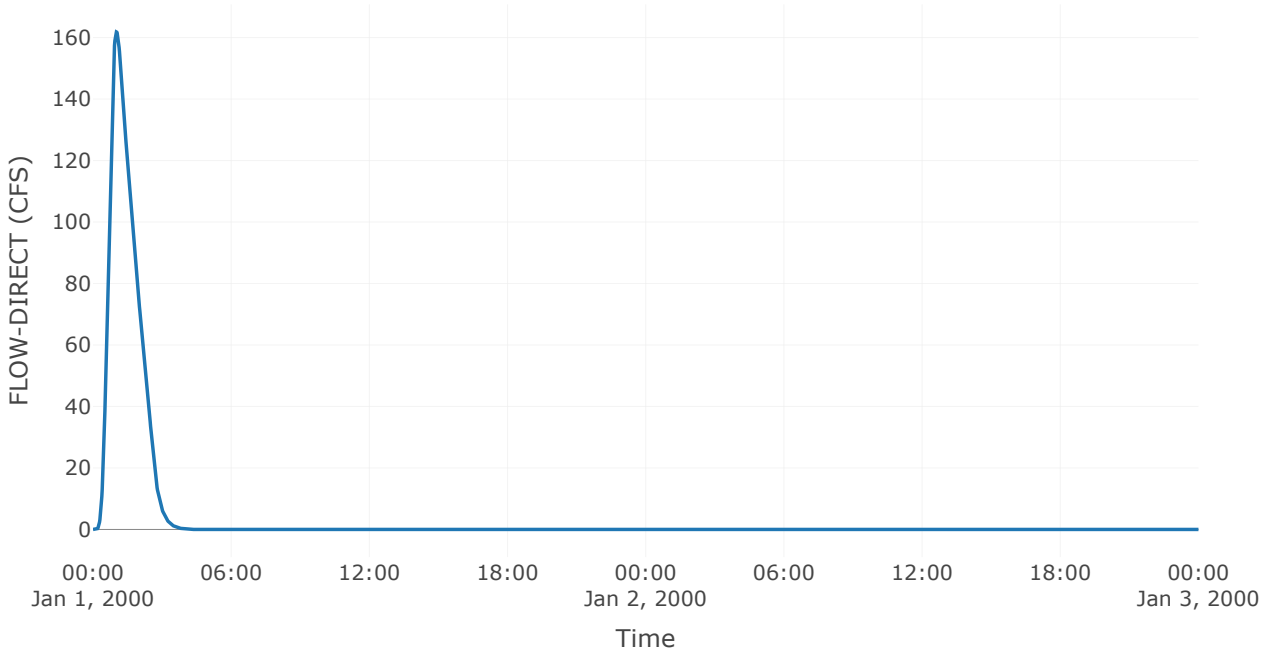

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

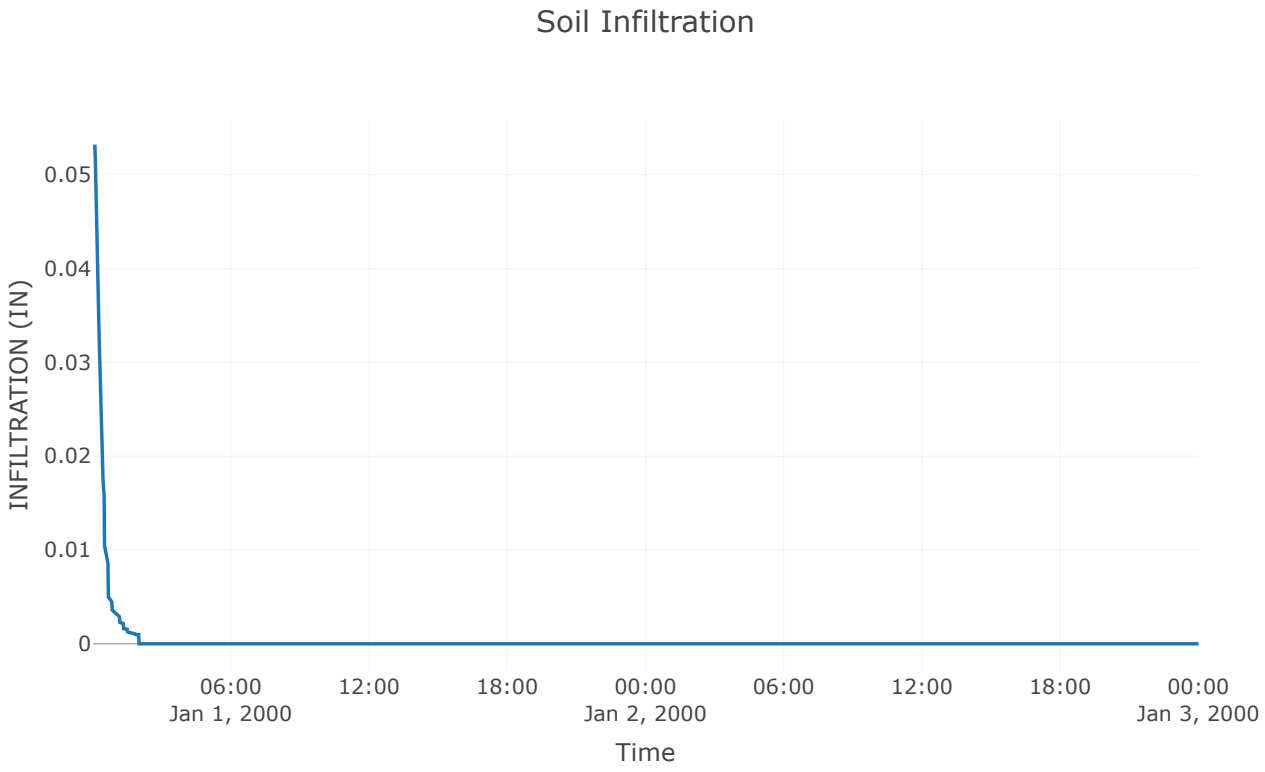

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



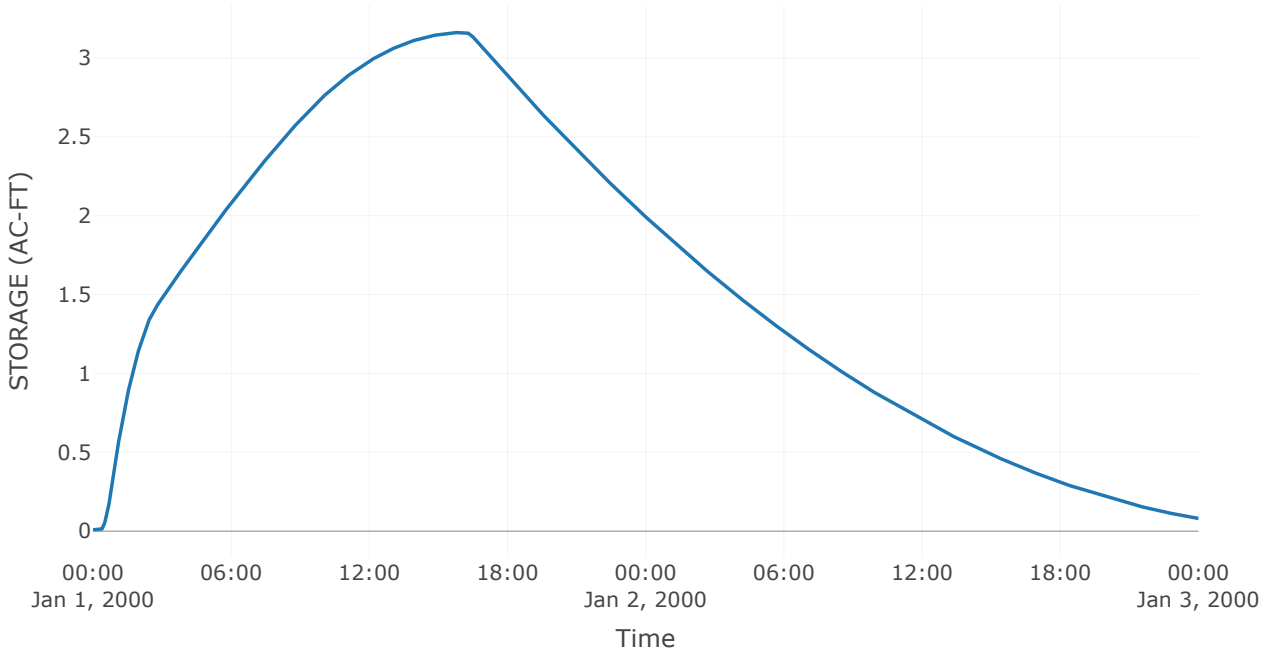

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

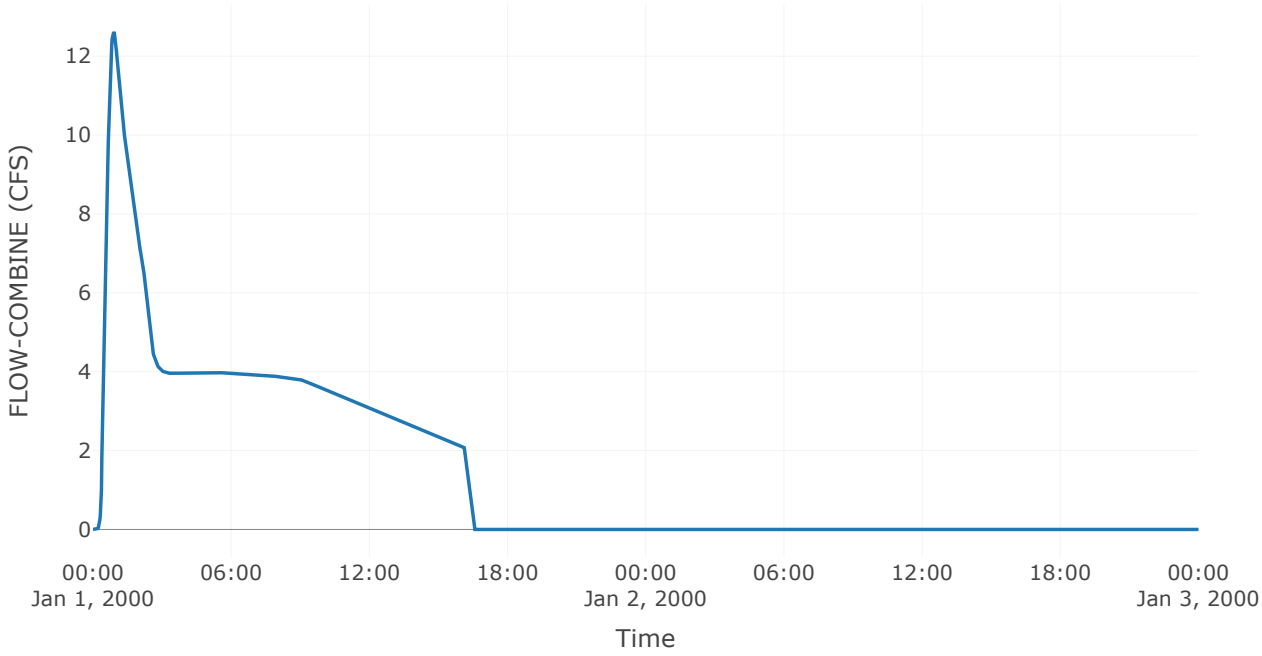
Downstream : Off - Site Tributary Area

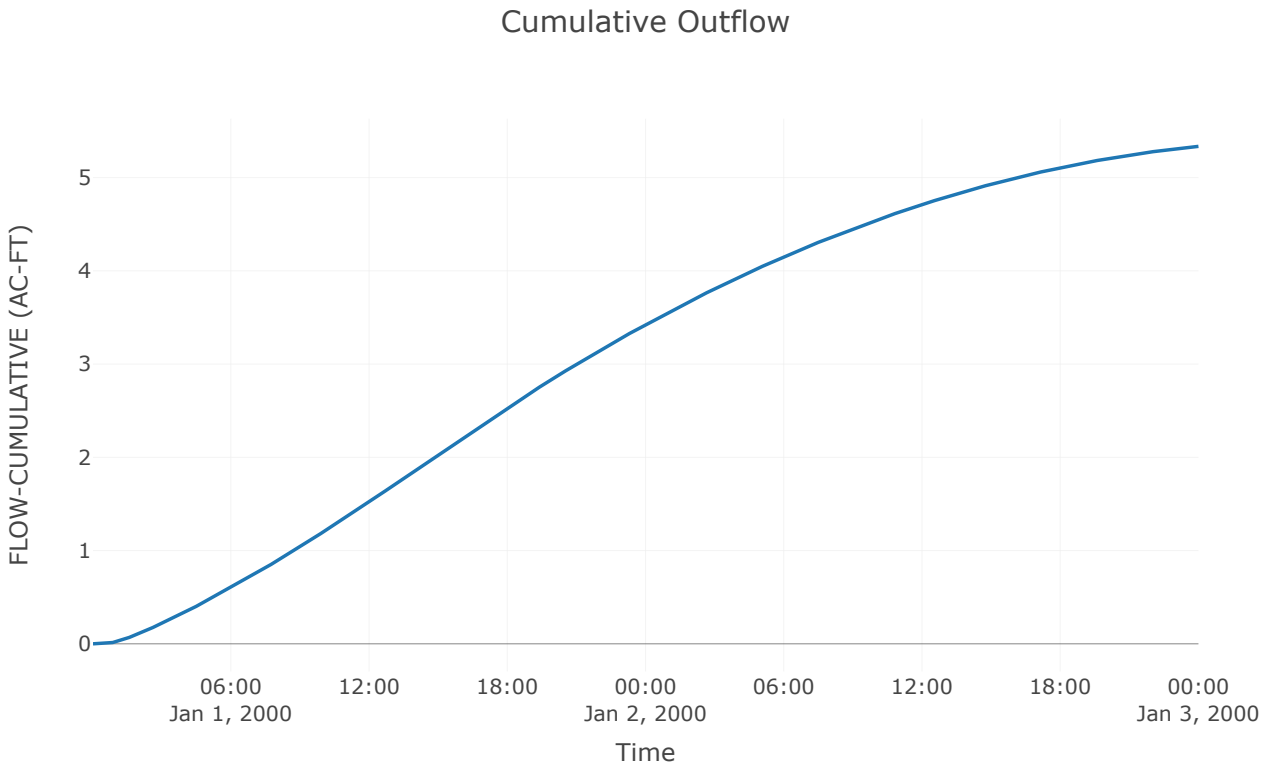
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

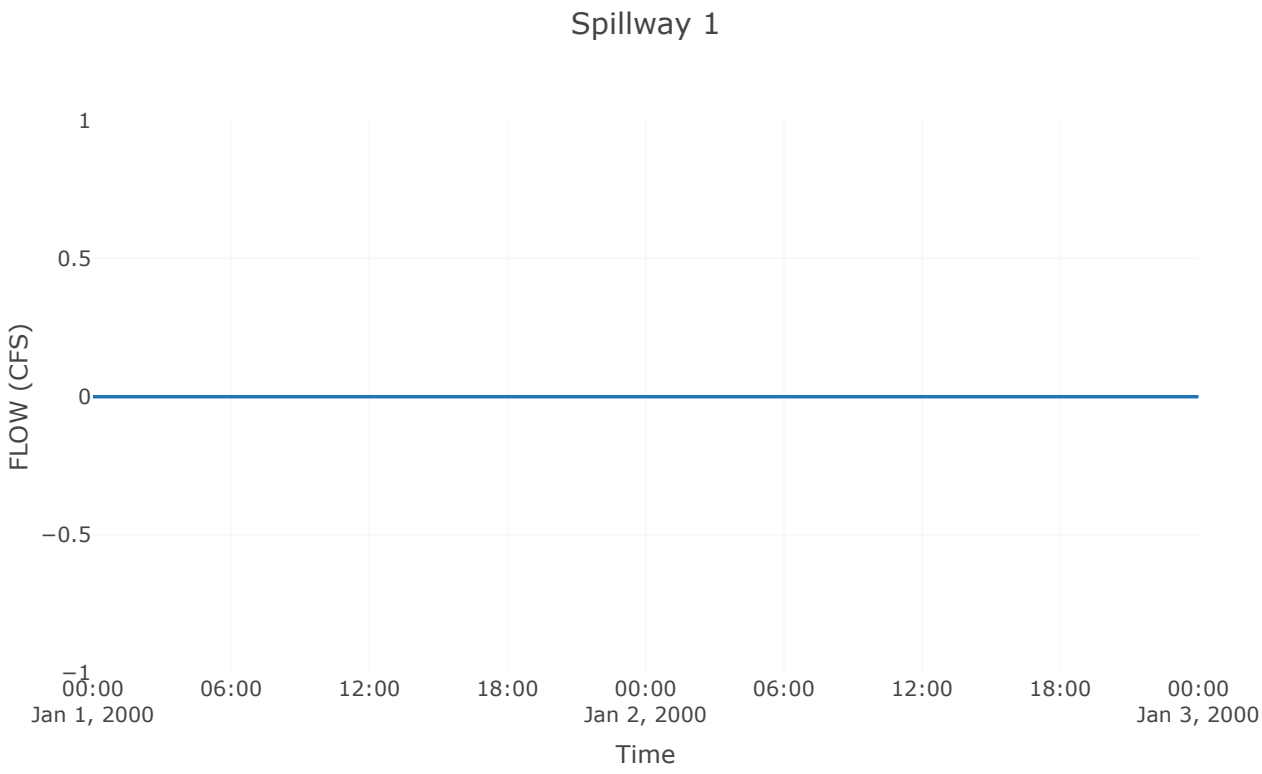
Storage

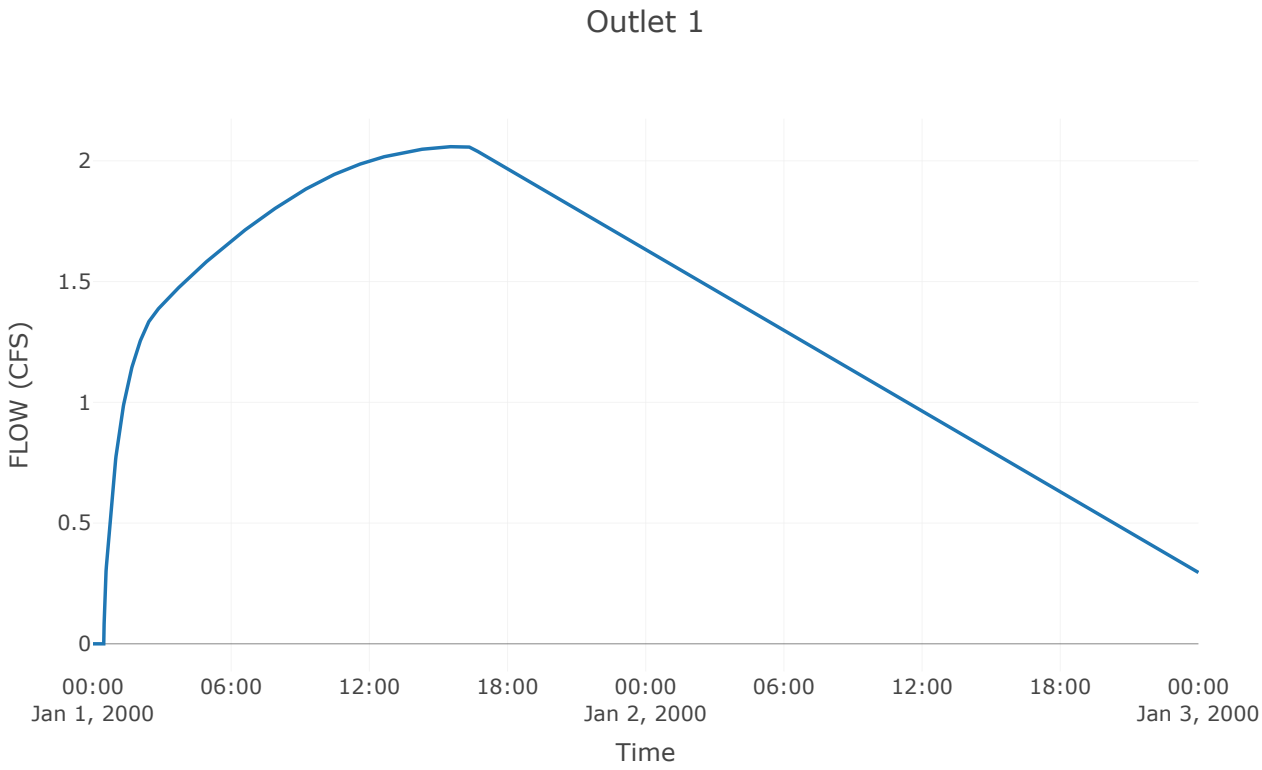


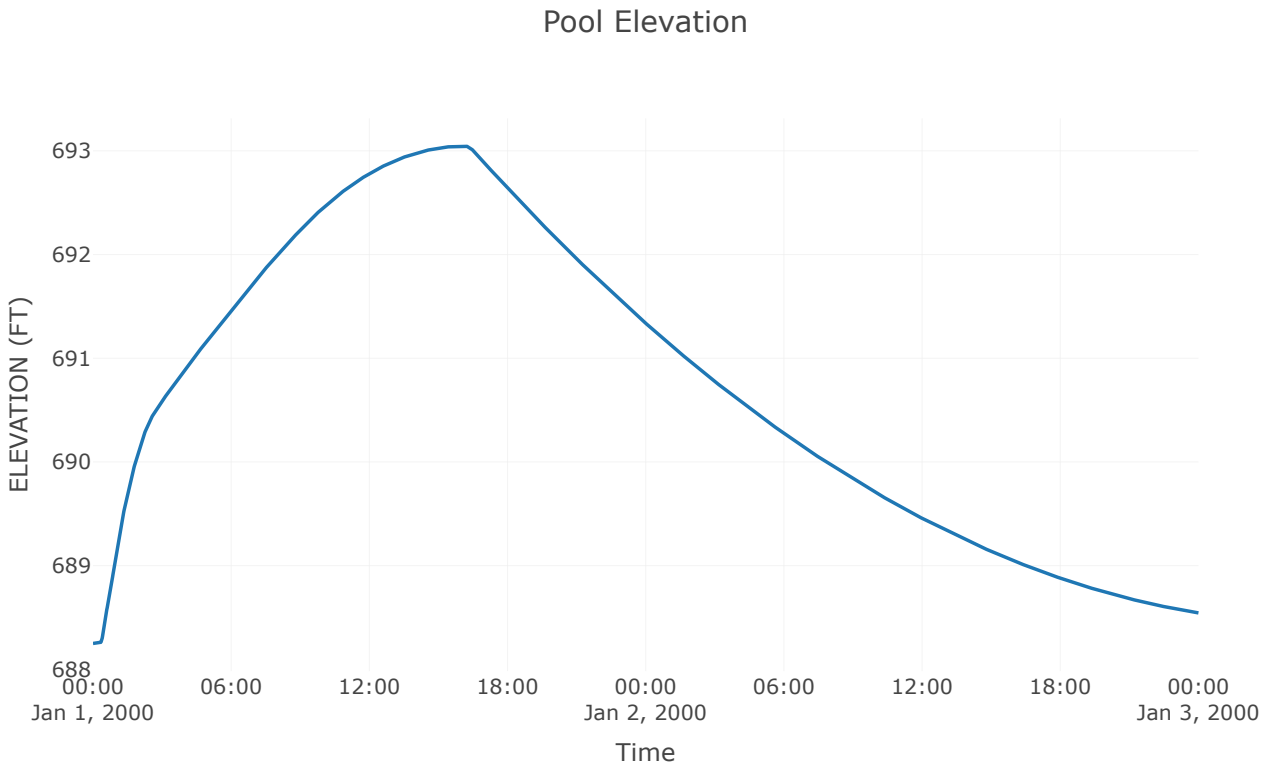
Combined Inflow

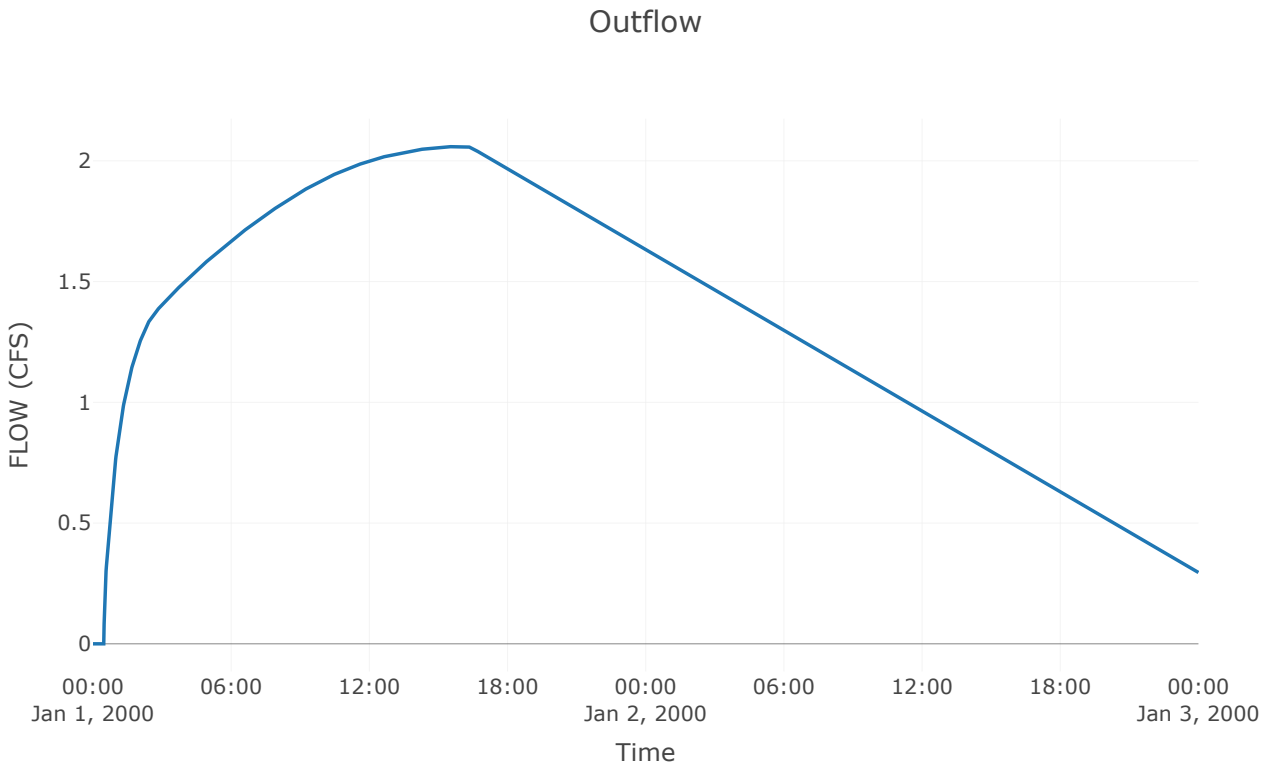



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

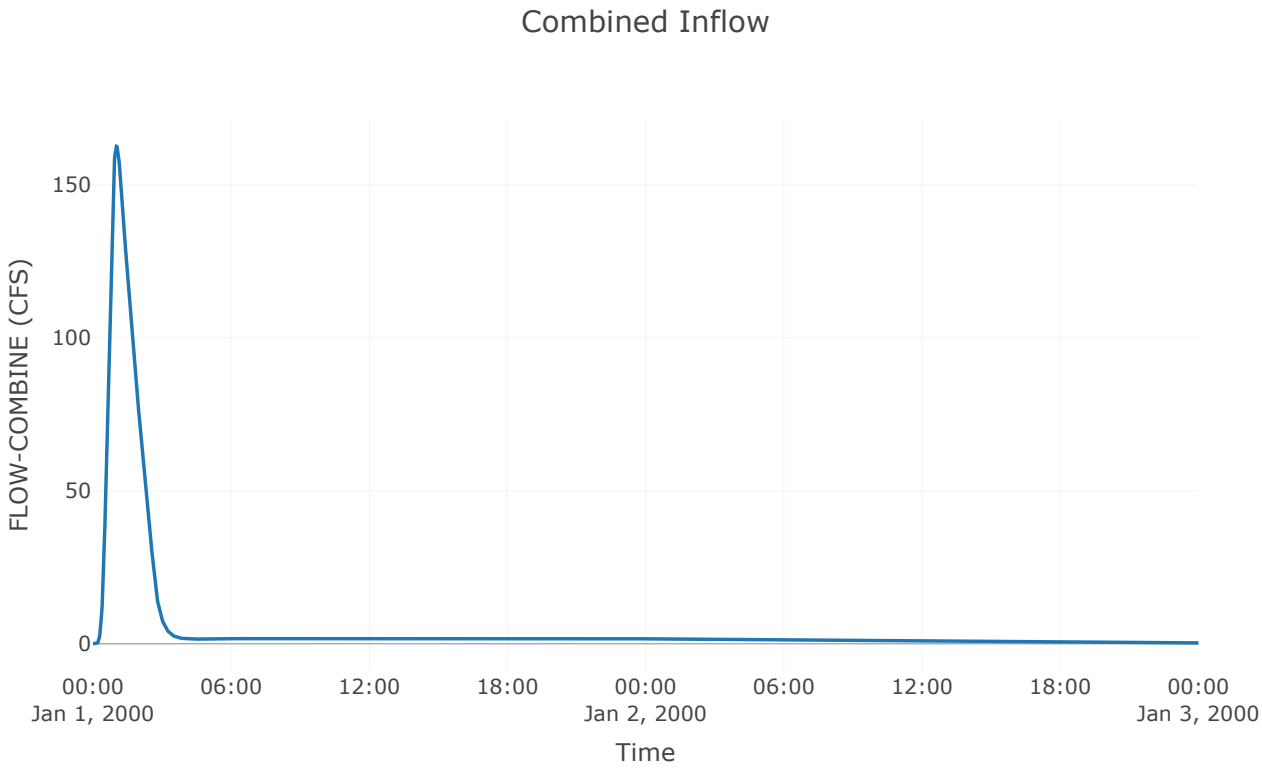

Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

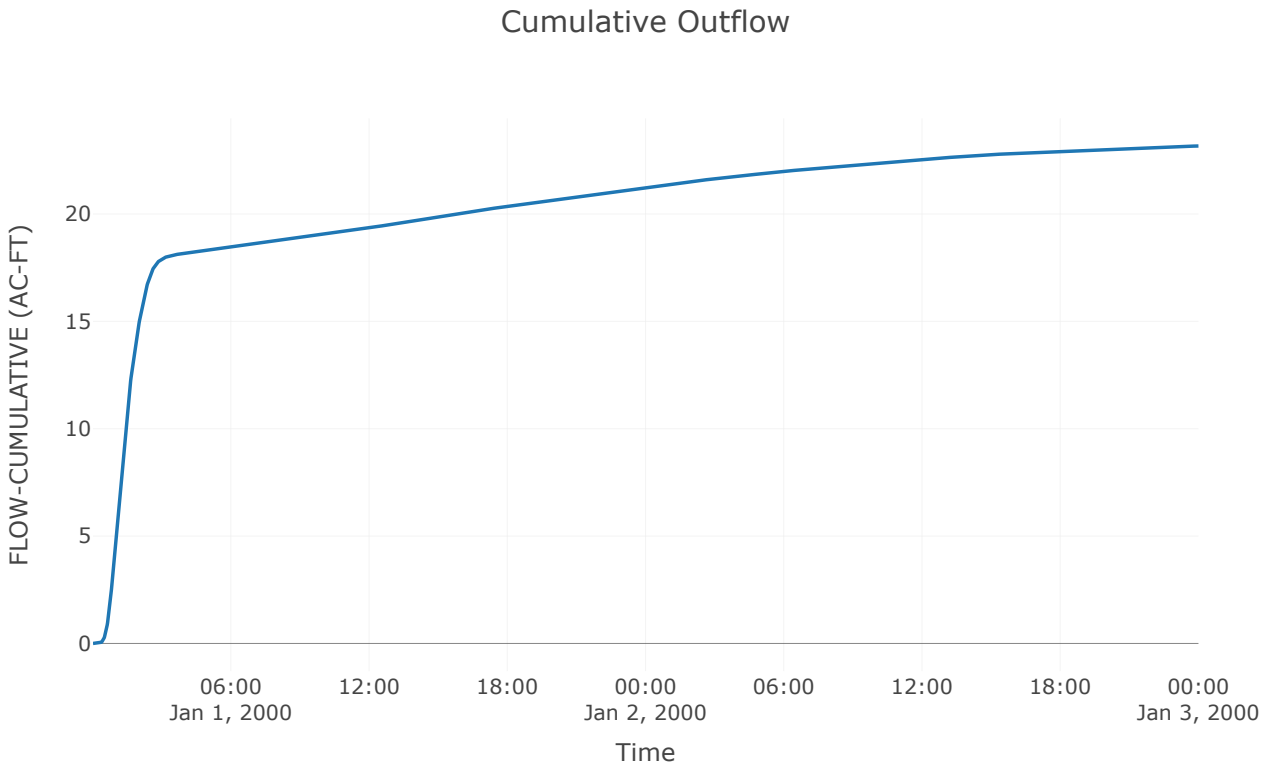

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

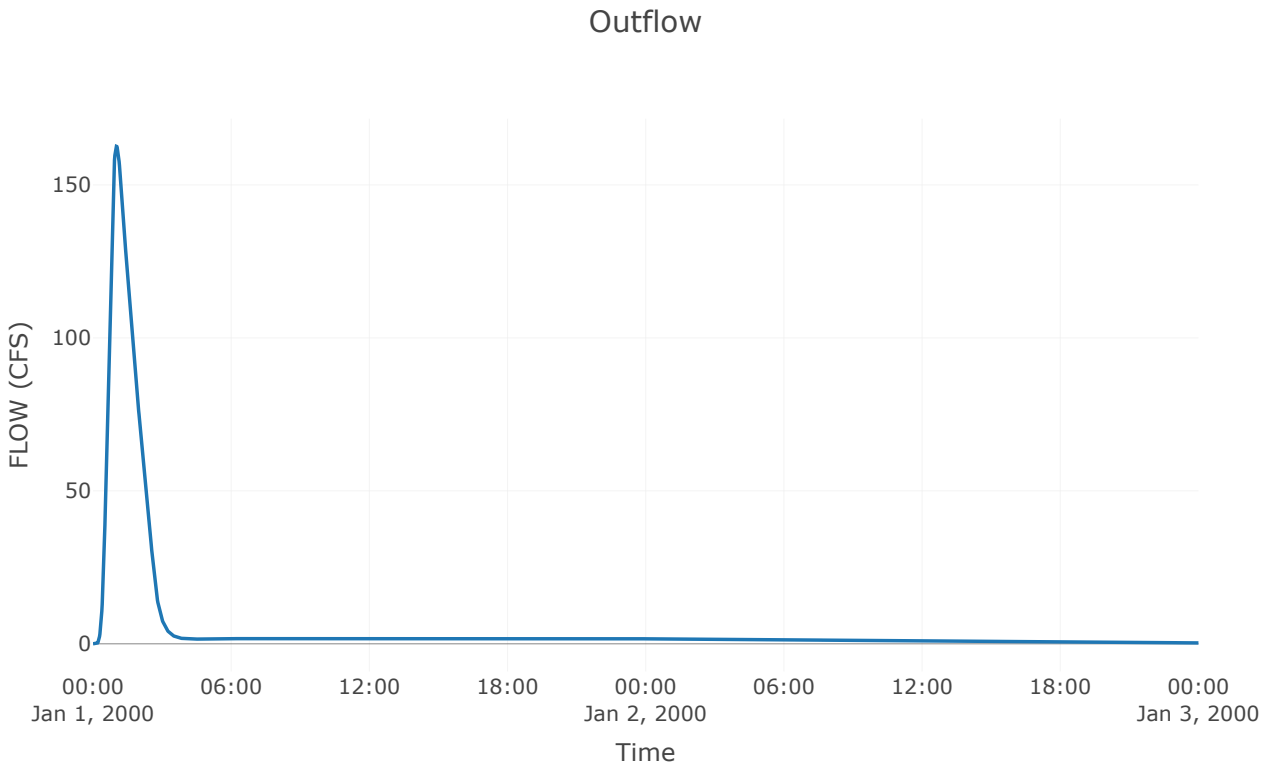
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61


Combined Inflow
FLOW-COMBINE (CFS)
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

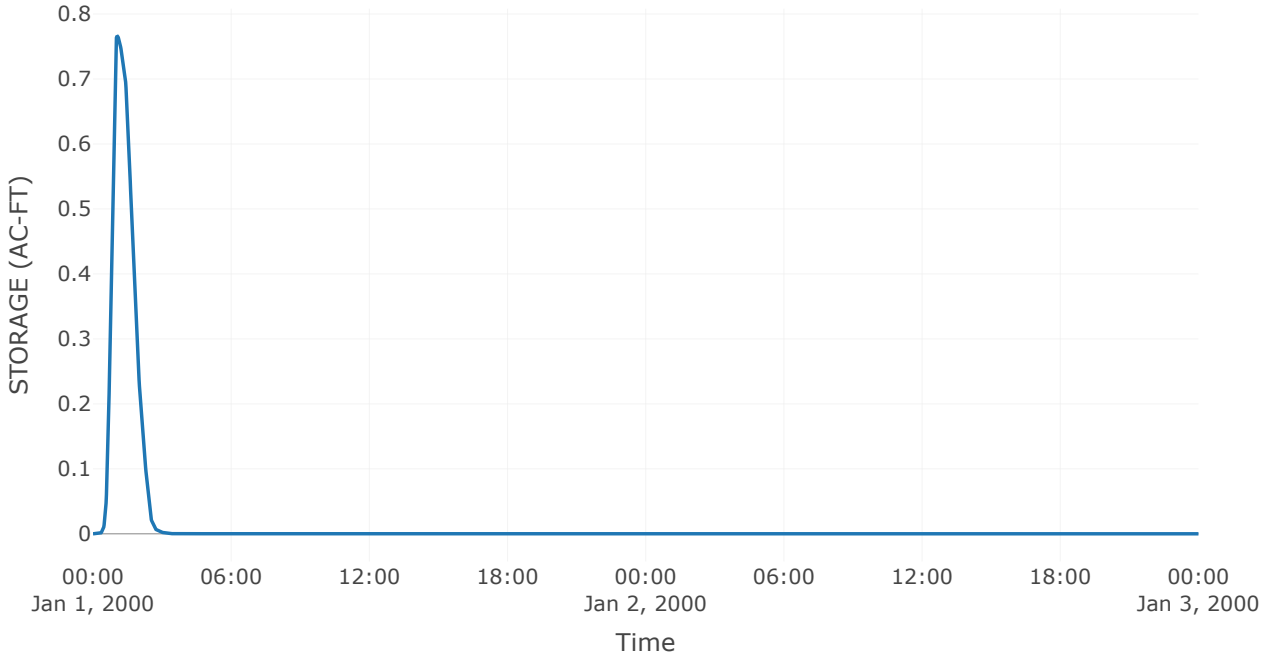

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

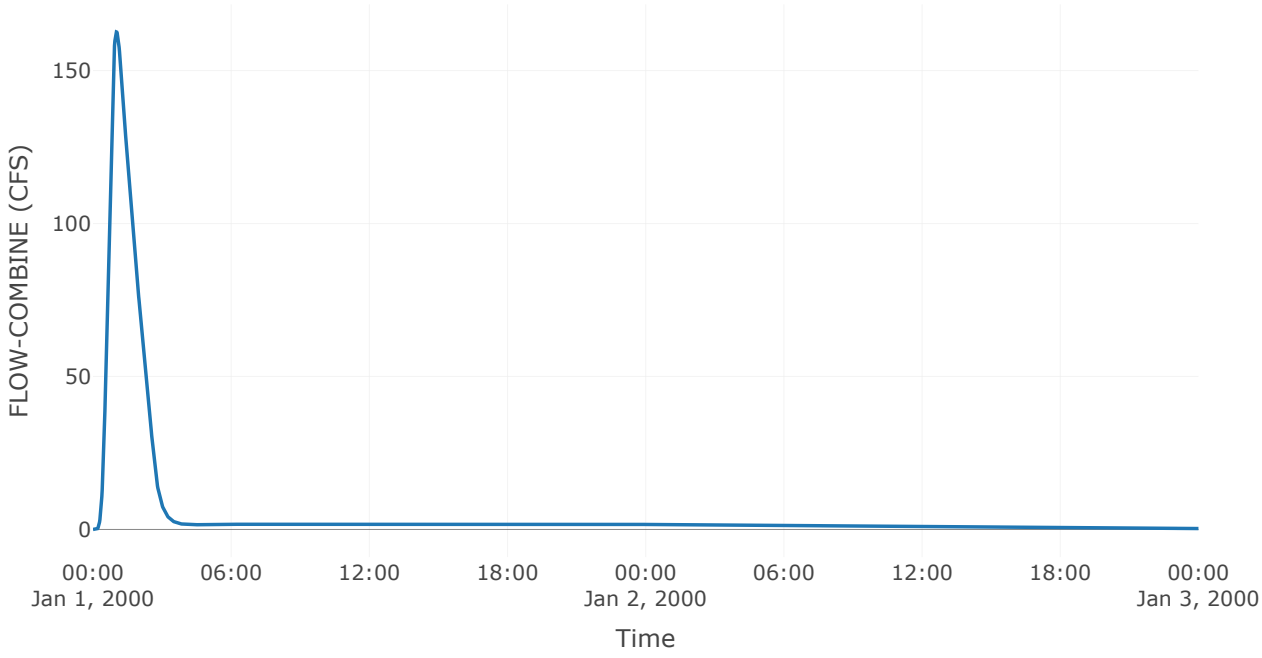
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

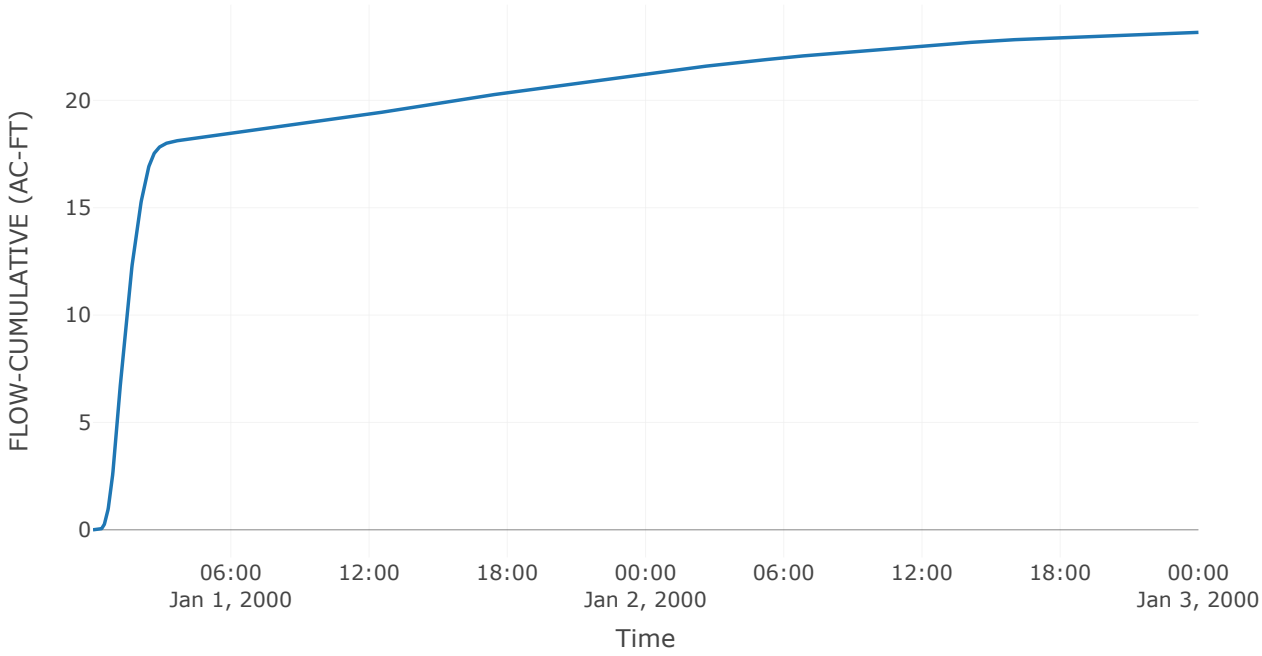
Storage



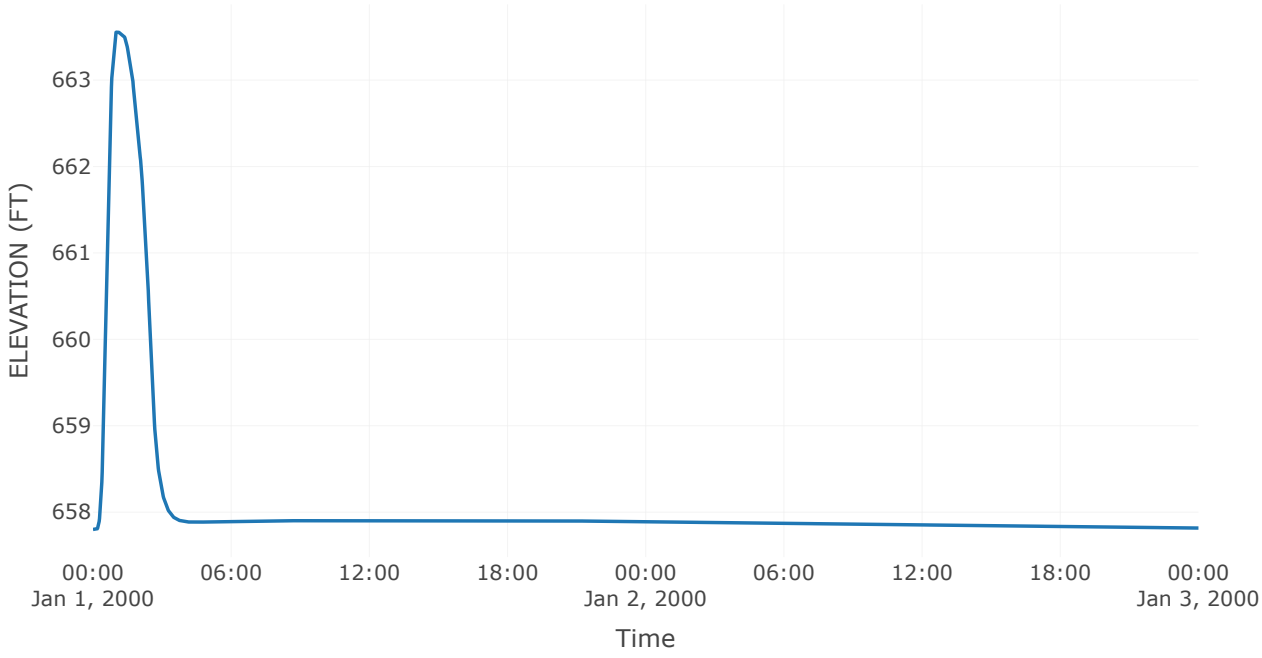
Combined Inflow

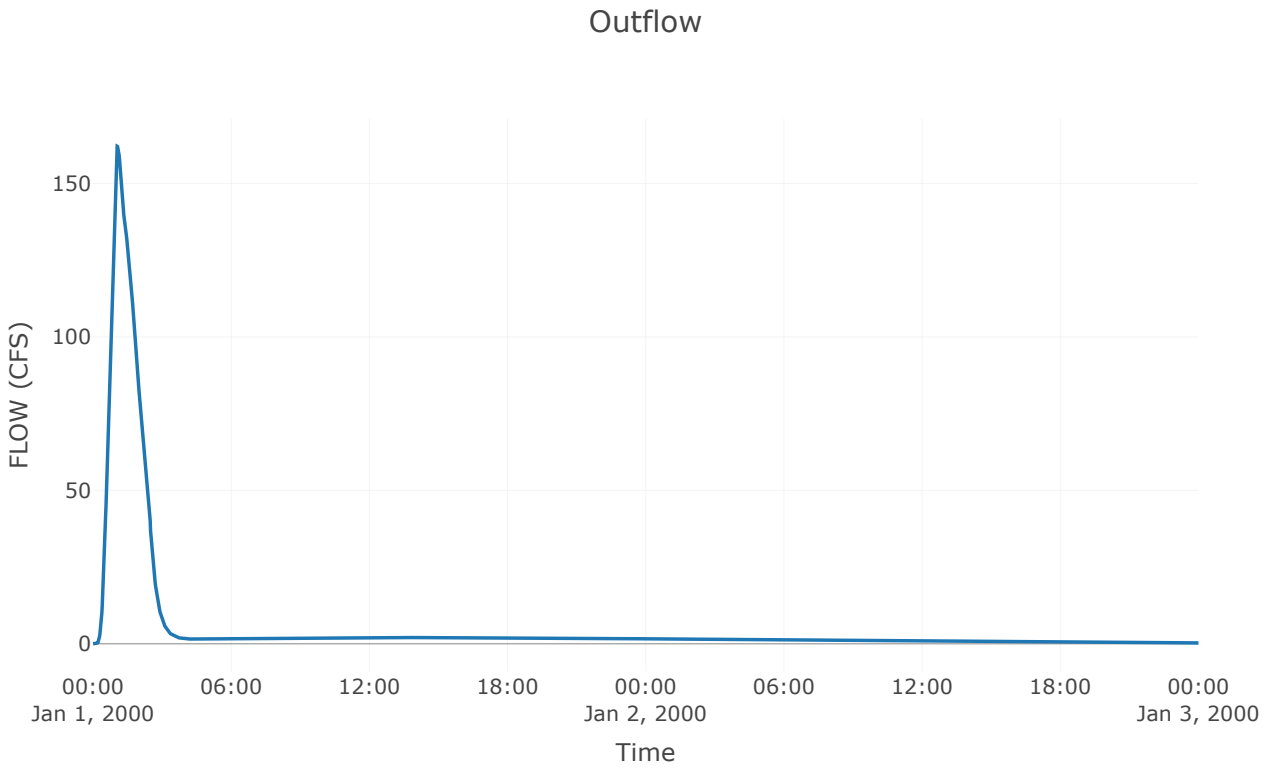


Cumulative Outflow



Pool Elevation



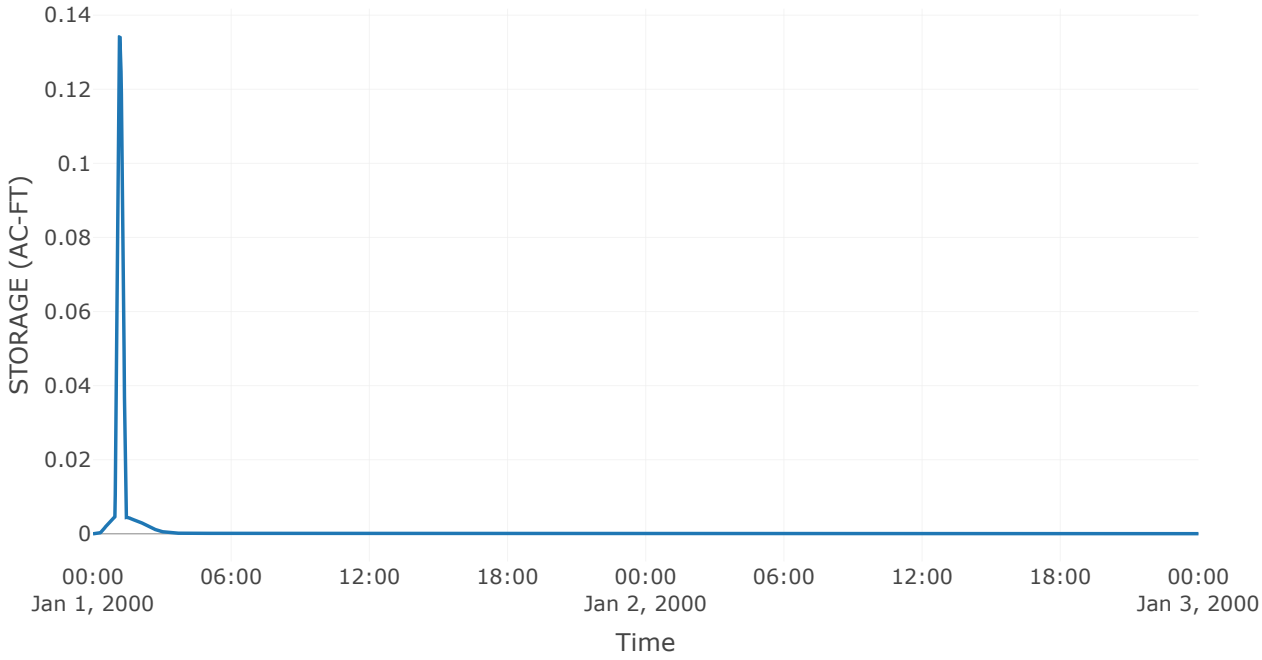

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

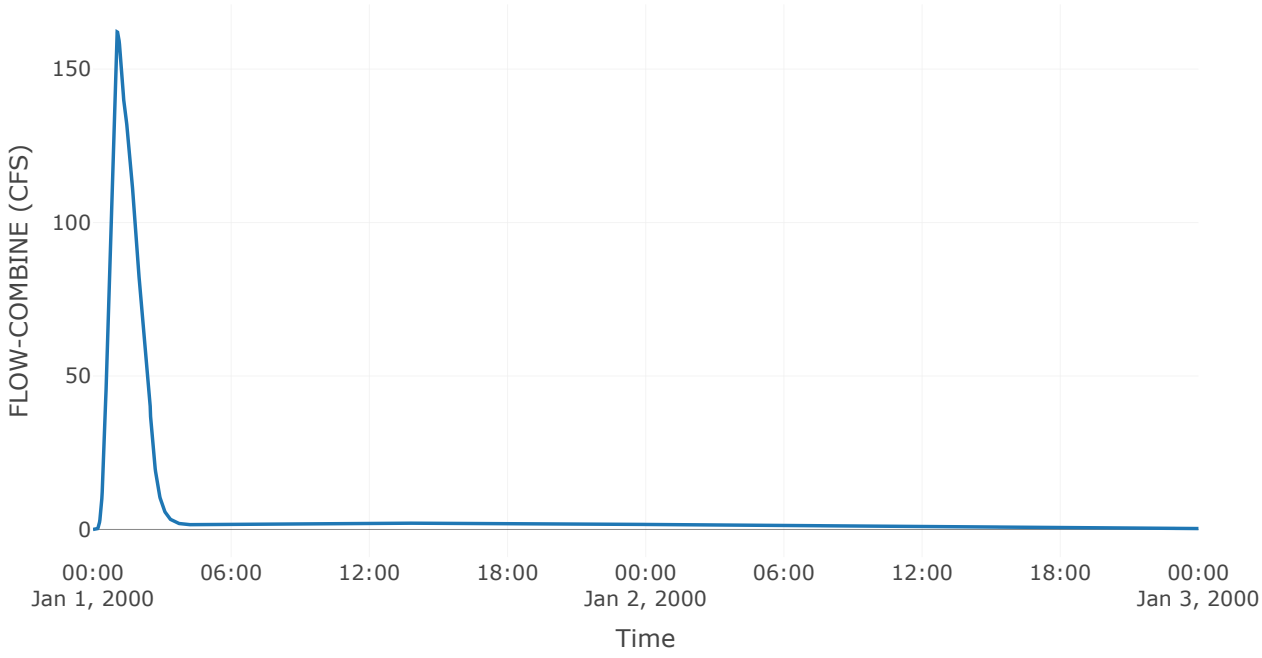
Downstream : Storage West of Wolf Road

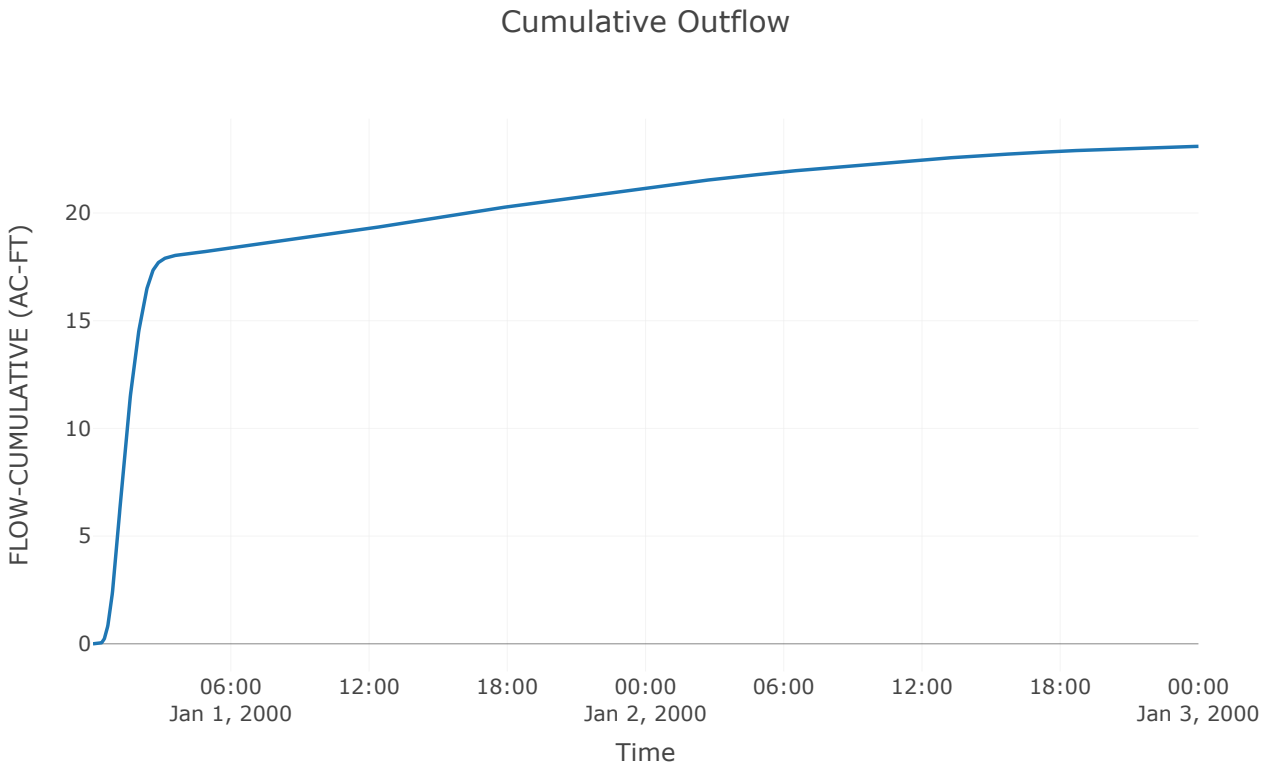
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.13
Peak Elevation (FT)	662.3
Discharge Volume (AC - FT)	23.09

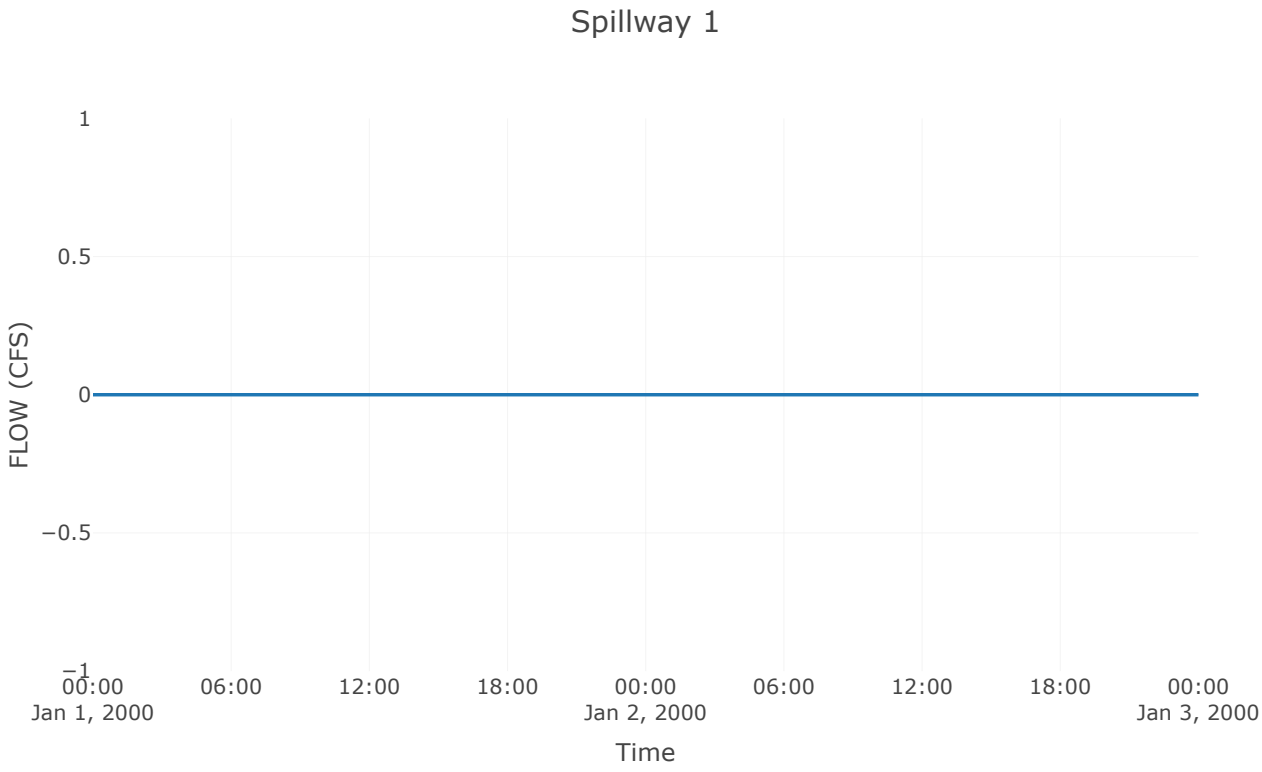
Storage



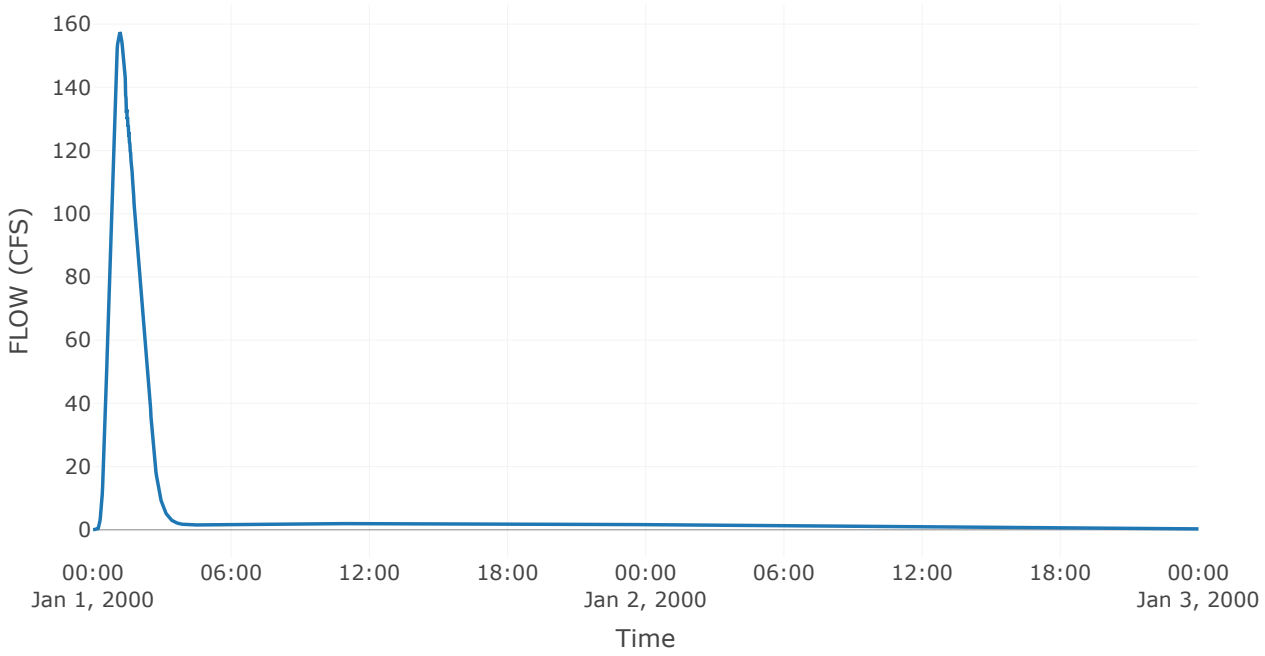
Combined Inflow



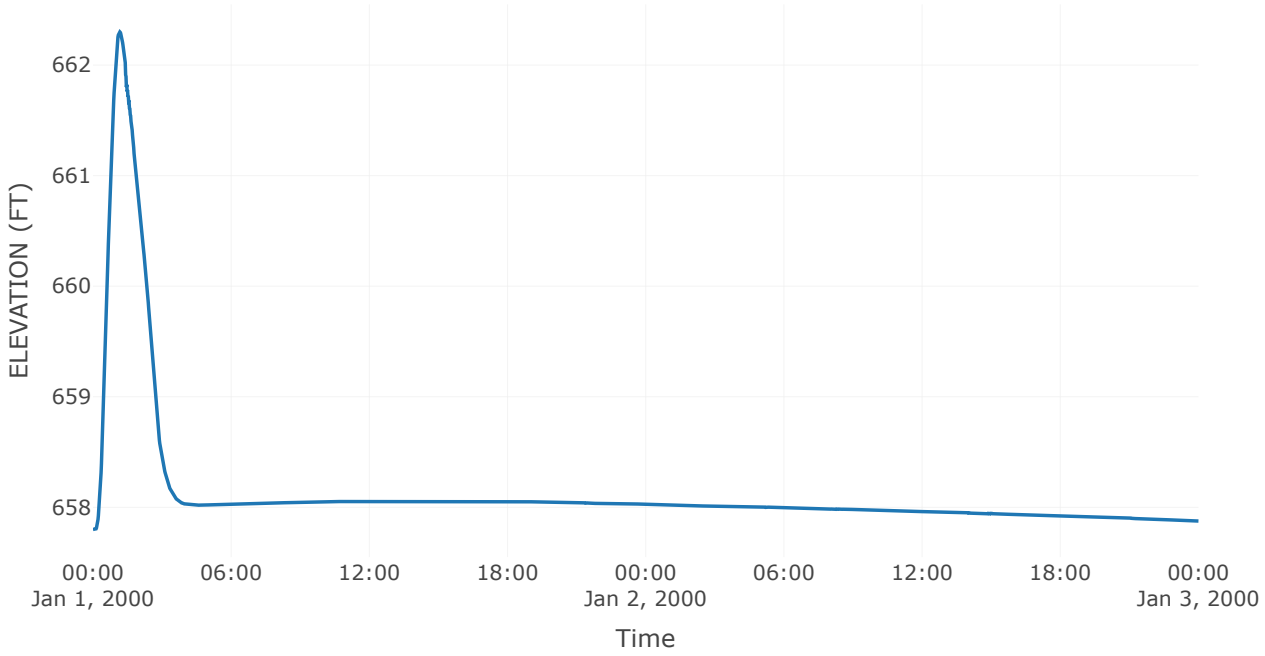

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

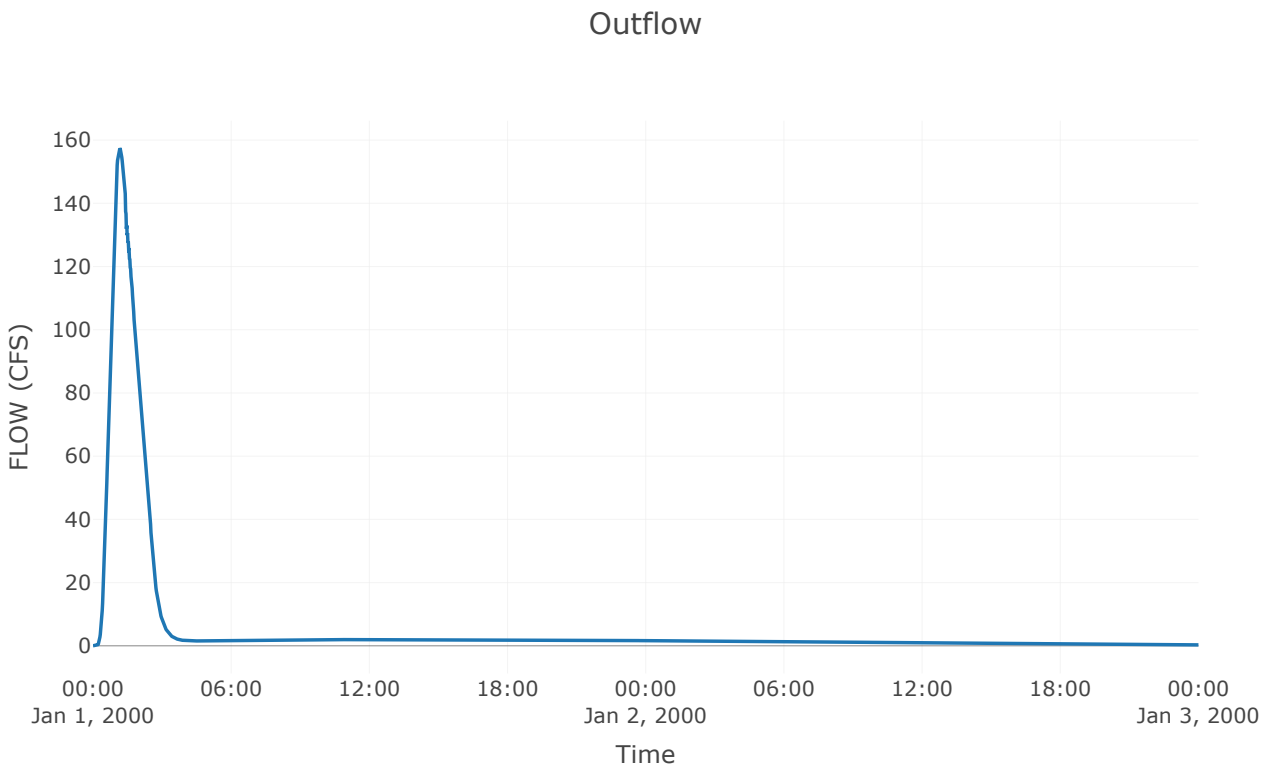

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



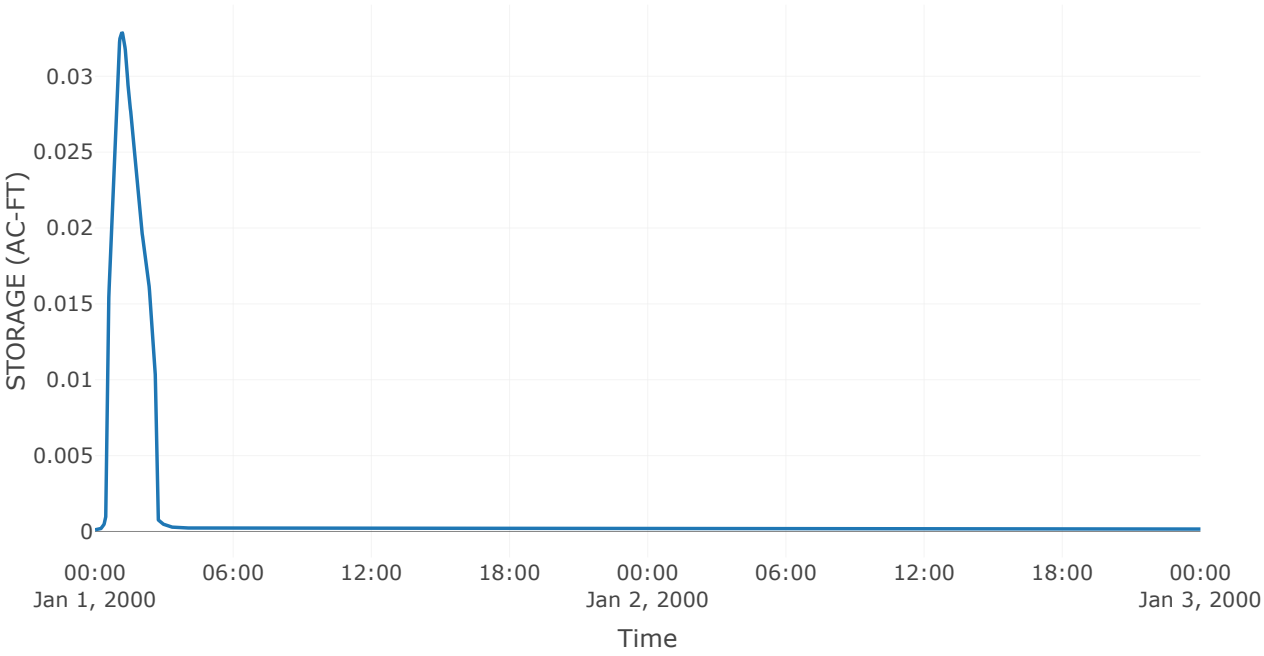

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

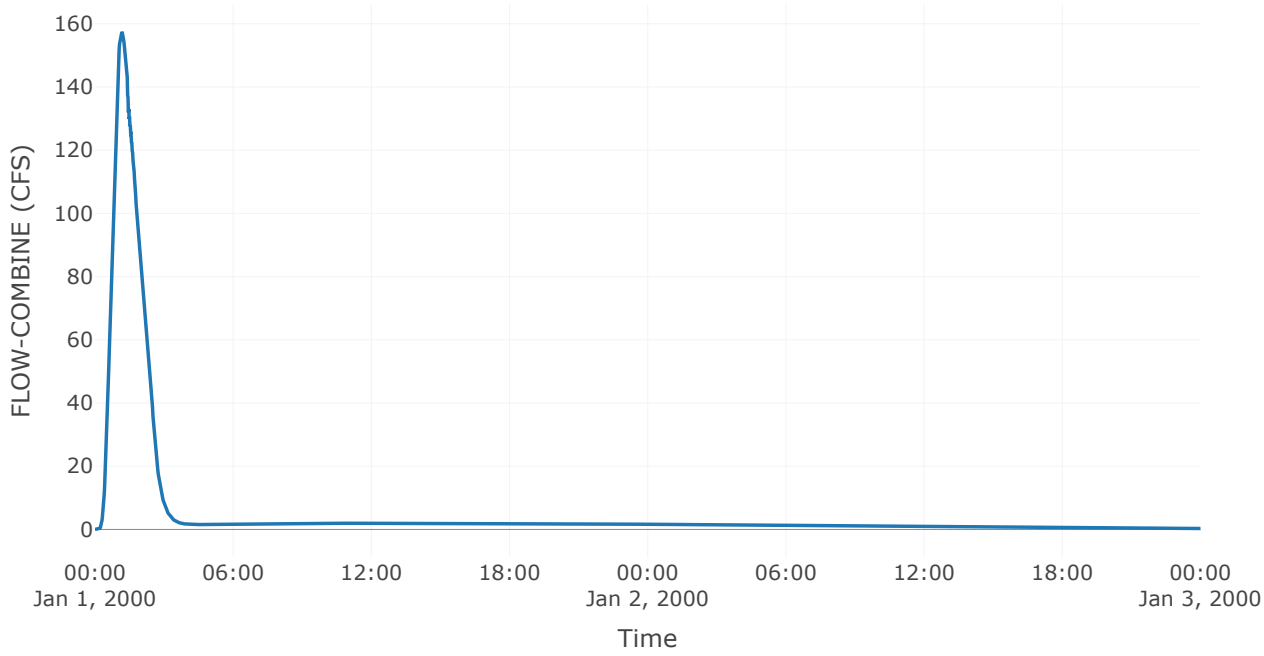
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.6
Peak Inflow (CFS)	157.38
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.03
Peak Elevation (FT)	659.44
Discharge Volume (AC - FT)	23.04

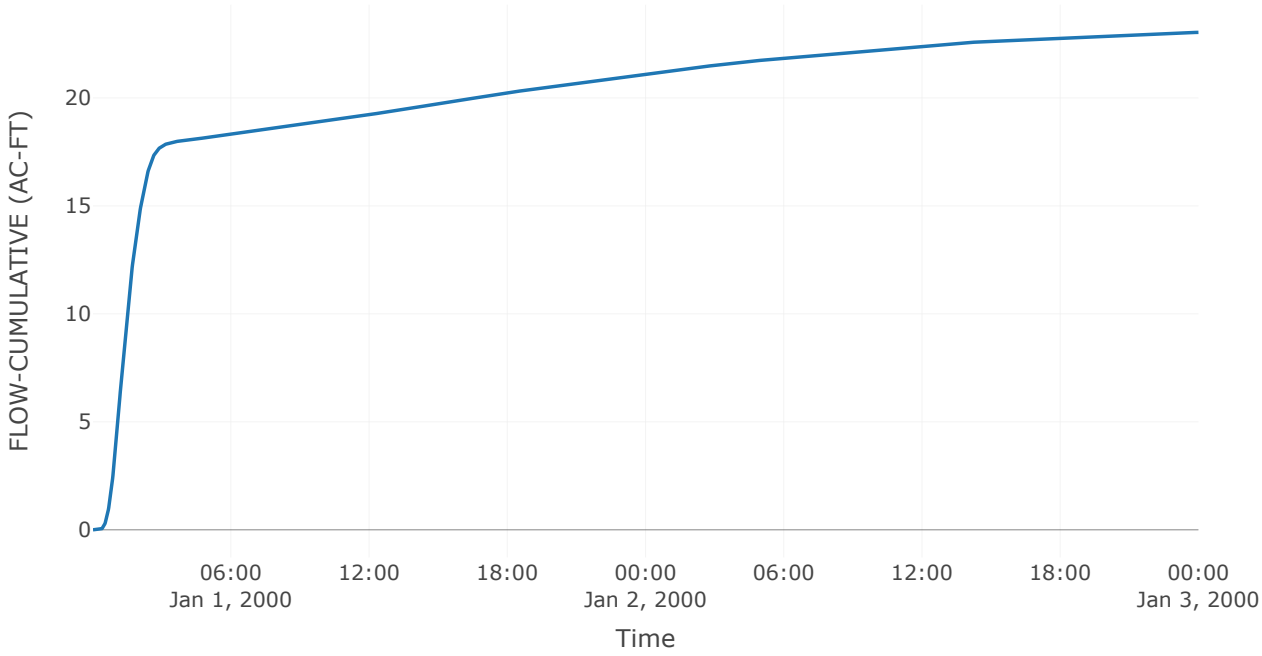
Storage



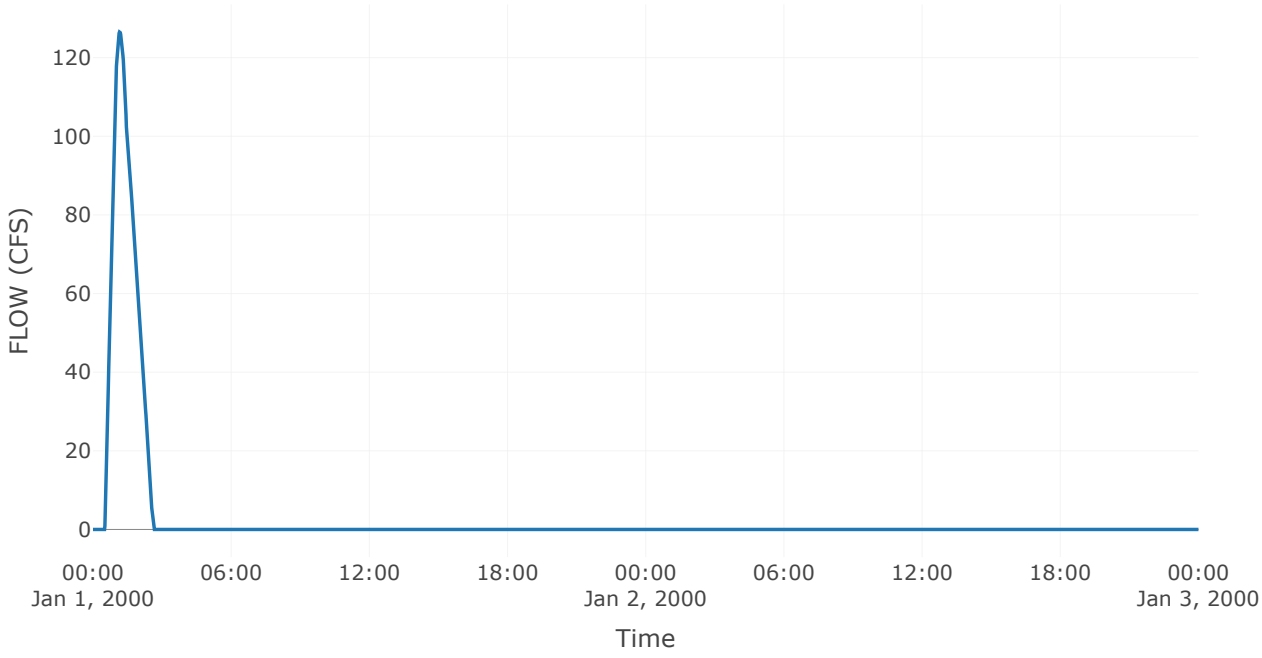
Combined Inflow



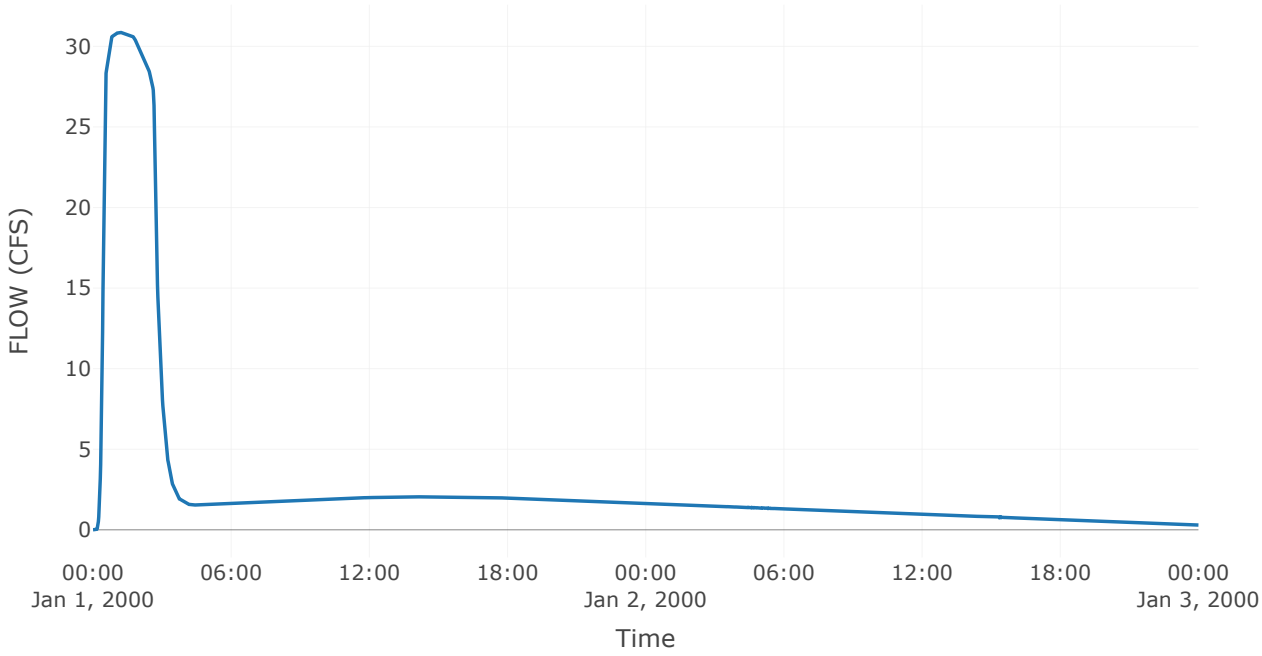
Cumulative Outflow



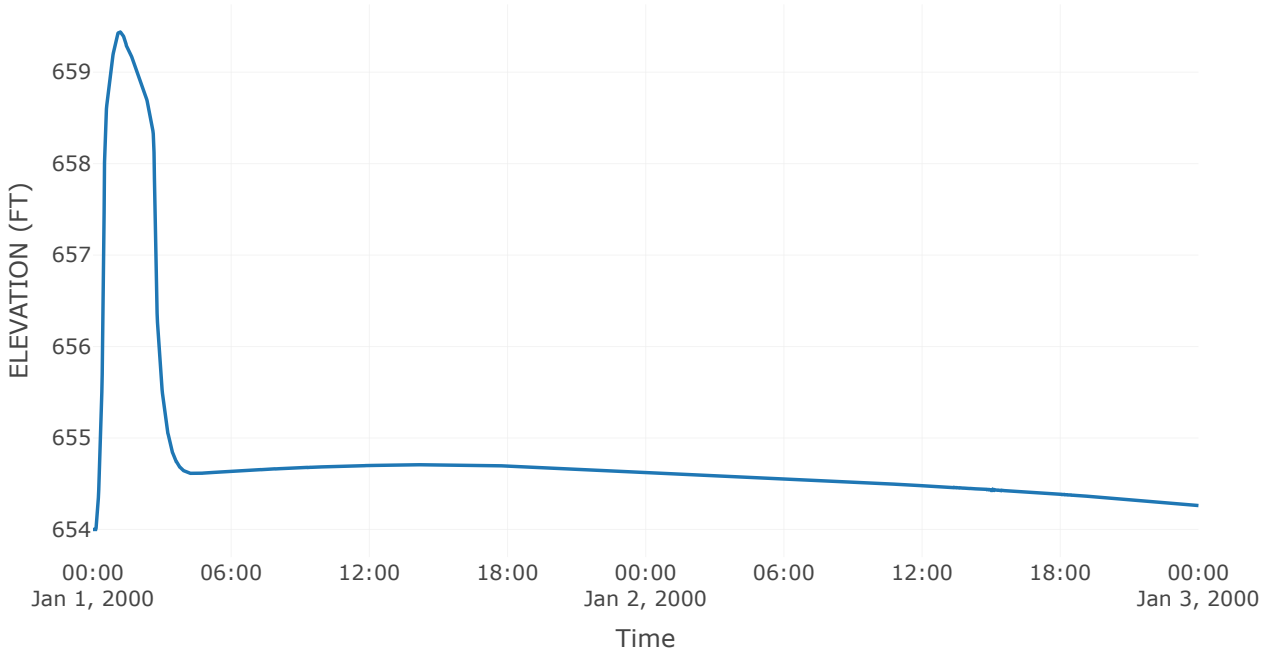
Spillway 1

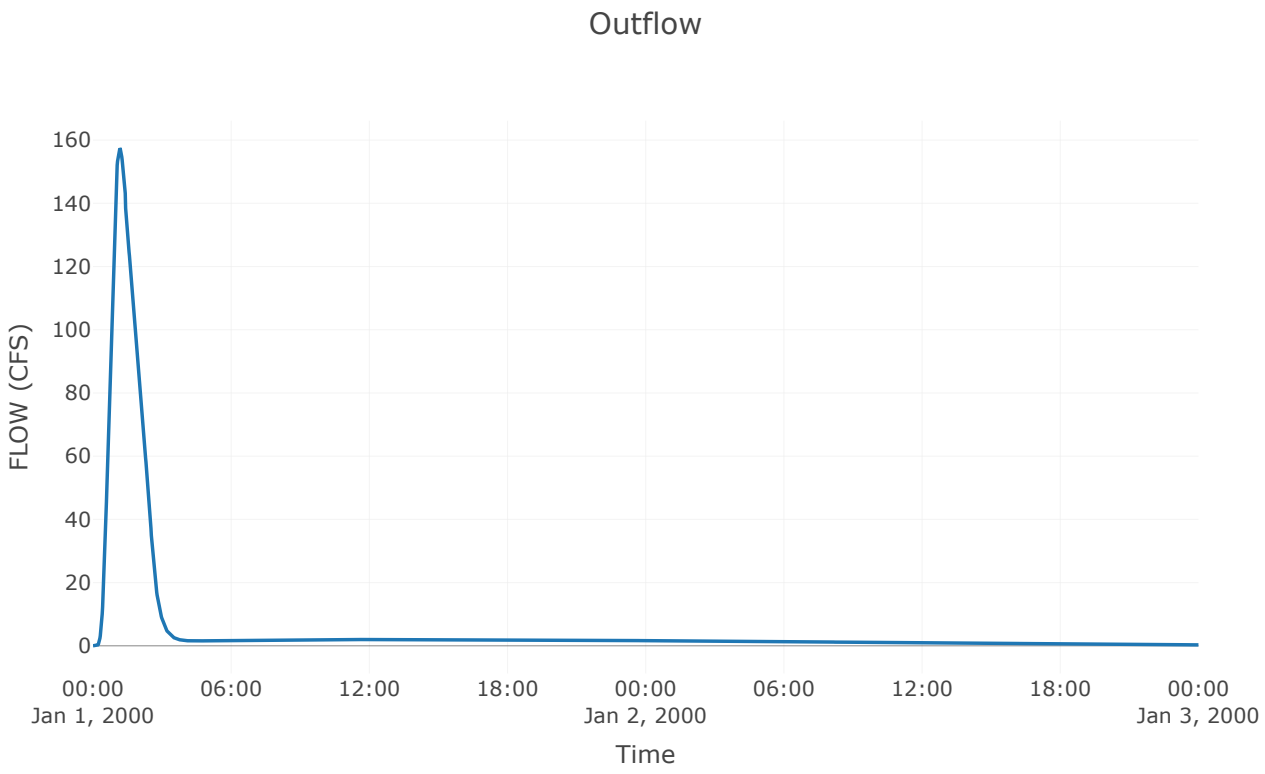


Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

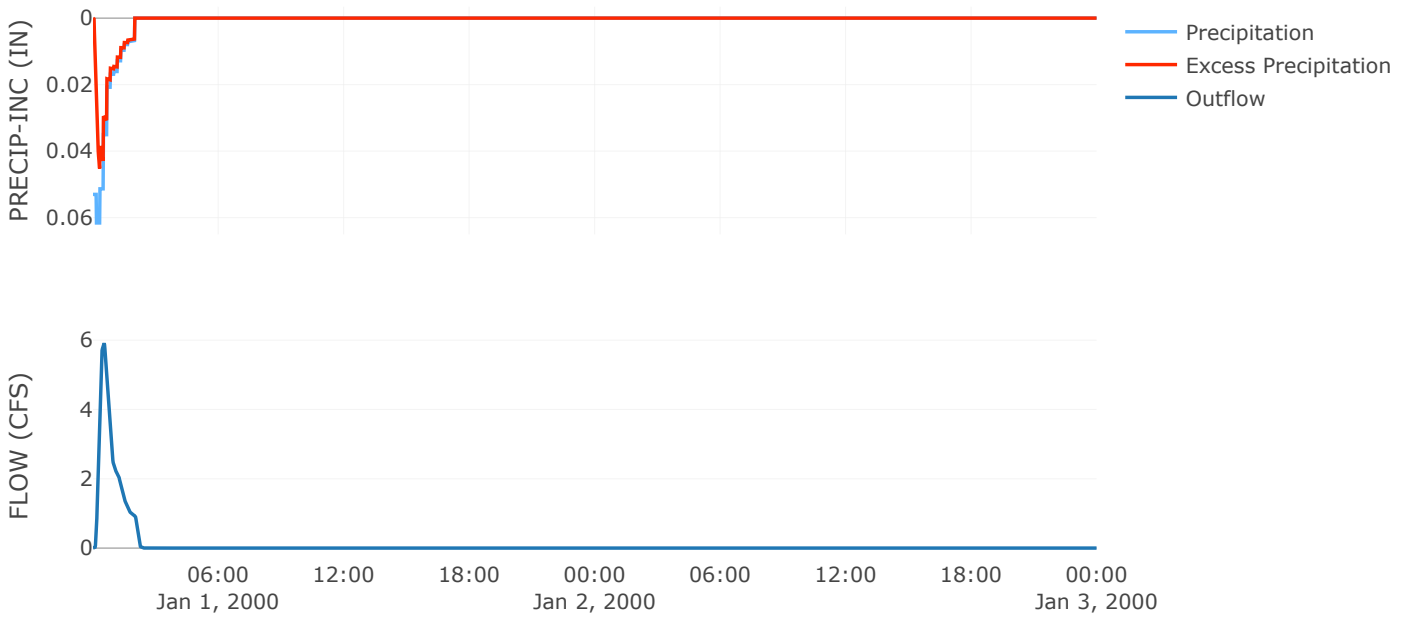
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

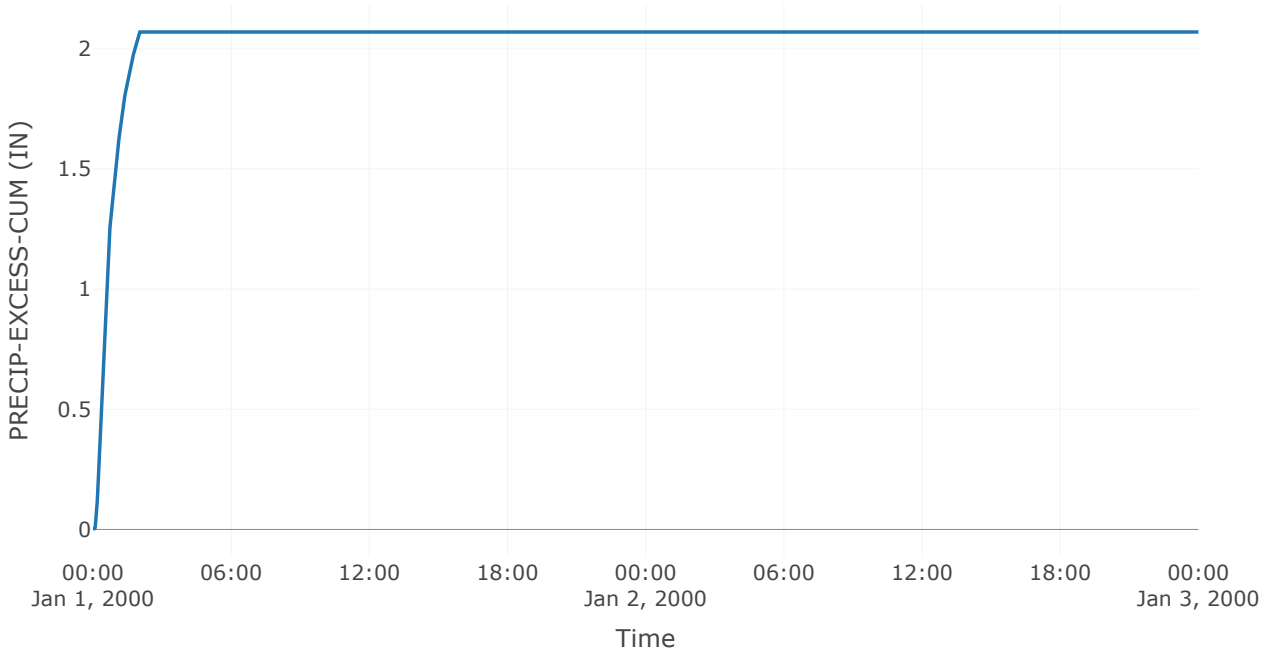
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	5.91
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.42
Direct Runoff Volume (AC - FT)	0.42
Baseflow Volume (AC - FT)	0

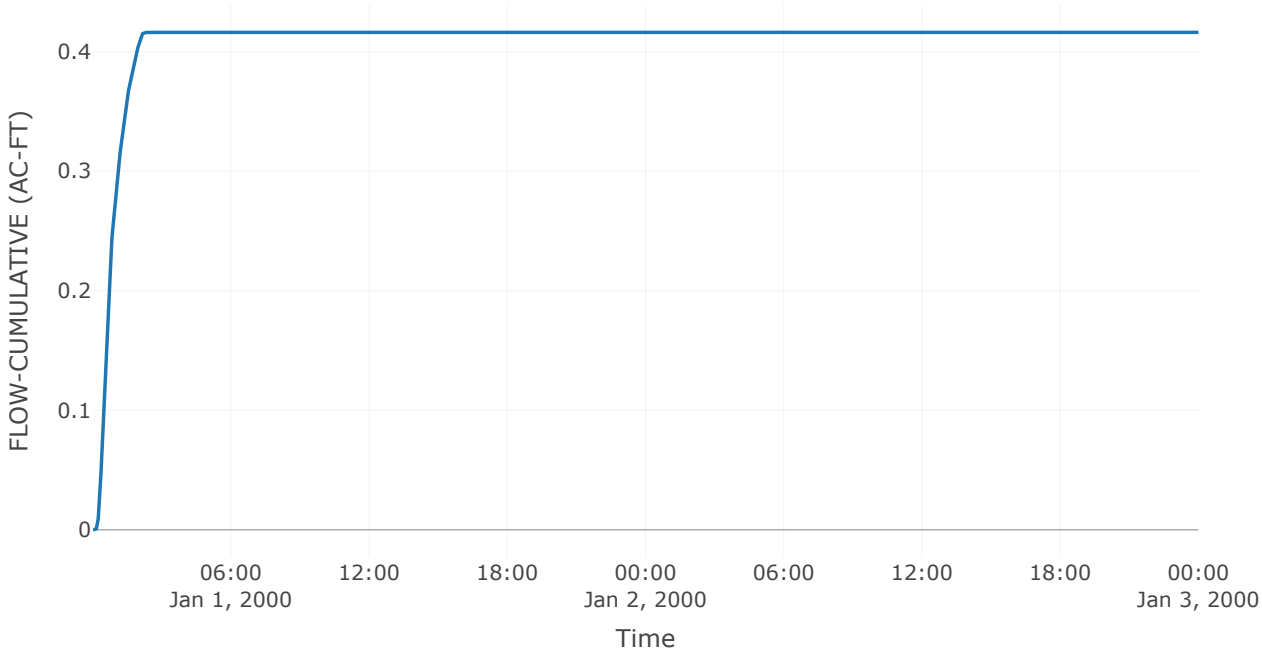
Precipitation and Outflow



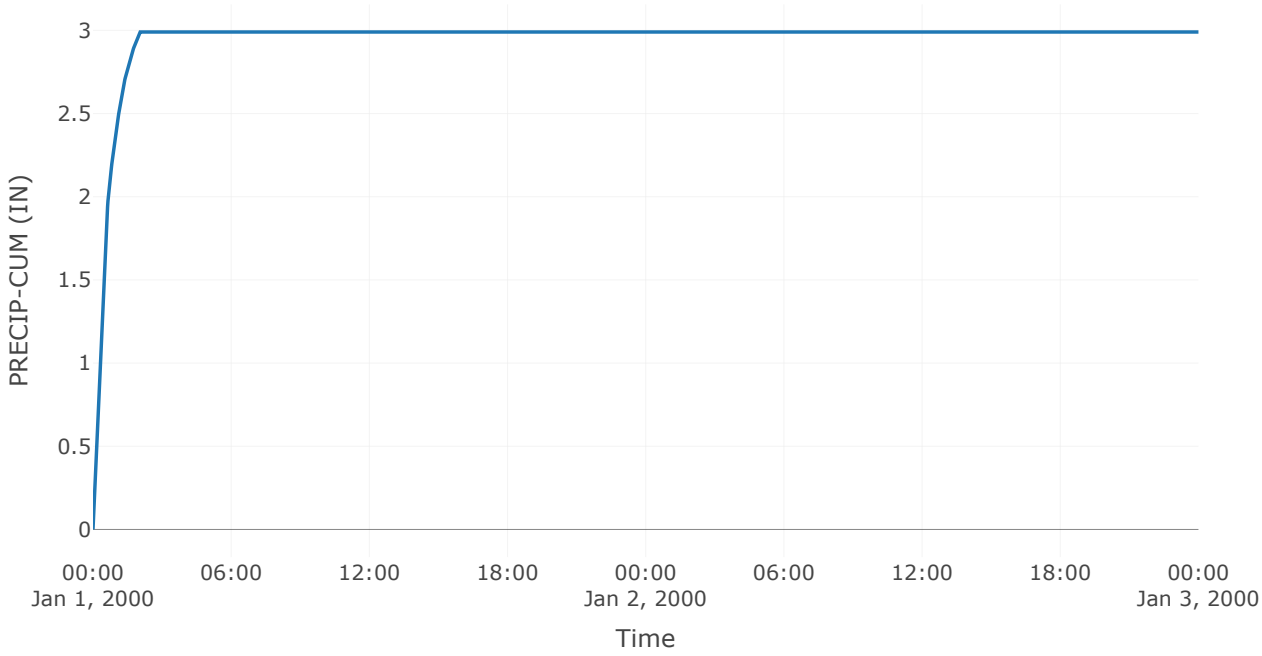
Cumulative Excess Precipitation

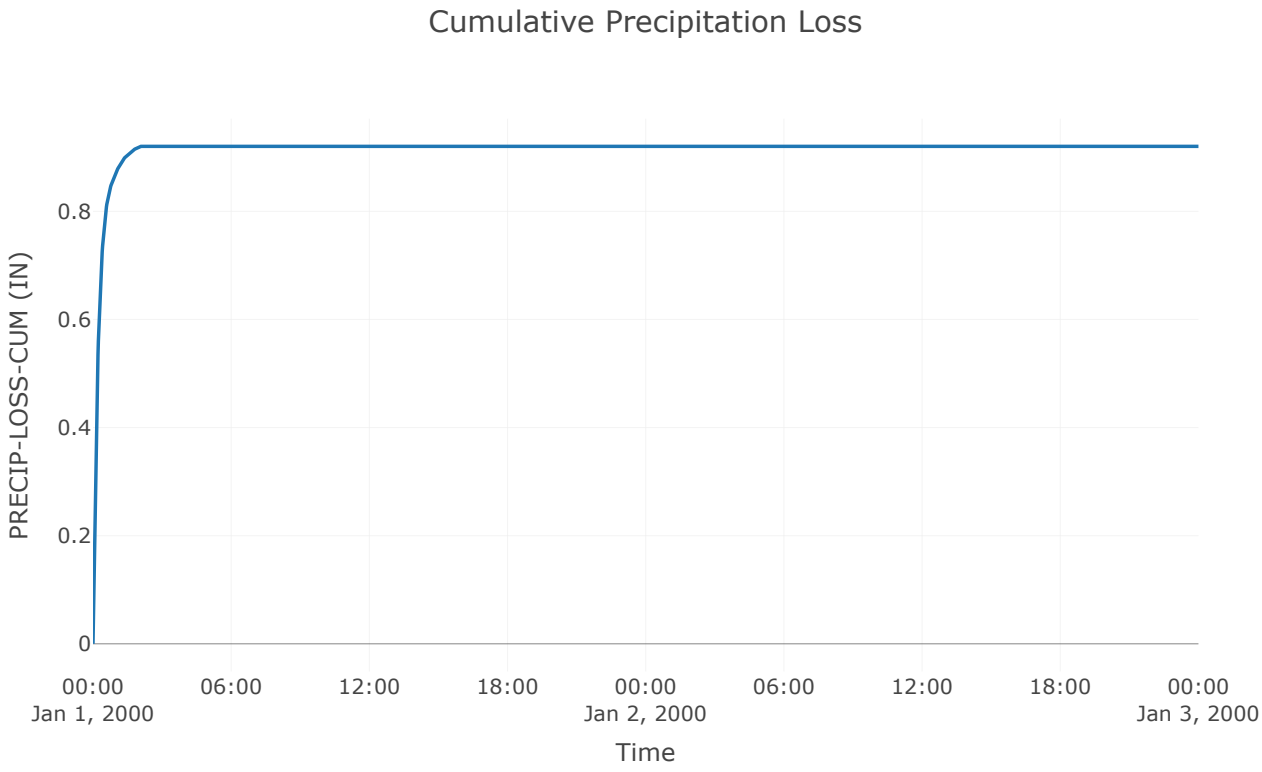


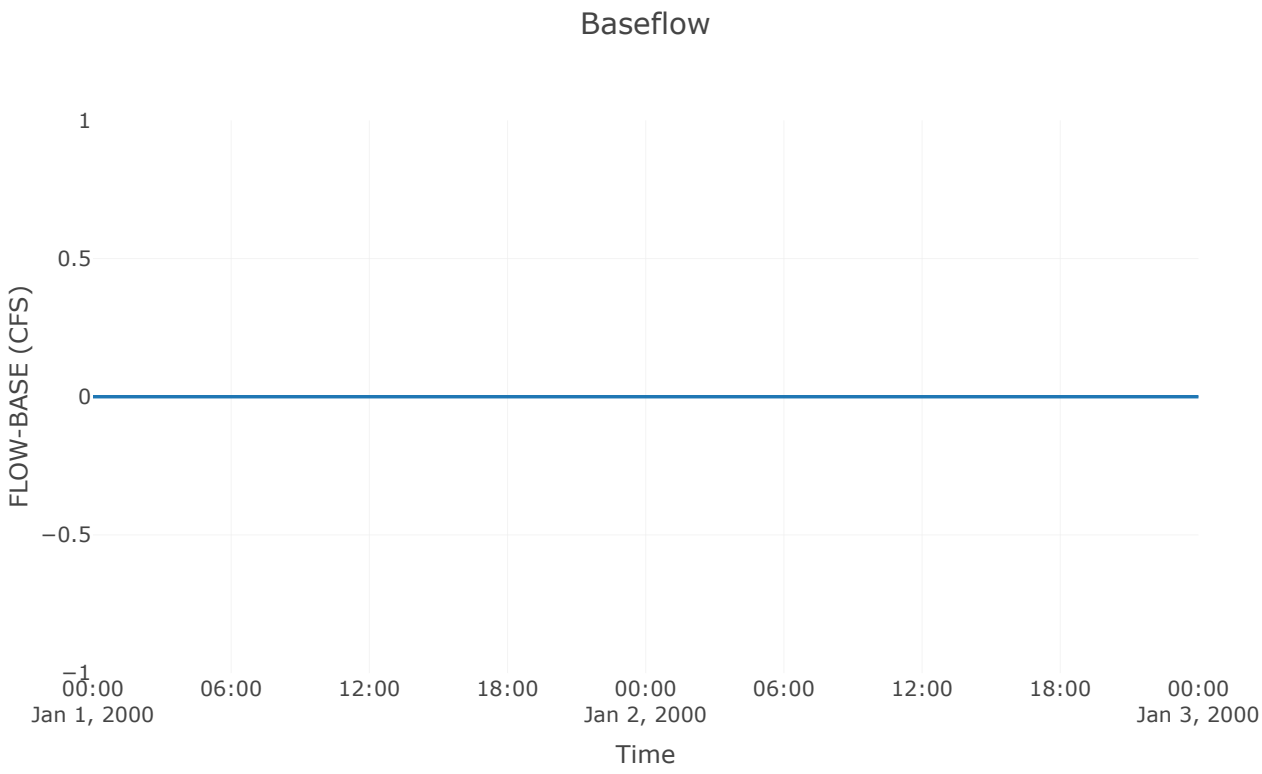
Cumulative Outflow

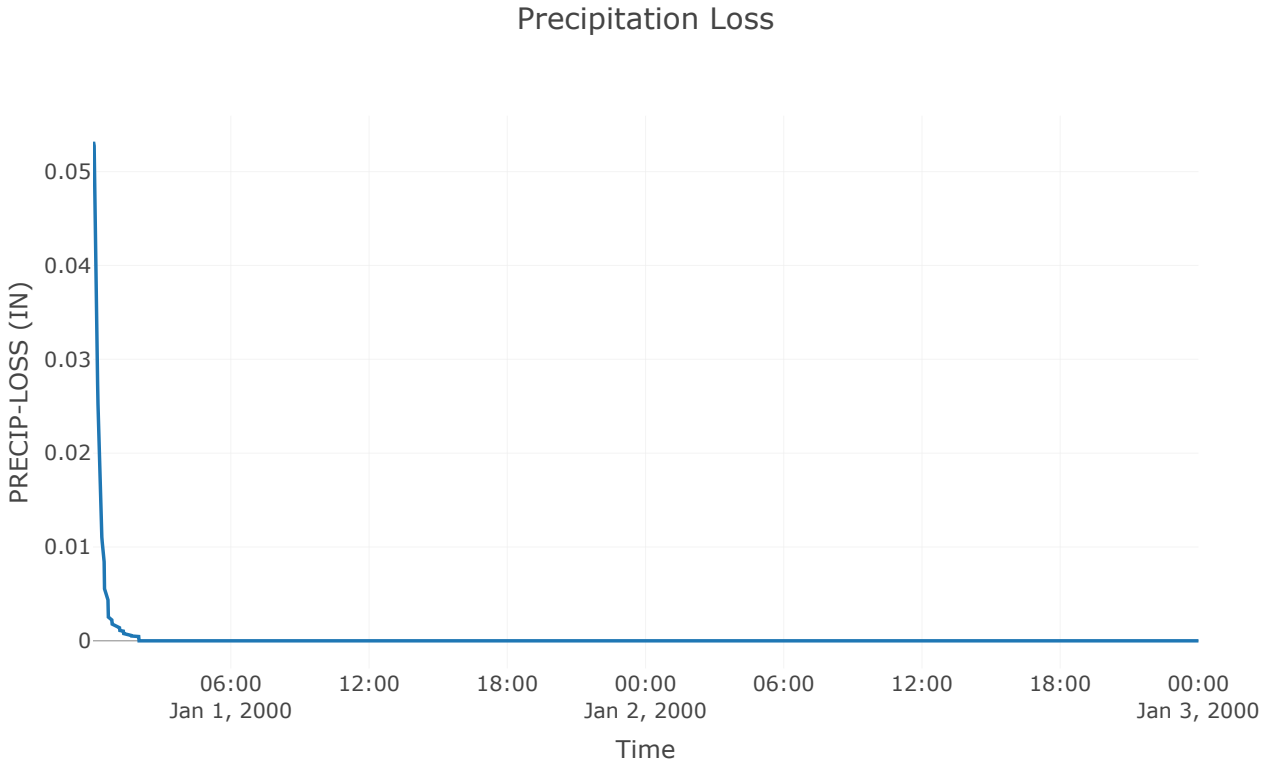


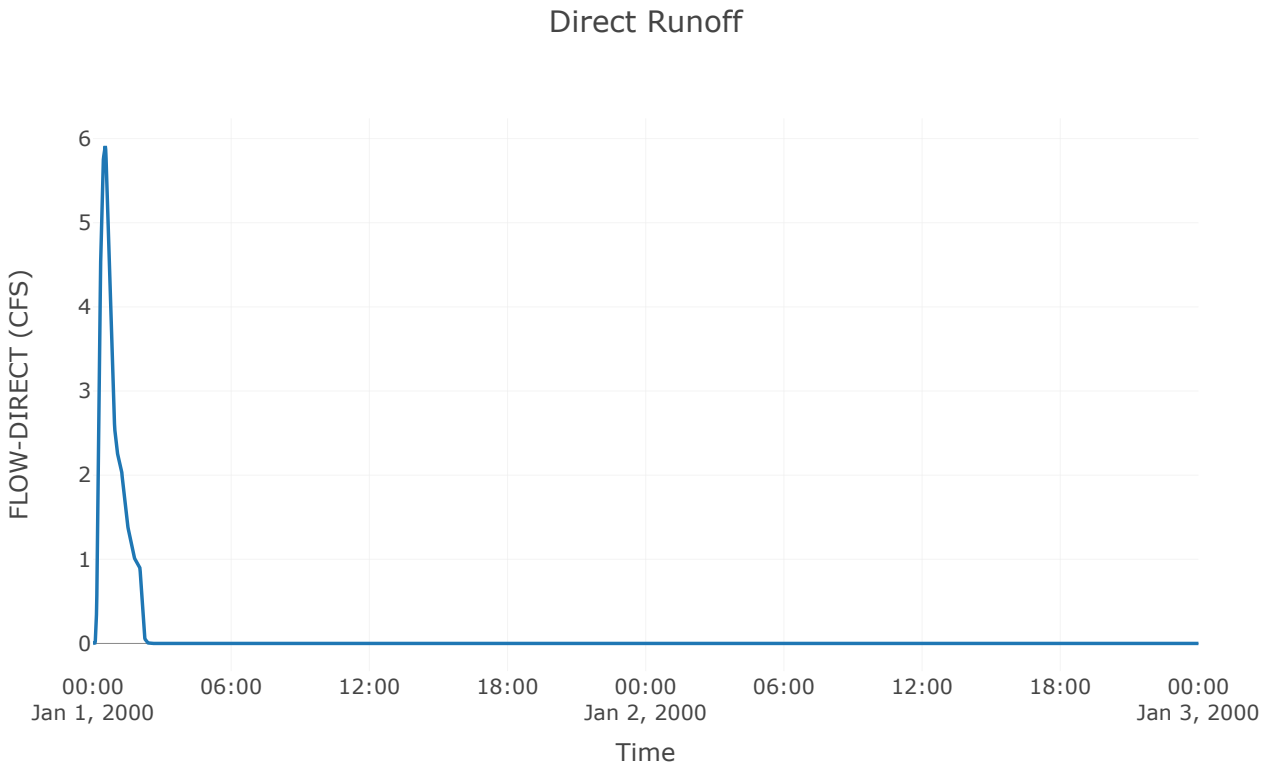
Cumulative Precipitation

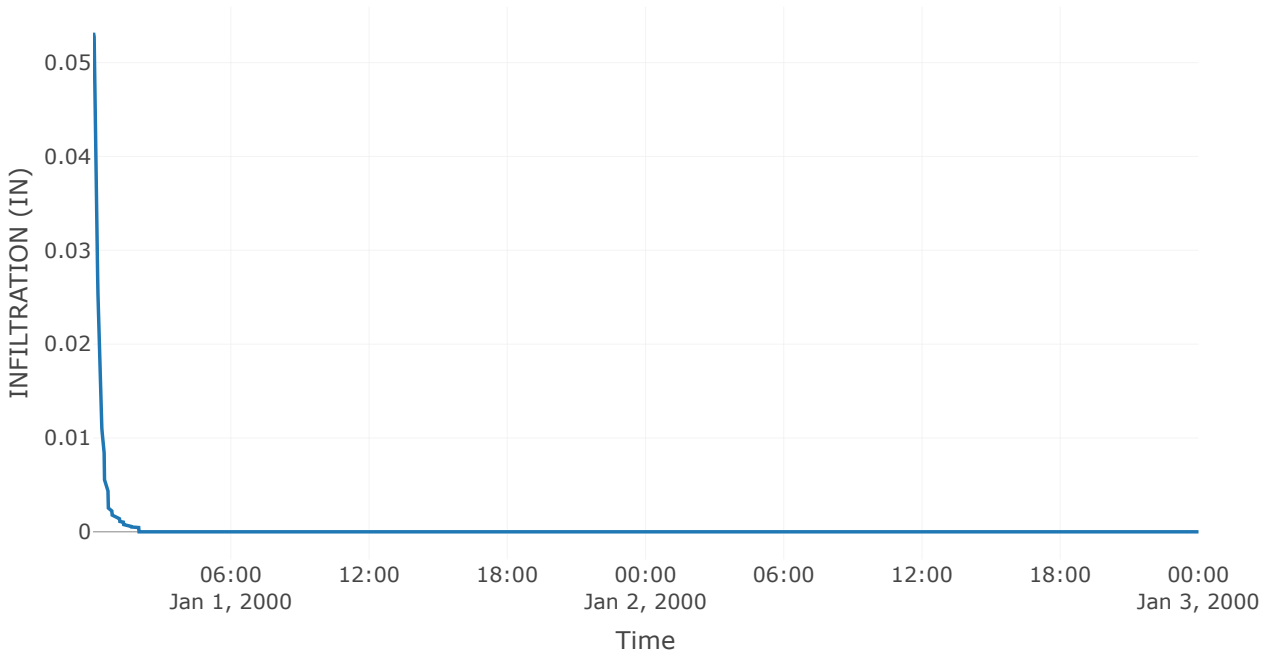



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

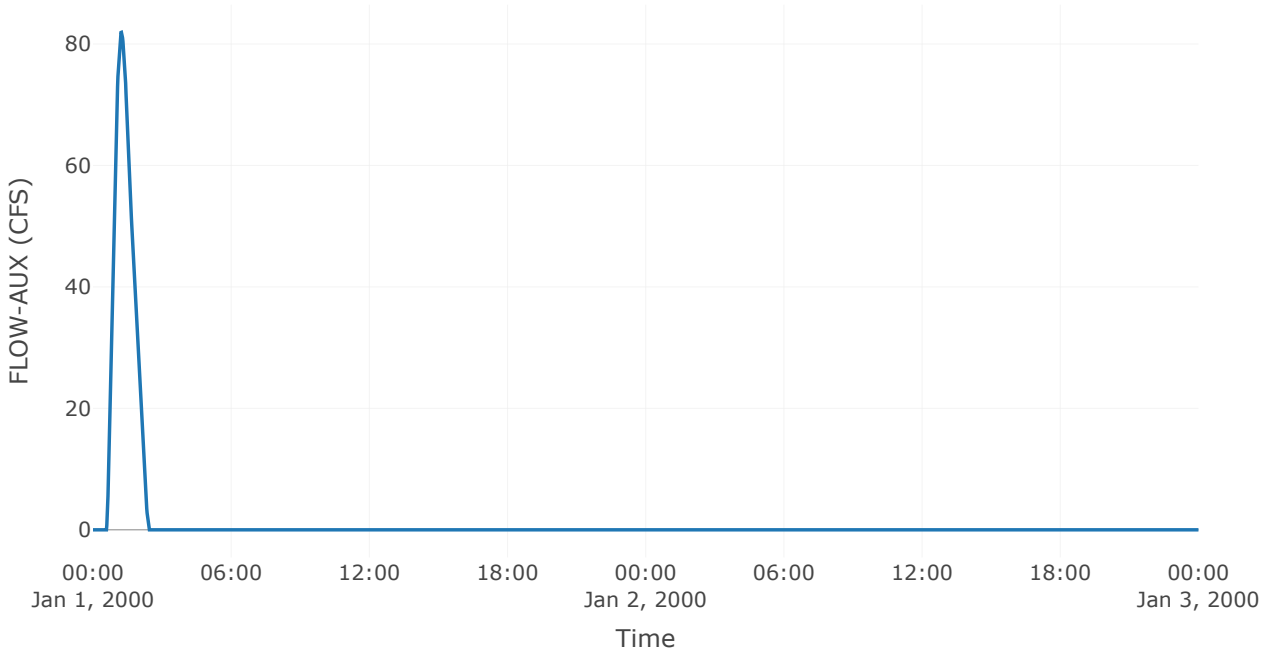

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

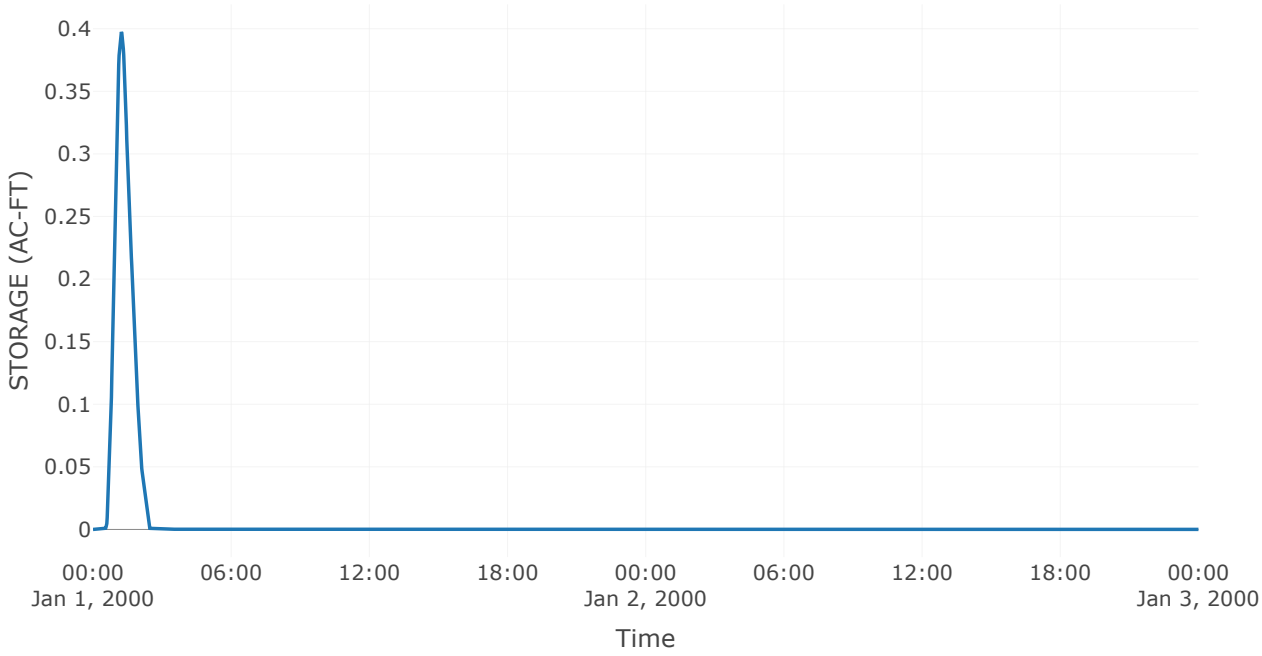
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	75.96
Time of Peak Discharge	01Jan2000, 01:14
Volume (IN)	1.17
Peak Inflow (CFS)	159.55
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.45
Maximum Storage (AC - FT)	0.4
Peak Elevation (FT)	652.49
Discharge Volume (AC - FT)	17.07

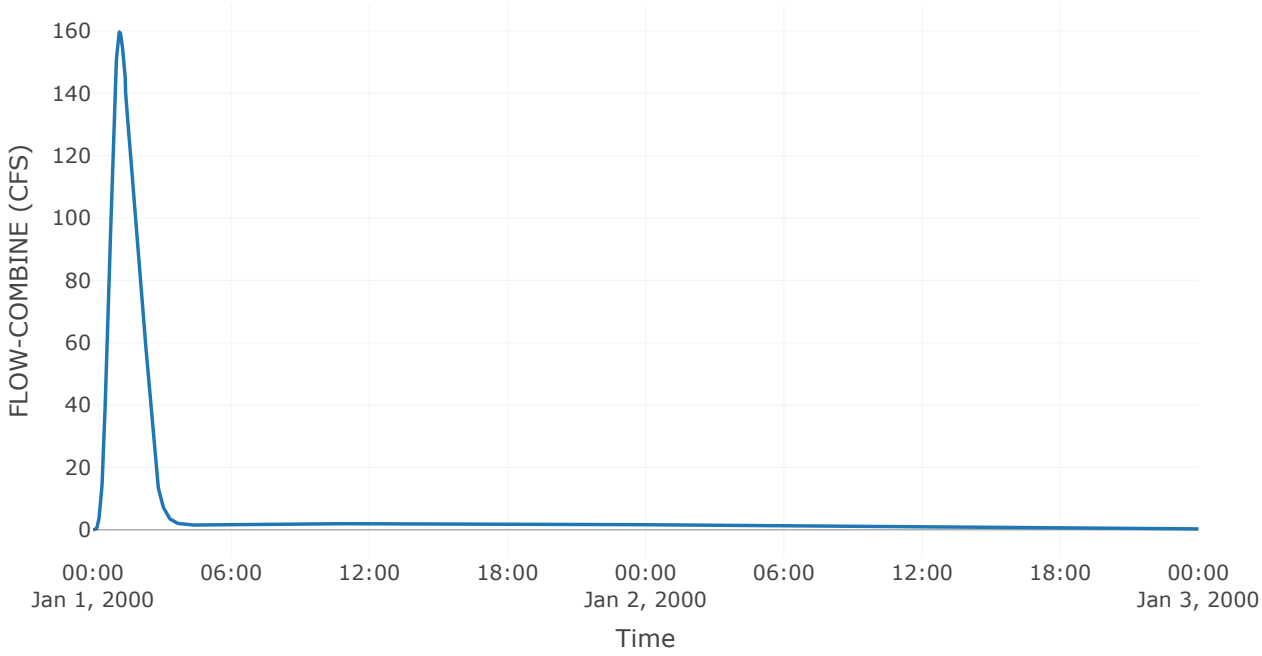
Auxiliary Outflow



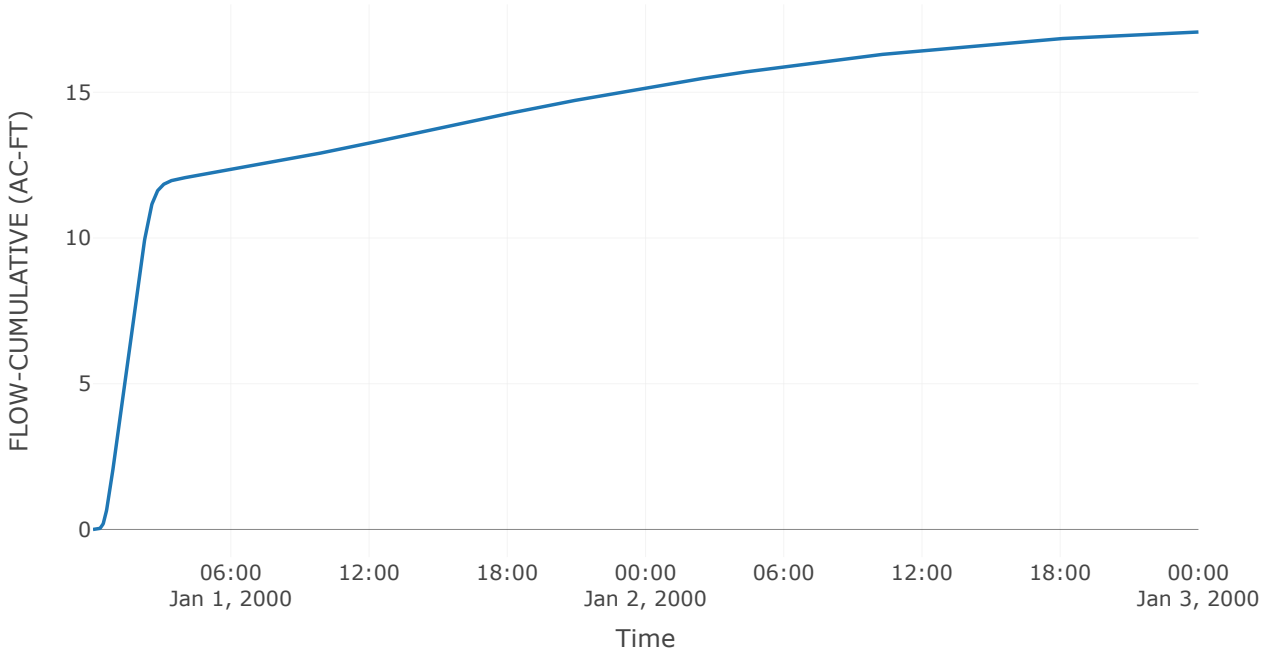
Storage

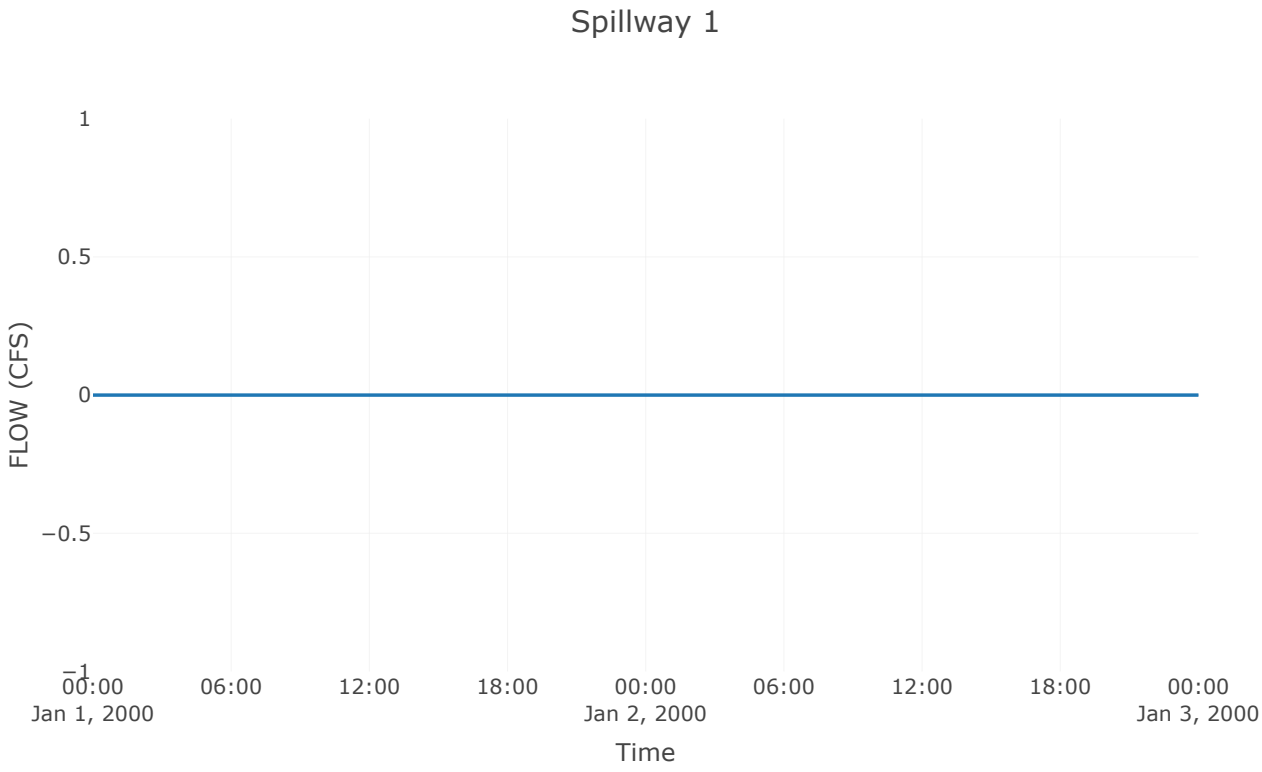


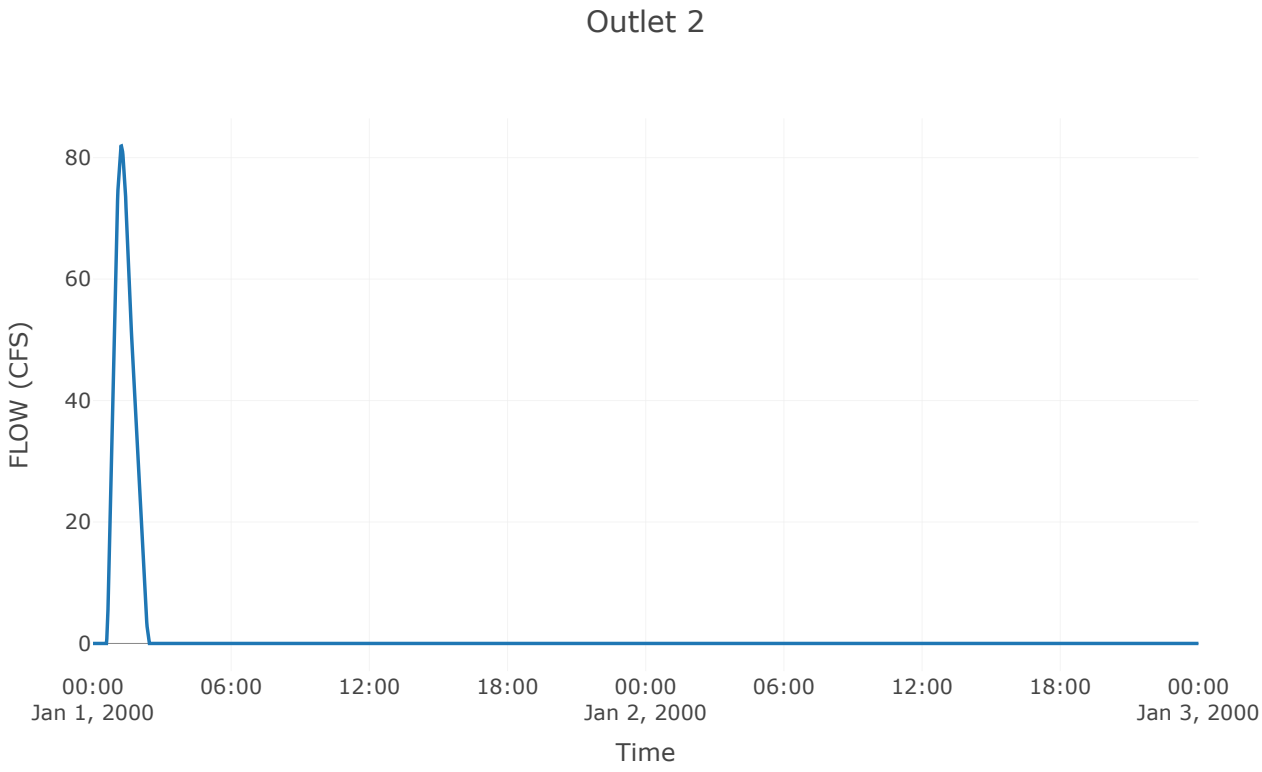
Combined Inflow



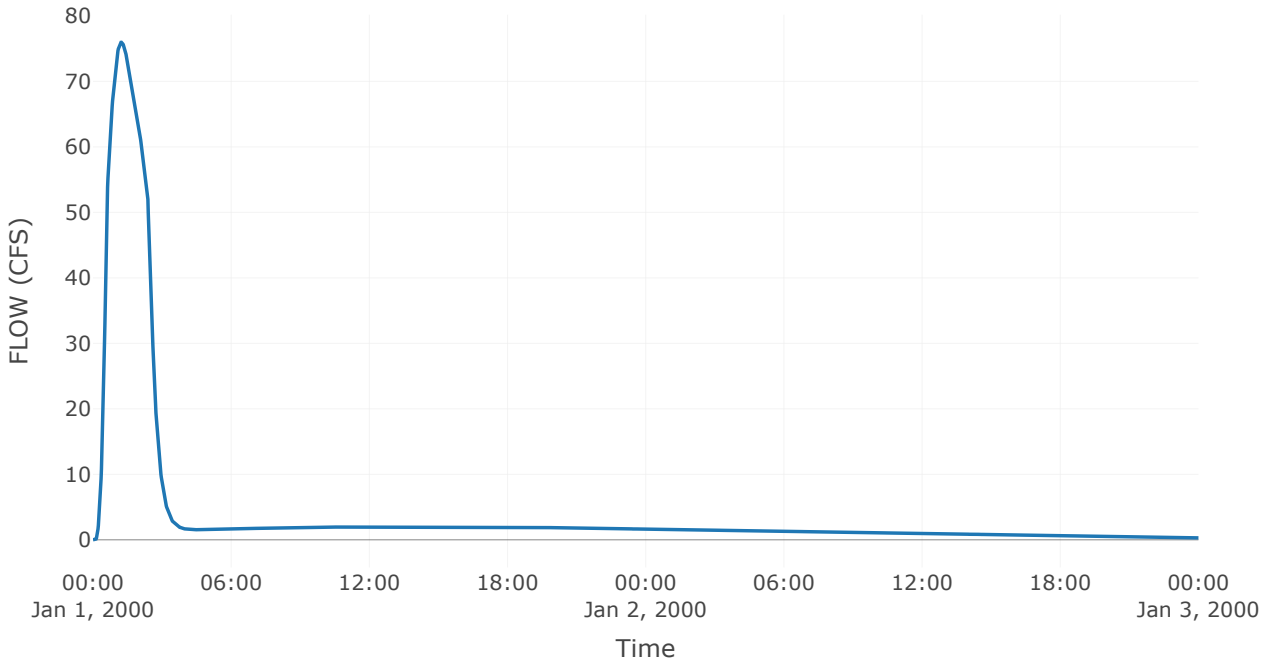
Cumulative Outflow



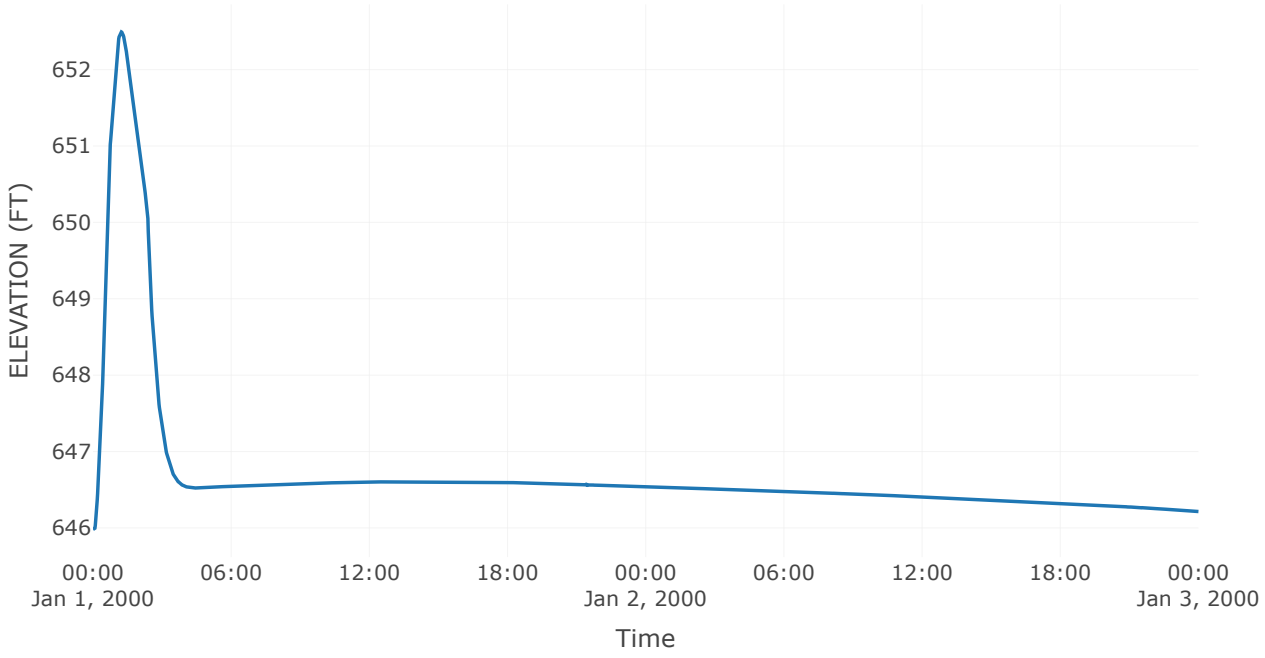

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

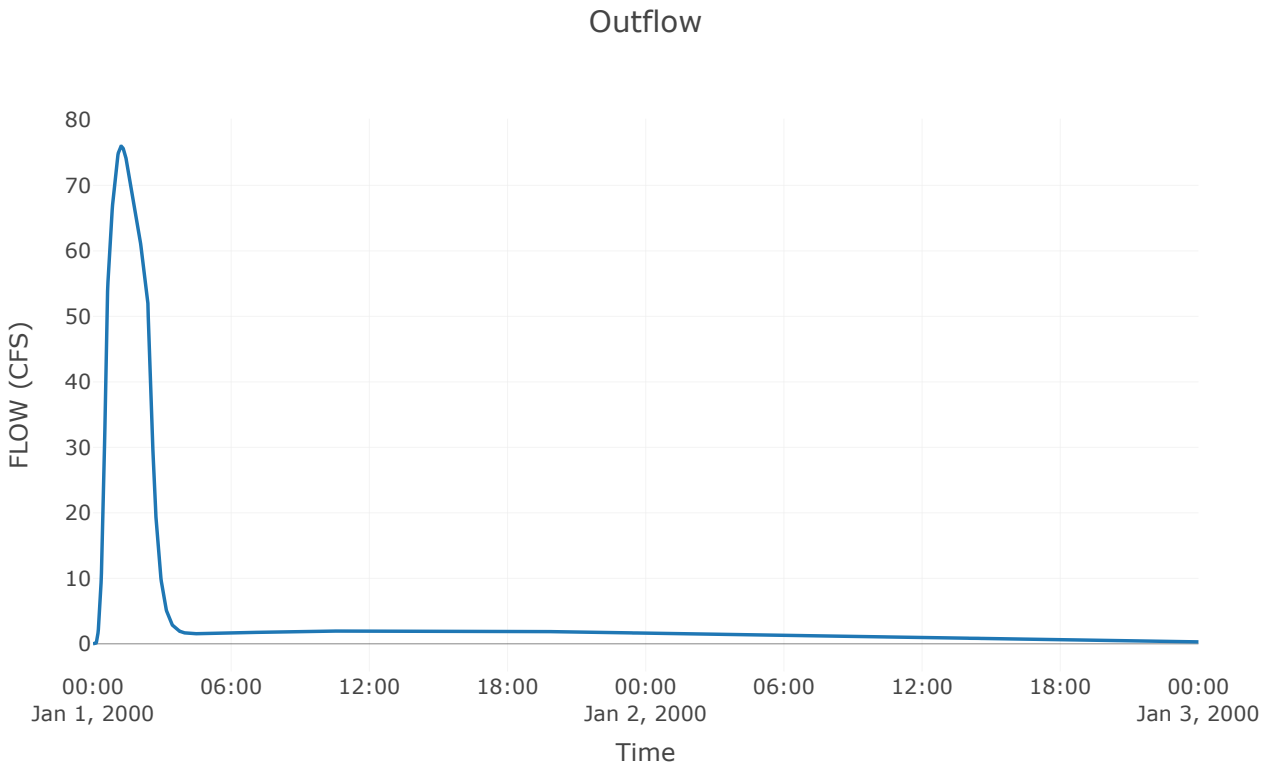

Outlet 2
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

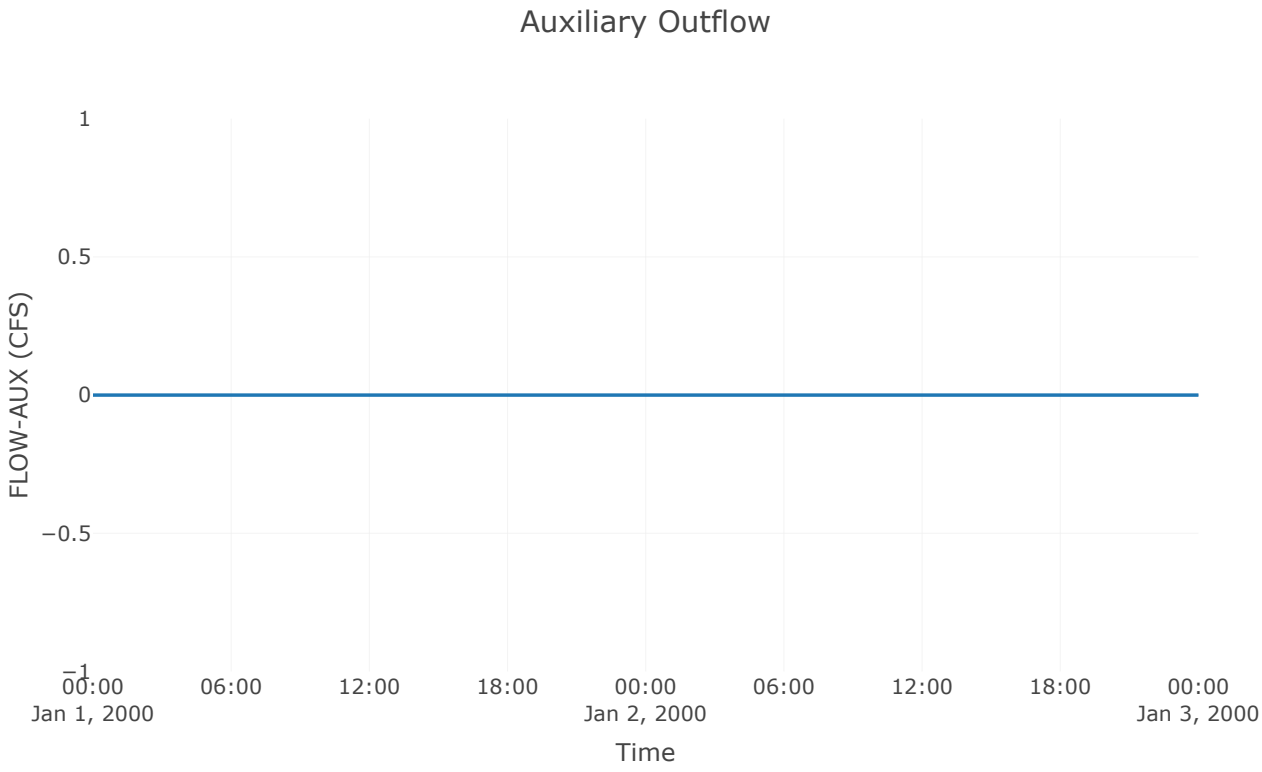


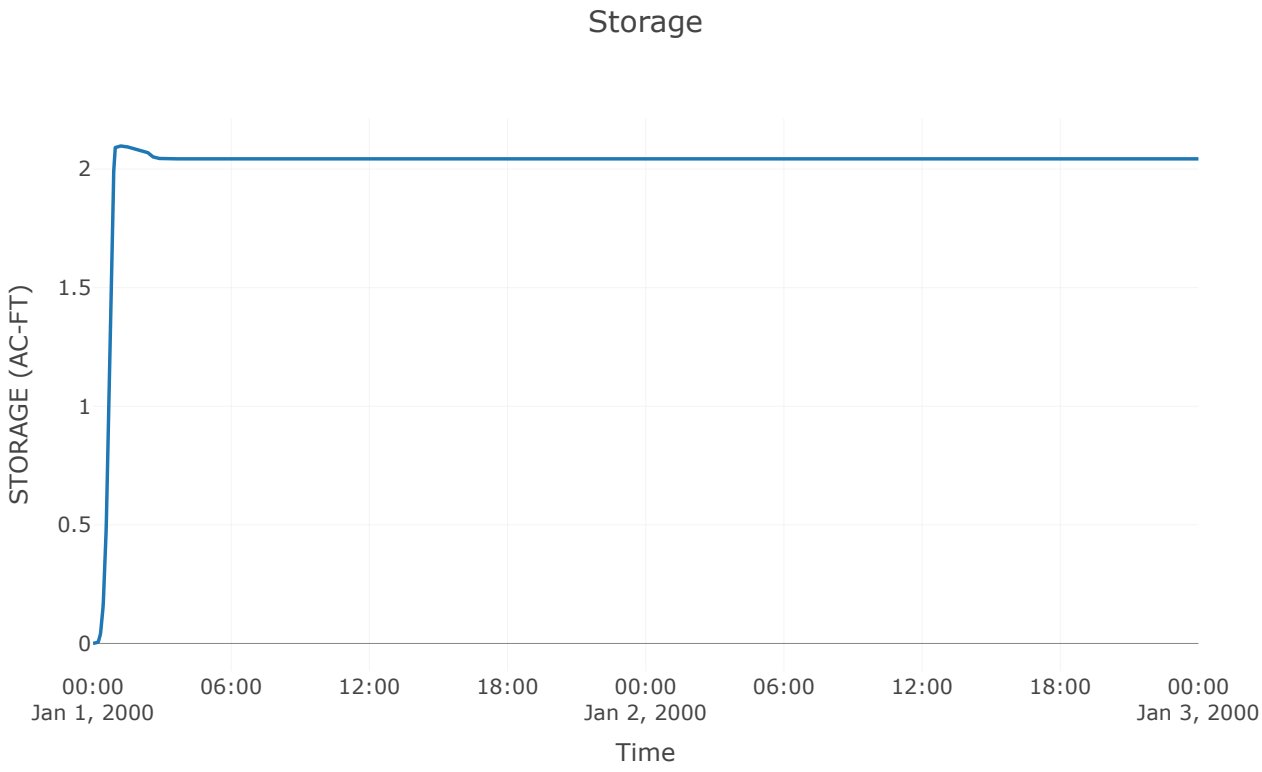

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

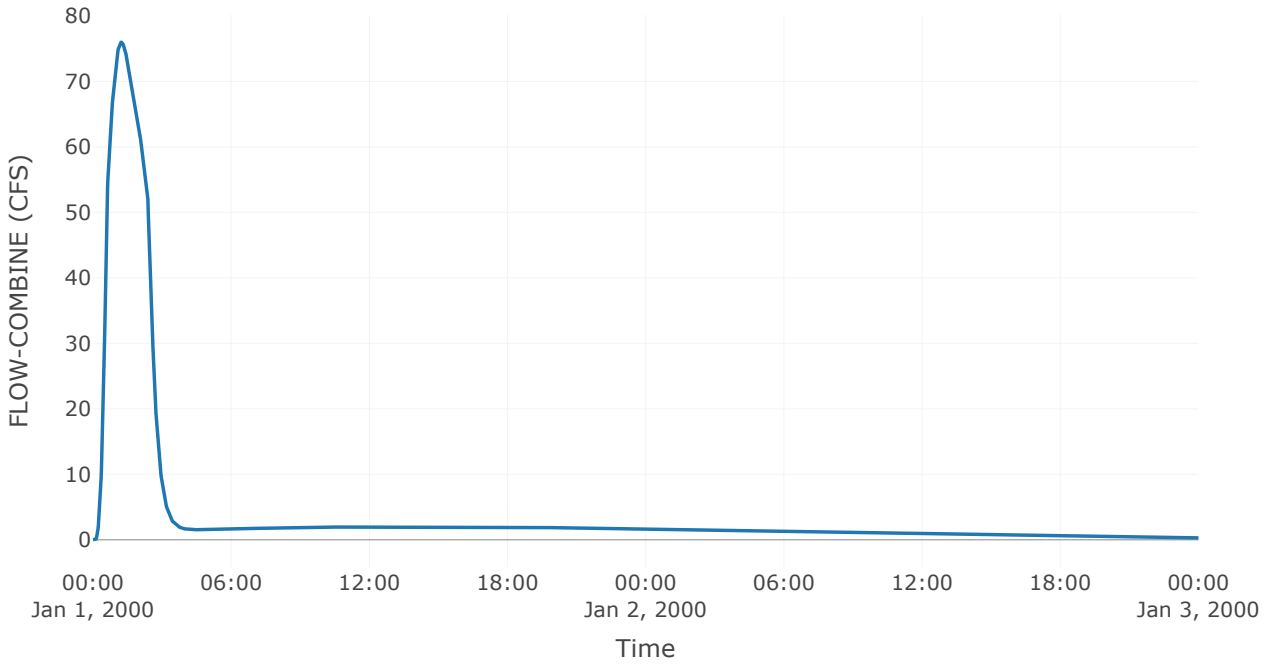
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02
Peak Inflow (CFS)	75.96
Time of Peak Inflow	01Jan2000, 01:14
Inflow Volume (AC - FT)	17.07
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	14.86

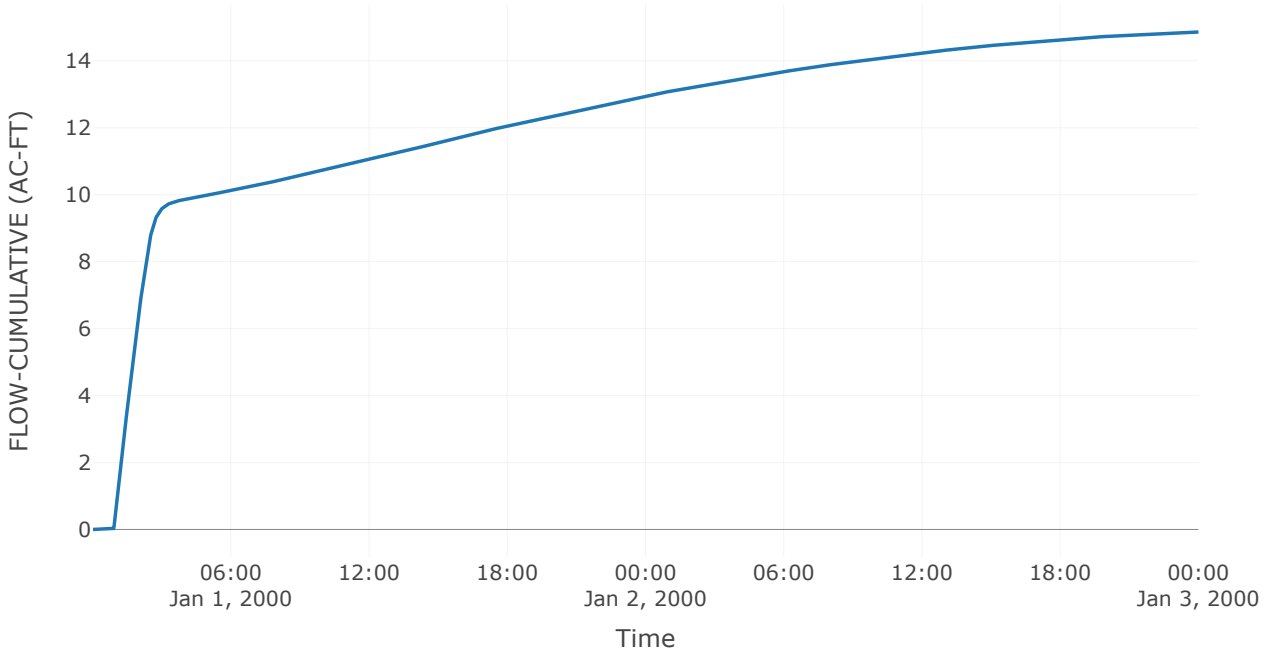

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

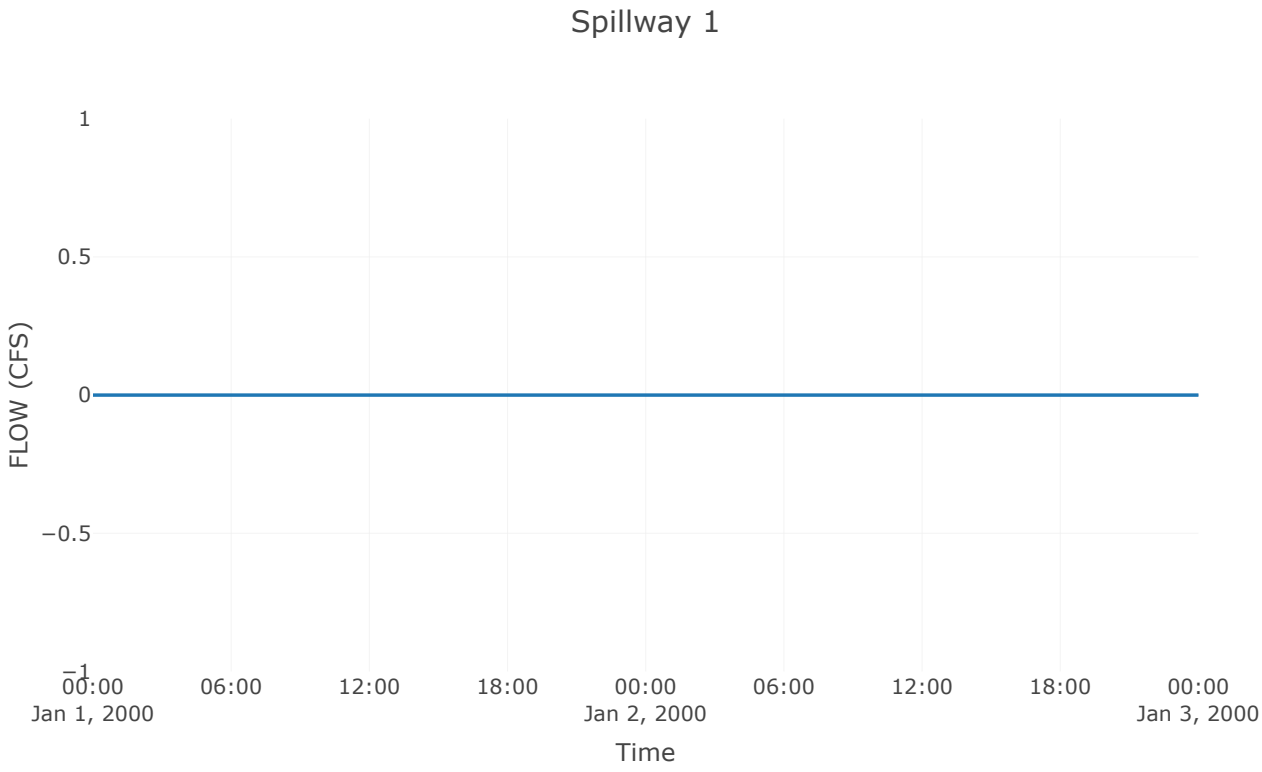

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

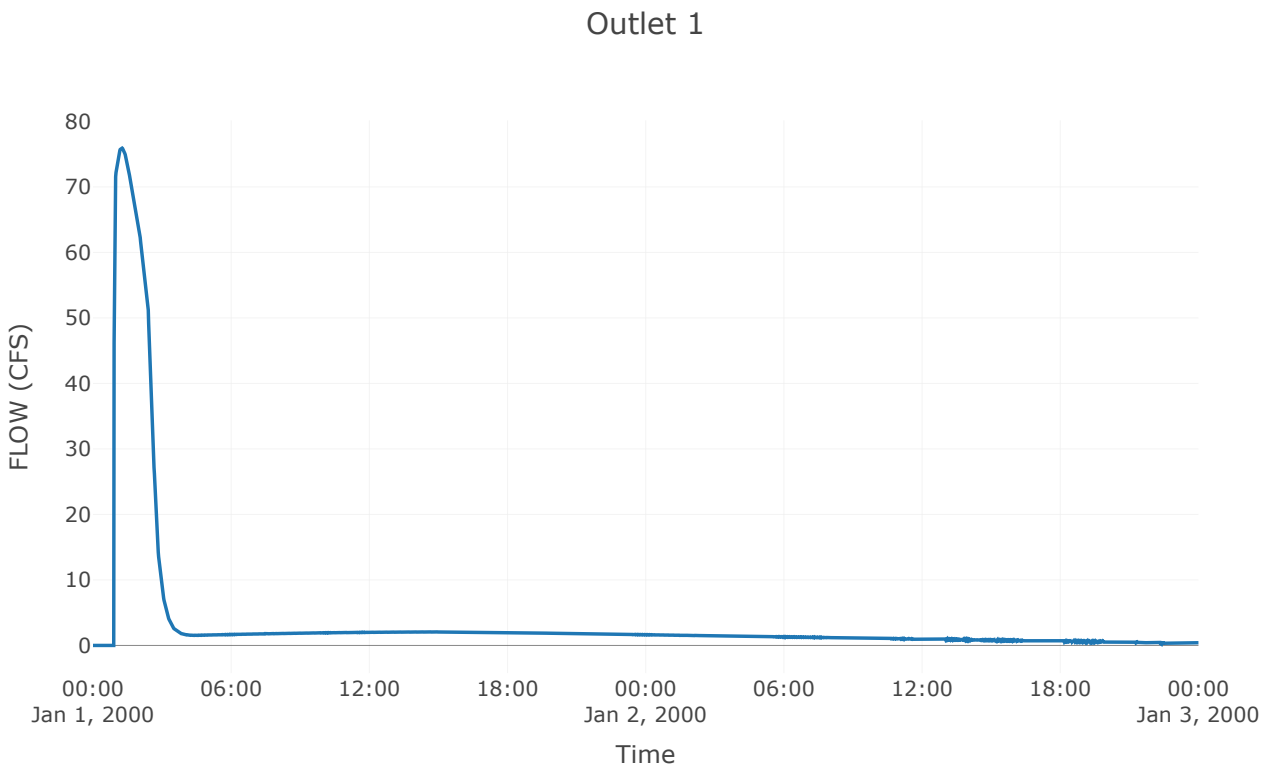
Combined Inflow



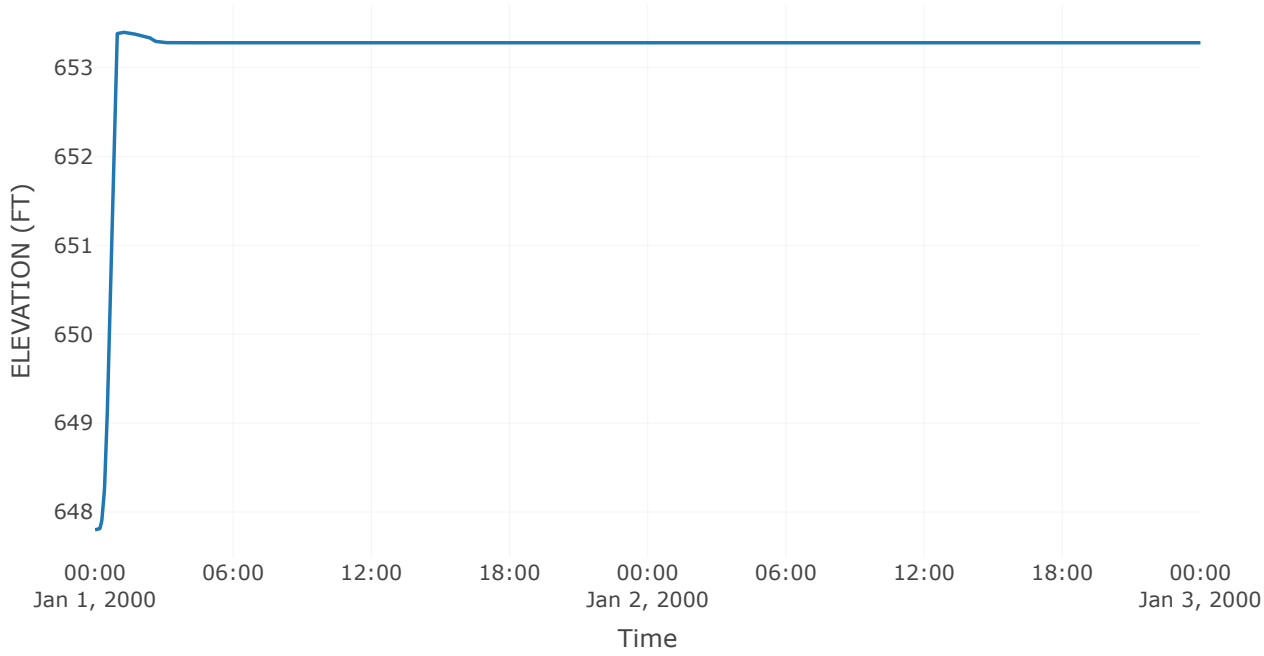
Cumulative Outflow



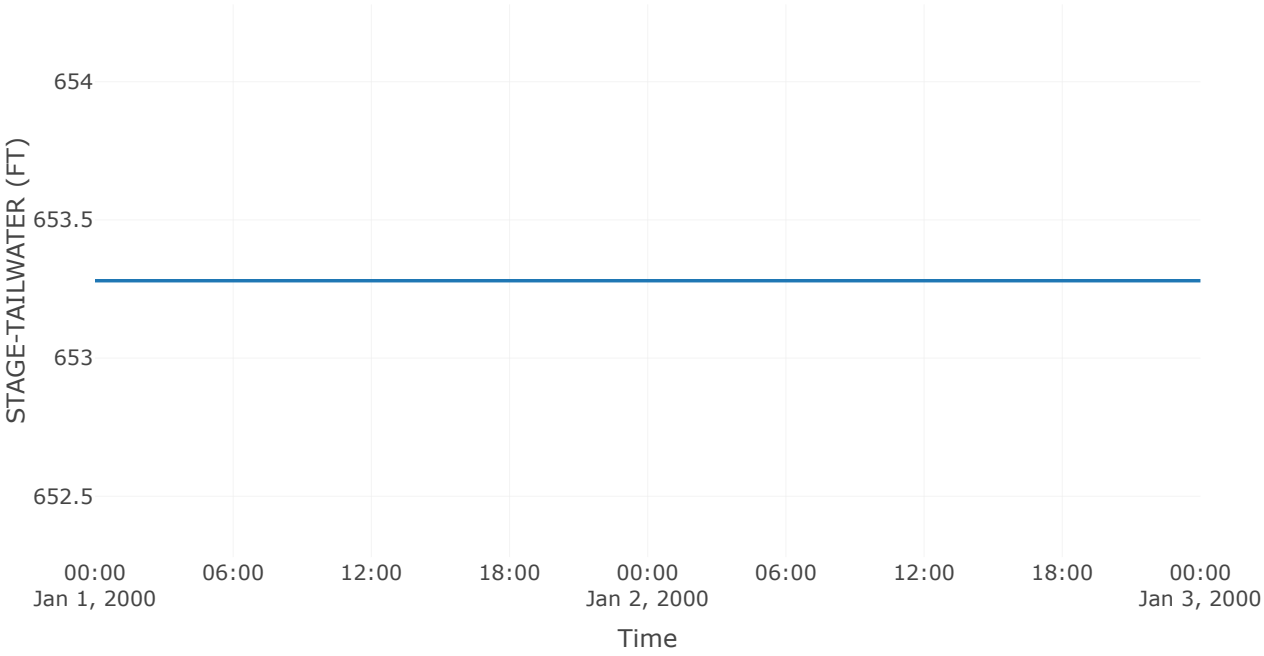

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

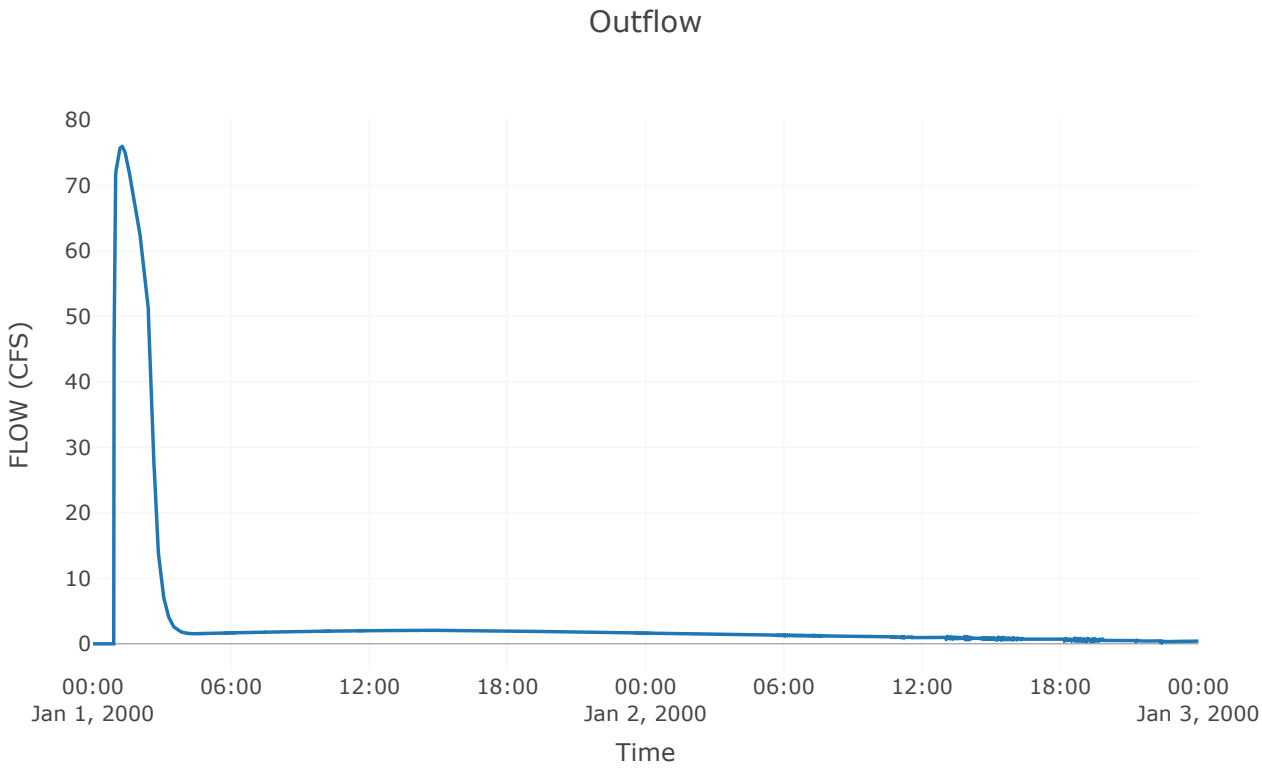

Outlet 1
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



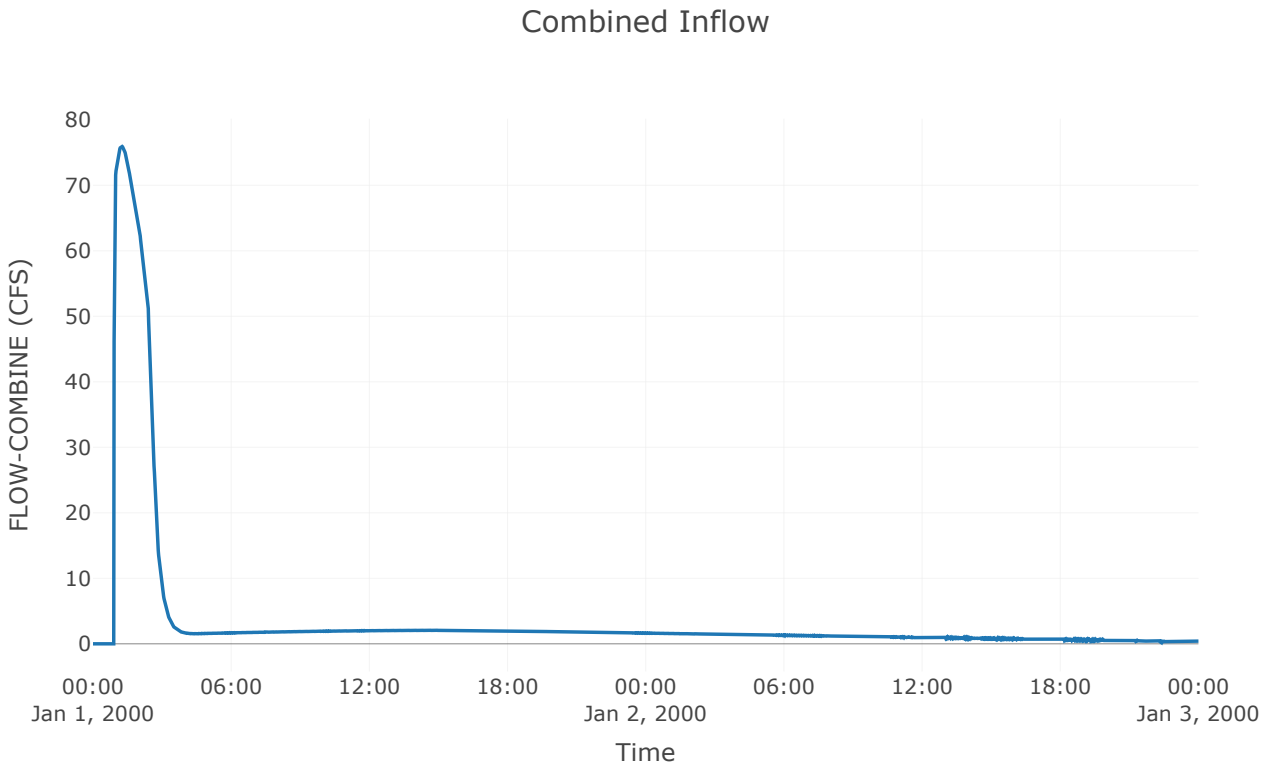
Tailwater Stage

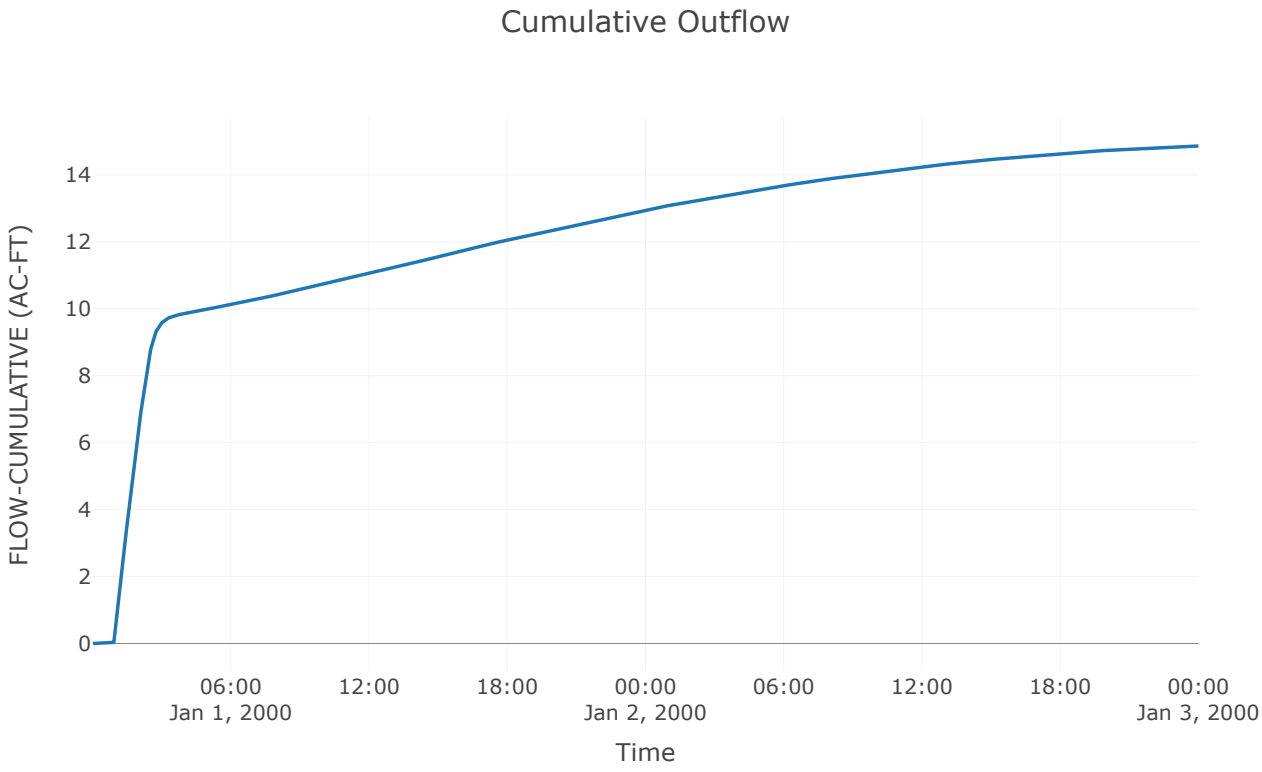


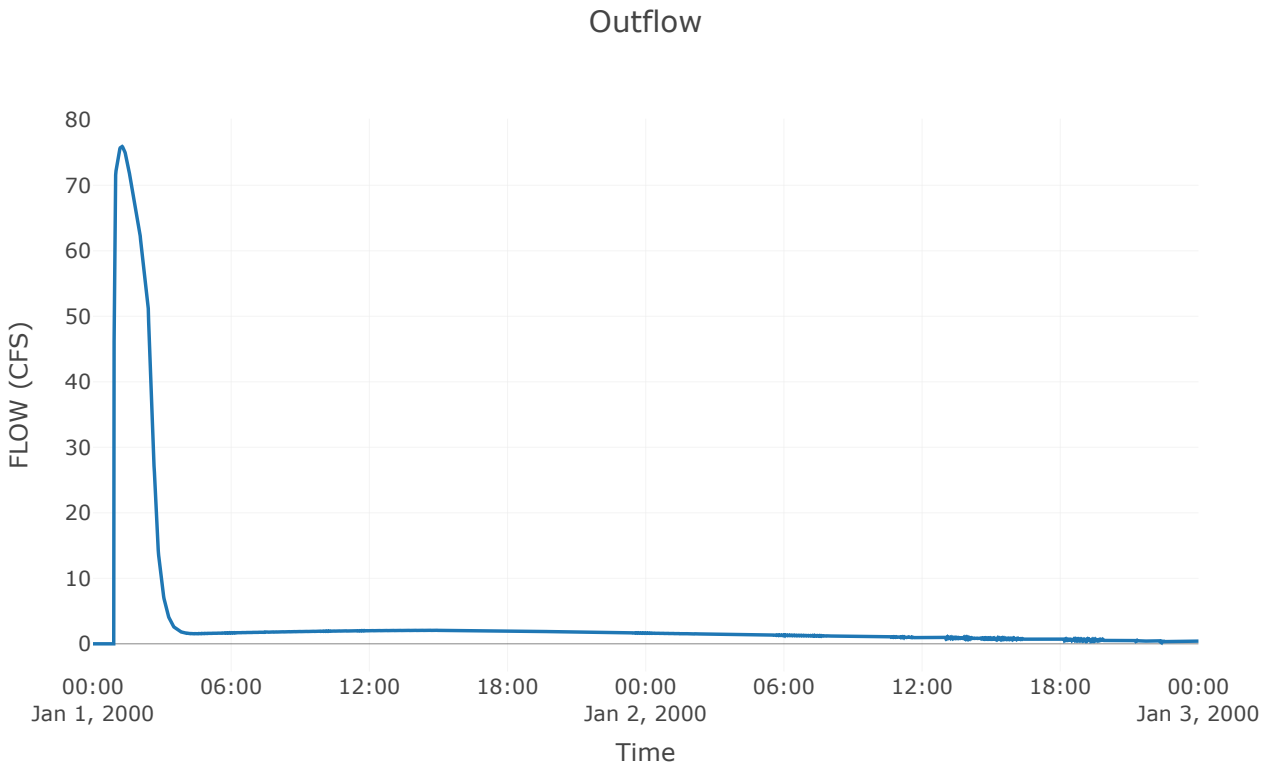

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Sink: 55th Street Outlet

Results: 55th Street Outlet	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
14
12
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:39

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	331.13	01Jan2000, 01:00	2.48
Storage West of Wolf Road	0.27	331.51	01Jan2000, 01:00	2.48
Existing On - Site	0	15.64	01Jan2000, 00:18	3.06
Existing Basin C	0.27	95.49	01Jan2000, 01:08	1.35
Existing Basin A & B	0.27	95.45	01Jan2000, 01:09	1.2

55th Street Outlet	0.27	95.45	01Jan2000, 01:09	1.2

Subbasin: On-Site Trib 1

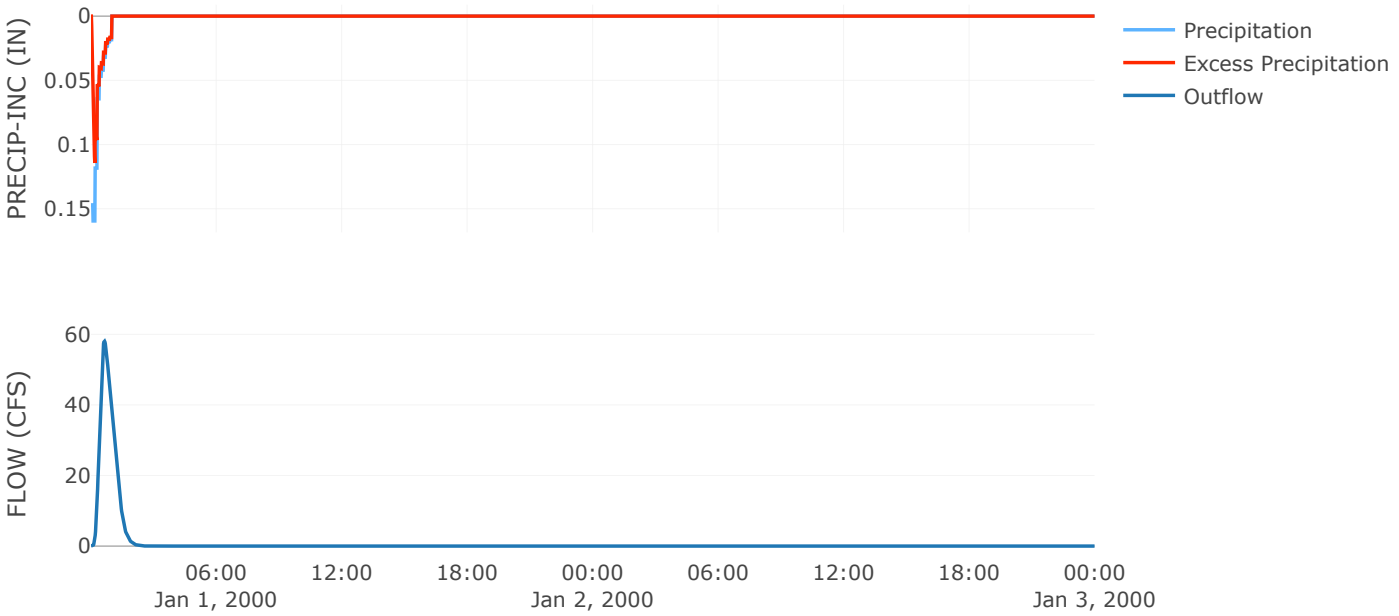
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

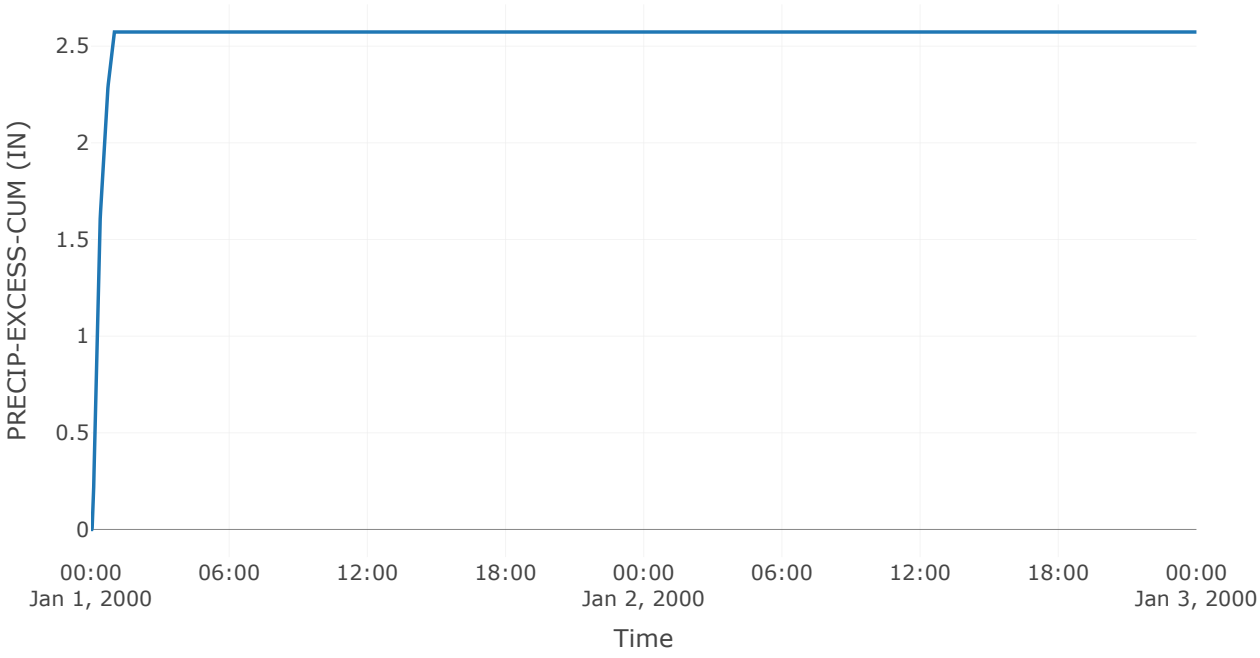
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

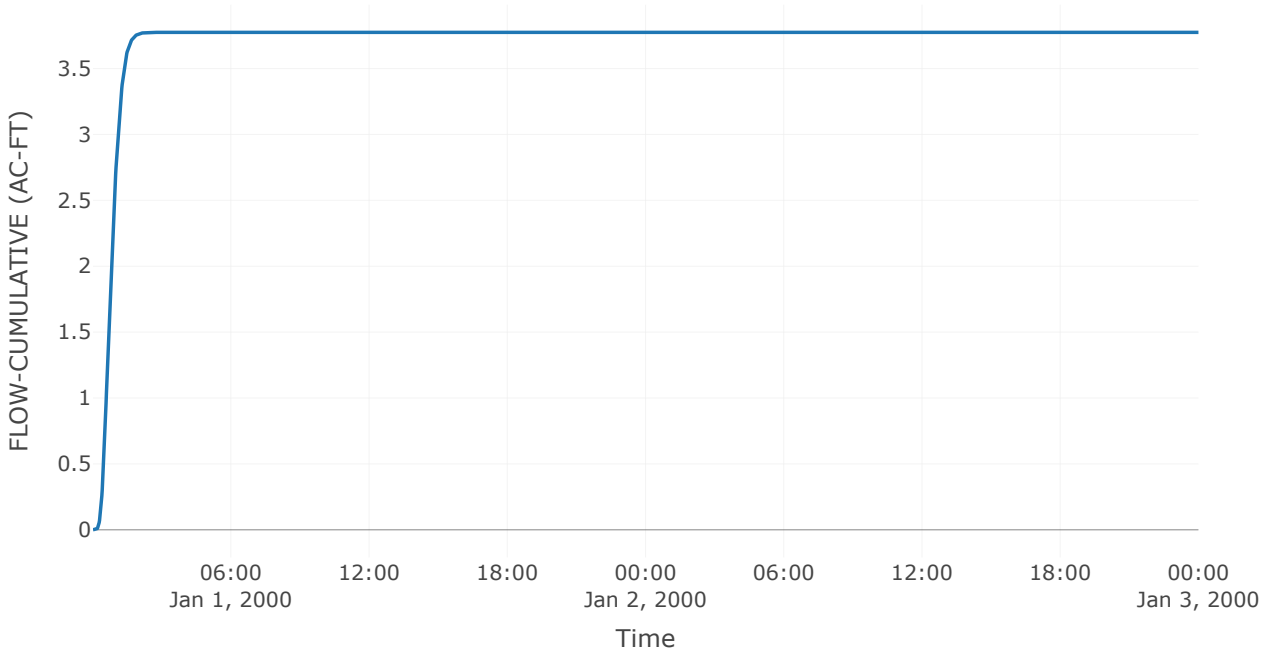
Precipitation and Outflow



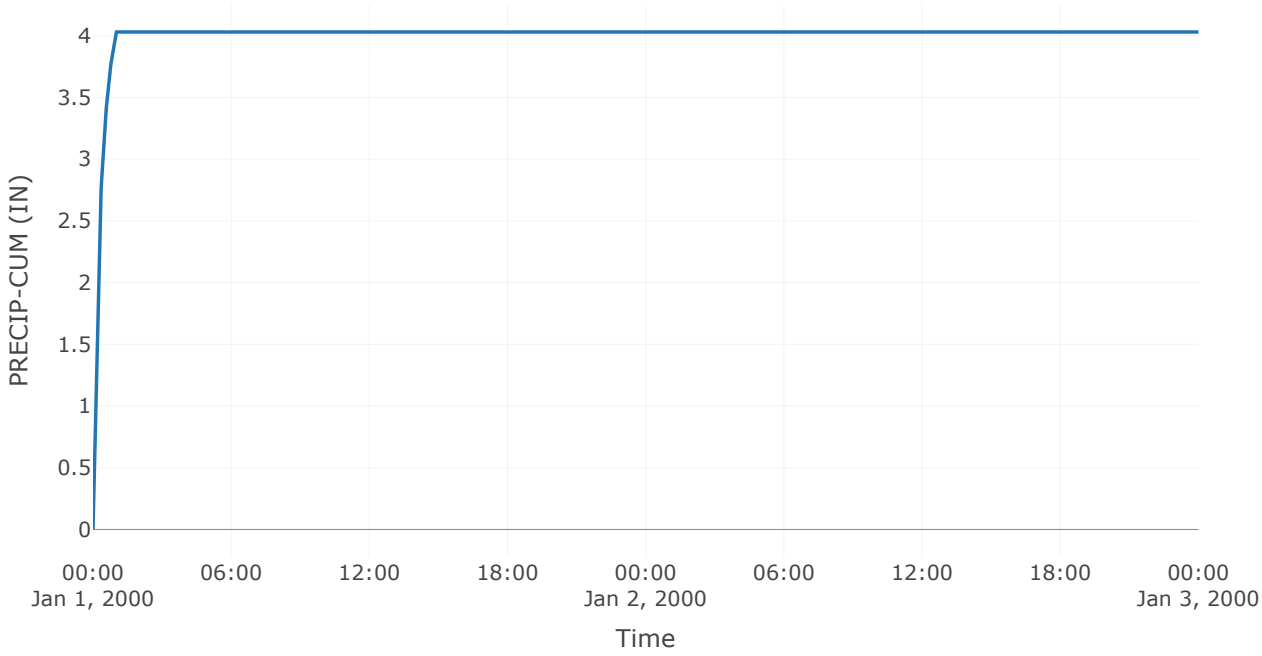
Cumulative Excess Precipitation

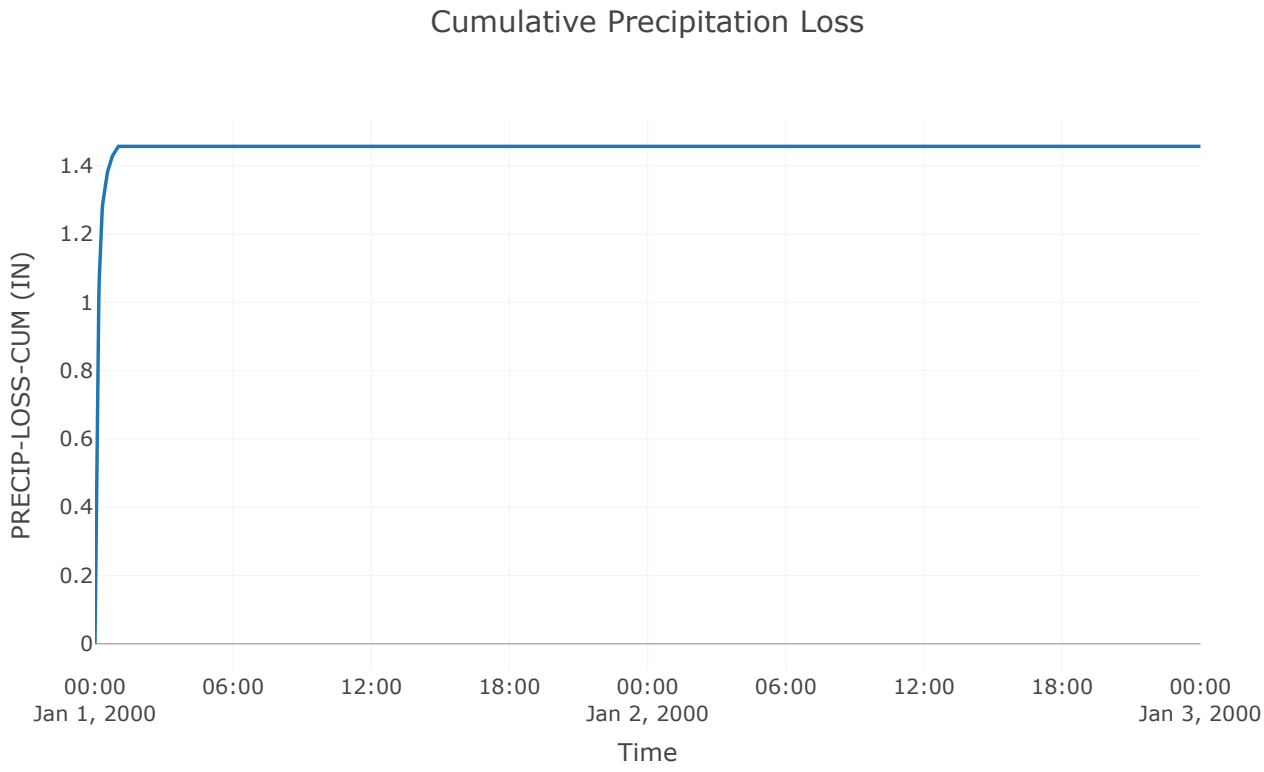


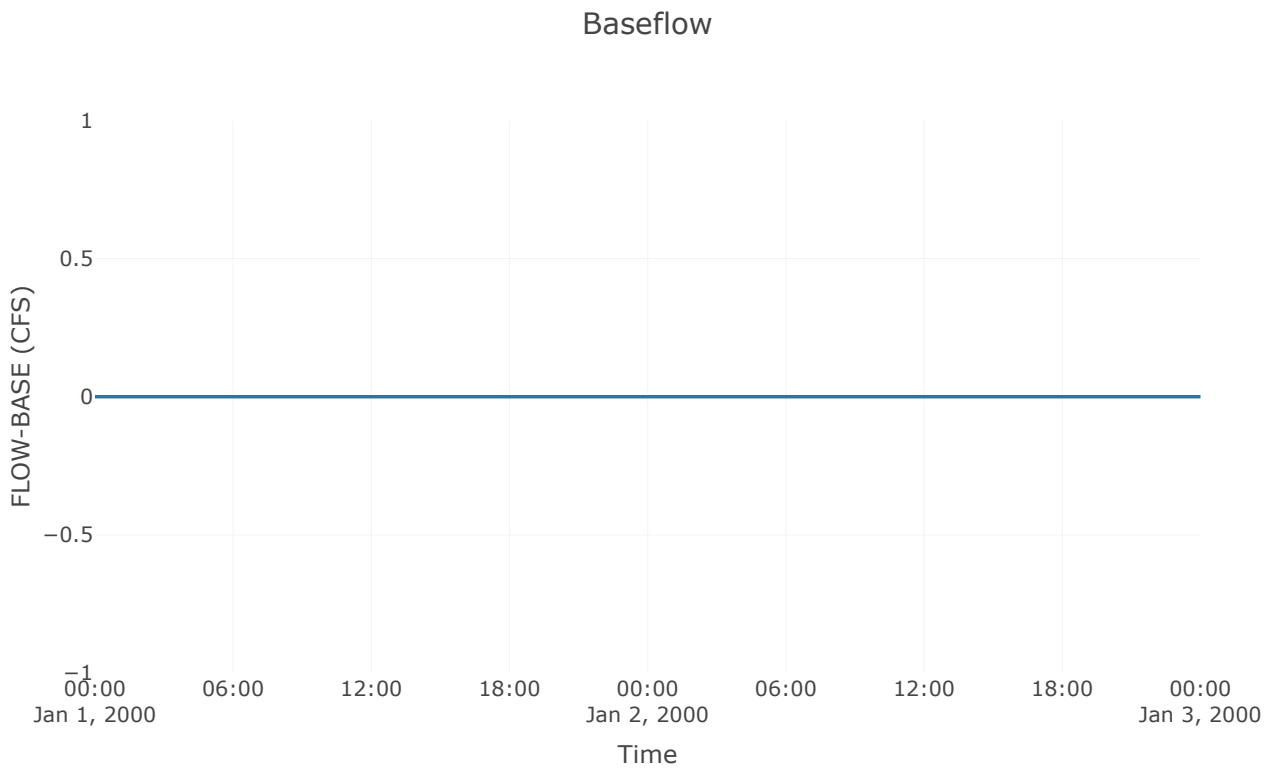
Cumulative Outflow

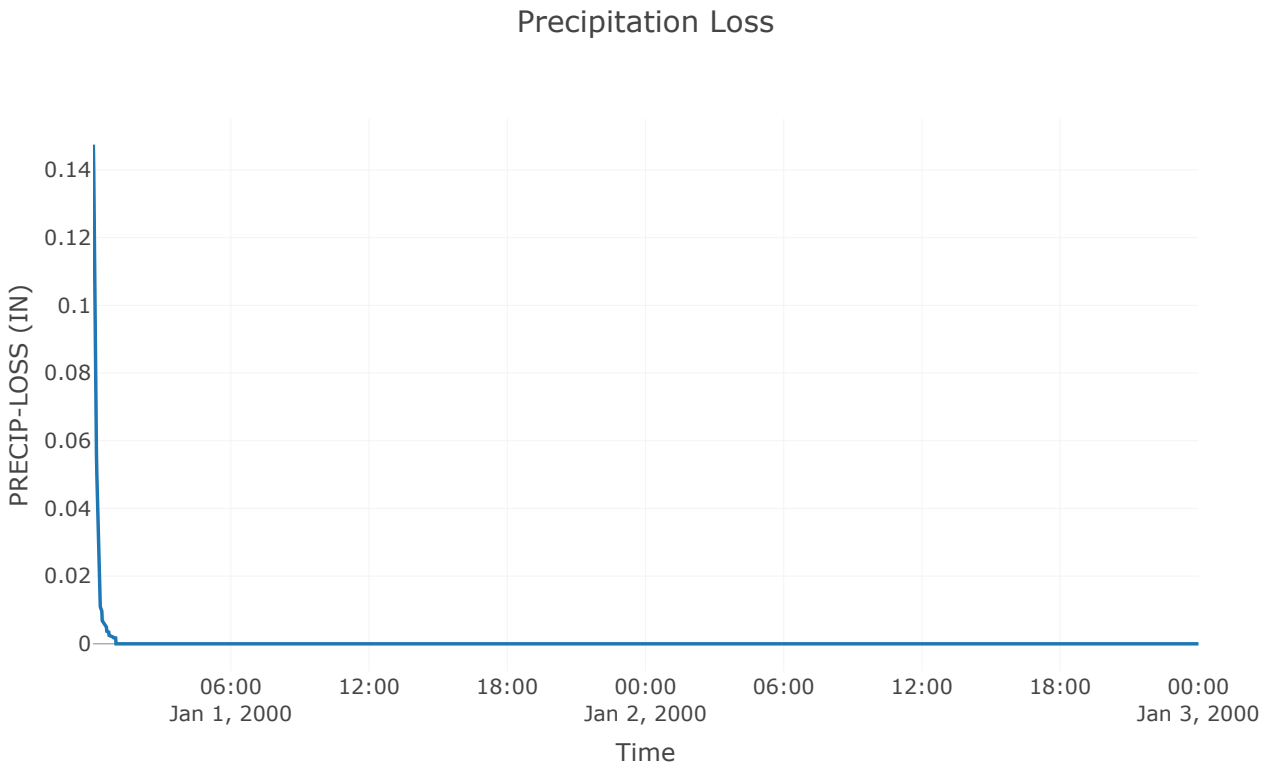


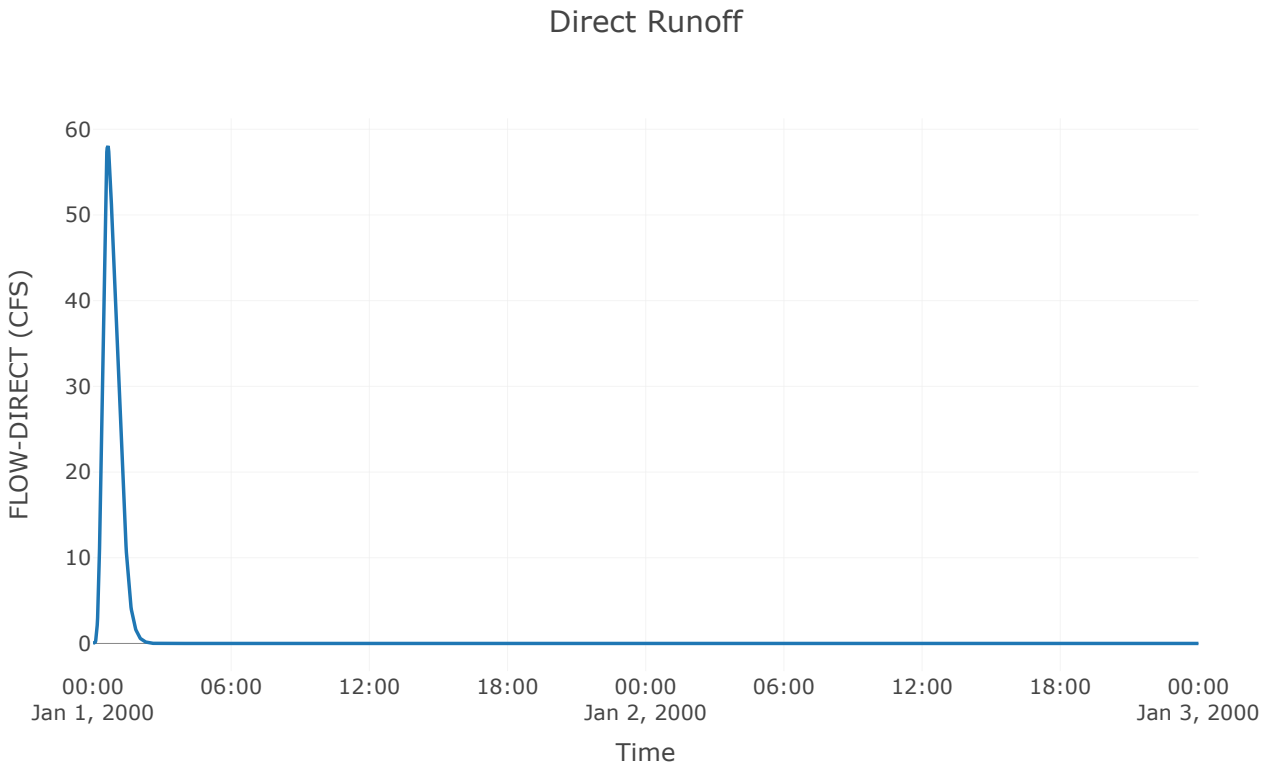
Cumulative Precipitation

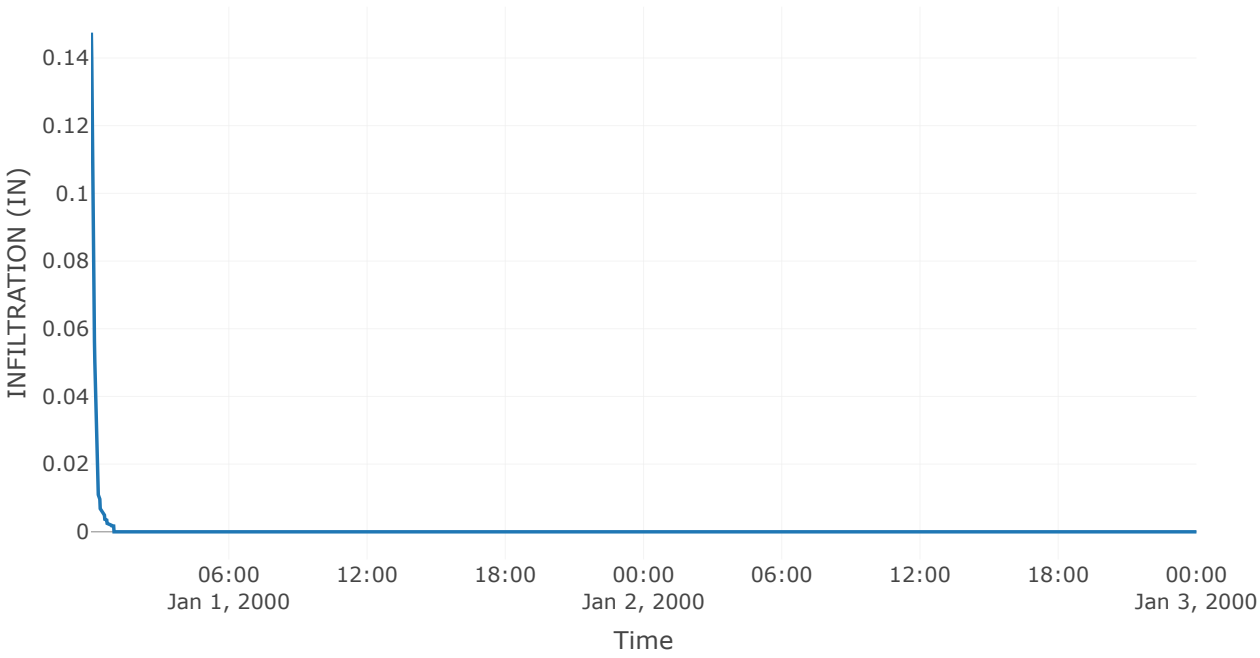



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

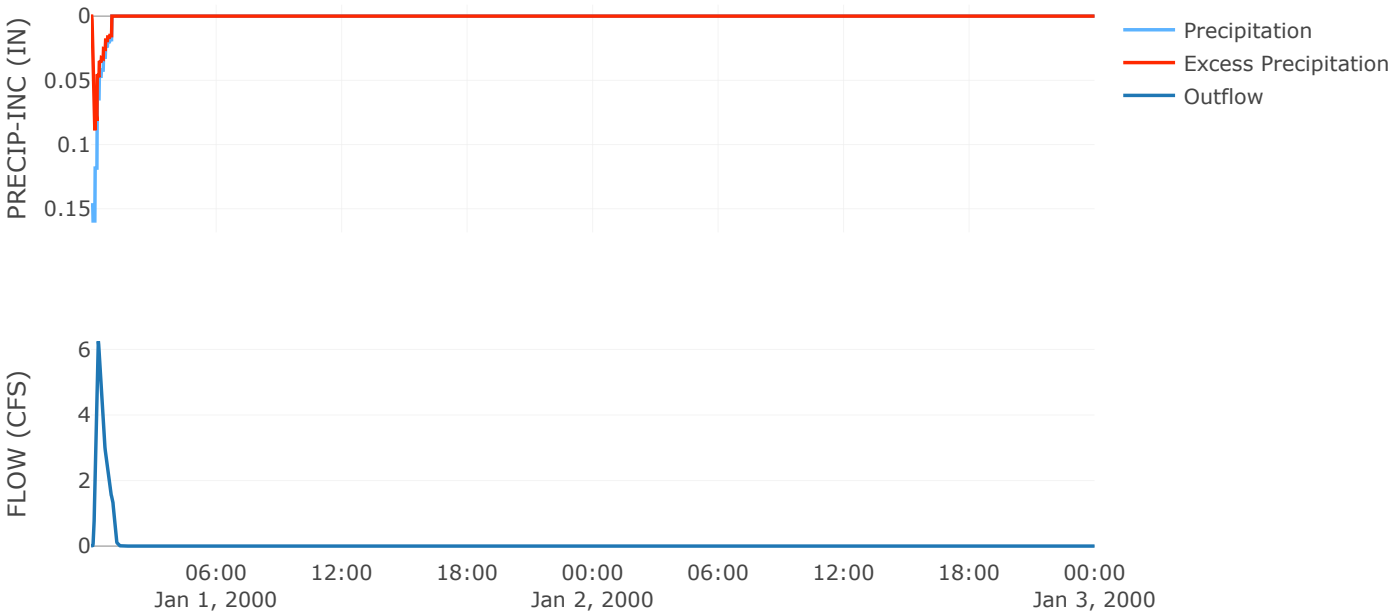
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

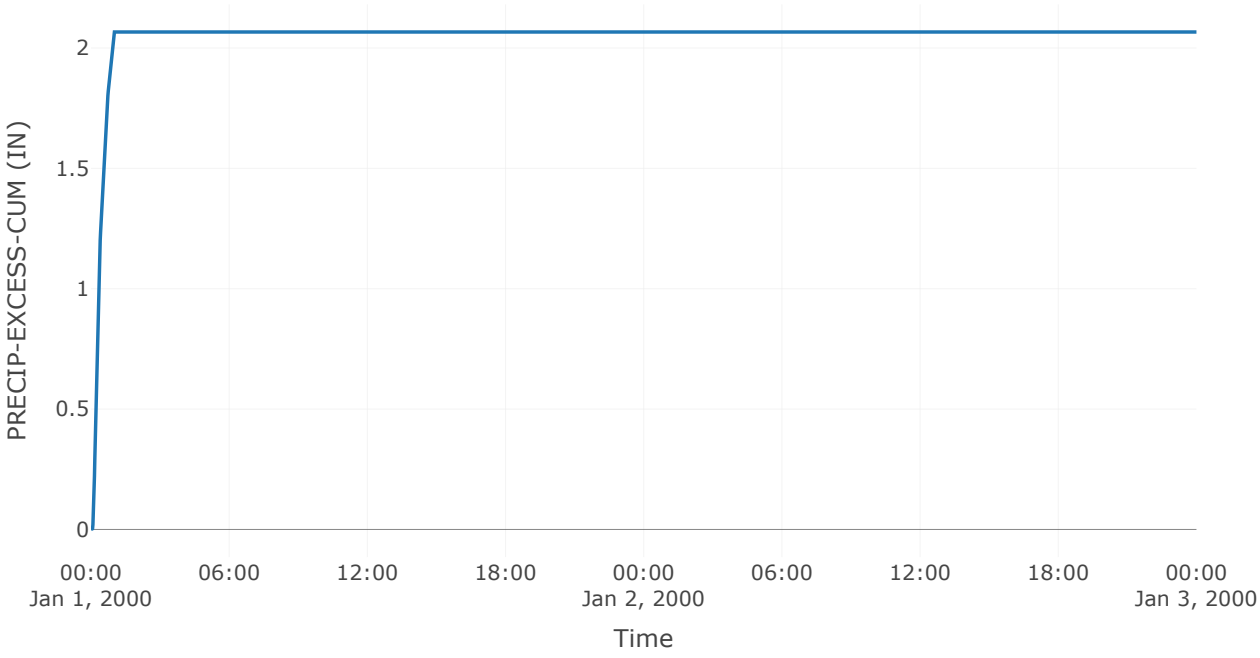
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

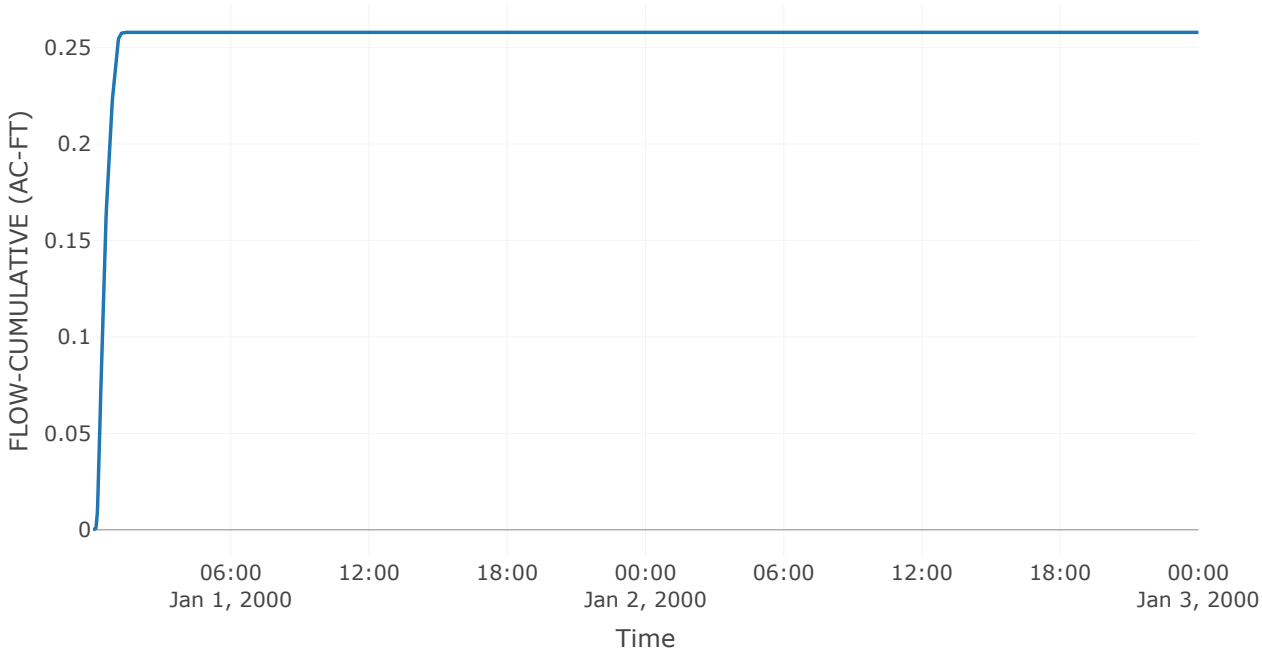
Precipitation and Outflow



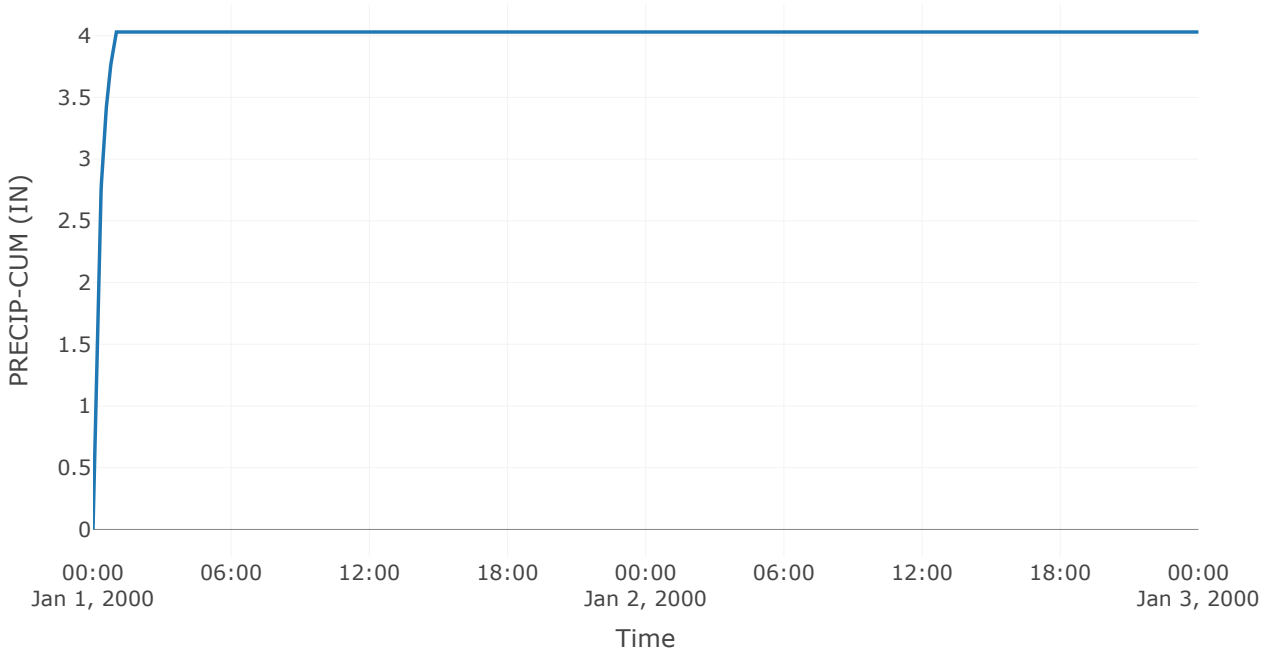
Cumulative Excess Precipitation

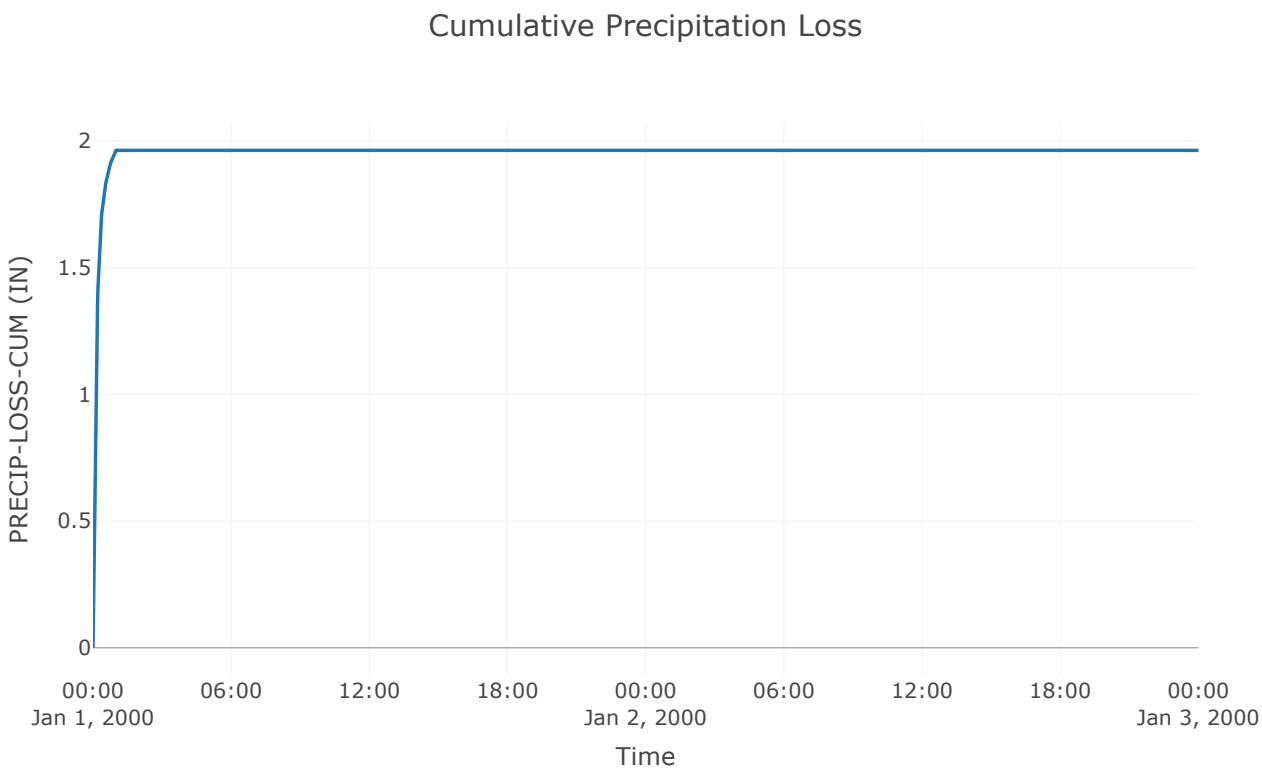


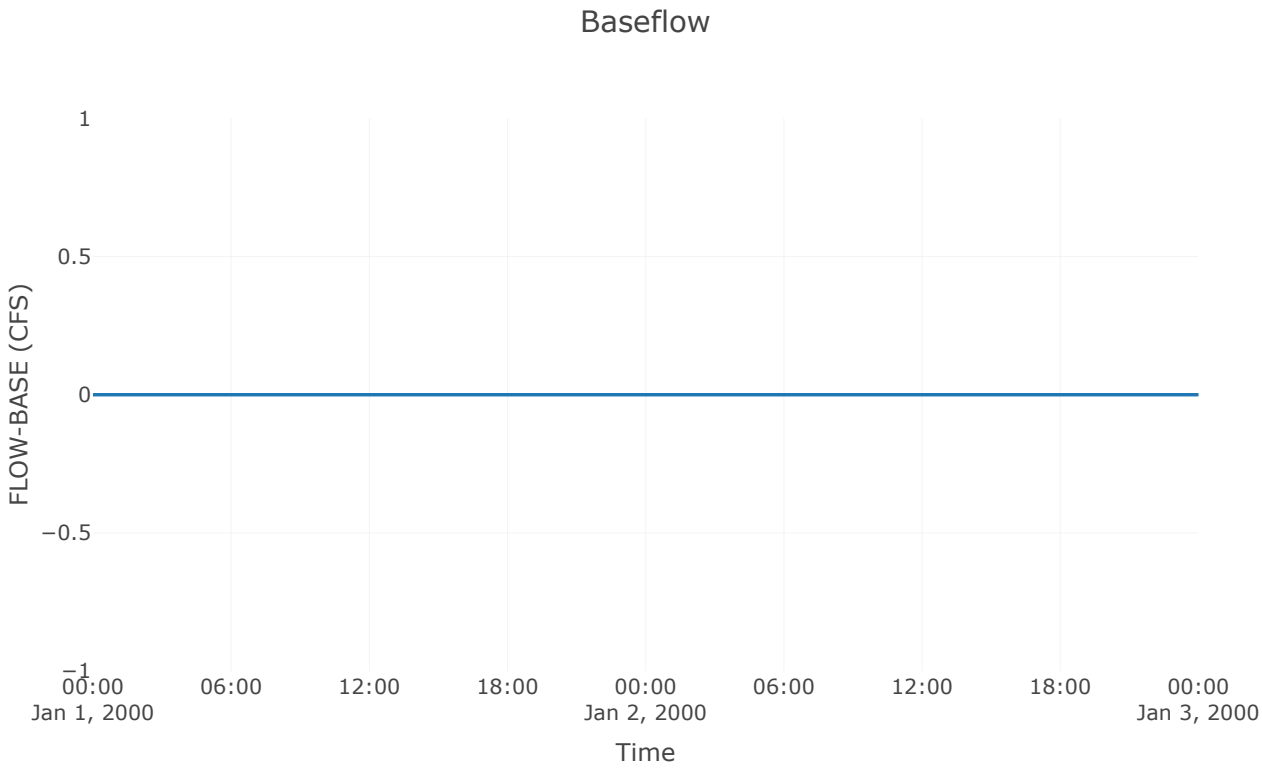
Cumulative Outflow



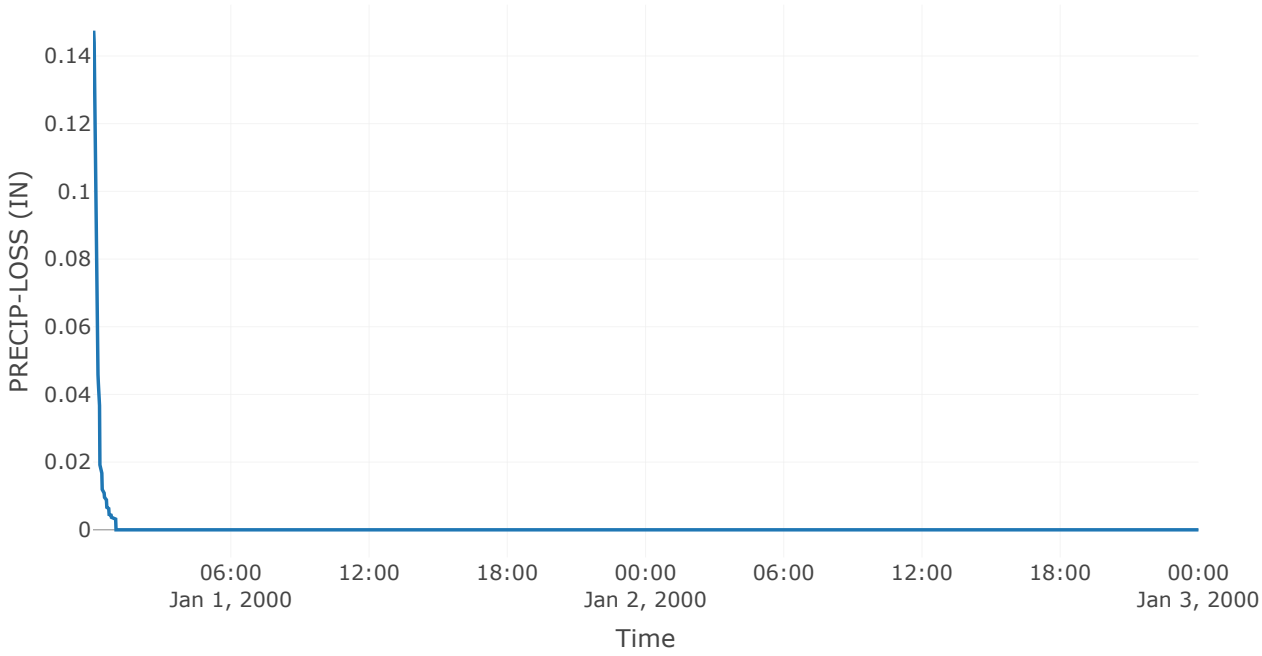
Cumulative Precipitation



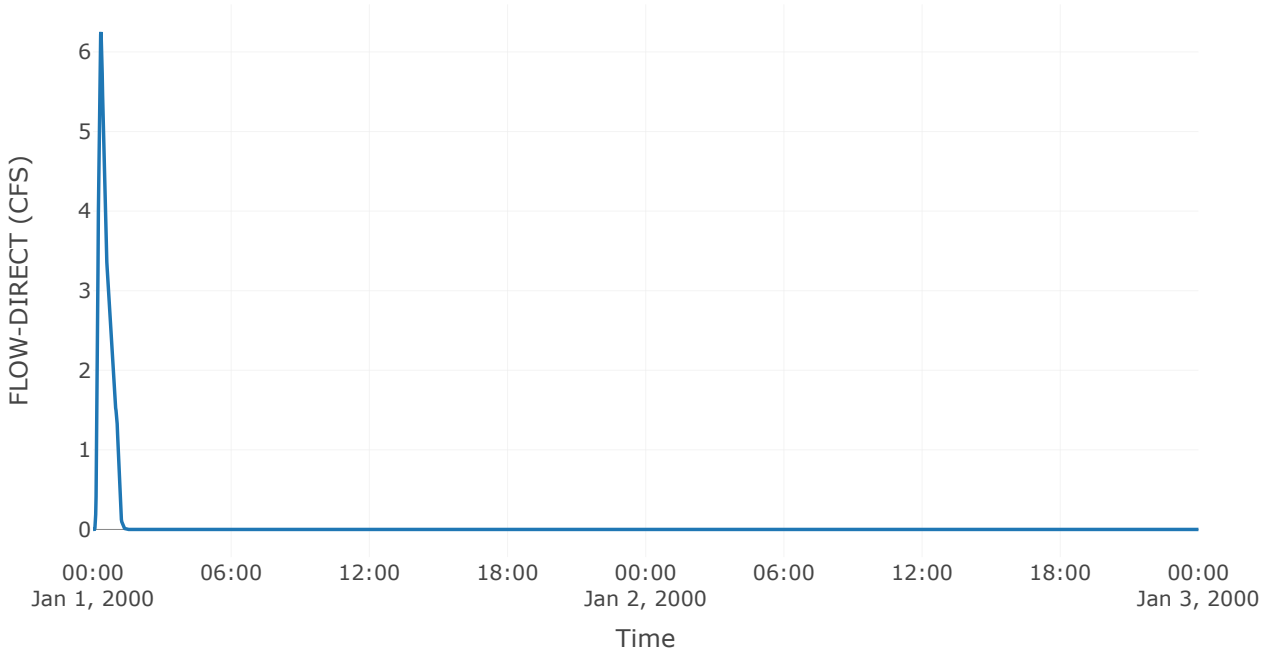

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

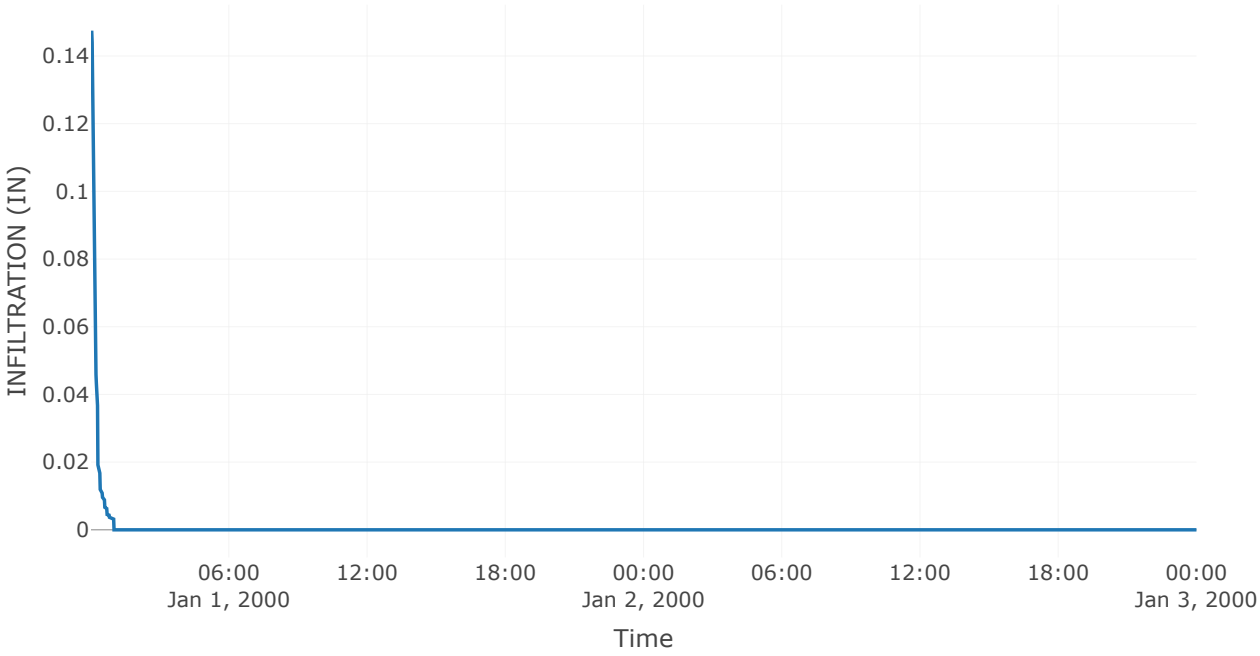

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

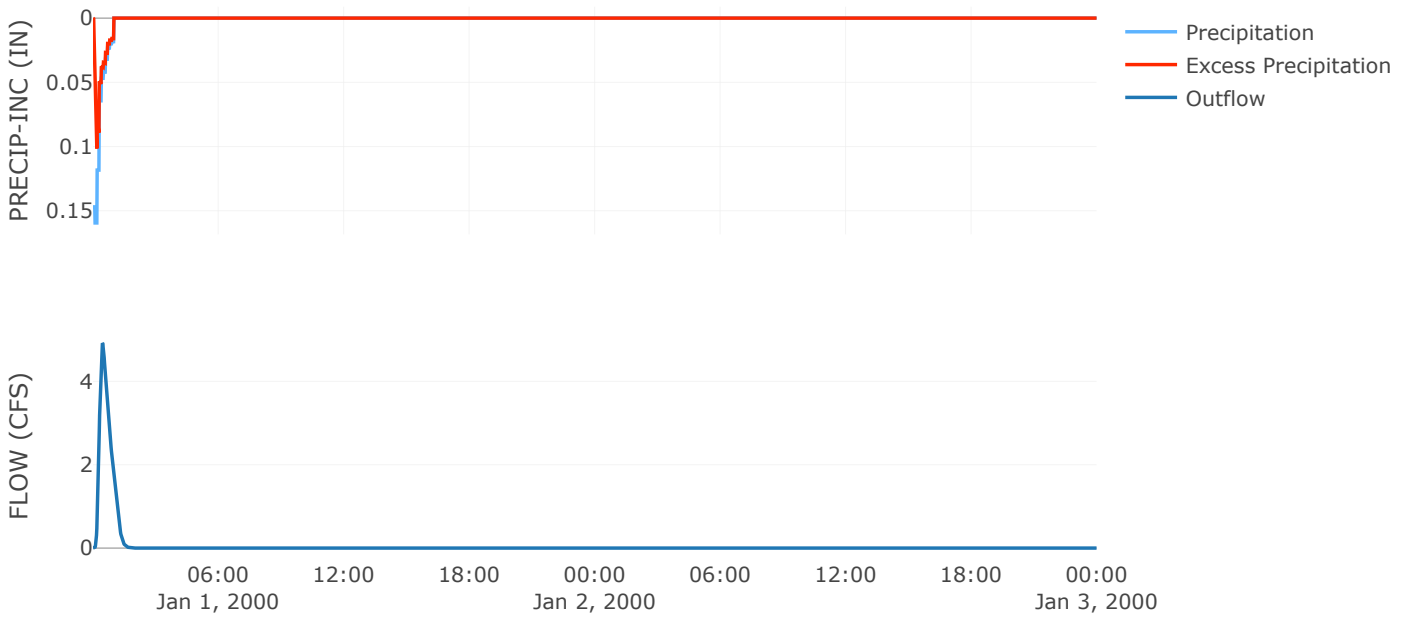
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

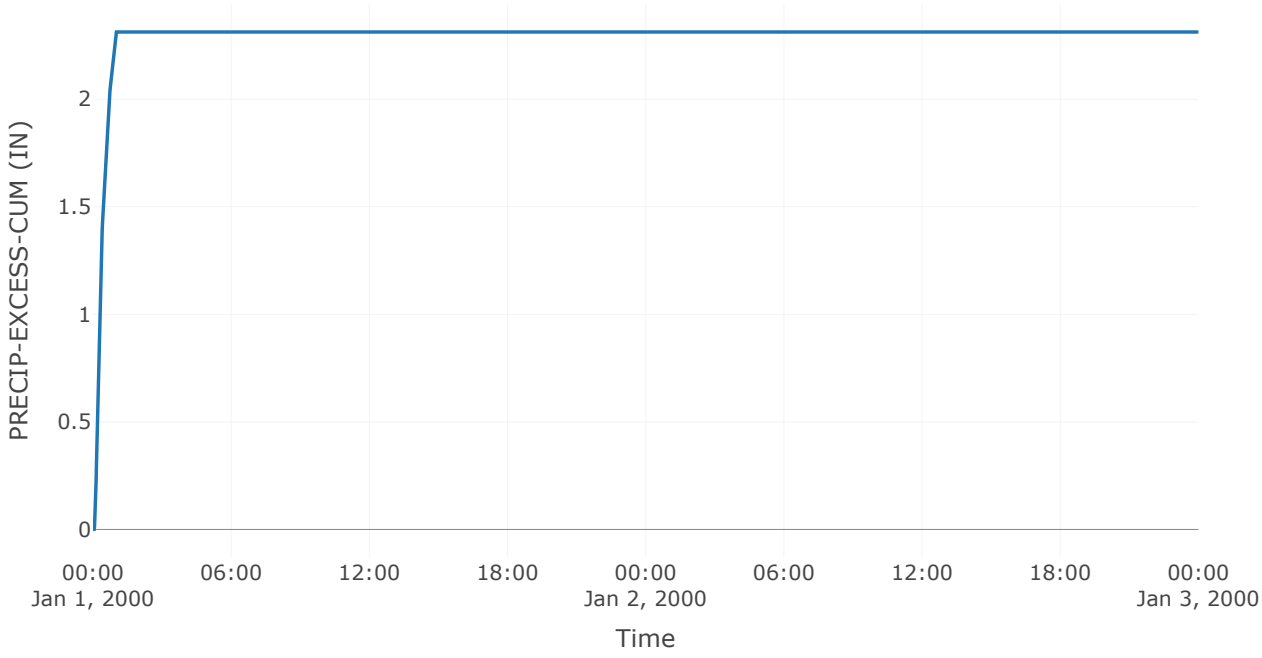
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

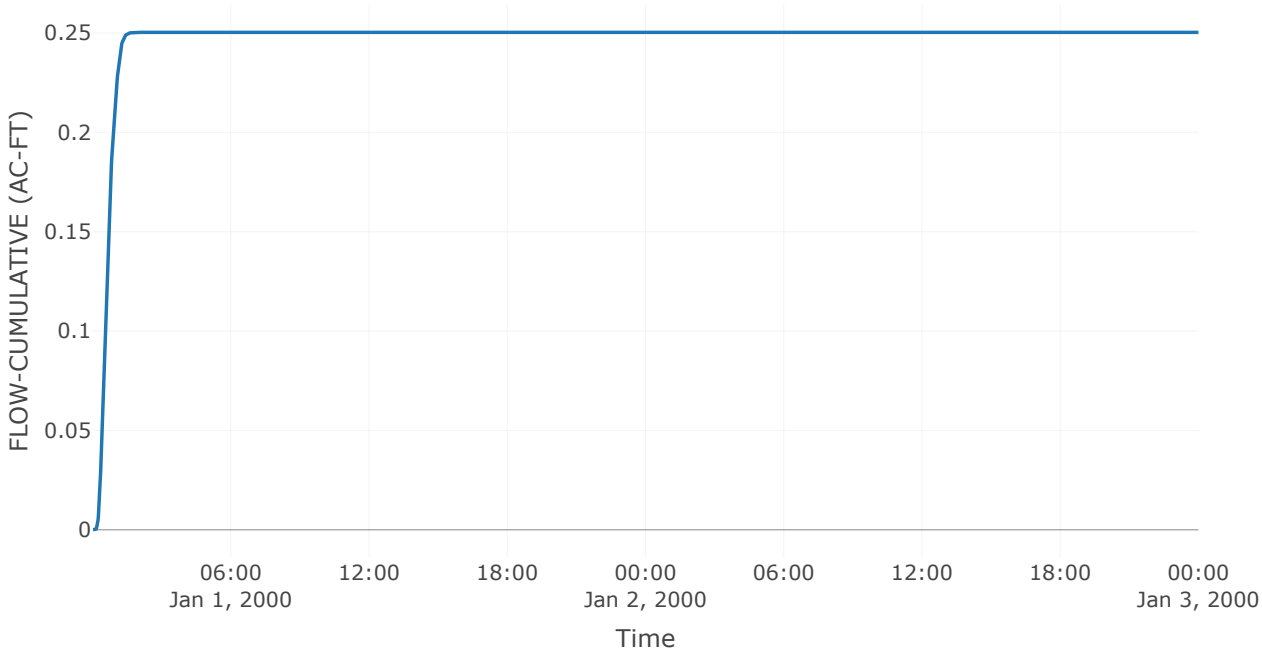
Precipitation and Outflow



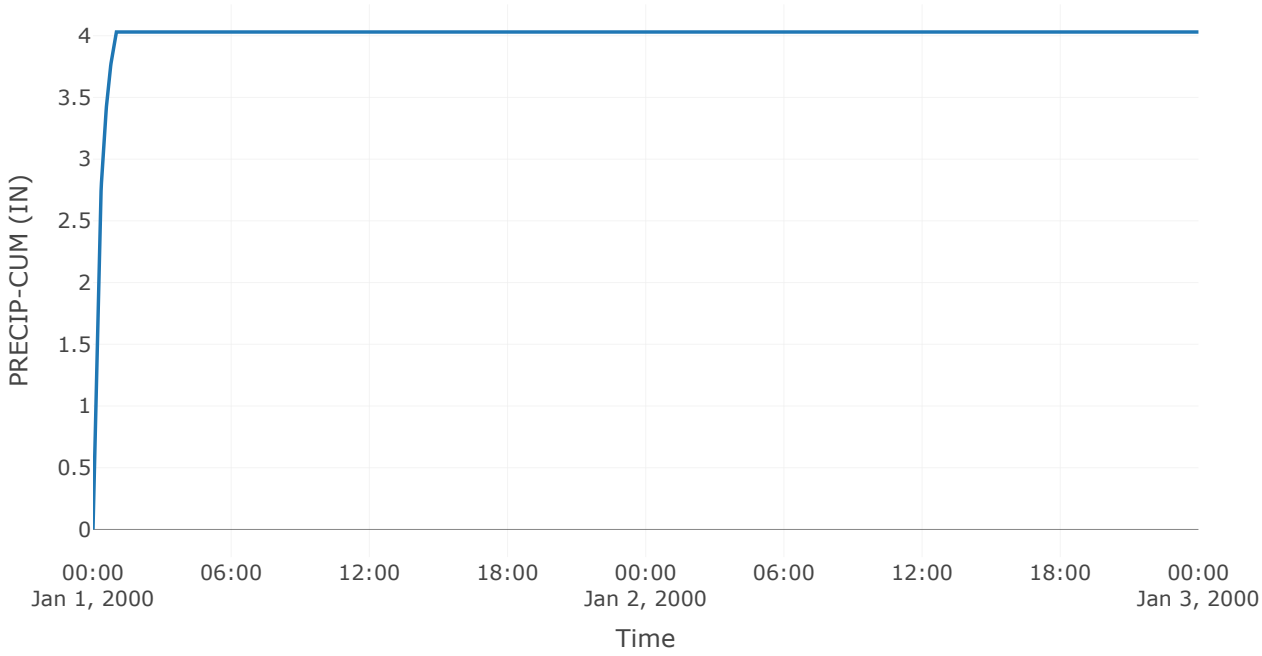
Cumulative Excess Precipitation

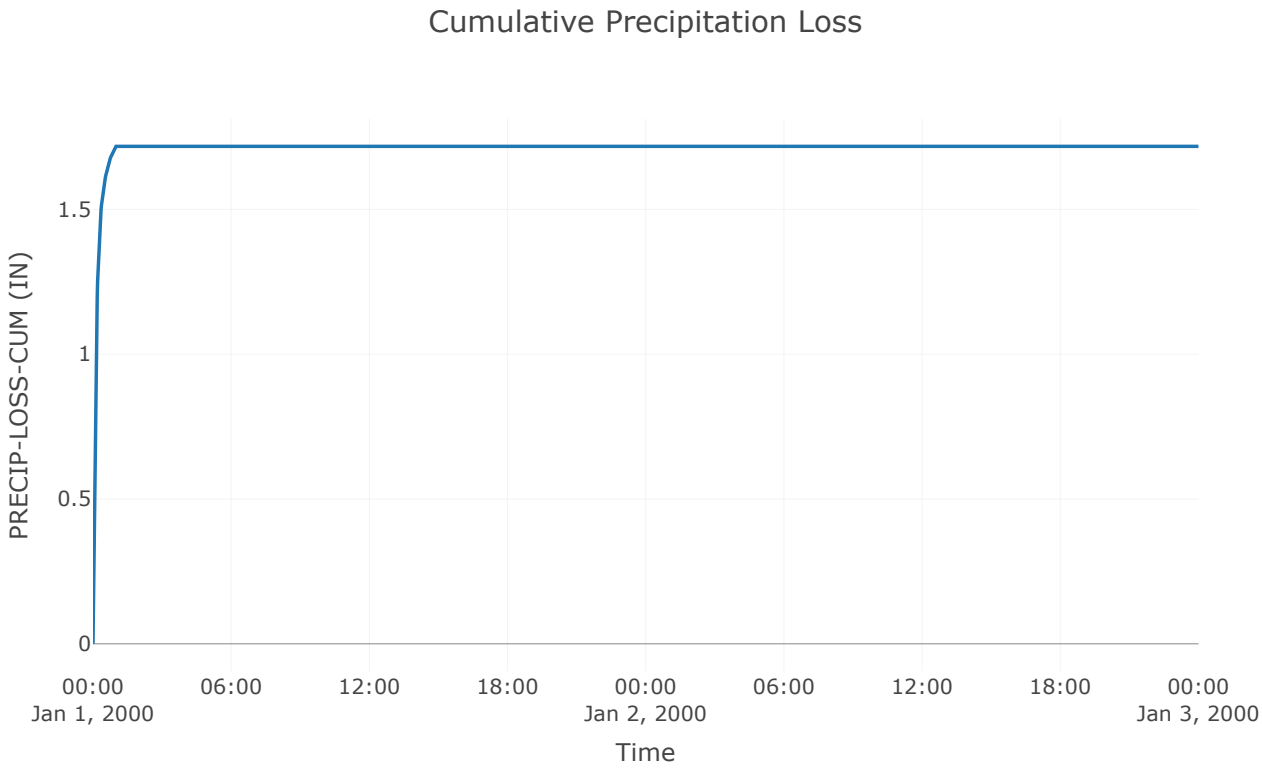


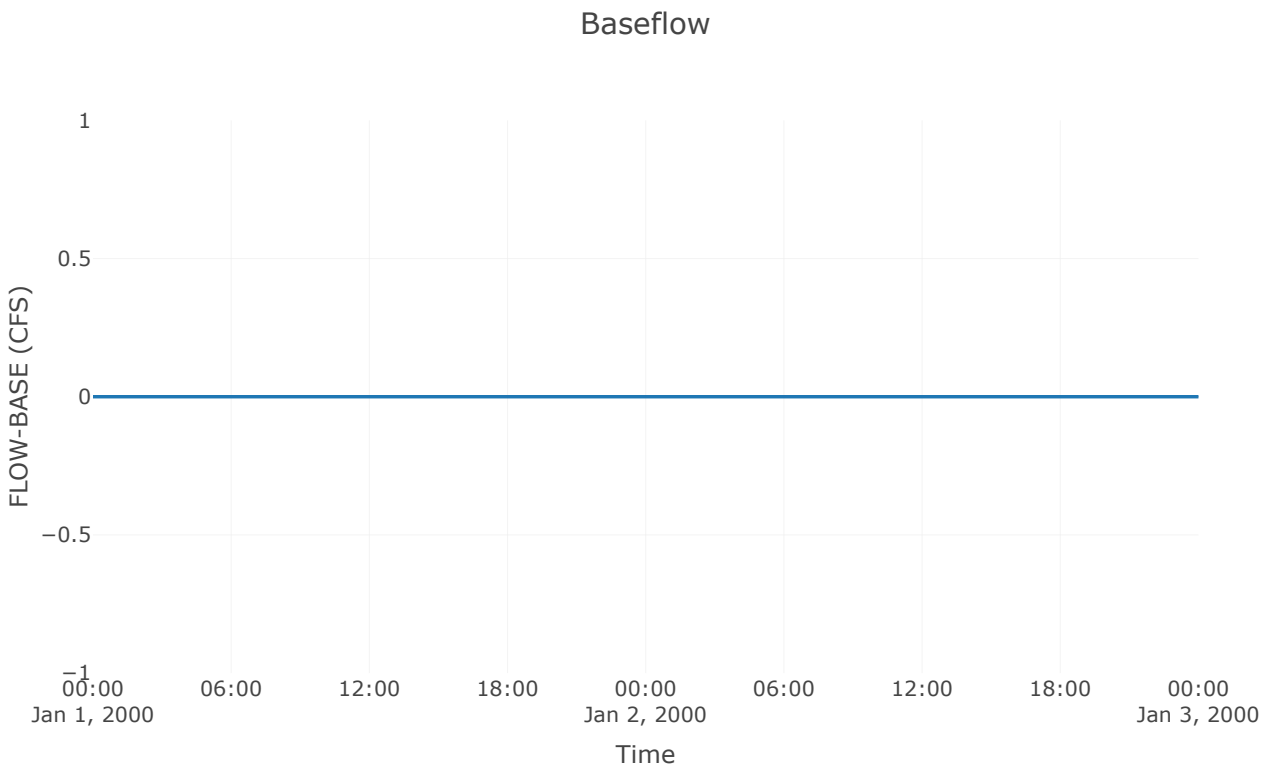
Cumulative Outflow



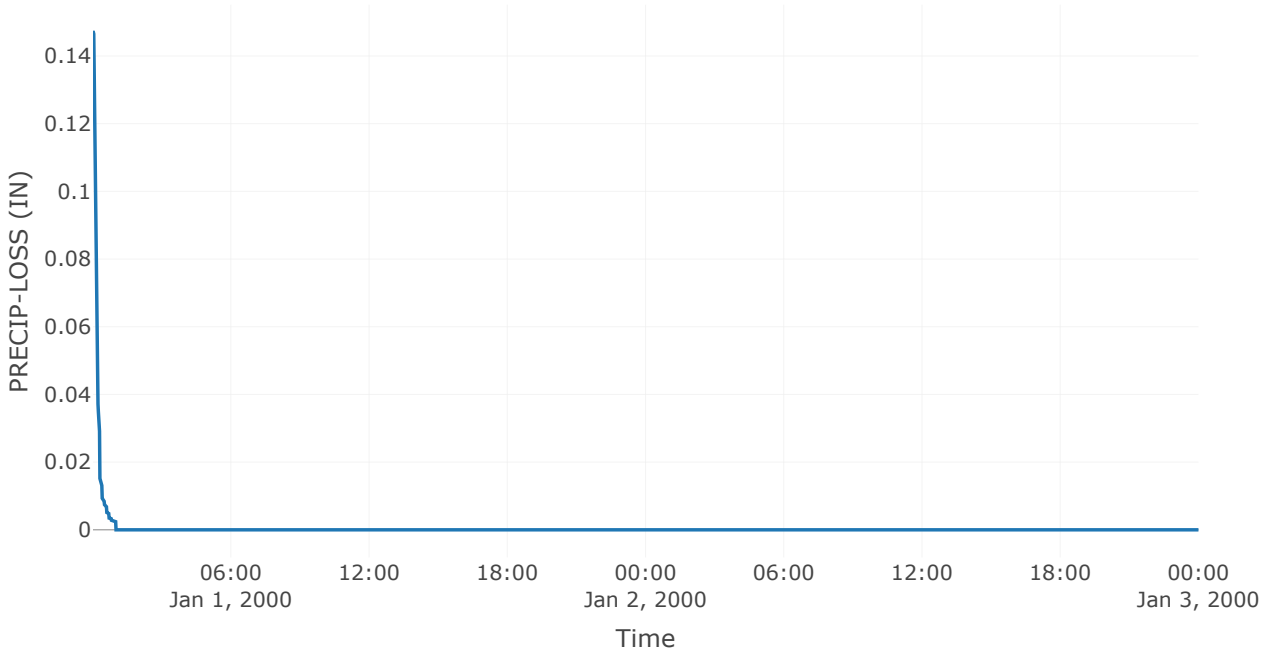
Cumulative Precipitation



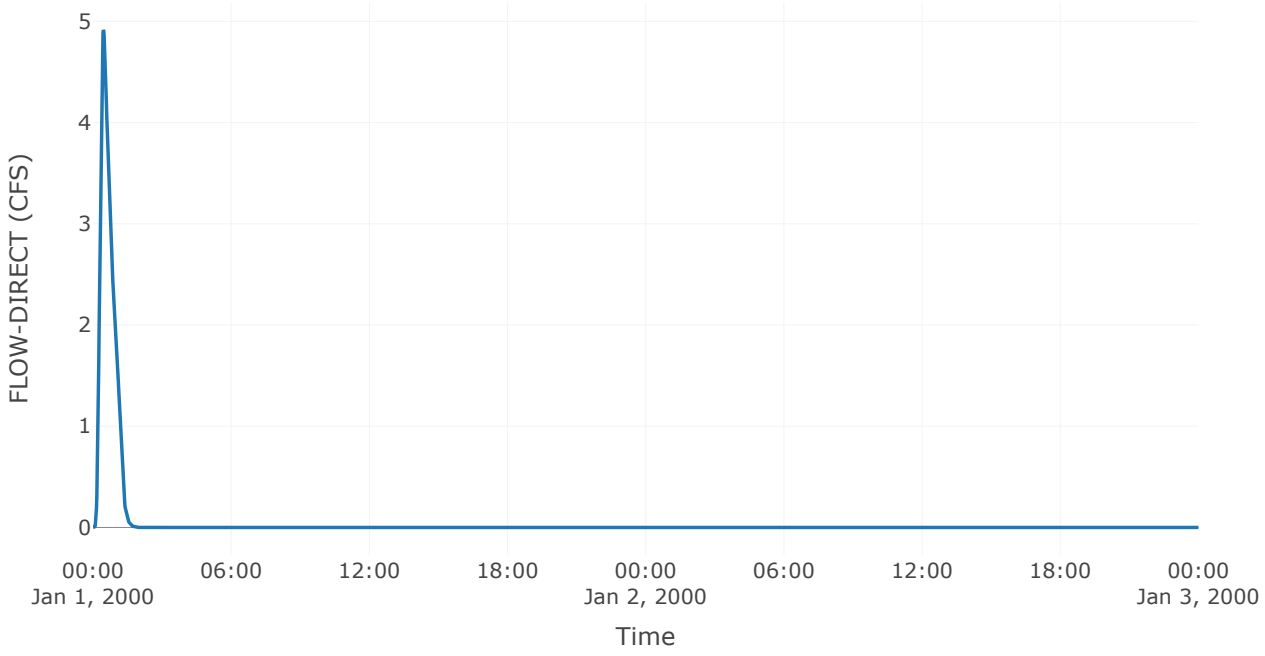

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

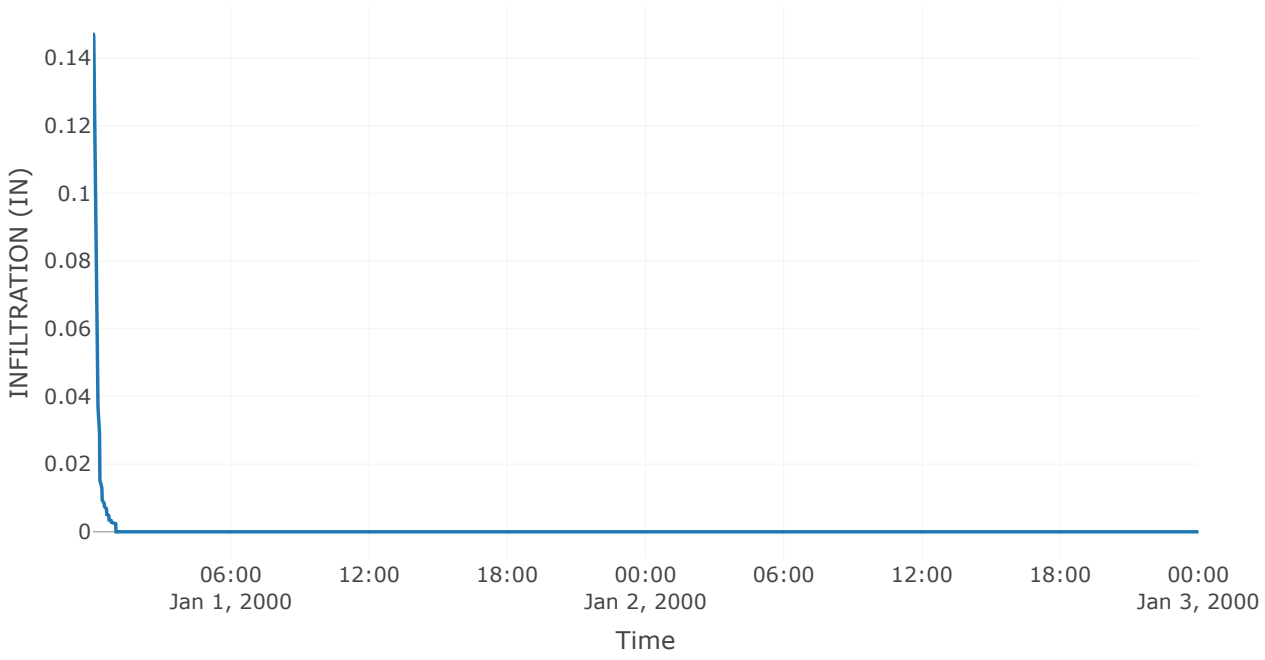

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



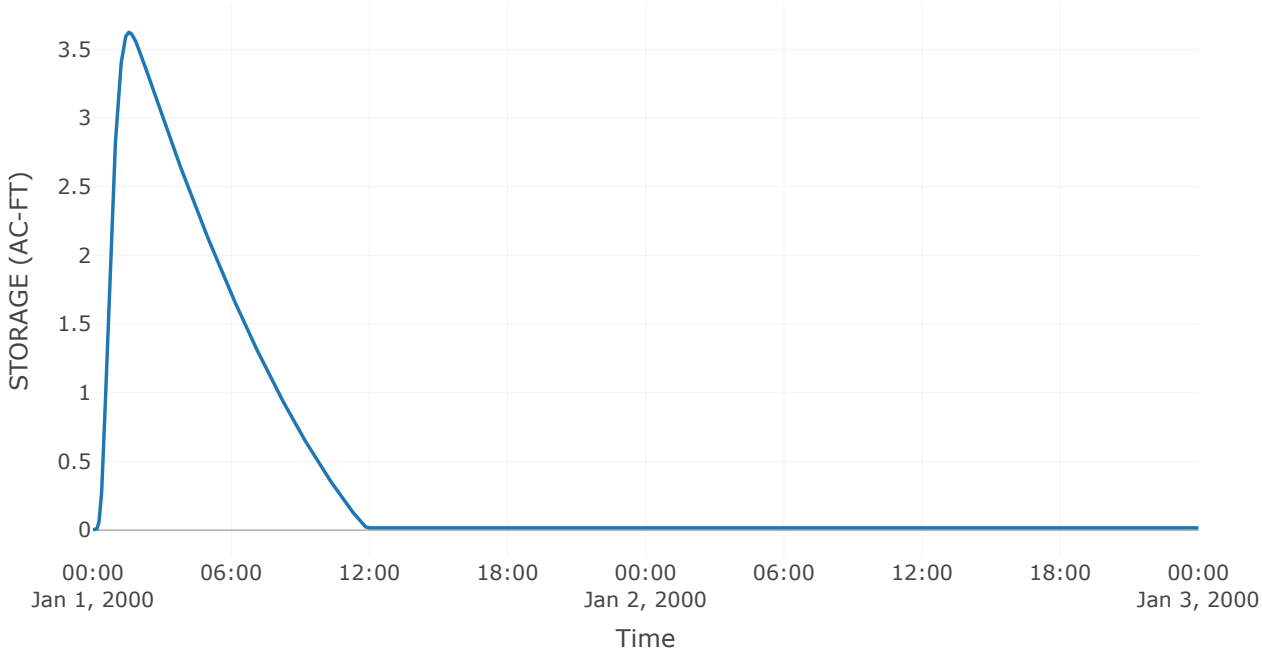

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

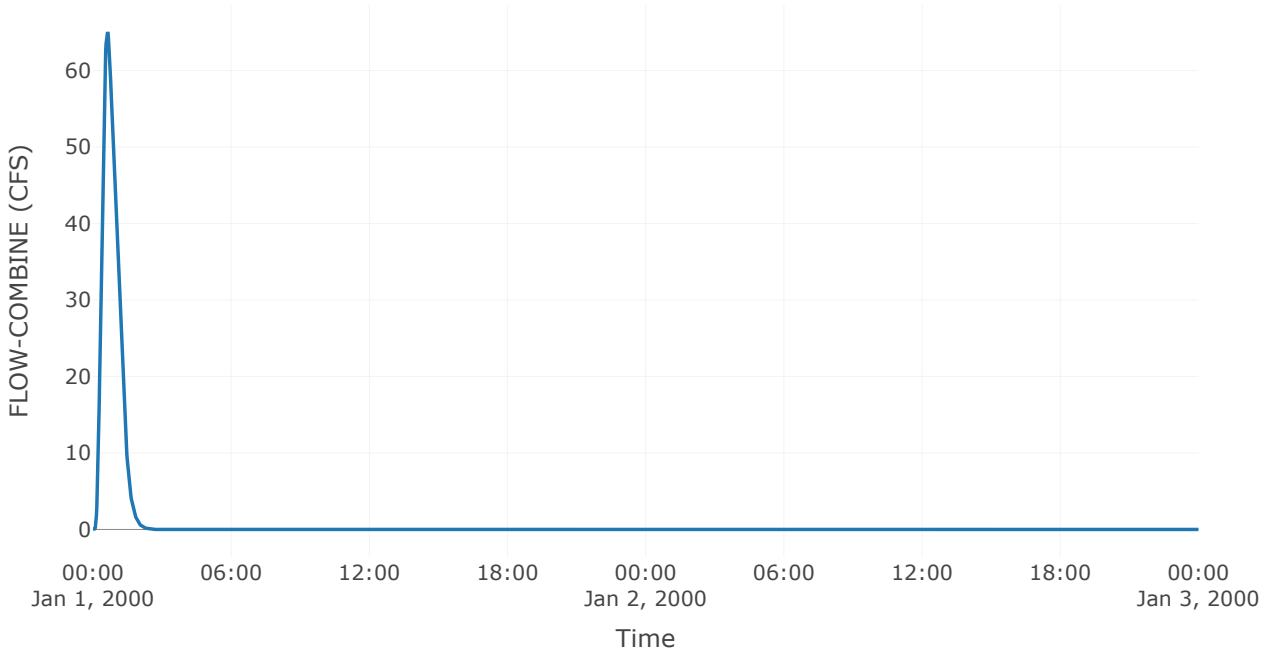
Downstream : Basin 2

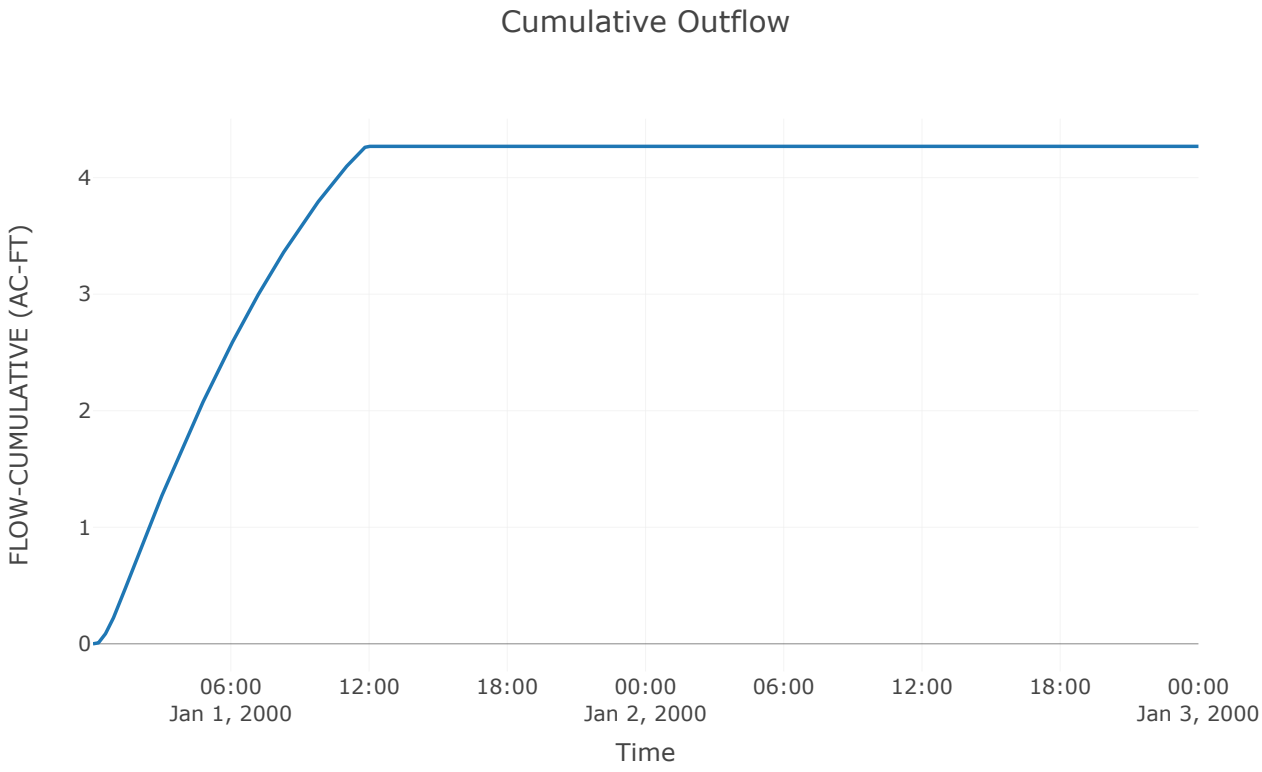
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

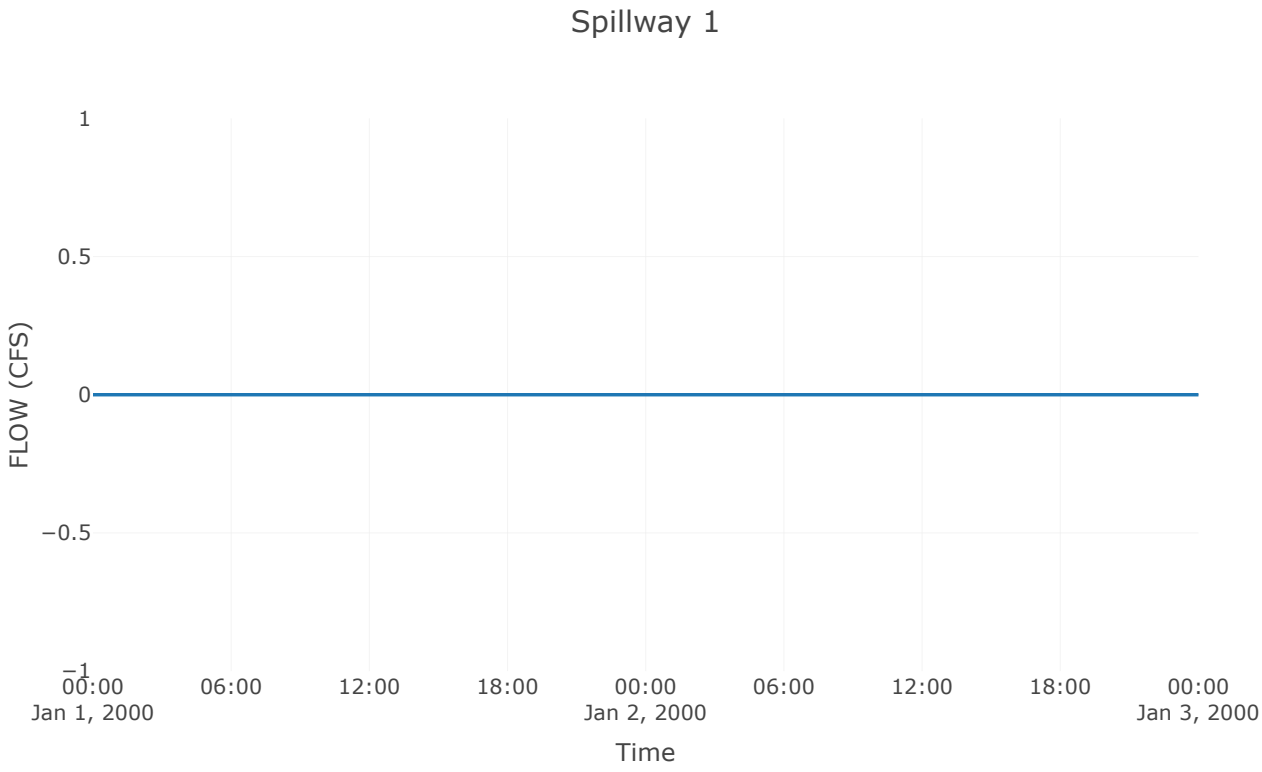
Storage



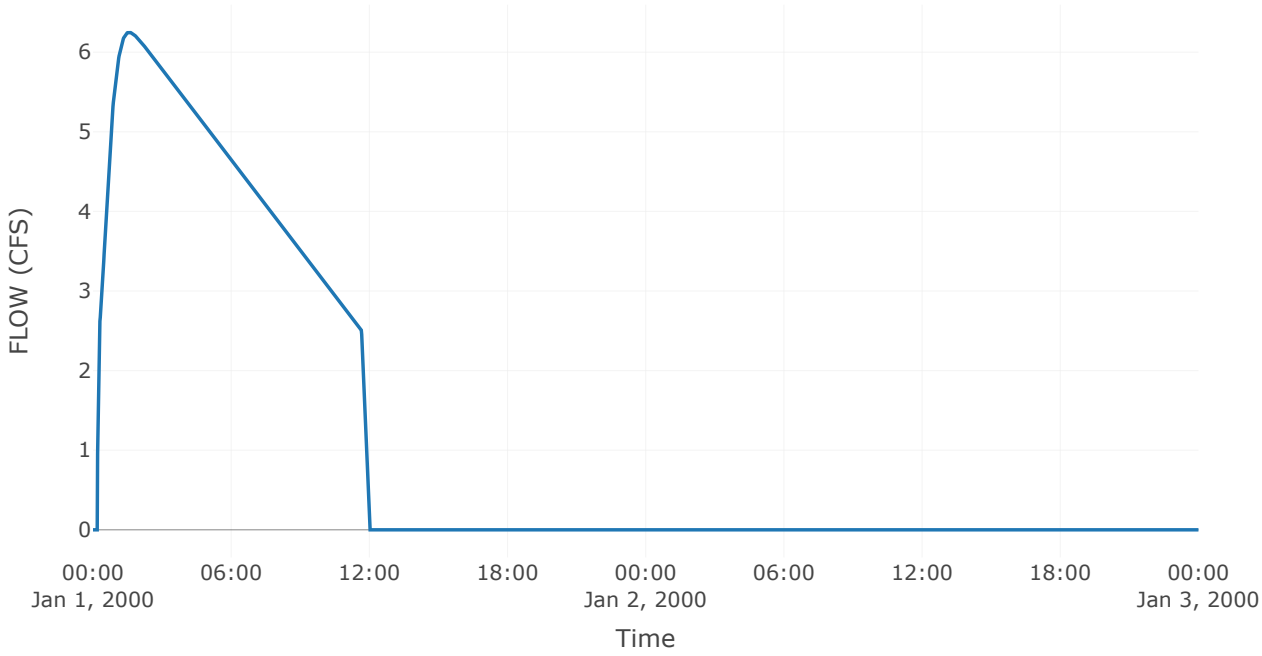
Combined Inflow



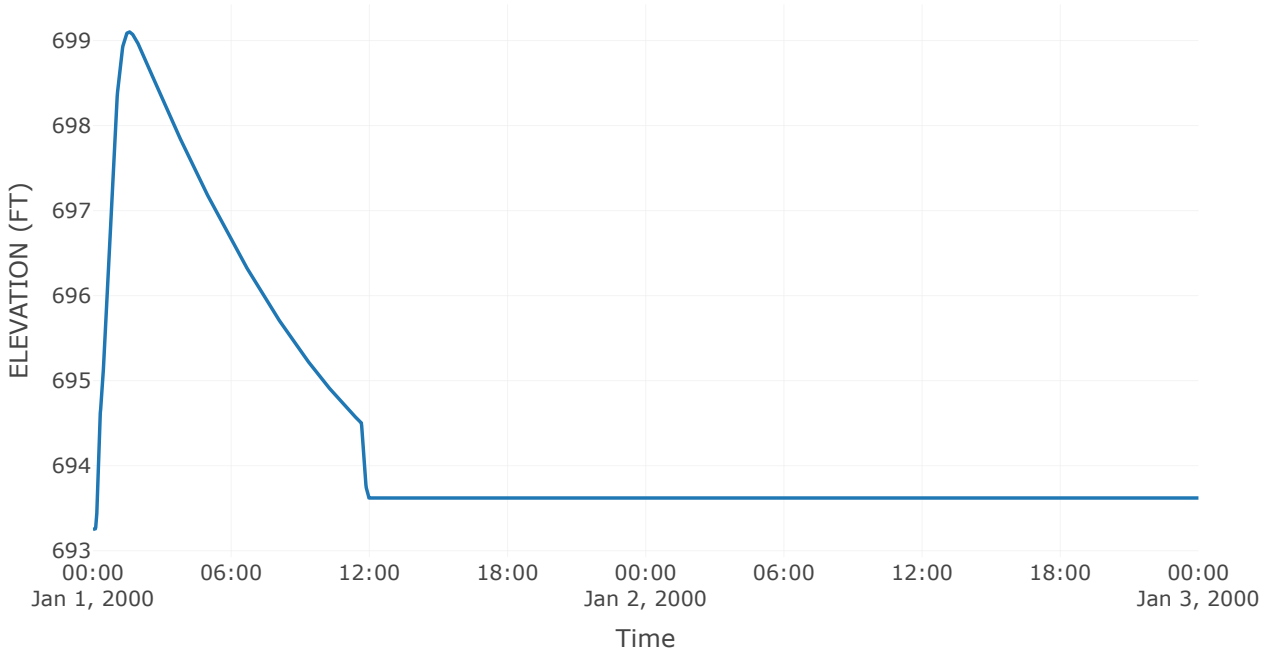

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

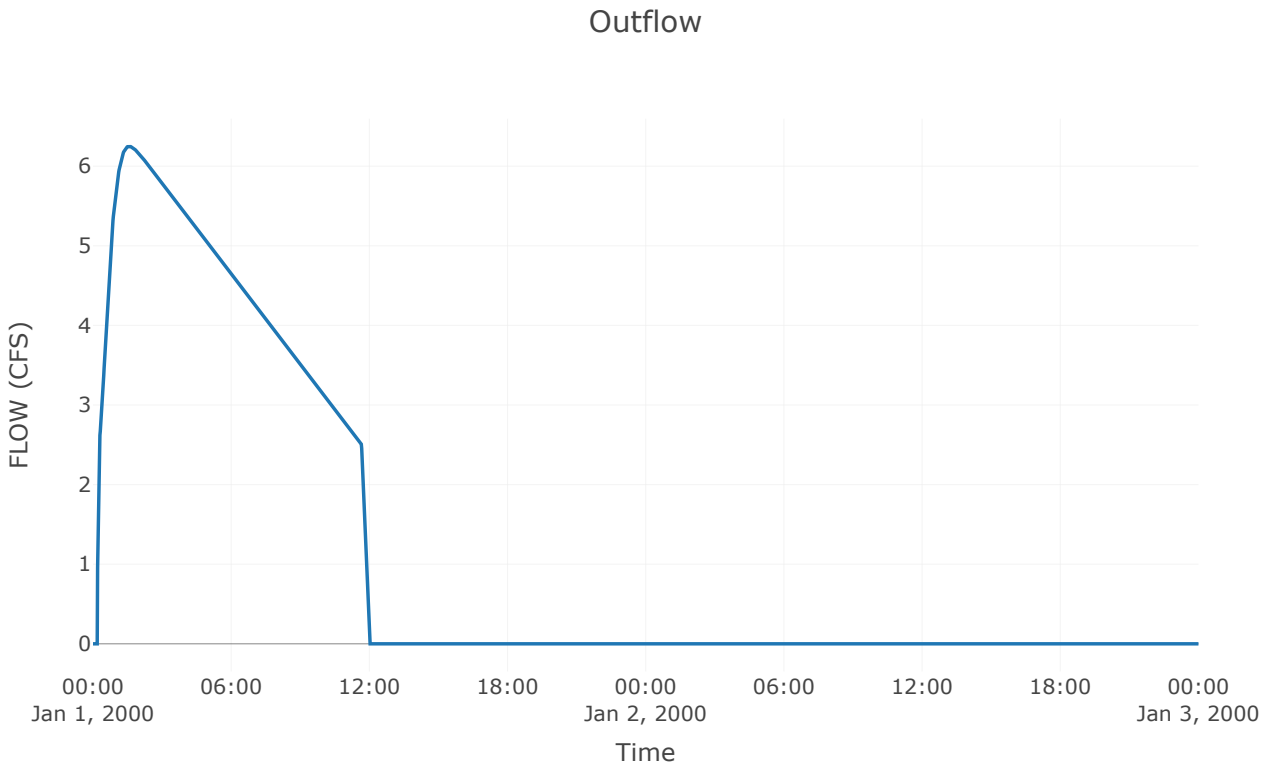

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

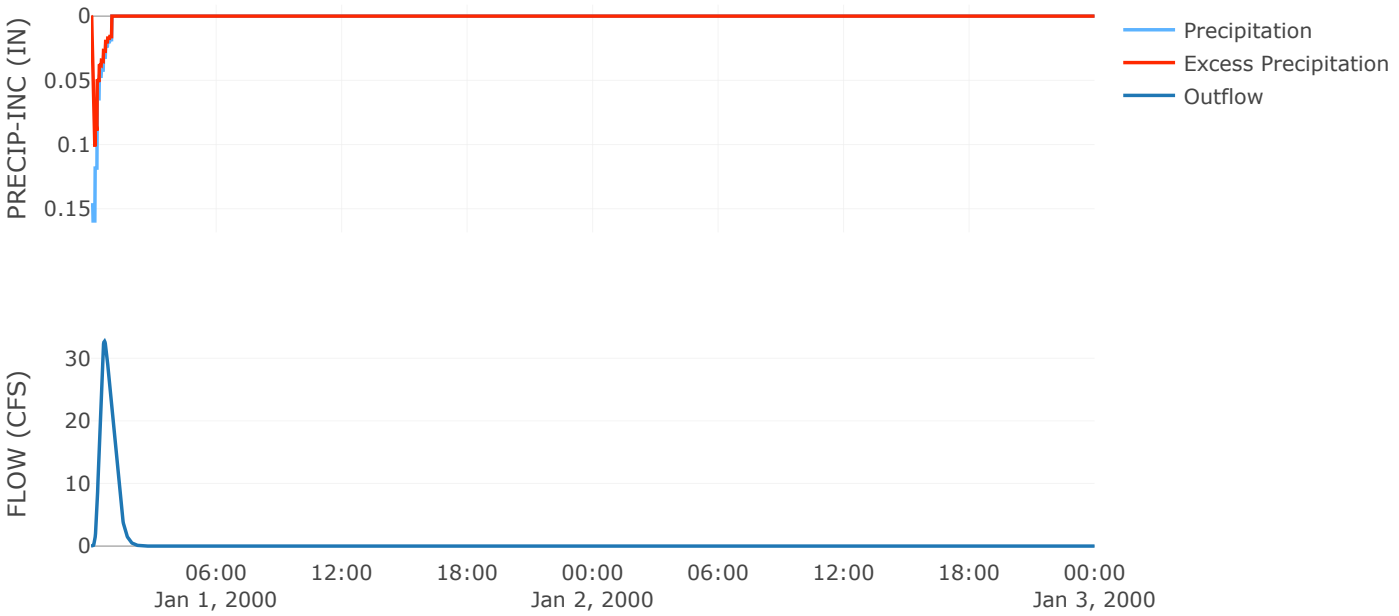
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

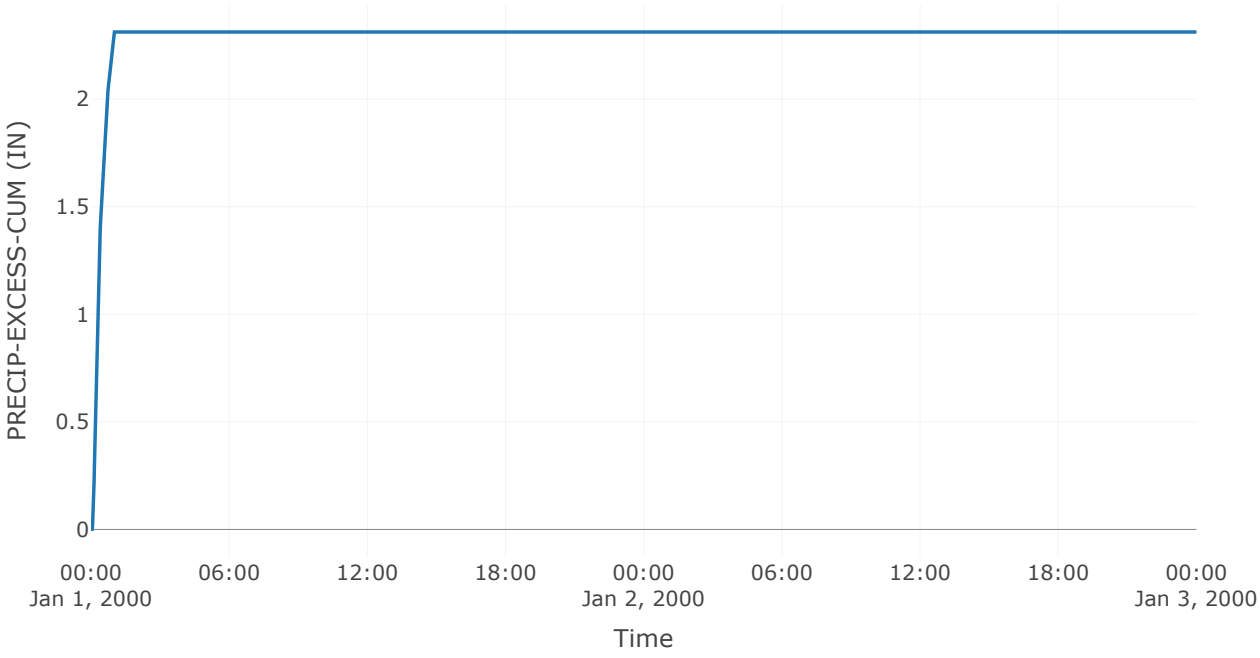
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

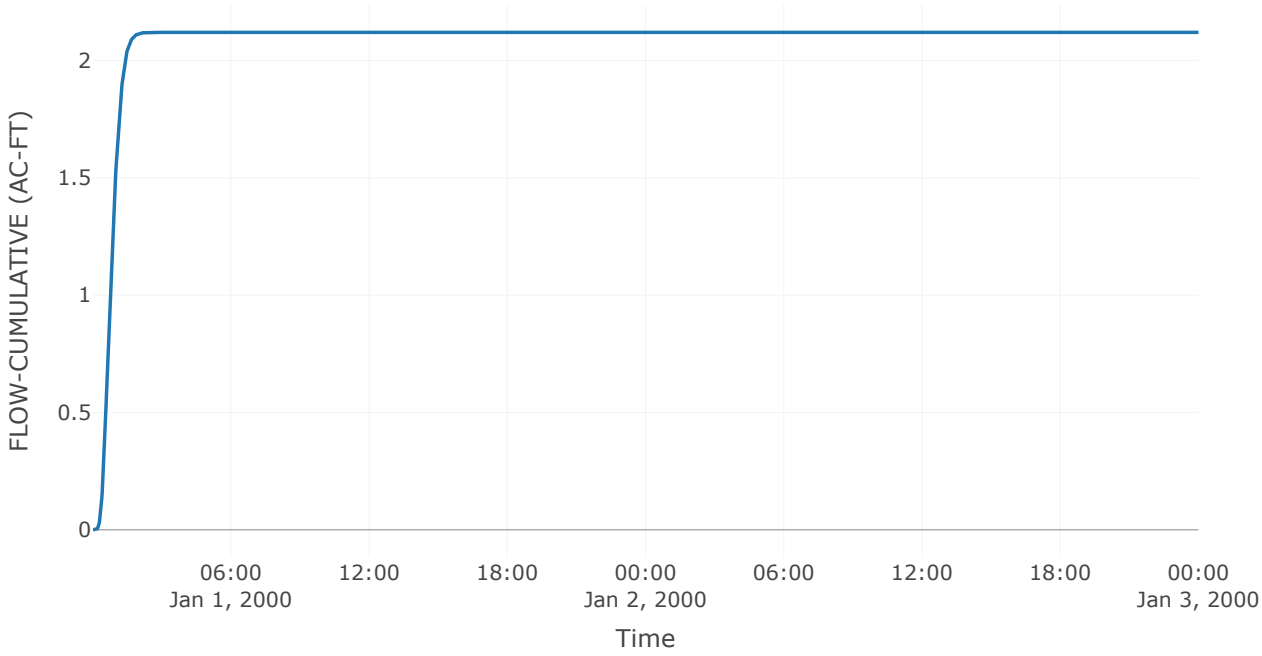
Precipitation and Outflow



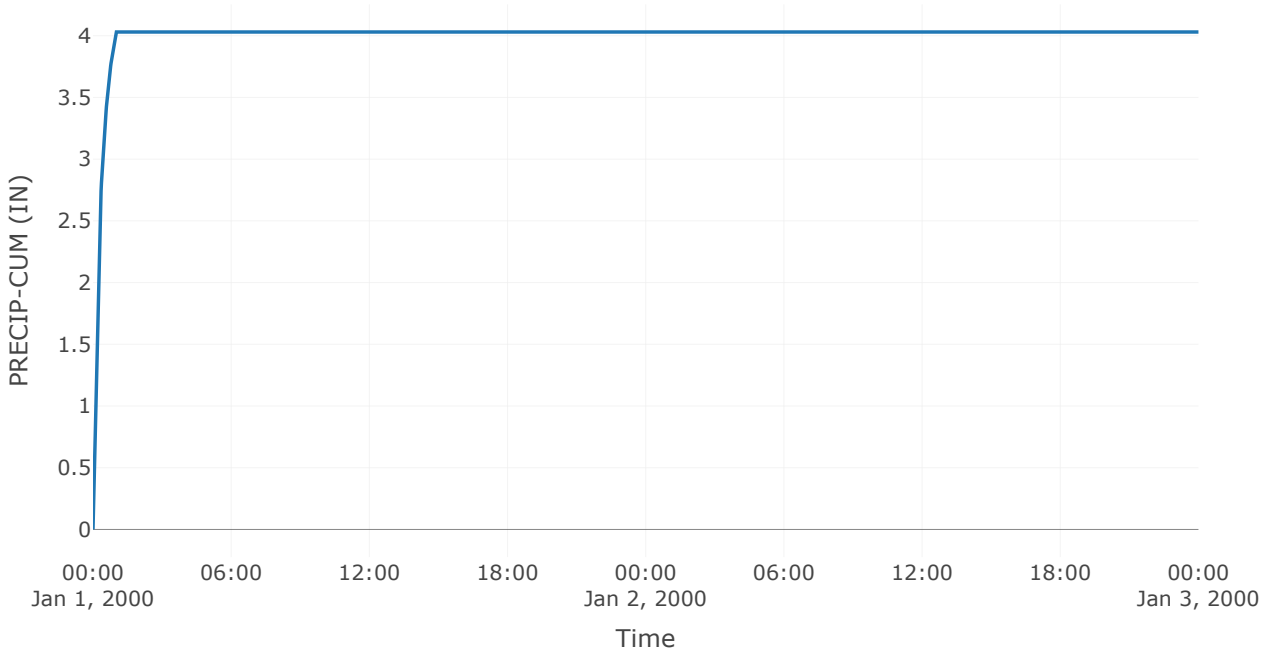
Cumulative Excess Precipitation

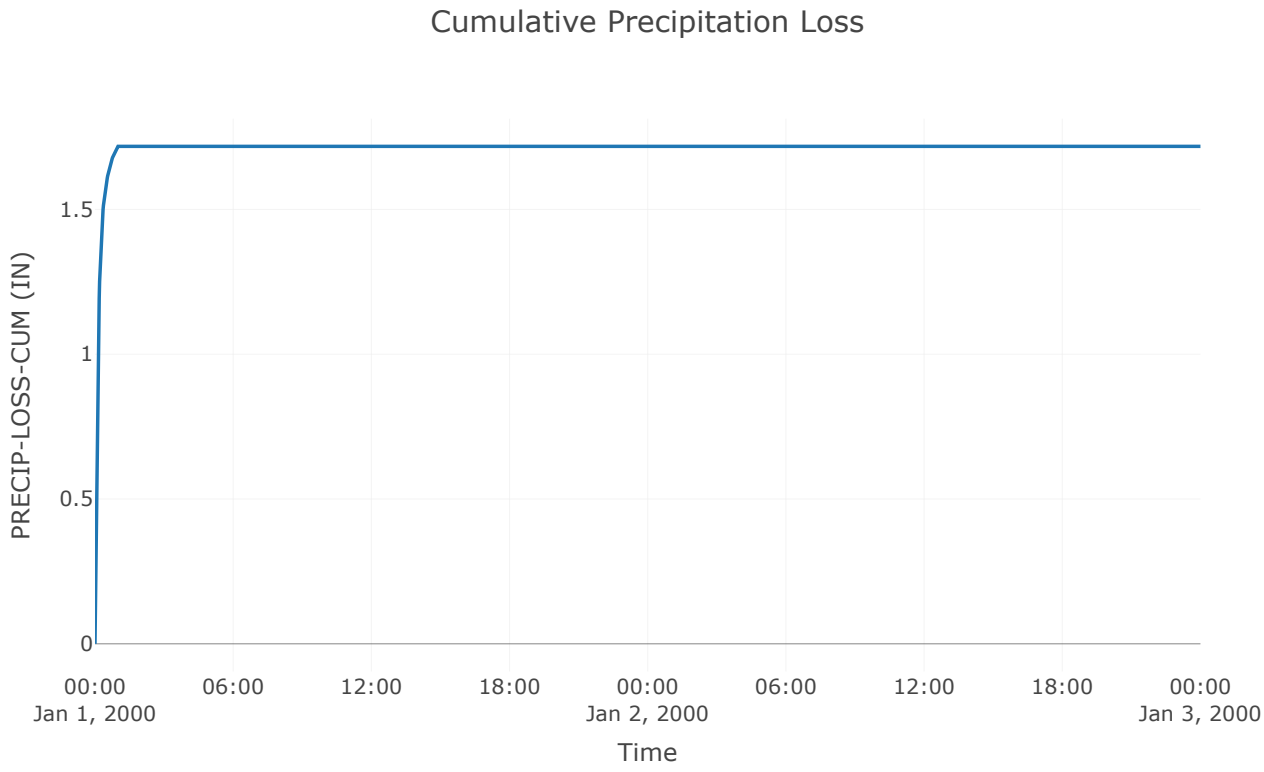


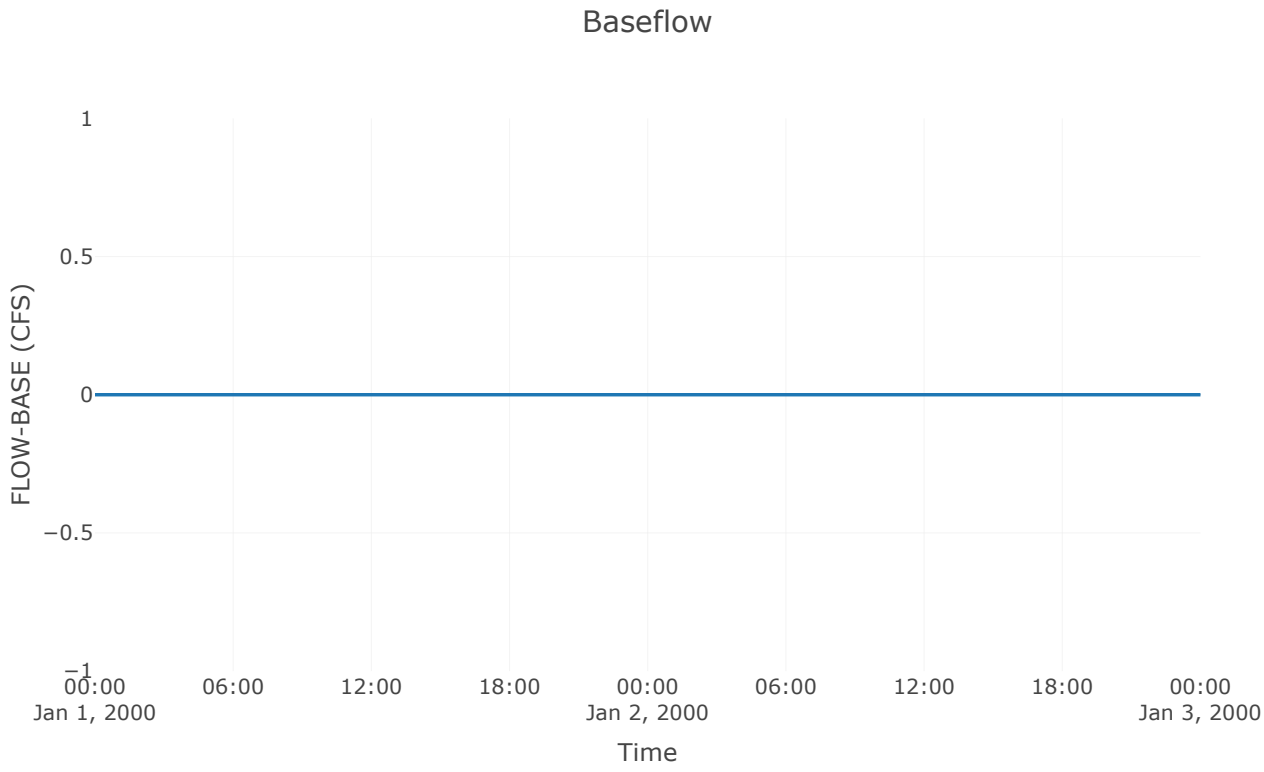
Cumulative Outflow

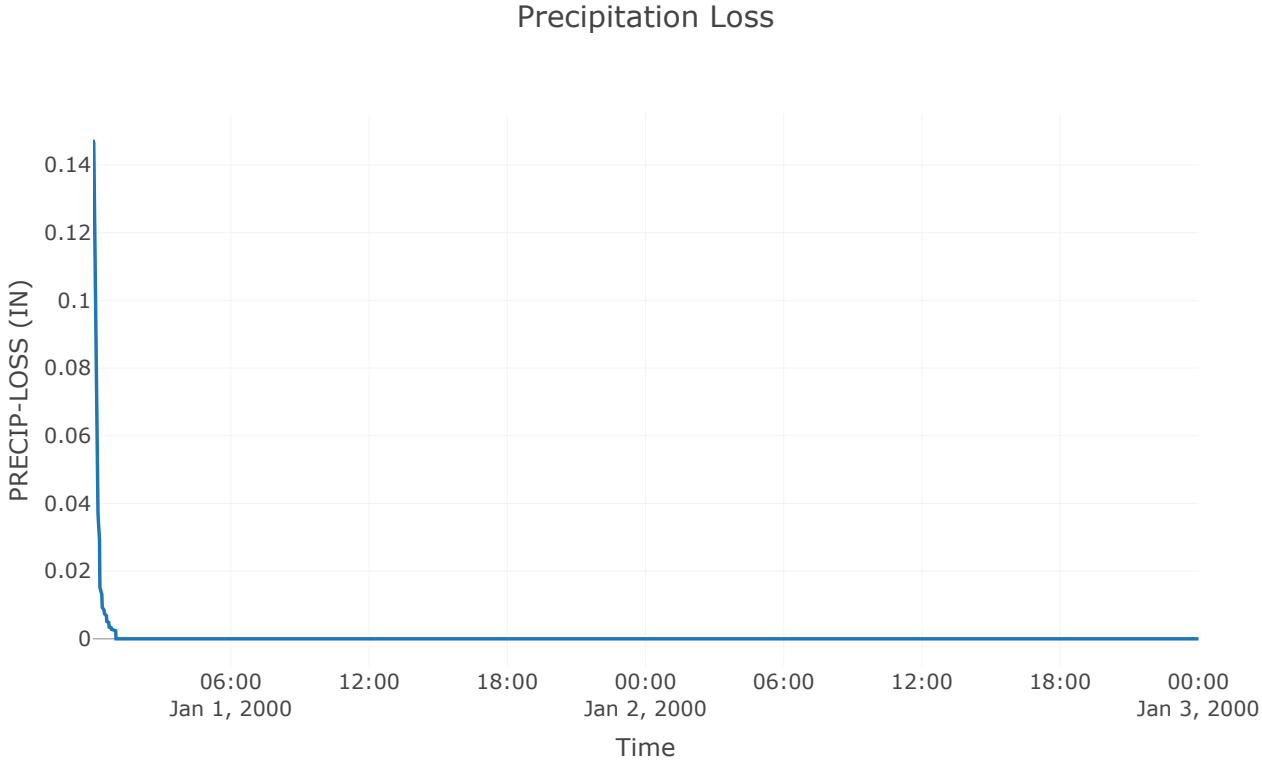


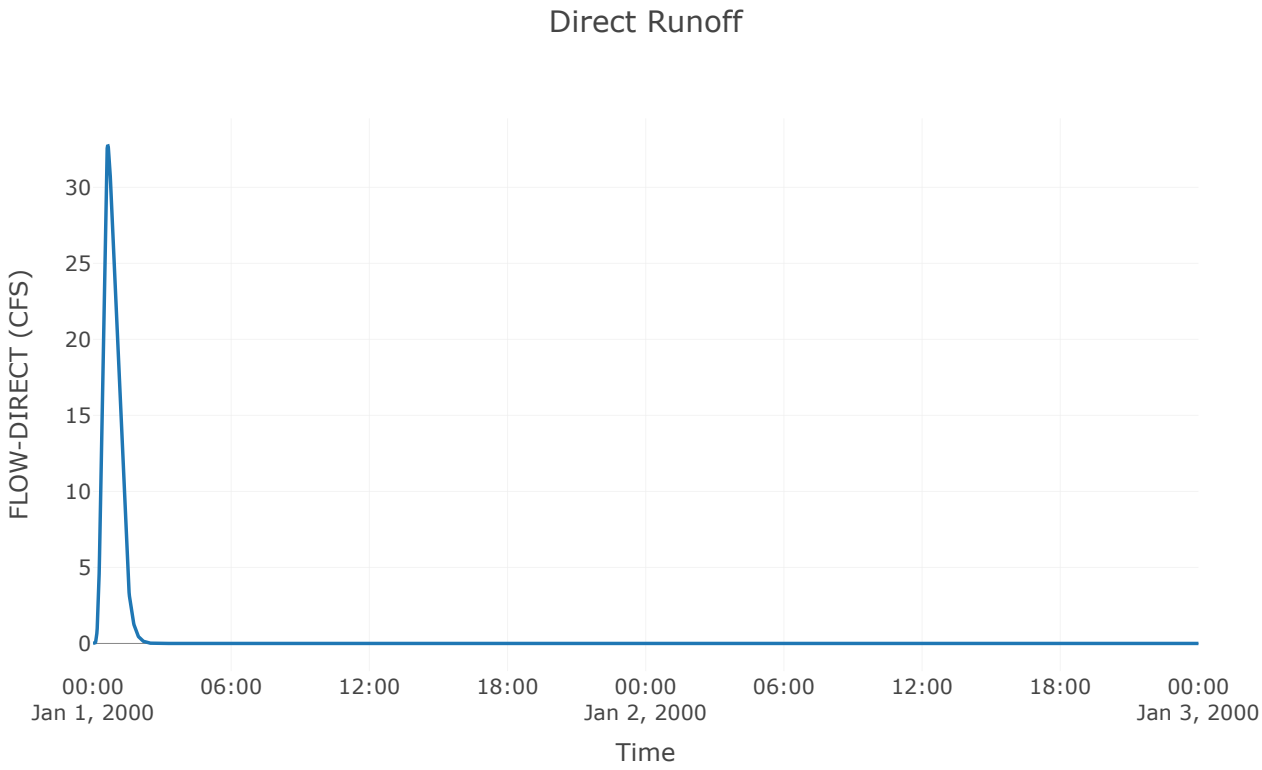
Cumulative Precipitation

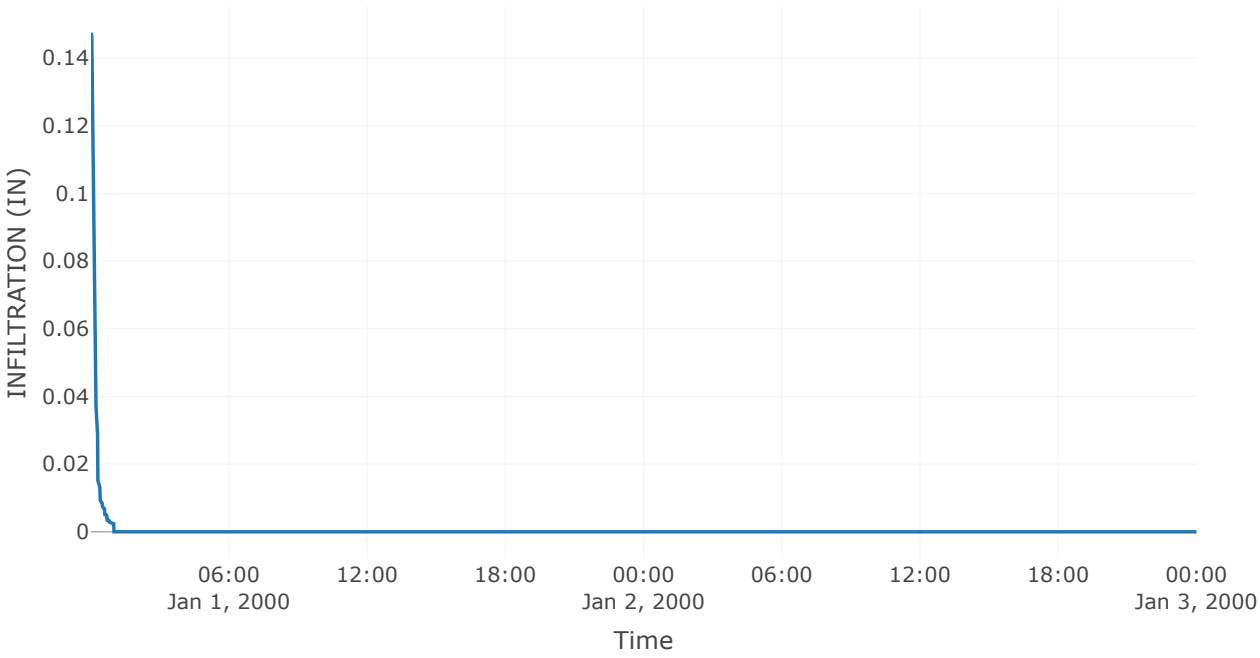



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
30
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

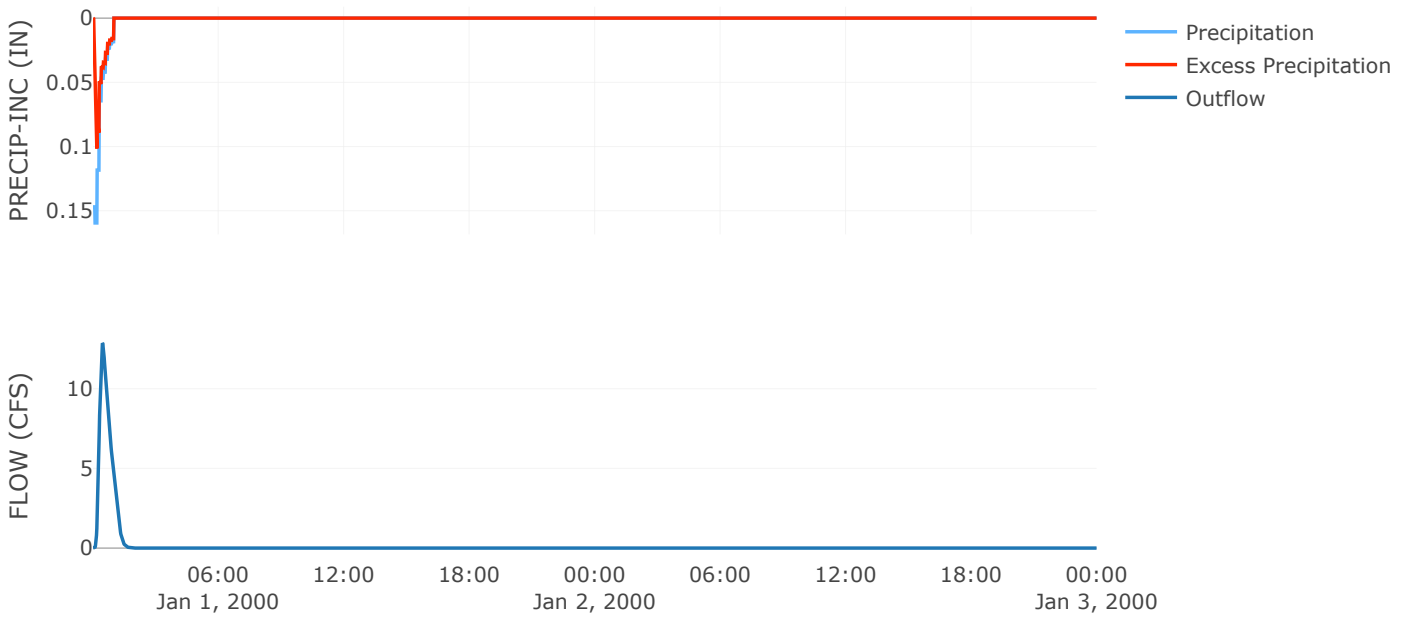
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

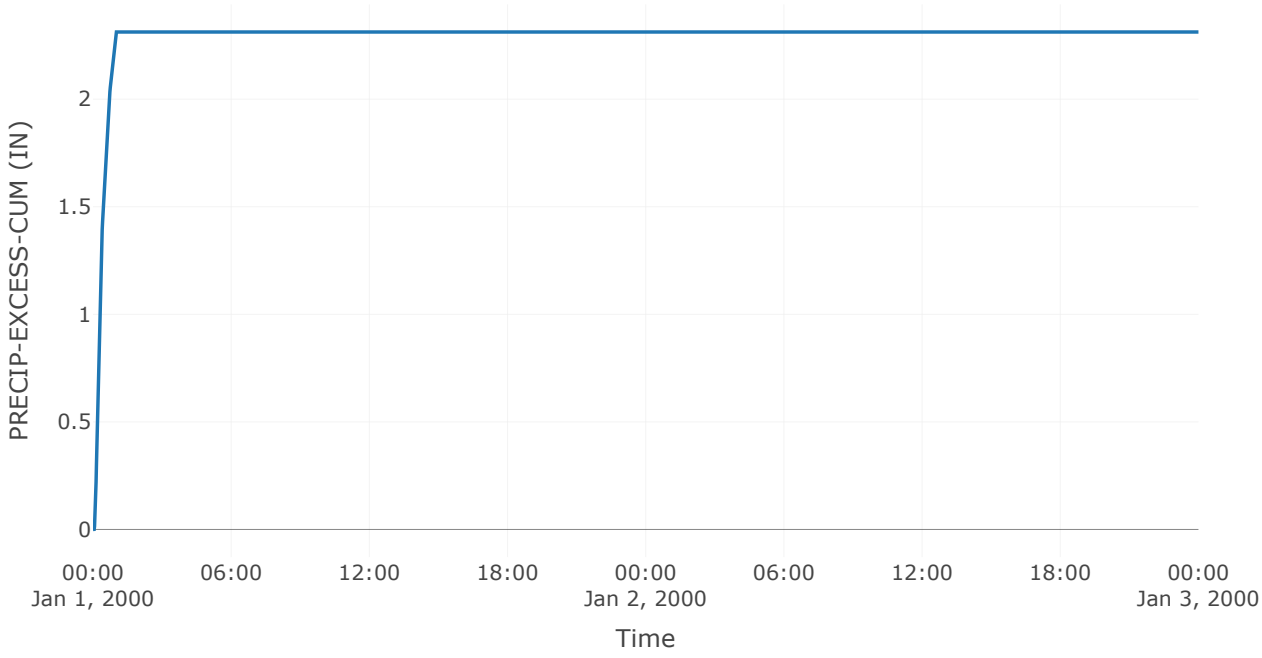
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

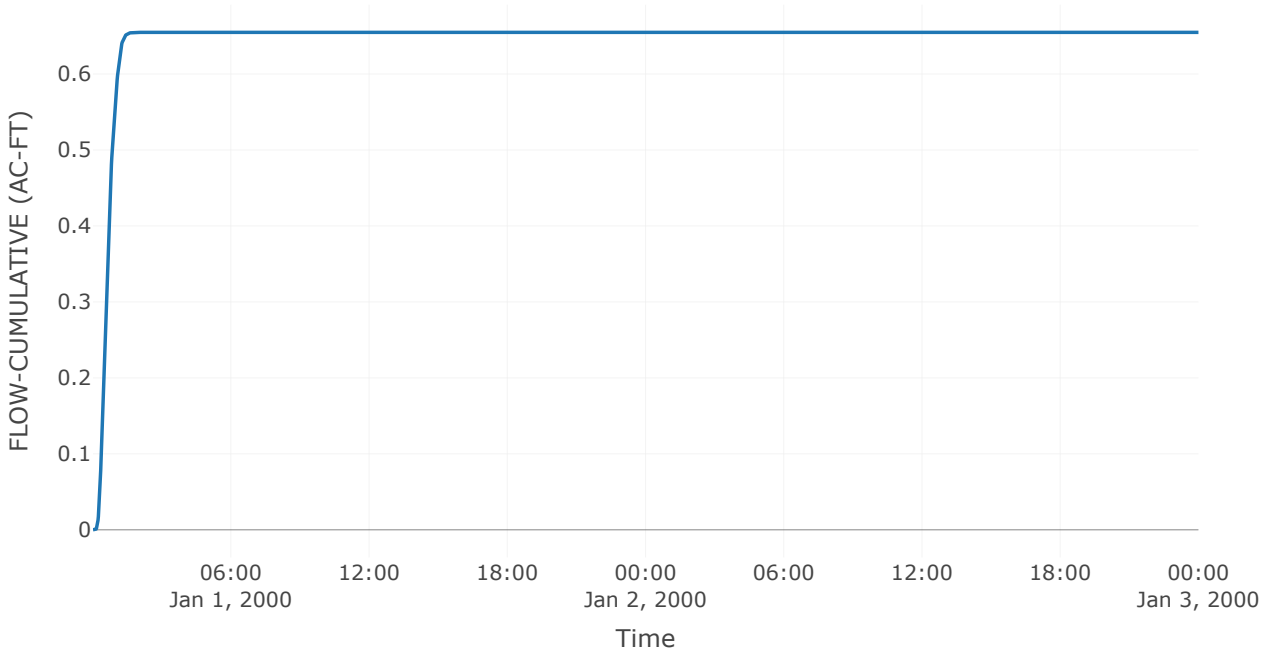
Precipitation and Outflow



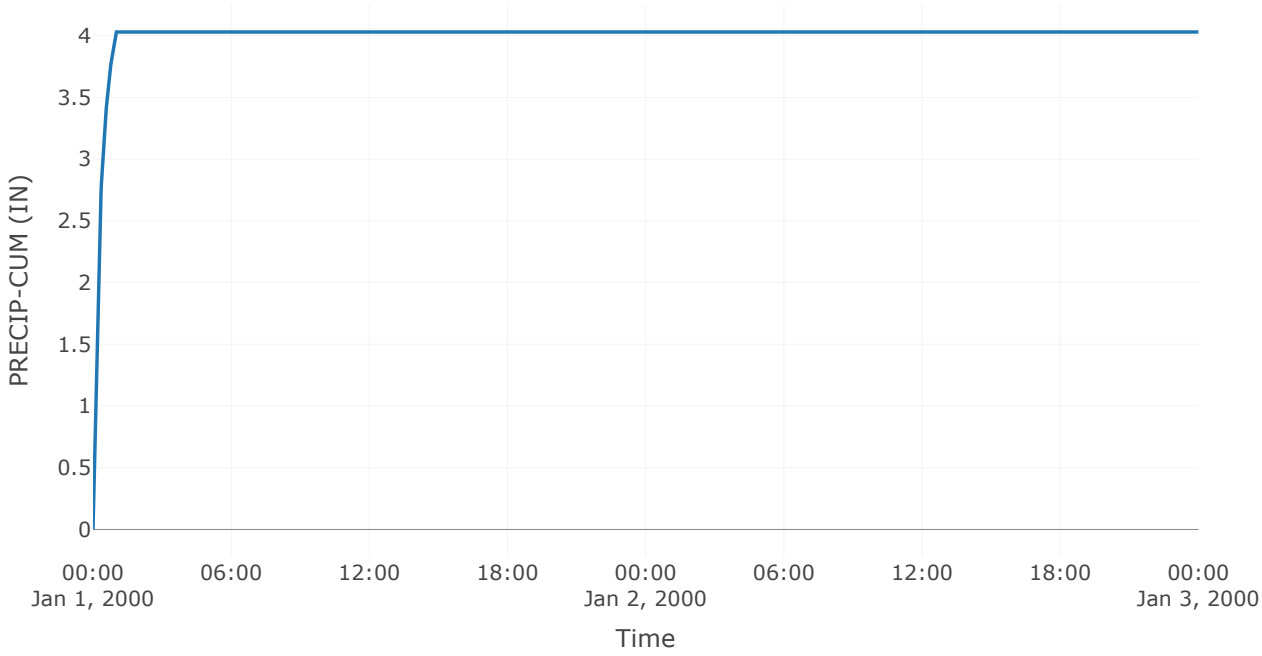
Cumulative Excess Precipitation

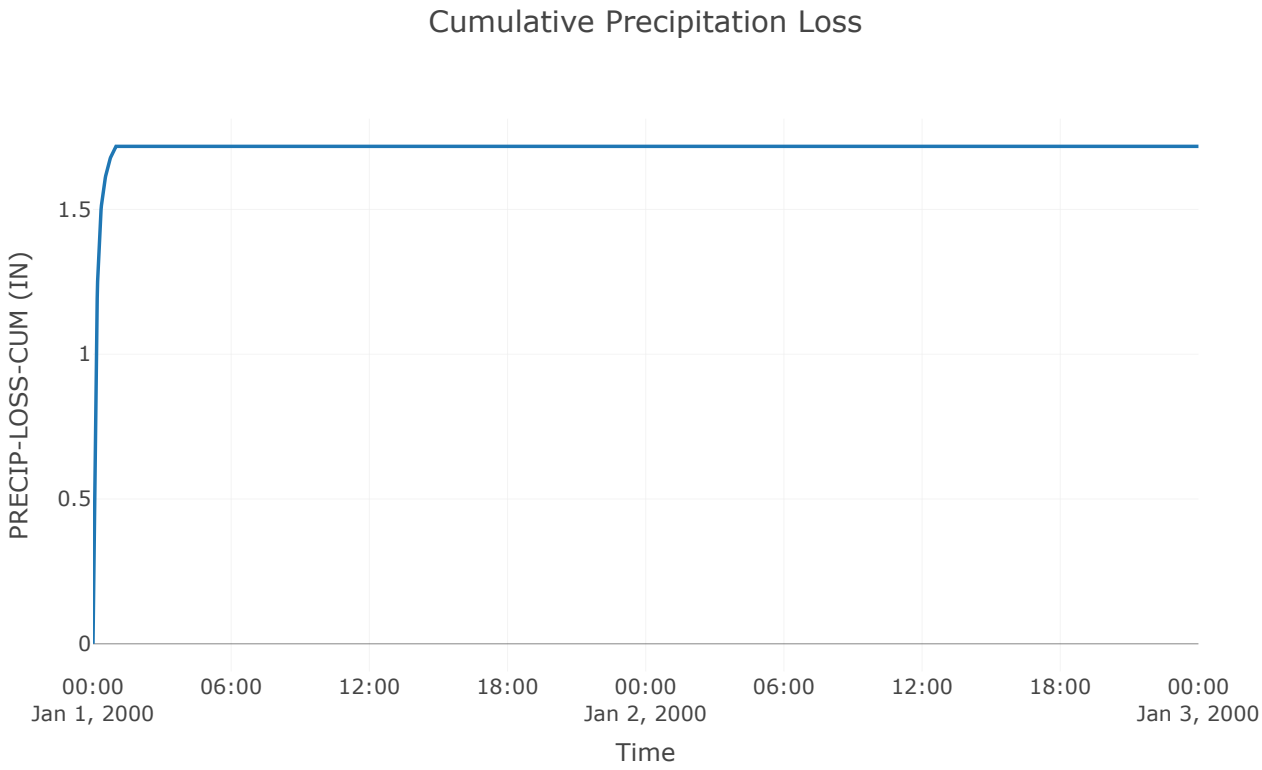


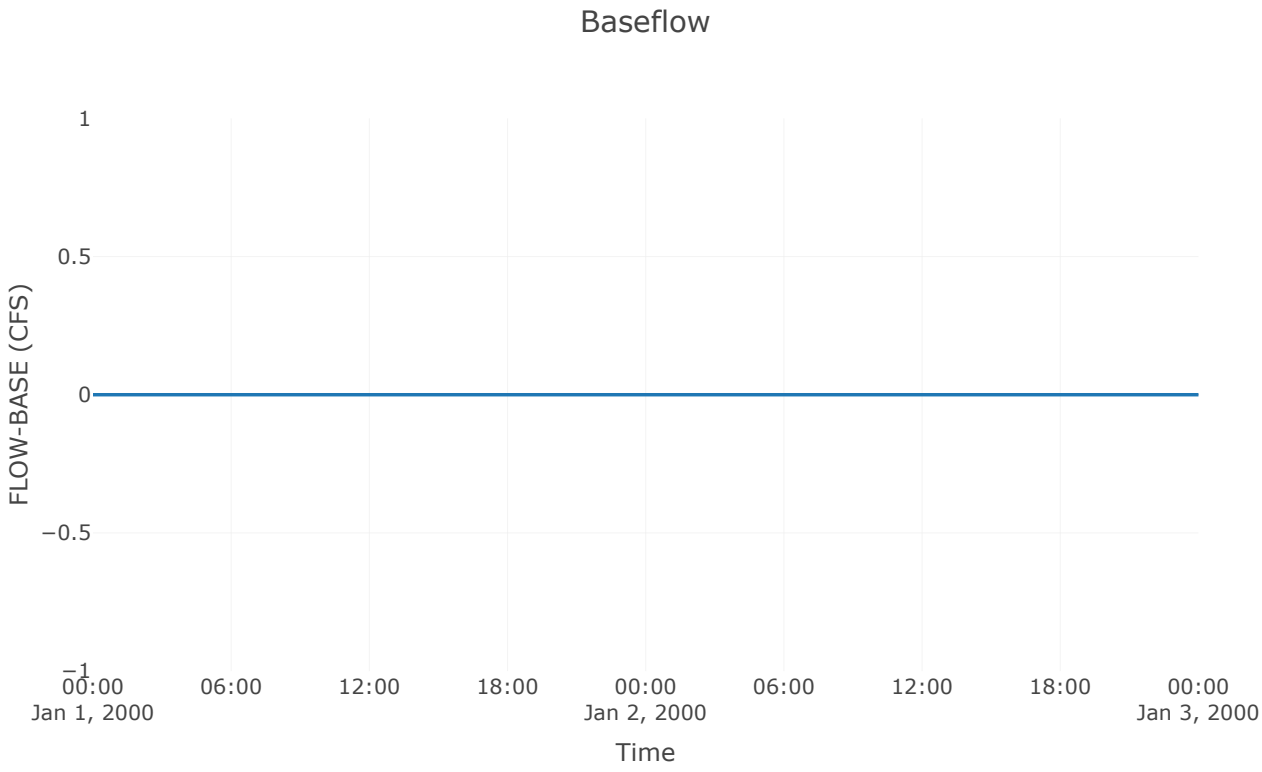
Cumulative Outflow



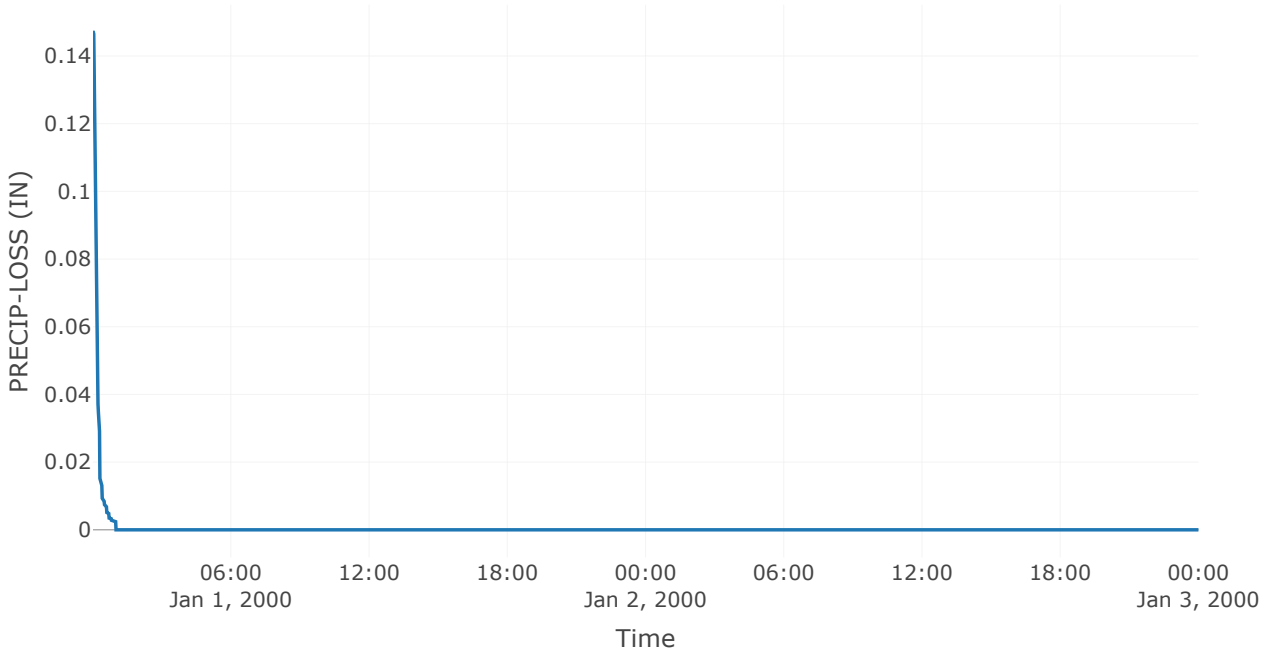
Cumulative Precipitation



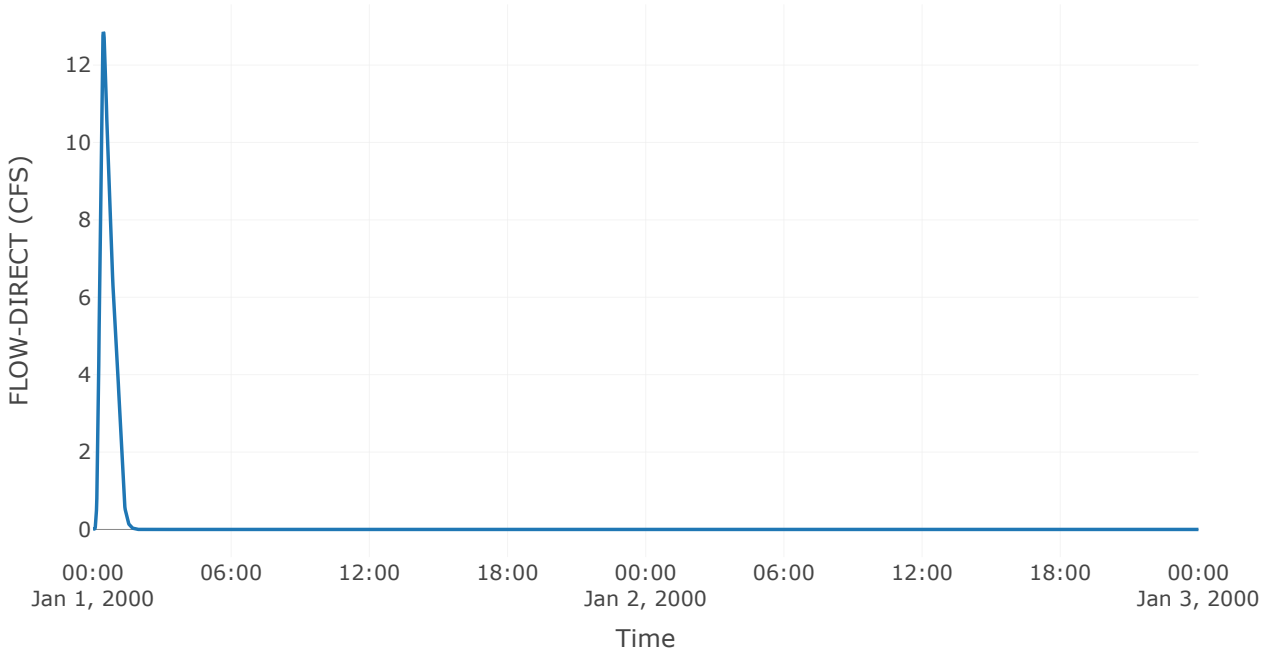

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

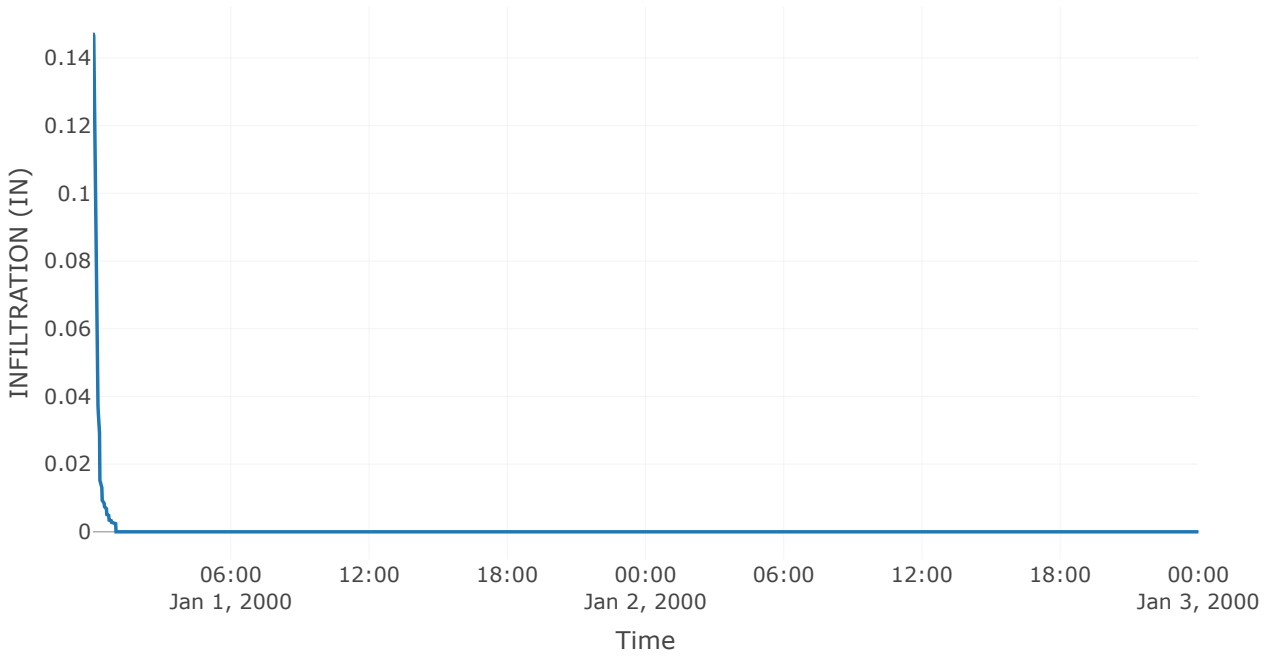

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



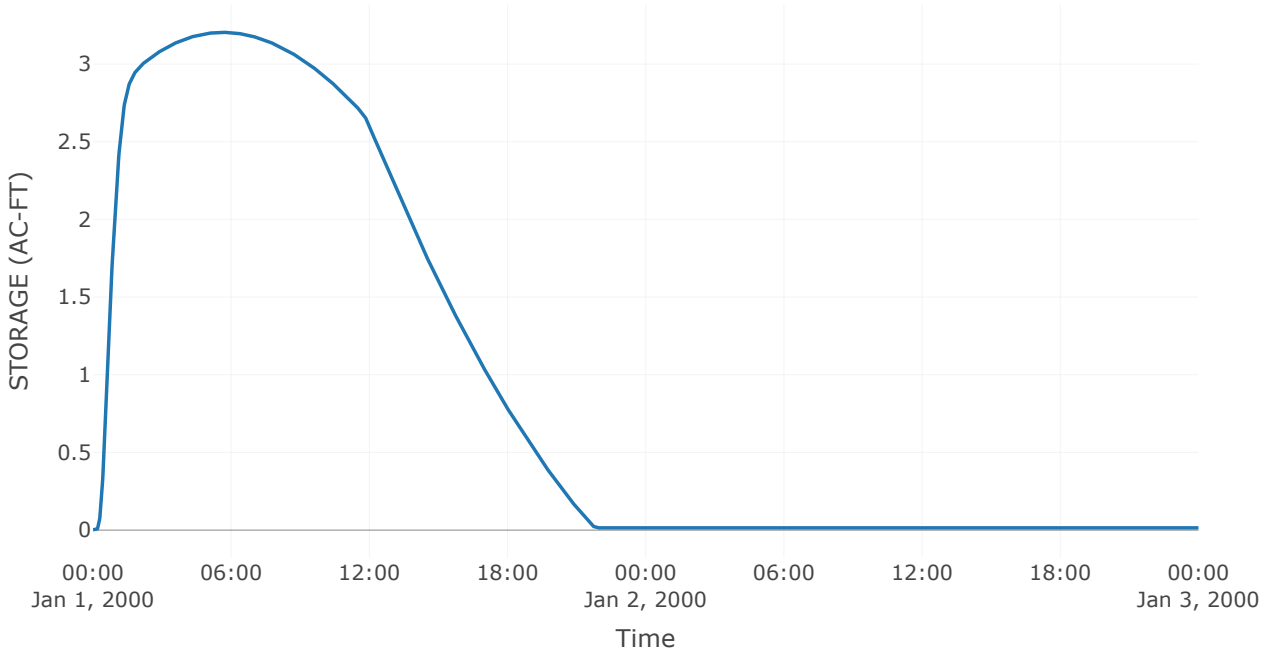

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

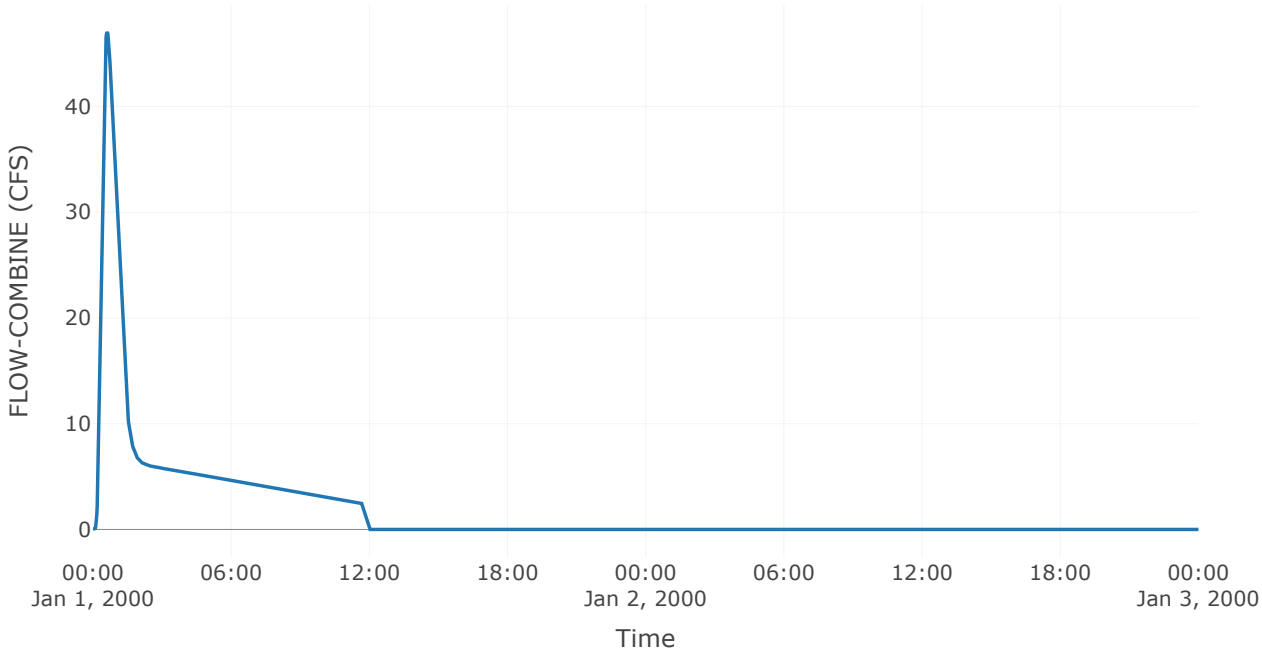
Downstream : Basin 3

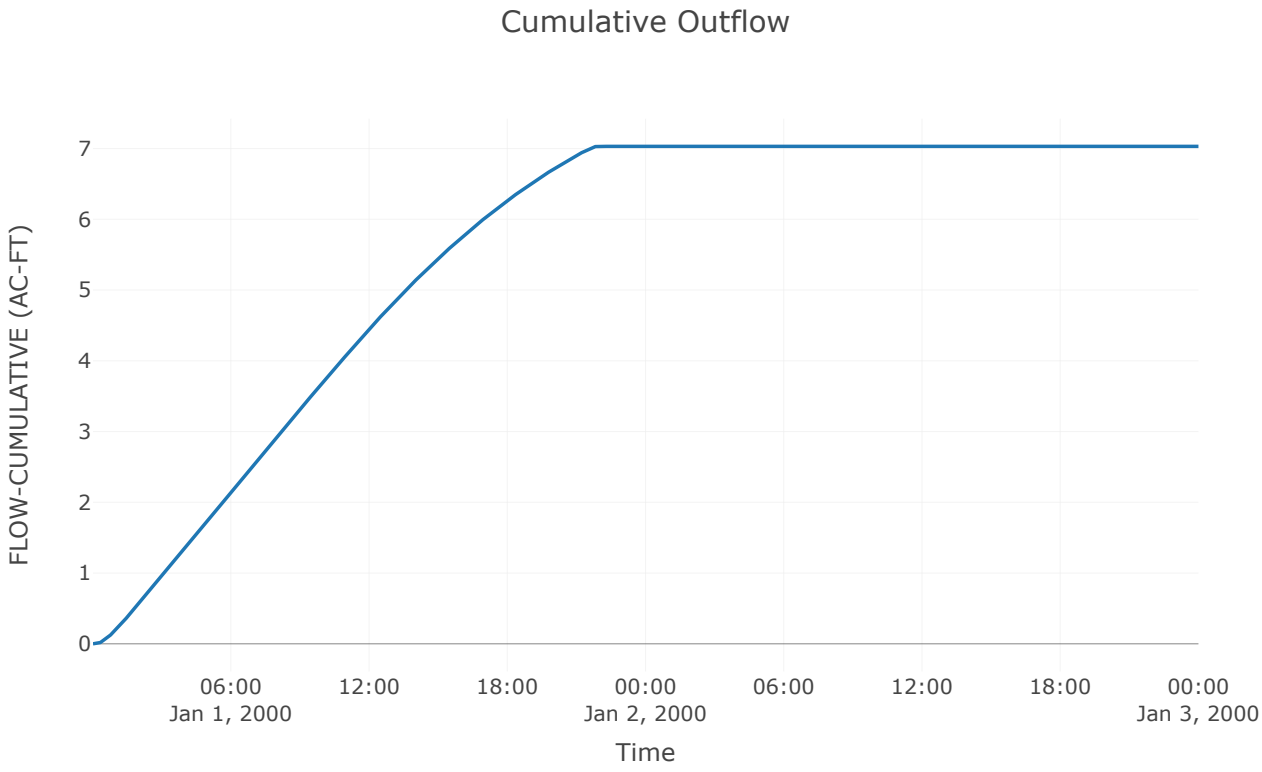
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

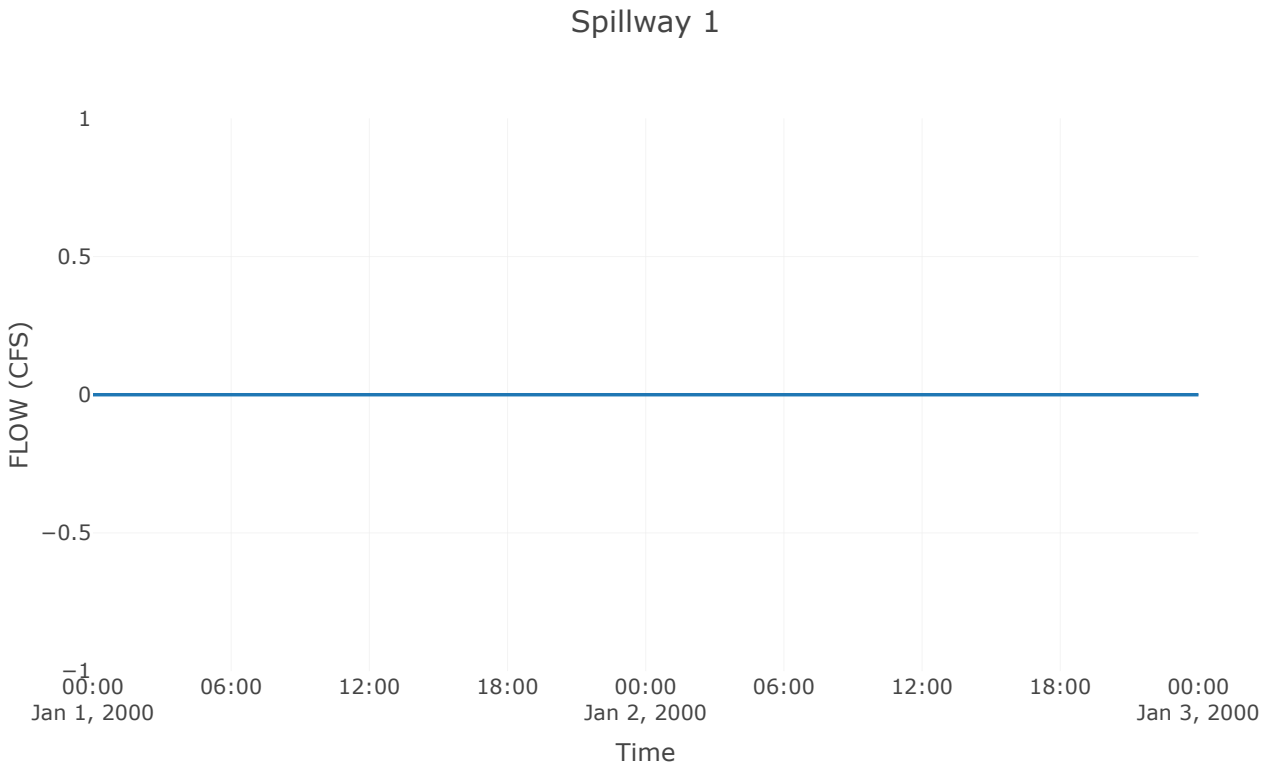
Storage

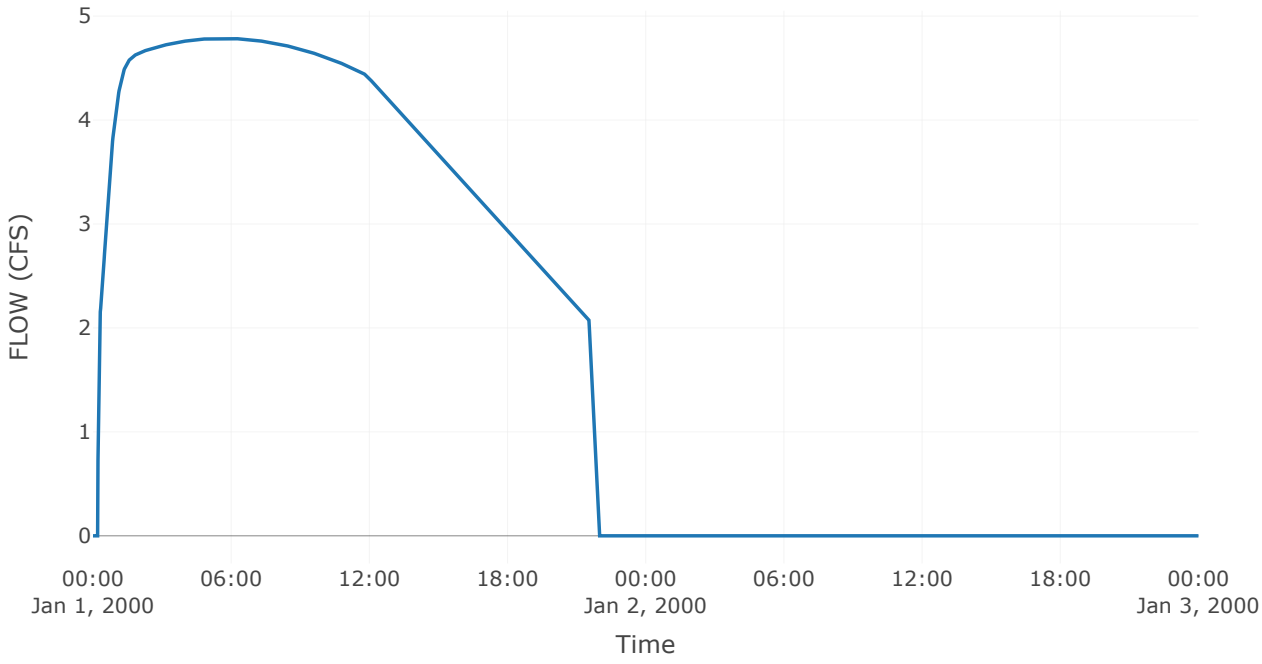


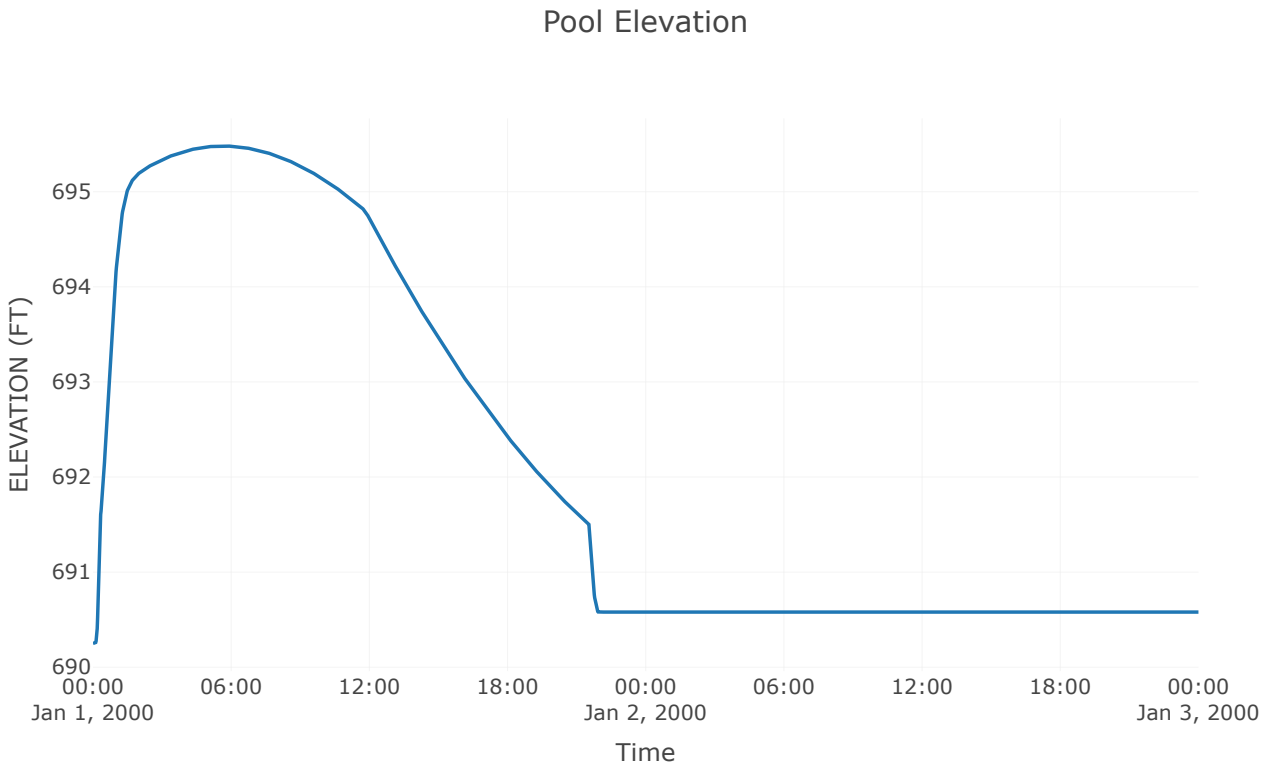
Combined Inflow

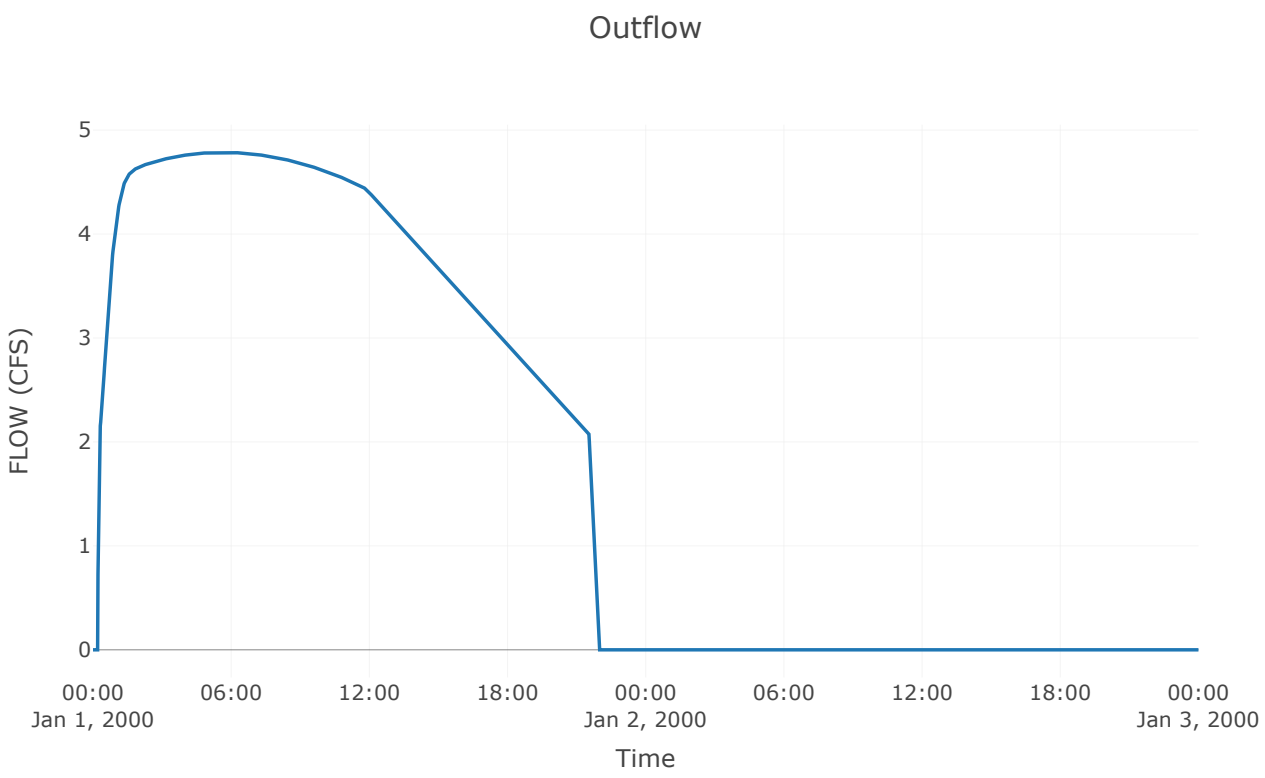



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695
694
693
692
691
690
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

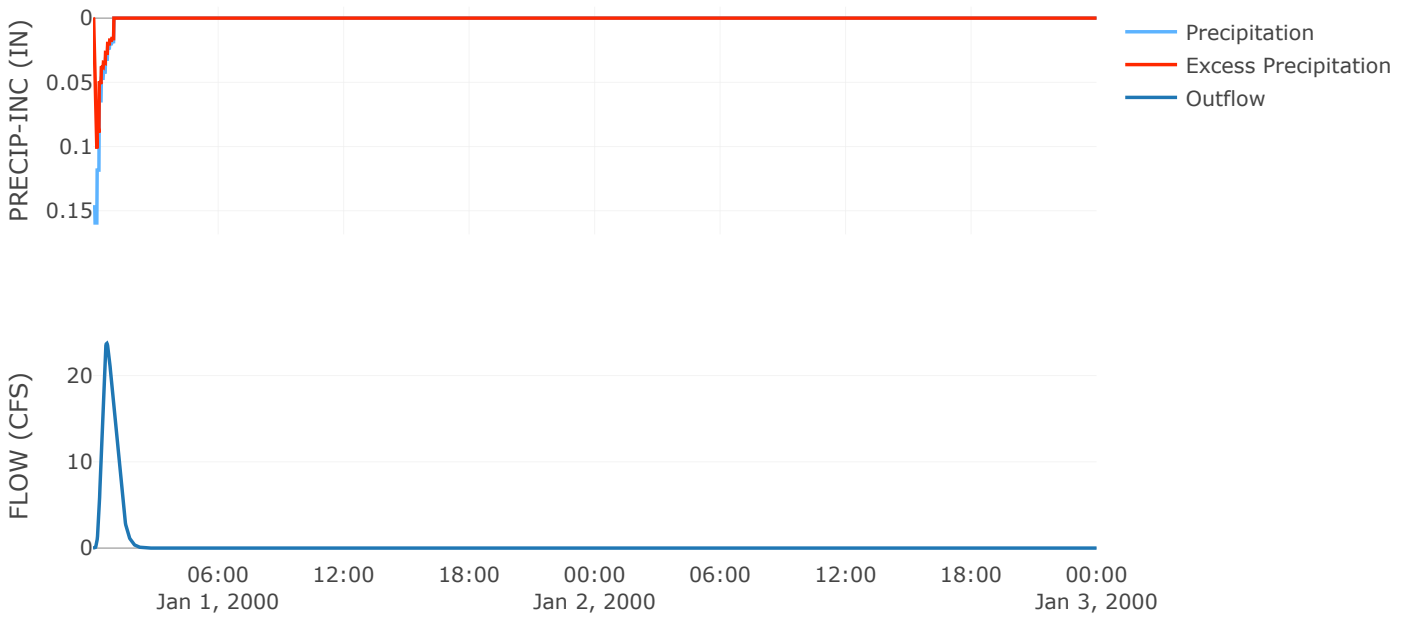
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

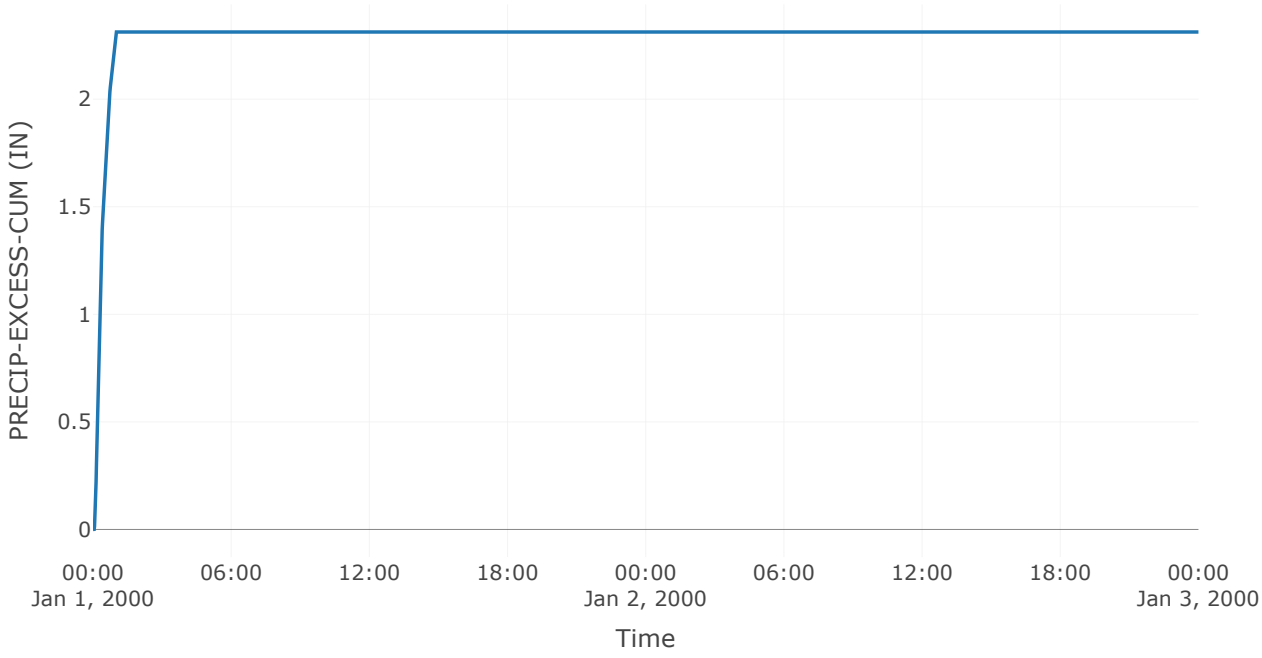
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

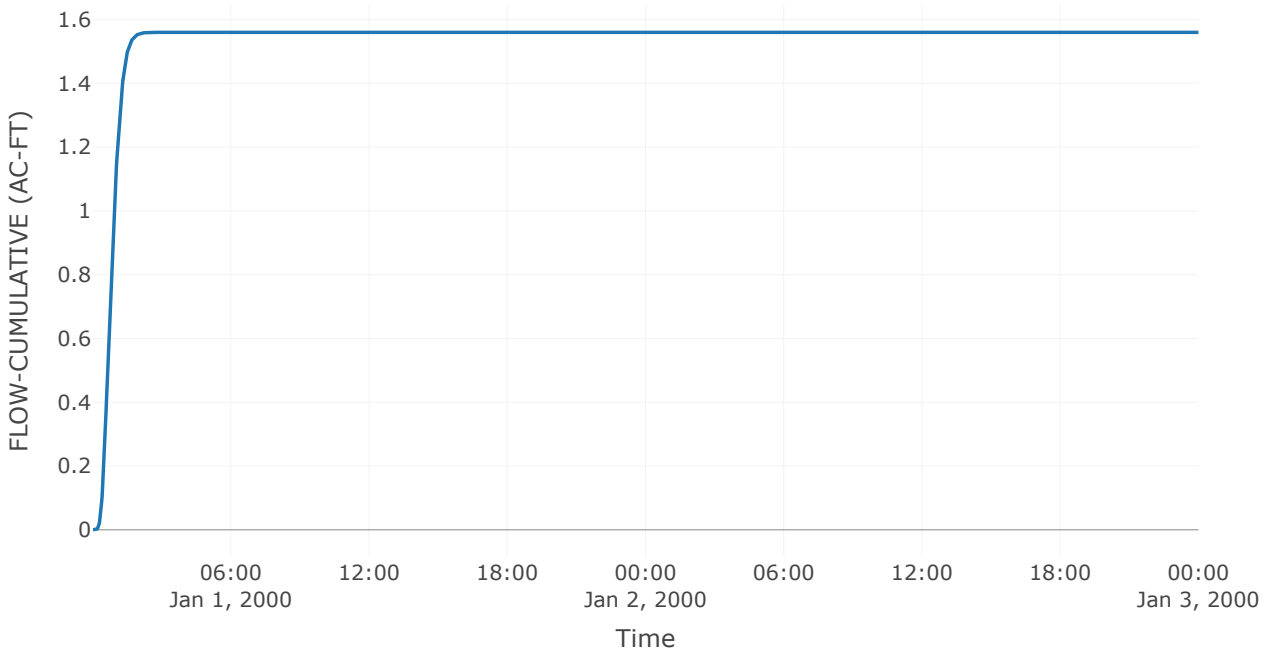
Precipitation and Outflow



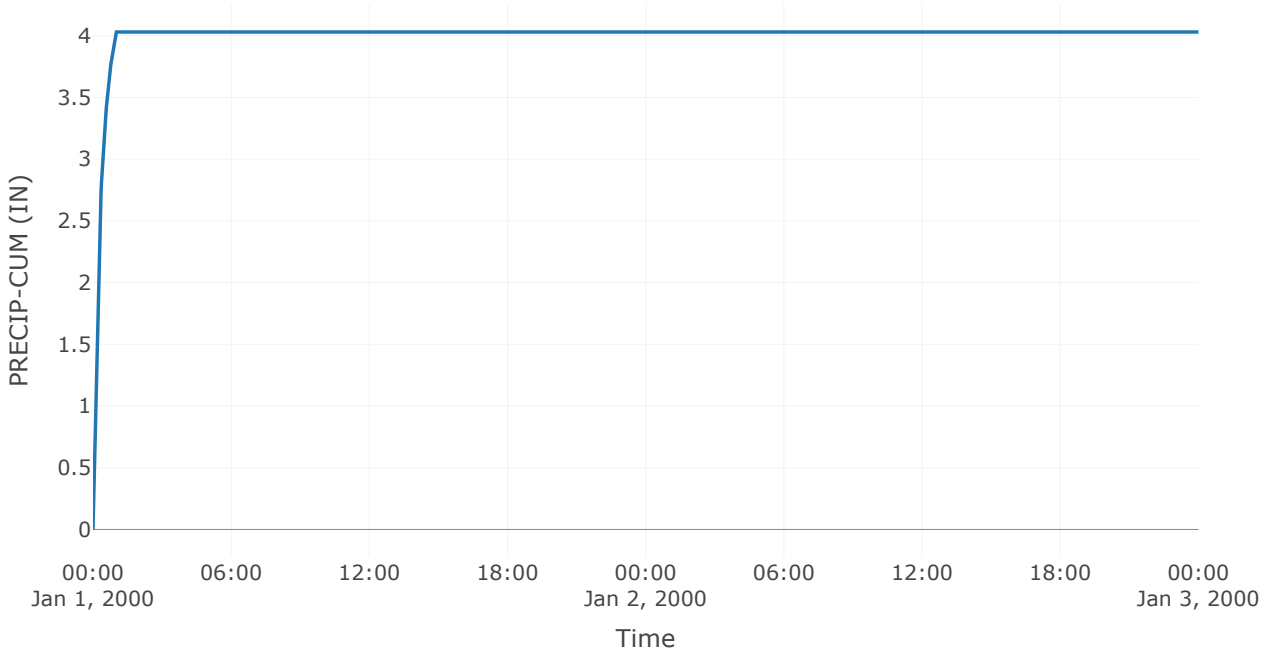
Cumulative Excess Precipitation

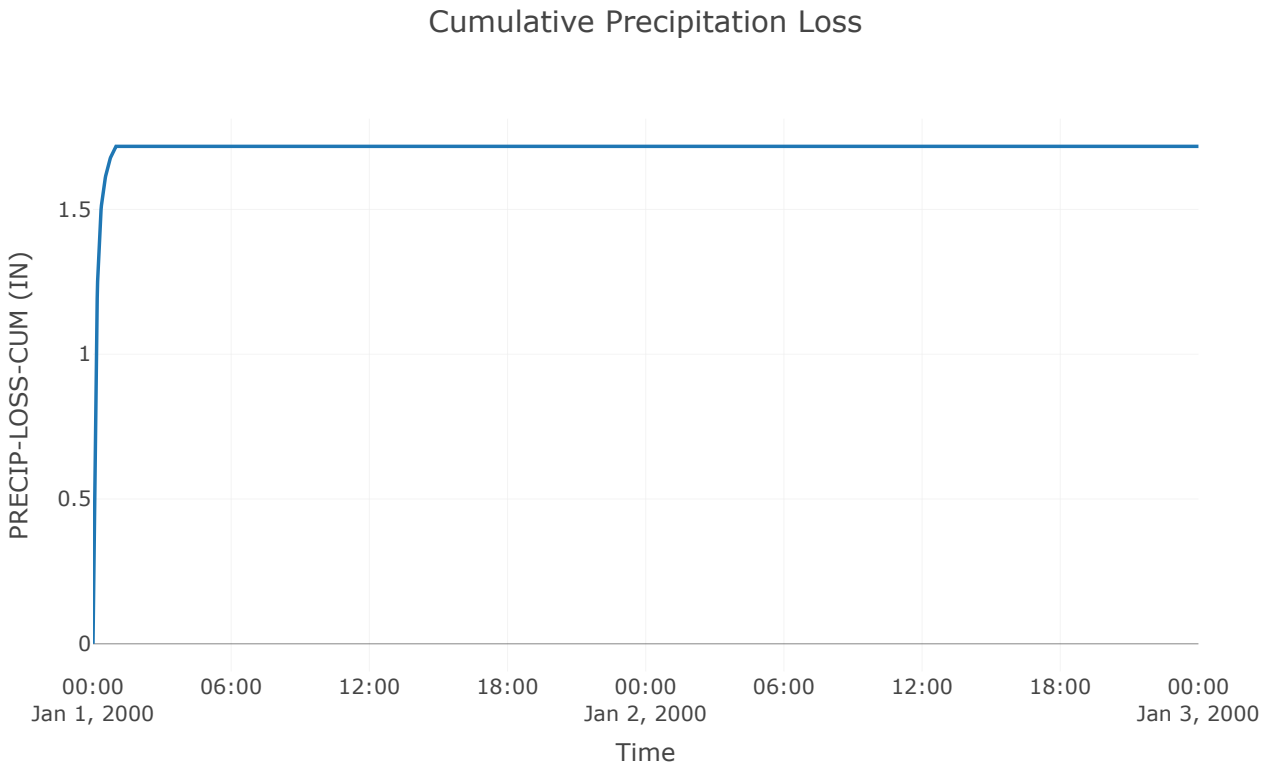


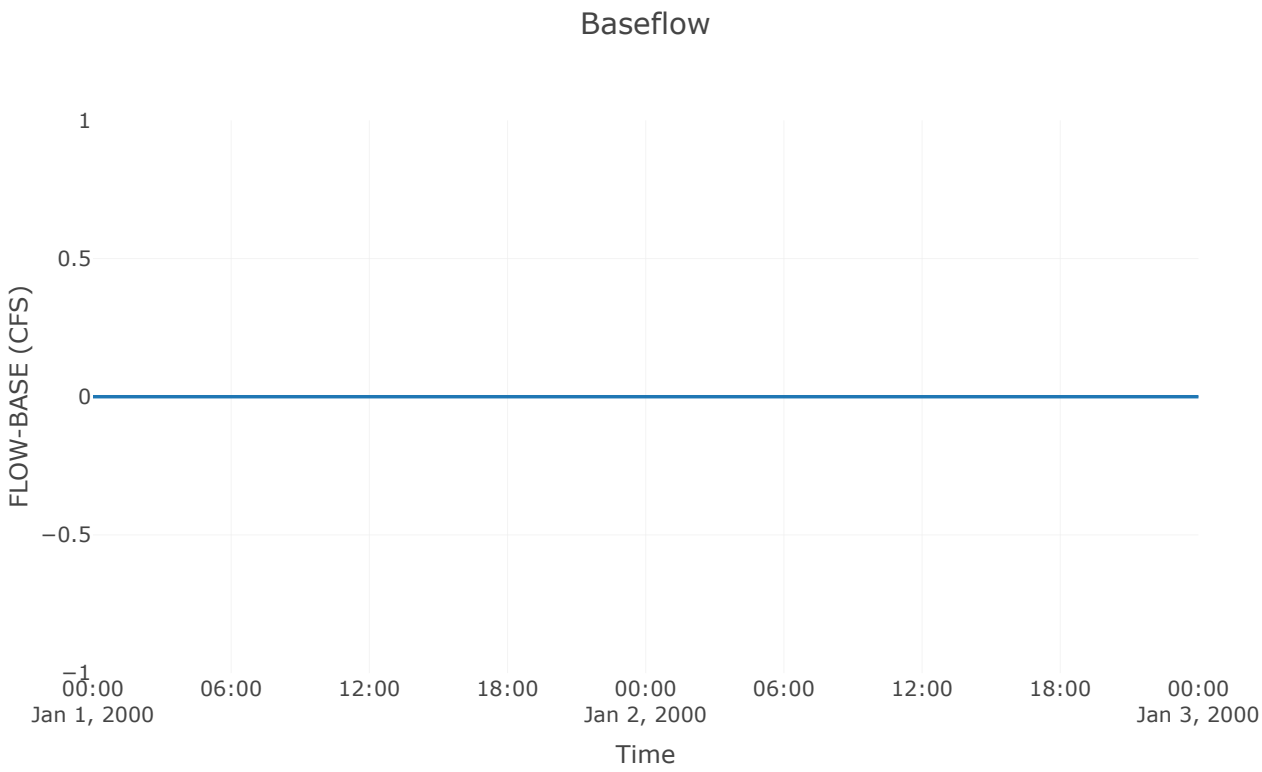
Cumulative Outflow

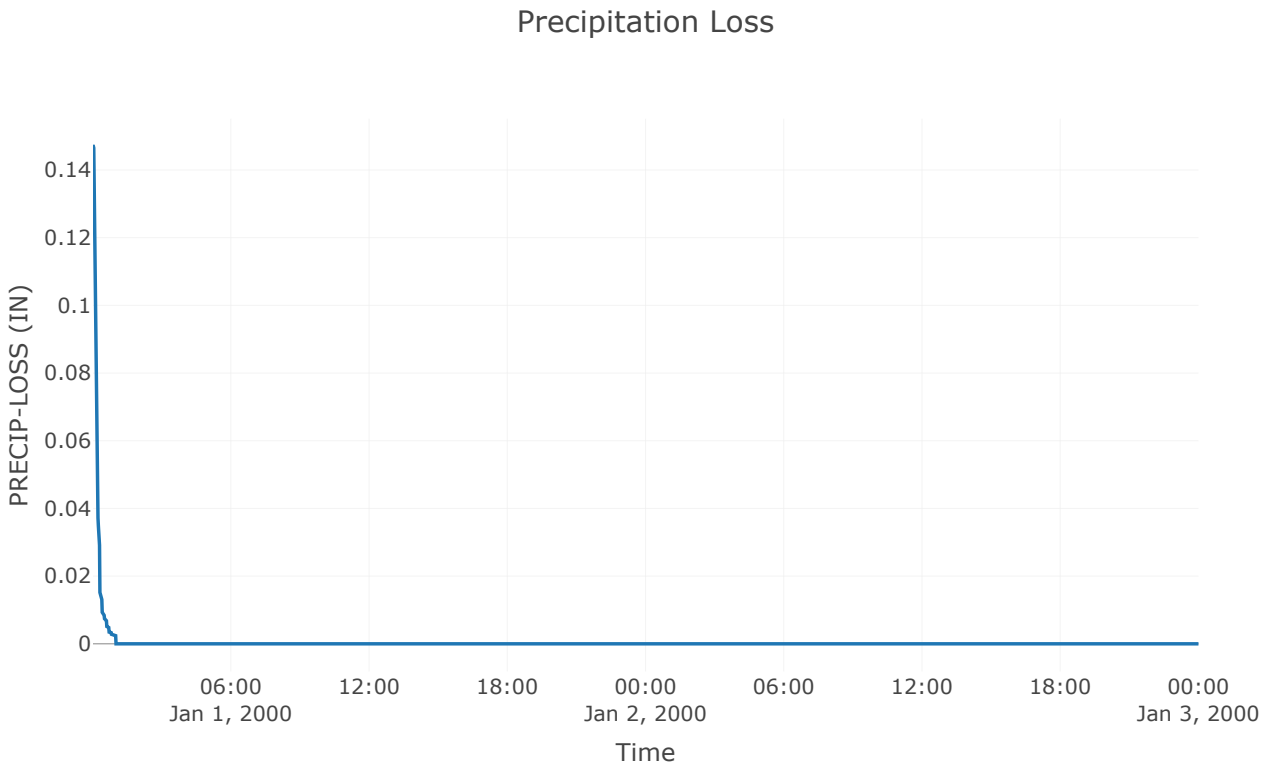


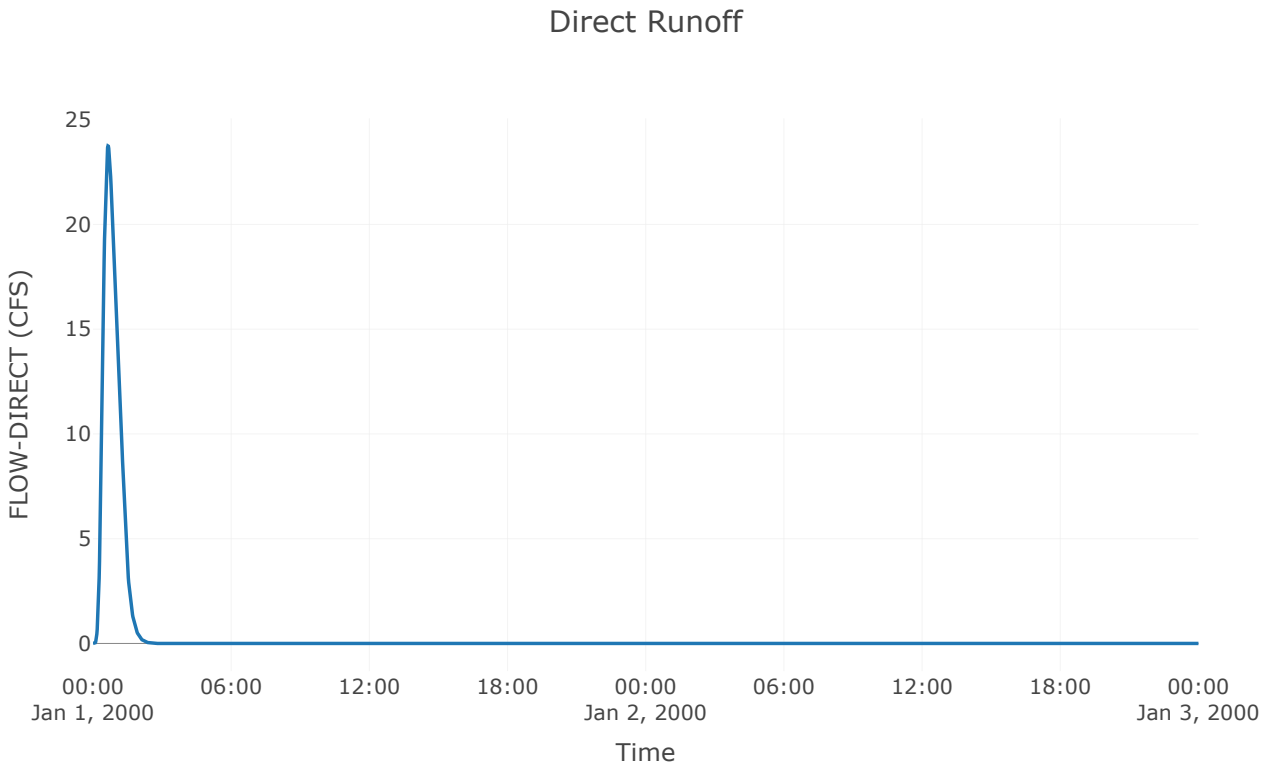
Cumulative Precipitation

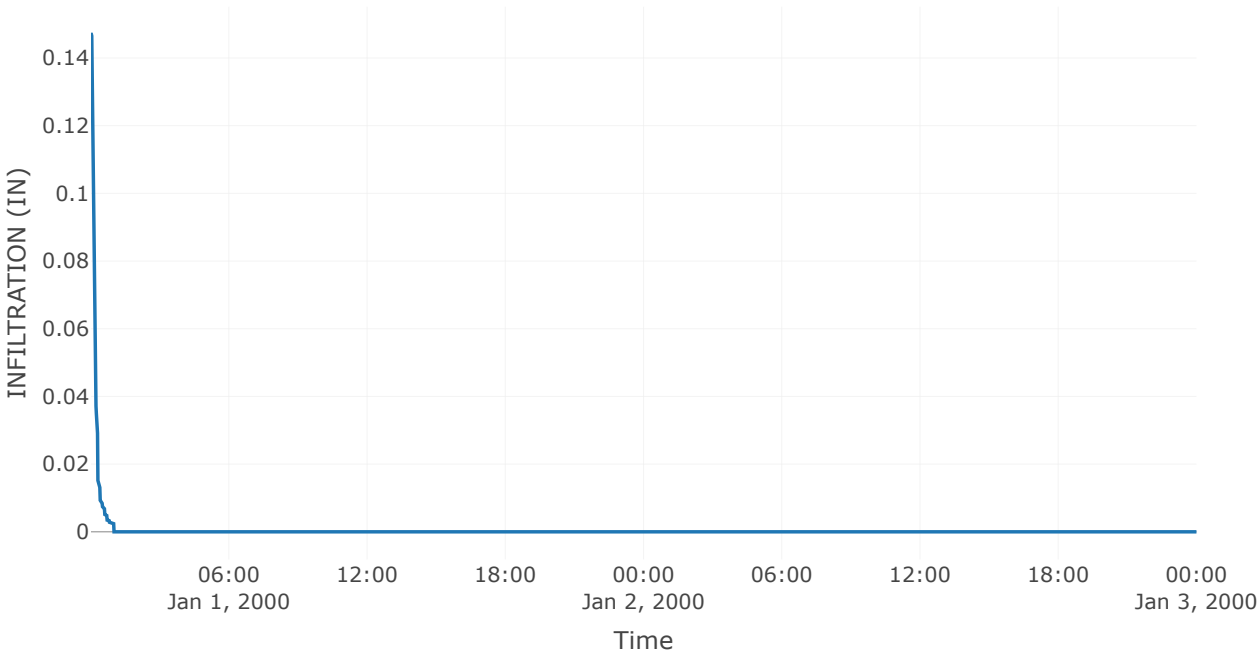



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

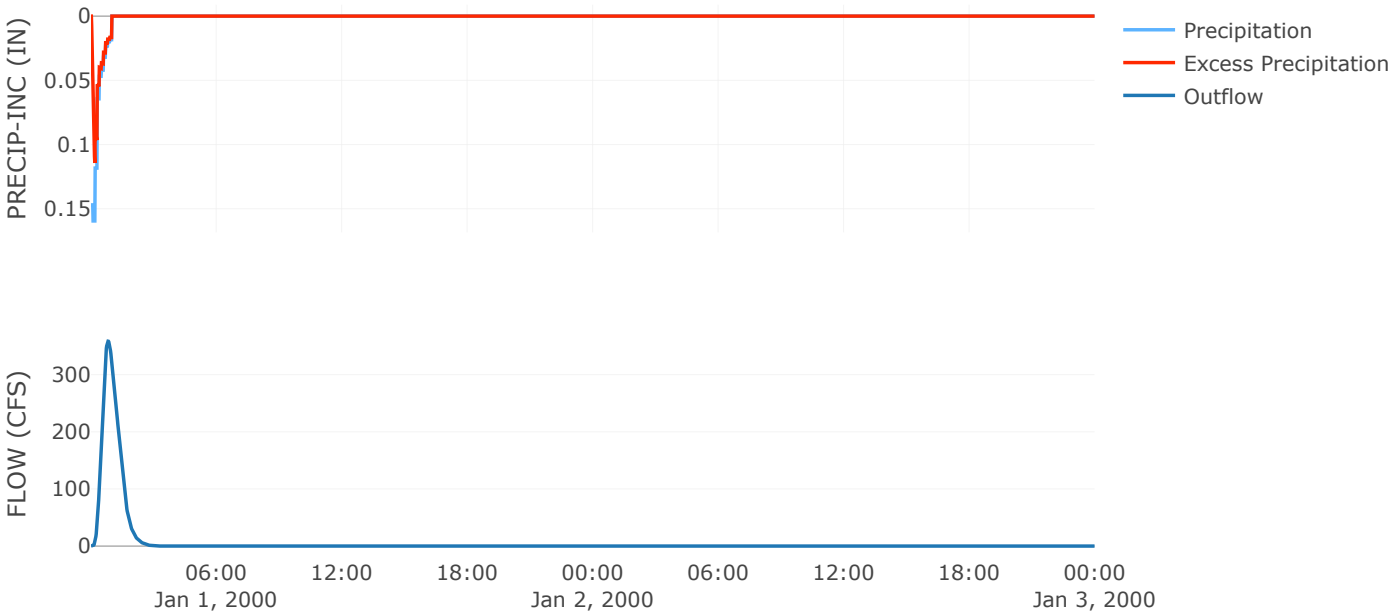
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

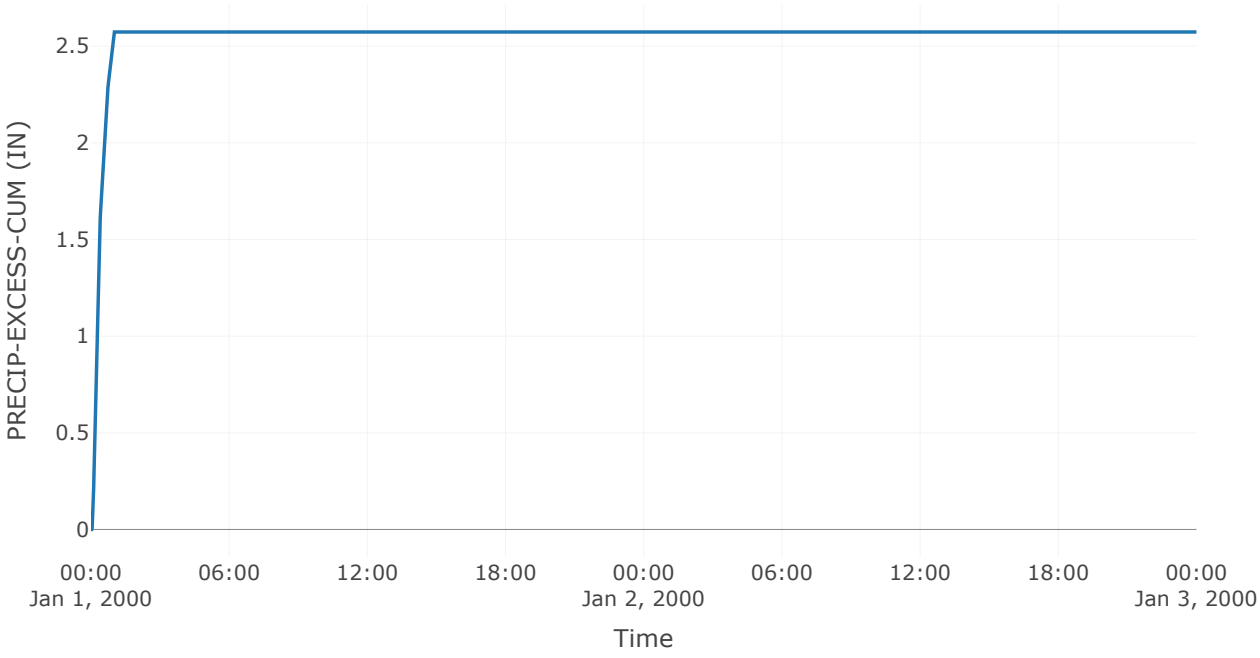
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

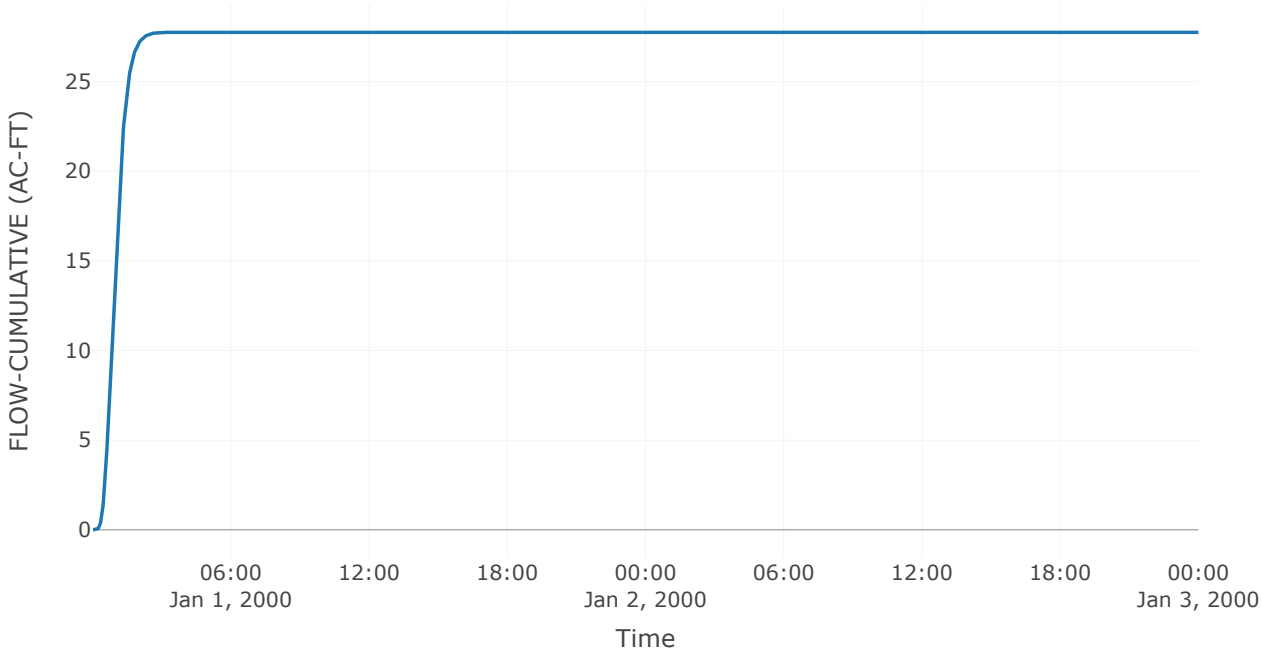
Precipitation and Outflow



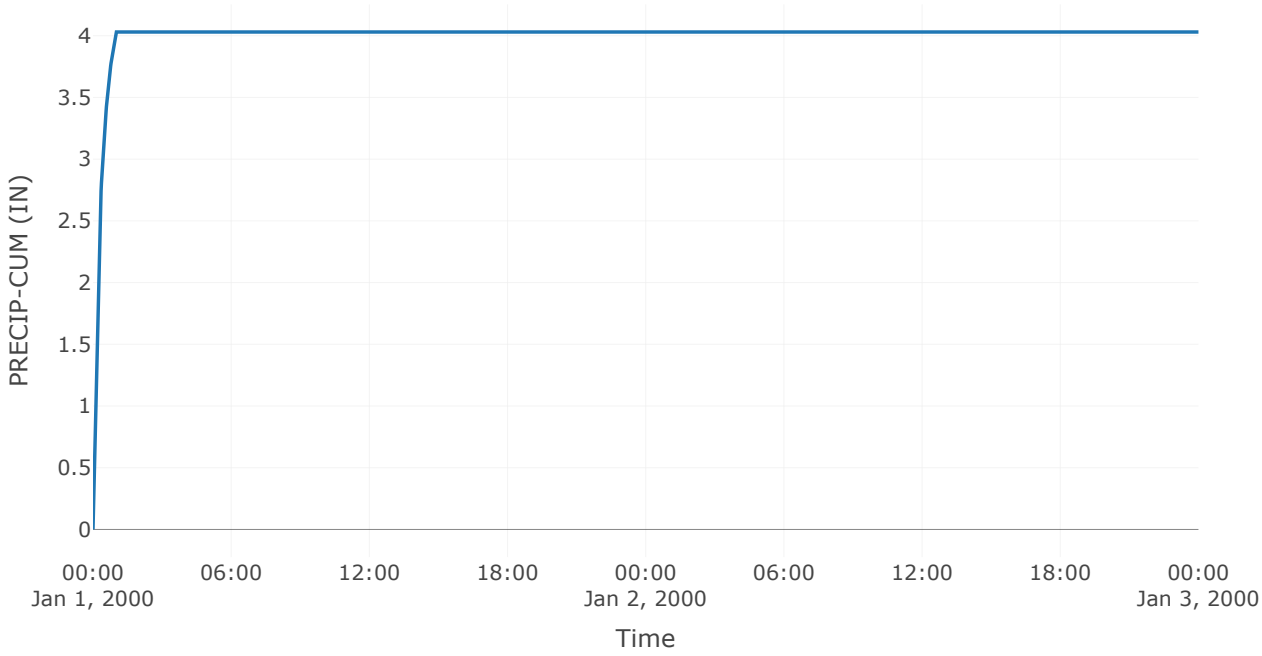
Cumulative Excess Precipitation

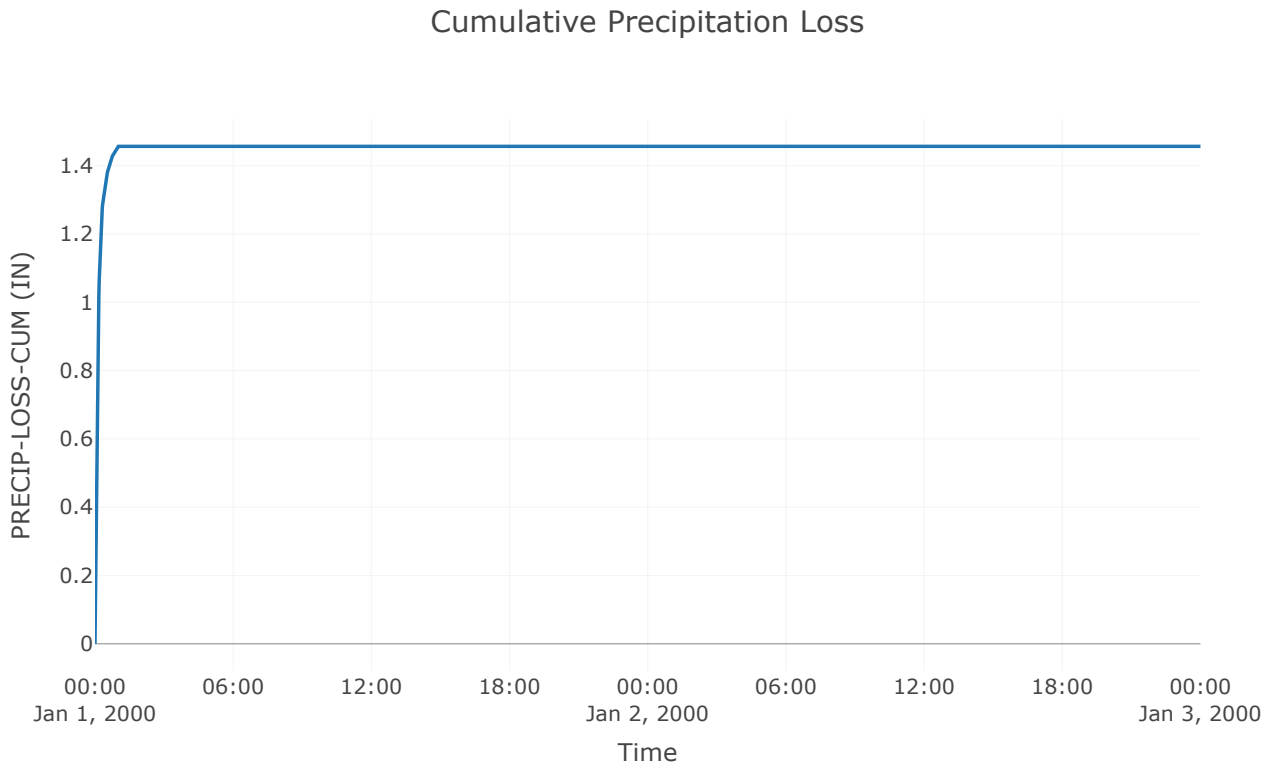


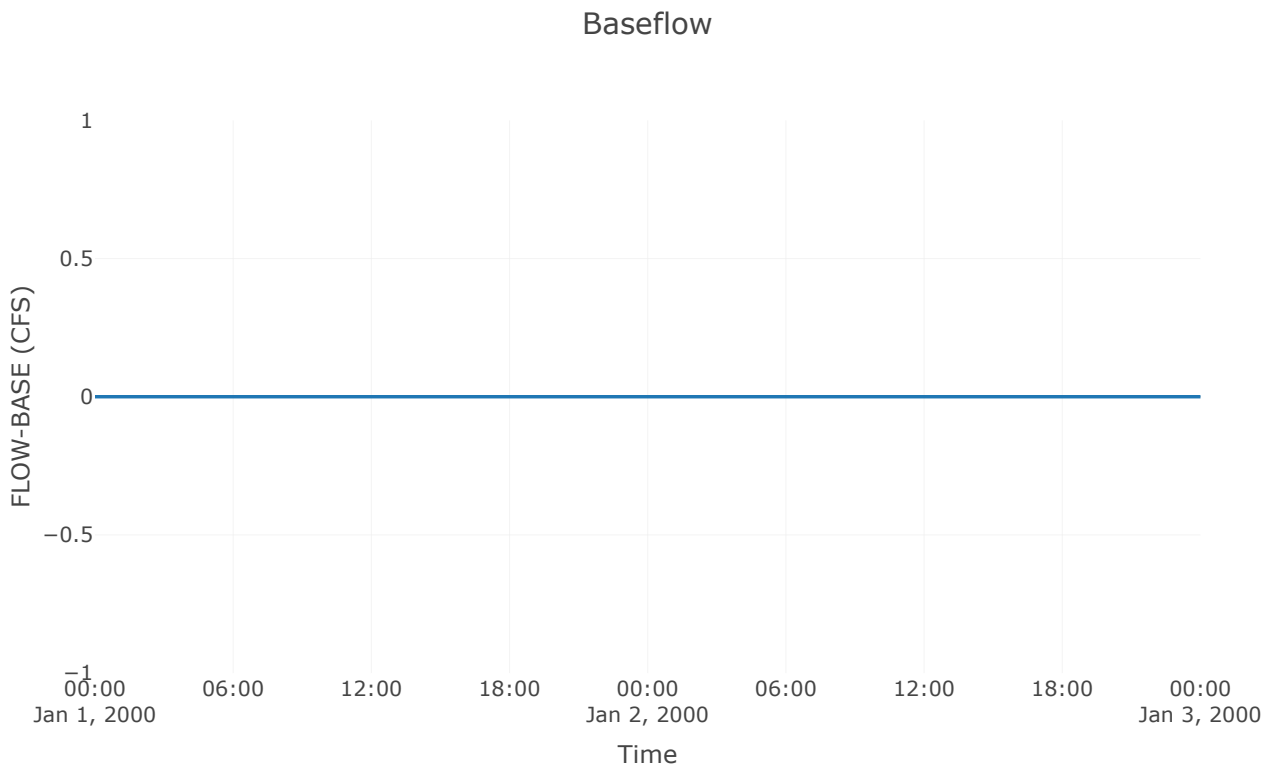
Cumulative Outflow

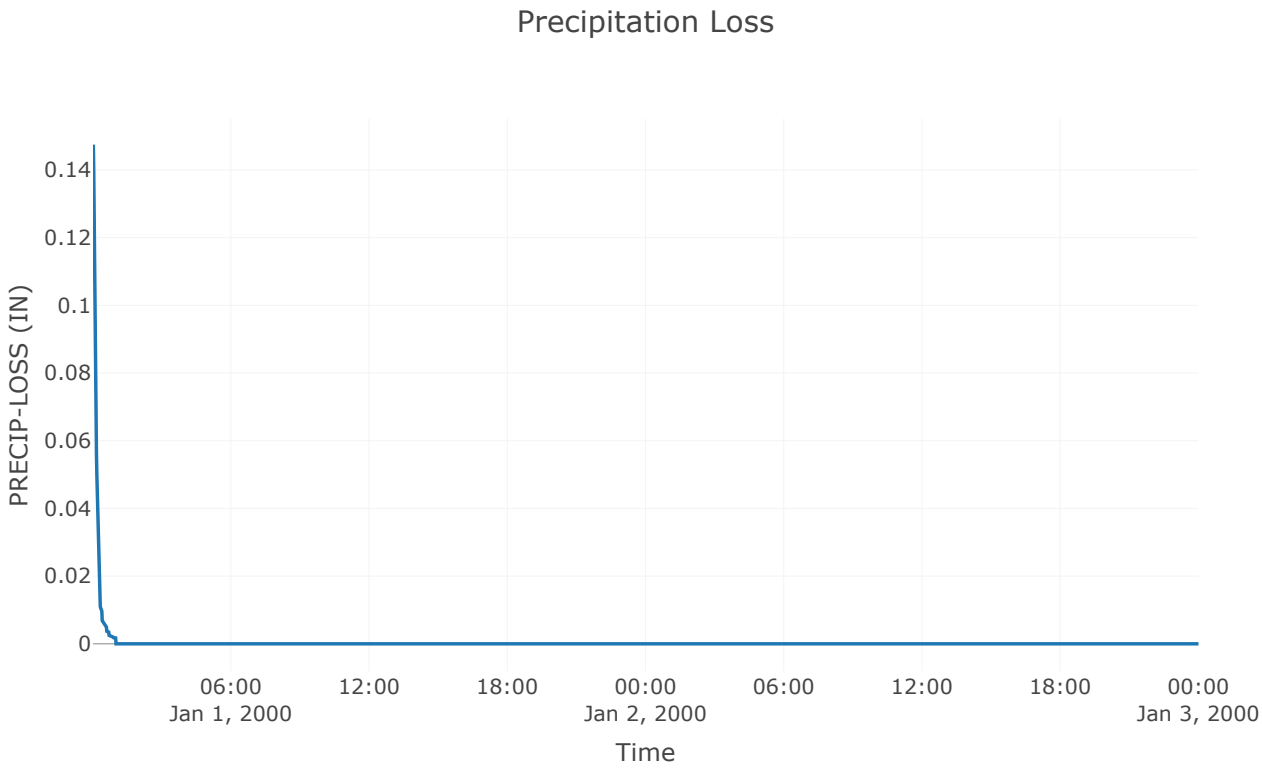


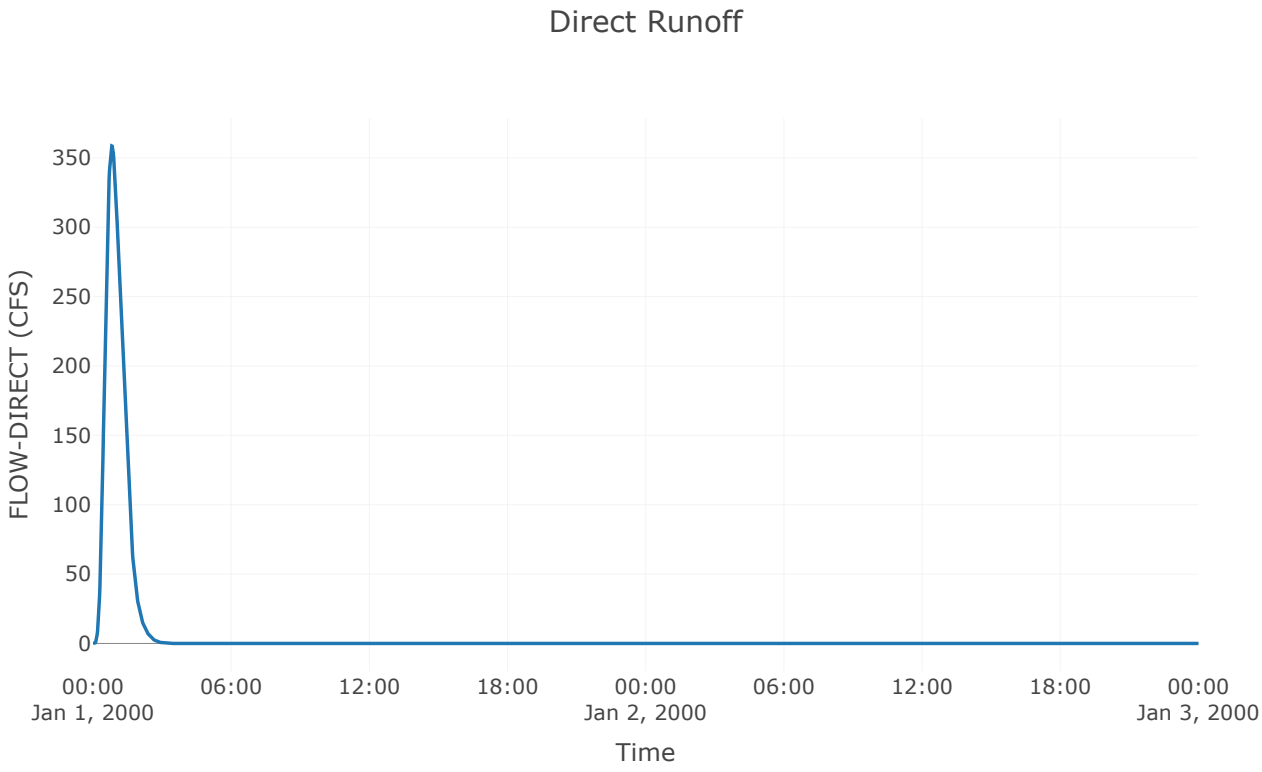
Cumulative Precipitation

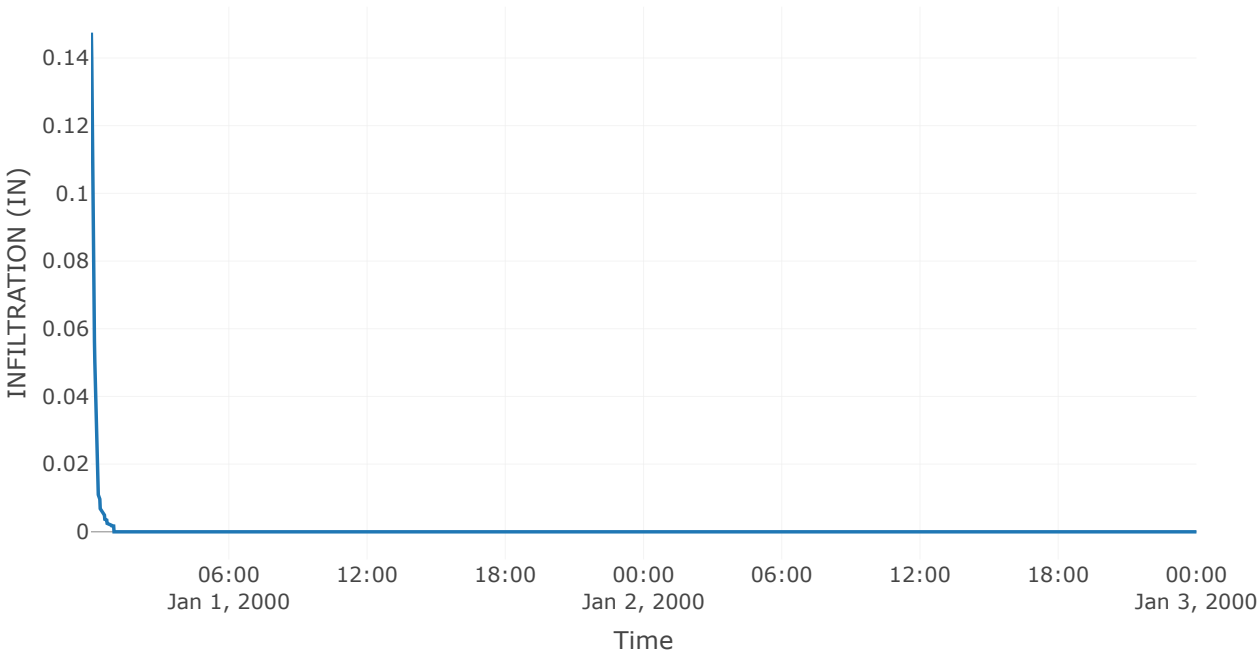



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

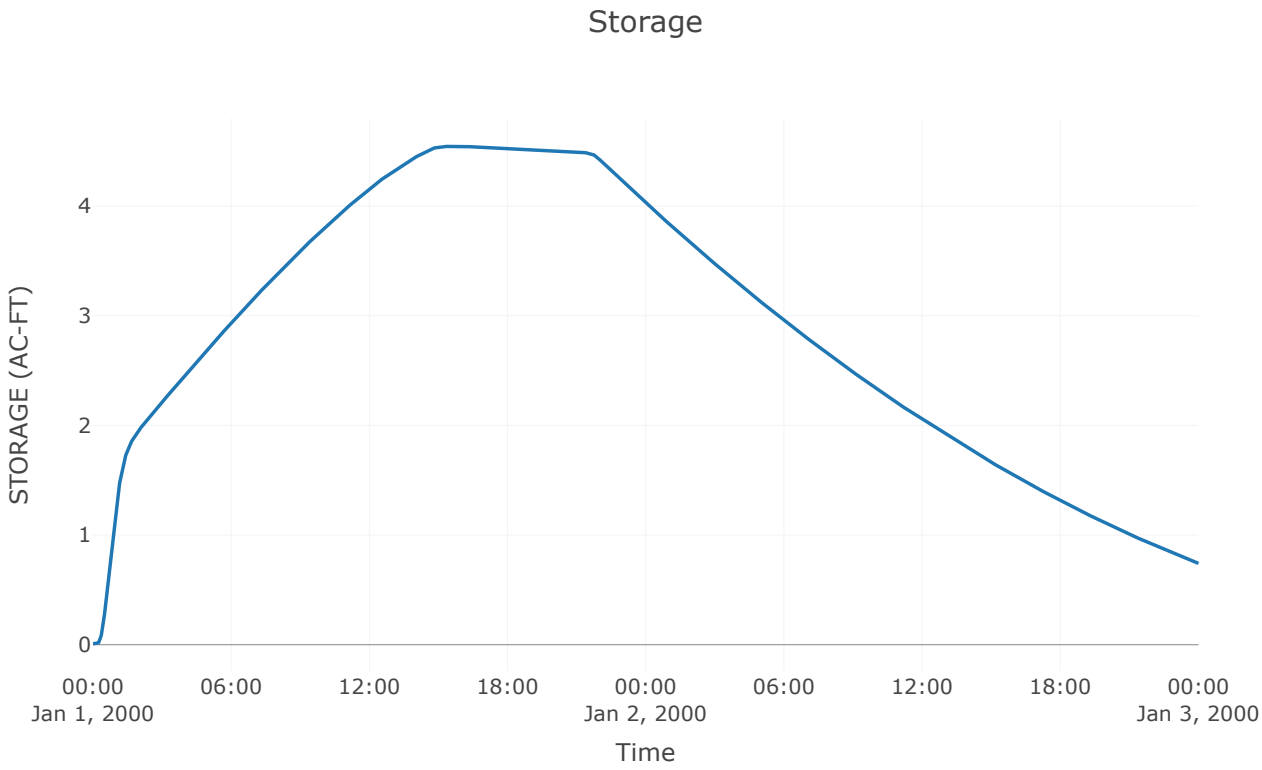

Direct Runoff
FLOW-DIRECT (CFS)
350
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

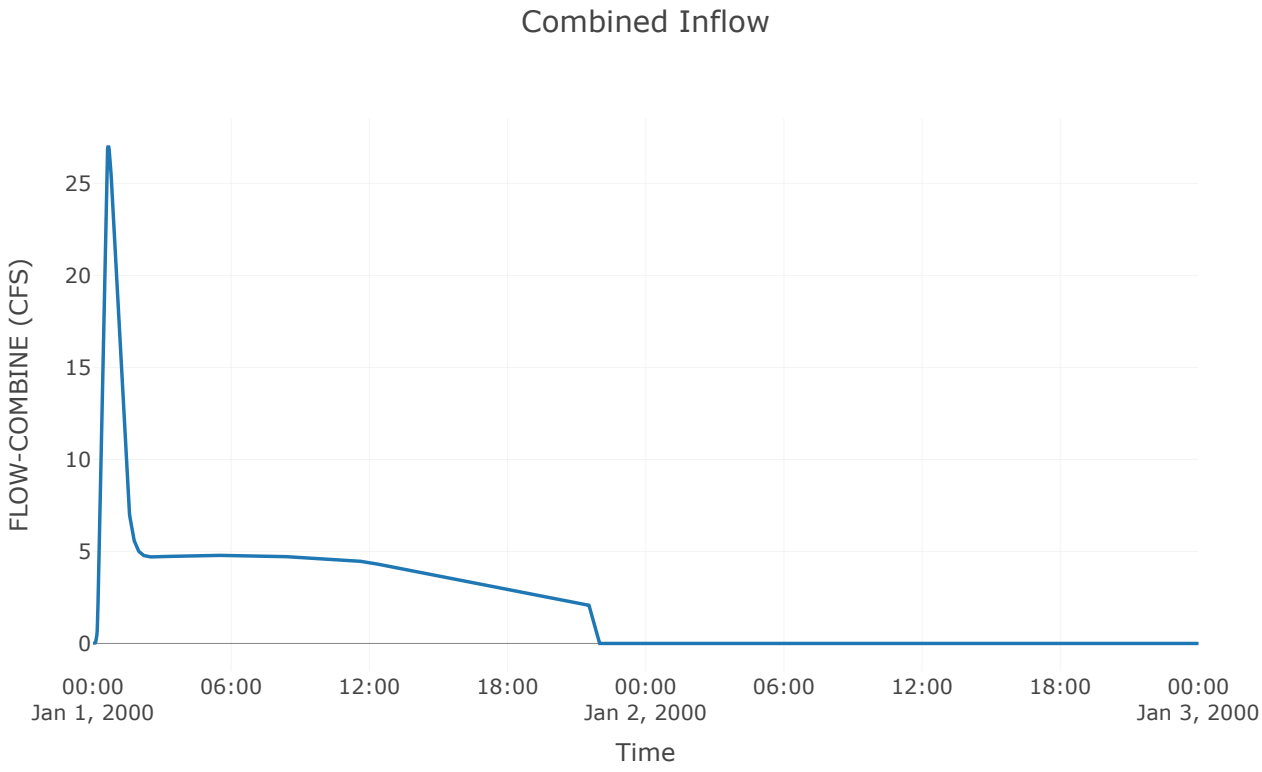

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

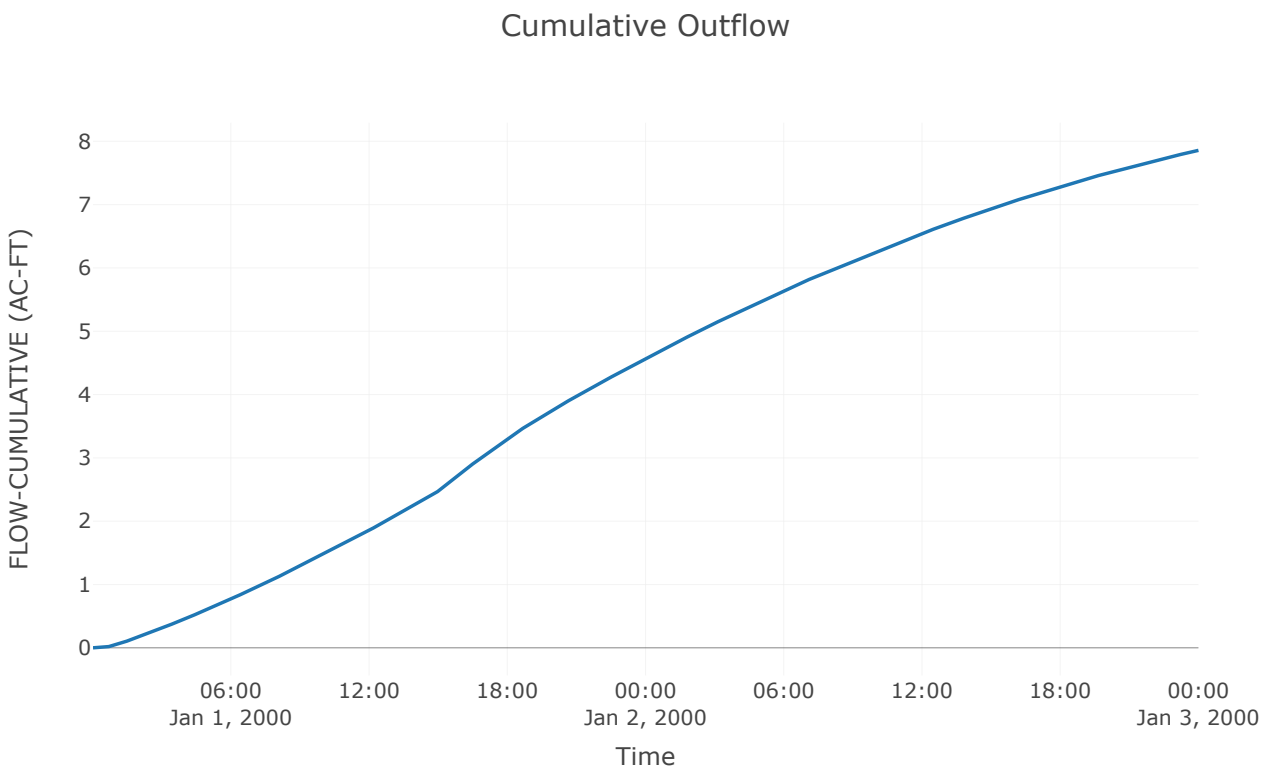
Reservoir: Basin 3

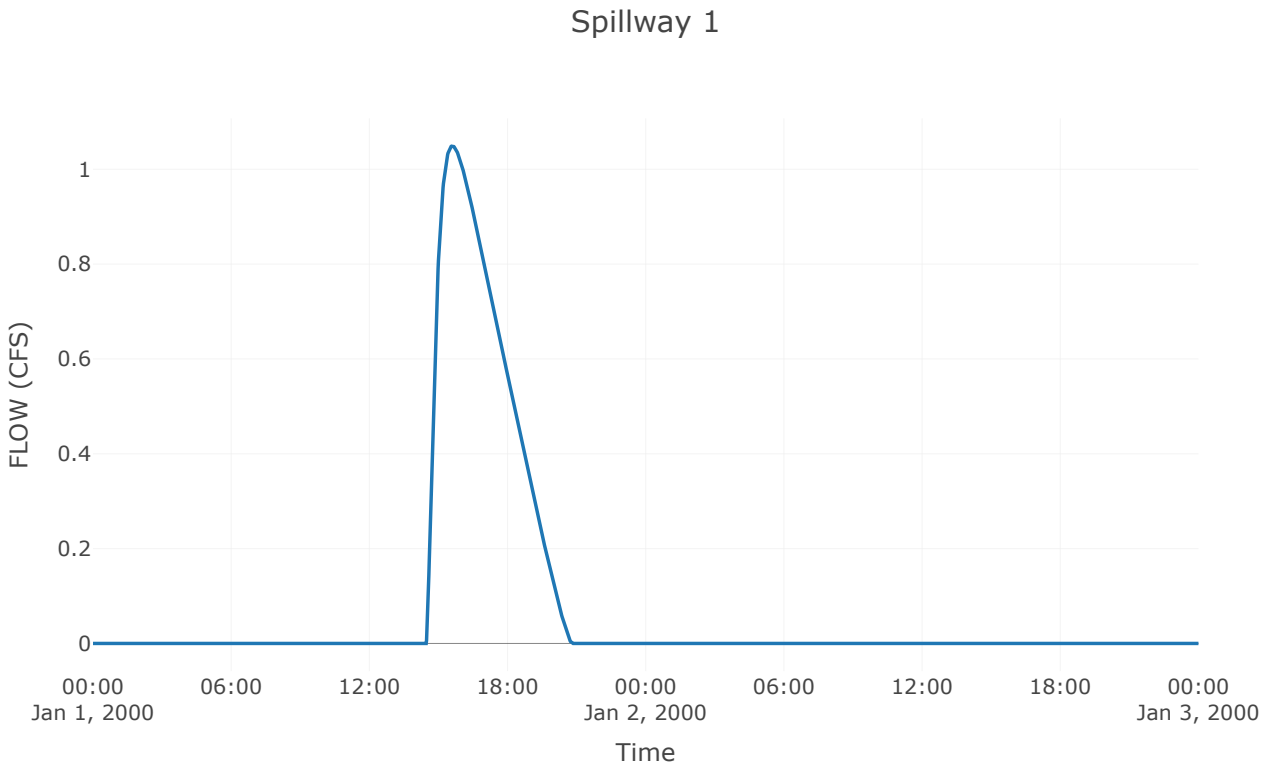
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

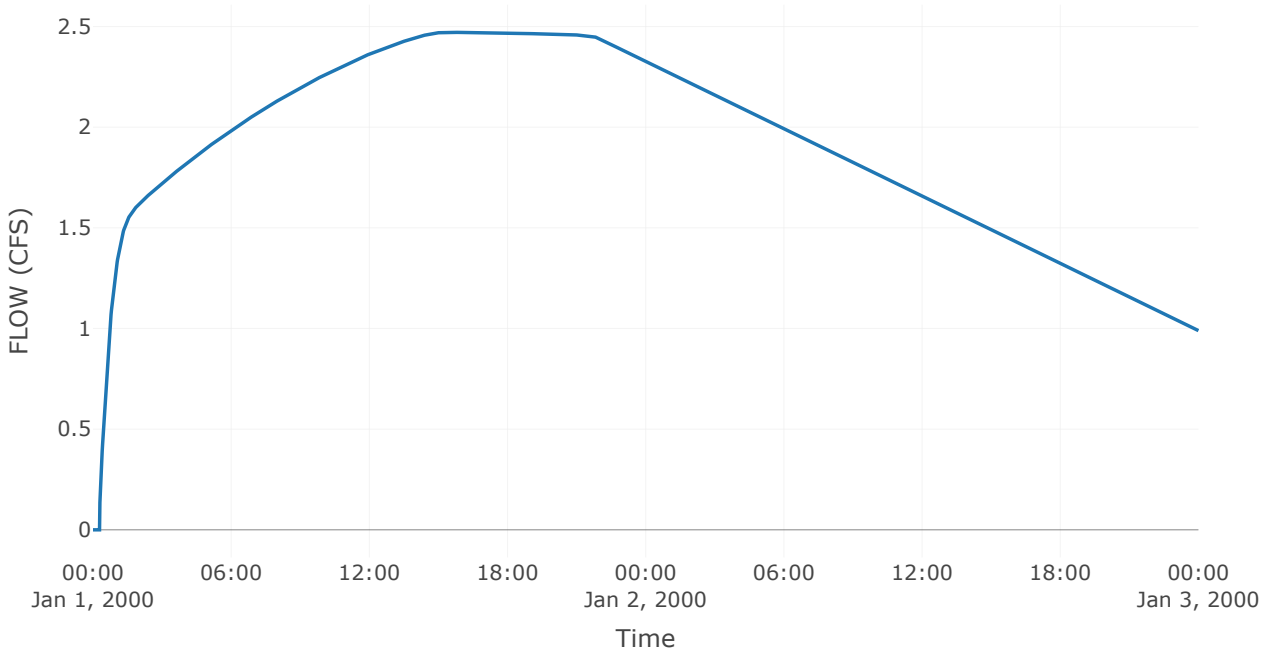

Storage
STORAGE (AC-FT)
0
1
2
3
4
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
0
5
10
15
20
25
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

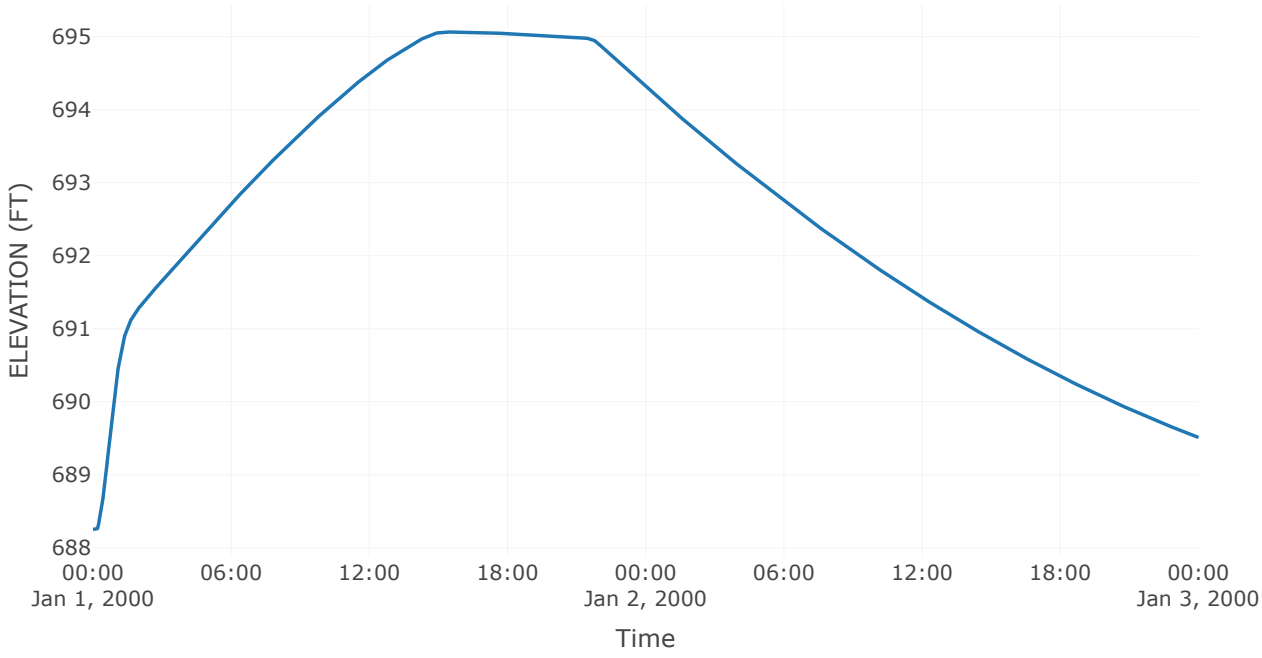

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

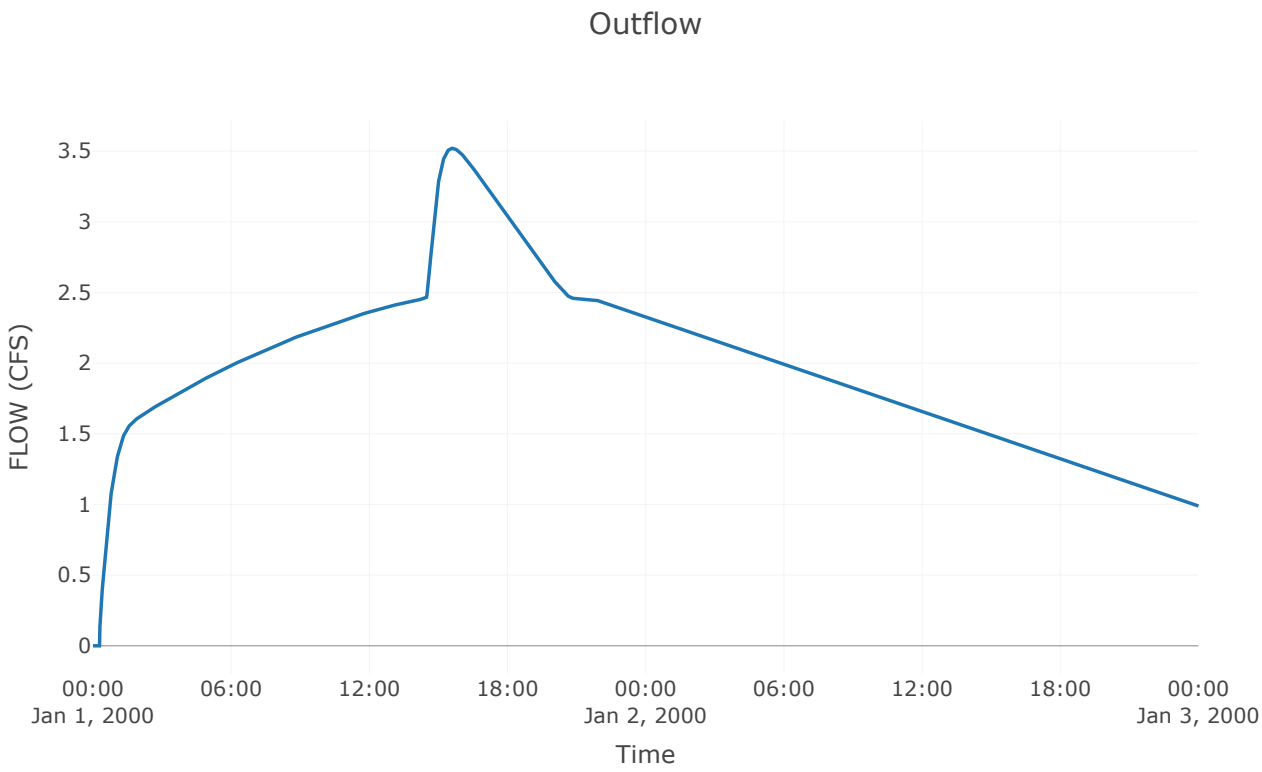

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



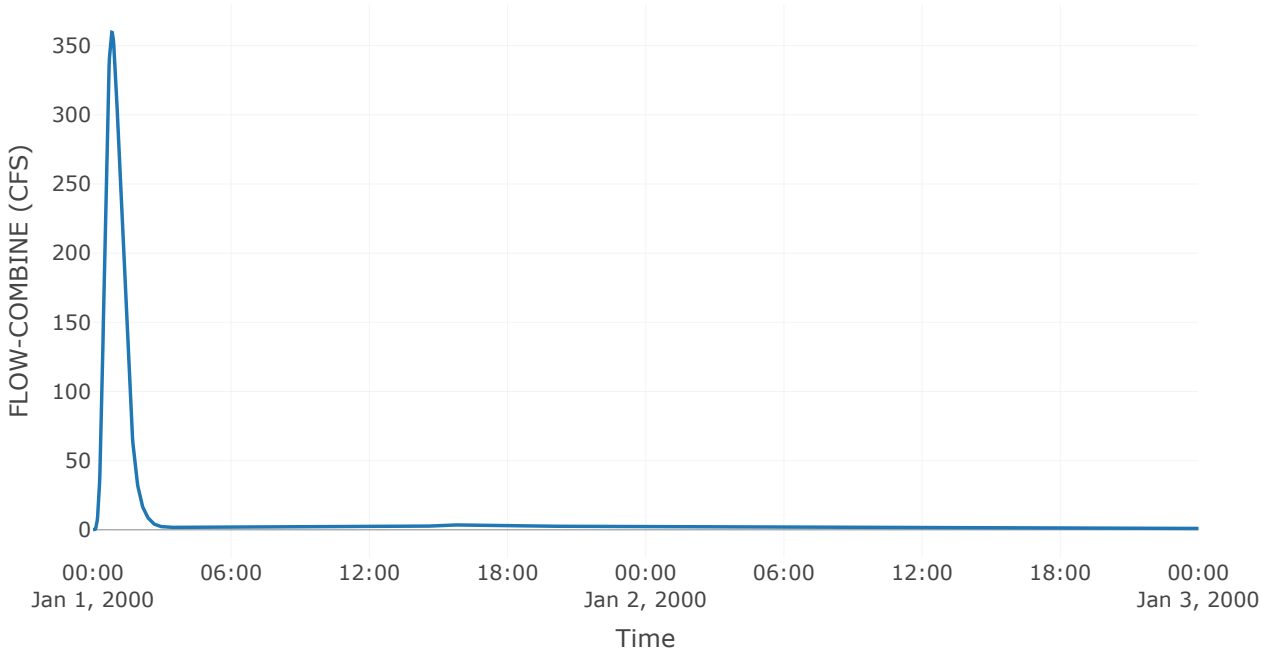

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

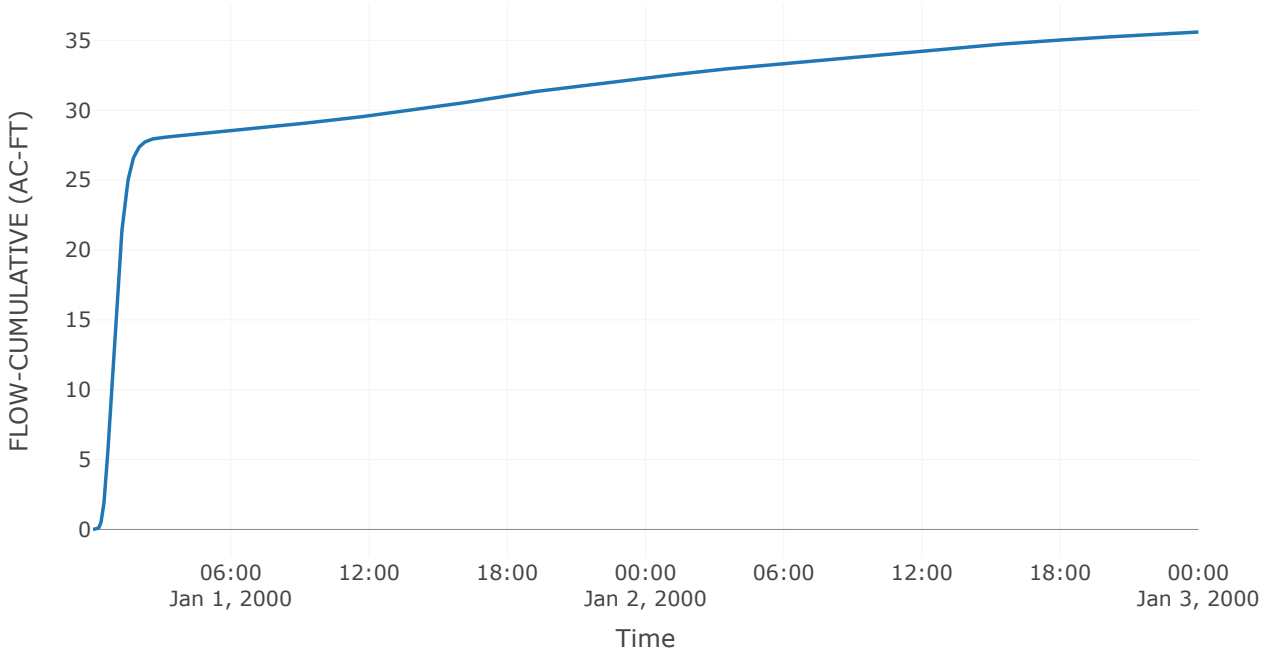
Downstream : Storage East of Wolf Road

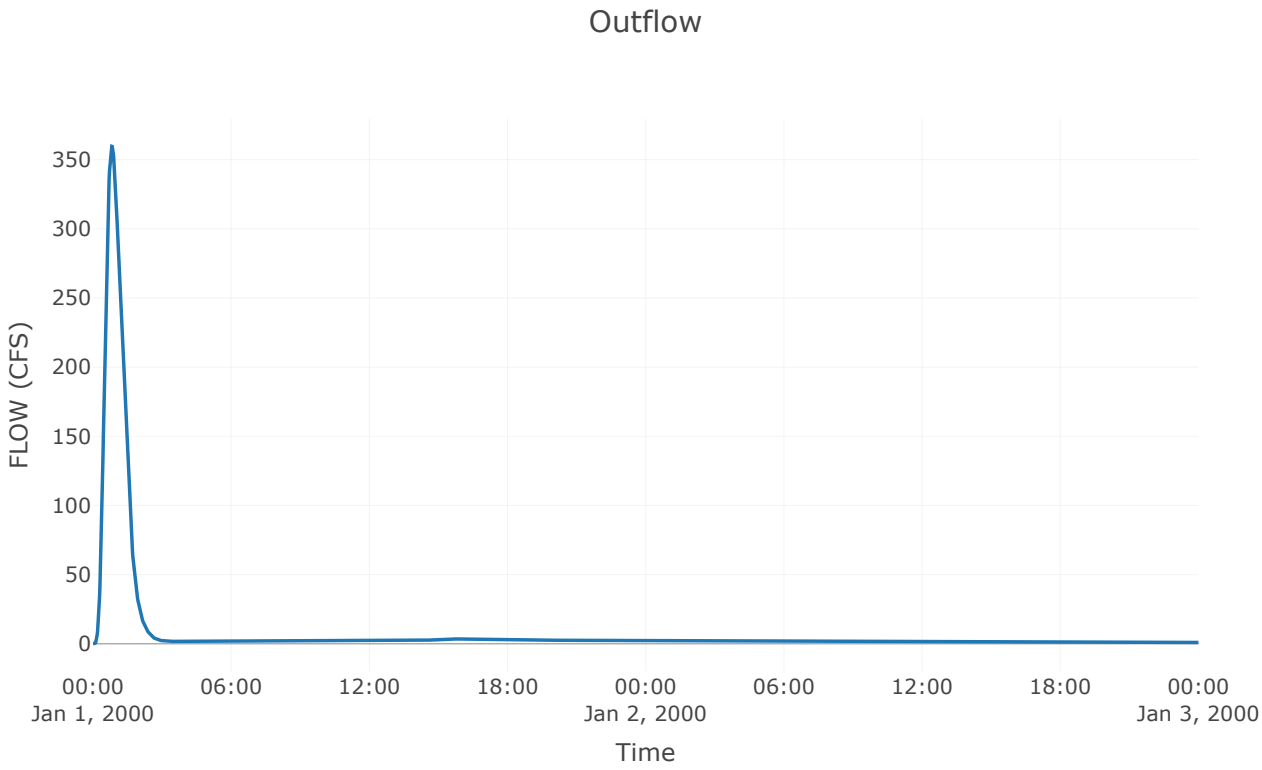
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



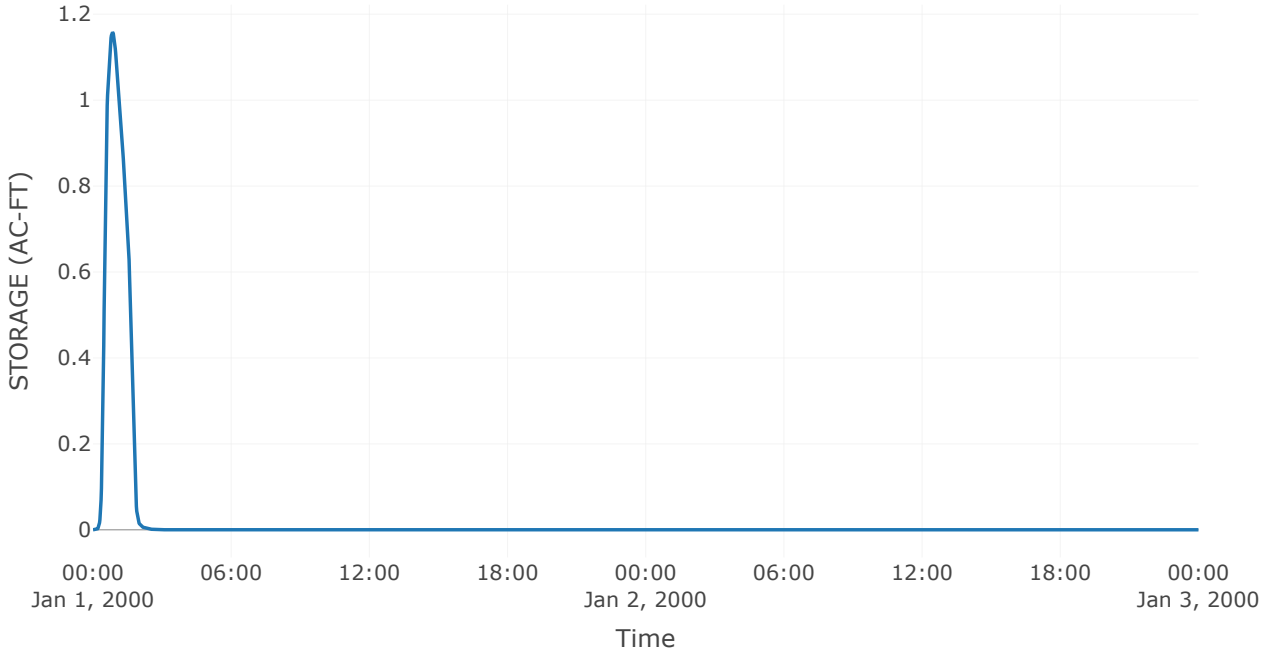

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

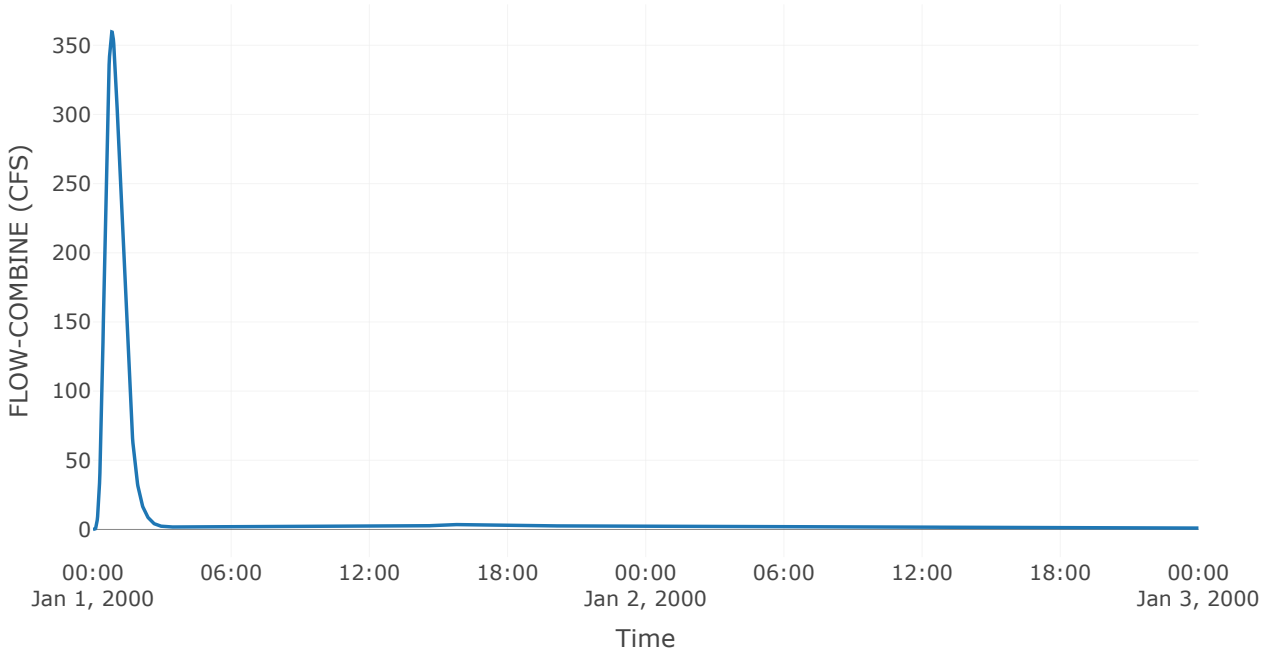
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

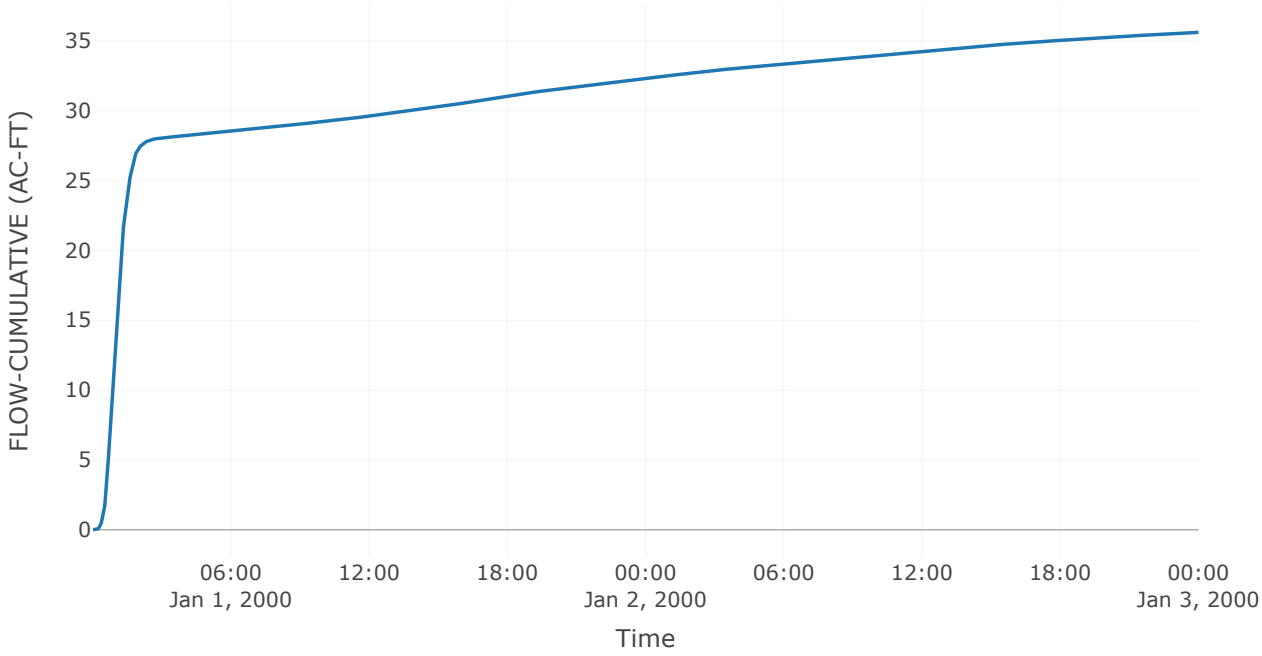
Storage



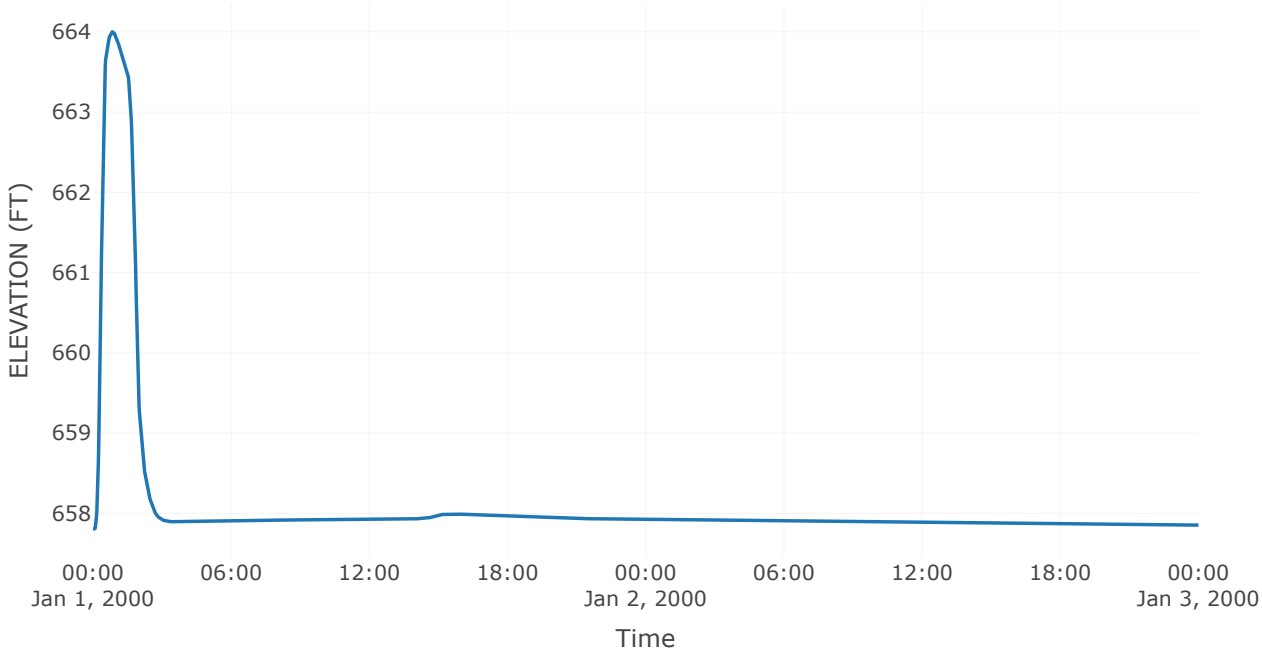
Combined Inflow

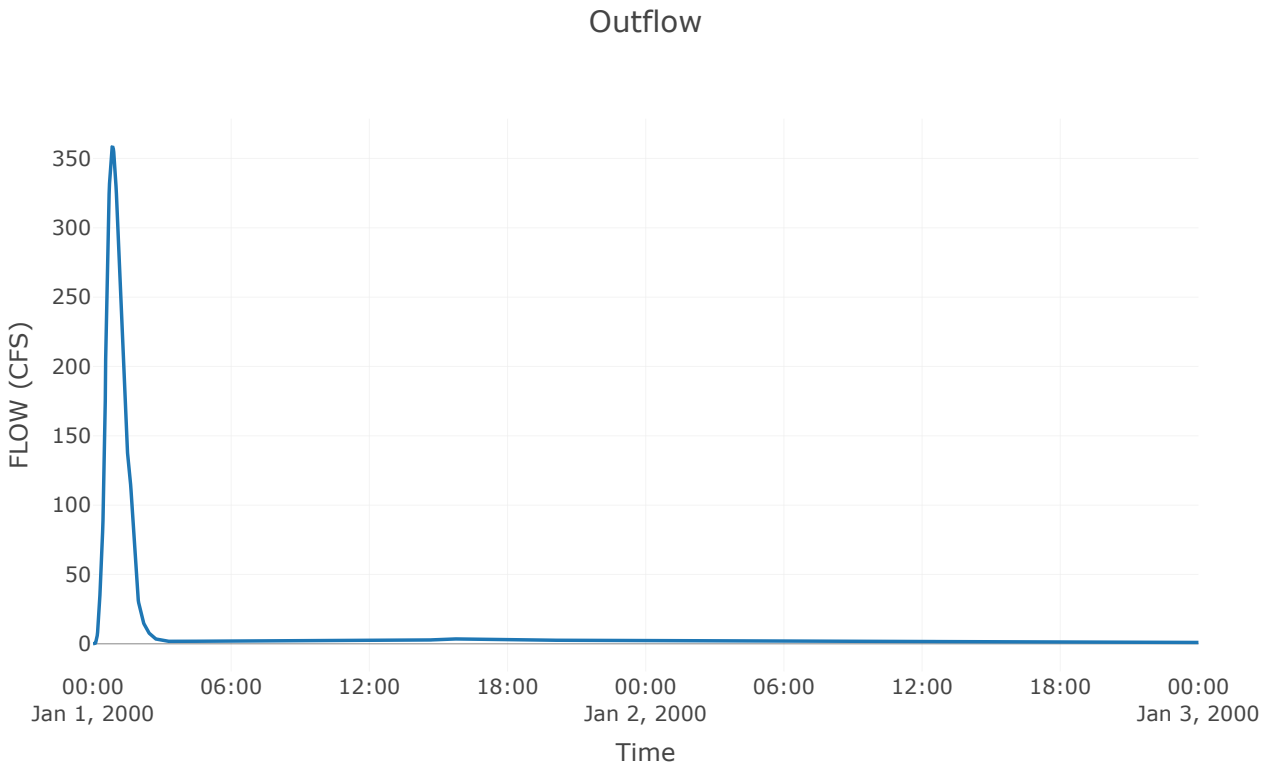


Cumulative Outflow



Pool Elevation



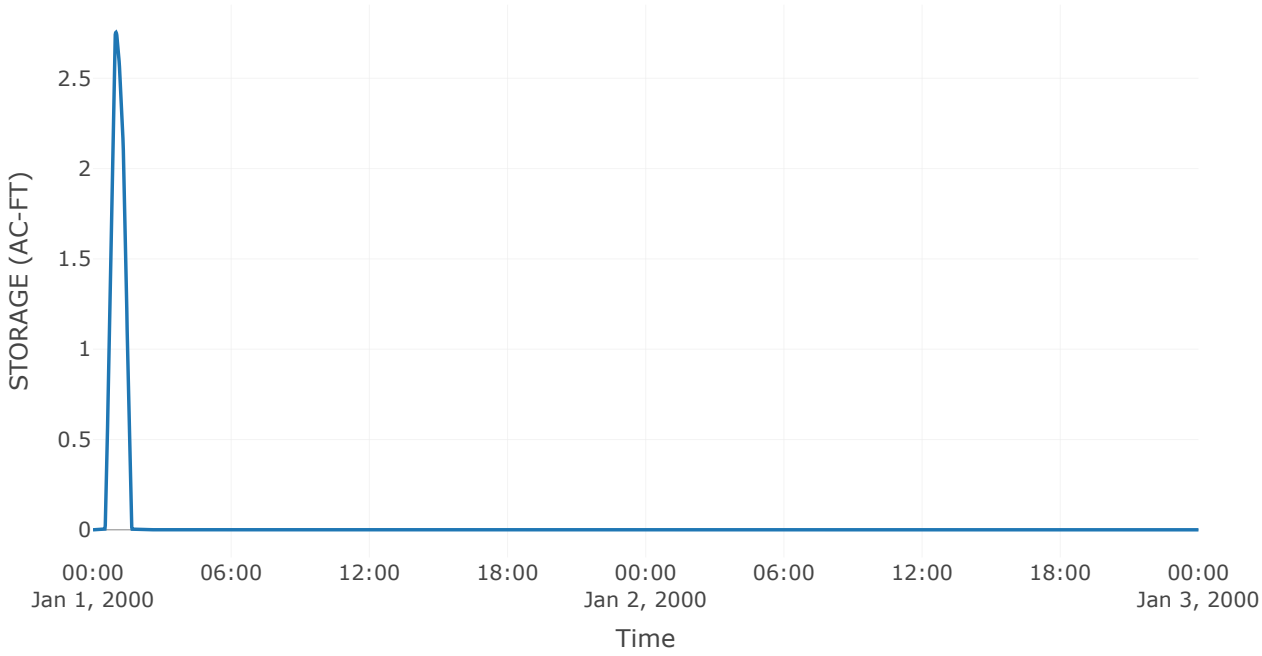

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

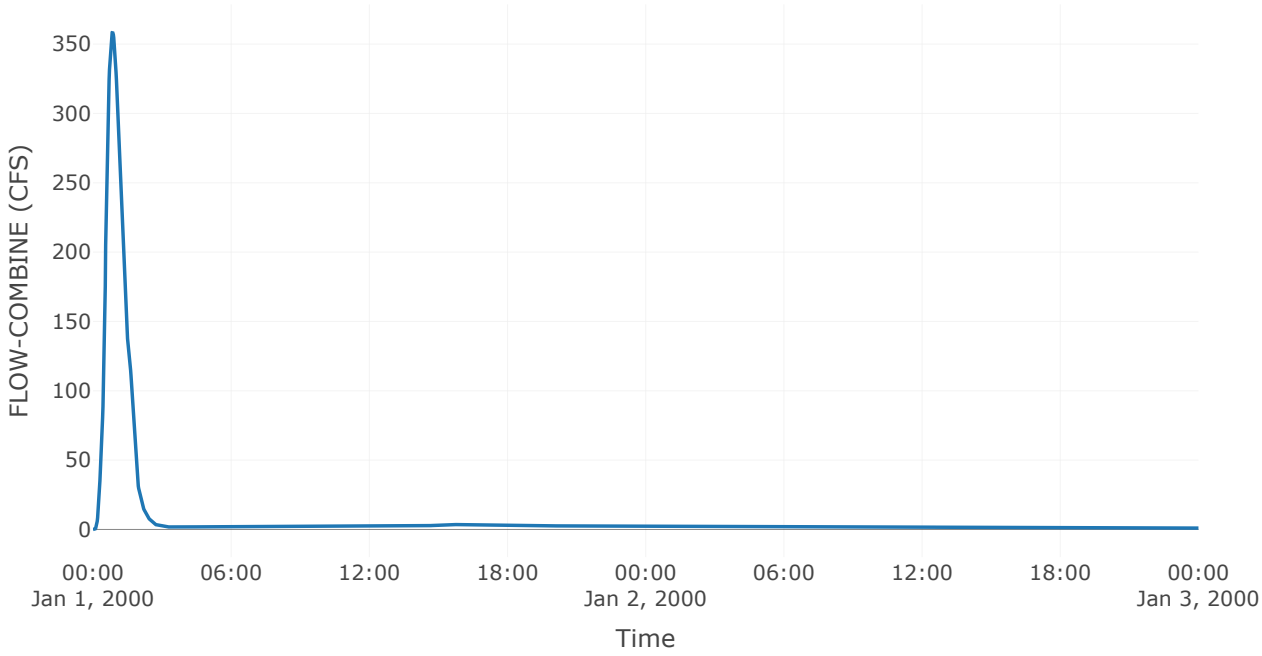
Downstream : Storage West of Wolf Road

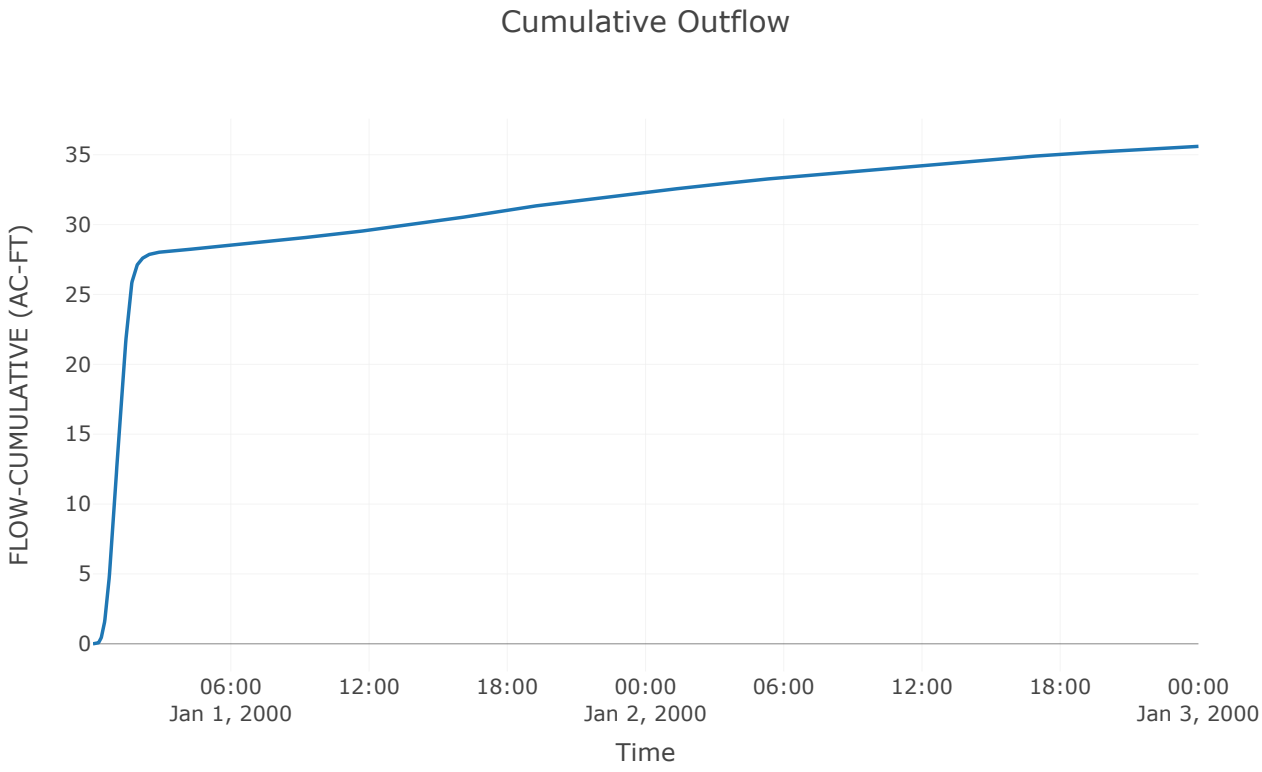
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	331.13
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.75
Peak Elevation (FT)	664.98
Discharge Volume (AC - FT)	35.6

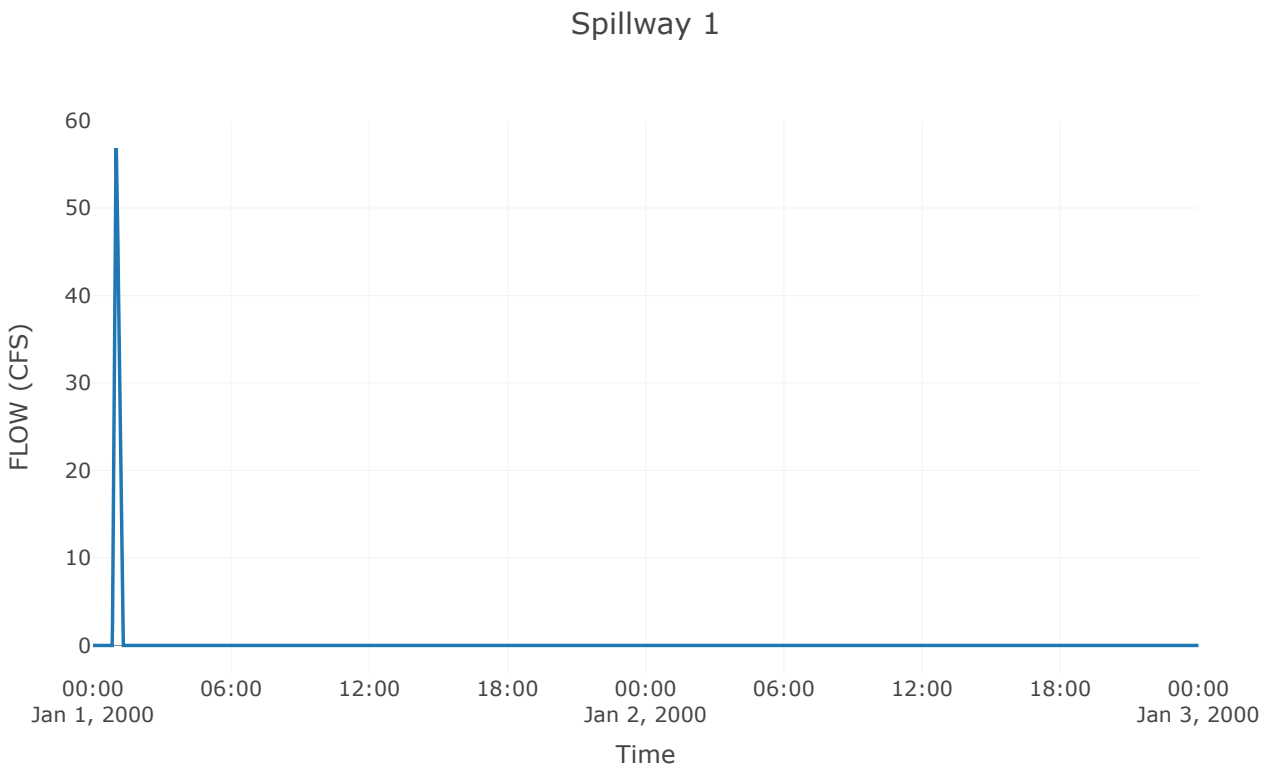
Storage



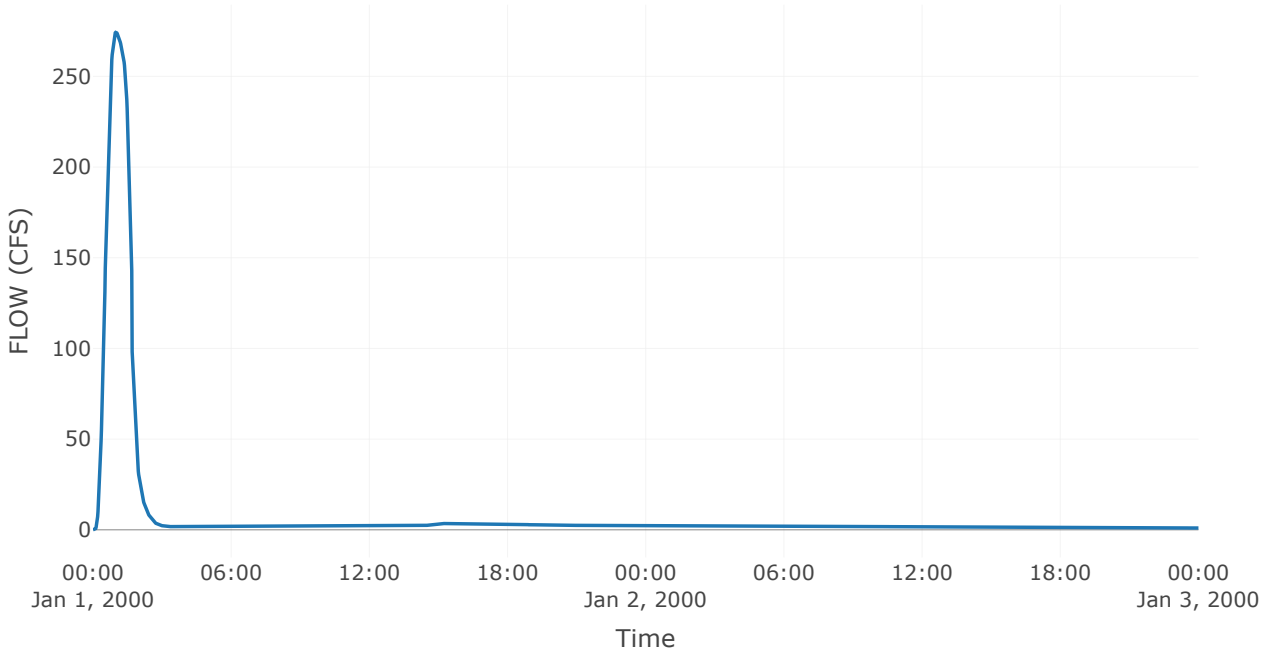
Combined Inflow



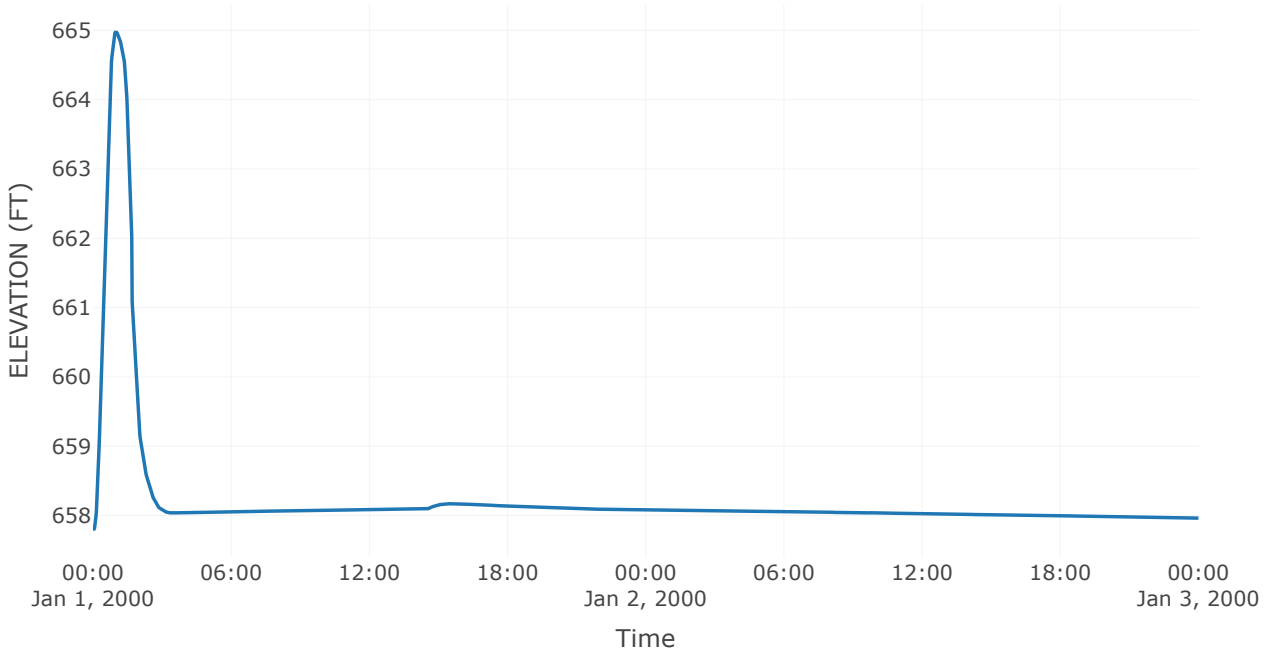

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
35
30
25
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

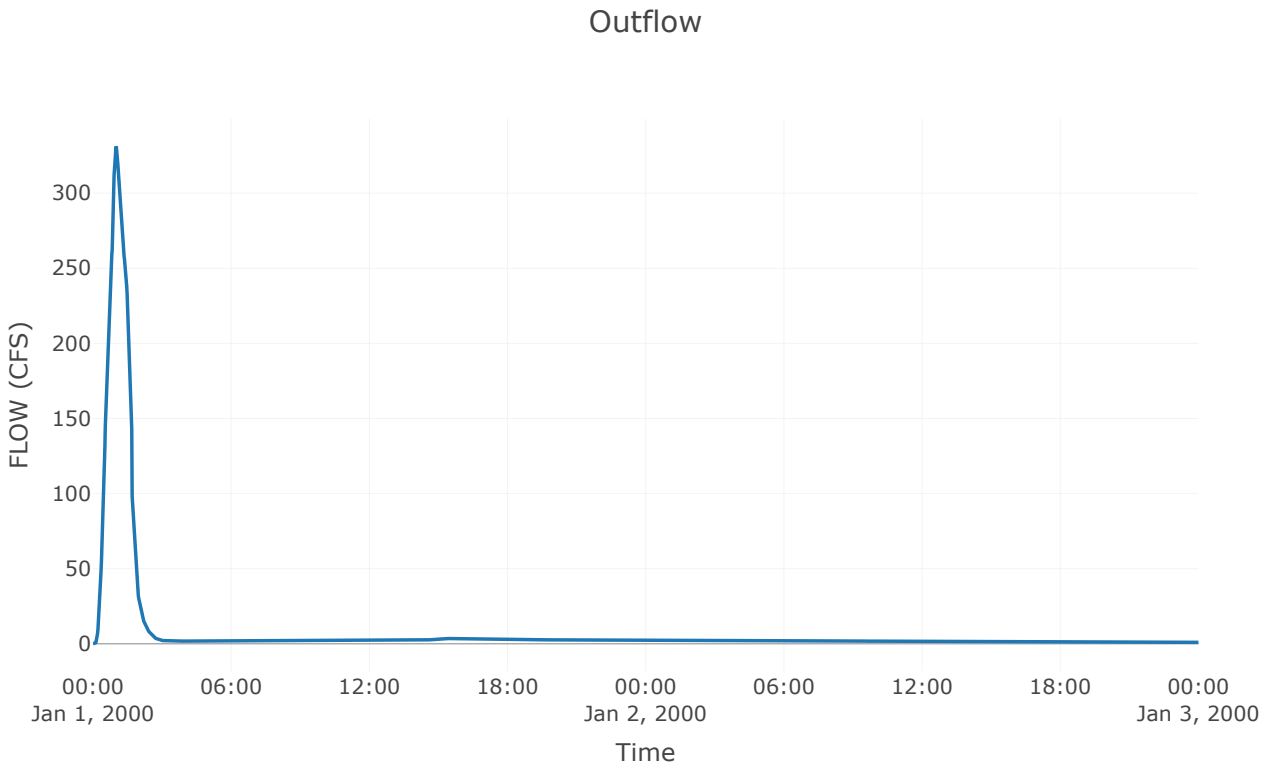

Spillway 1
FLOW (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



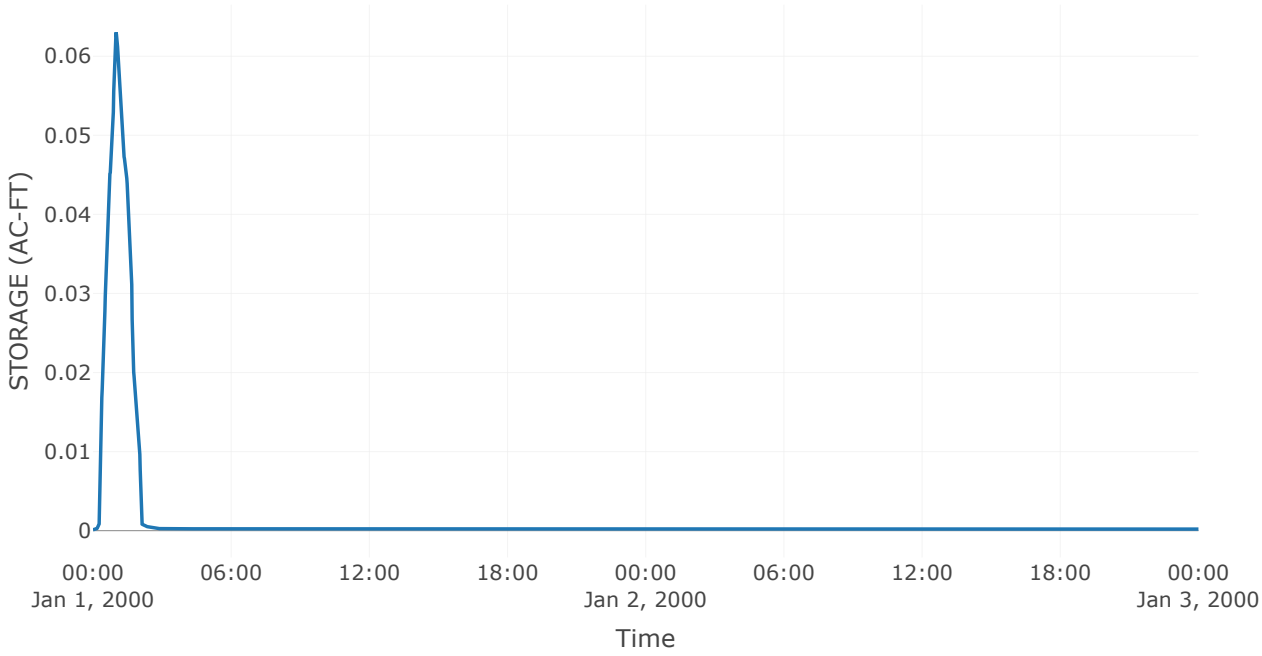

Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

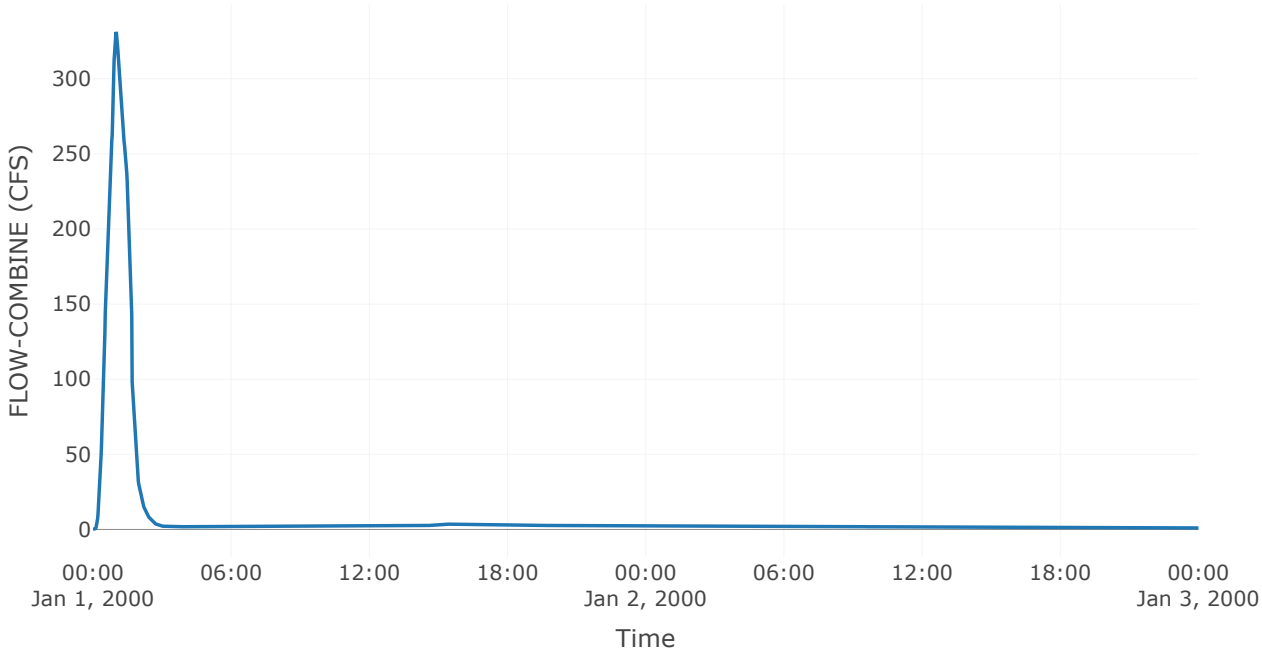
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	331.51
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	331.13
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	0.06
Peak Elevation (FT)	660.32
Discharge Volume (AC - FT)	35.55

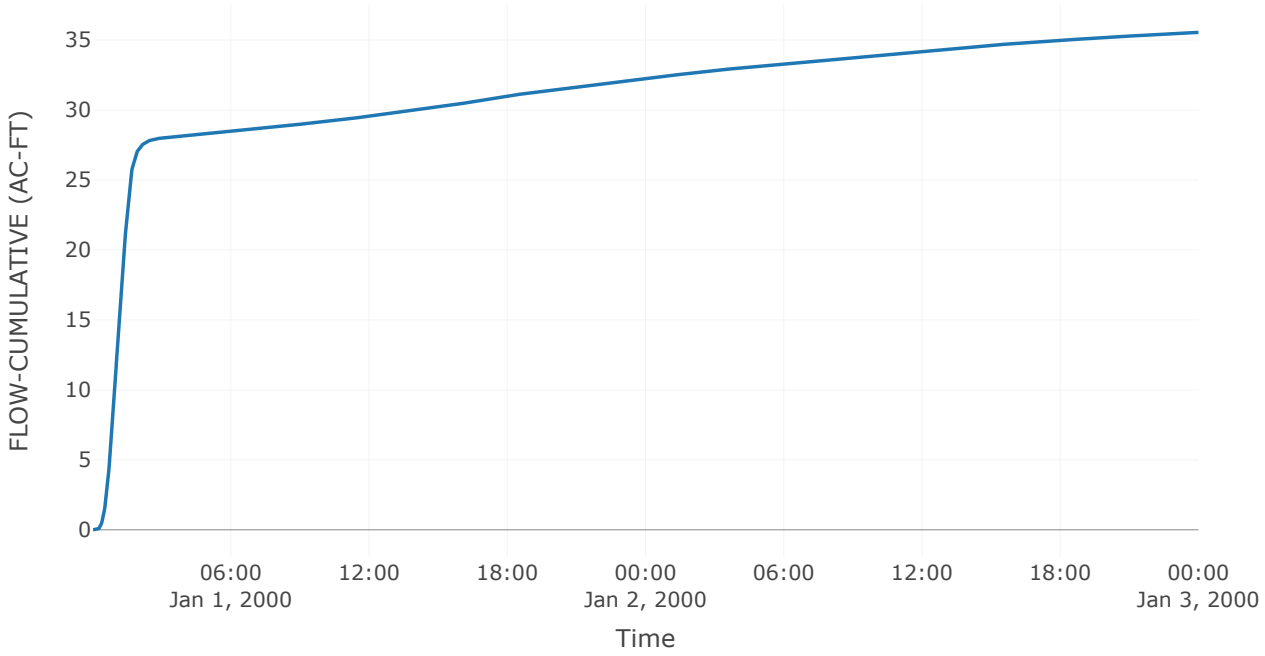
Storage



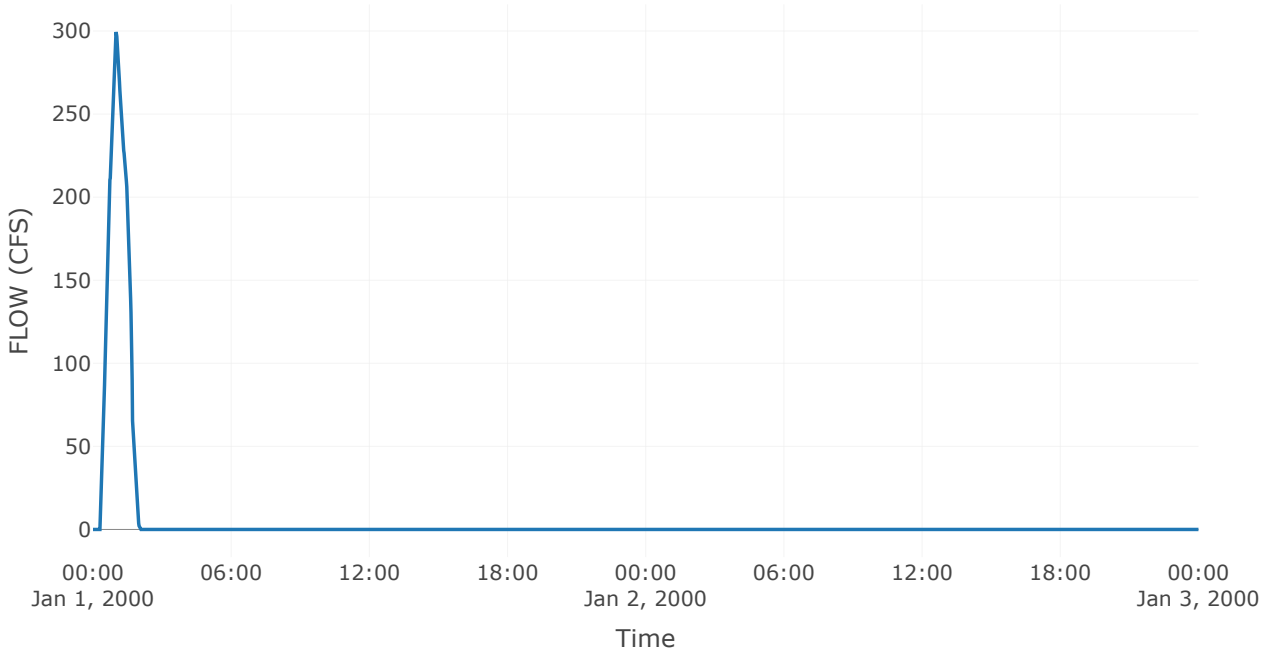
Combined Inflow



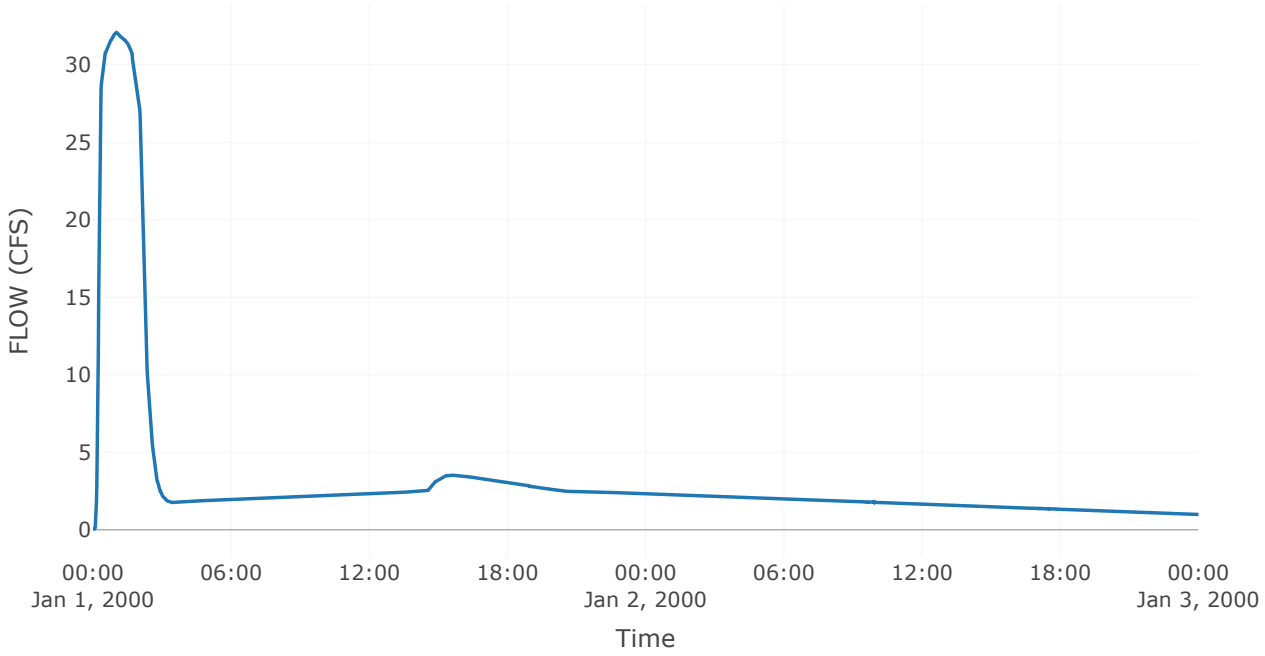
Cumulative Outflow



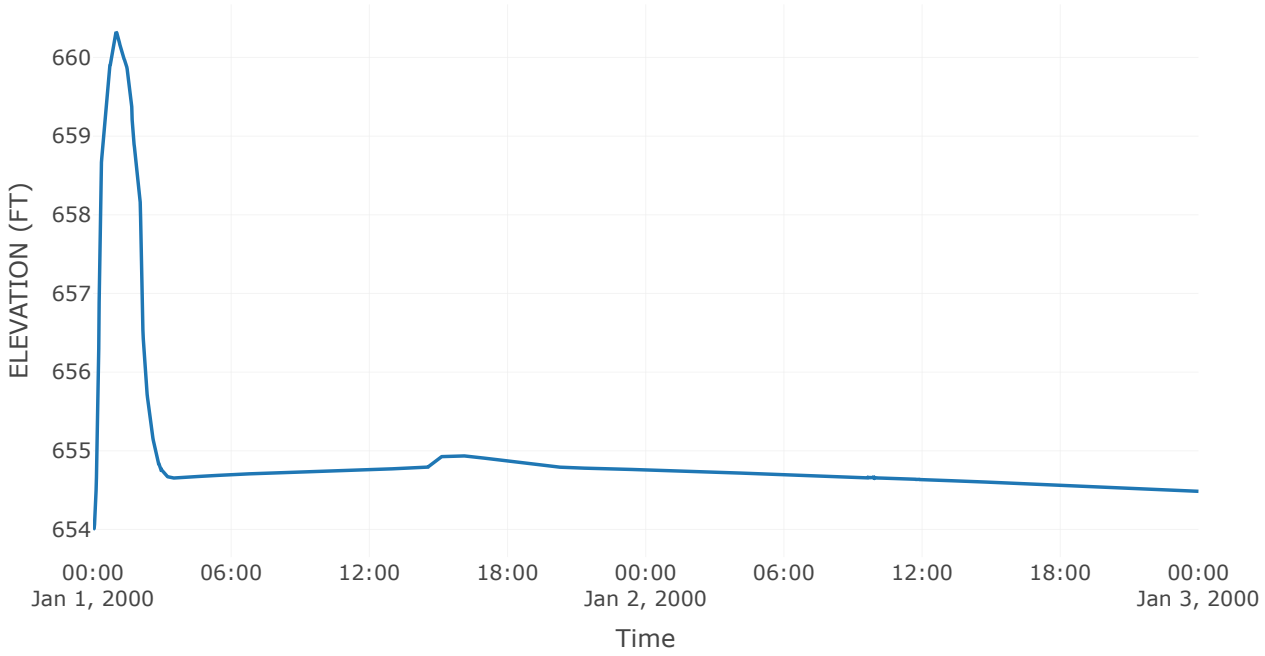
Spillway 1

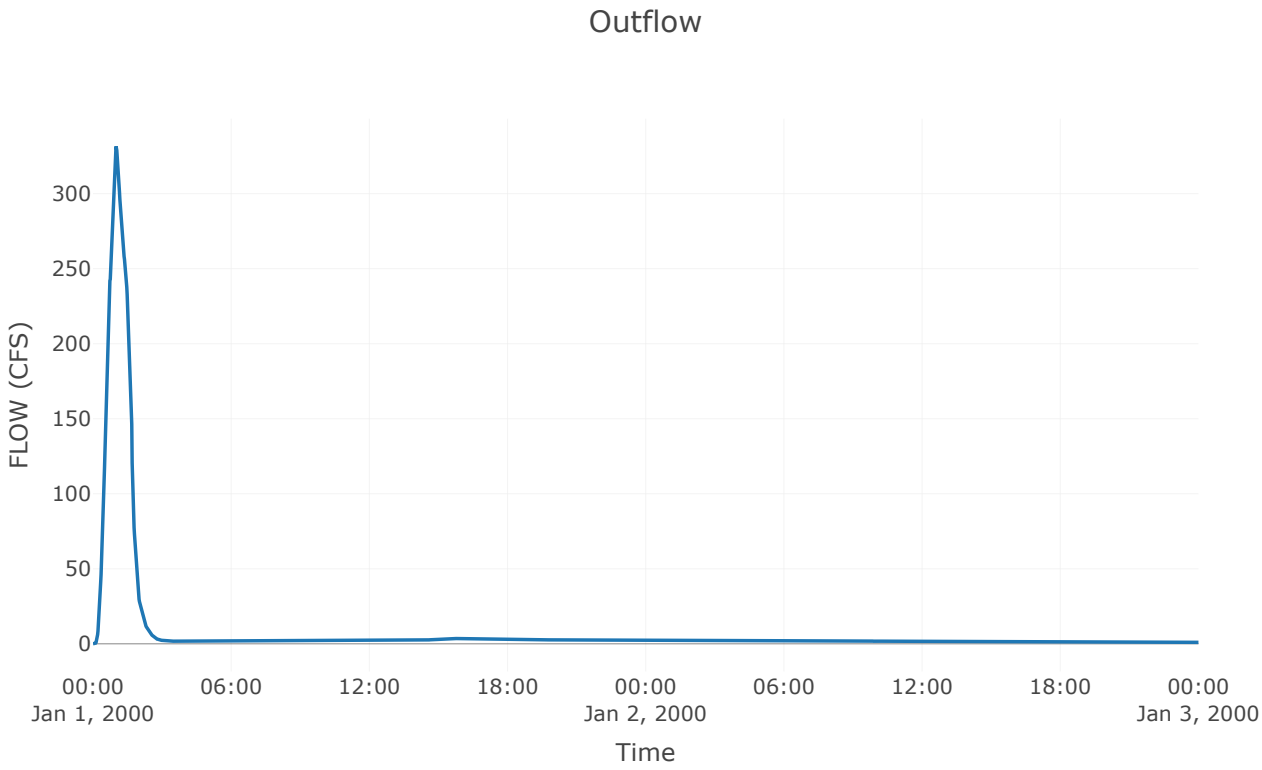


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

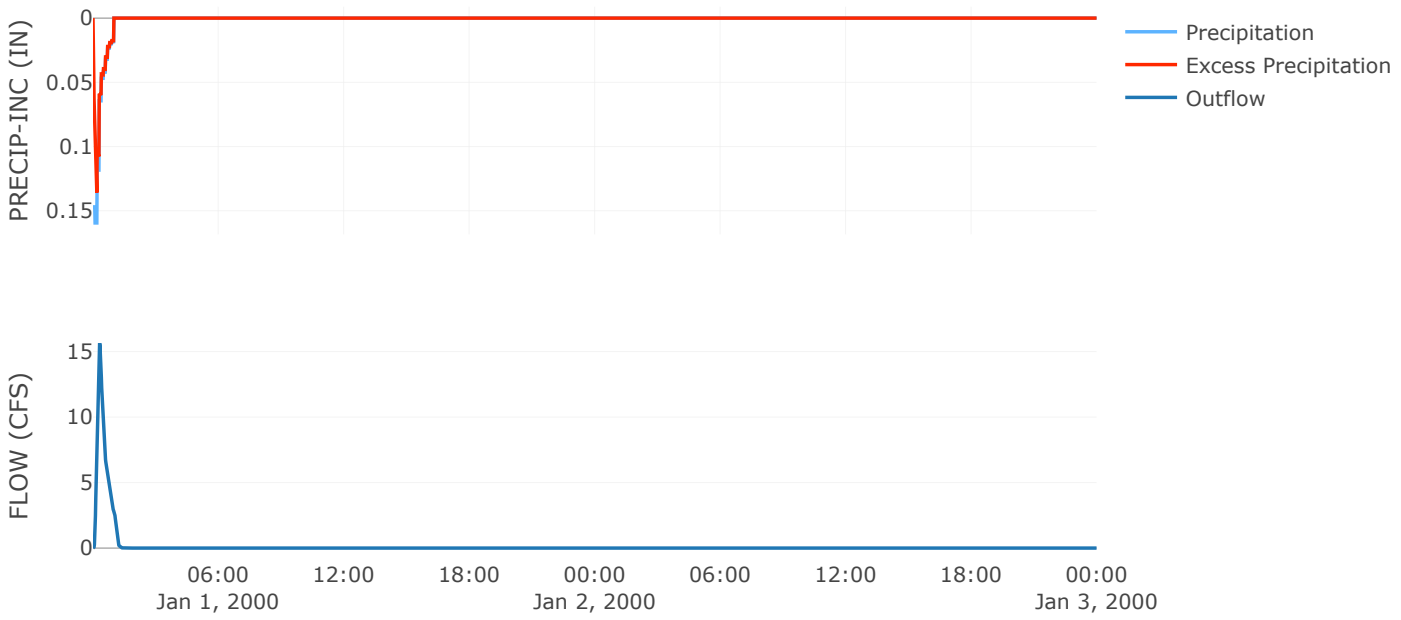
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

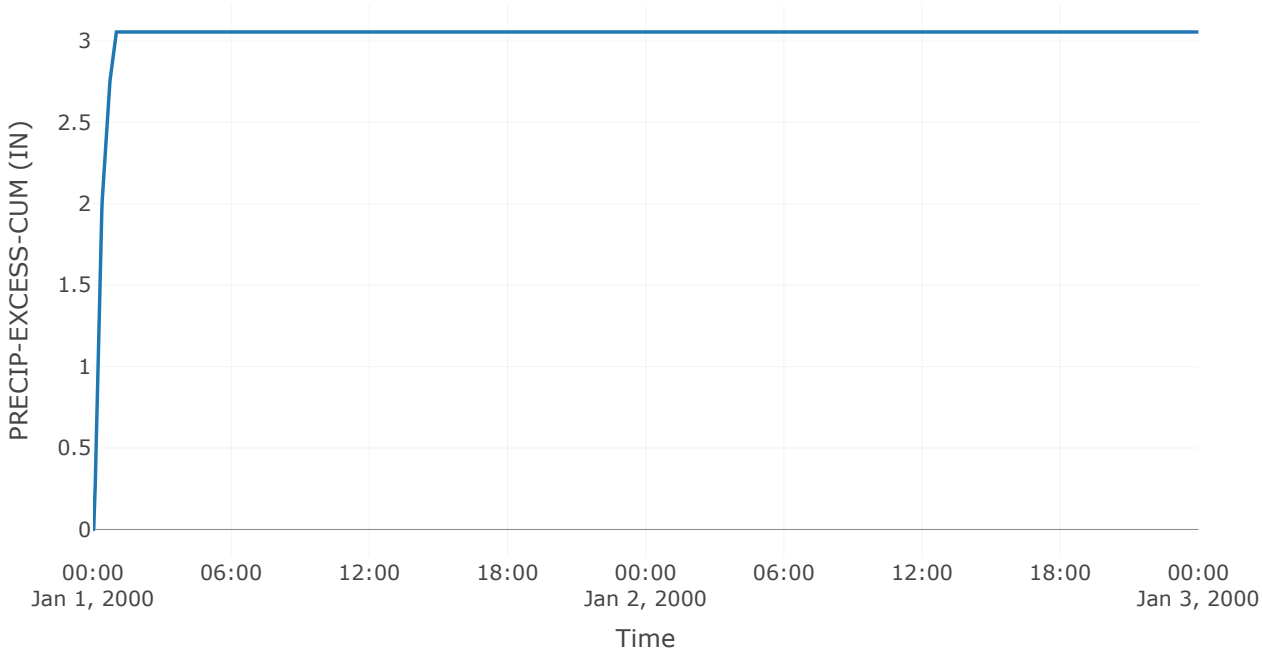
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	15.64
Time of Peak Discharge	01Jan2000, 00:18
Volume (IN)	3.06
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.2
Excess Volume (AC - FT)	0.61
Direct Runoff Volume (AC - FT)	0.61
Baseflow Volume (AC - FT)	0

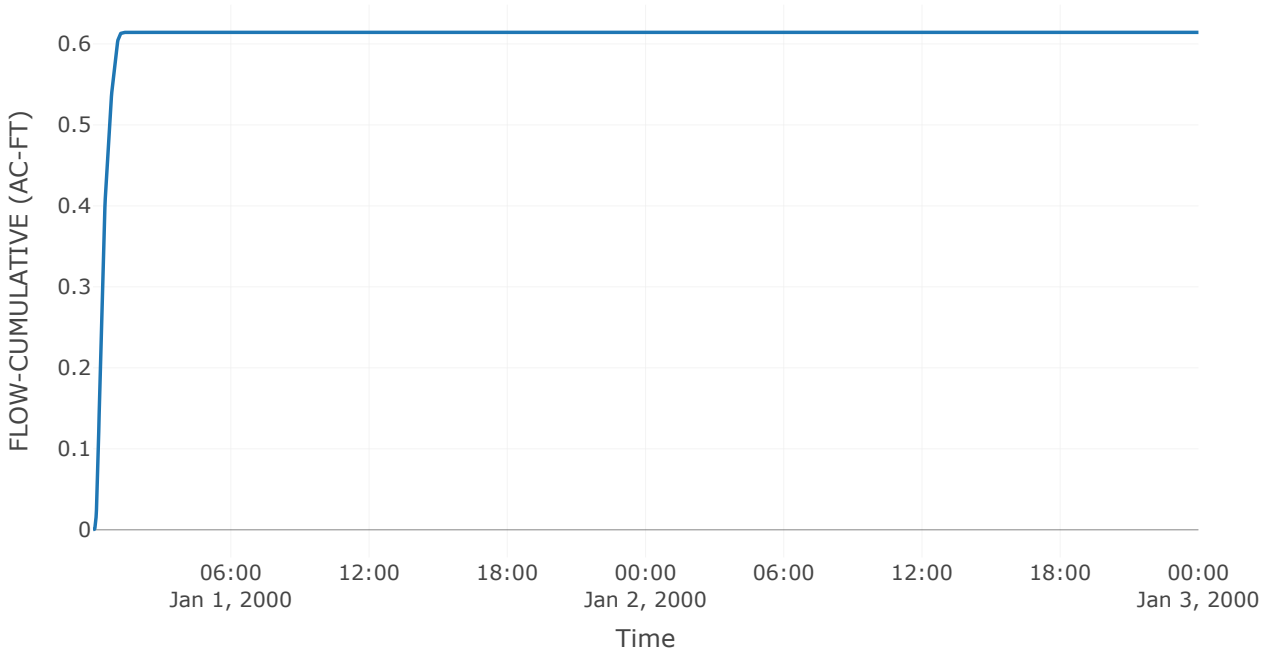
Precipitation and Outflow



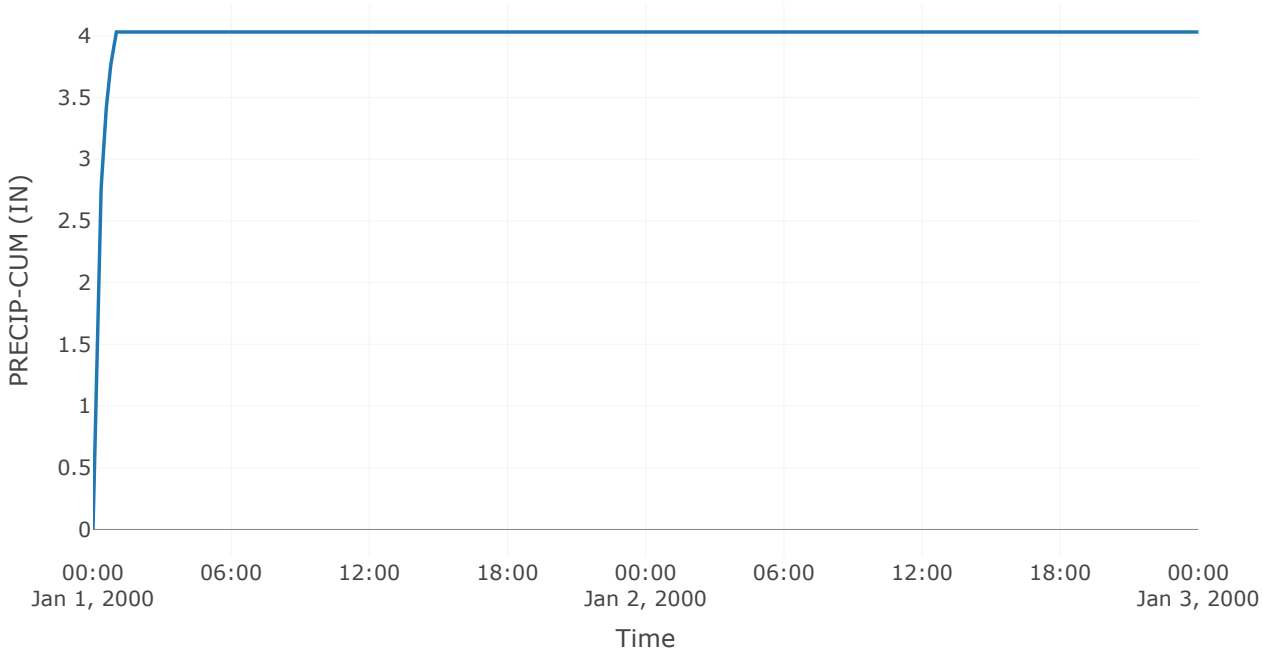
Cumulative Excess Precipitation

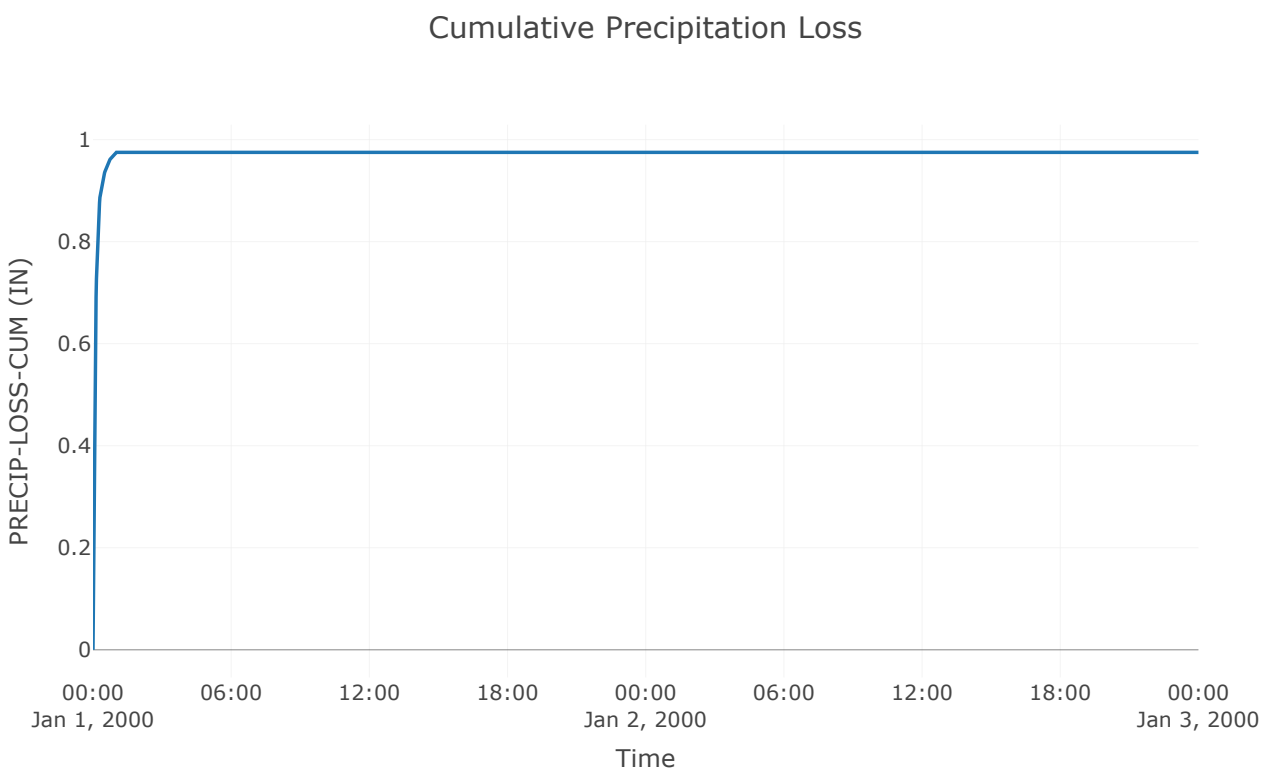


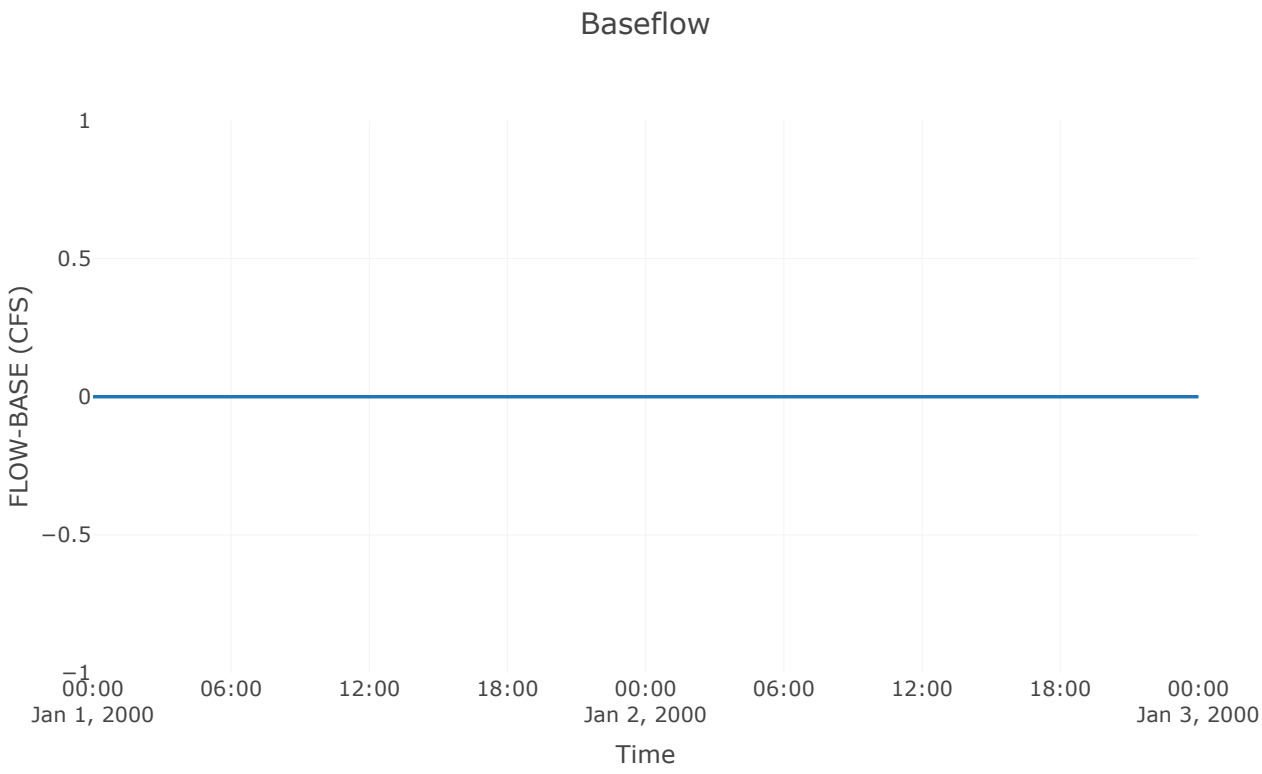
Cumulative Outflow



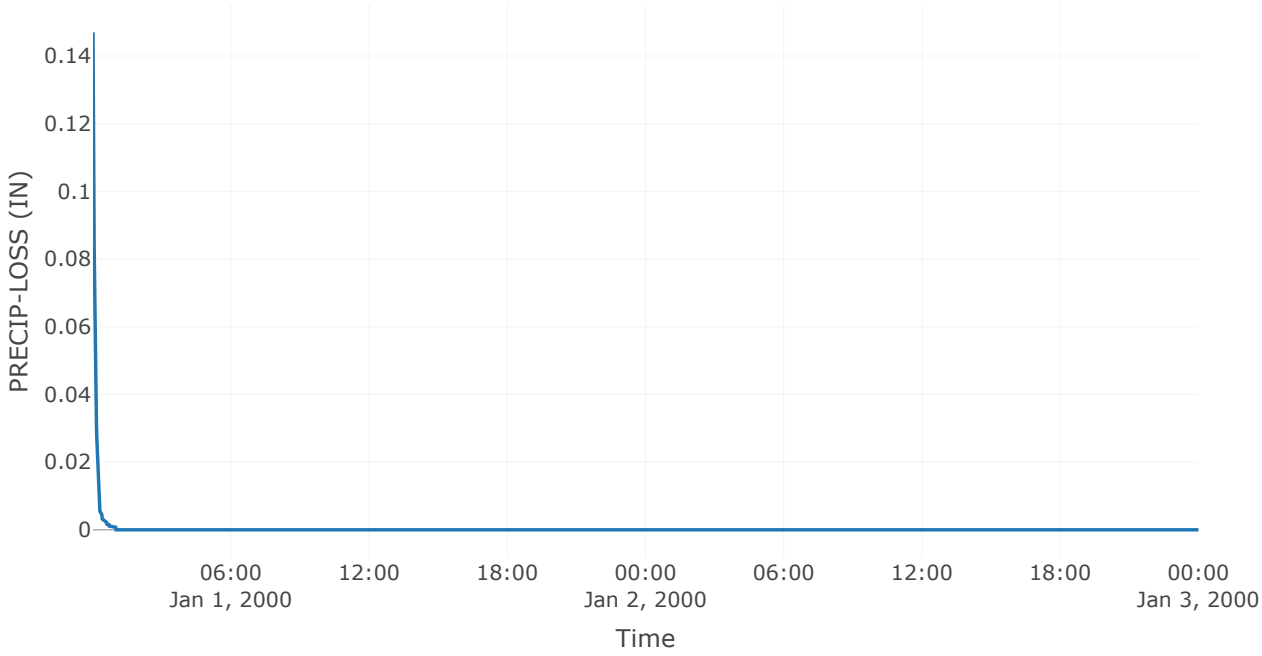
Cumulative Precipitation



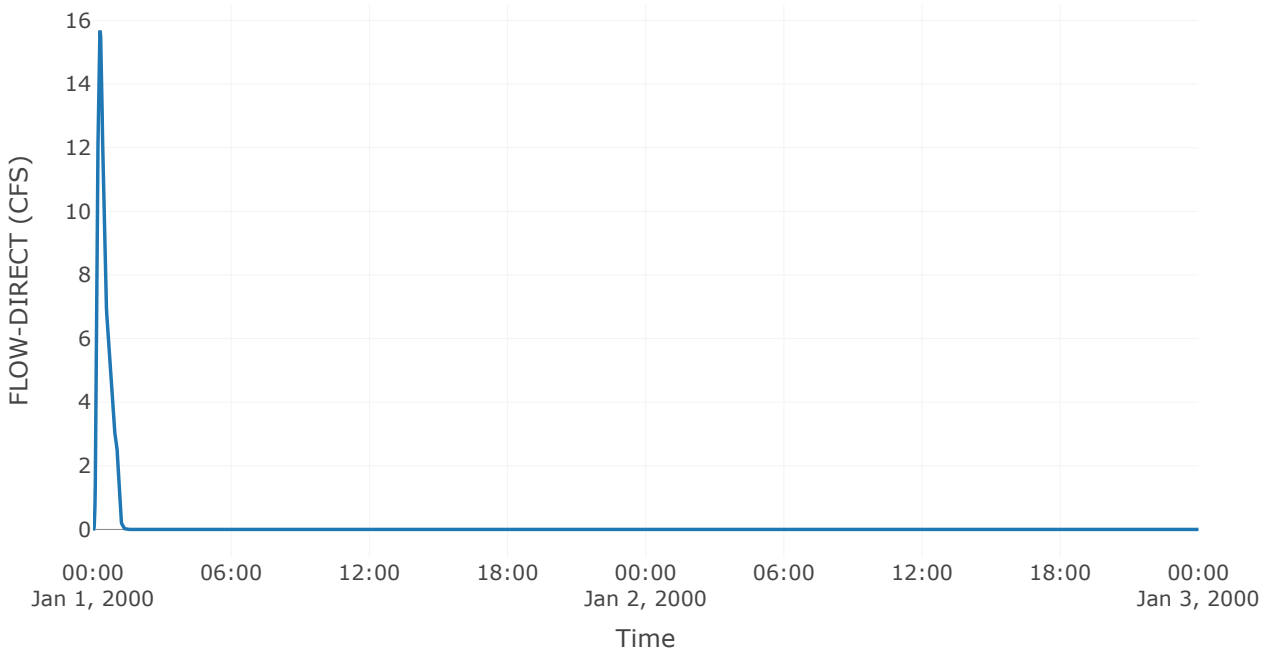

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

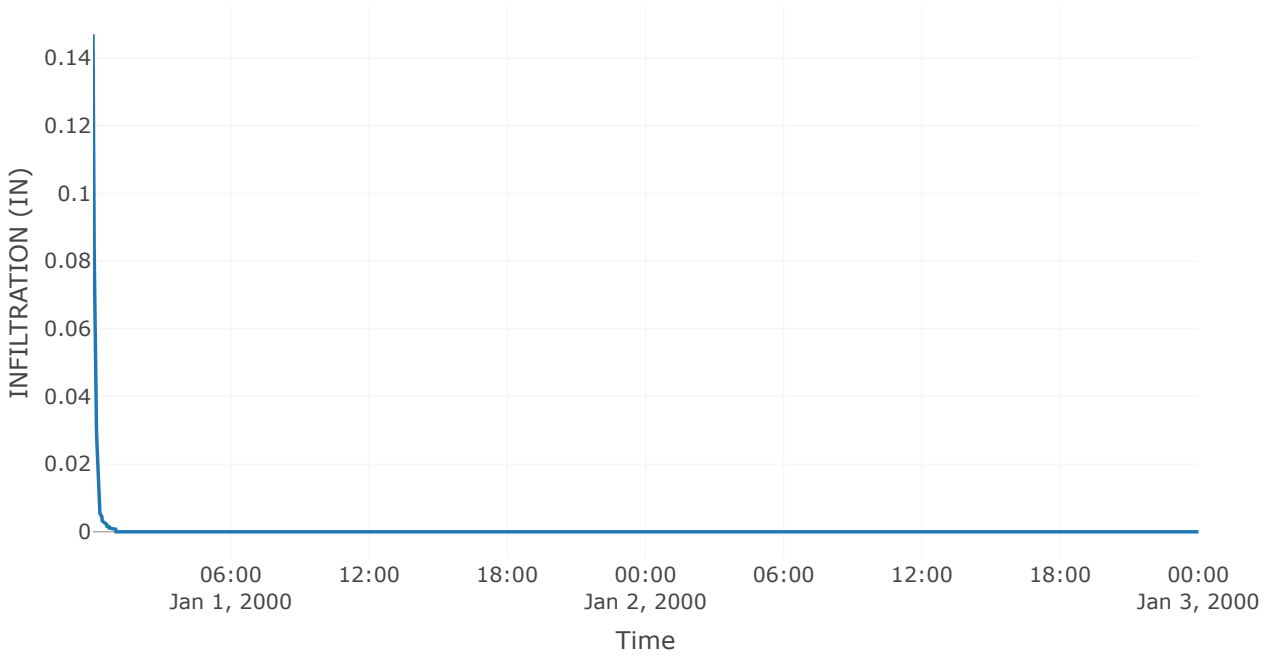

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



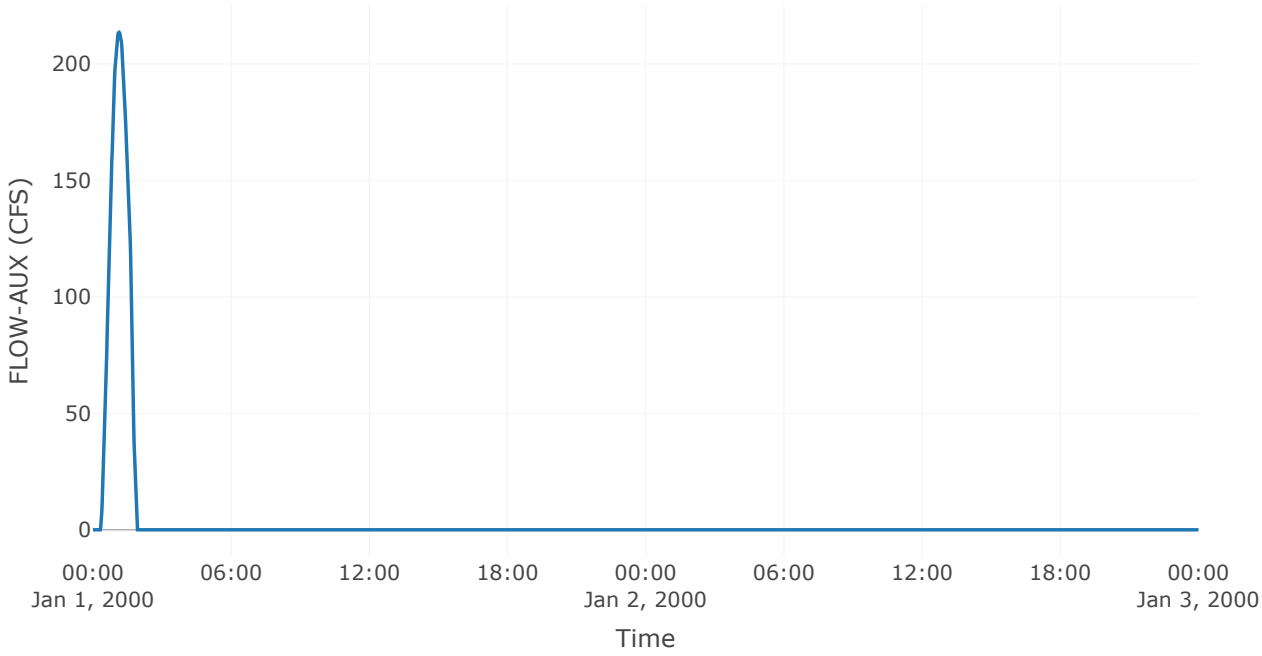

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

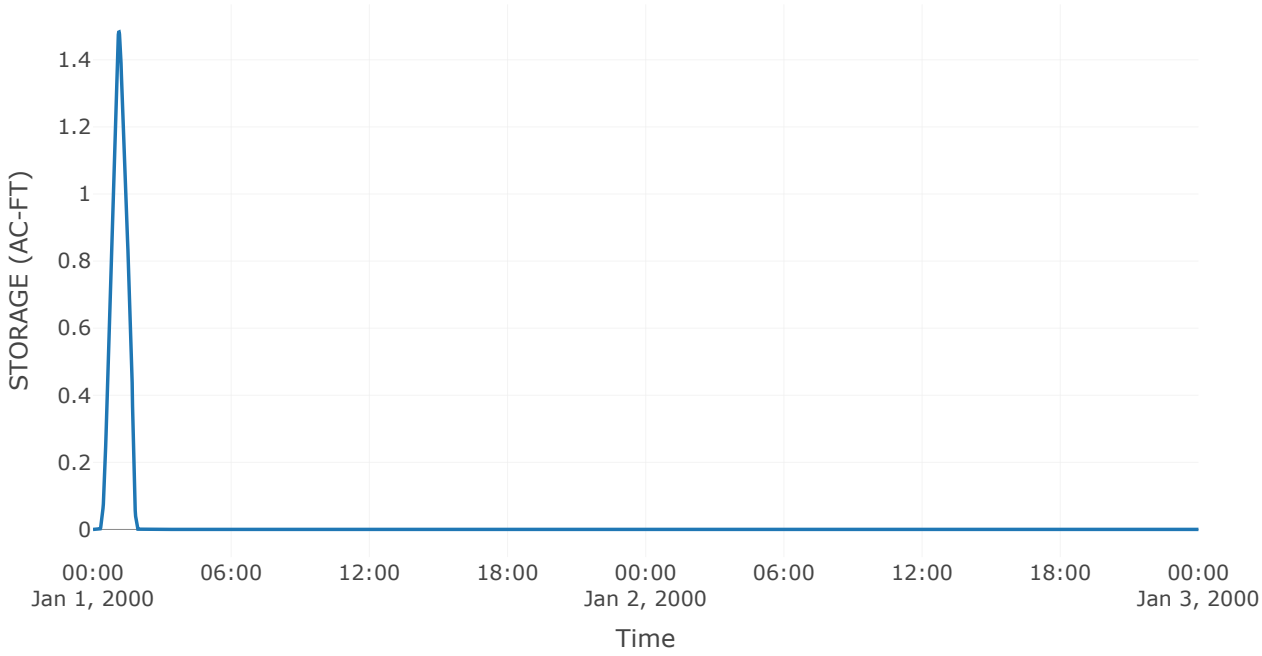
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	95.49
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.35
Peak Inflow (CFS)	334.32
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	36.16
Maximum Storage (AC - FT)	1.48
Peak Elevation (FT)	655.16
Discharge Volume (AC - FT)	19.63

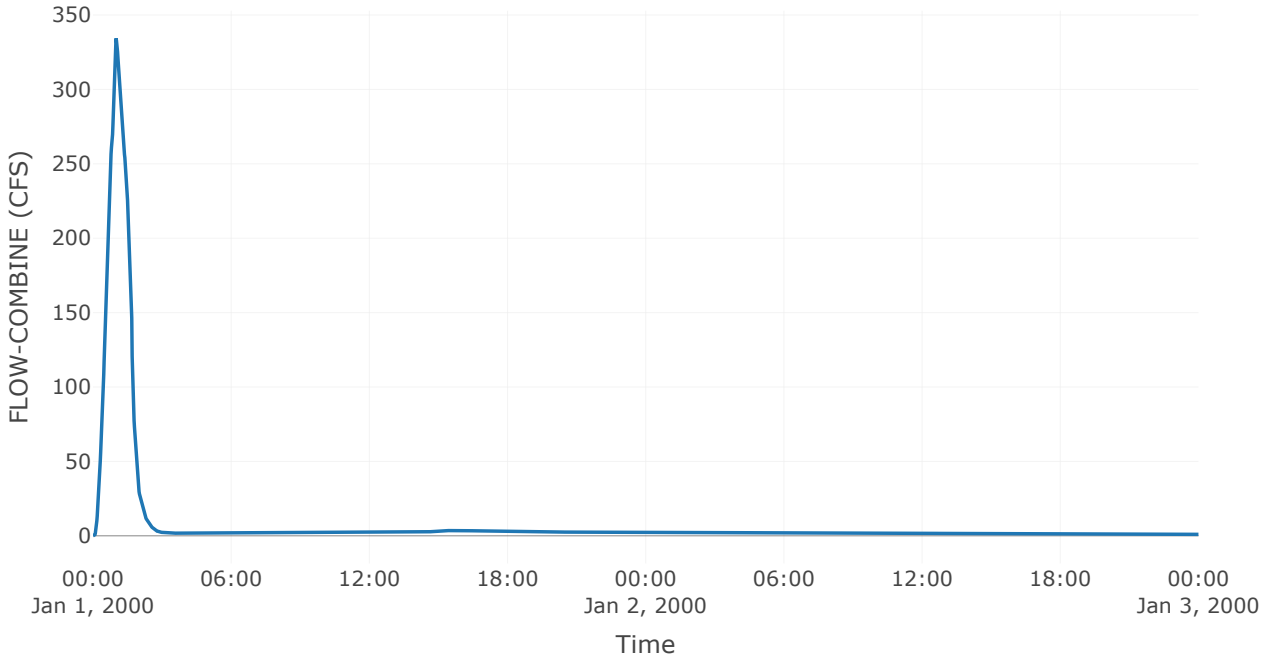
Auxiliary Outflow



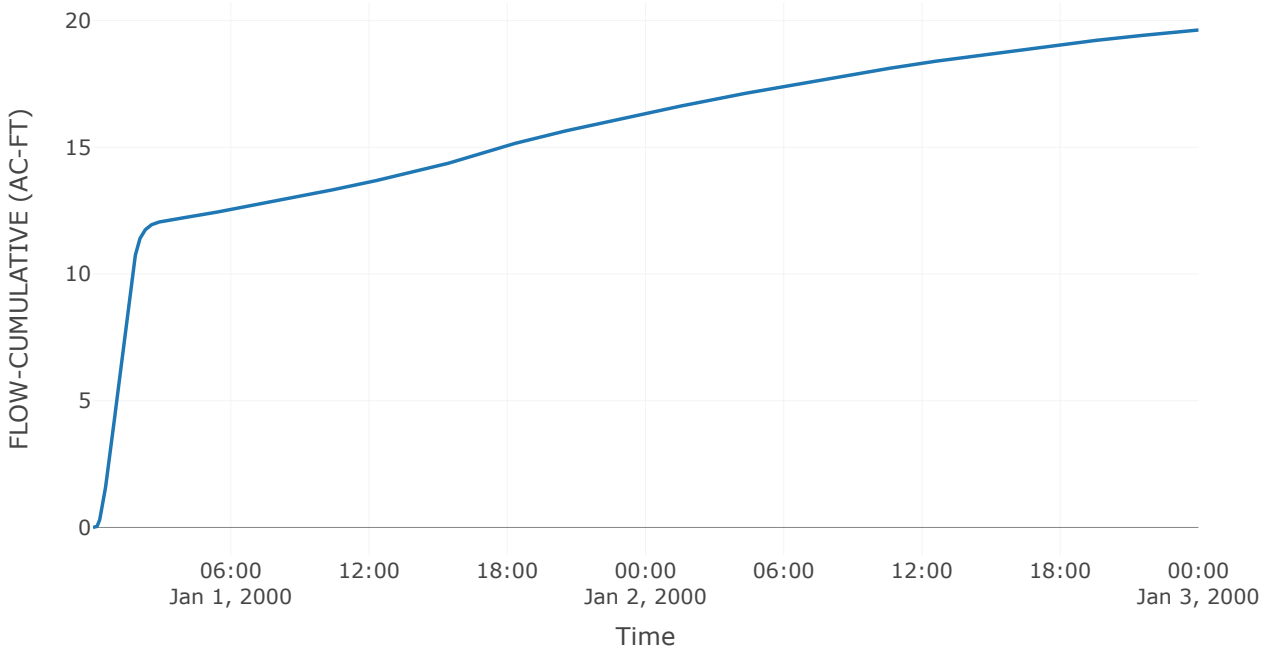
Storage

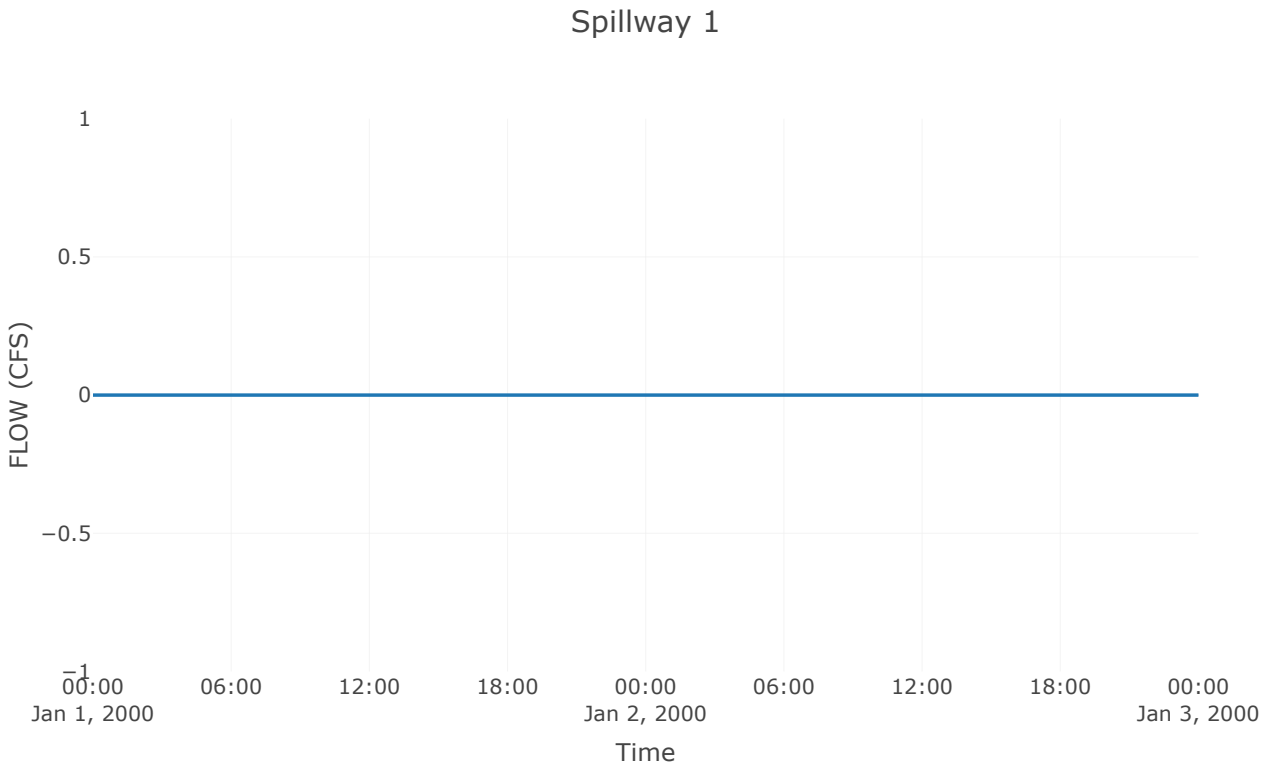


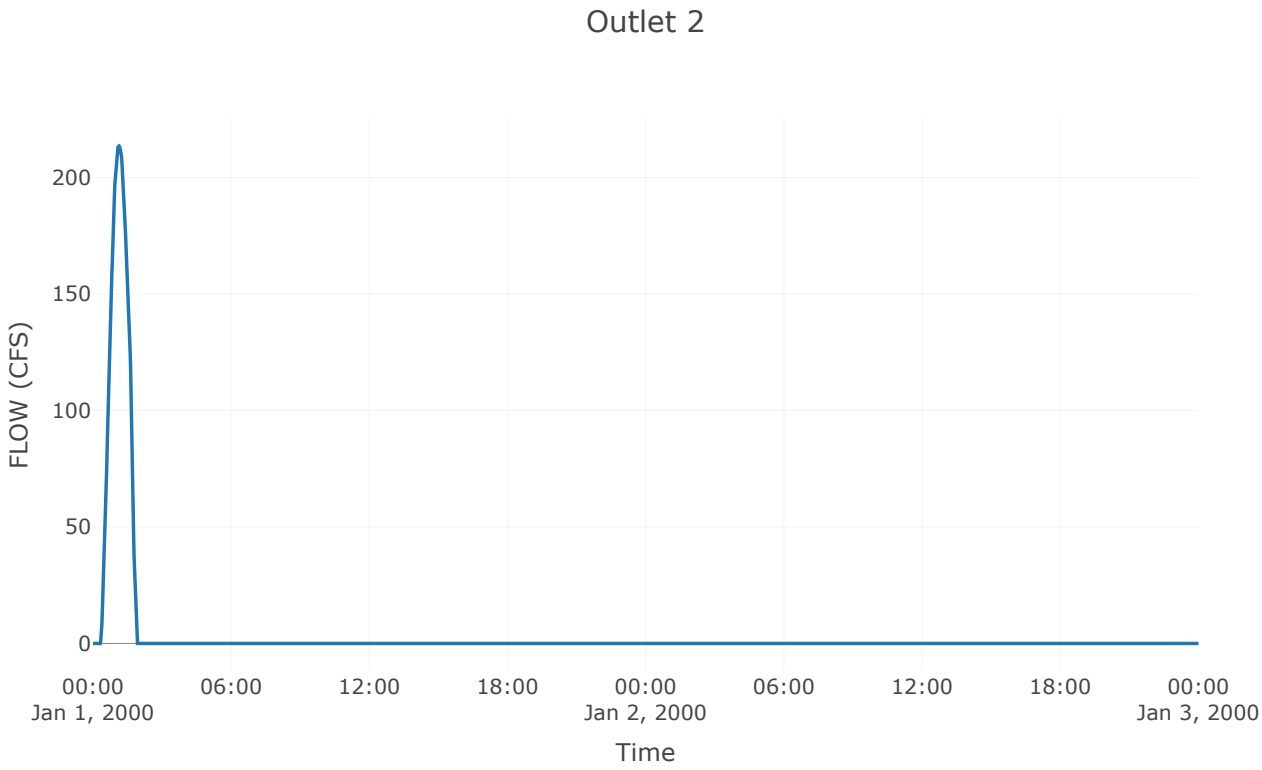
Combined Inflow



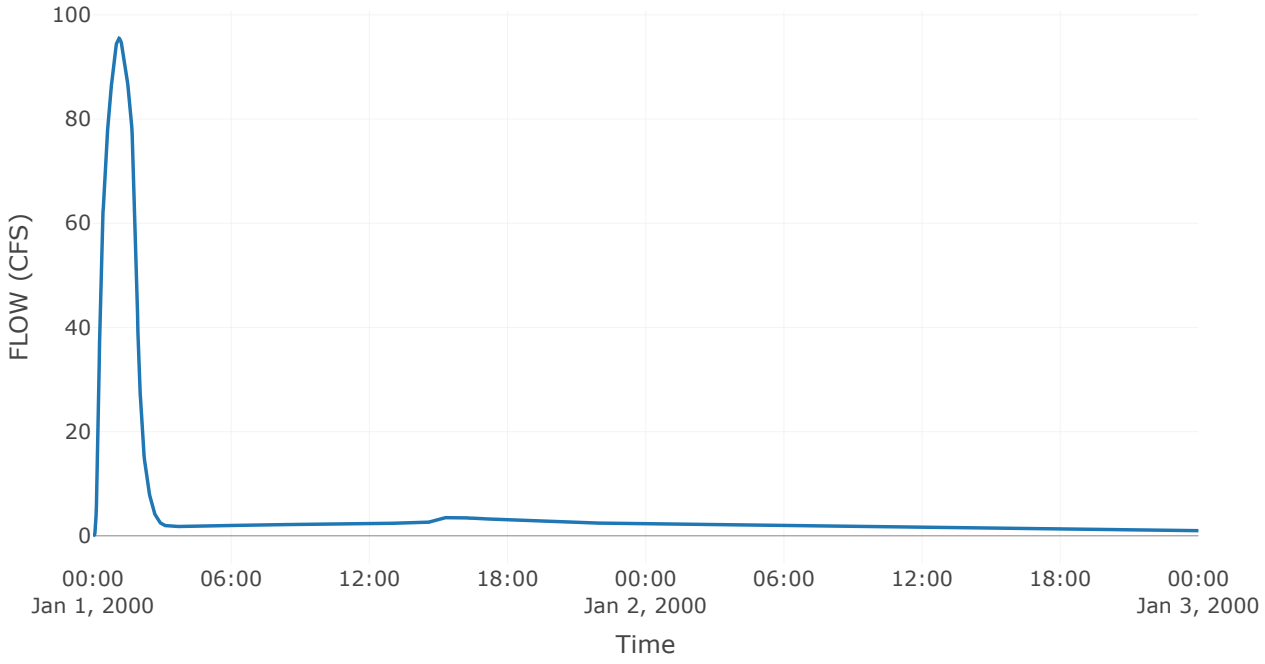
Cumulative Outflow



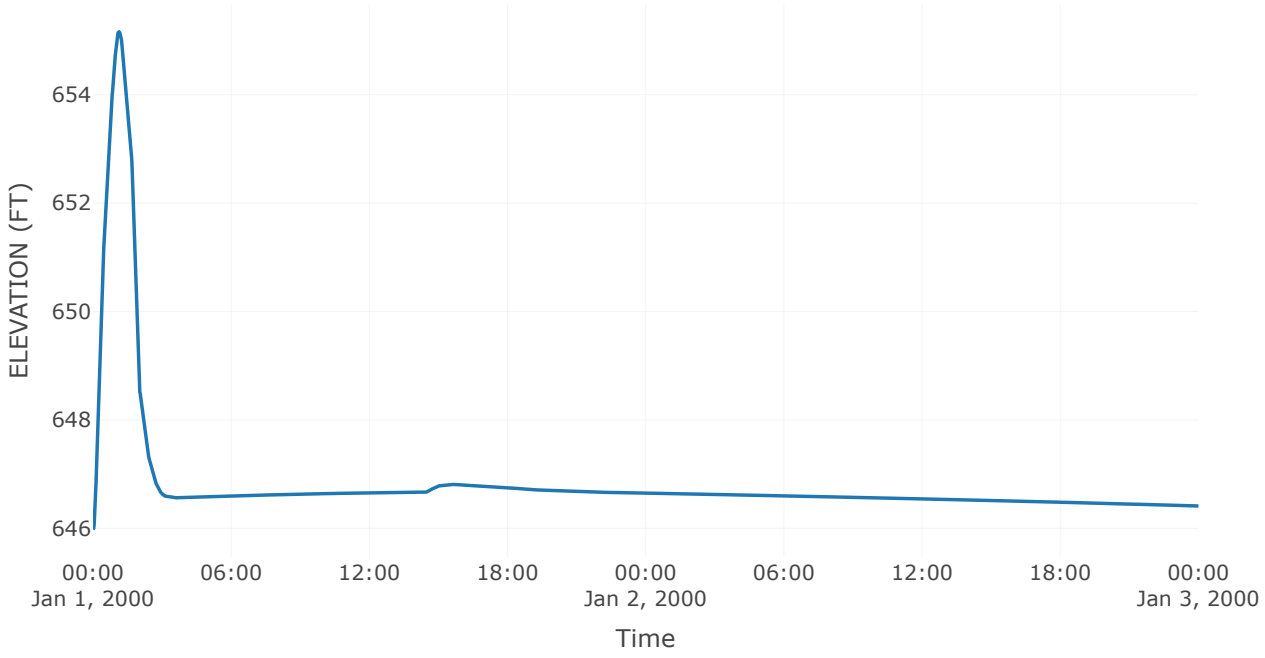

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

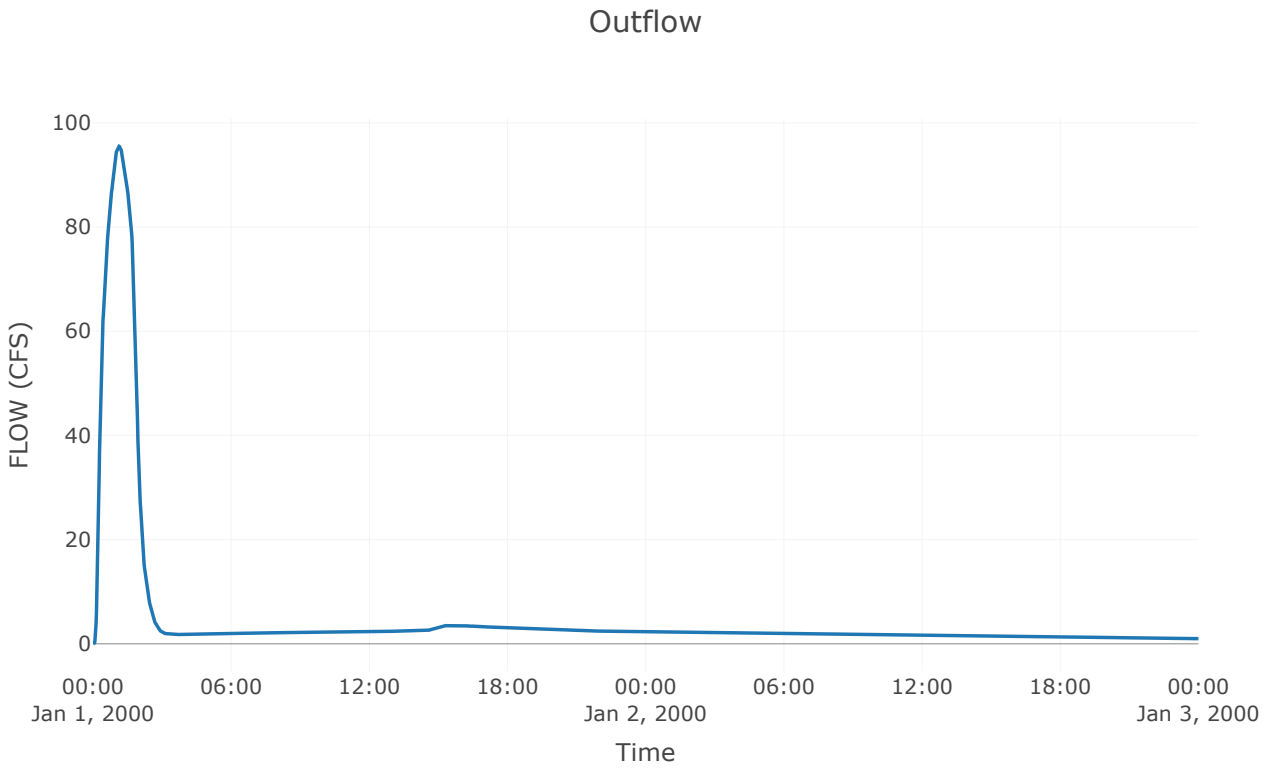

Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

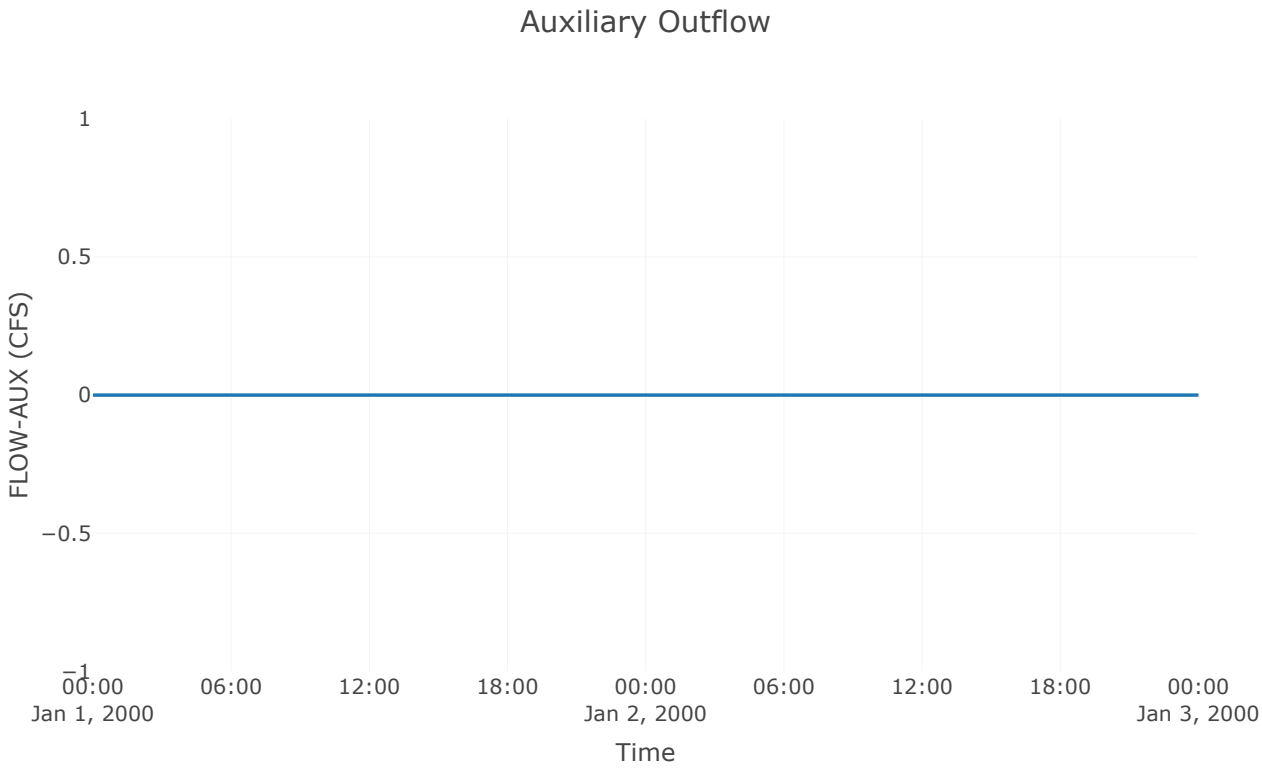


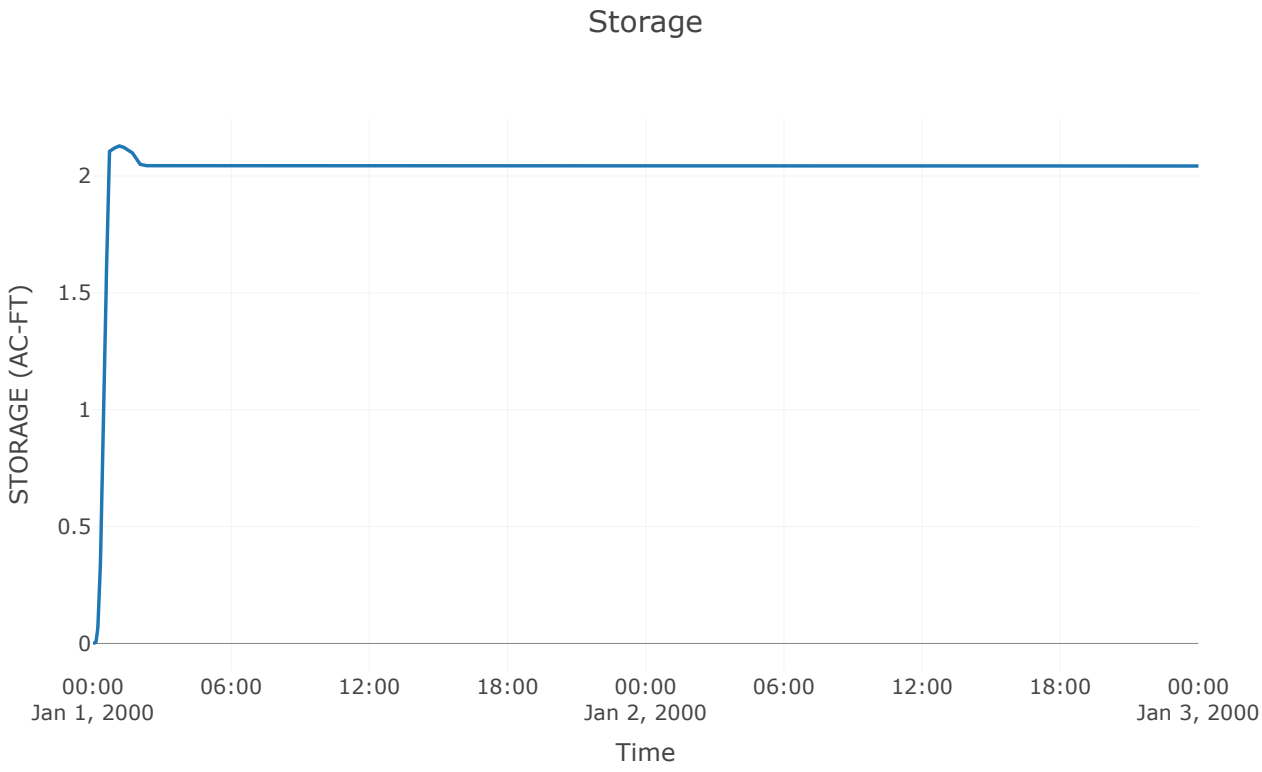

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

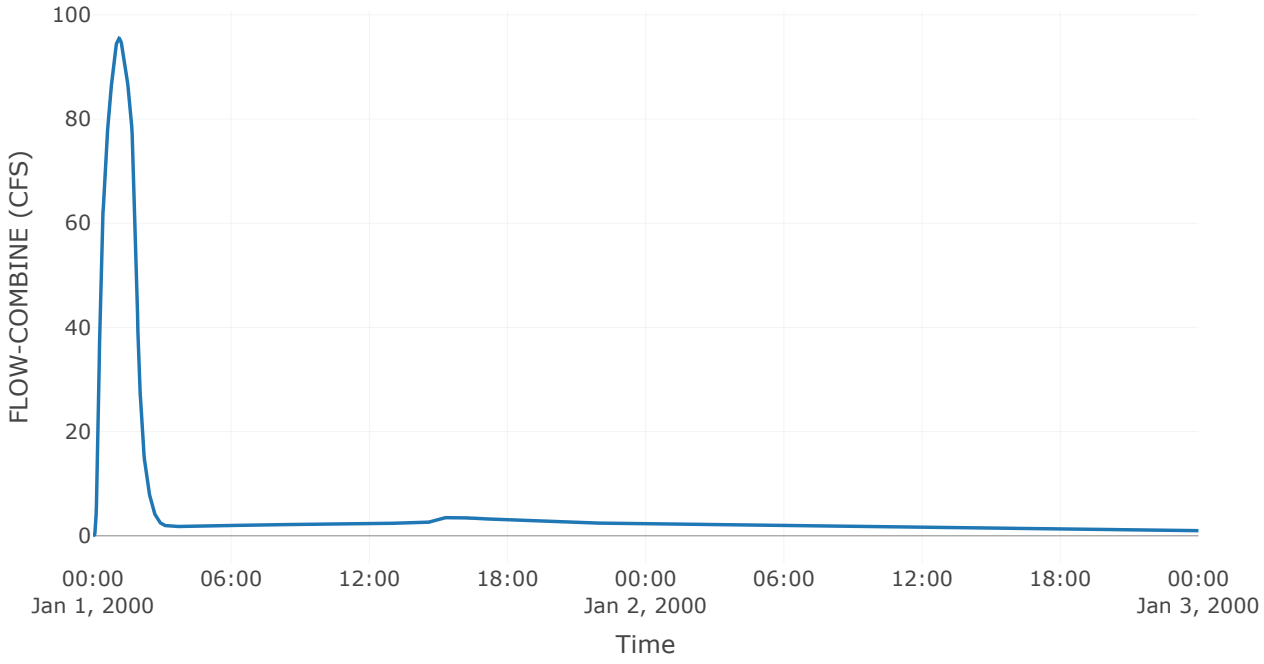
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2
Peak Inflow (CFS)	95.49
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.63
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.42

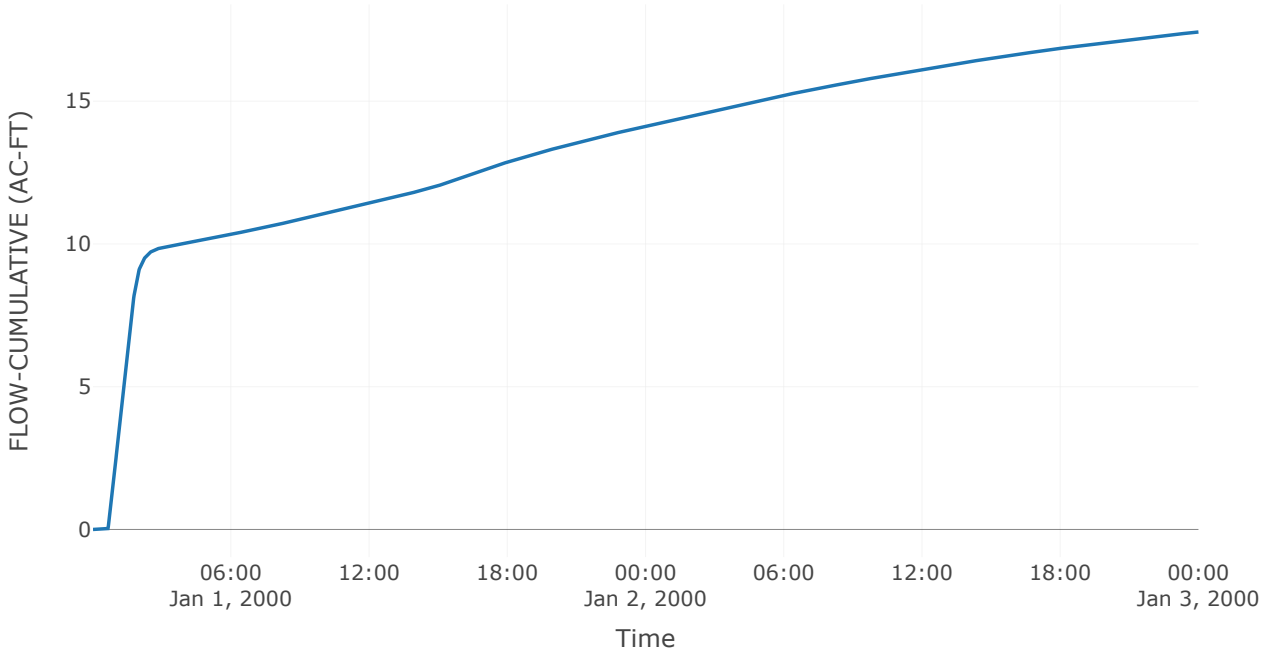

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

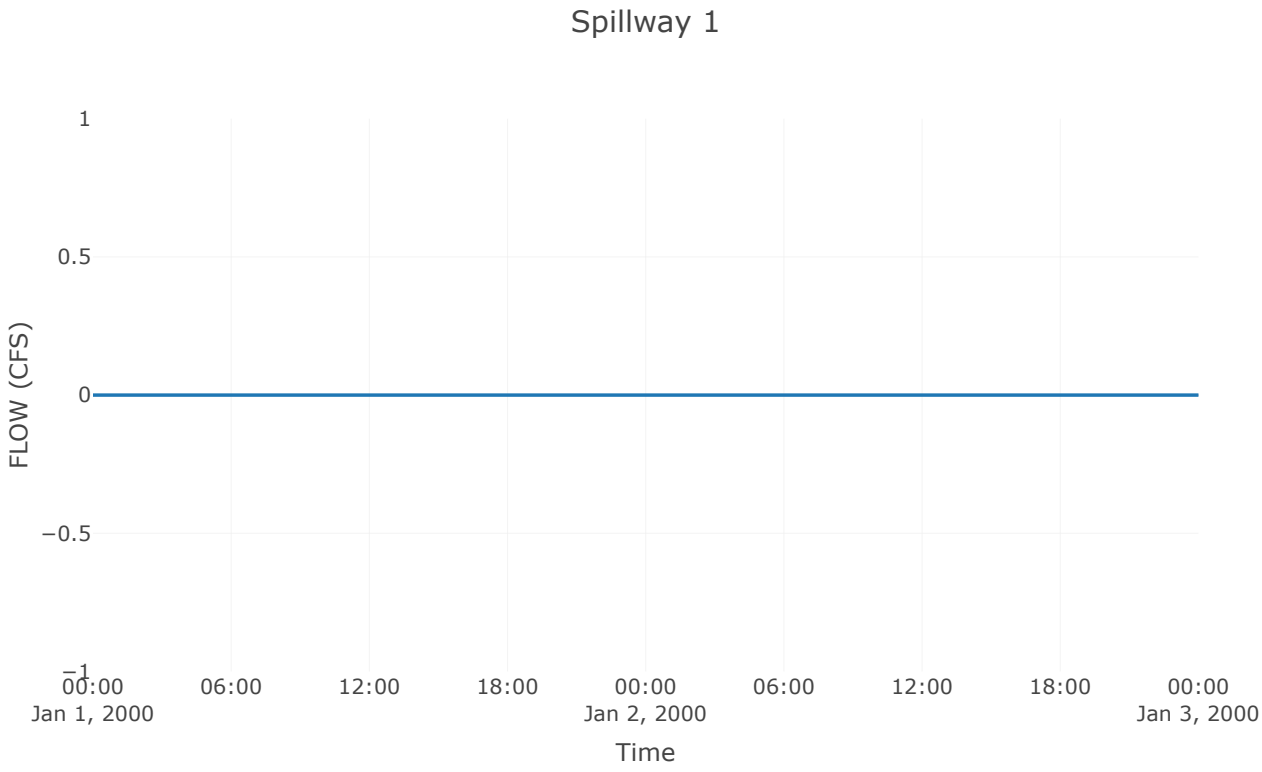

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

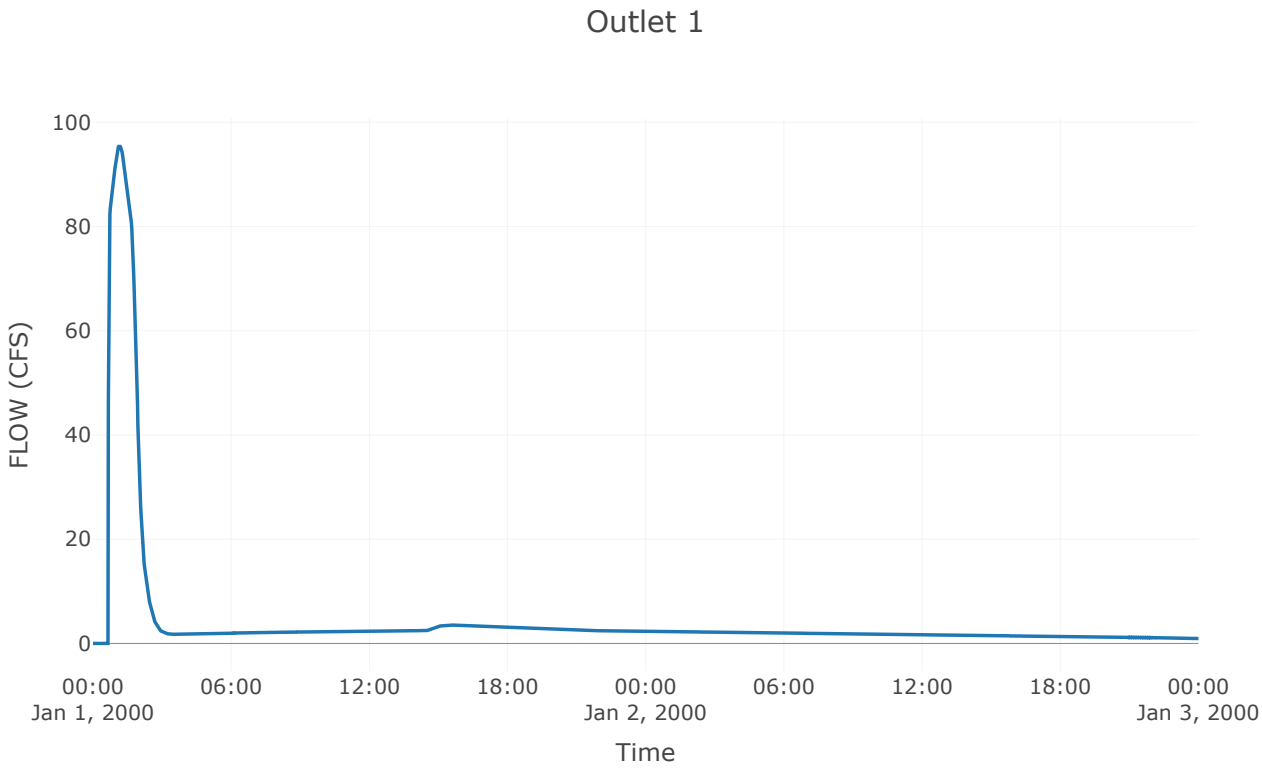
Combined Inflow



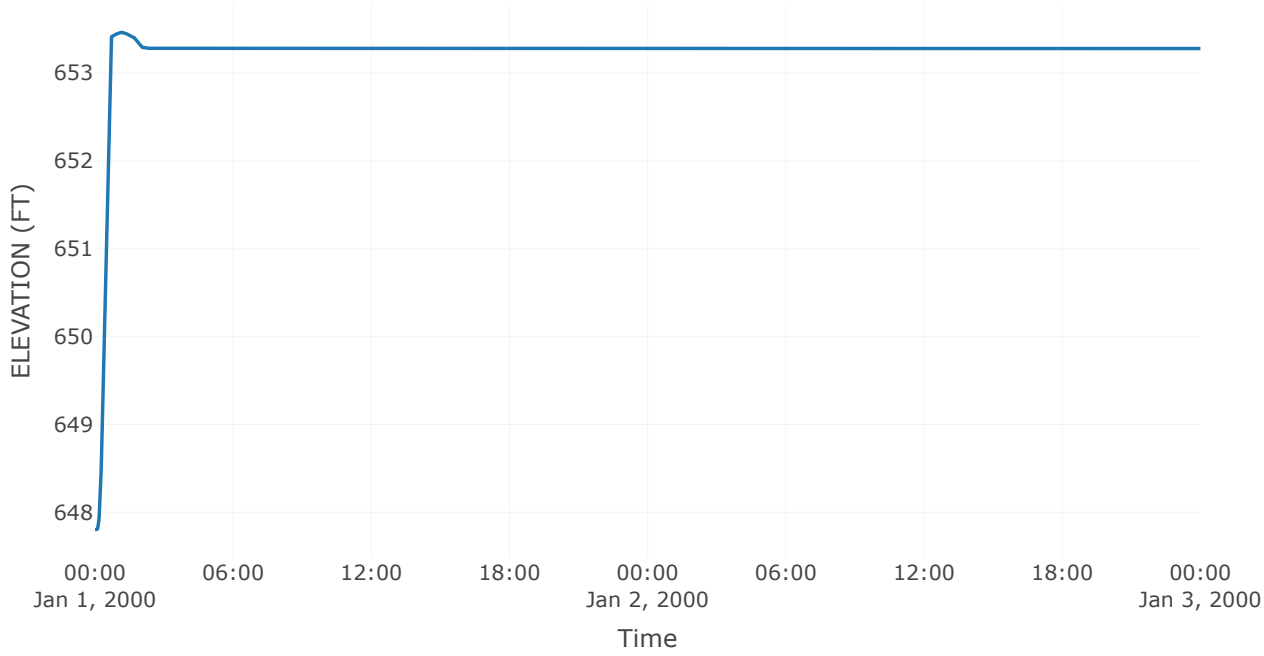
Cumulative Outflow



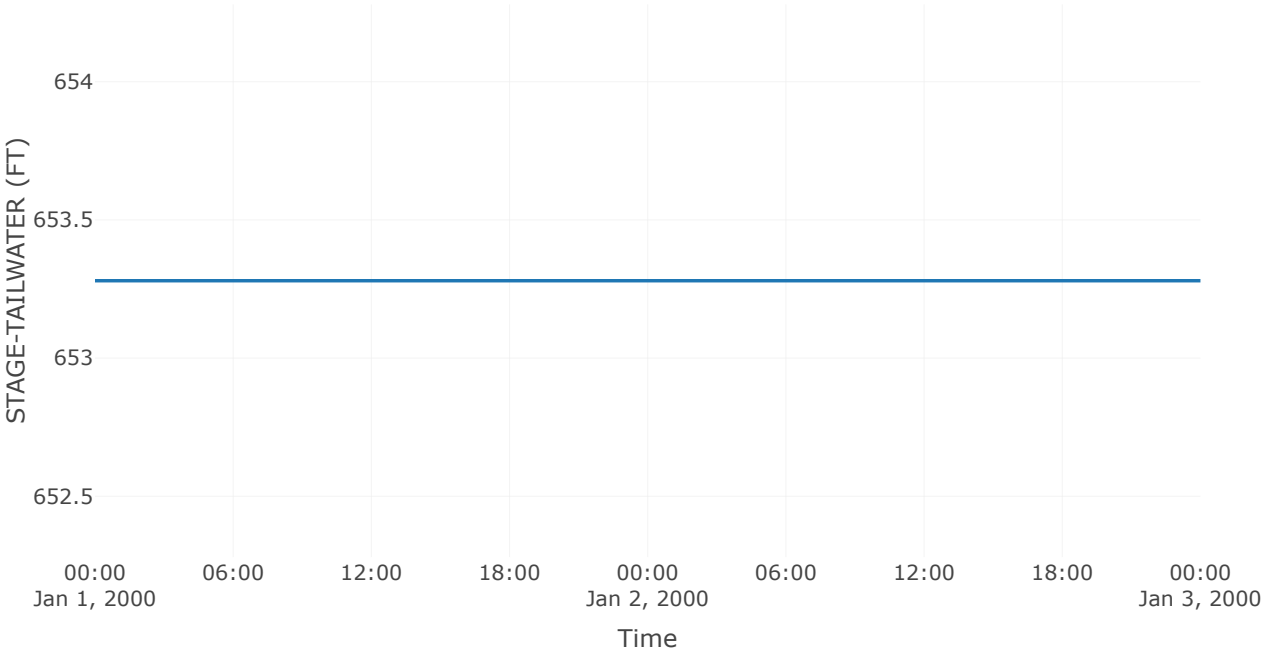

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

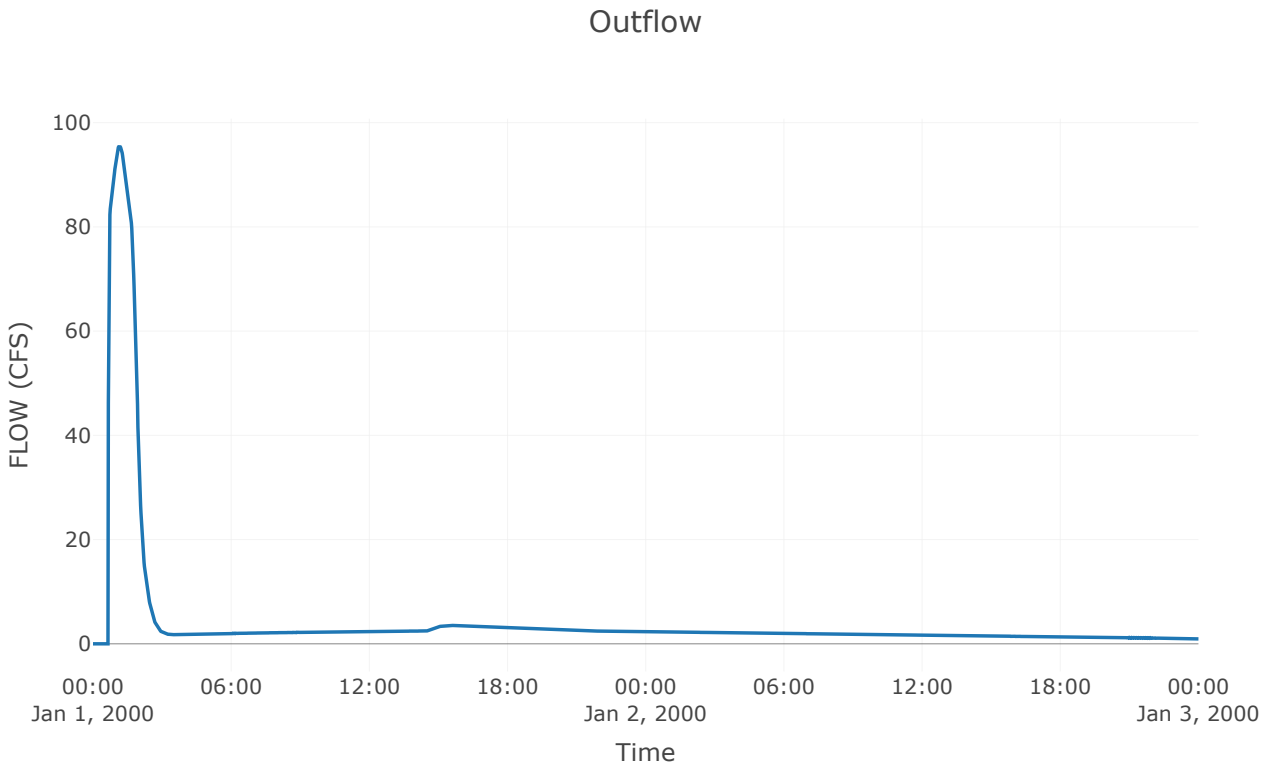

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

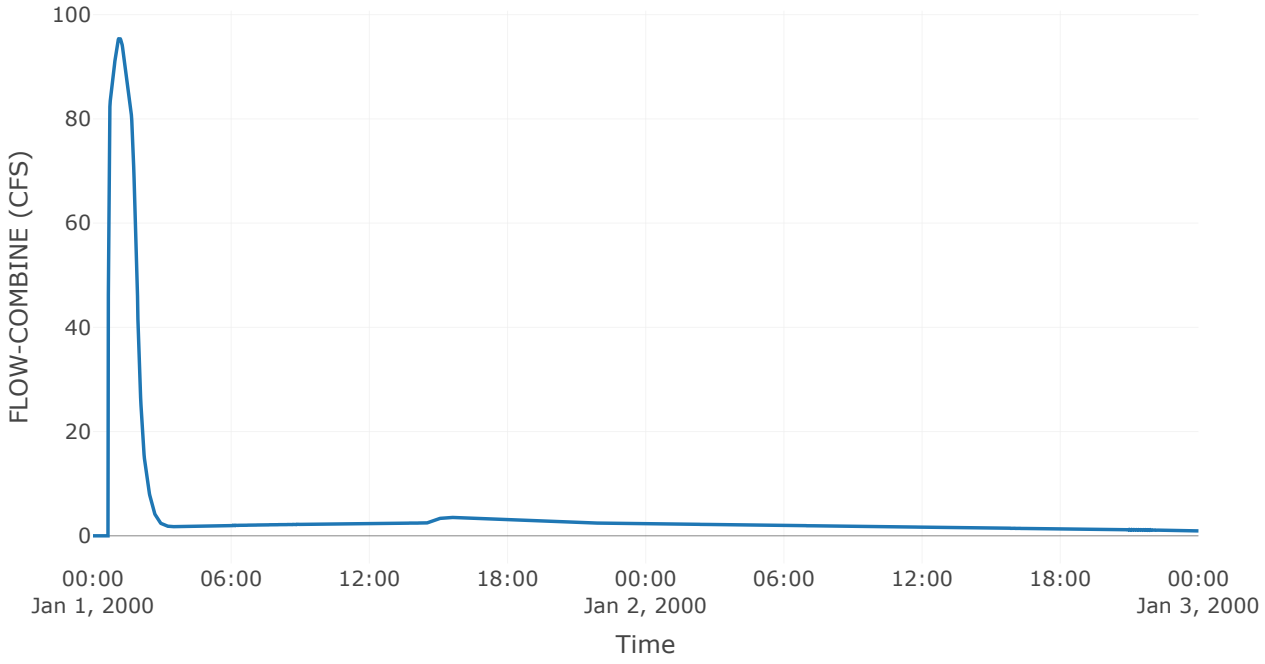



Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

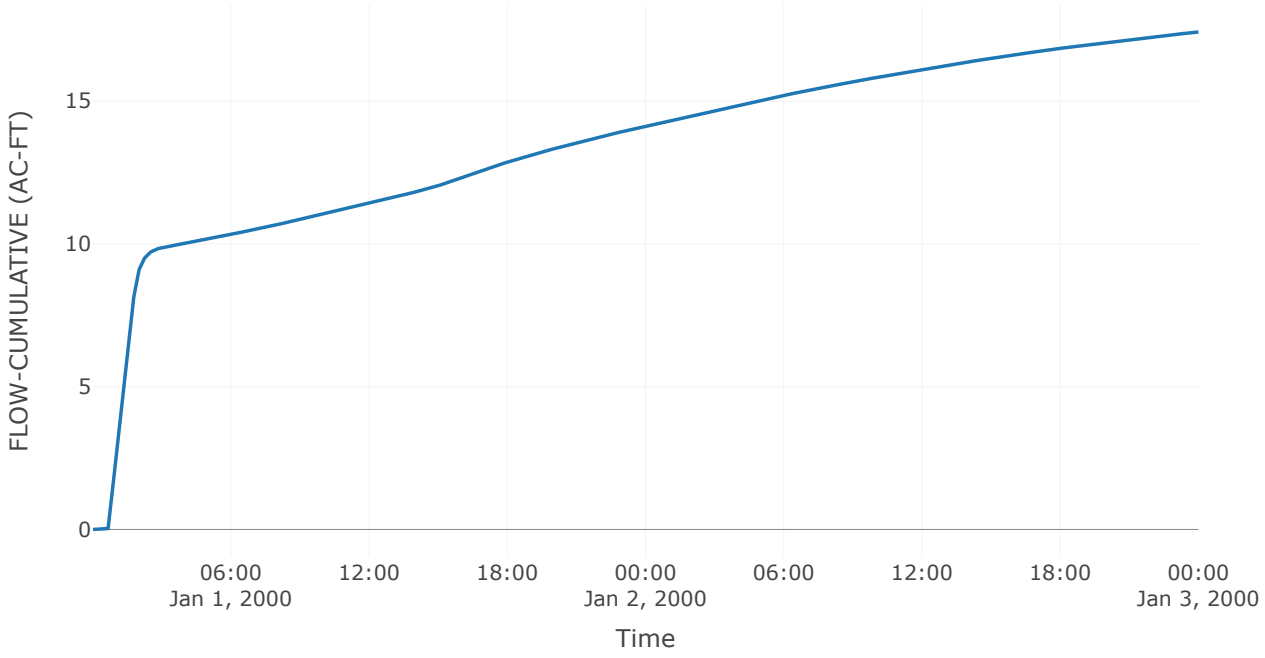
Sink: 55th Street Outlet

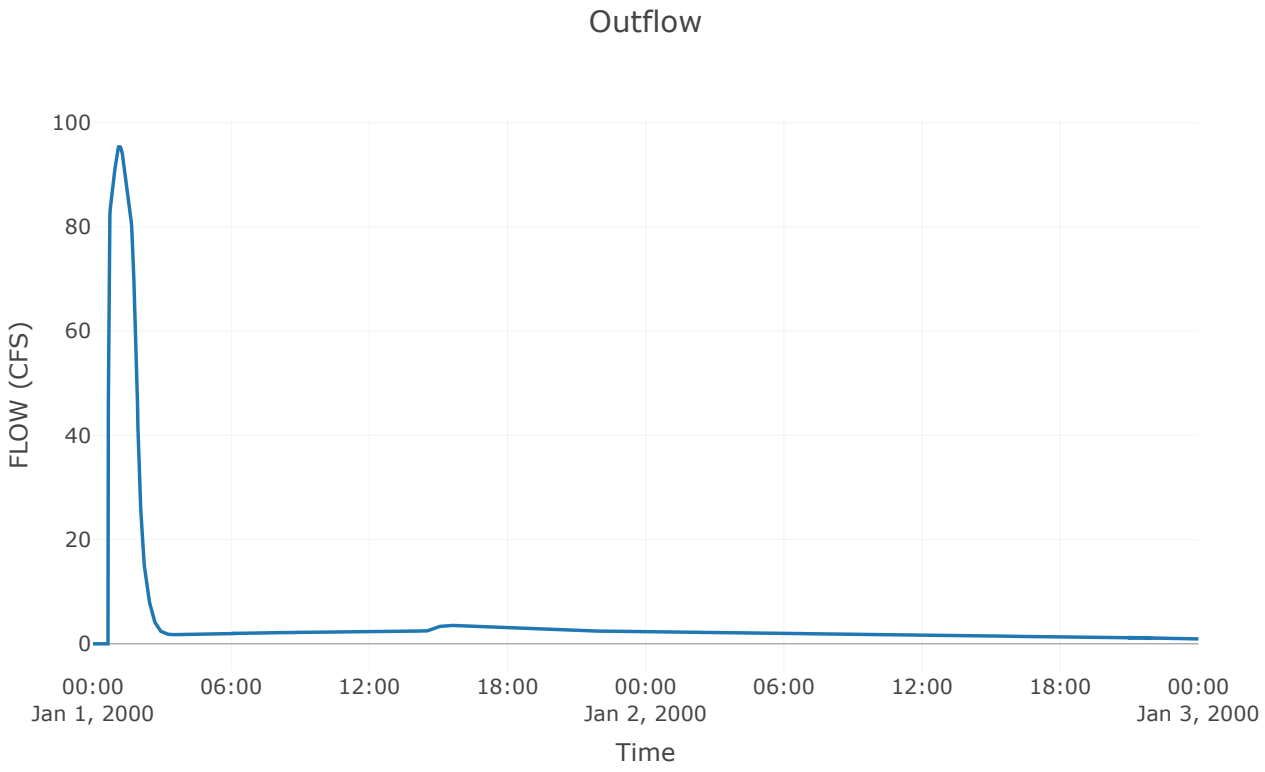
Results: 55th Street Outlet	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2

Combined Inflow



Cumulative Outflow




Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Stormwater Analysis
Proposed Conditions

Curve Number

Project: Heritage Crossing By: AJS Date: 8/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 8/26/2024

Conditions (i.e. Present / Developed): Proposed

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			1.0008	74.06
C	Pavement, Parking, Curb and Gutter	98			0.3374	33.07
C	Carriage Walk	98			0.0644	6.31
C	Driveways	98			0.2829	27.72
C	Stoops & Patios	98			0.0681	6.67
C	Buildings	98			0.6564	64.33
				Totals =	2.4100	212.16

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{212.16}{2.4100} = 88.03$; use CN = **88.03**

Heritage Crossing - Western Springs, IL

10/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

Heritage Crossing - Western Springs, IL

11/4/2024

Proposed Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	654.10	0				0.0000
			0.90	19	0.000	
	655.00	64				0.0004
			1.00	113	0.003	
	656.00	170				0.0030
			1.00	240	0.006	
	657.00	318				0.0085
			1.00	352	0.008	
	658.00	388				0.0166
			1.00	416	0.010	
	659.00	444				0.0262
			0.70	325	0.007	
Overland Weir Flow	659.70	485				0.0336
			0.30	148	0.003	
	660.00	503				0.0370
			1.00	534	0.012	
	661.00	565				0.0493

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

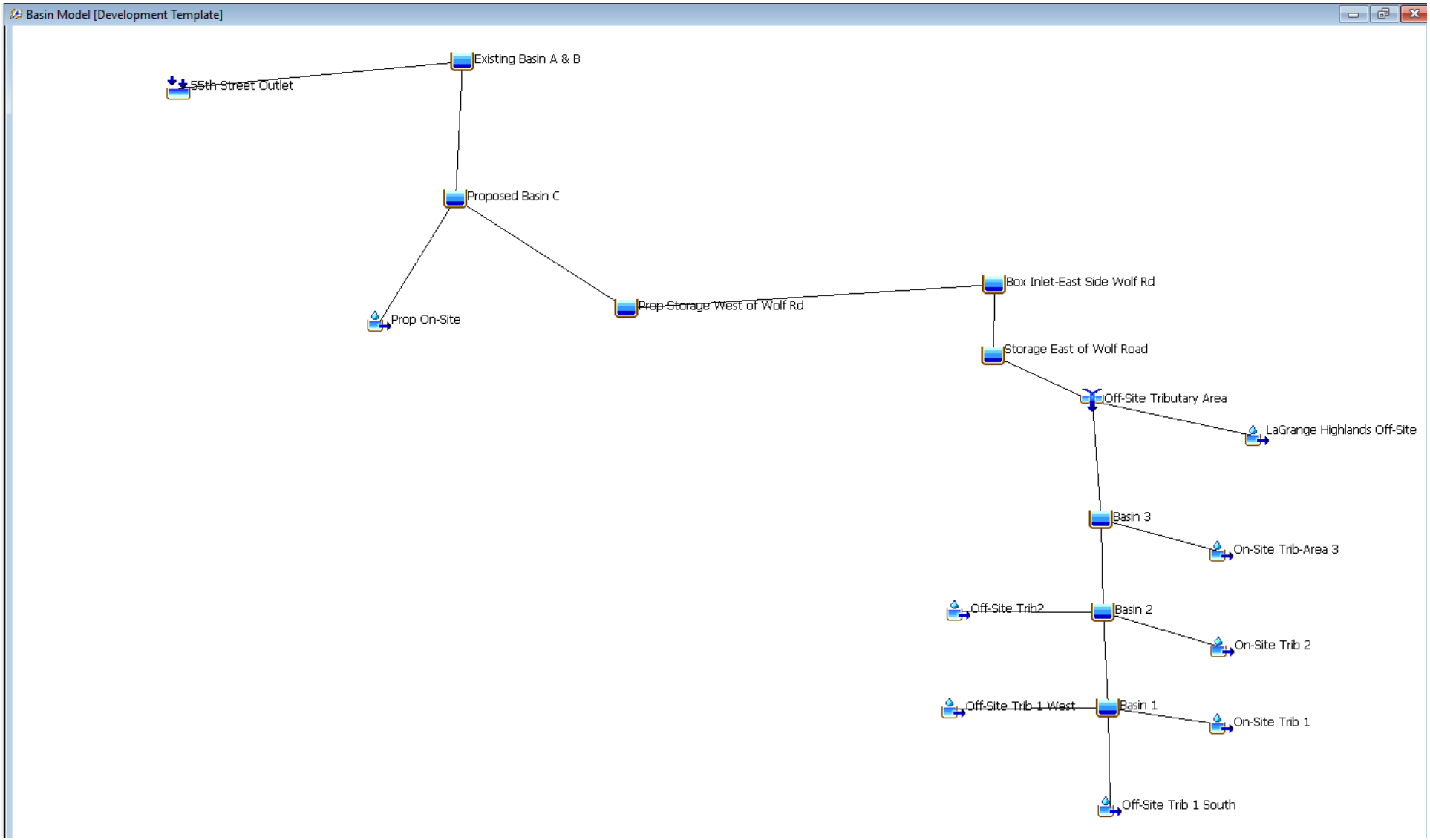
8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081


Basin Model [Development Template]
Existing Basin A & B
55th Street Outlet
Proposed Basin C
Prop On-Site
Prop Storage West of Wolf Rd
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:43

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Prop Storage West of Wolf Rd	0.27	75.06	01Jan2000, 01:10	0.77
Prop On - Site	0	2.53	01Jan2000, 00:33	0.92
Proposed Basin C	0.27	59.4	01Jan2000, 01:18	0.73
Existing Basin A & B	0.27	59.36	01Jan2000, 01:19	0.58

55th Street Outlet	0.27	59.36	01Jan2000, 01:19	0.58

Subbasin: On-Site Trib 1

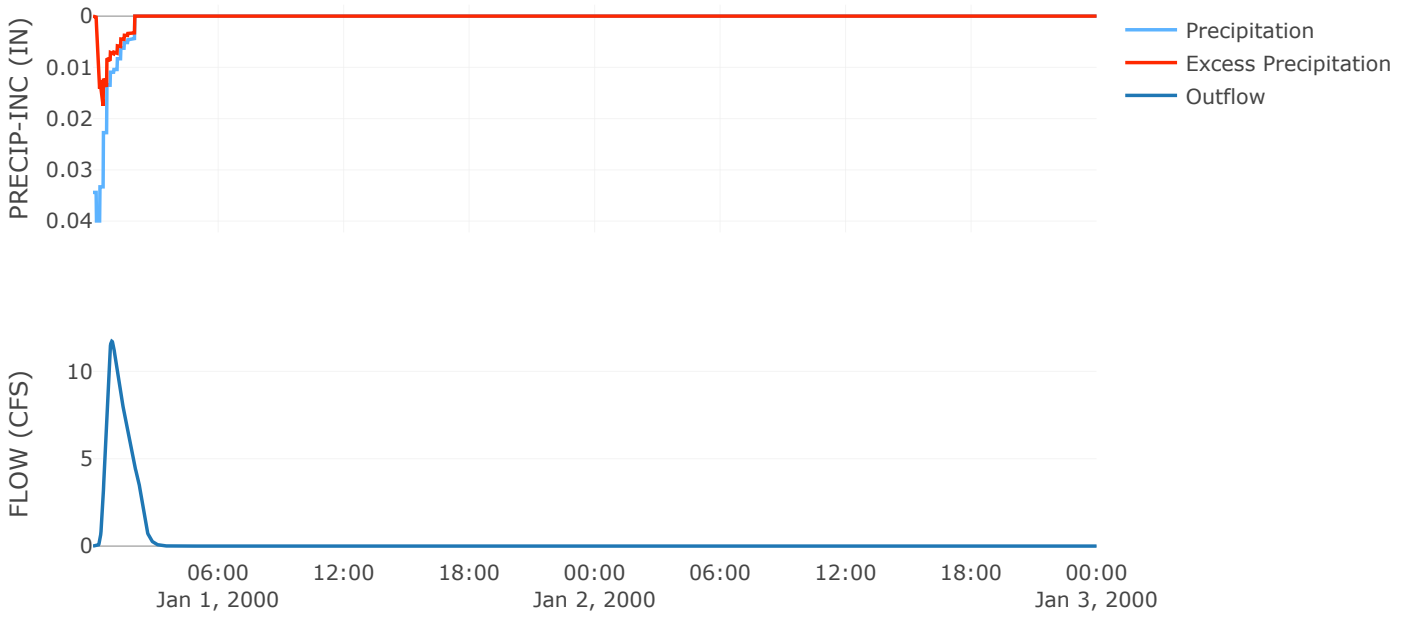
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

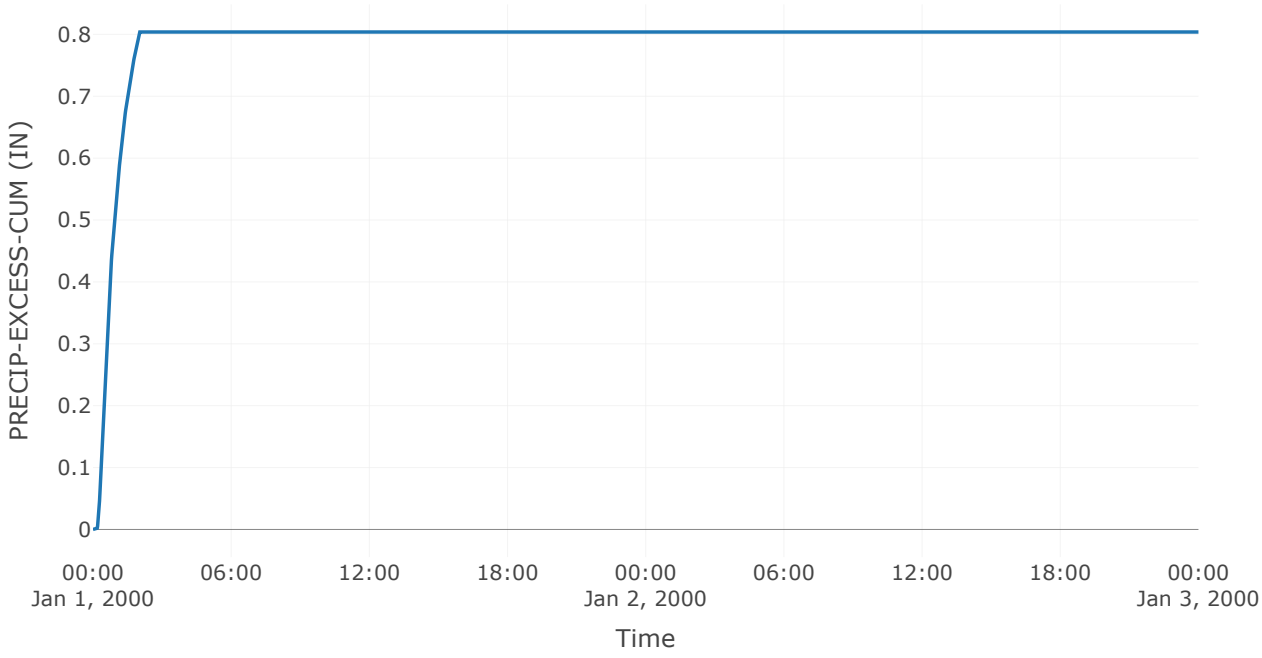
Transform: Scs	
Lag	21
Unitgraph Type	Standard

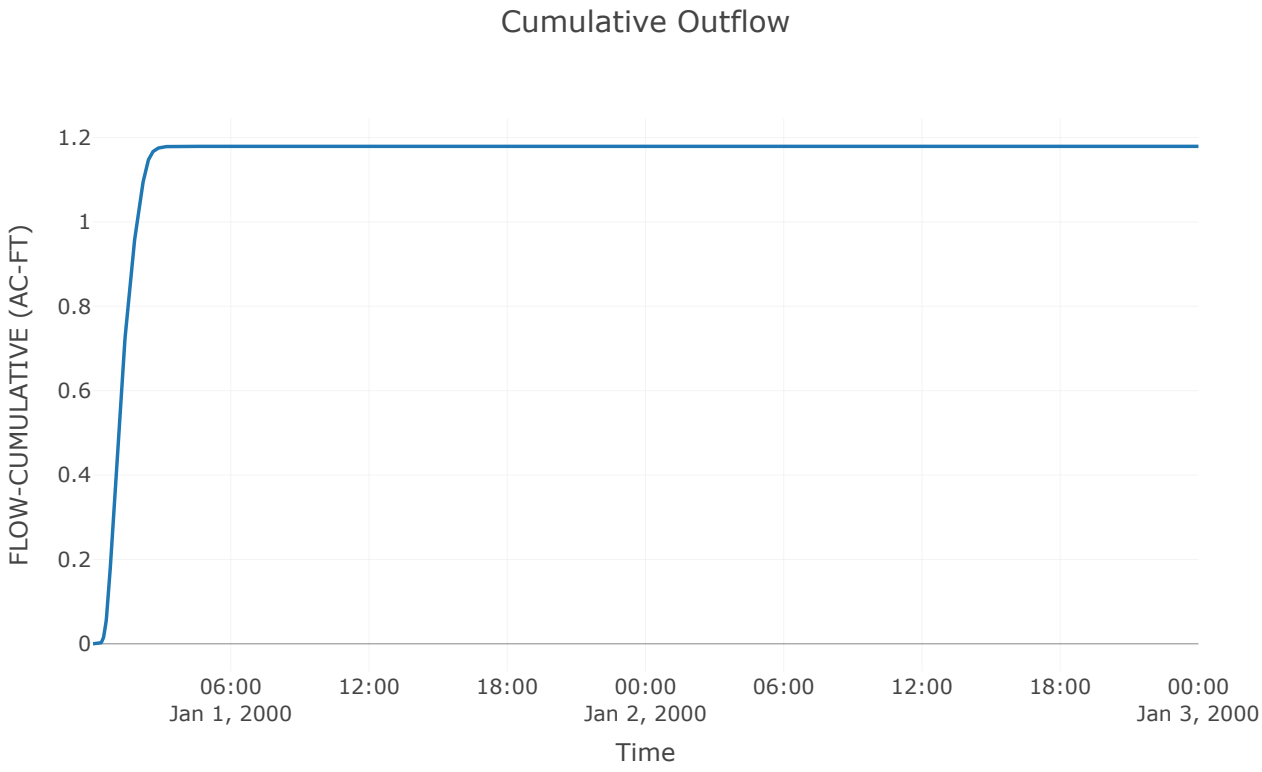
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

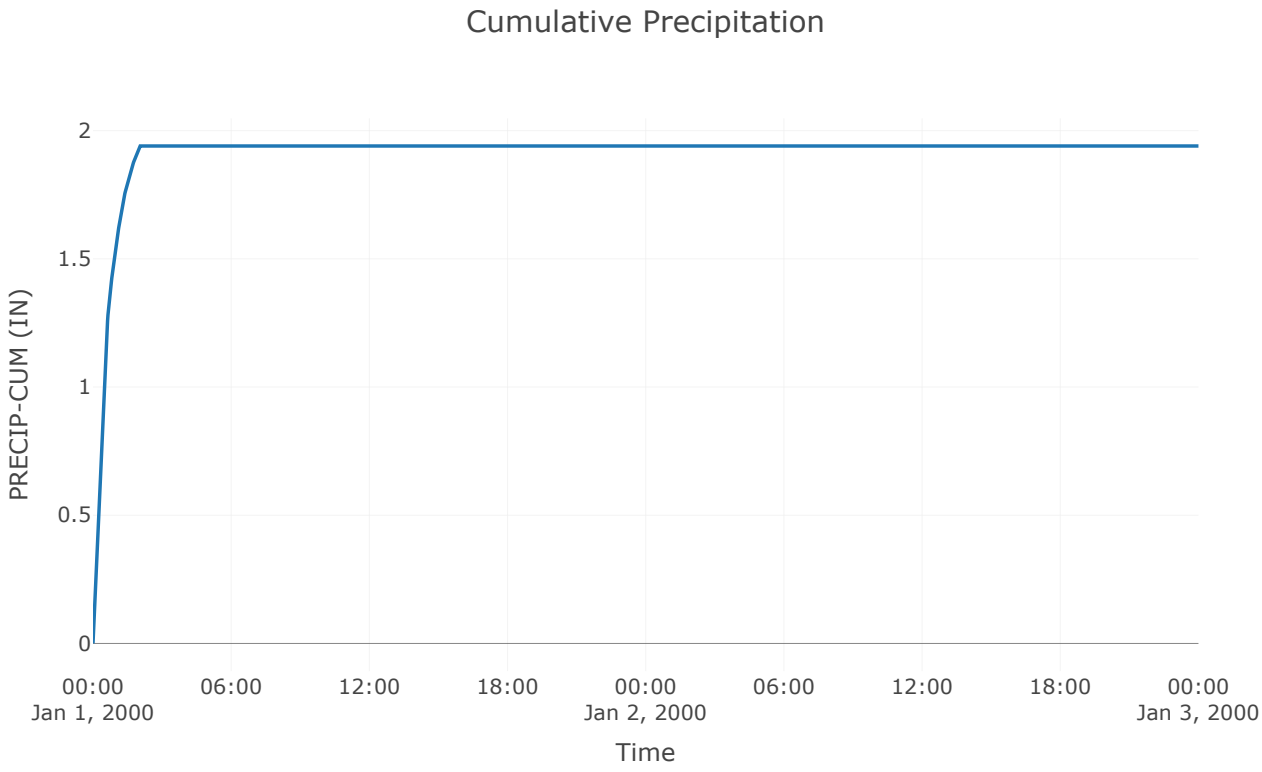
Precipitation and Outflow

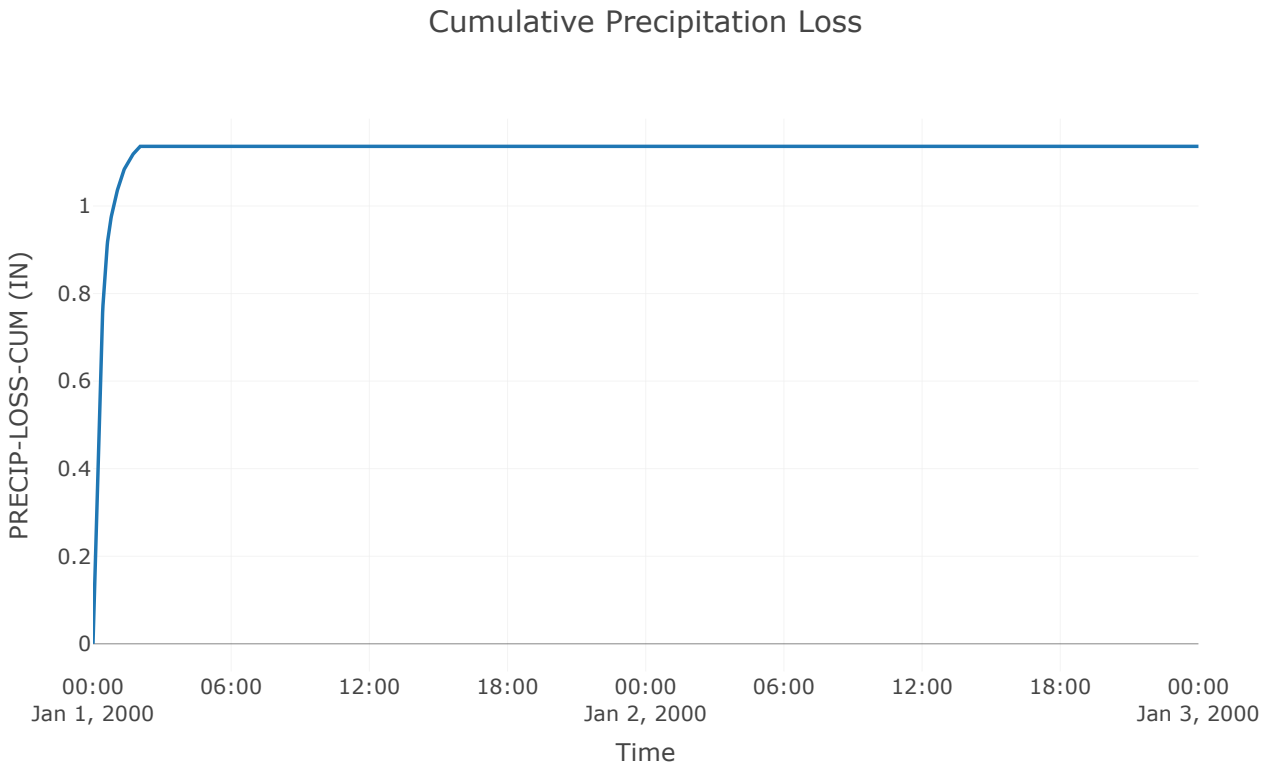


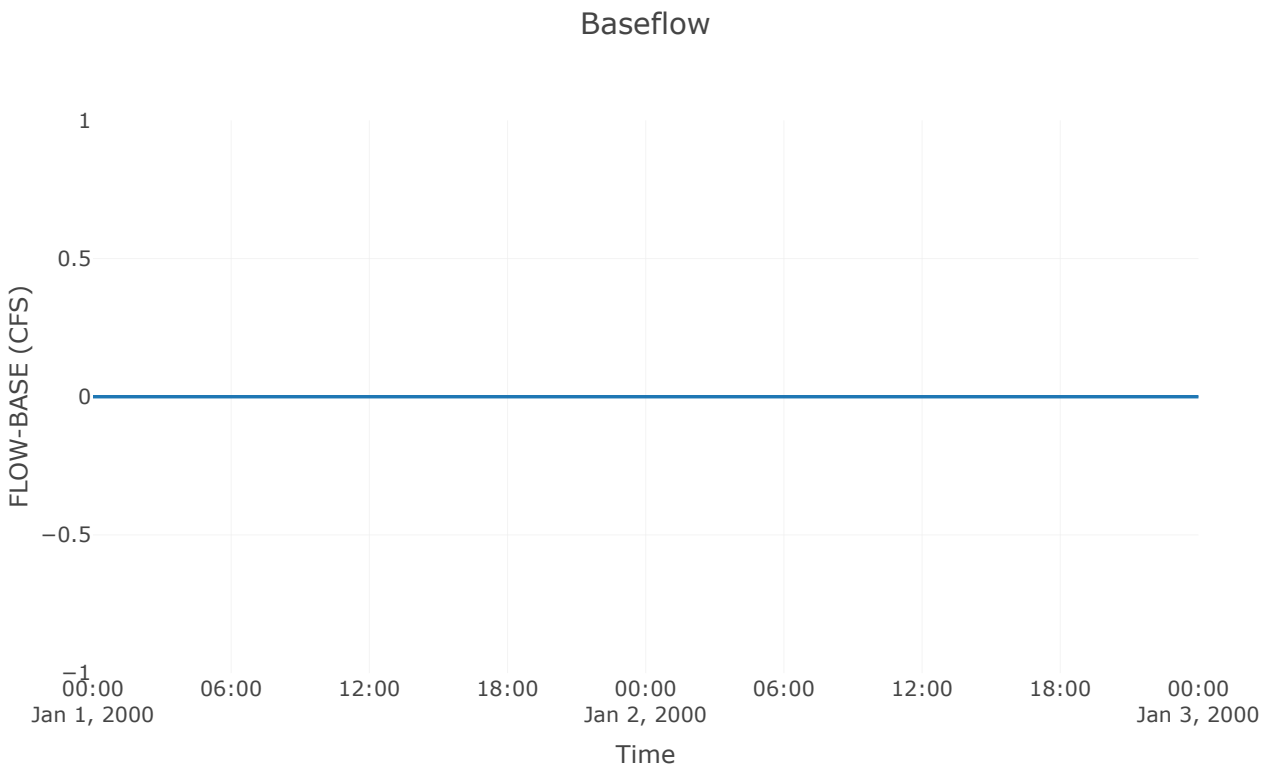
Cumulative Excess Precipitation

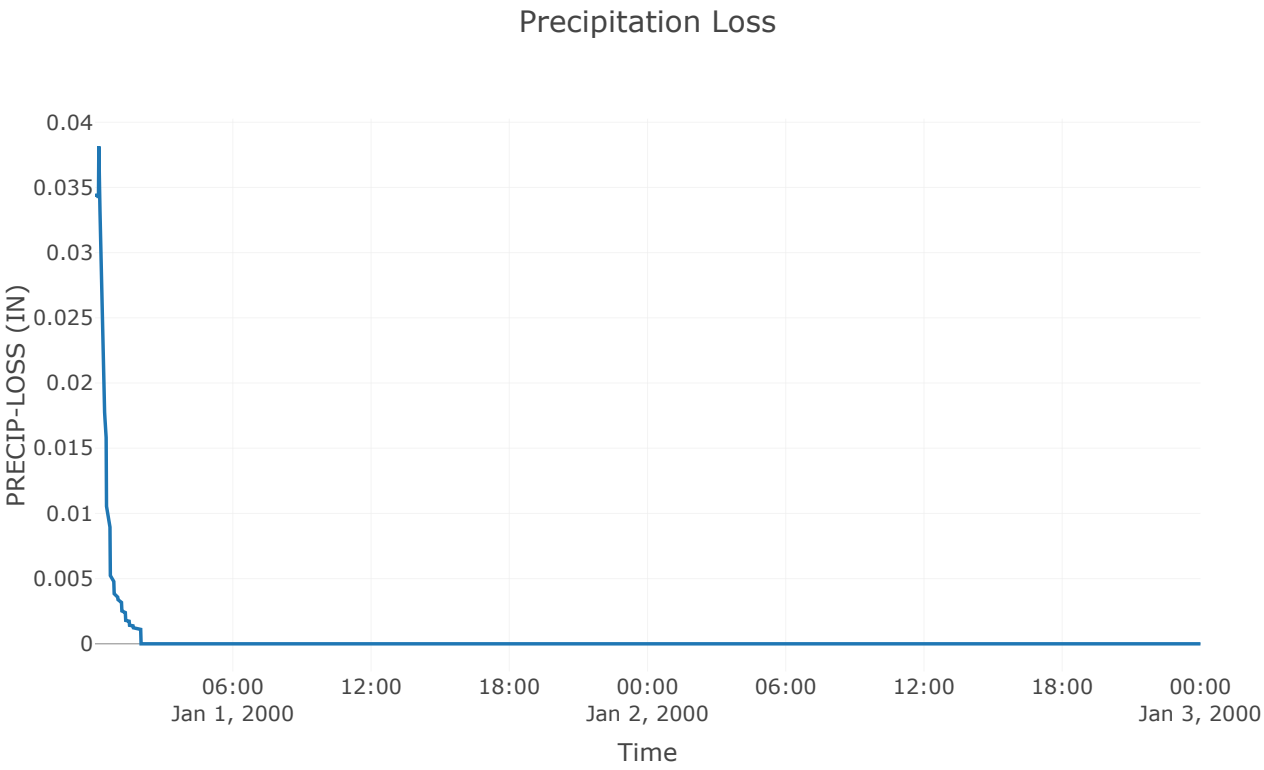


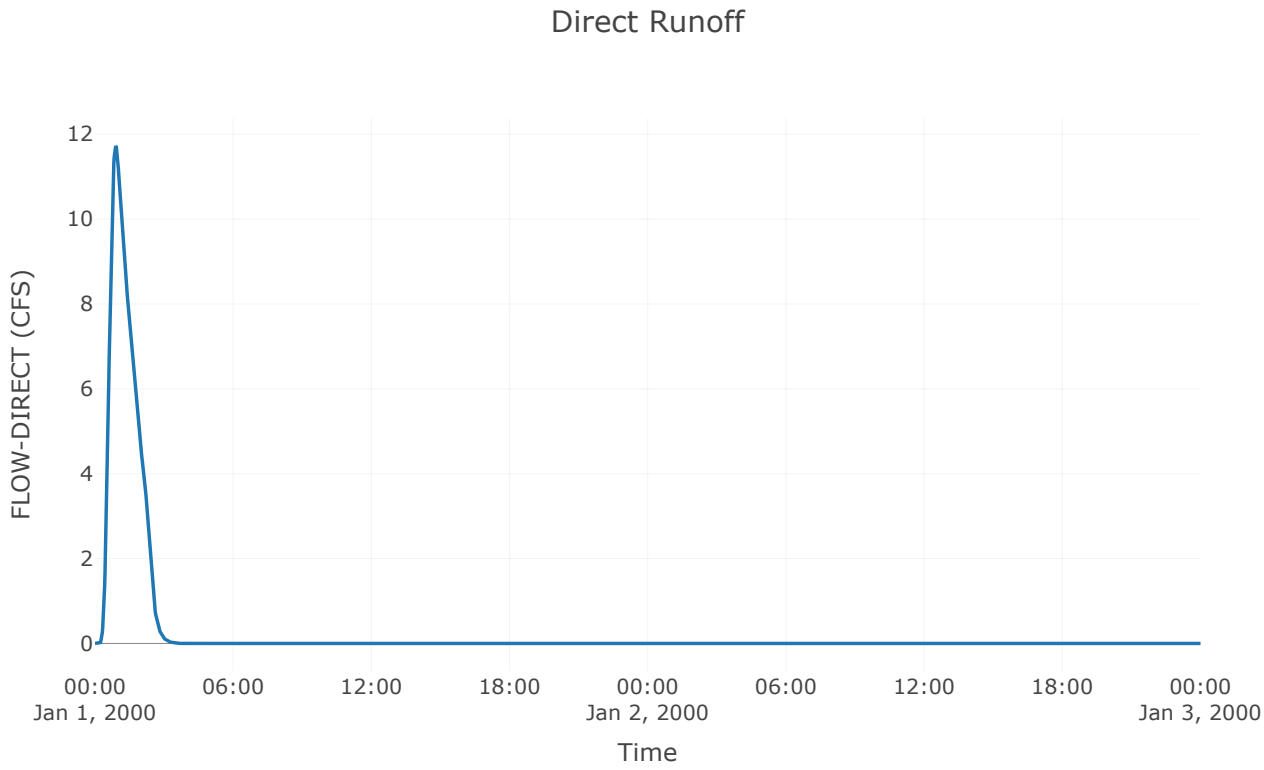

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

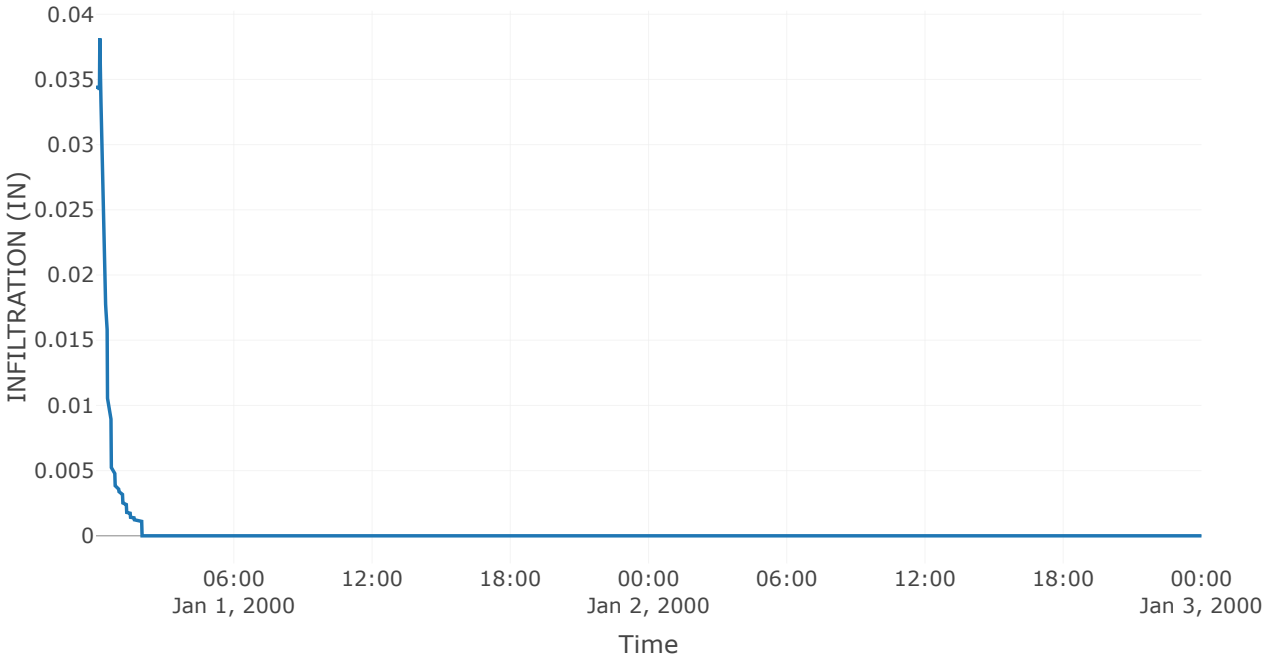

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

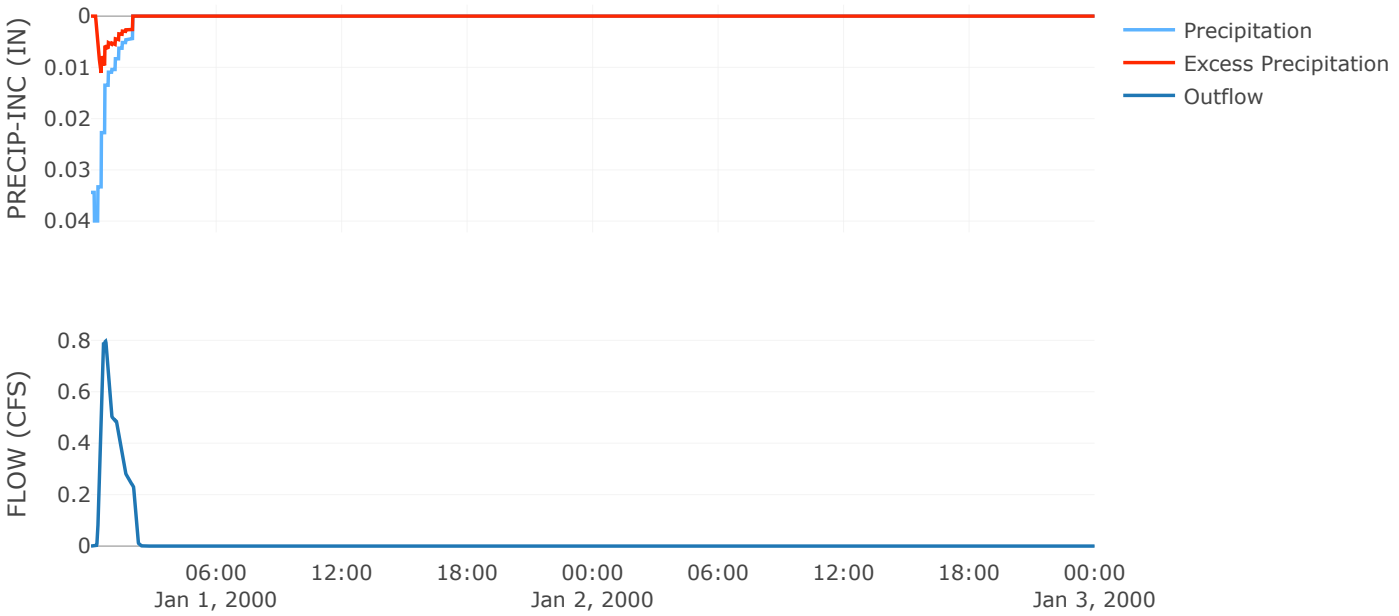
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

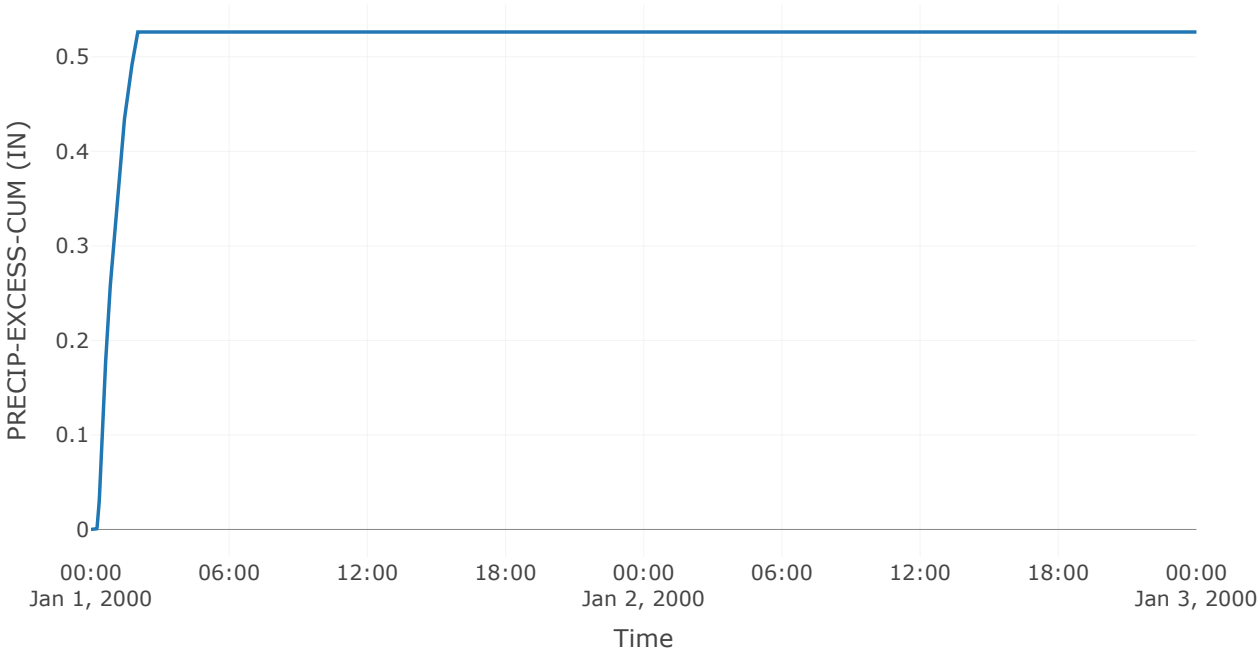
Transform: Scs	
Lag	6
Unitgraph Type	Standard

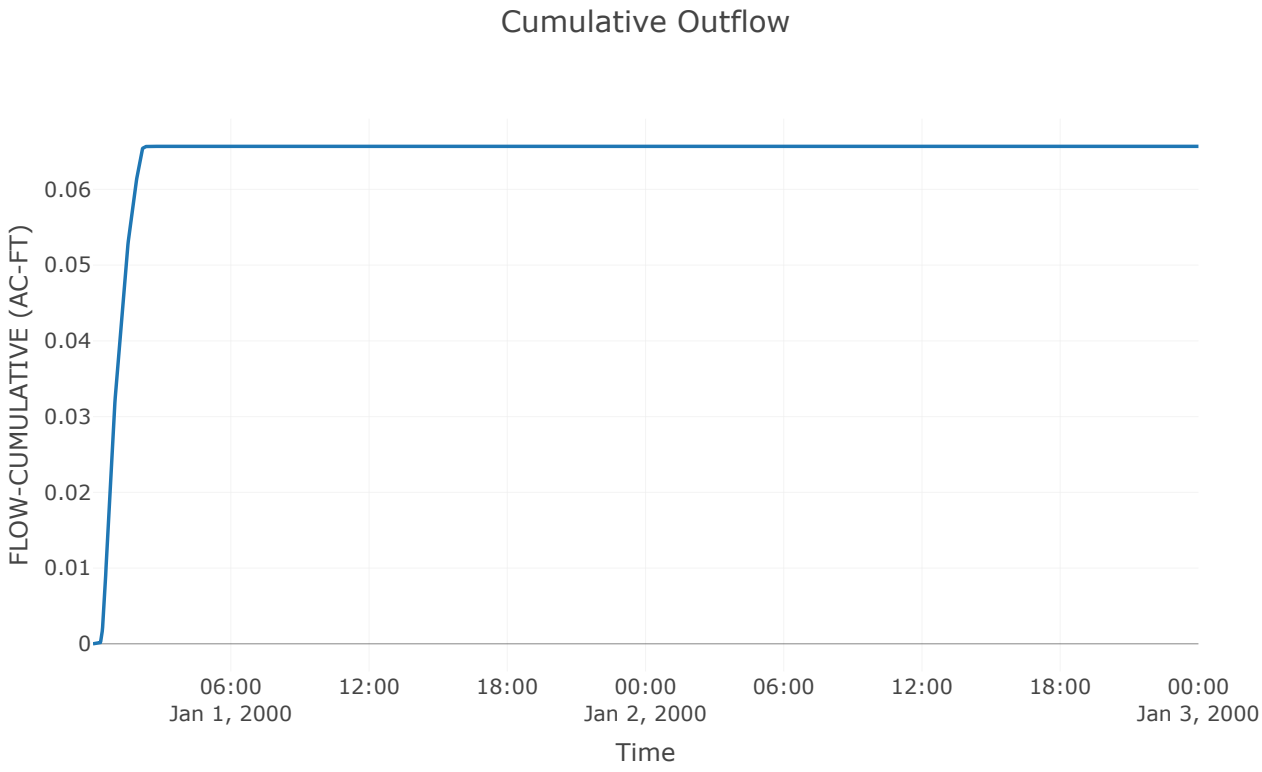
Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

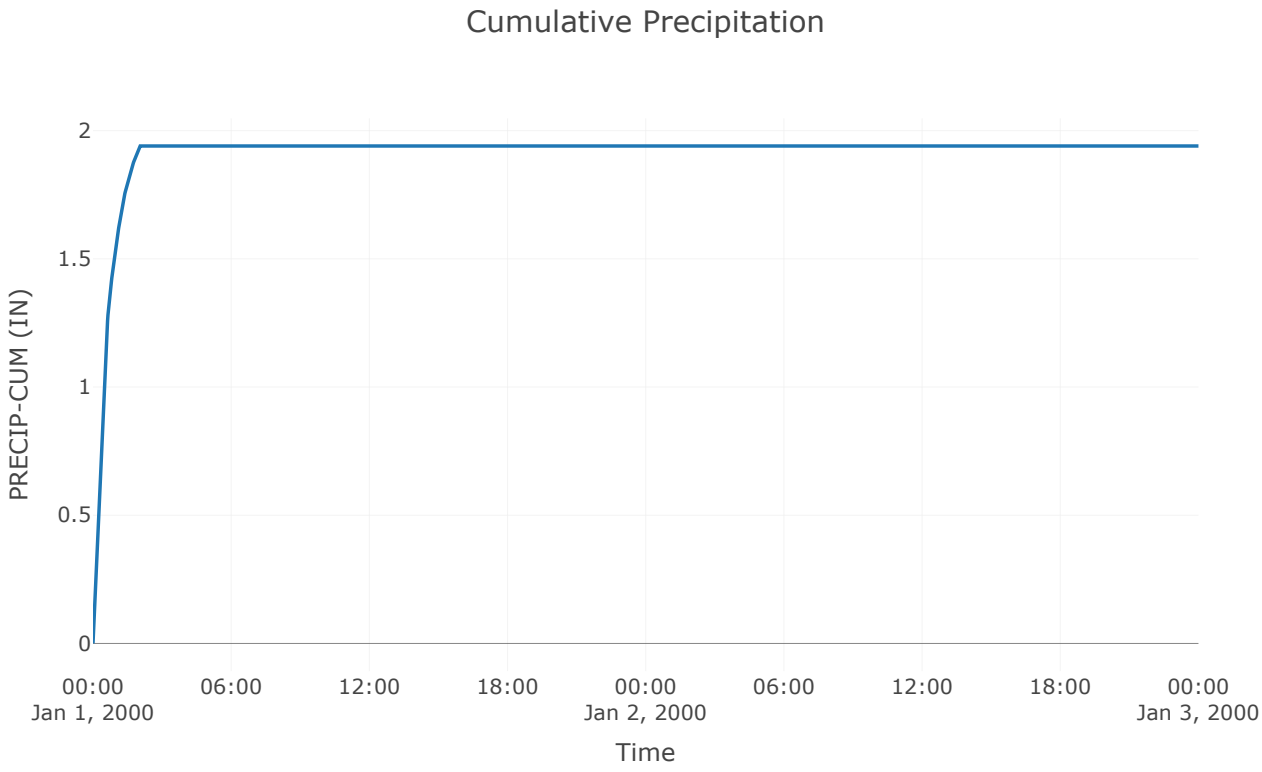
Precipitation and Outflow

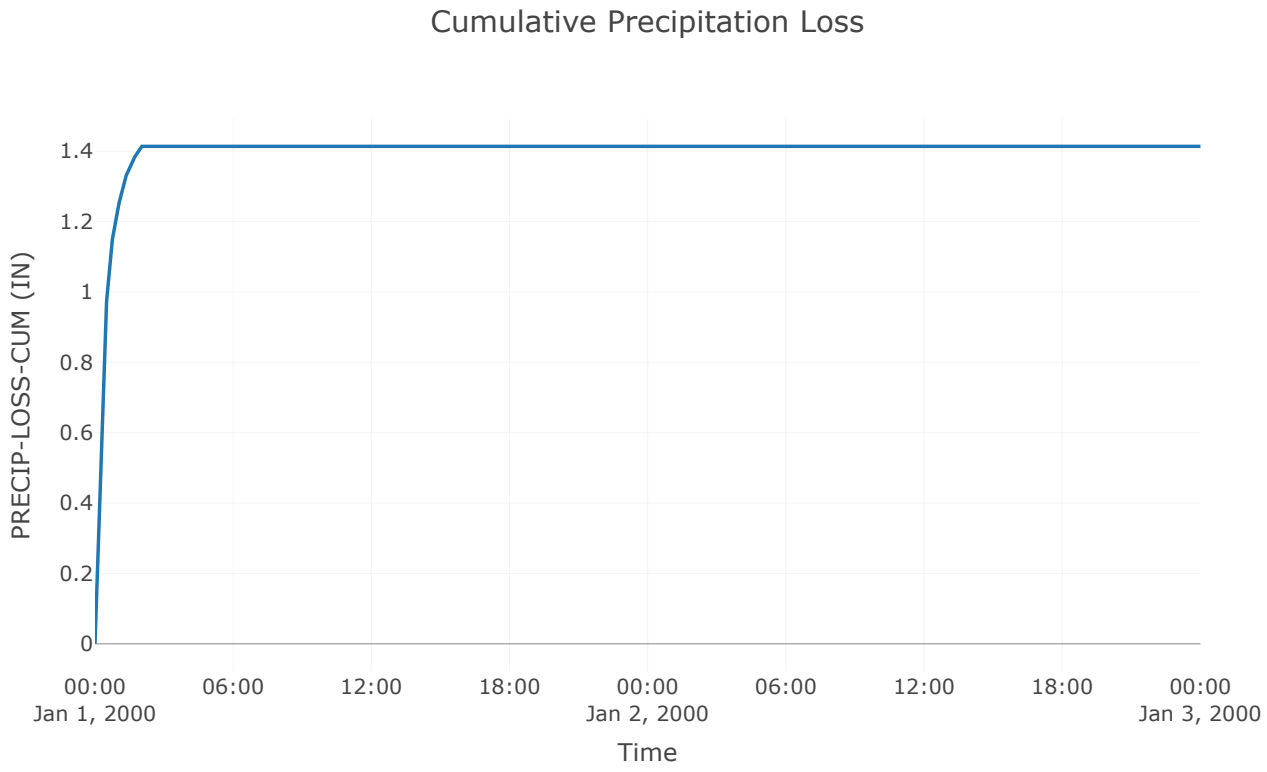


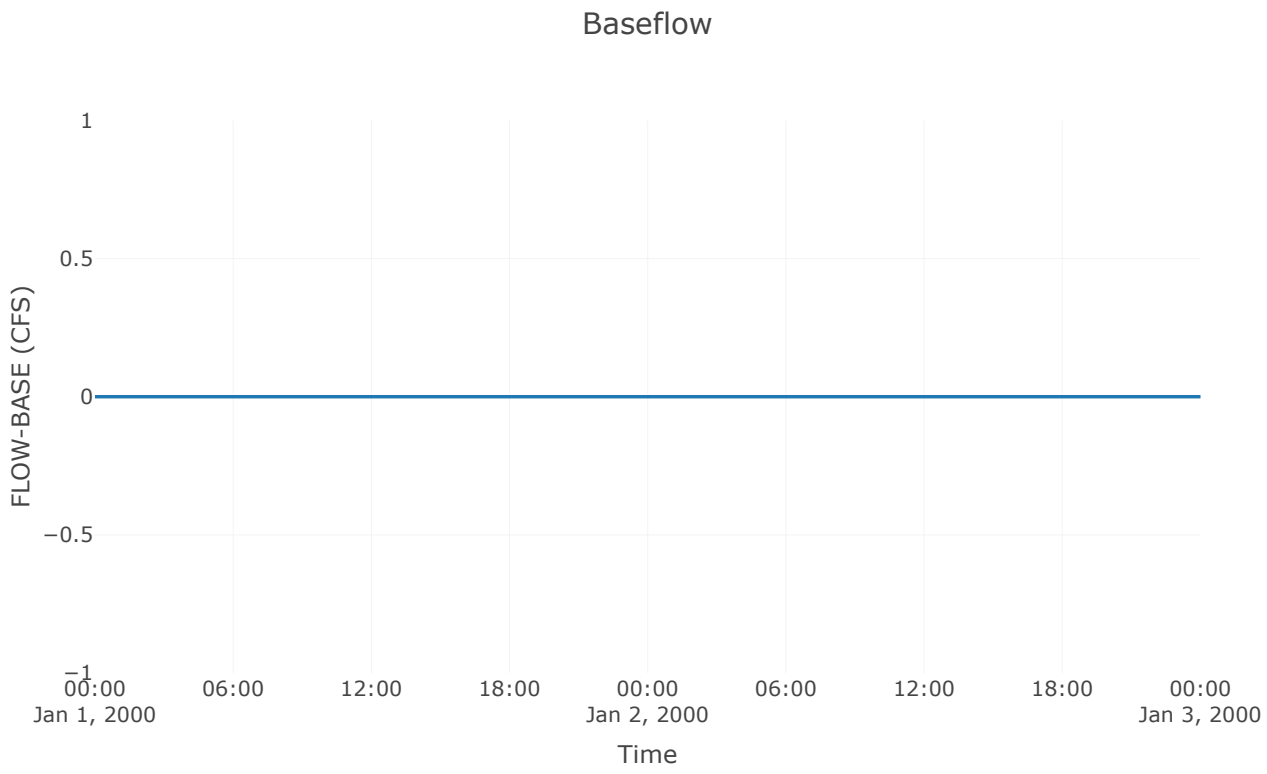
Cumulative Excess Precipitation



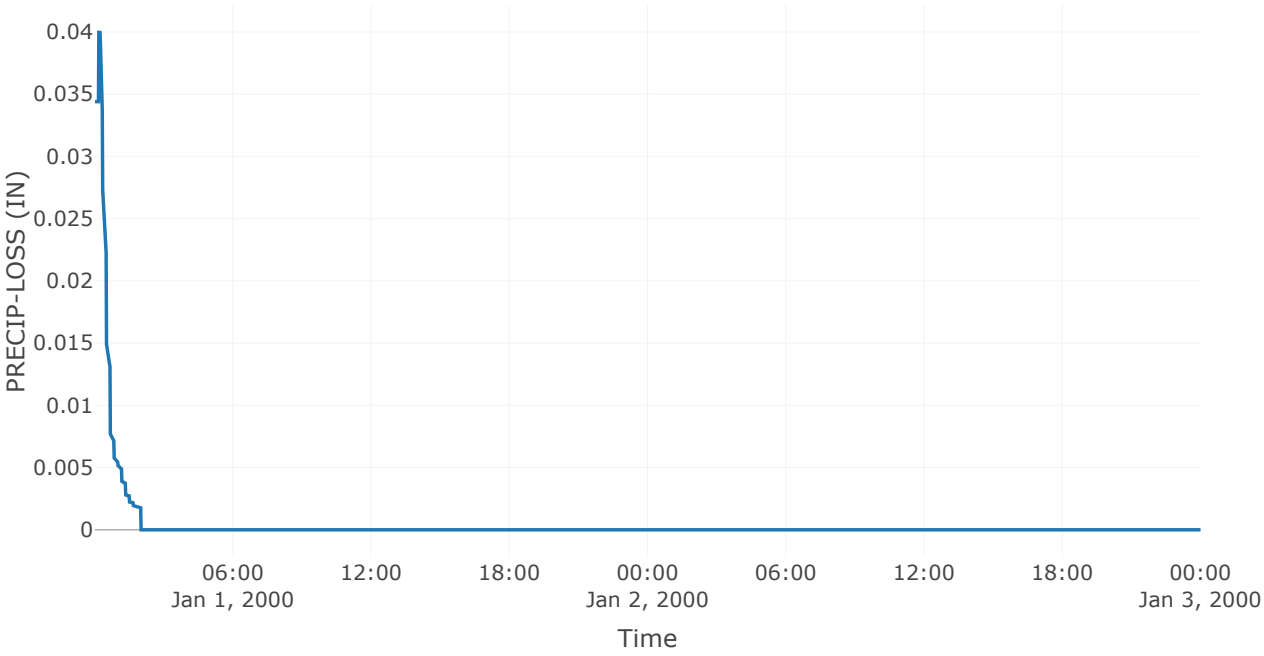

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

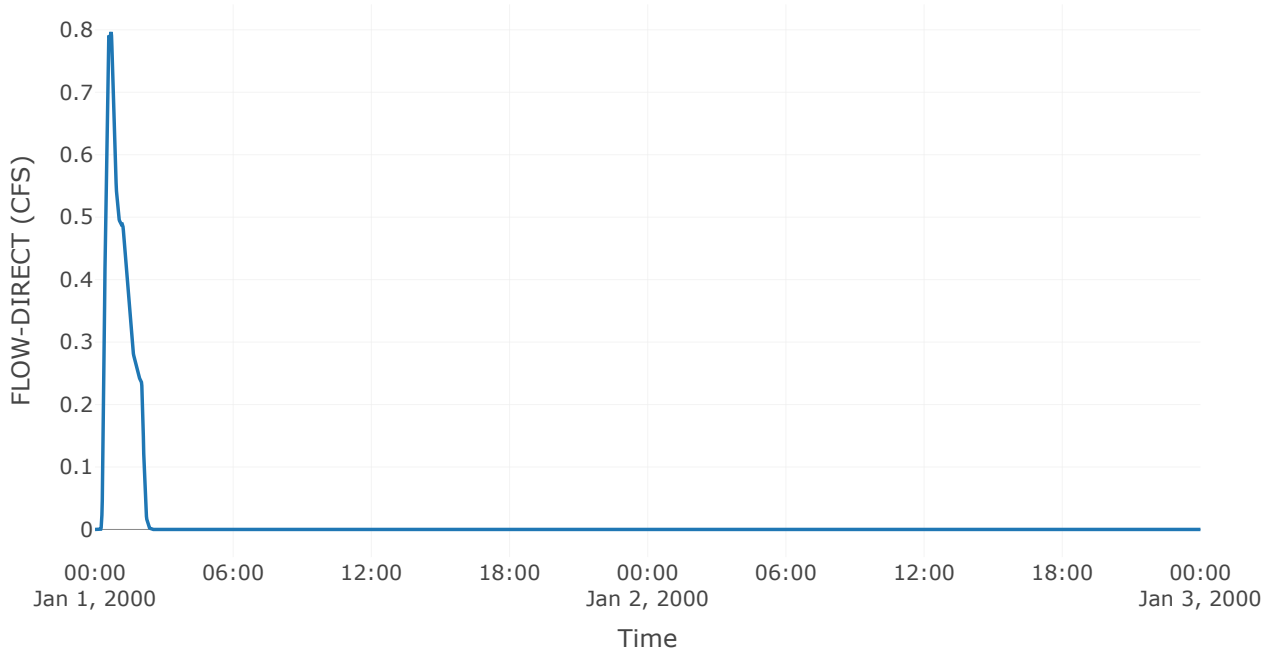

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

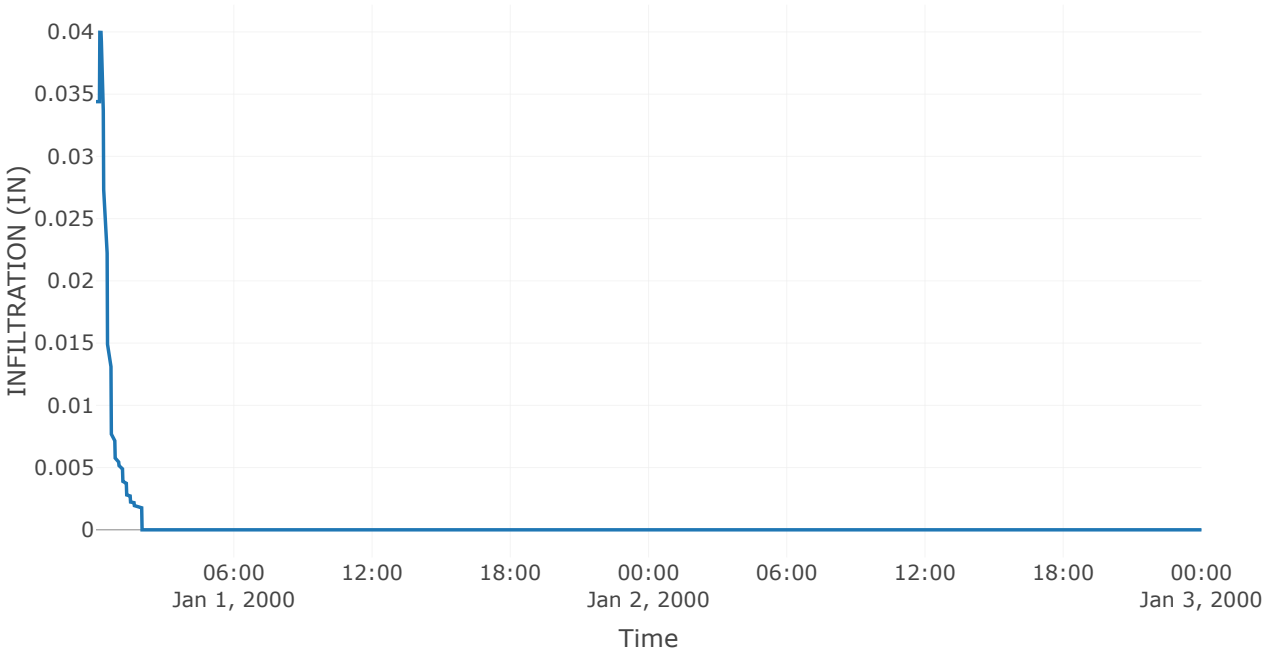

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

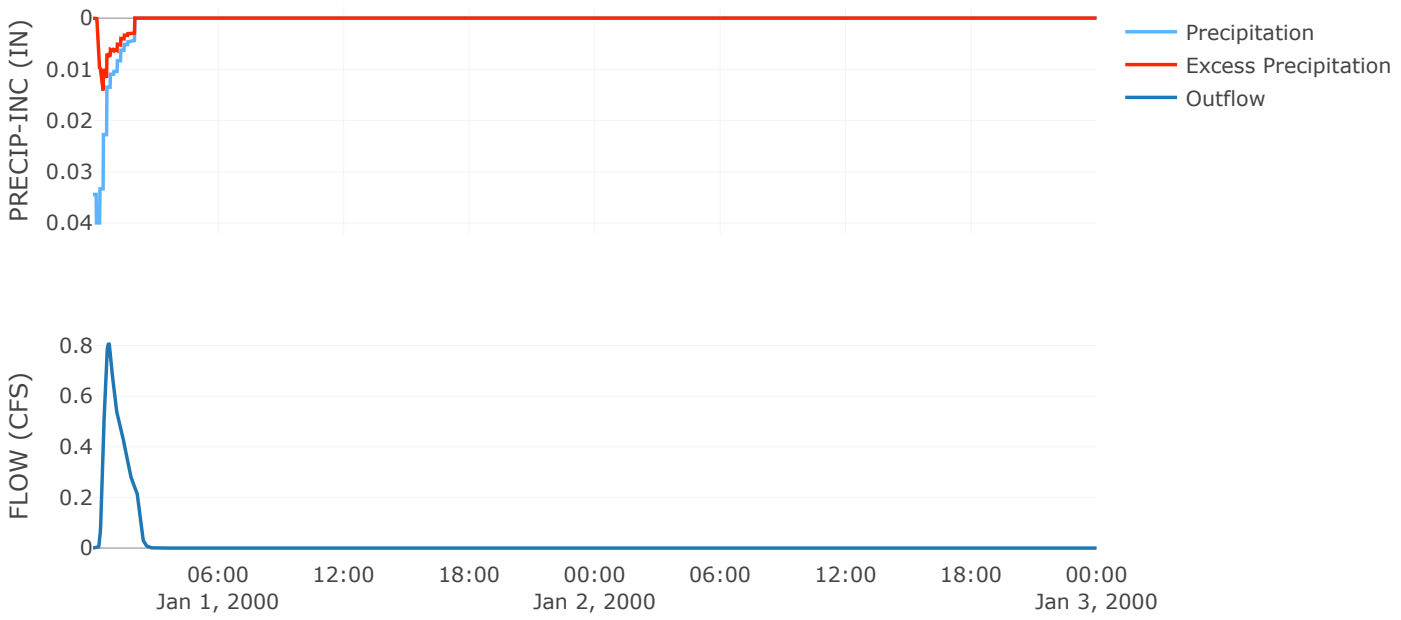
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

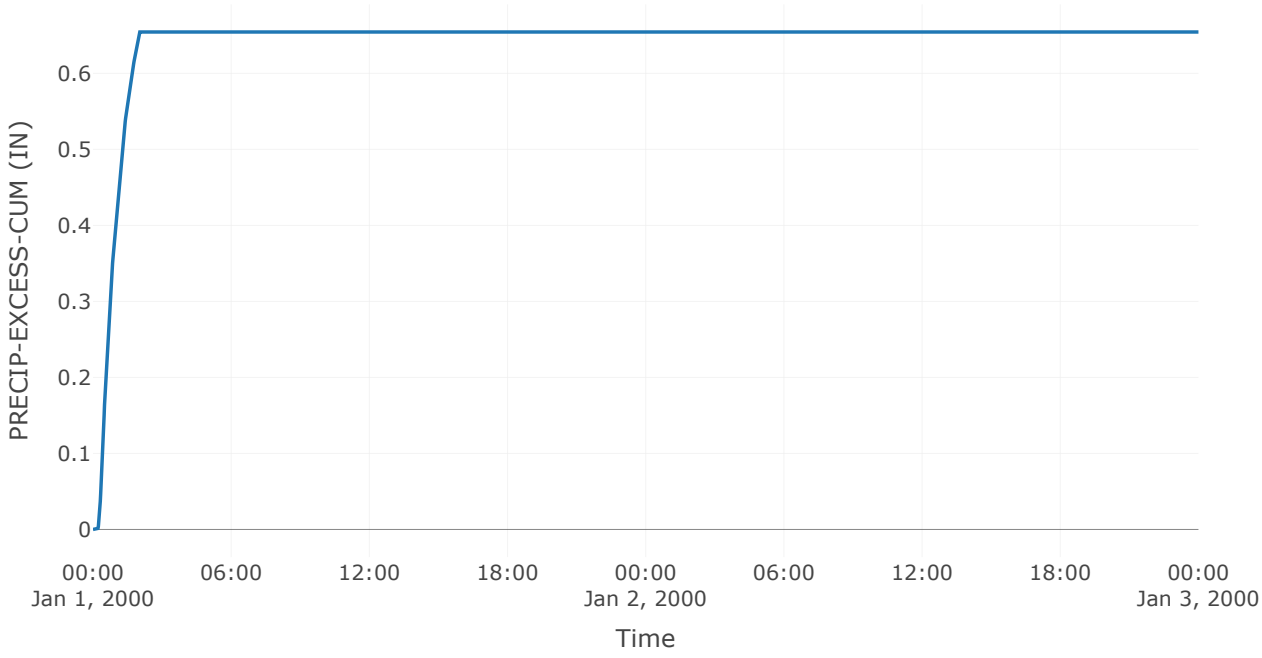
Transform: Scs	
Lag	12
Unitgraph Type	Standard

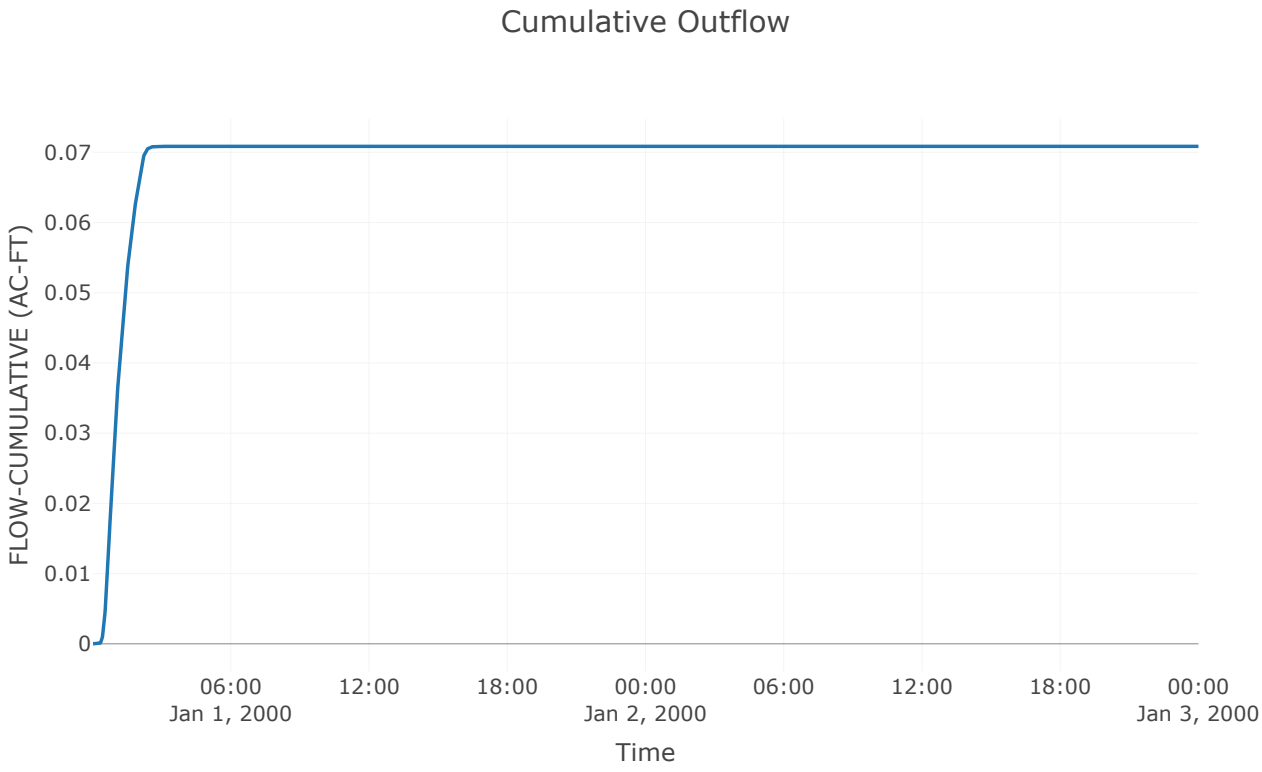
Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

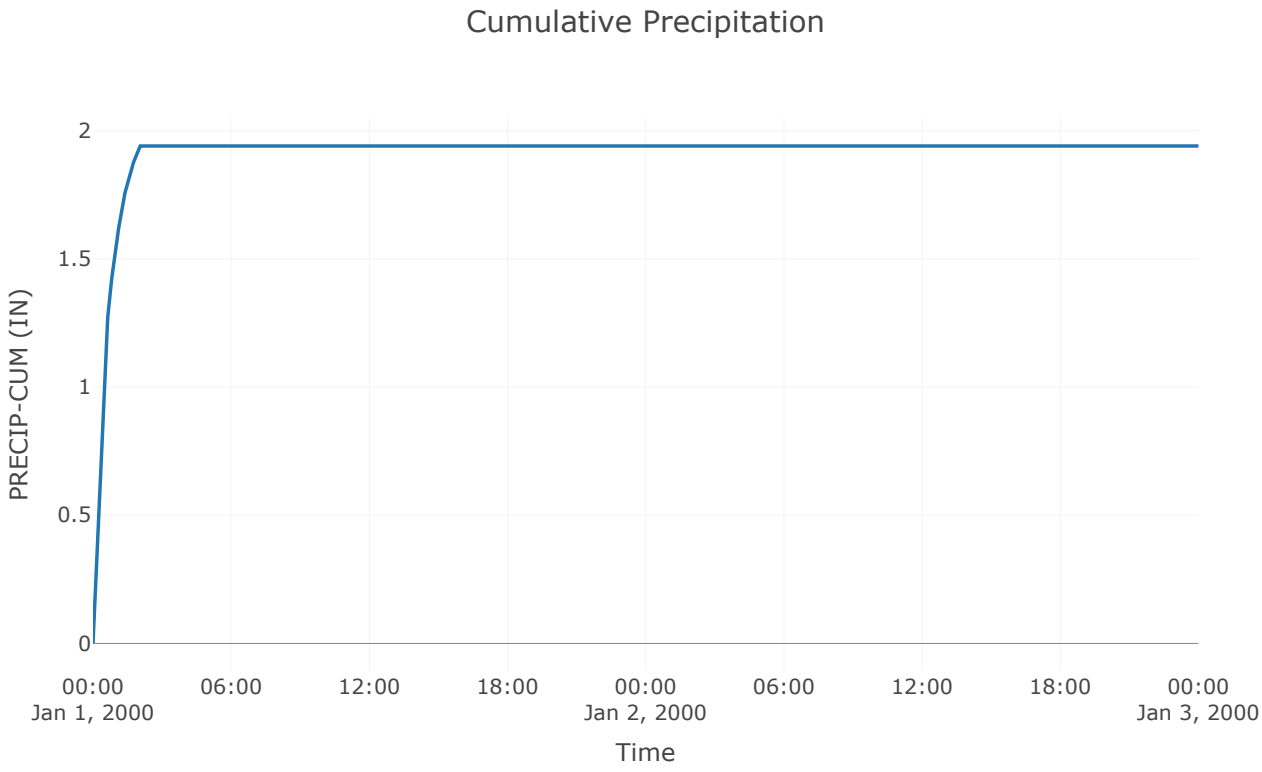
Precipitation and Outflow

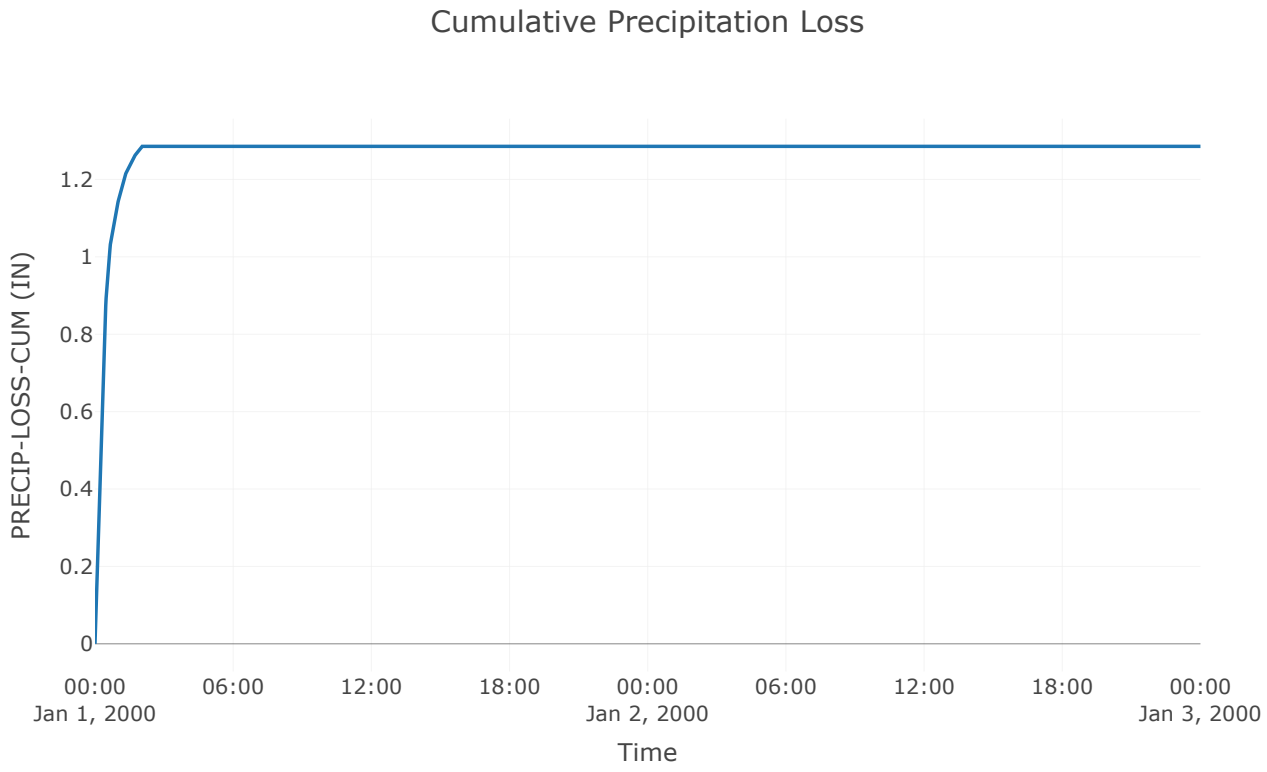


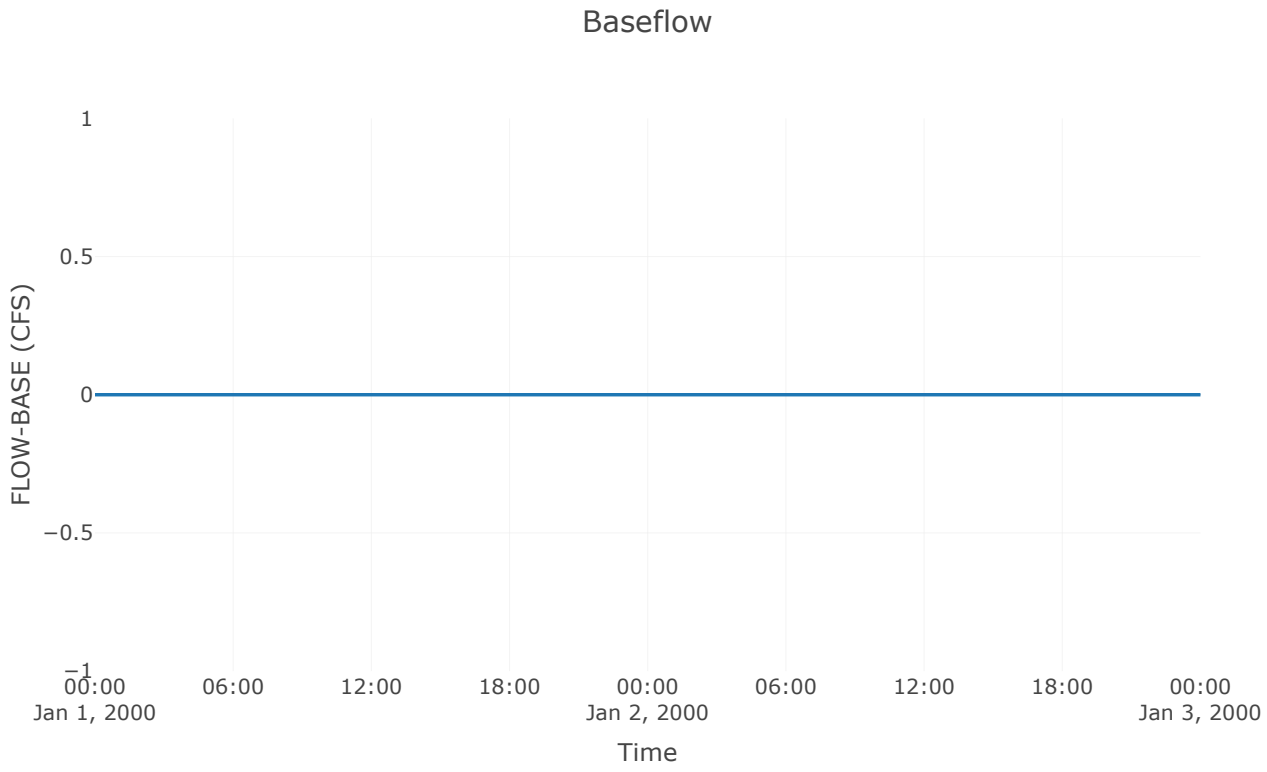
Cumulative Excess Precipitation



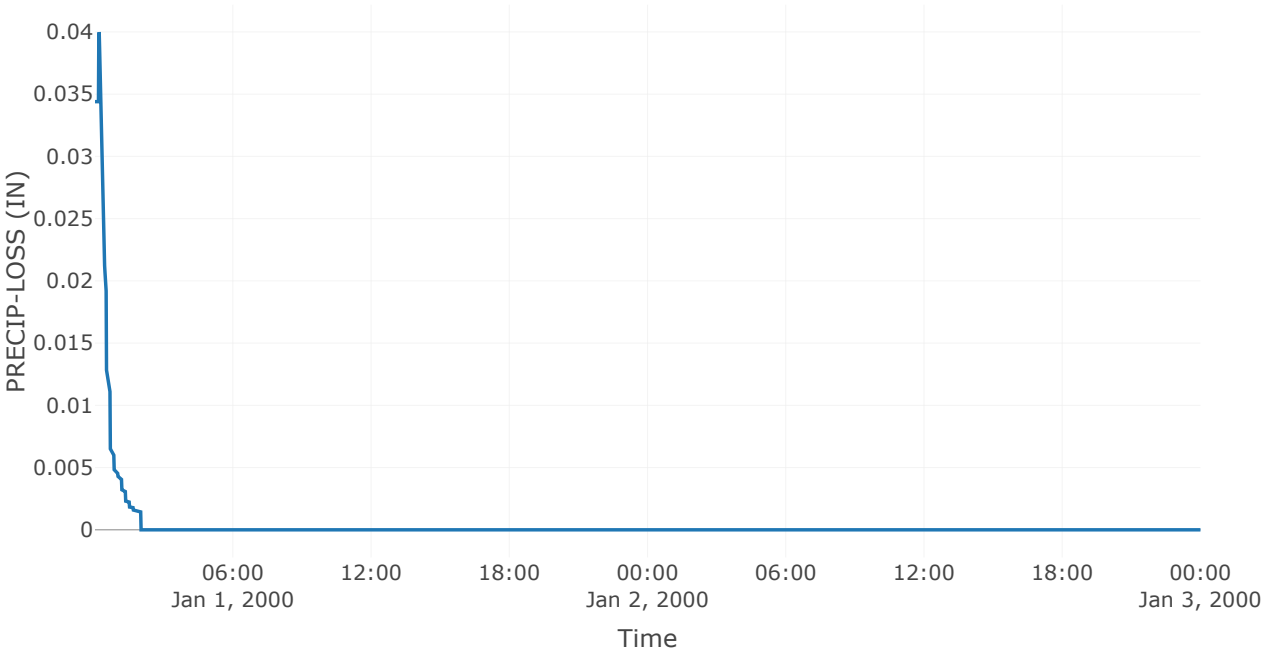

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

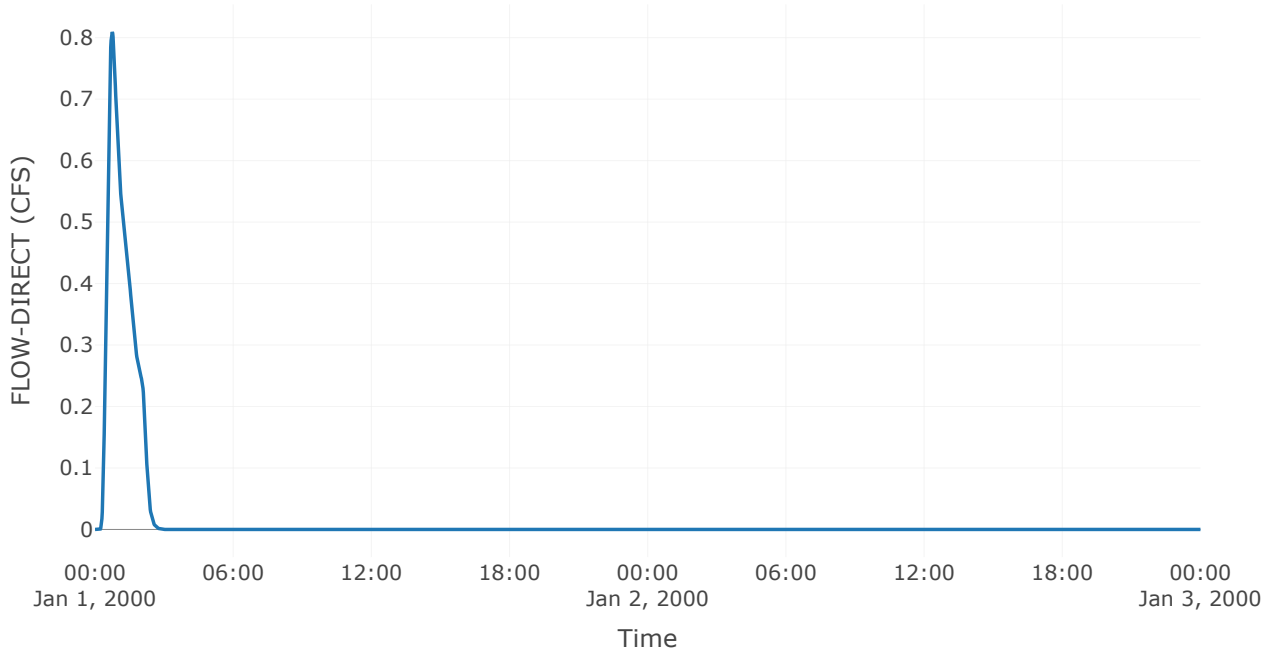

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

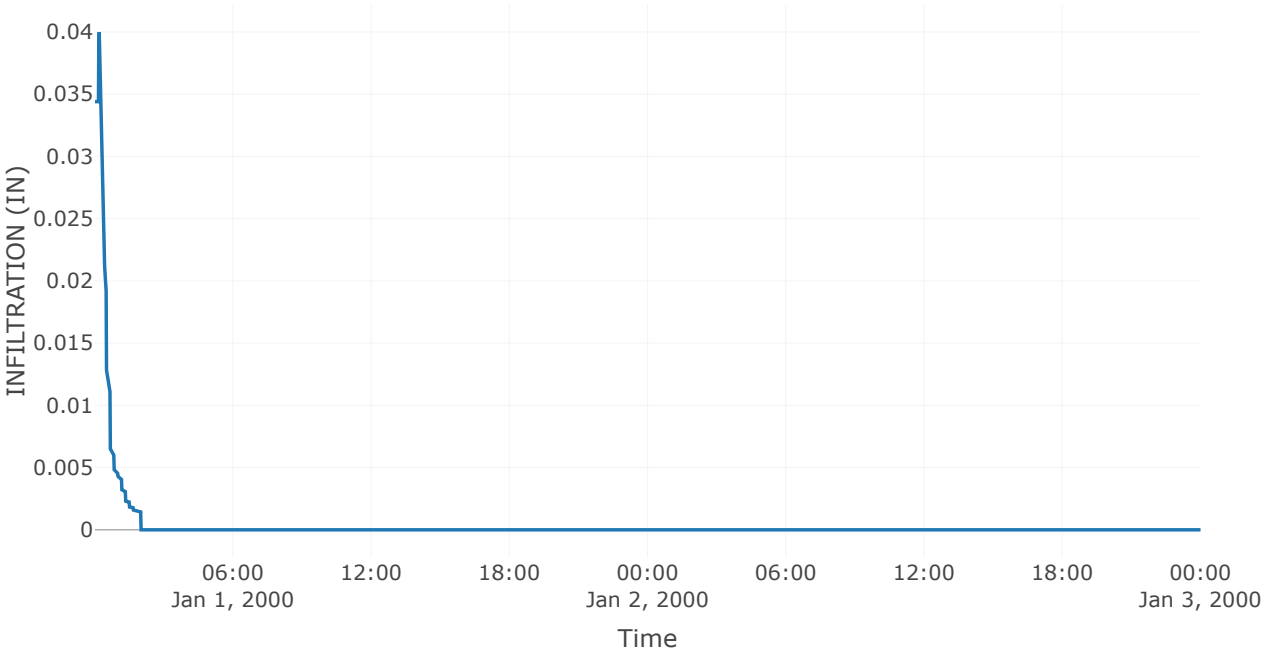

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



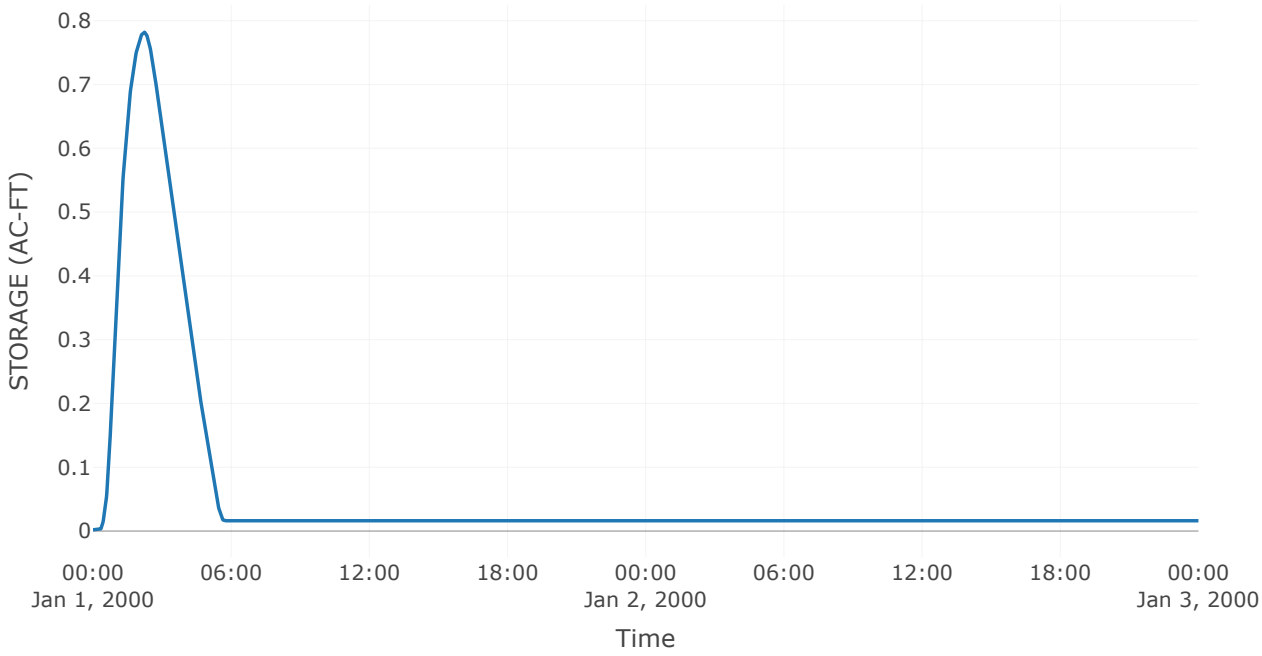

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

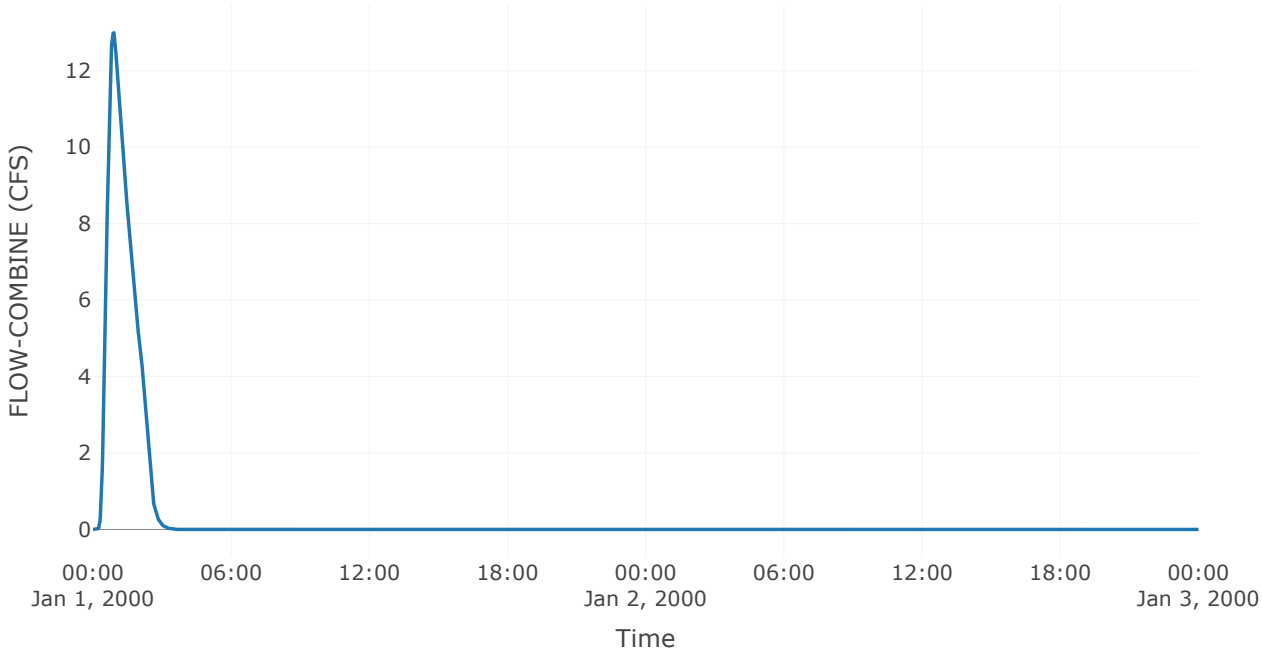
Downstream : Basin 2

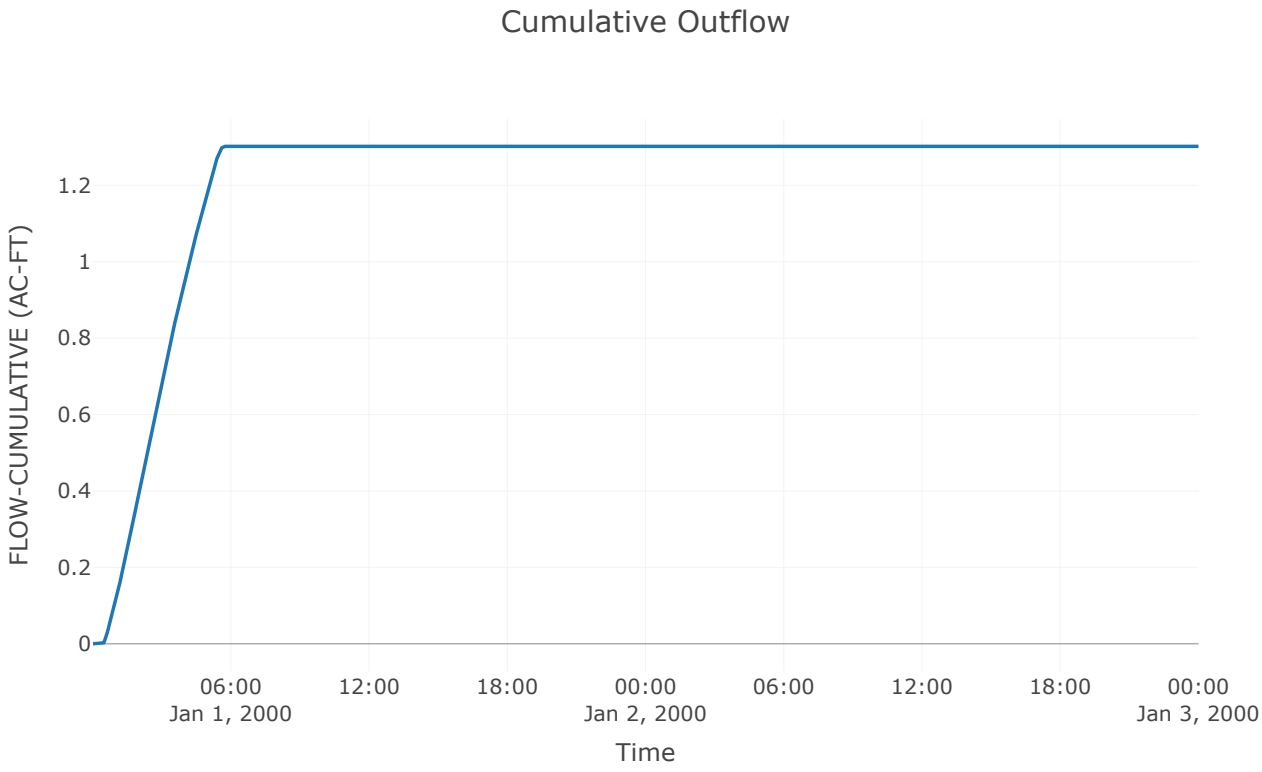
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

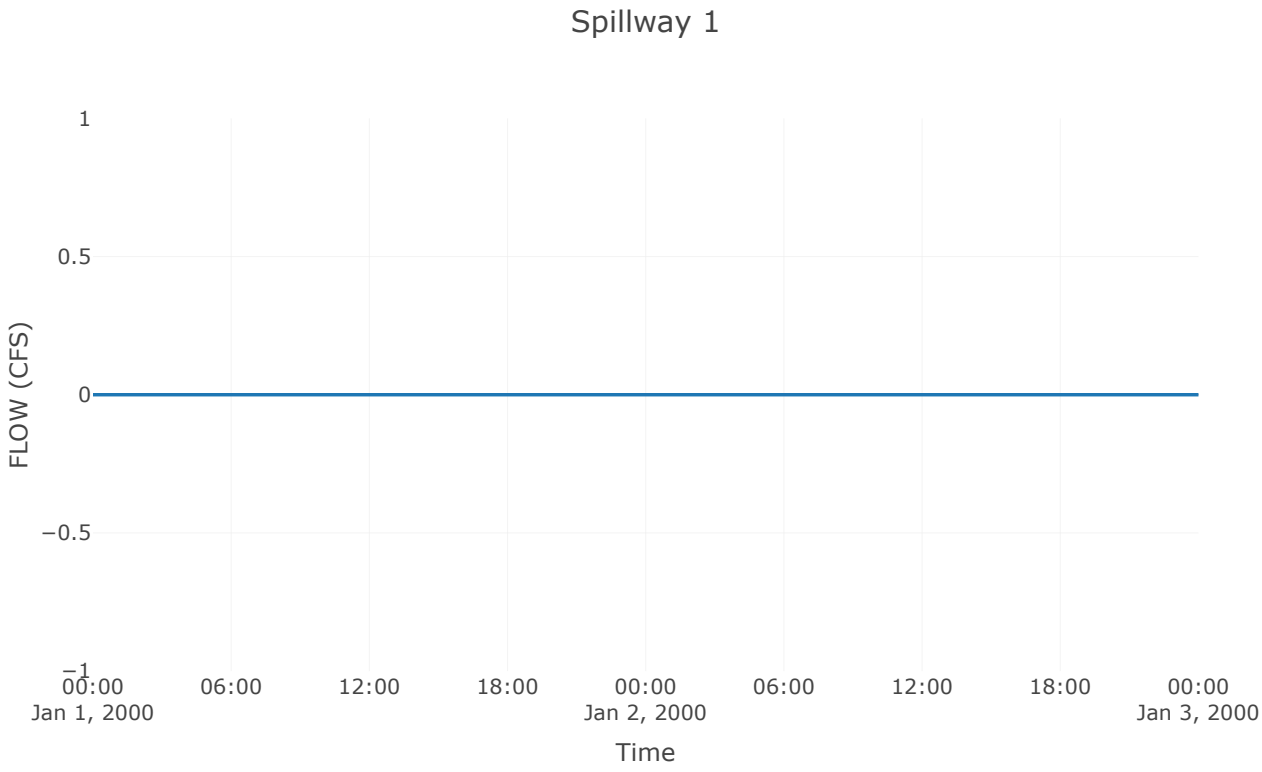
Storage



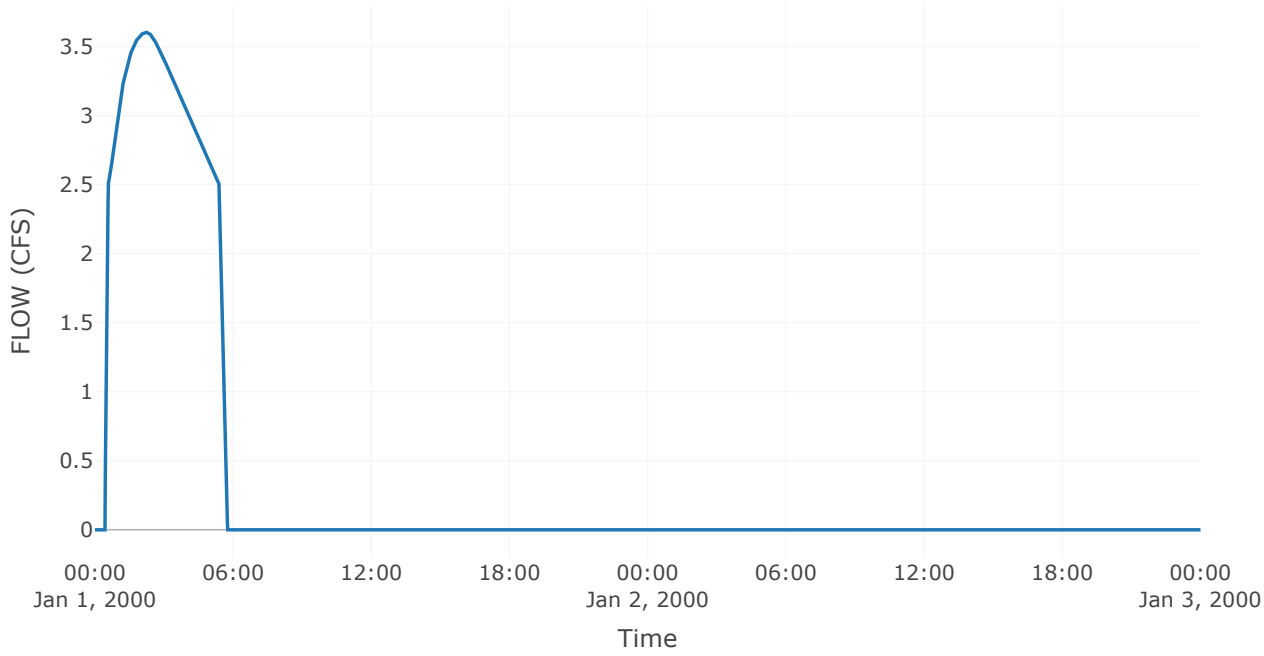
Combined Inflow



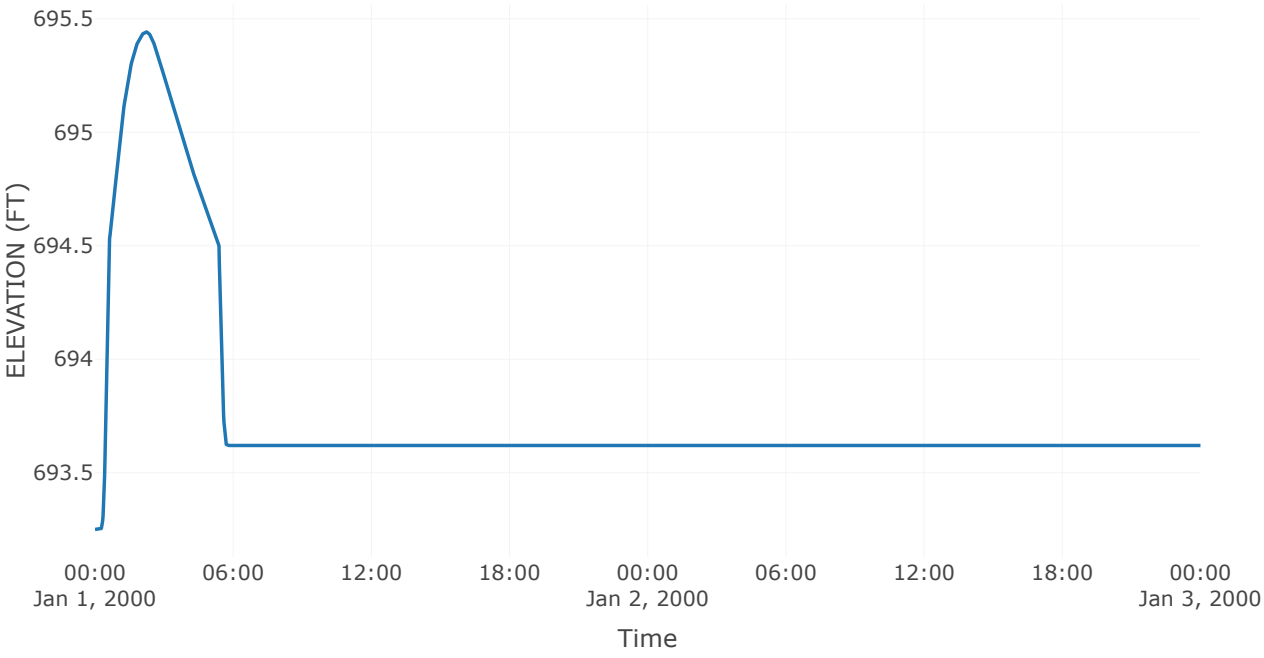

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

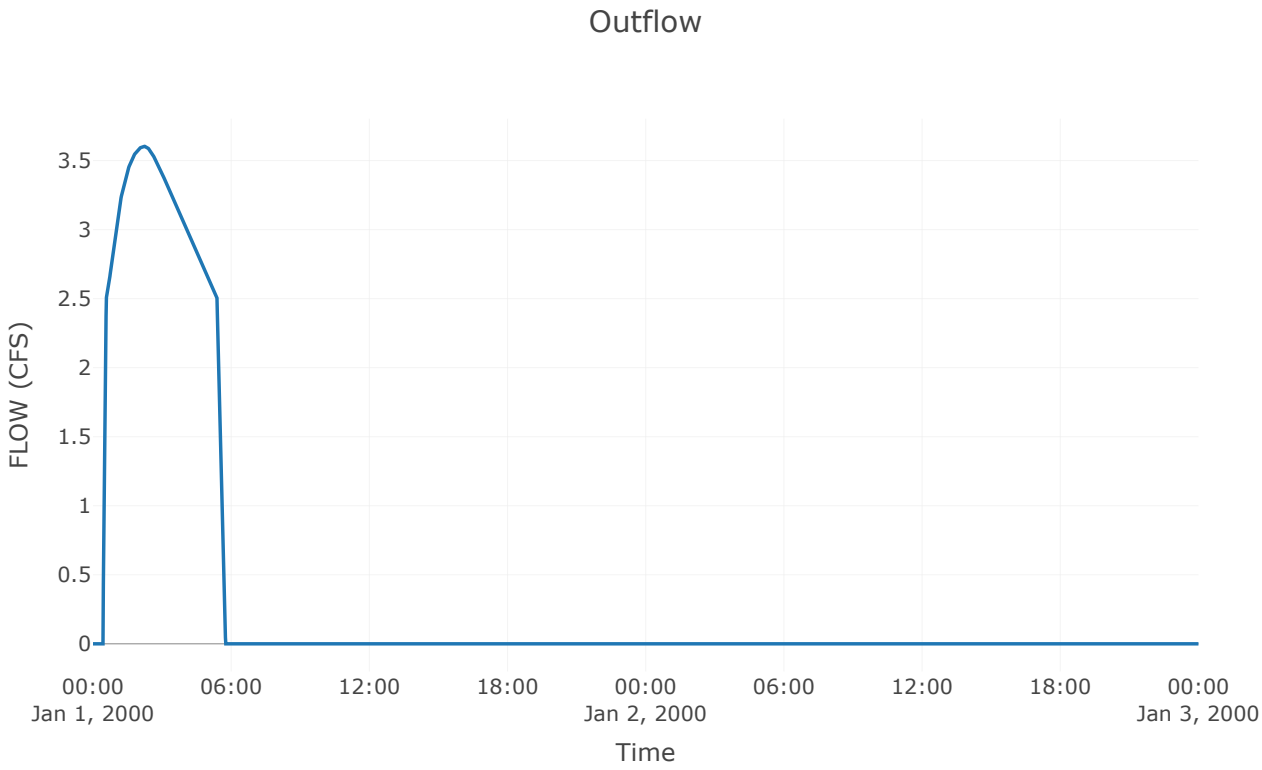

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

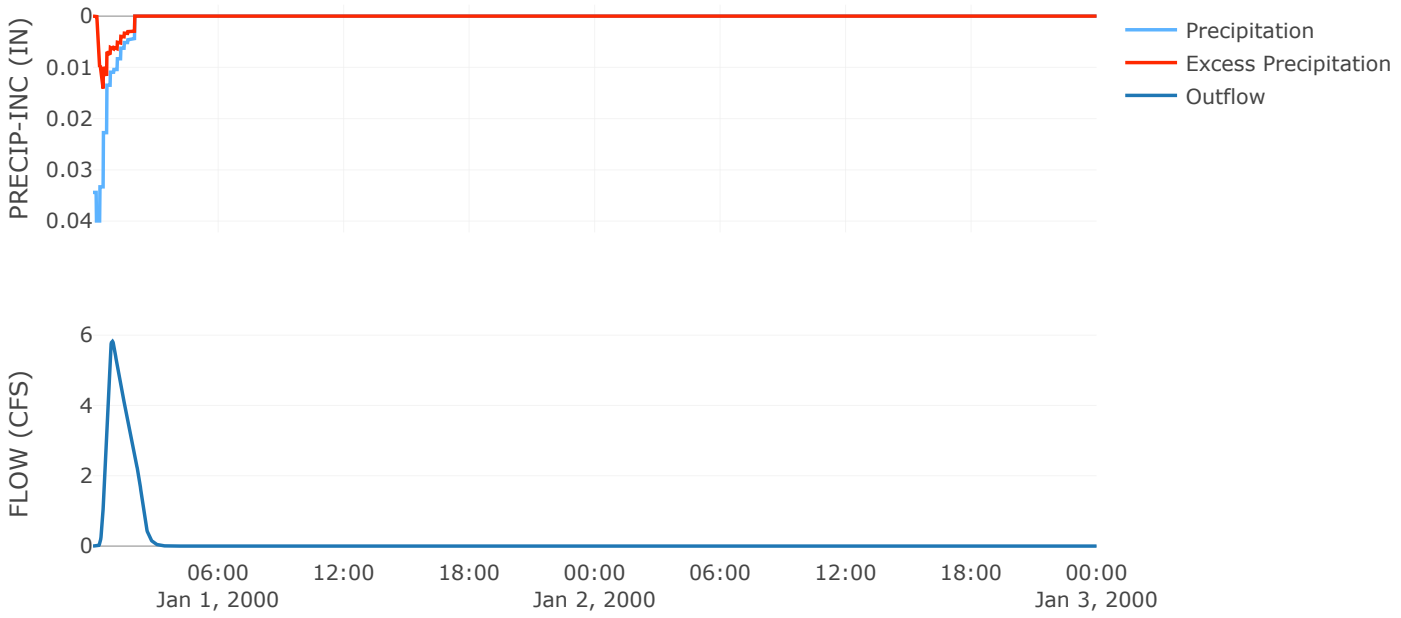
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

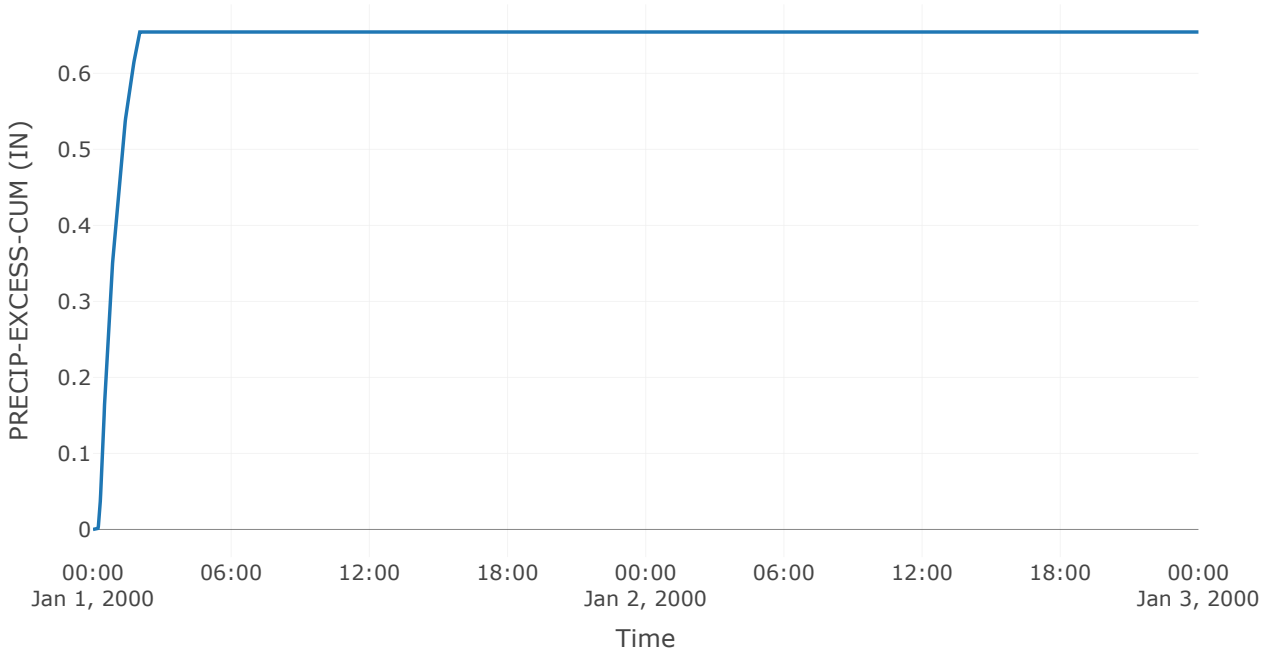
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

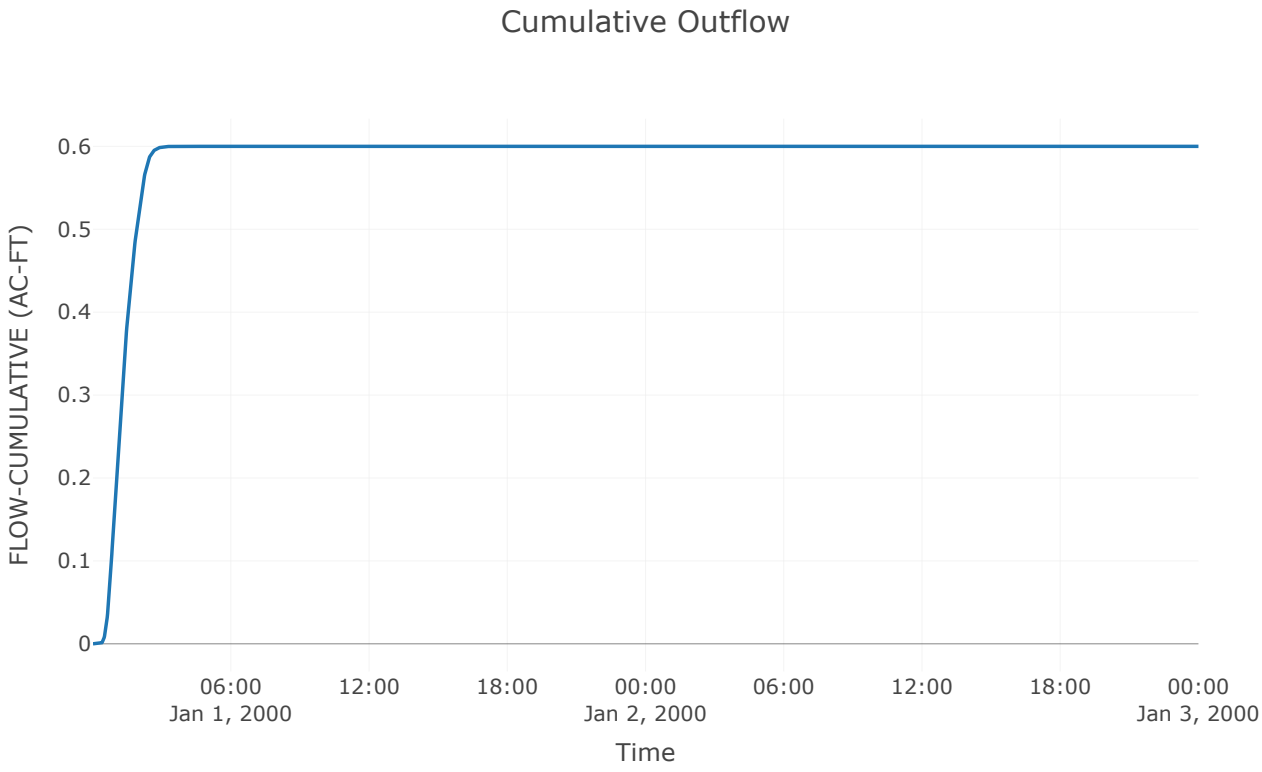
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

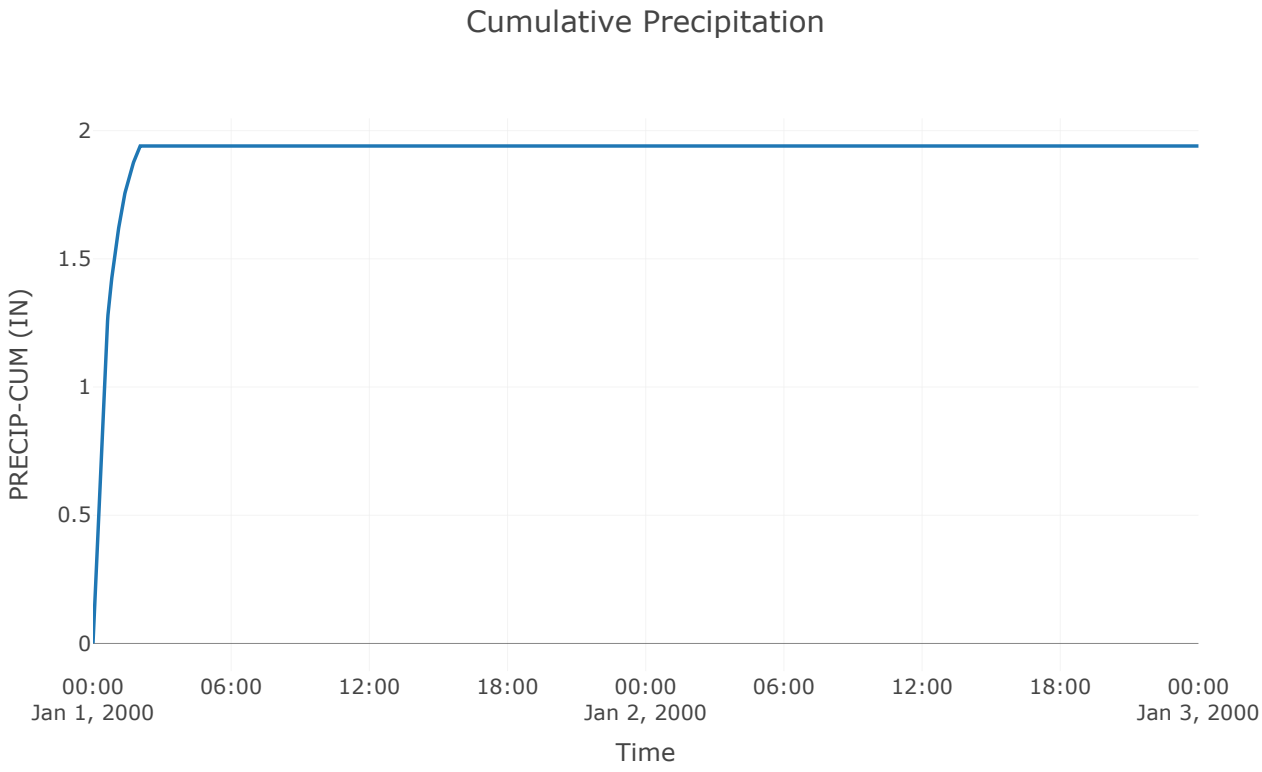
Precipitation and Outflow

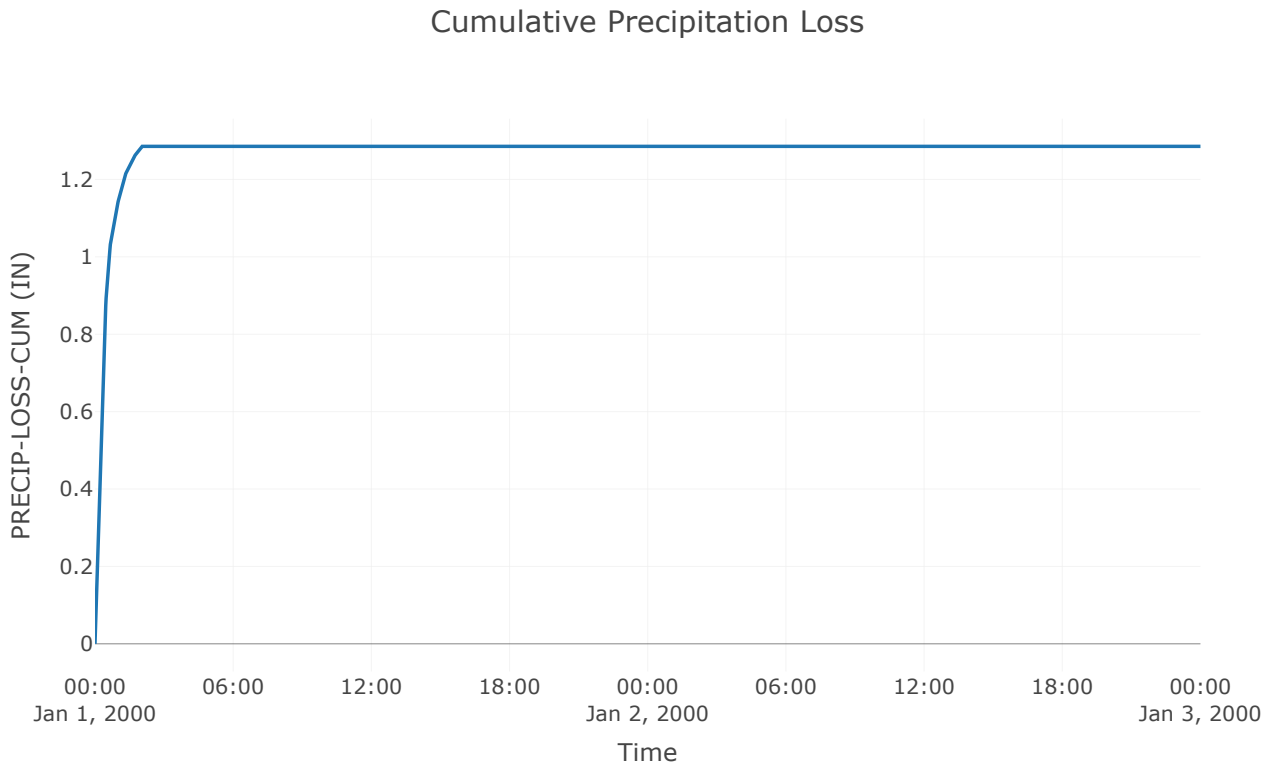


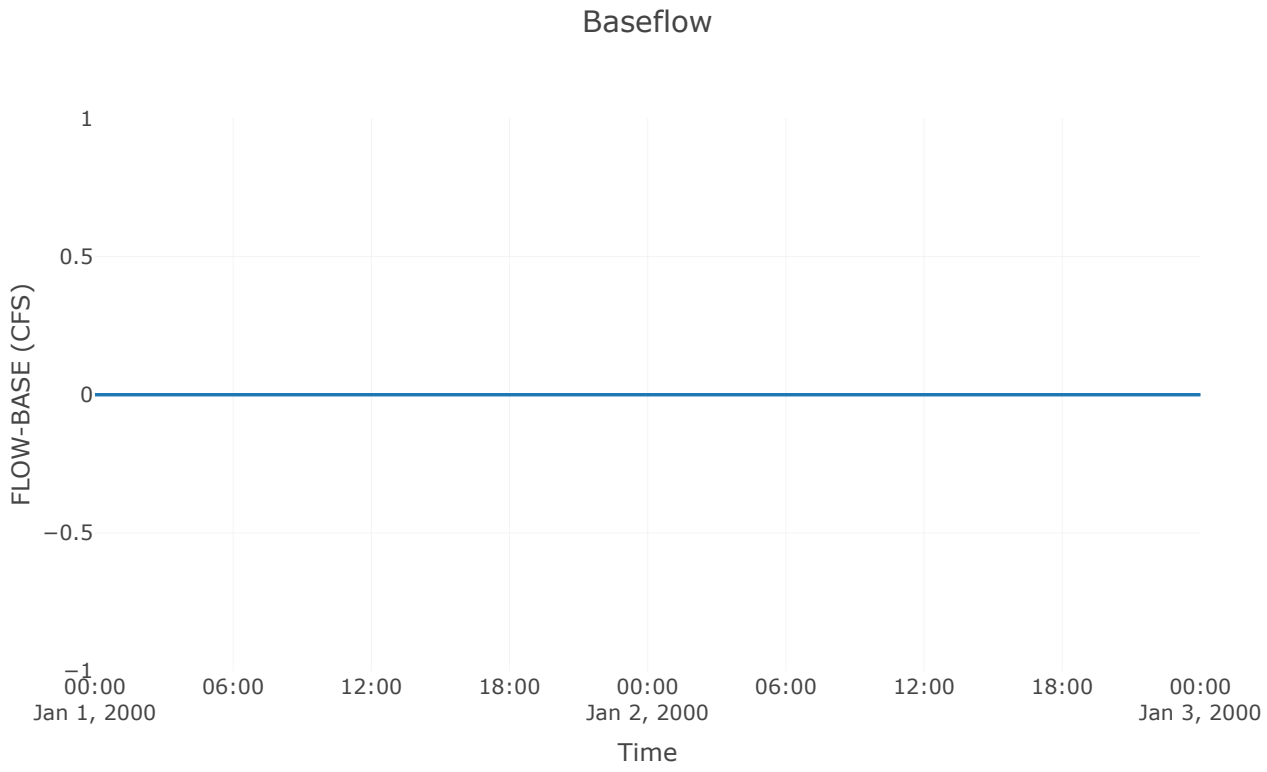
Cumulative Excess Precipitation



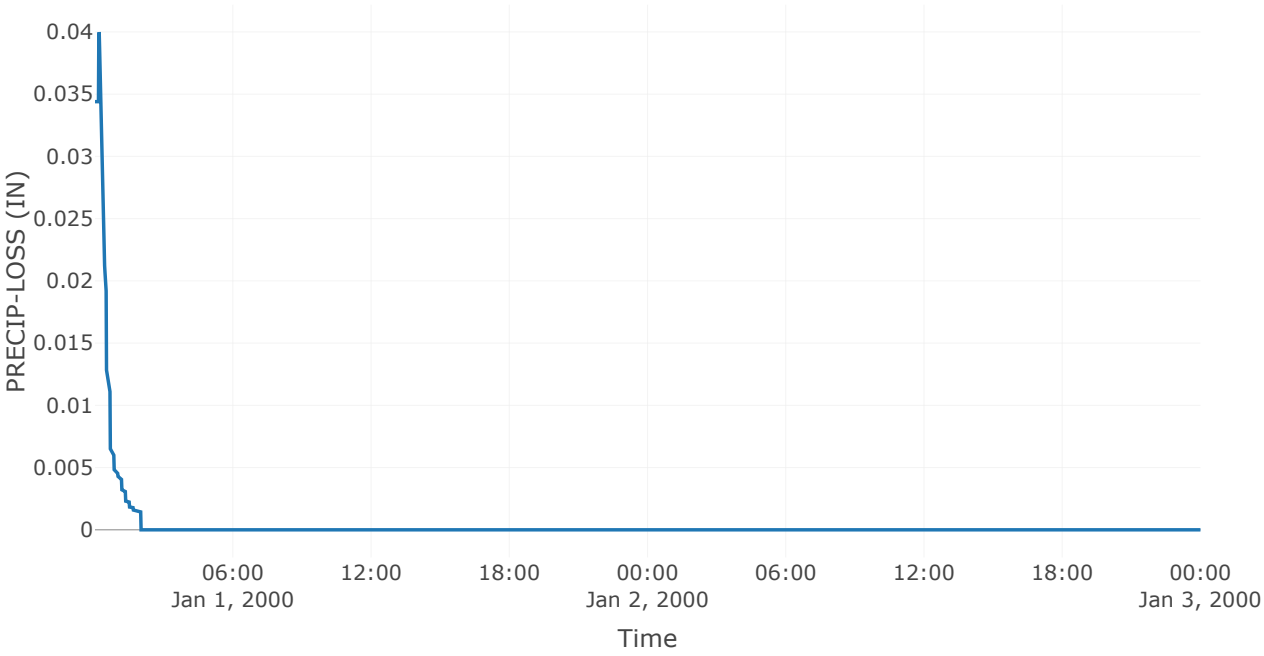

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

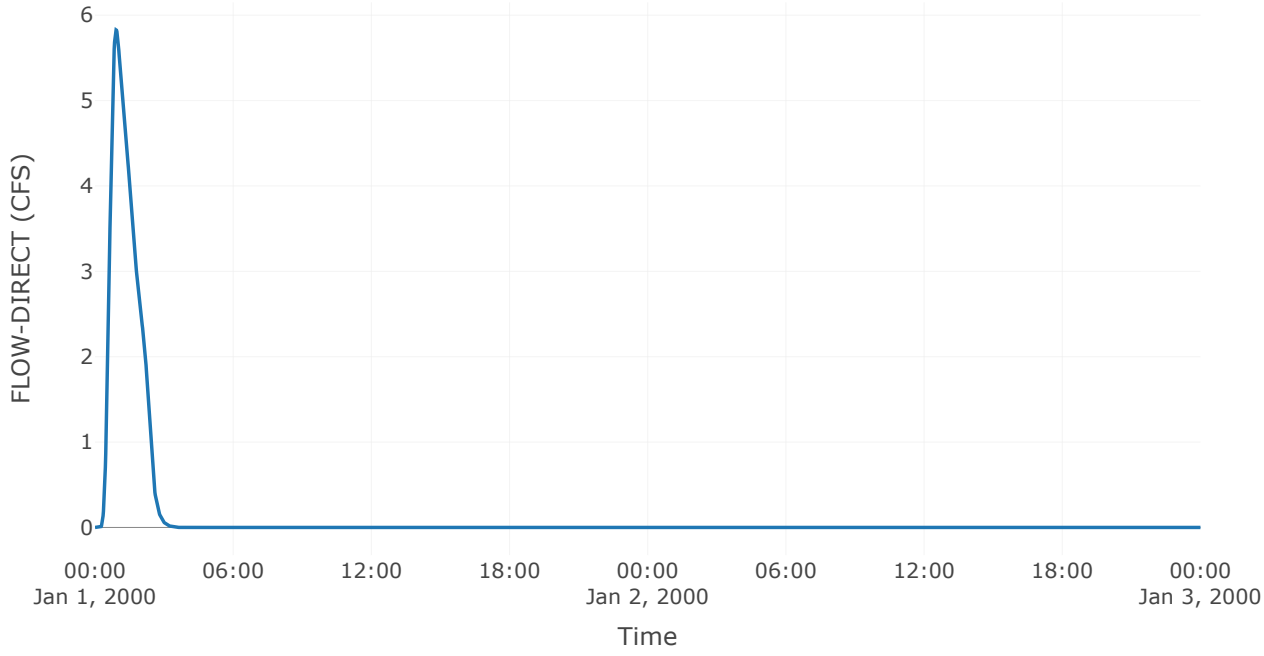

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

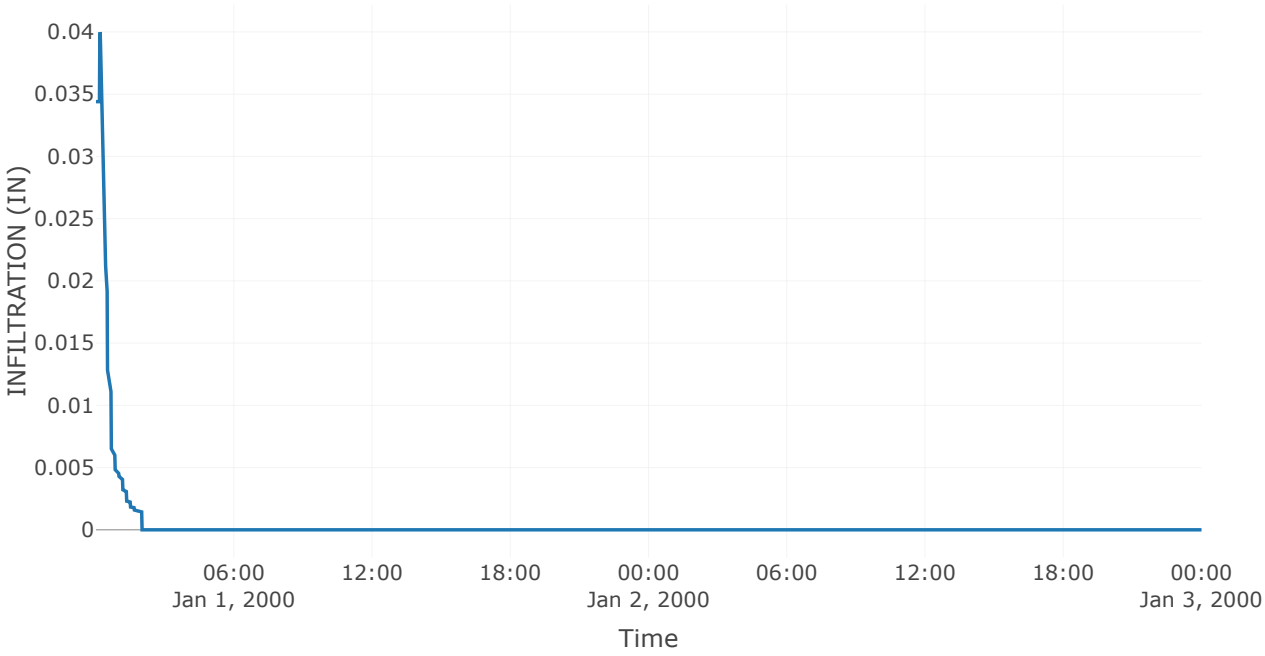

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

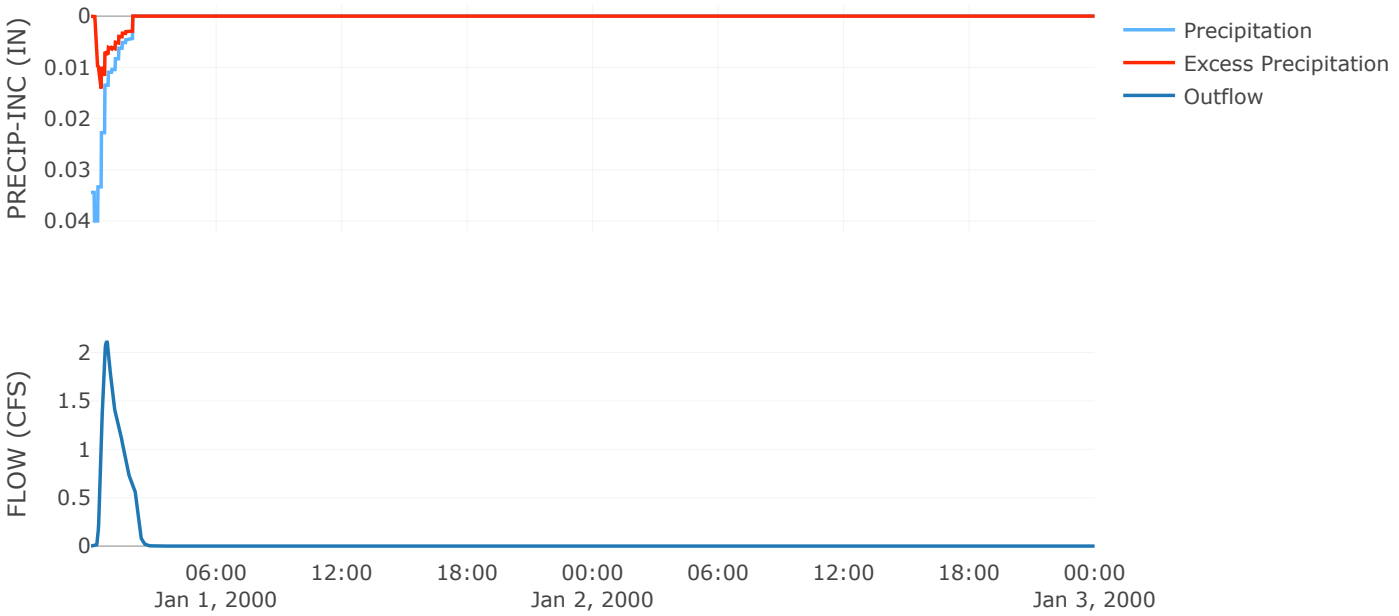
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

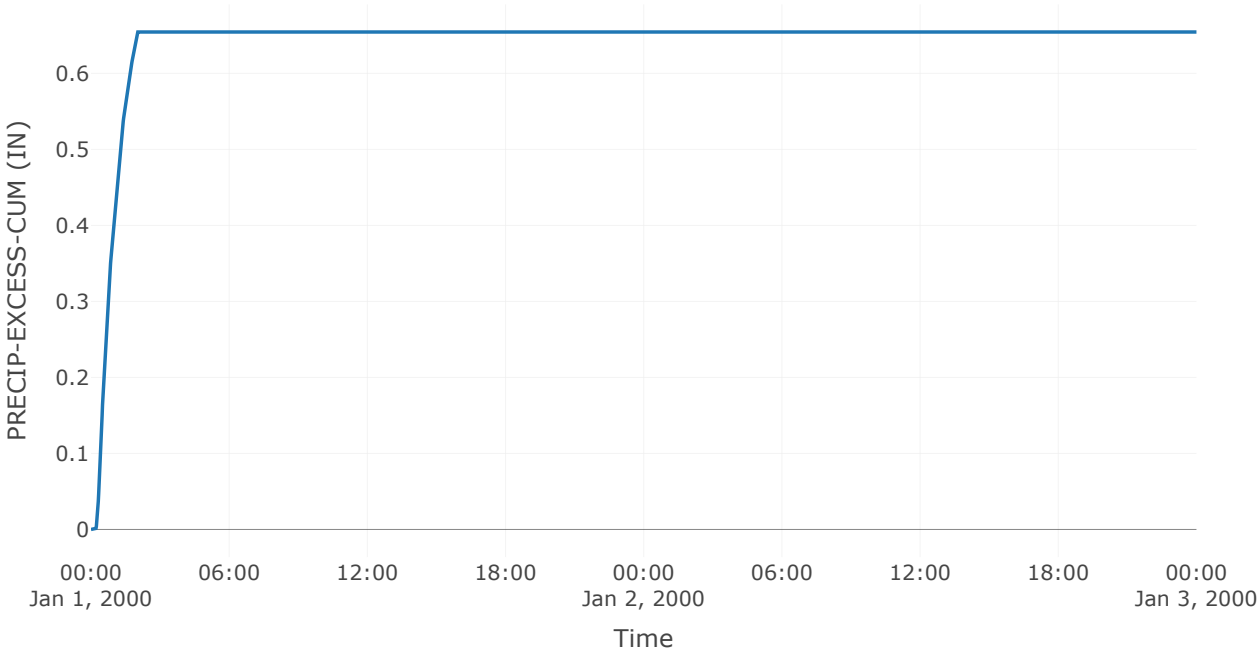
Transform: Scs	
Lag	12
Unitgraph Type	Standard

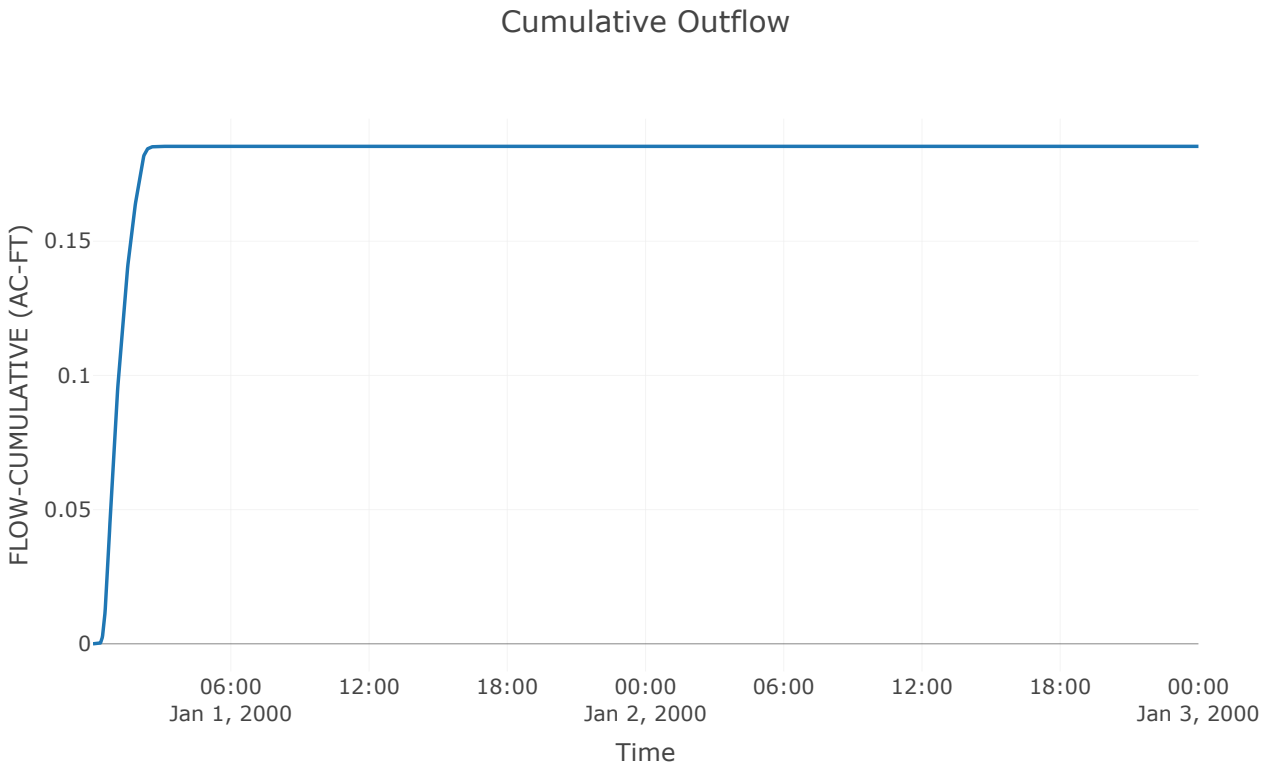
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

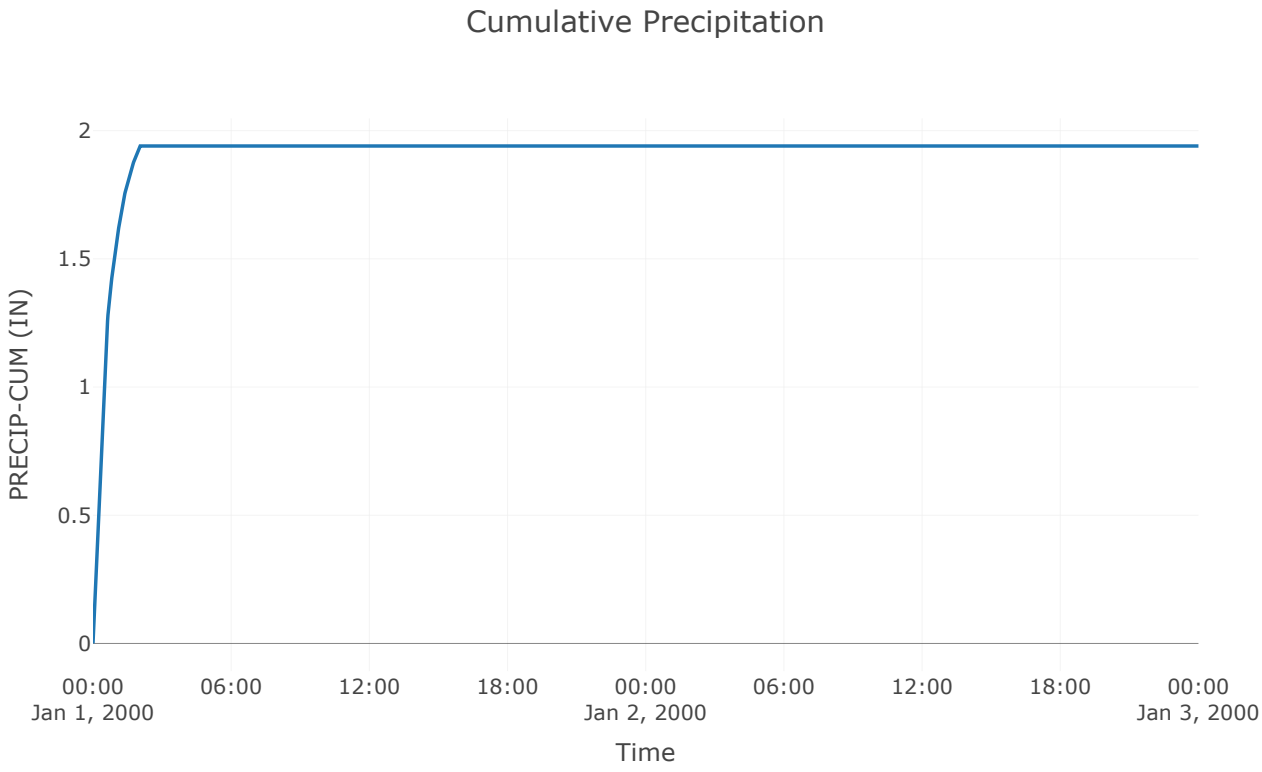
Precipitation and Outflow

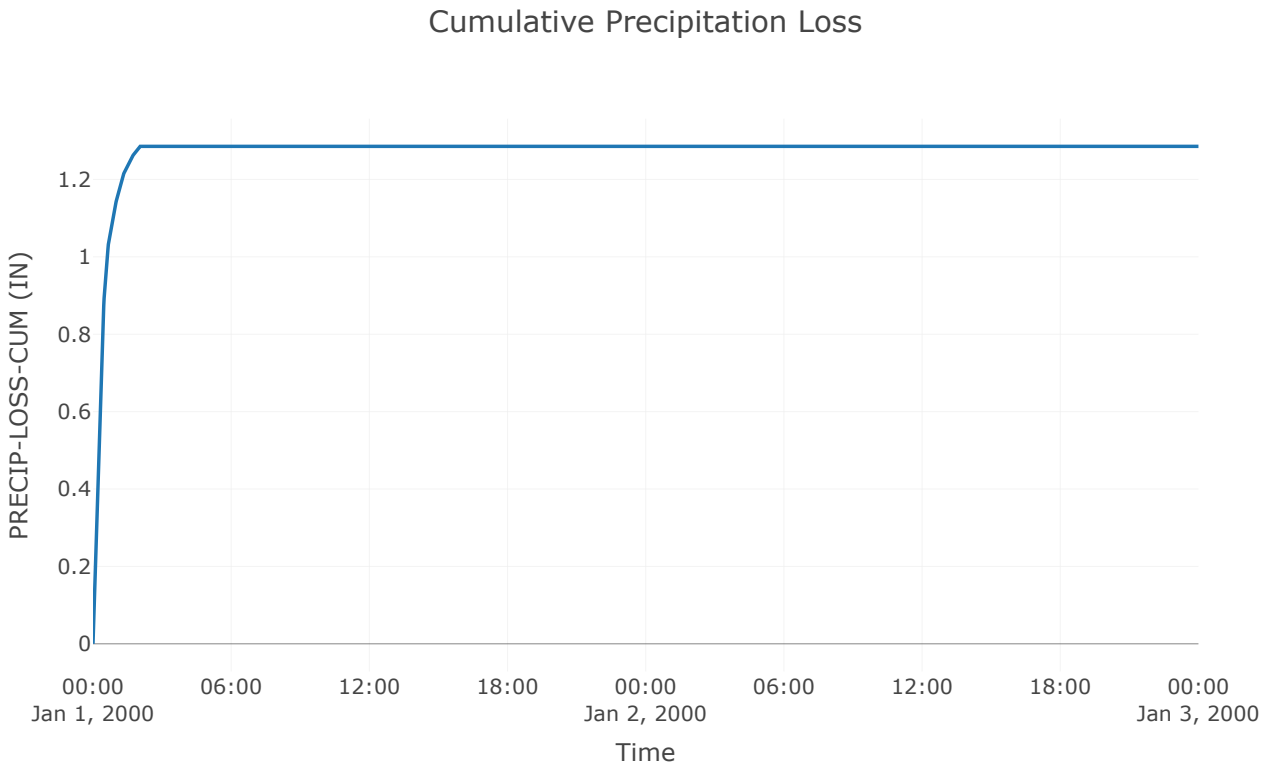


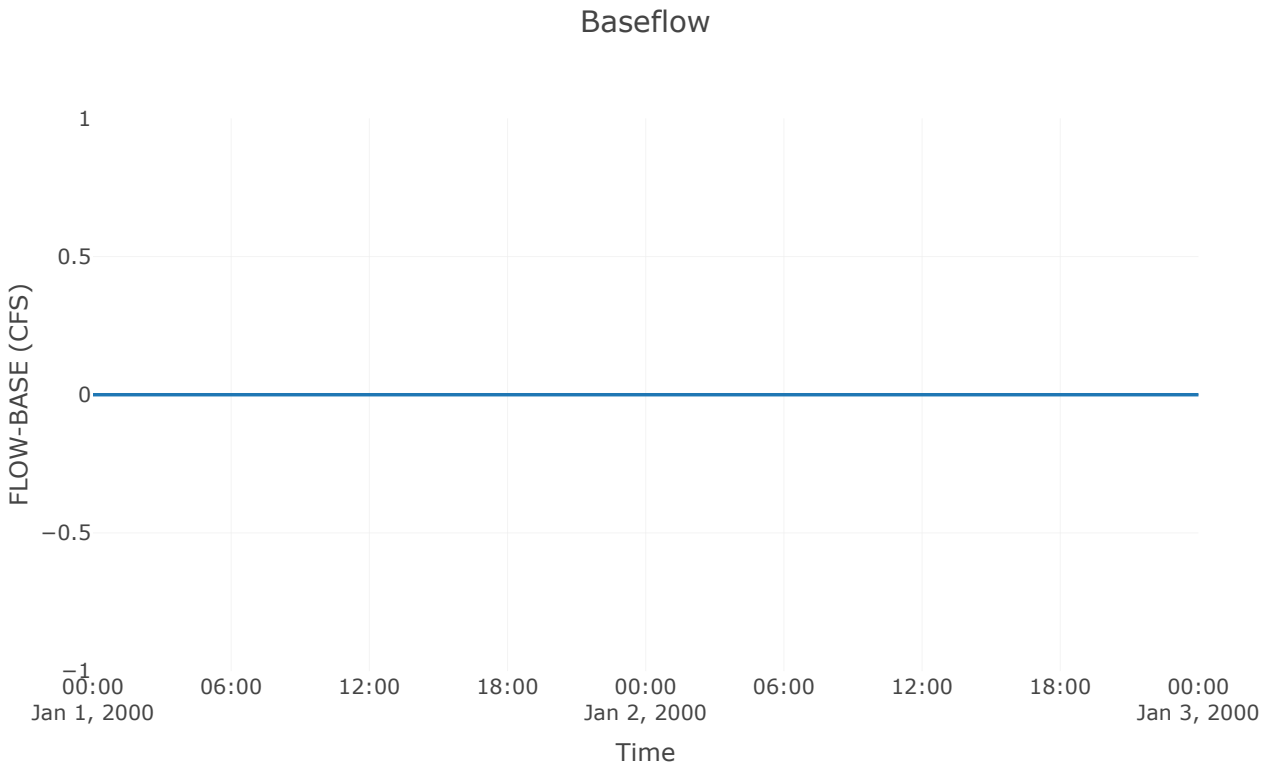
Cumulative Excess Precipitation



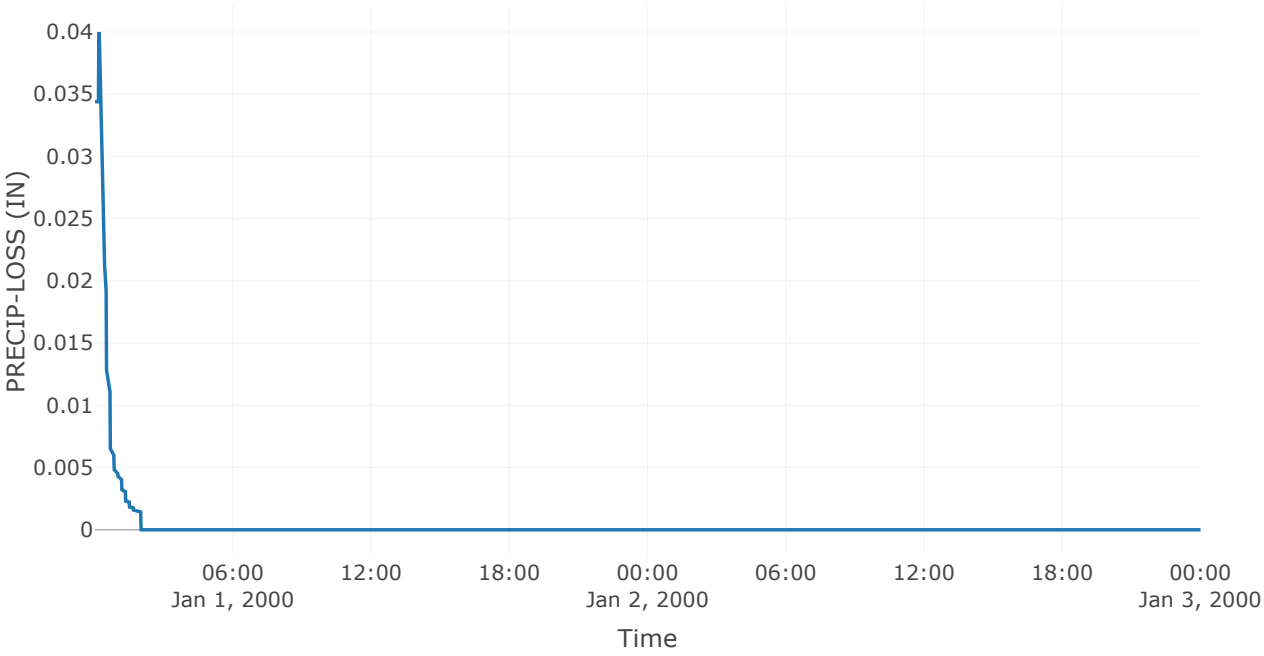

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

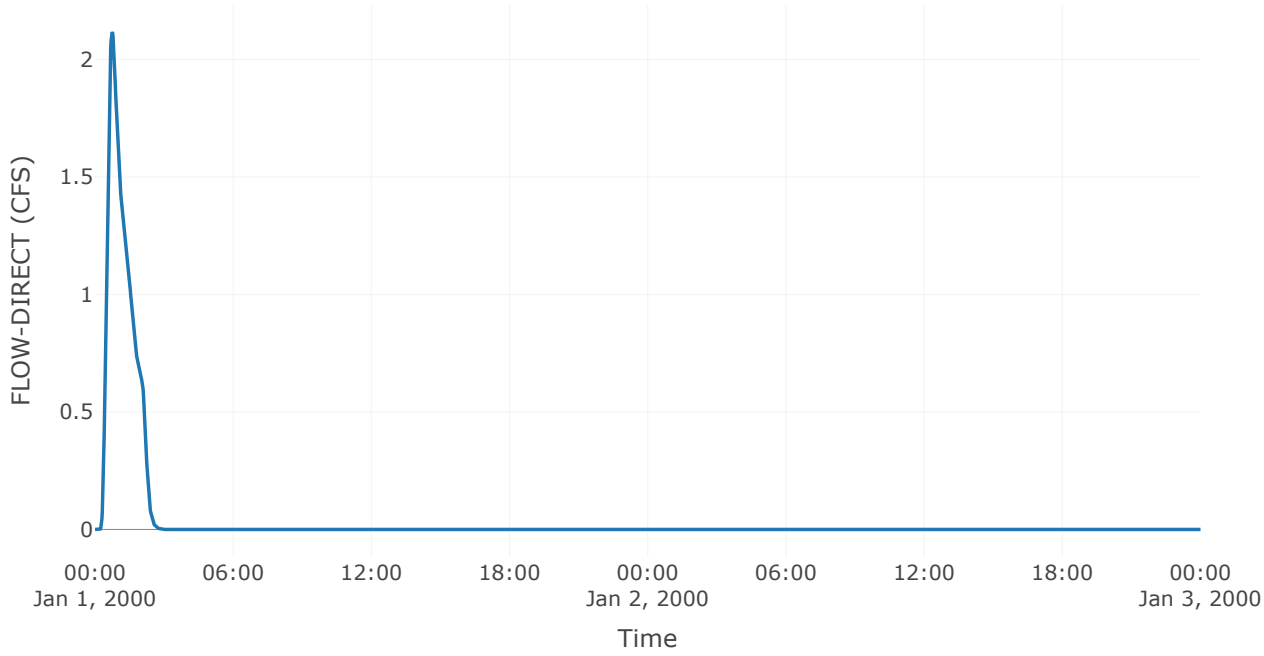

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

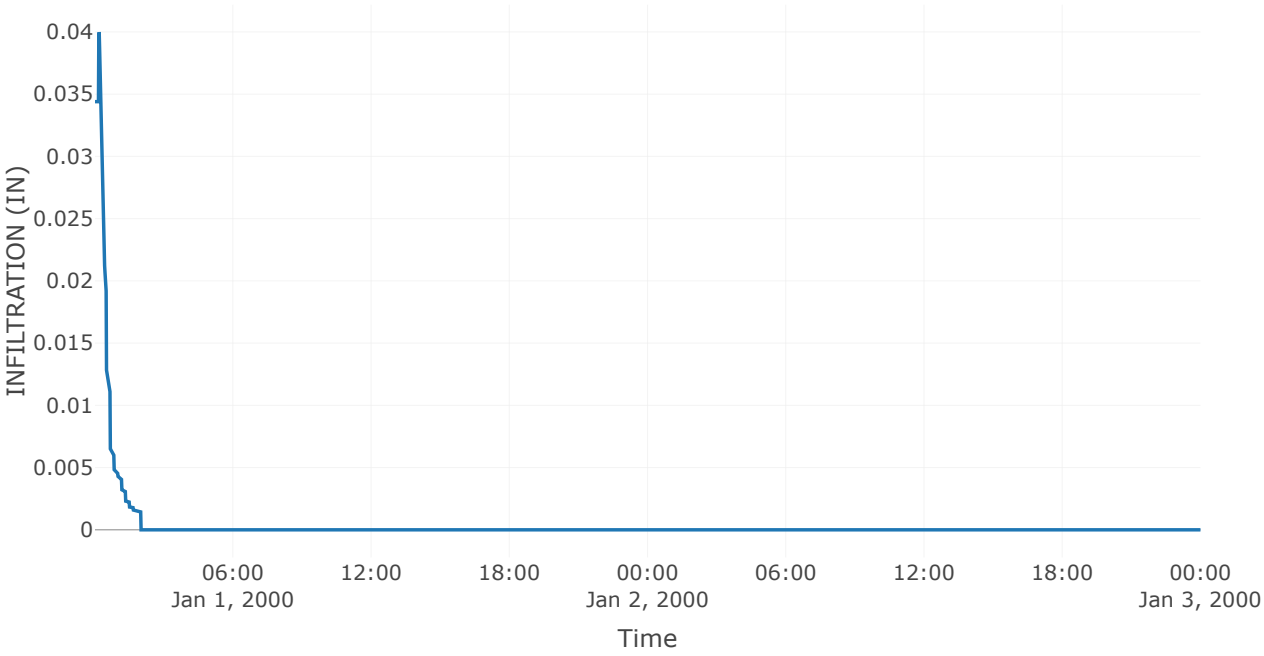

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



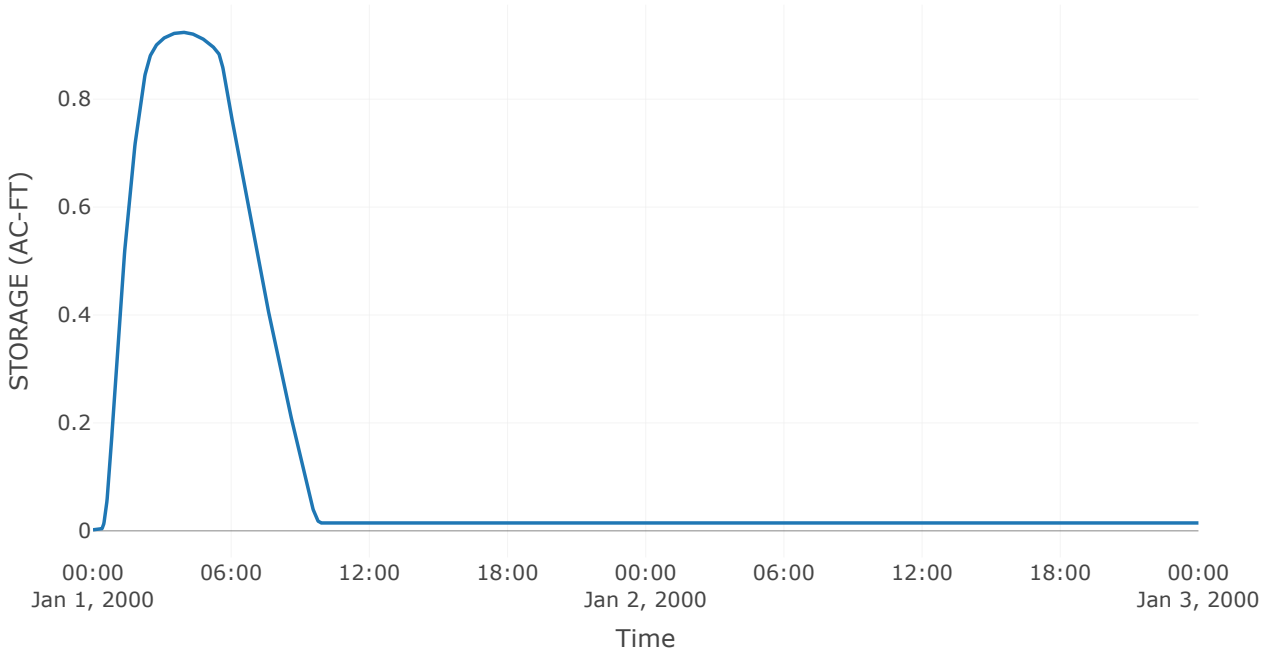

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

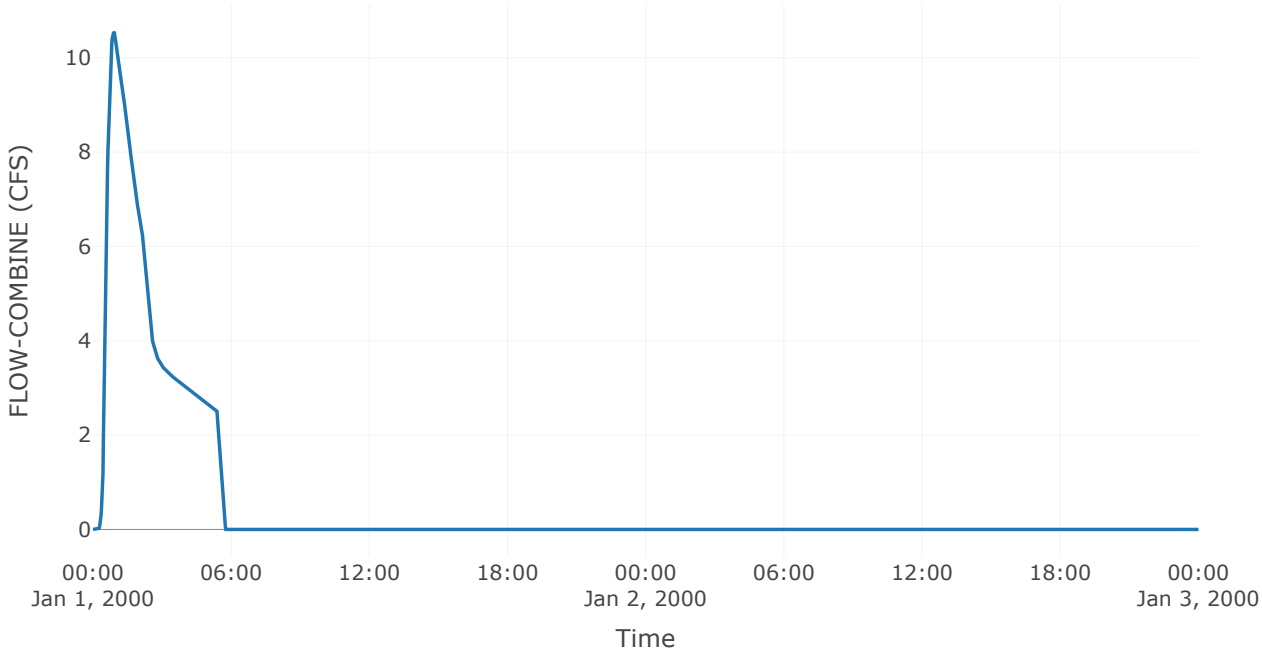
Downstream : Basin 3

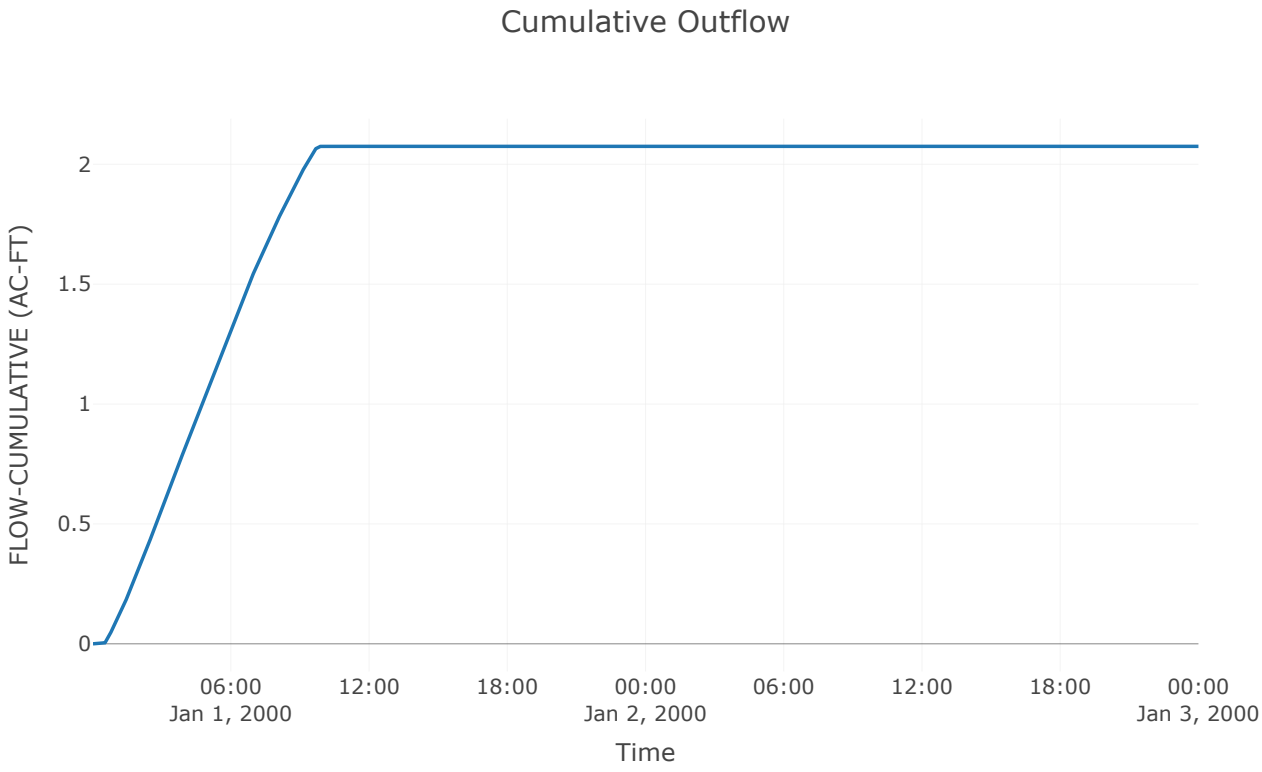
Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

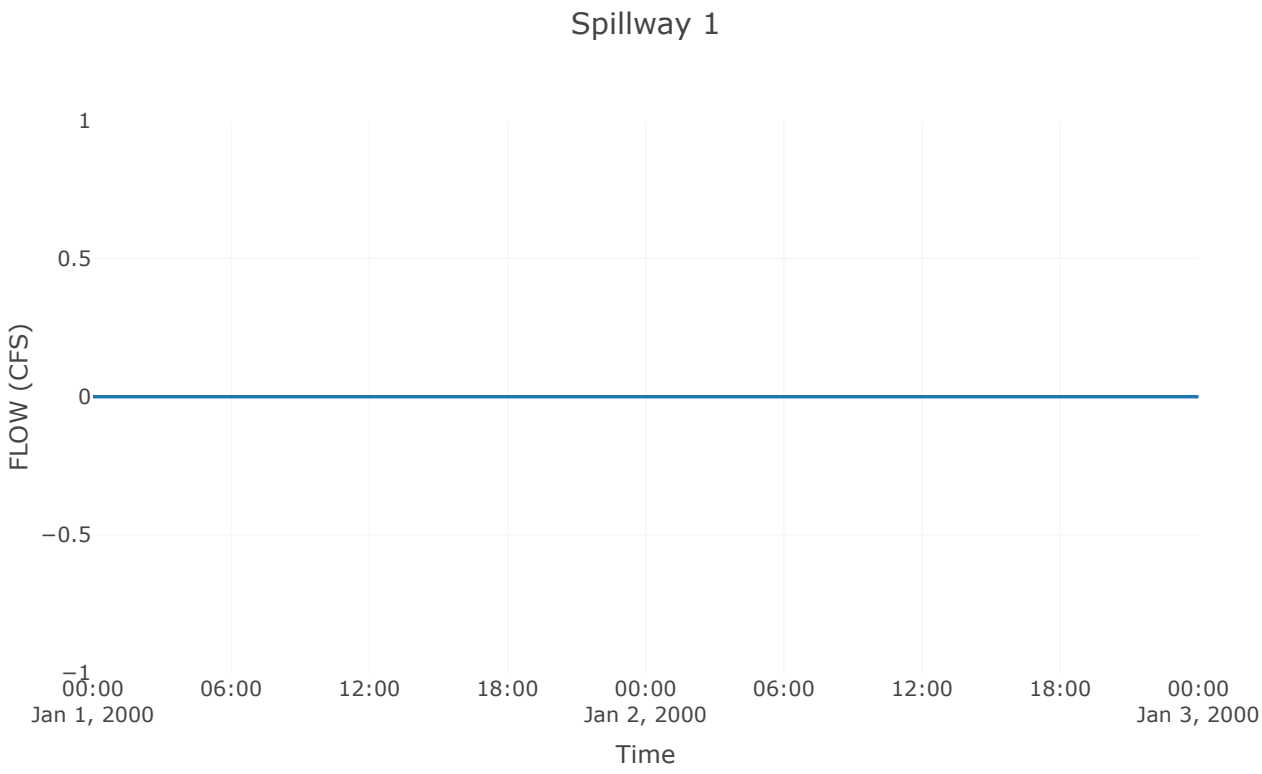
Storage



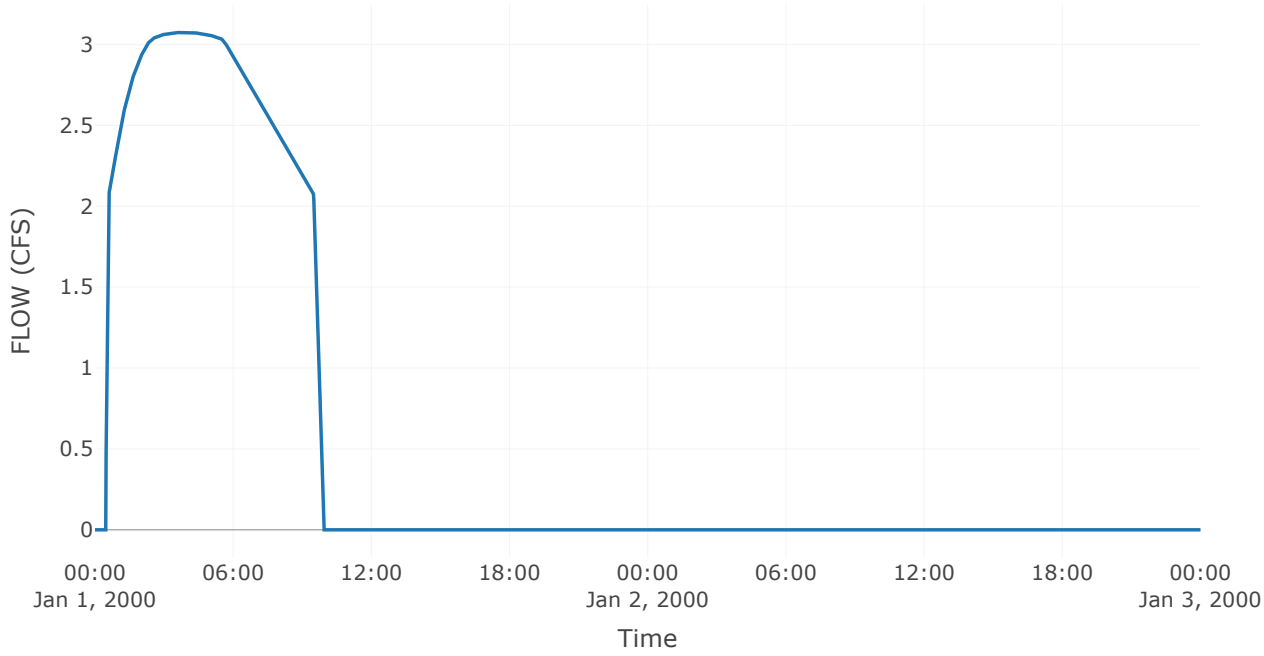
Combined Inflow



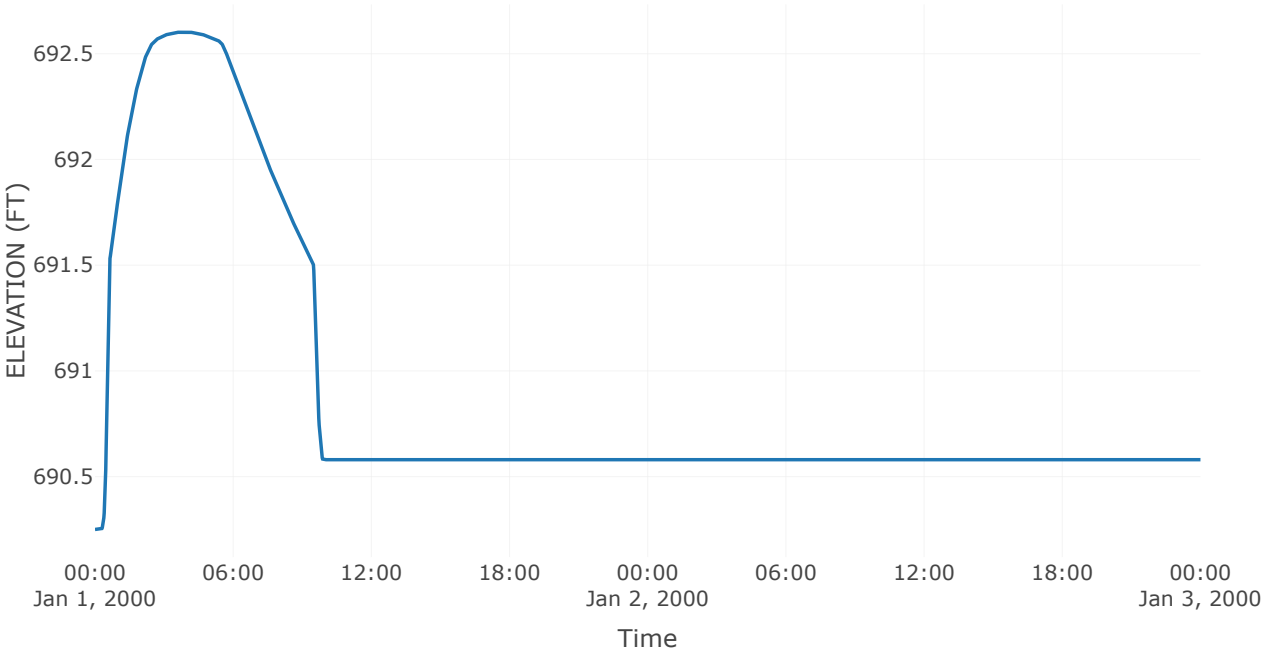

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

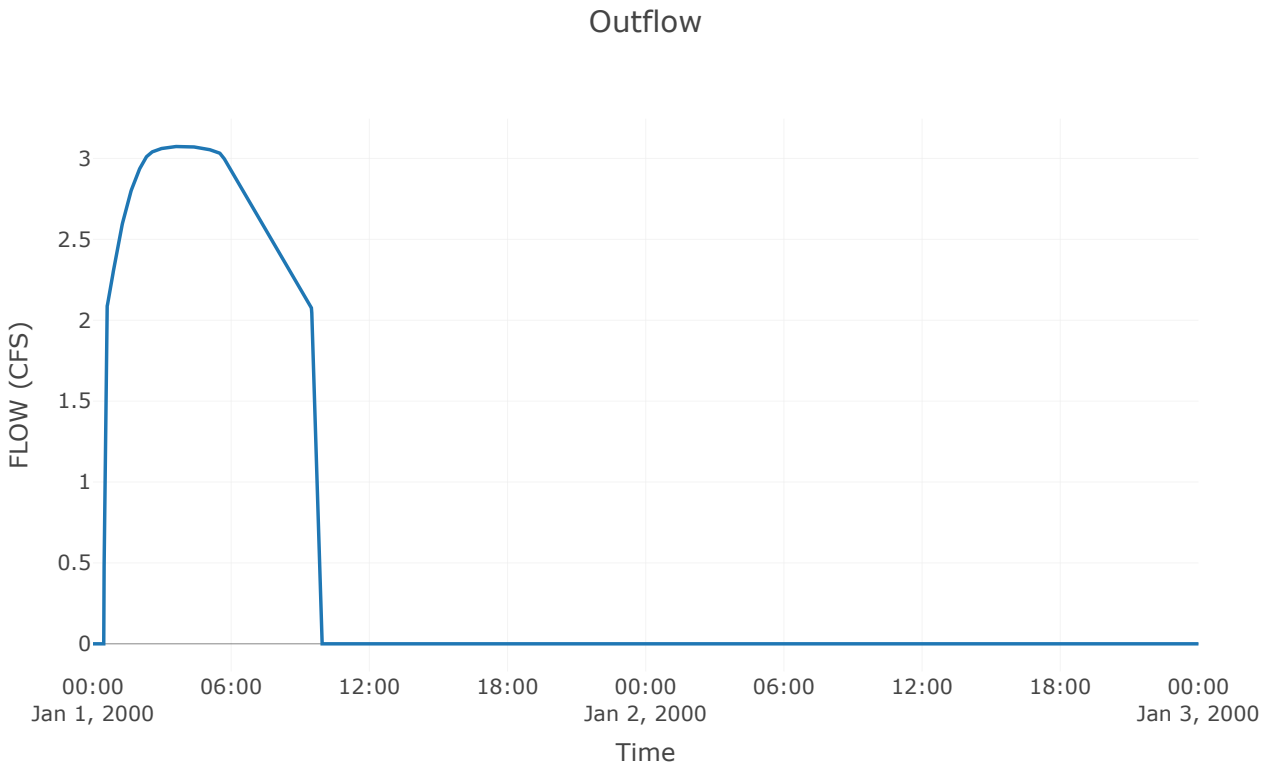

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

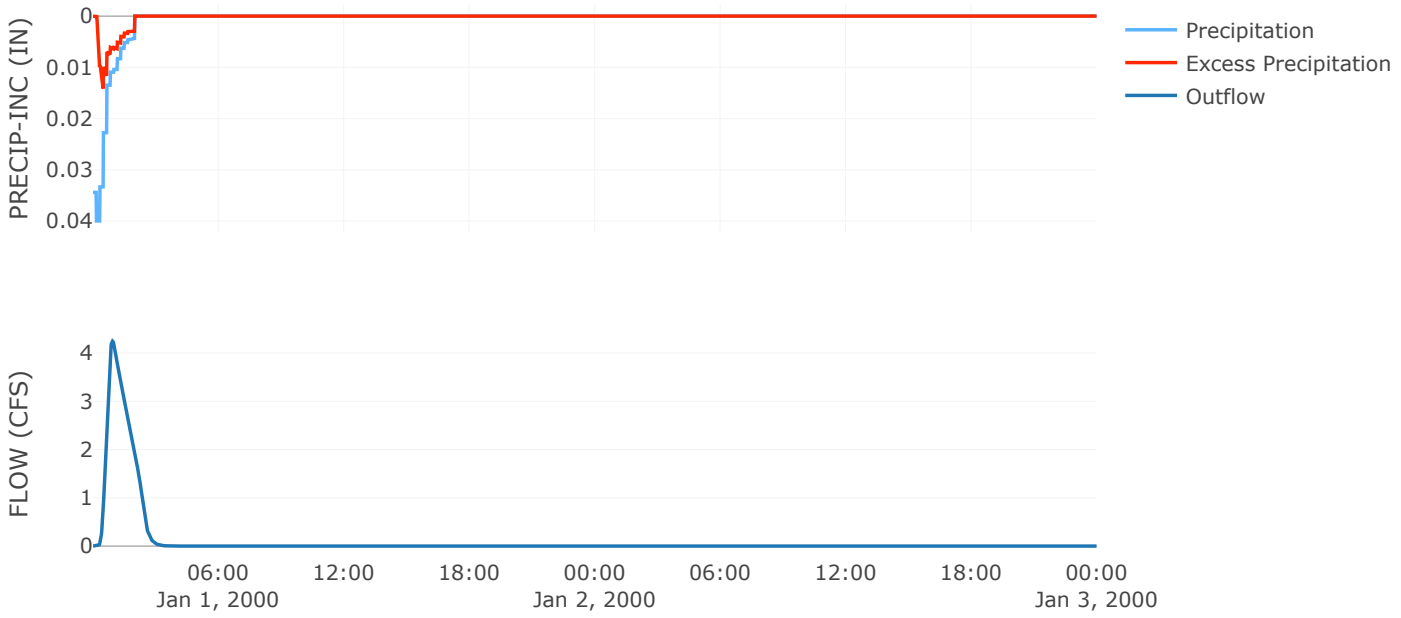
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

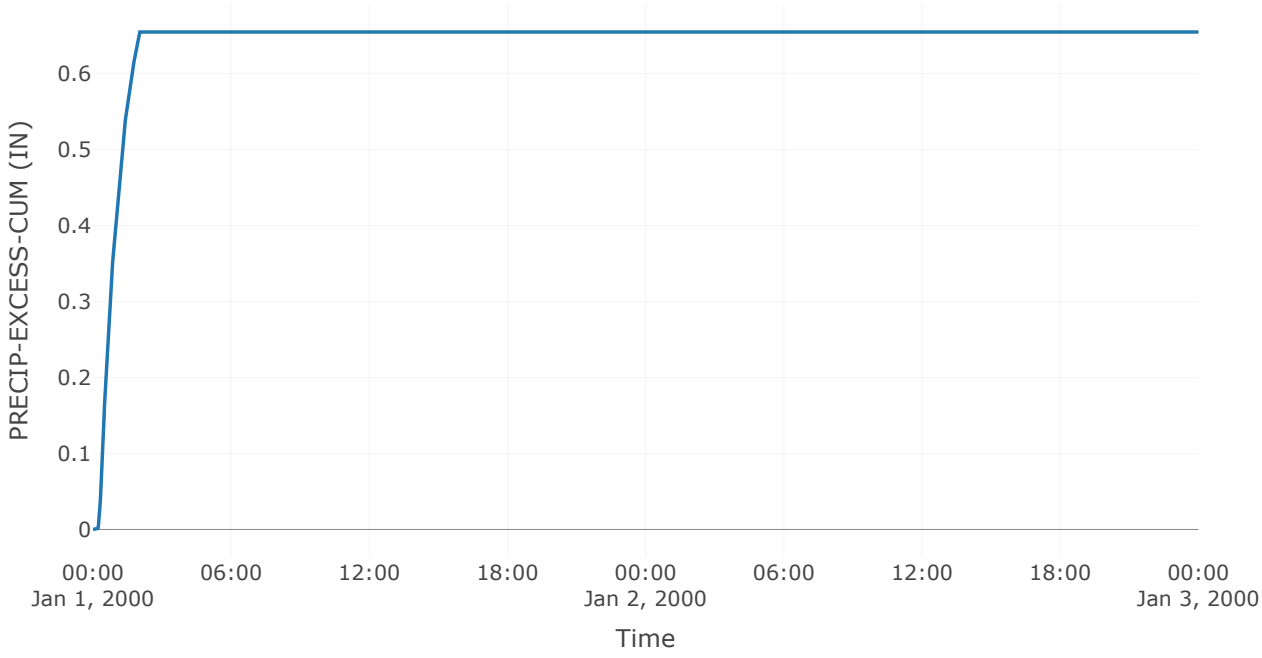
Transform: Scs	
Lag	21
Unitgraph Type	Standard

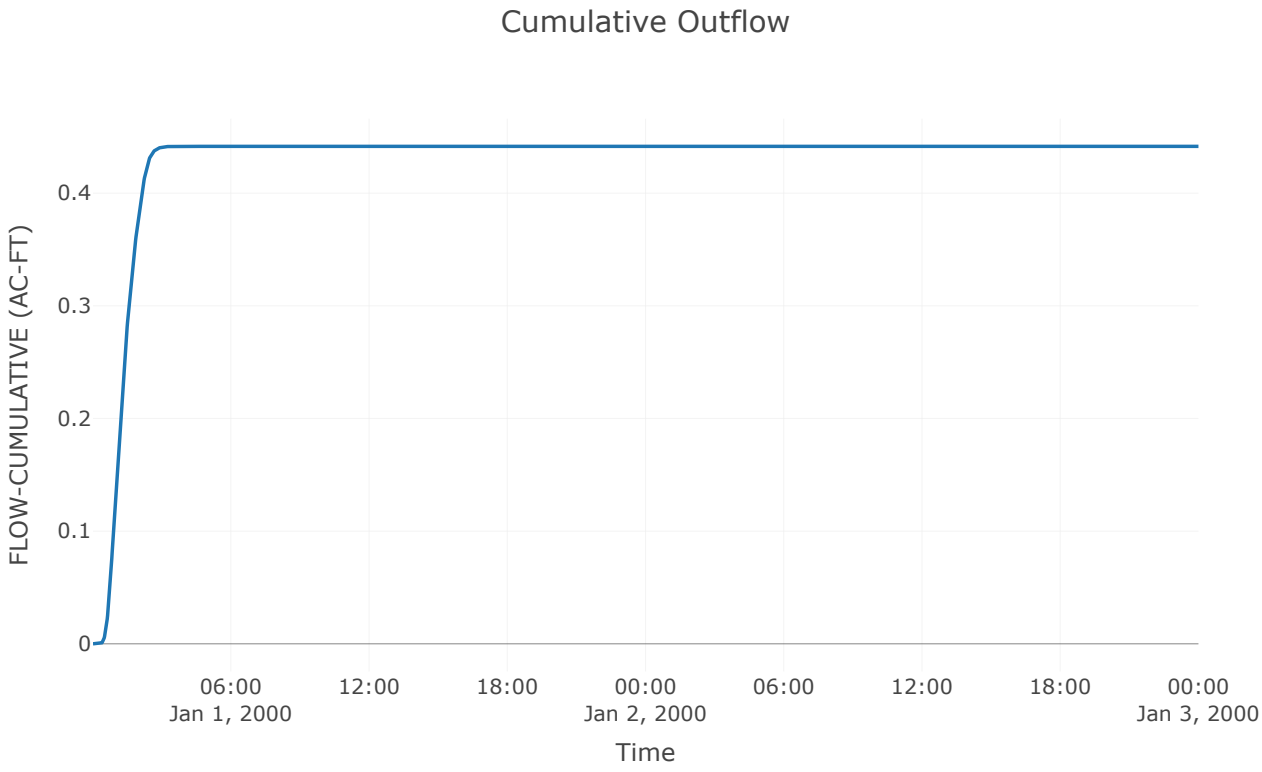
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

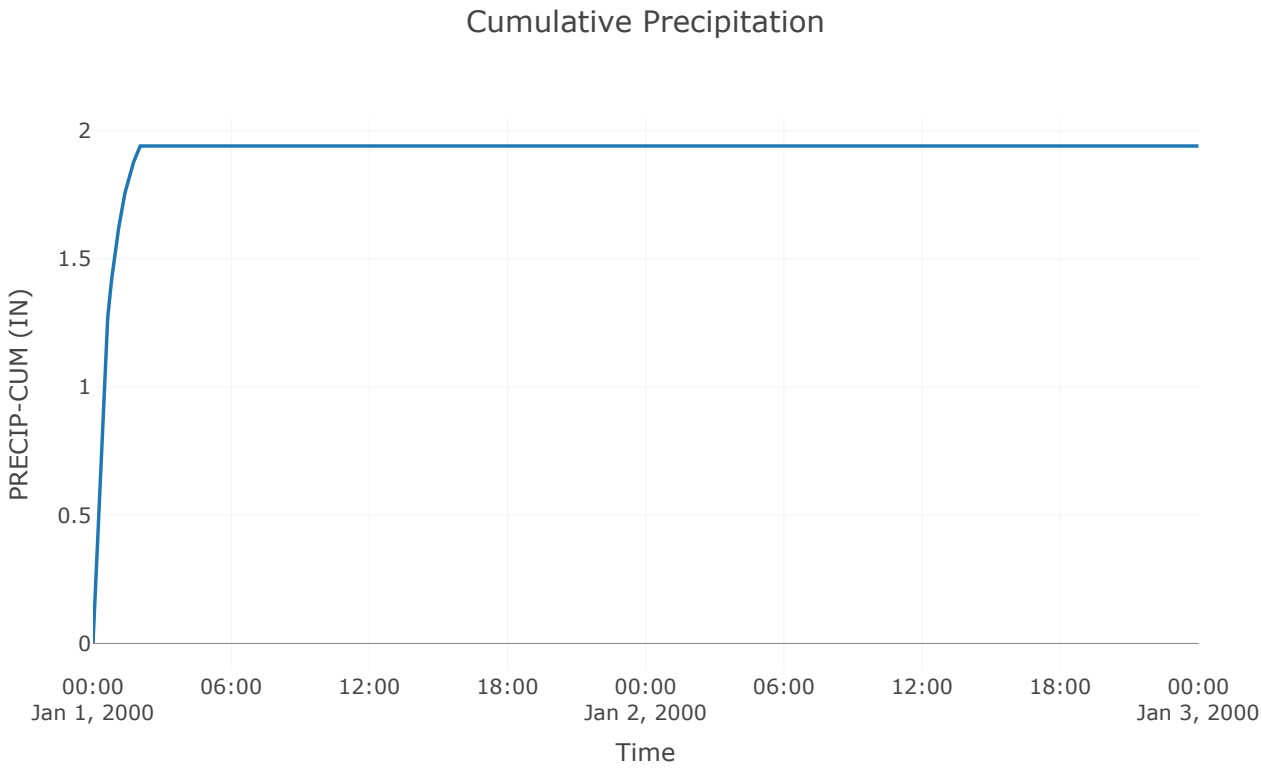
Precipitation and Outflow

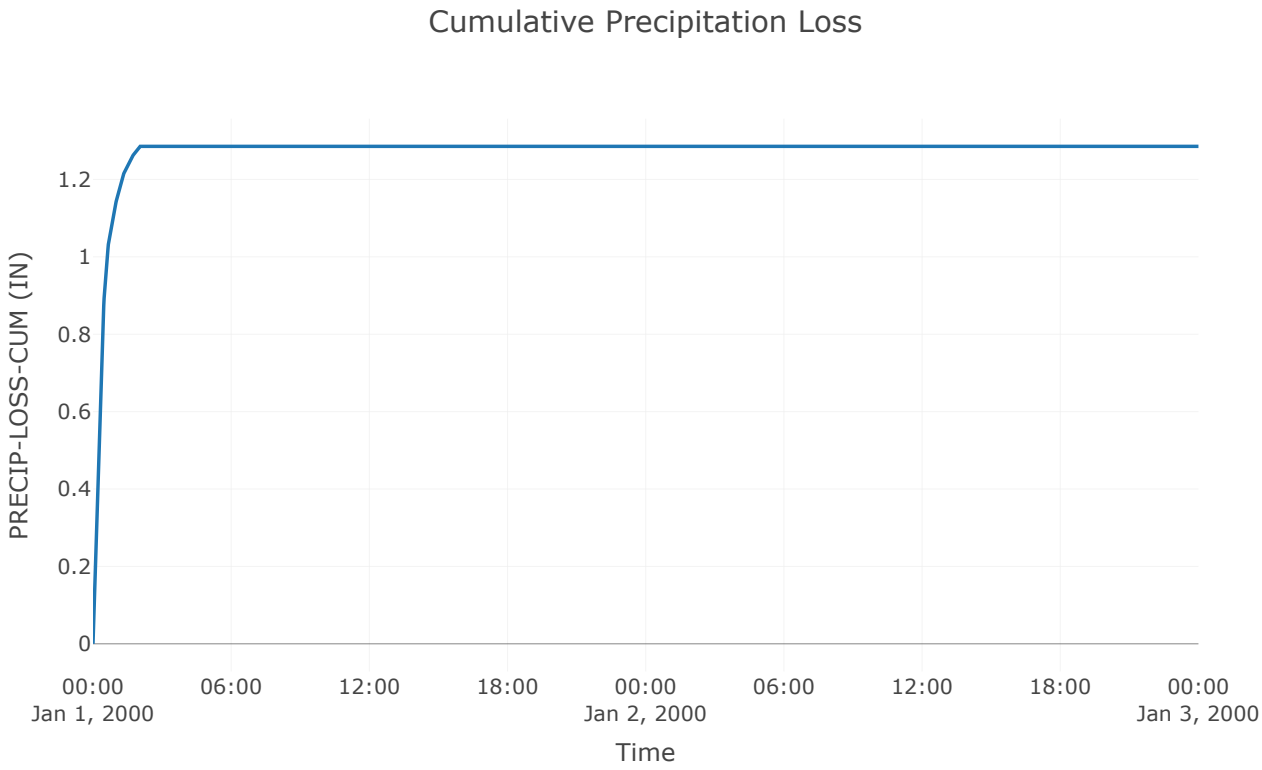


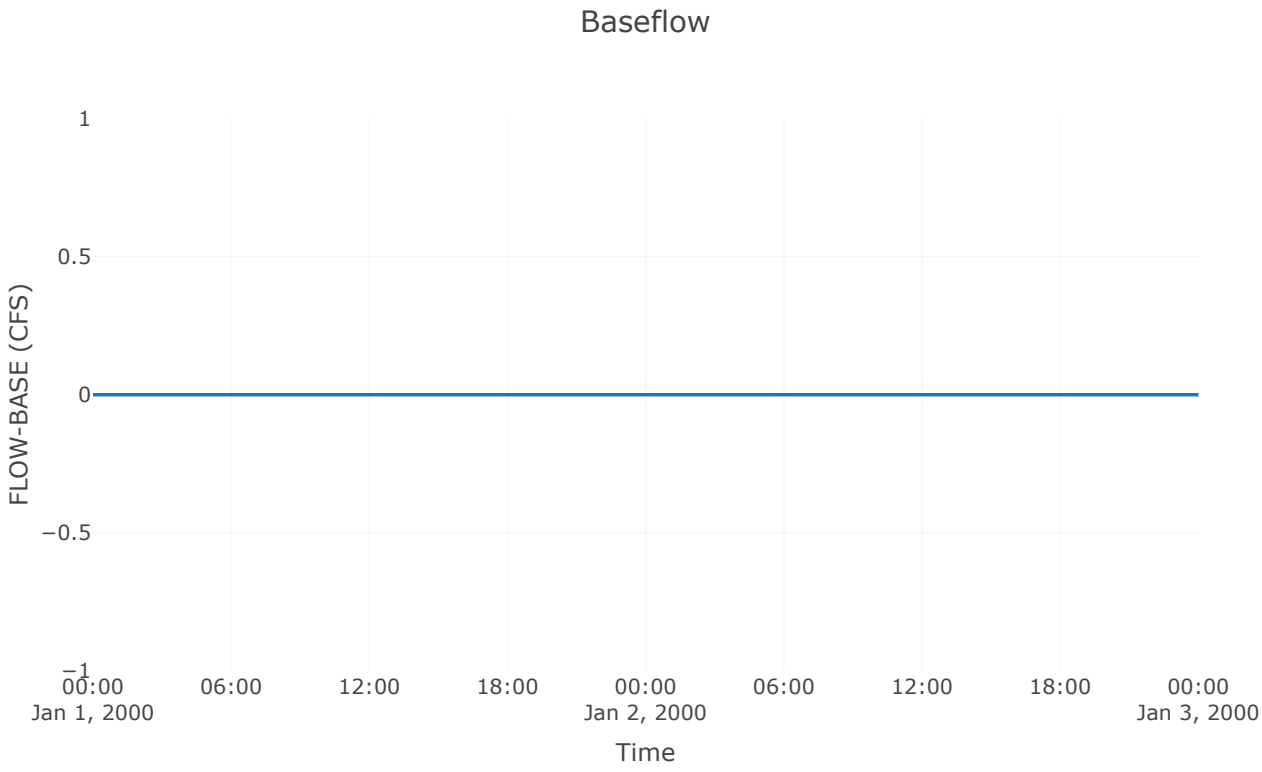
Cumulative Excess Precipitation



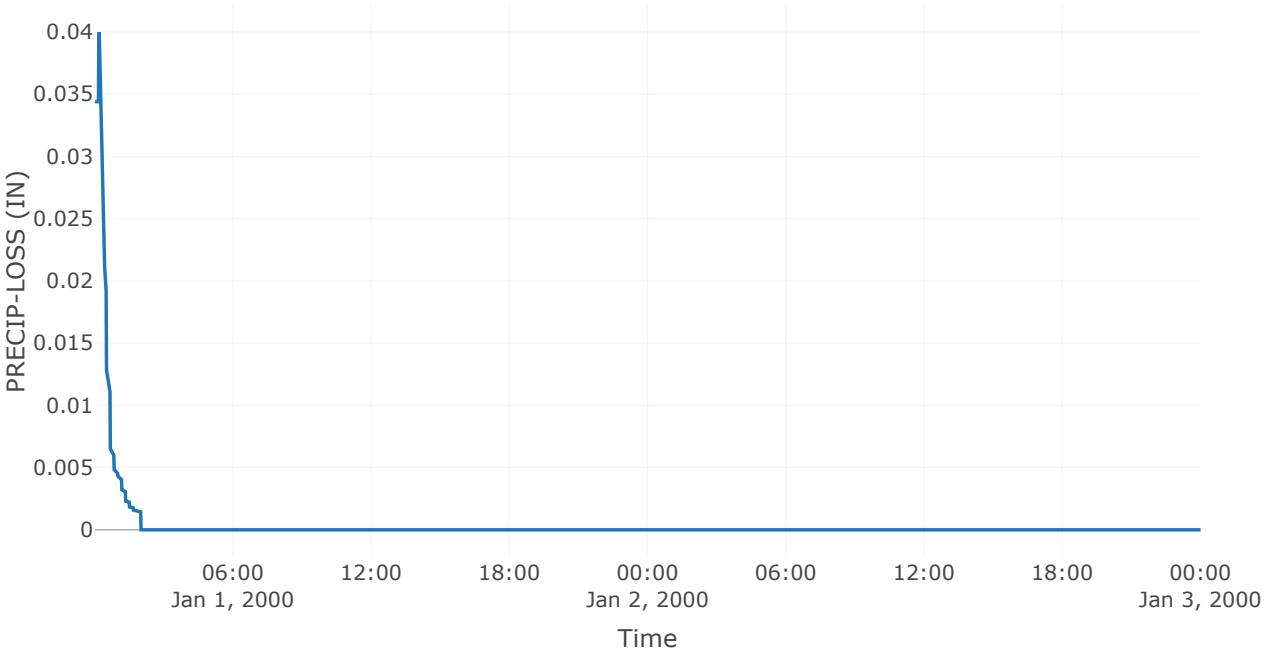

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

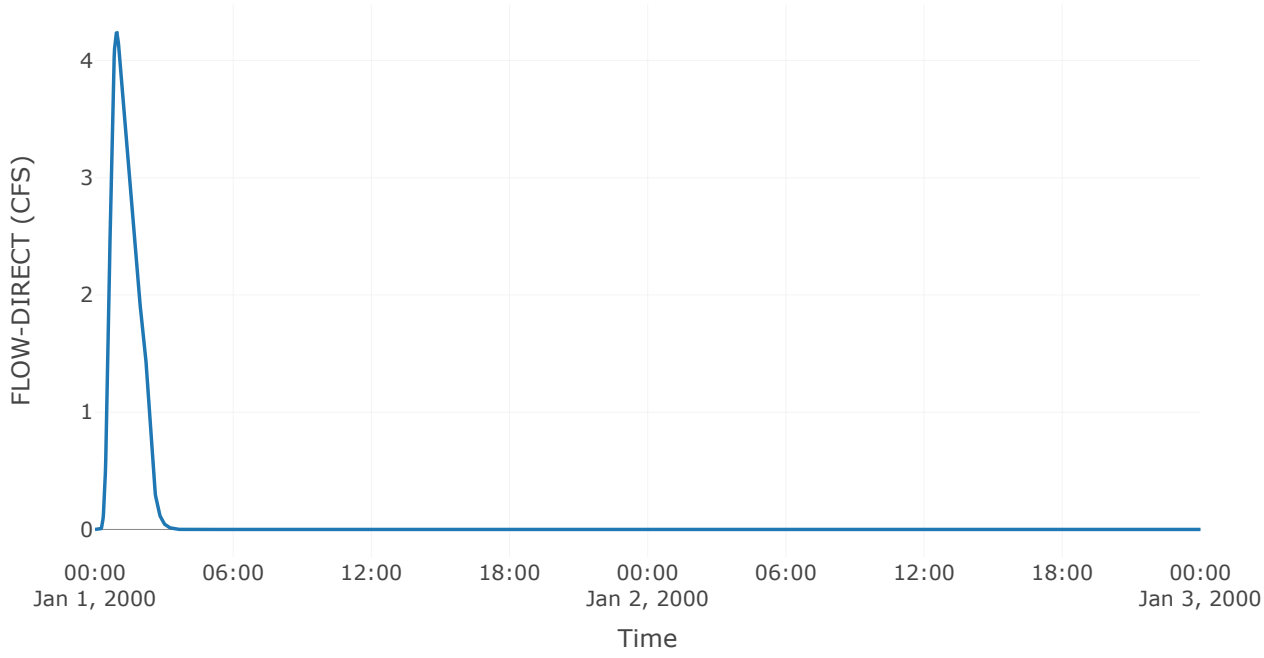

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

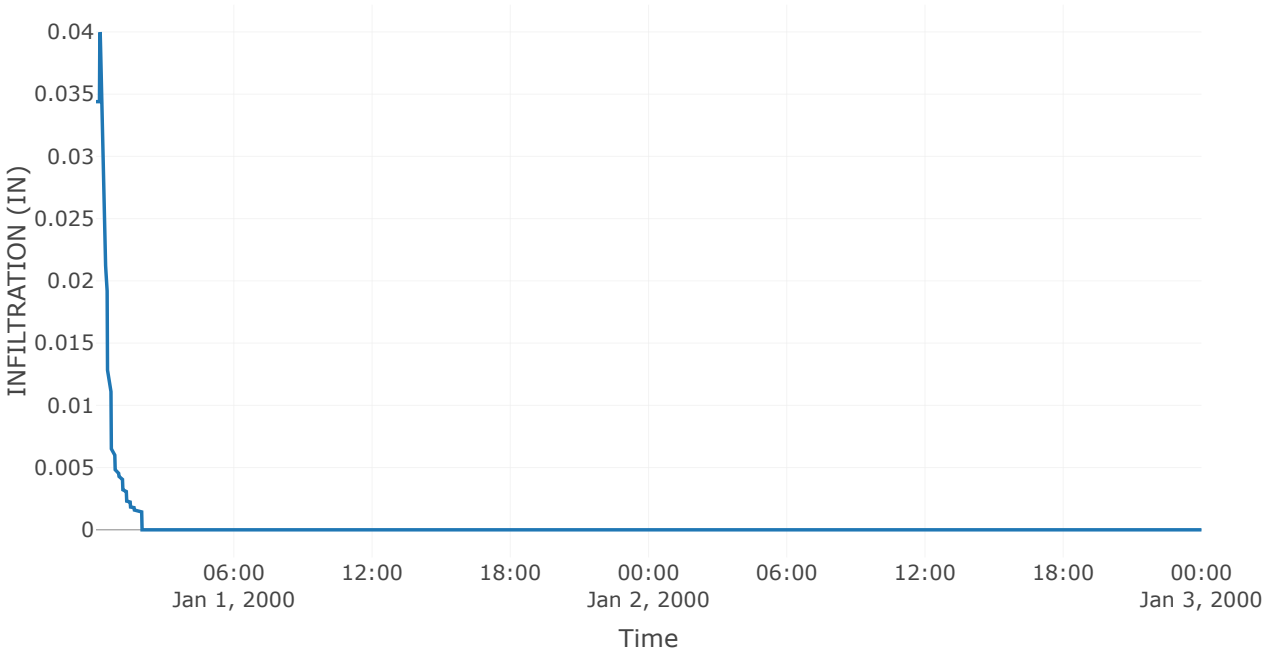

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

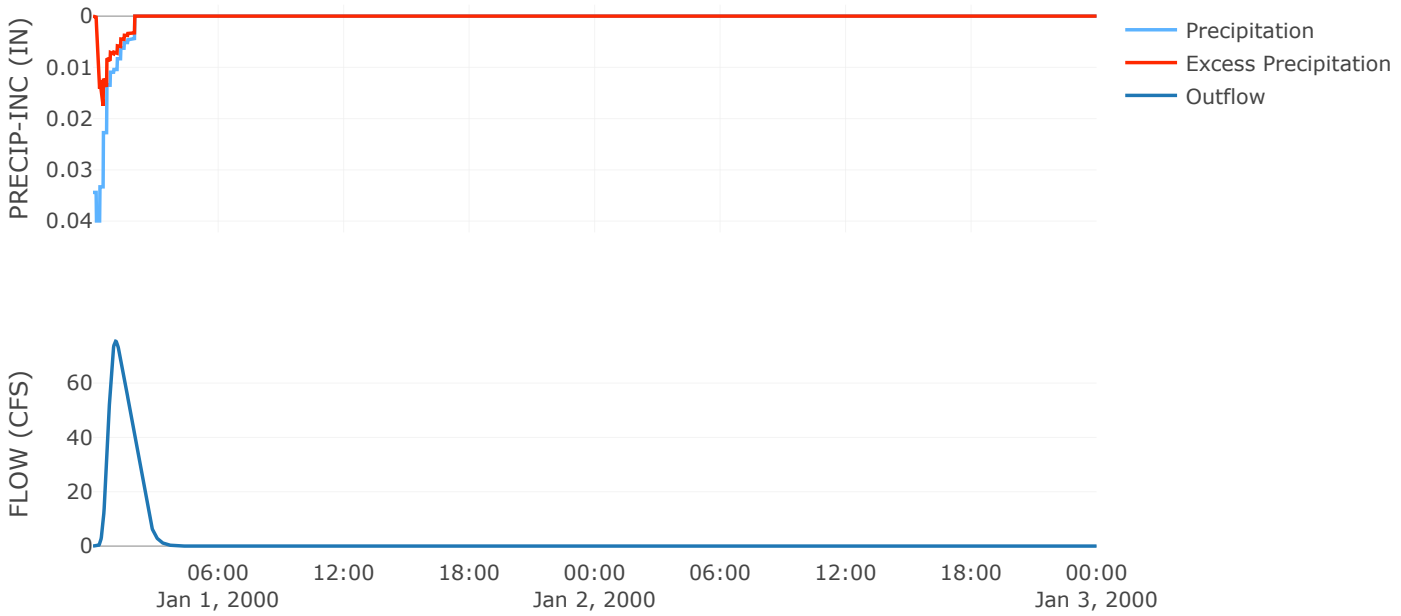
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

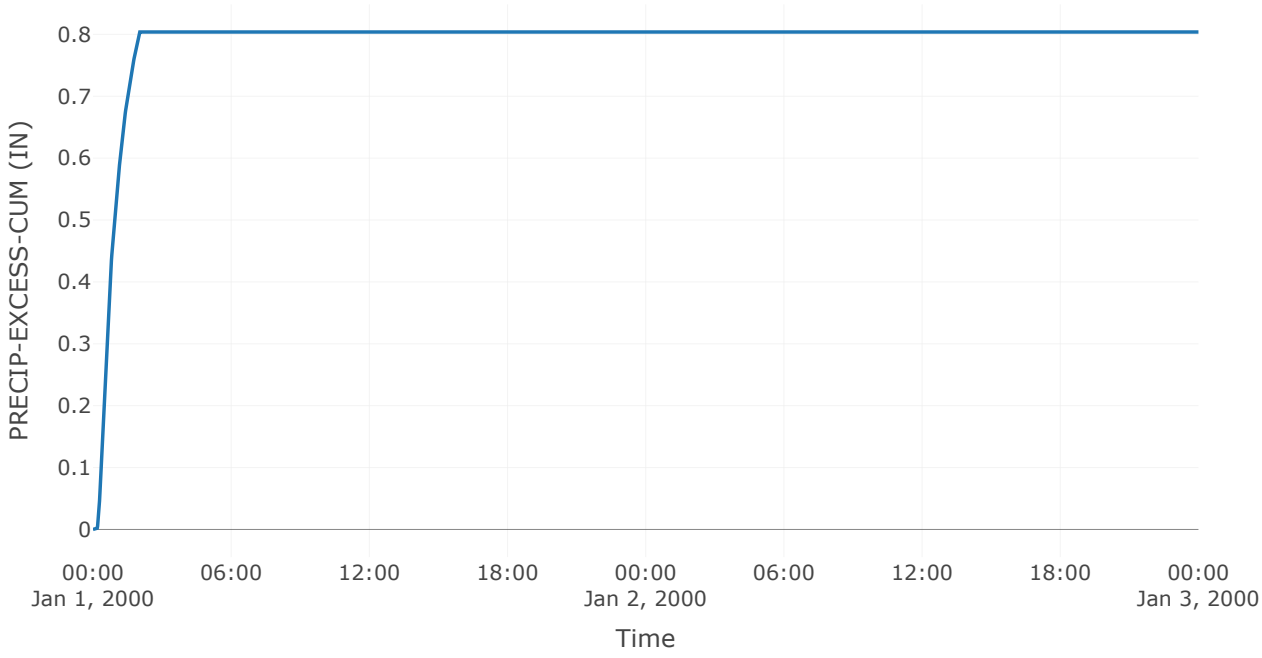
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

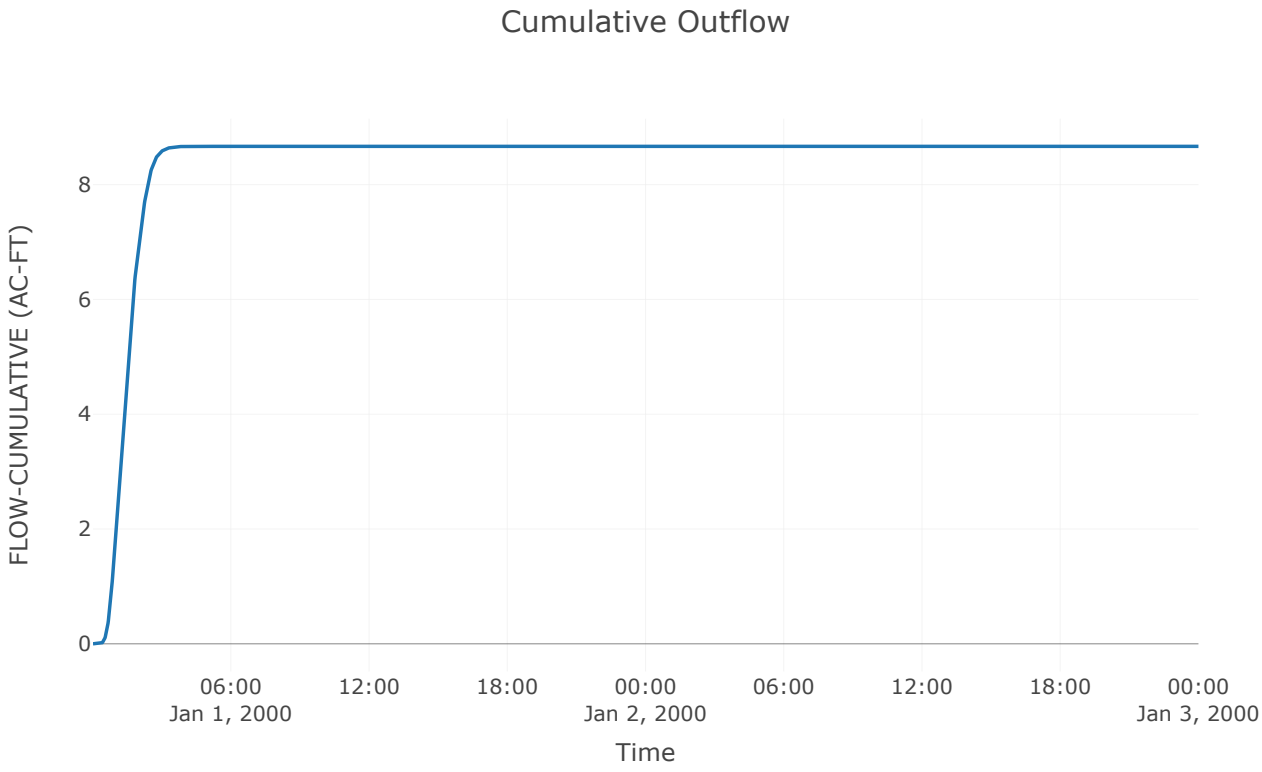
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

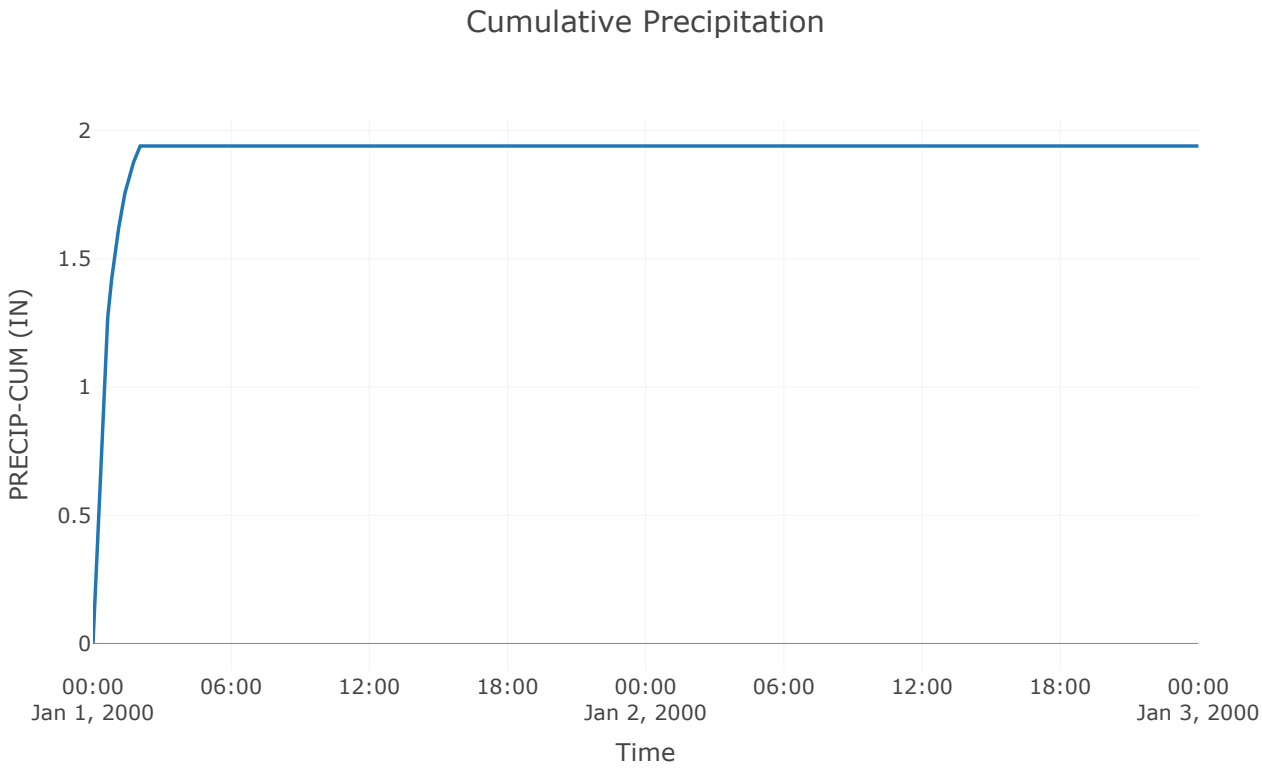
Precipitation and Outflow

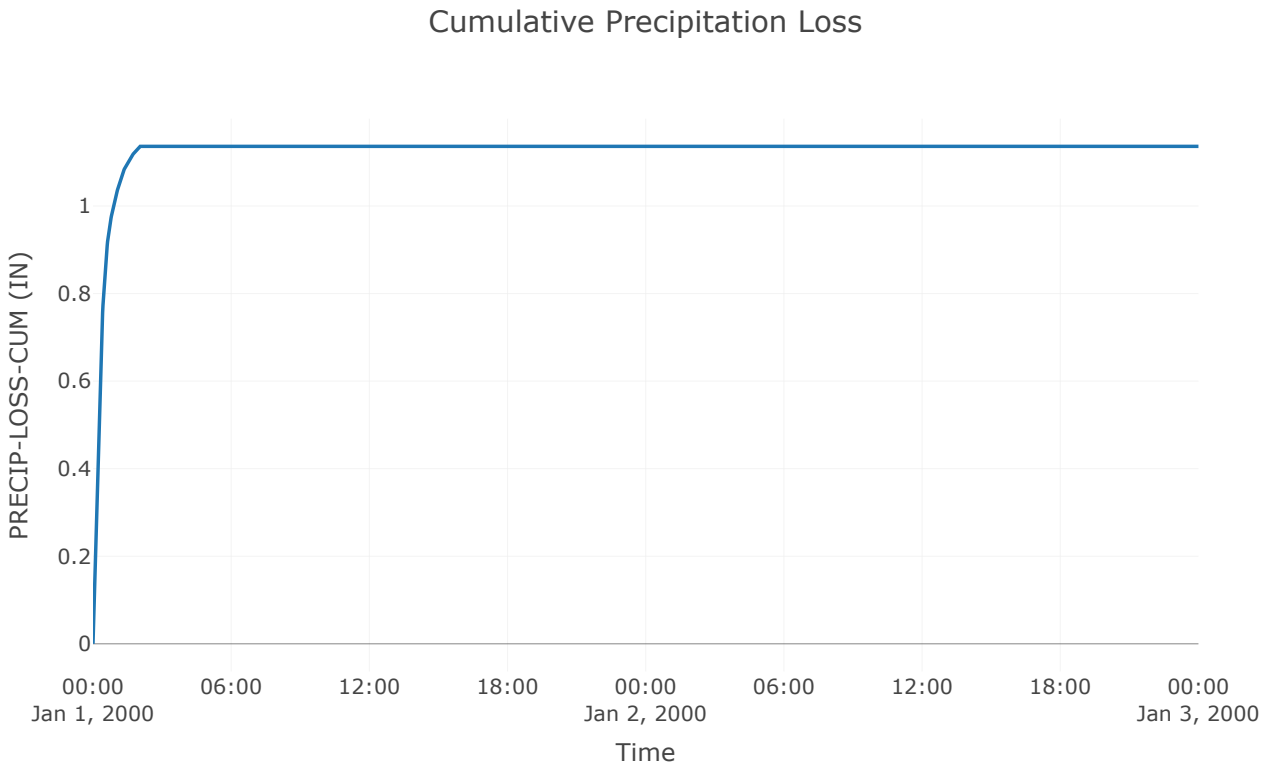


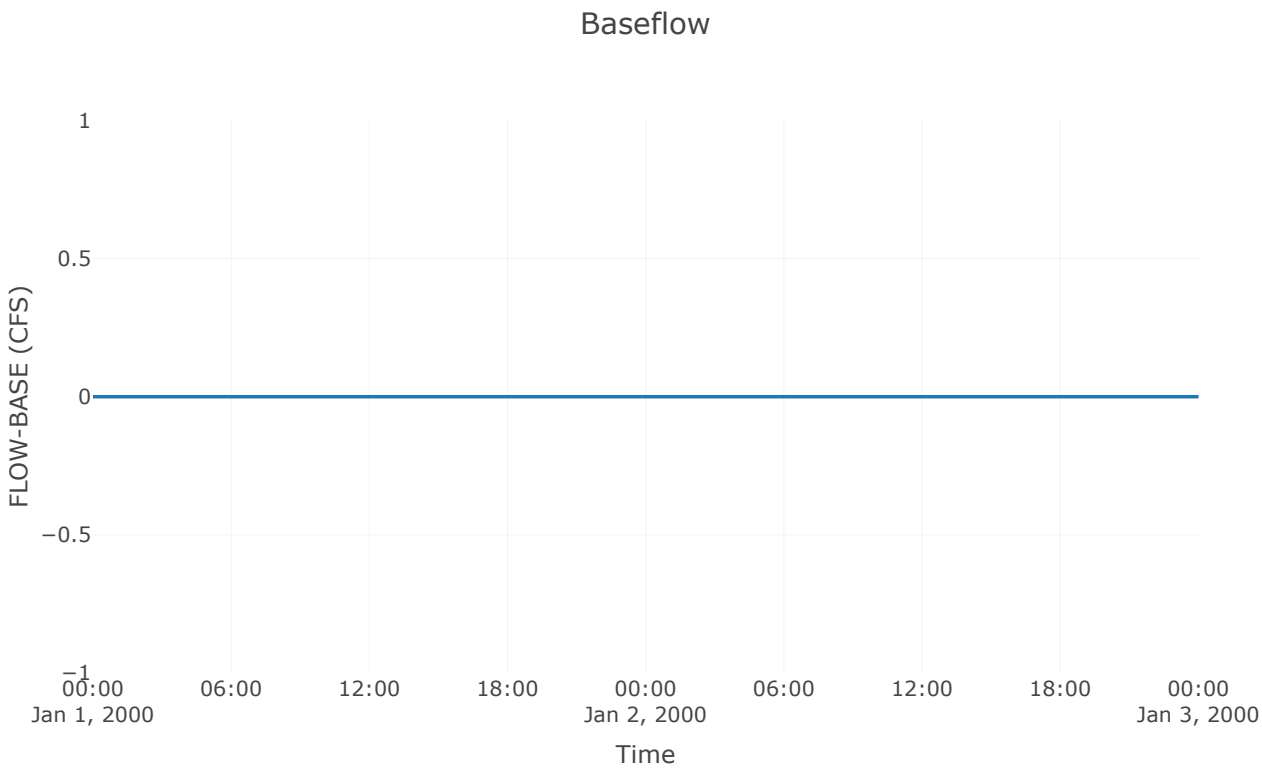
Cumulative Excess Precipitation



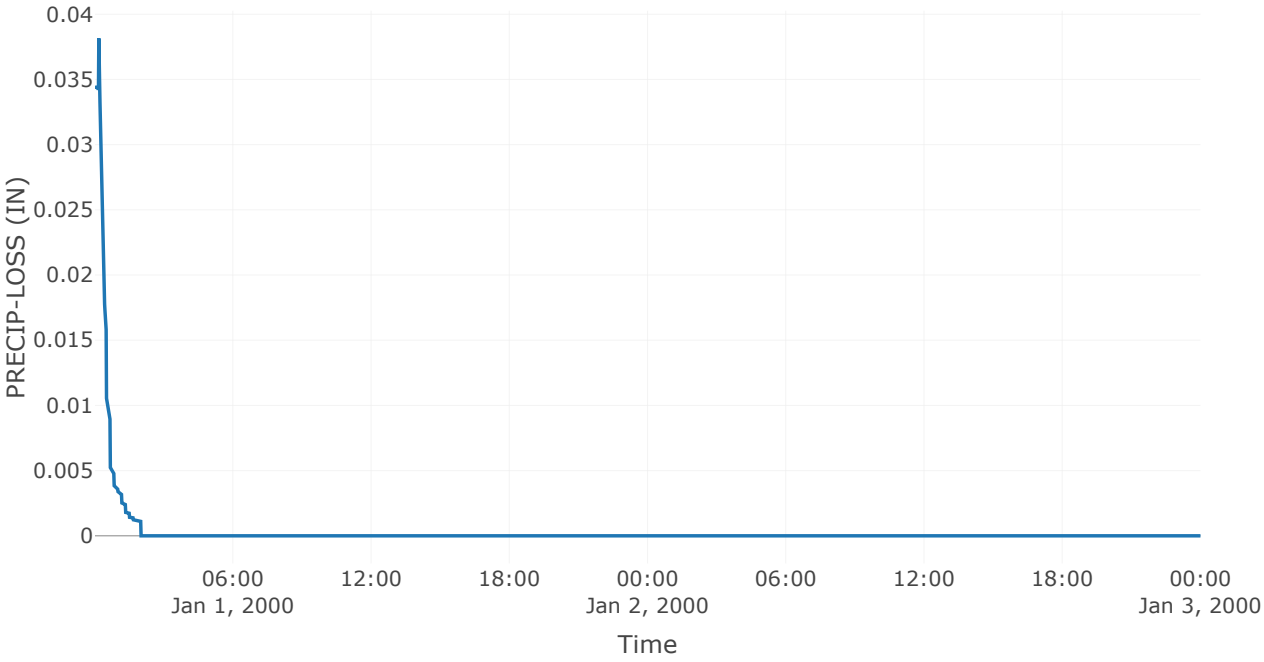

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

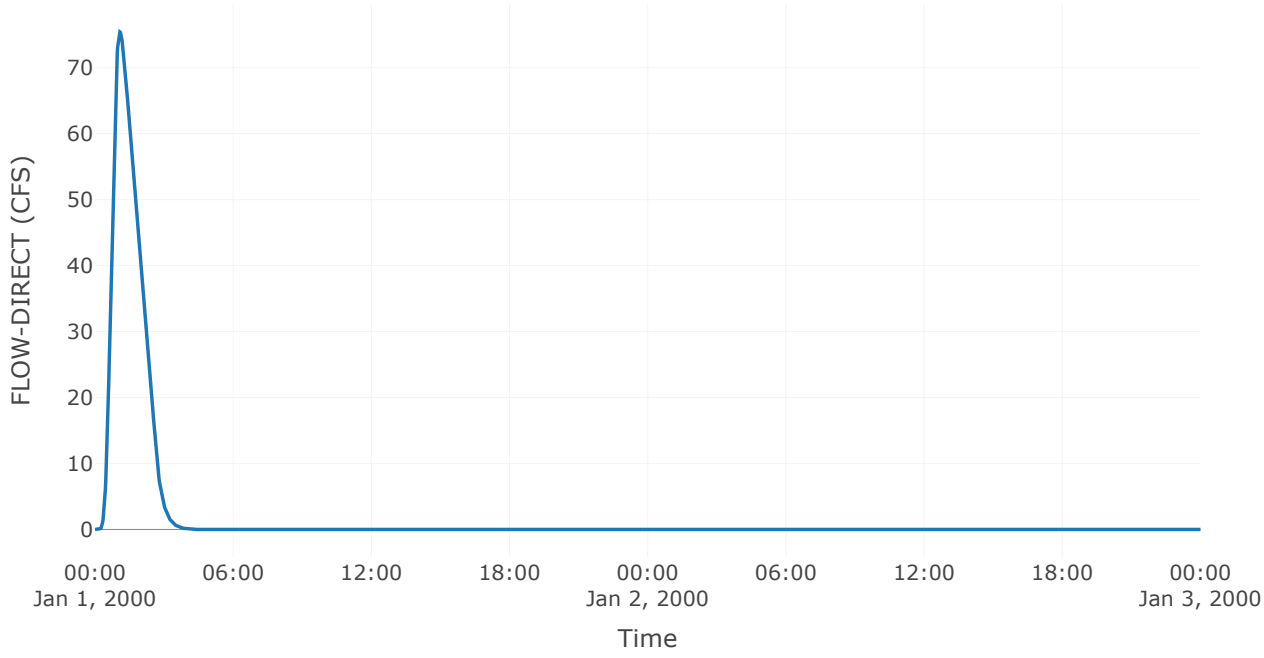

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

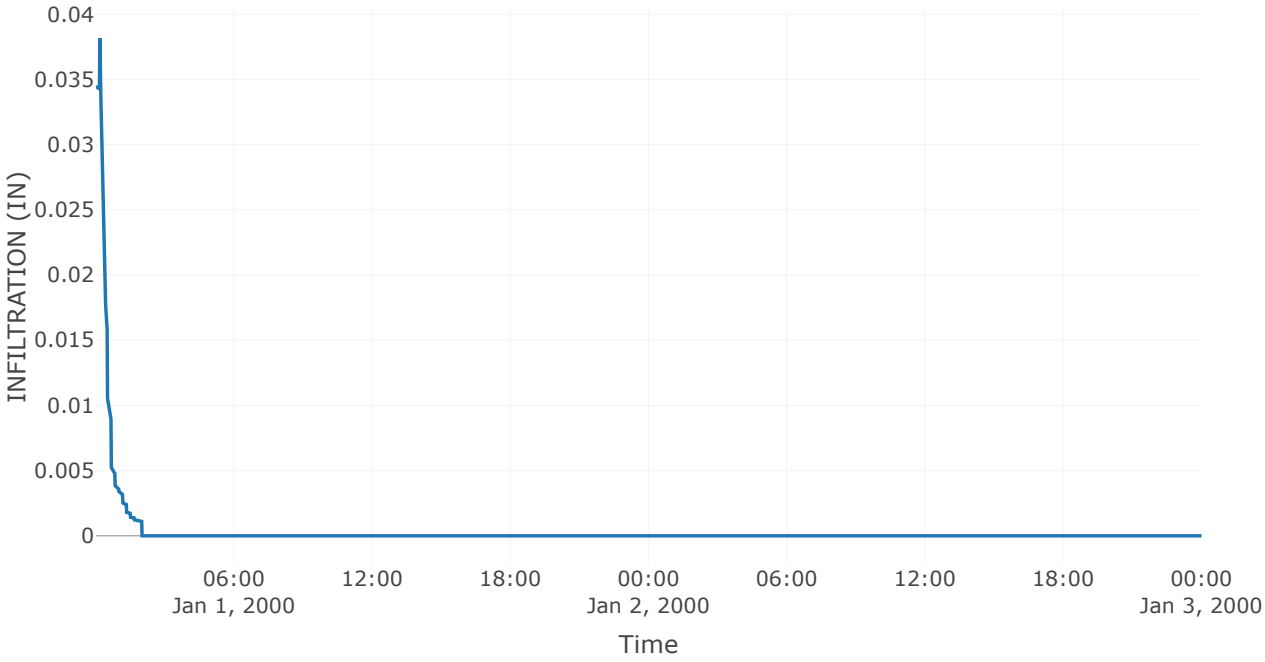

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

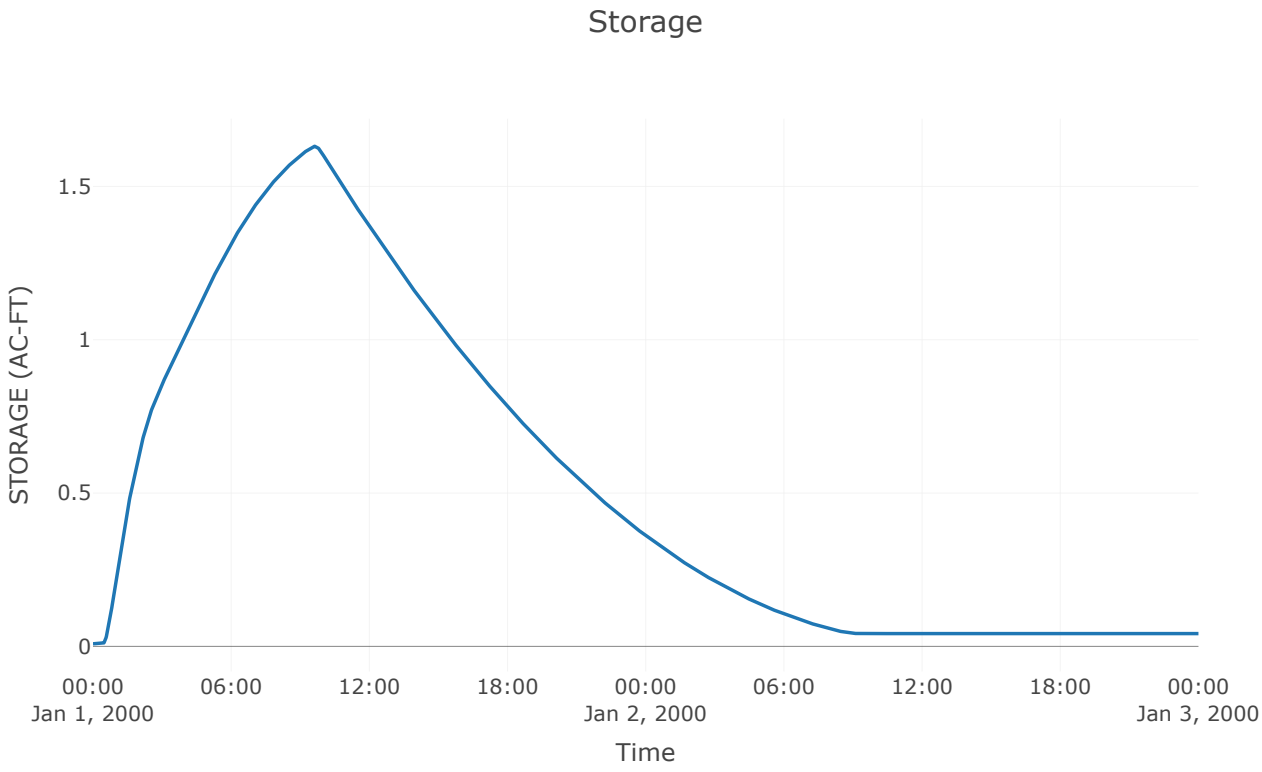


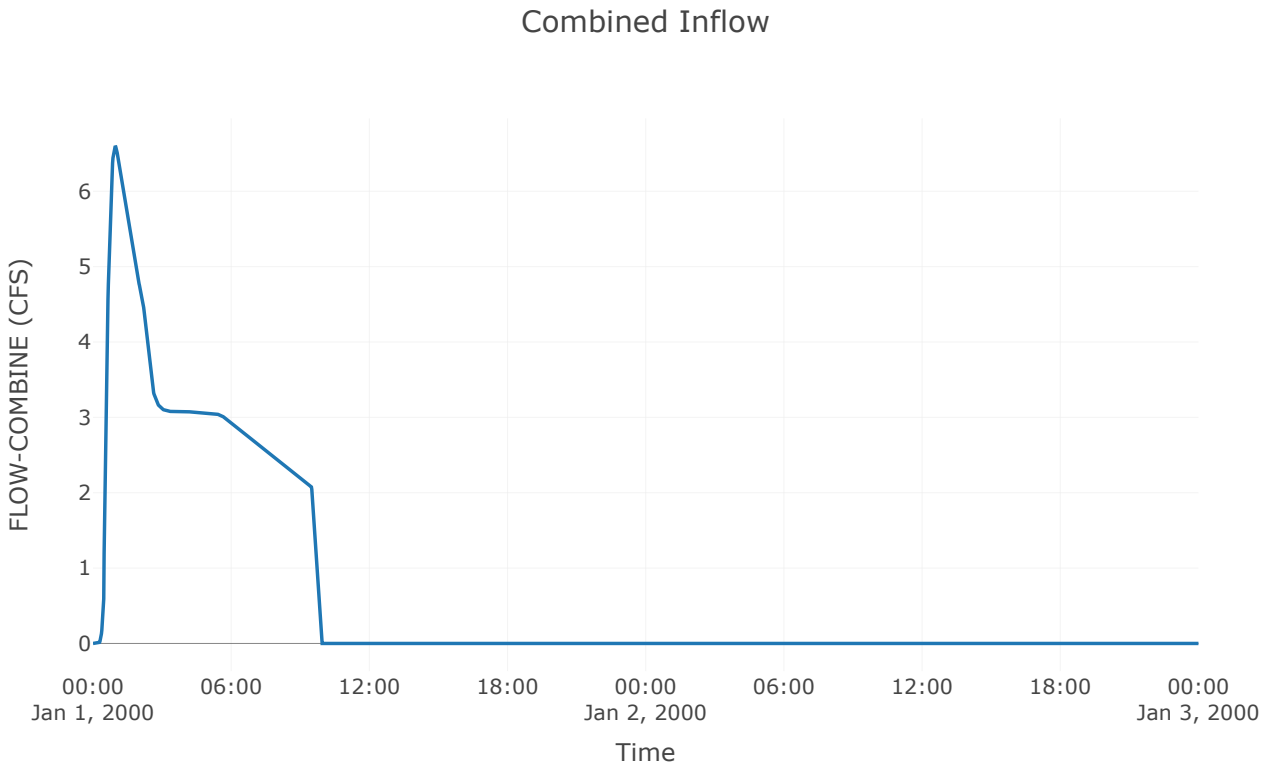

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

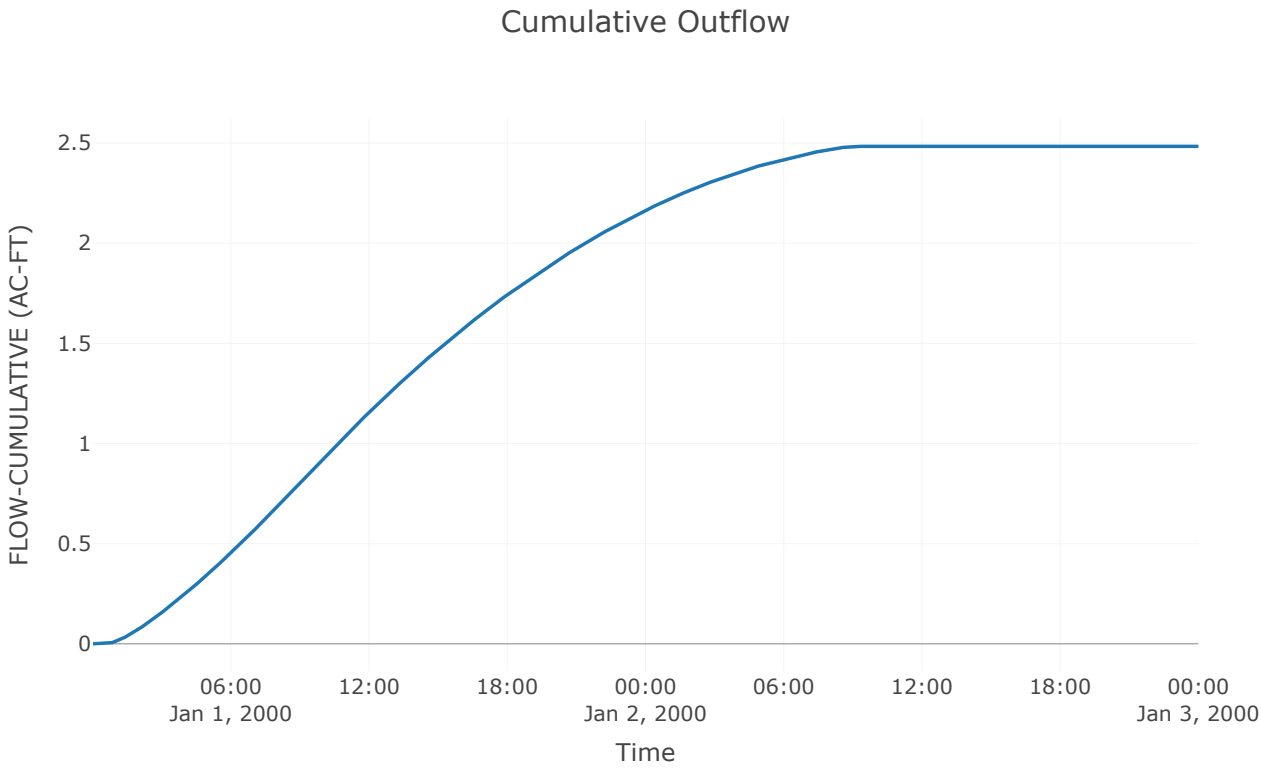
Reservoir: Basin 3

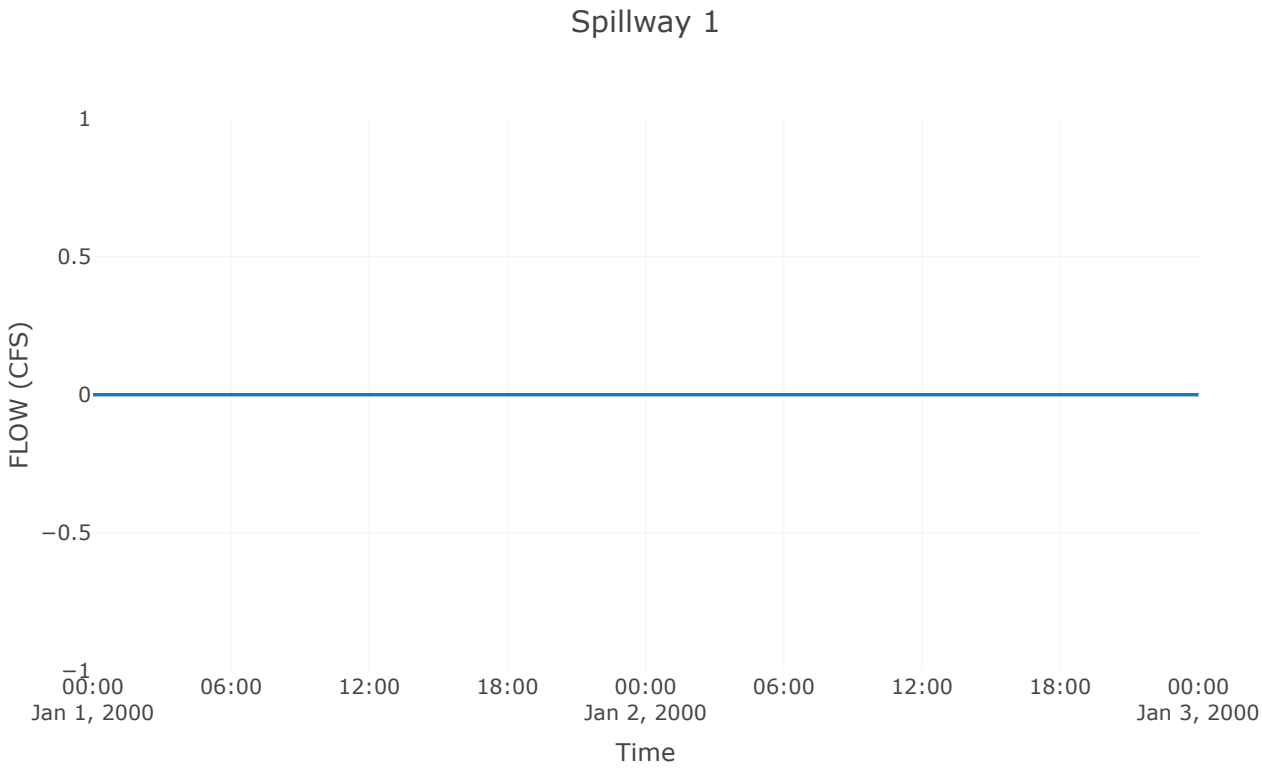
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

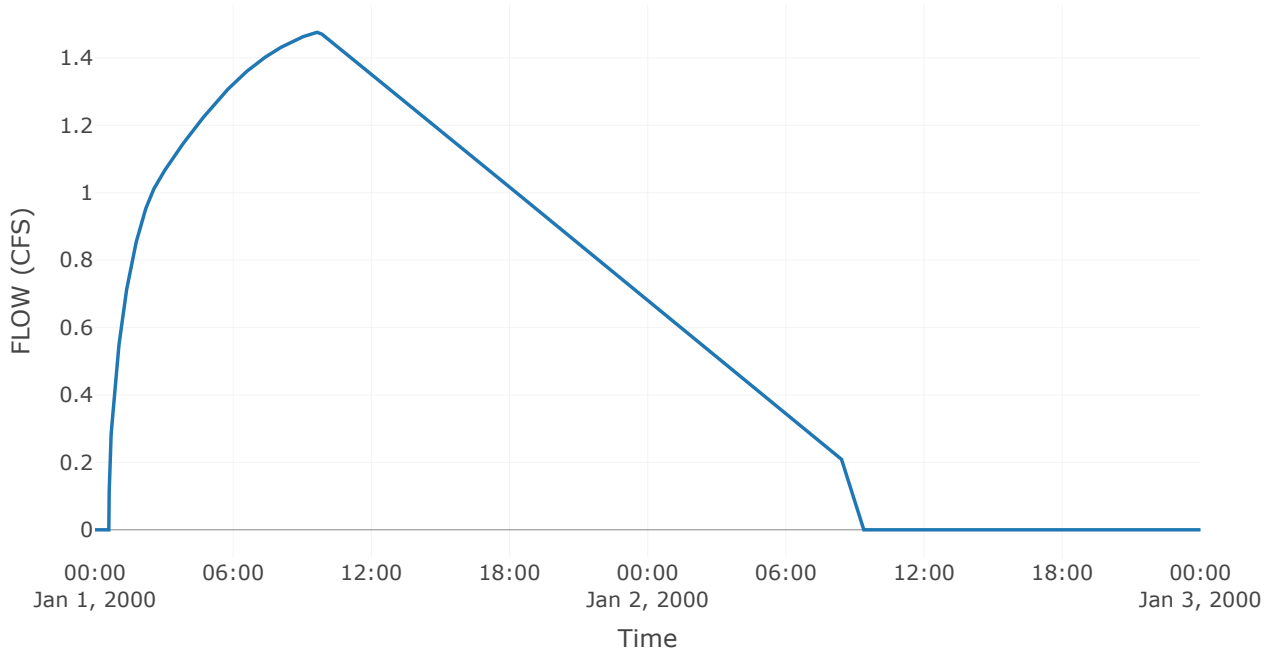

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

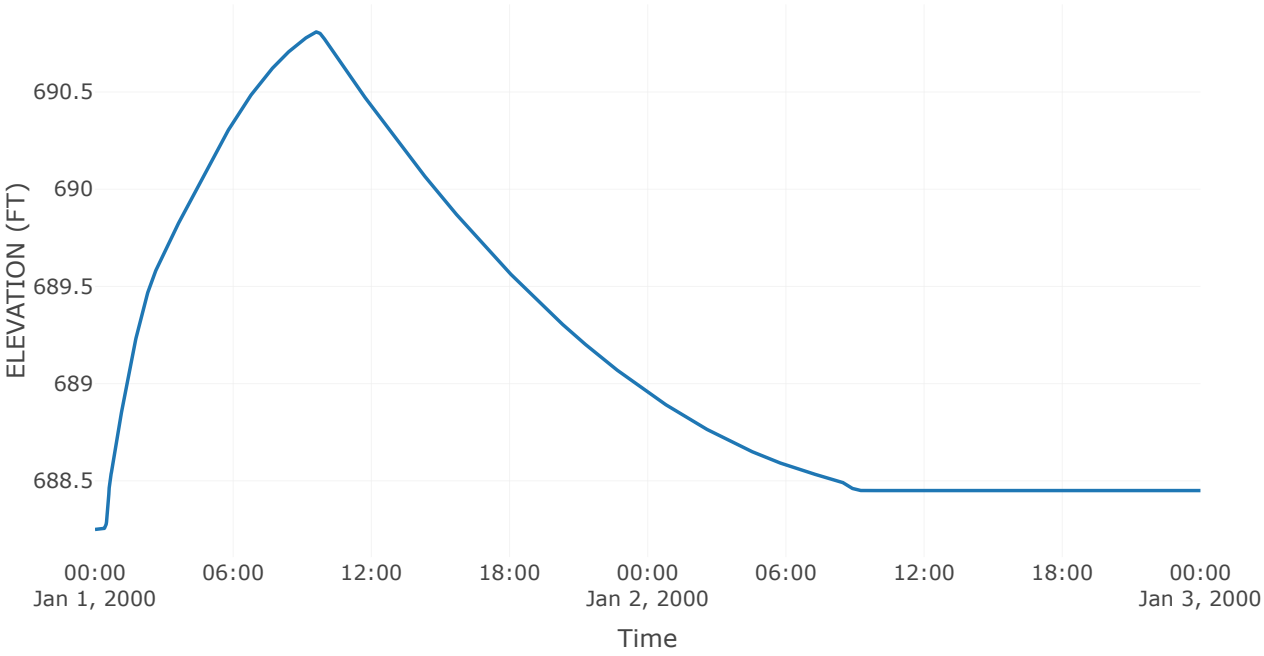

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

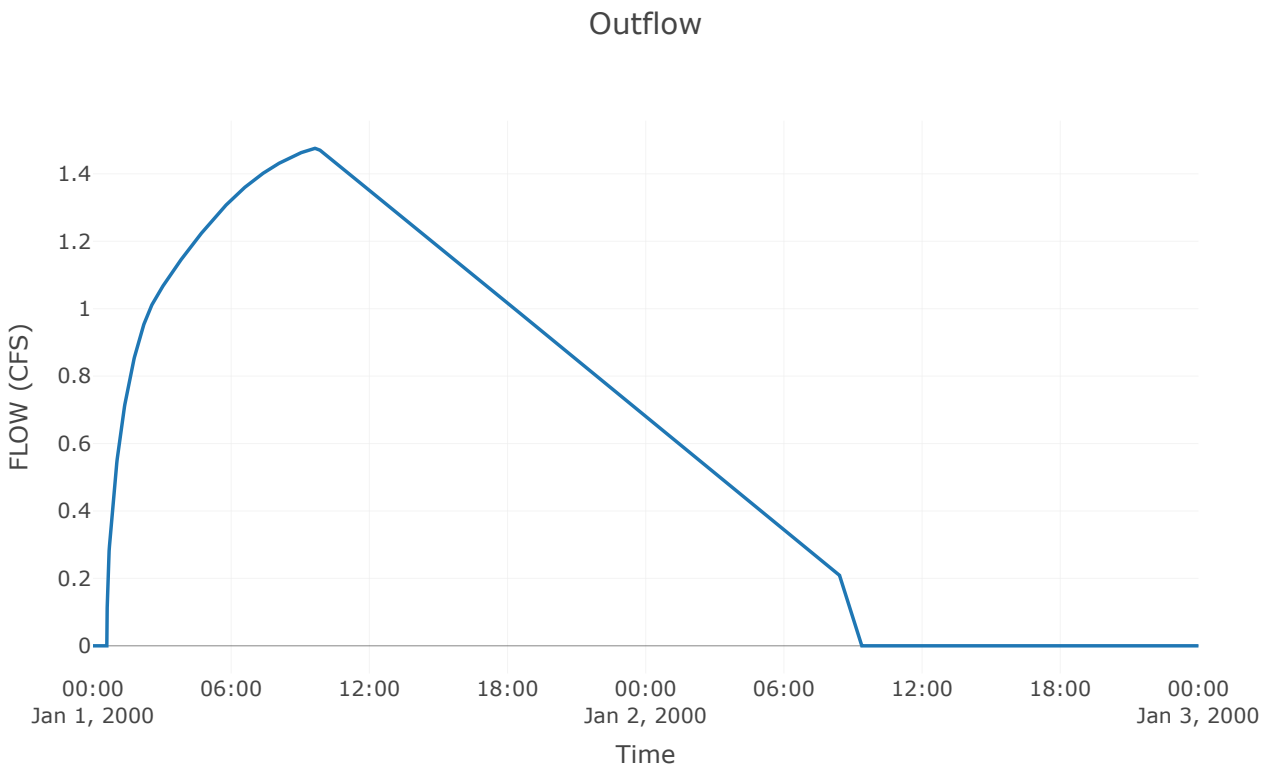

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

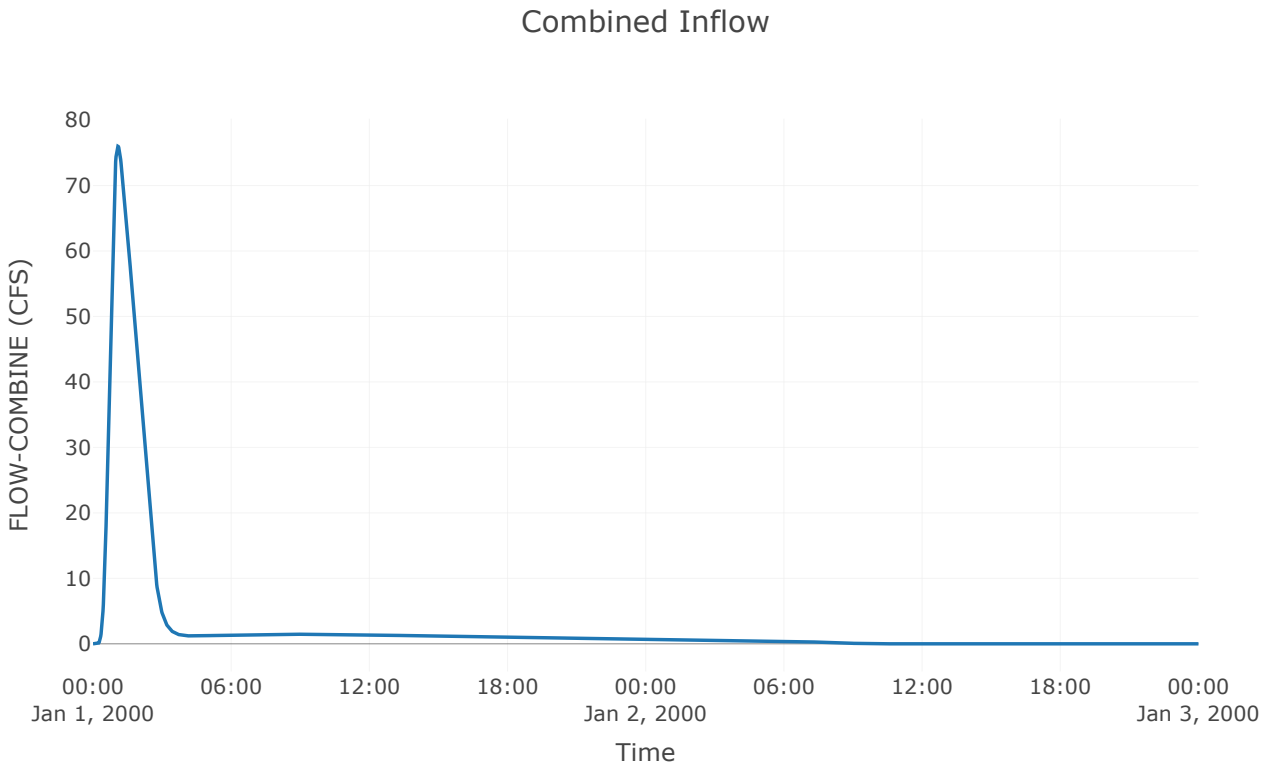


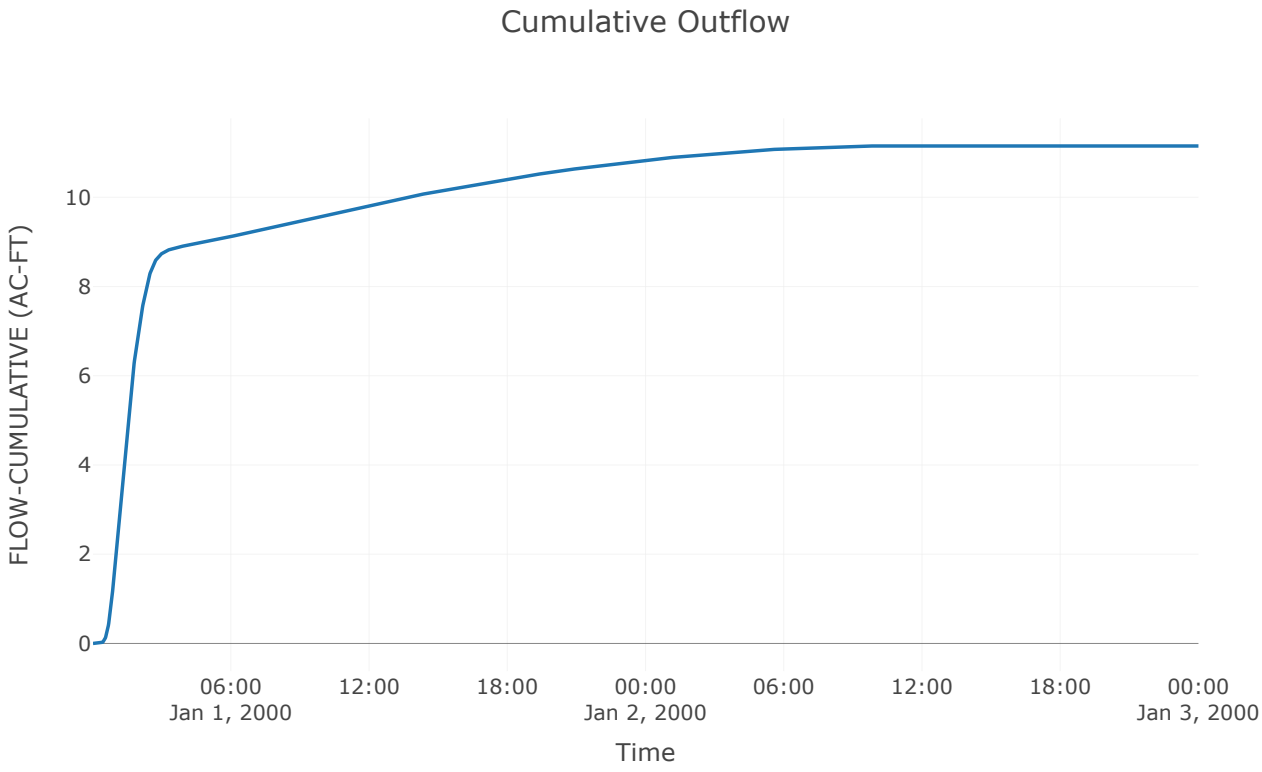

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

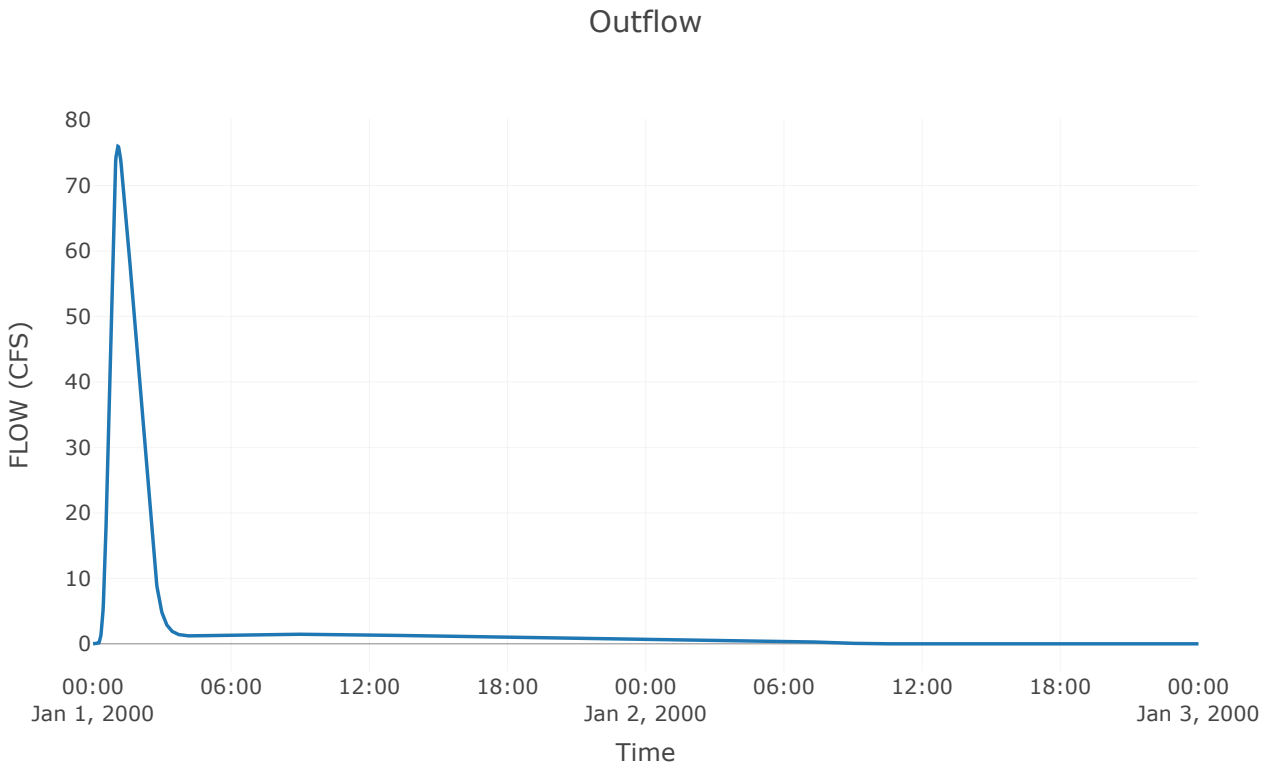
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

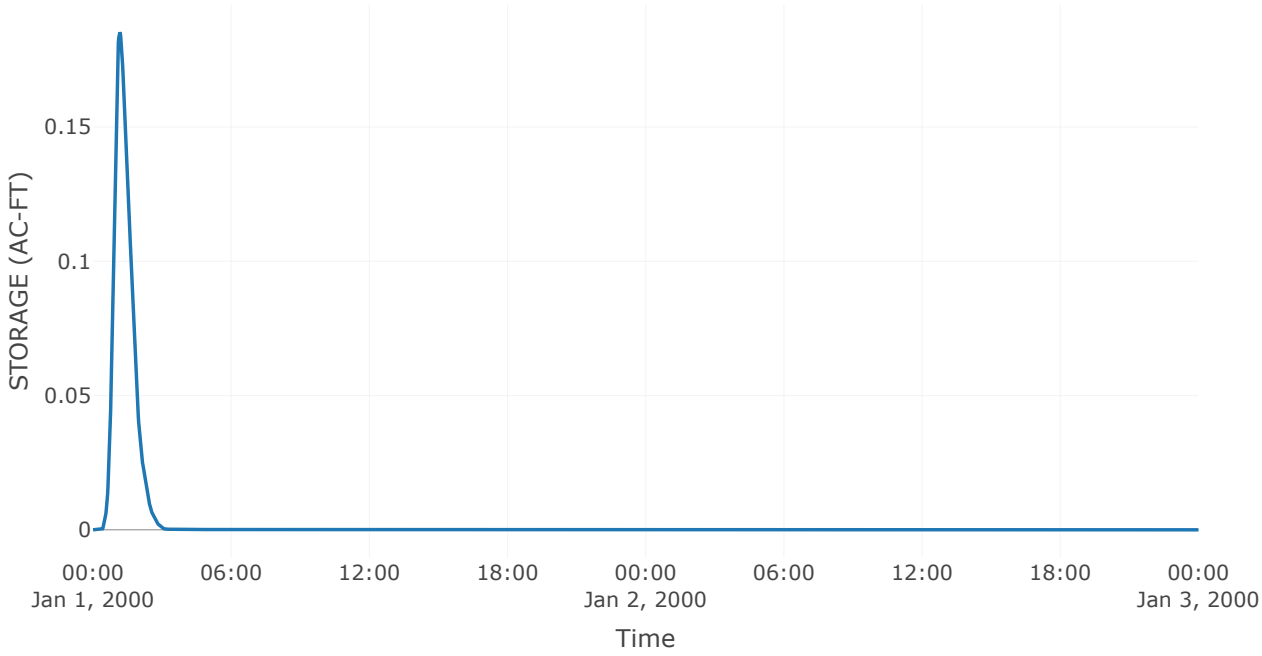

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

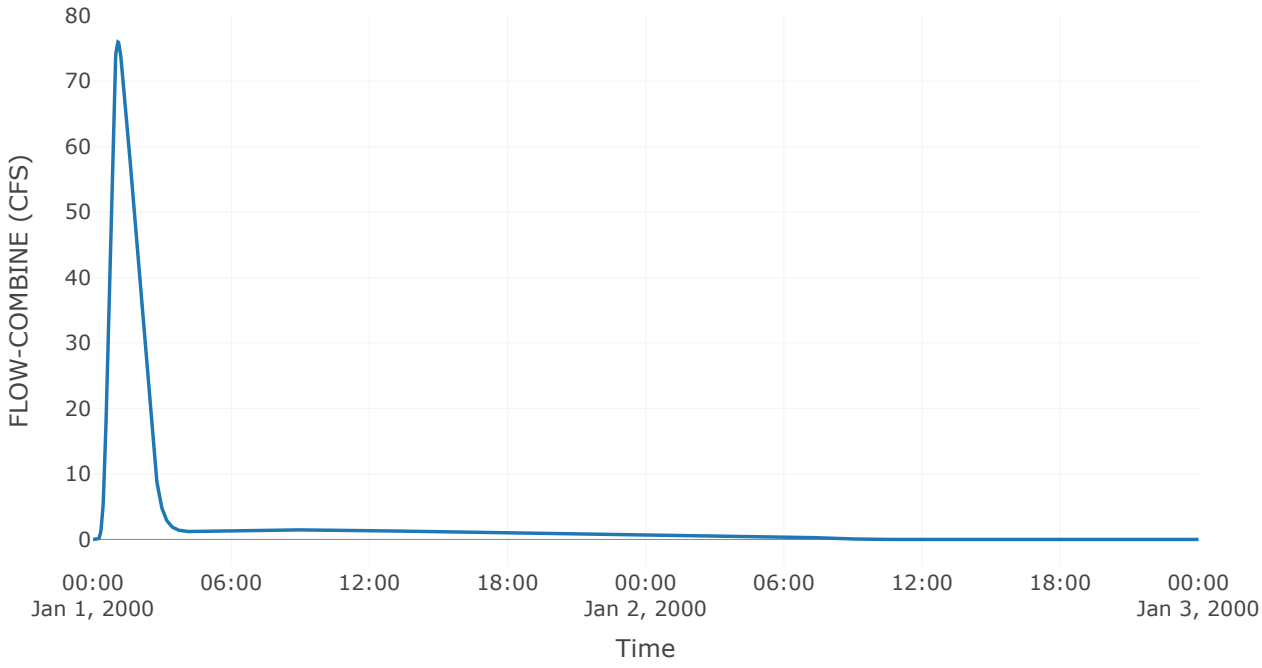
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

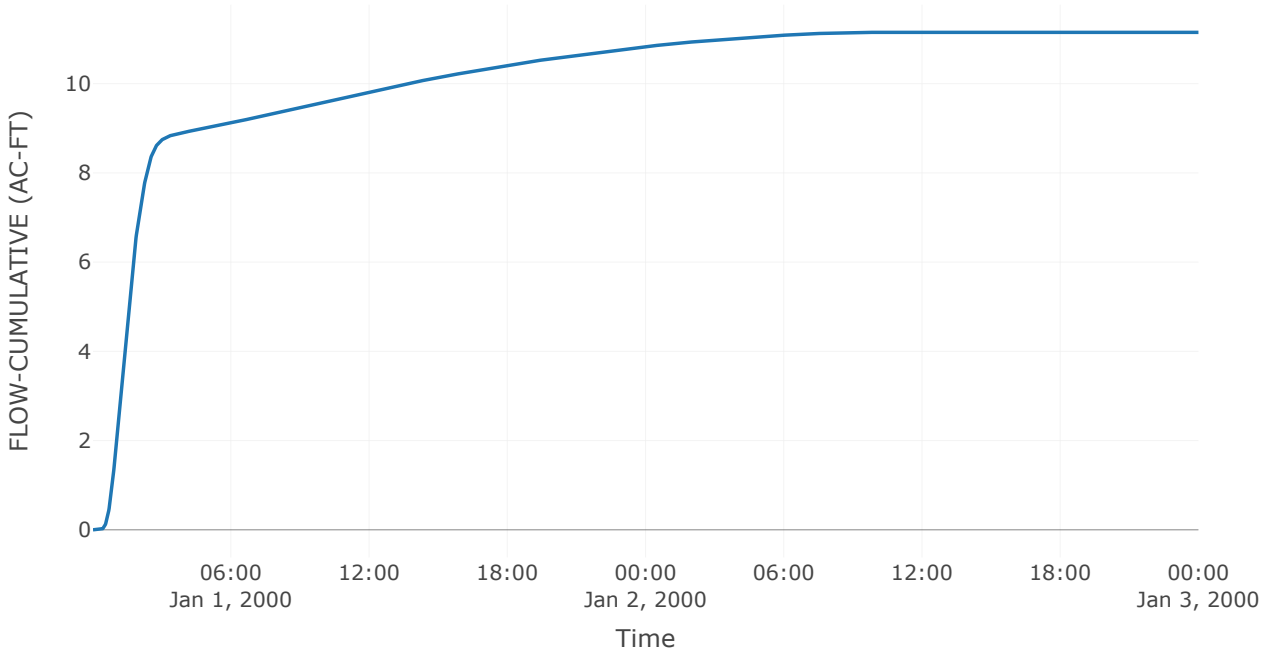
Storage



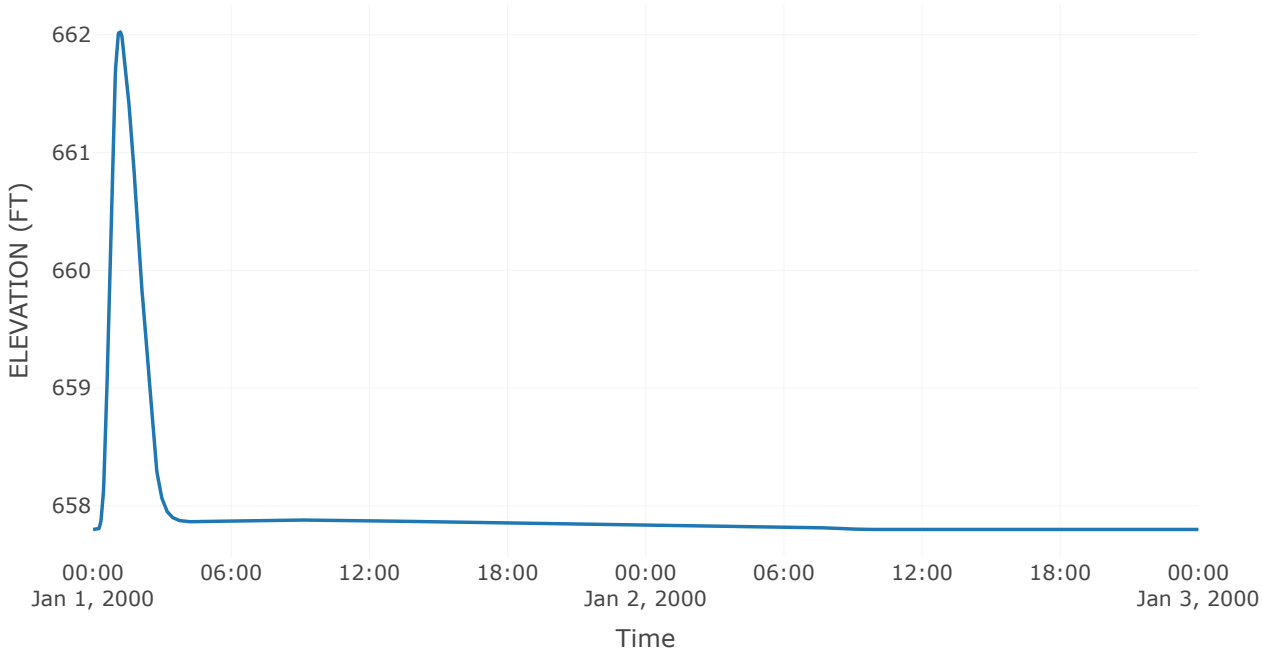
Combined Inflow

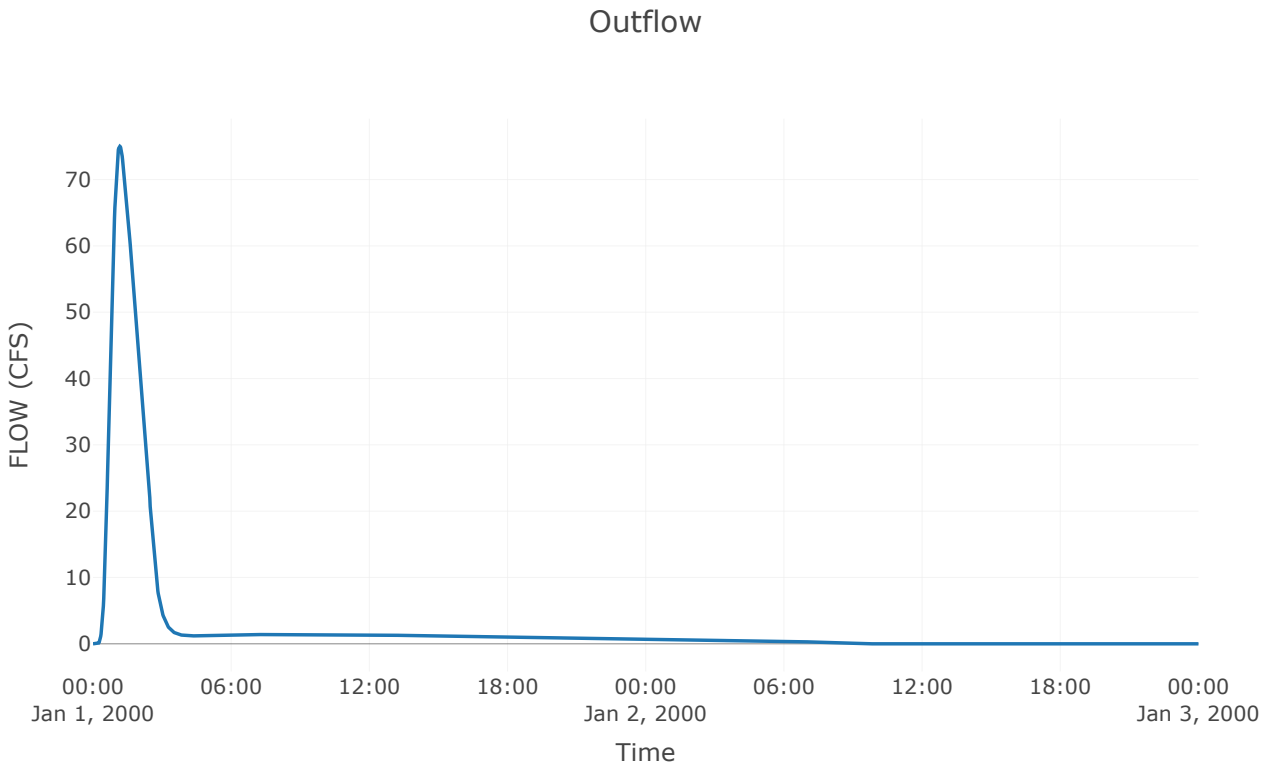


Cumulative Outflow



Pool Elevation



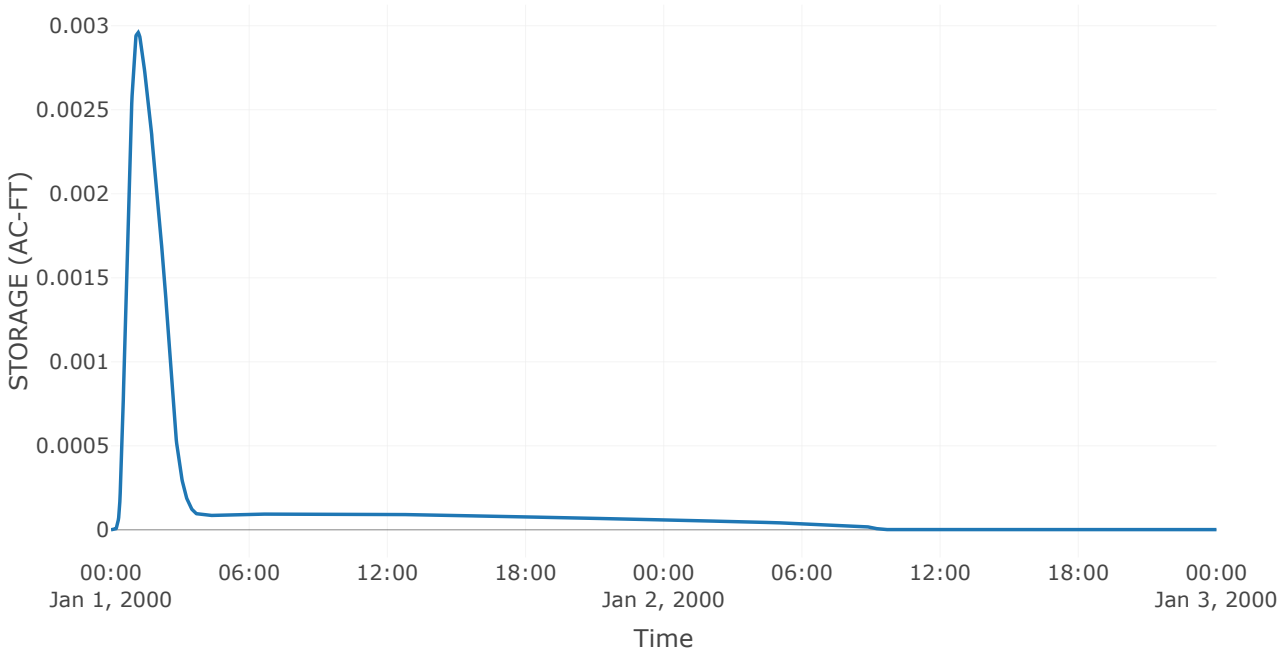

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

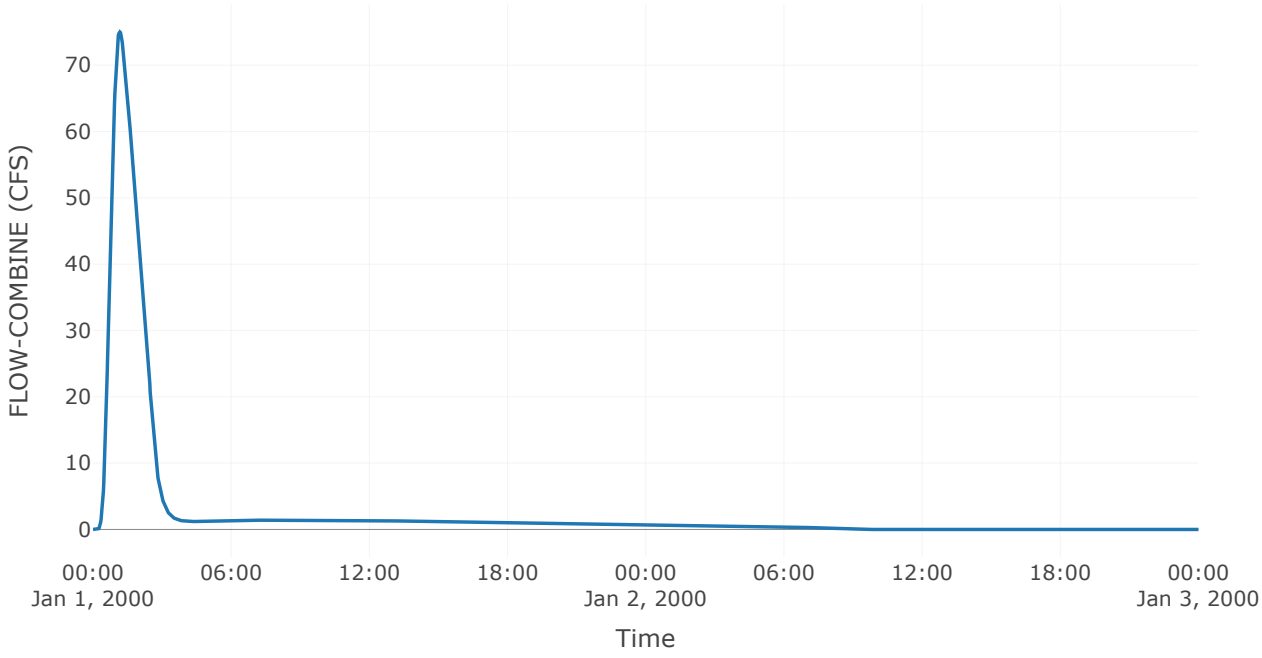
Downstream : Prop Storage West of Wolf Rd

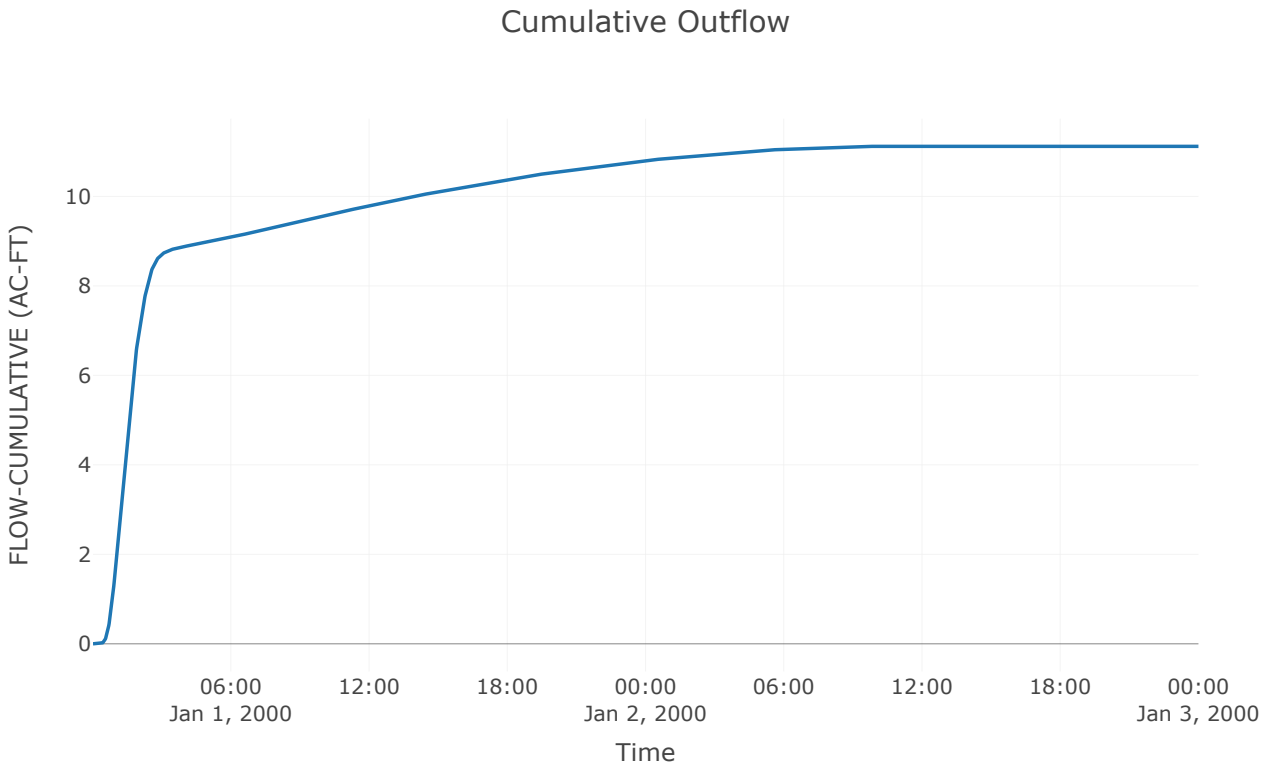
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.51
Discharge Volume (AC - FT)	11.12

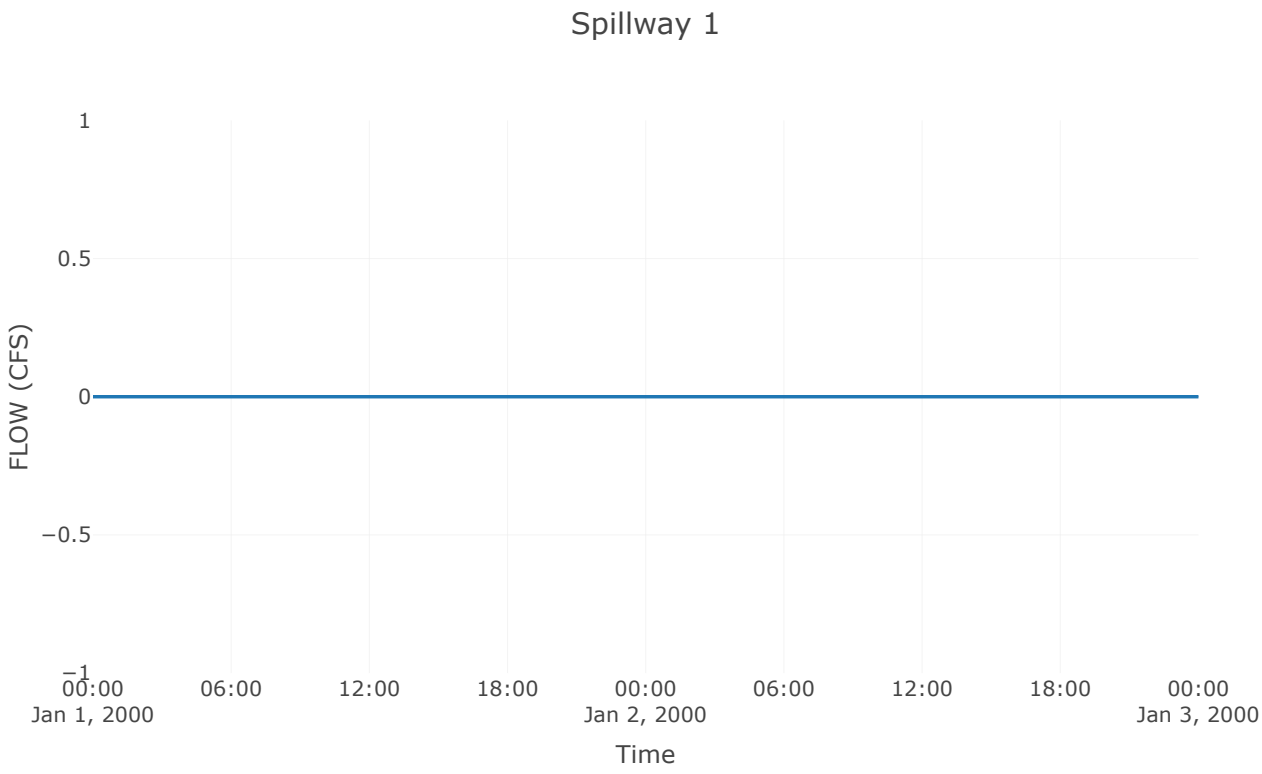
Storage



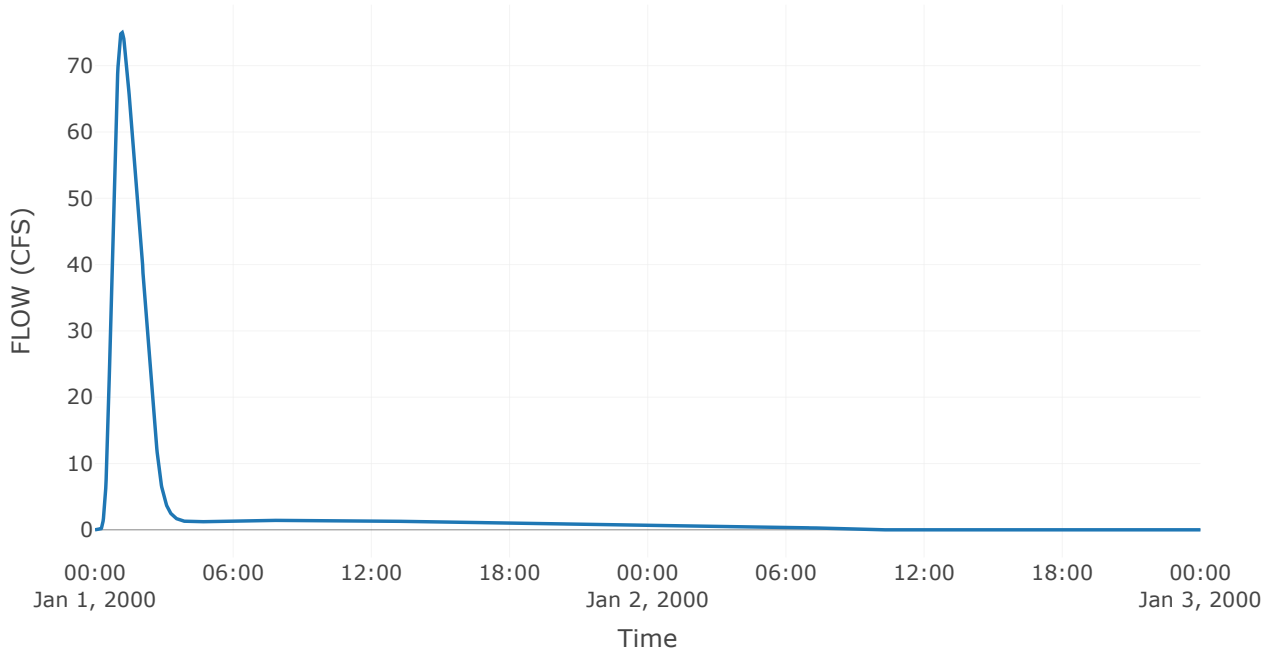
Combined Inflow



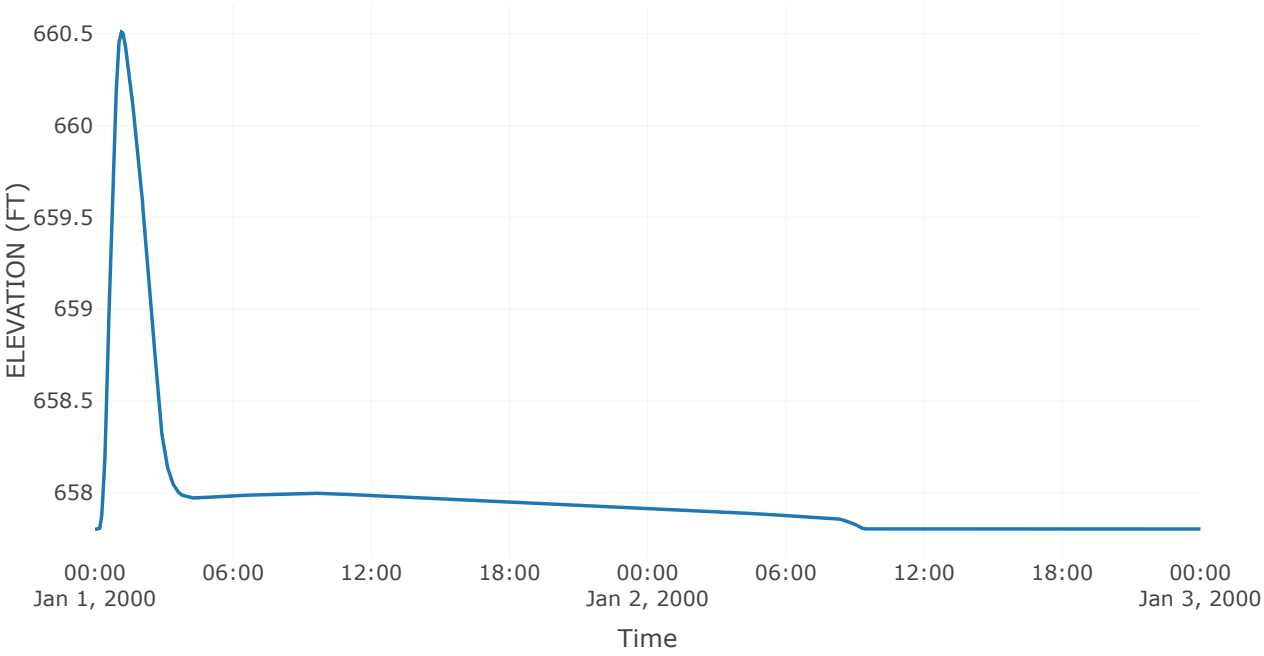

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

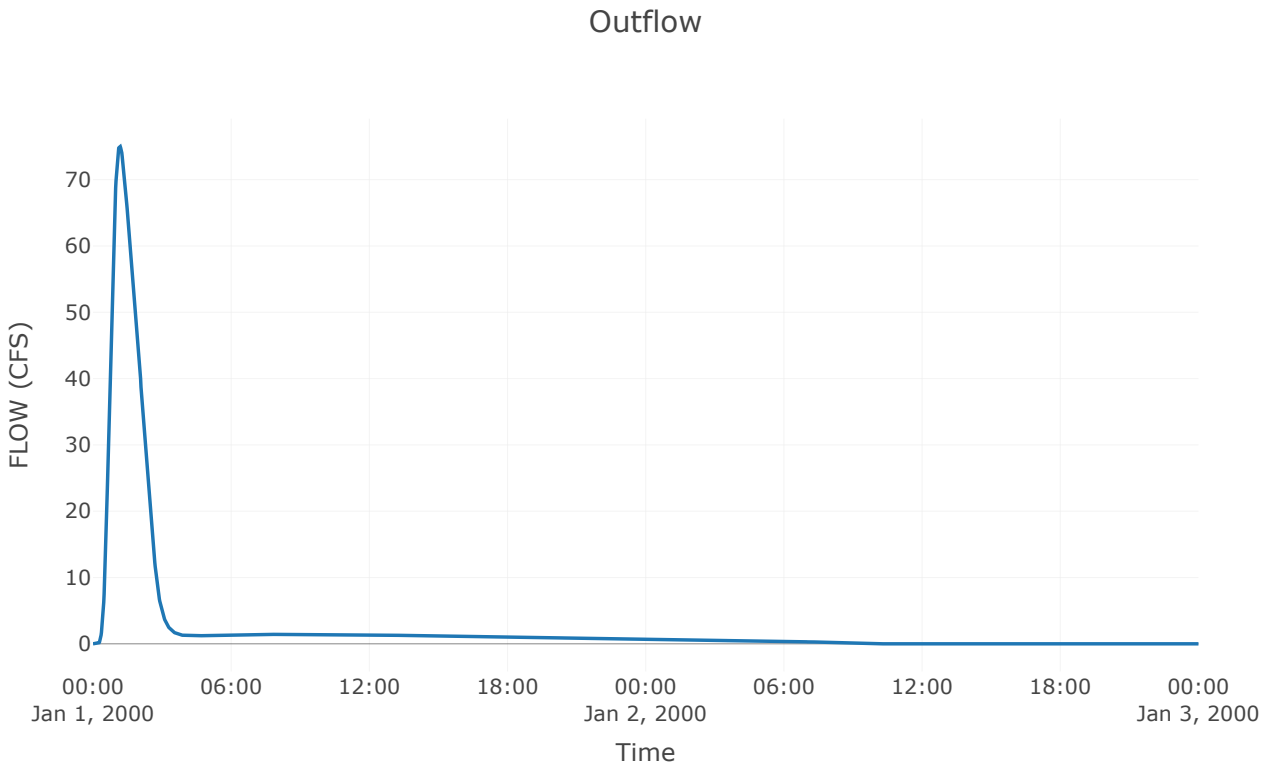

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



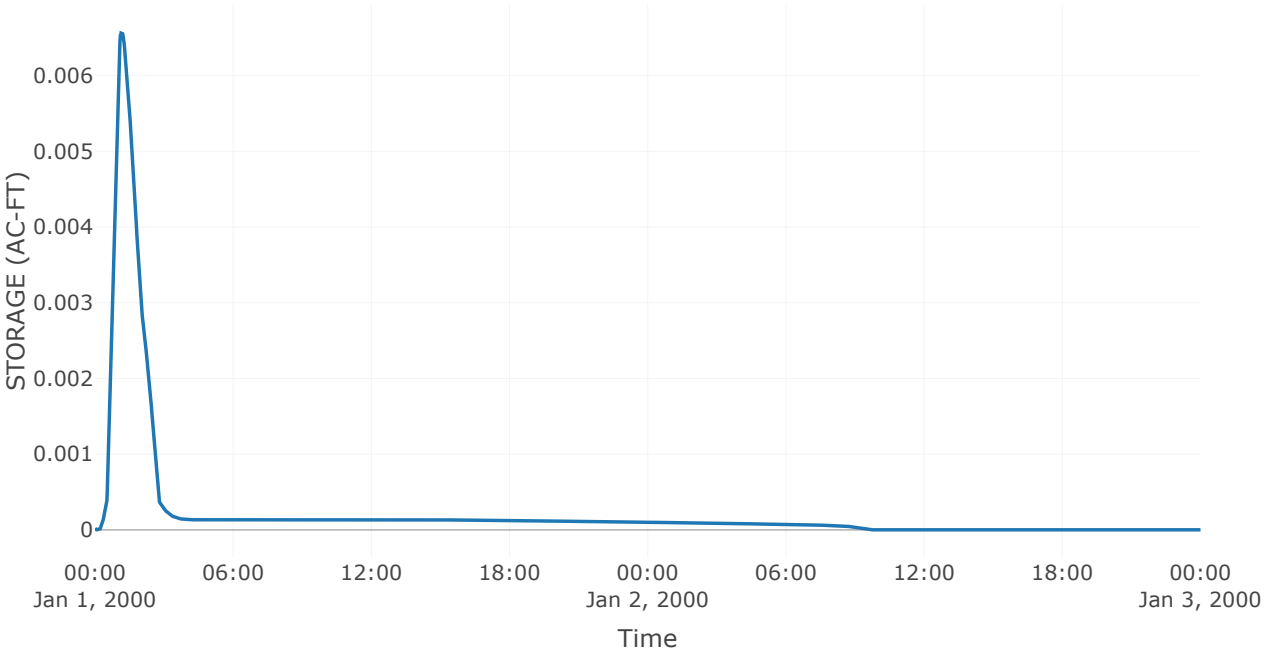

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

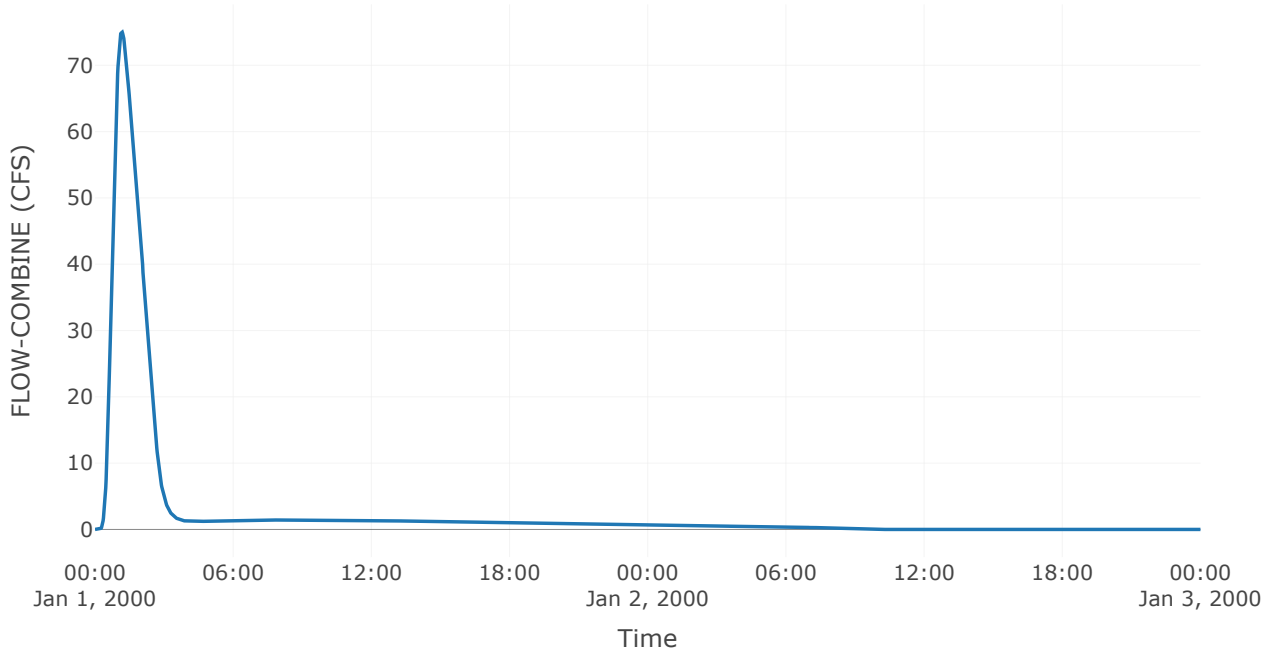
Downstream : Proposed Basin C

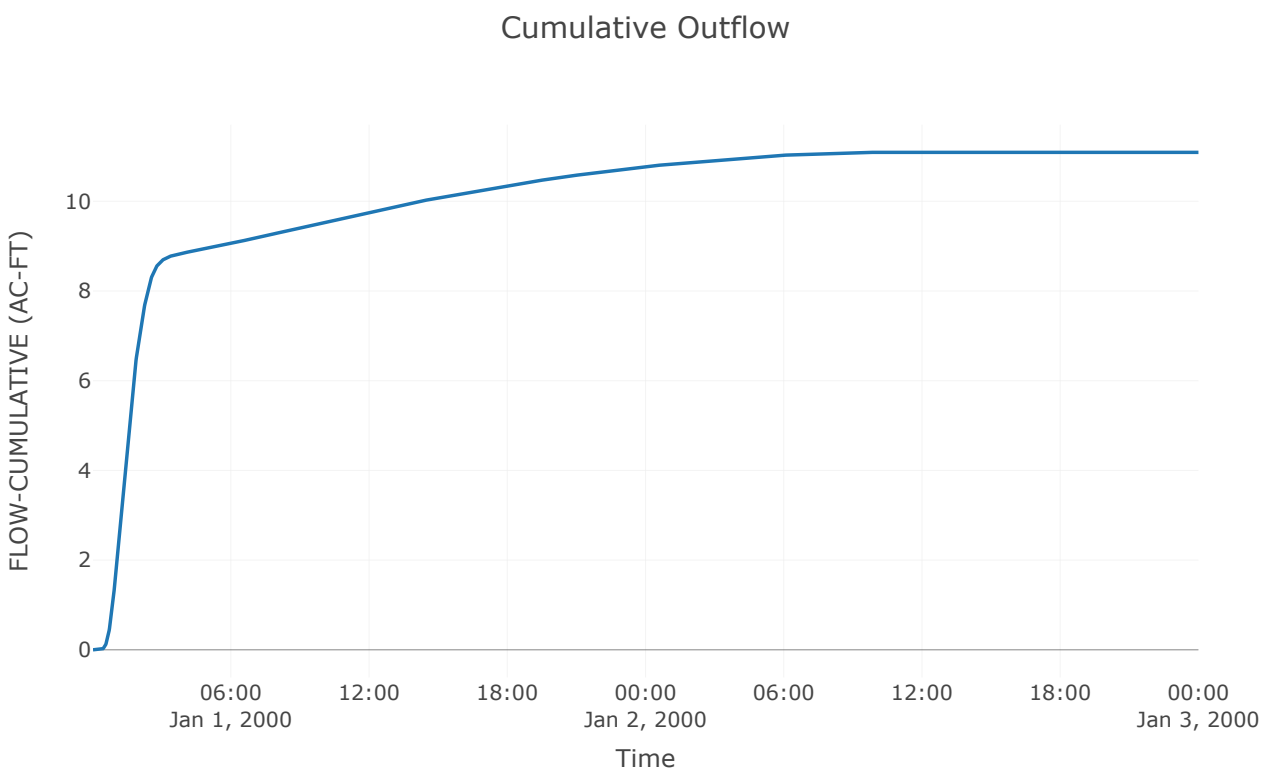
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	75.06
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.01
Peak Elevation (FT)	656.65
Discharge Volume (AC - FT)	11.09

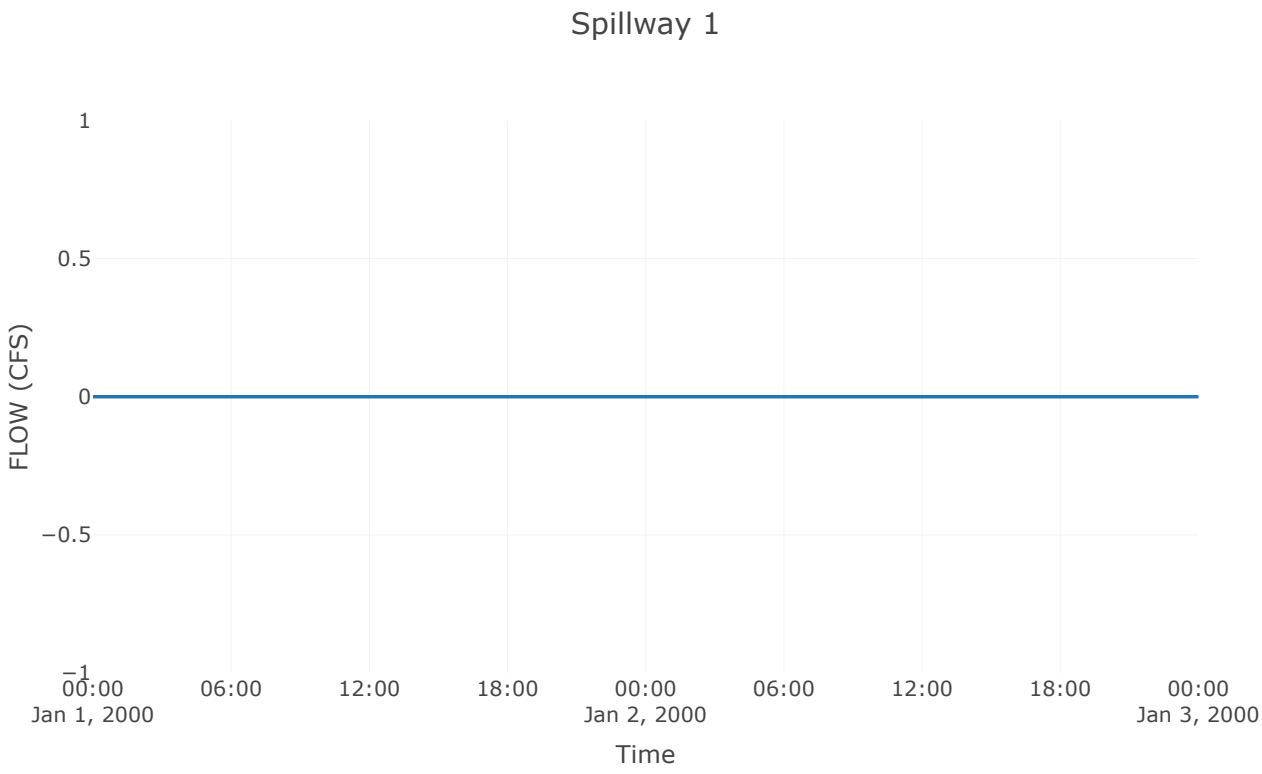
Storage



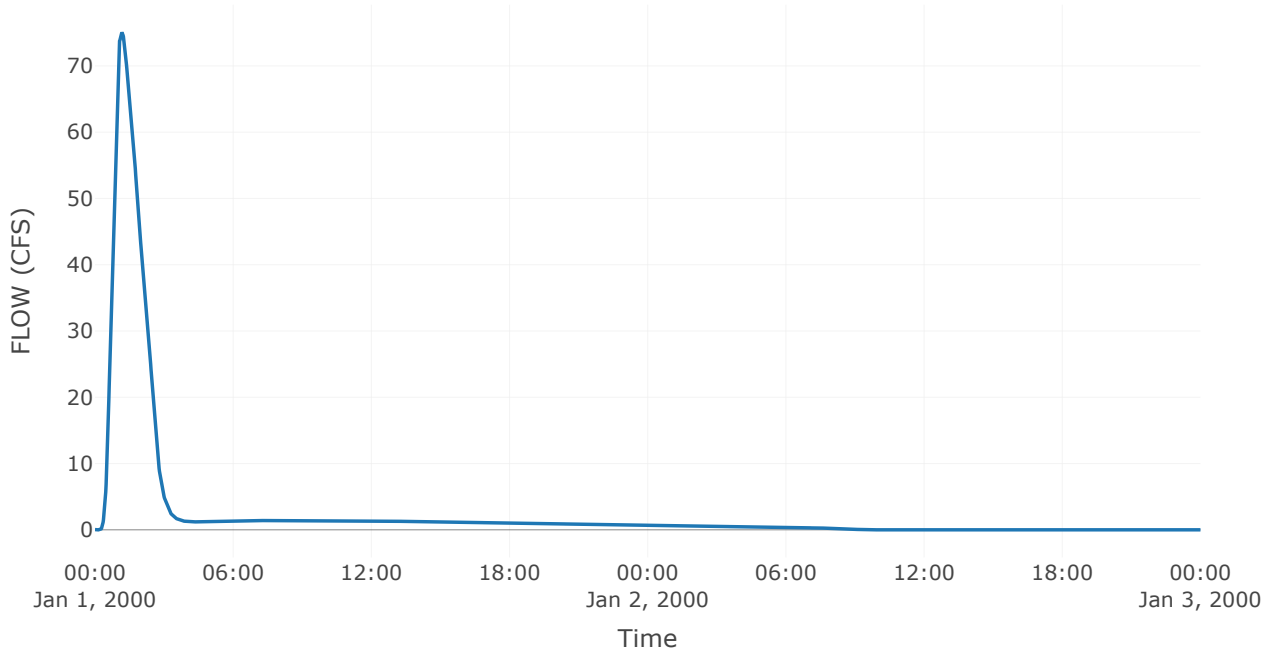
Combined Inflow



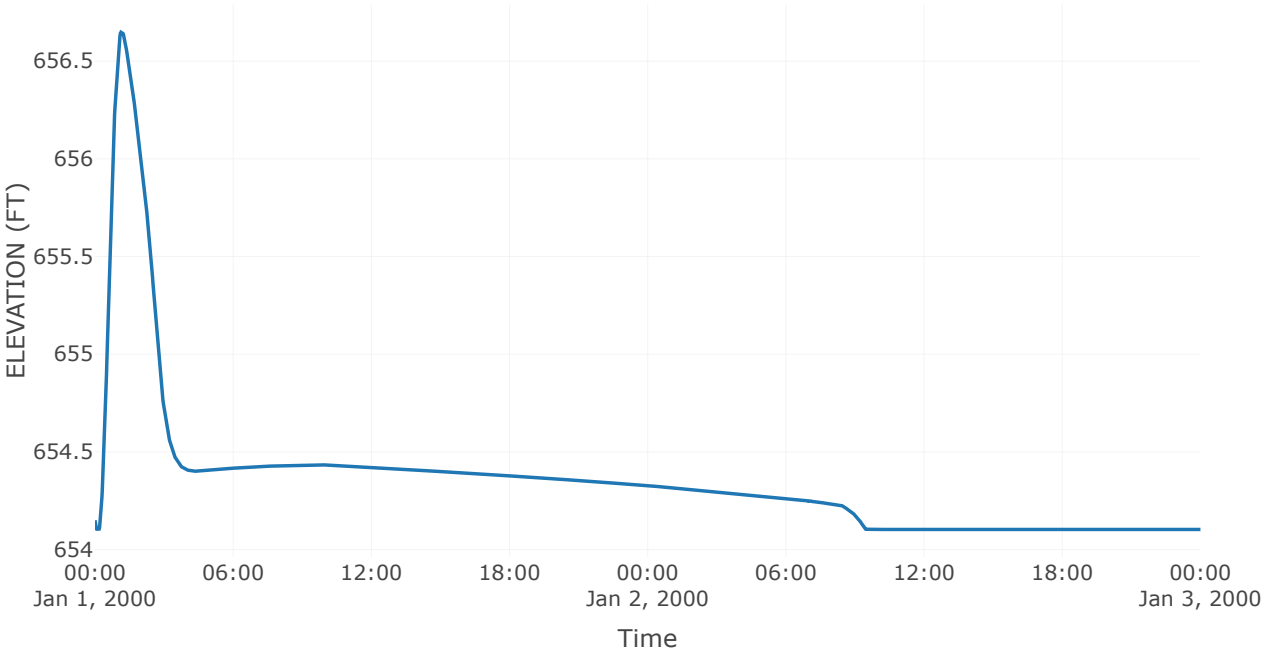

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

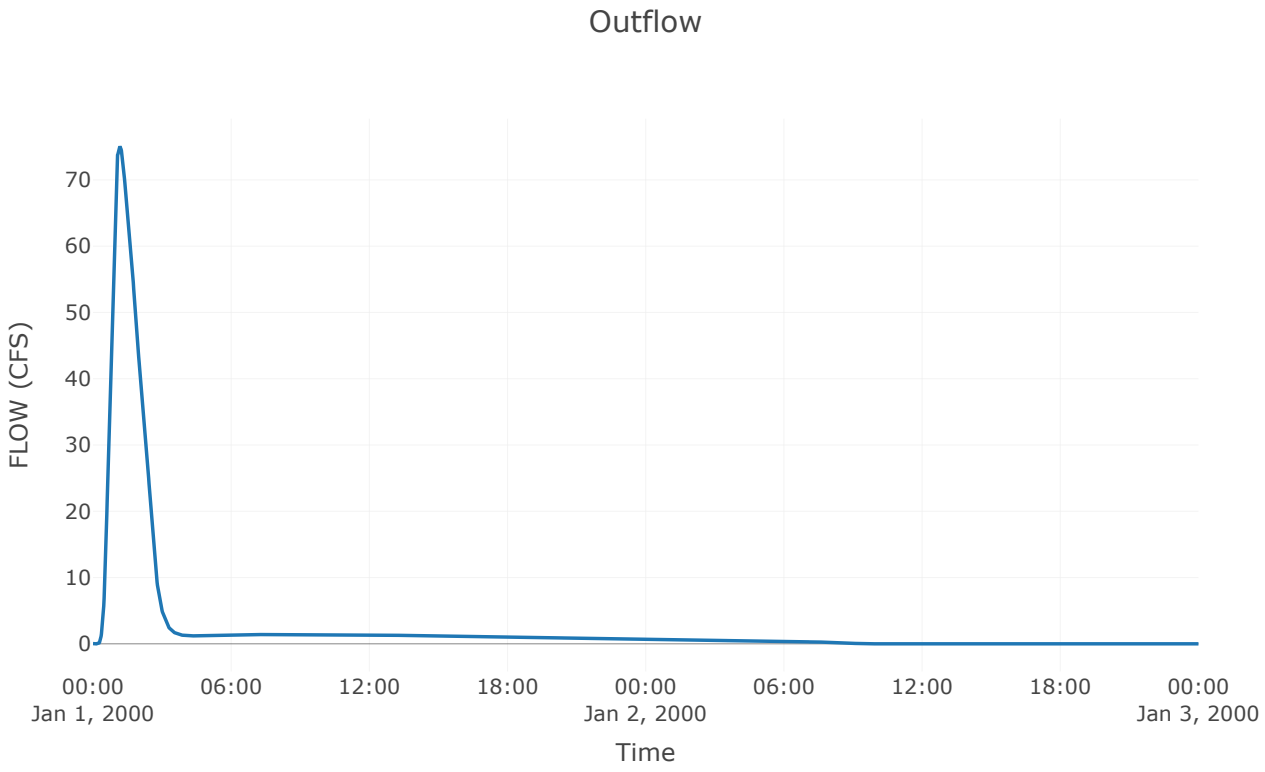

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

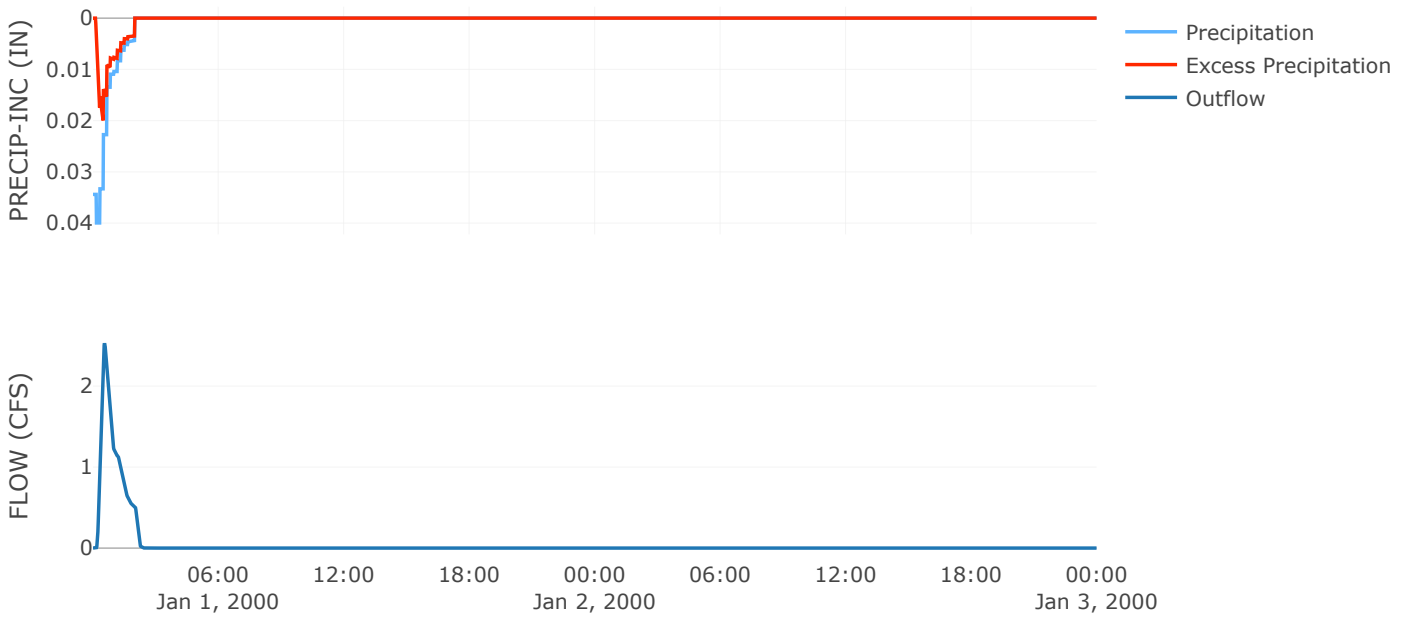
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

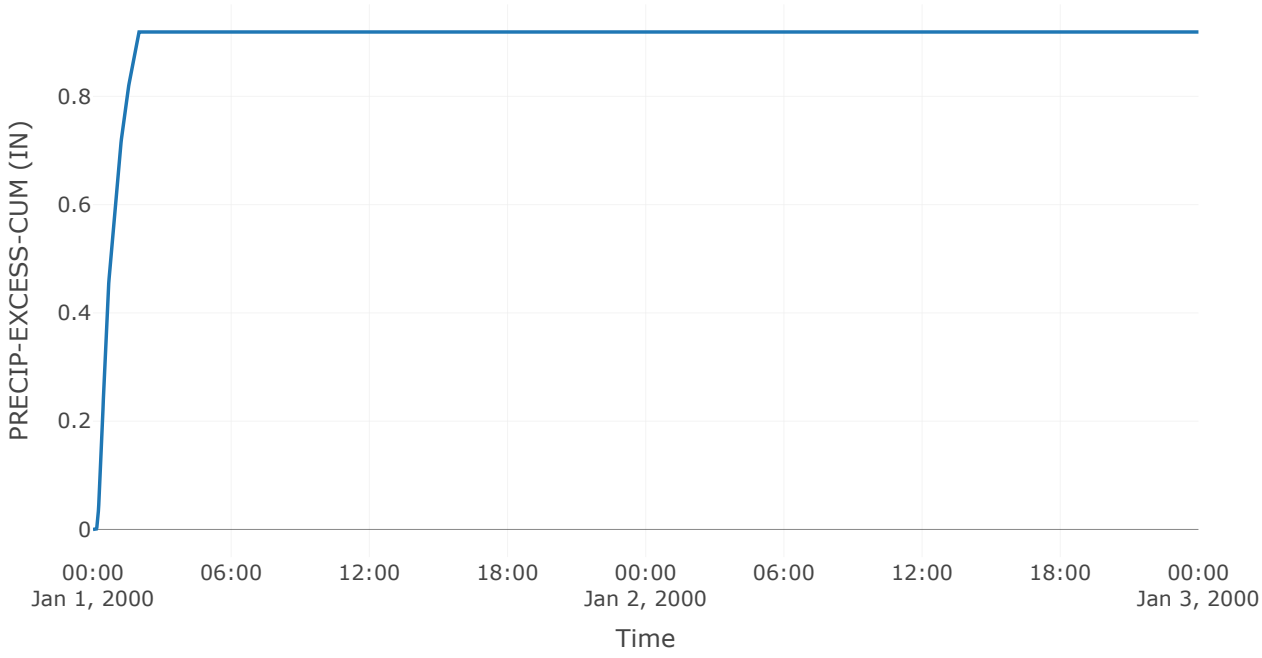
Transform: Scs	
Lag	6
Unitgraph Type	Standard

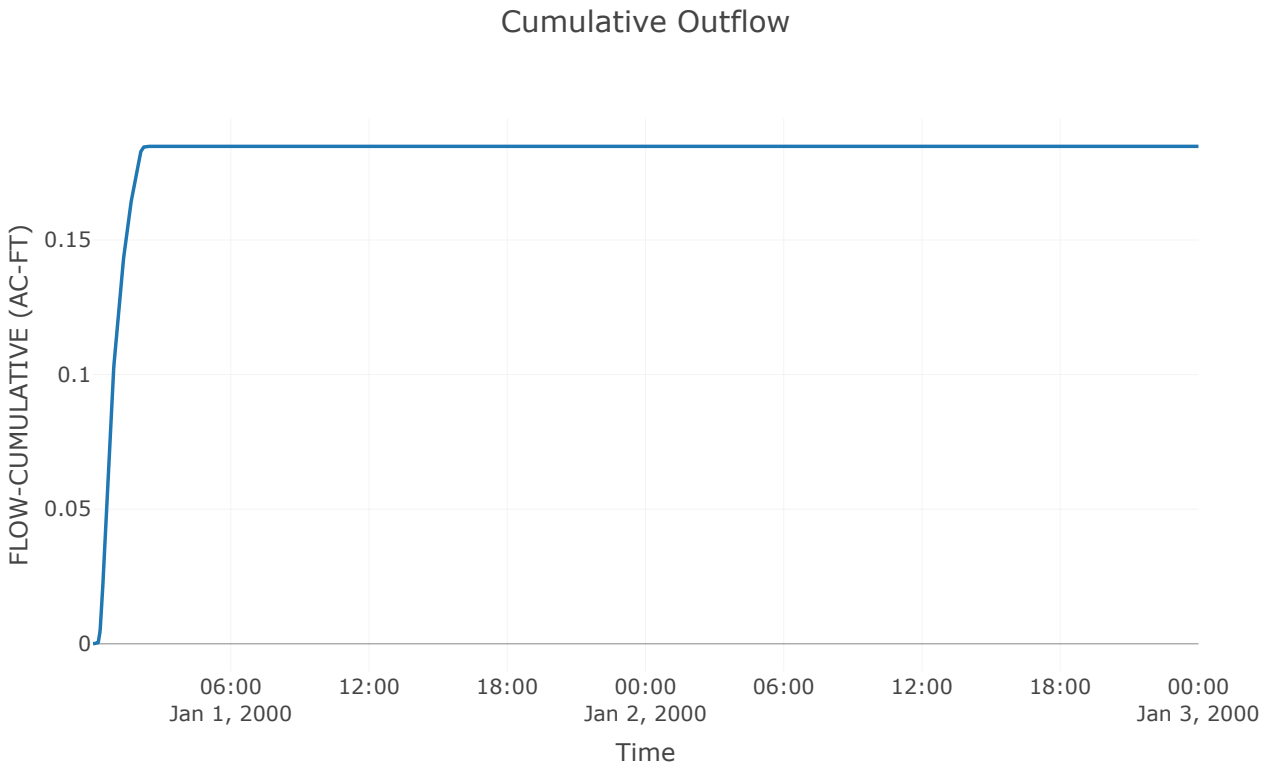
Results: Prop On-Site	
Peak Discharge (CFS)	2.53
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	0.92
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.21
Excess Volume (AC - FT)	0.18
Direct Runoff Volume (AC - FT)	0.18
Baseflow Volume (AC - FT)	0

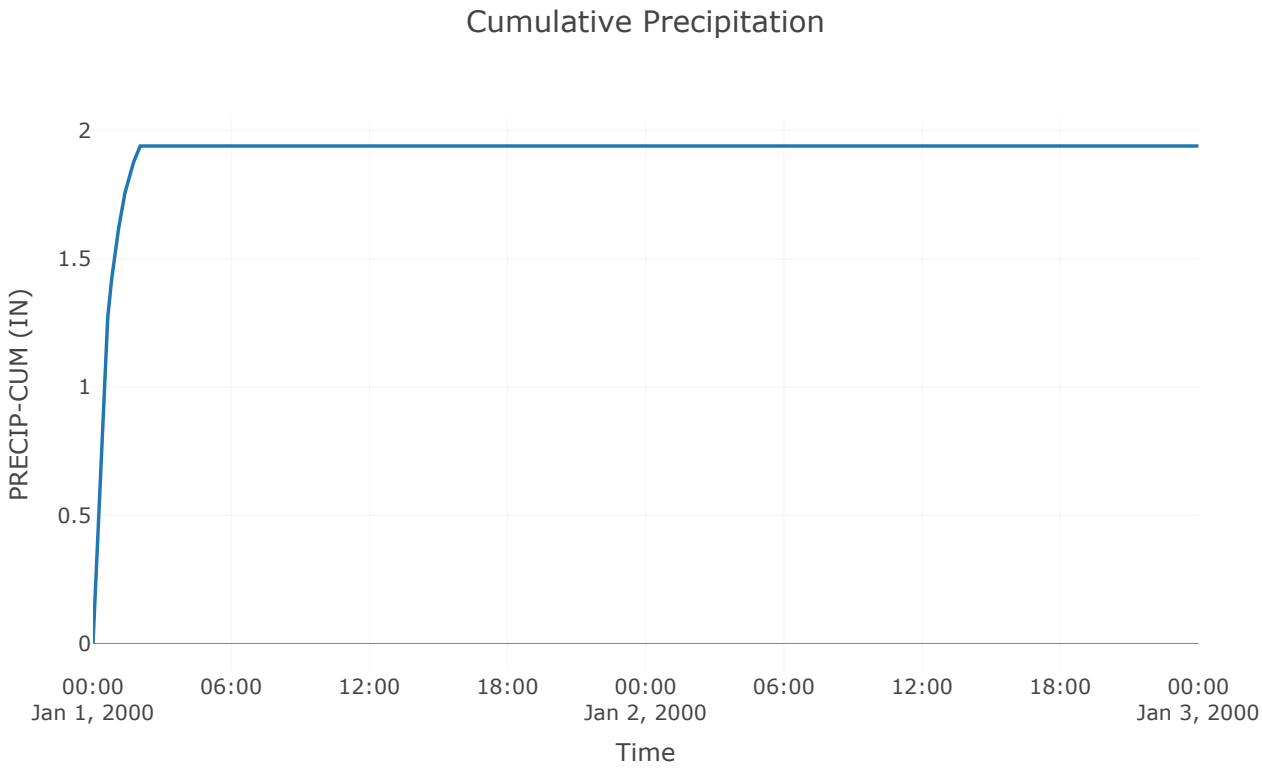
Precipitation and Outflow

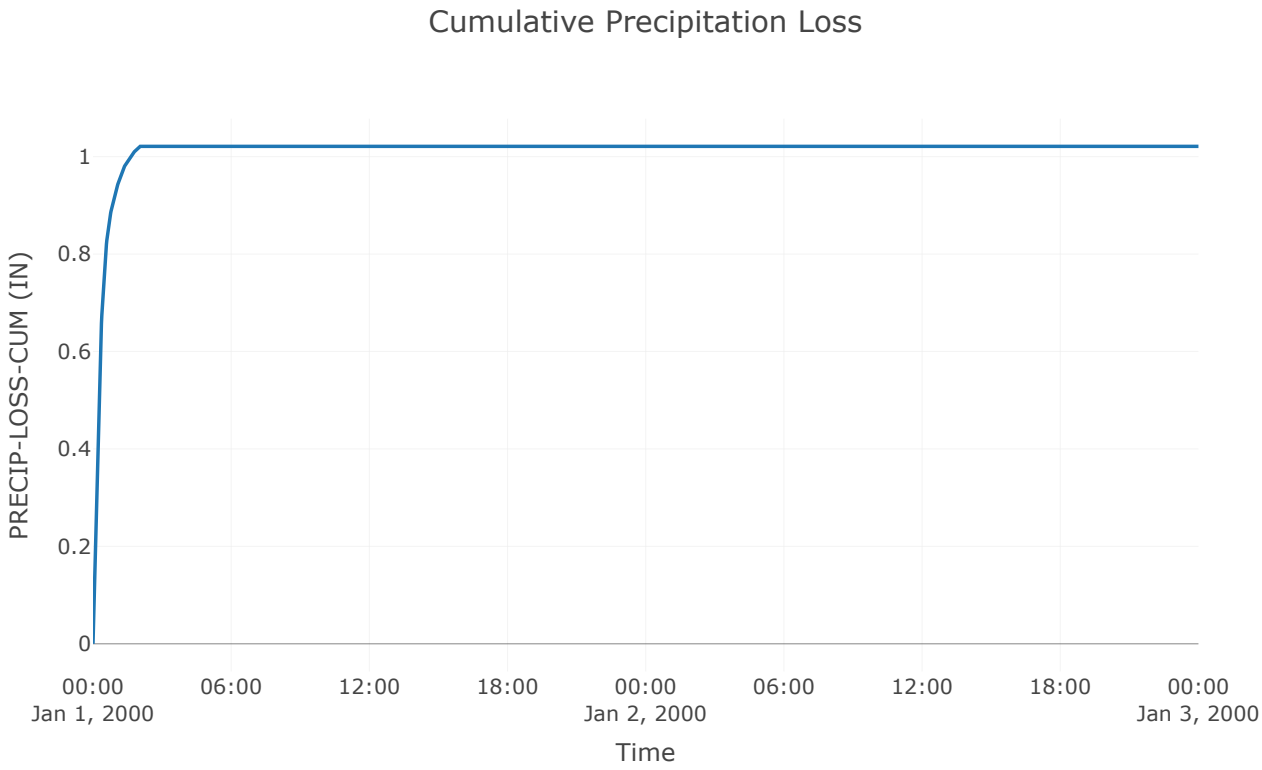


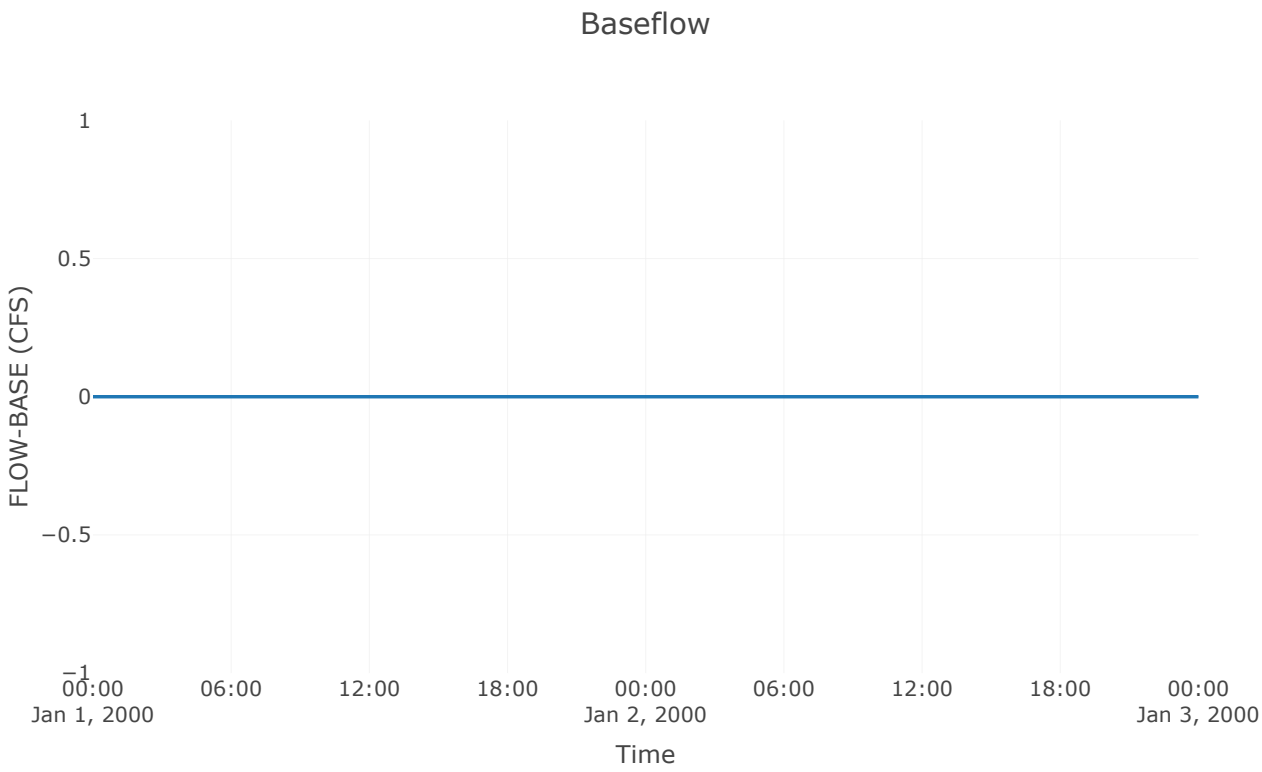
Cumulative Excess Precipitation



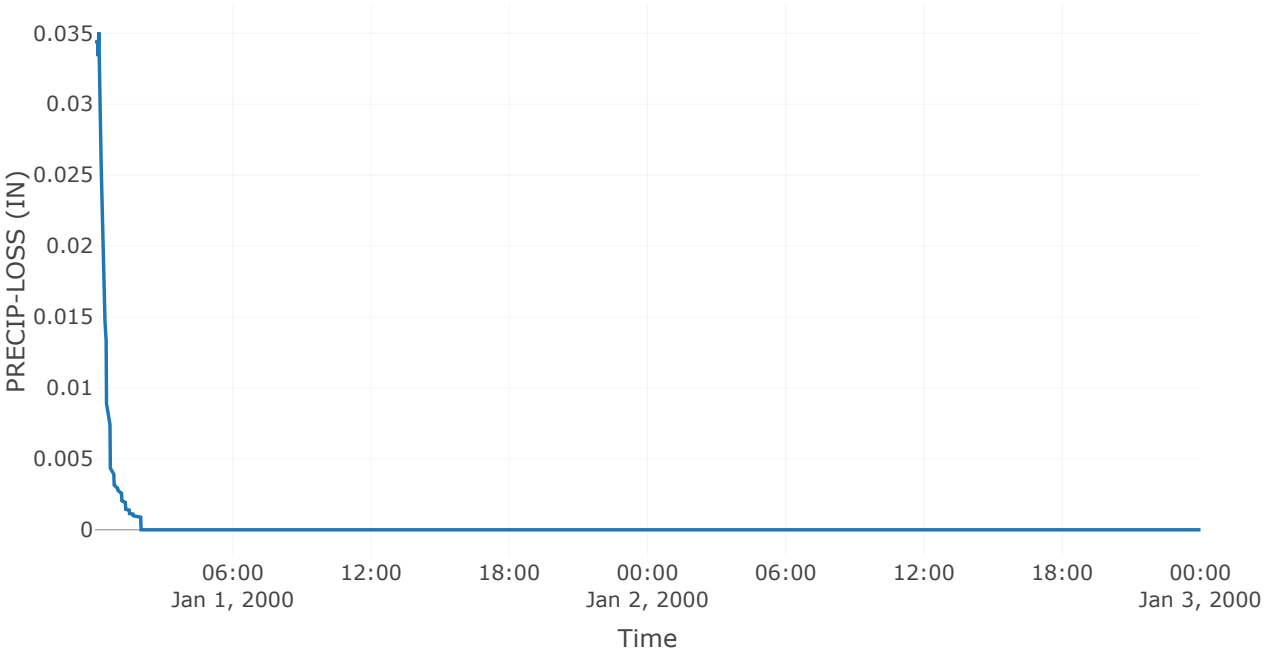

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

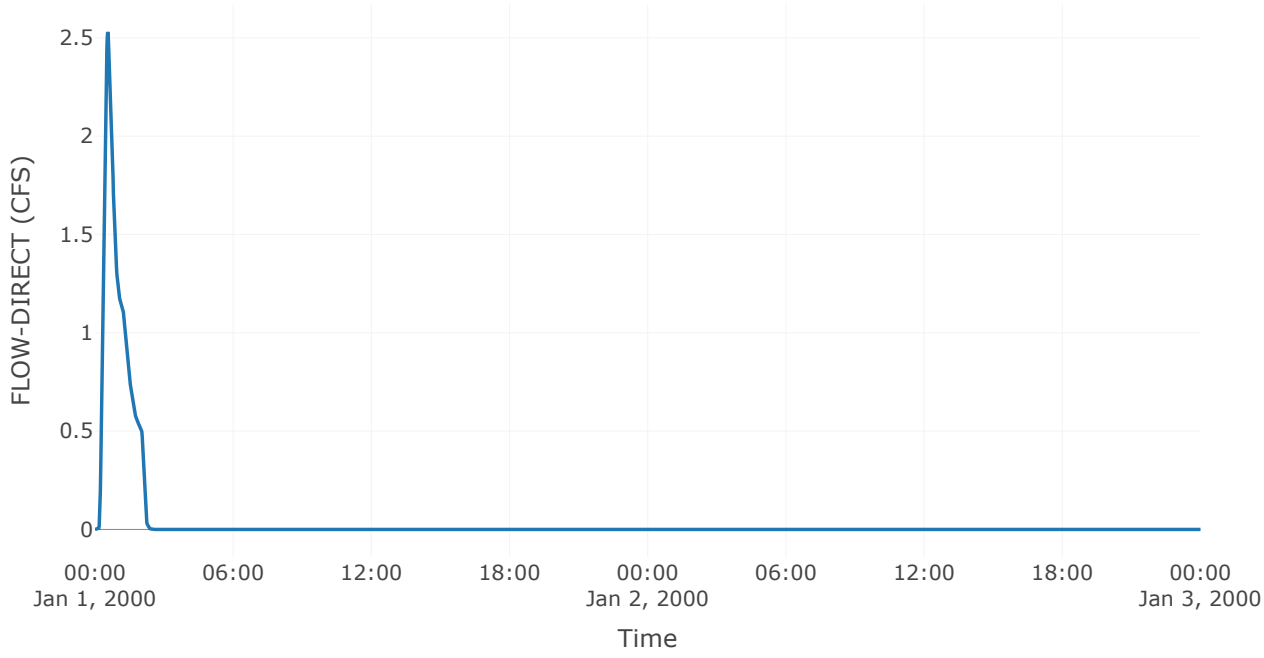

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

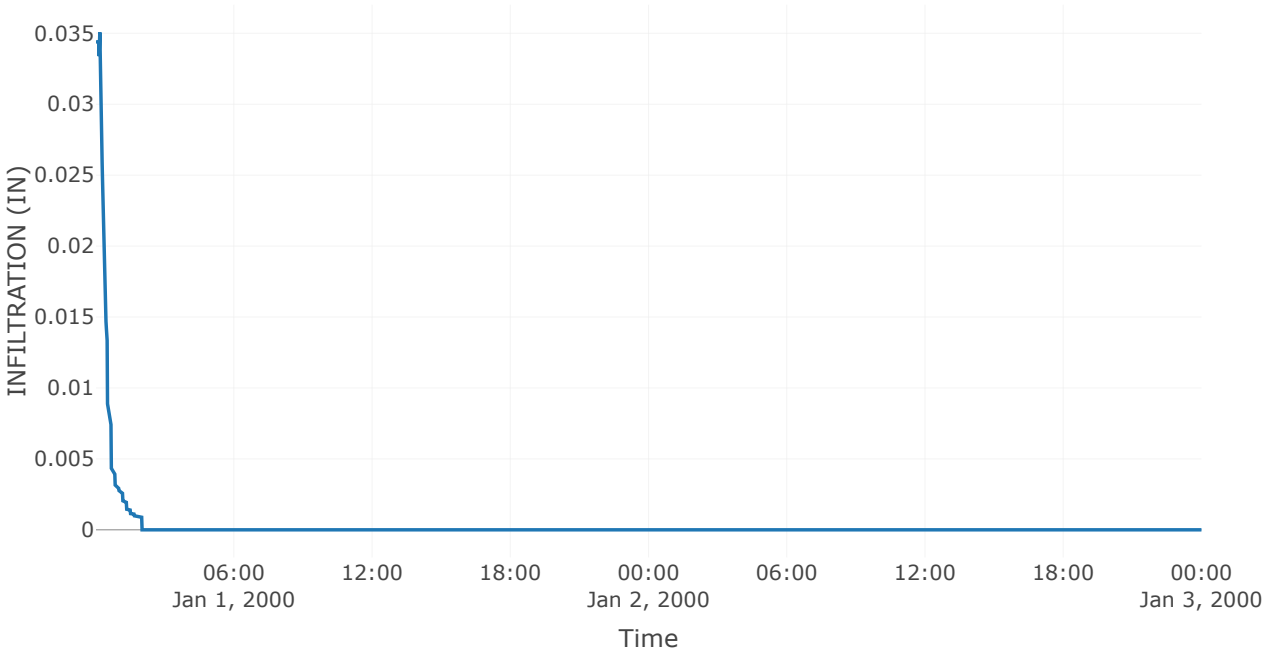

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



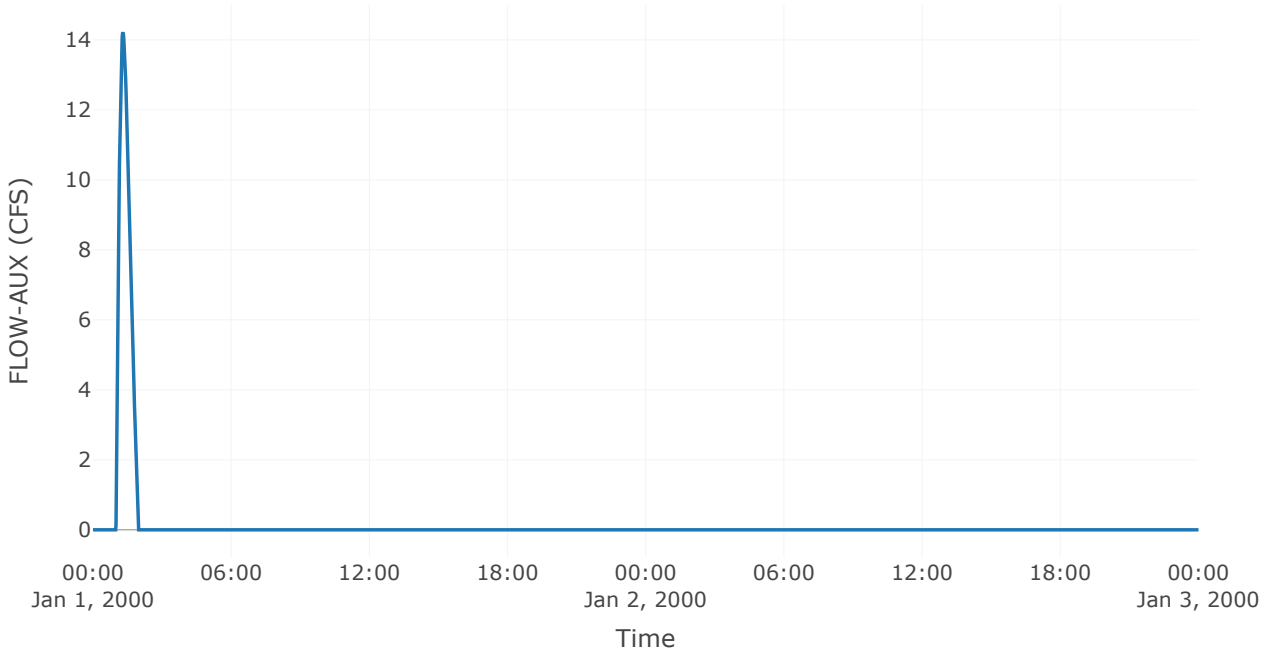

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

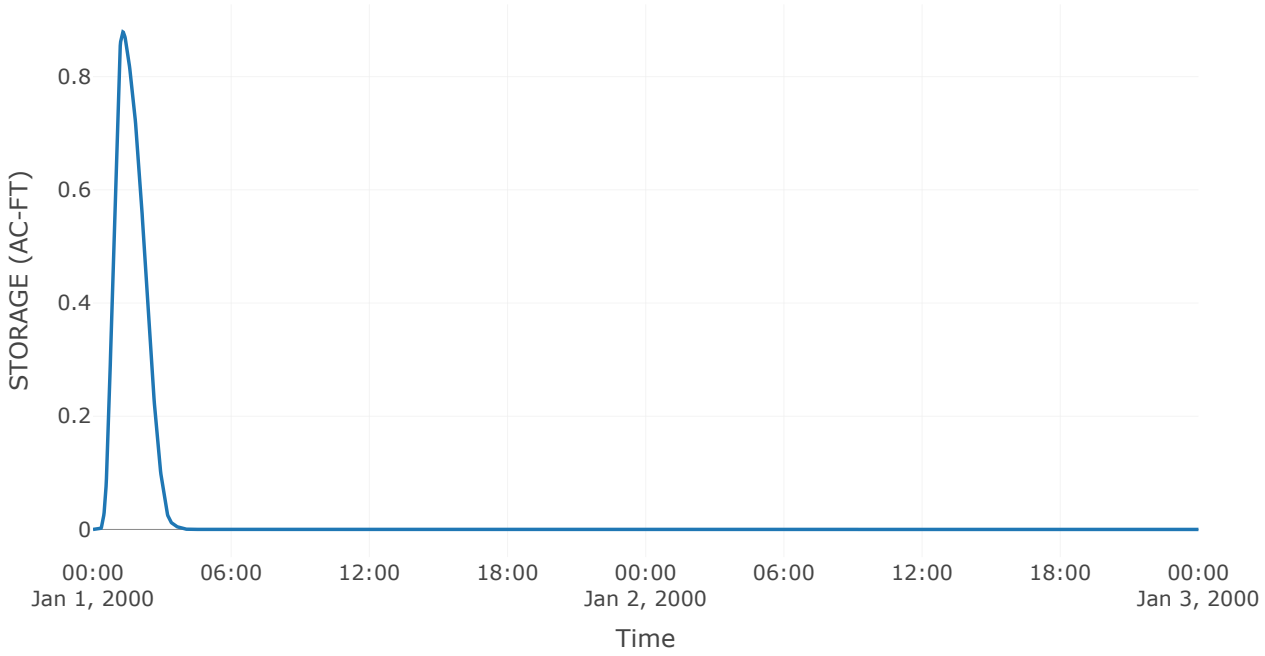
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	59.4
Time of Peak Discharge	01Jan2000, 01:18
Volume (IN)	0.73
Peak Inflow (CFS)	76.2
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.28
Maximum Storage (AC - FT)	0.88
Peak Elevation (FT)	650.71
Discharge Volume (AC - FT)	10.63

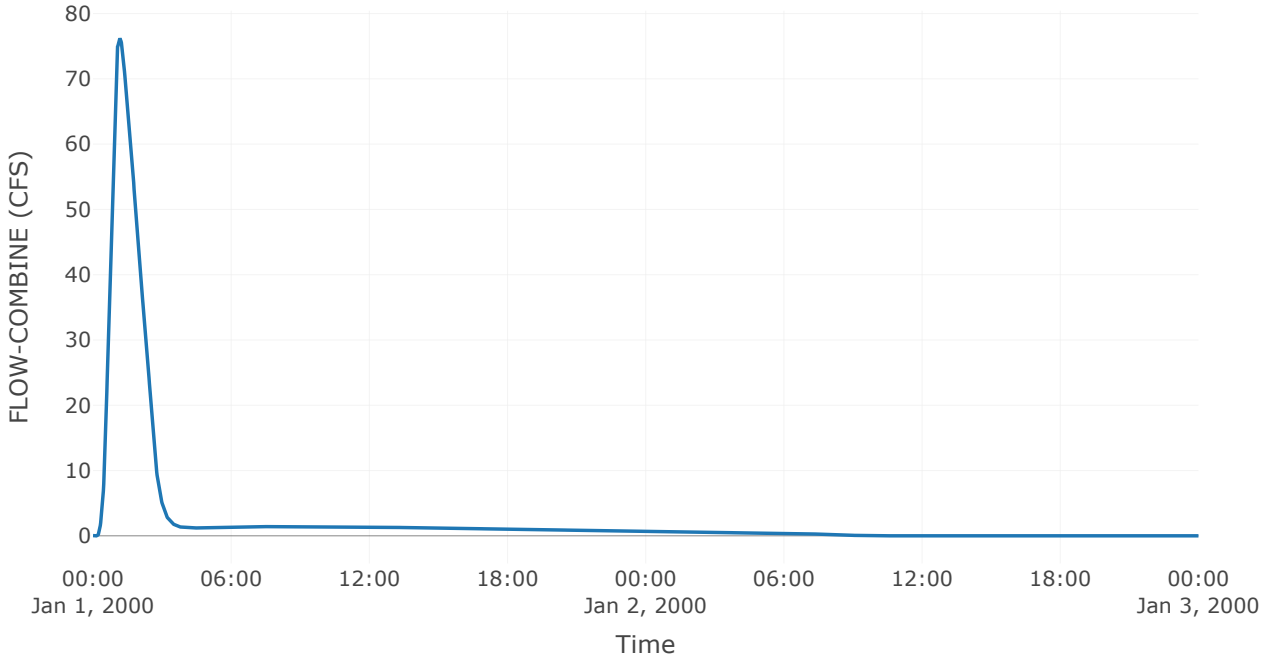
Auxiliary Outflow



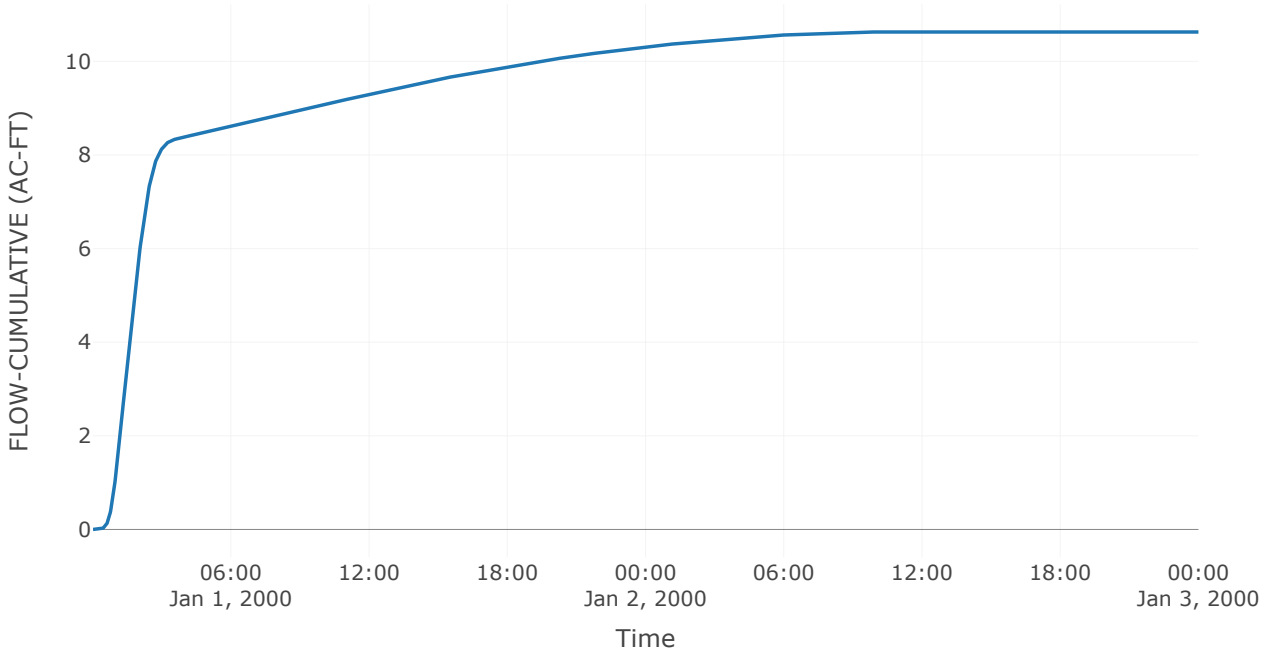
Storage

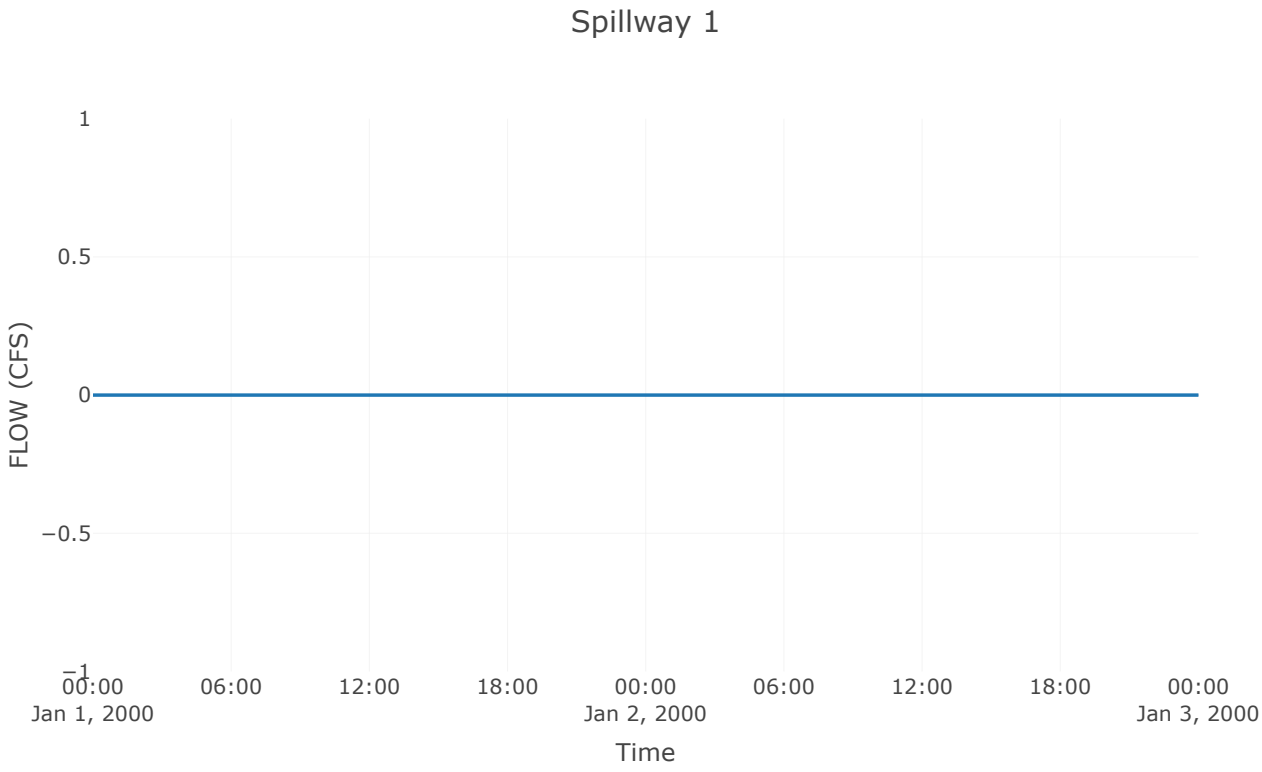


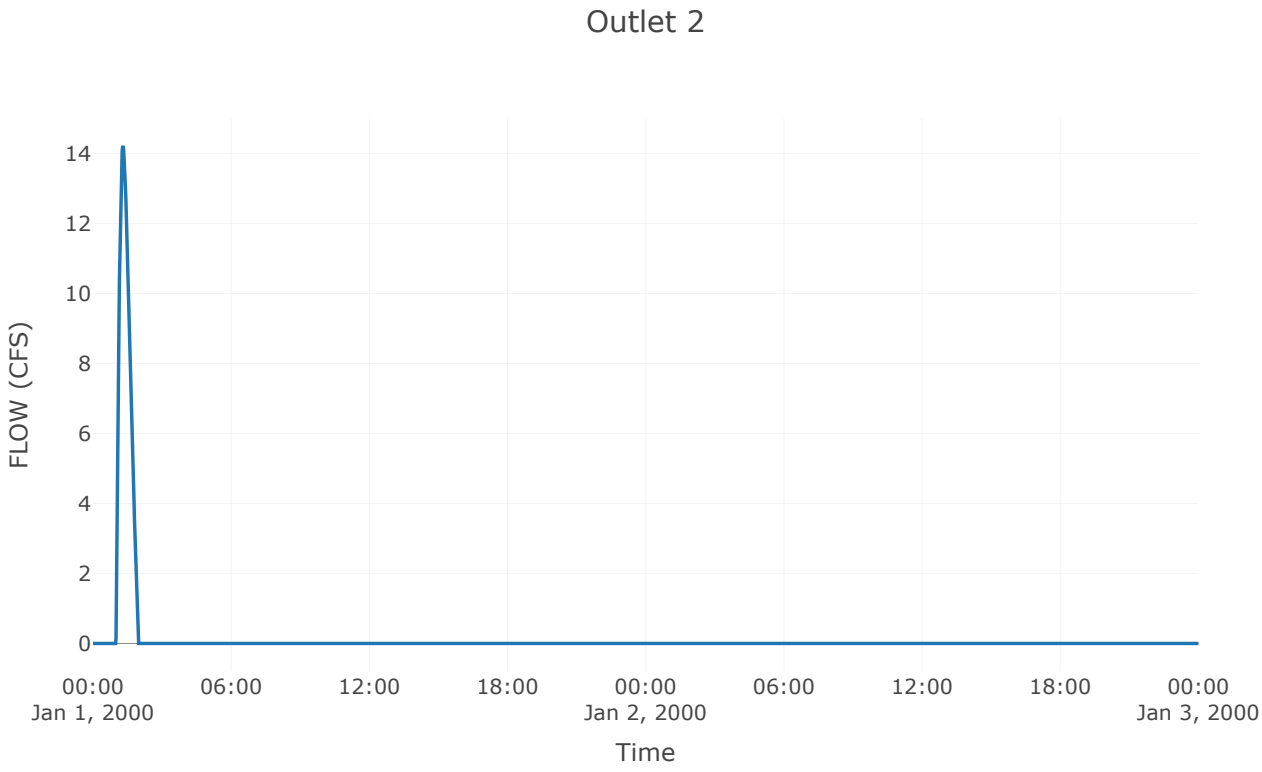
Combined Inflow



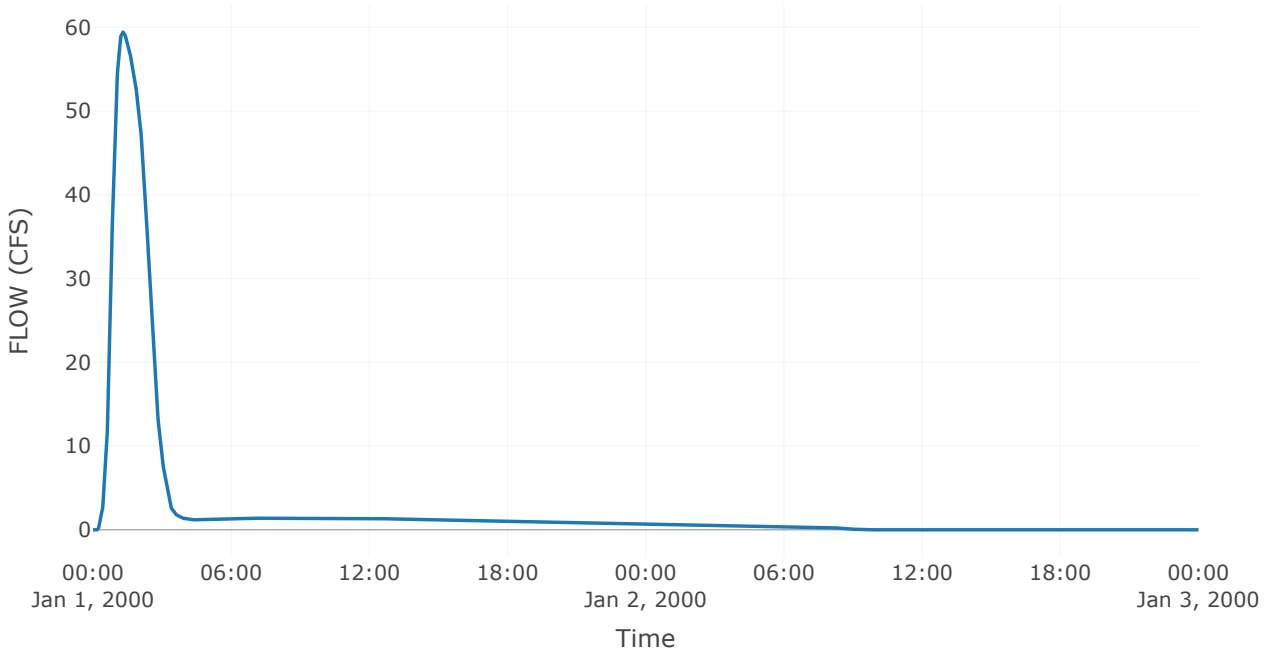
Cumulative Outflow



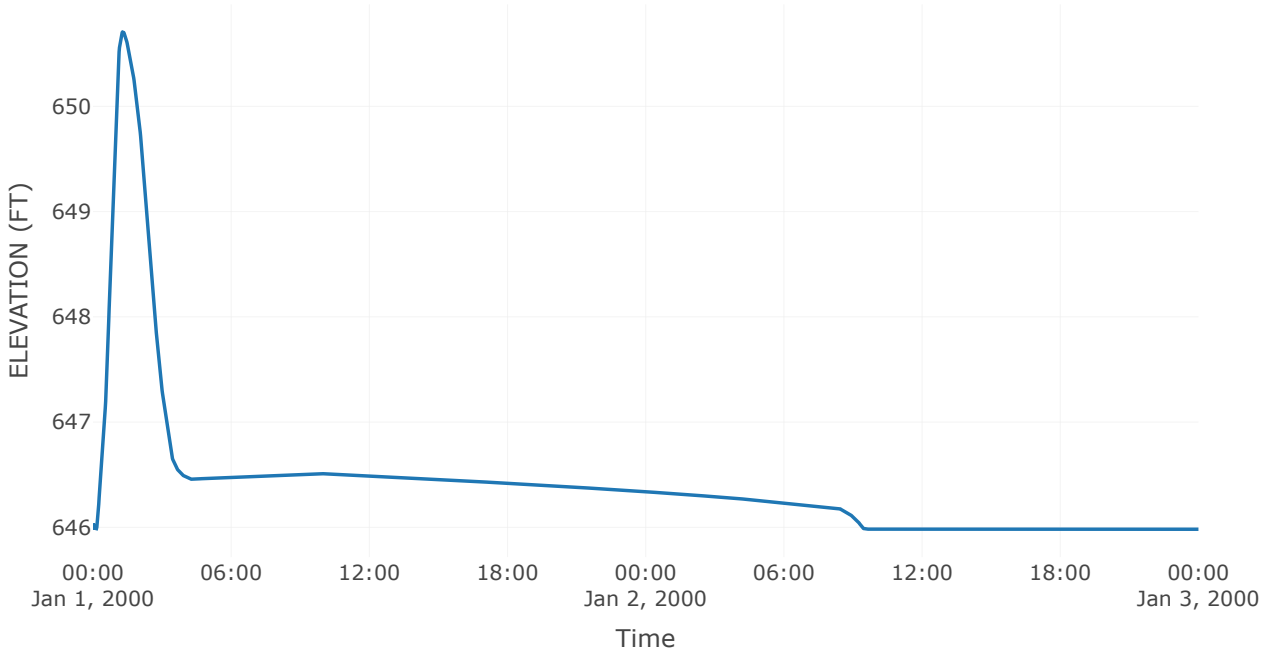

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

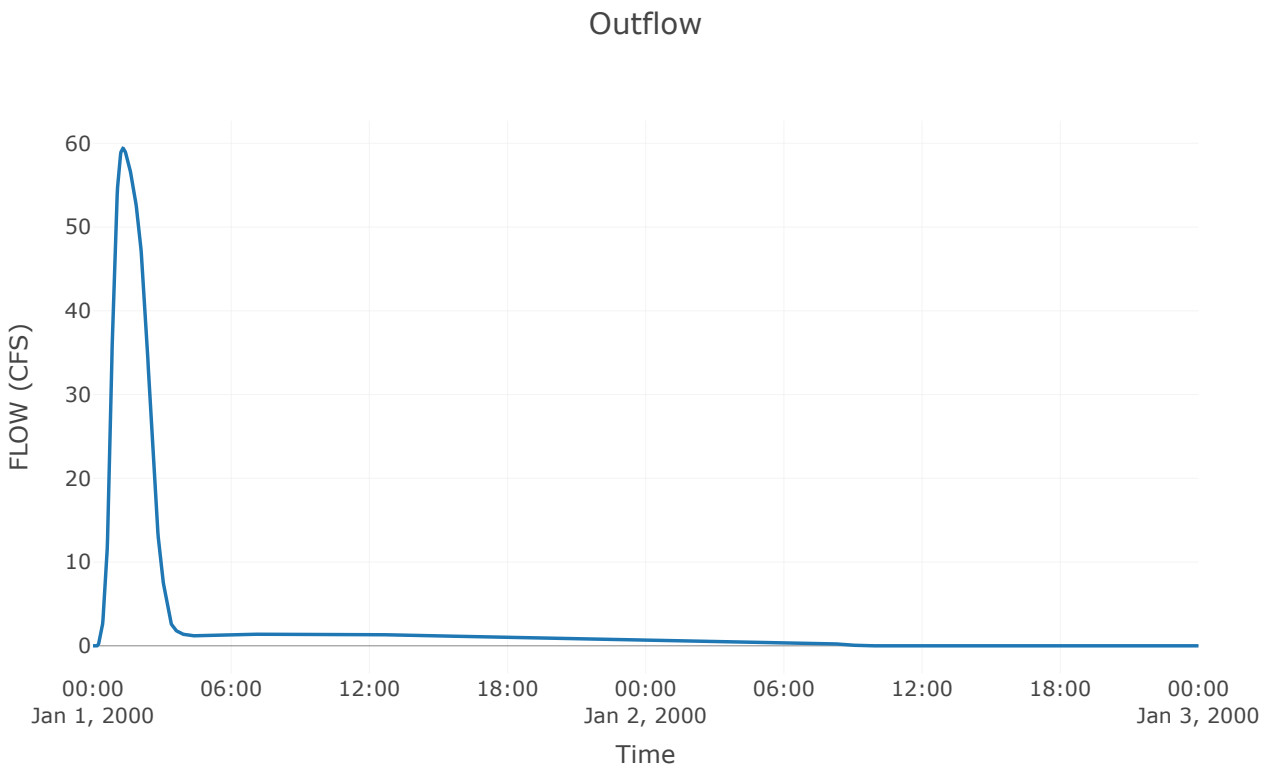

Outlet 2
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

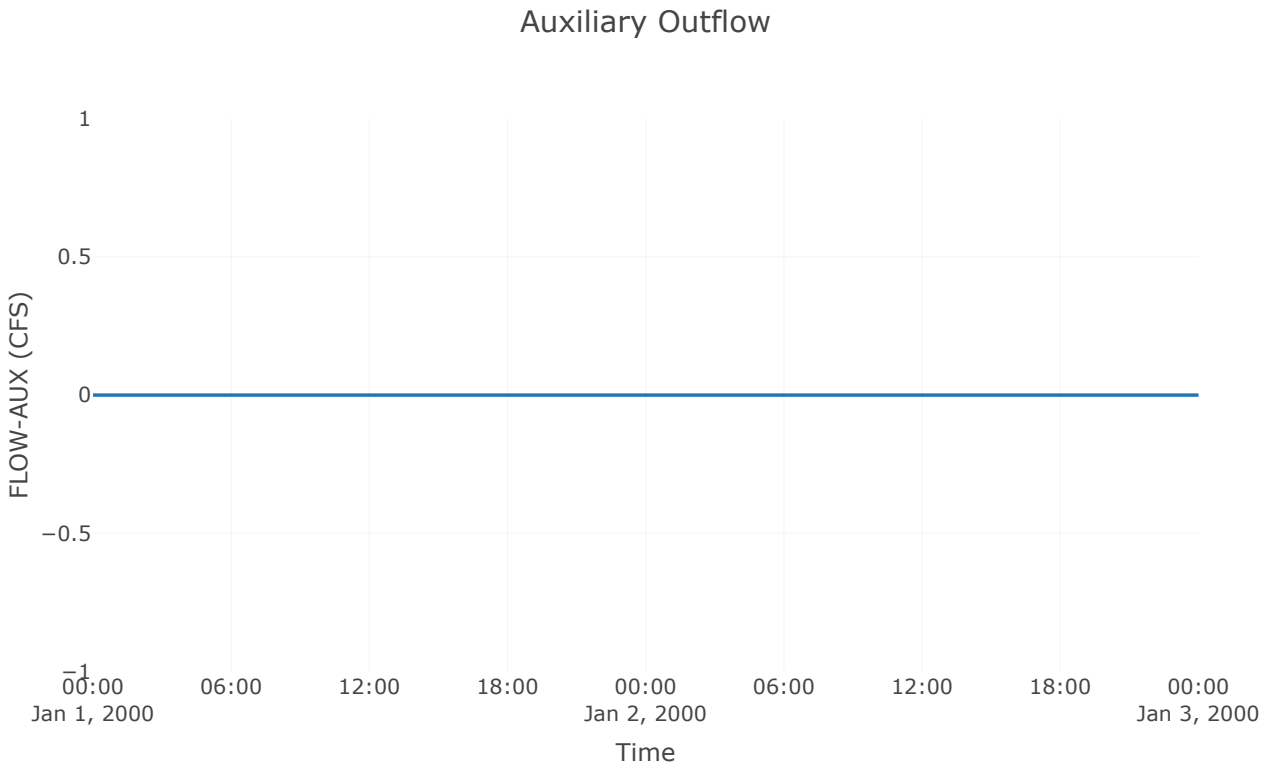


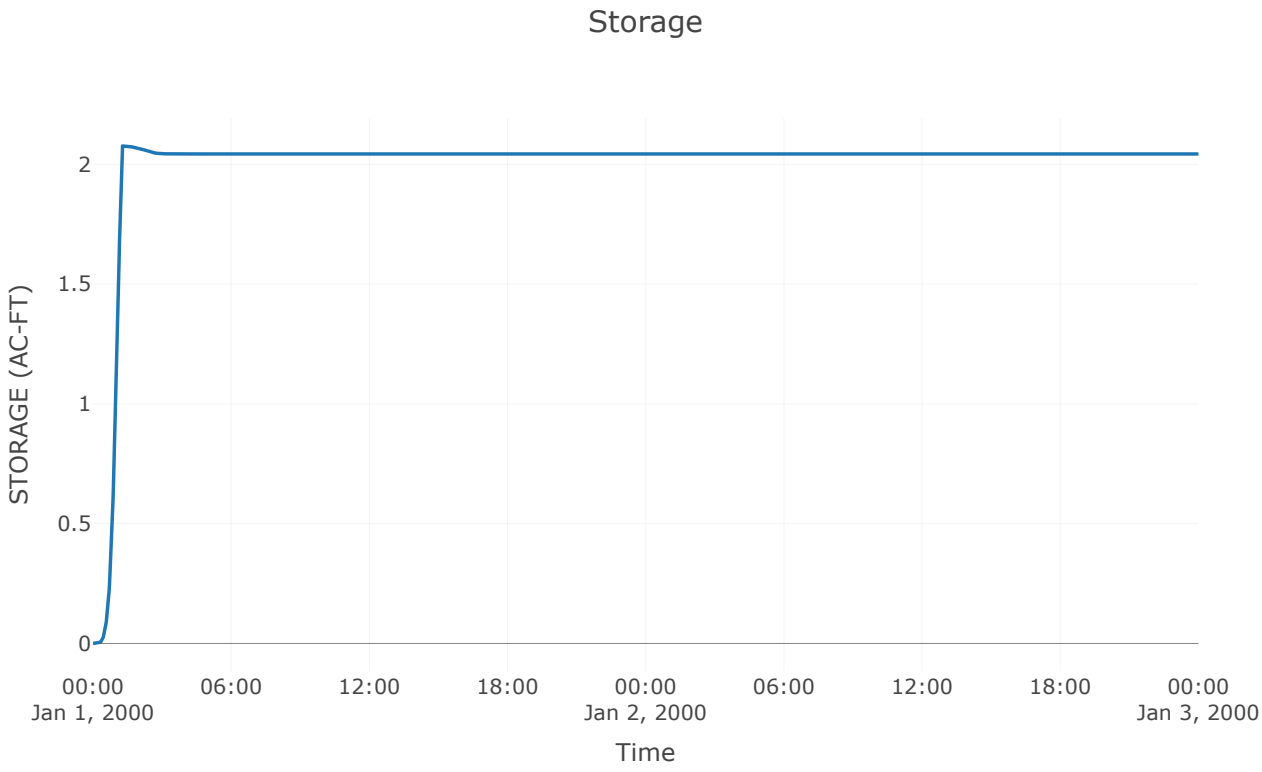

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

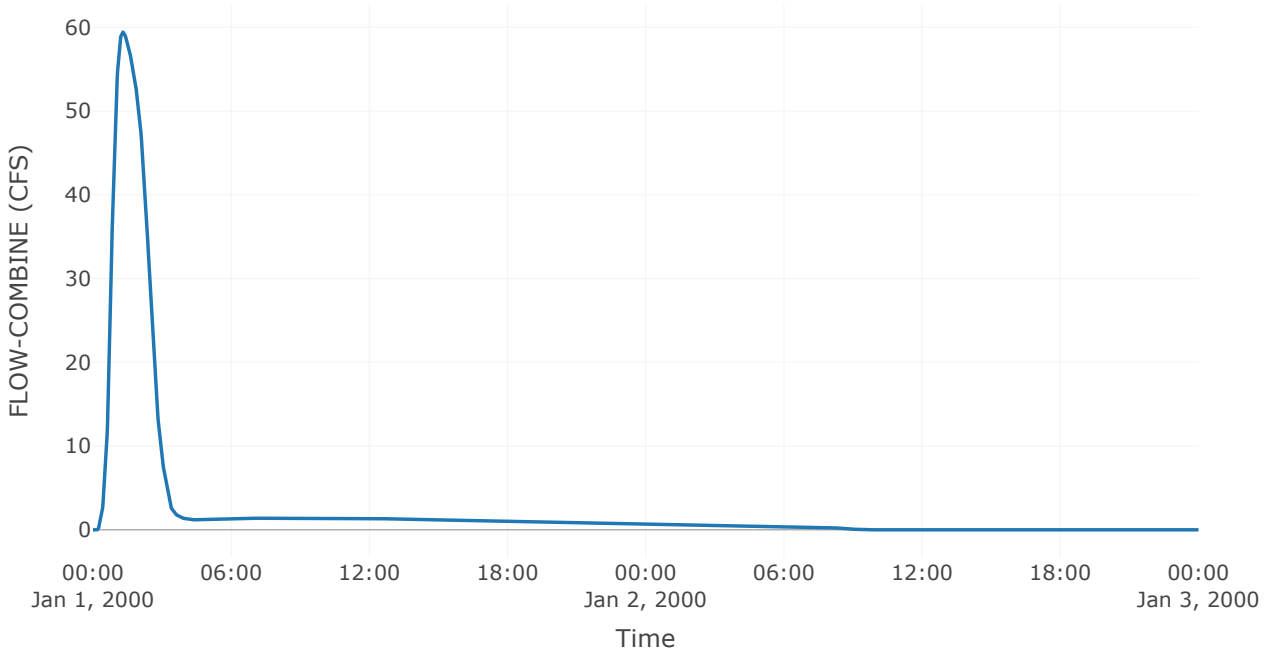
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58
Peak Inflow (CFS)	59.4
Time of Peak Inflow	01Jan2000, 01:18
Inflow Volume (AC - FT)	10.63
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.38

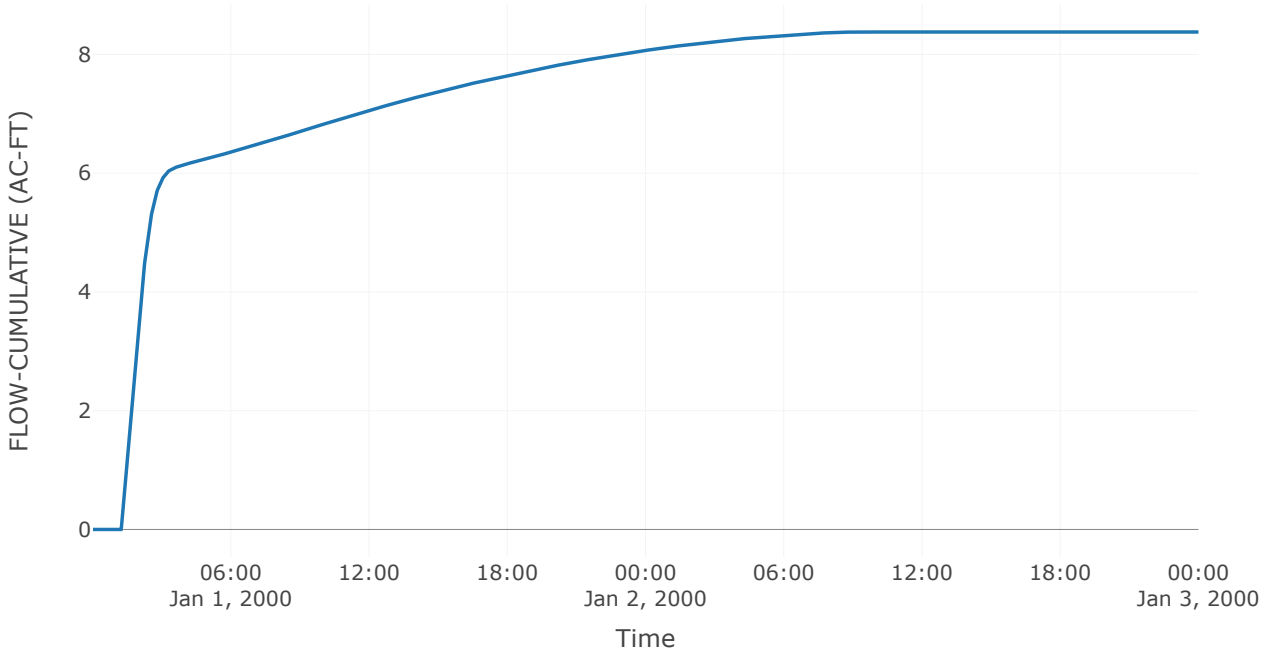

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

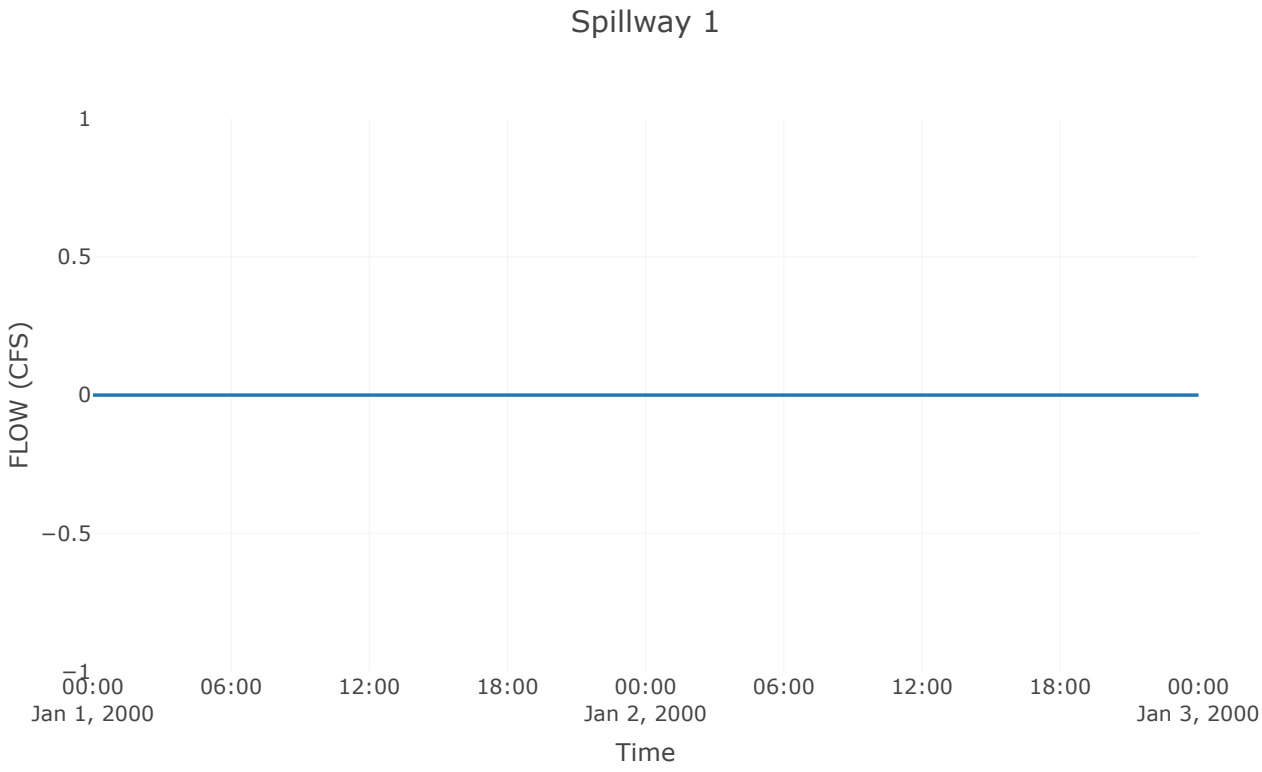

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

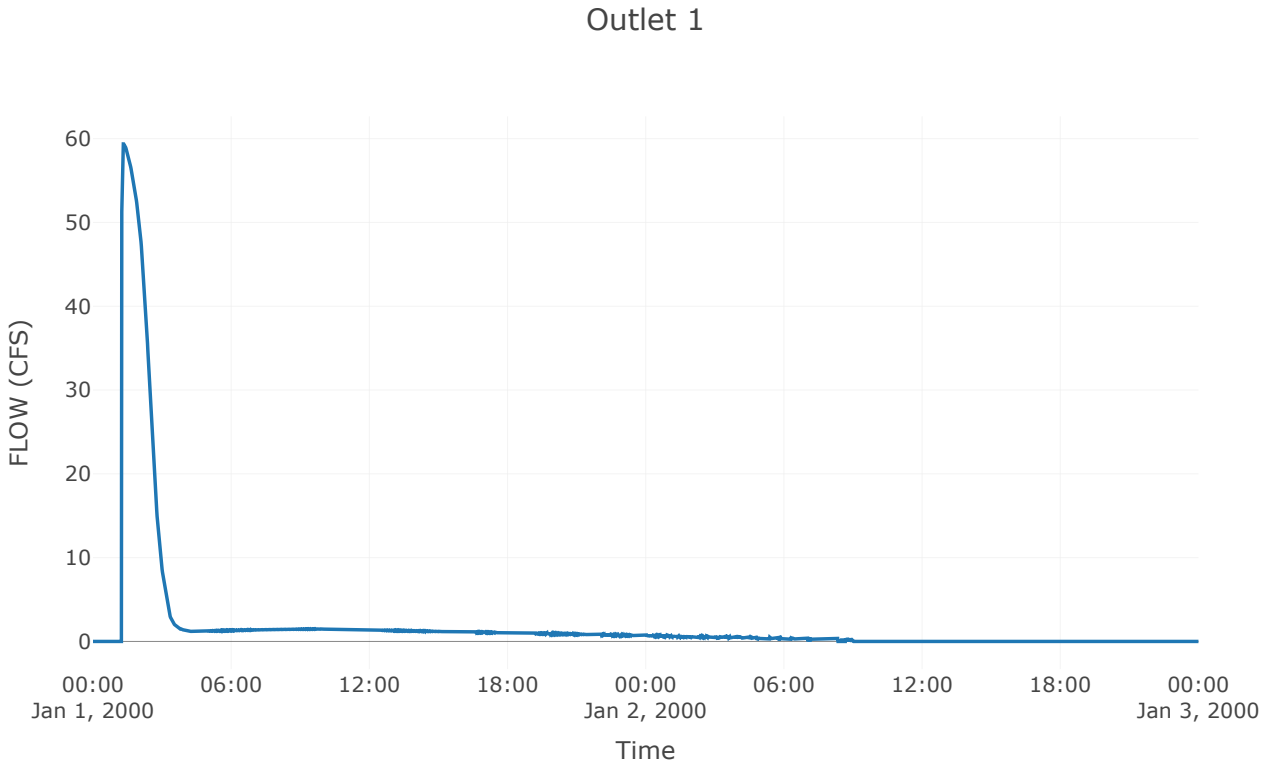
Combined Inflow



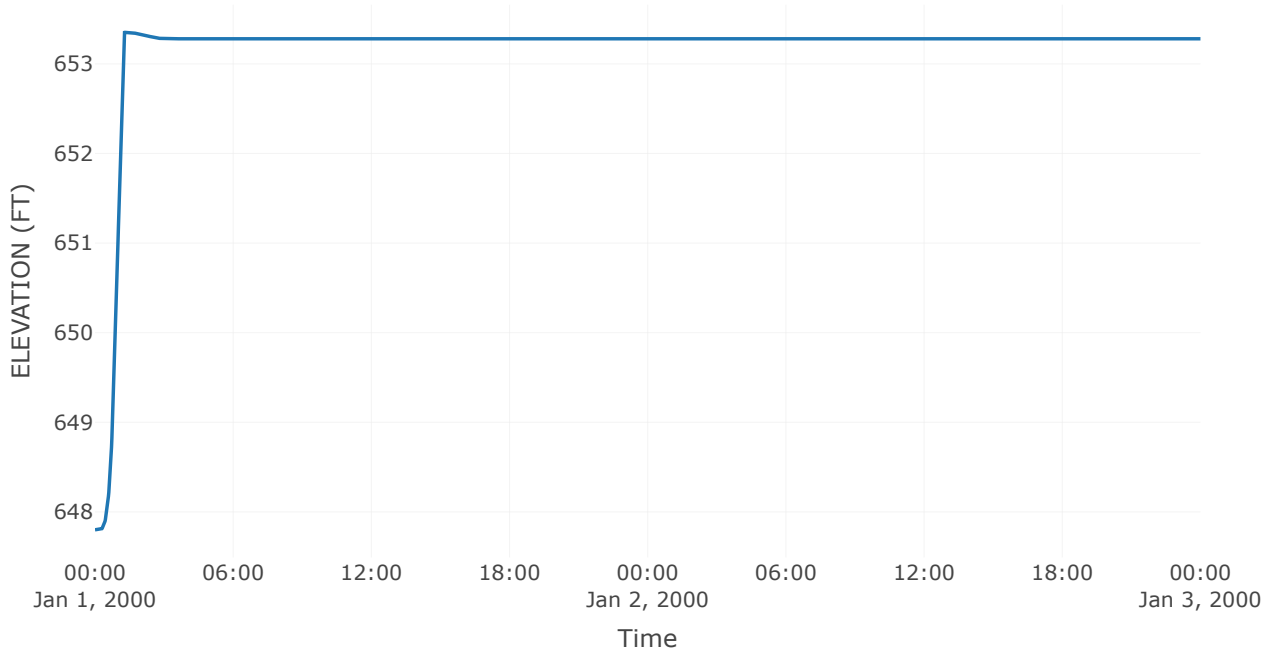
Cumulative Outflow



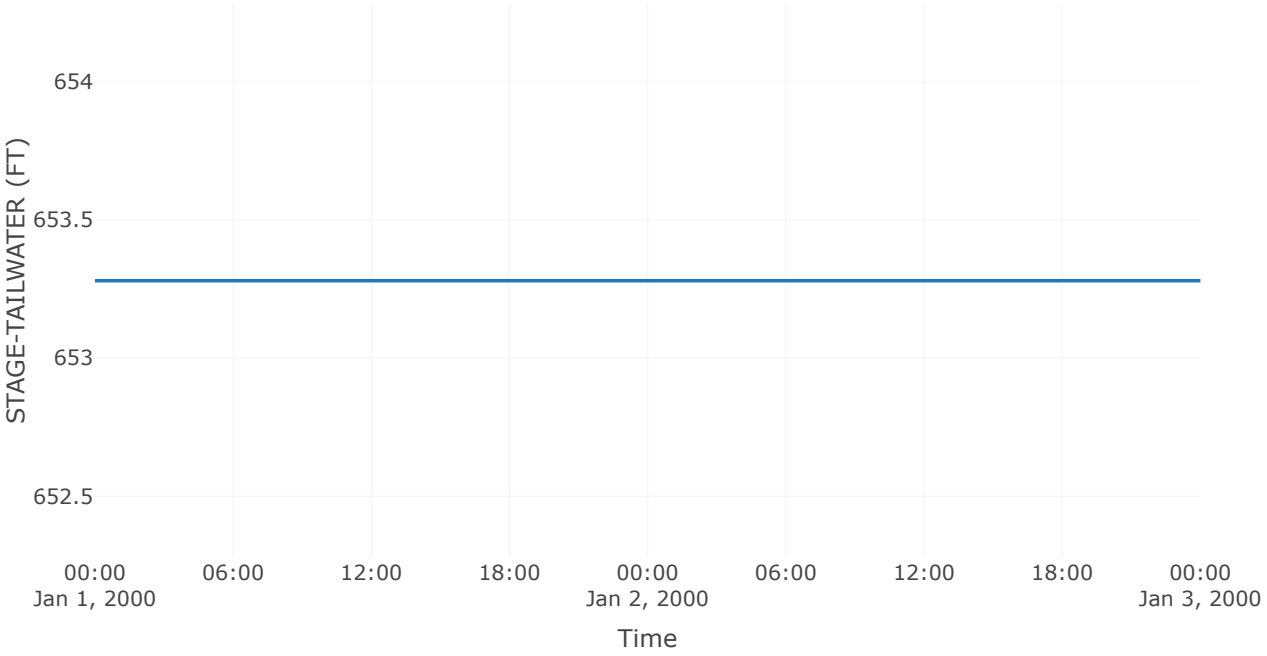

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

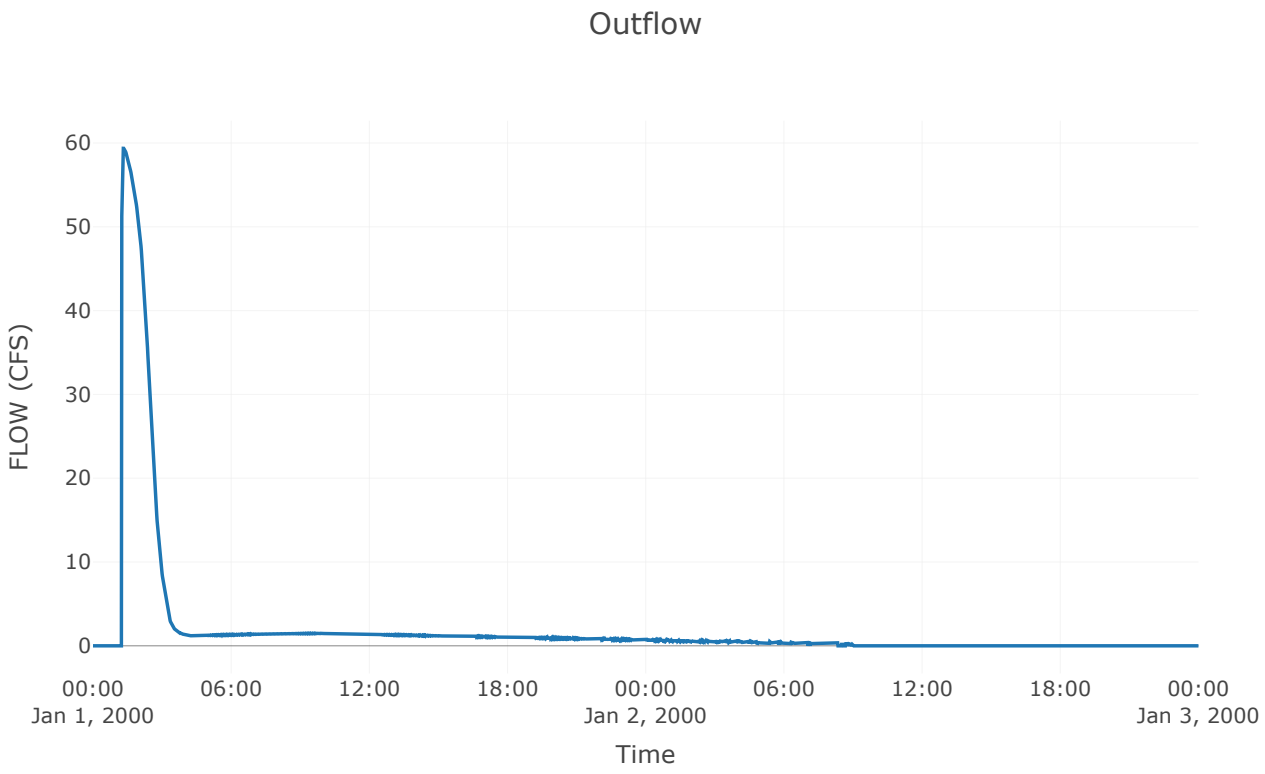

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

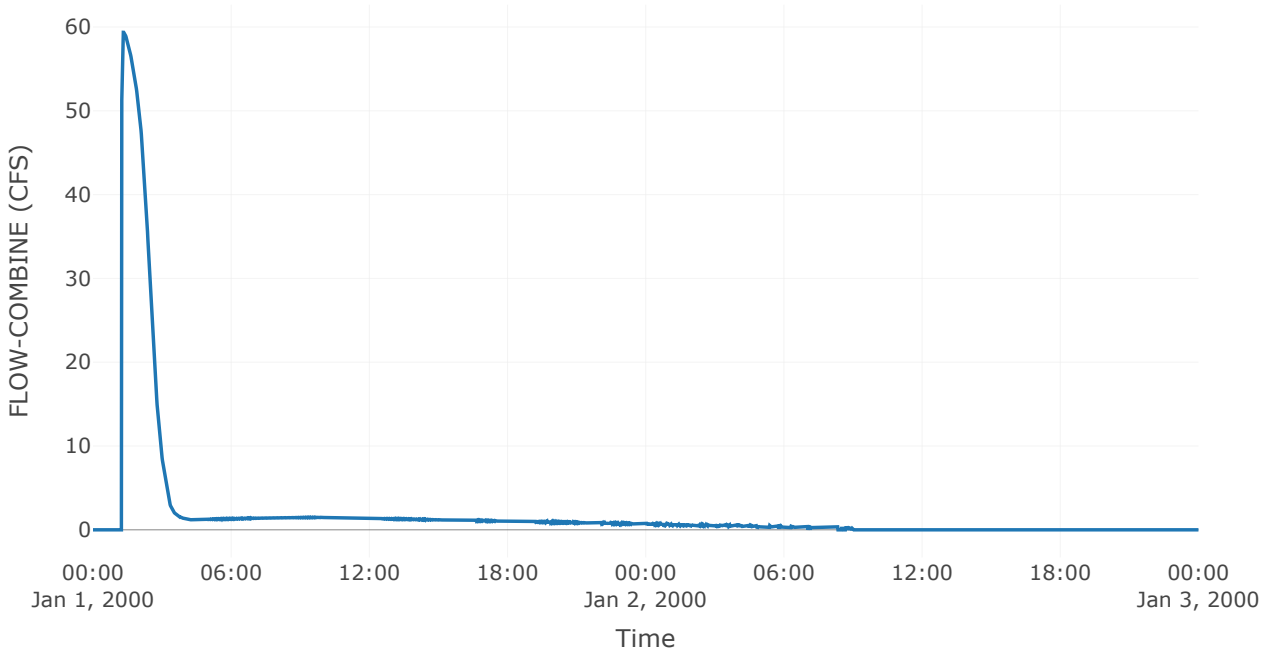



Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

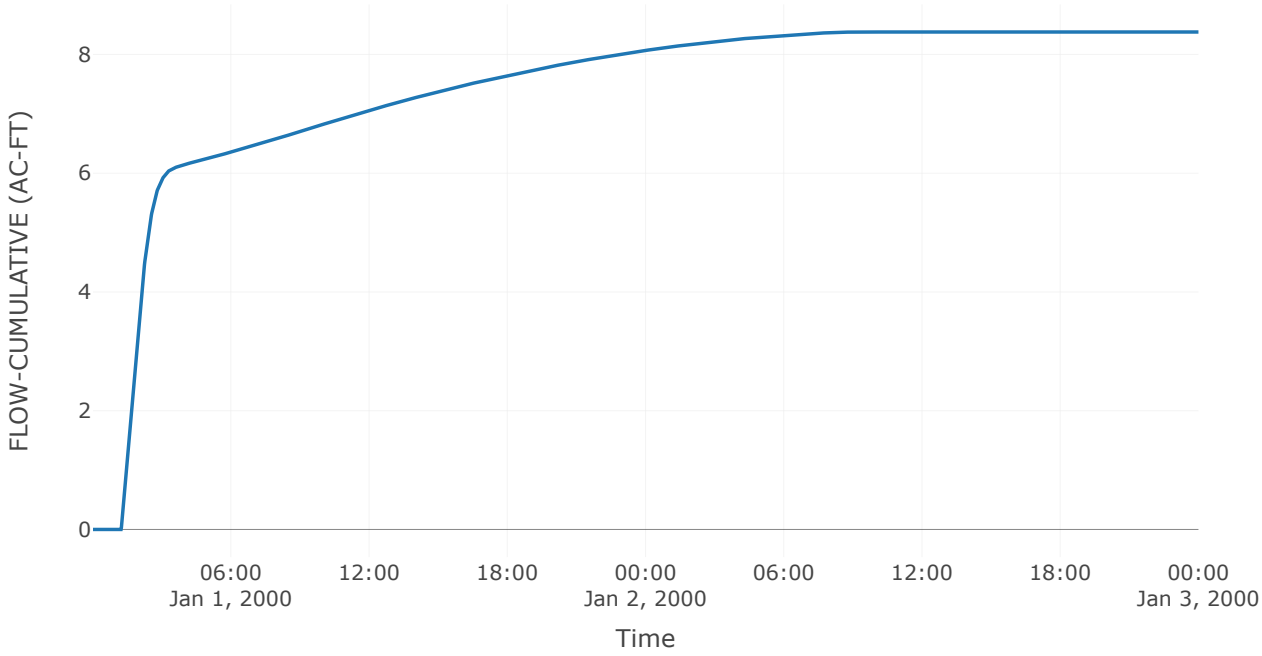
Sink: 55th Street Outlet

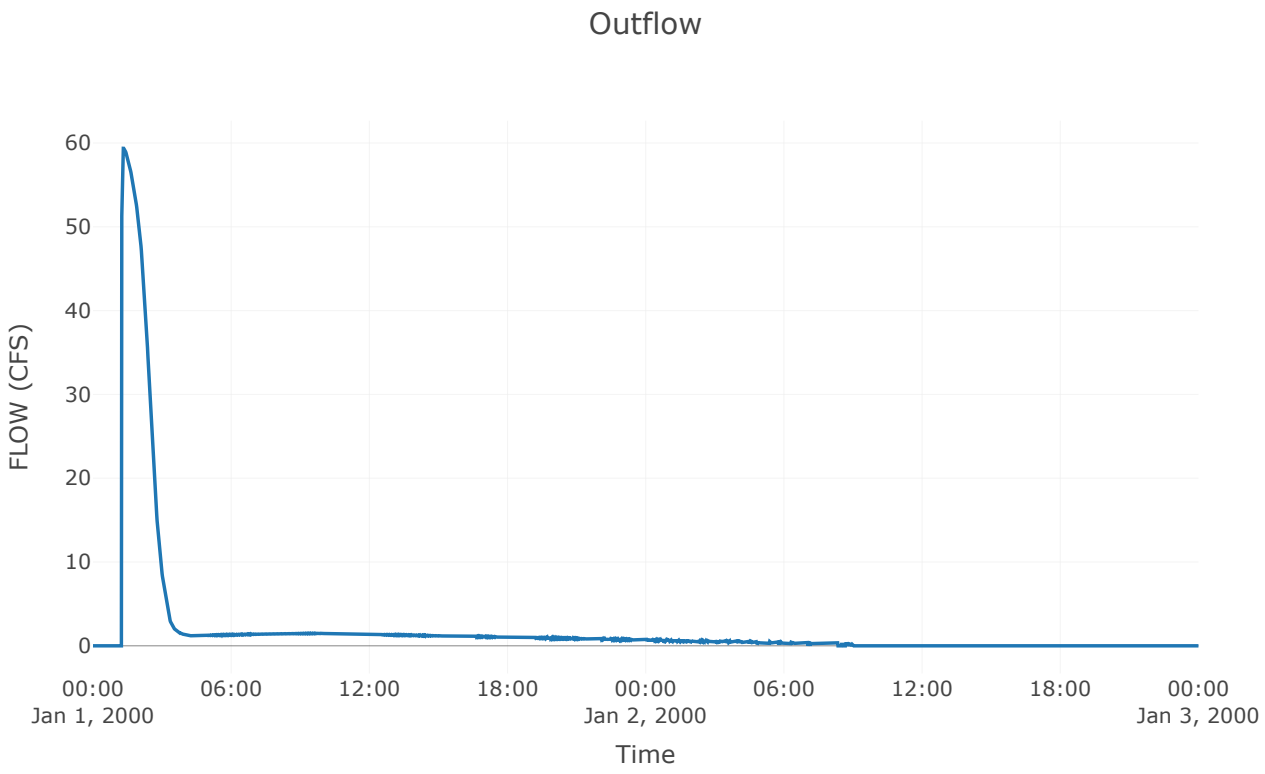
Results: 55th Street Outlet	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58

Combined Inflow



Cumulative Outflow




Outflow
FLOW (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:46

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.79	01Jan2000, 01:09	1.61
Prop Storage West of Wolf Rd	0.27	157.76	01Jan2000, 01:09	1.6
Prop On - Site	0	5.14	01Jan2000, 00:32	1.81
Proposed Basin C	0.27	75.77	01Jan2000, 01:15	1.18
Existing Basin A & B	0.27	75.75	01Jan2000, 01:16	1.03

55th Street Outlet	0.27	75.75	01Jan2000, 01:16	1.03

Subbasin: On-Site Trib 1

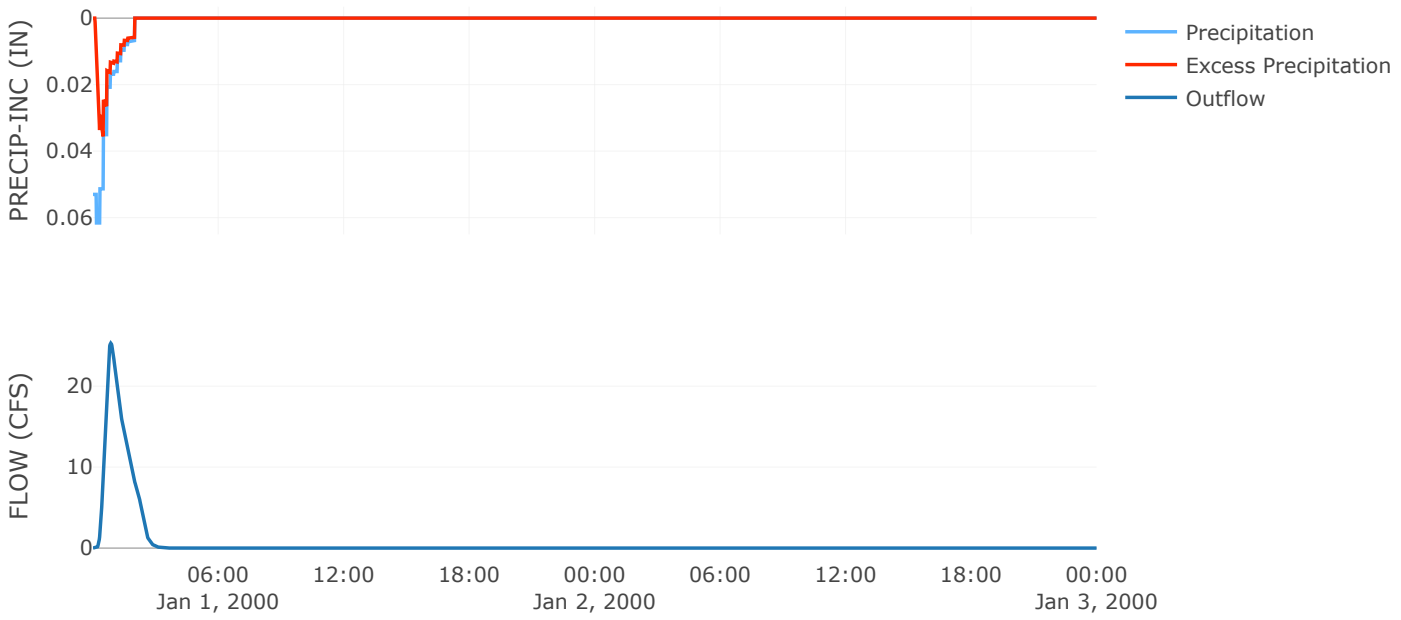
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

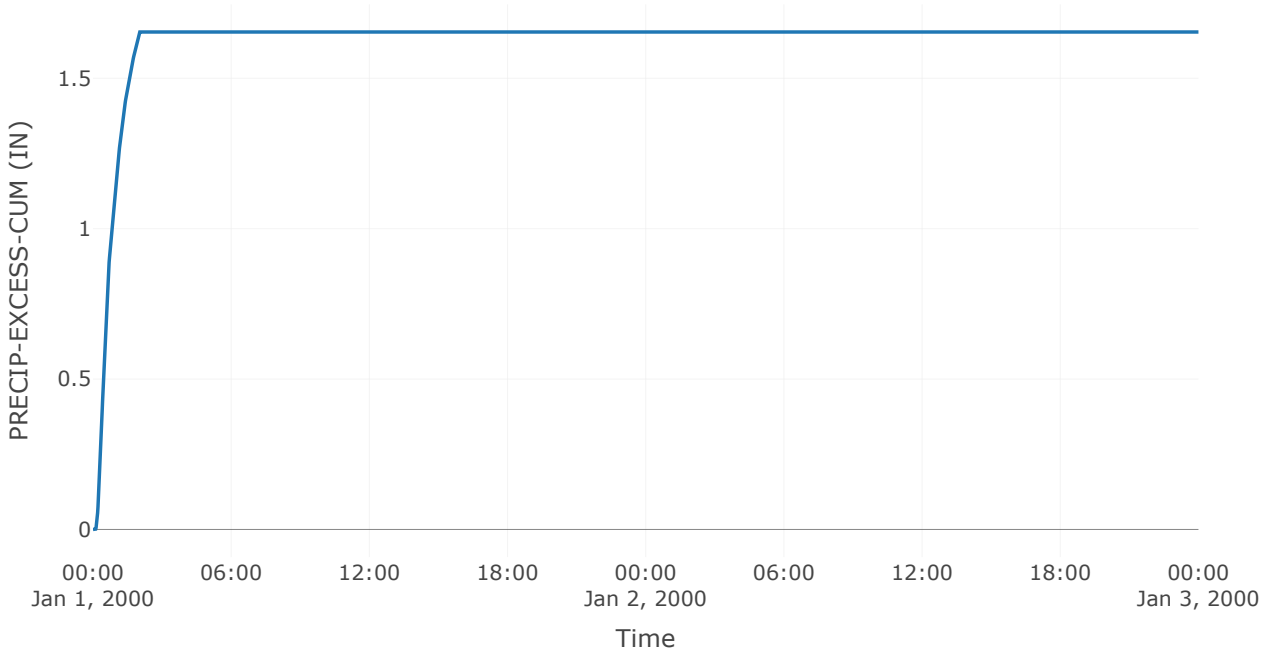
Transform: Scs	
Lag	21
Unitgraph Type	Standard

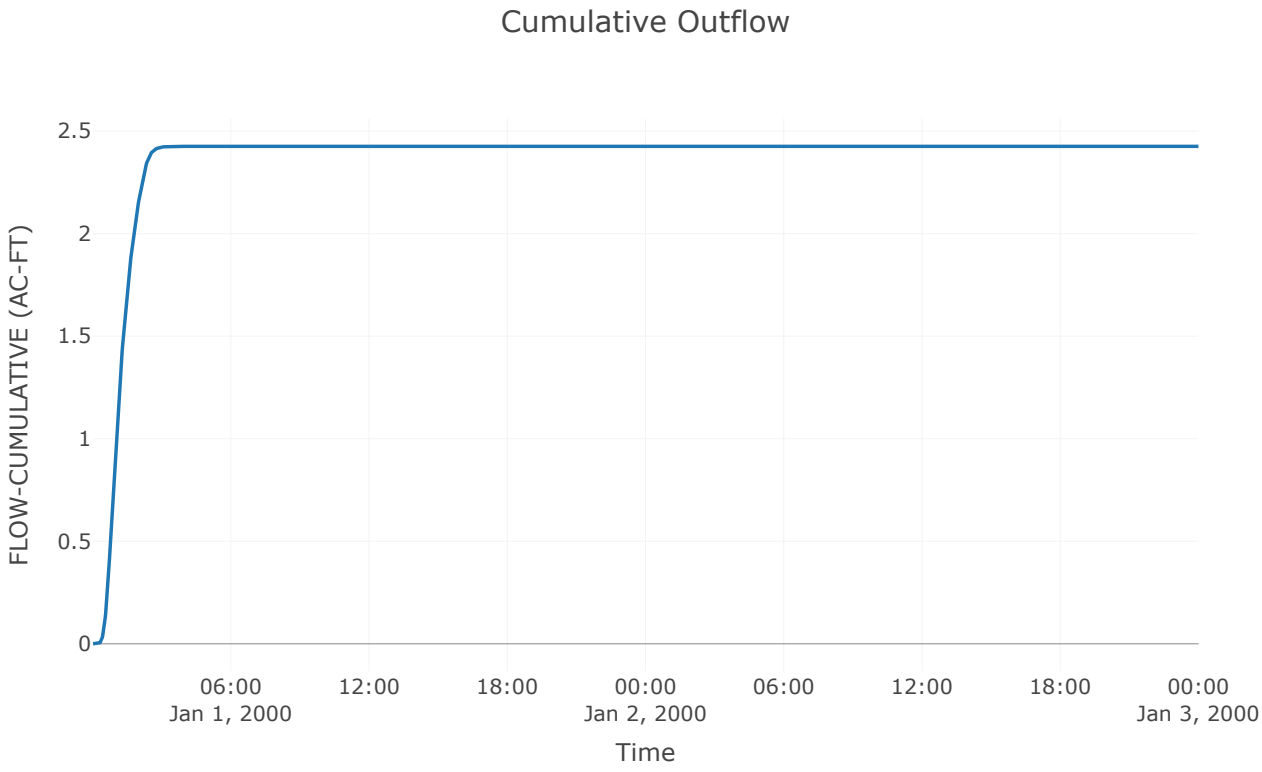
Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

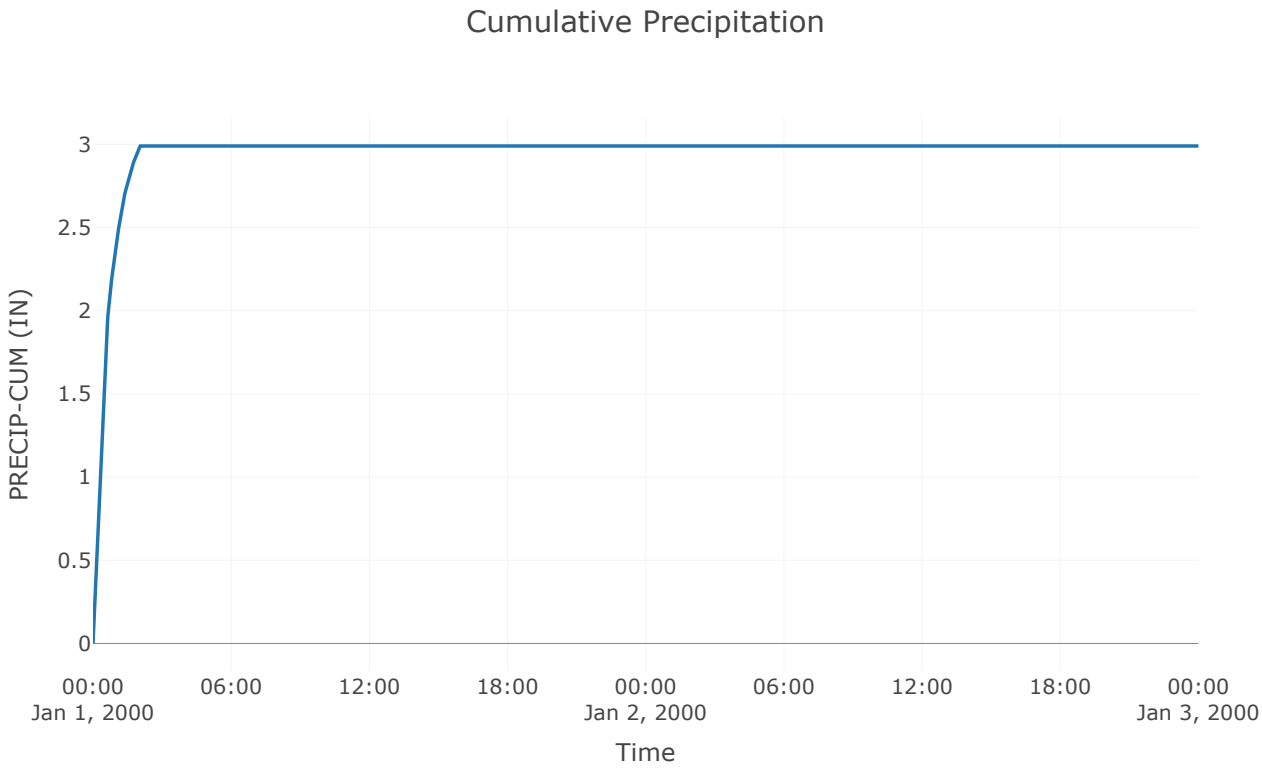
Precipitation and Outflow

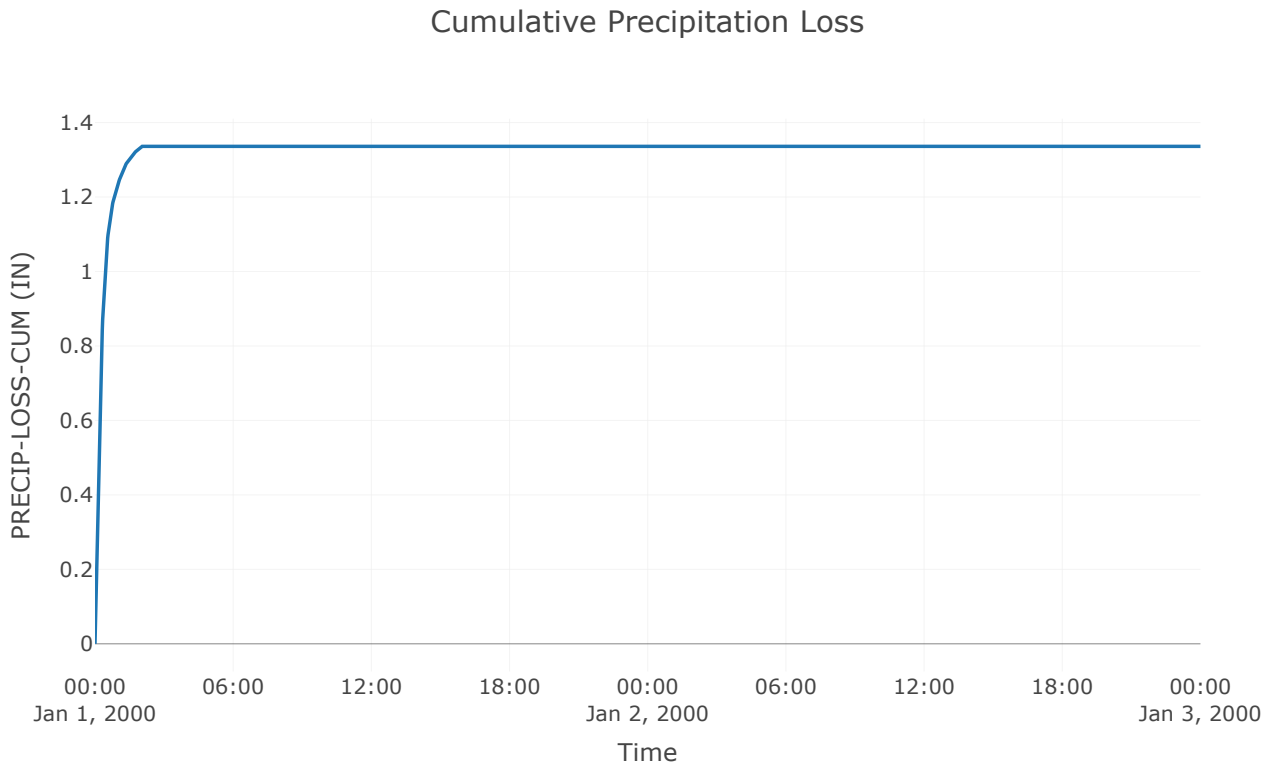


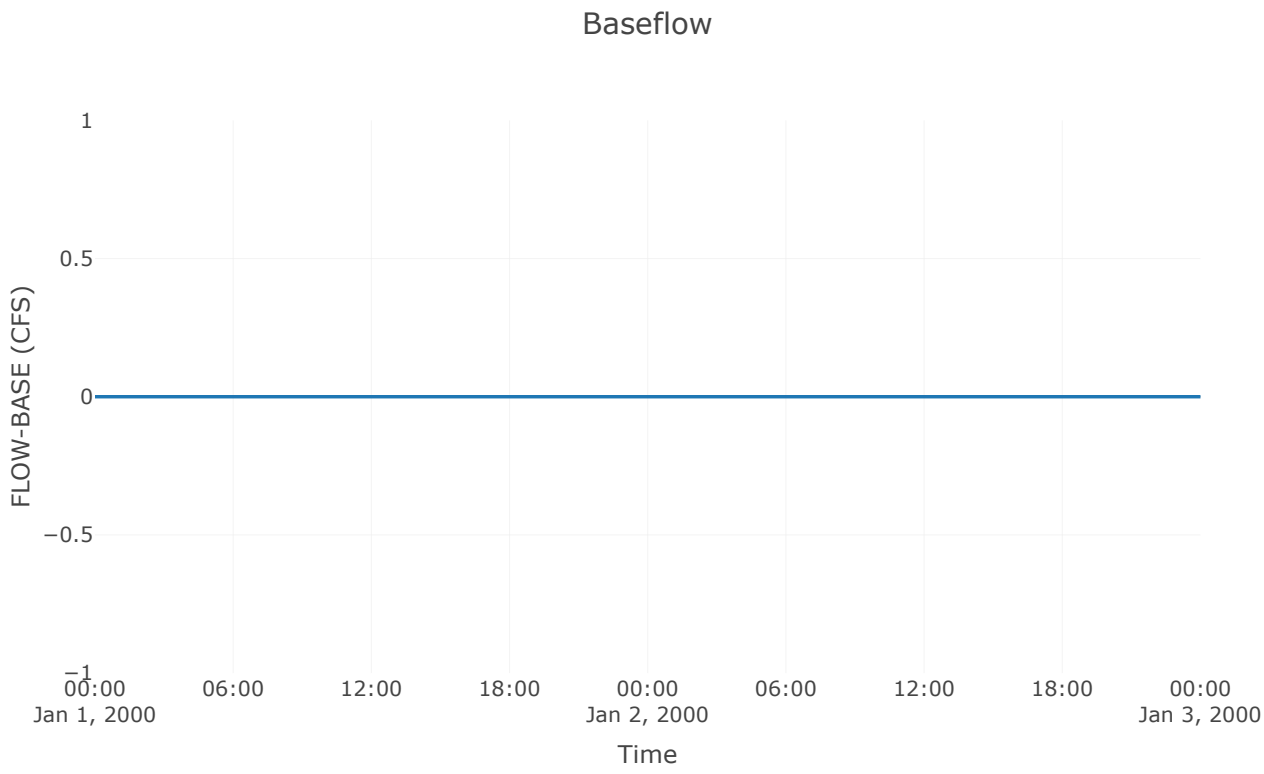
Cumulative Excess Precipitation



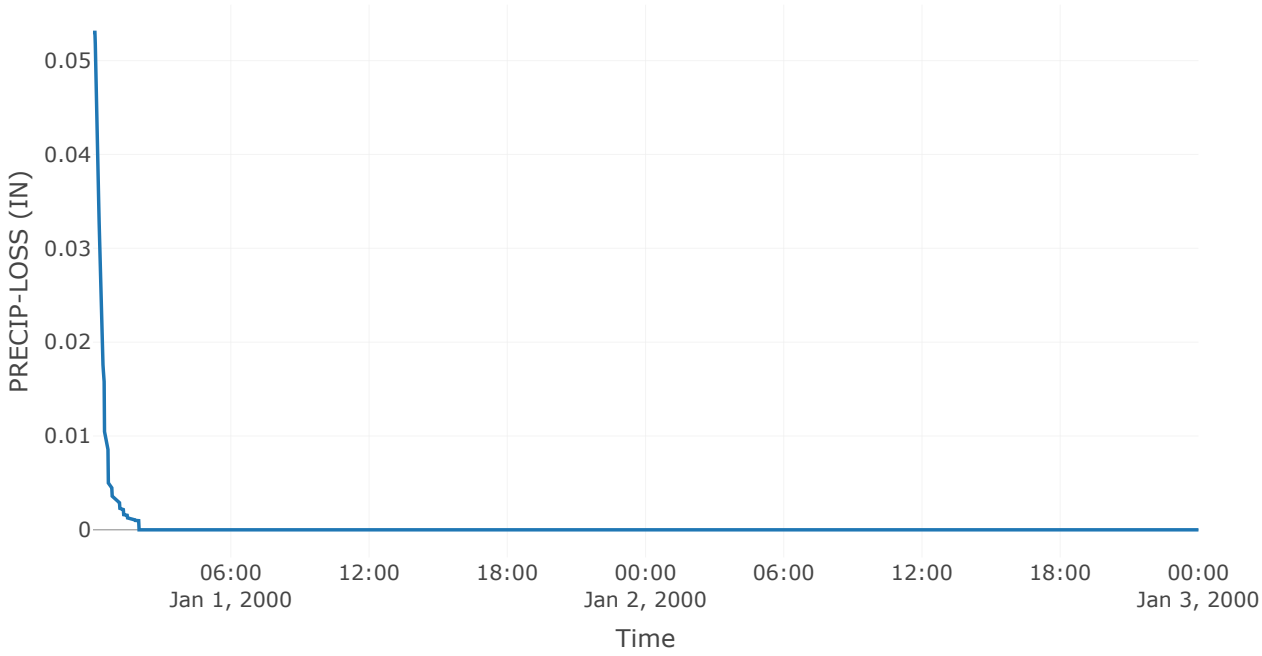

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

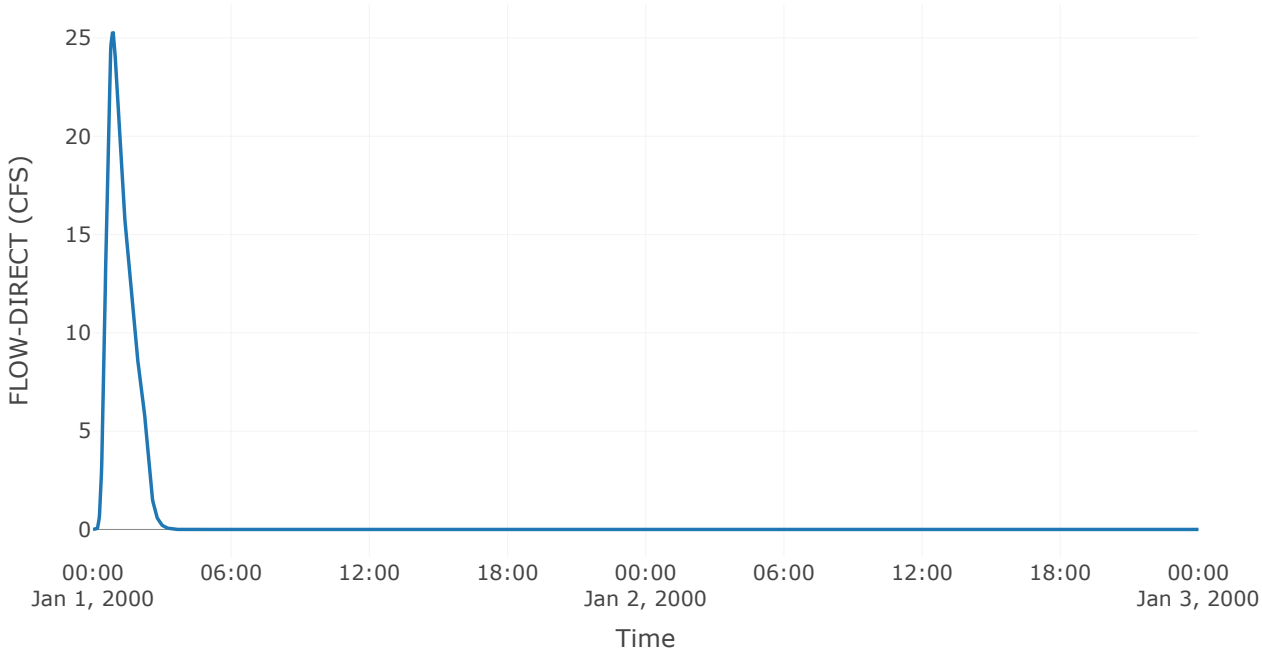

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

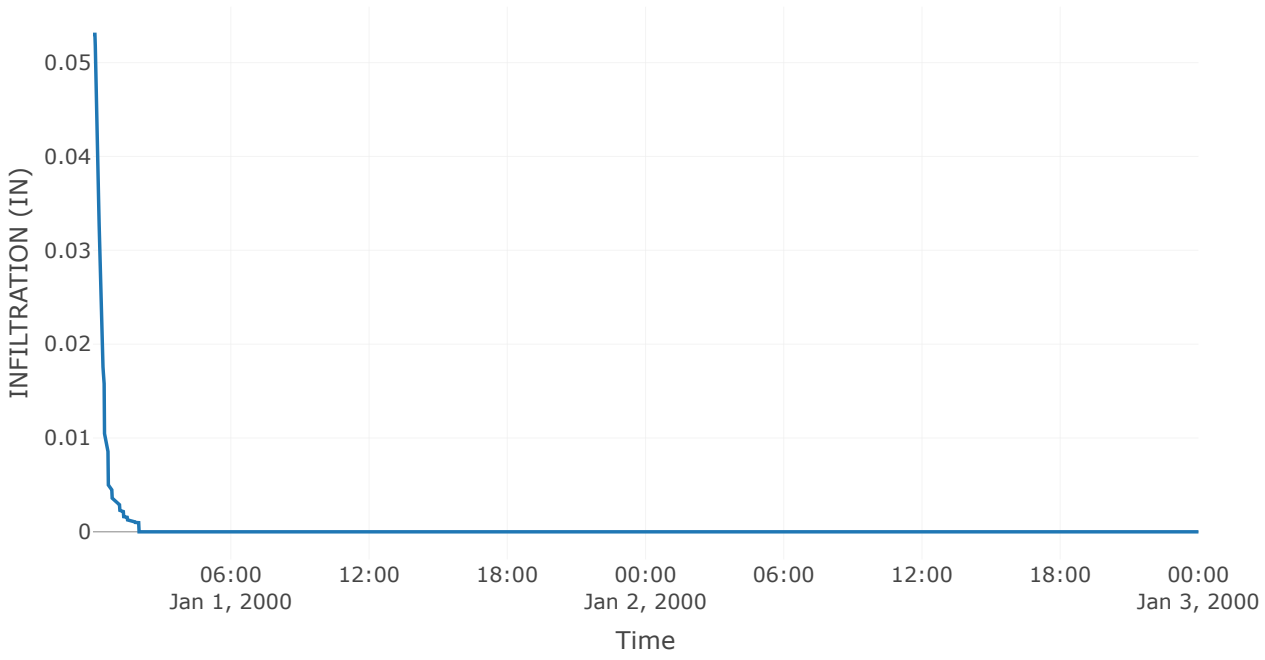

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

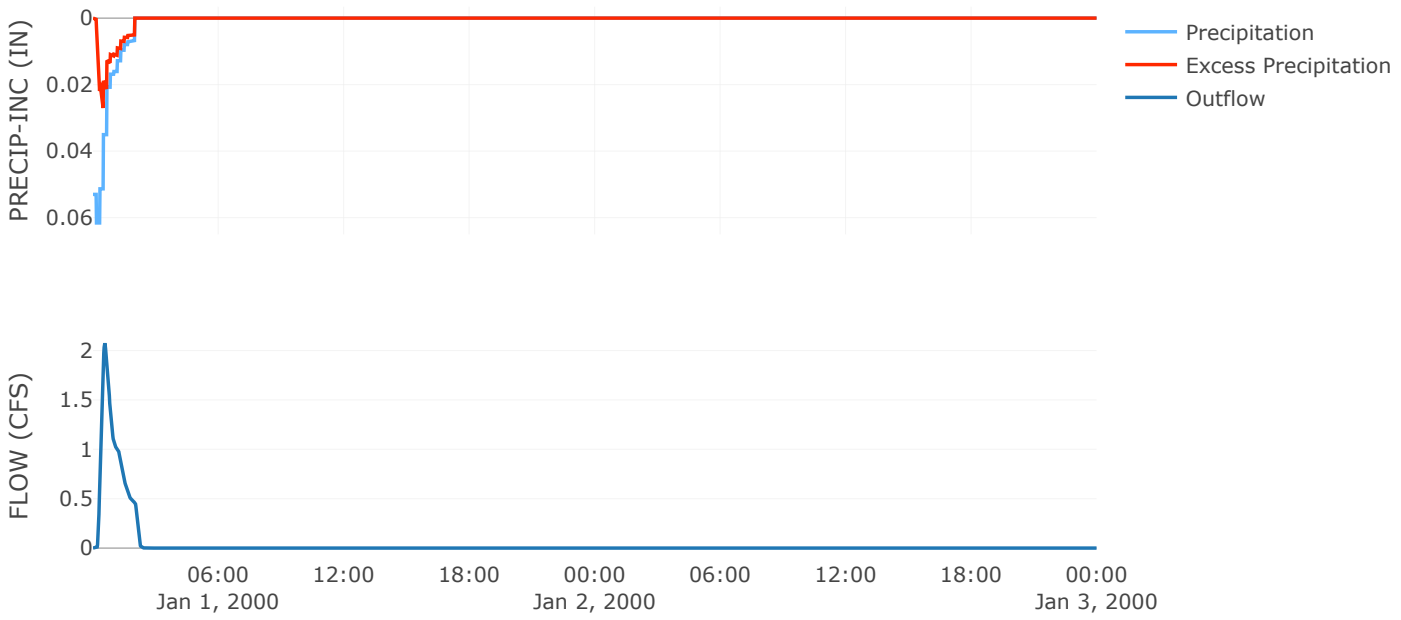
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

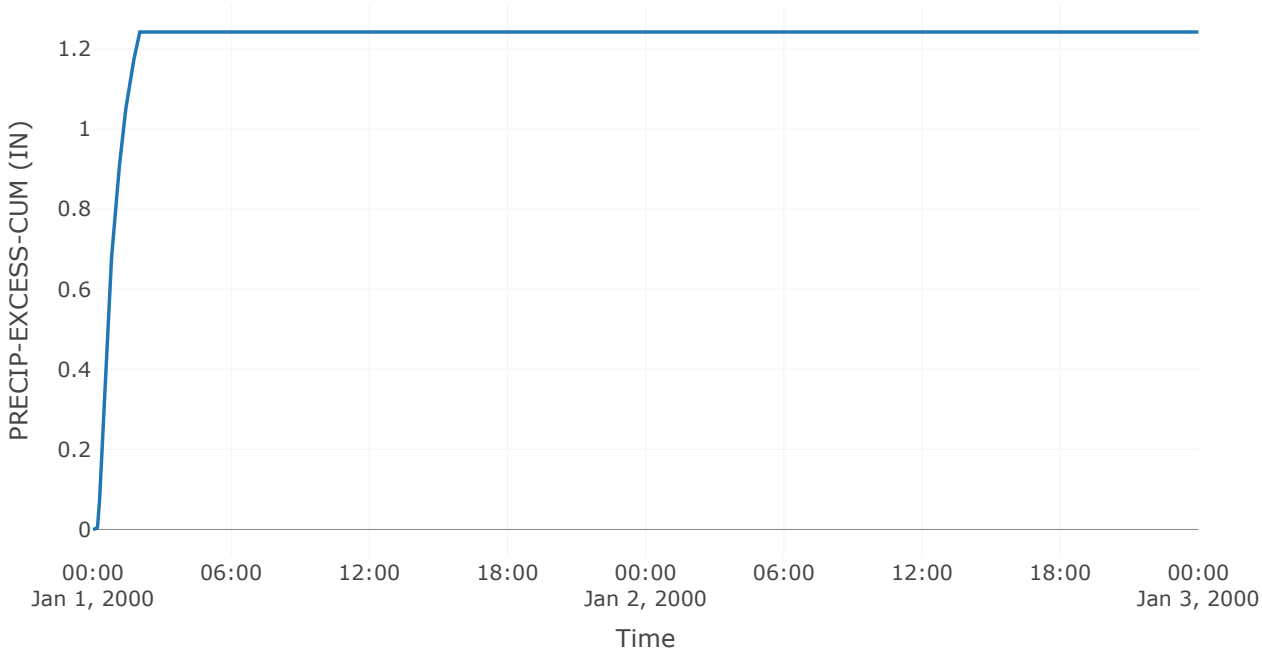
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

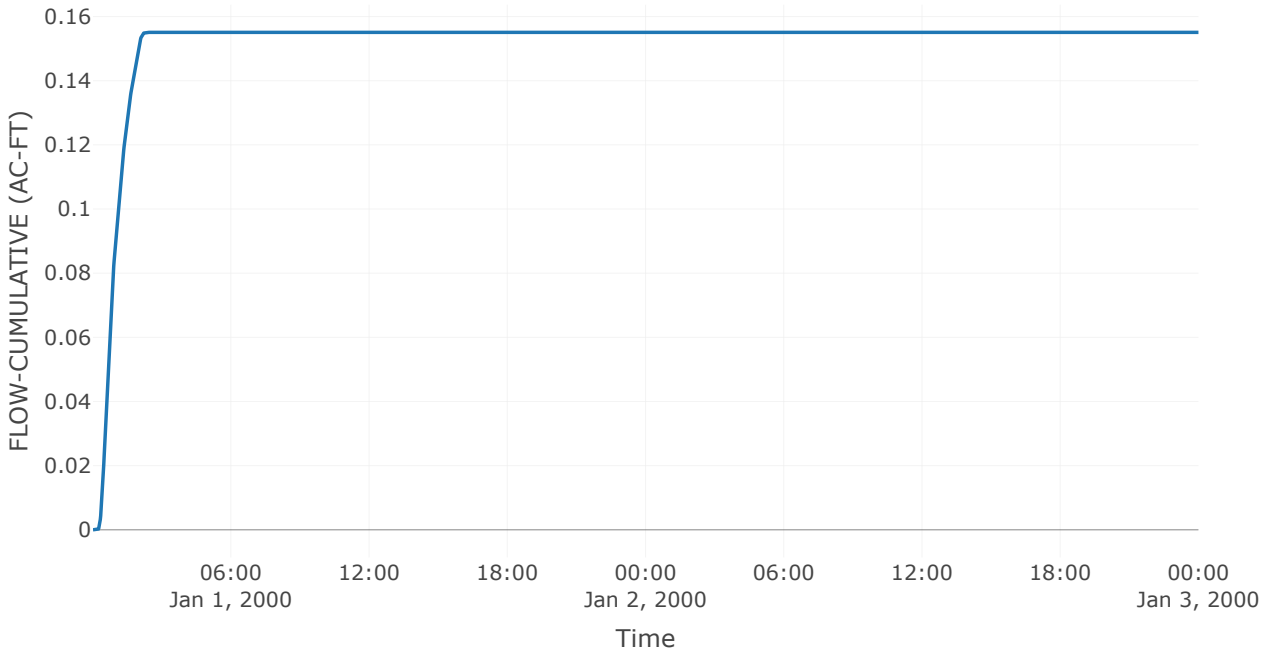
Precipitation and Outflow



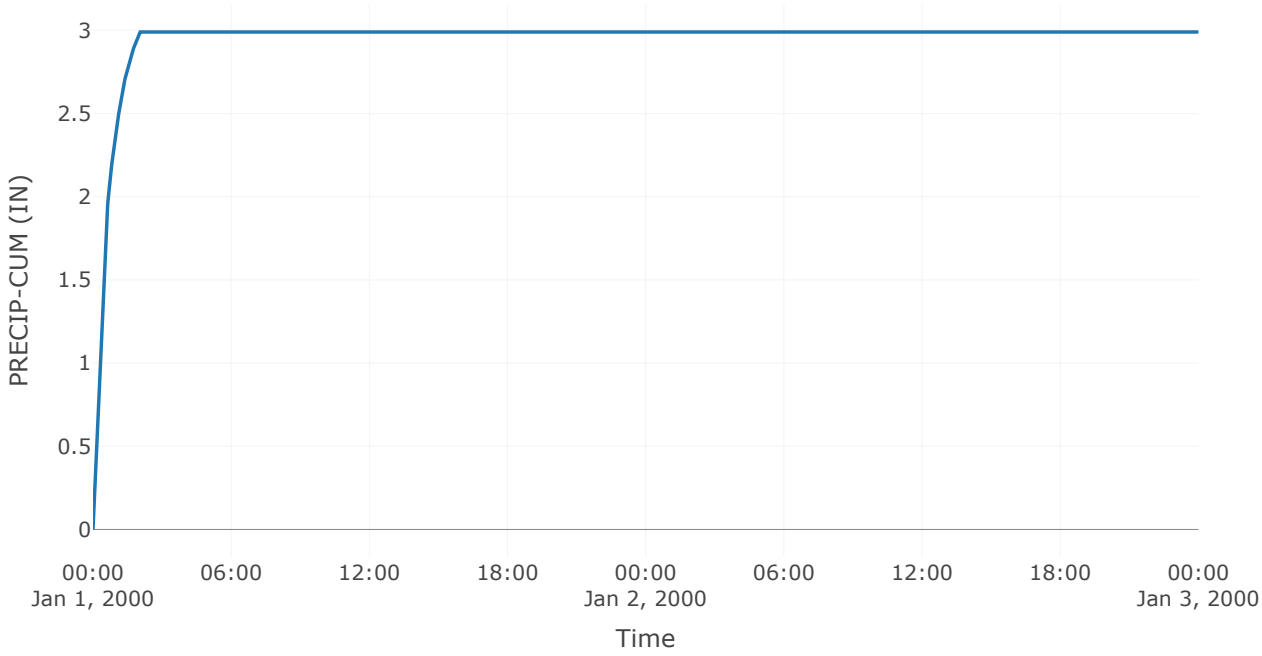
Cumulative Excess Precipitation

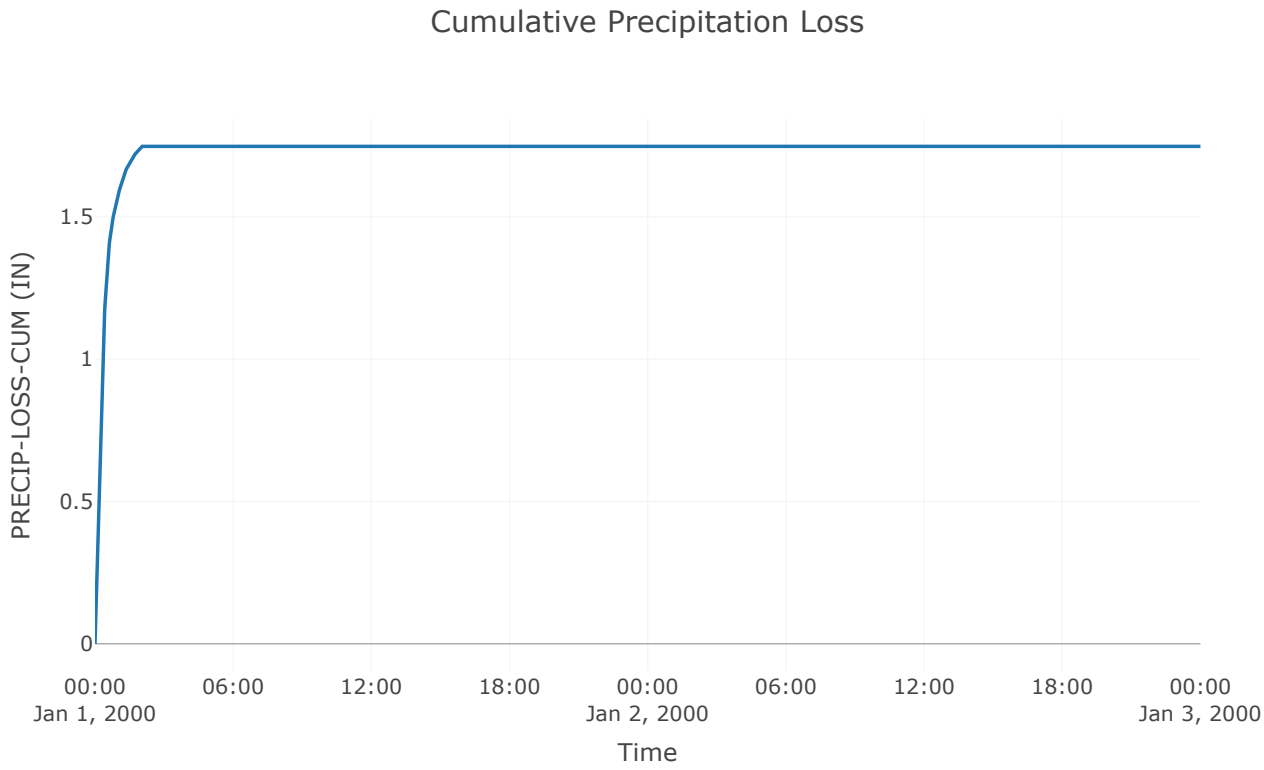


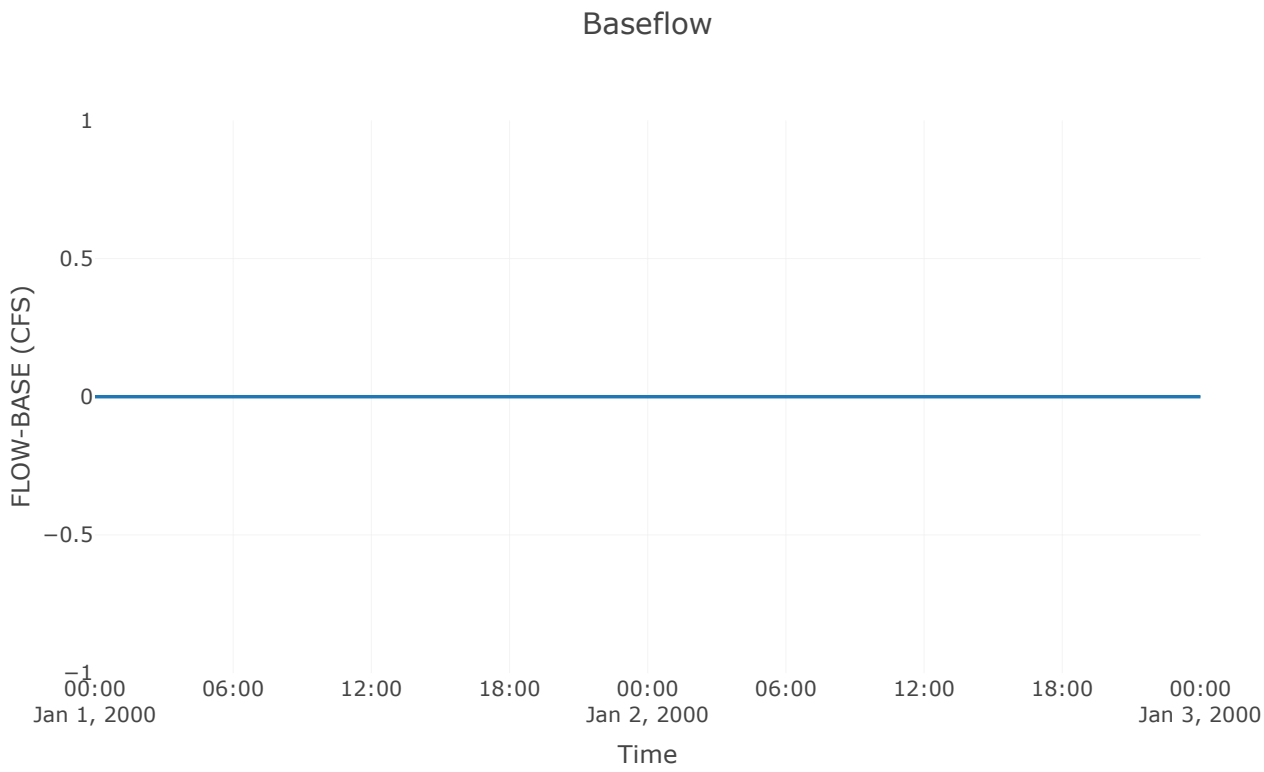
Cumulative Outflow

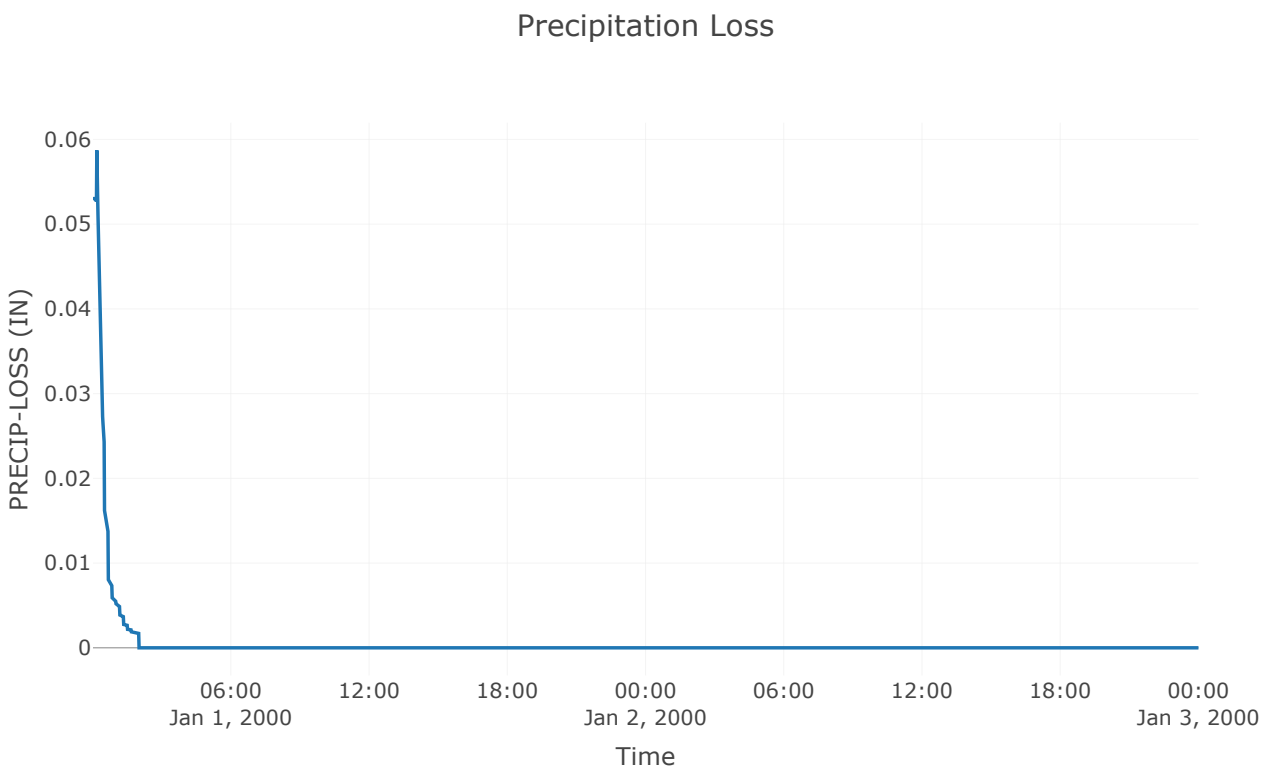


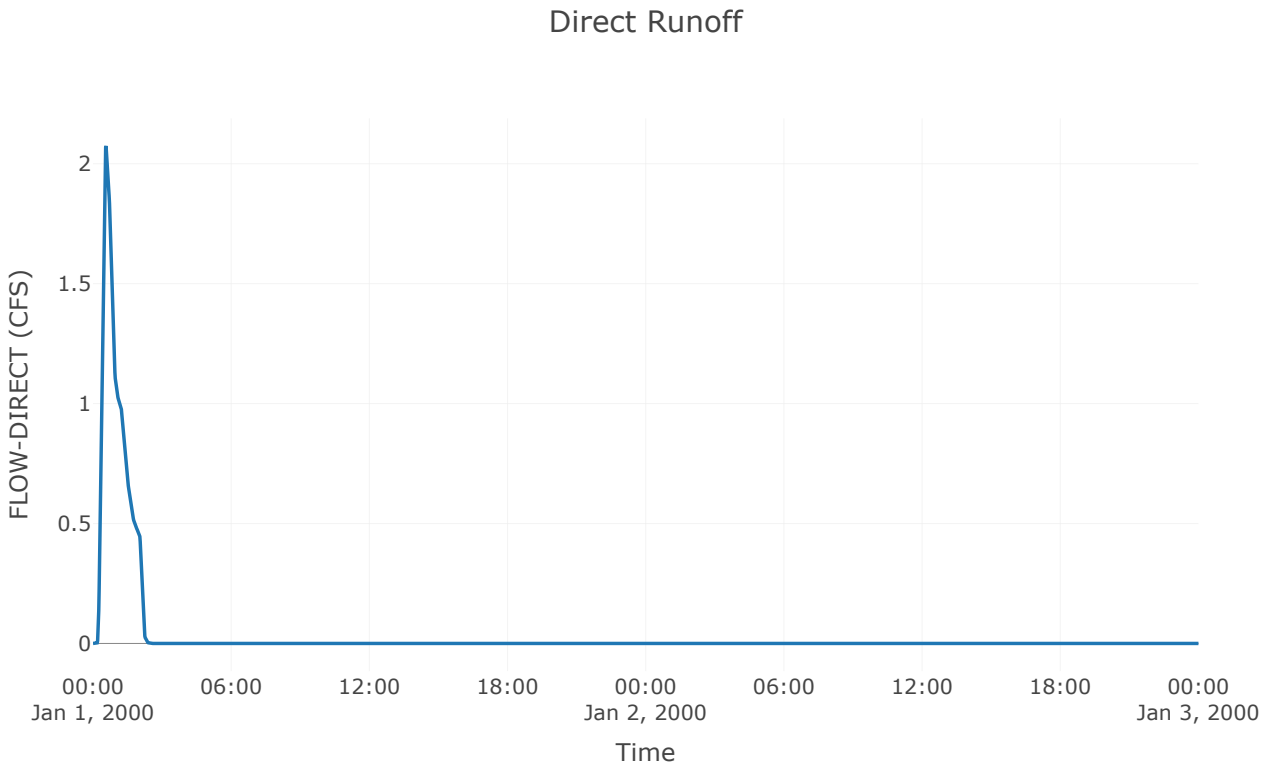
Cumulative Precipitation

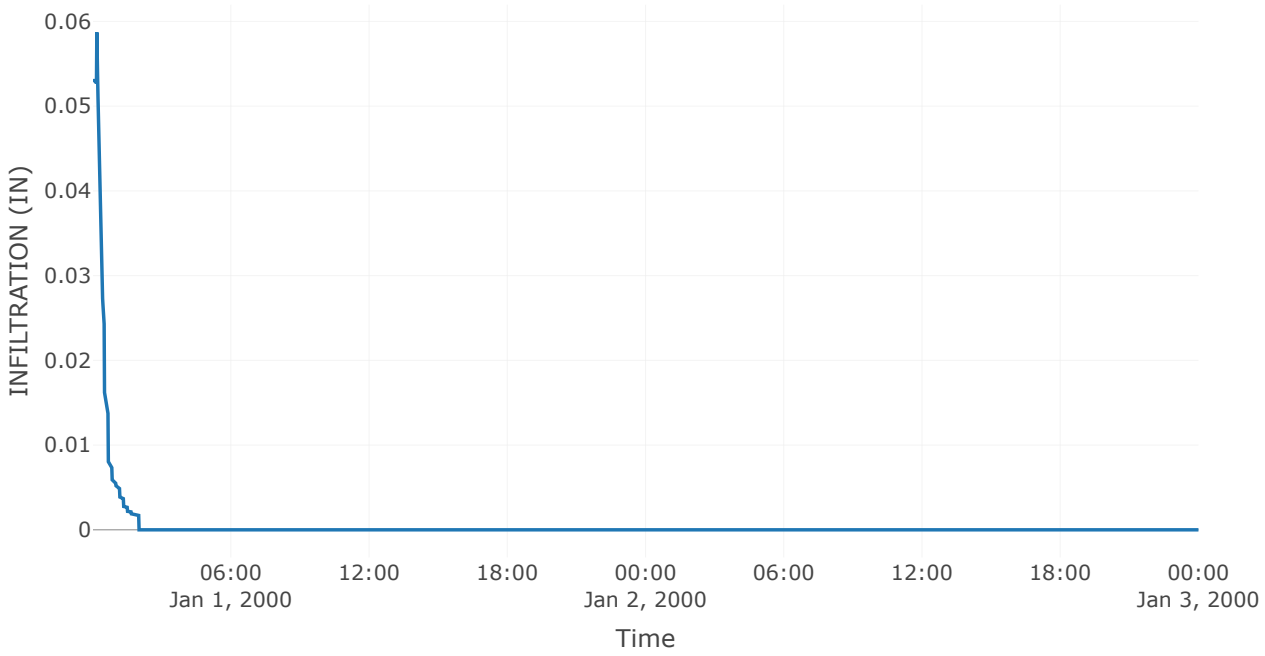



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

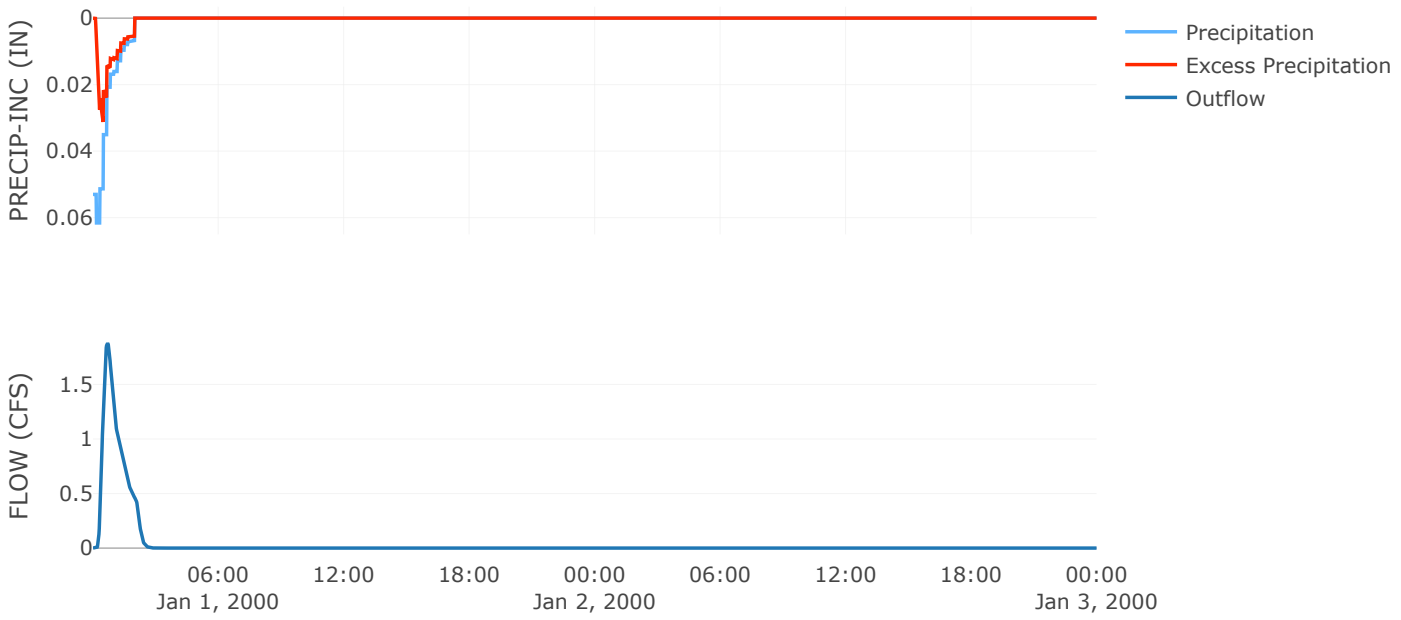
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

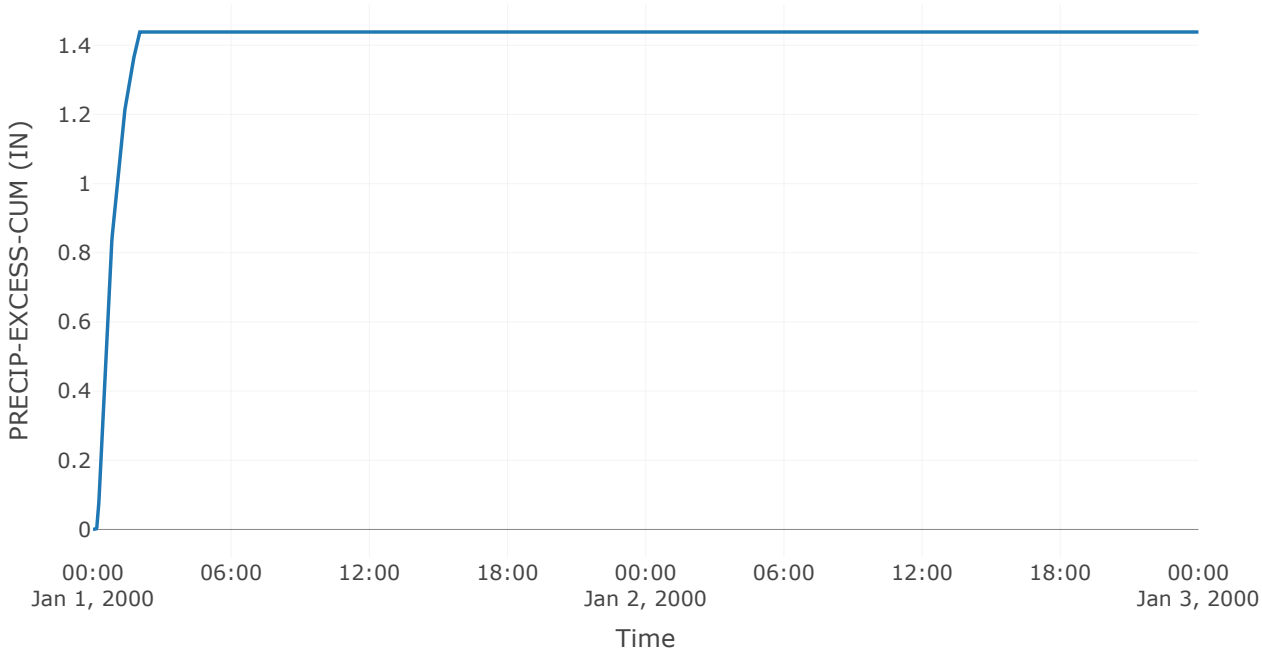
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

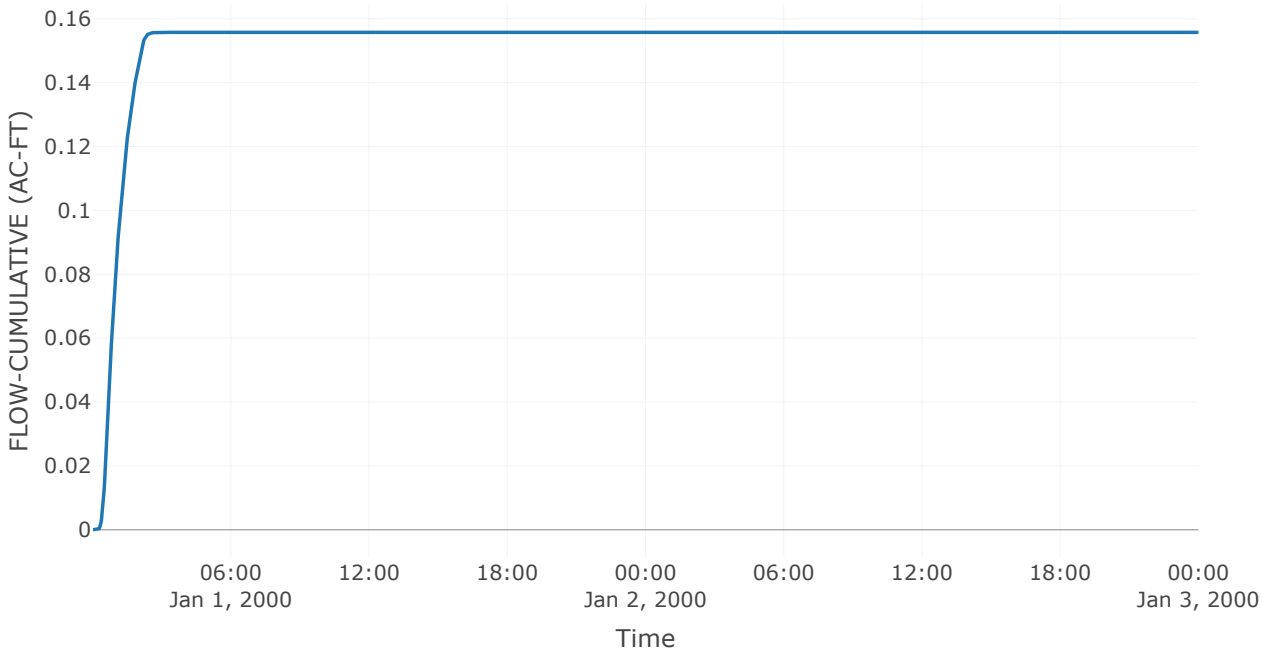
Precipitation and Outflow



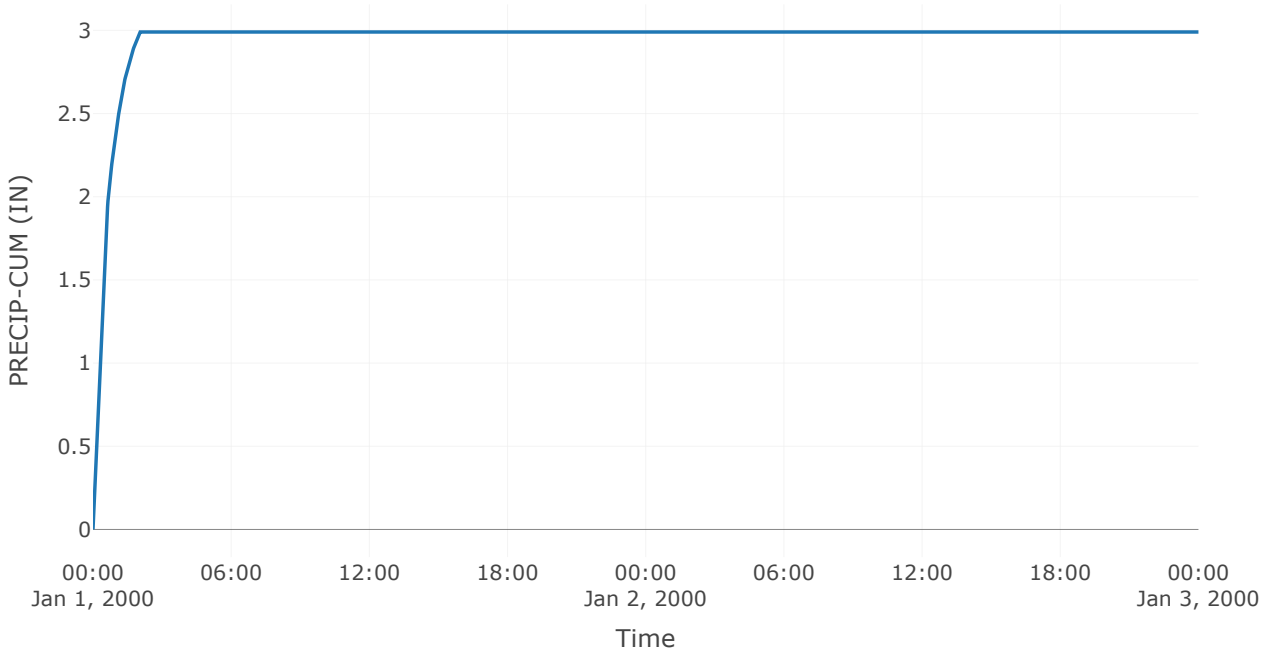
Cumulative Excess Precipitation

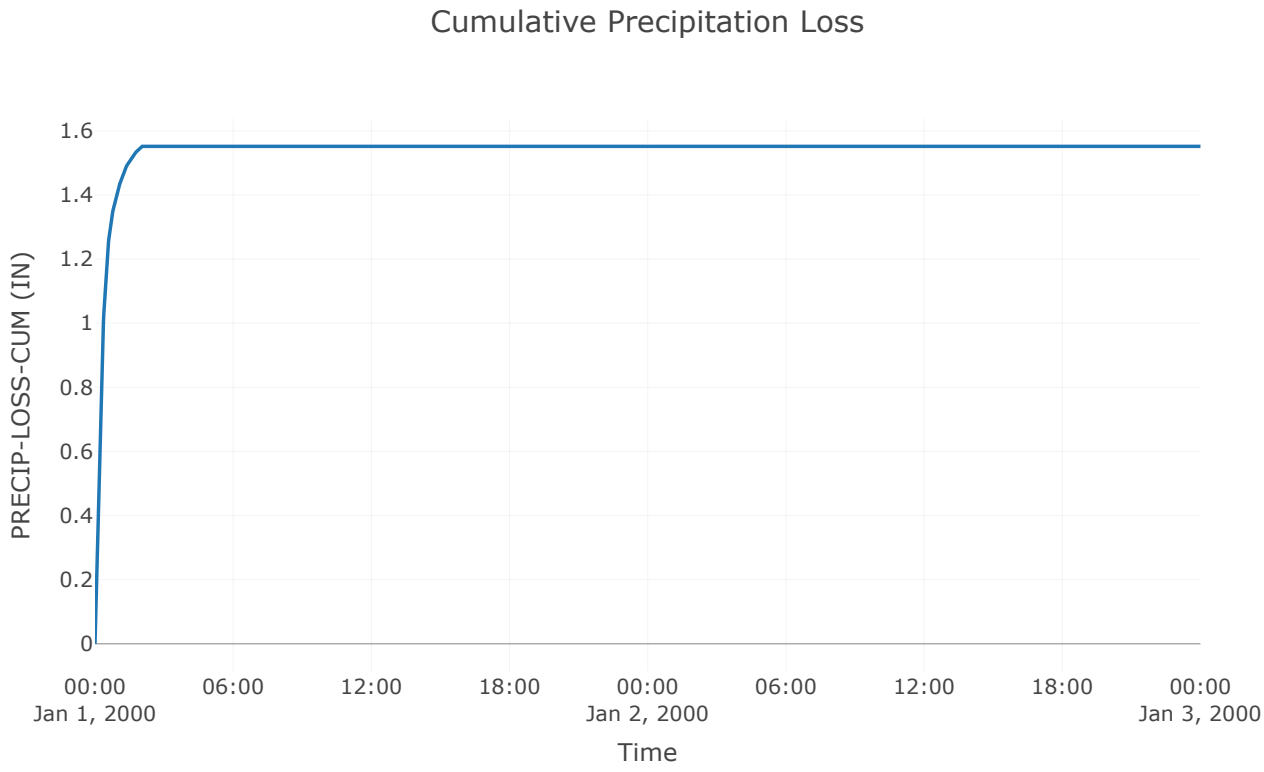


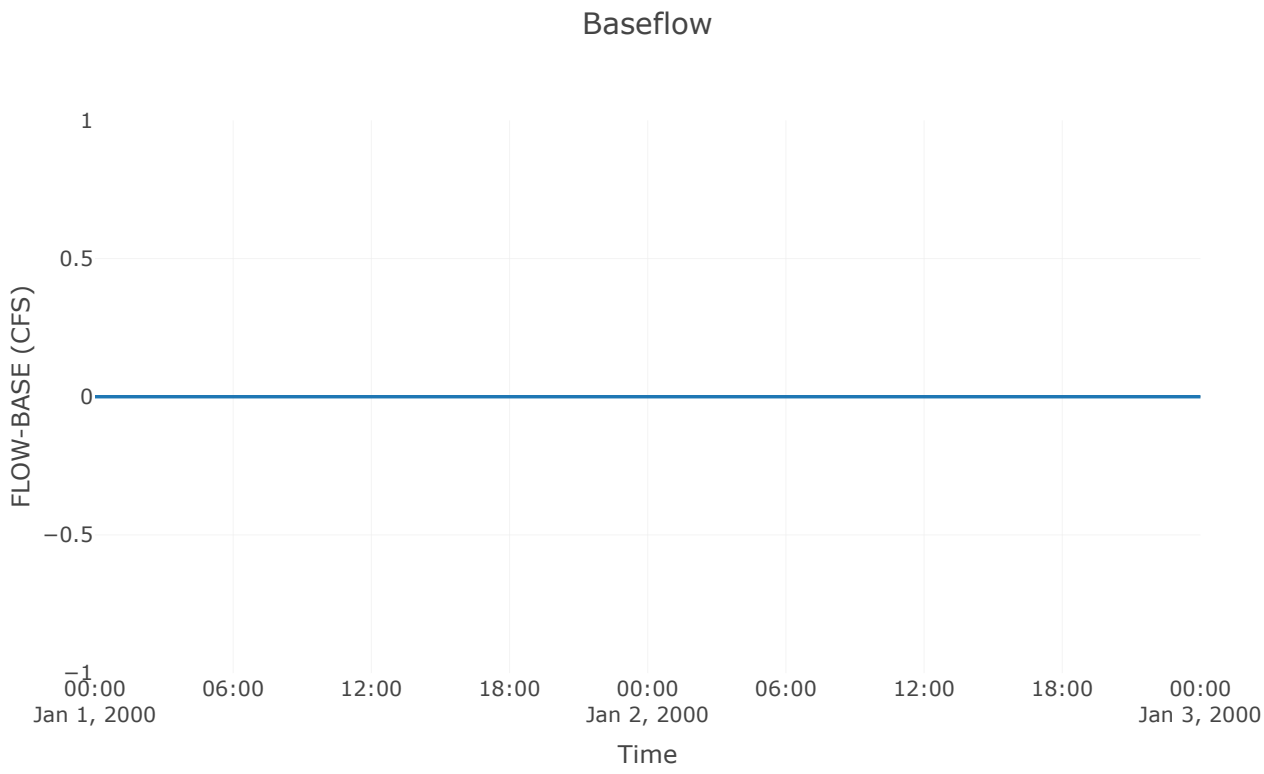
Cumulative Outflow

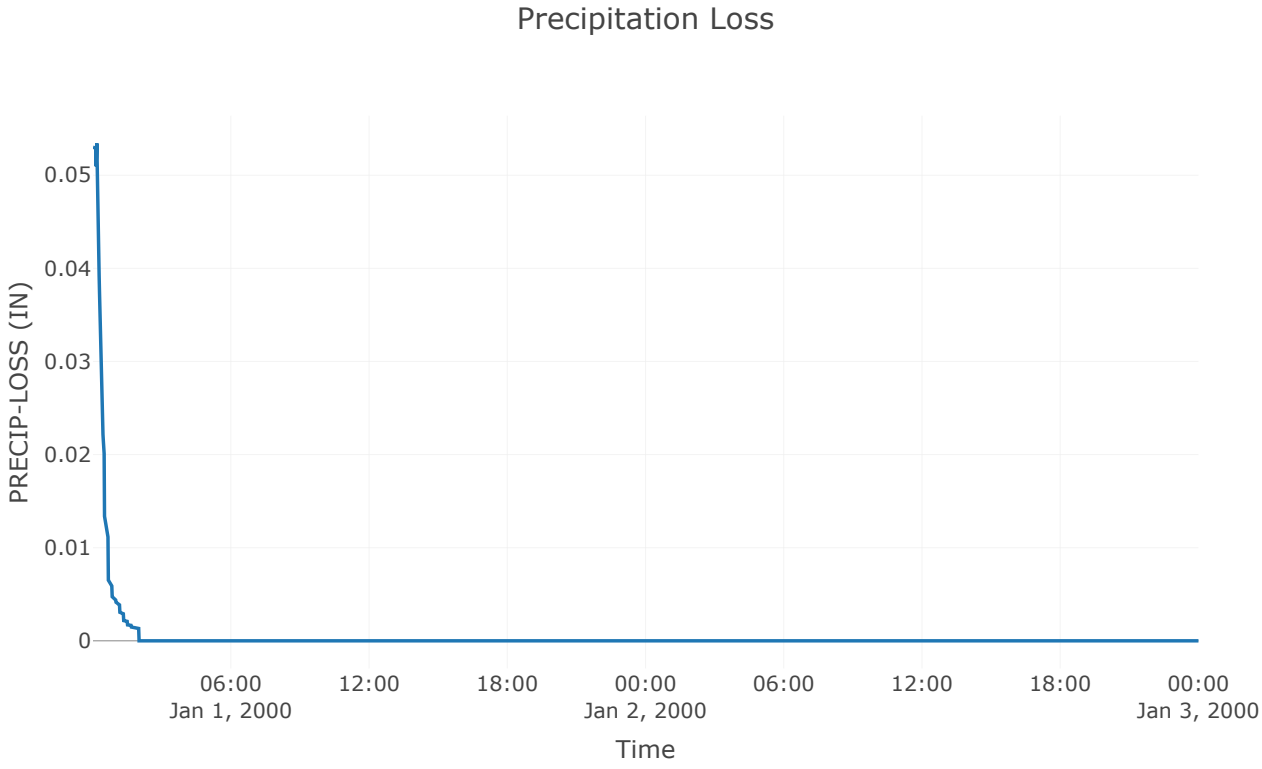


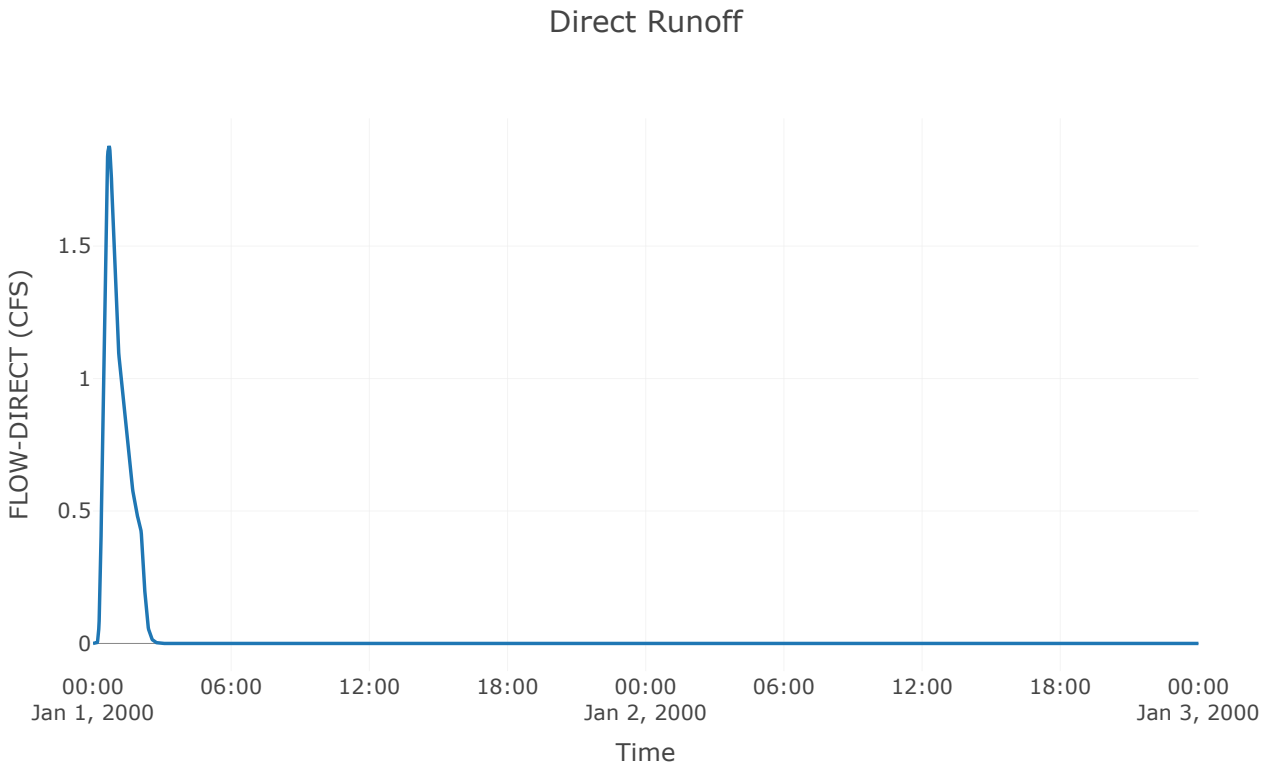
Cumulative Precipitation

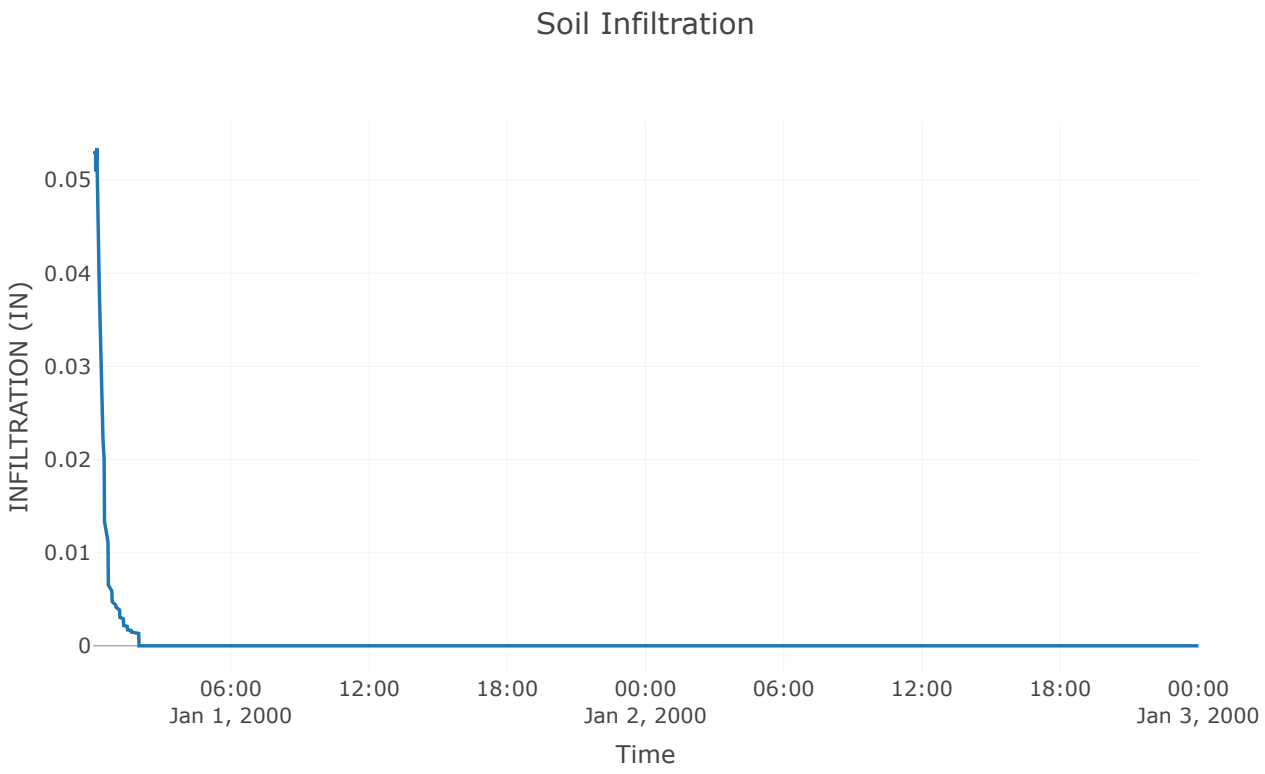



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

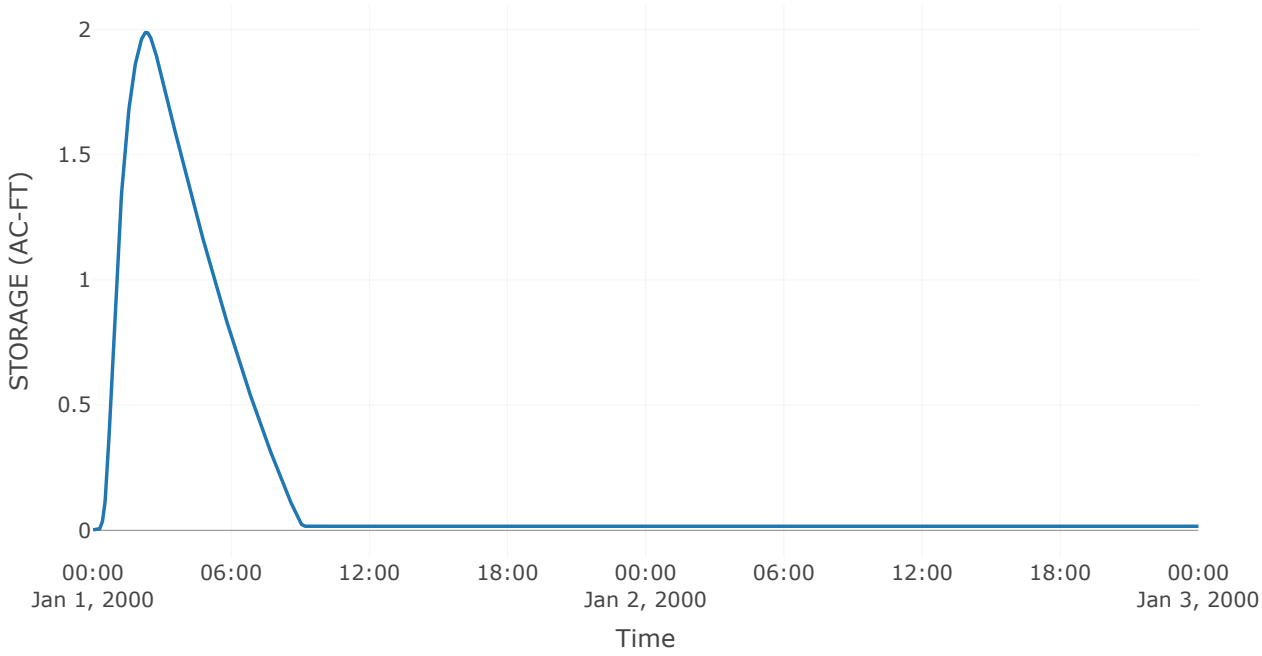

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

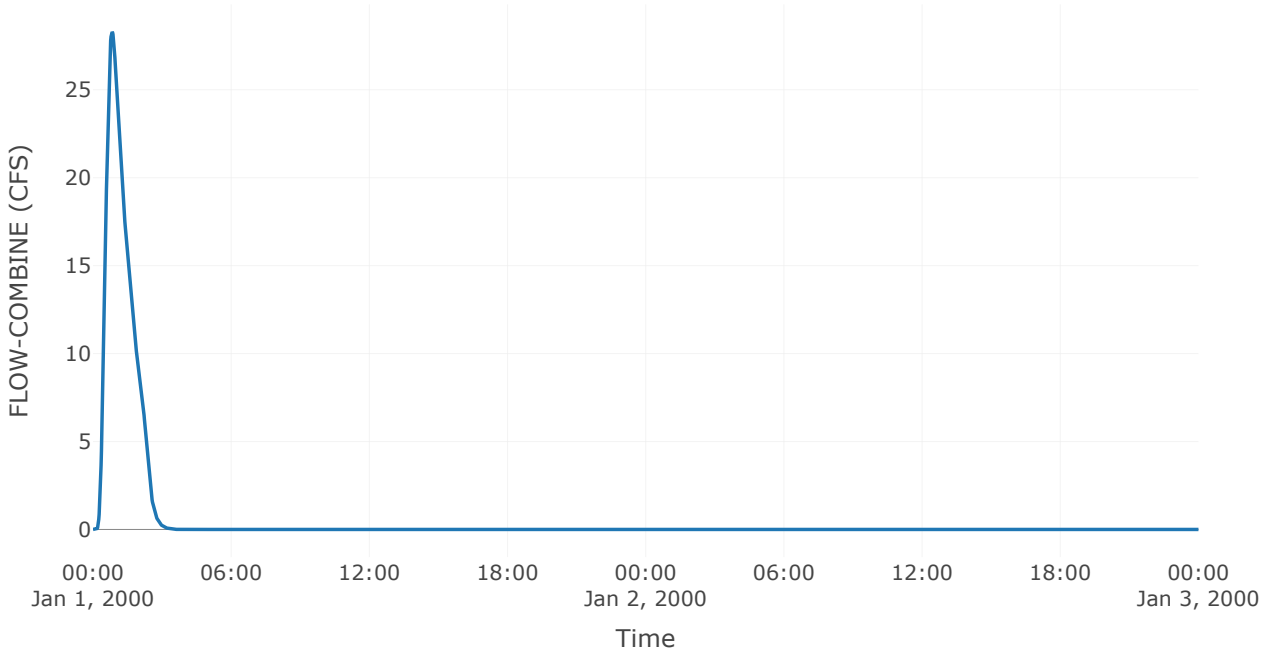
Downstream : Basin 2

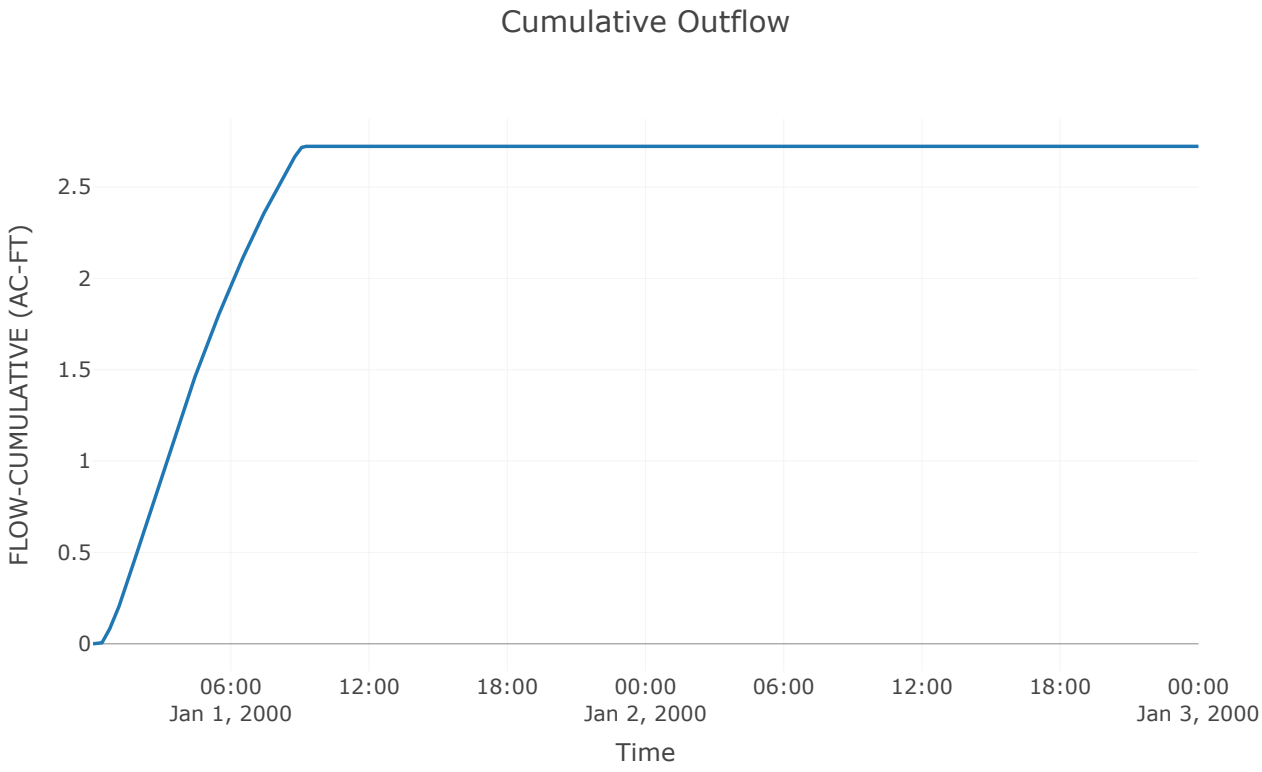
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

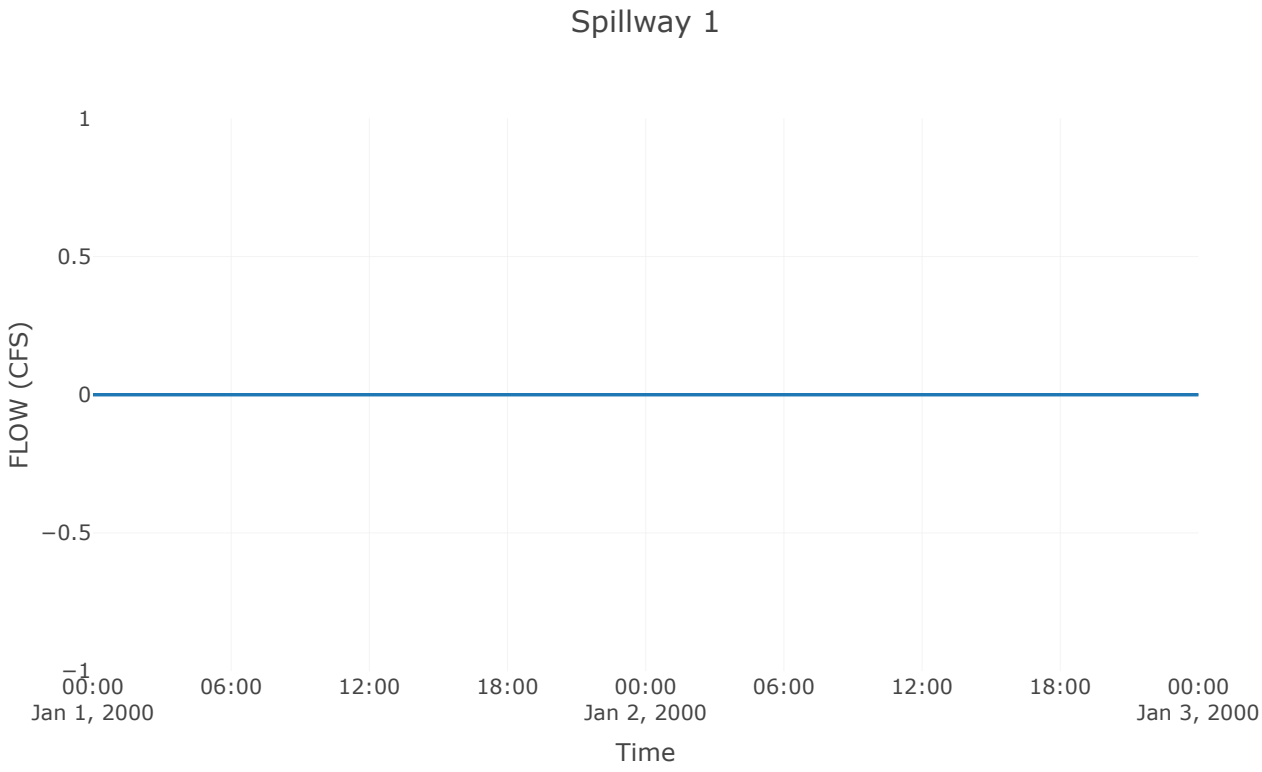
Storage



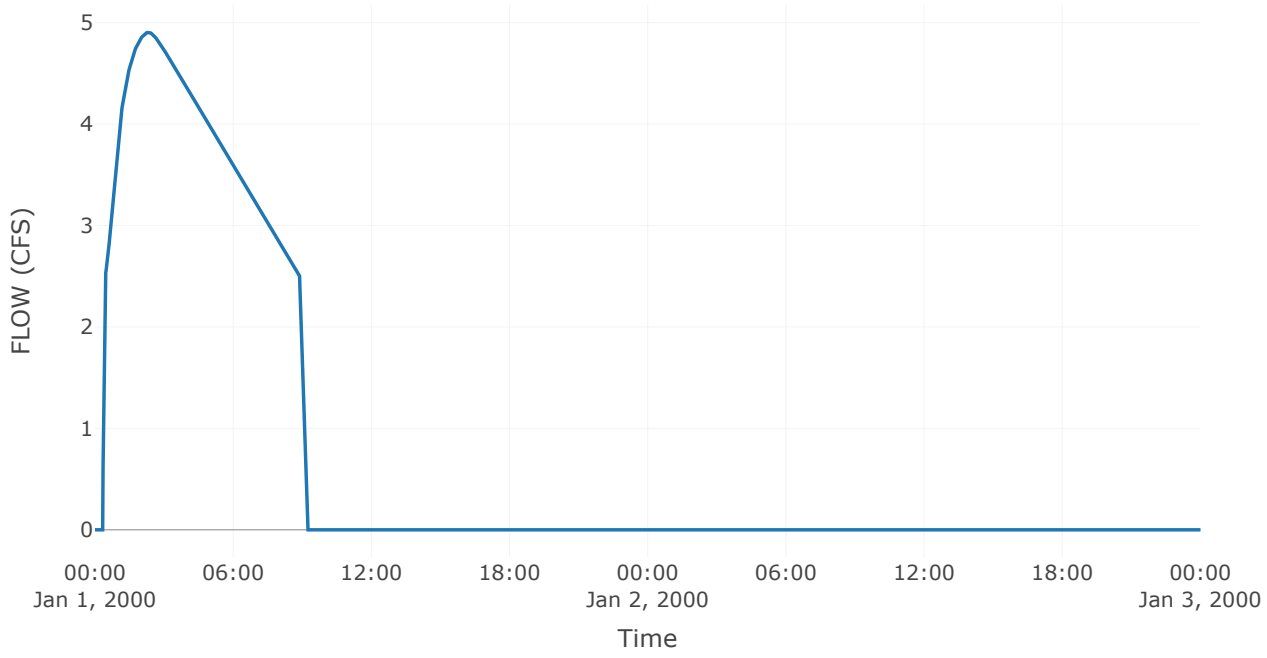
Combined Inflow



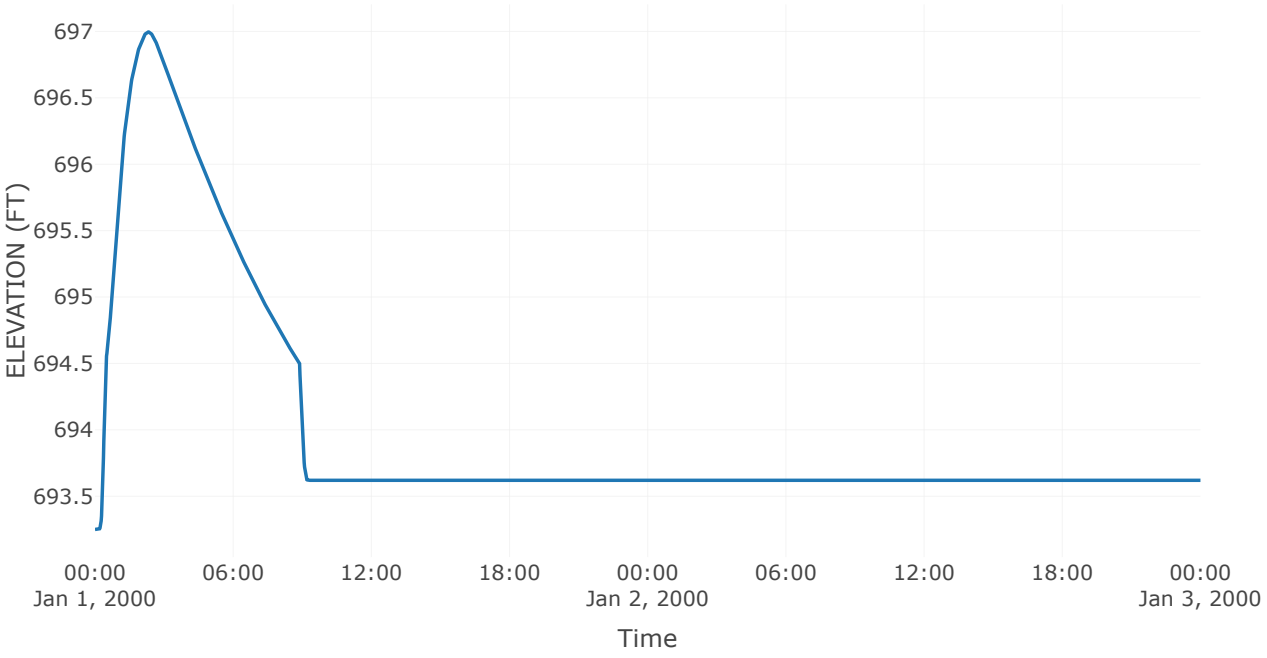

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

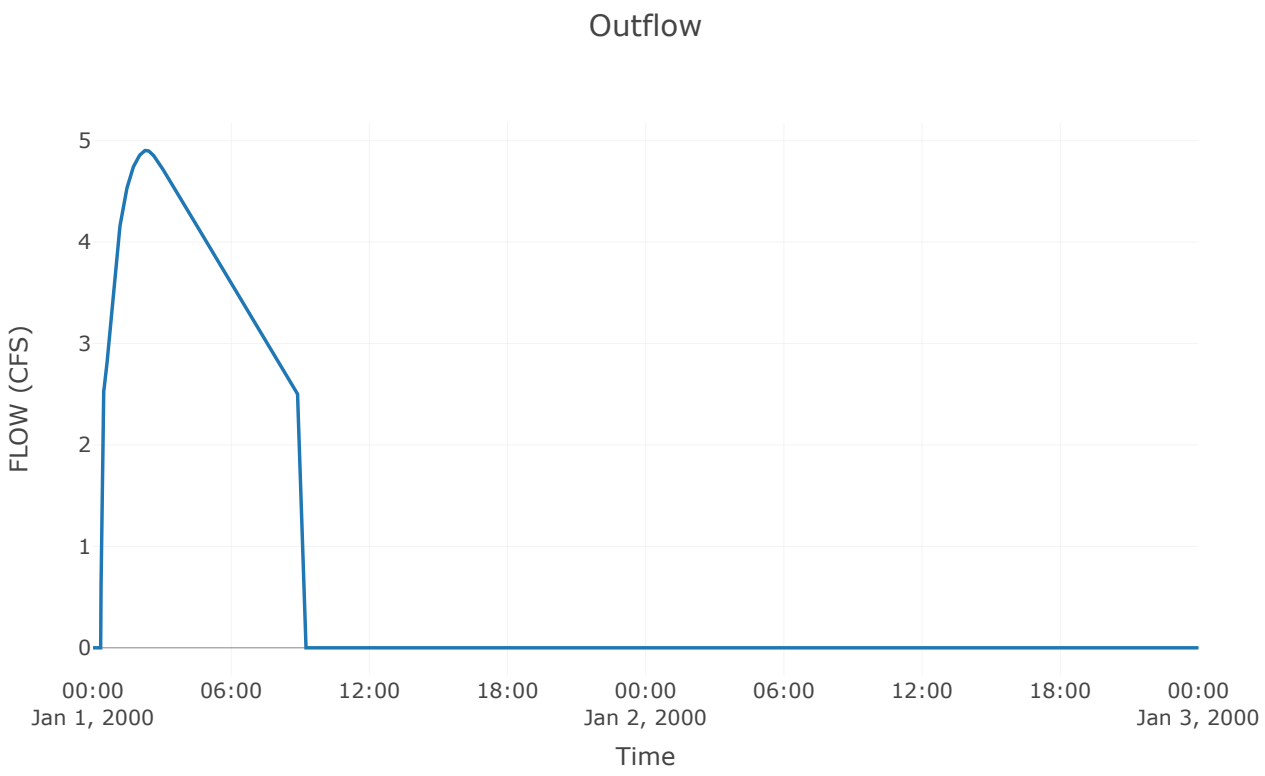

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

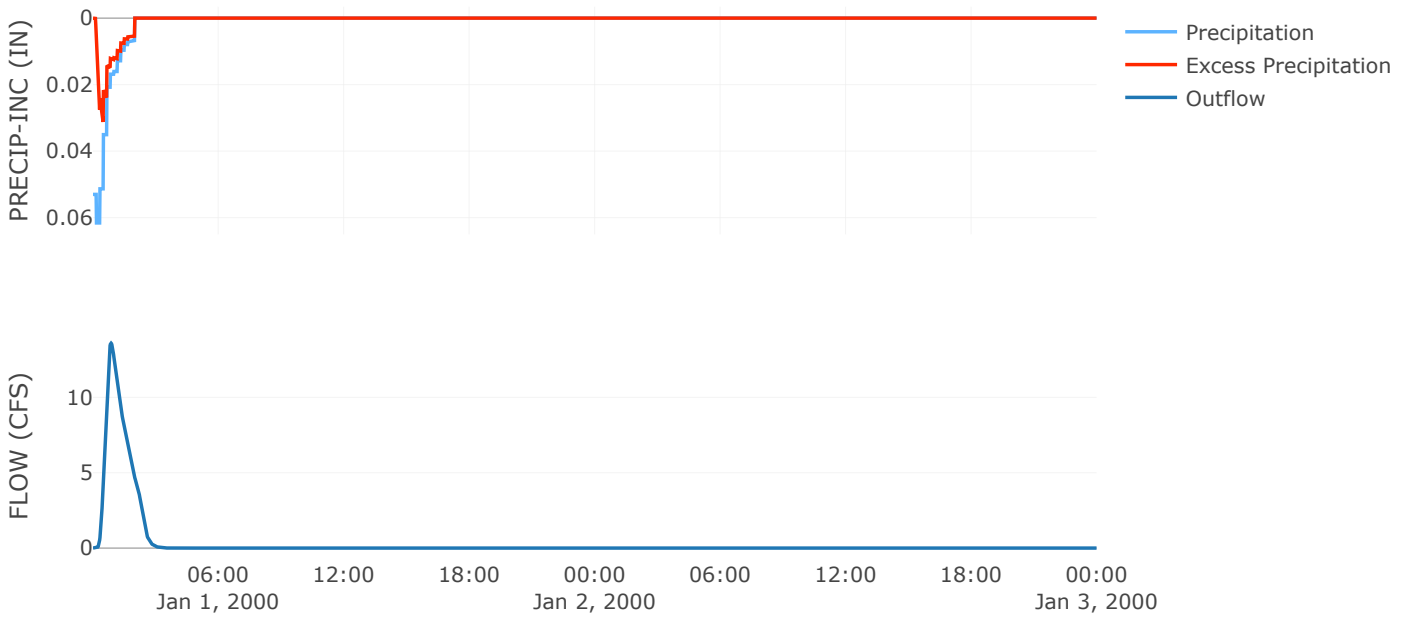
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

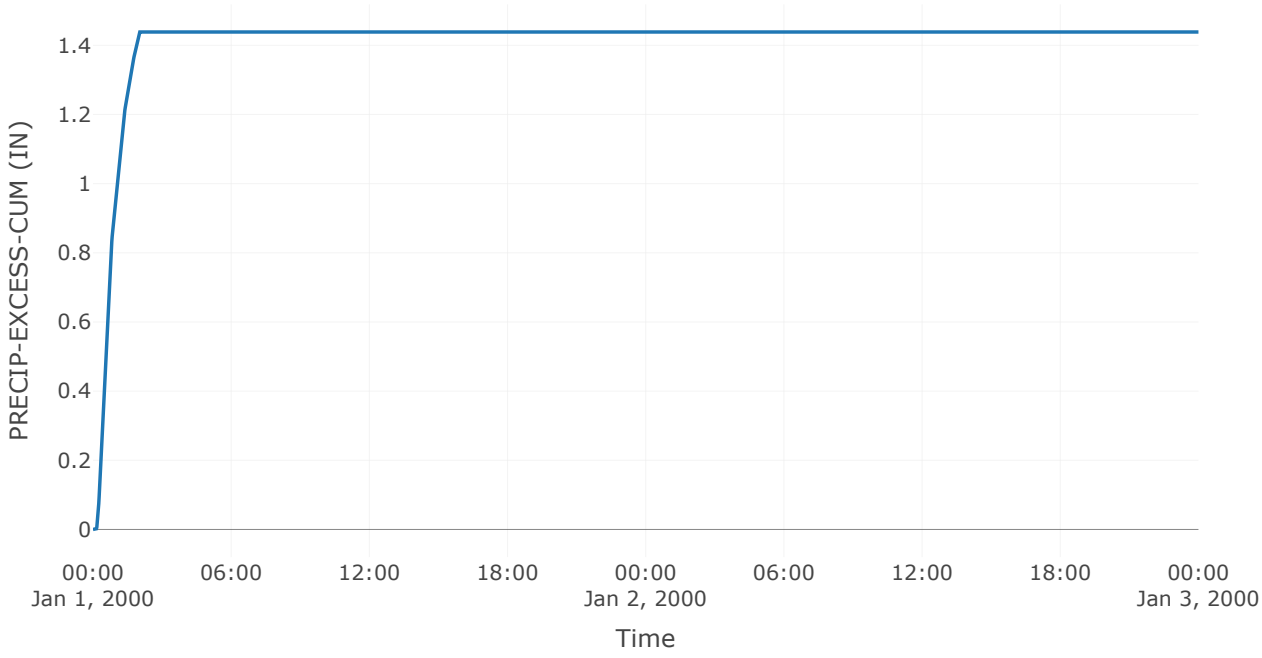
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

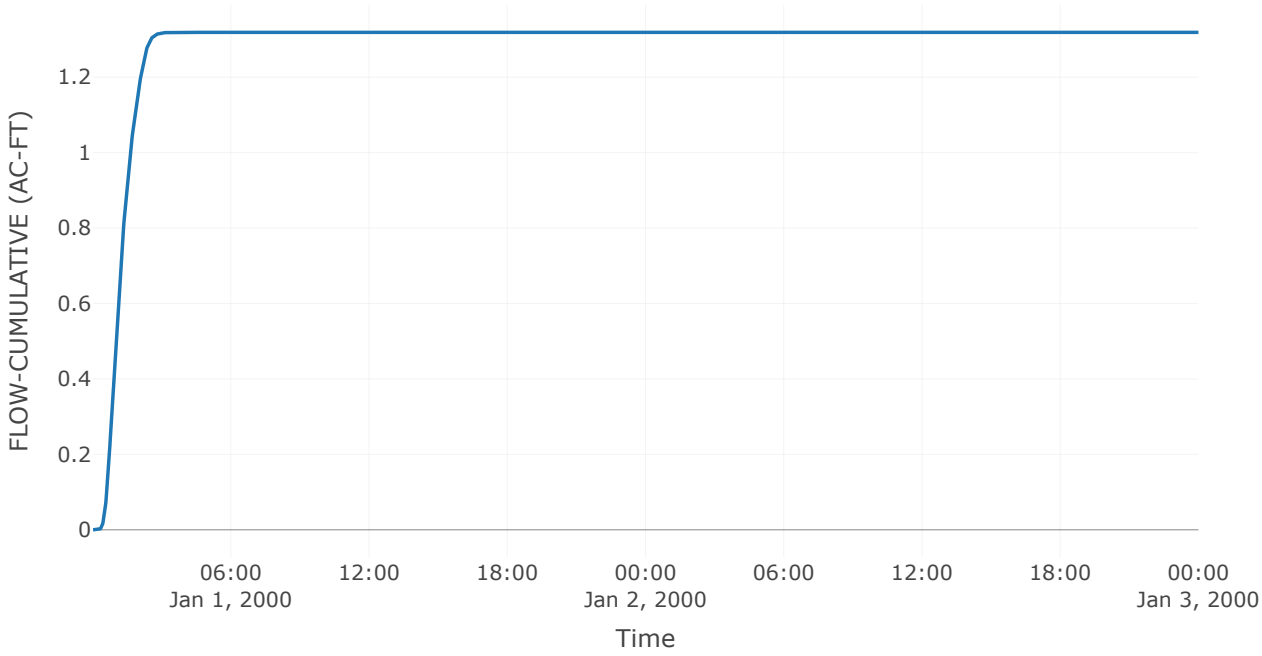
Precipitation and Outflow



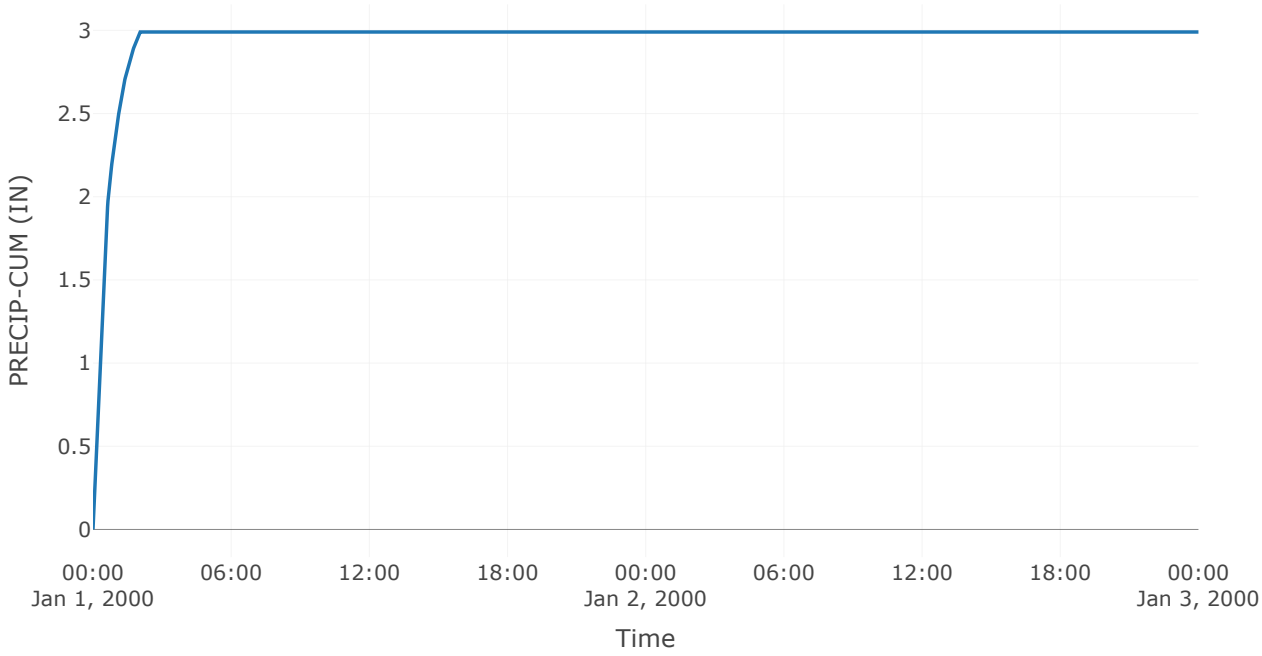
Cumulative Excess Precipitation

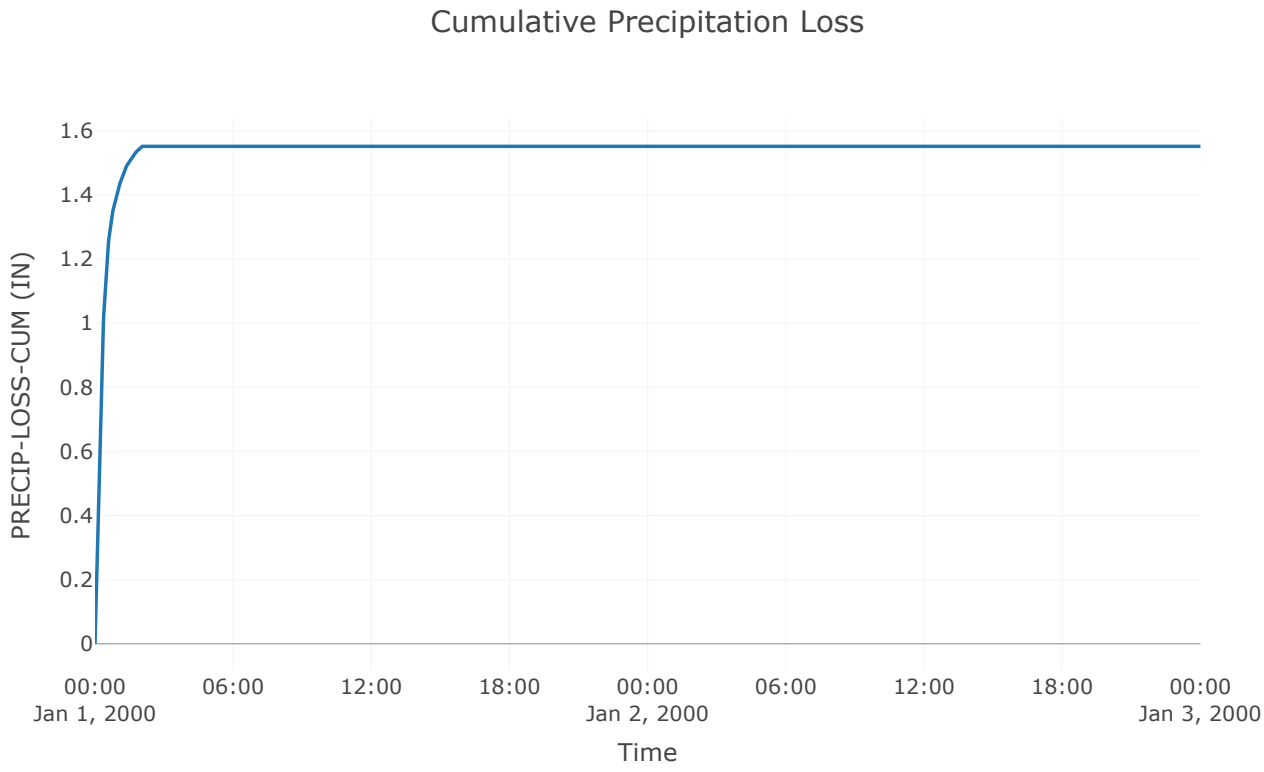


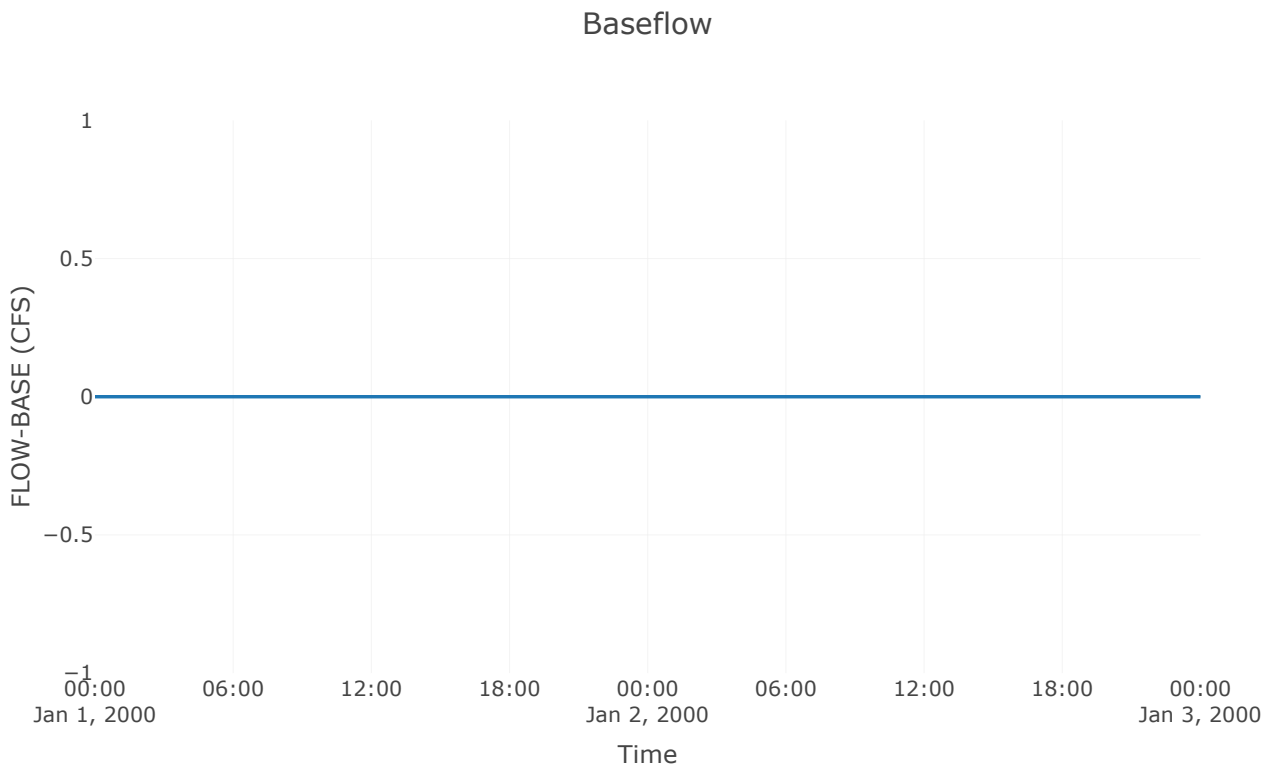
Cumulative Outflow



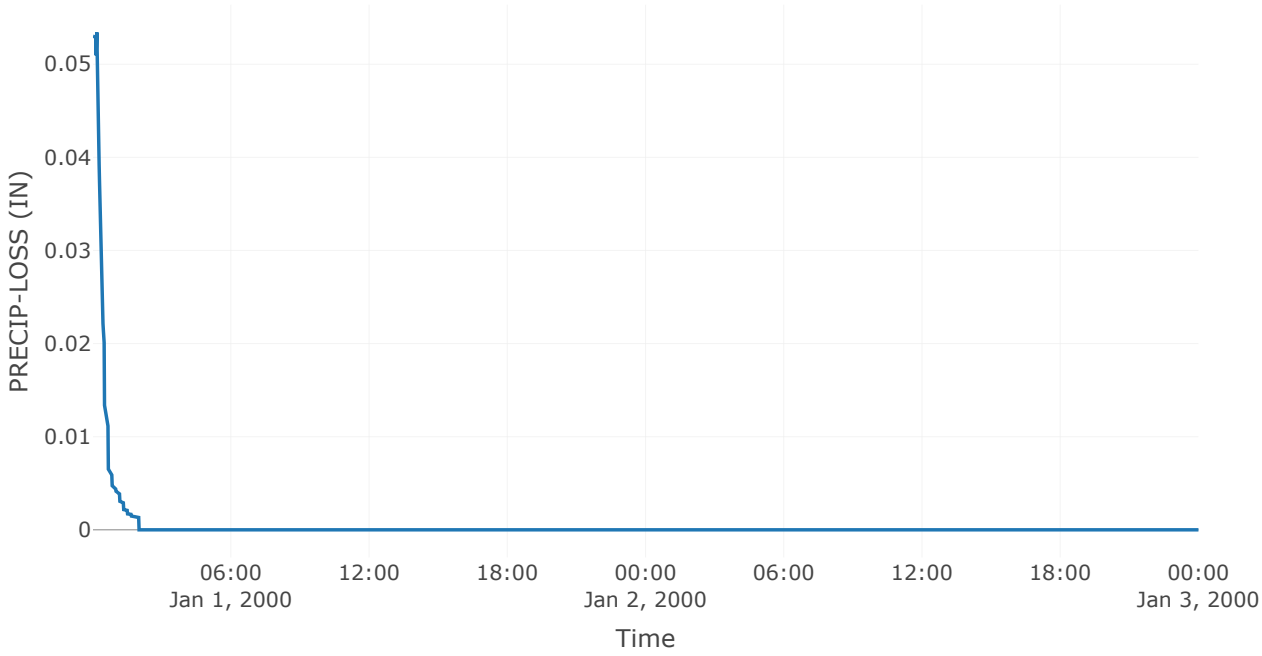
Cumulative Precipitation



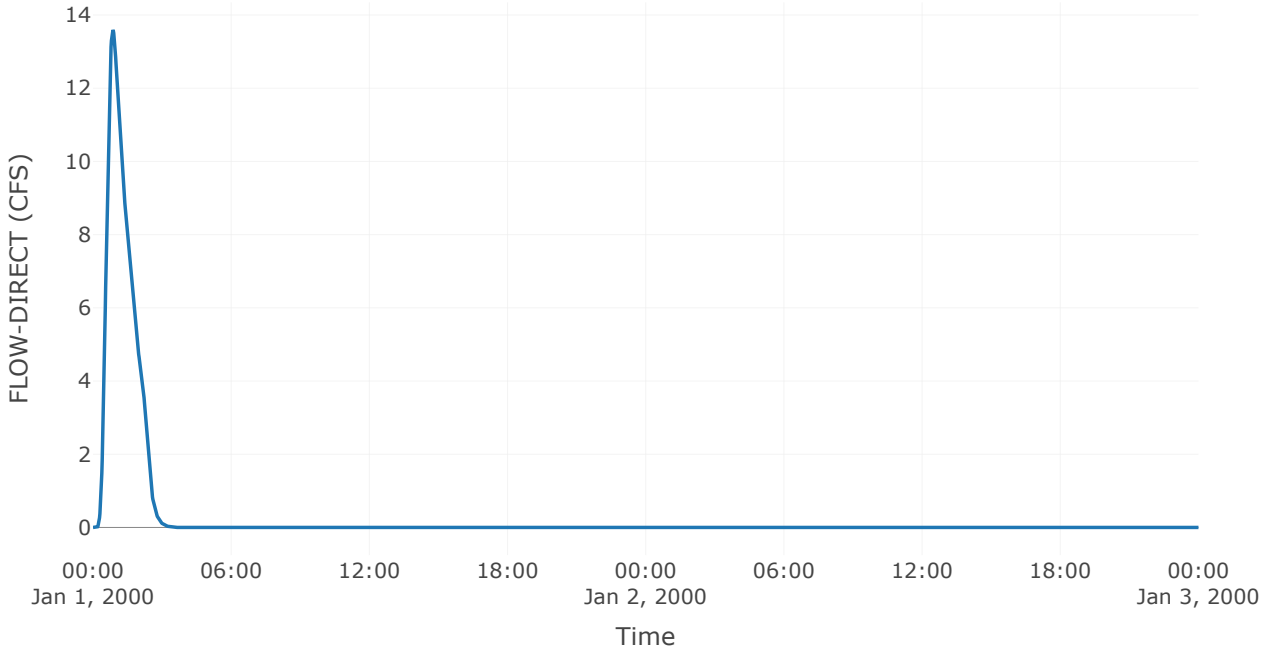

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

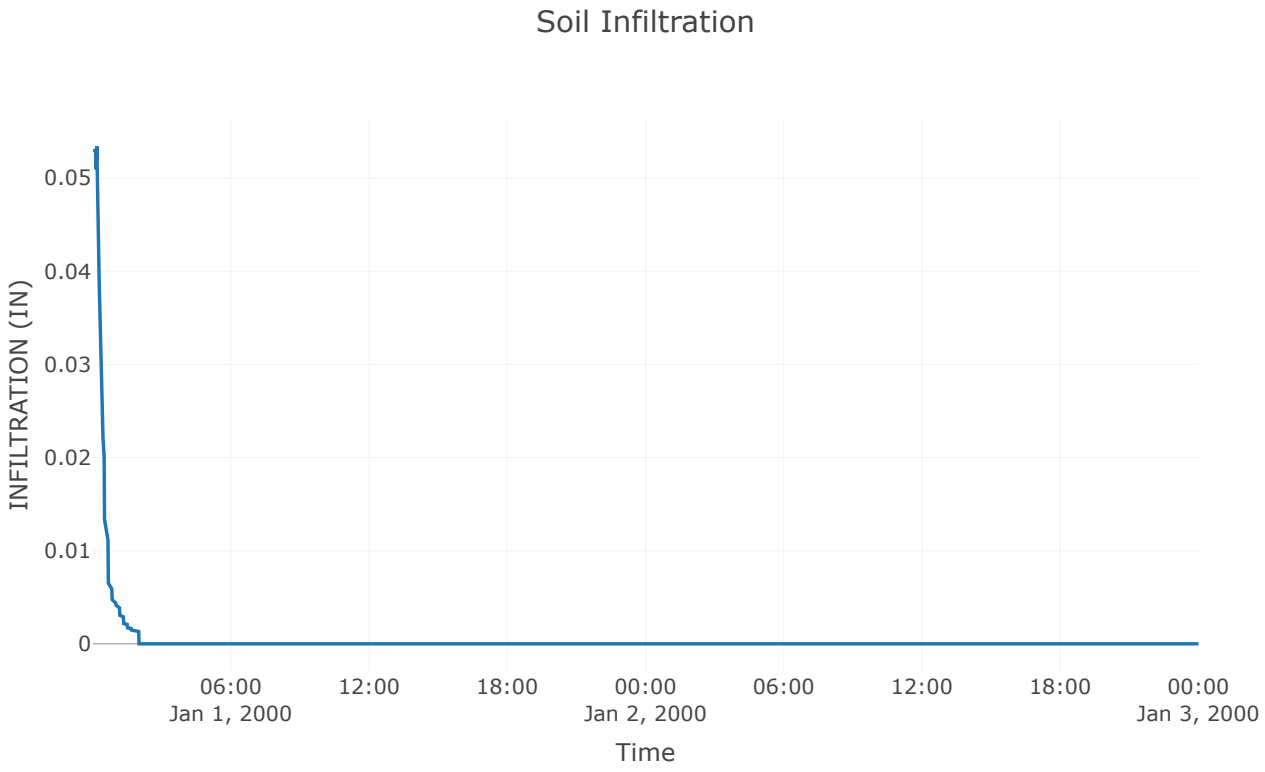

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

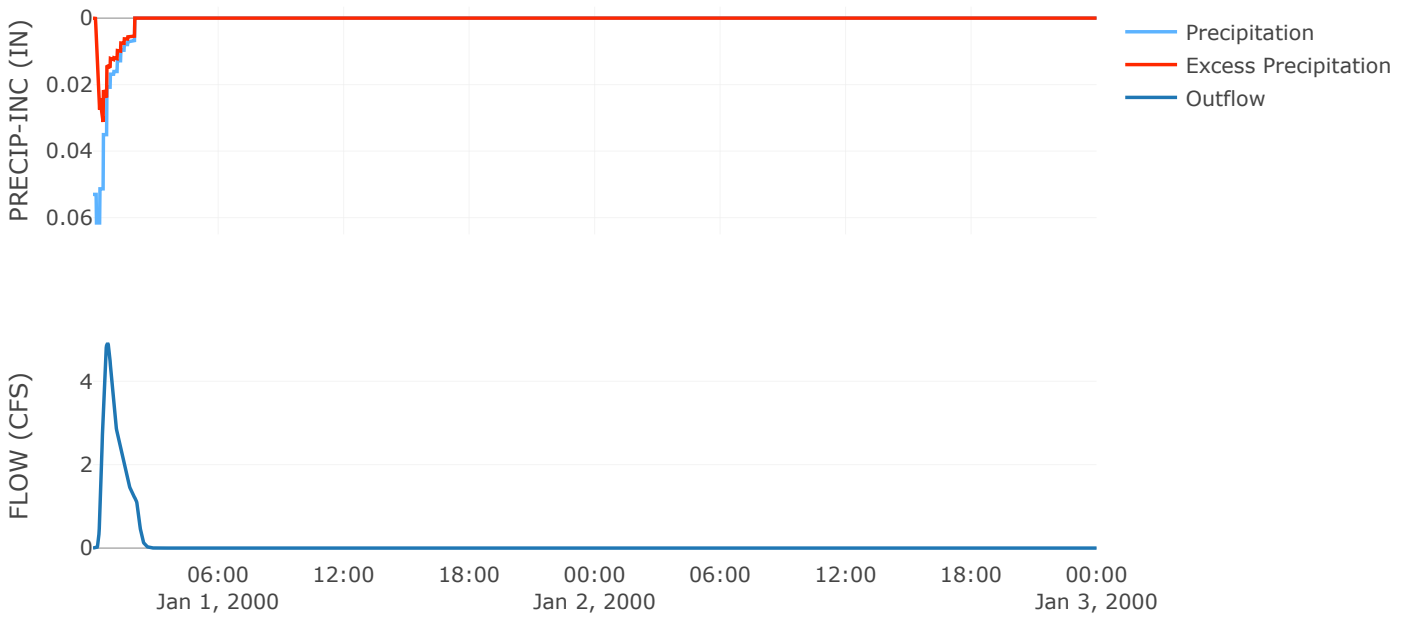
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

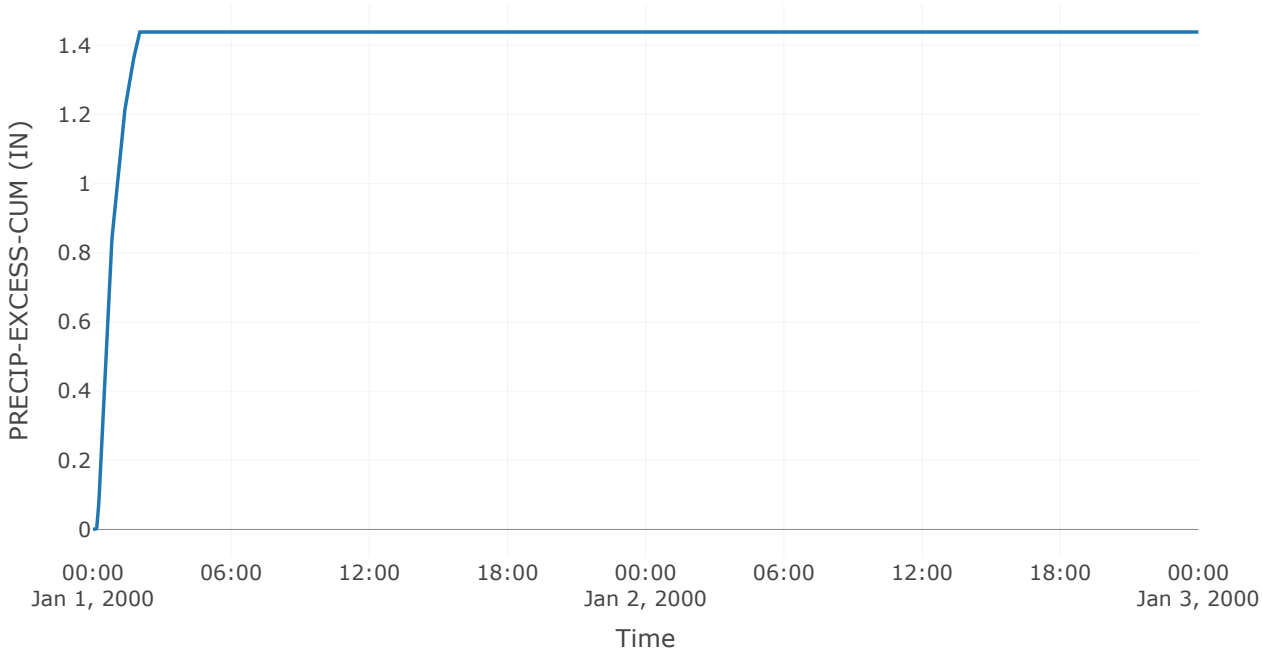
Transform: Scs	
Lag	12
Unitgraph Type	Standard

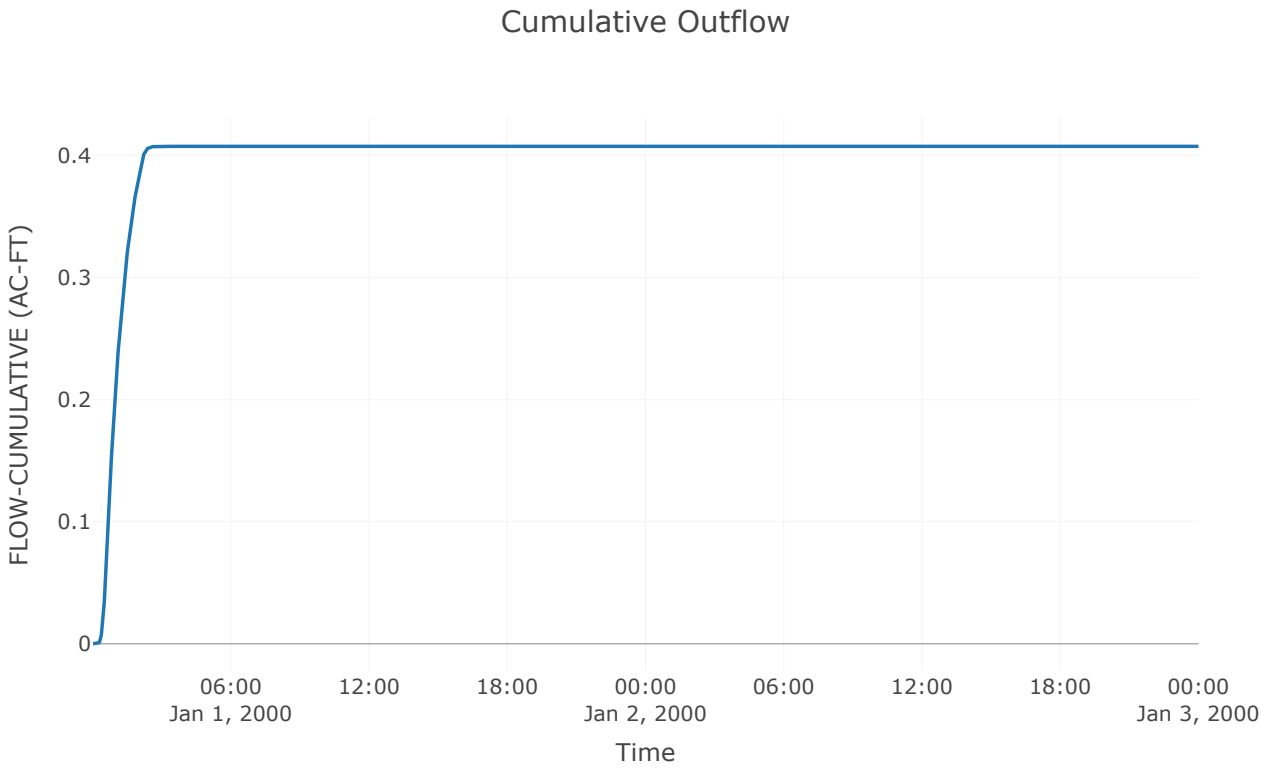
Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

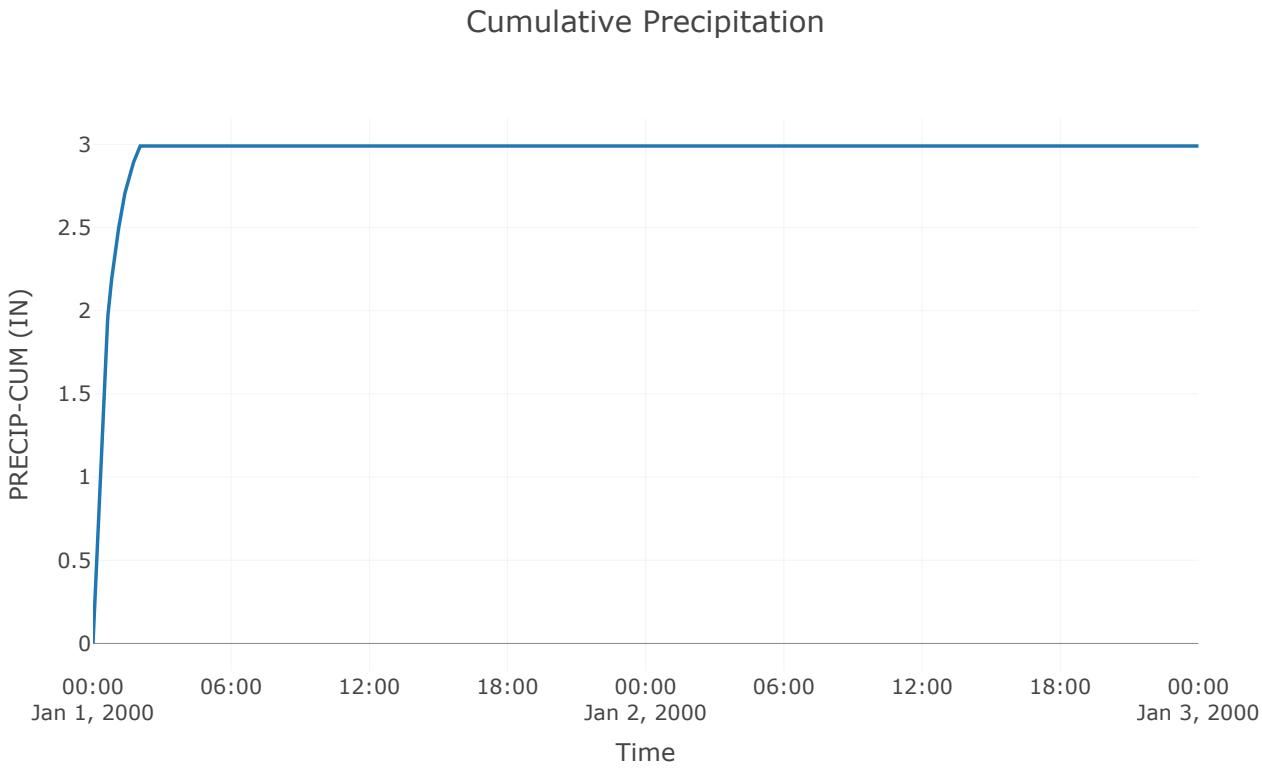
Precipitation and Outflow

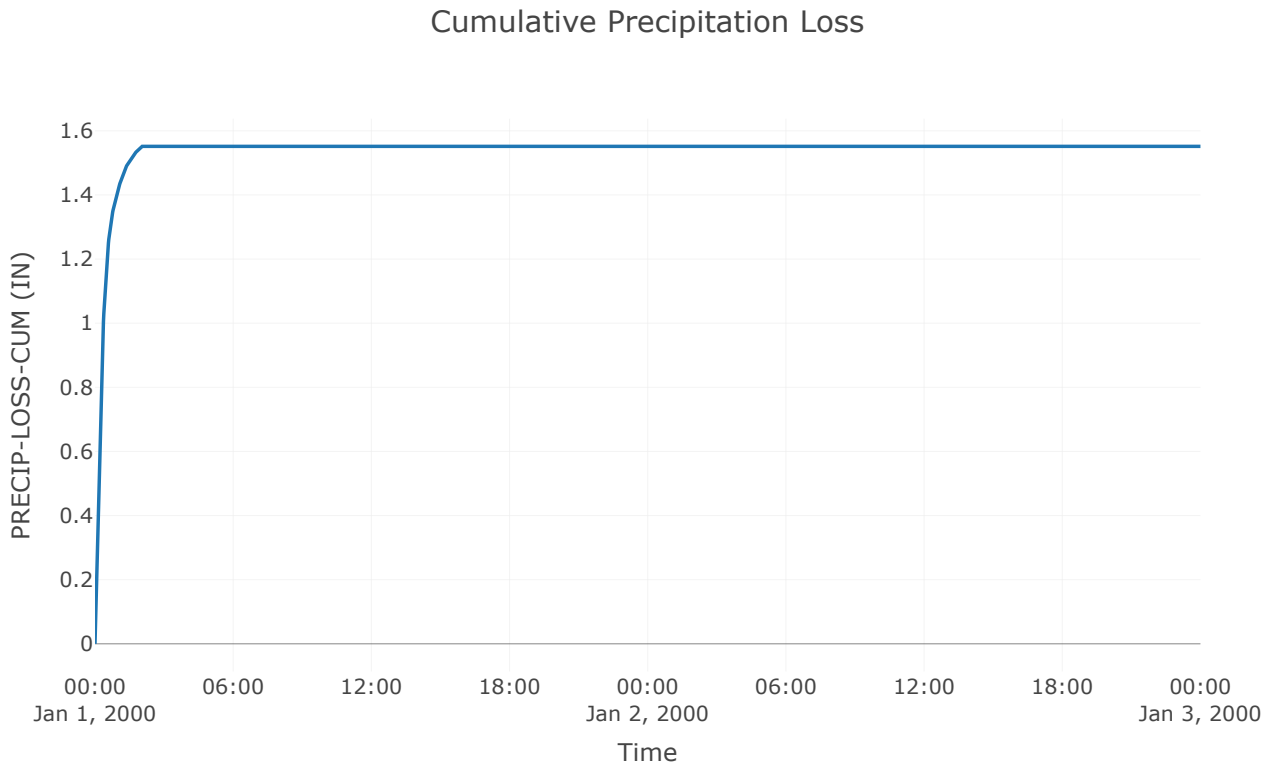


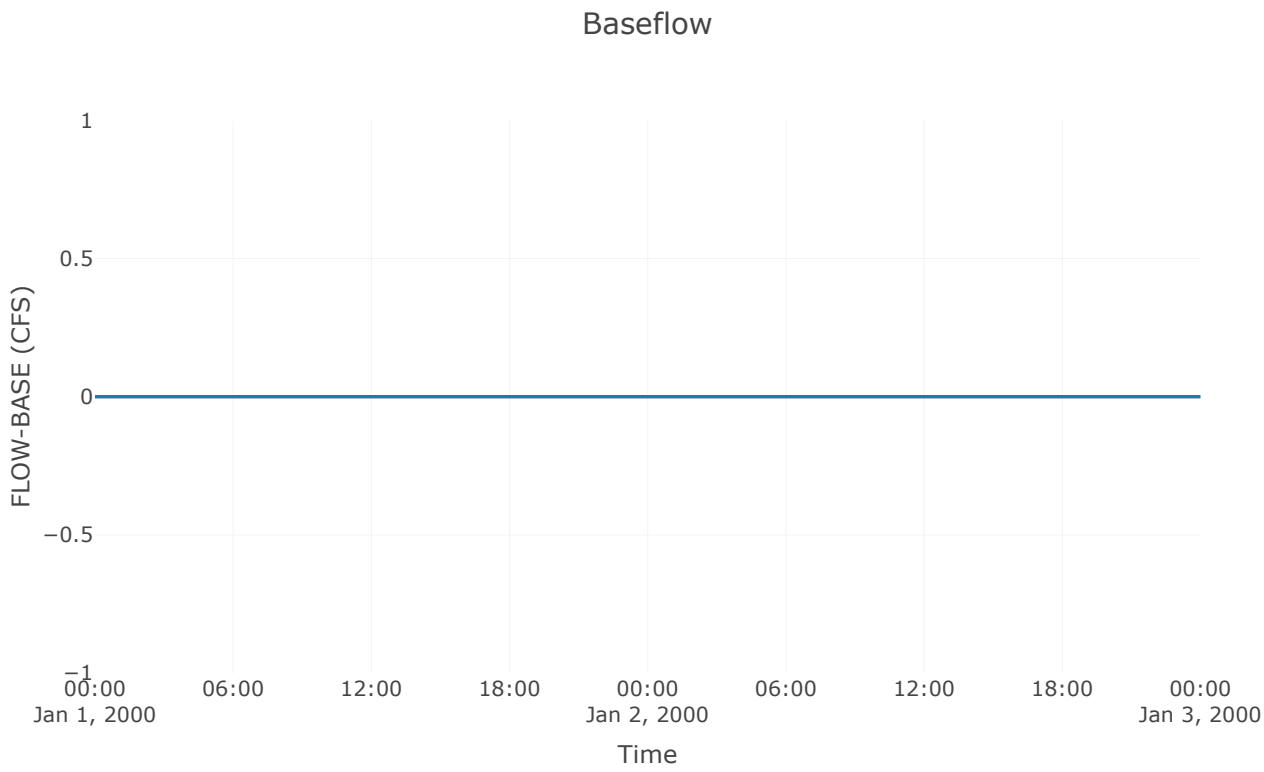
Cumulative Excess Precipitation



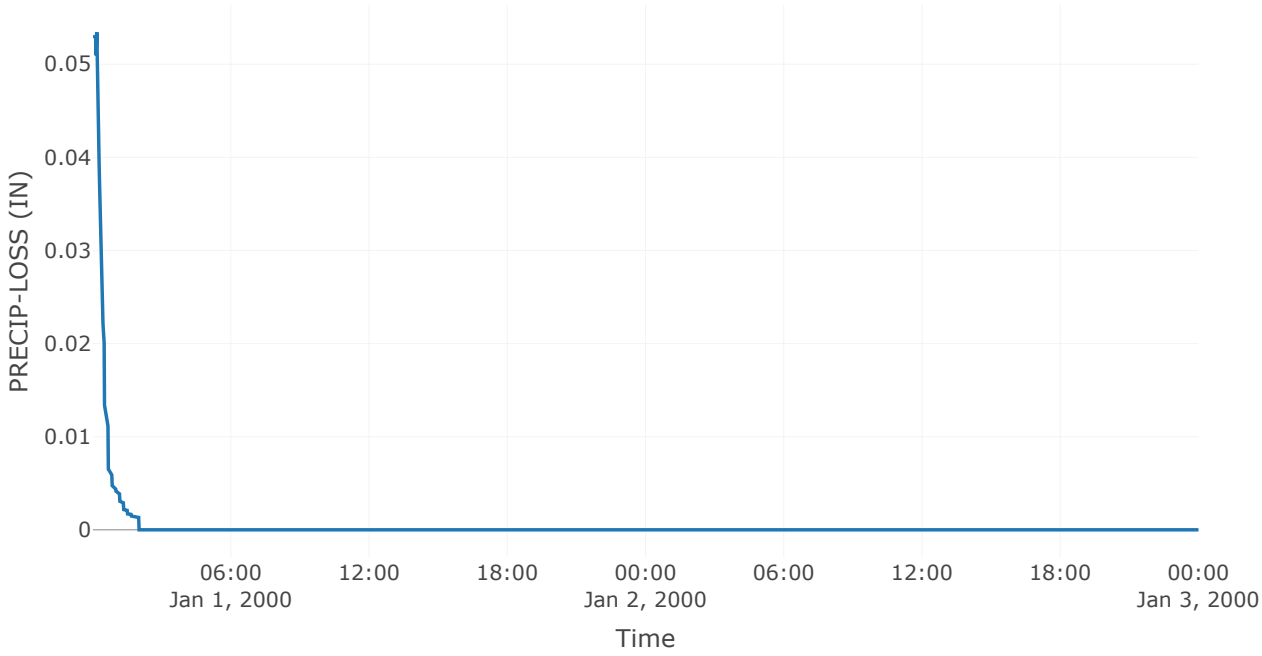

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

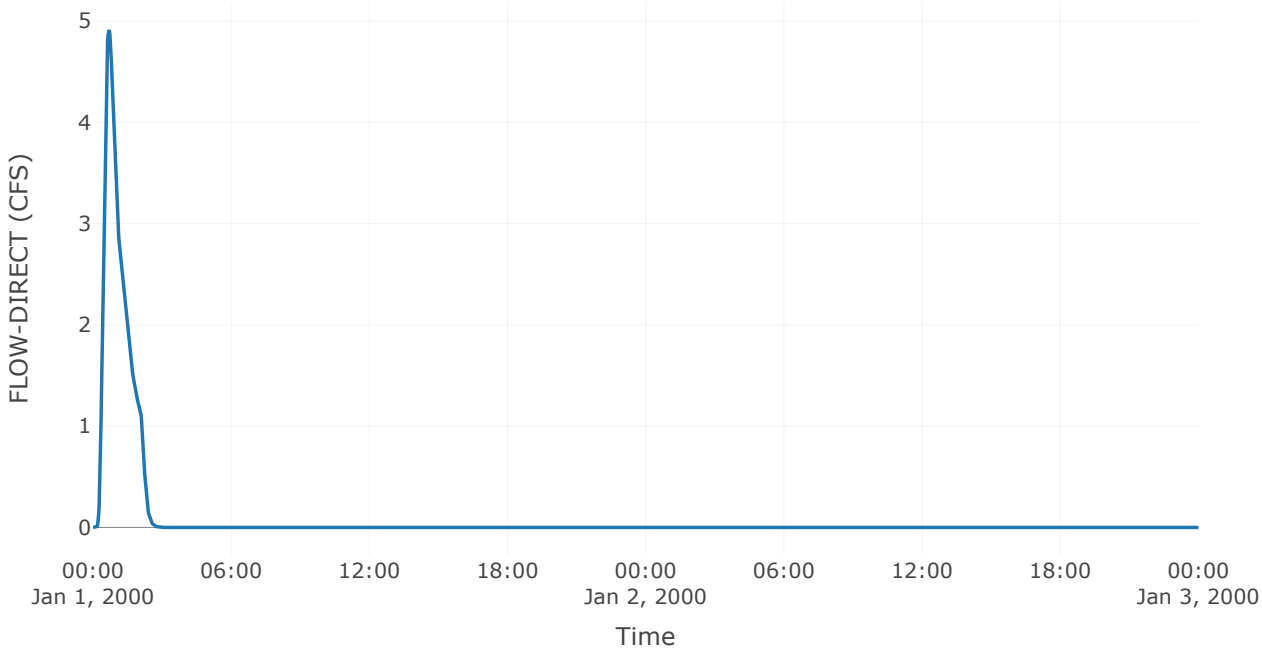

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

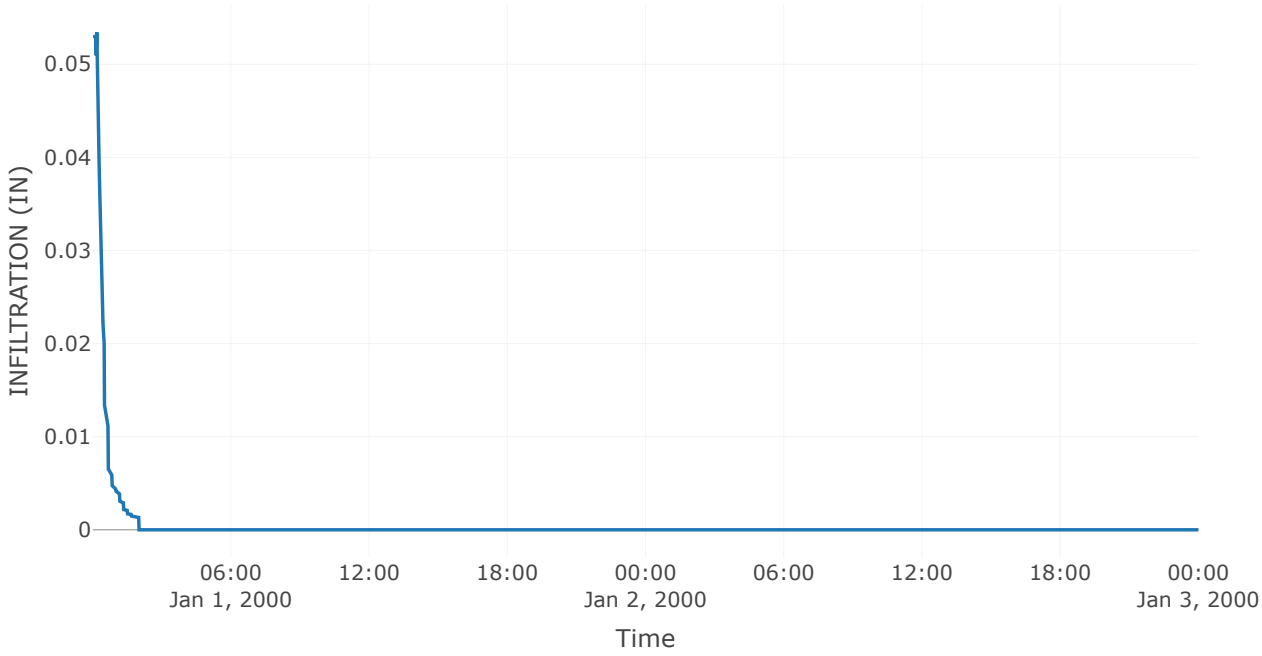

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



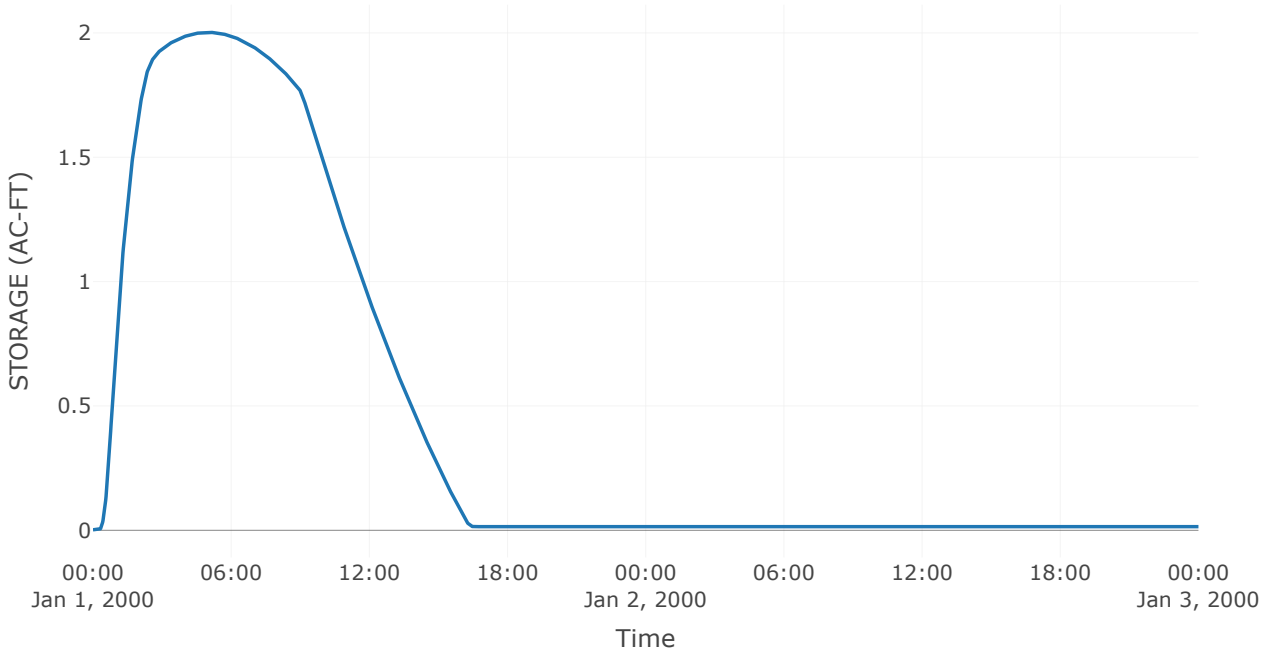

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

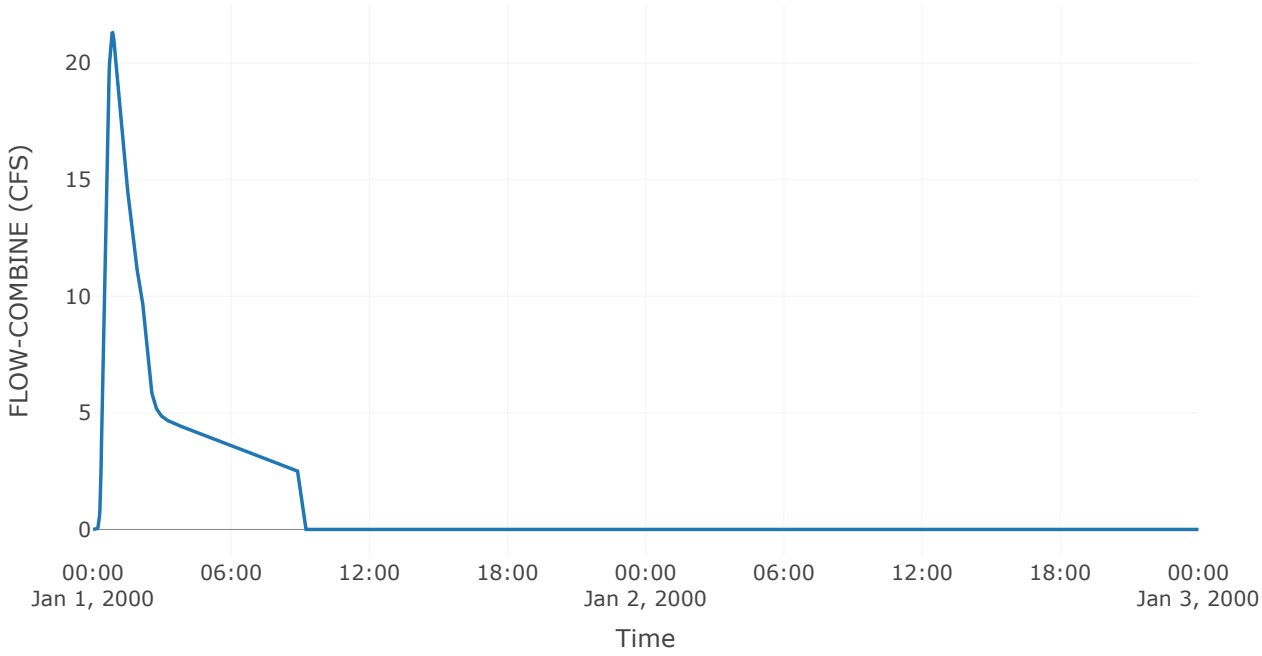
Downstream : Basin 3

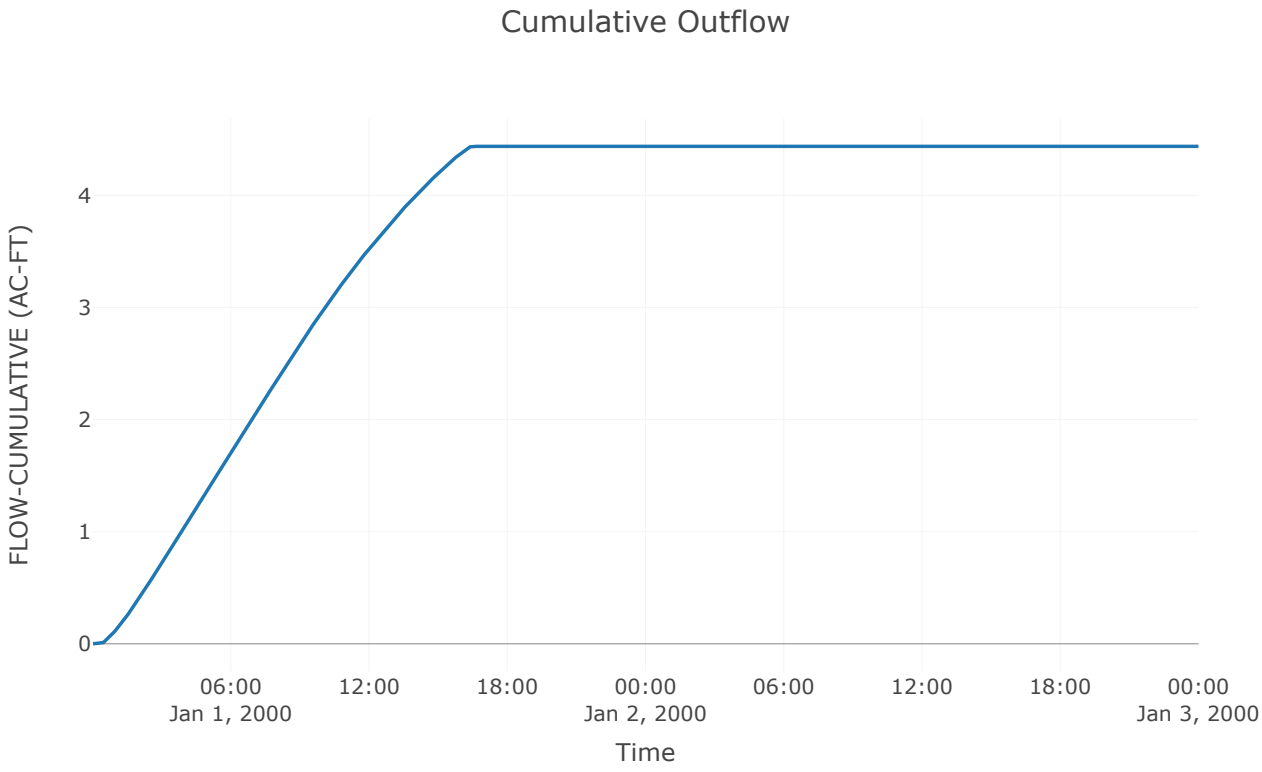
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

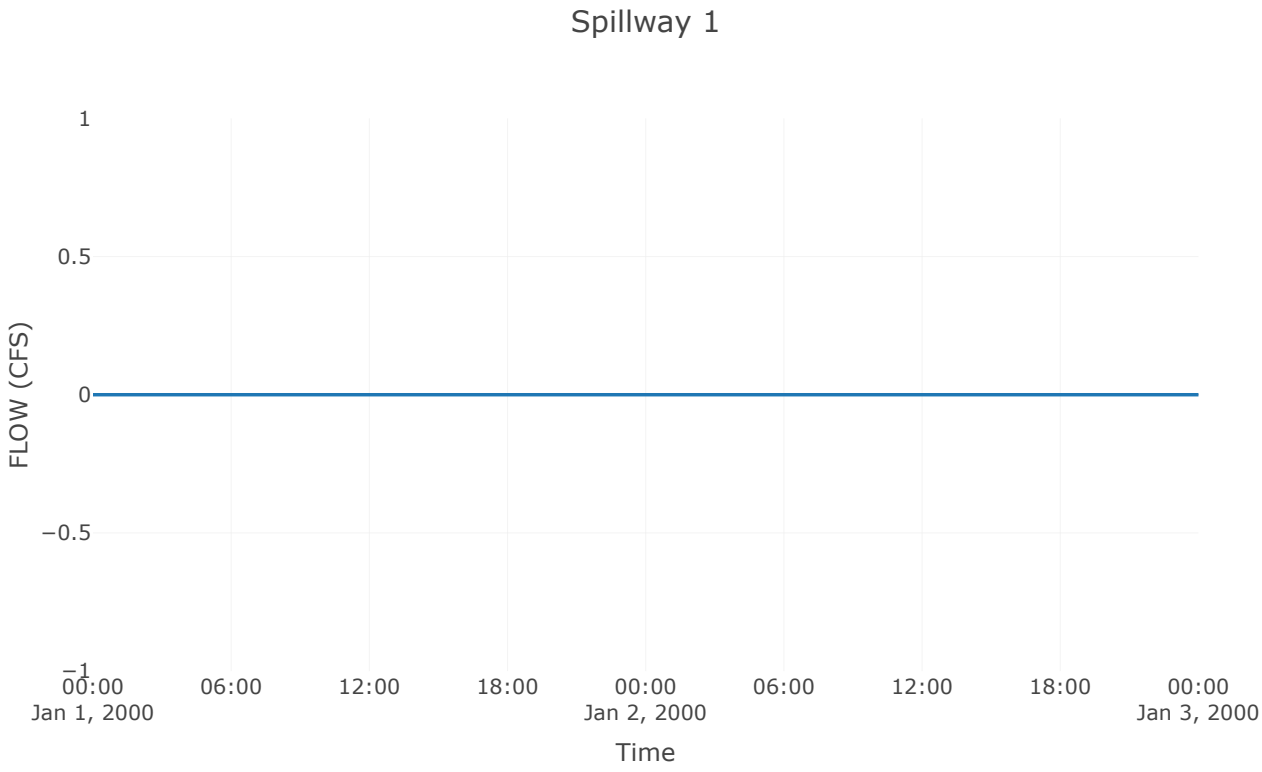
Storage



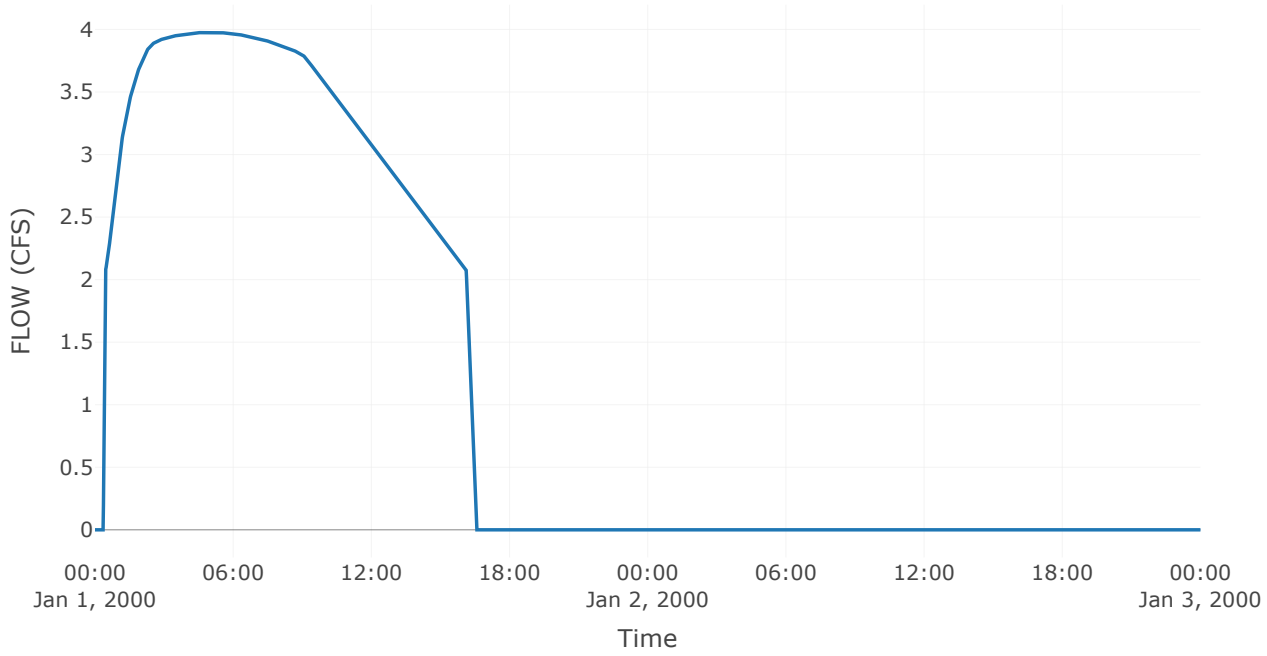
Combined Inflow



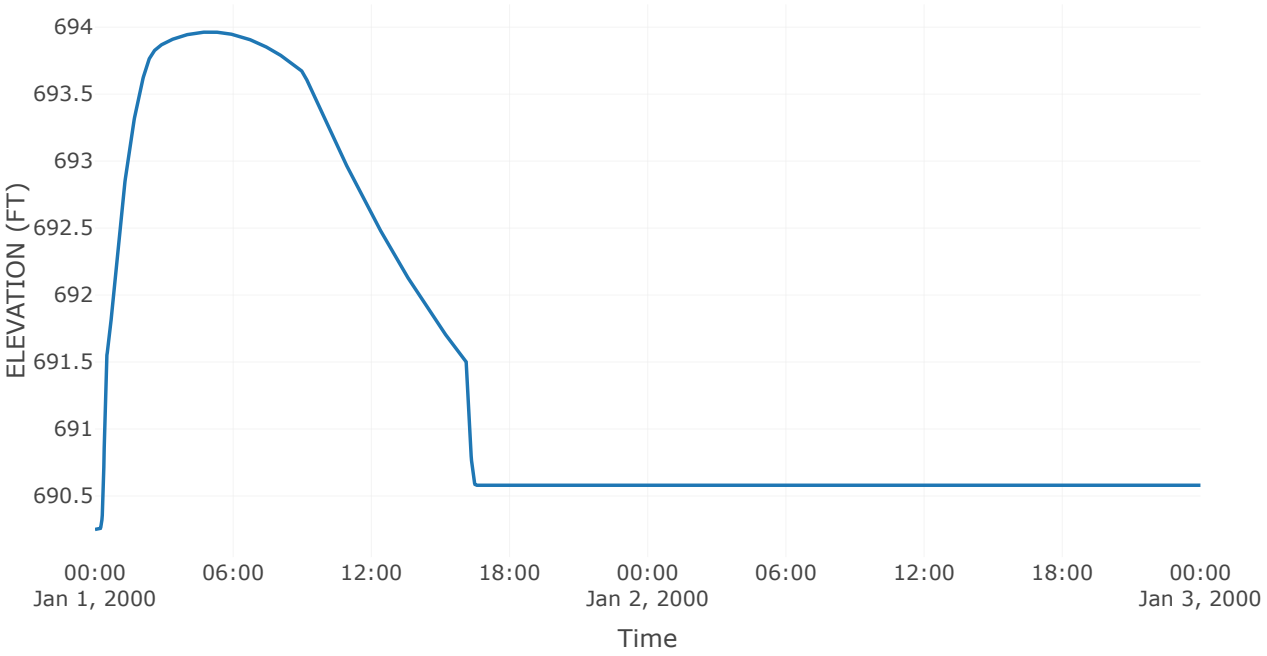

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

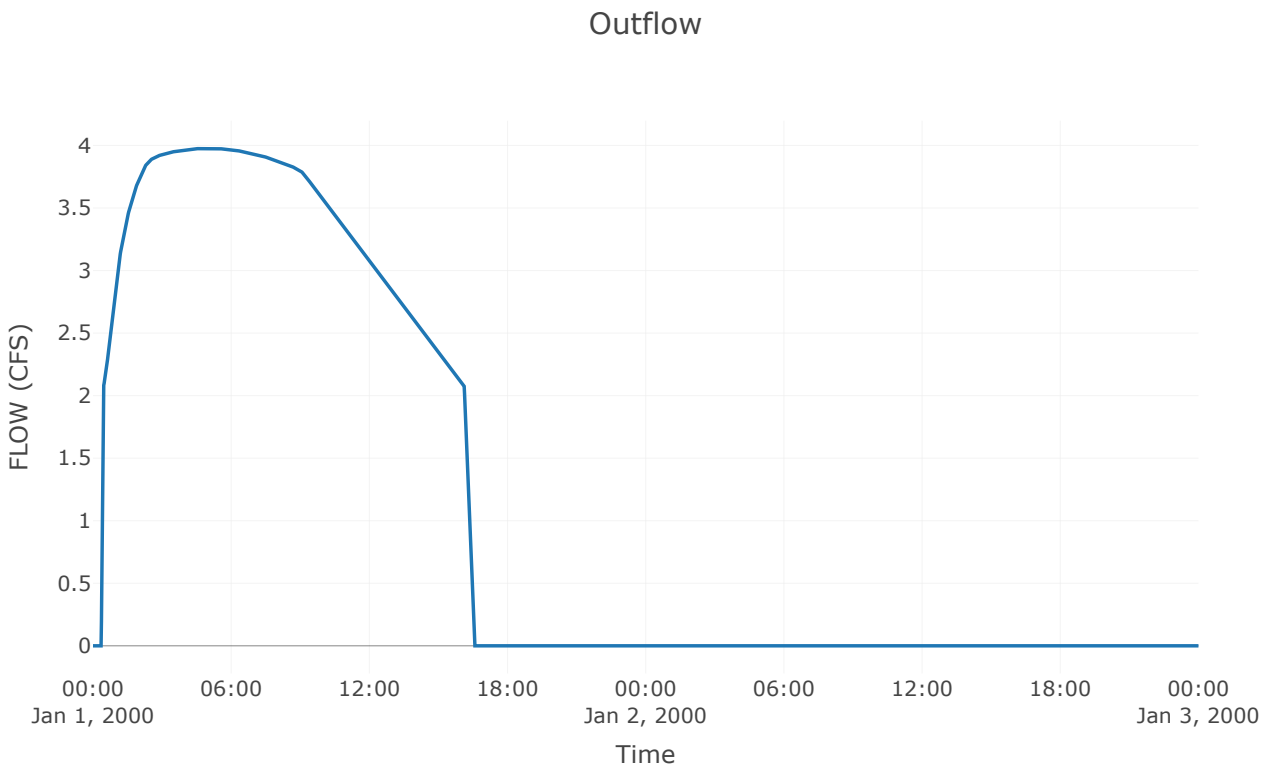

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

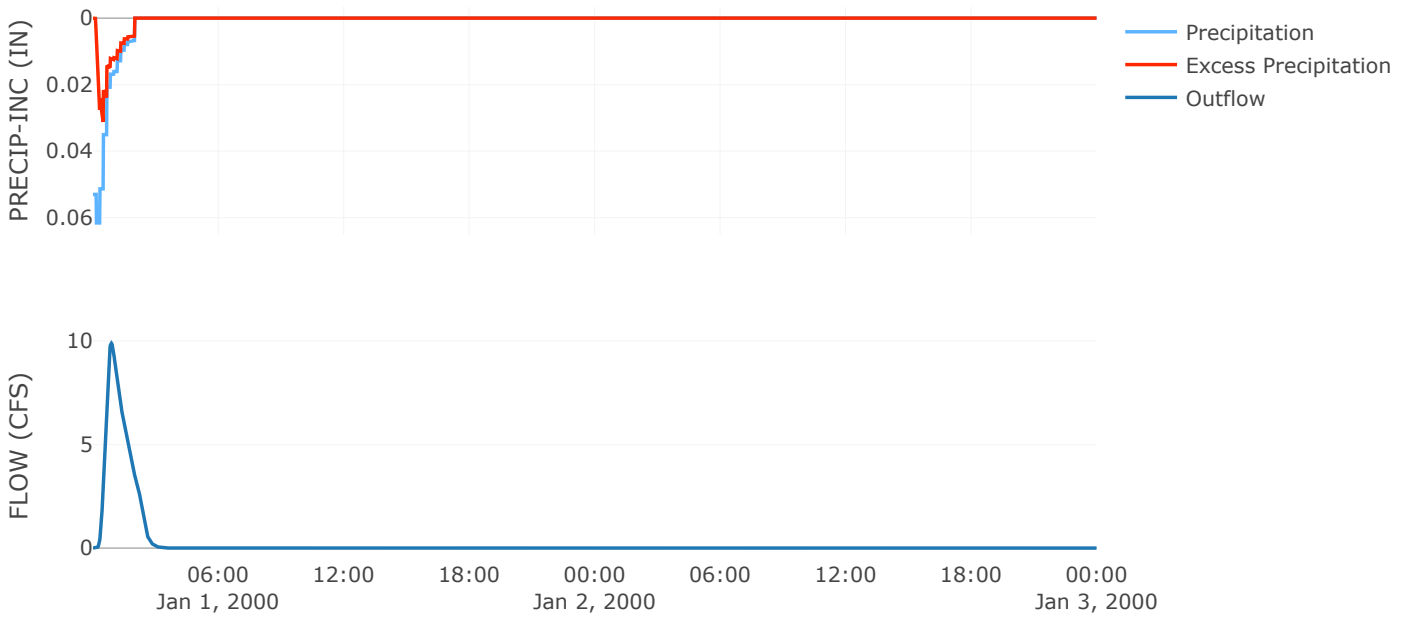
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

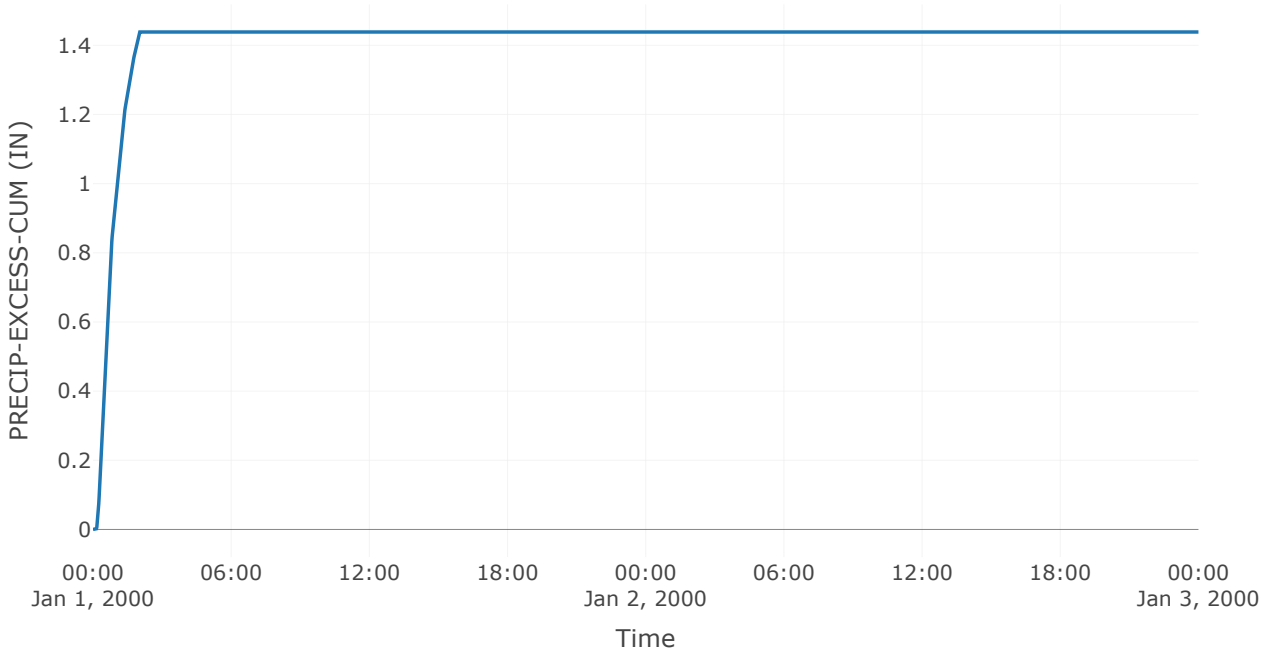
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

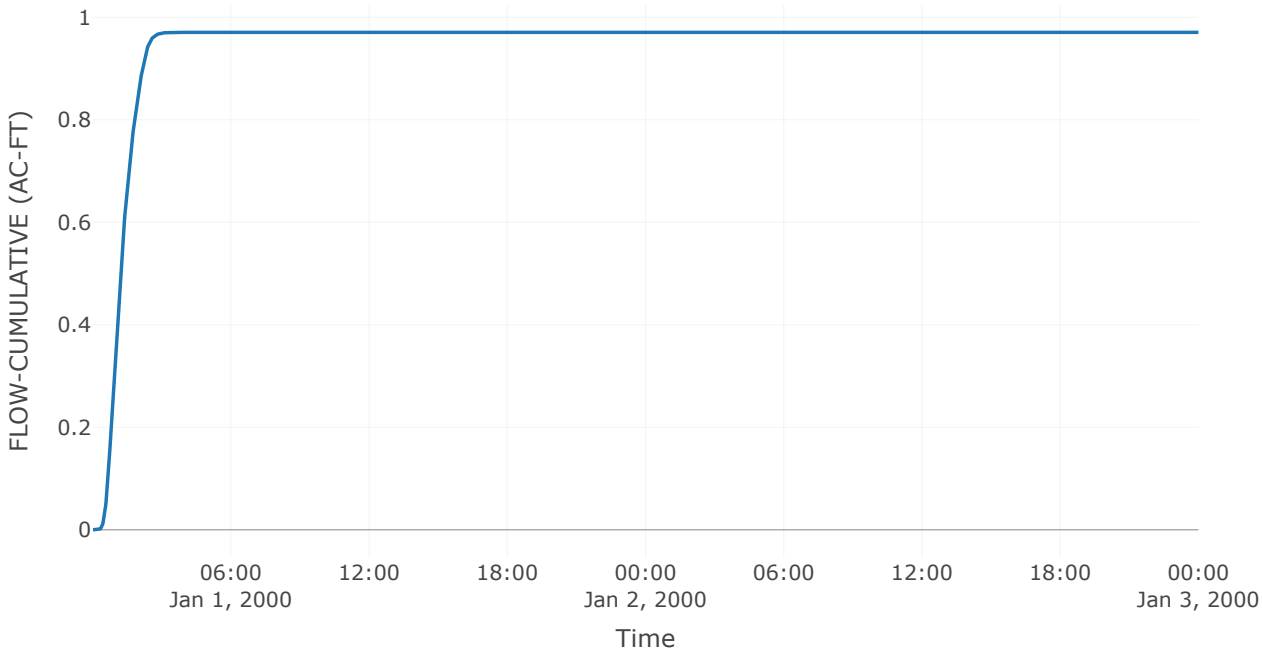
Precipitation and Outflow



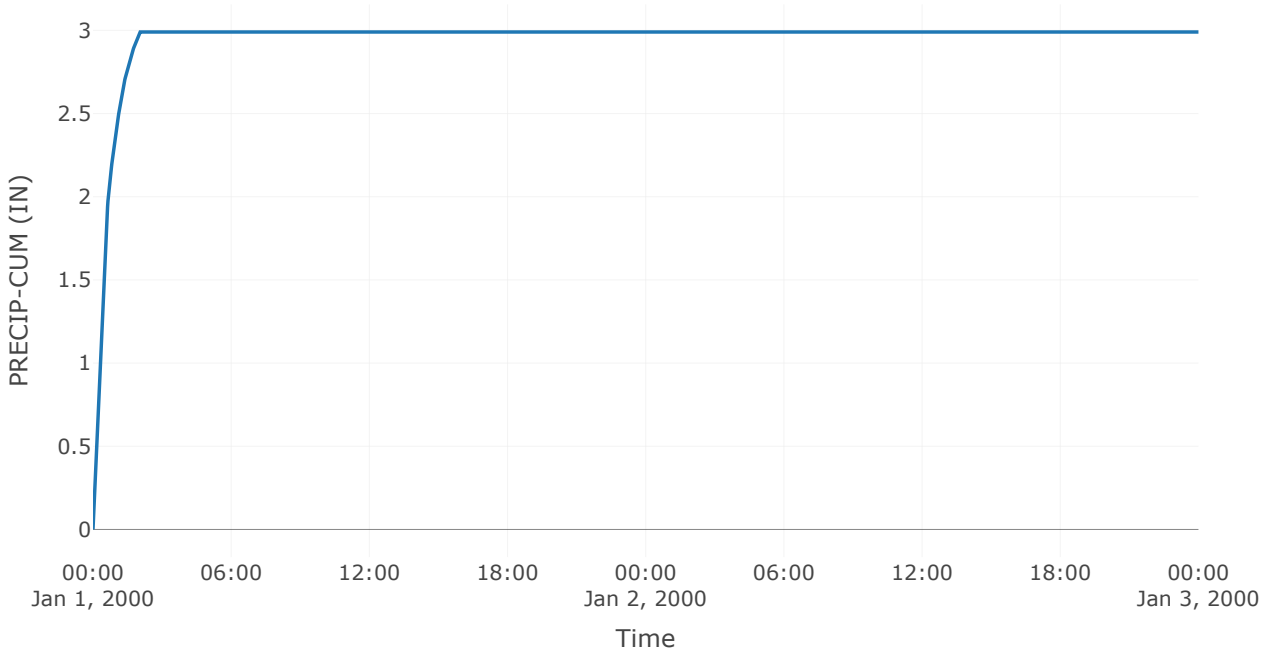
Cumulative Excess Precipitation

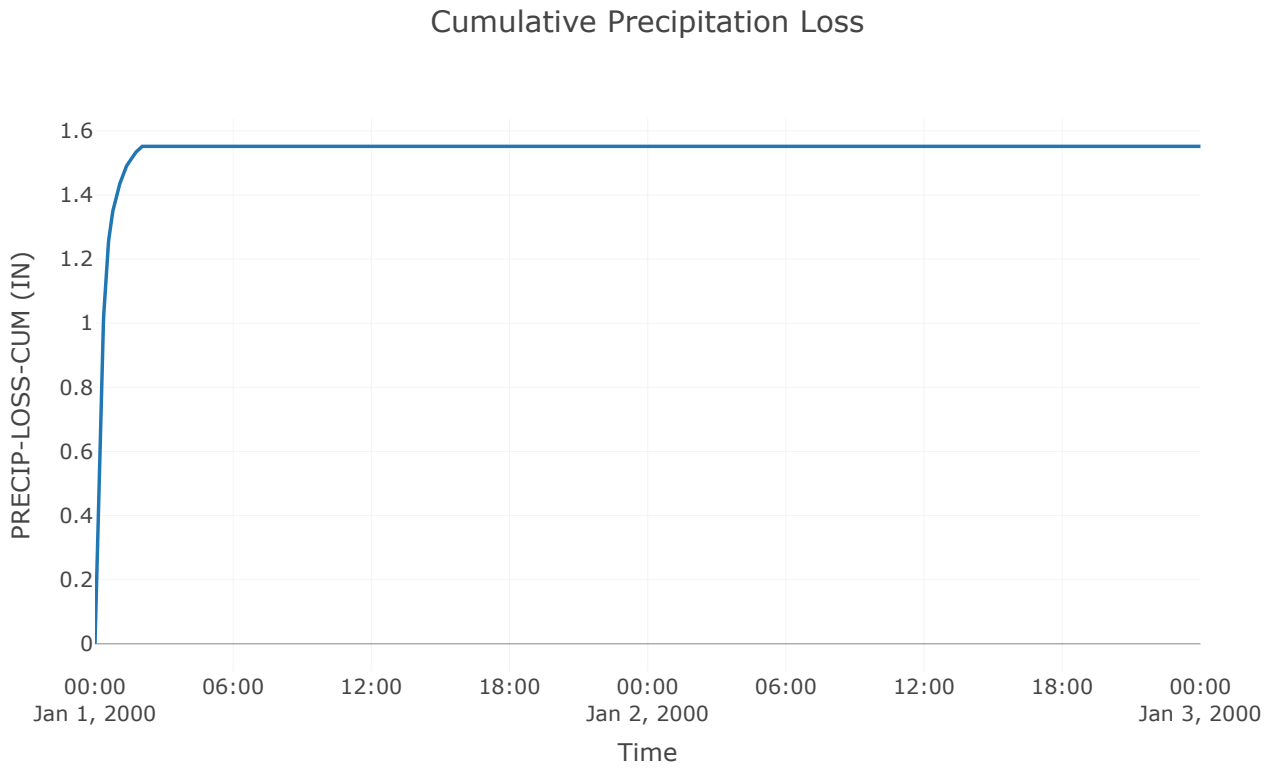


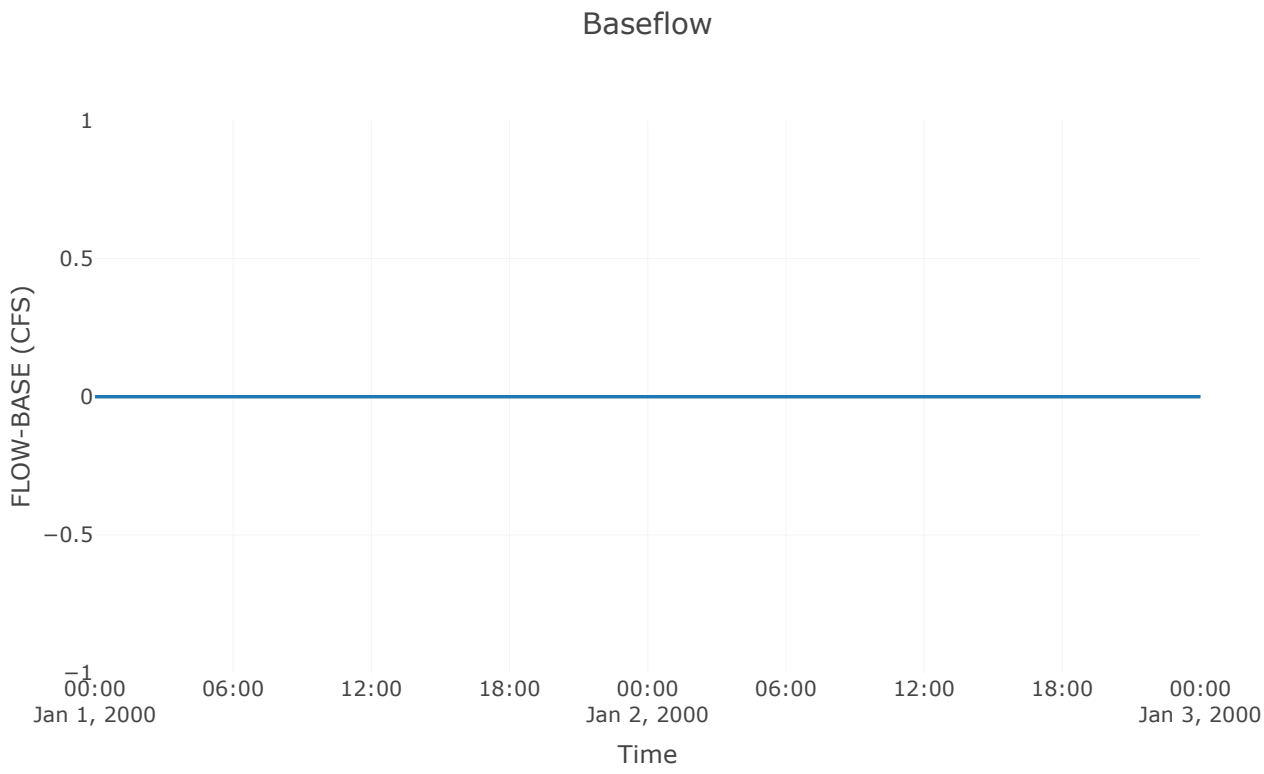
Cumulative Outflow



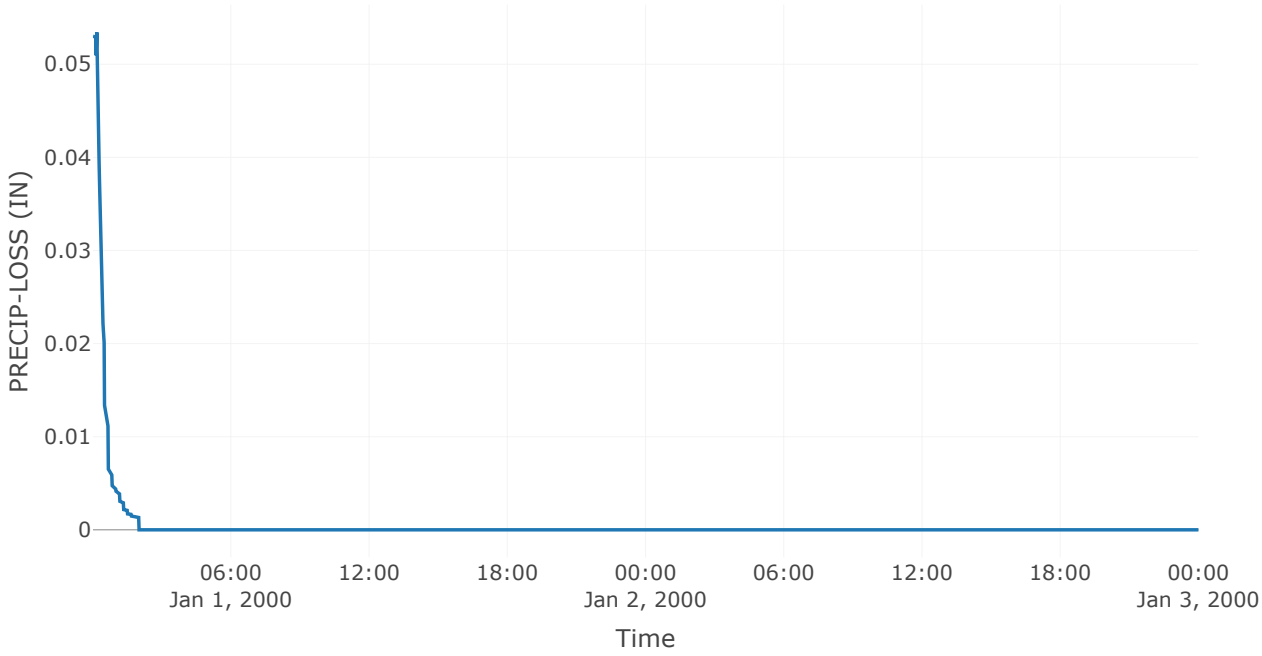
Cumulative Precipitation



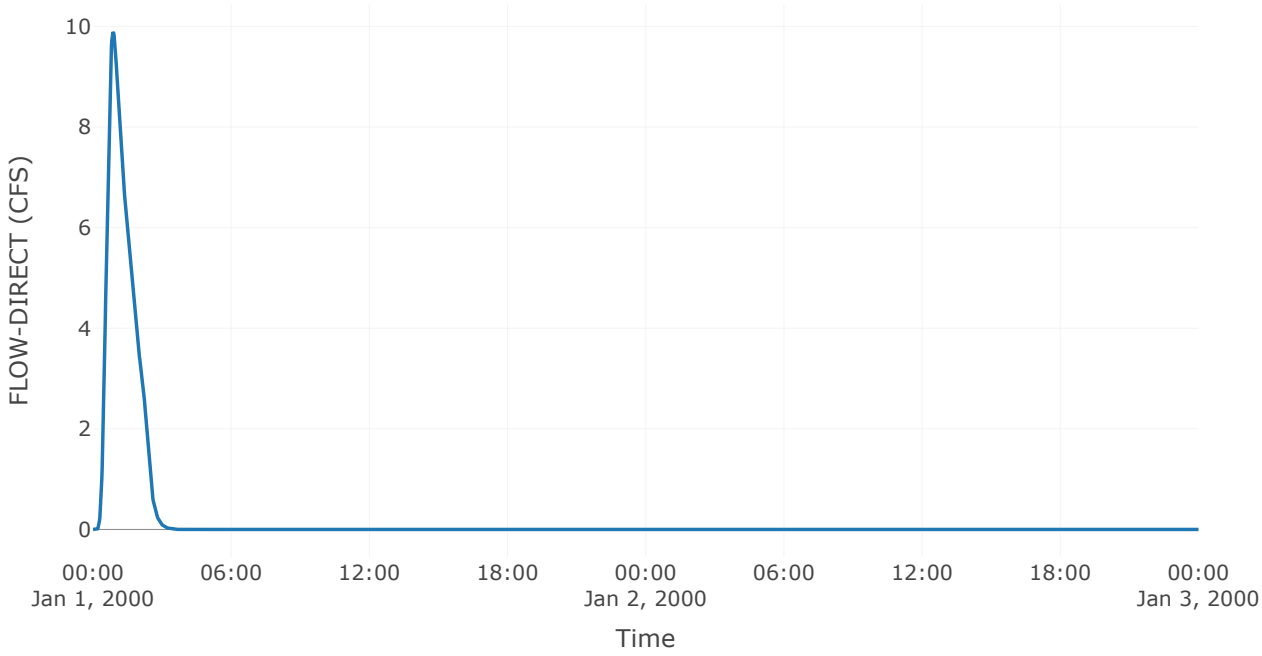

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

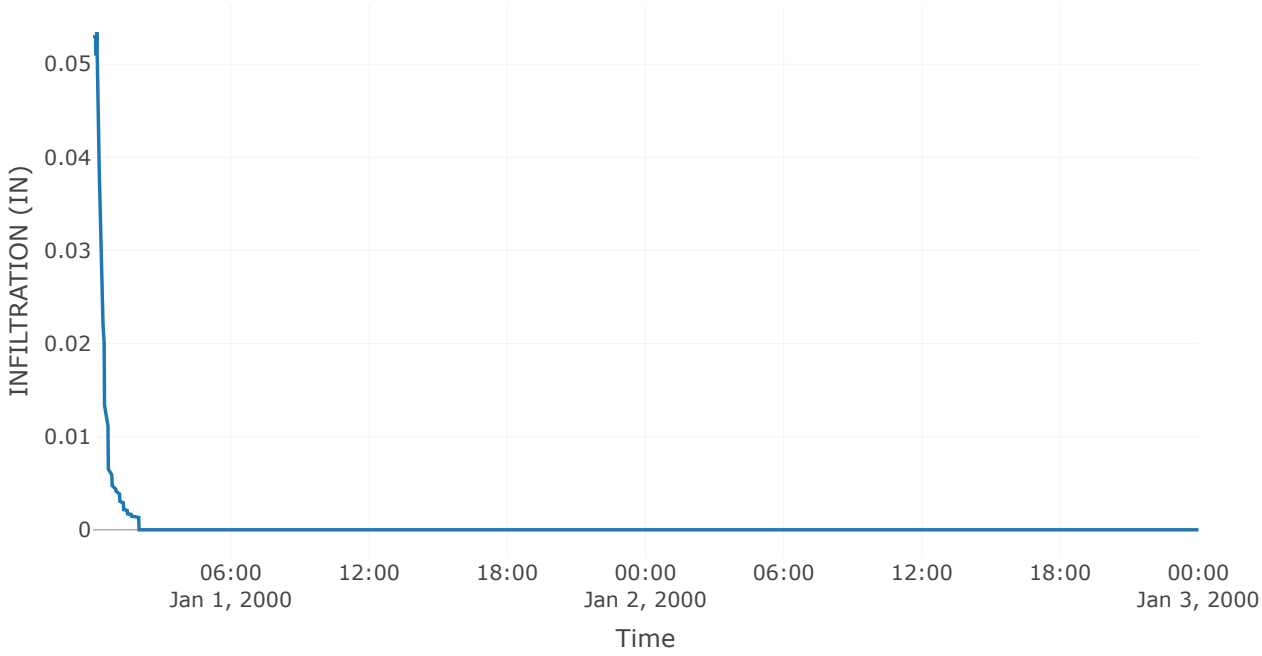

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

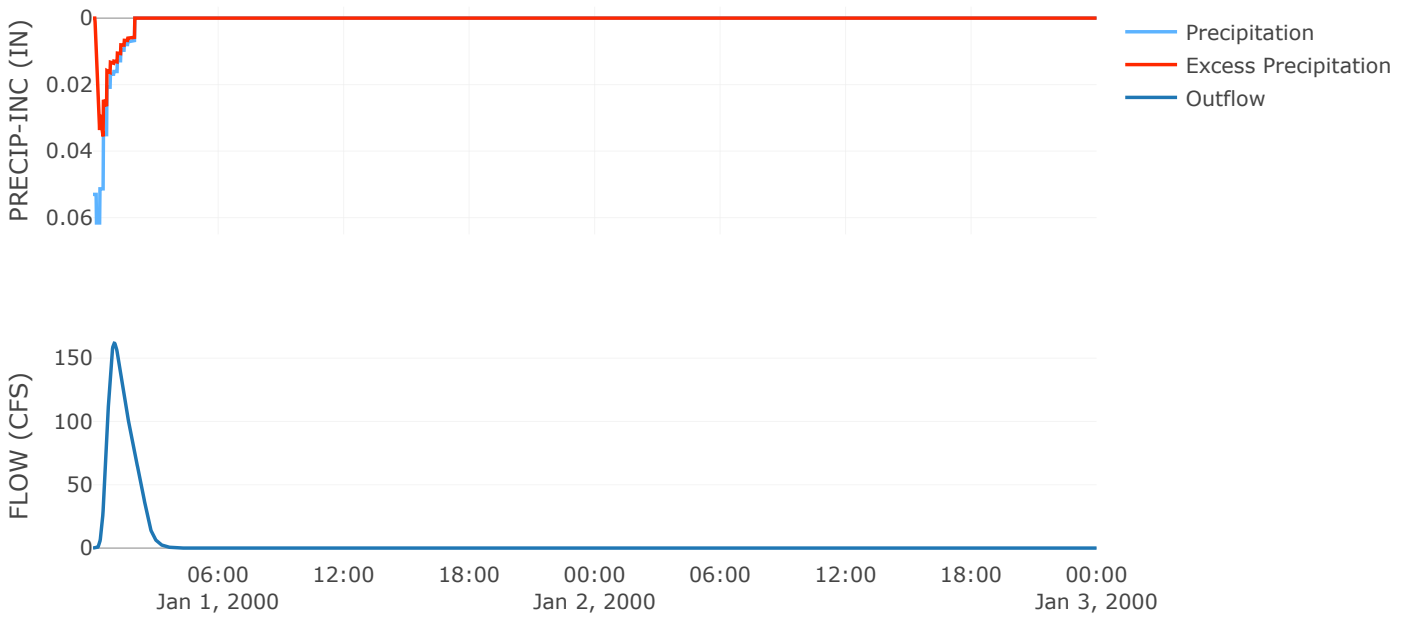
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

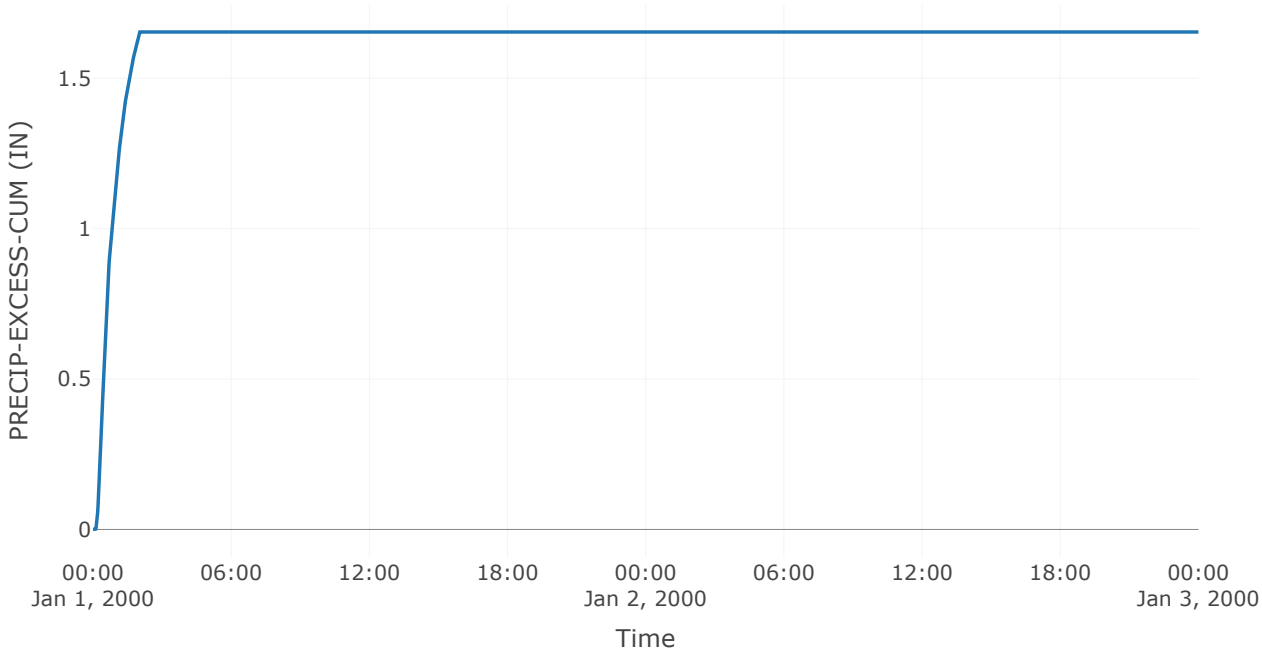
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

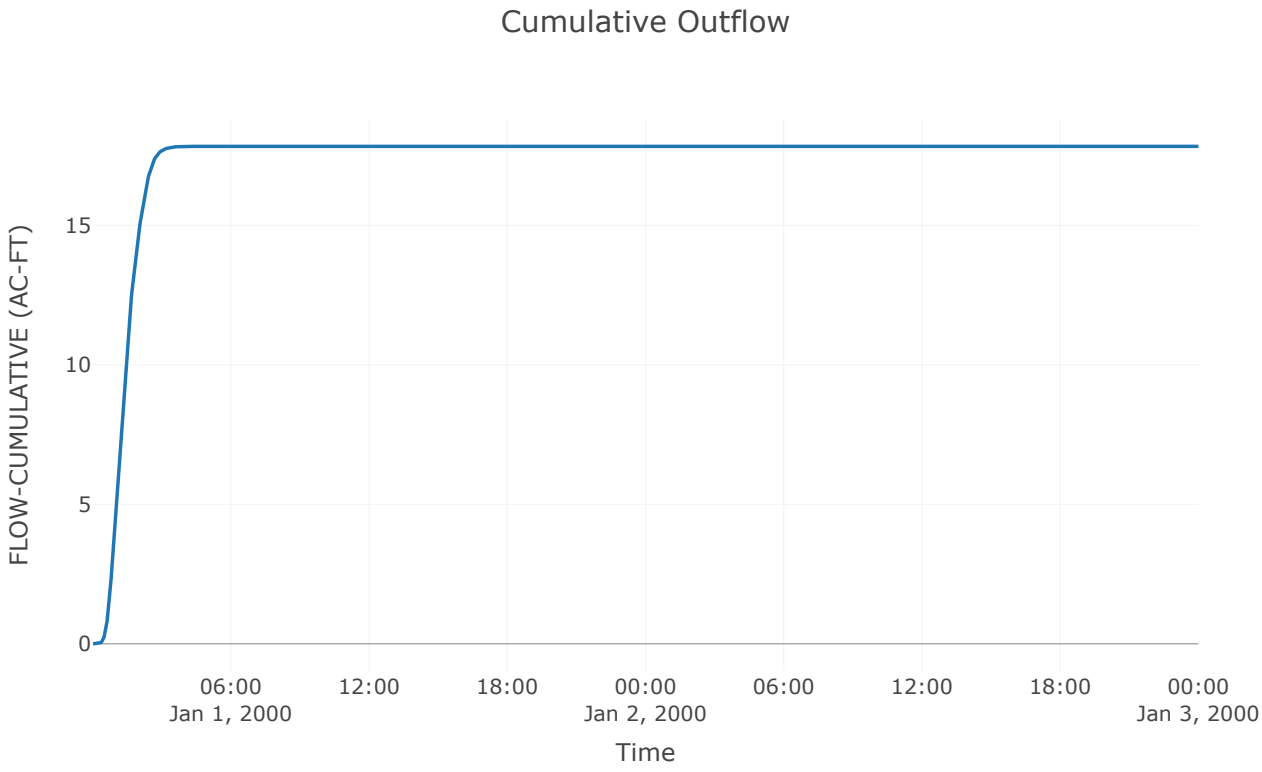
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

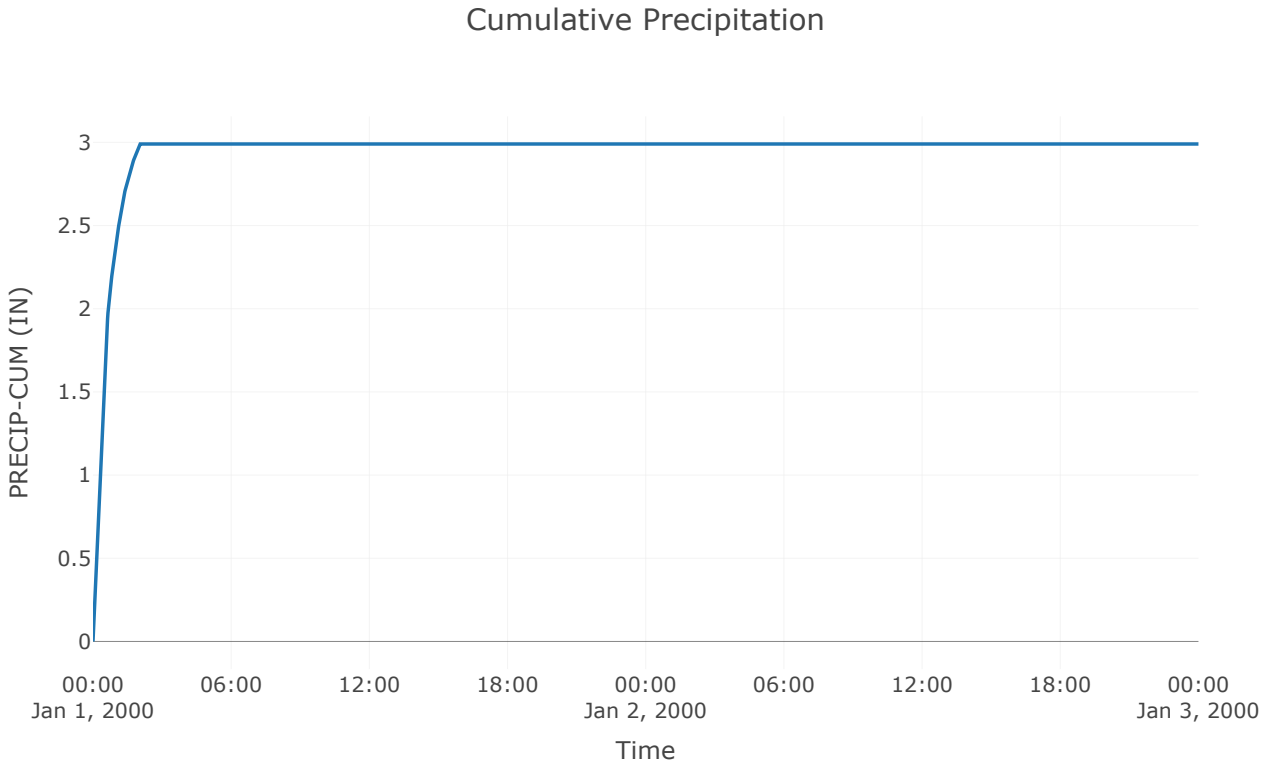
Precipitation and Outflow

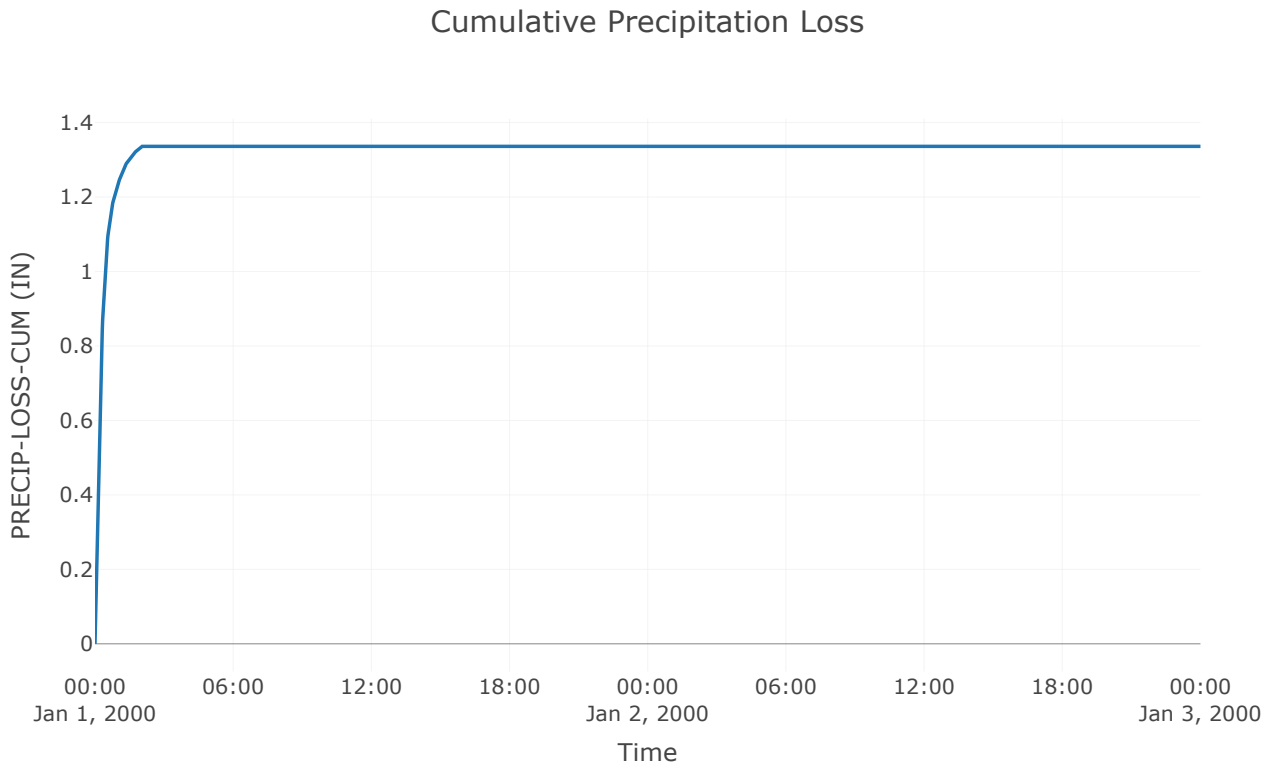


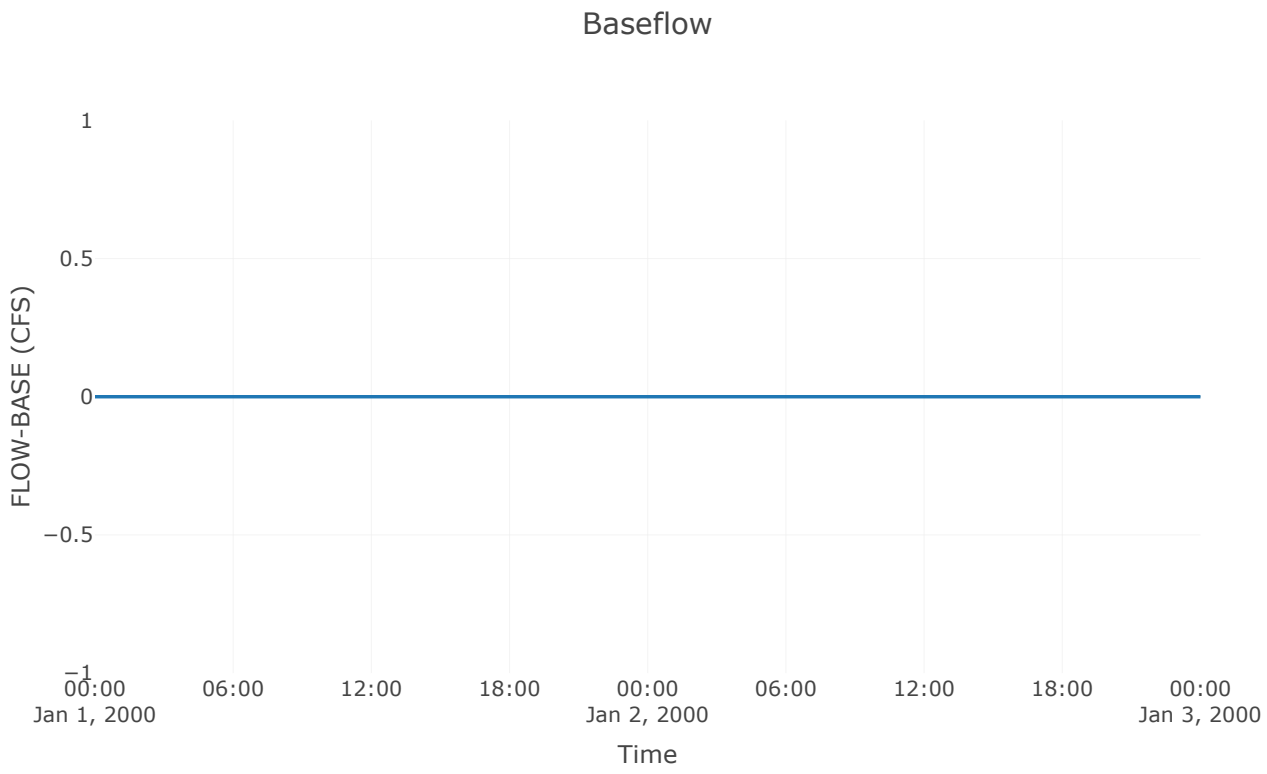
Cumulative Excess Precipitation



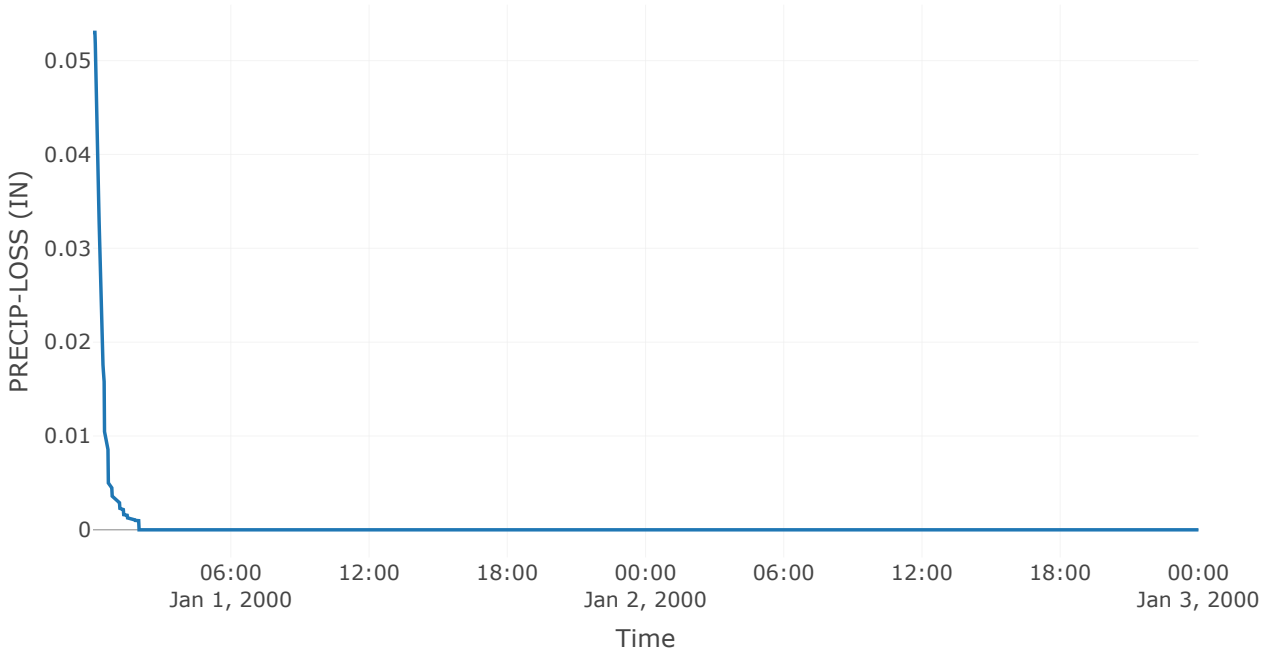

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

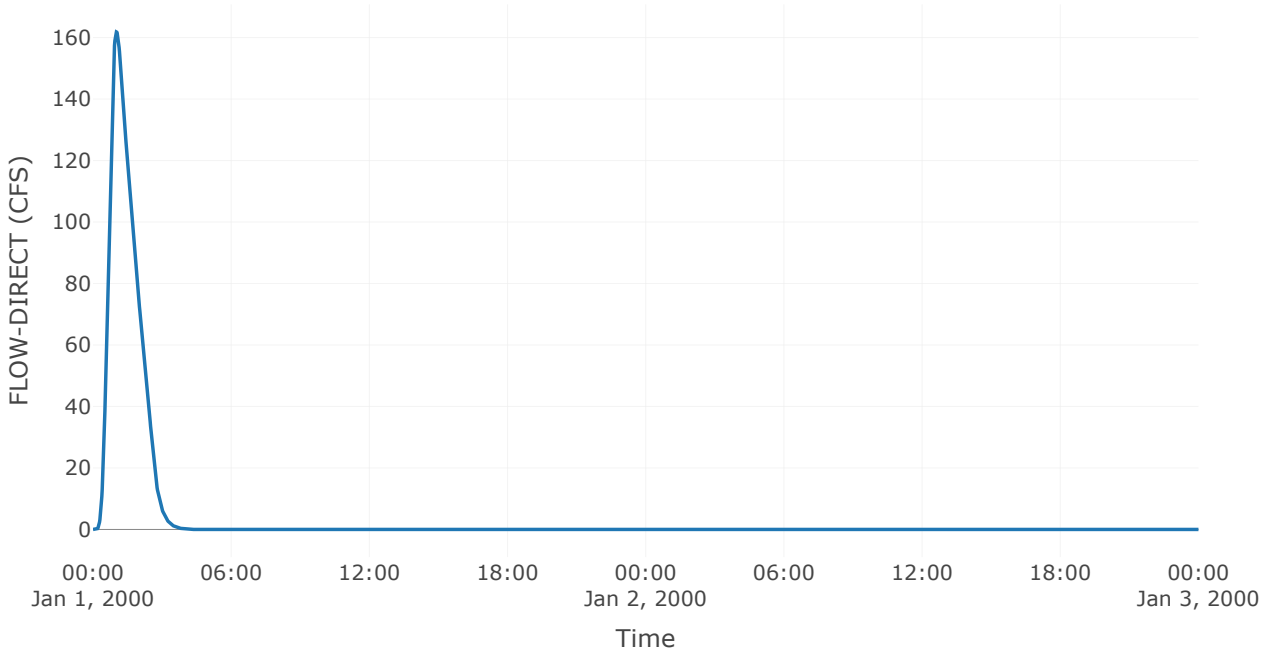

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

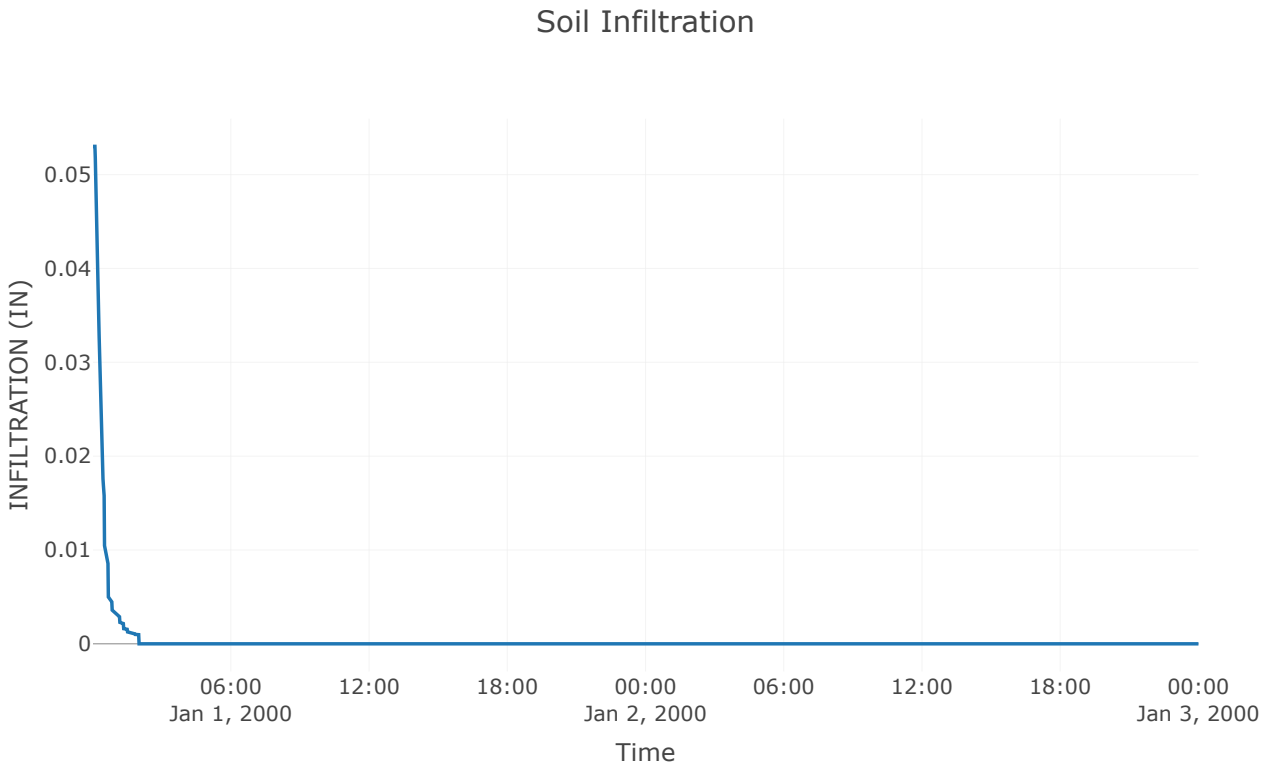

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

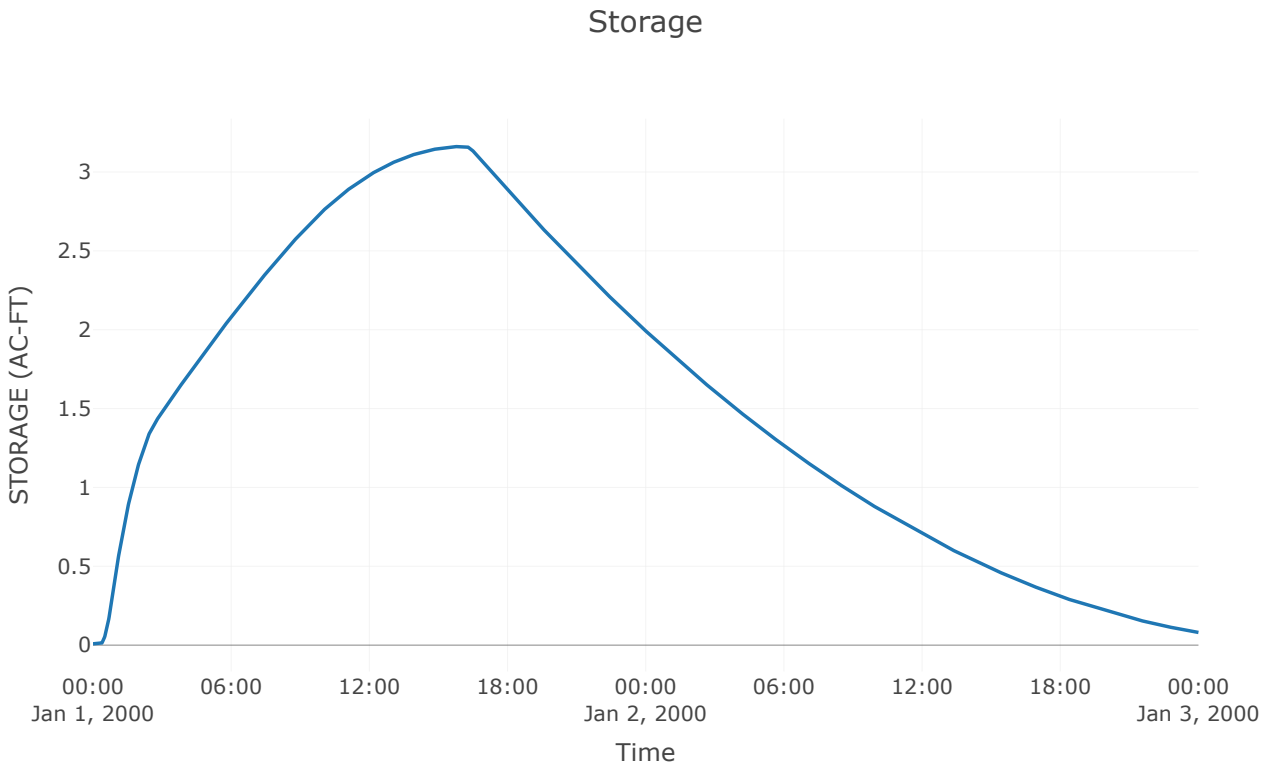


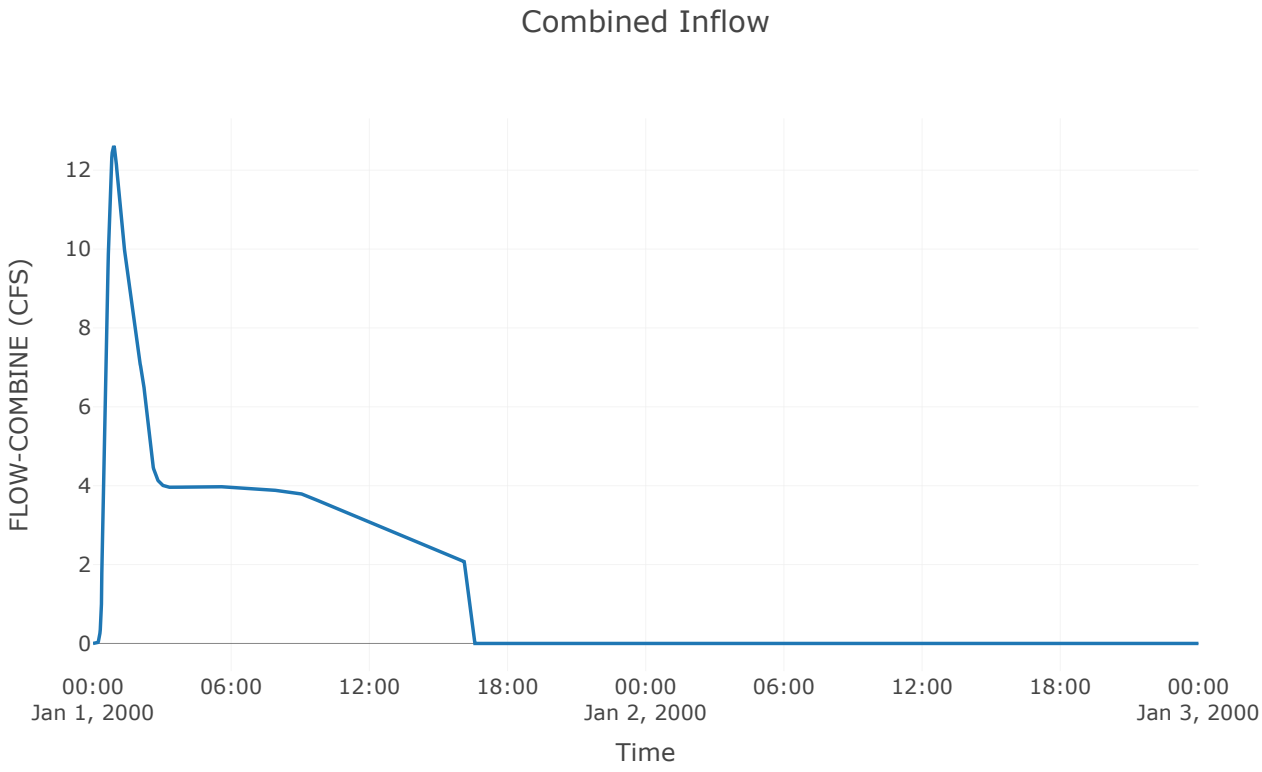

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

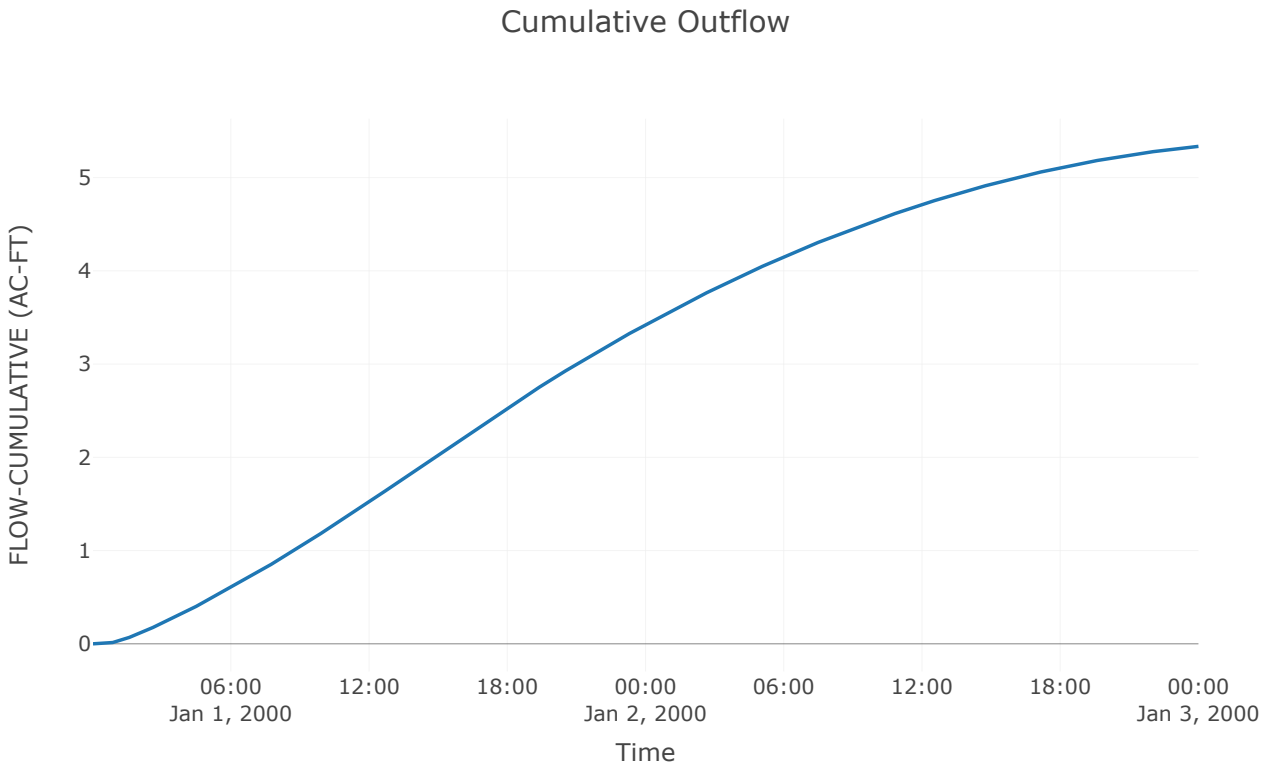
Reservoir: Basin 3

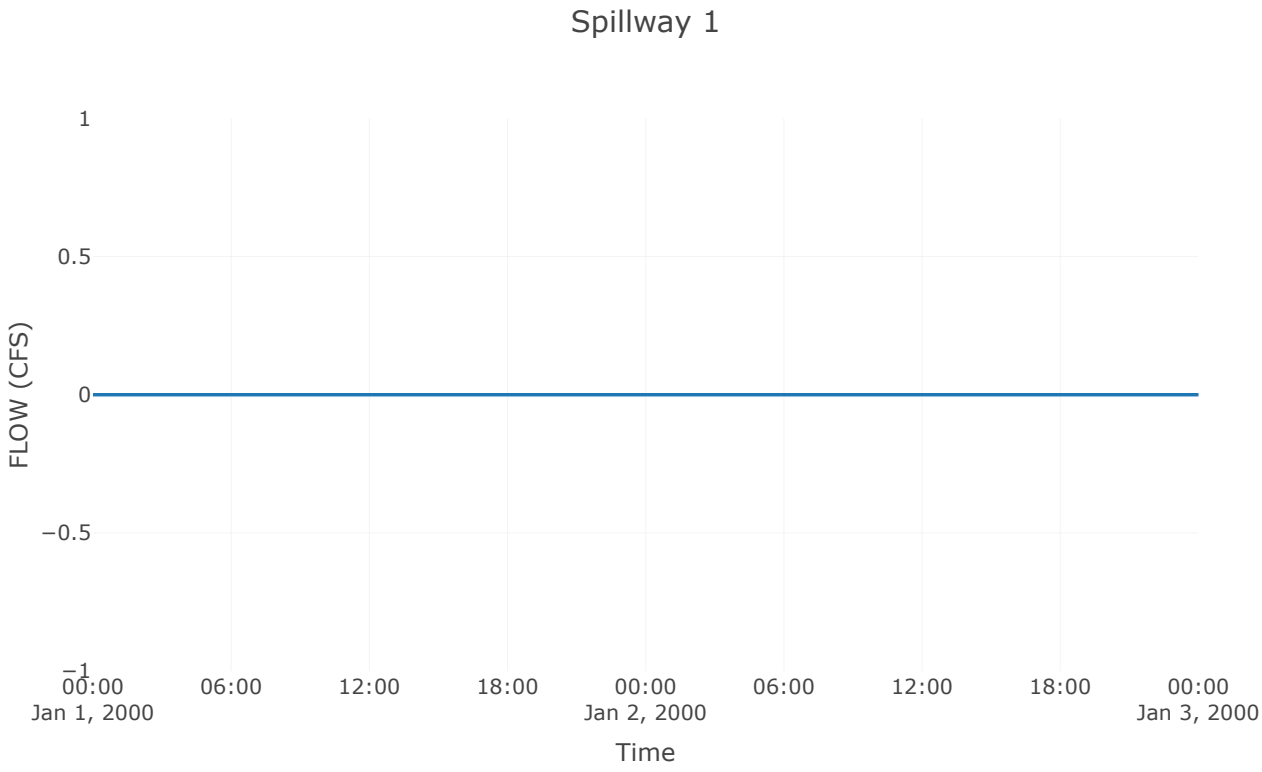
Downstream : Off - Site Tributary Area

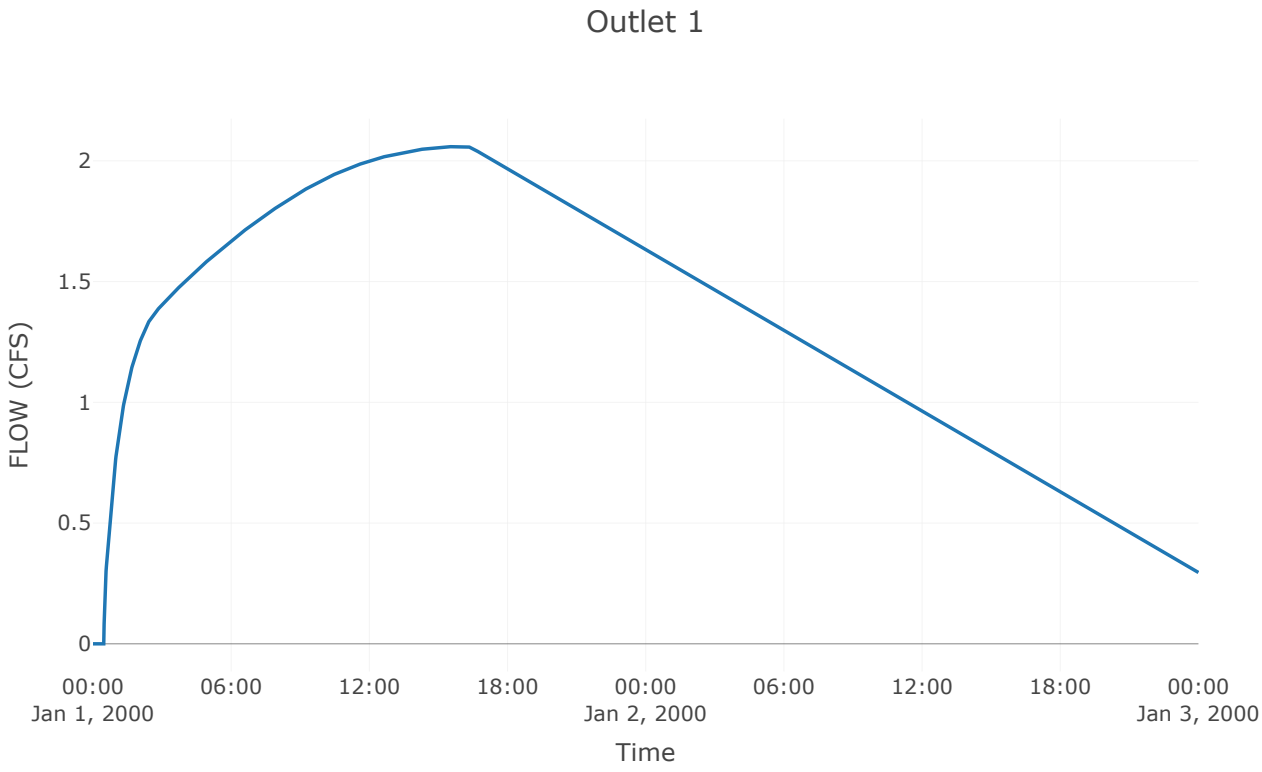
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

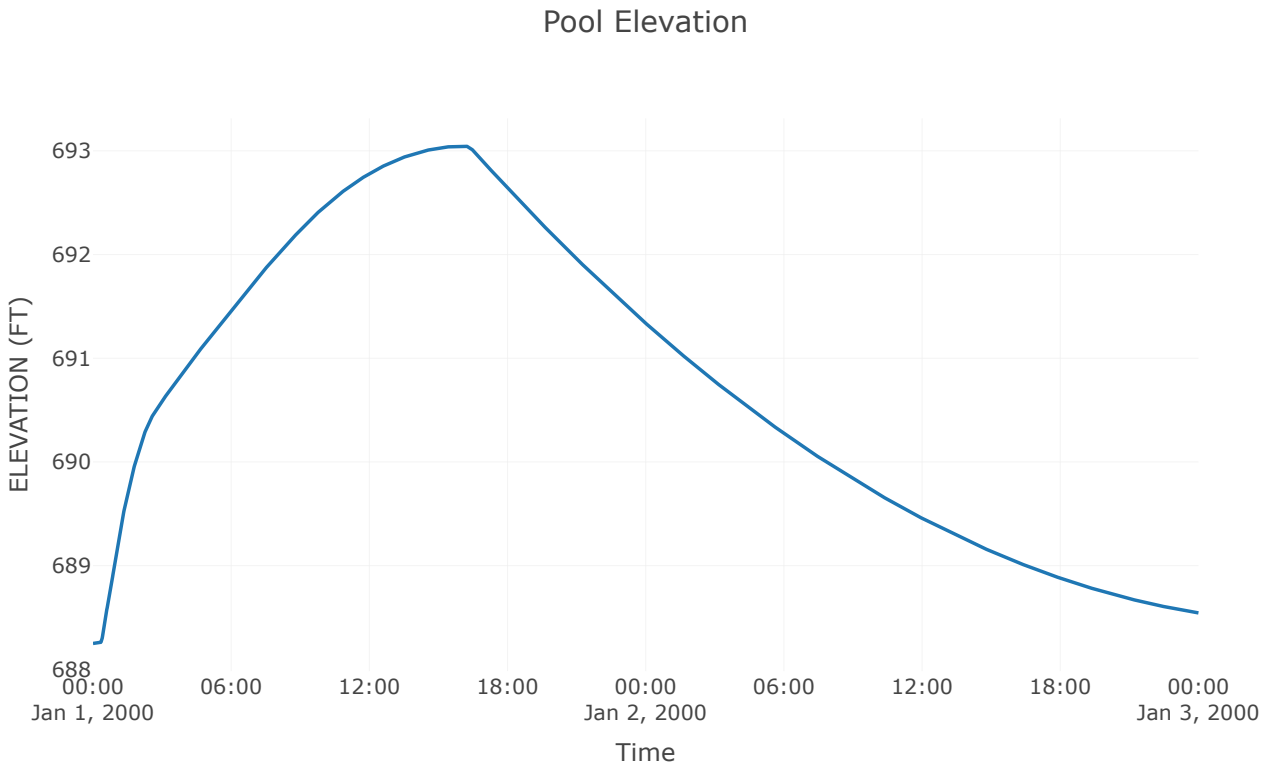

Storage
STORAGE (AC-FT)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

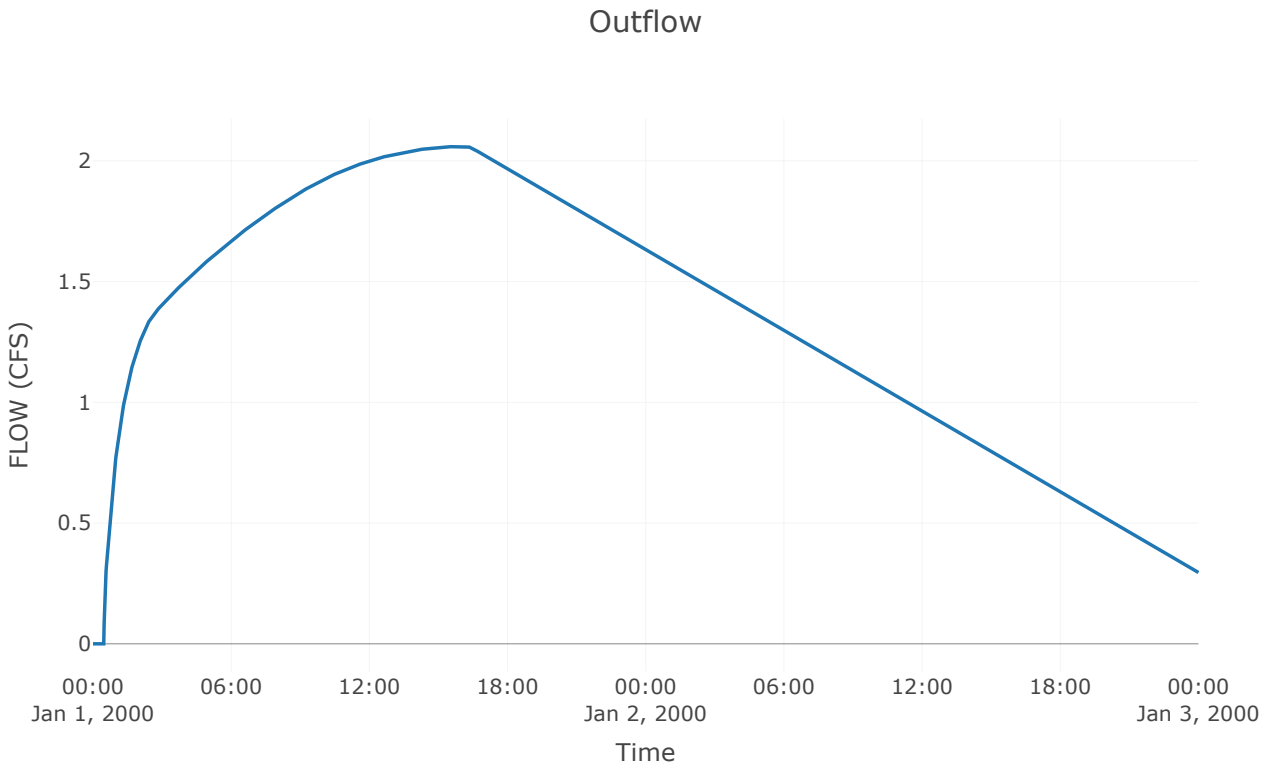

Combined Inflow
FLOW-COMBINE (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

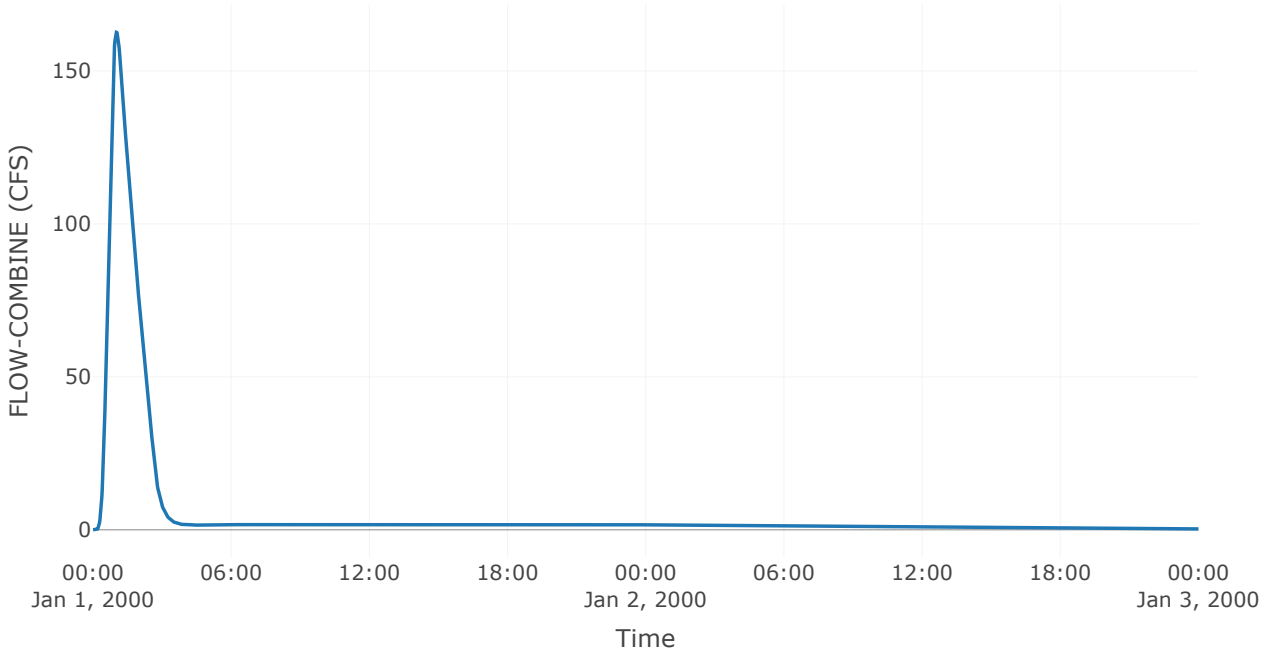

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

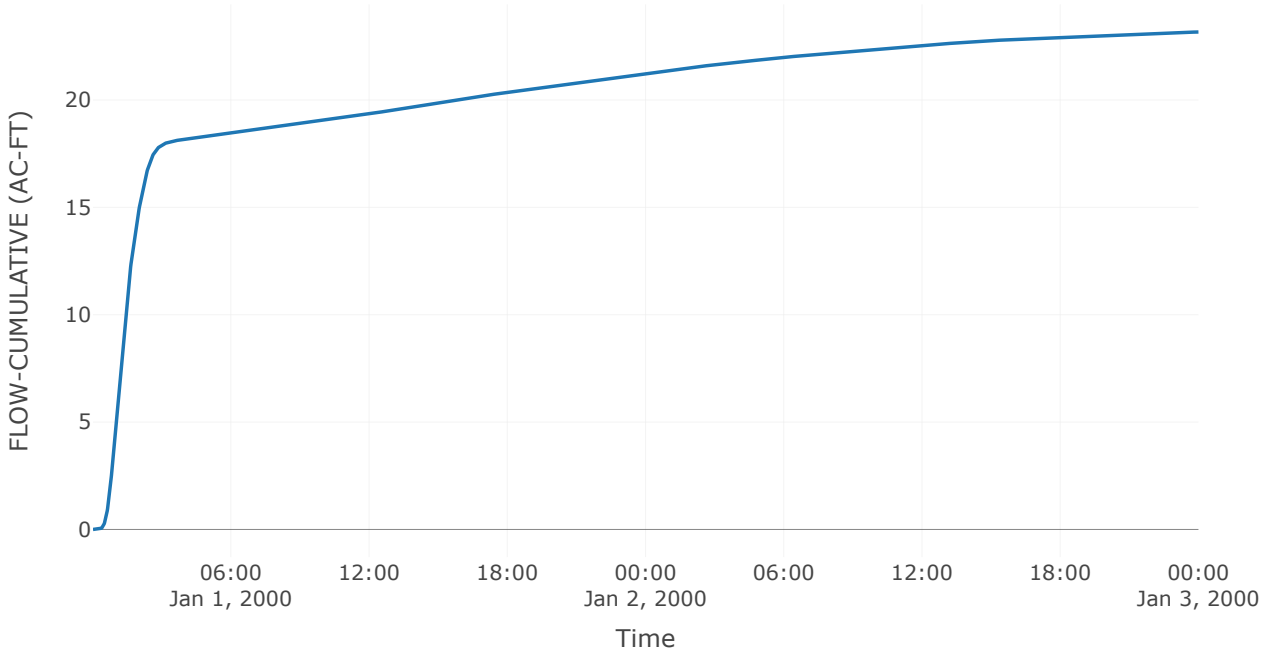
Downstream : Storage East of Wolf Road

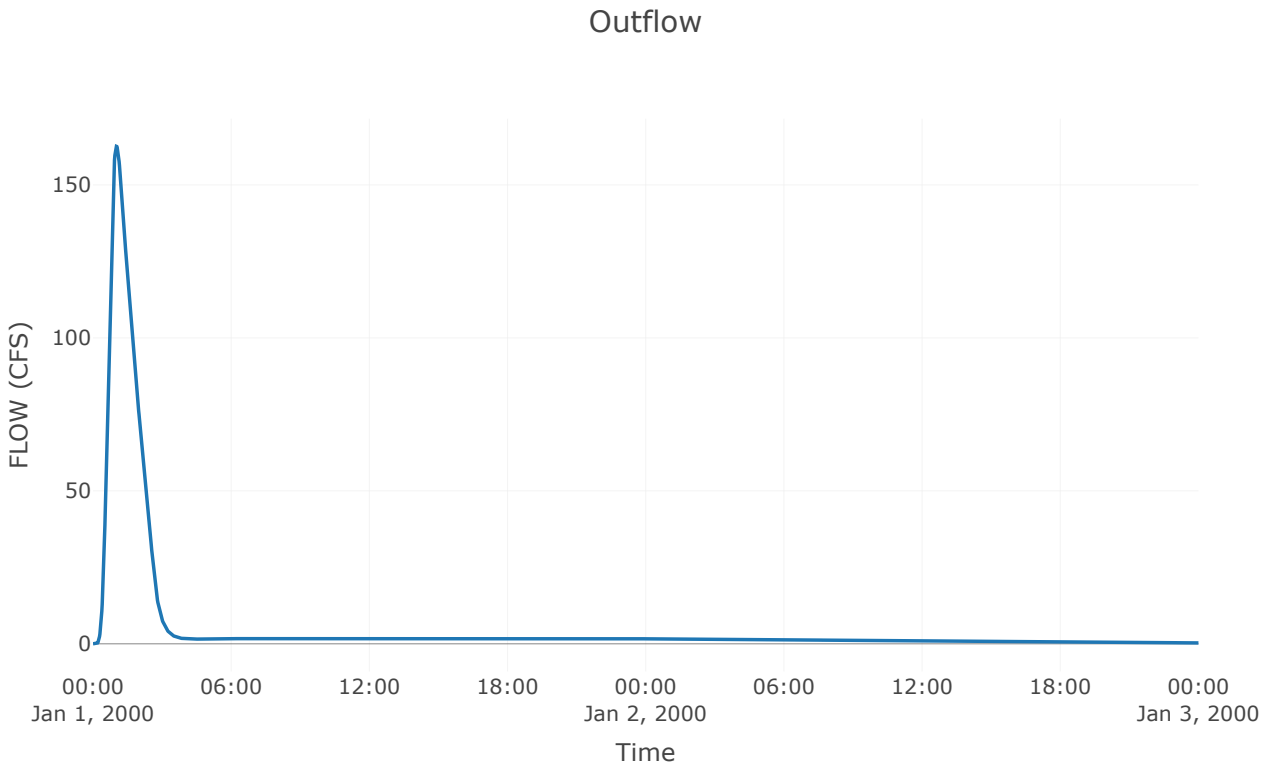
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61

Combined Inflow



Cumulative Outflow



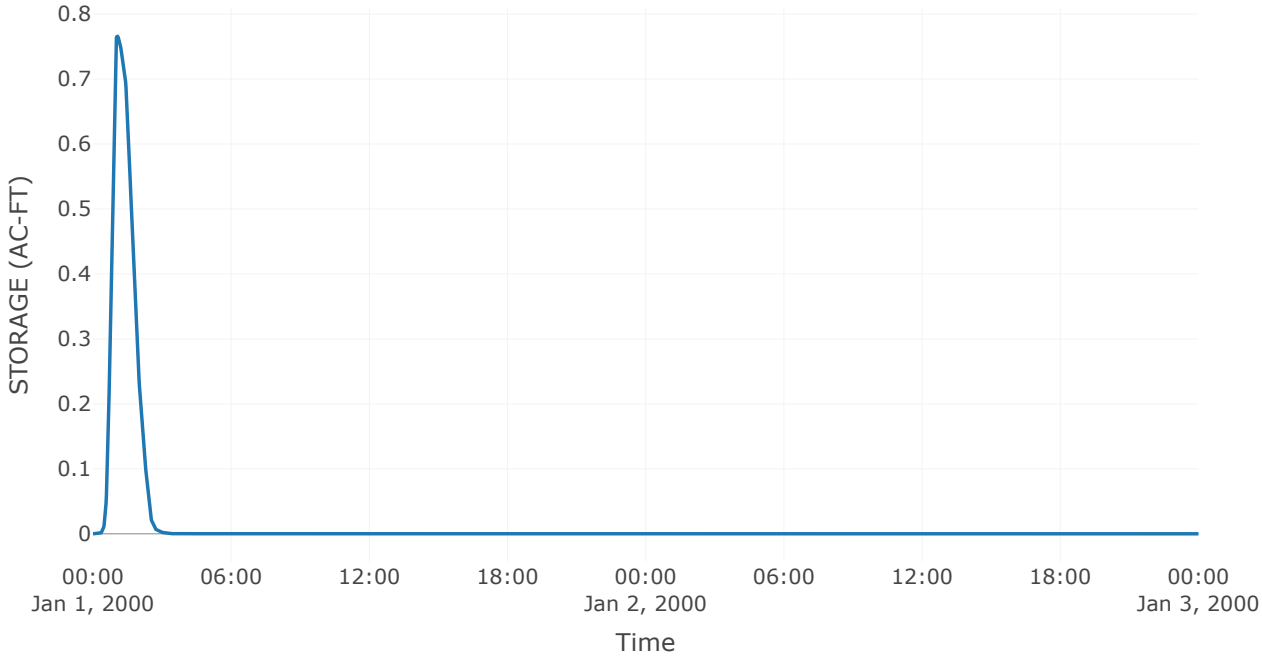

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

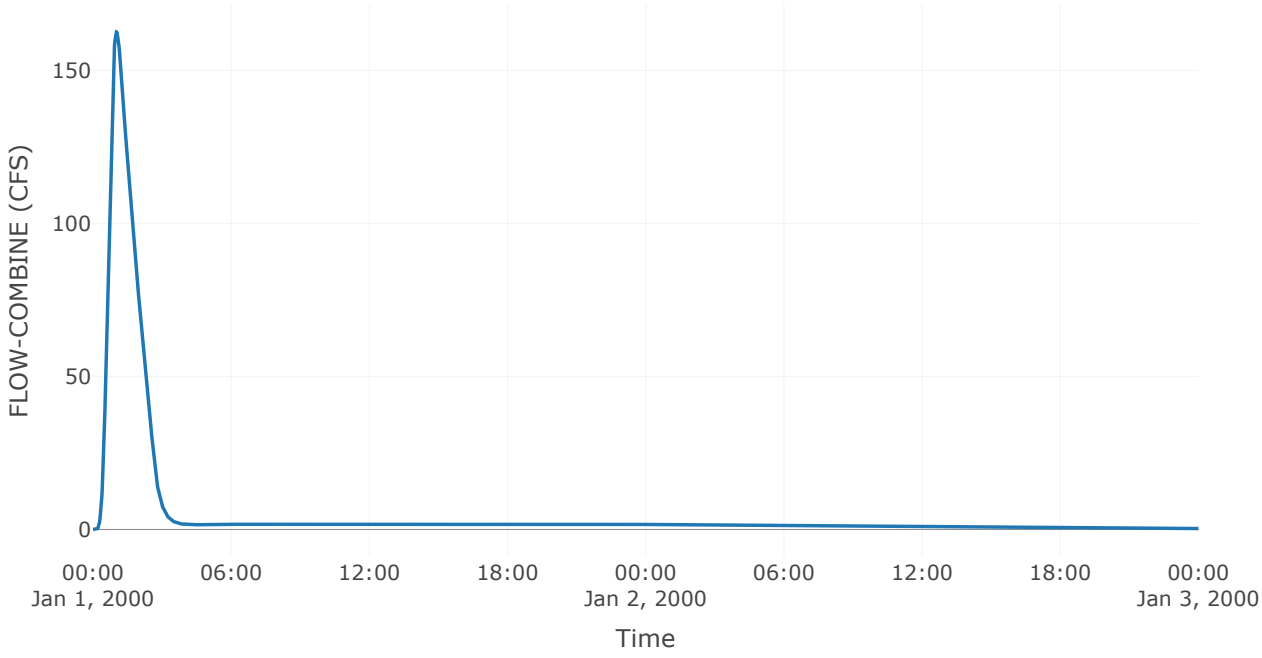
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

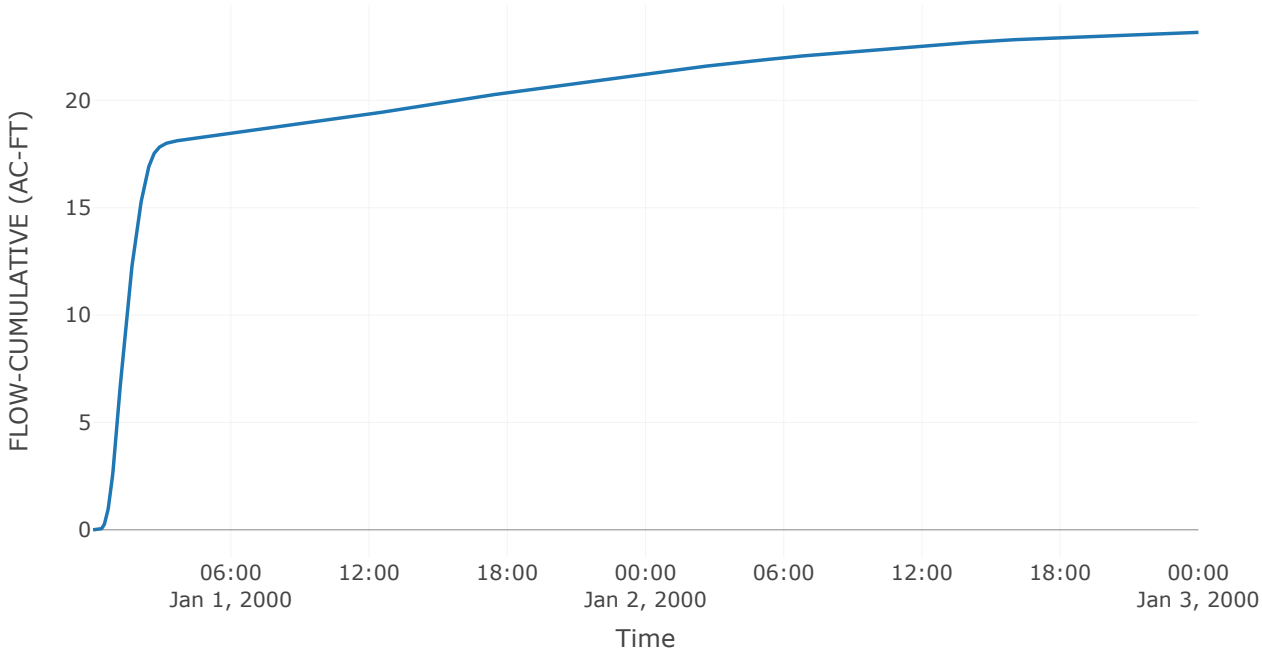
Storage



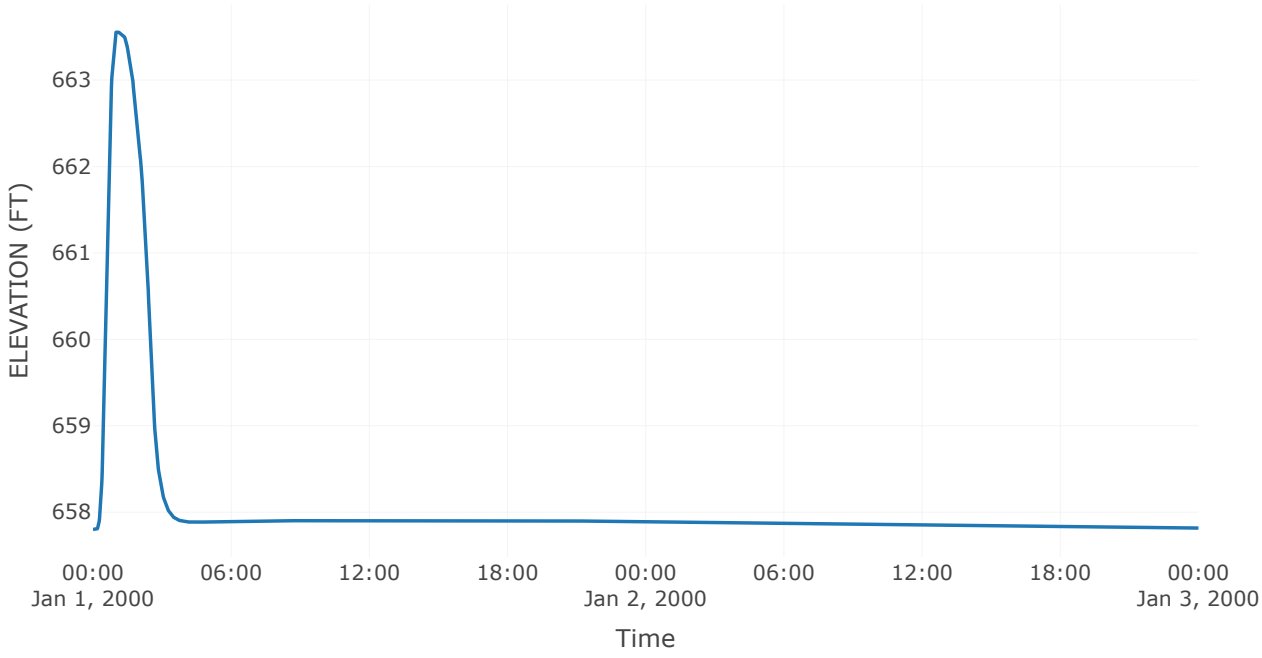
Combined Inflow

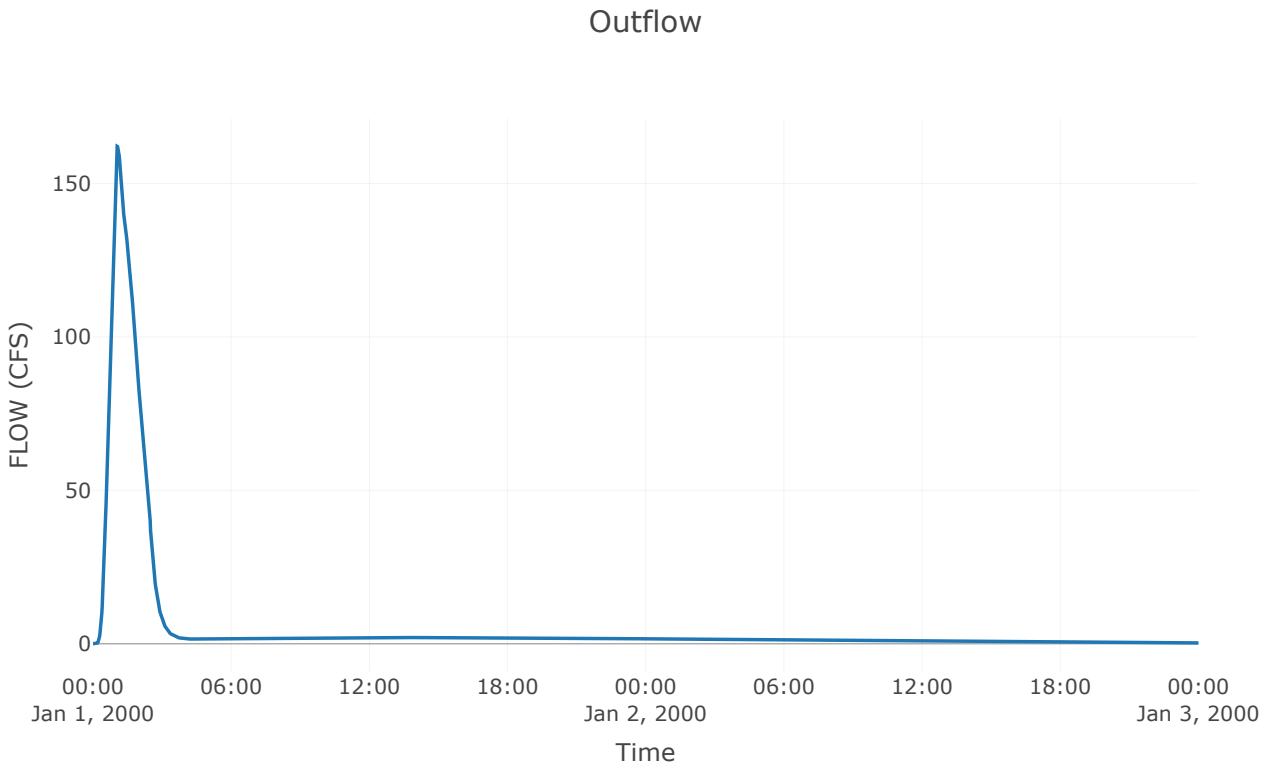


Cumulative Outflow



Pool Elevation



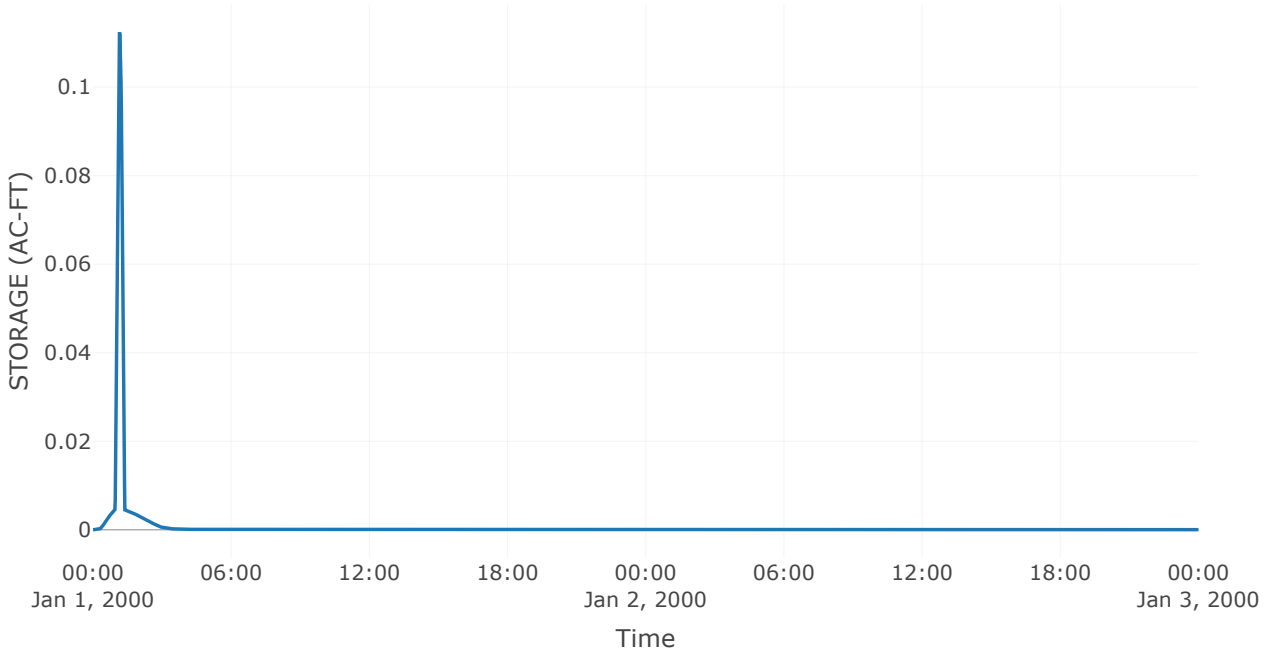

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

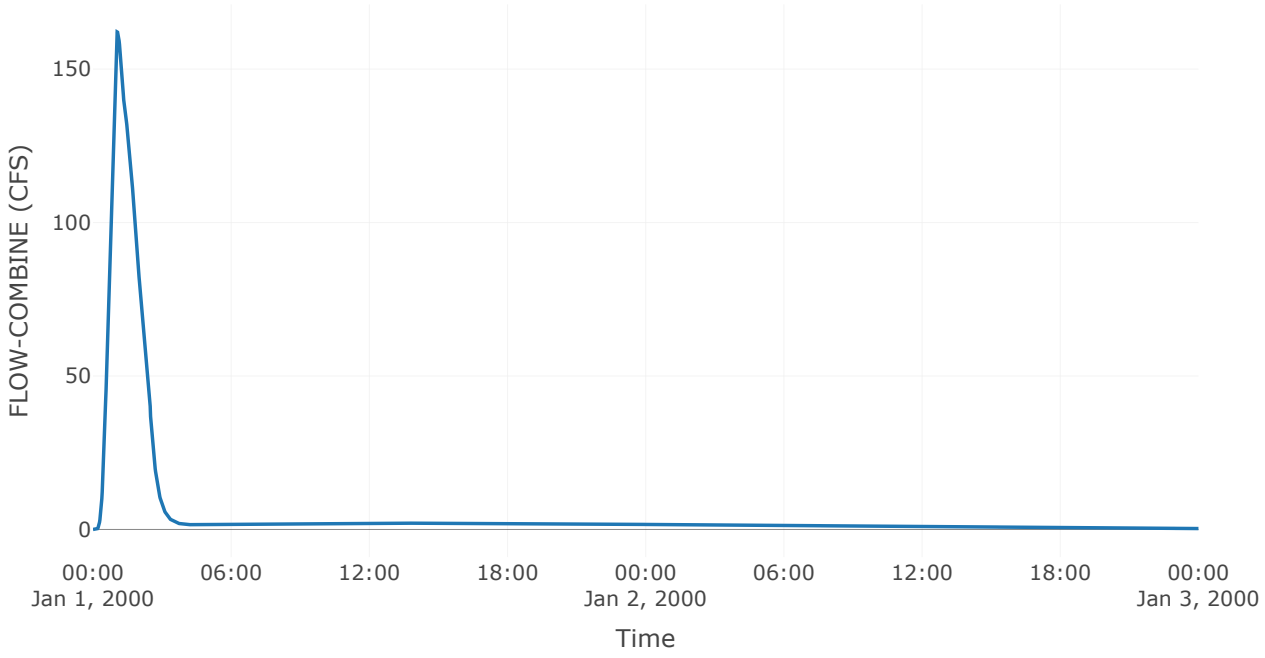
Downstream : Prop Storage West of Wolf Rd

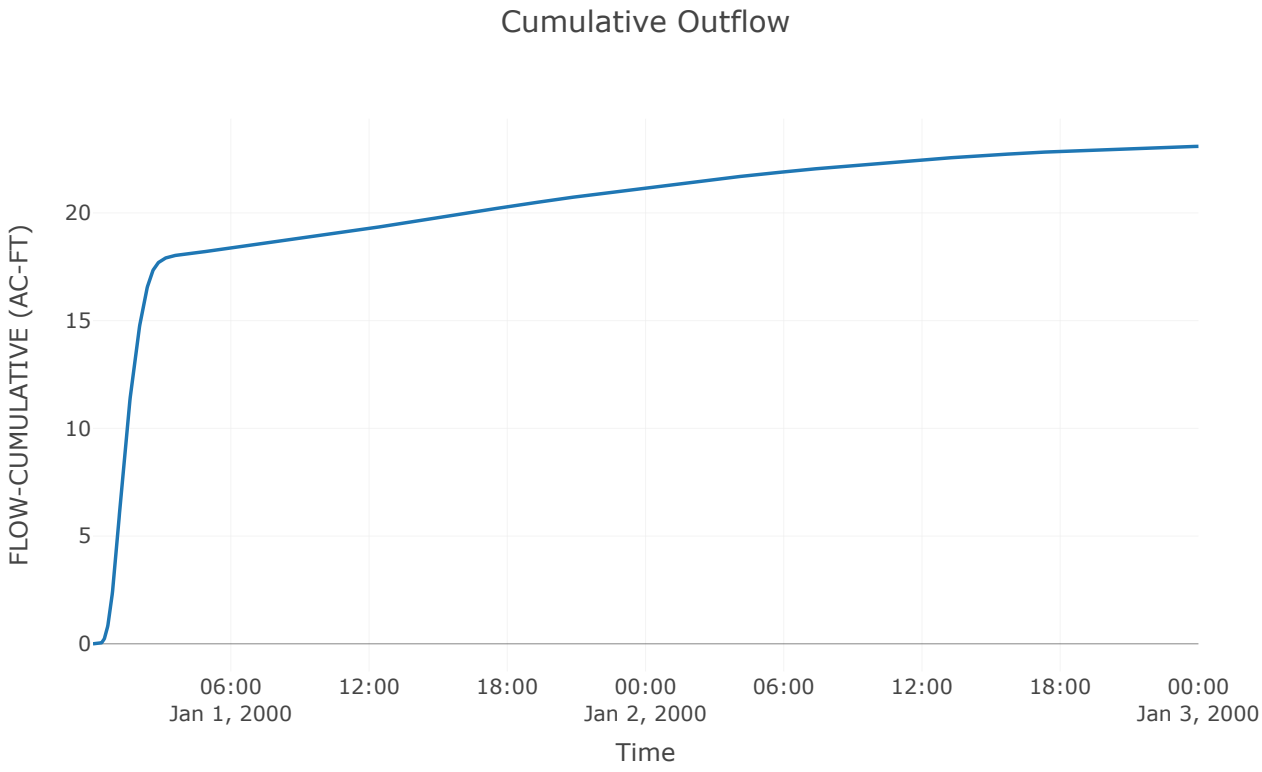
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.79
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.11
Peak Elevation (FT)	662.25
Discharge Volume (AC - FT)	23.09

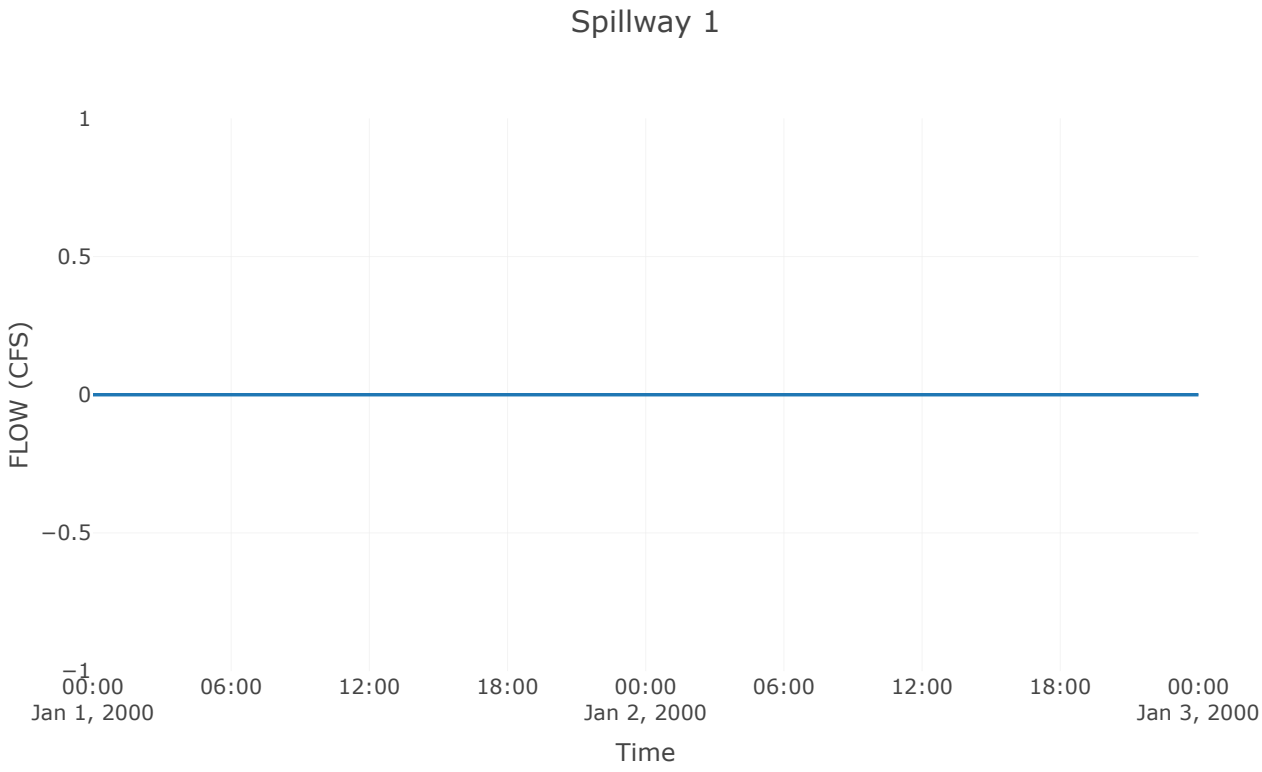
Storage



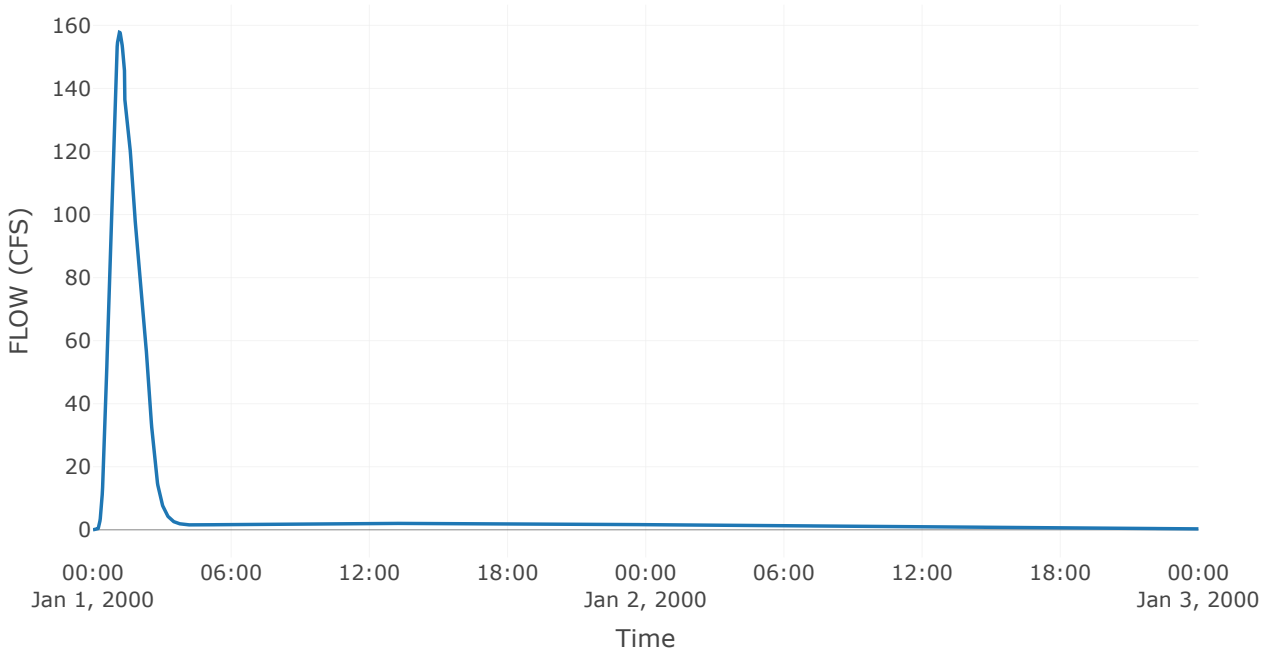
Combined Inflow



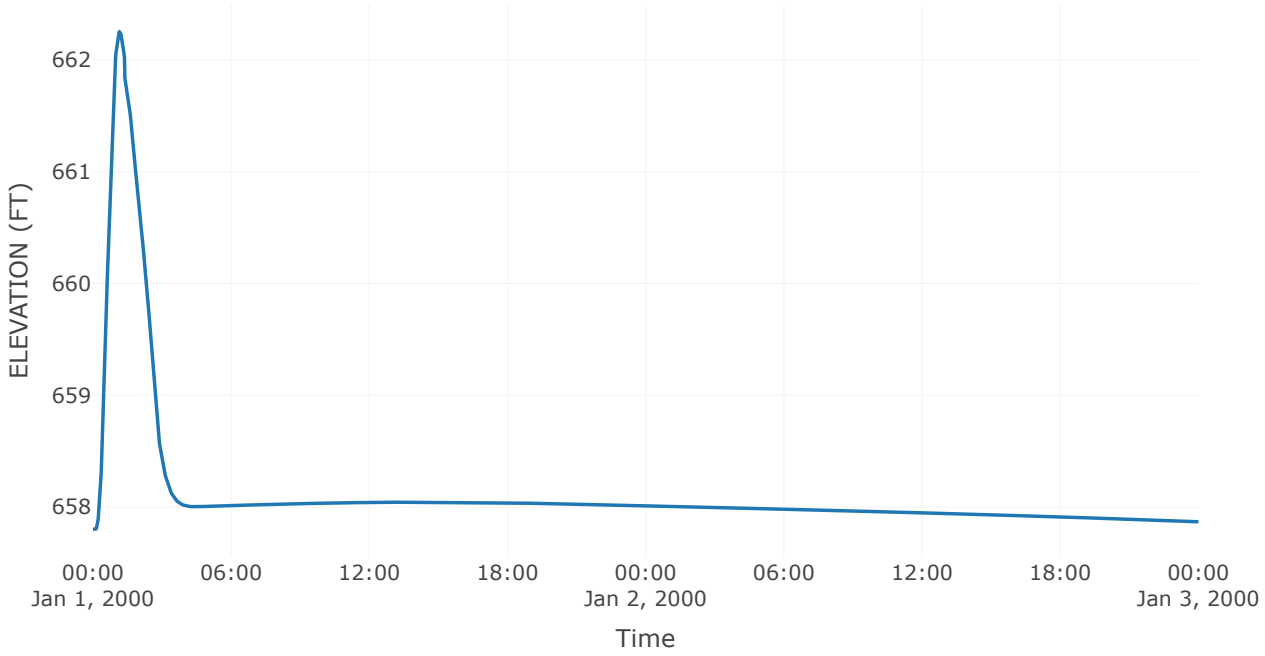

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

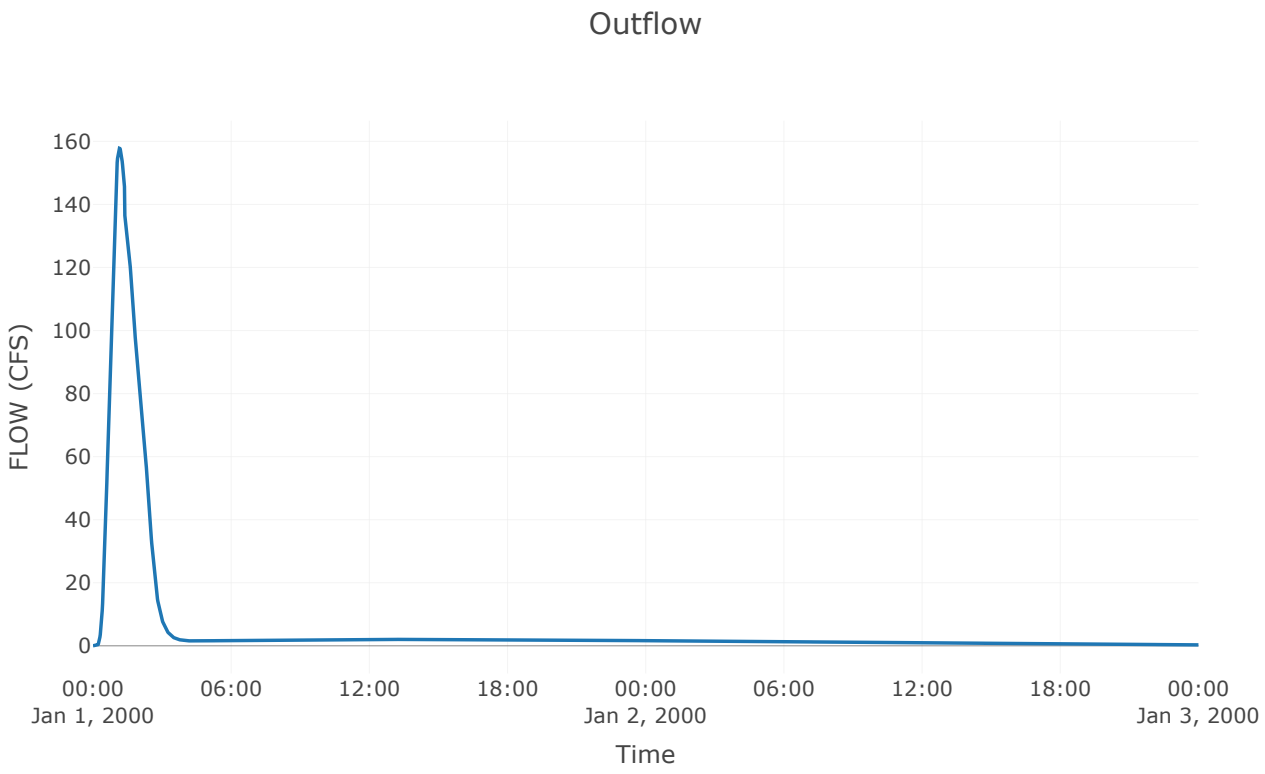

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



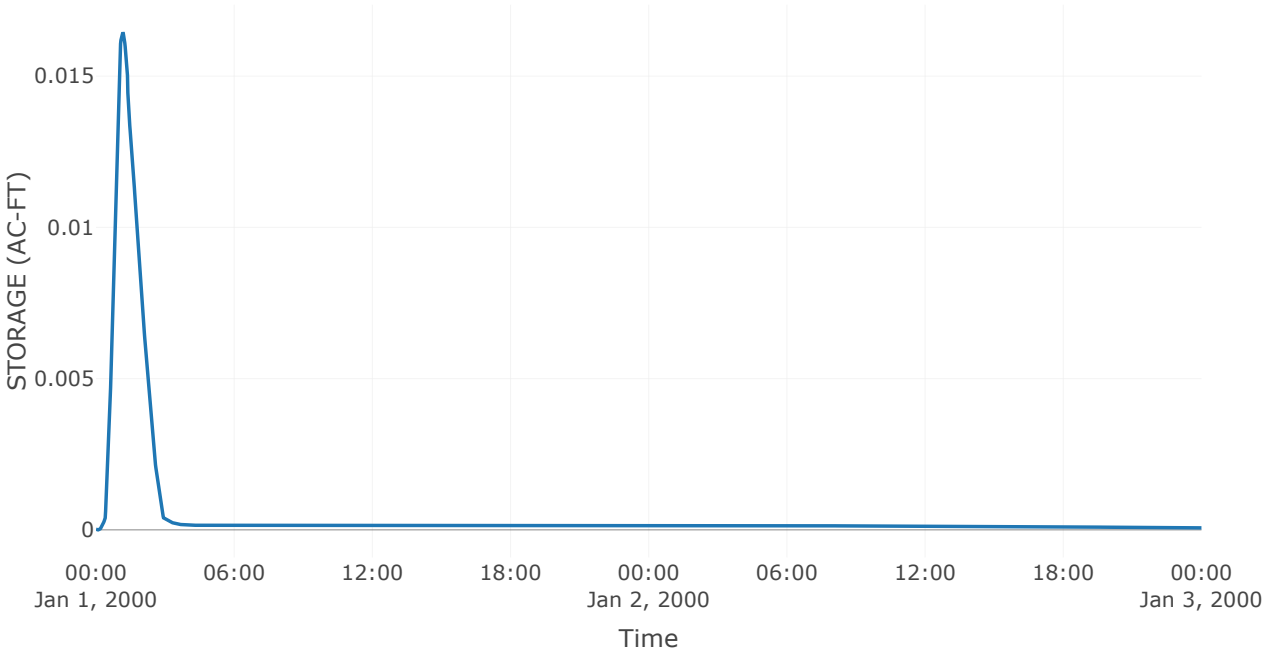

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

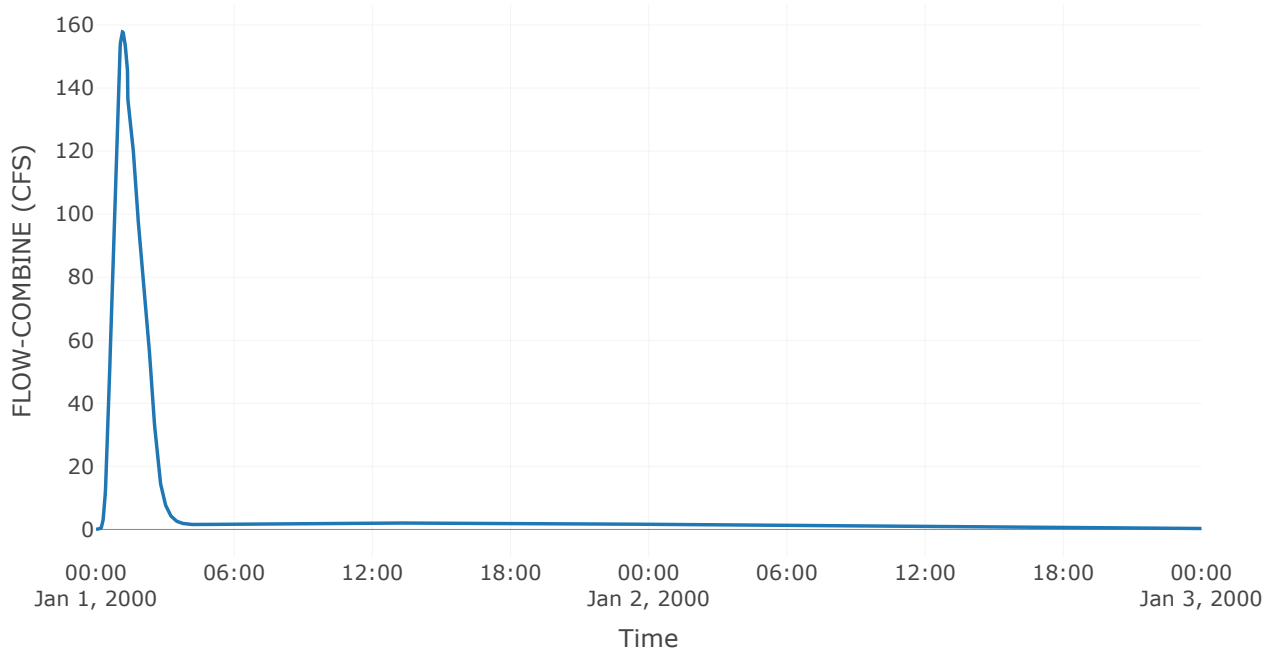
Downstream : Proposed Basin C

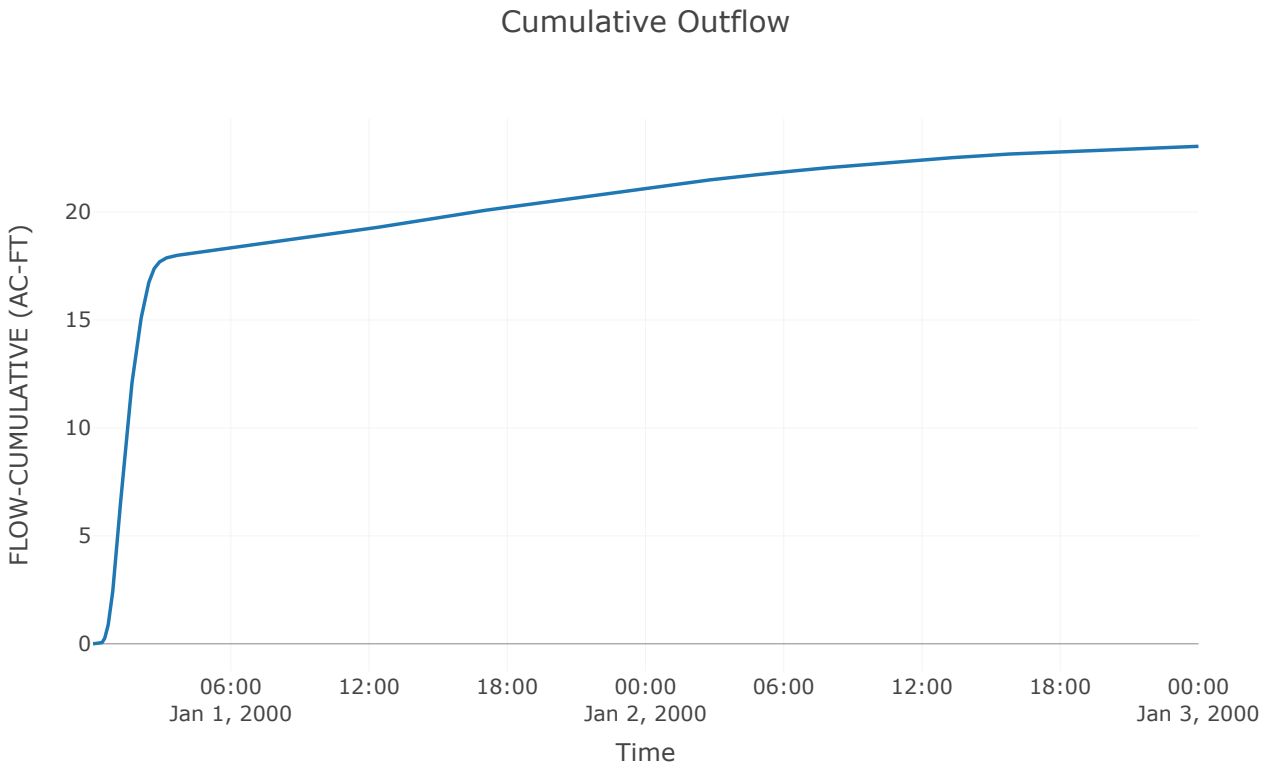
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	157.76
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.6
Peak Inflow (CFS)	157.79
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	657.98
Discharge Volume (AC - FT)	23.04

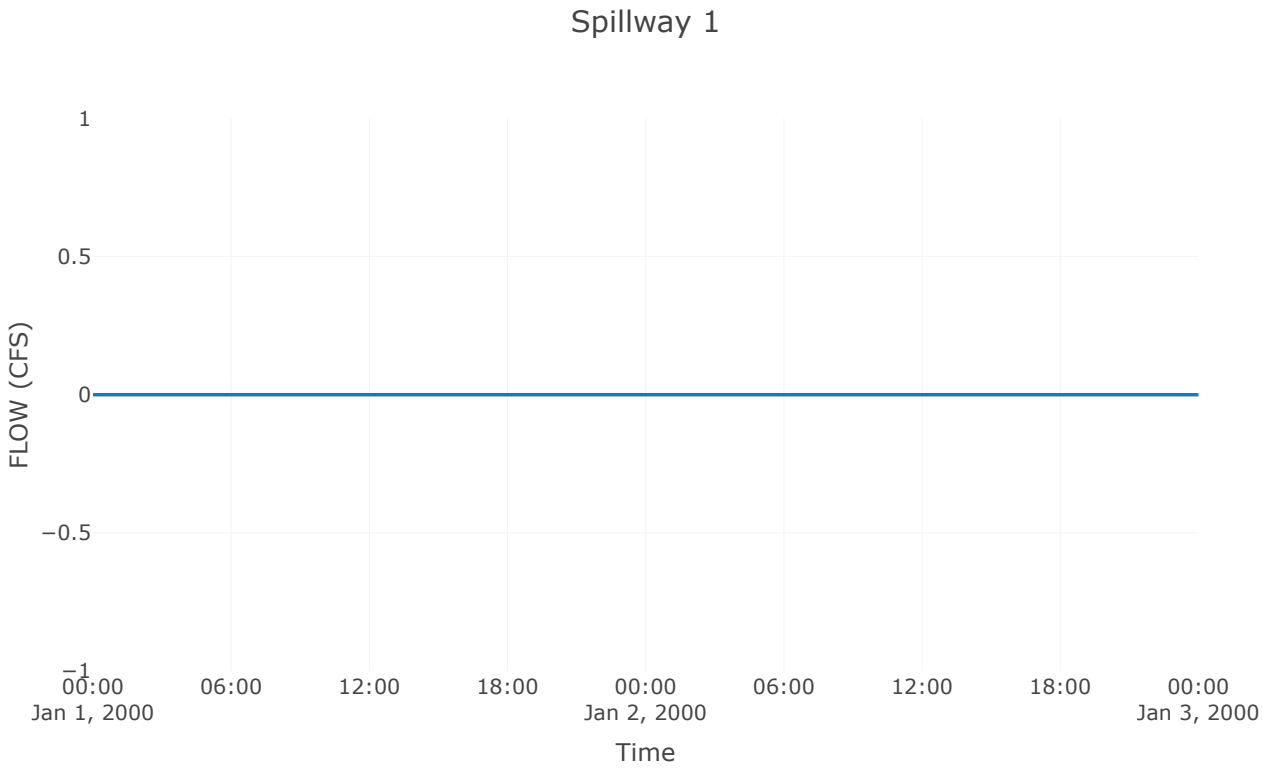
Storage



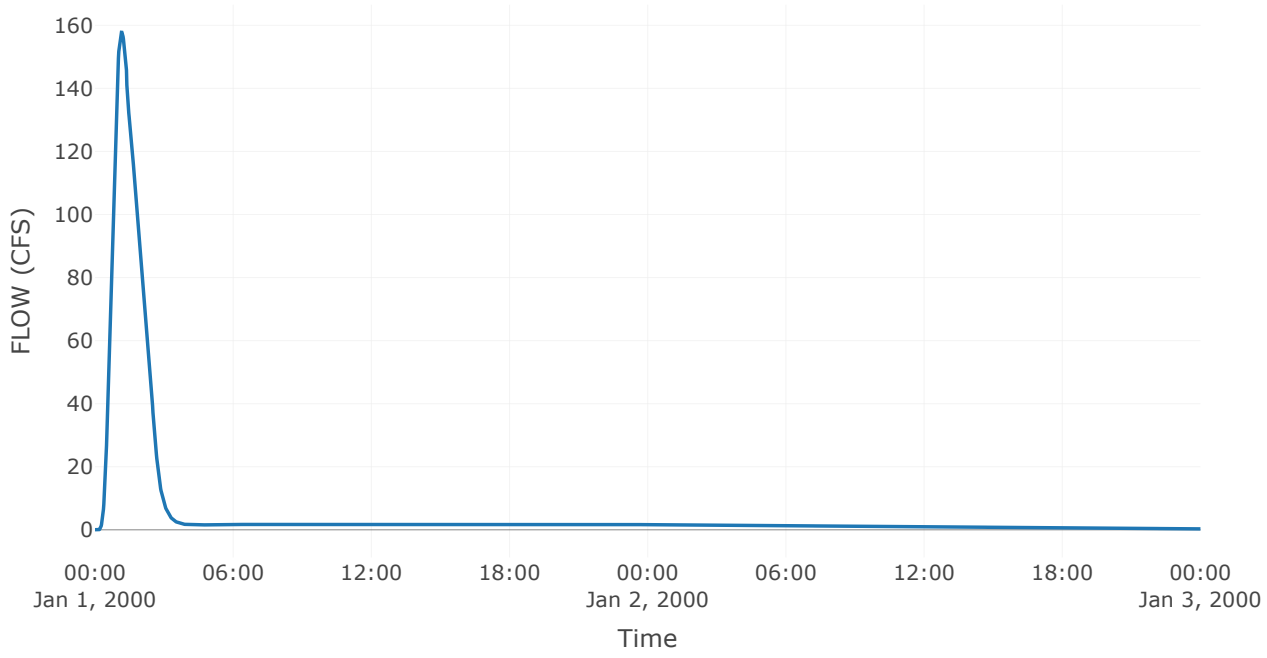
Combined Inflow



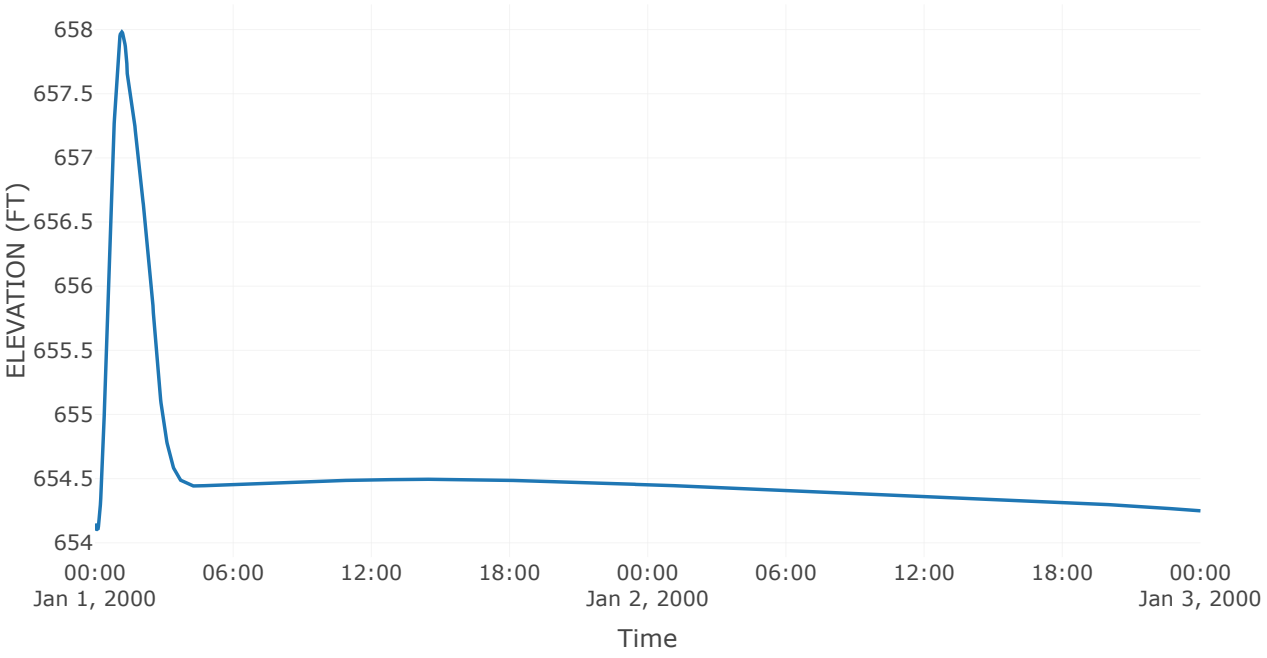

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

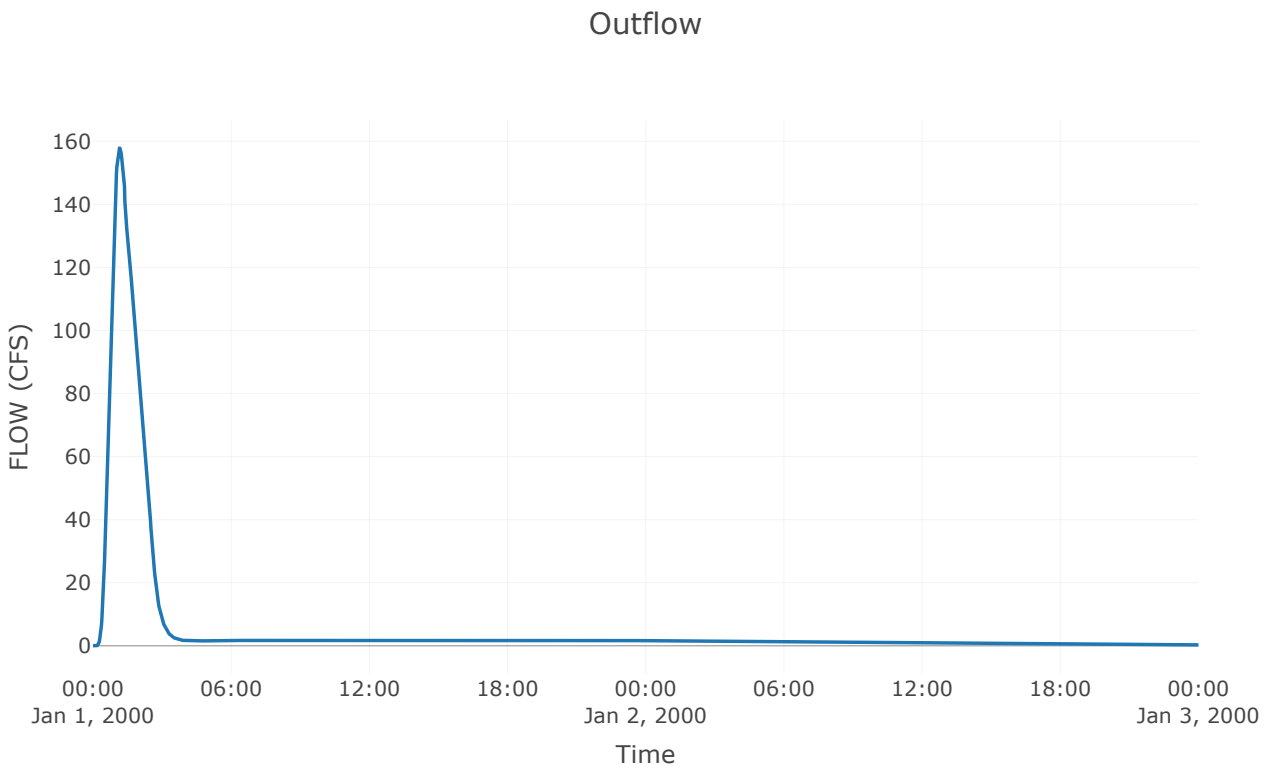

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

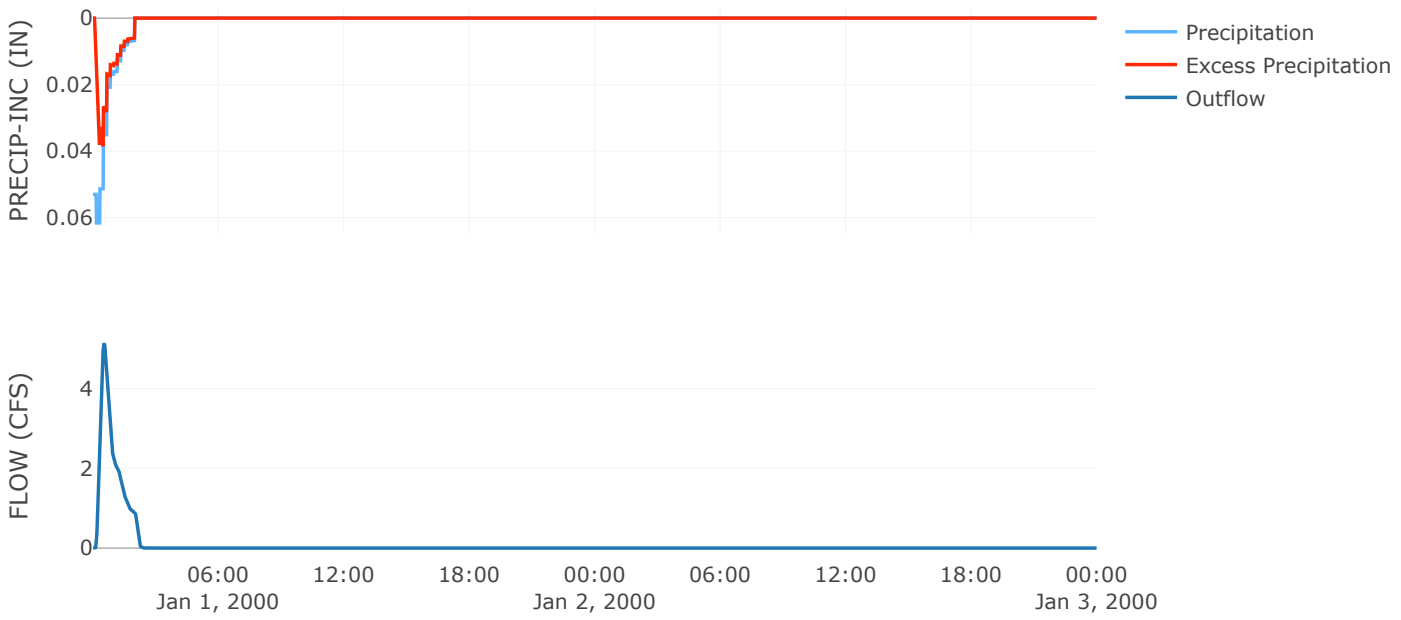
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

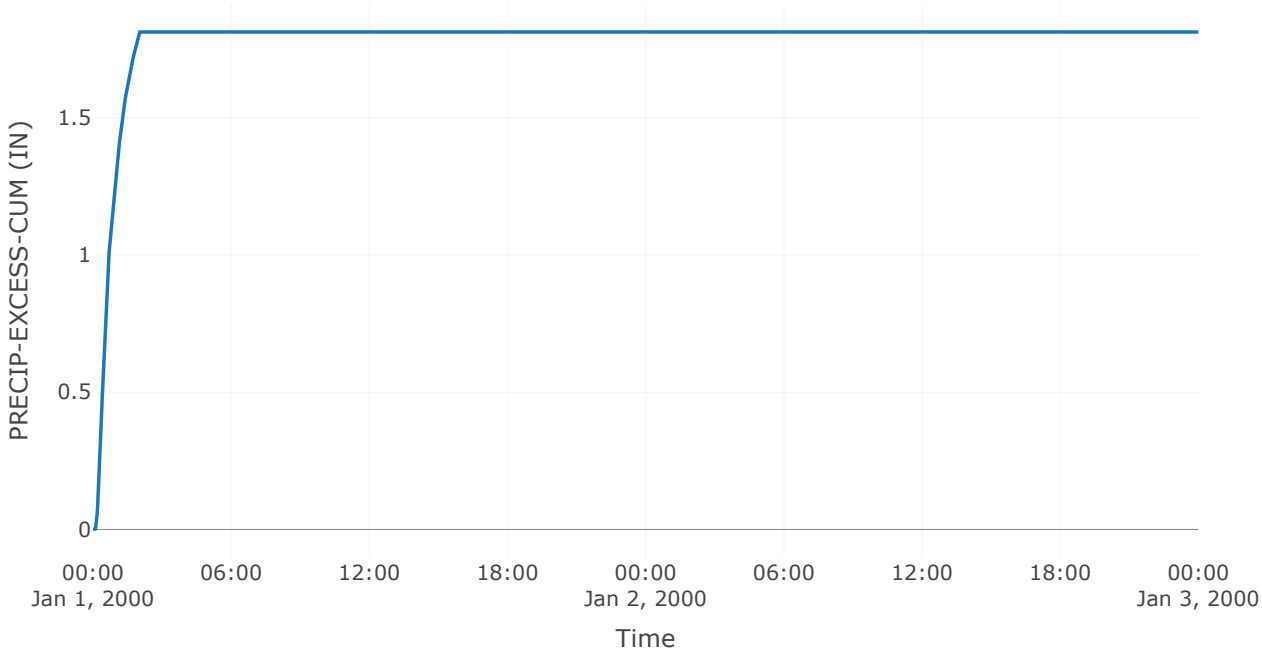
Transform: Scs	
Lag	6
Unitgraph Type	Standard

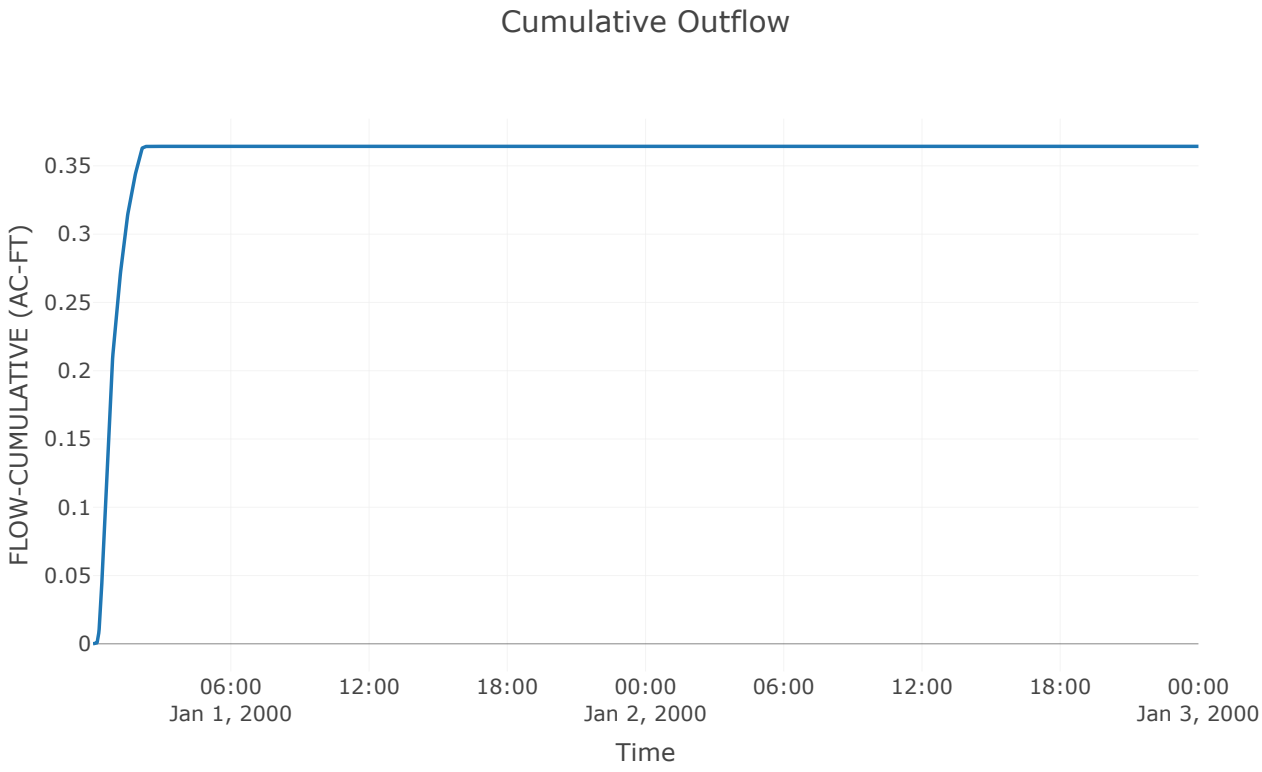
Results: Prop On-Site	
Peak Discharge (CFS)	5.14
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	1.81
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.24
Excess Volume (AC - FT)	0.36
Direct Runoff Volume (AC - FT)	0.36
Baseflow Volume (AC - FT)	0

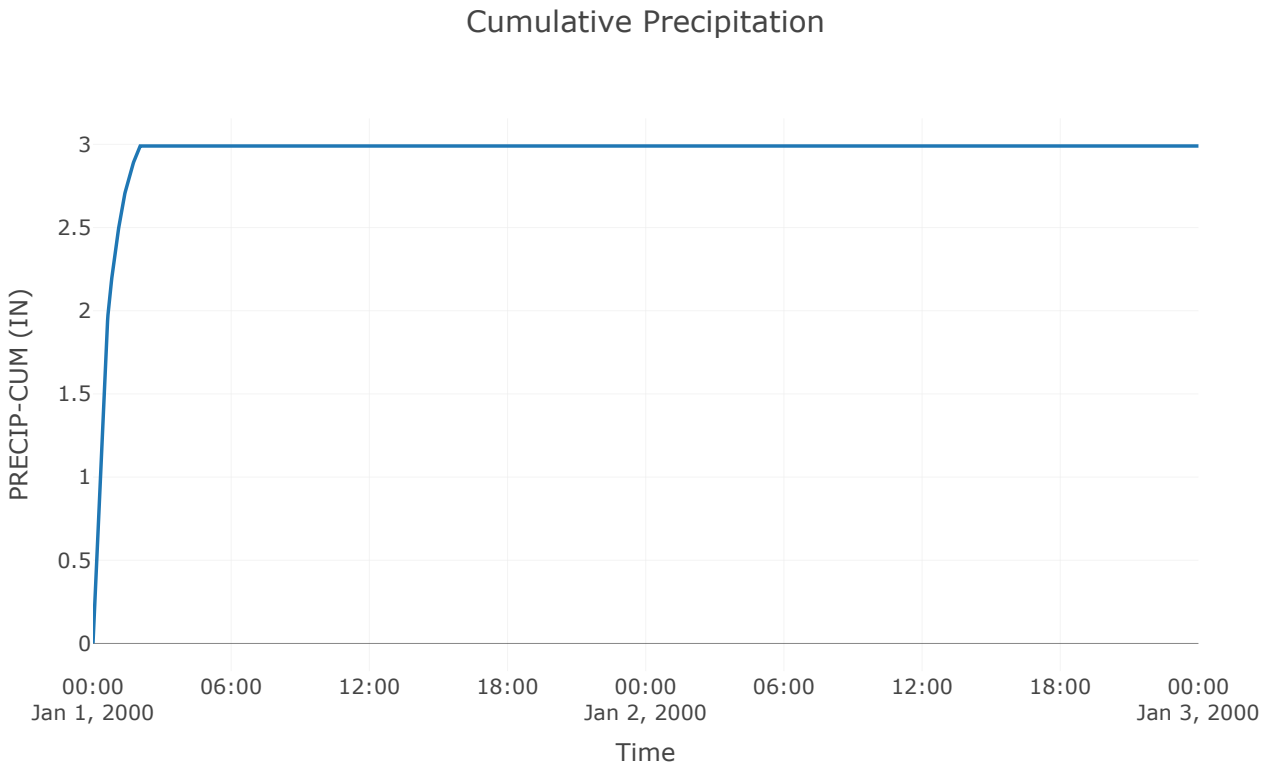
Precipitation and Outflow

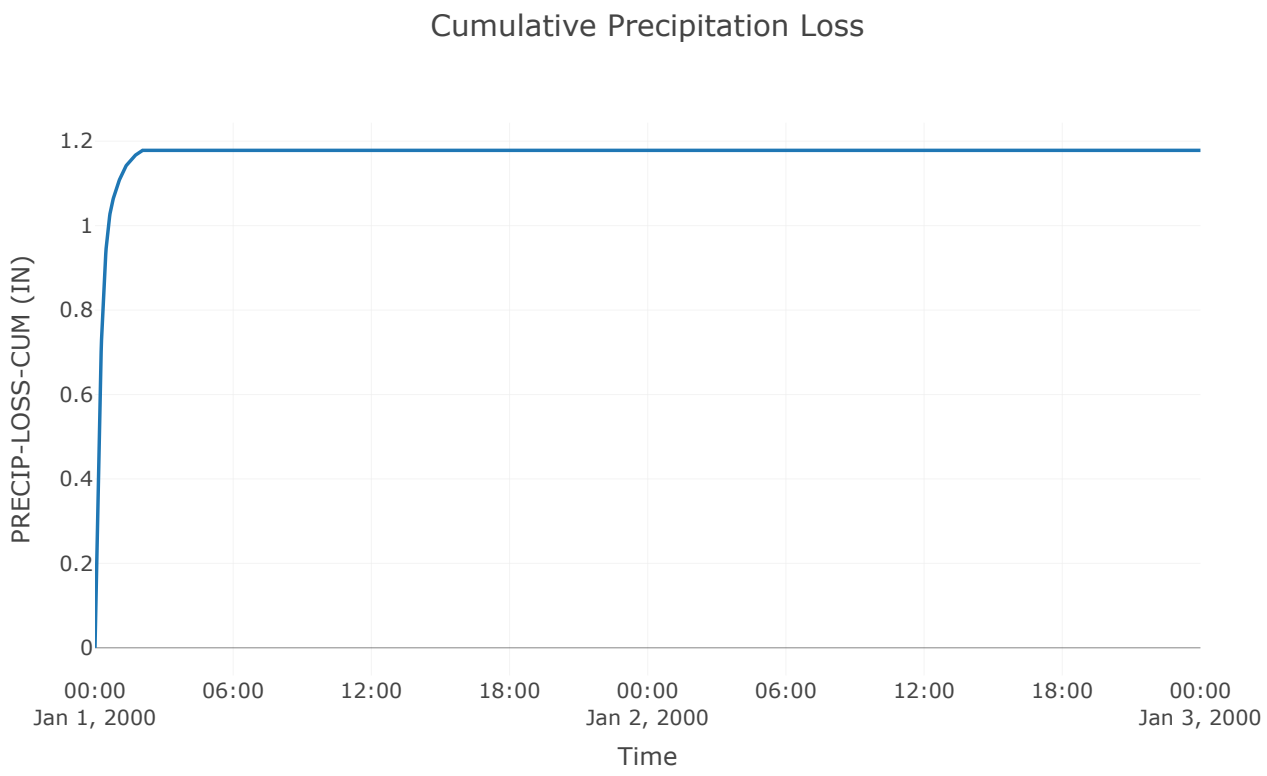


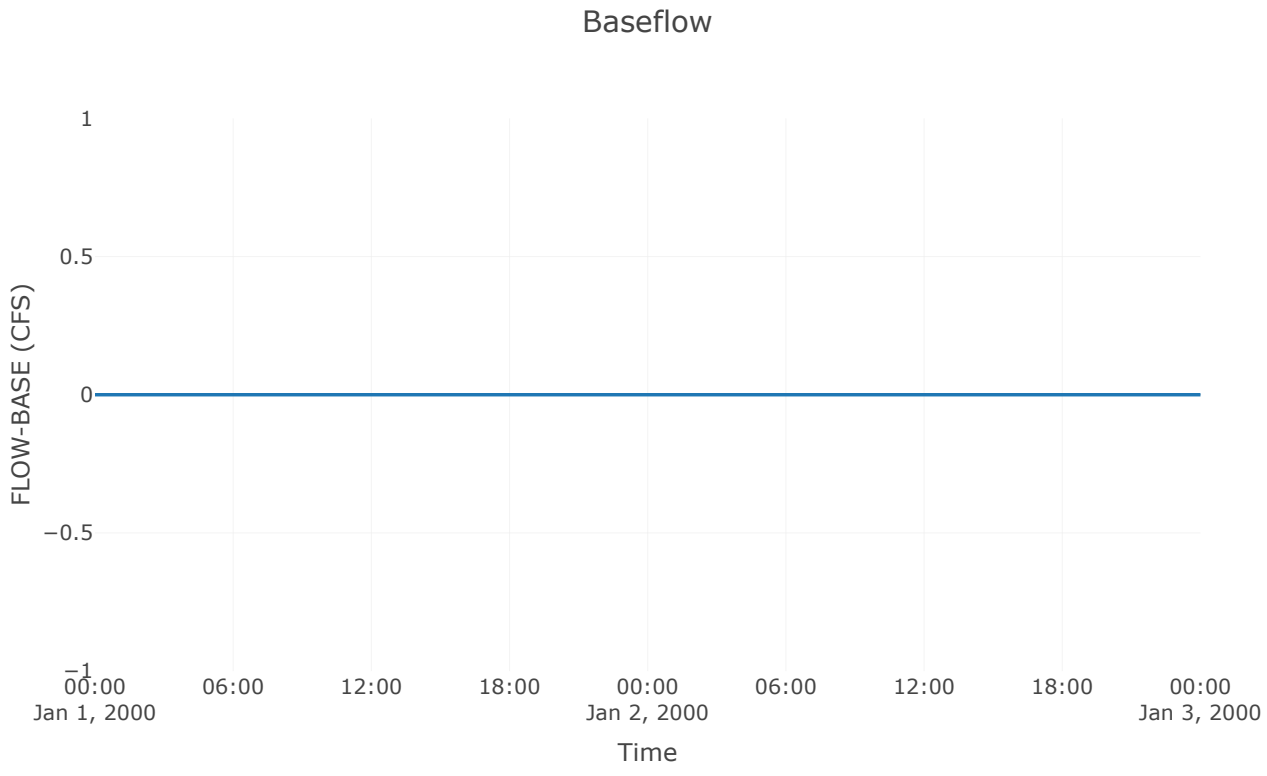
Cumulative Excess Precipitation

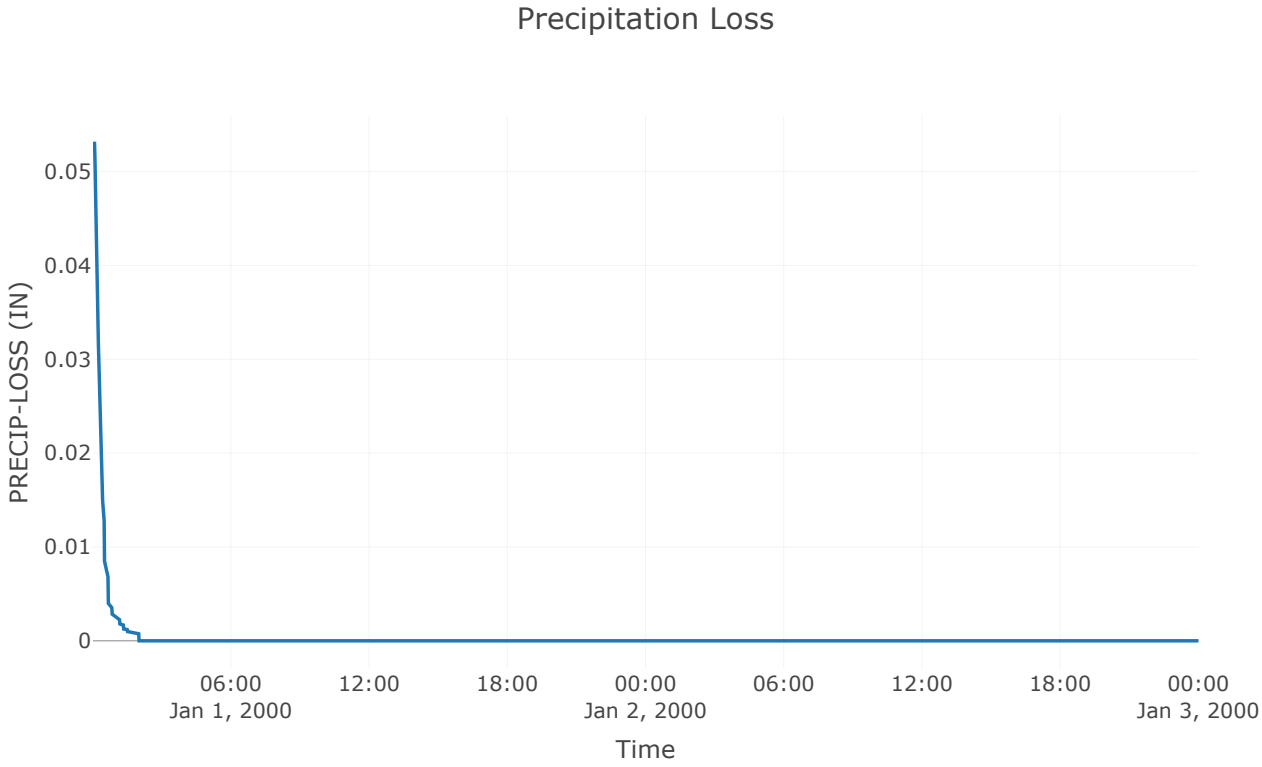


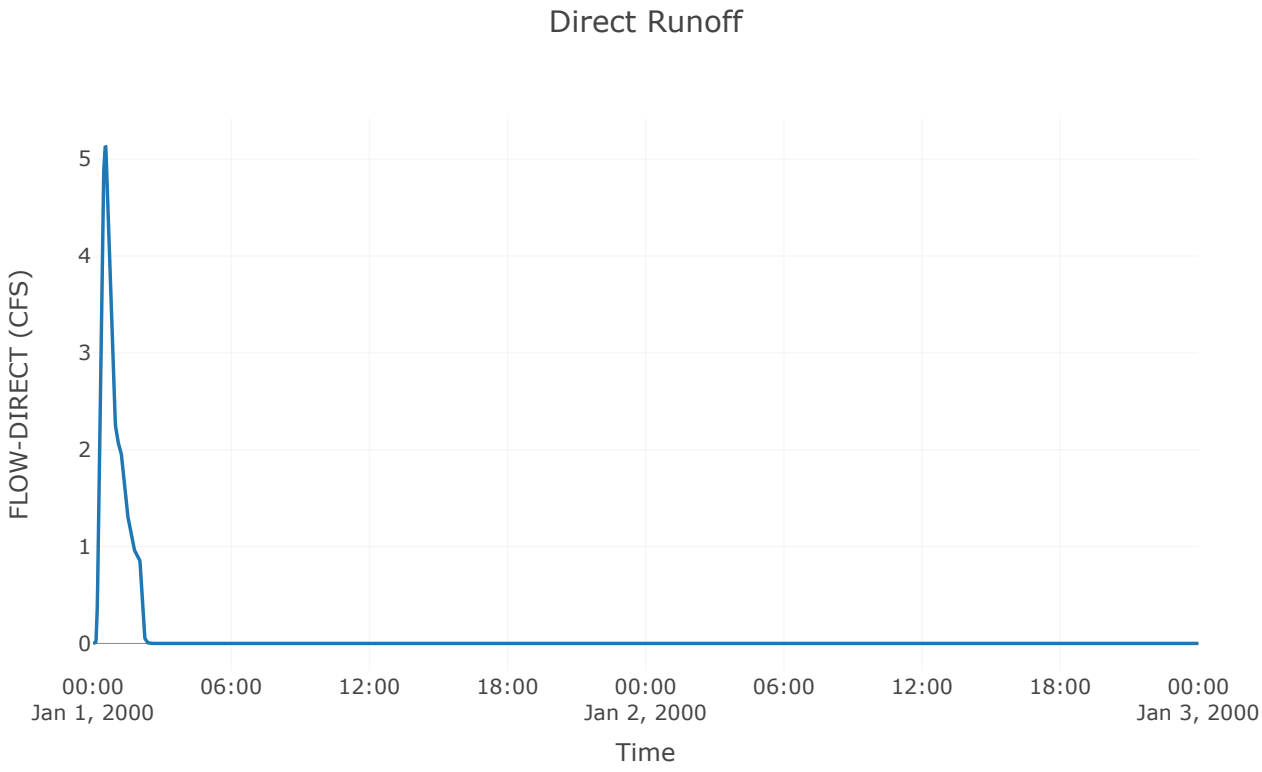

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

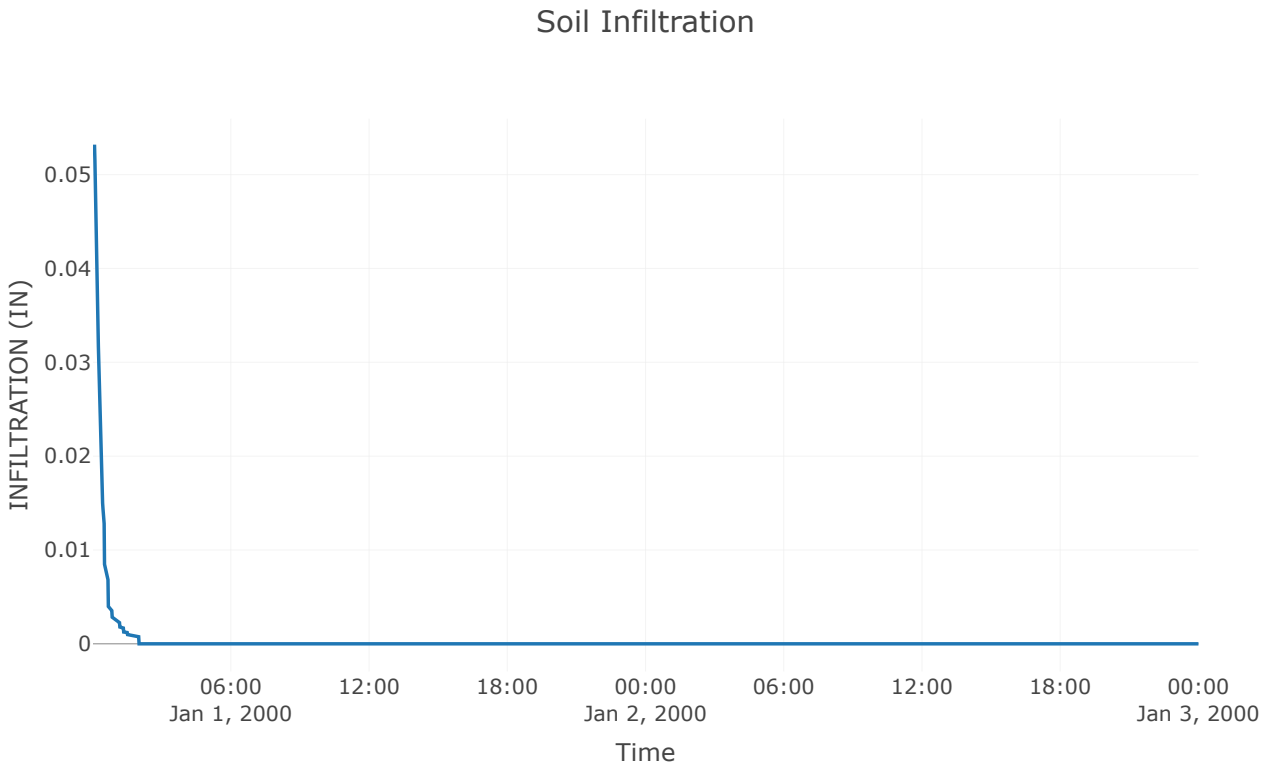

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

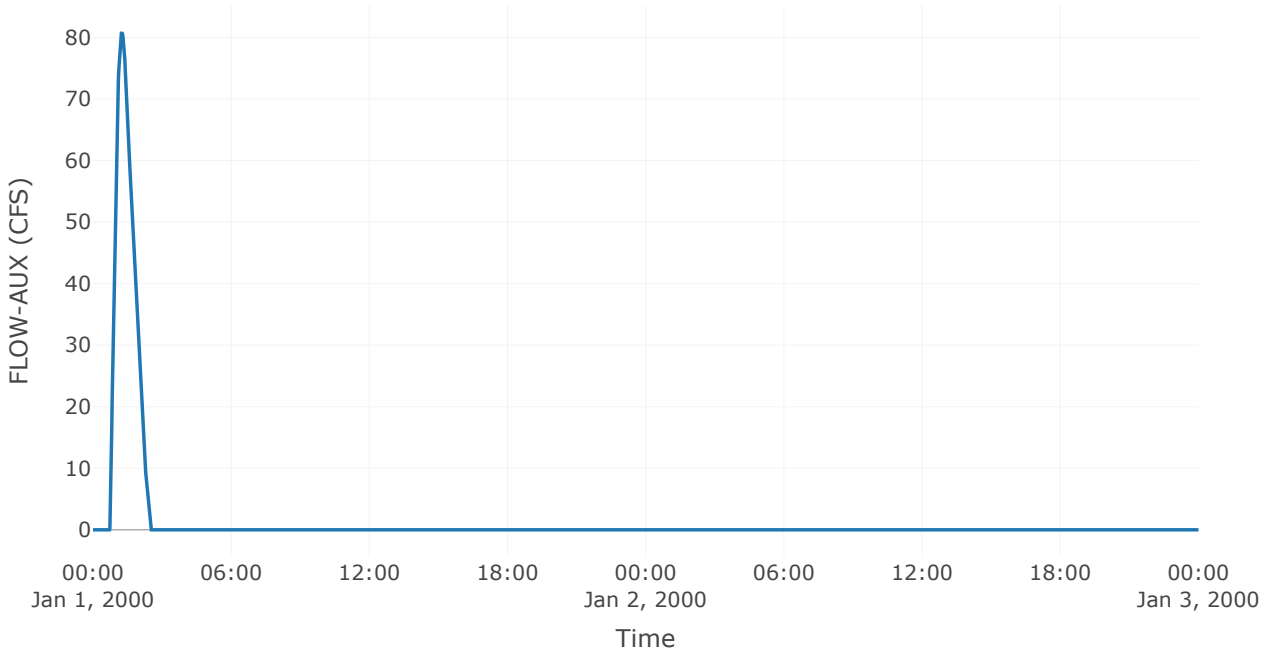

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

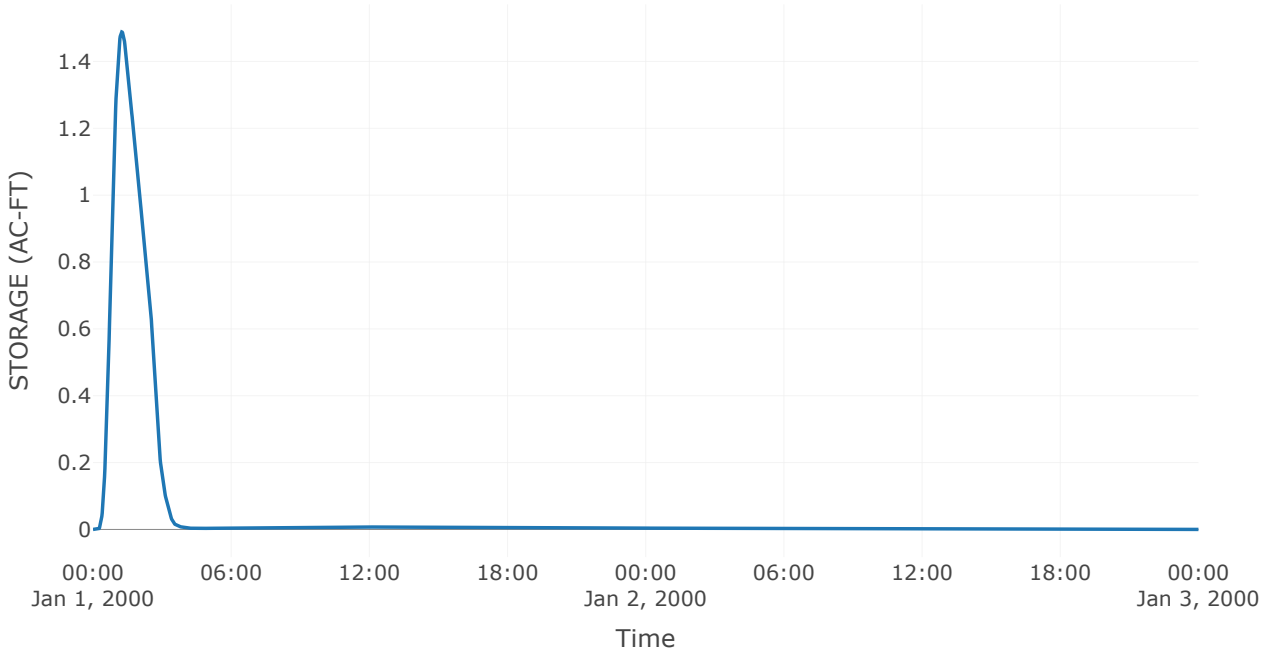
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	75.77
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.18
Peak Inflow (CFS)	159.8
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.4
Maximum Storage (AC - FT)	1.49
Peak Elevation (FT)	652.47
Discharge Volume (AC - FT)	17.24

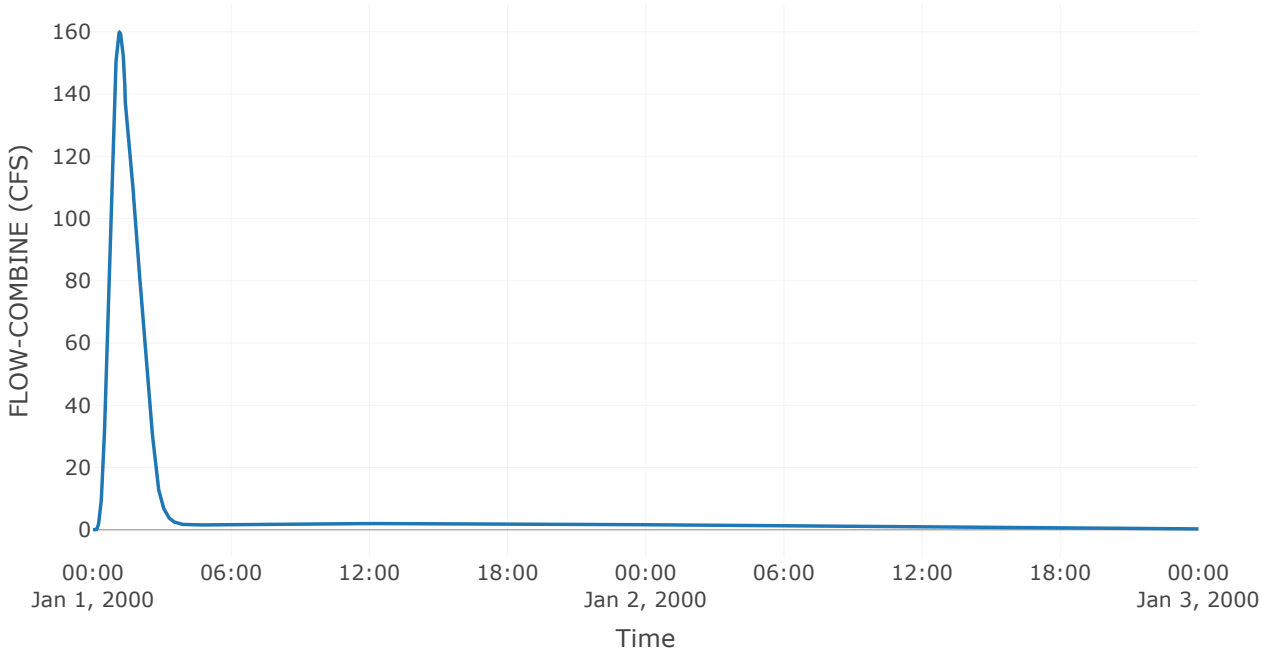
Auxiliary Outflow



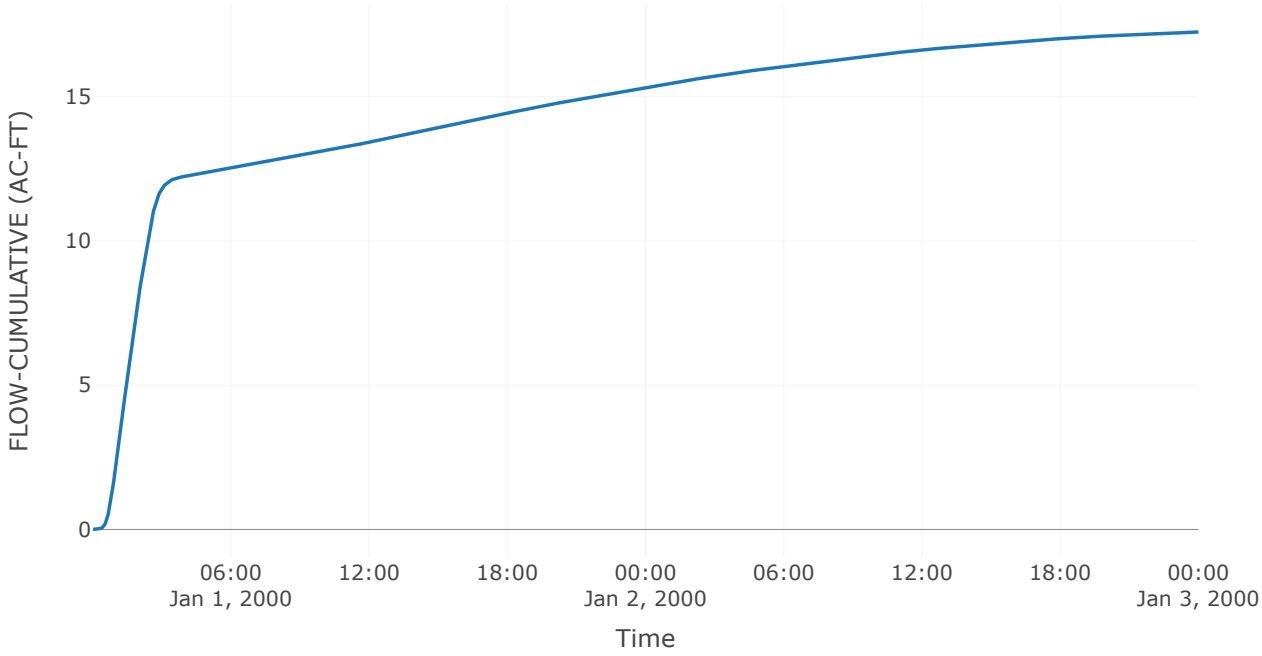
Storage

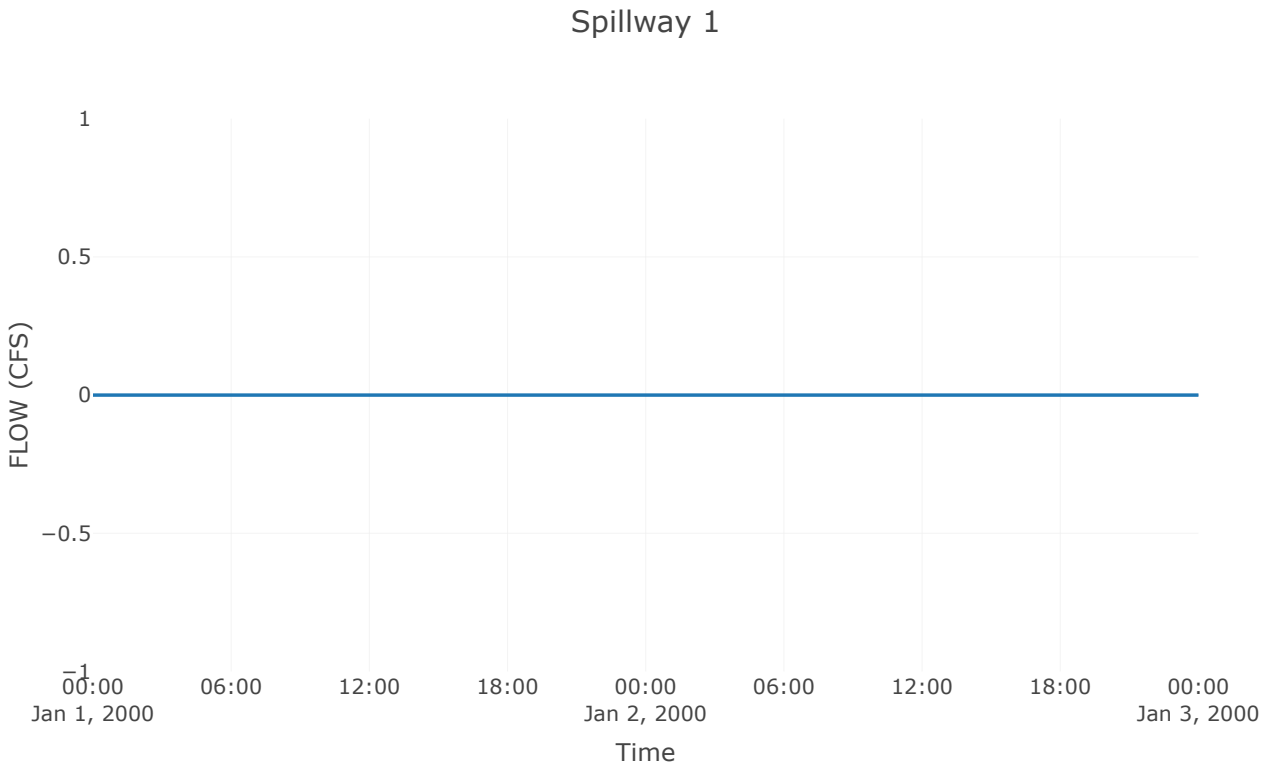


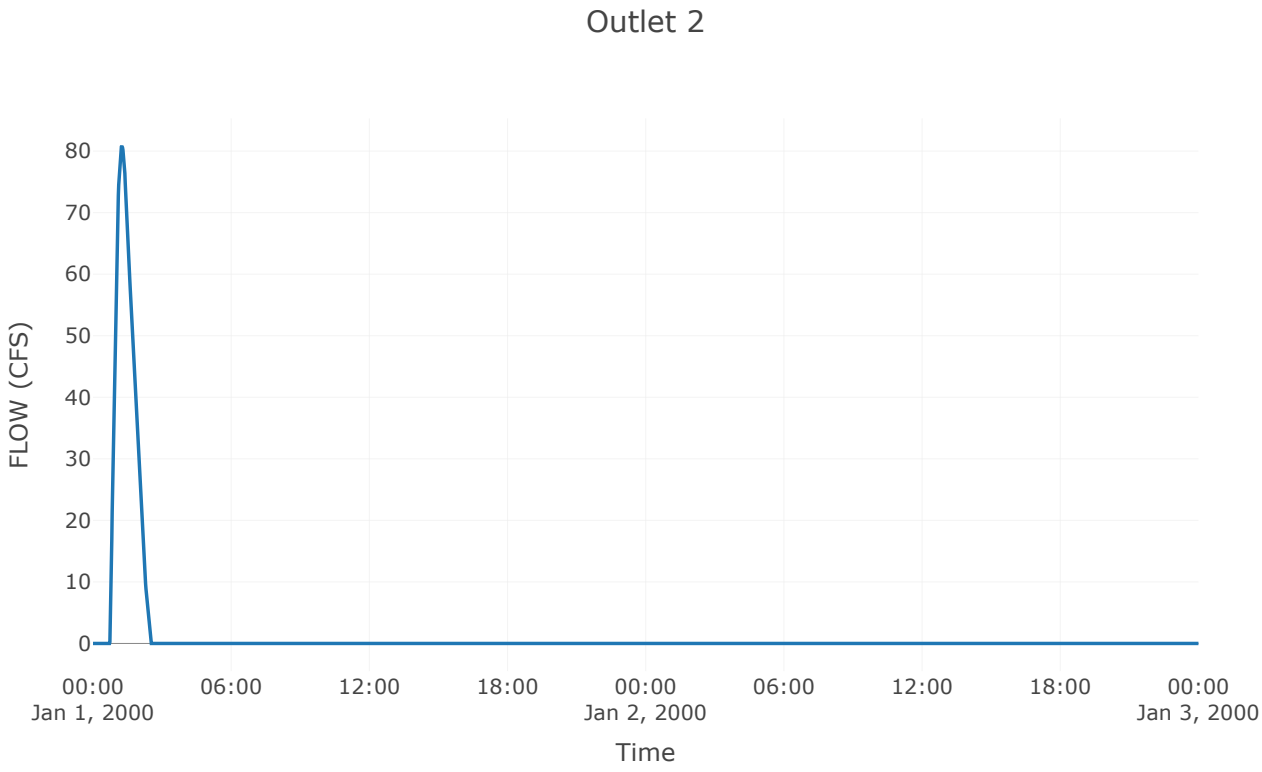
Combined Inflow



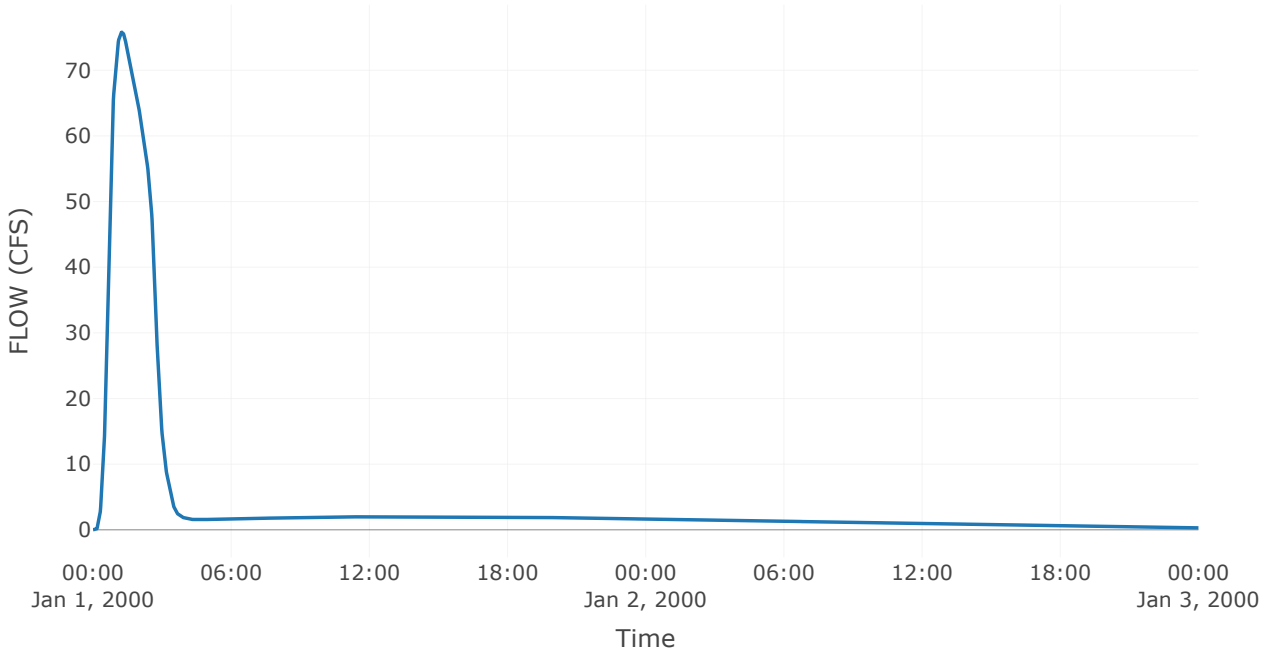
Cumulative Outflow



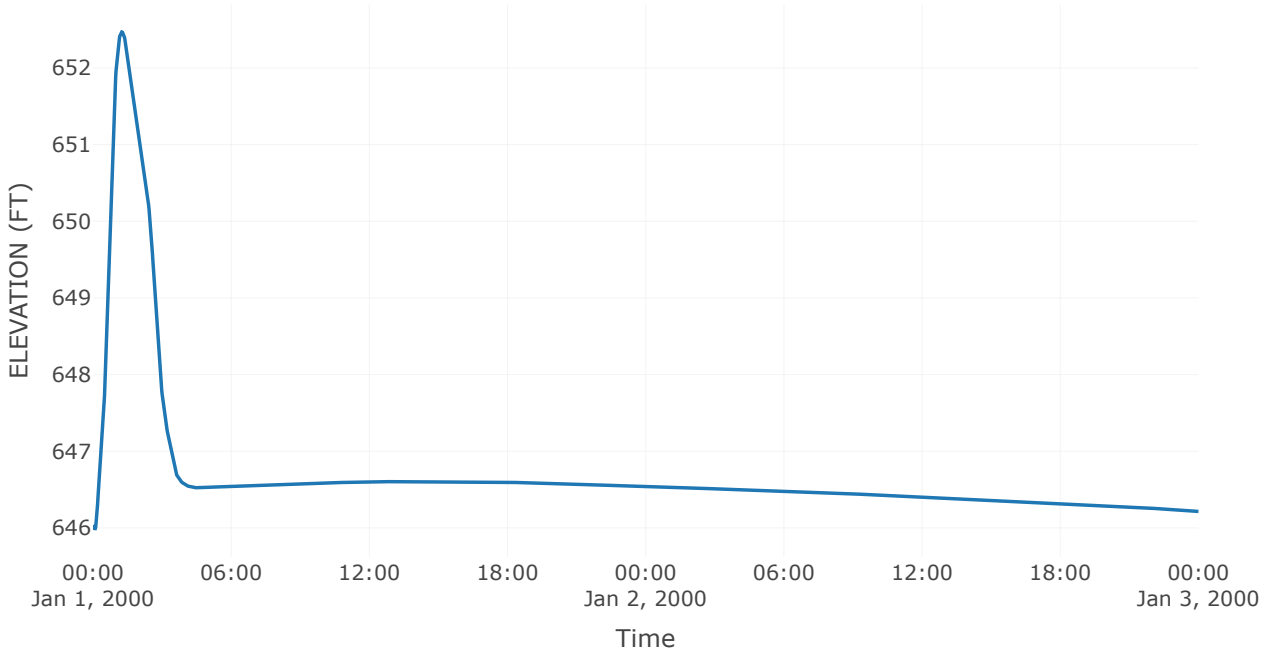

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

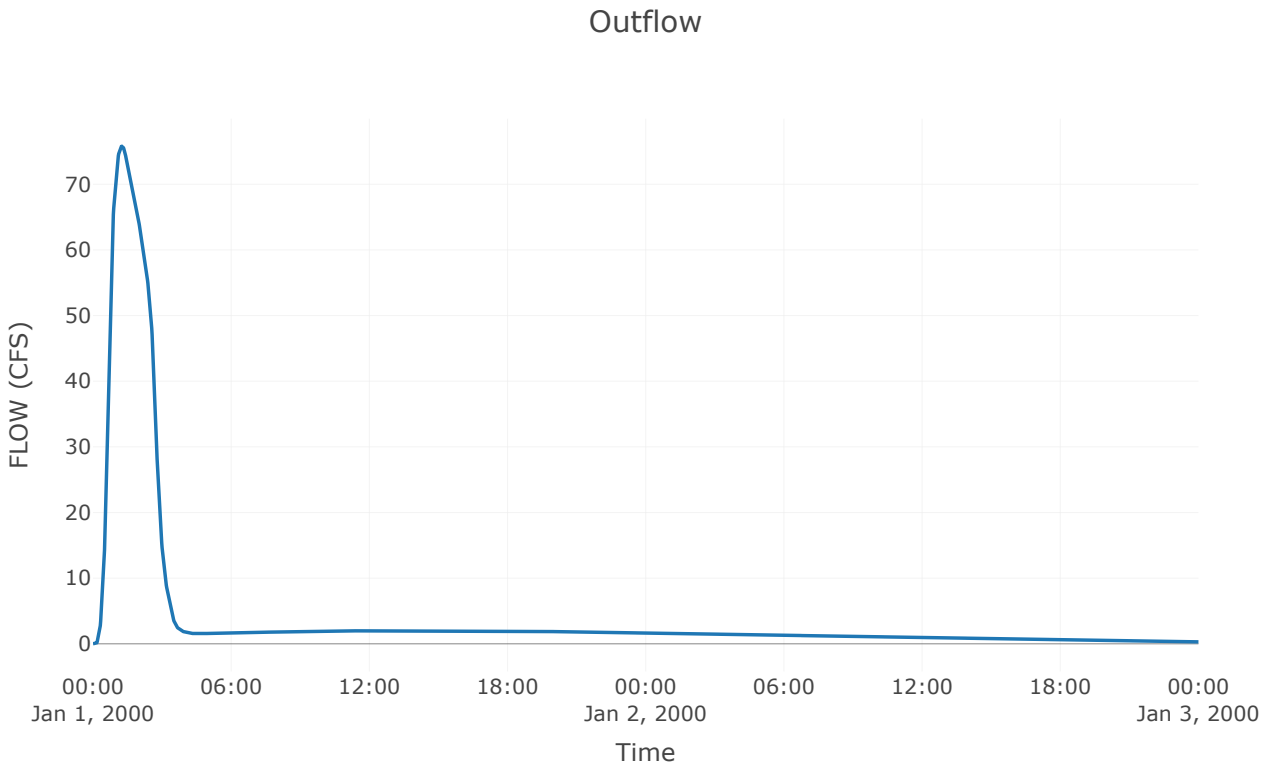

Outlet 2
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

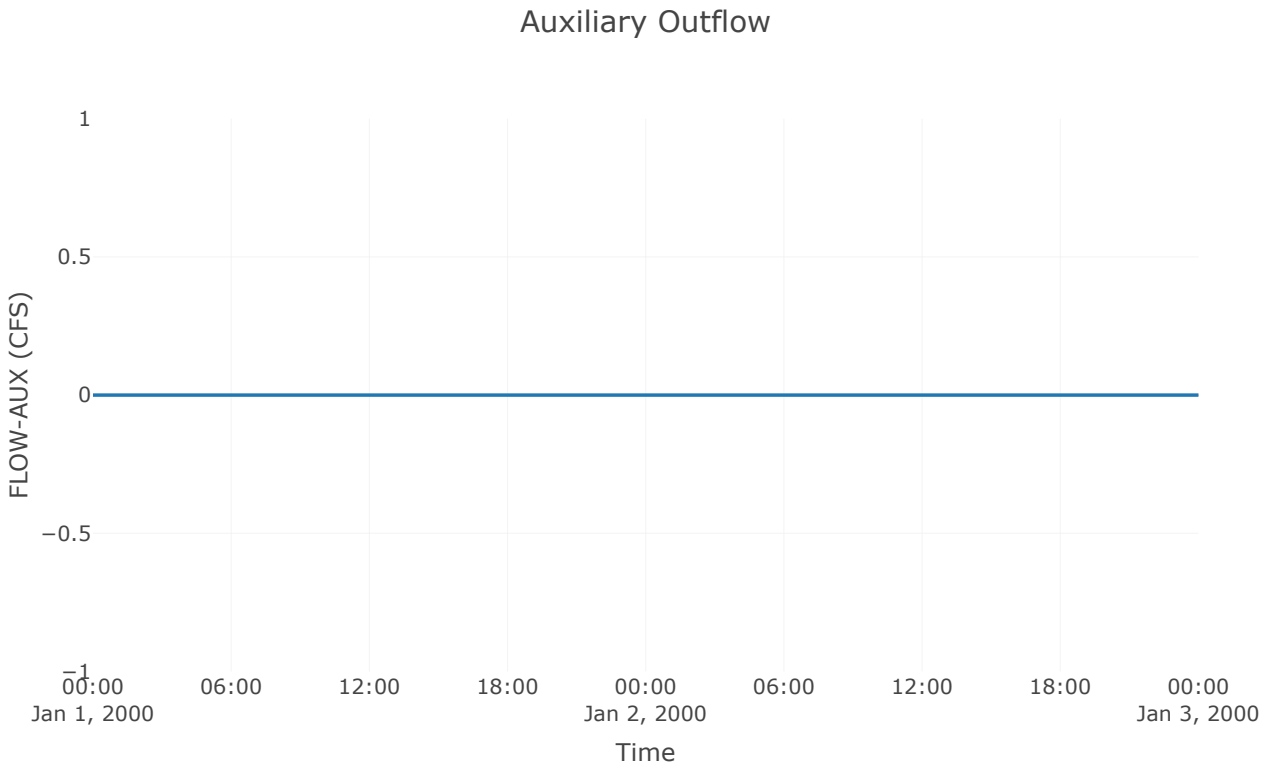


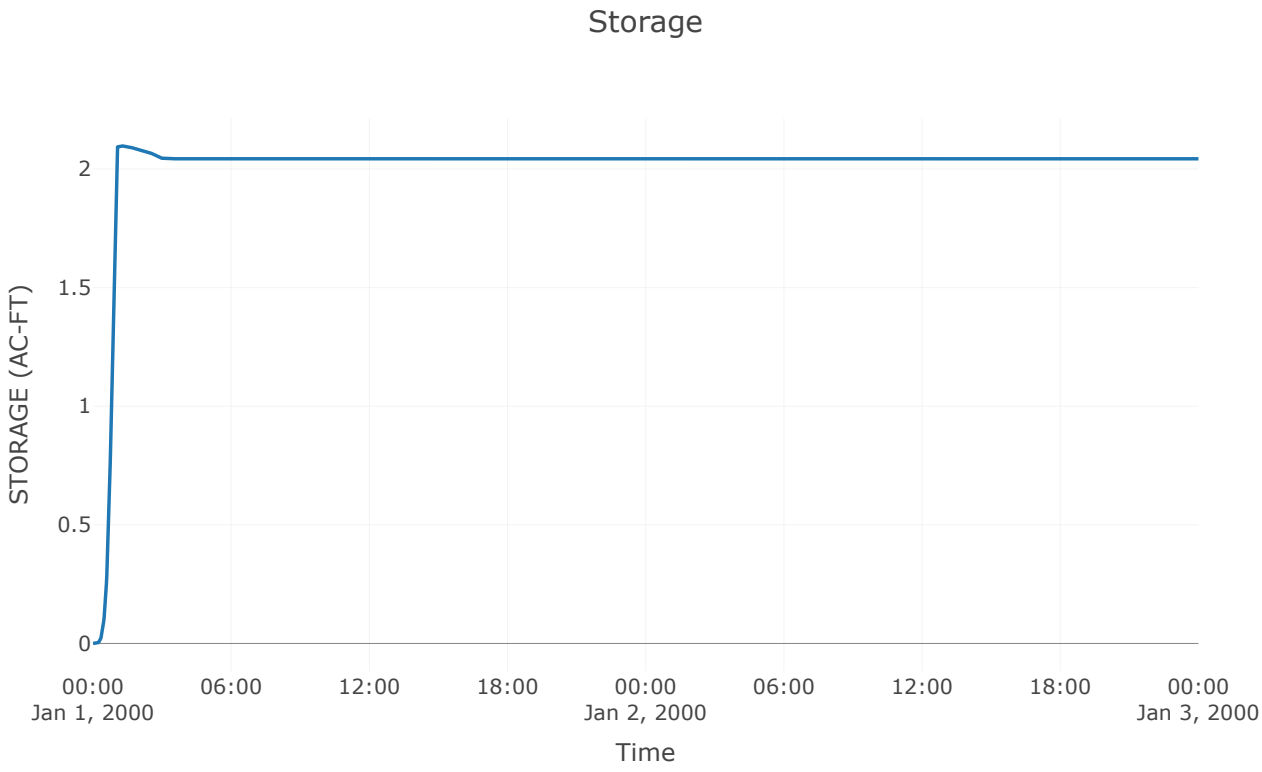

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

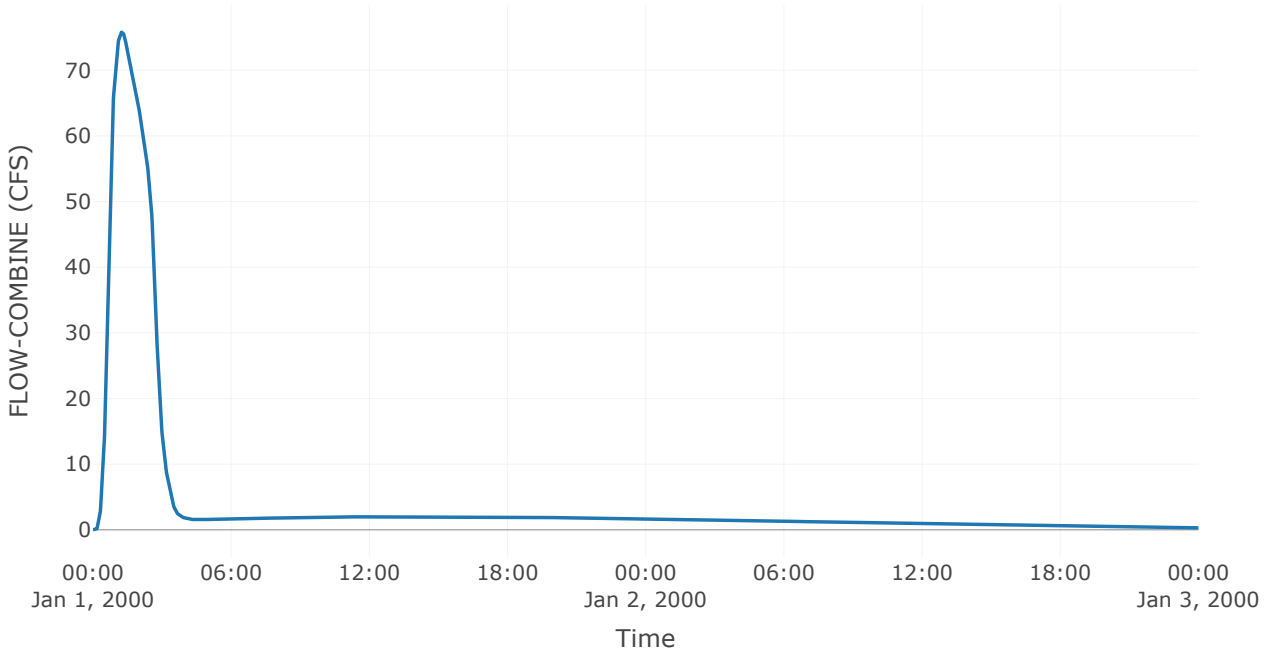
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03
Peak Inflow (CFS)	75.77
Time of Peak Inflow	01Jan2000, 01:15
Inflow Volume (AC - FT)	17.24
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	15.03

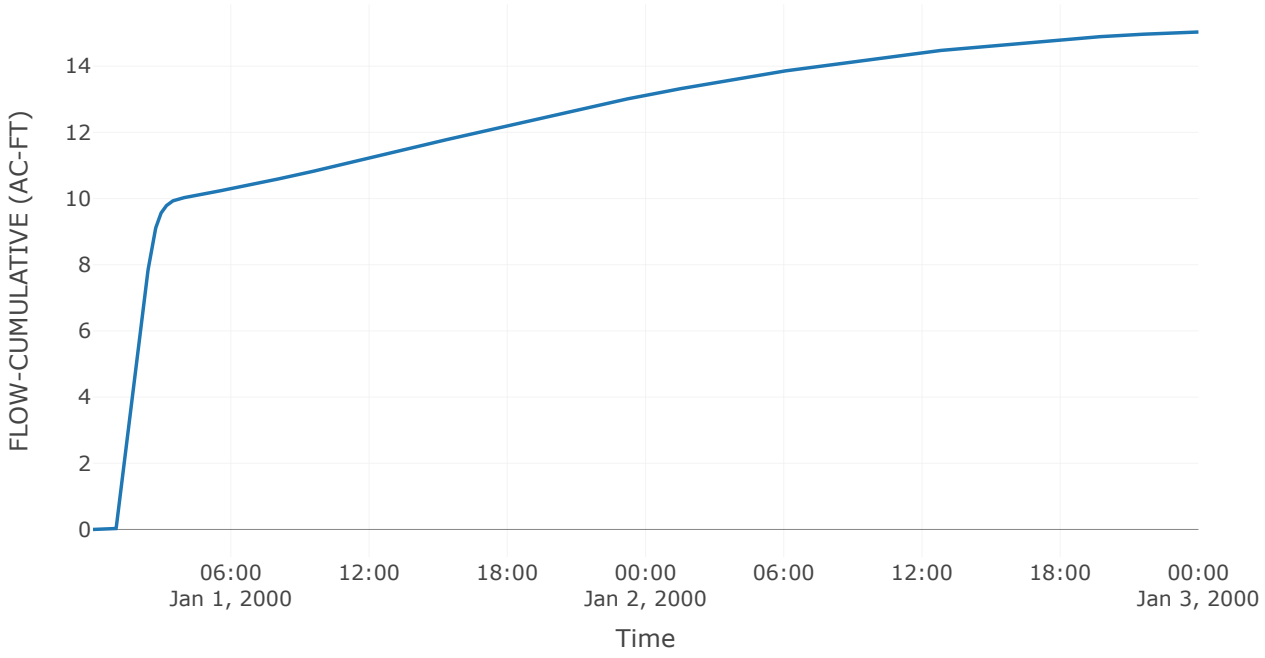

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

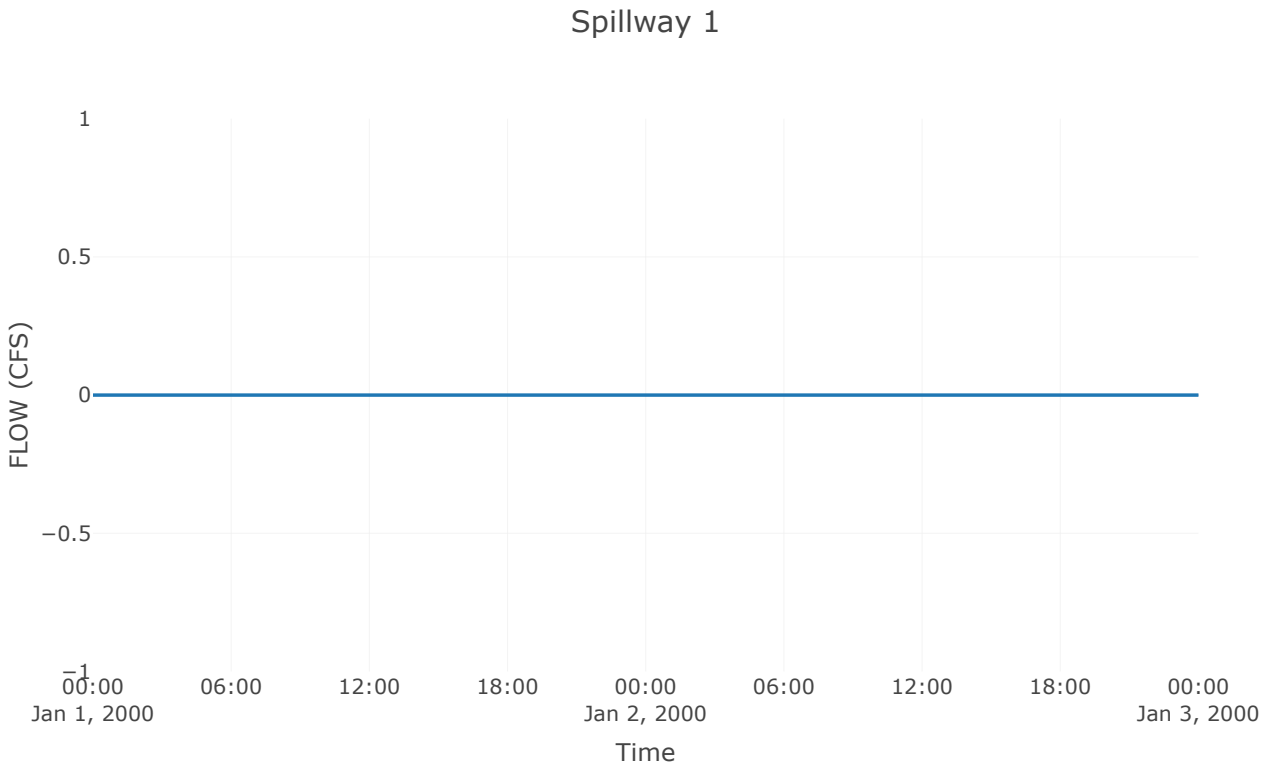

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

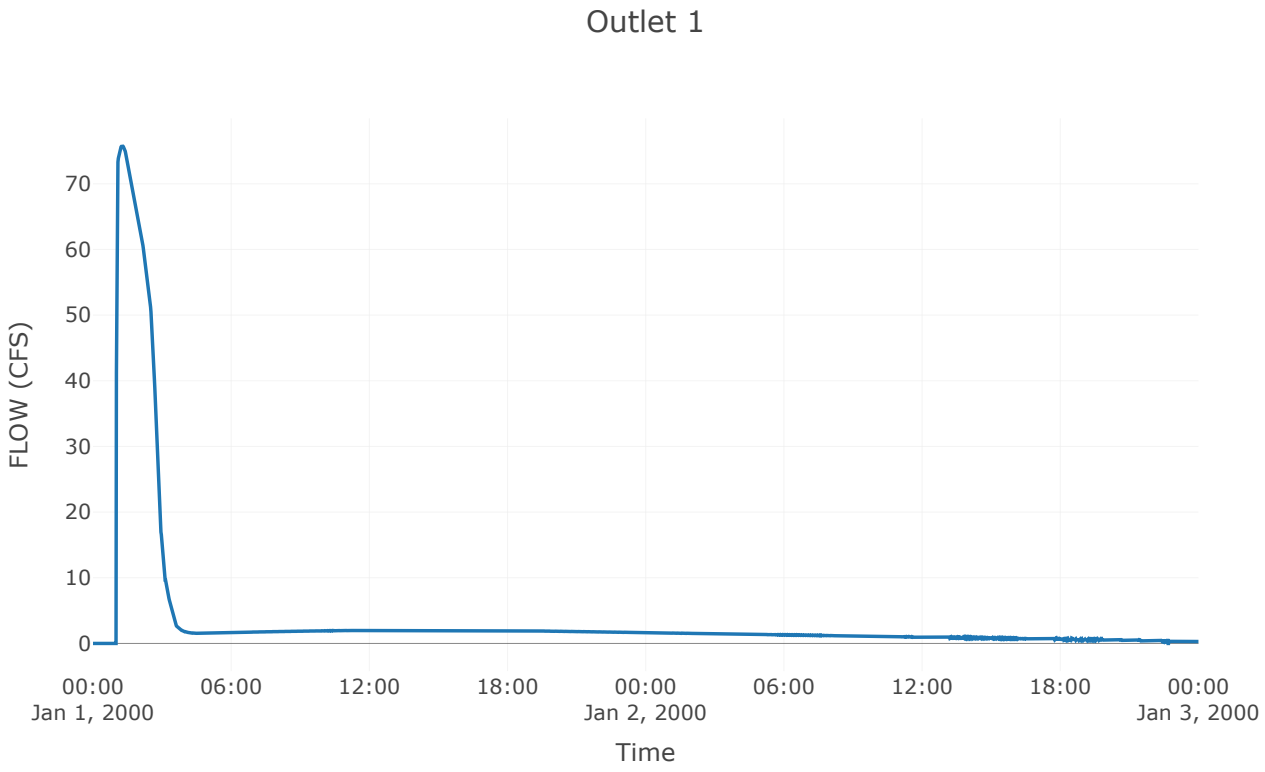
Combined Inflow



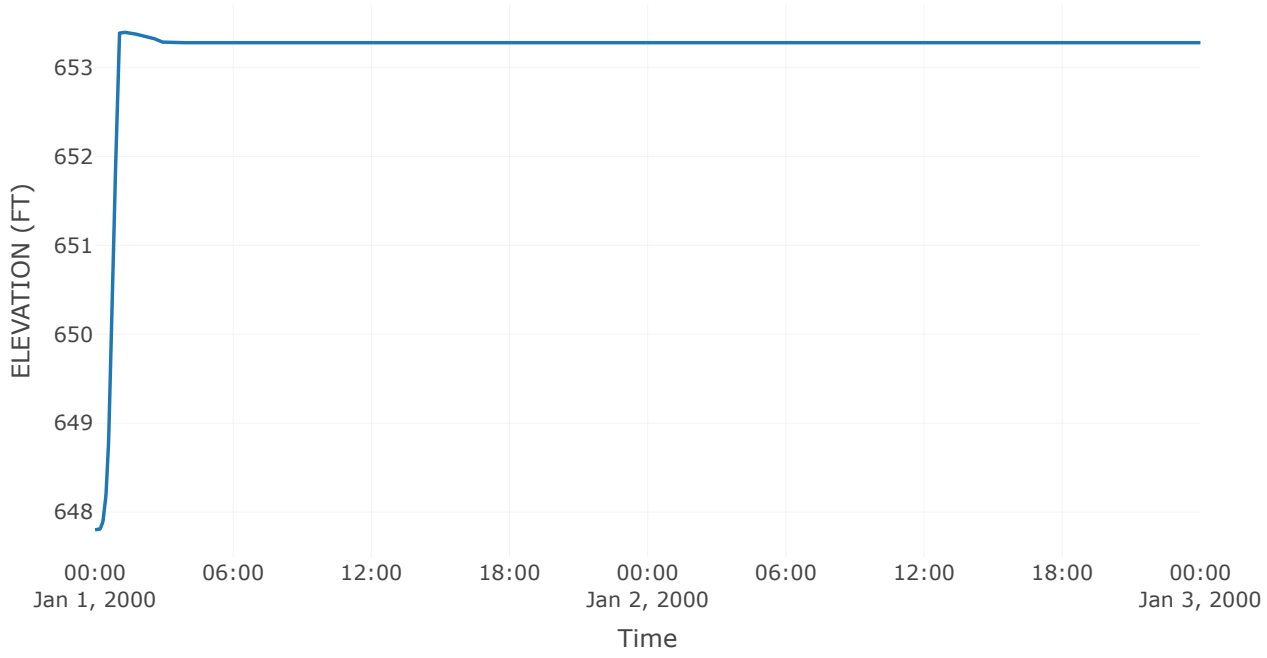
Cumulative Outflow



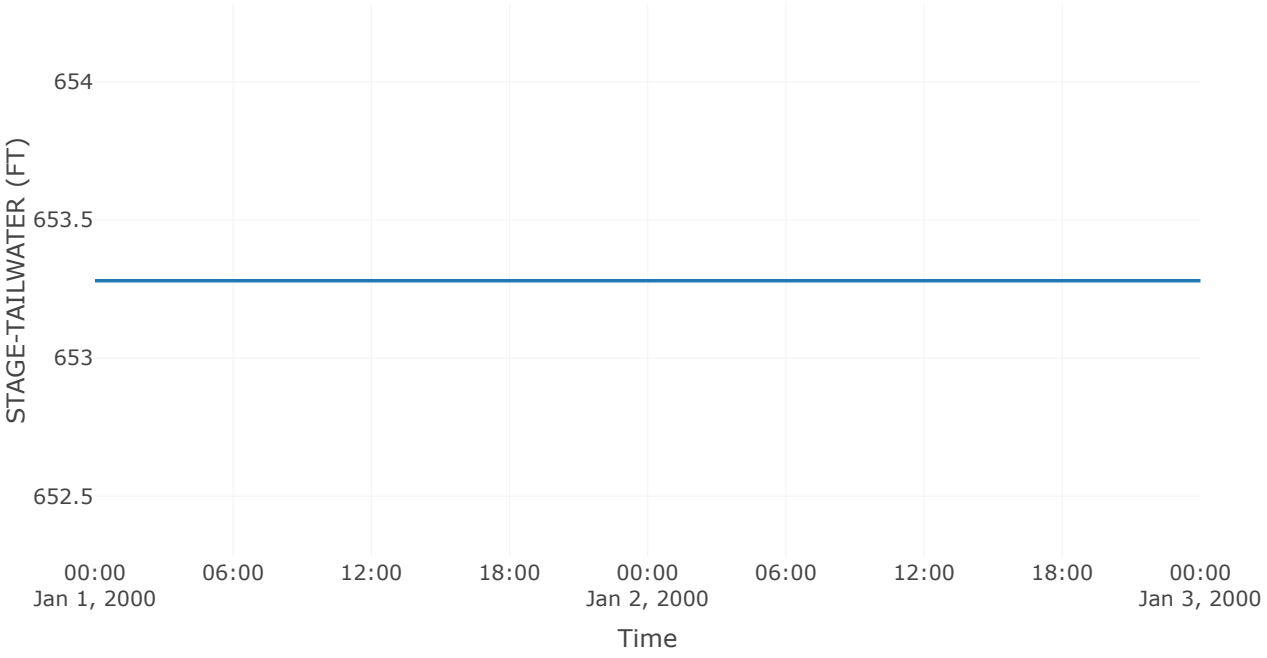

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

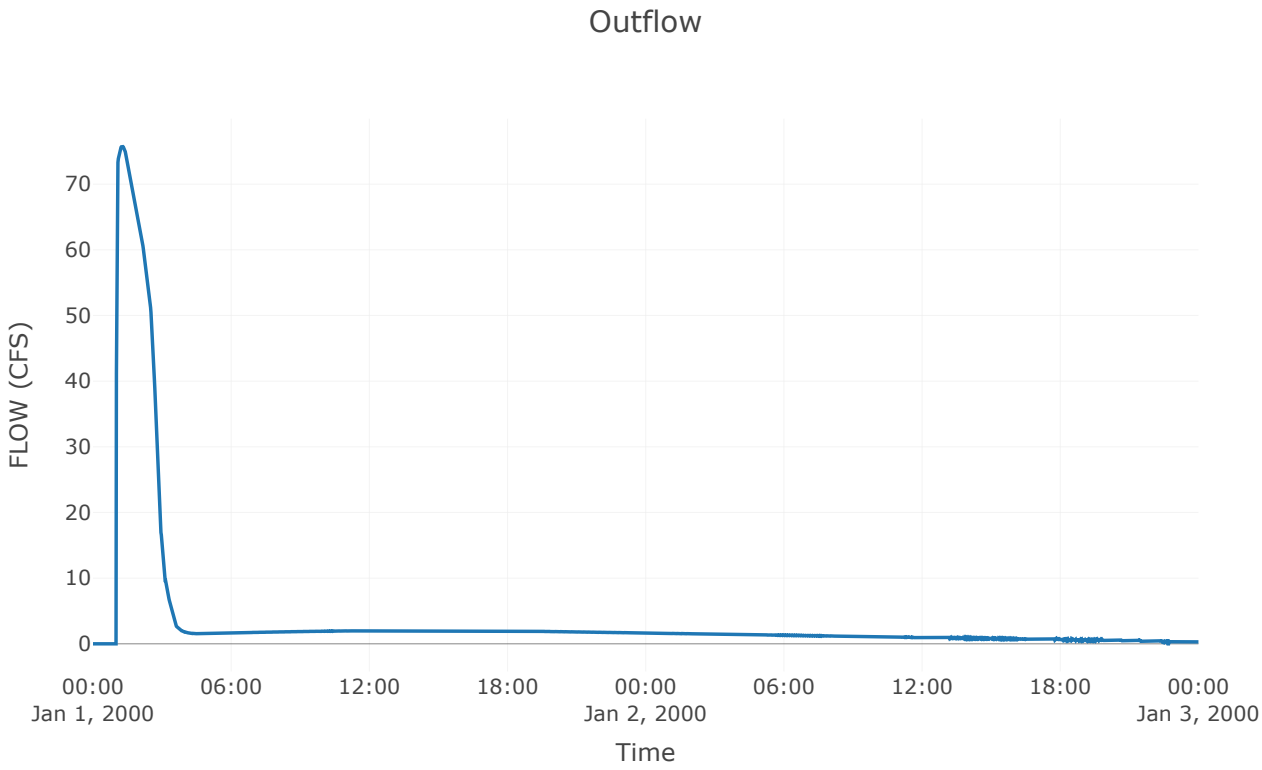

Outlet 1
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

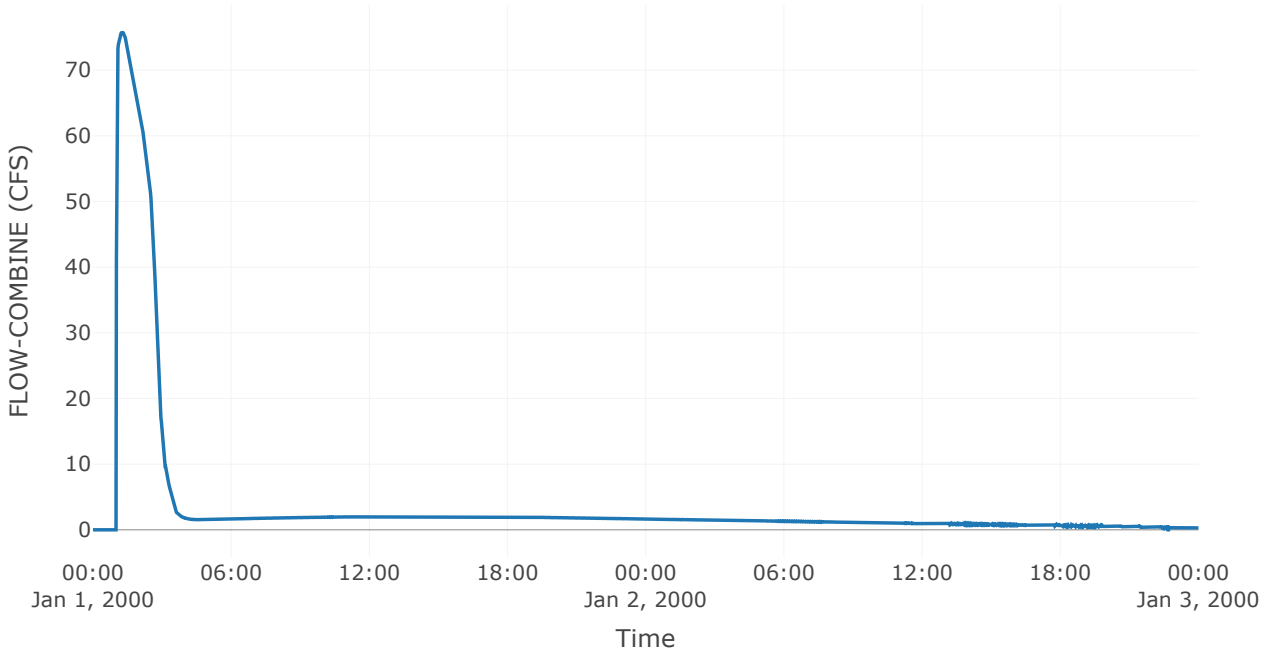



Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

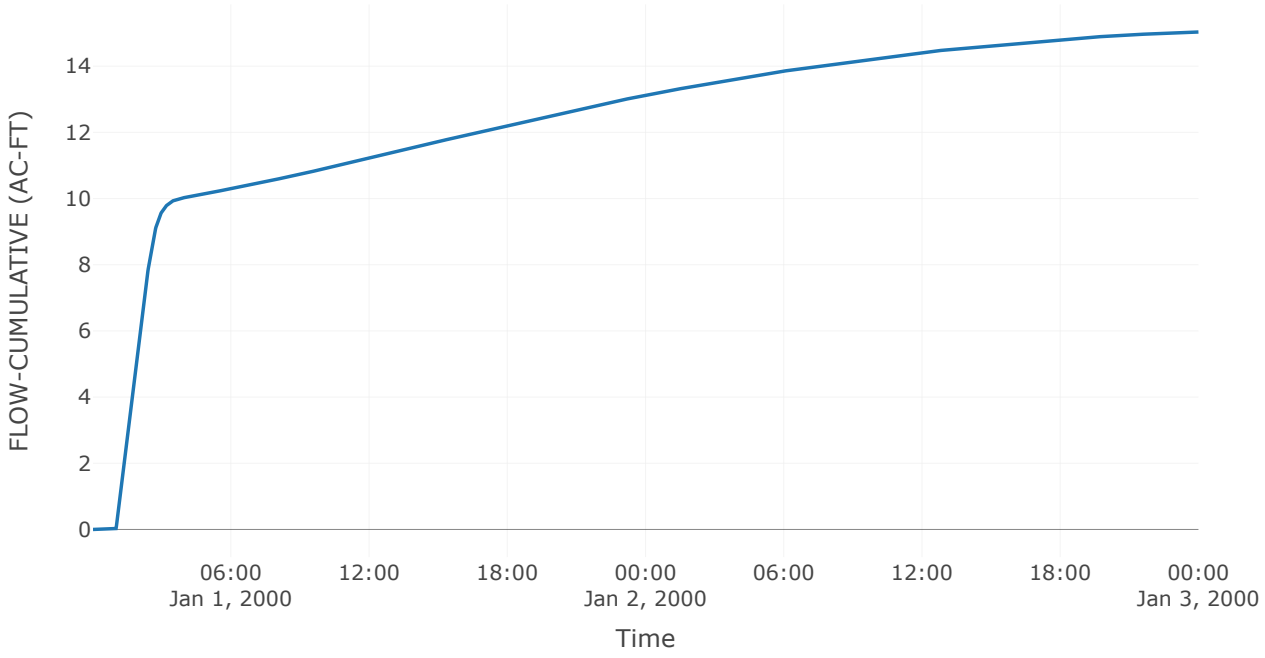
Sink: 55th Street Outlet

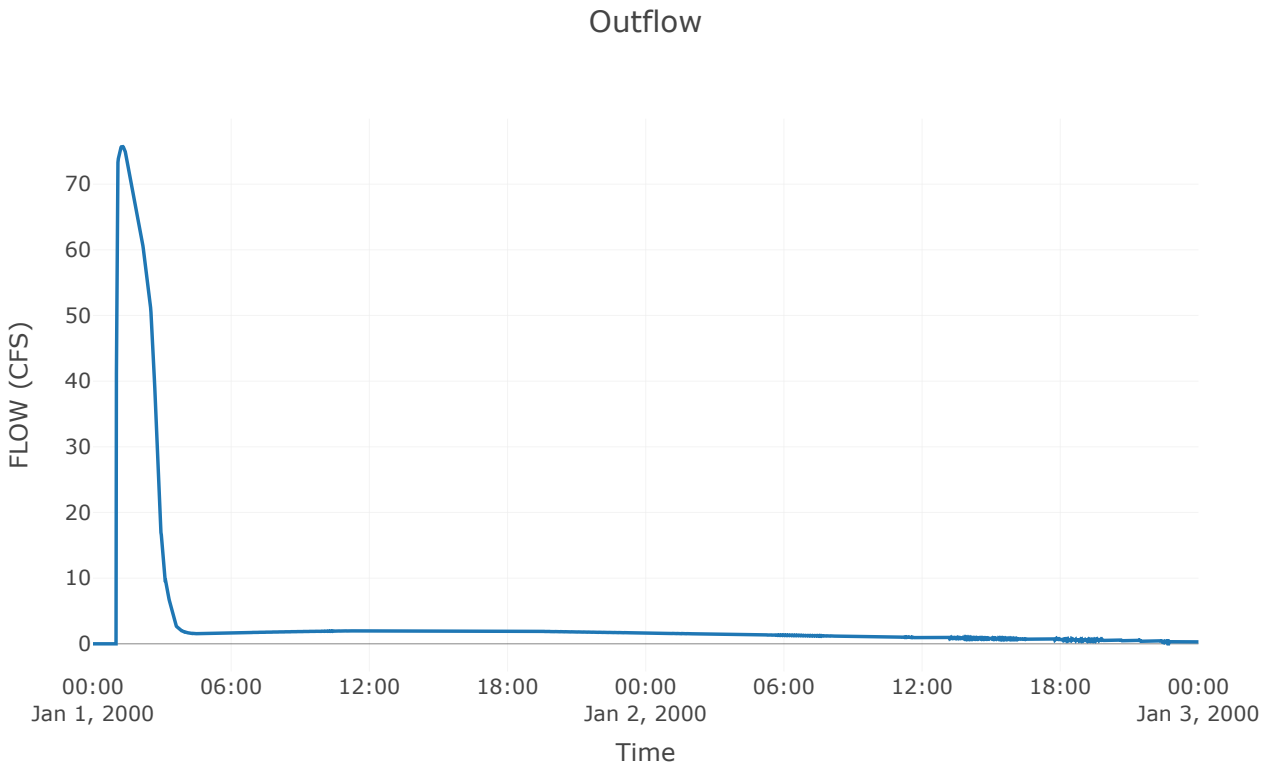
Results: 55th Street Outlet	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03

Combined Inflow



Cumulative Outflow




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:49

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	324.8	01Jan2000, 01:01	2.48
Prop Storage West of Wolf Rd	0.27	324.78	01Jan2000, 01:01	2.48
Prop On - Site	0	13.96	01Jan2000, 00:19	2.76
Proposed Basin C	0.27	95.13	01Jan2000, 01:08	1.37
Existing Basin A & B	0.27	95.08	01Jan2000, 01:09	1.21

55th Street Outlet	0.27	95.08	01Jan2000, 01:09	1.21

Subbasin: On-Site Trib 1

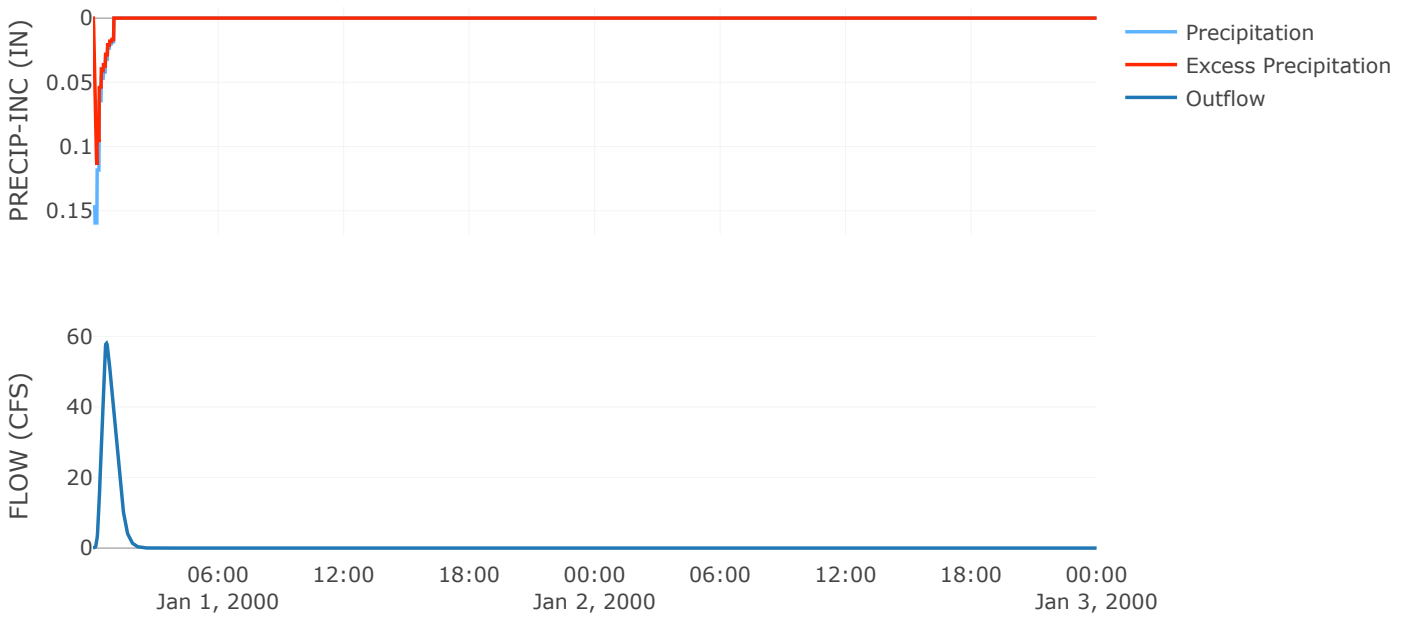
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

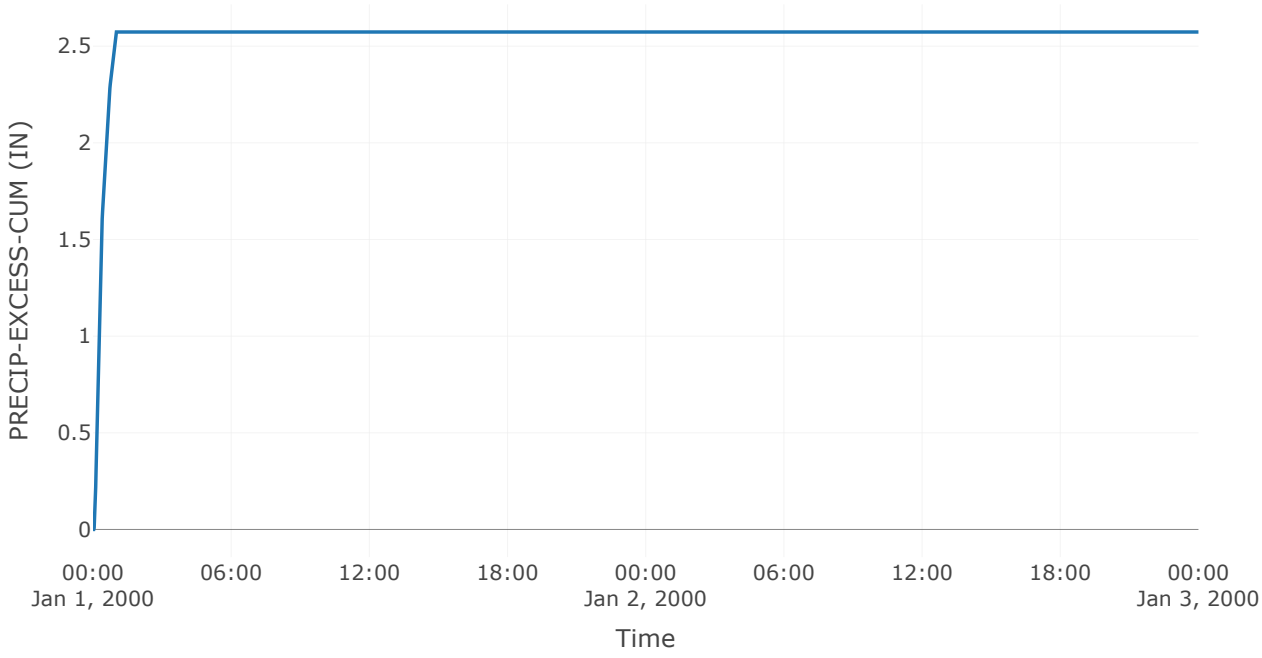
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

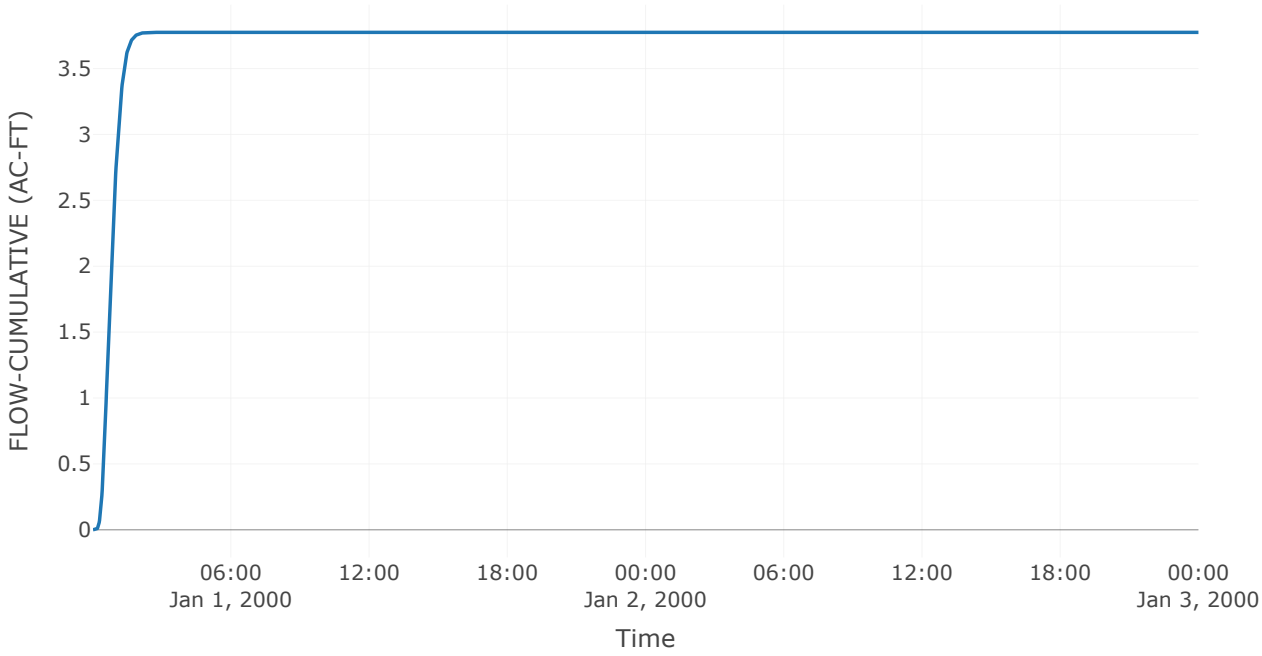
Precipitation and Outflow



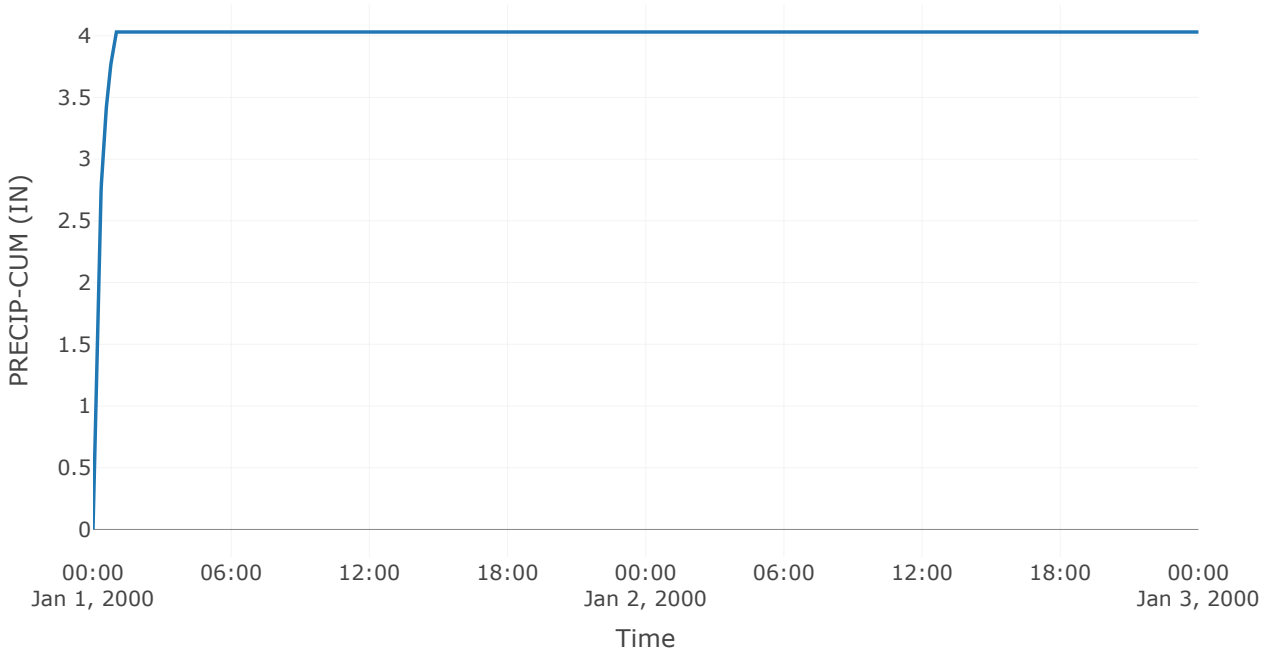
Cumulative Excess Precipitation

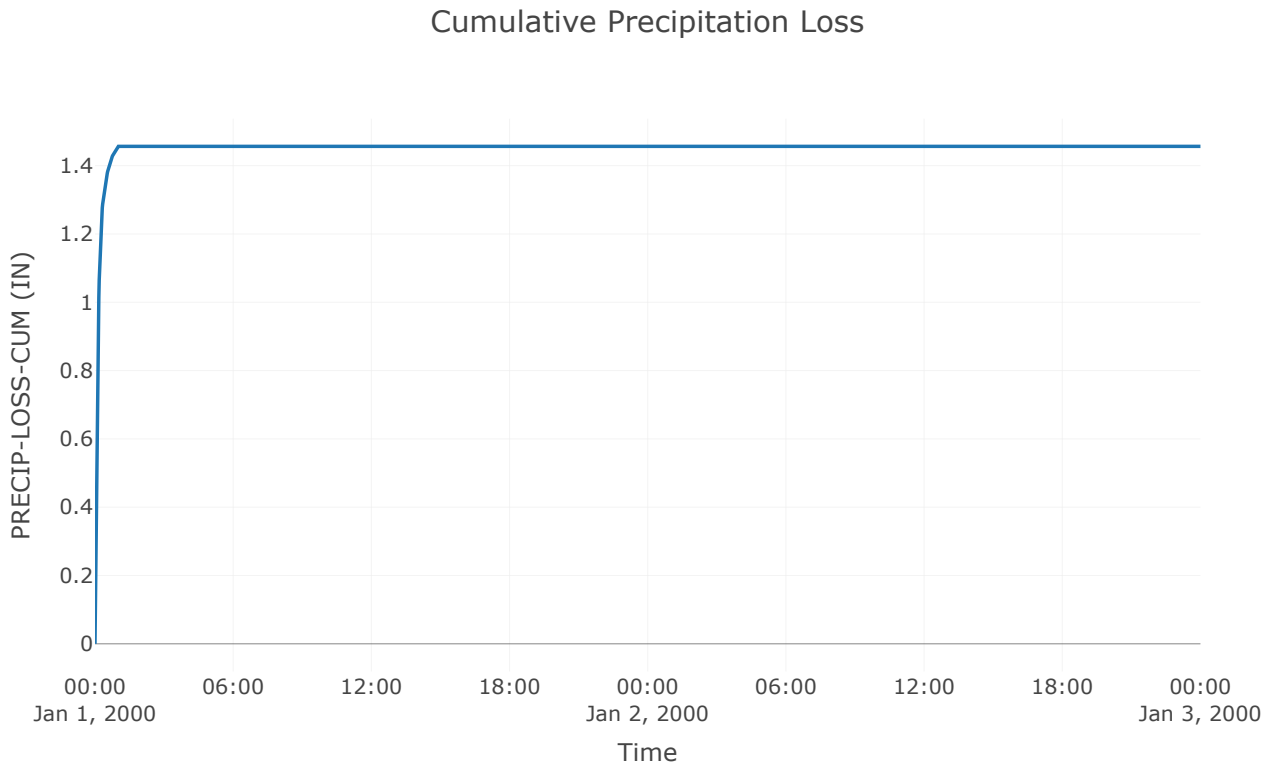


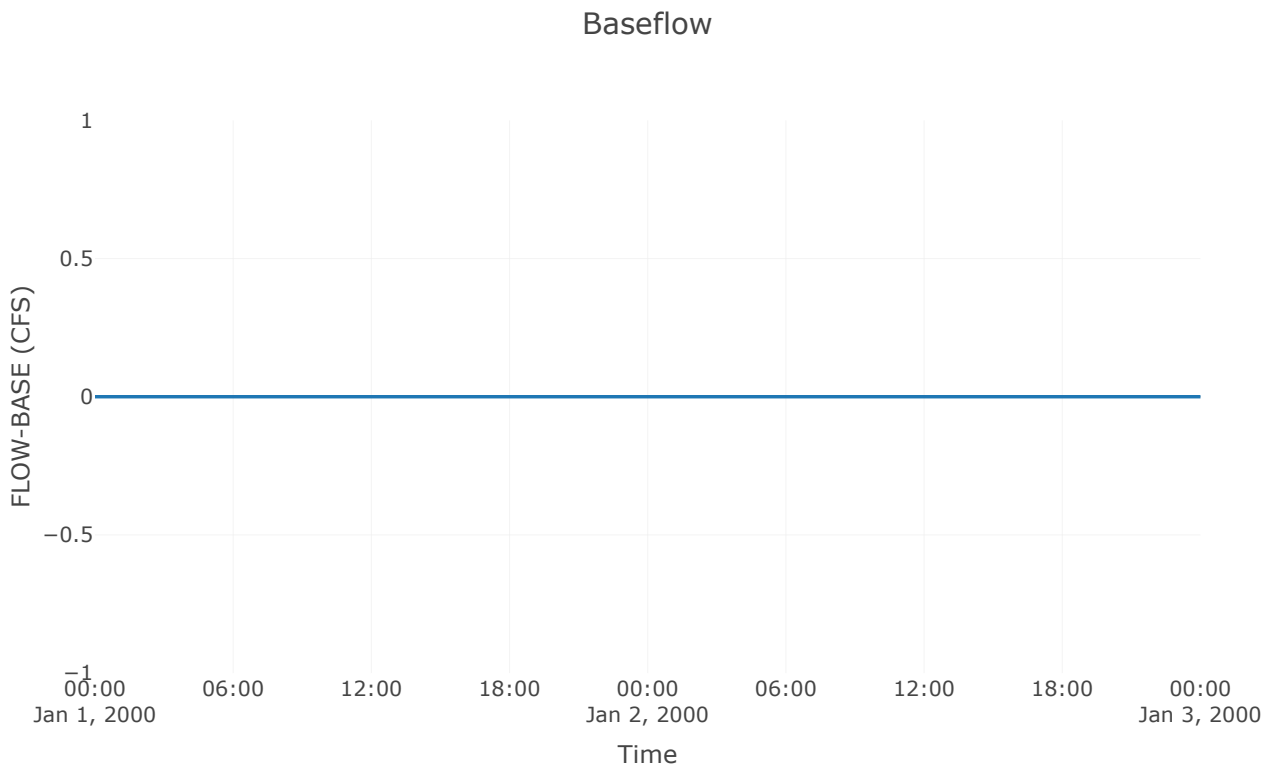
Cumulative Outflow

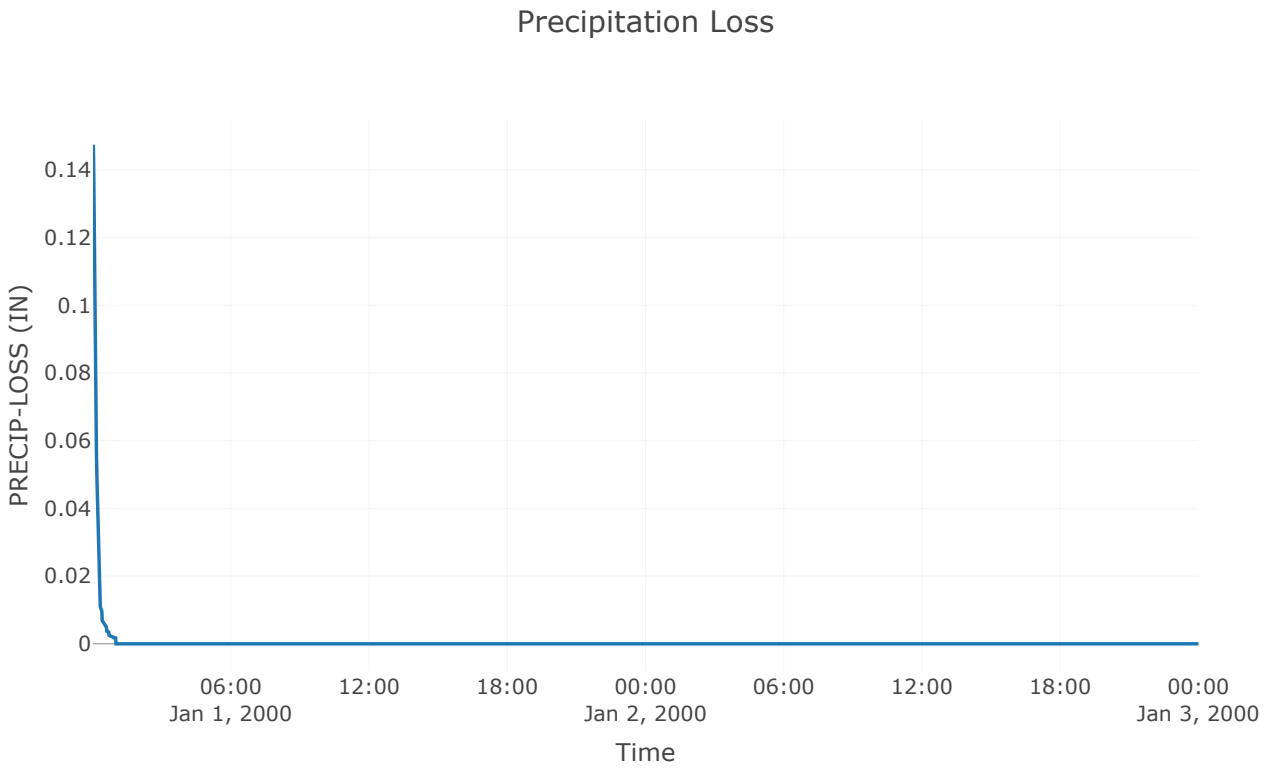


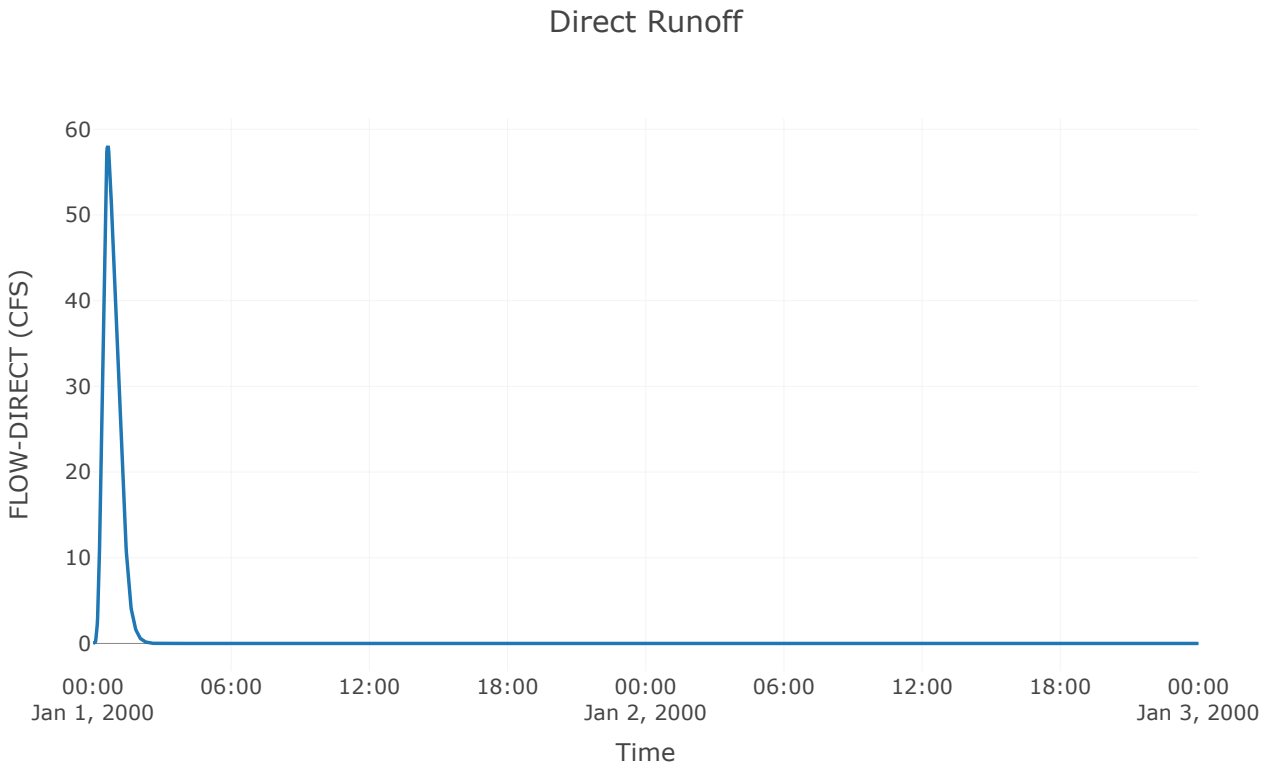
Cumulative Precipitation

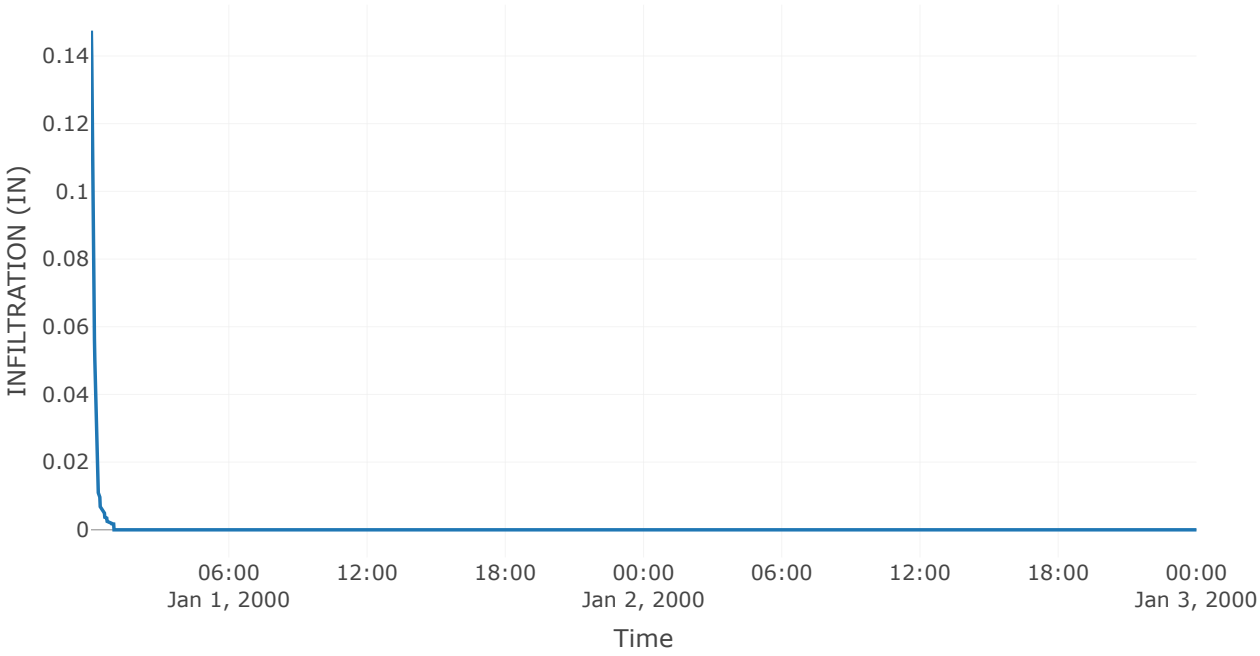



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

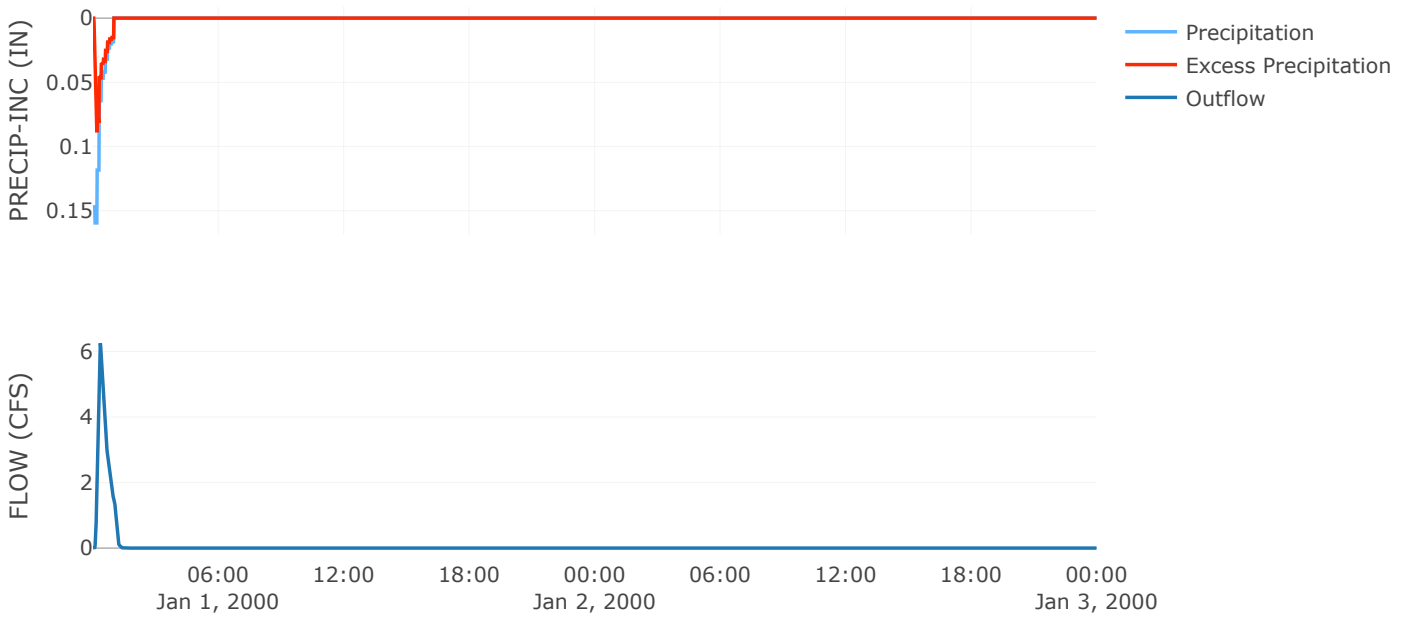
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

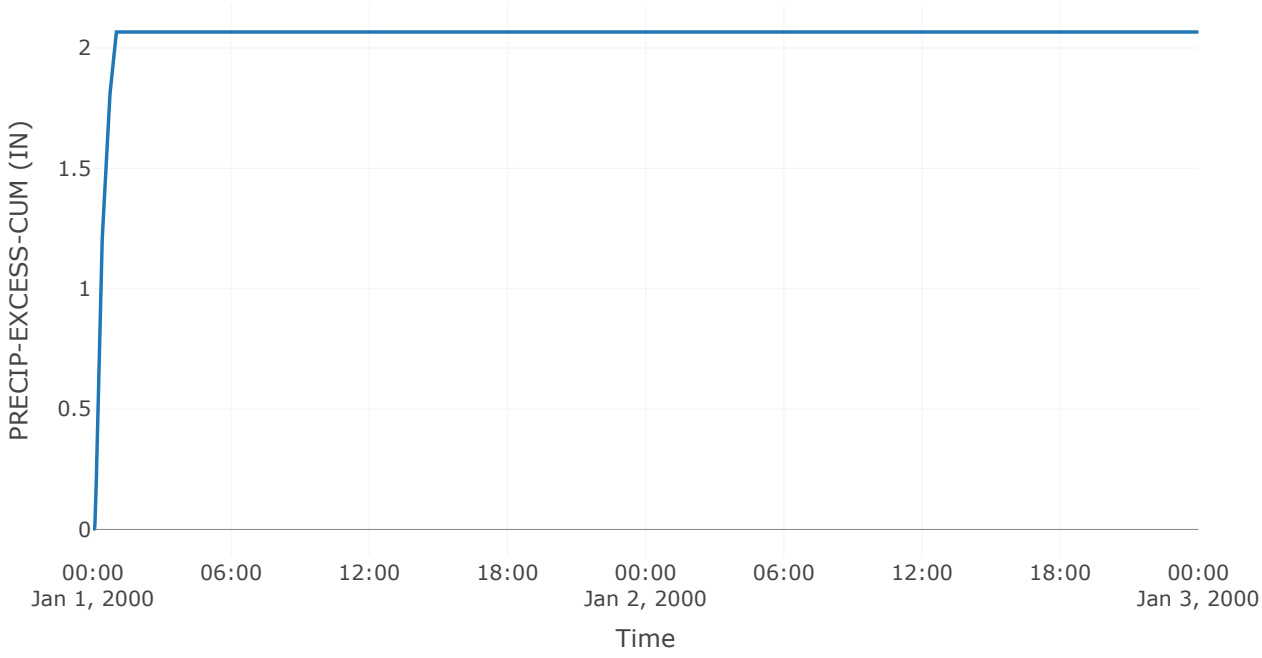
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

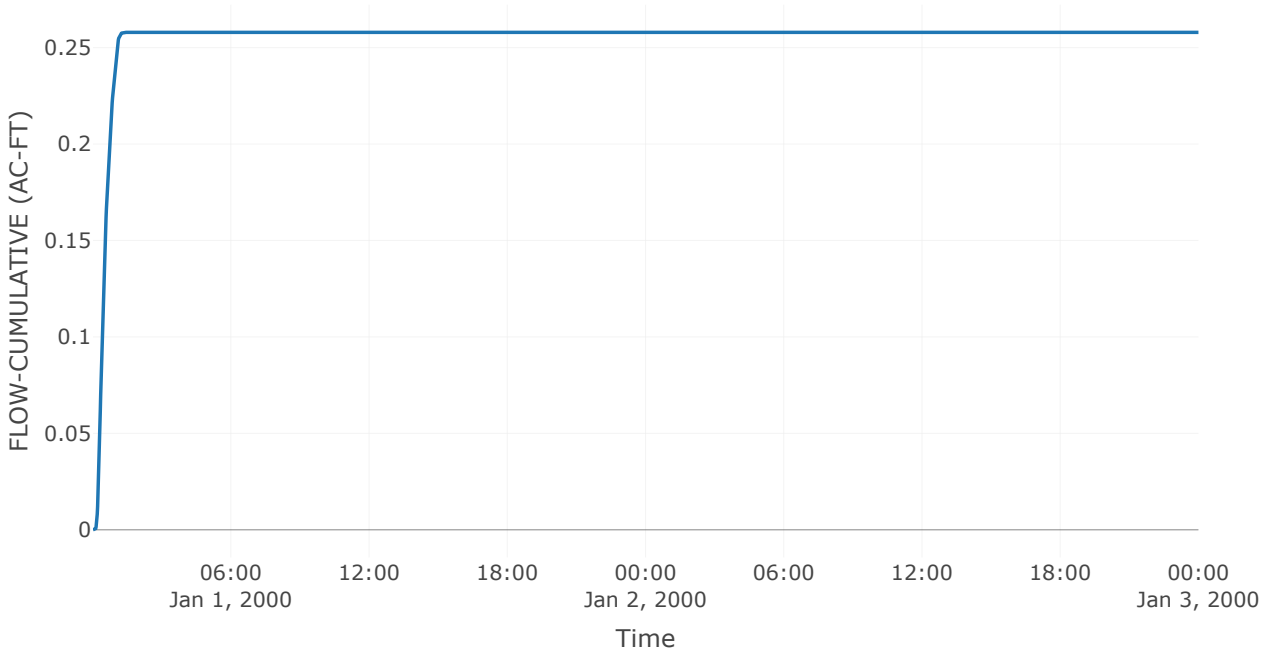
Precipitation and Outflow



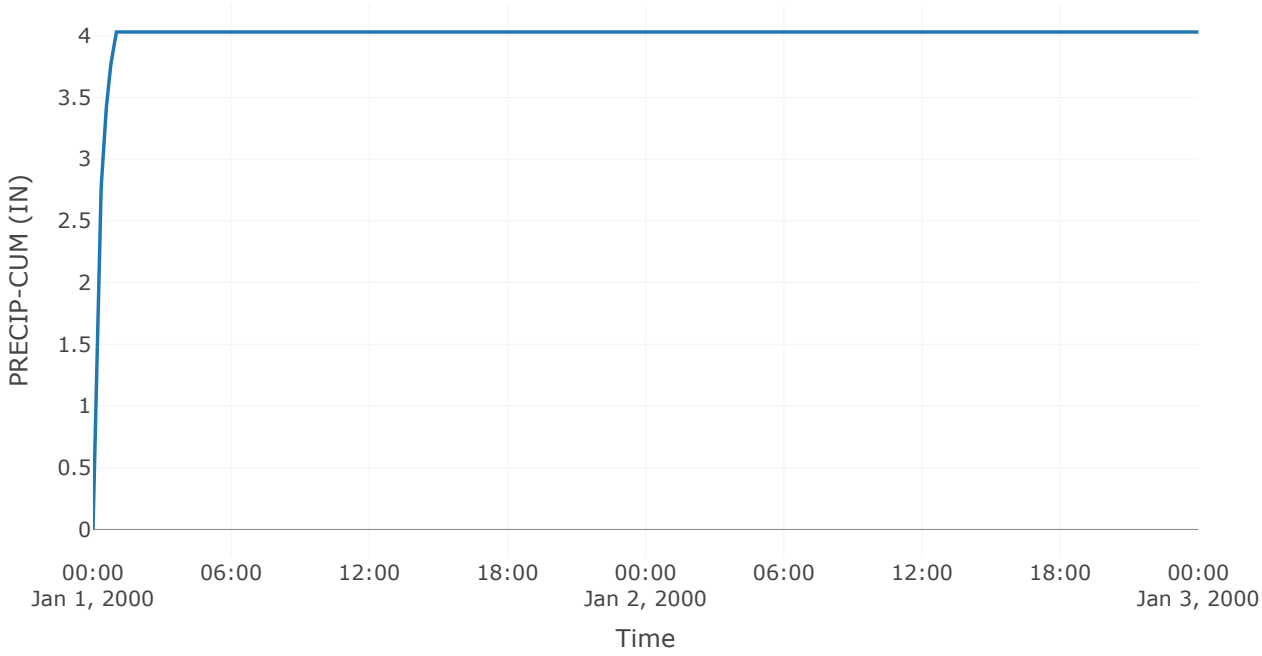
Cumulative Excess Precipitation

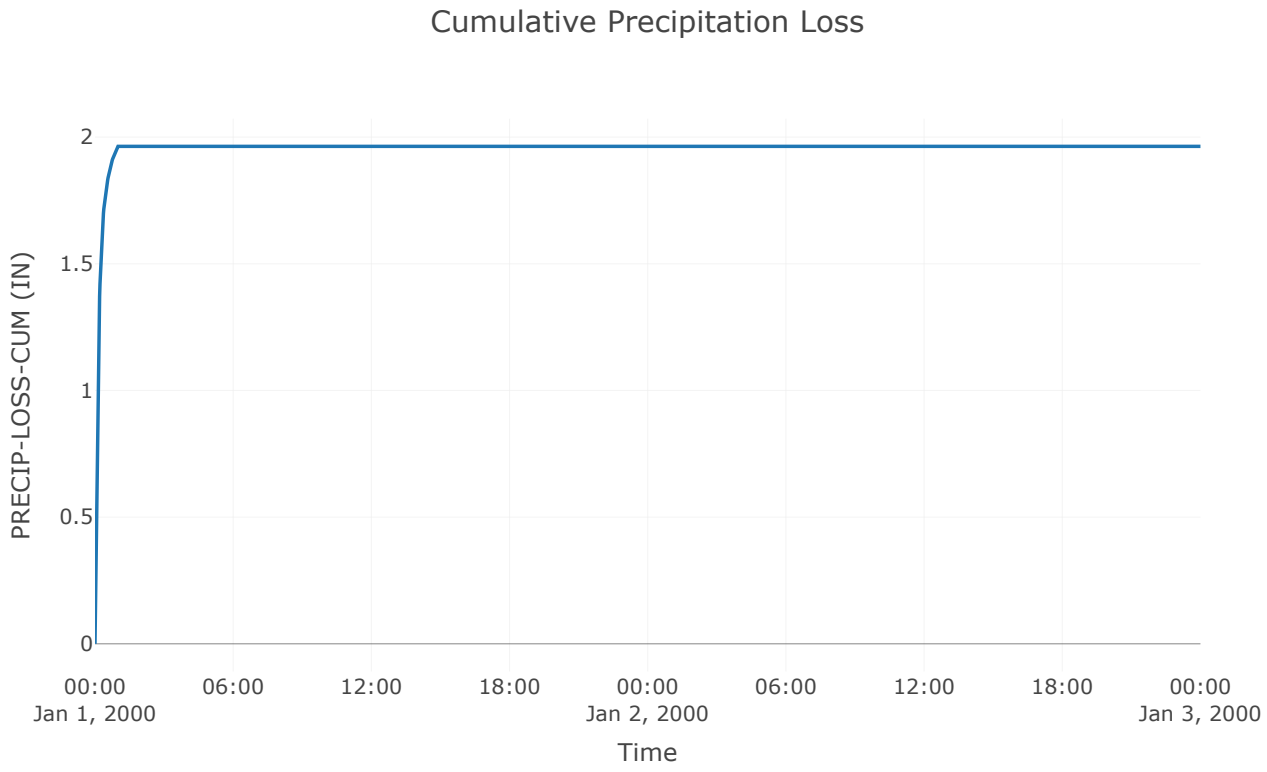


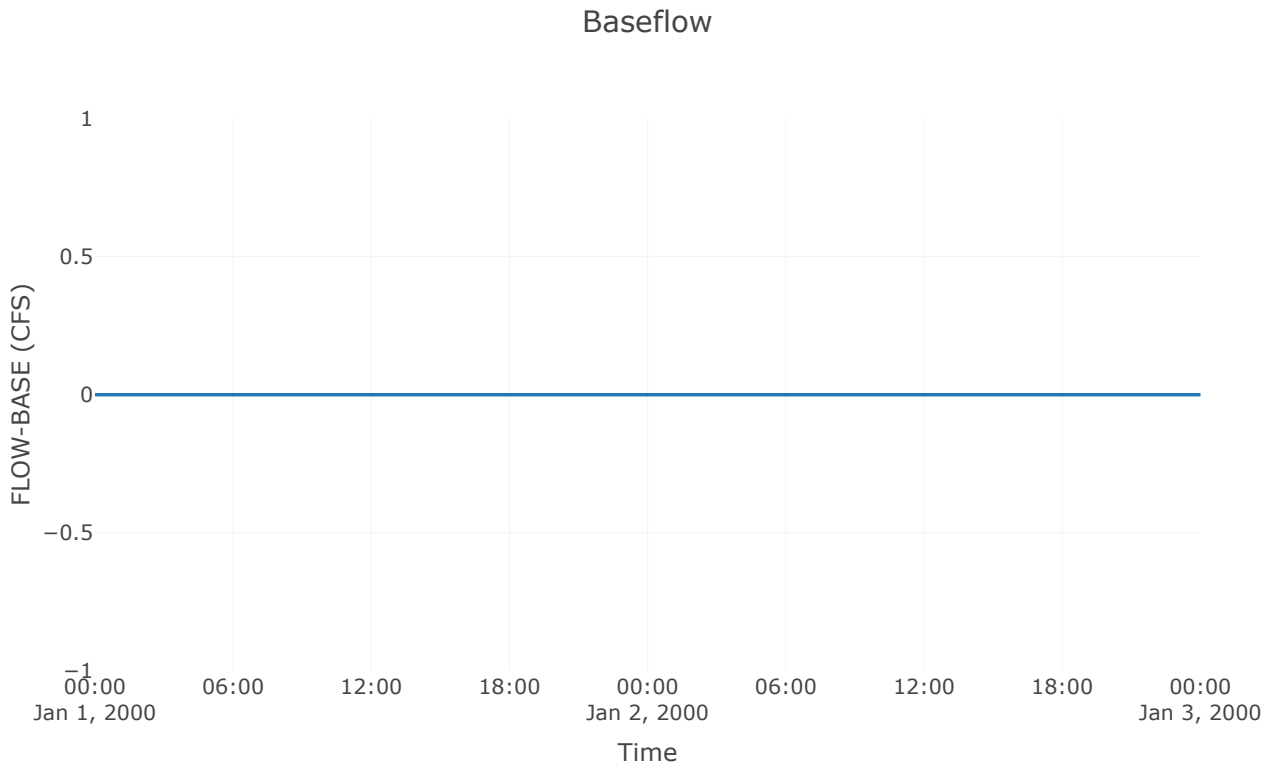
Cumulative Outflow



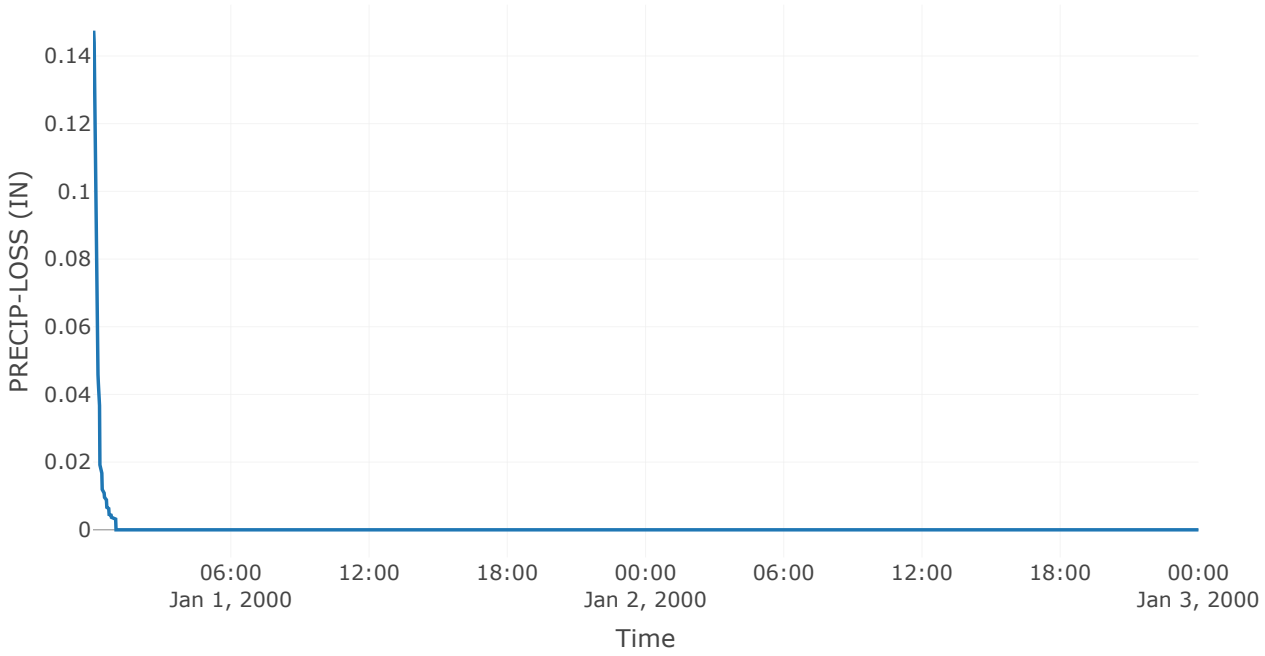
Cumulative Precipitation



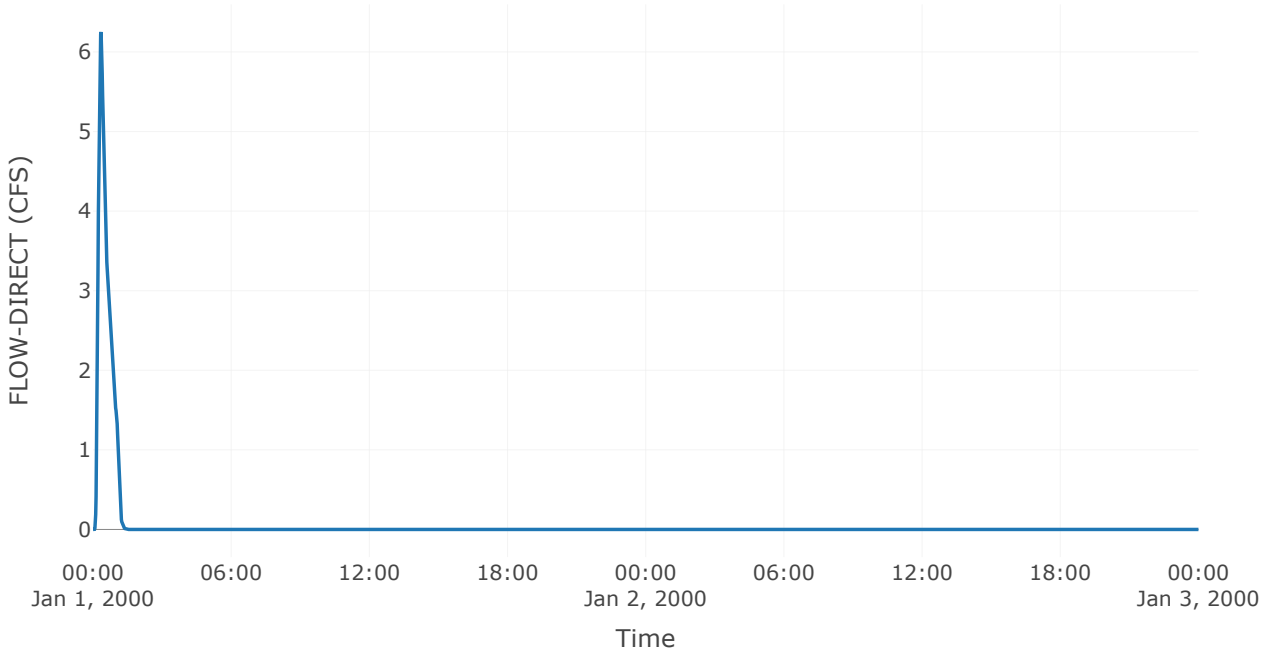

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

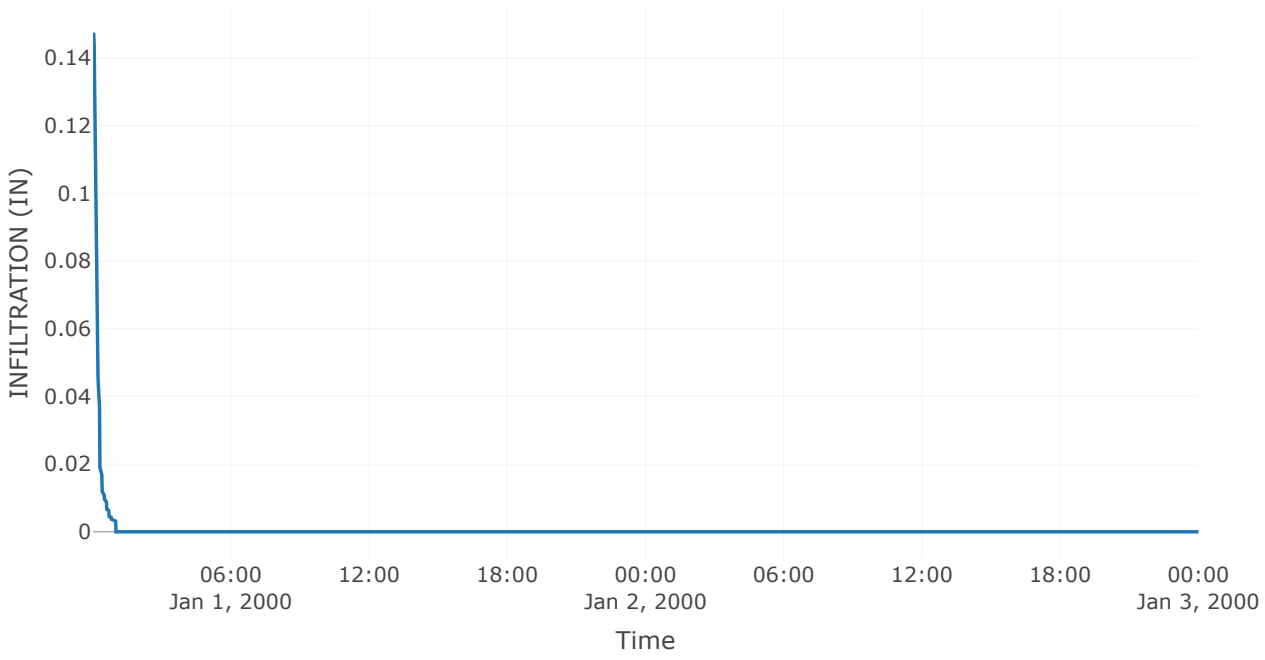

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

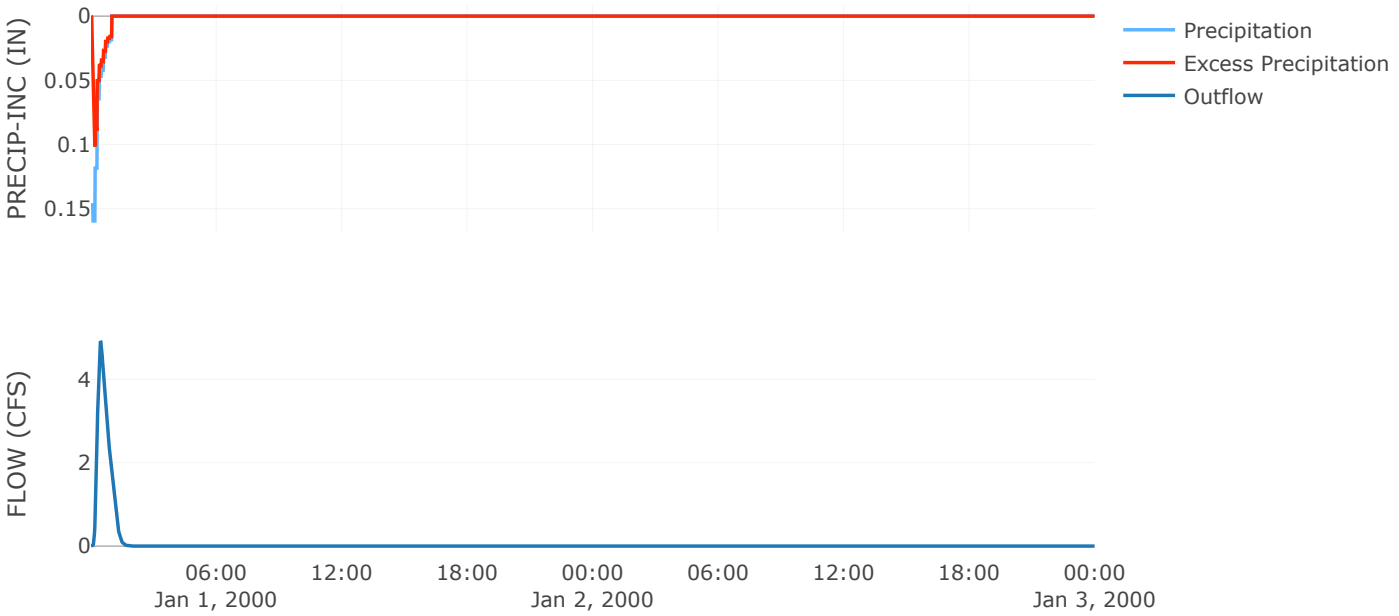
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

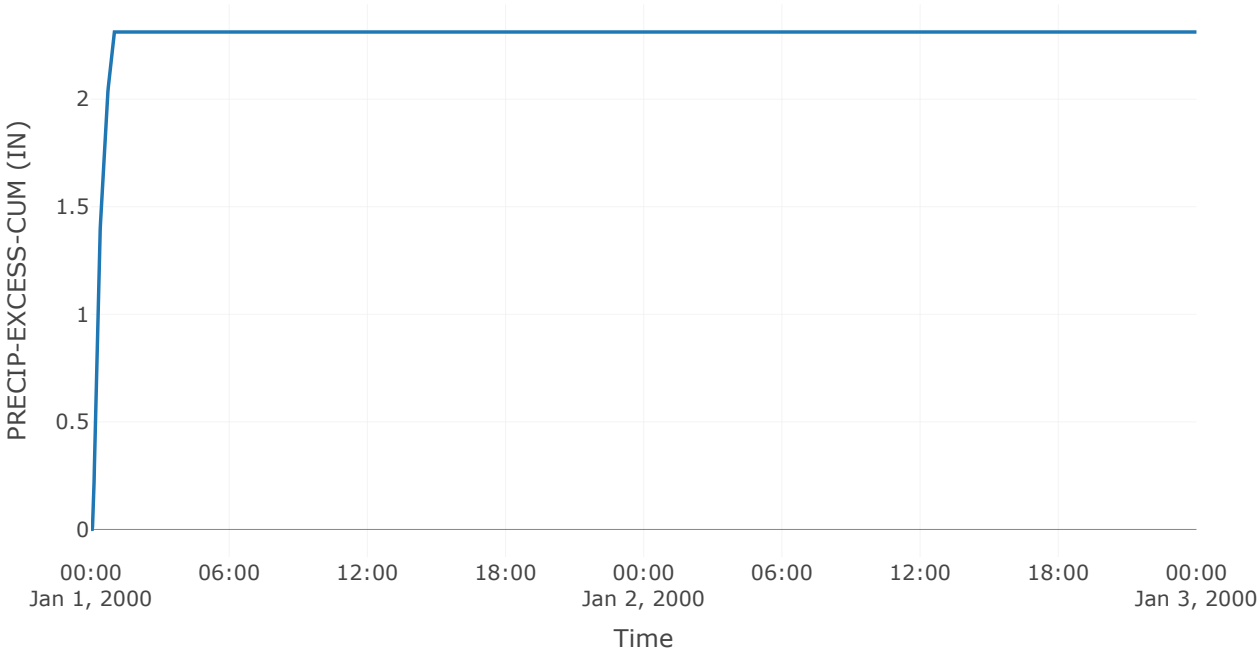
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

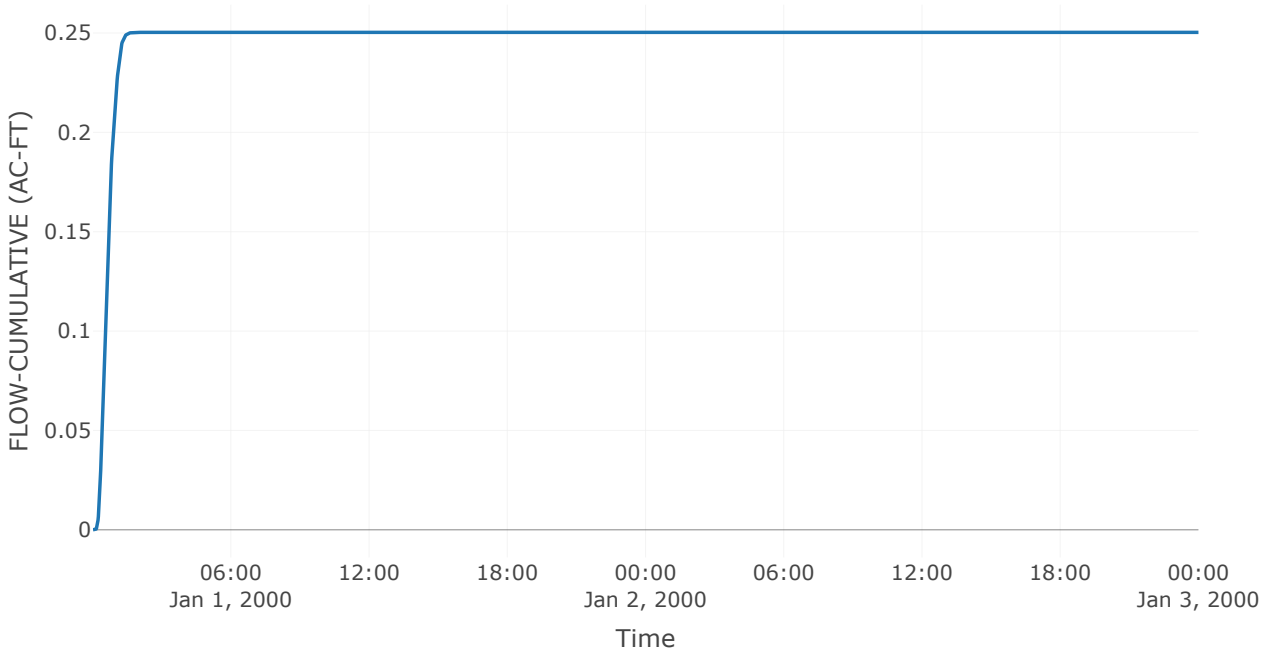
Precipitation and Outflow



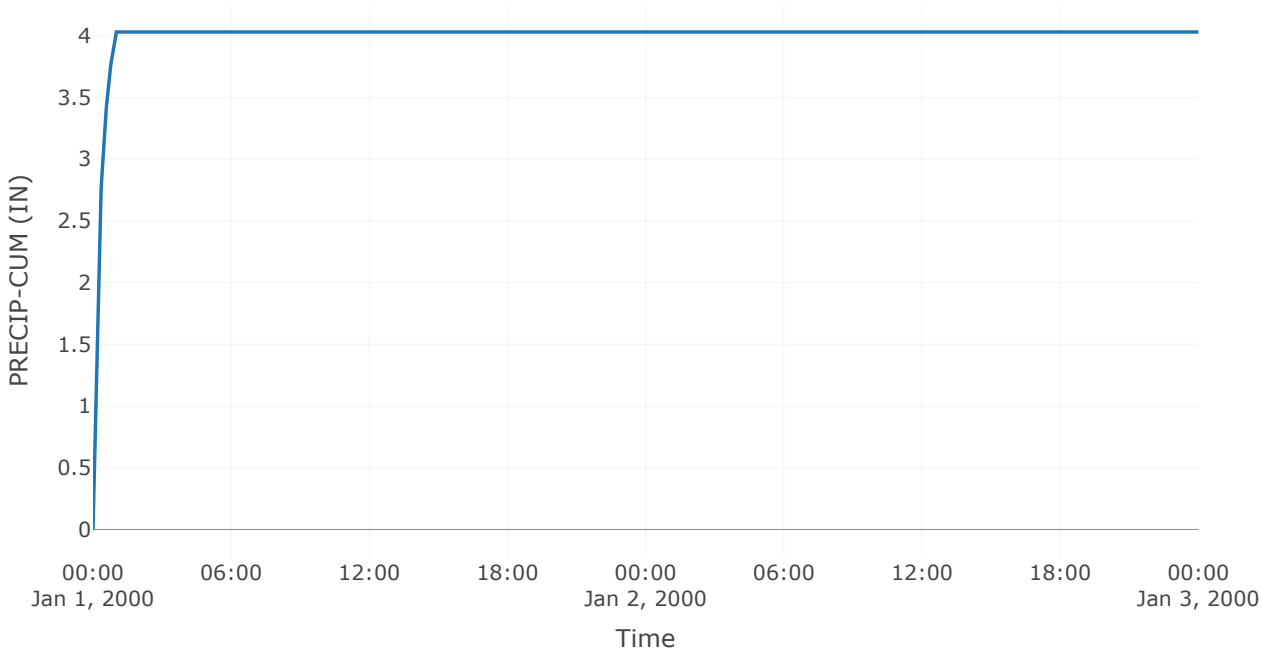
Cumulative Excess Precipitation

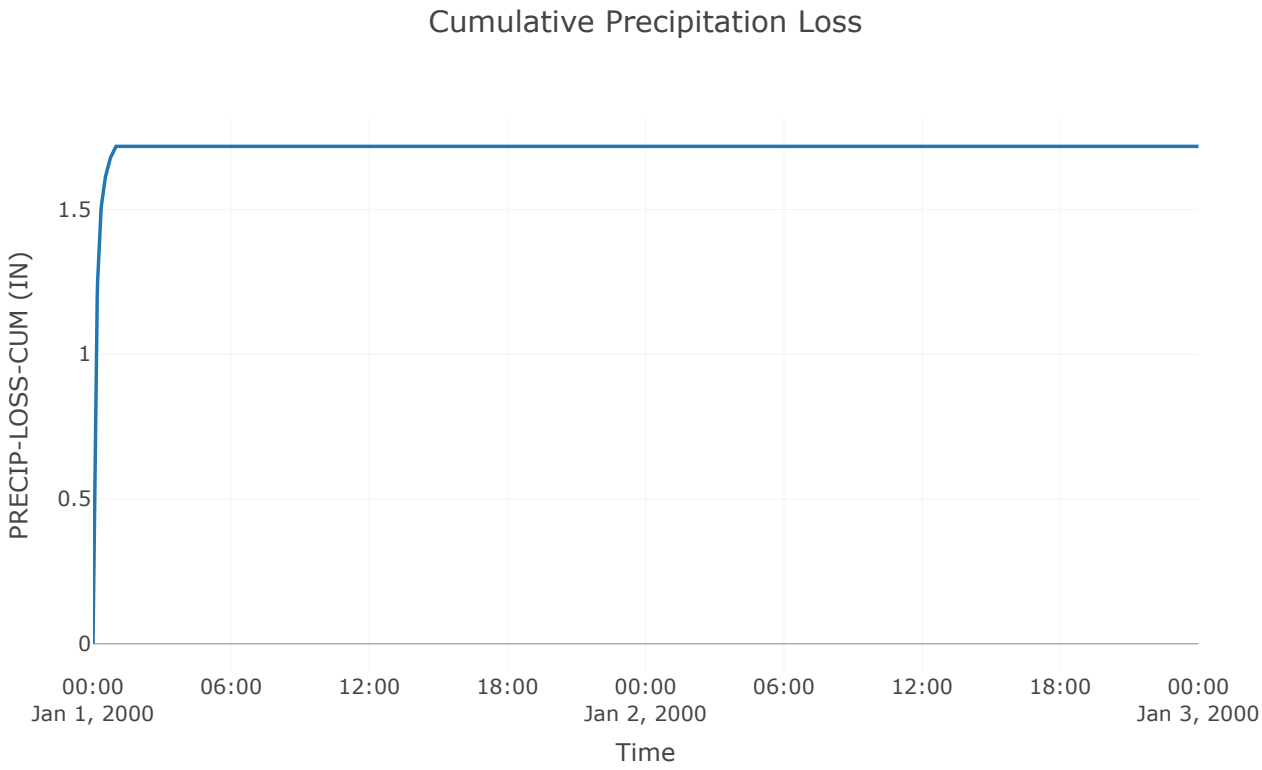


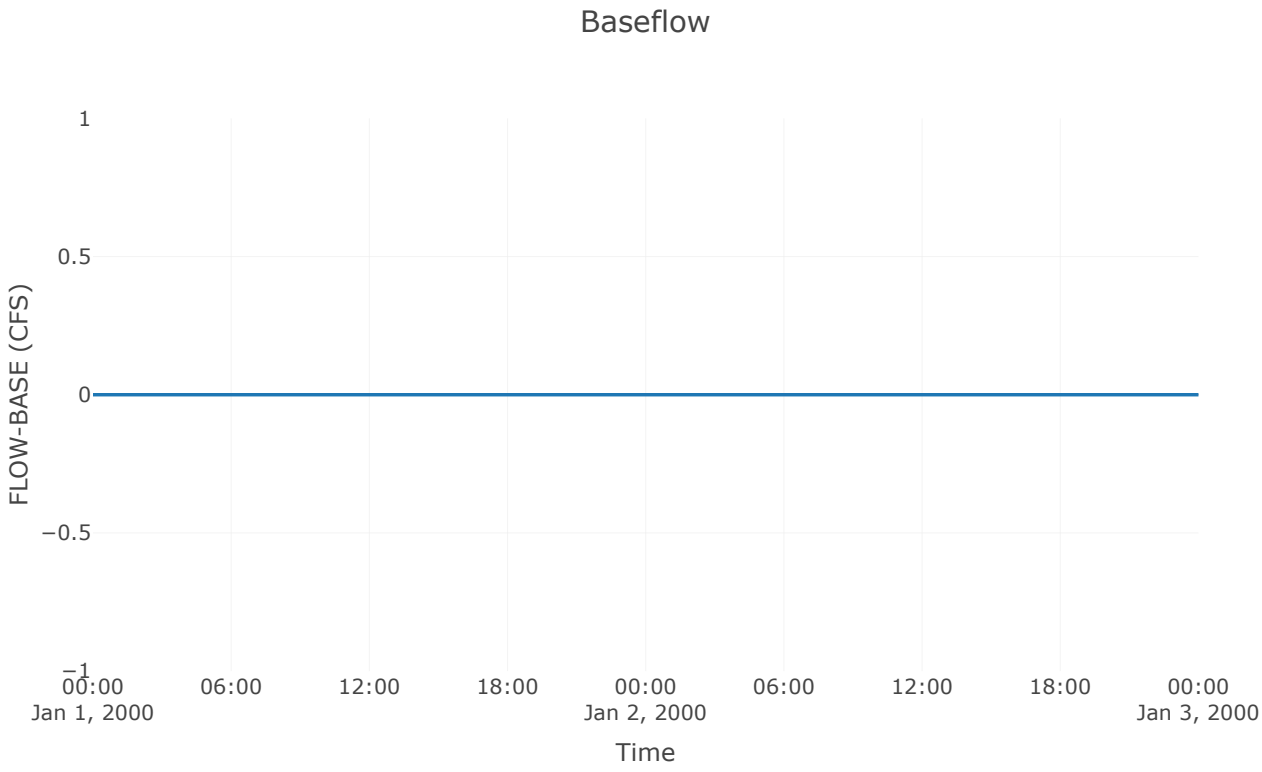
Cumulative Outflow

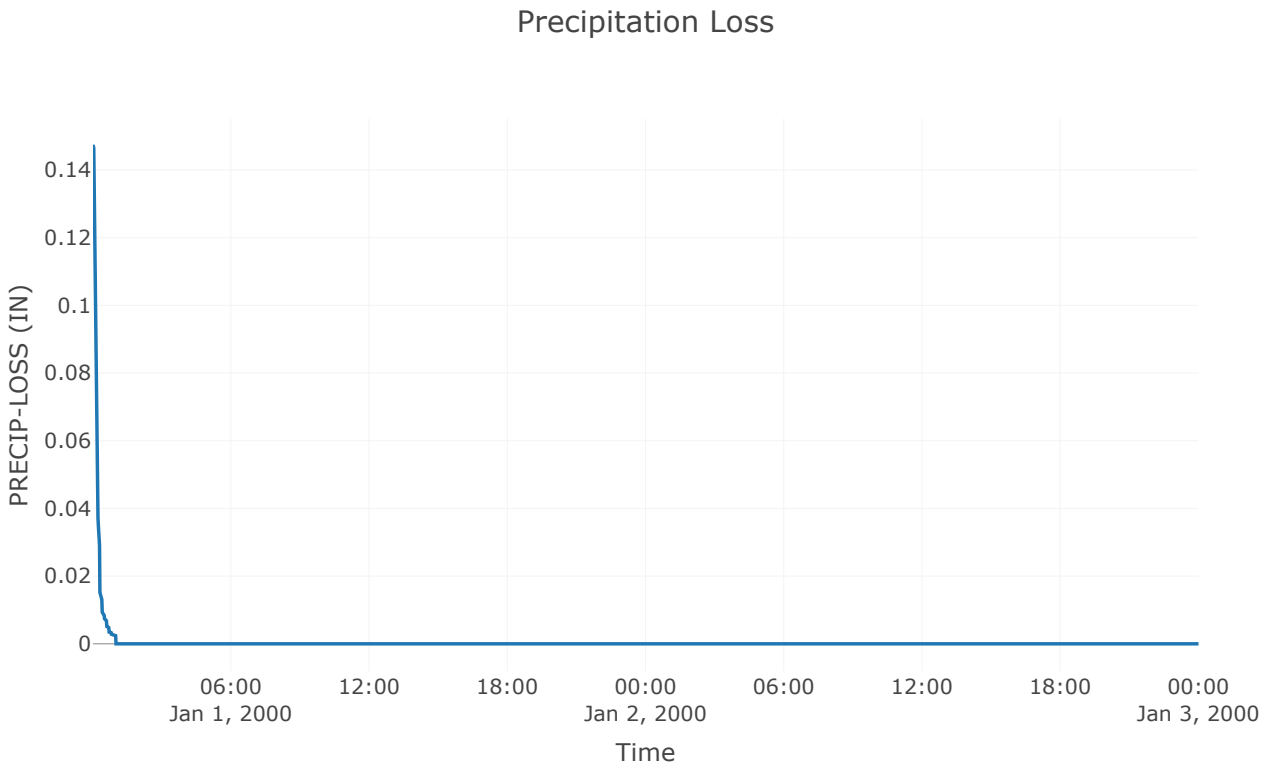


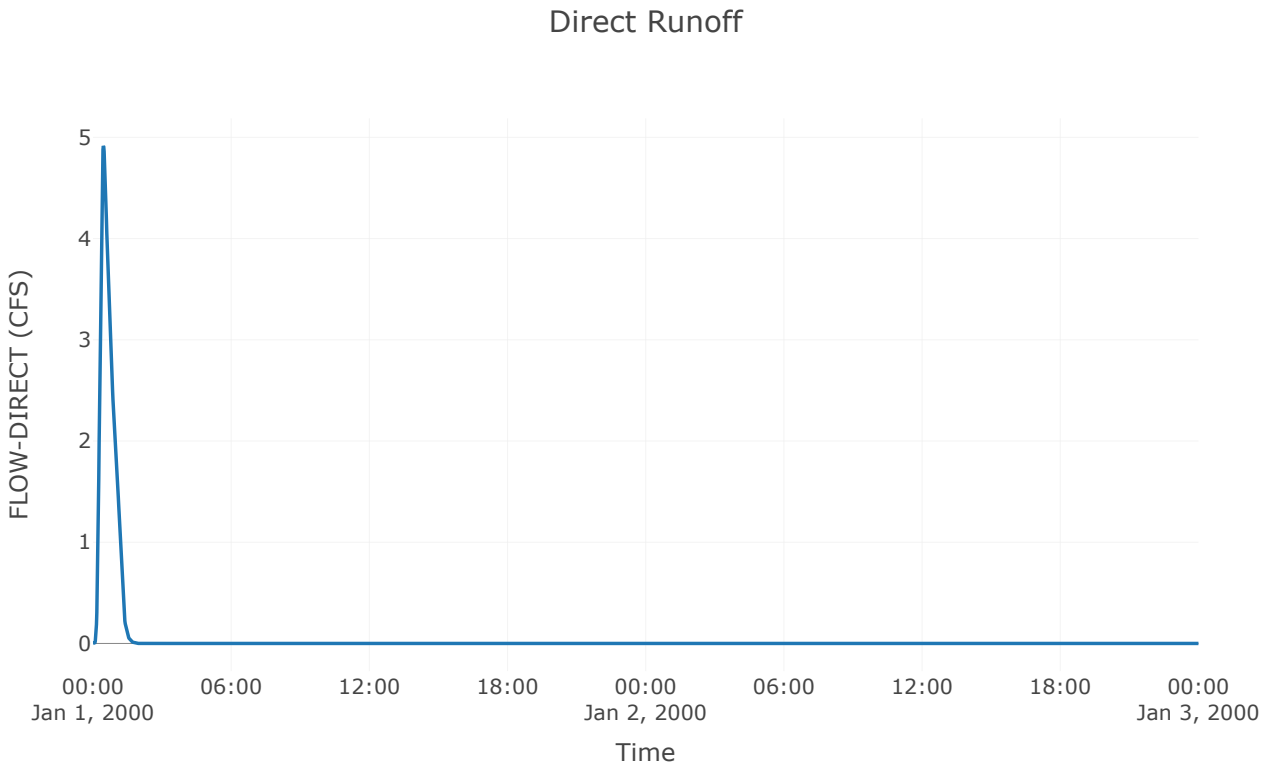
Cumulative Precipitation

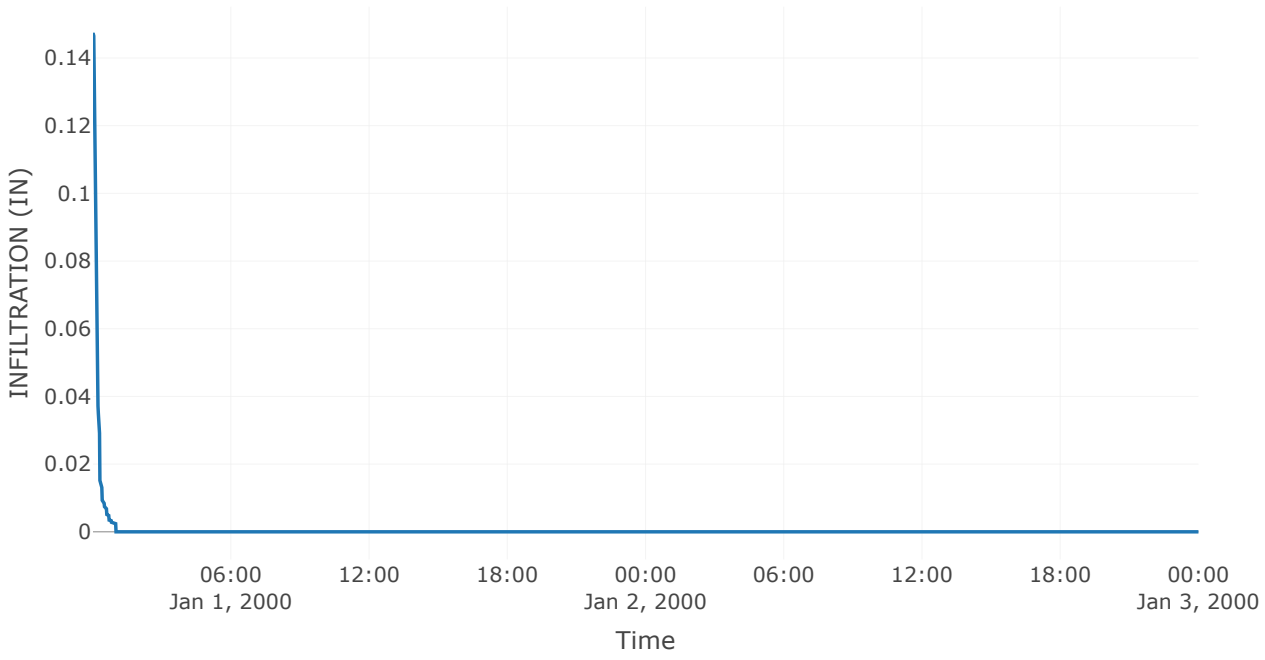



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

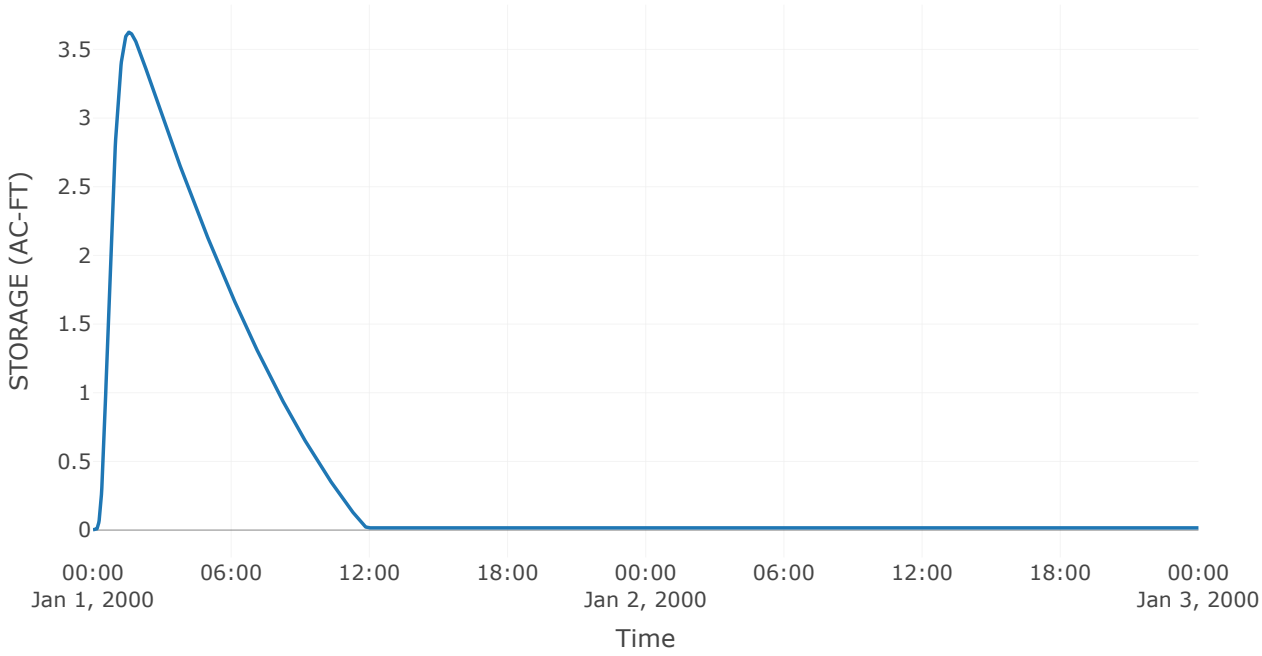

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

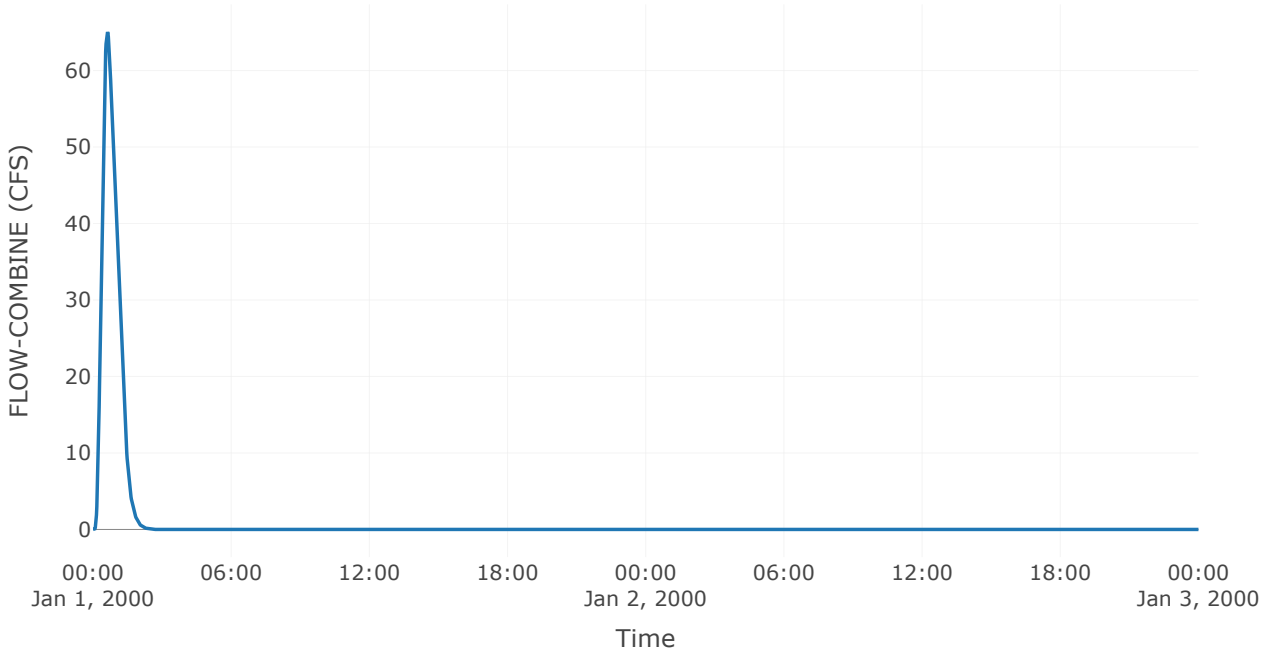
Downstream : Basin 2

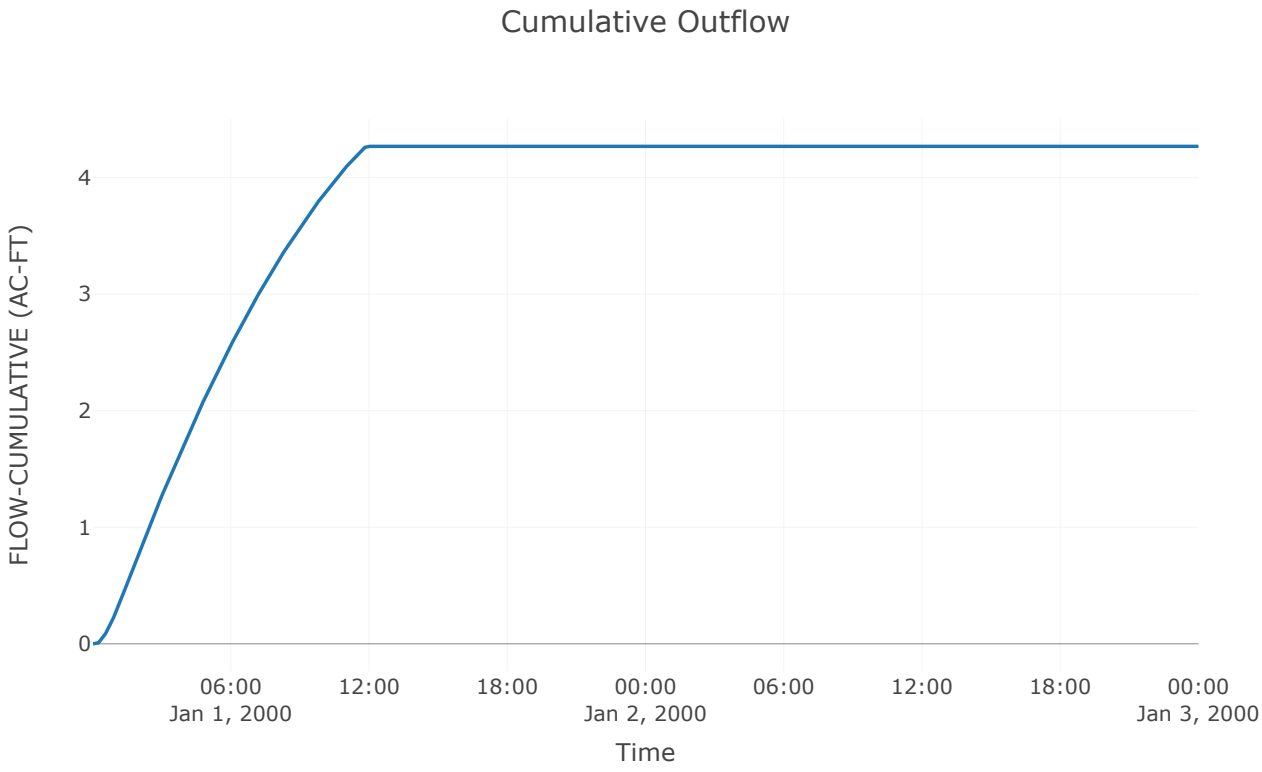
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

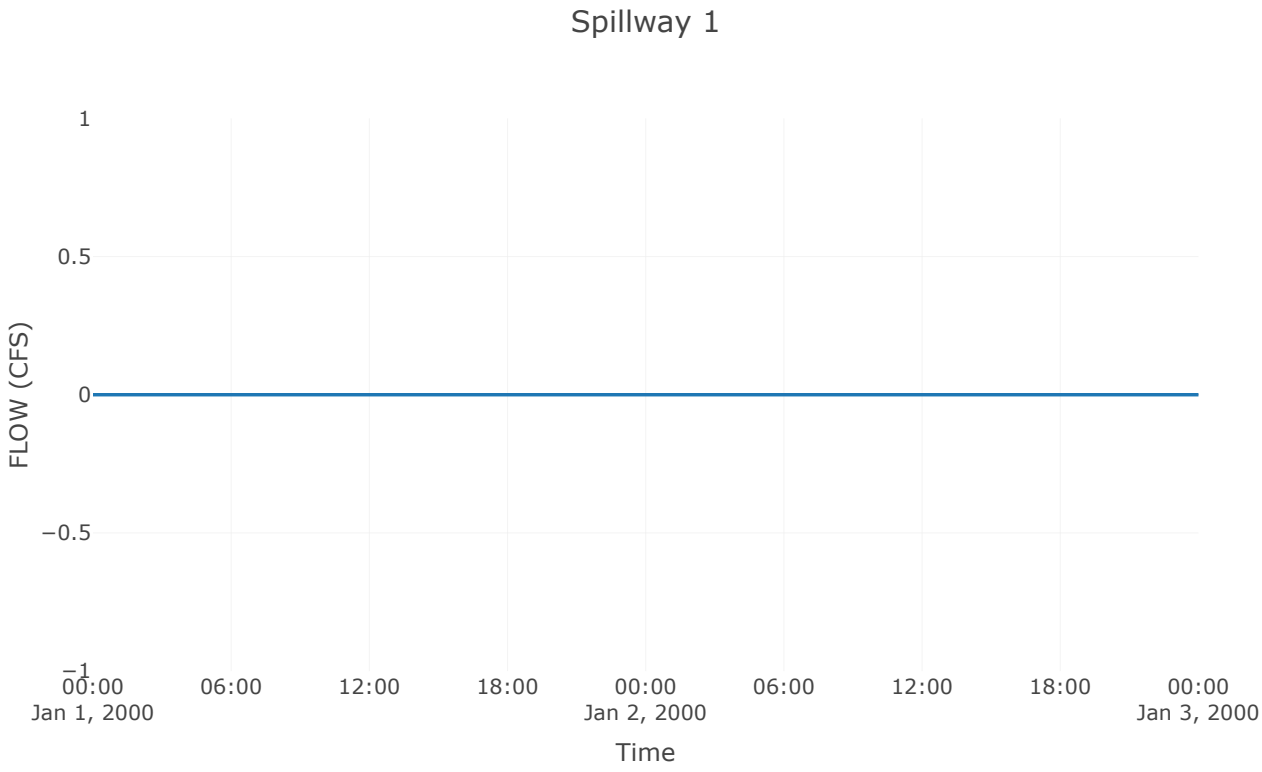
Storage



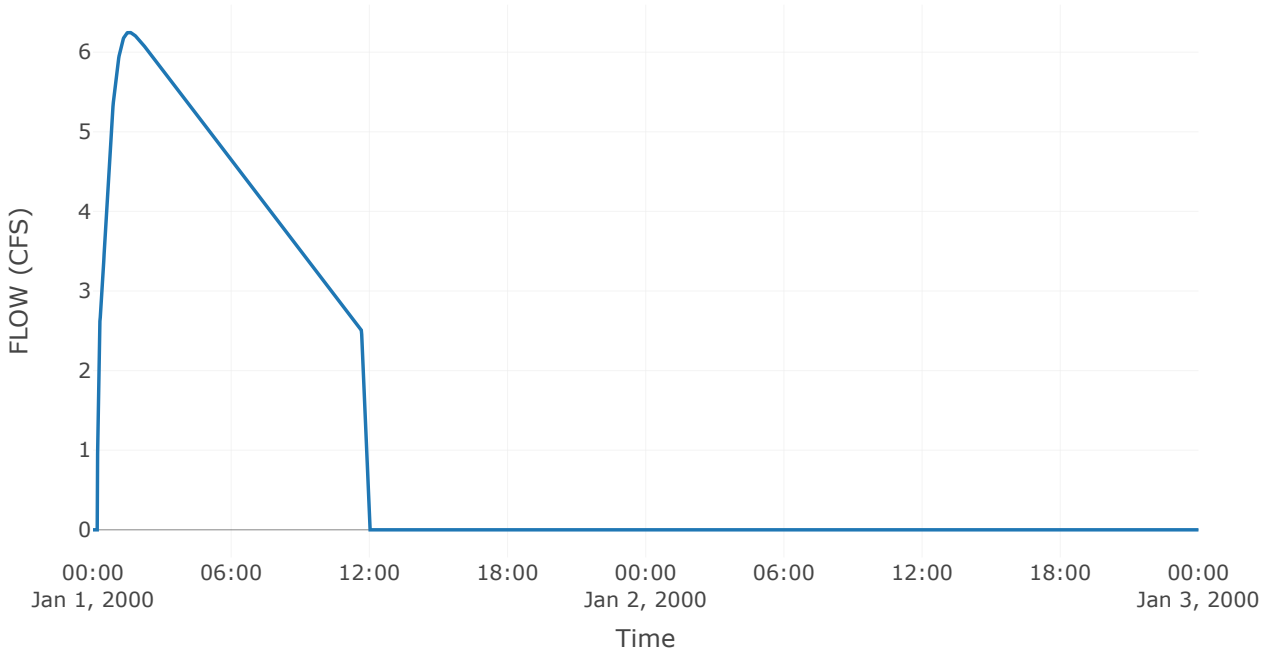
Combined Inflow



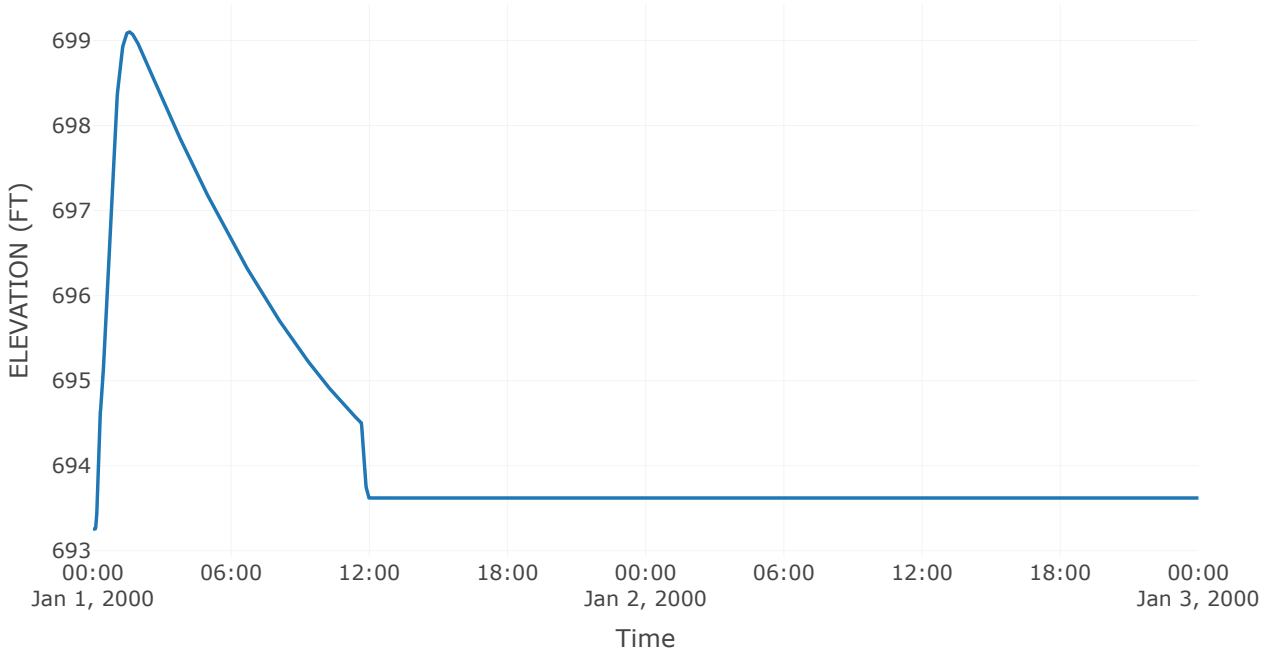

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

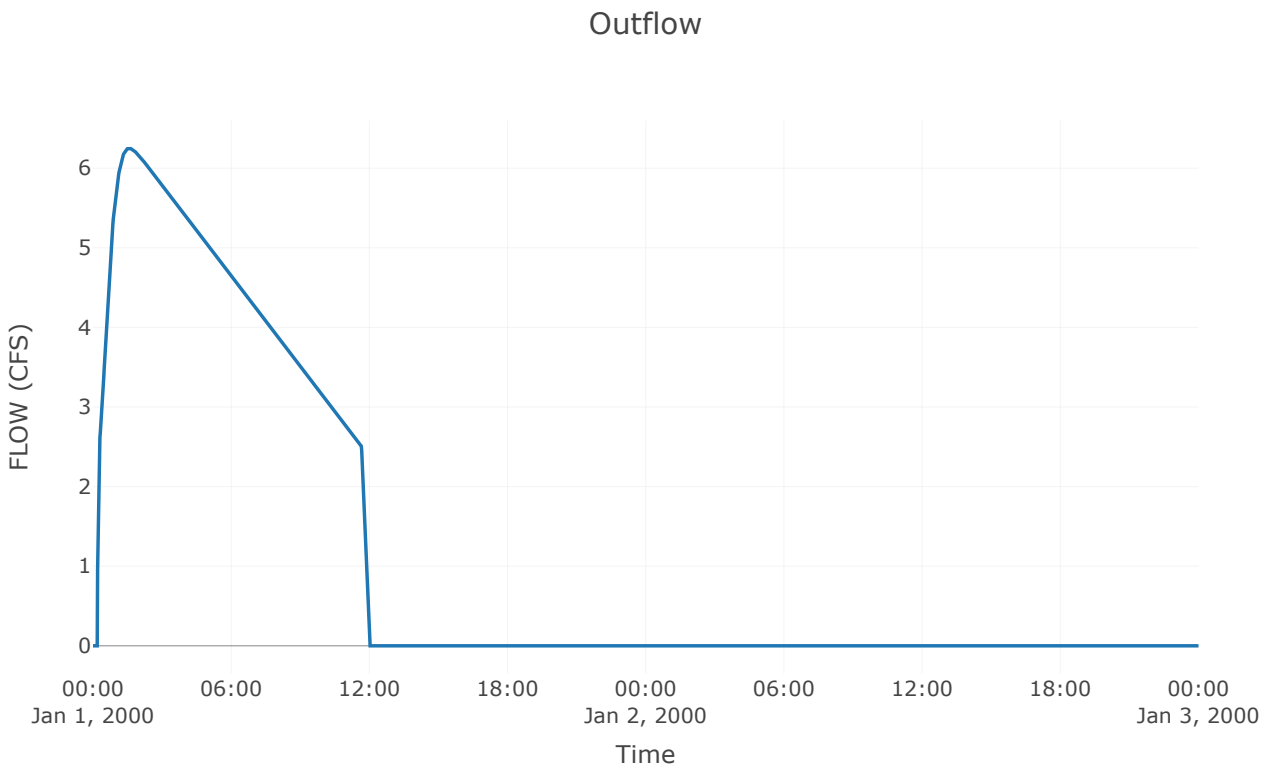

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

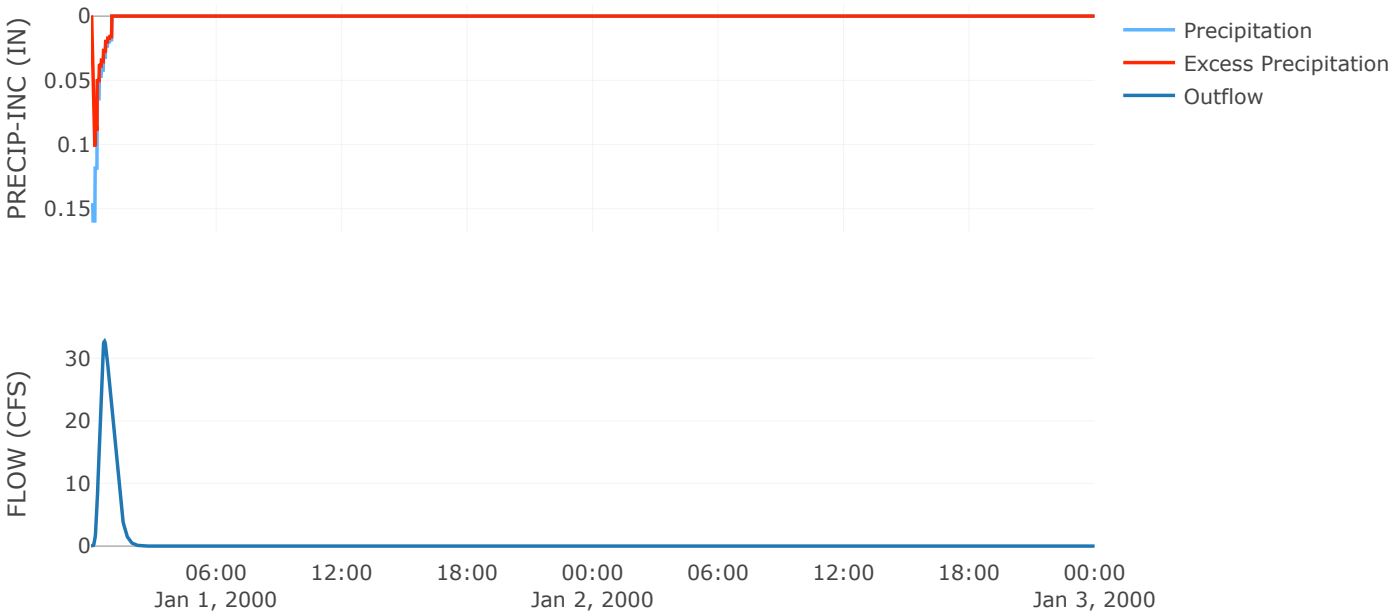
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

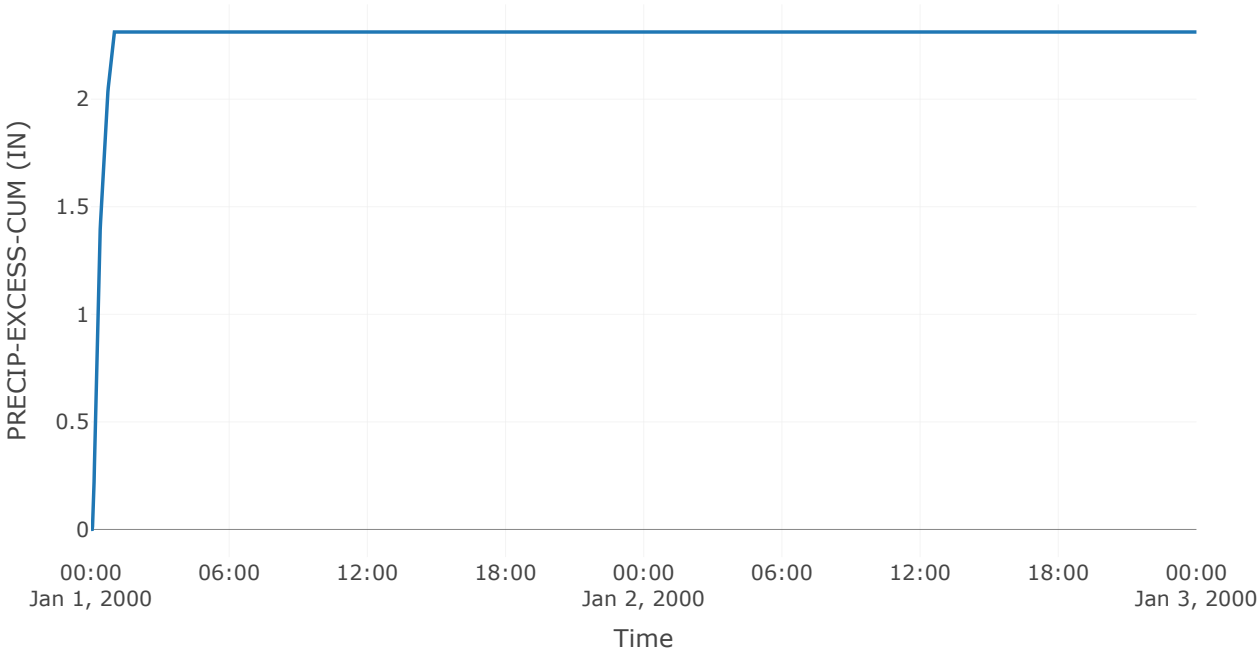
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

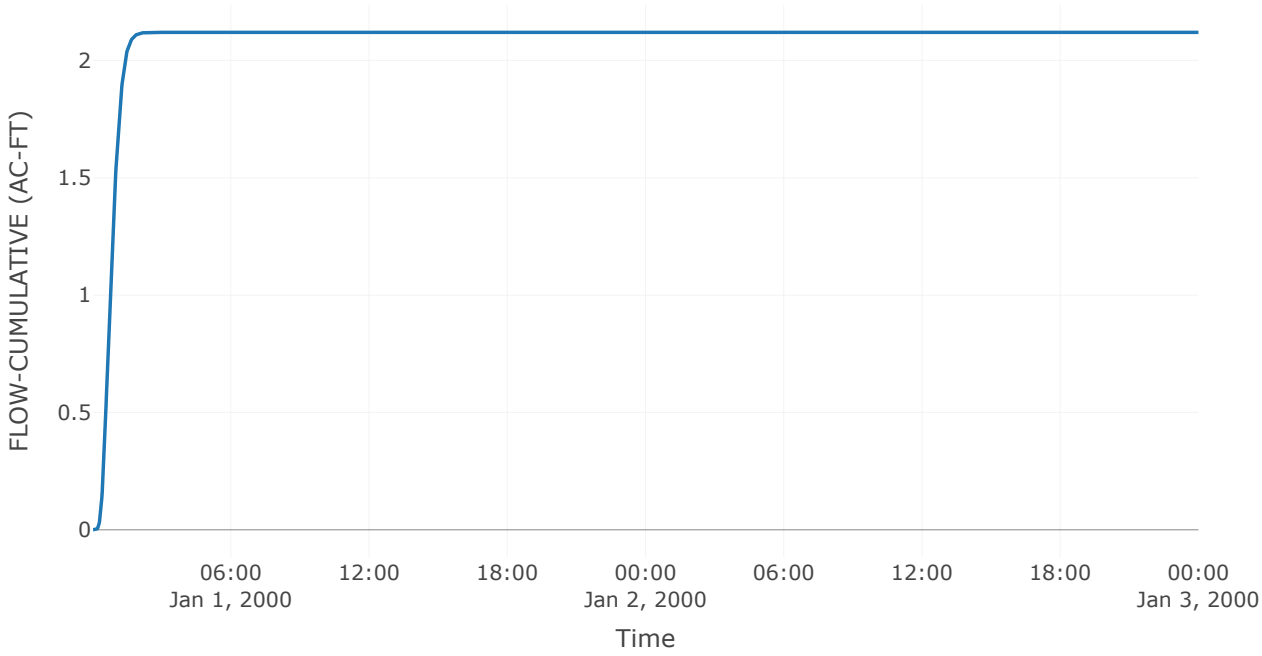
Precipitation and Outflow



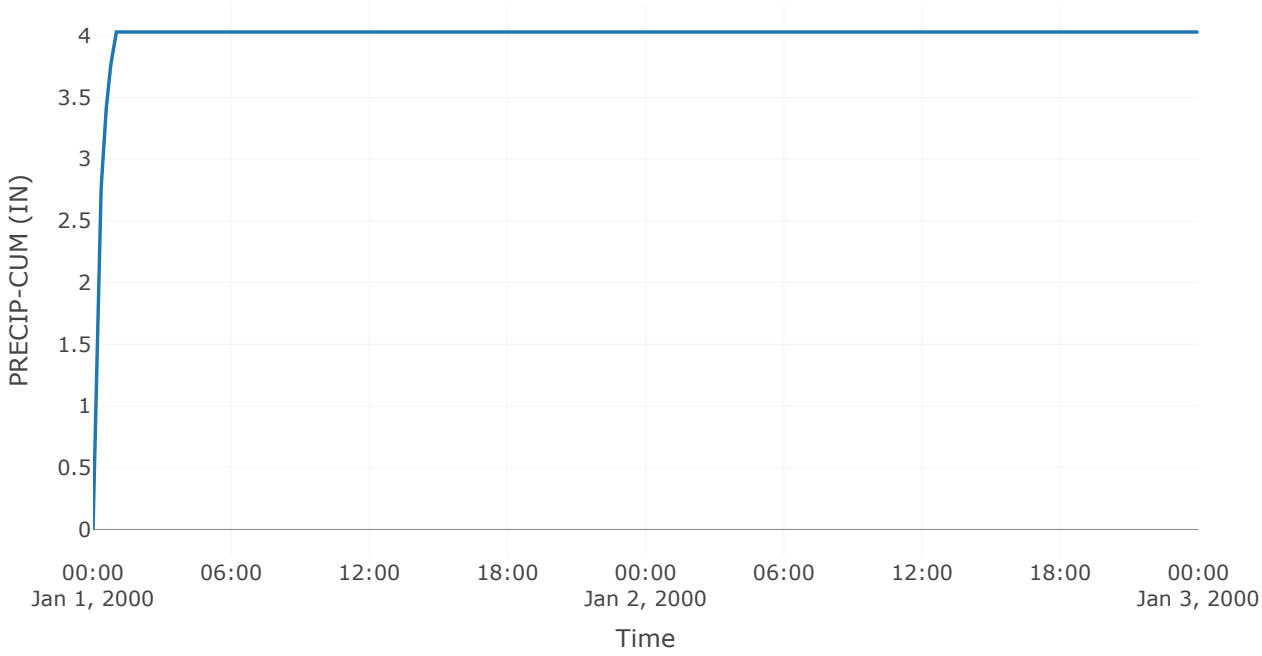
Cumulative Excess Precipitation

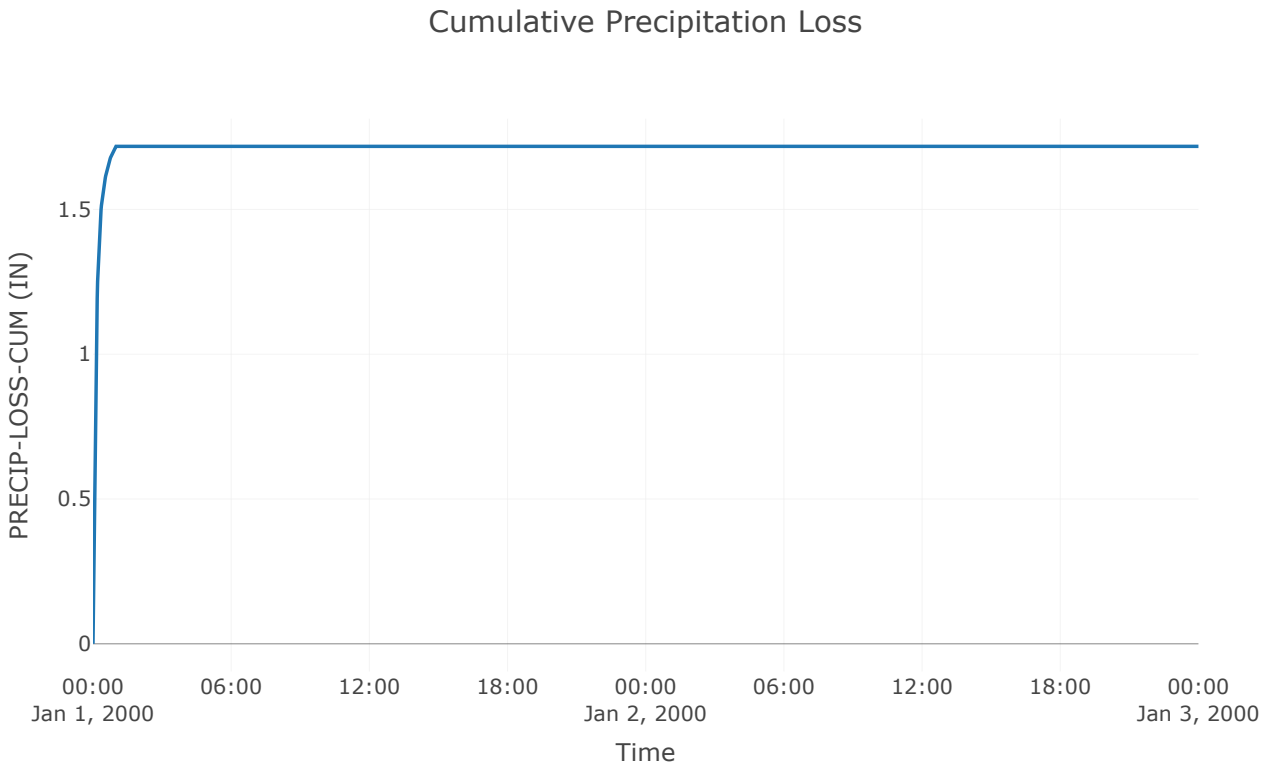


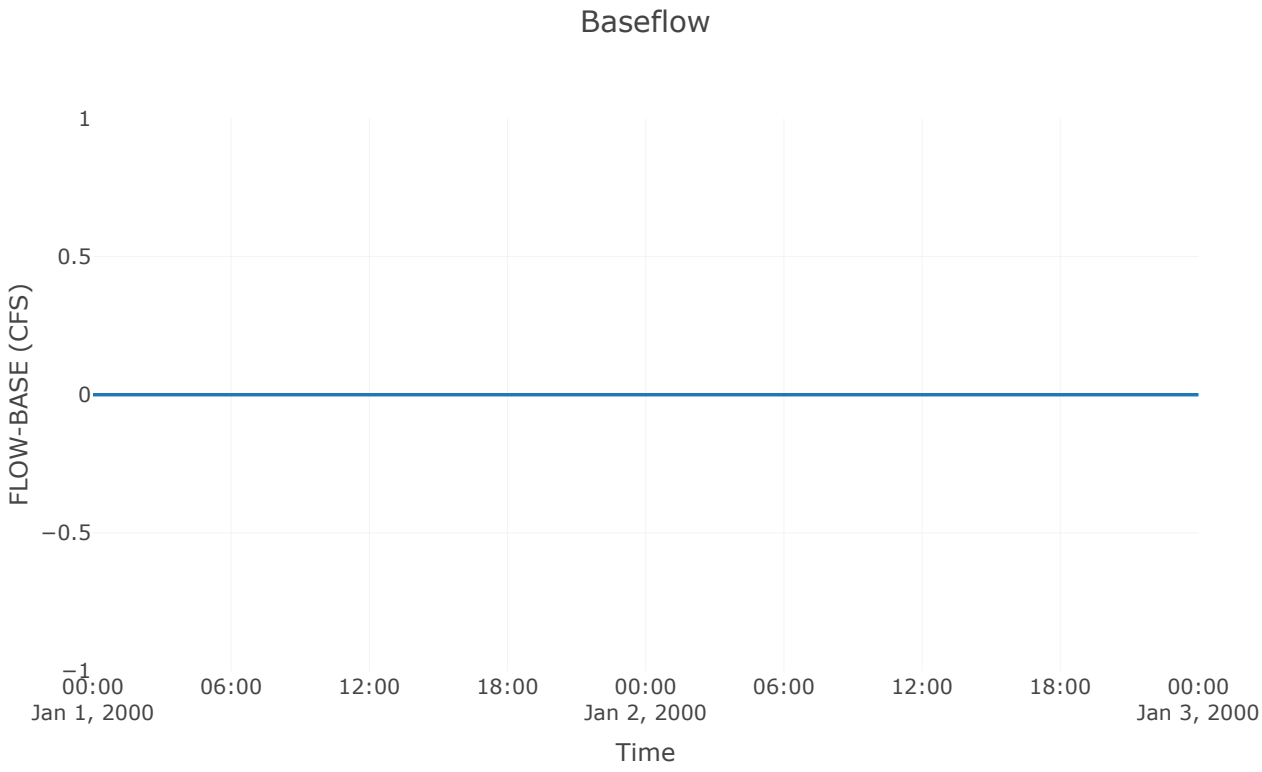
Cumulative Outflow



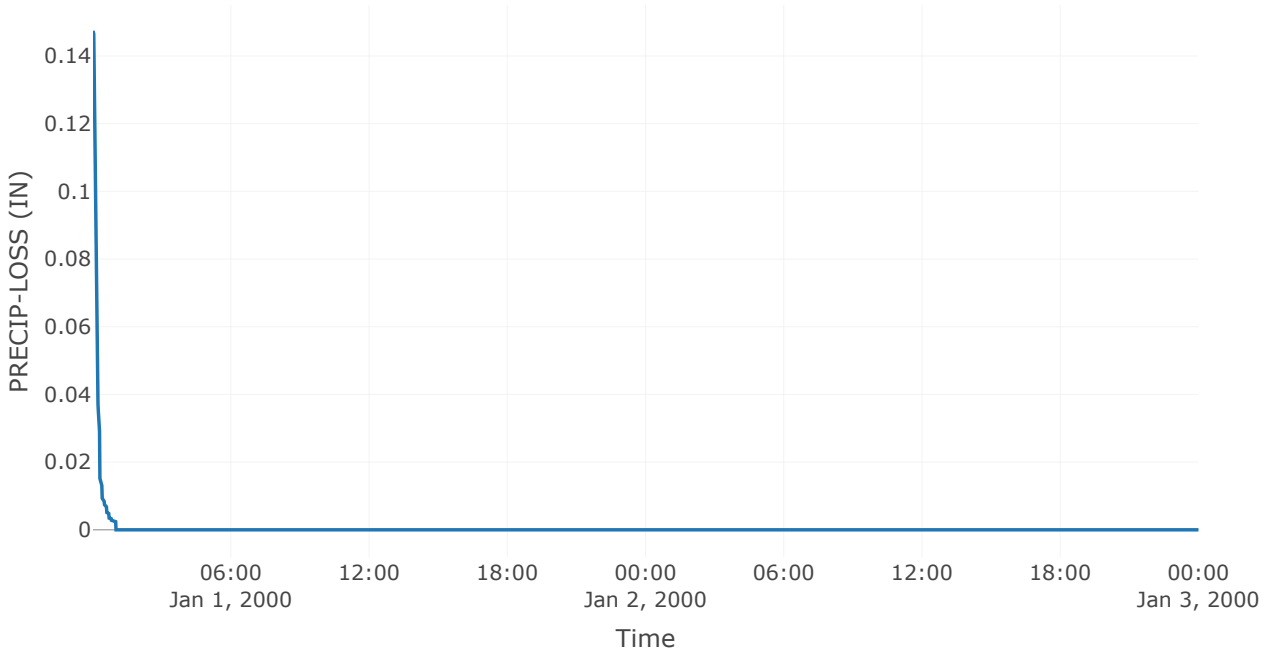
Cumulative Precipitation



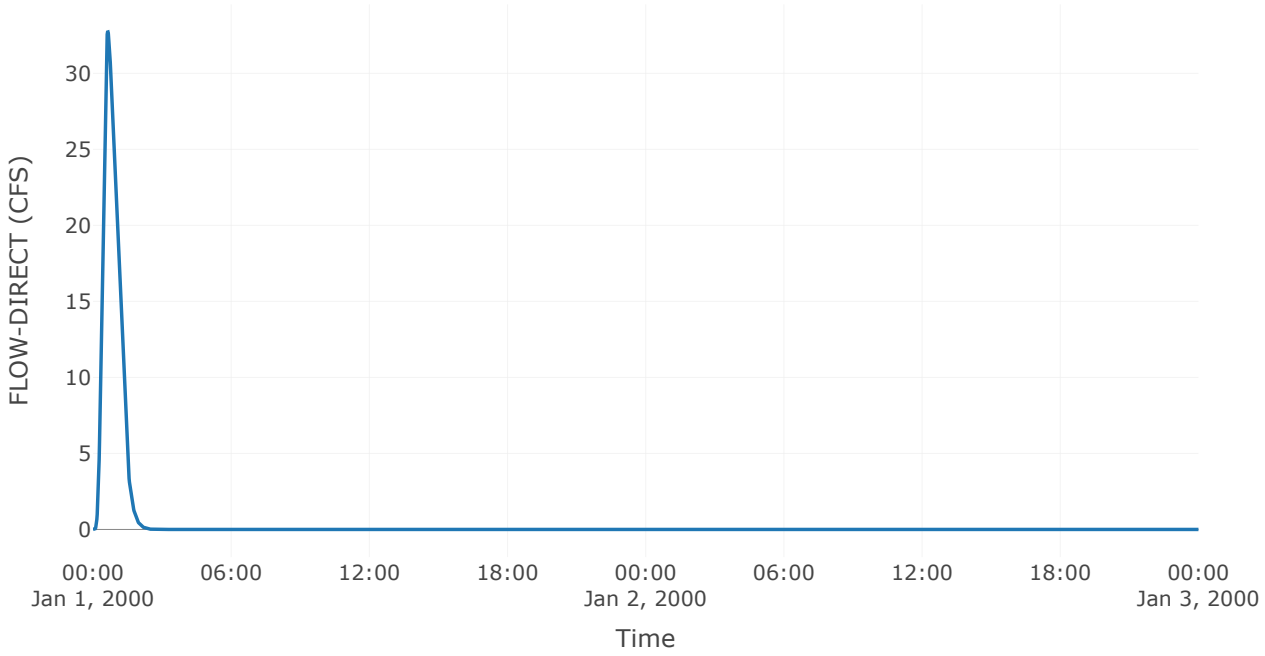

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

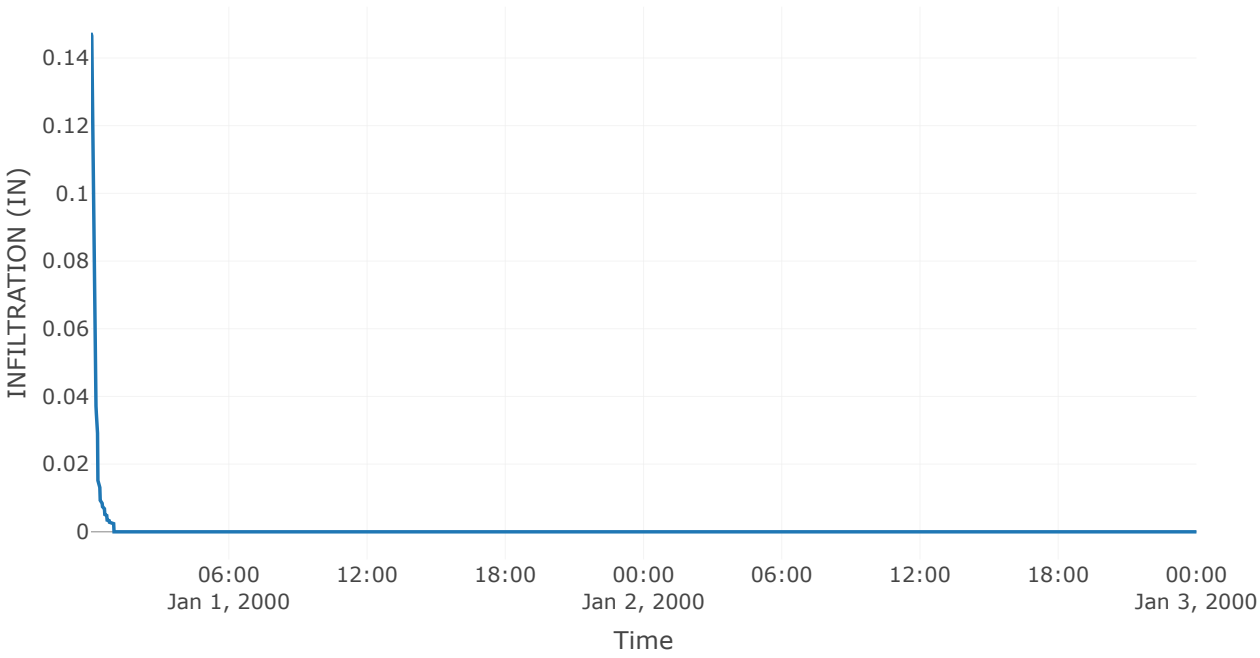

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

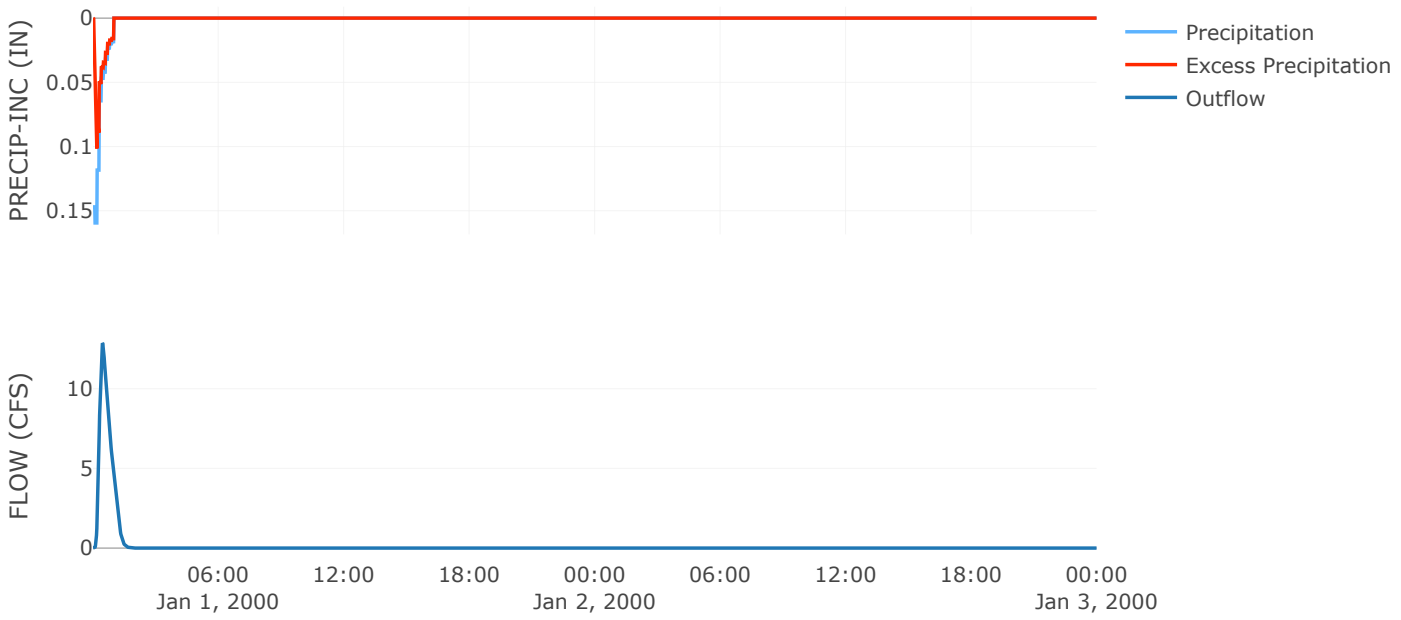
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

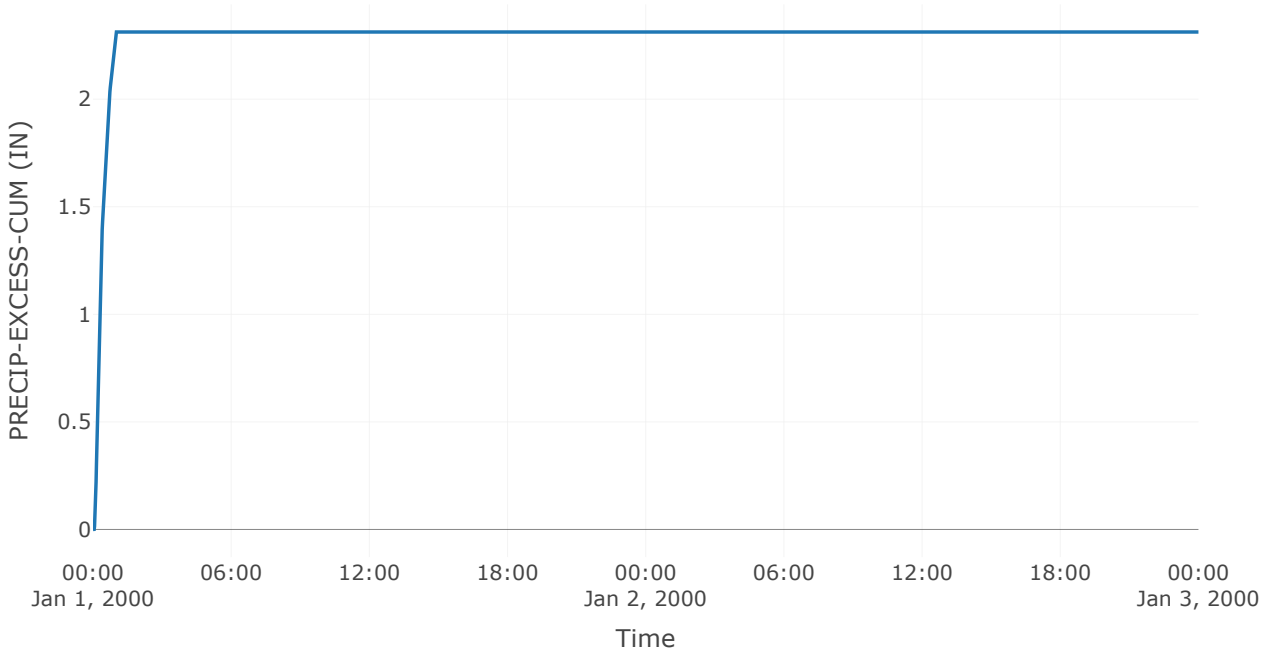
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

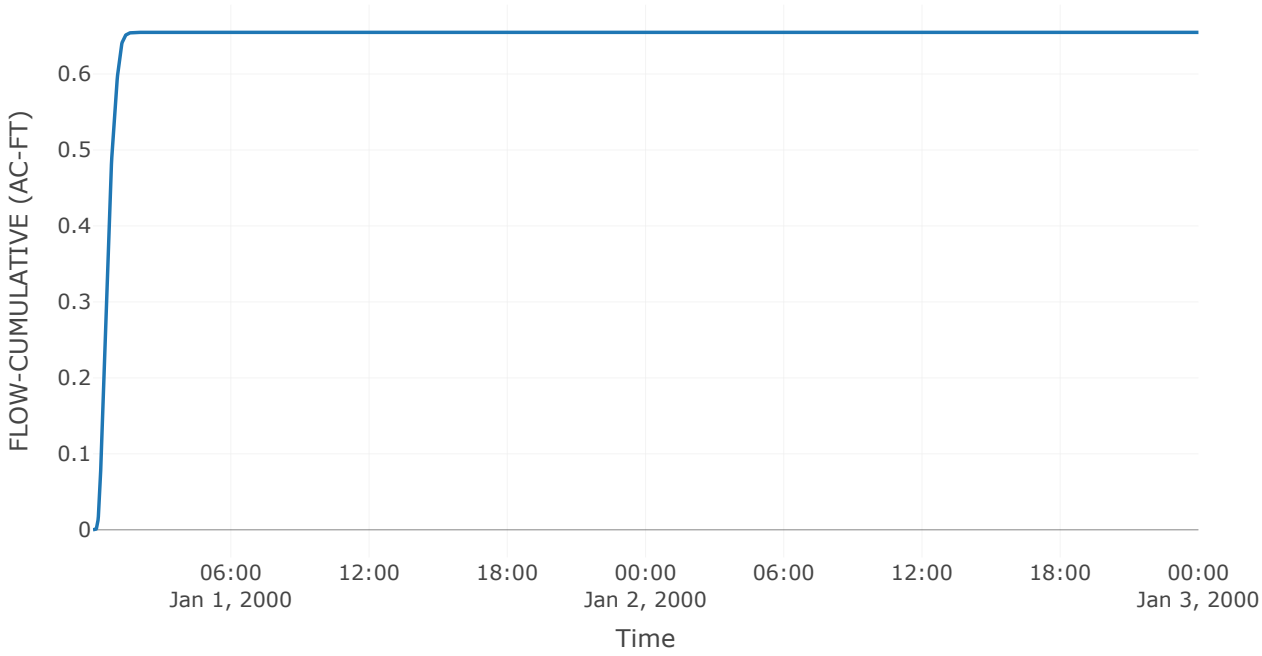
Precipitation and Outflow



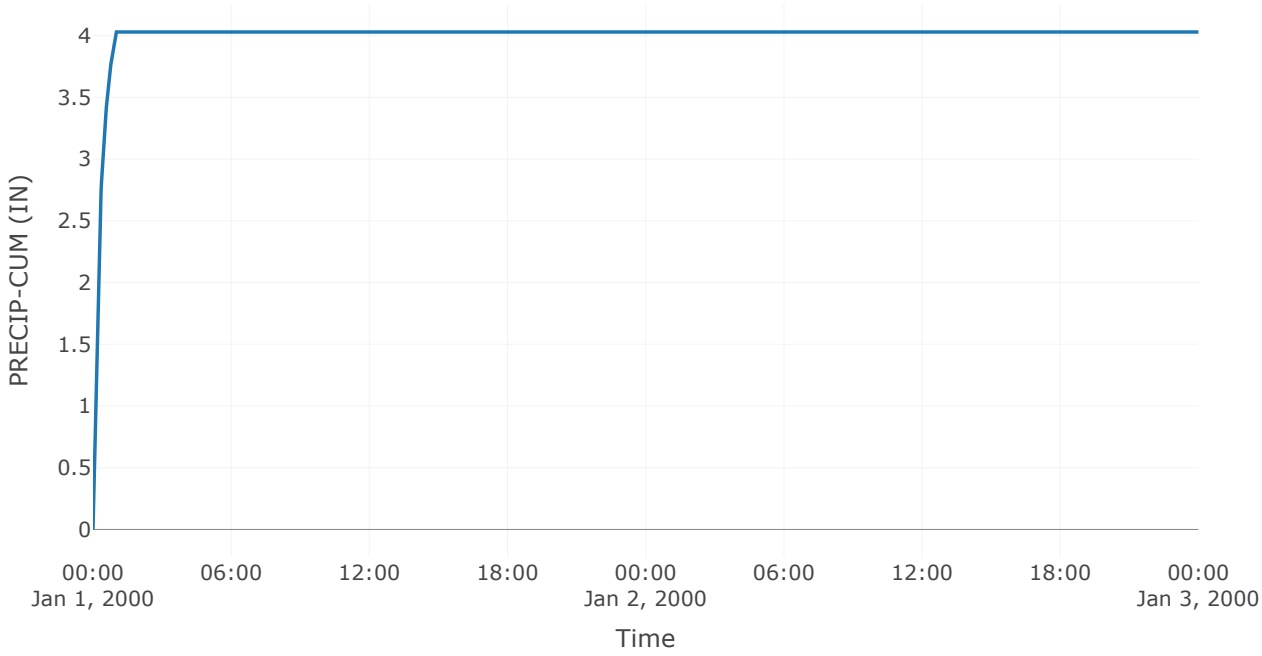
Cumulative Excess Precipitation

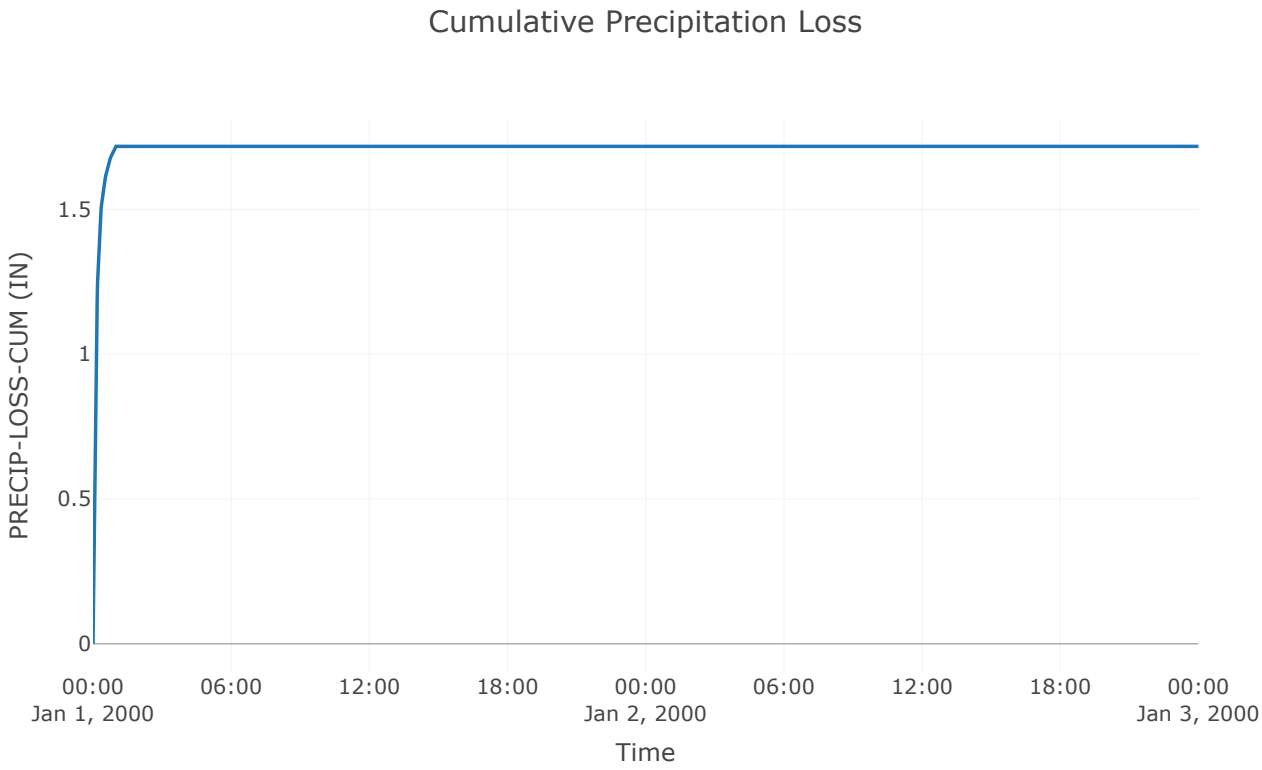


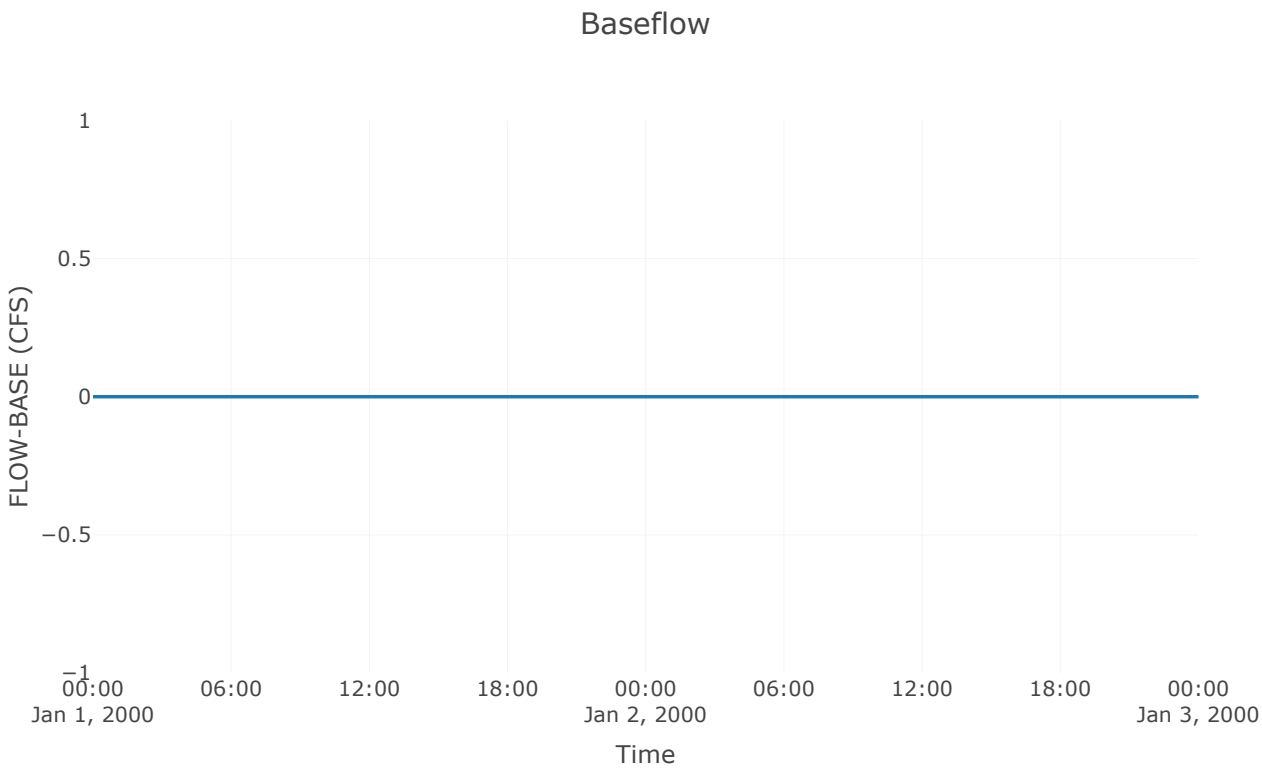
Cumulative Outflow

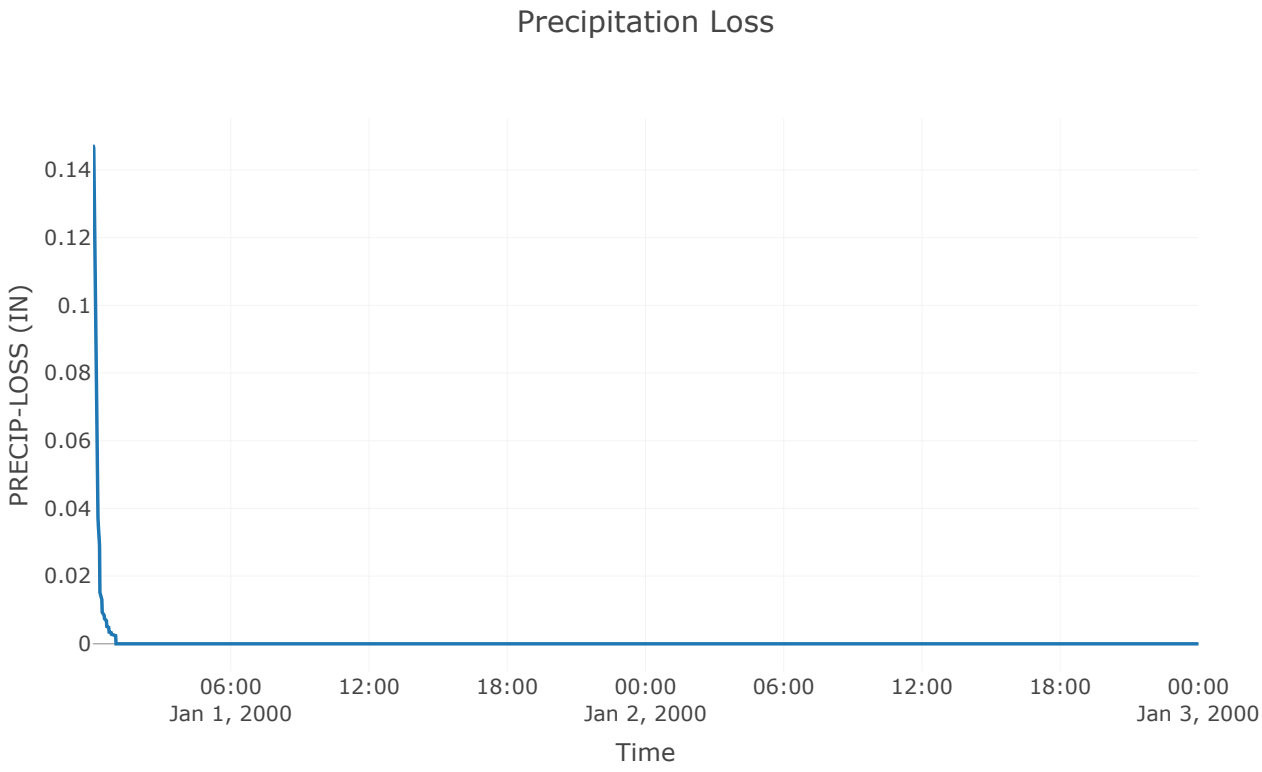


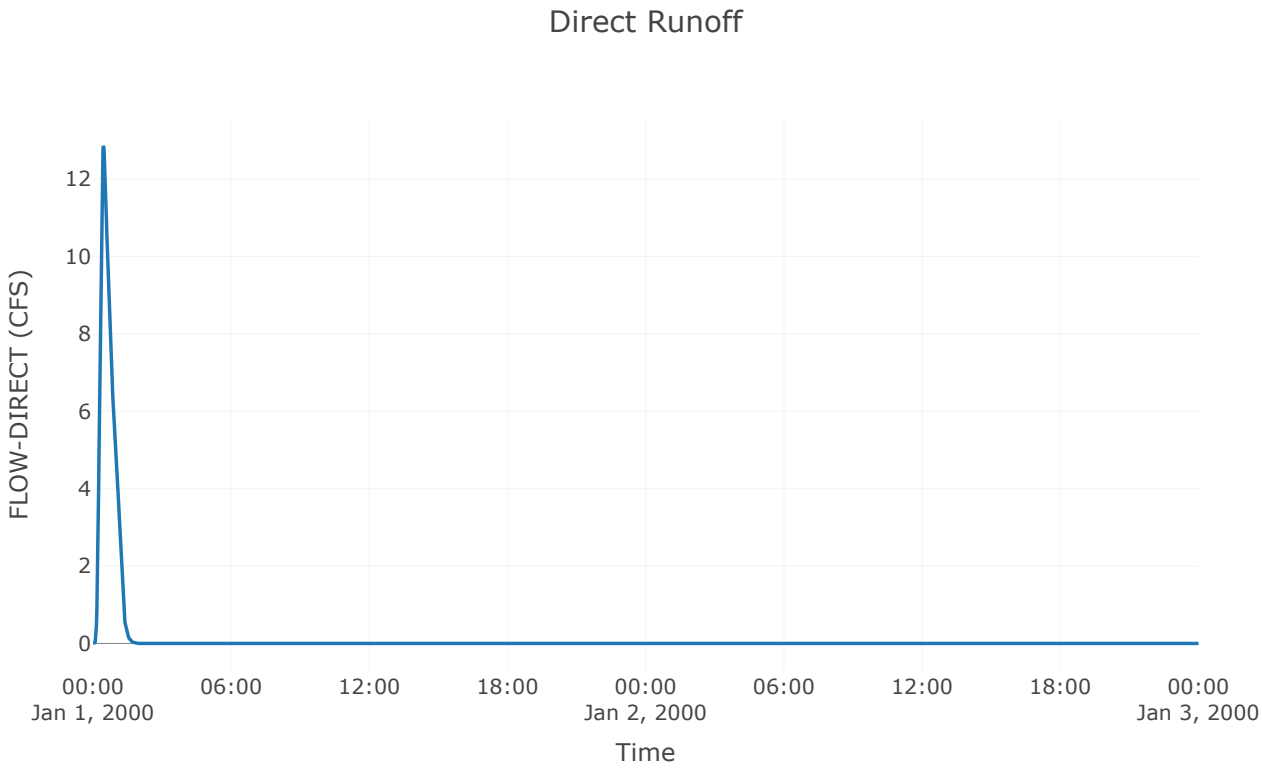
Cumulative Precipitation

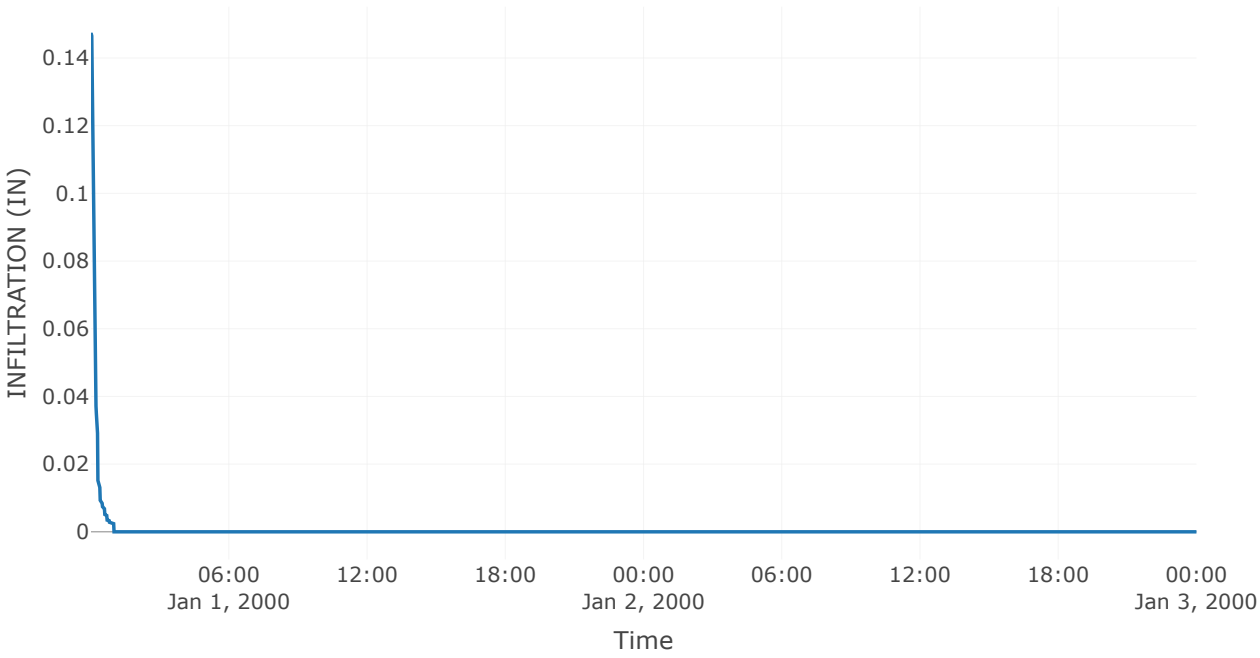



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

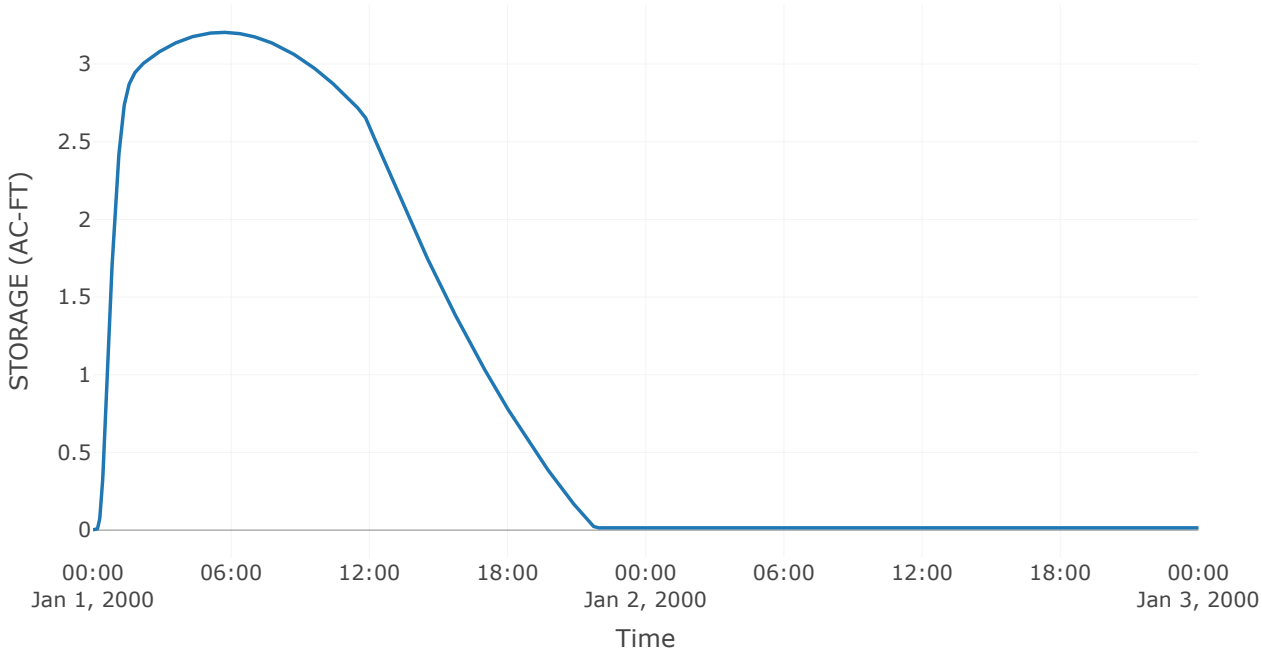

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

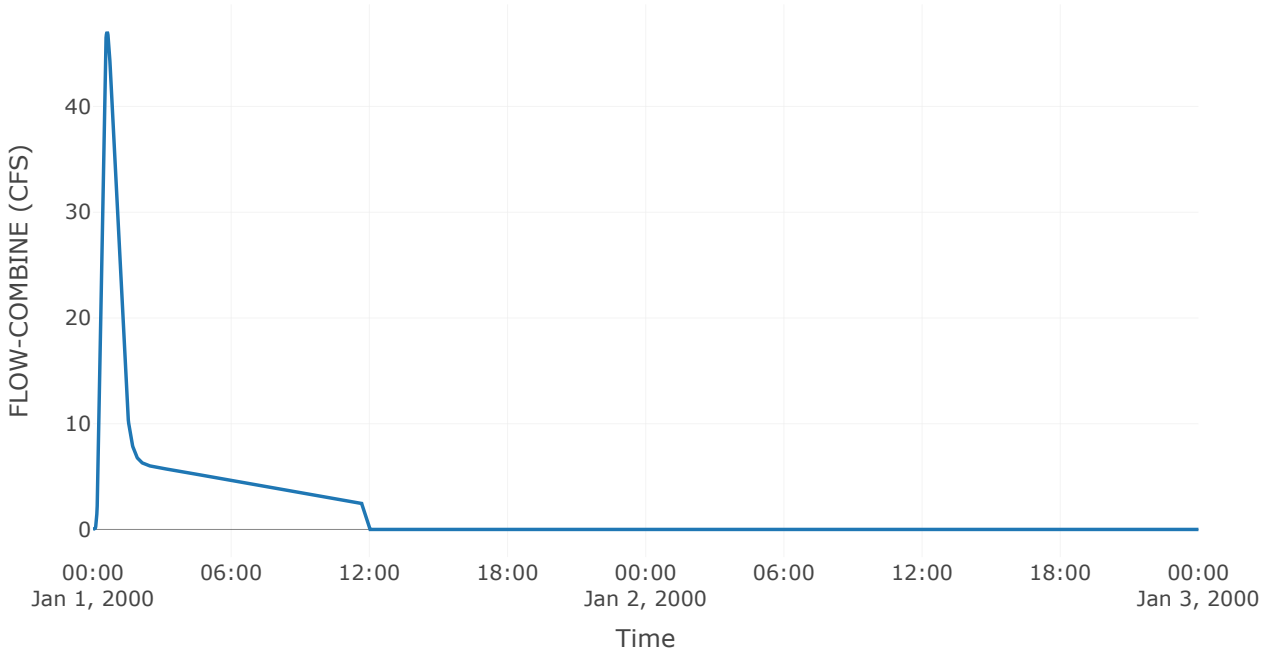
Downstream : Basin 3

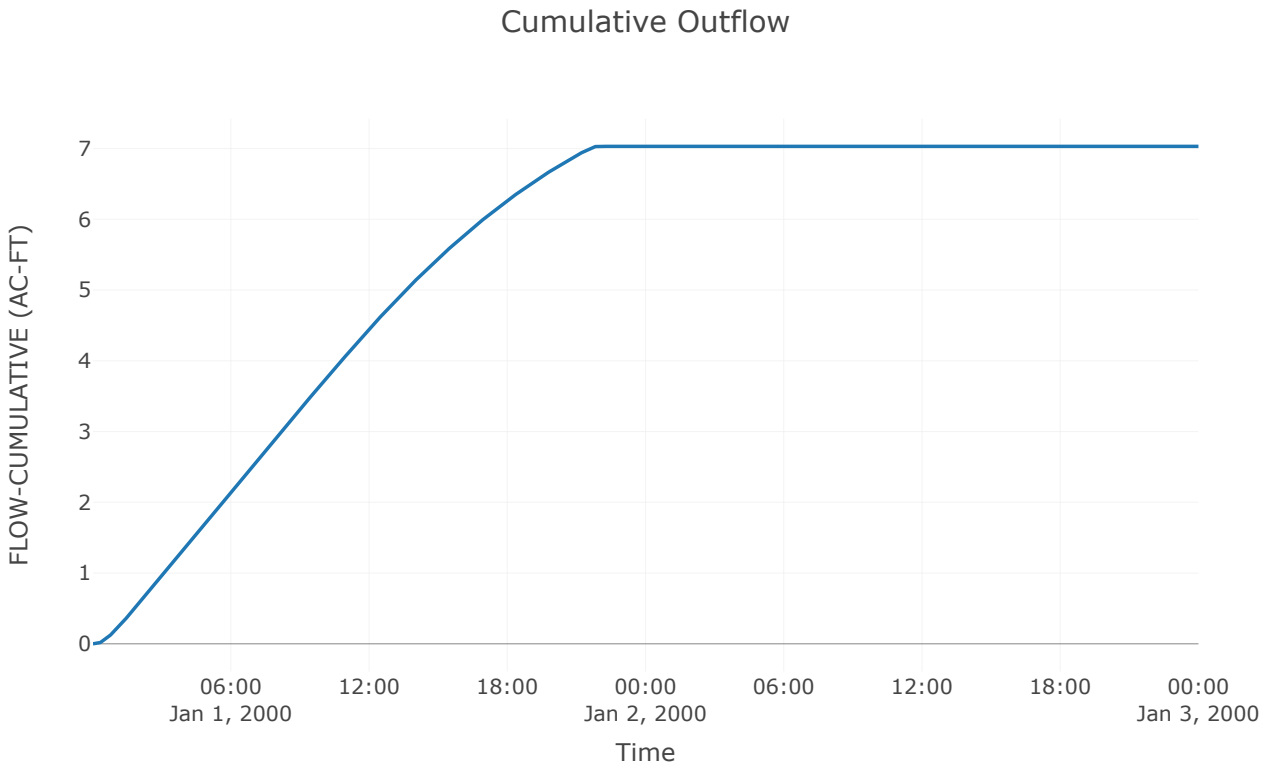
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

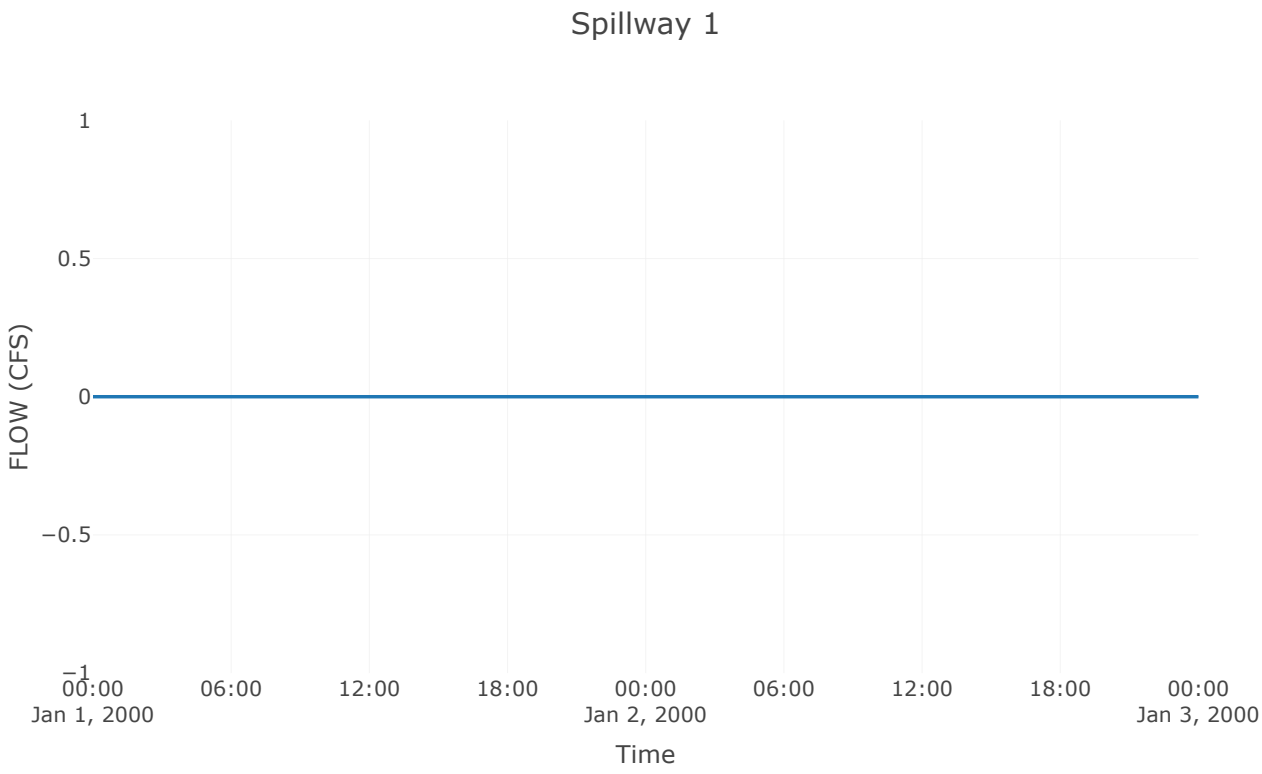
Storage



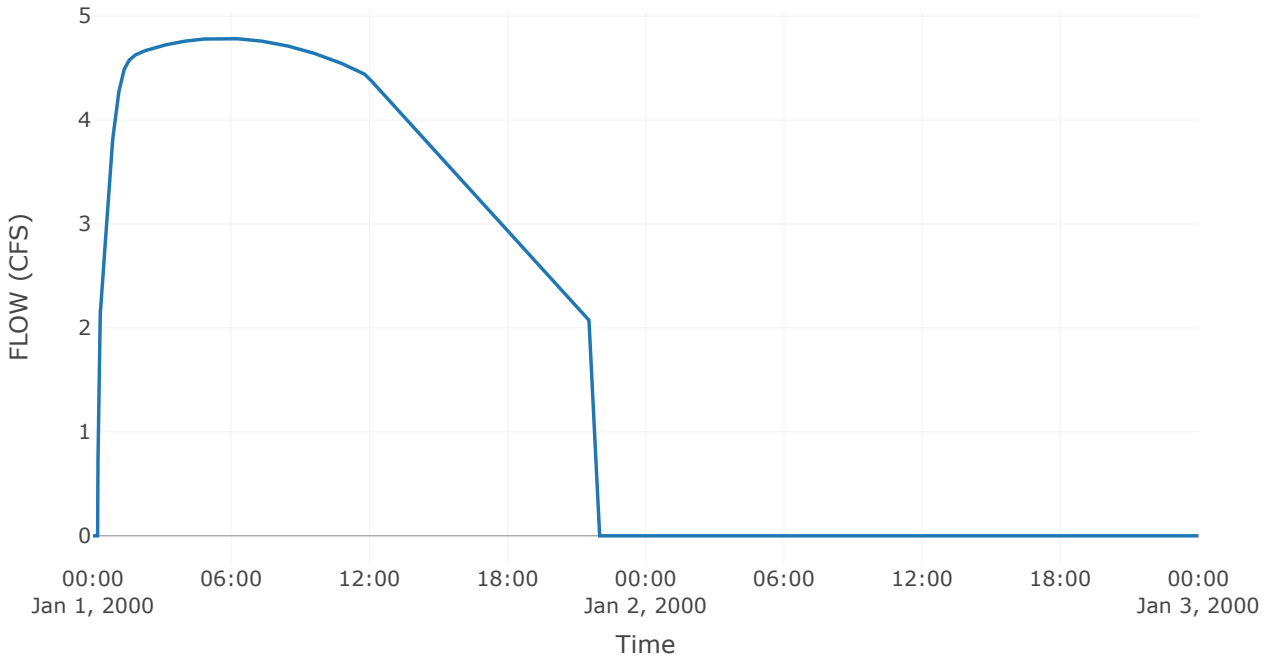
Combined Inflow



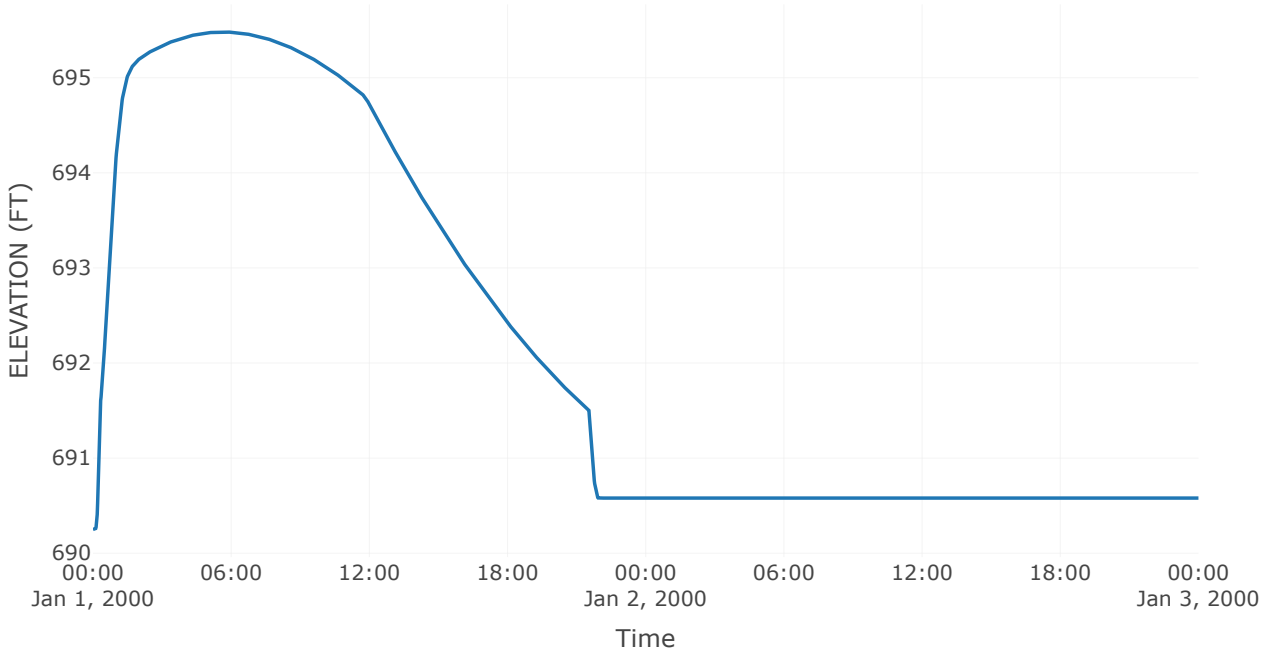

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

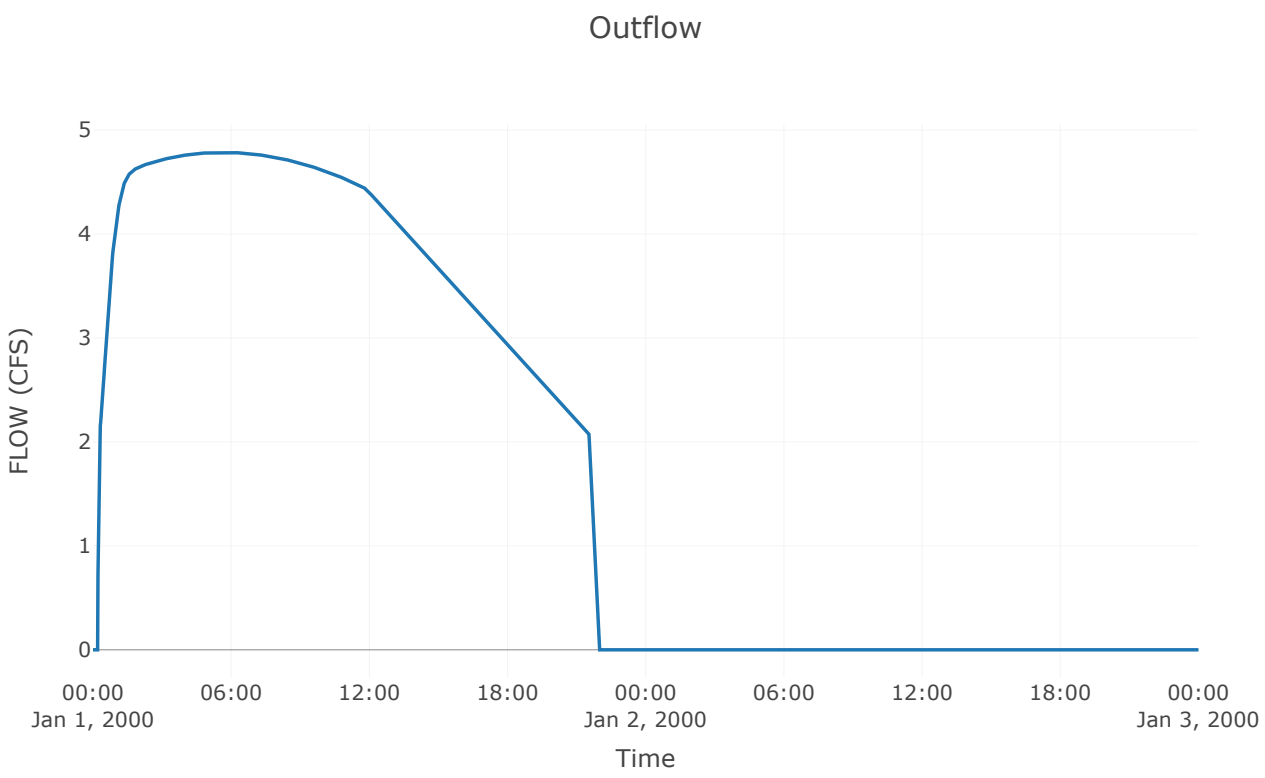

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

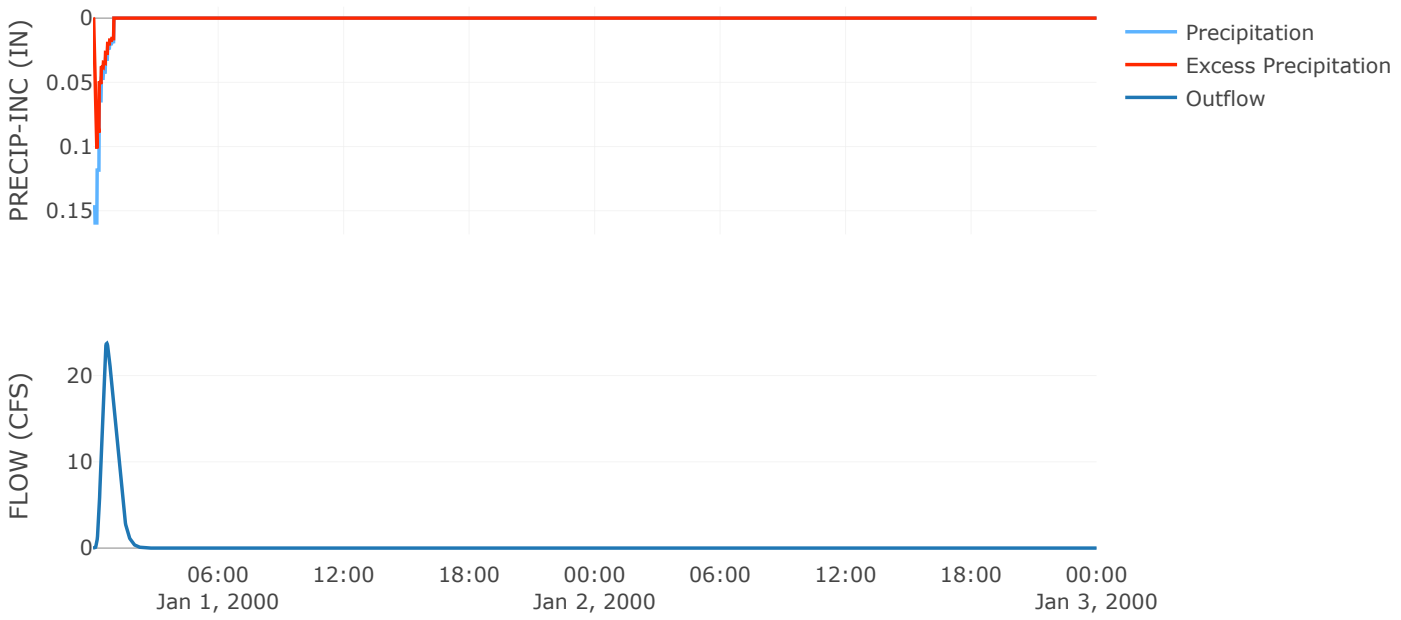
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

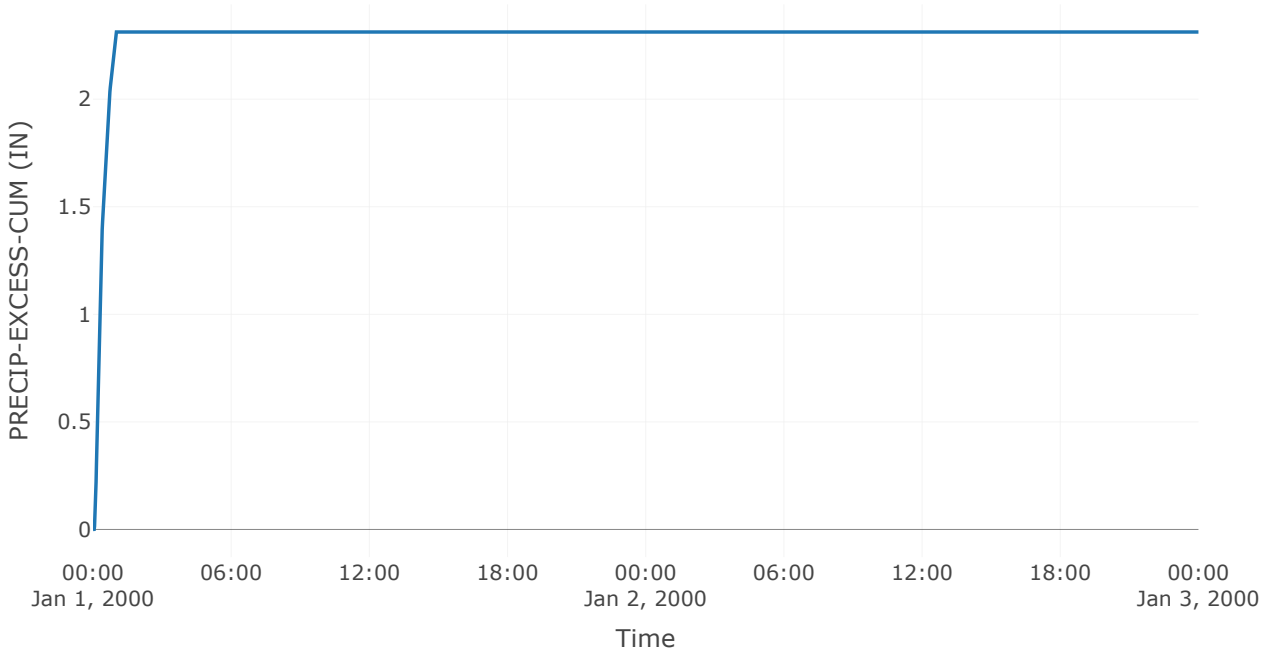
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

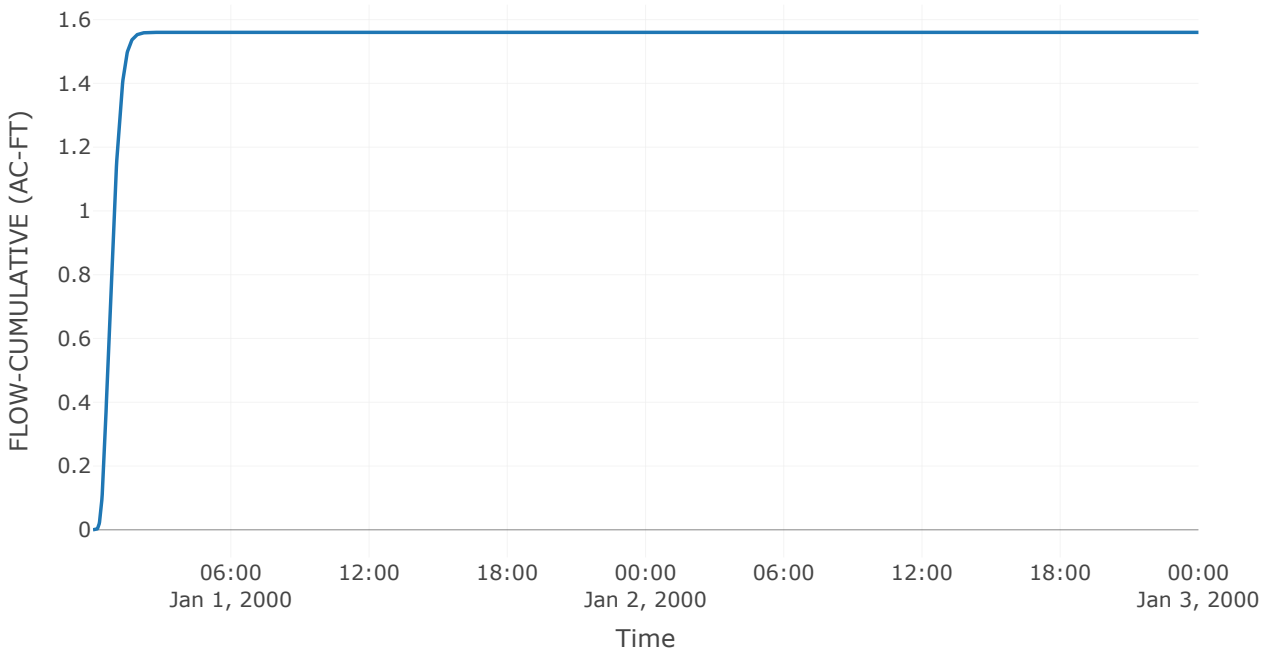
Precipitation and Outflow



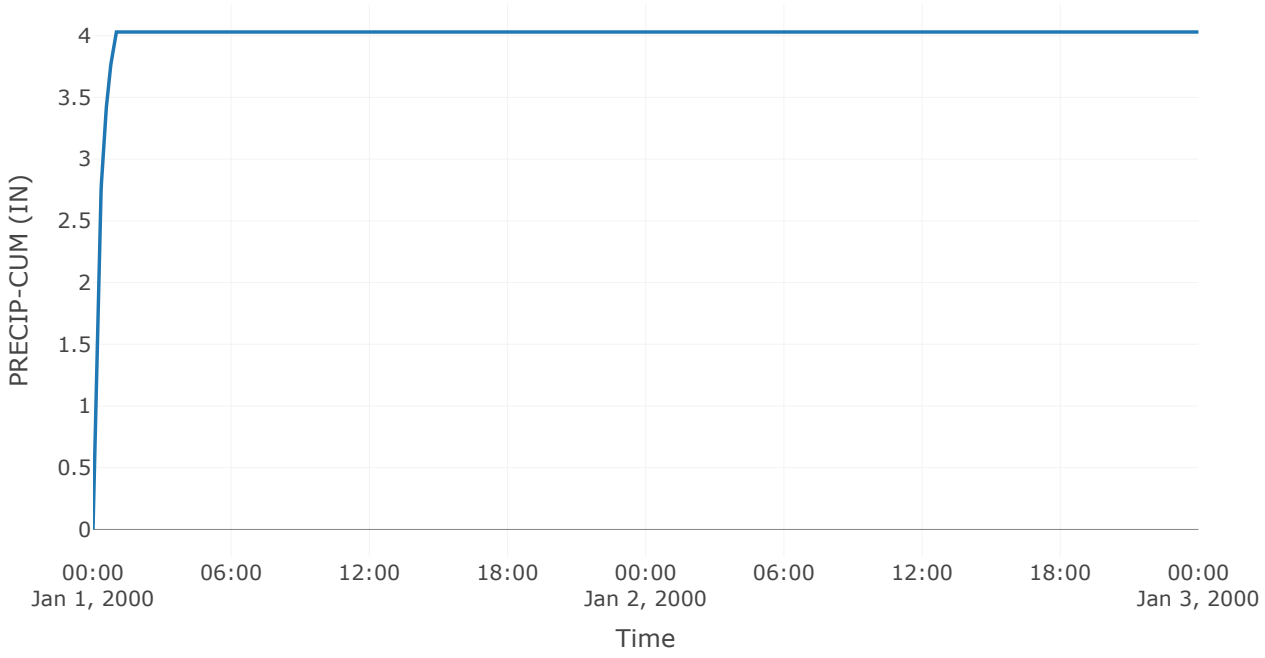
Cumulative Excess Precipitation

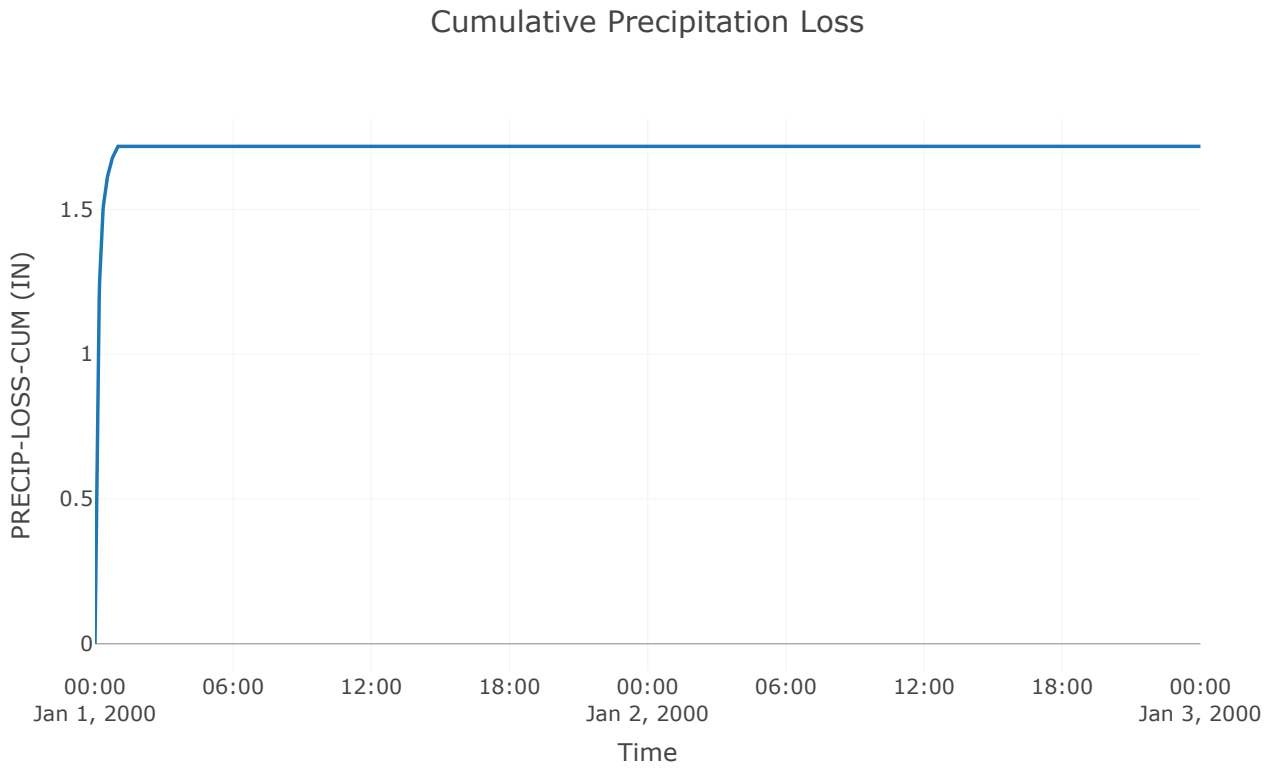


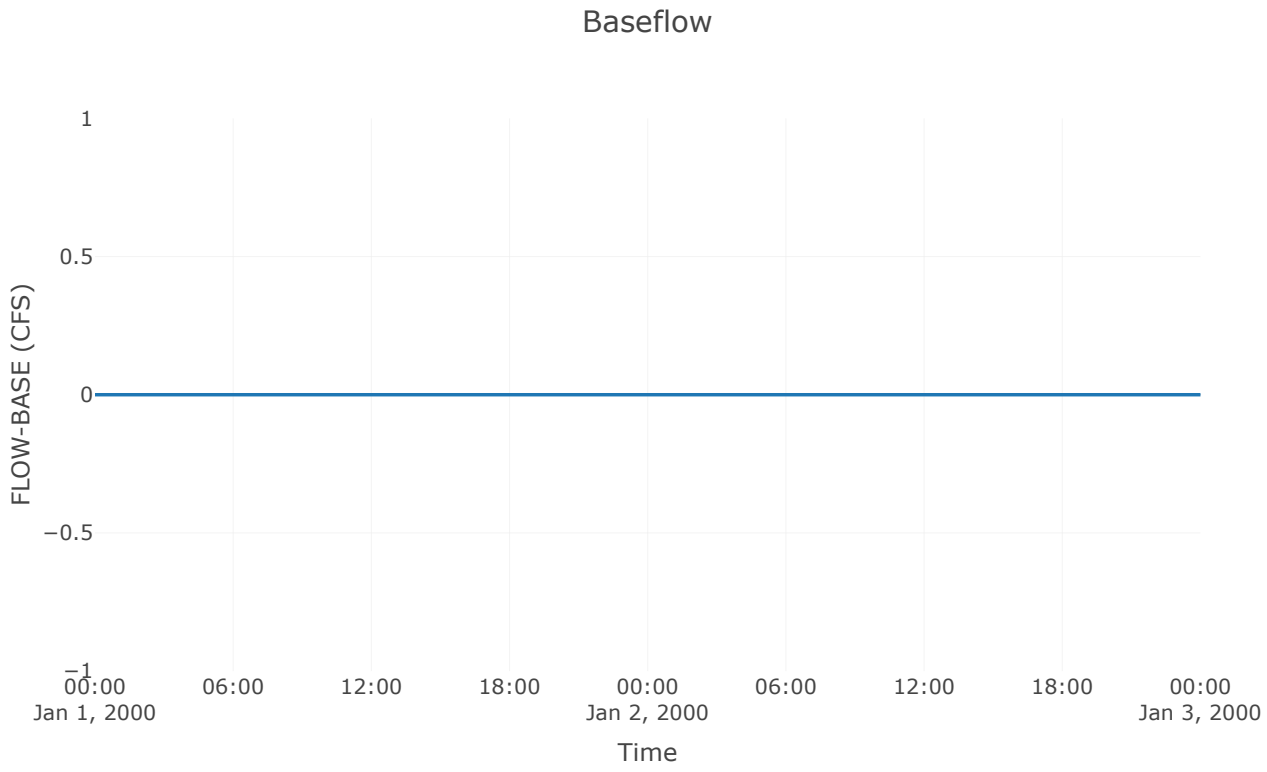
Cumulative Outflow

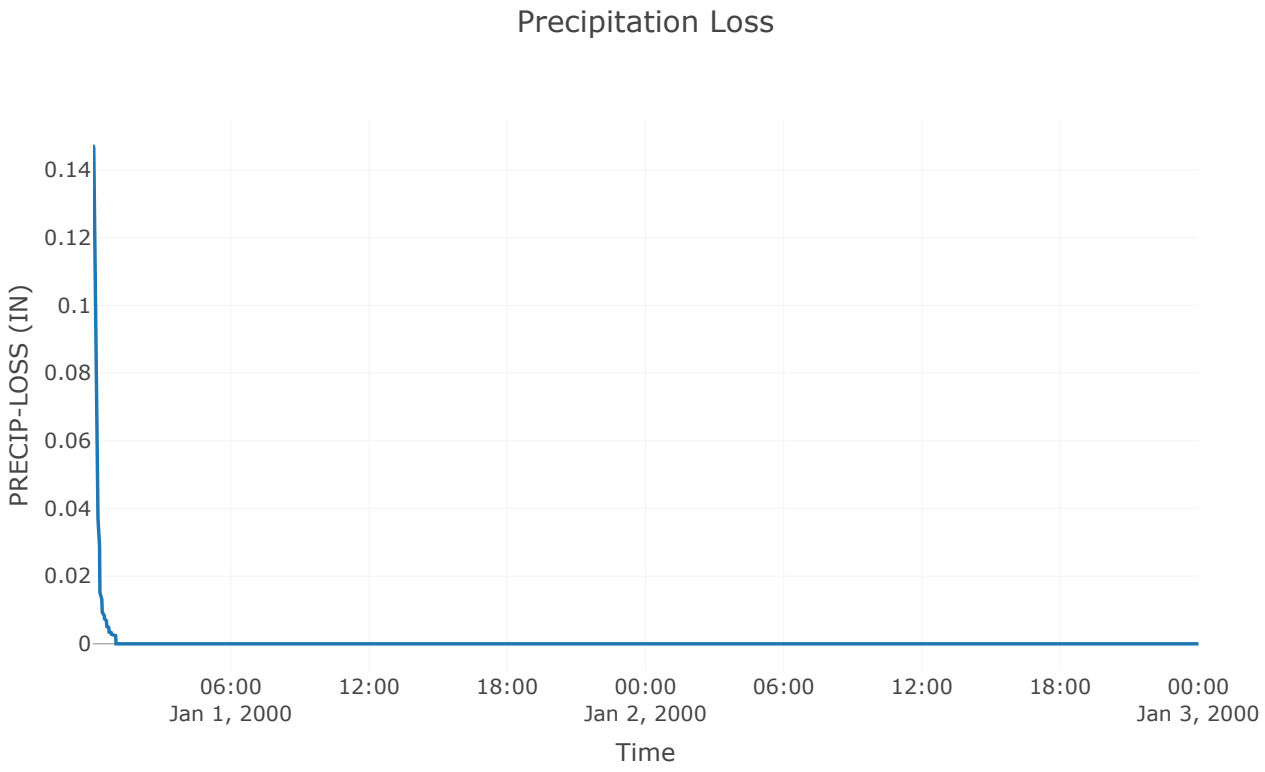


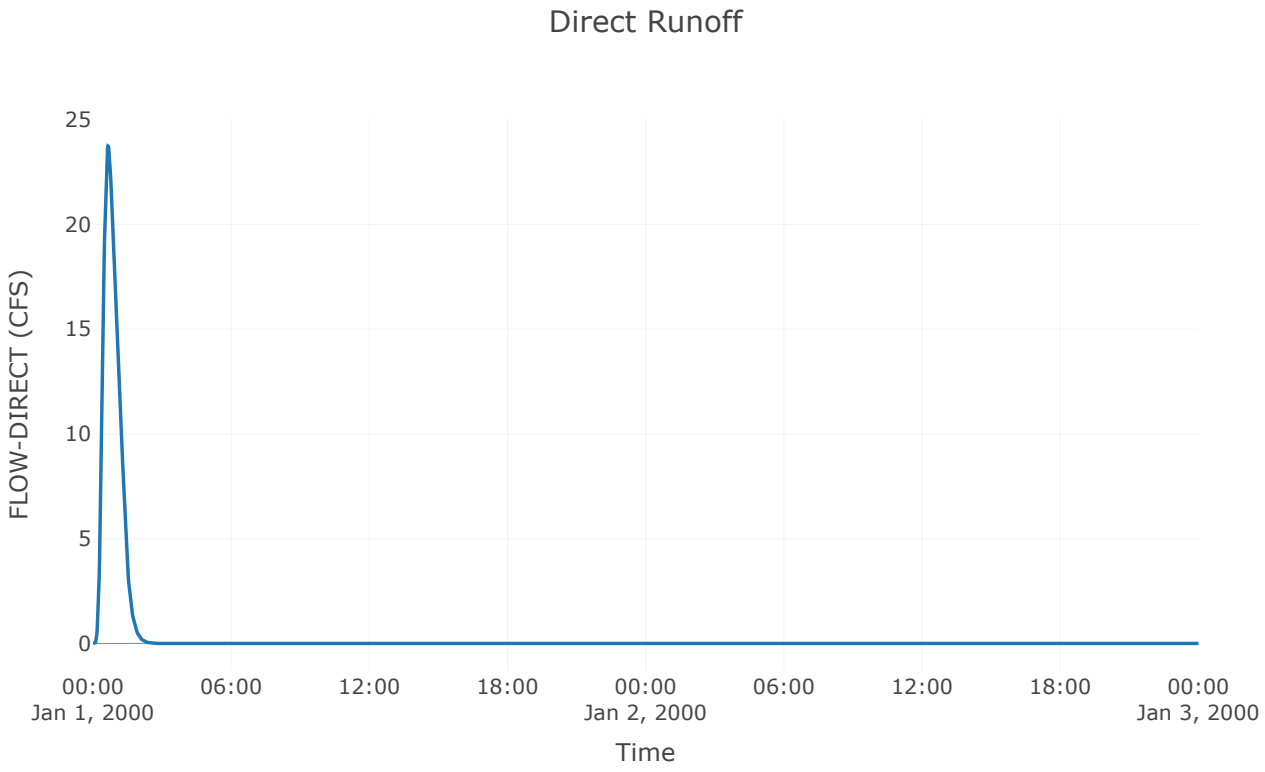
Cumulative Precipitation

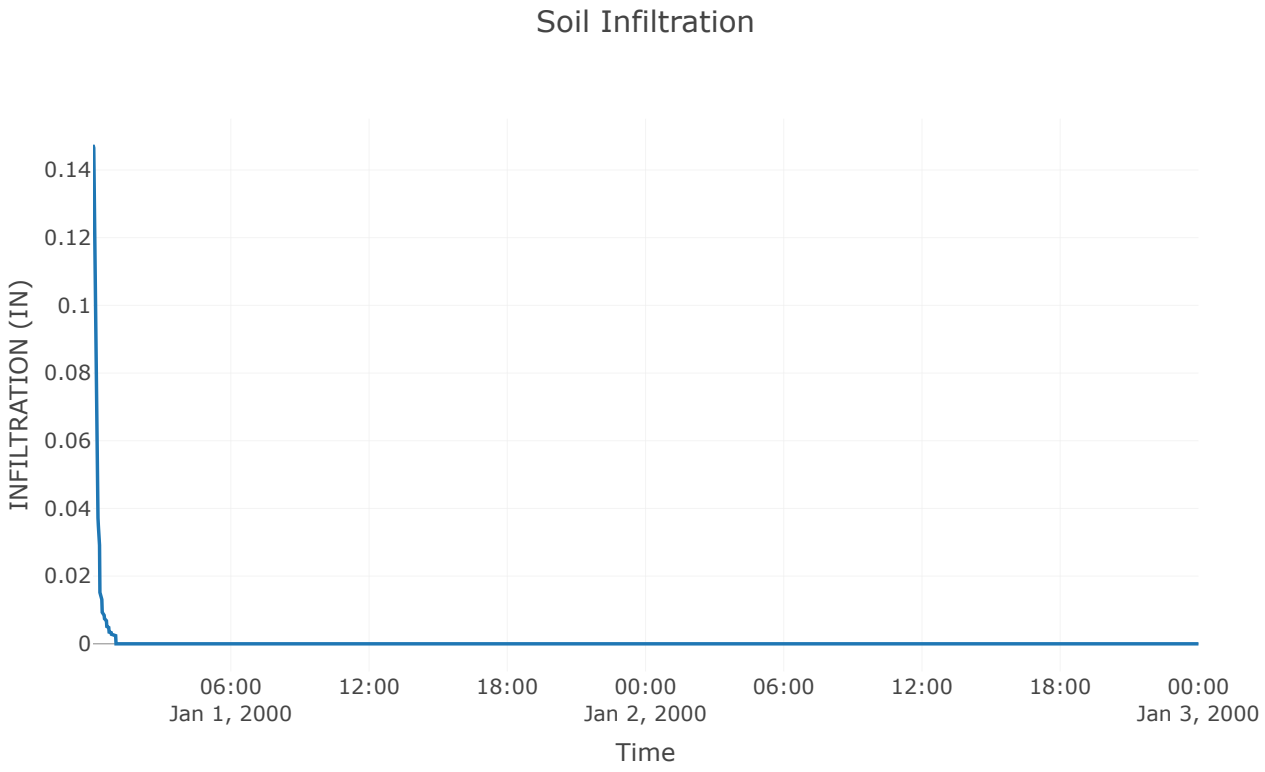



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

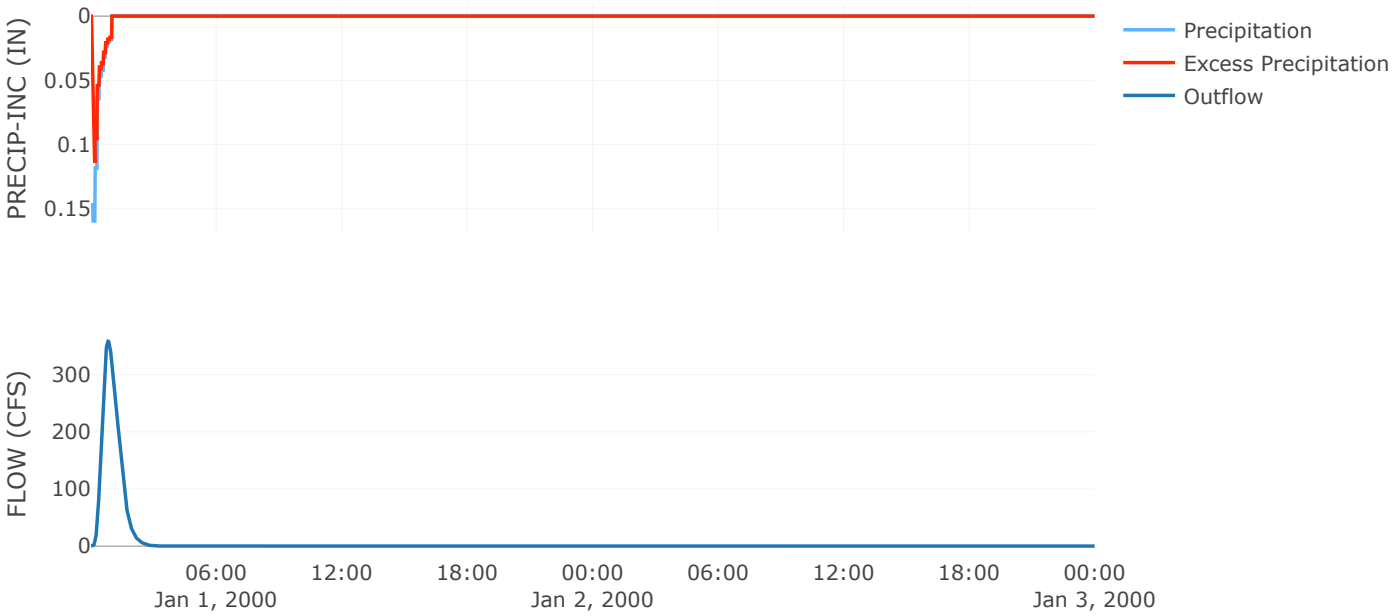
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

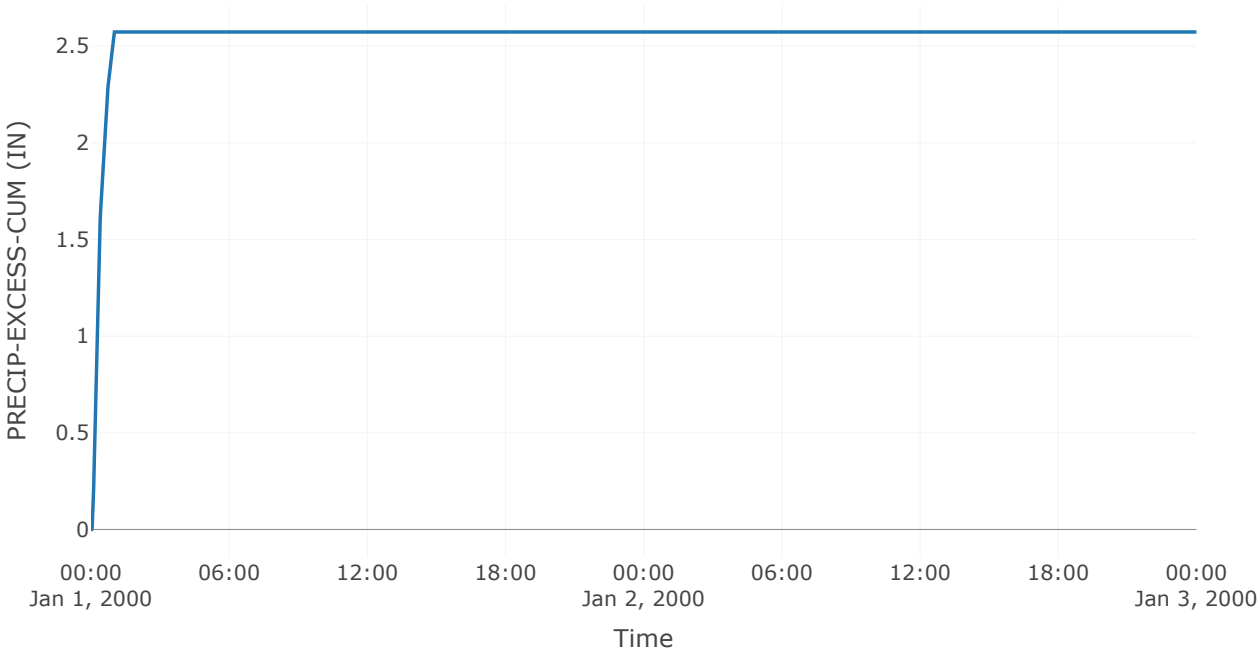
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

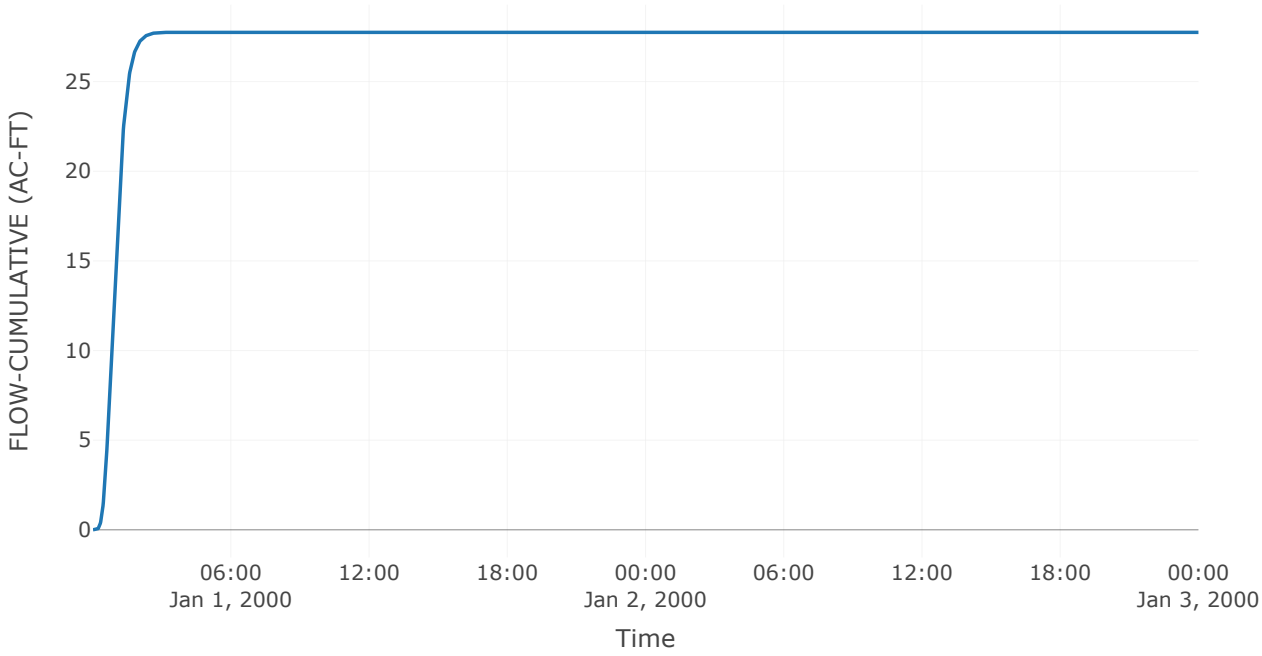
Precipitation and Outflow



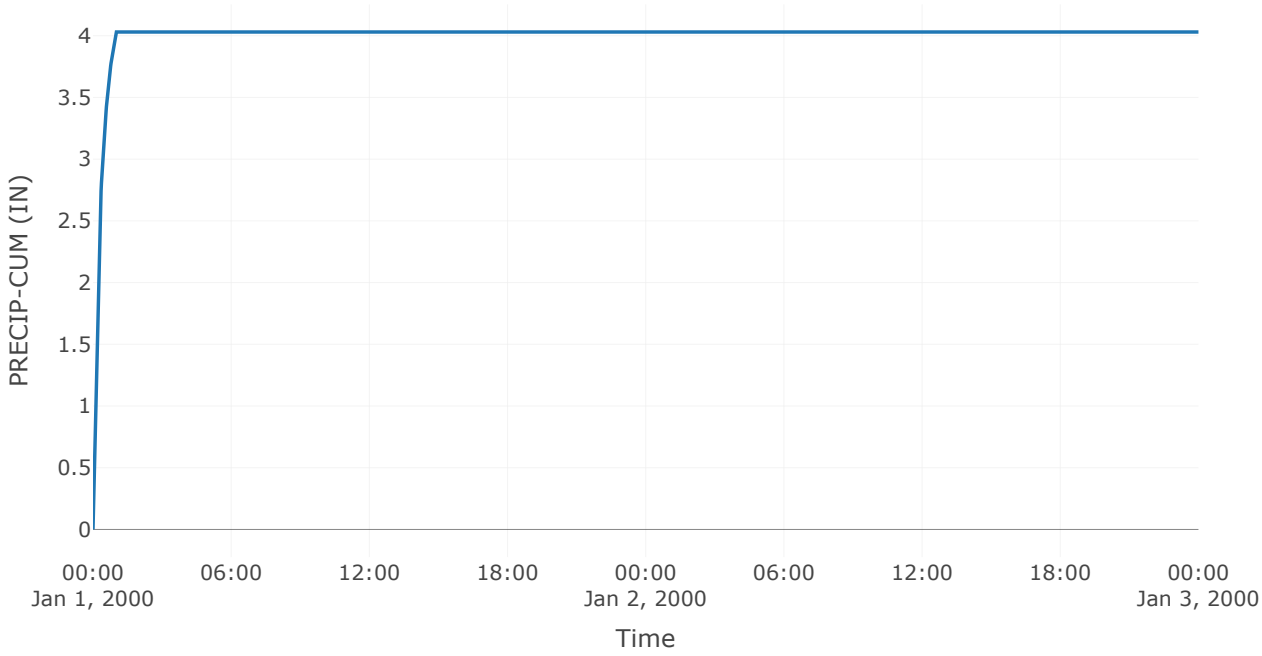
Cumulative Excess Precipitation

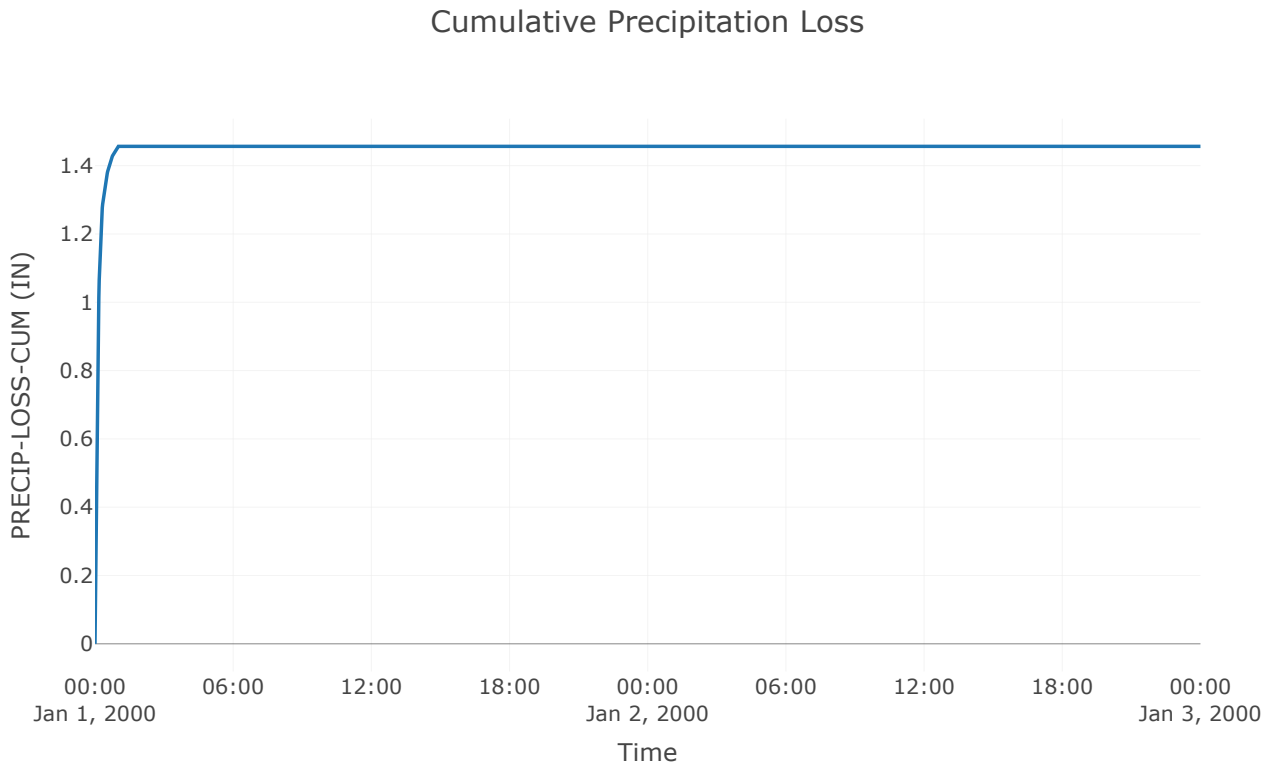


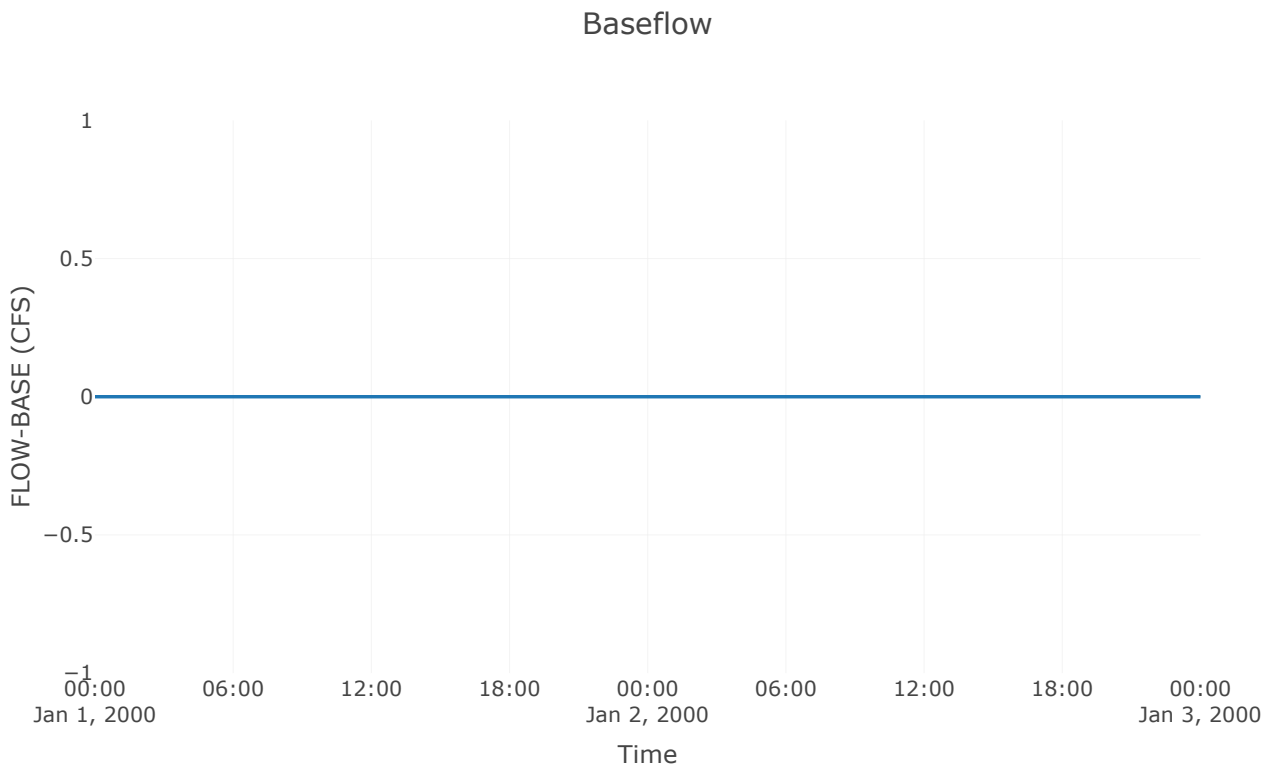
Cumulative Outflow



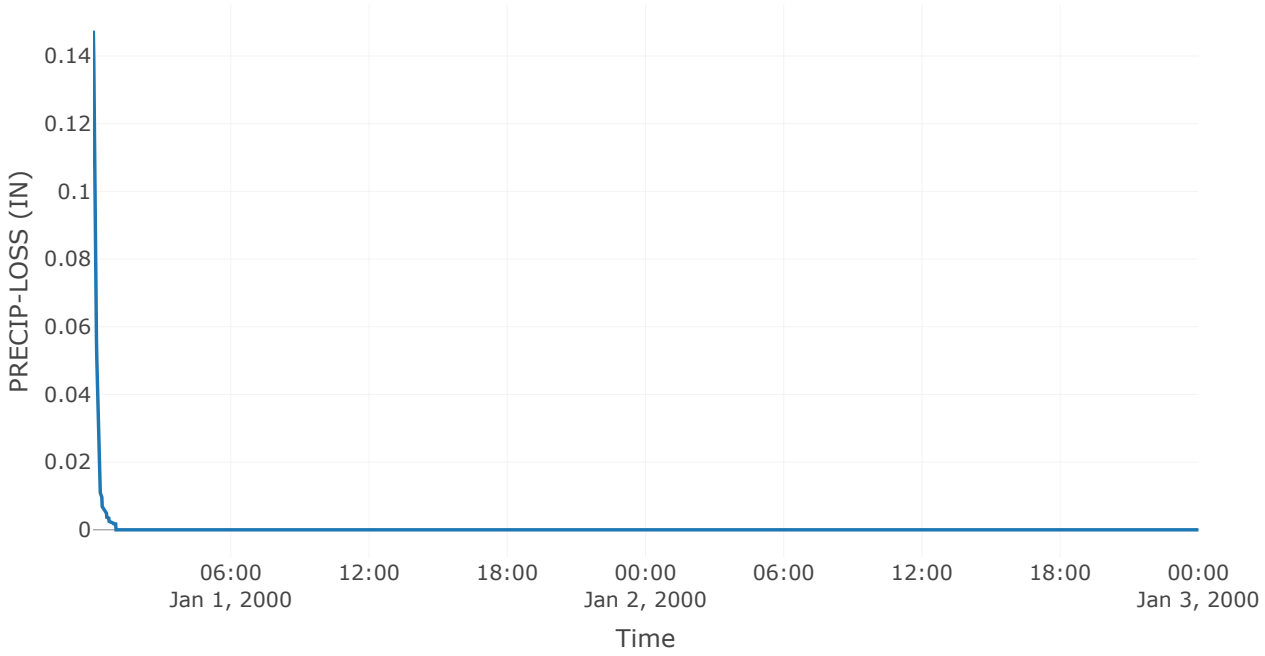
Cumulative Precipitation



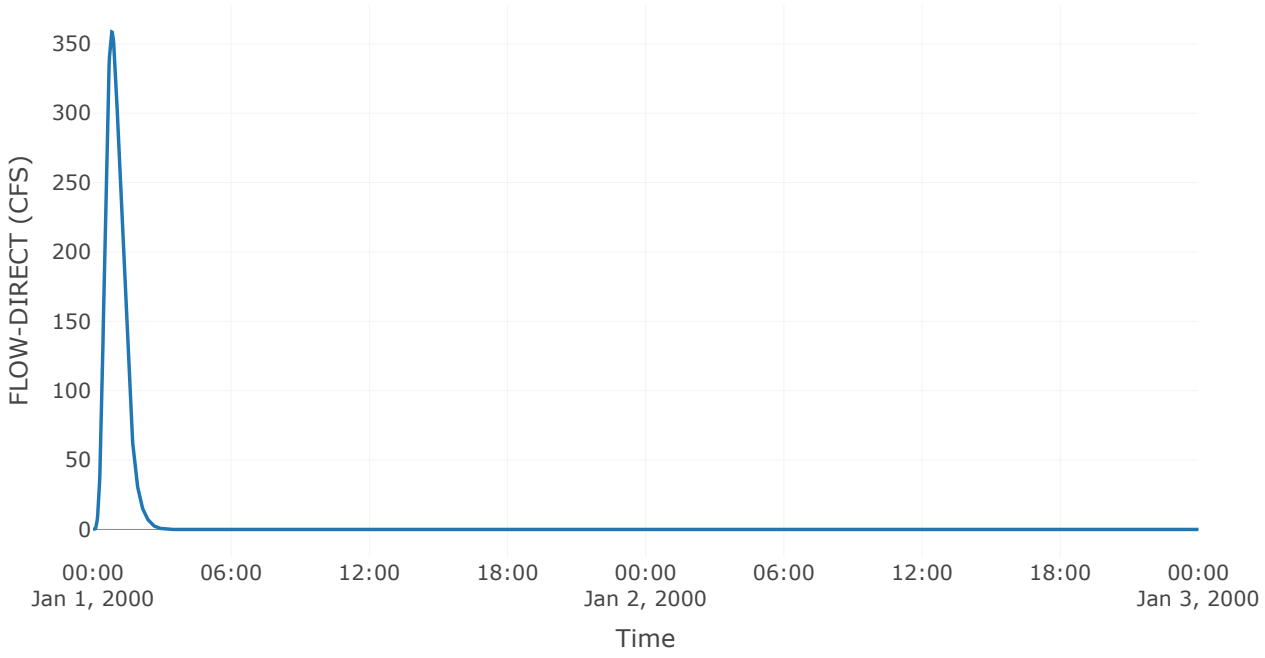

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

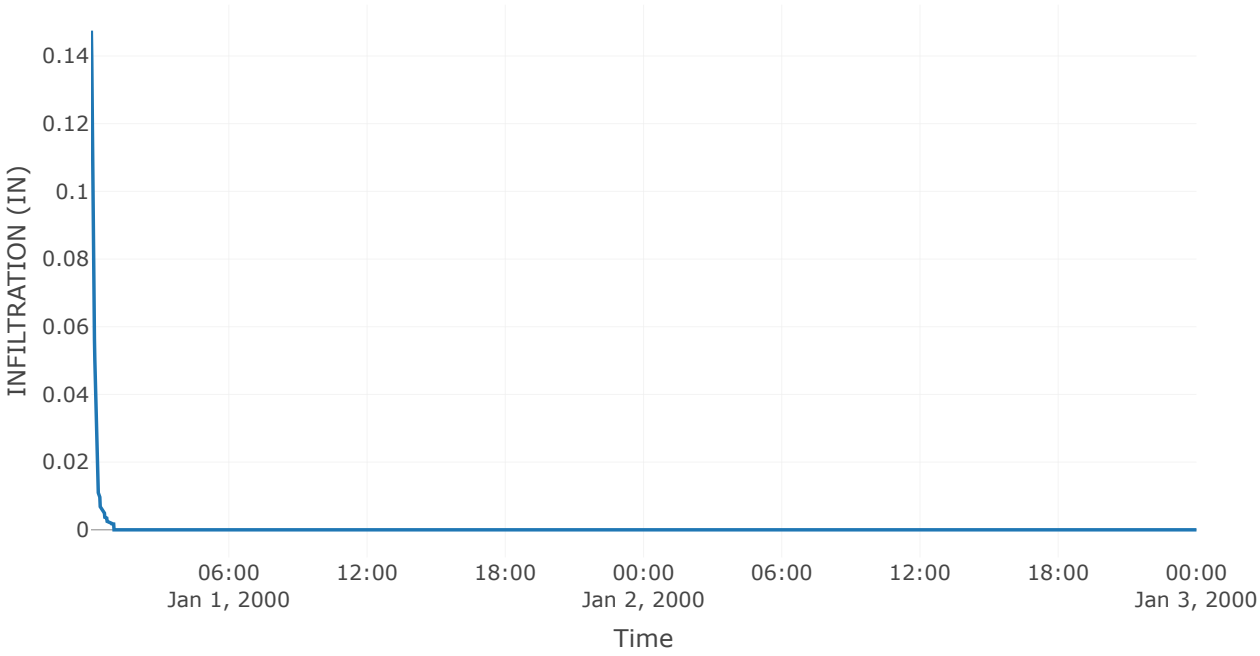

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



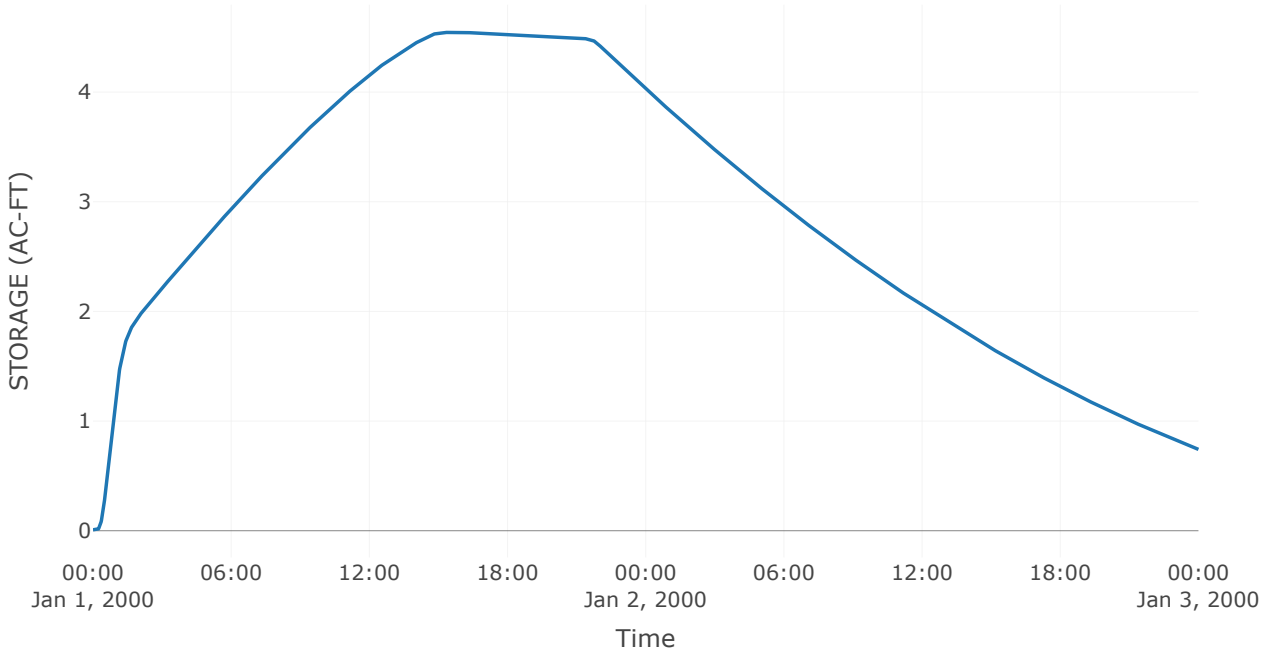

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

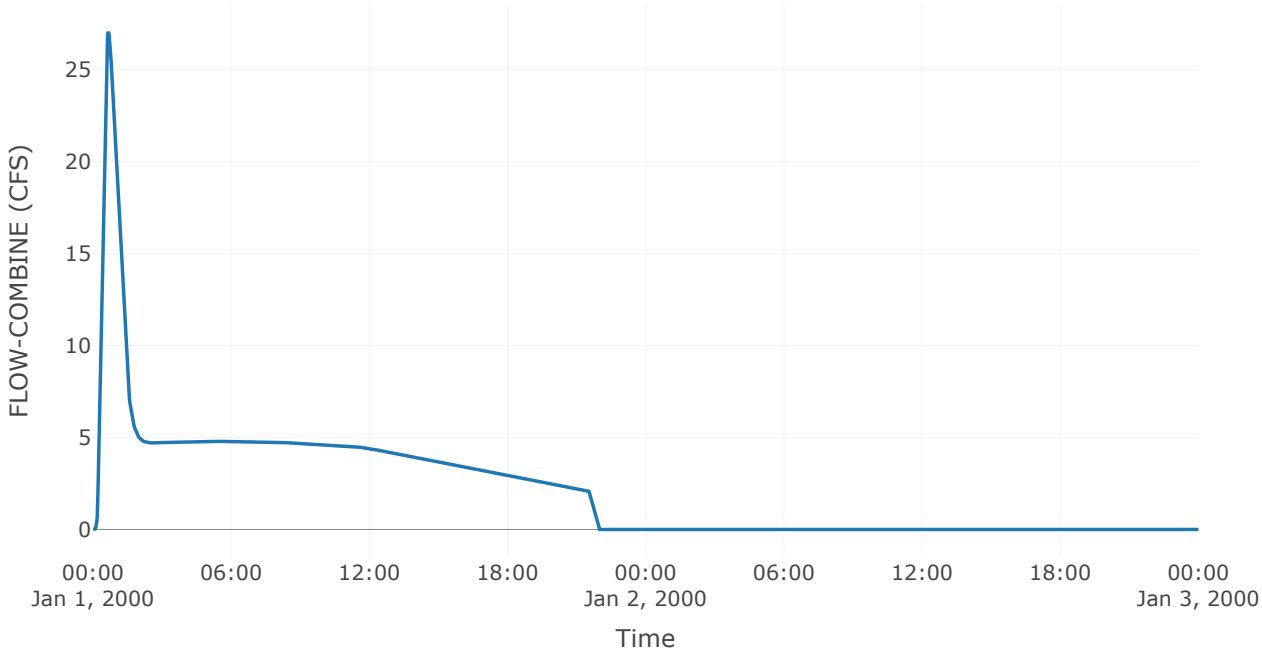
Downstream : Off - Site Tributary Area

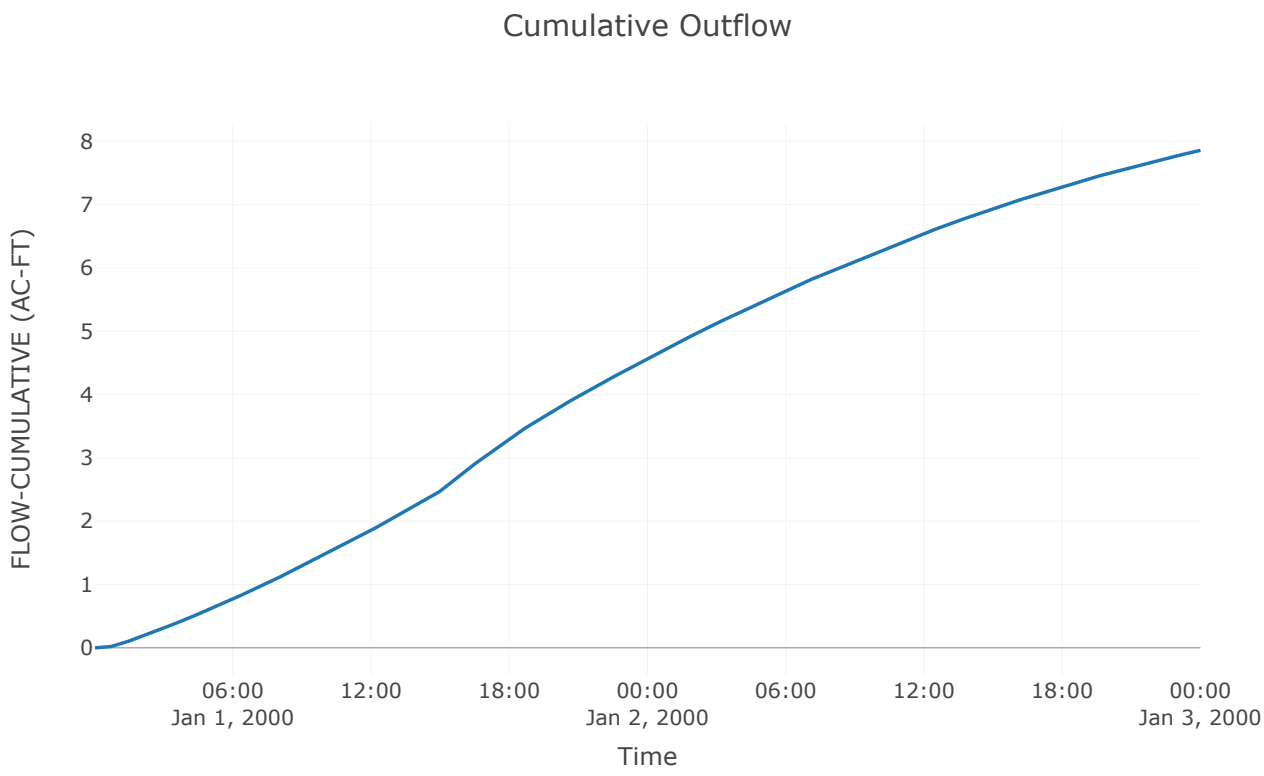
Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

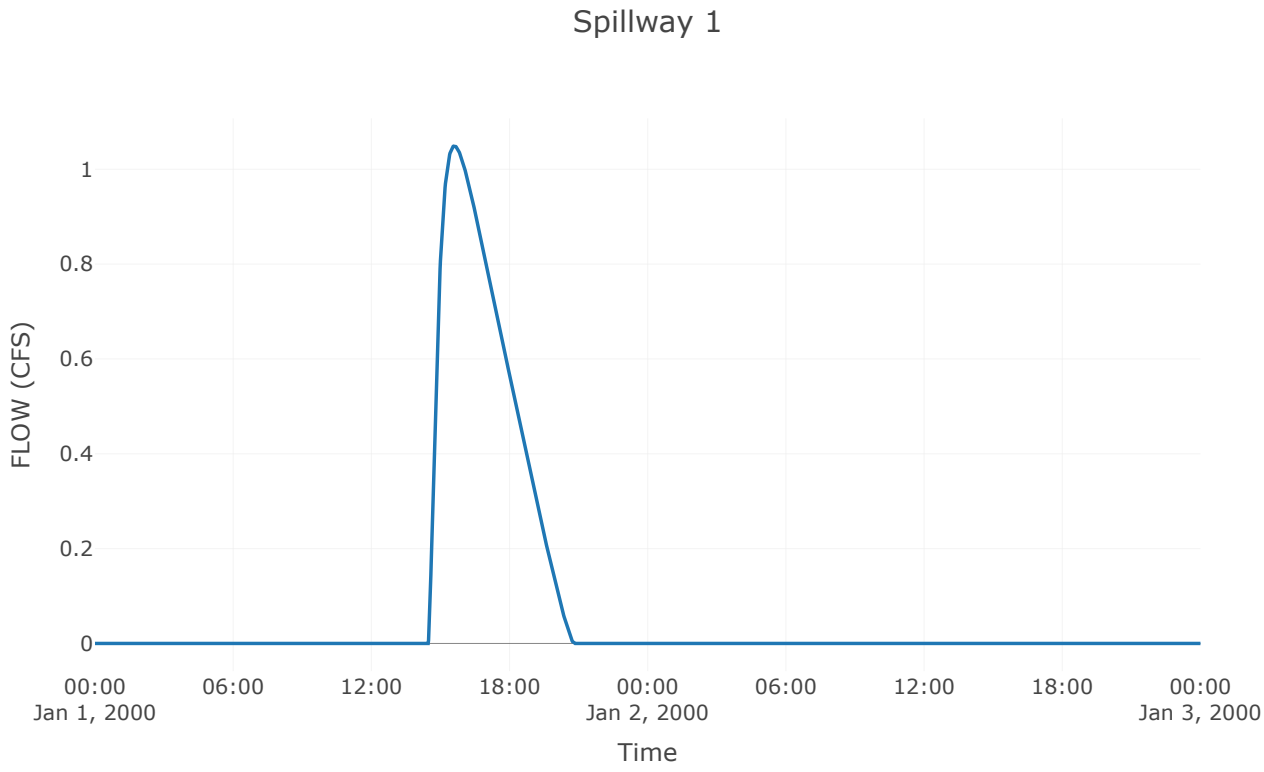
Storage



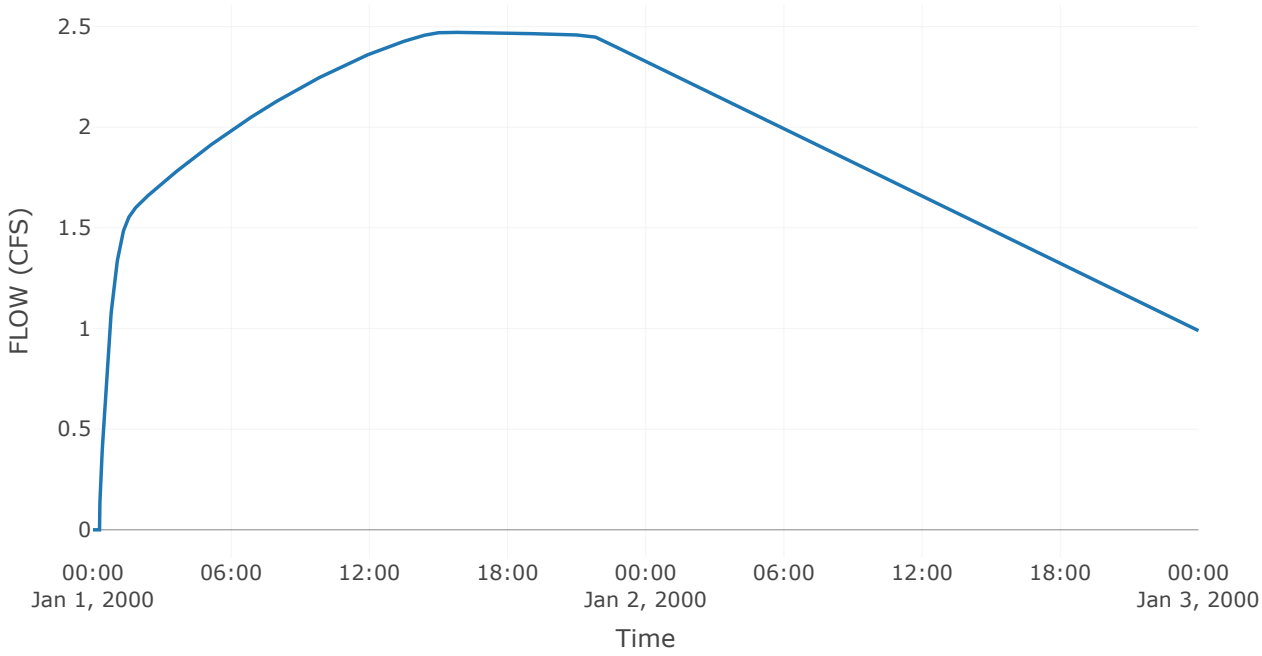
Combined Inflow



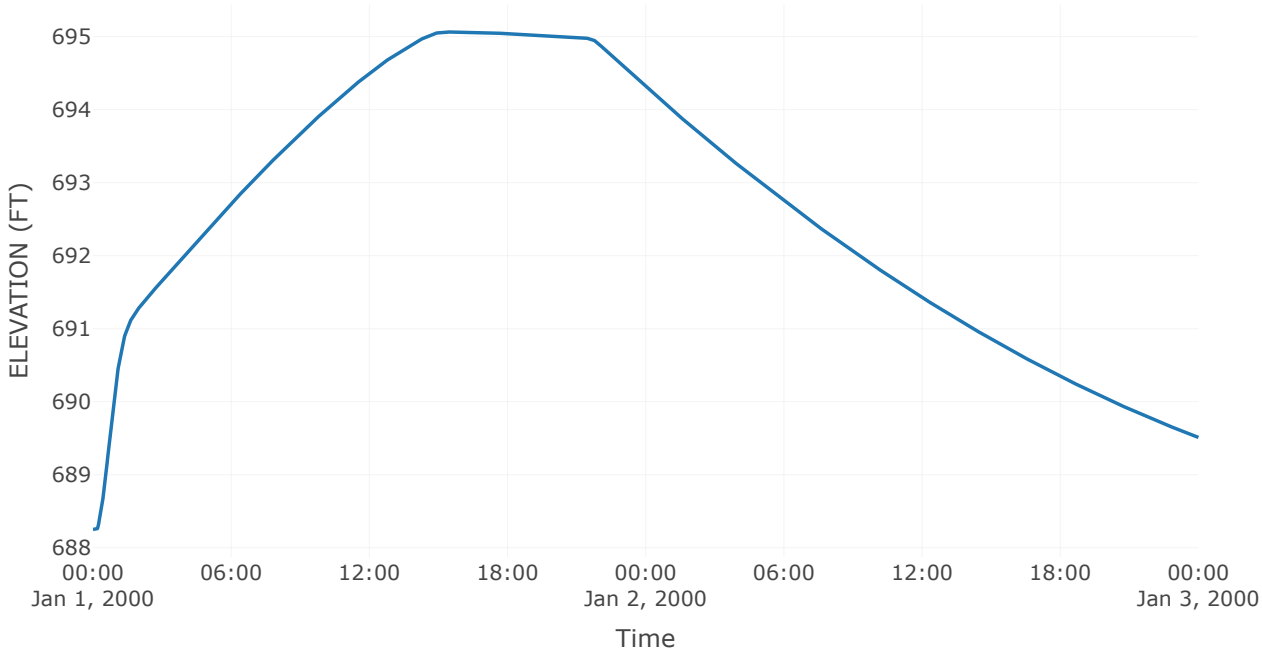

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

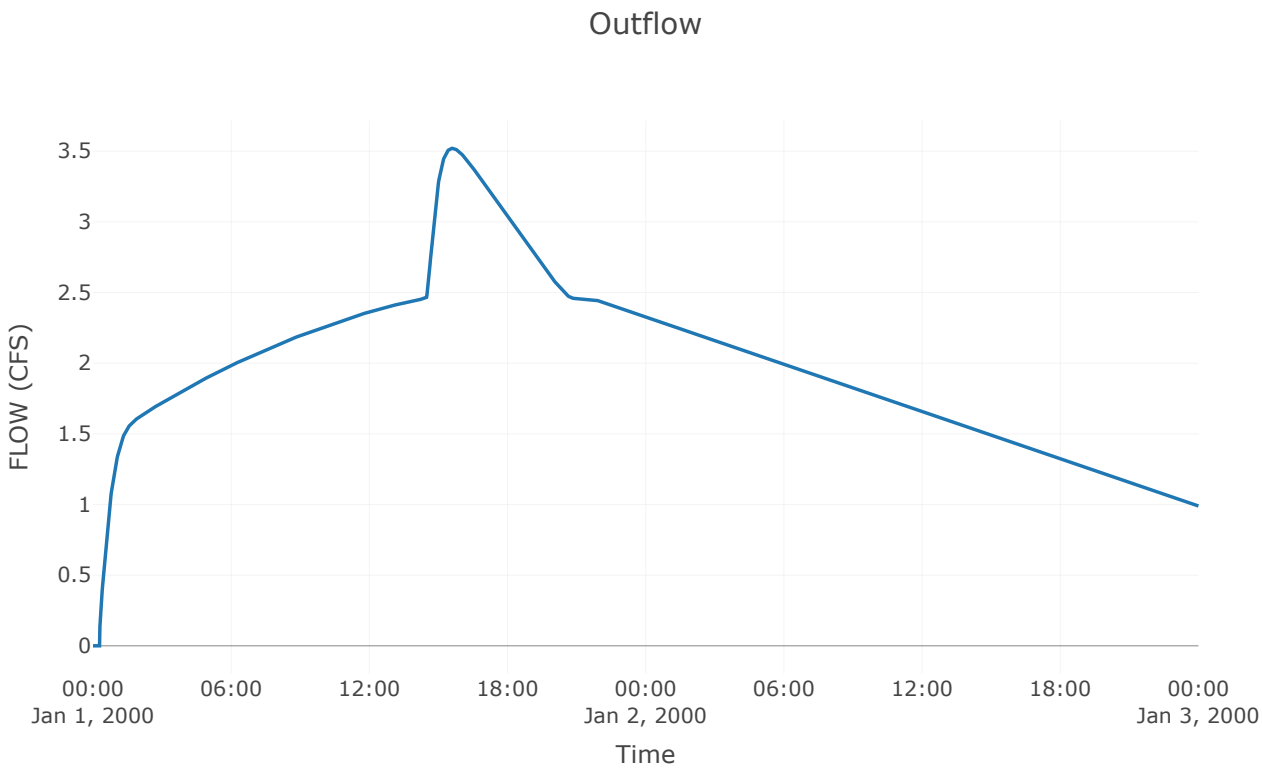

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



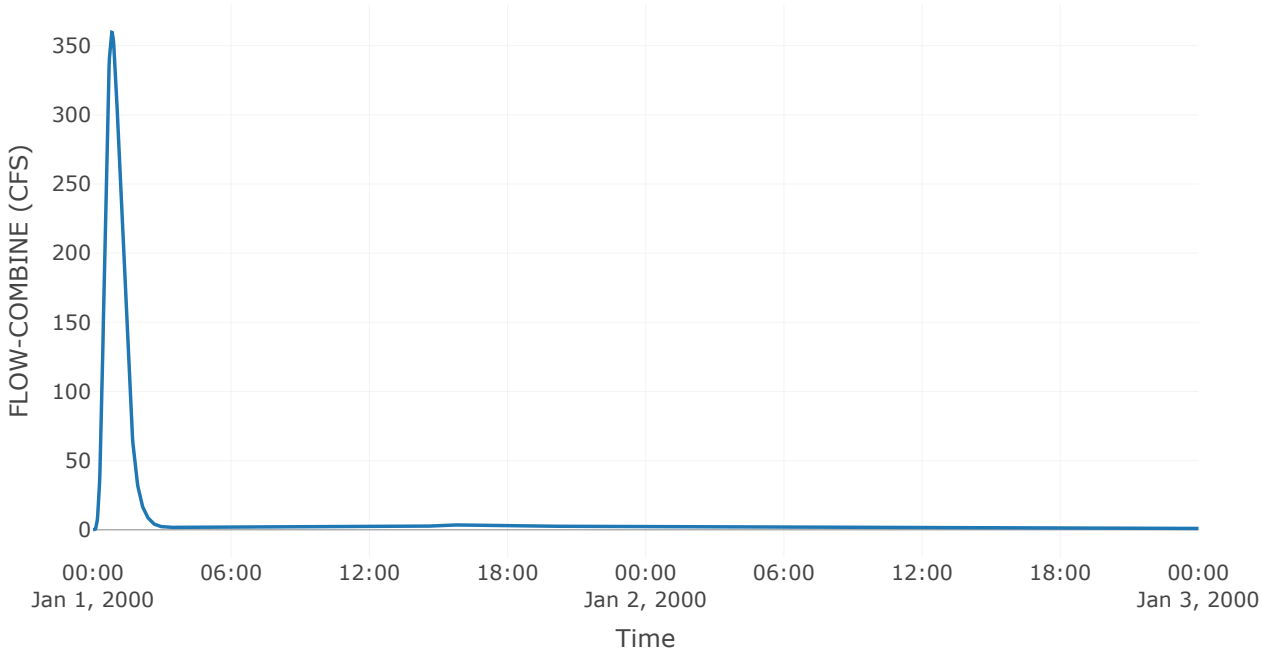

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

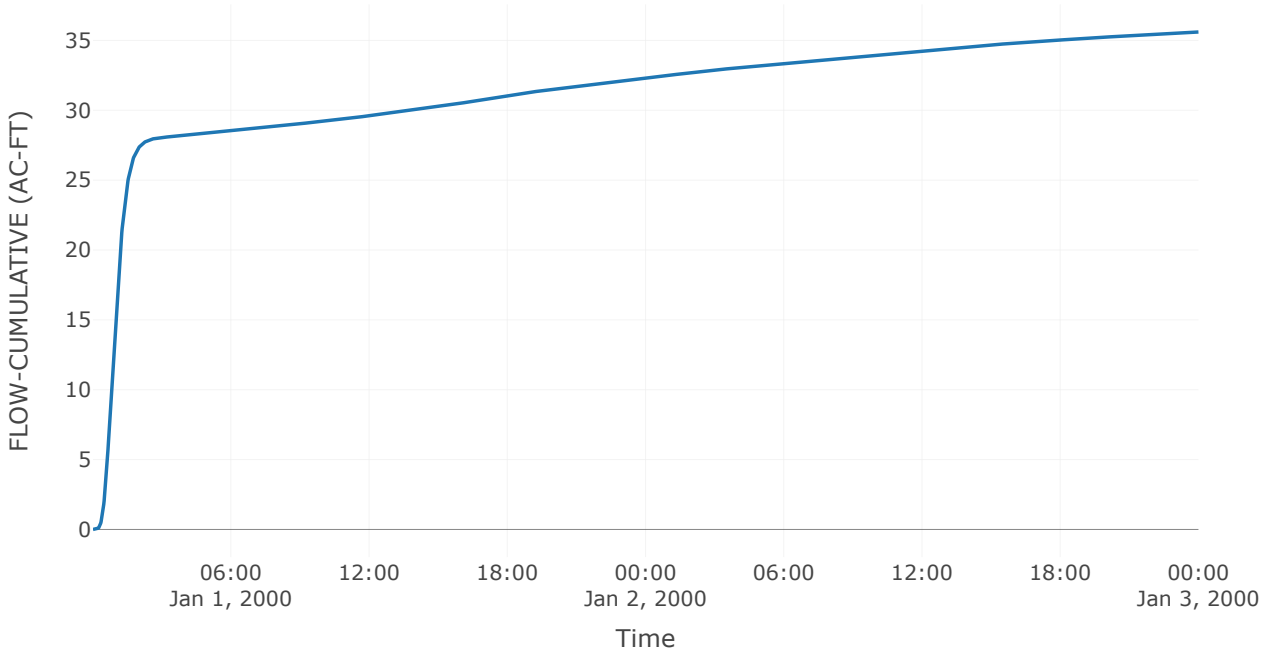
Downstream : Storage East of Wolf Road

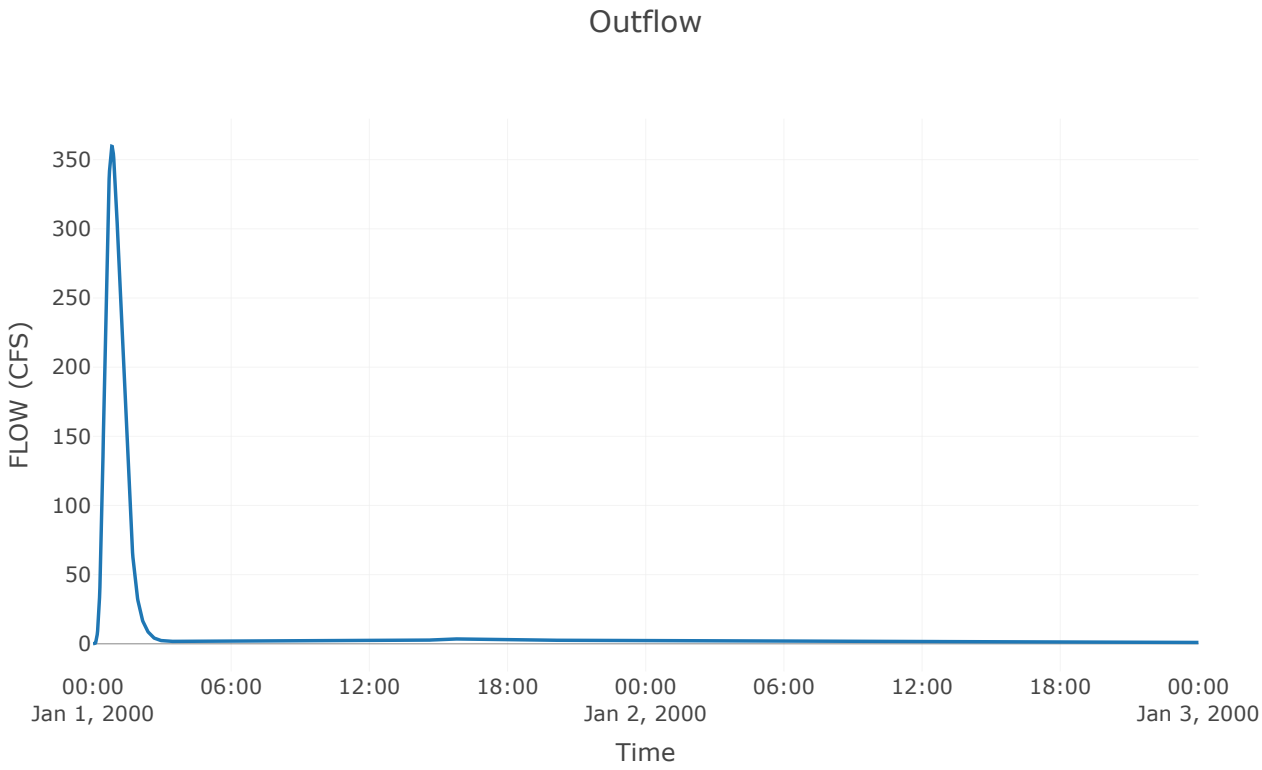
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



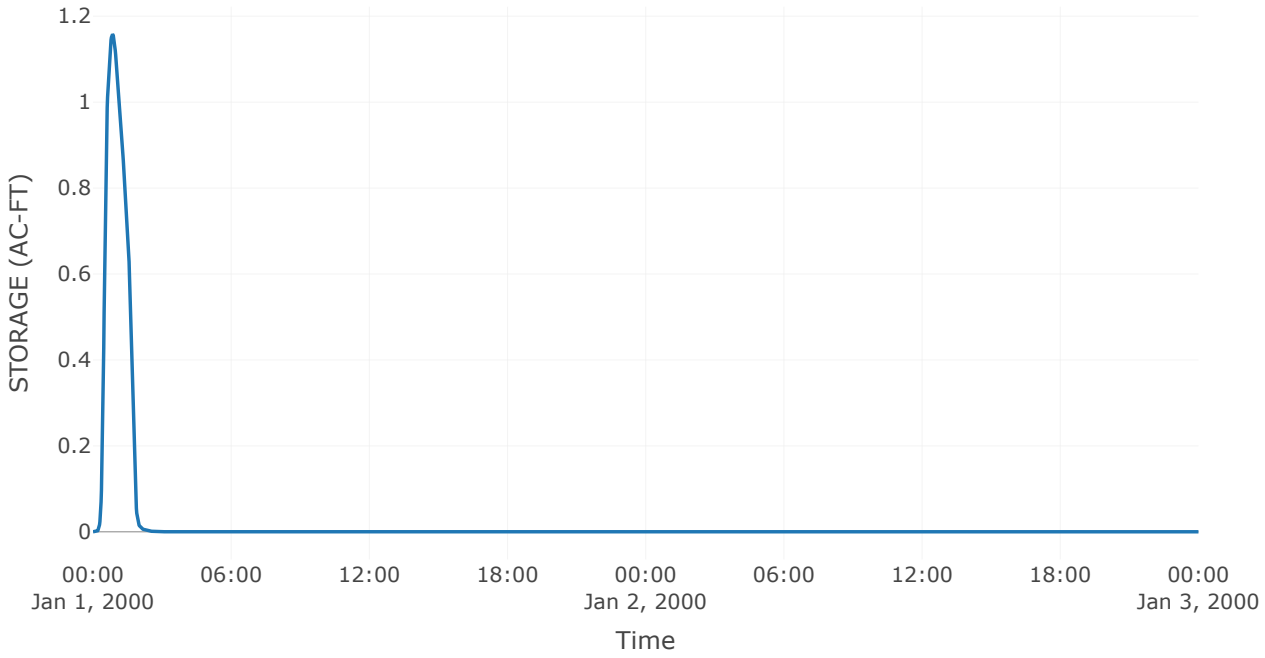

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

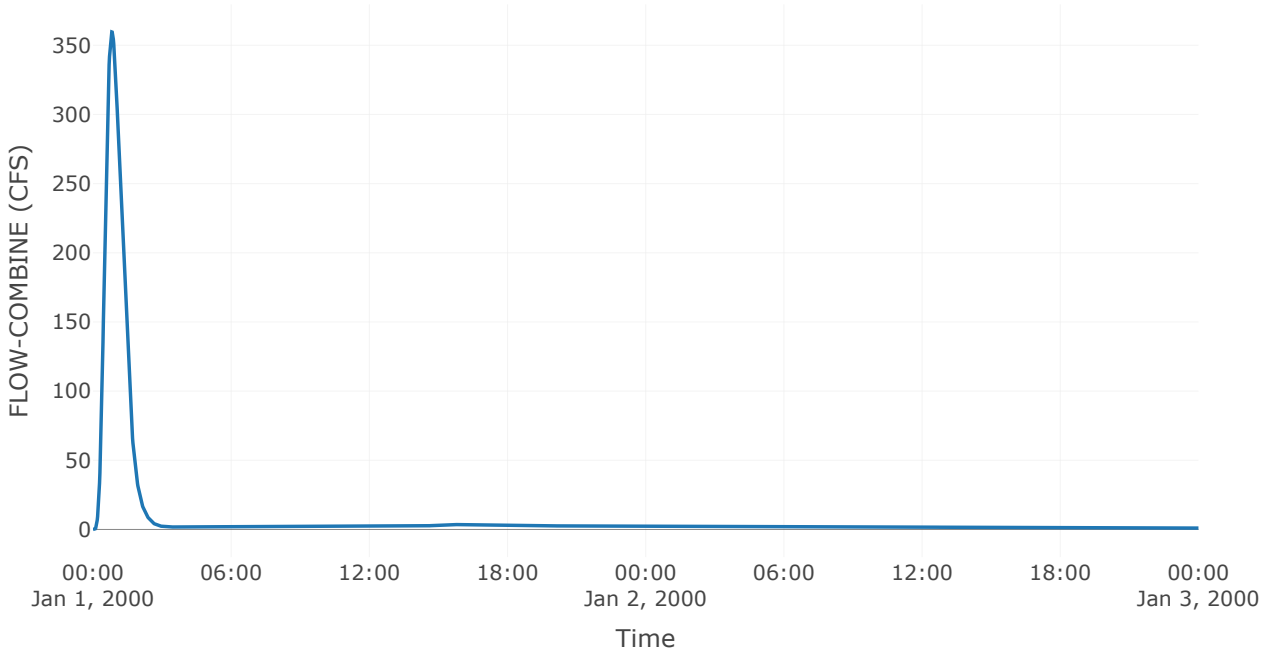
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

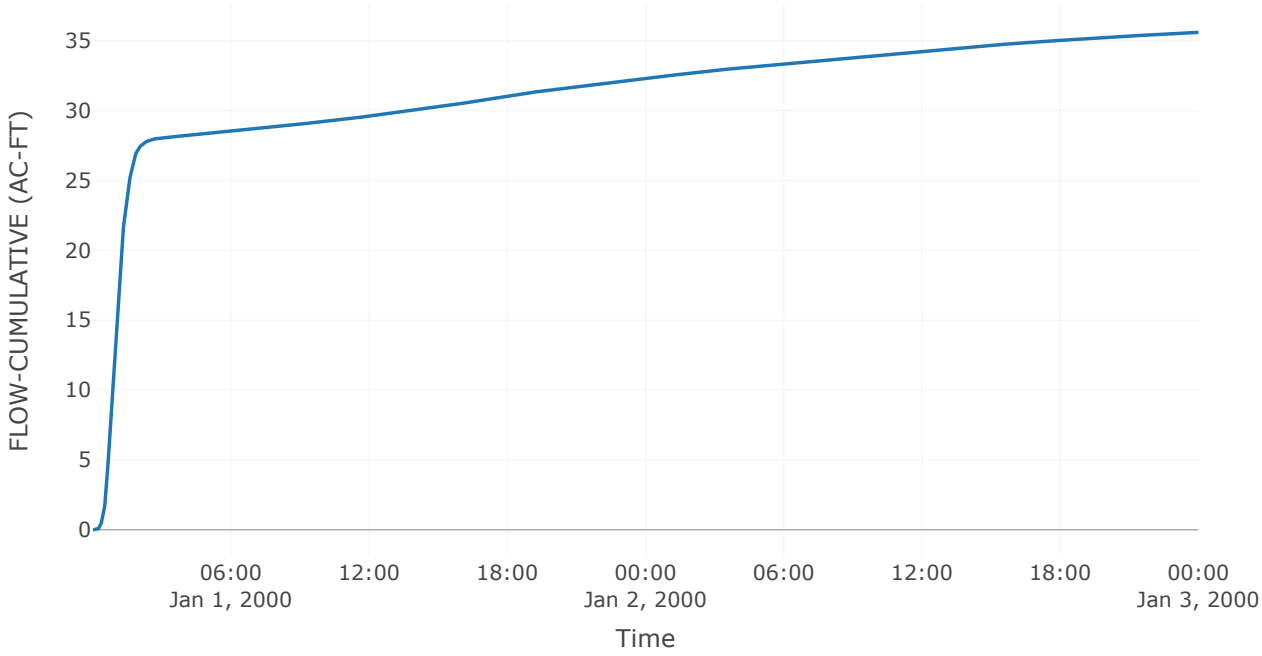
Storage



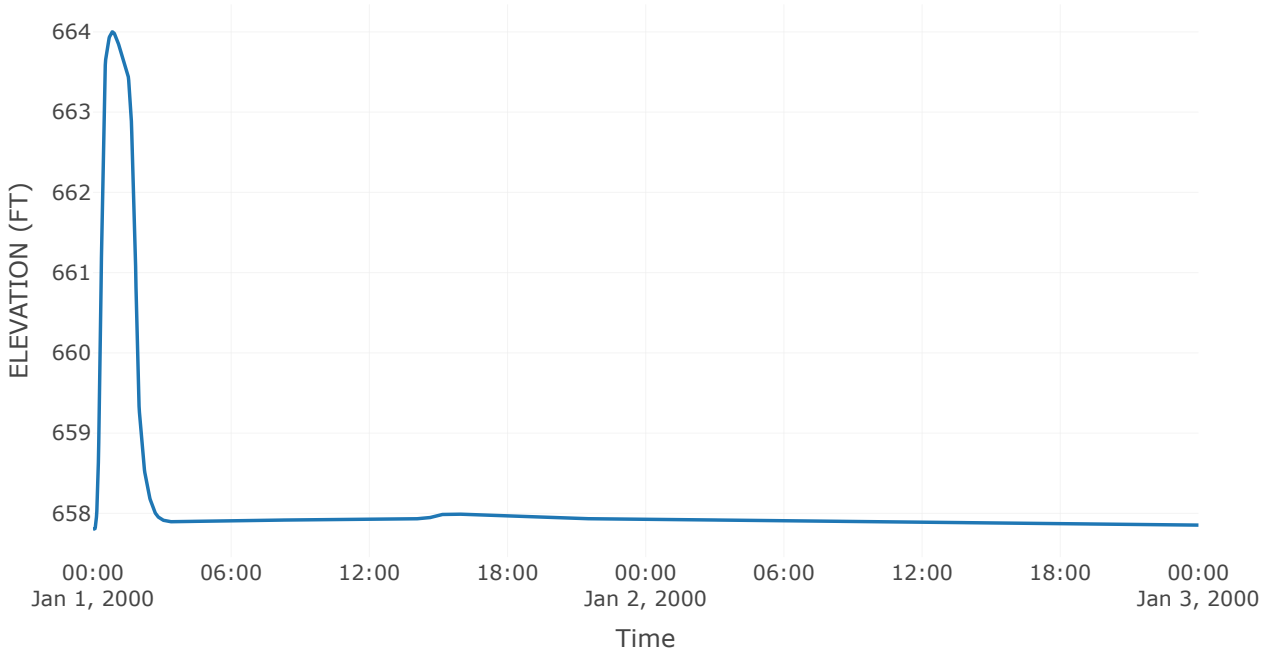
Combined Inflow

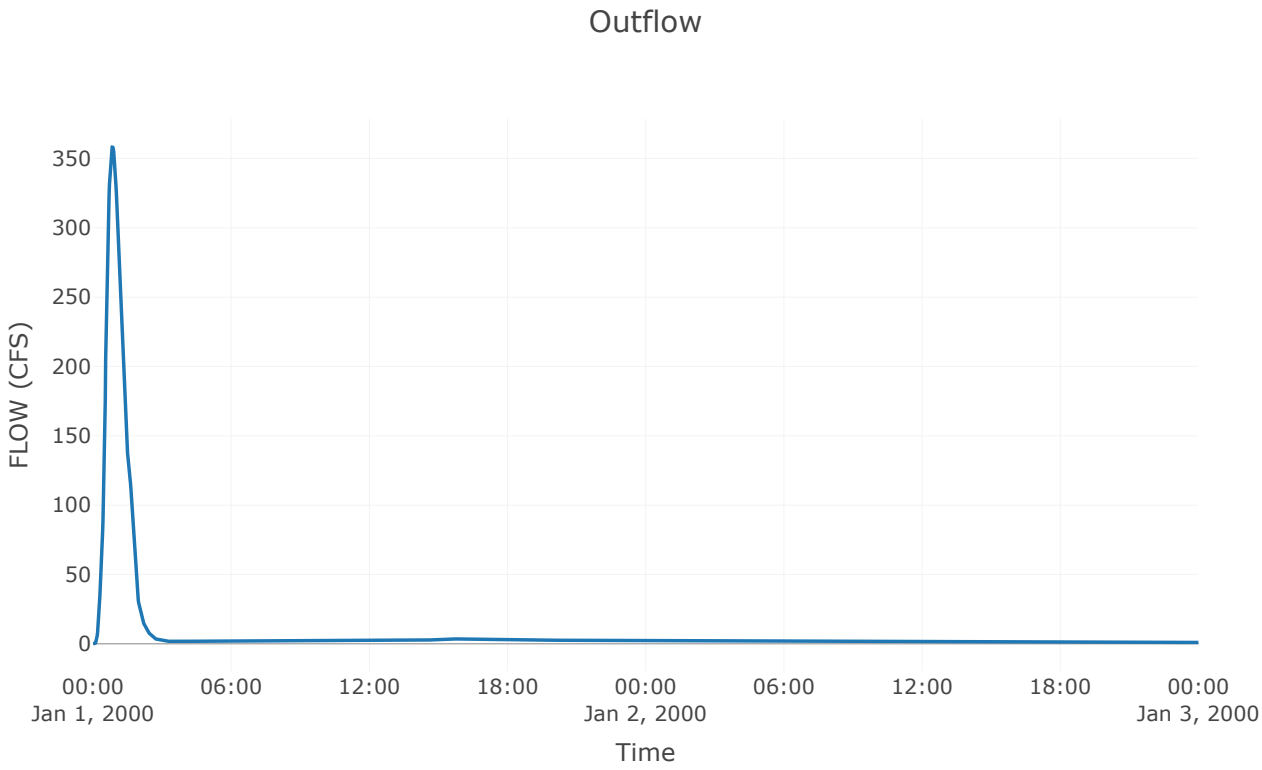


Cumulative Outflow



Pool Elevation



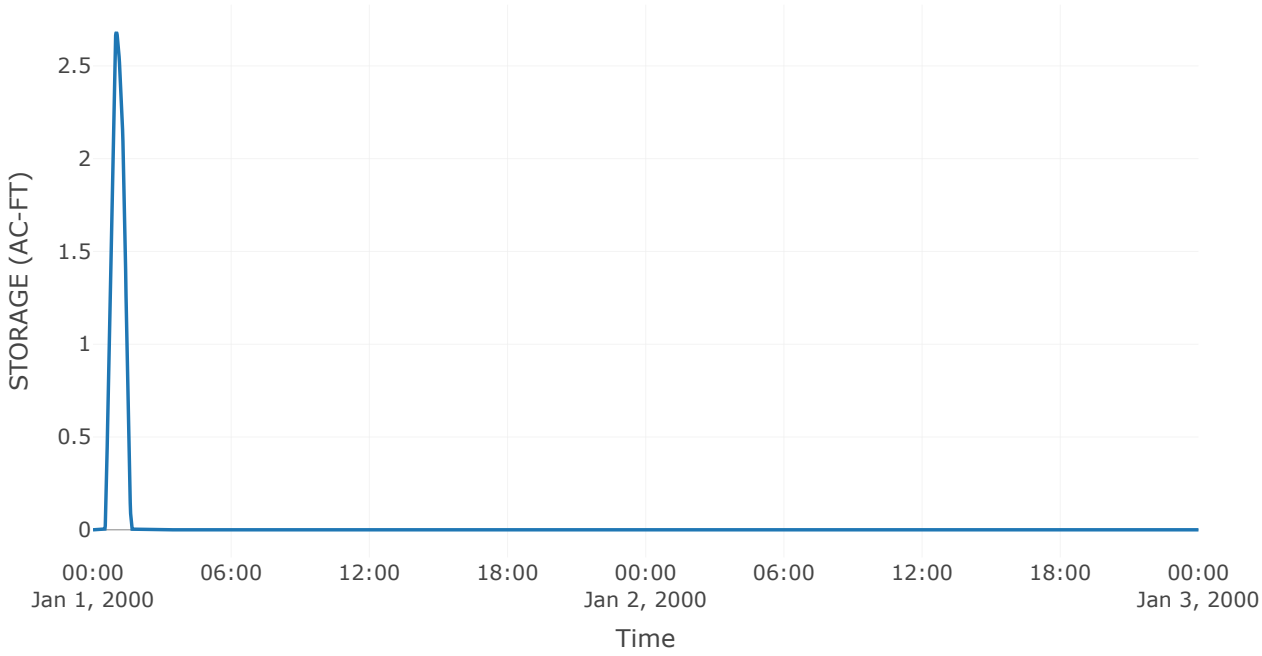

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

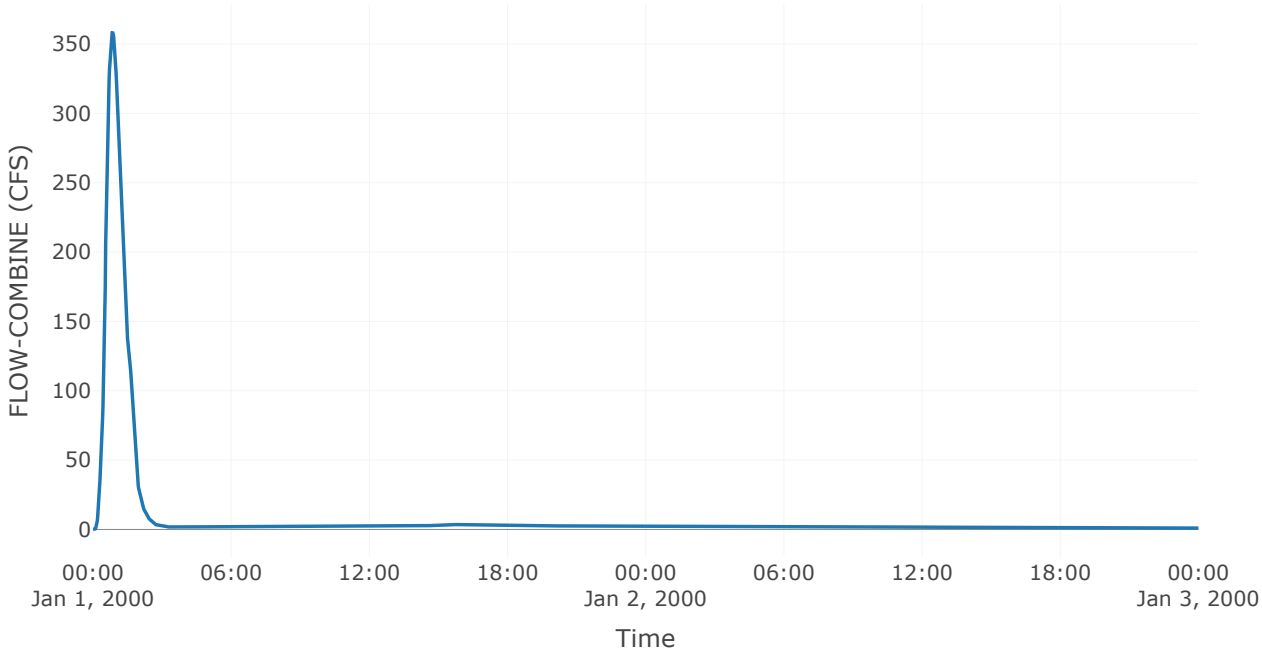
Downstream : Prop Storage West of Wolf Rd

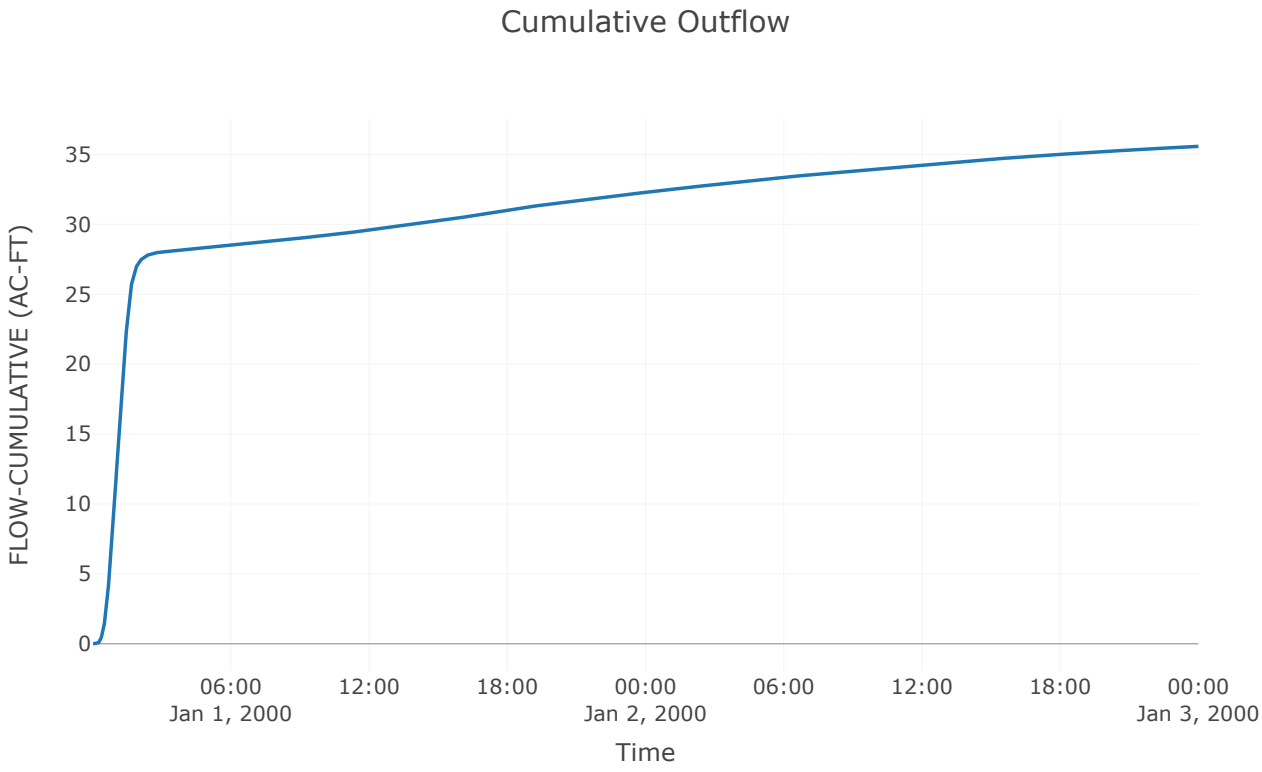
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	324.8
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.68
Peak Elevation (FT)	664.94
Discharge Volume (AC - FT)	35.58

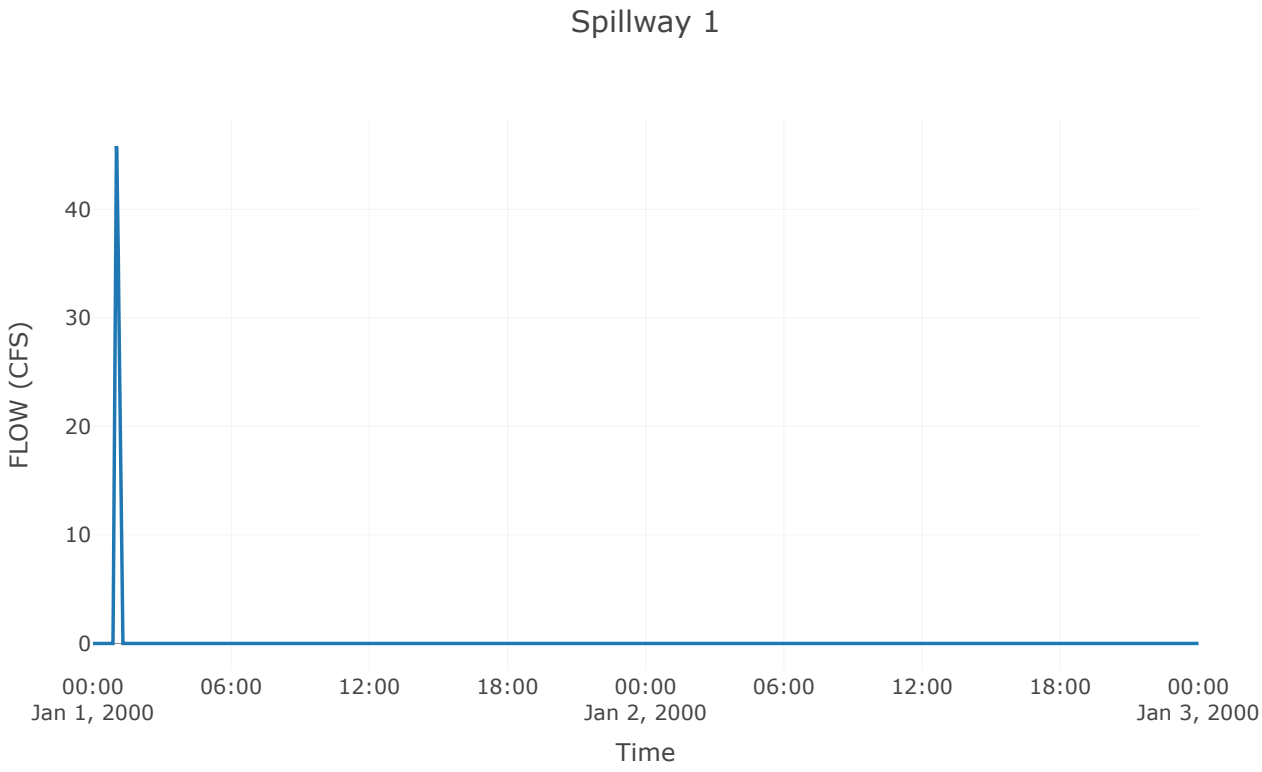
Storage



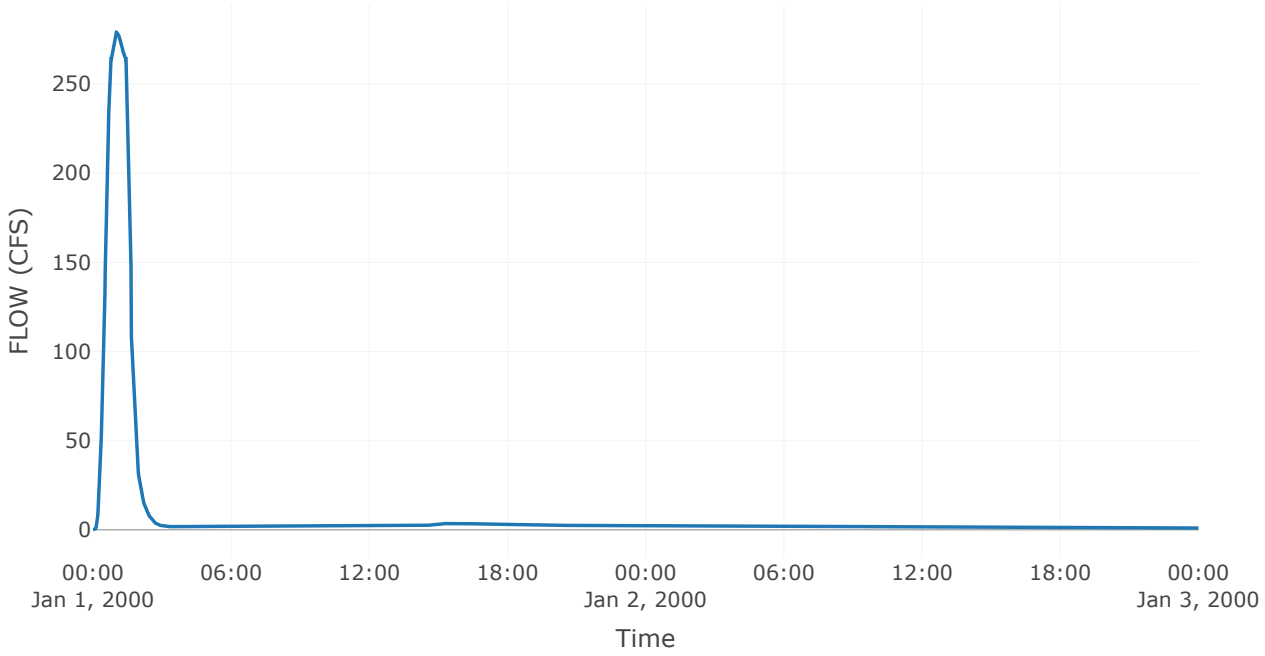
Combined Inflow



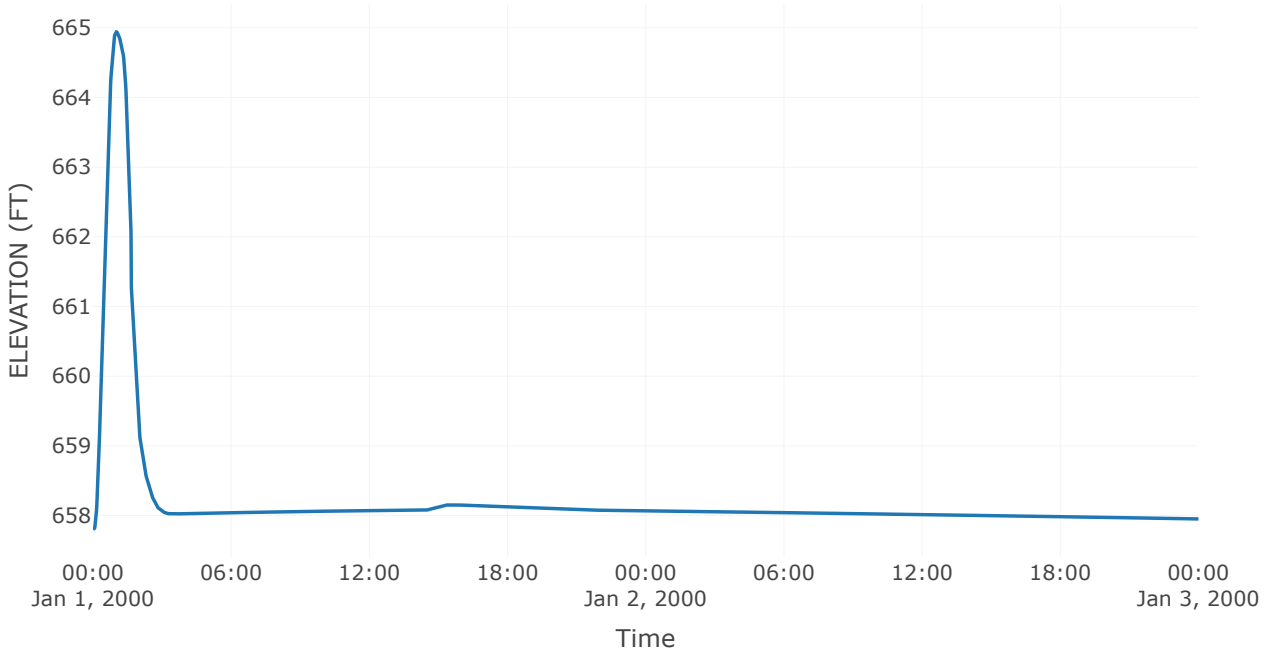

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
35
30
25
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

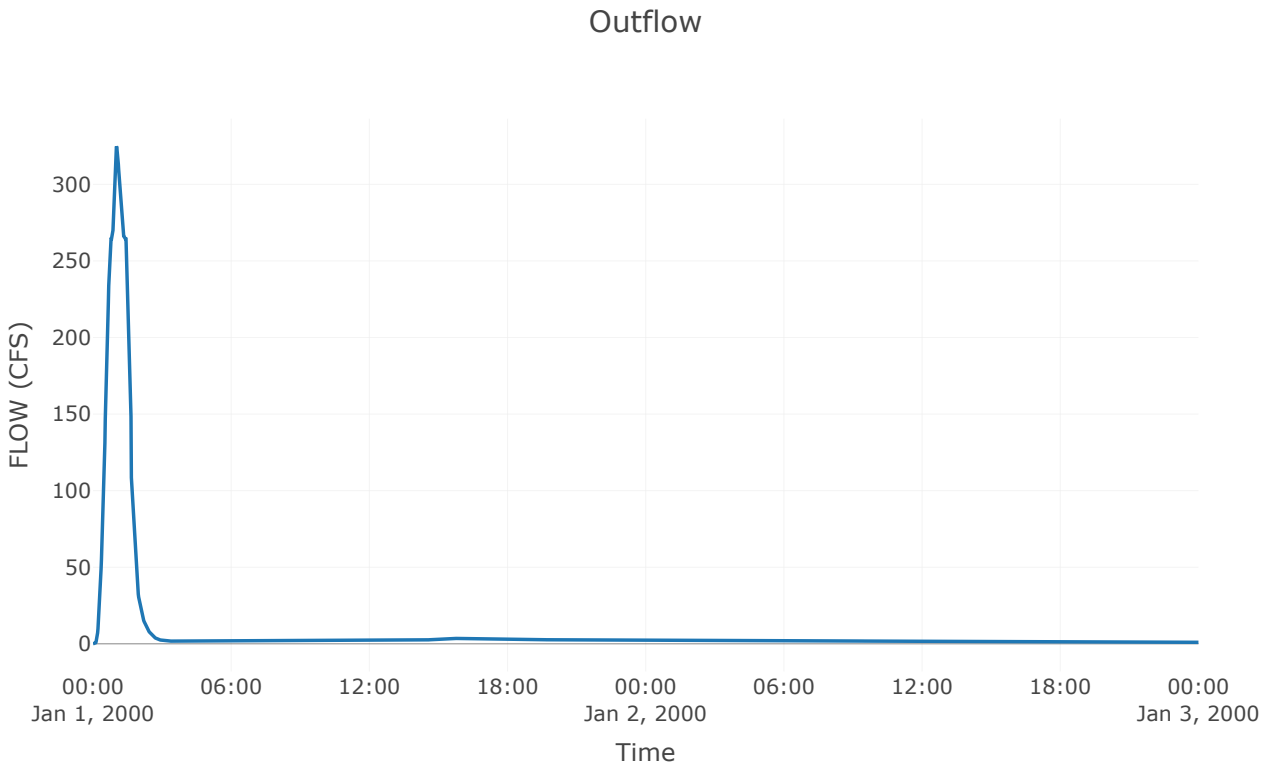

Spillway 1
FLOW (CFS)
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



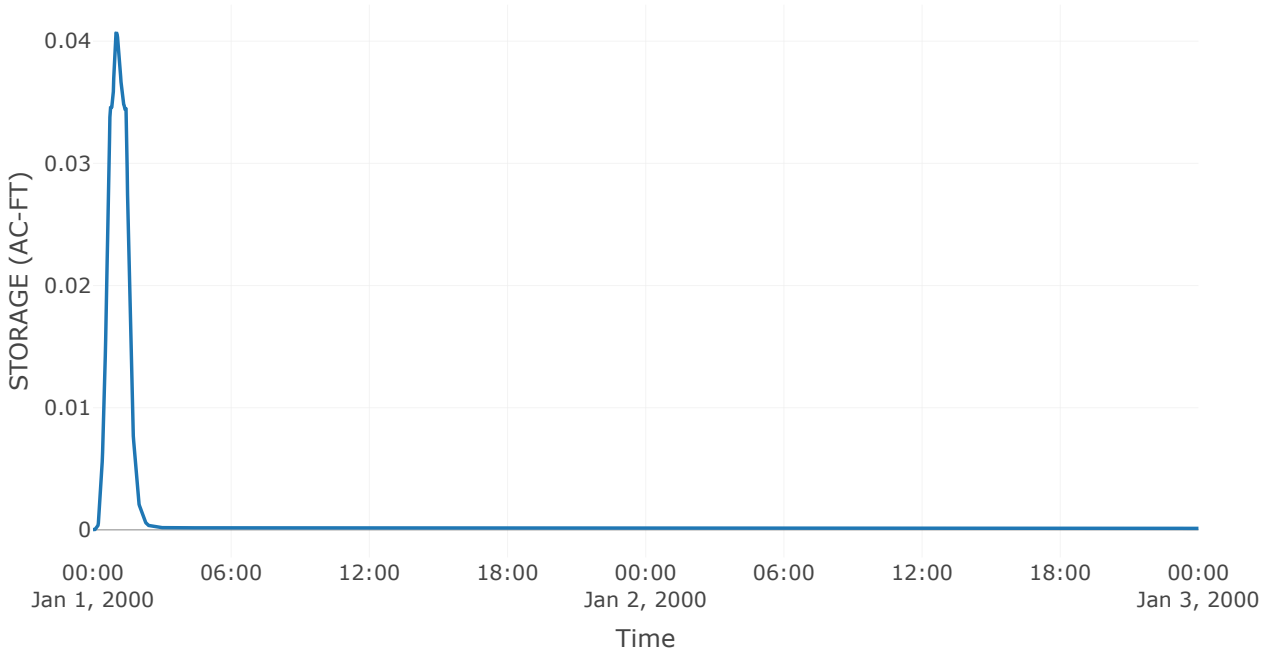

Outflow
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

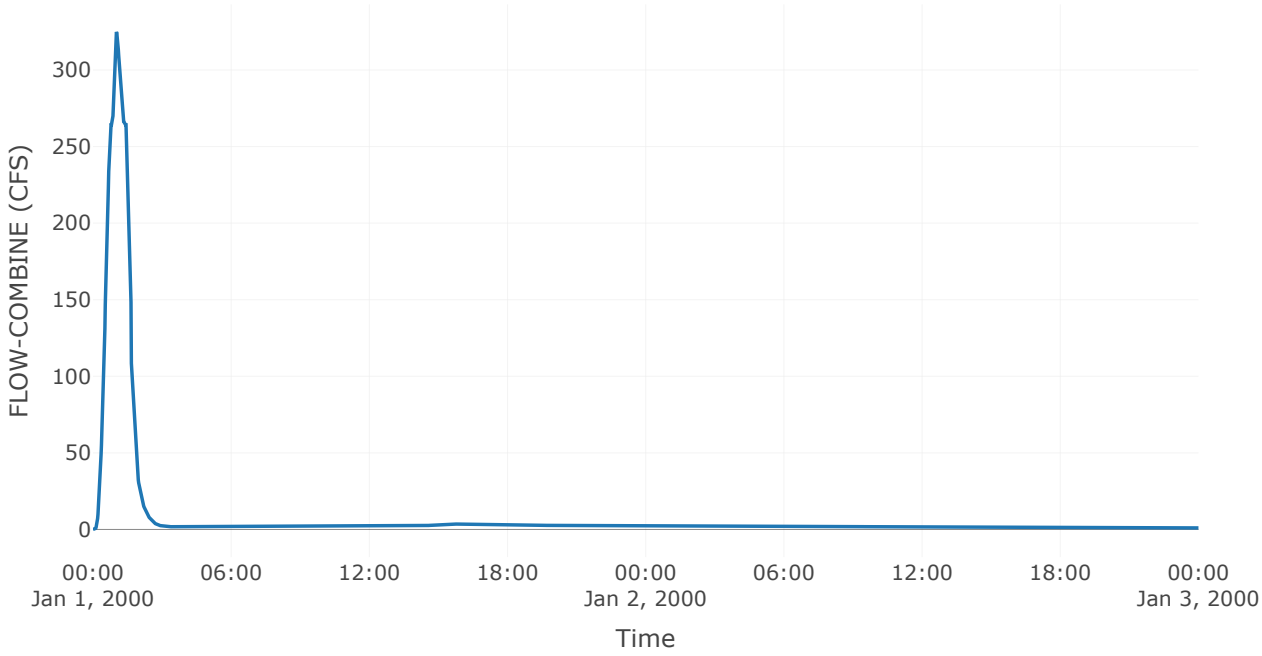
Downstream : Proposed Basin C

Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	324.78
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	324.8
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	35.58
Maximum Storage (AC - FT)	0.04
Peak Elevation (FT)	660.3
Discharge Volume (AC - FT)	35.57

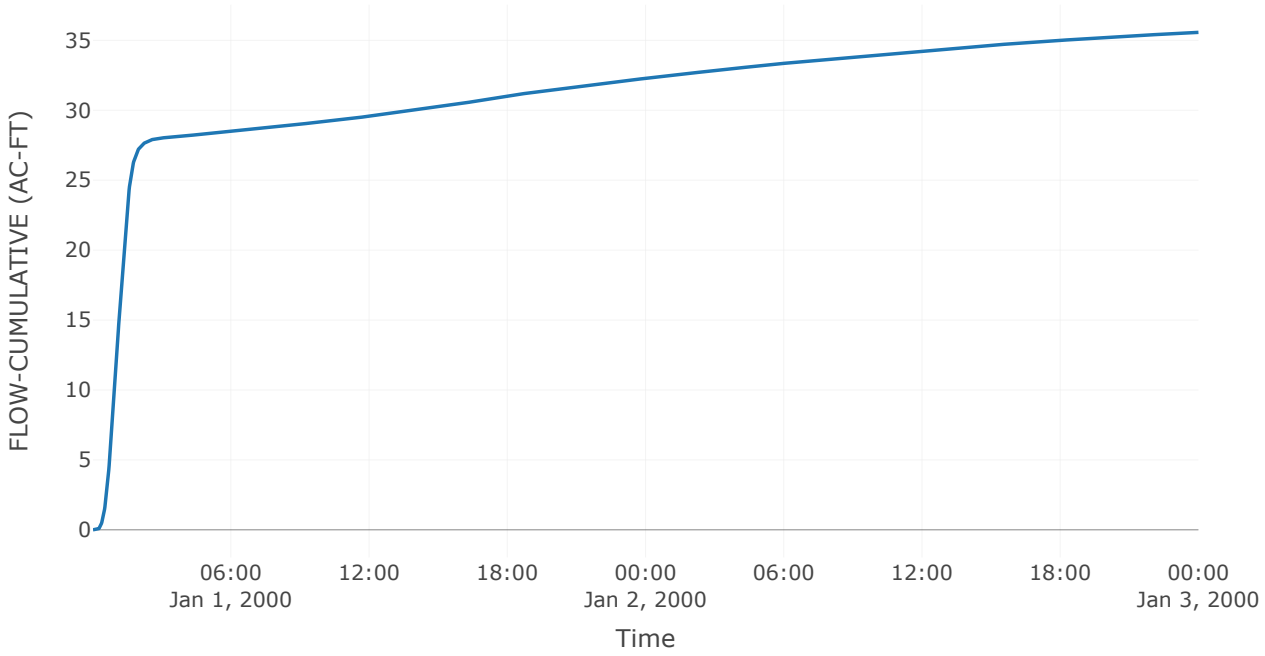
Storage



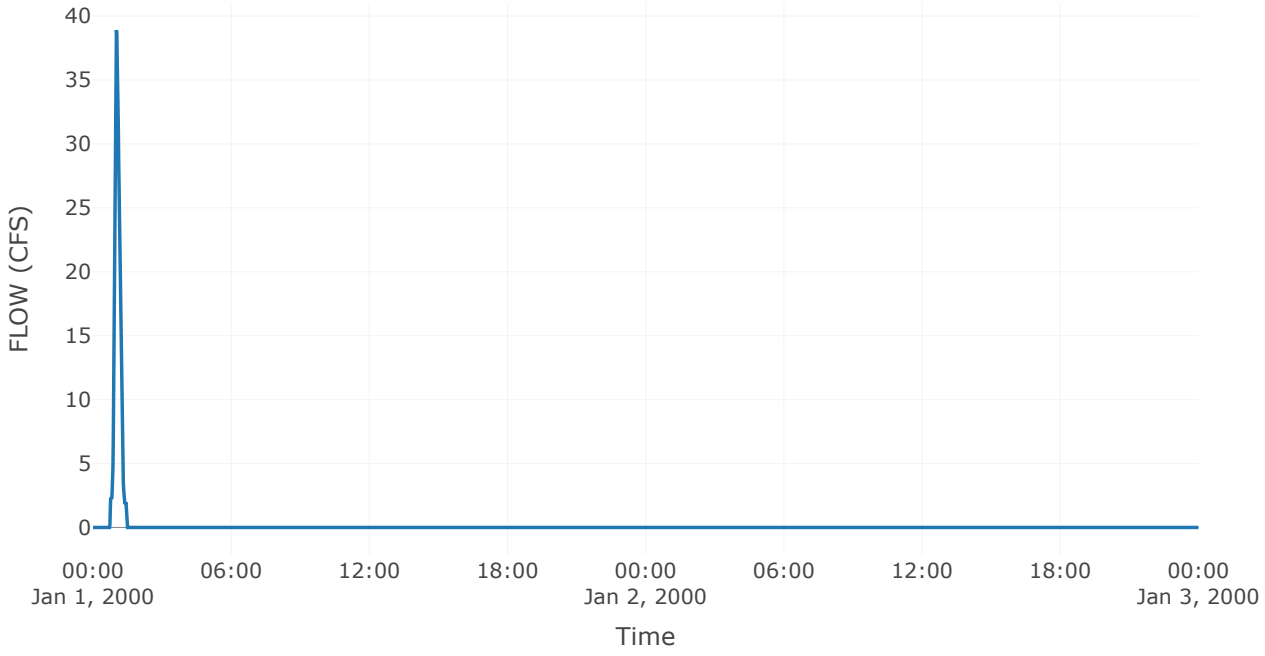
Combined Inflow



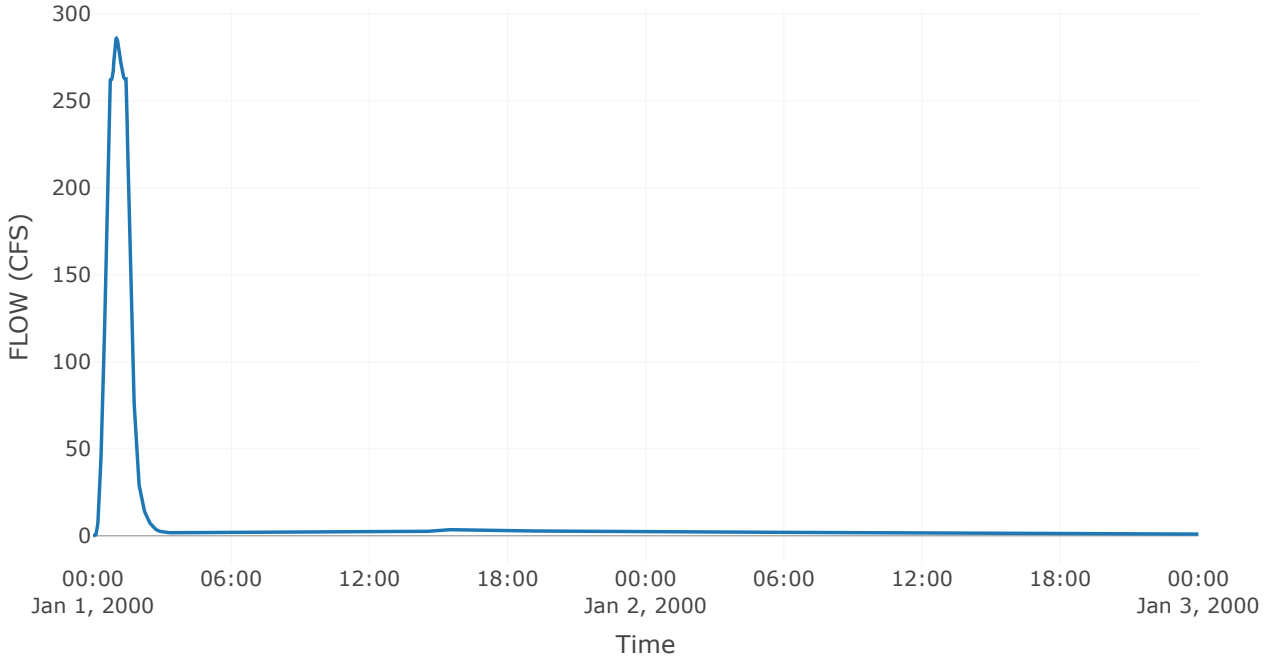
Cumulative Outflow



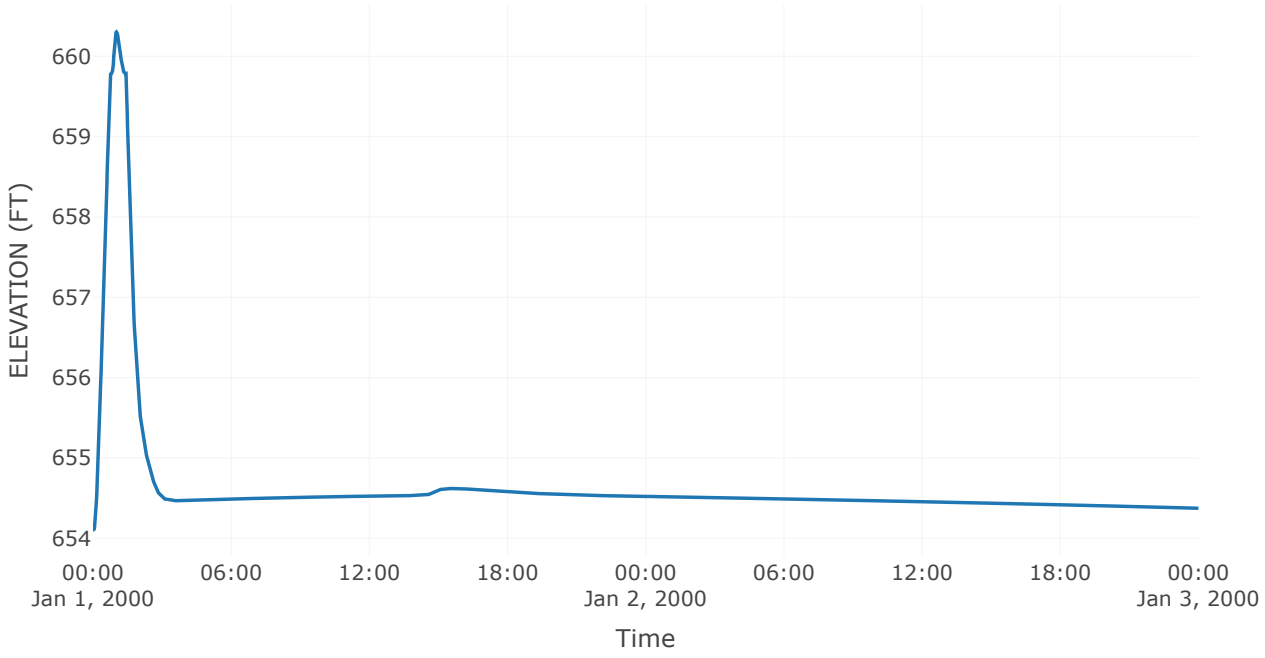
Spillway 1

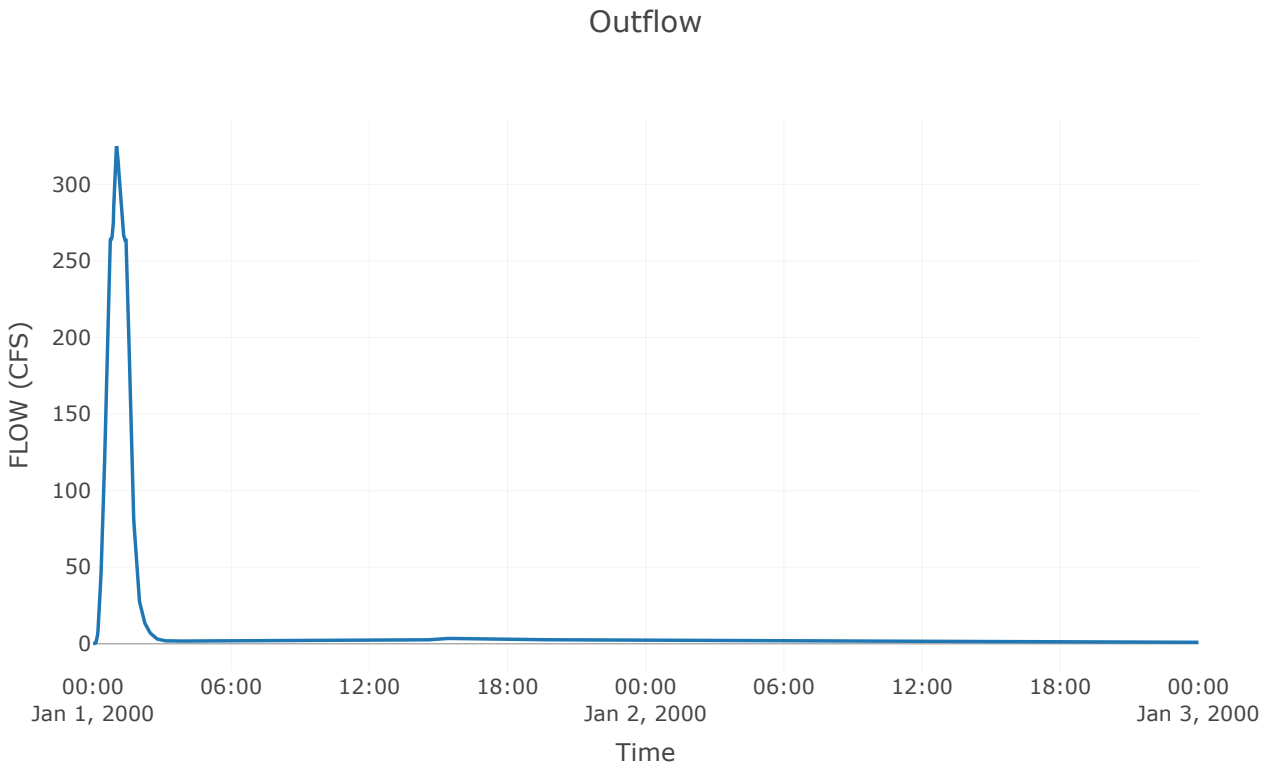


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

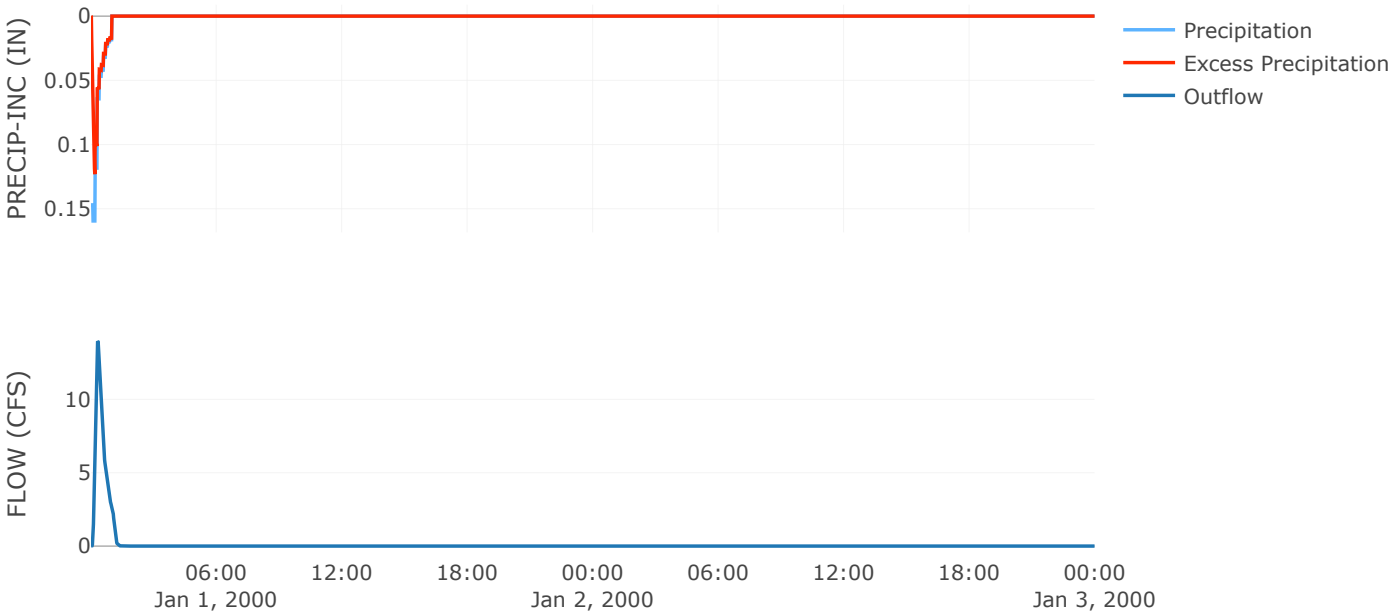
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

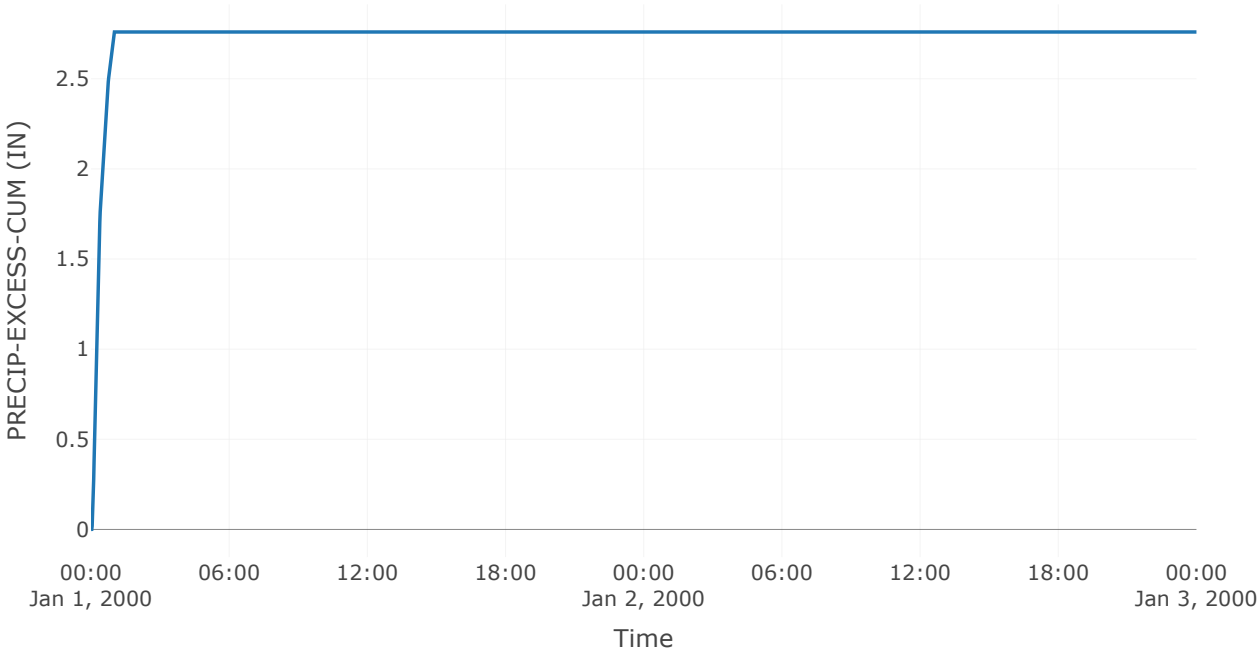
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Prop On-Site	
Peak Discharge (CFS)	13.96
Time of Peak Discharge	01Jan2000, 00:19
Volume (IN)	2.76
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.26
Excess Volume (AC - FT)	0.55
Direct Runoff Volume (AC - FT)	0.55
Baseflow Volume (AC - FT)	0

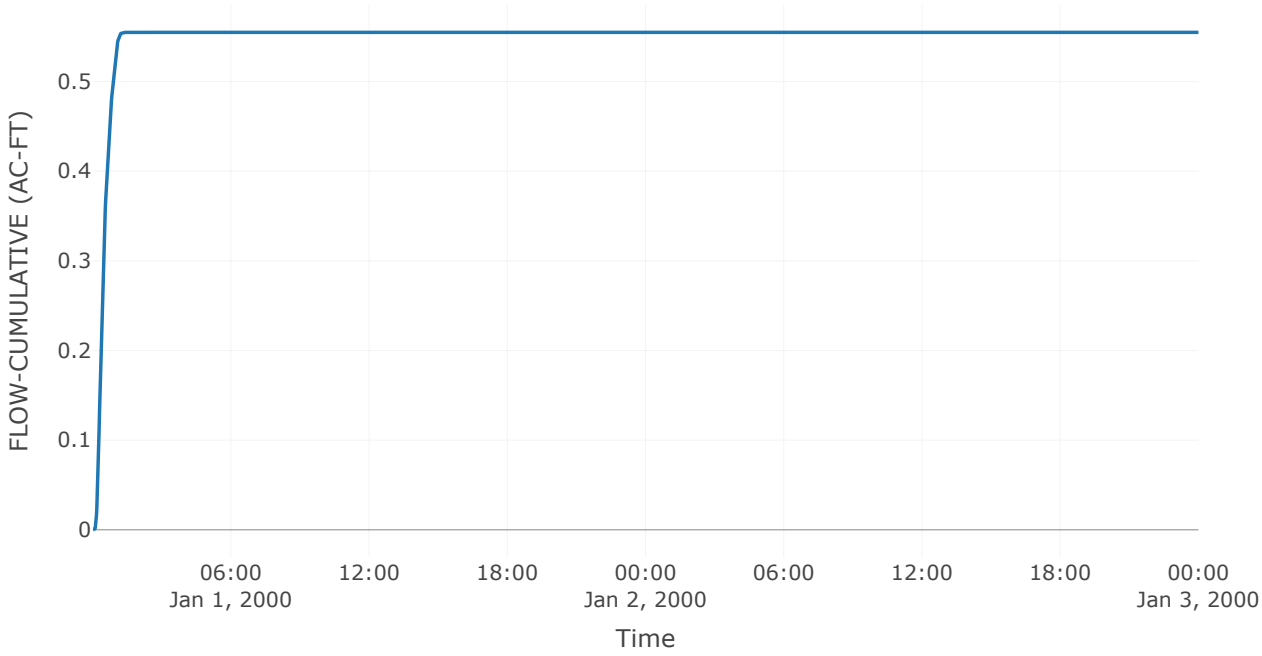
Precipitation and Outflow



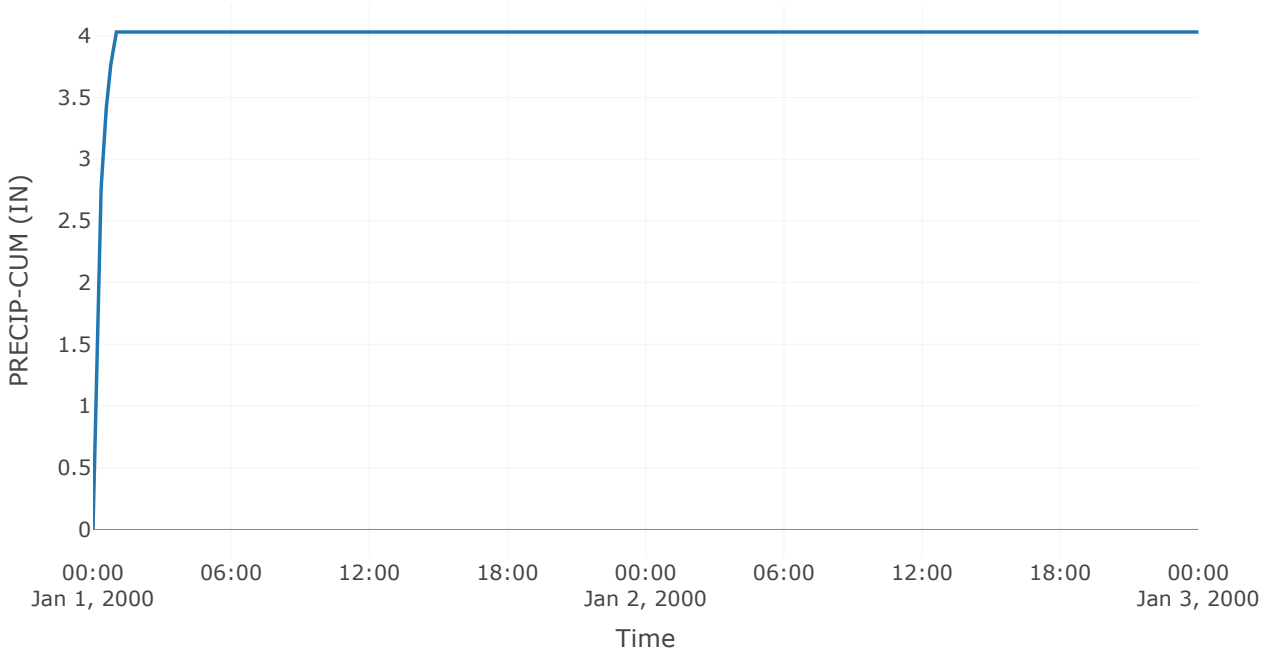
Cumulative Excess Precipitation

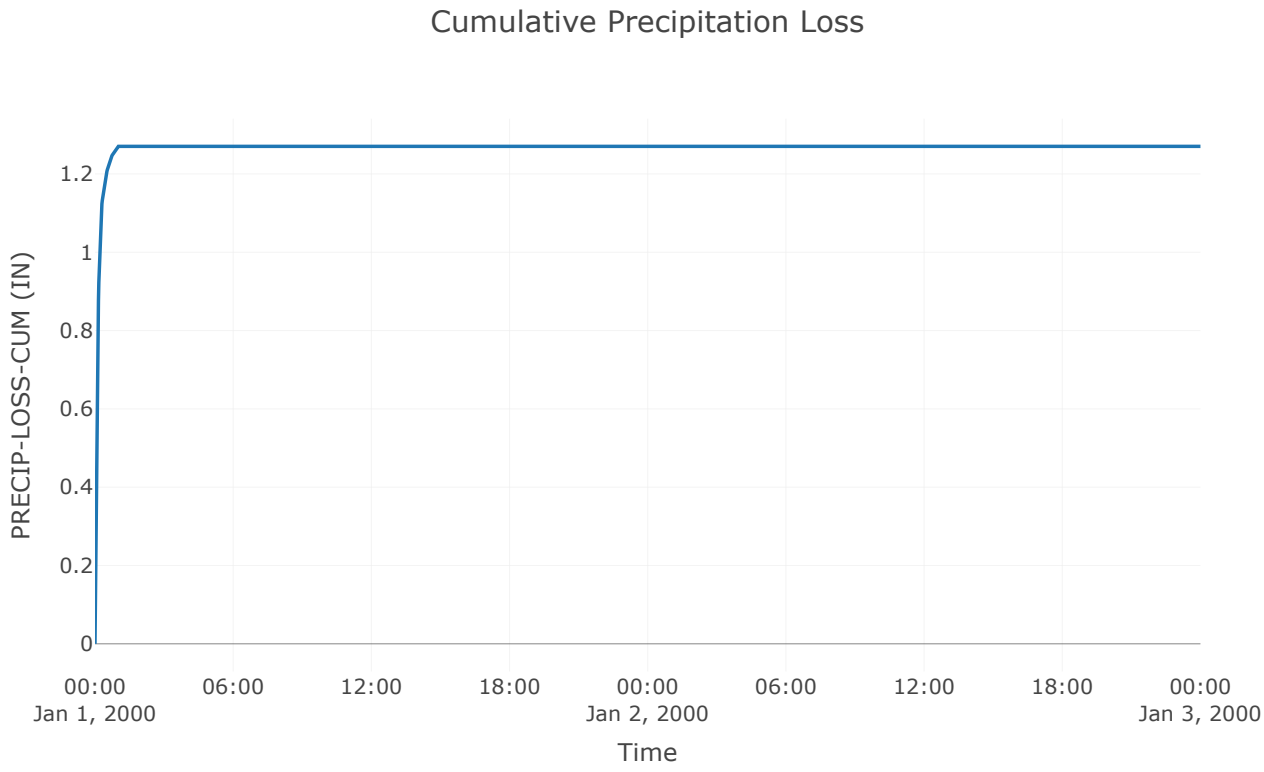


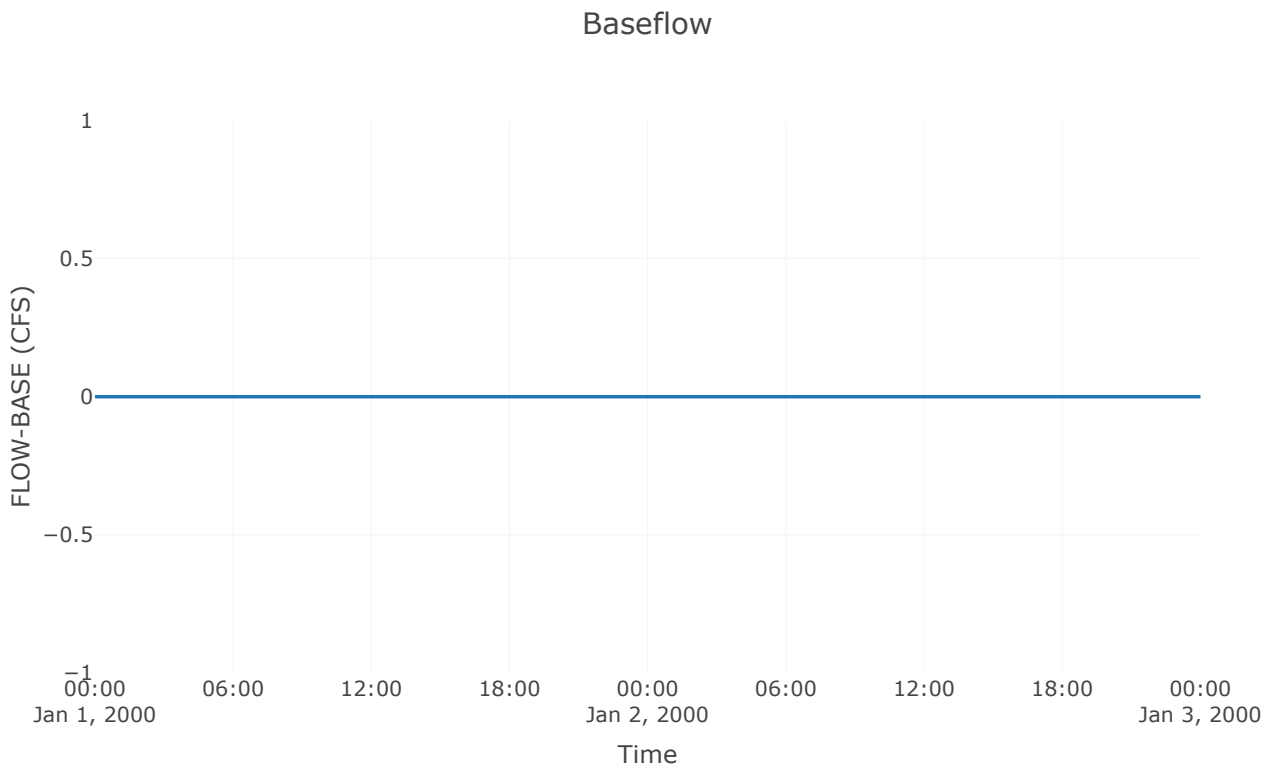
Cumulative Outflow



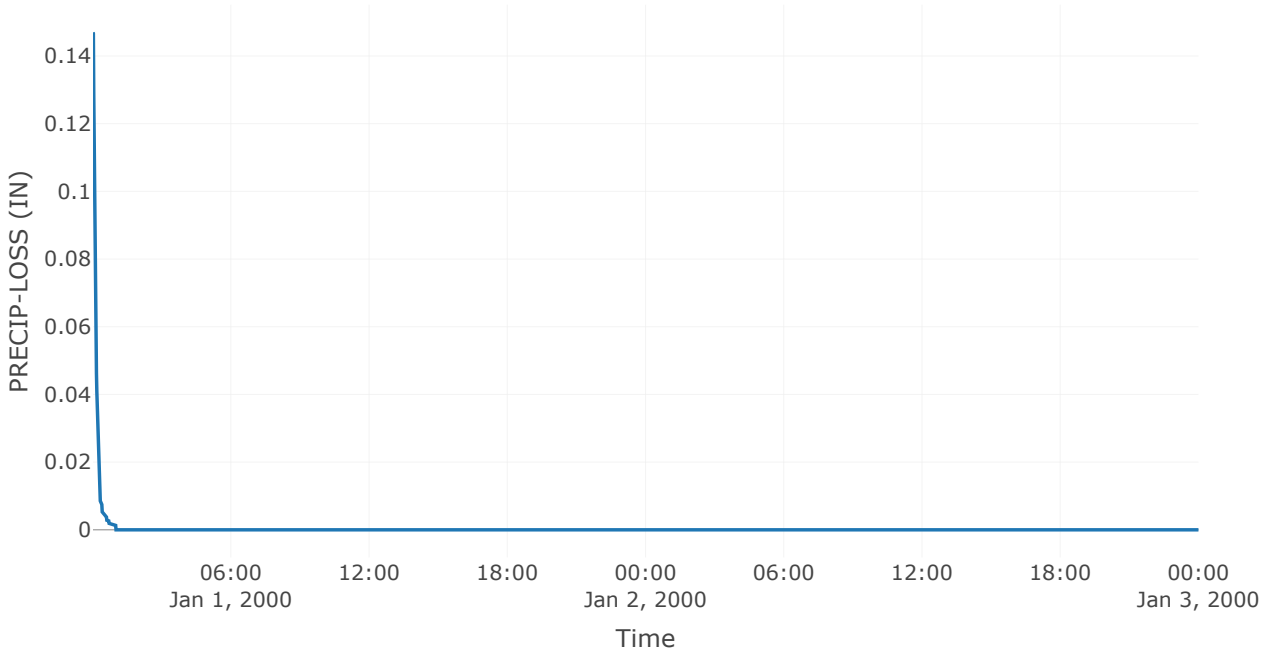
Cumulative Precipitation



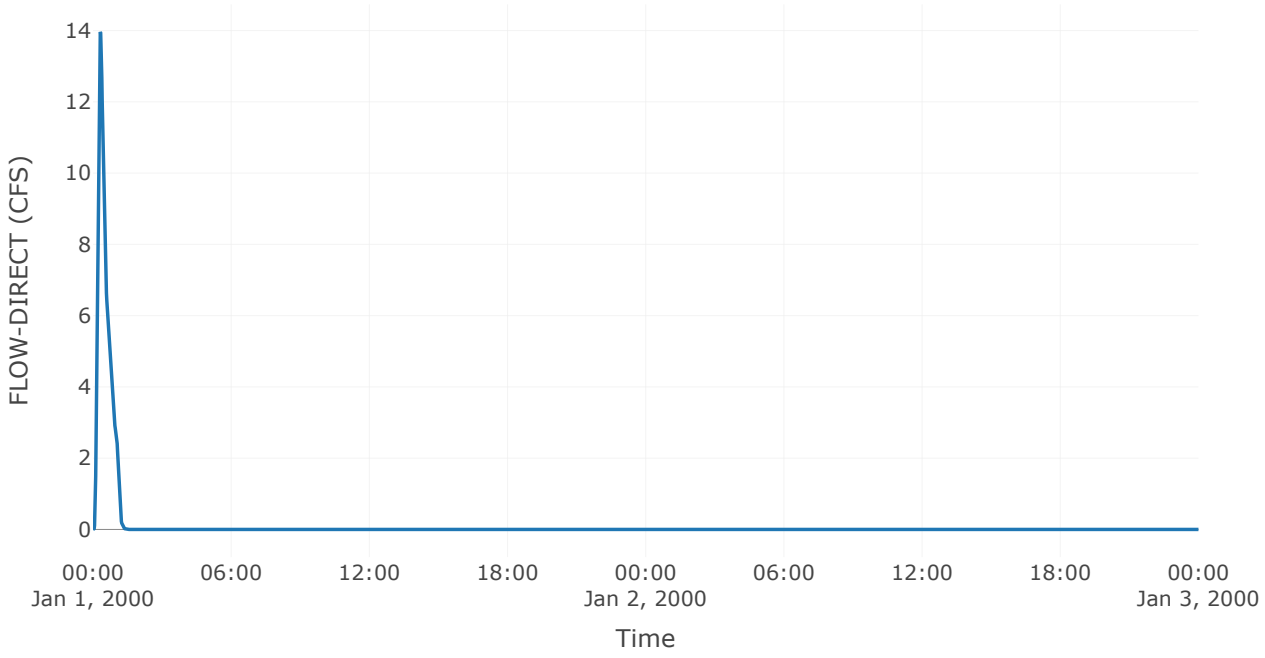

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

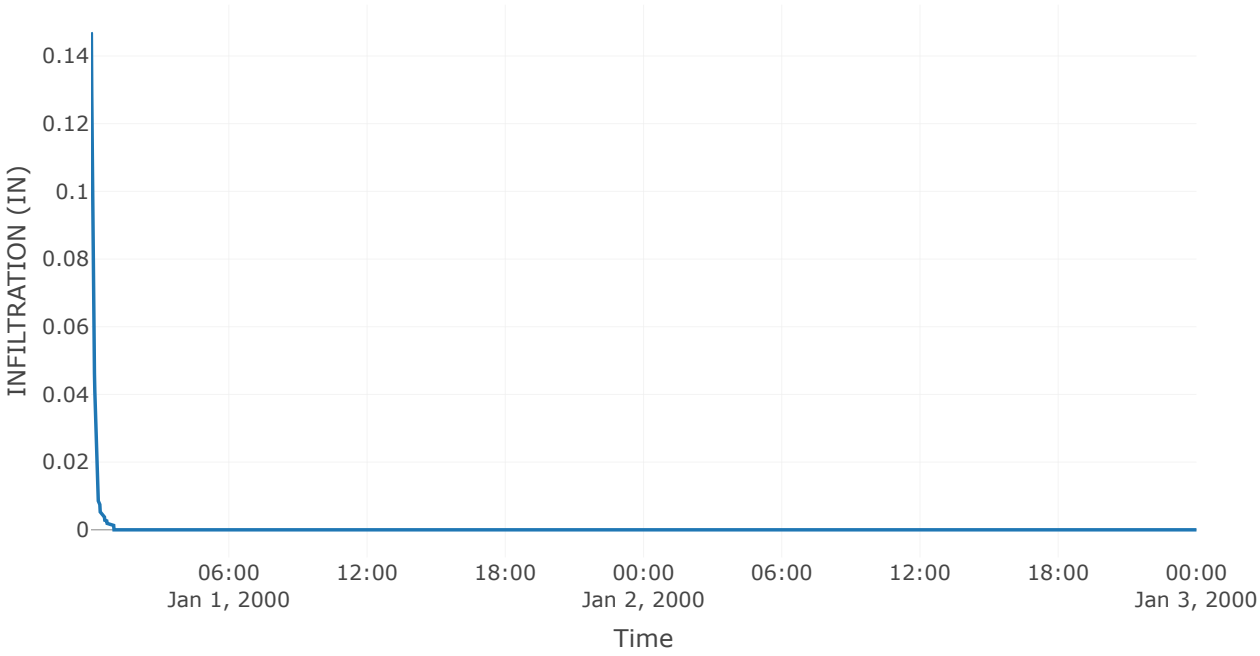

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



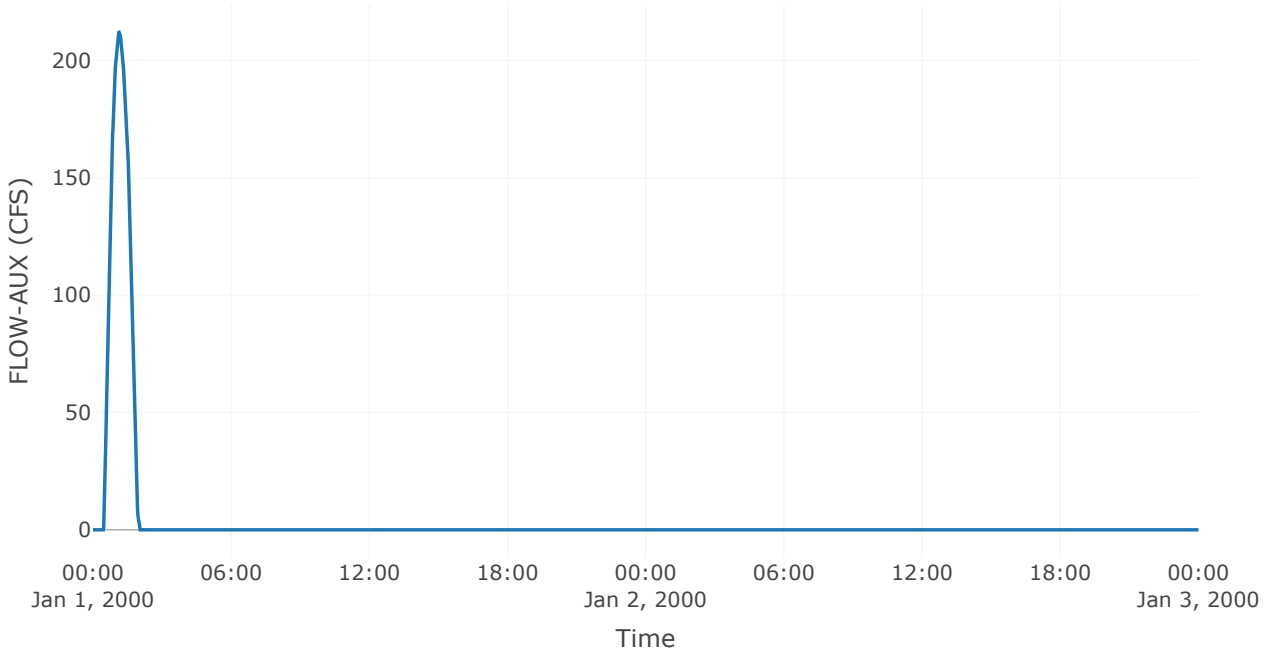

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

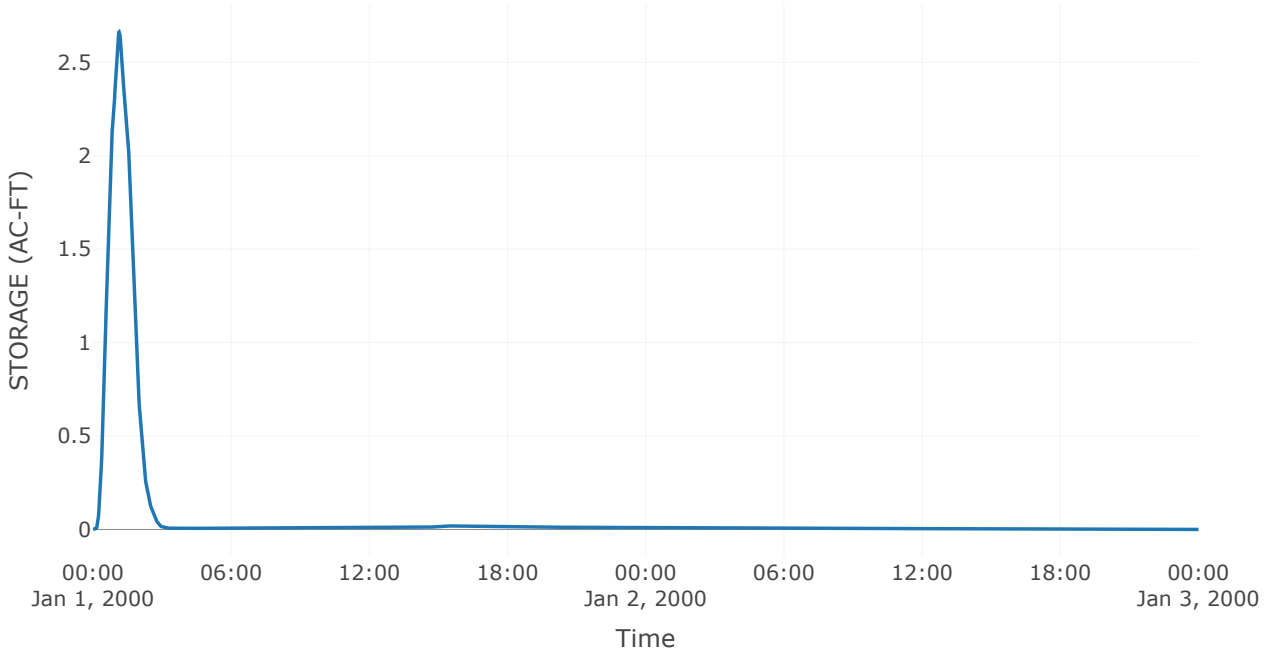
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	95.13
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.37
Peak Inflow (CFS)	327.44
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	36.13
Maximum Storage (AC - FT)	2.66
Peak Elevation (FT)	655.11
Discharge Volume (AC - FT)	19.89

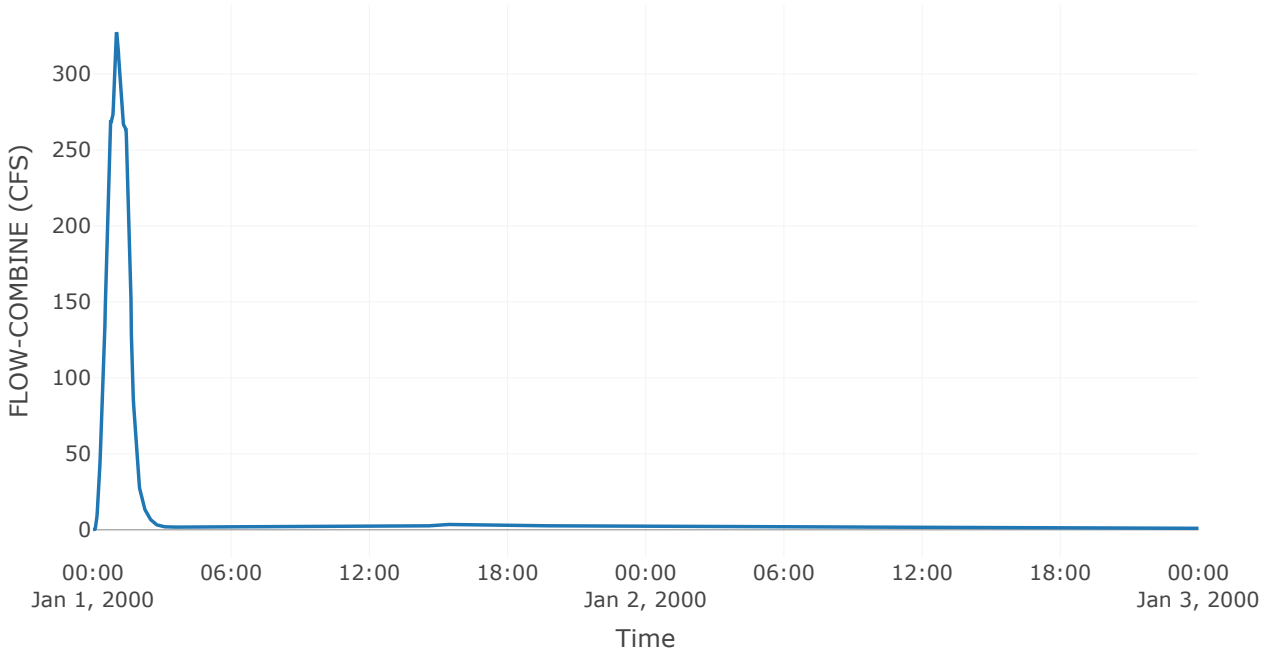
Auxiliary Outflow



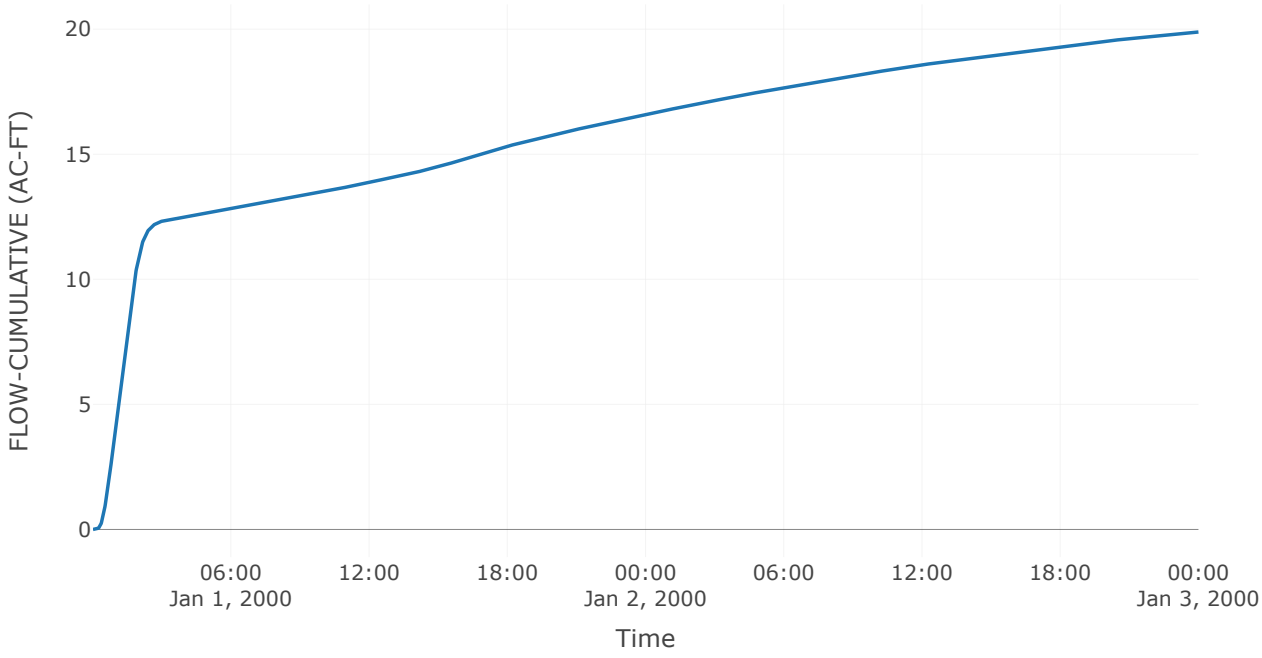
Storage

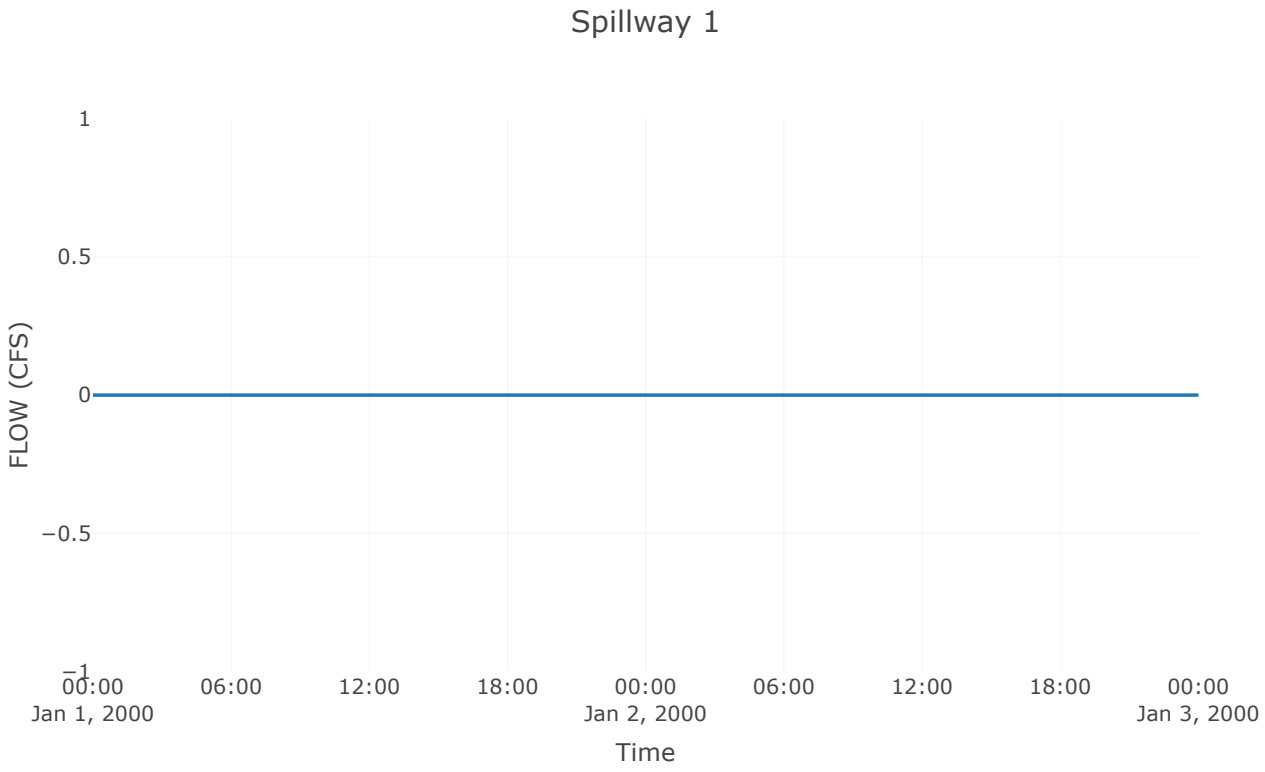


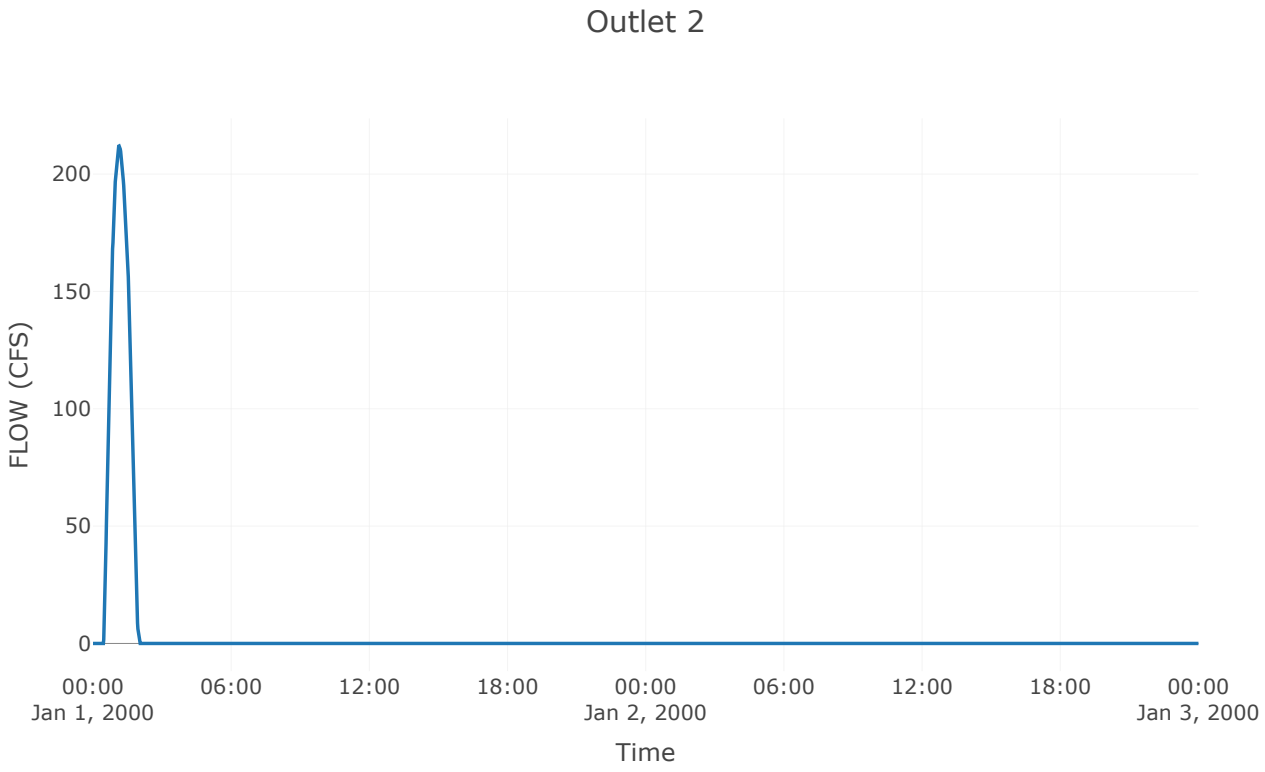
Combined Inflow



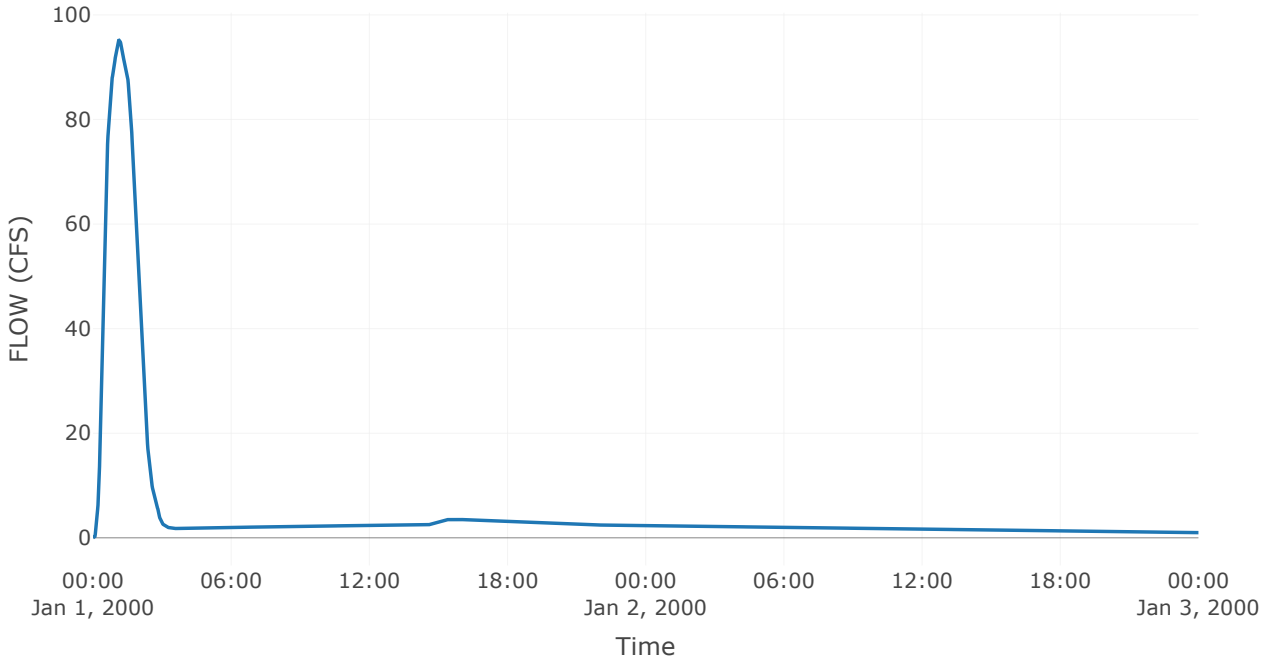
Cumulative Outflow



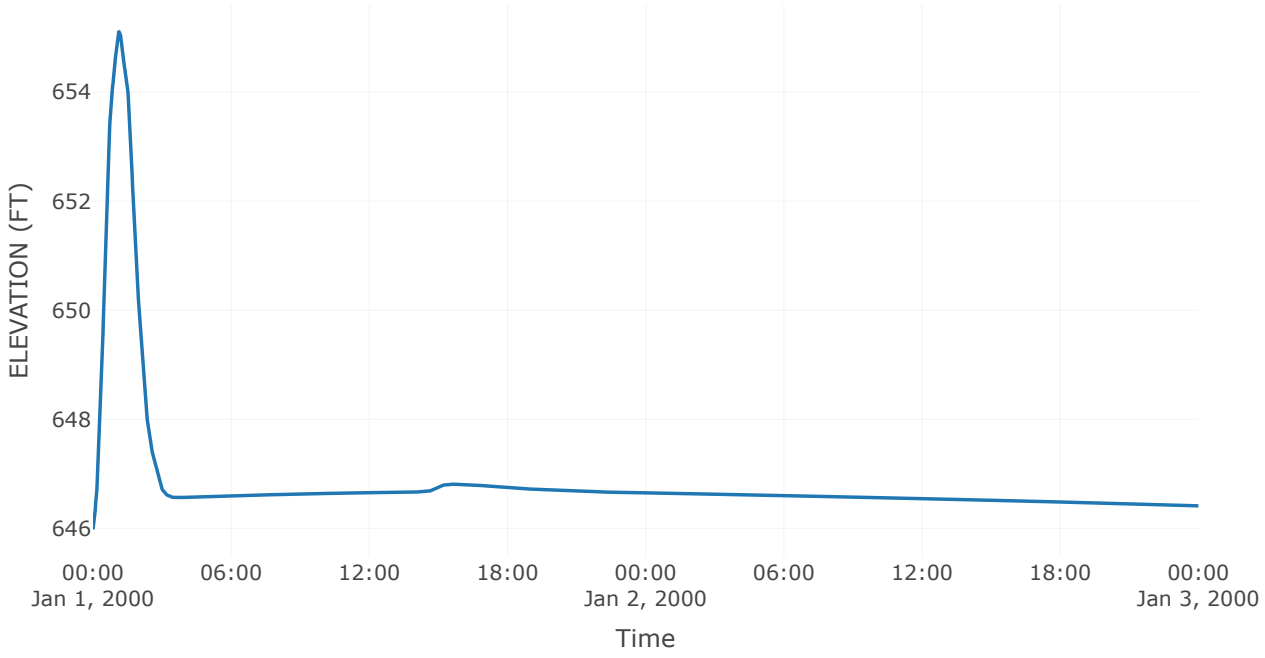

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

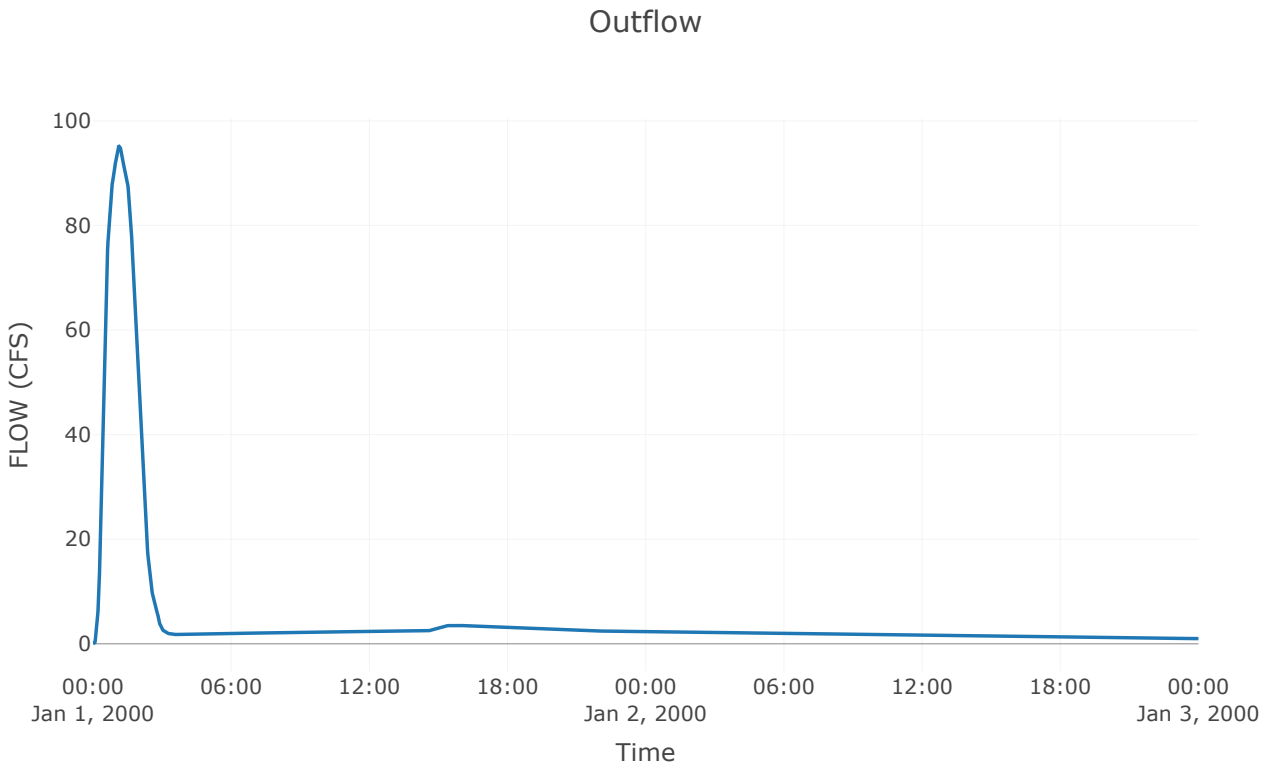

Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

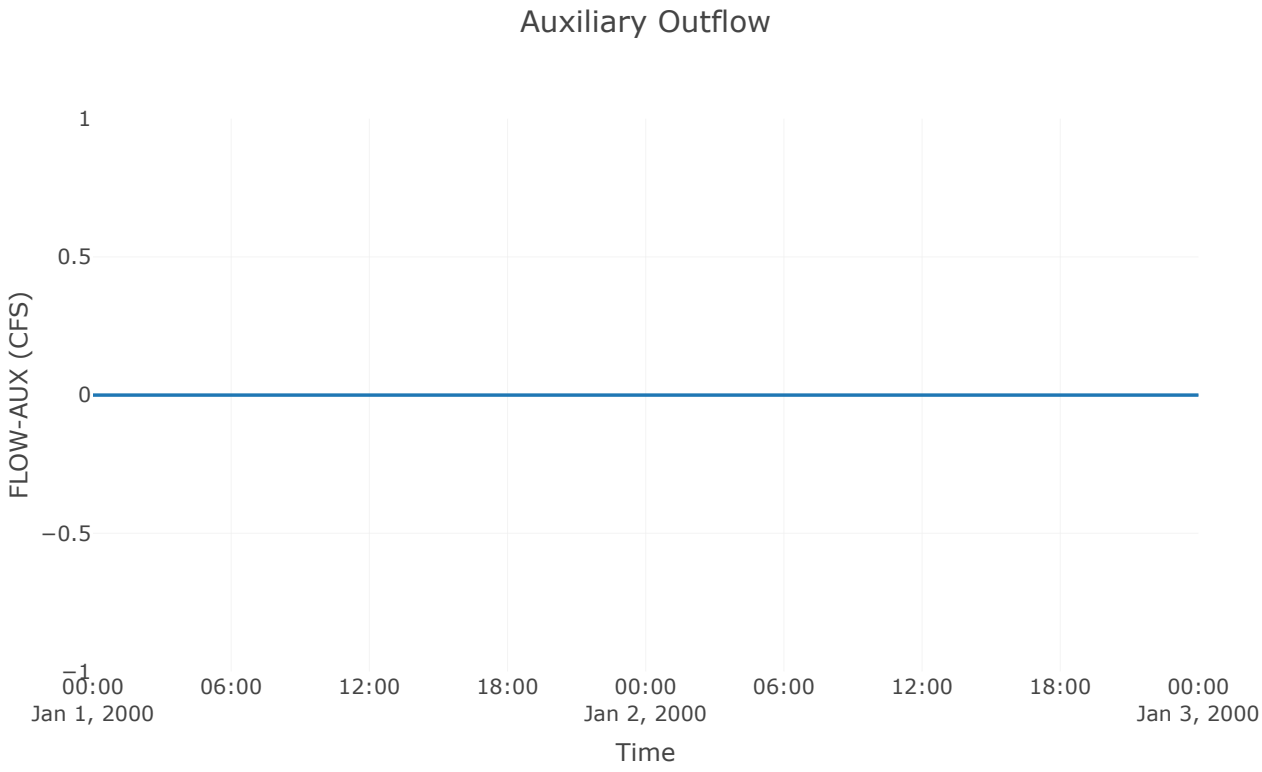


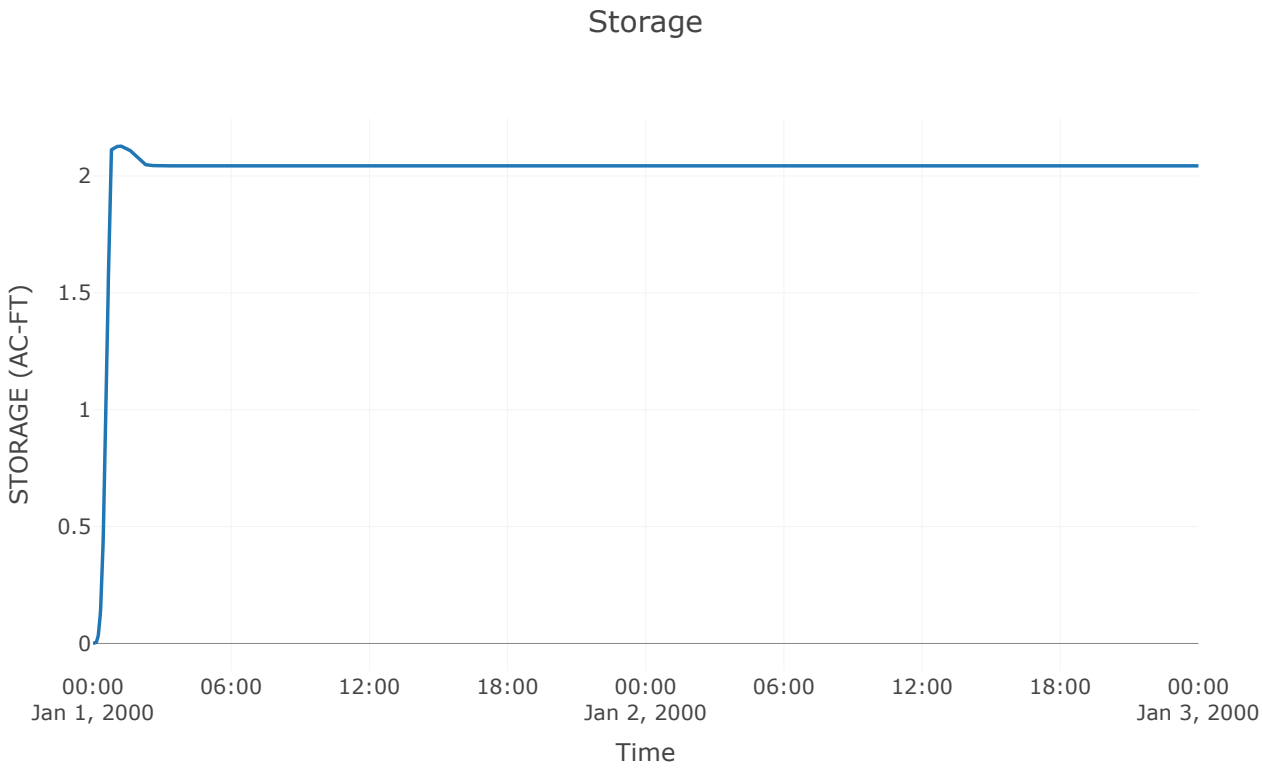

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

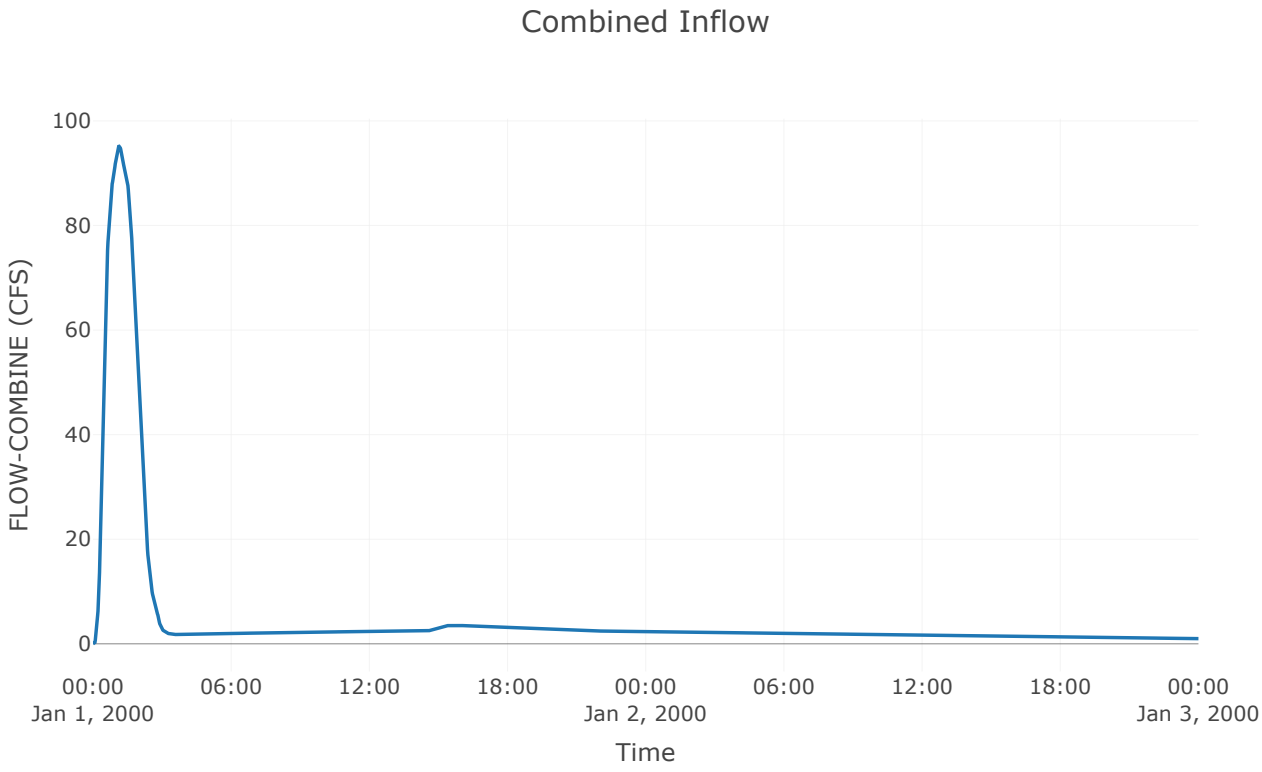
Reservoir: Existing Basin A & B

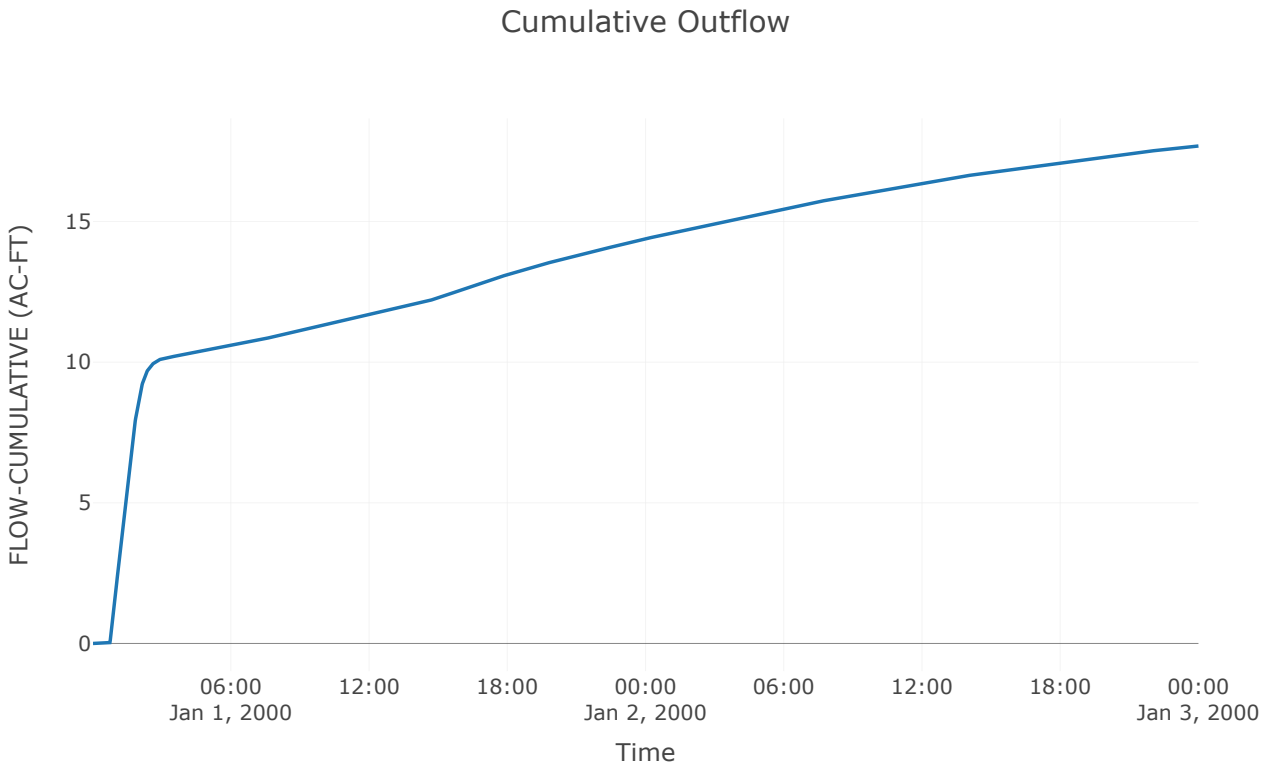
Downstream : 55th Street Outlet

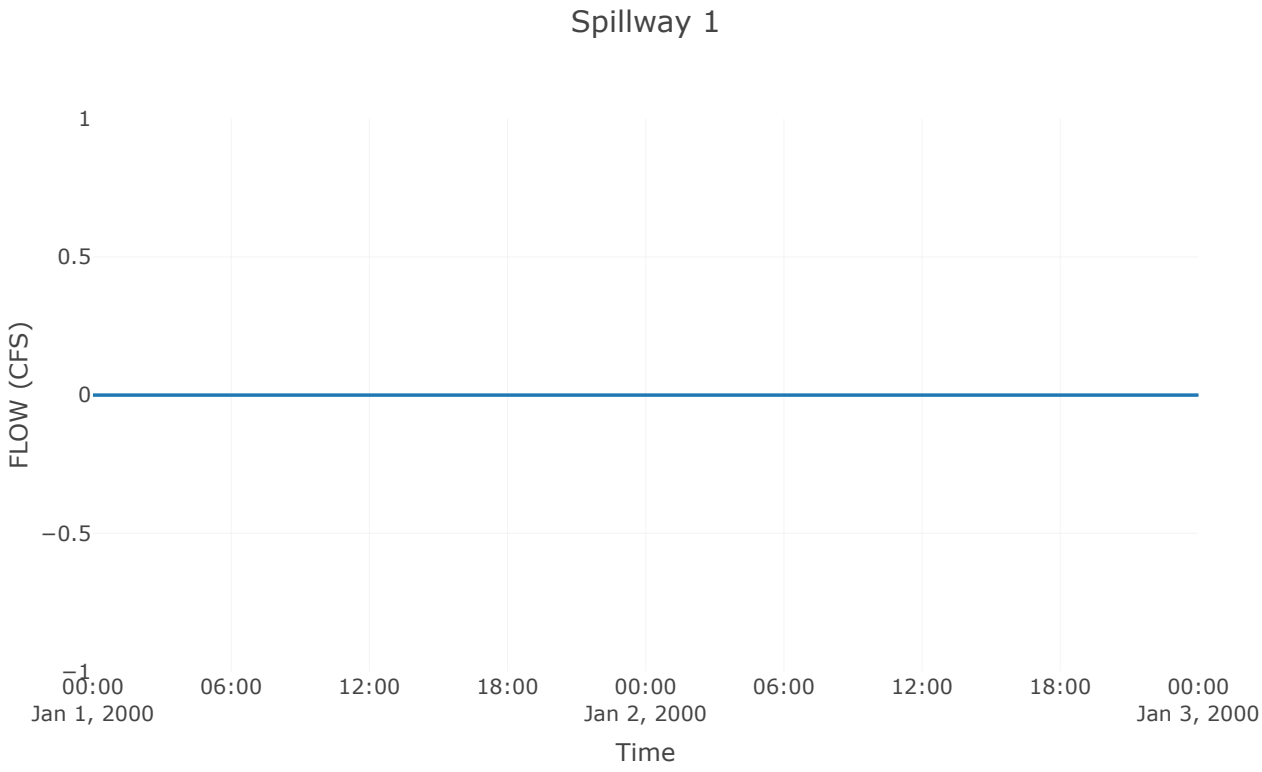
Results: Existing Basin A & B	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21
Peak Inflow (CFS)	95.13
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.89
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.68

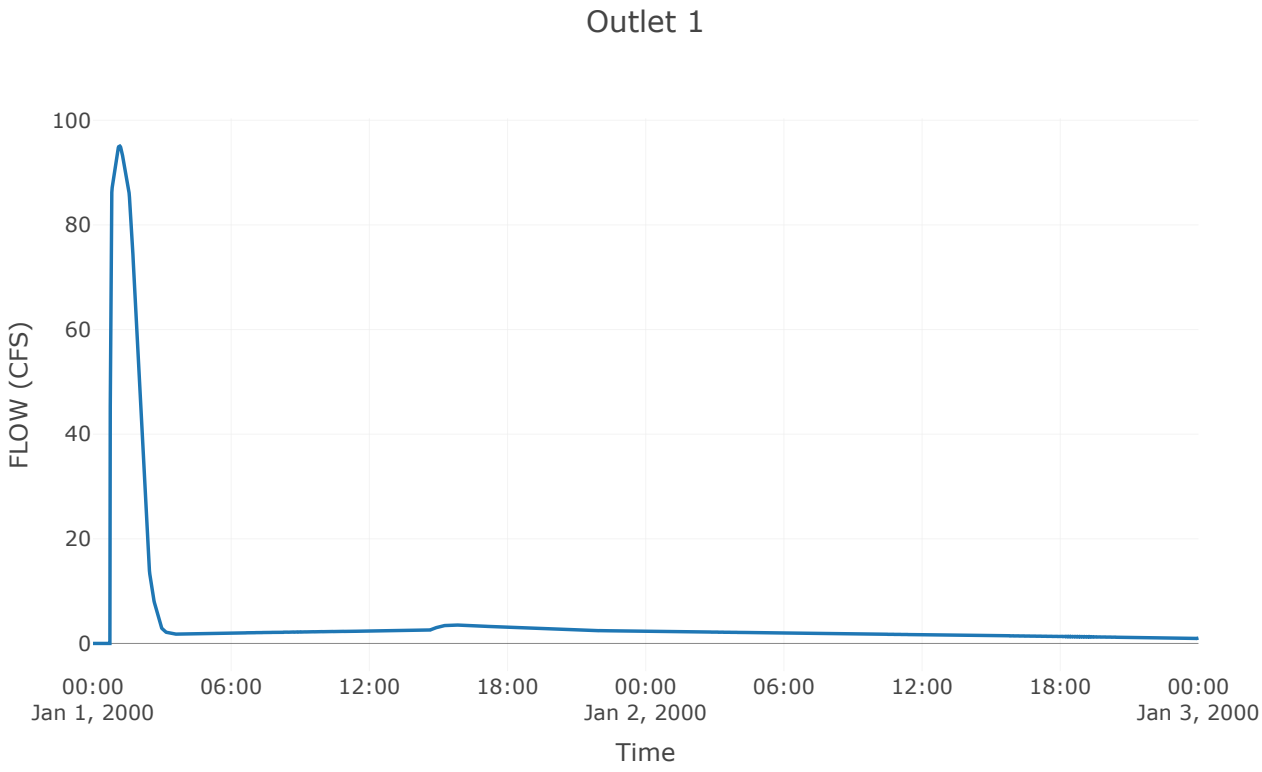

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

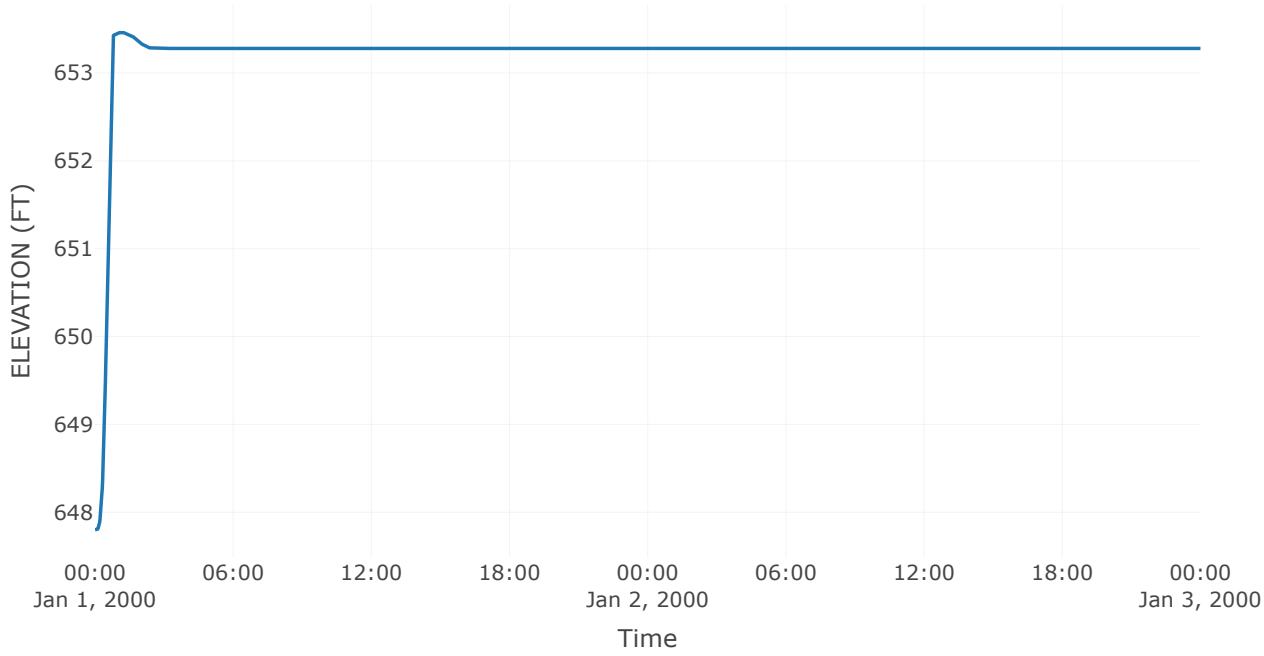

Combined Inflow
100
80
60
40
20
0
FLOW-COMBINE (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
15
10
5
0
FLOW-CUMULATIVE (AC-FT)
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

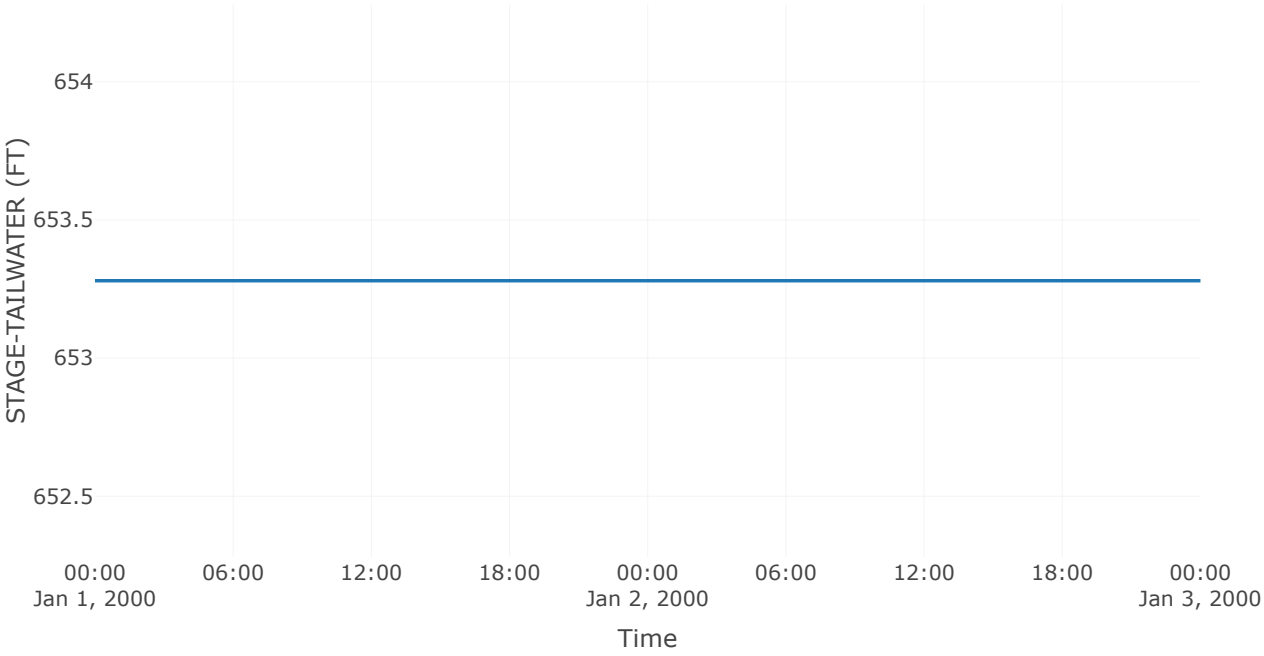

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

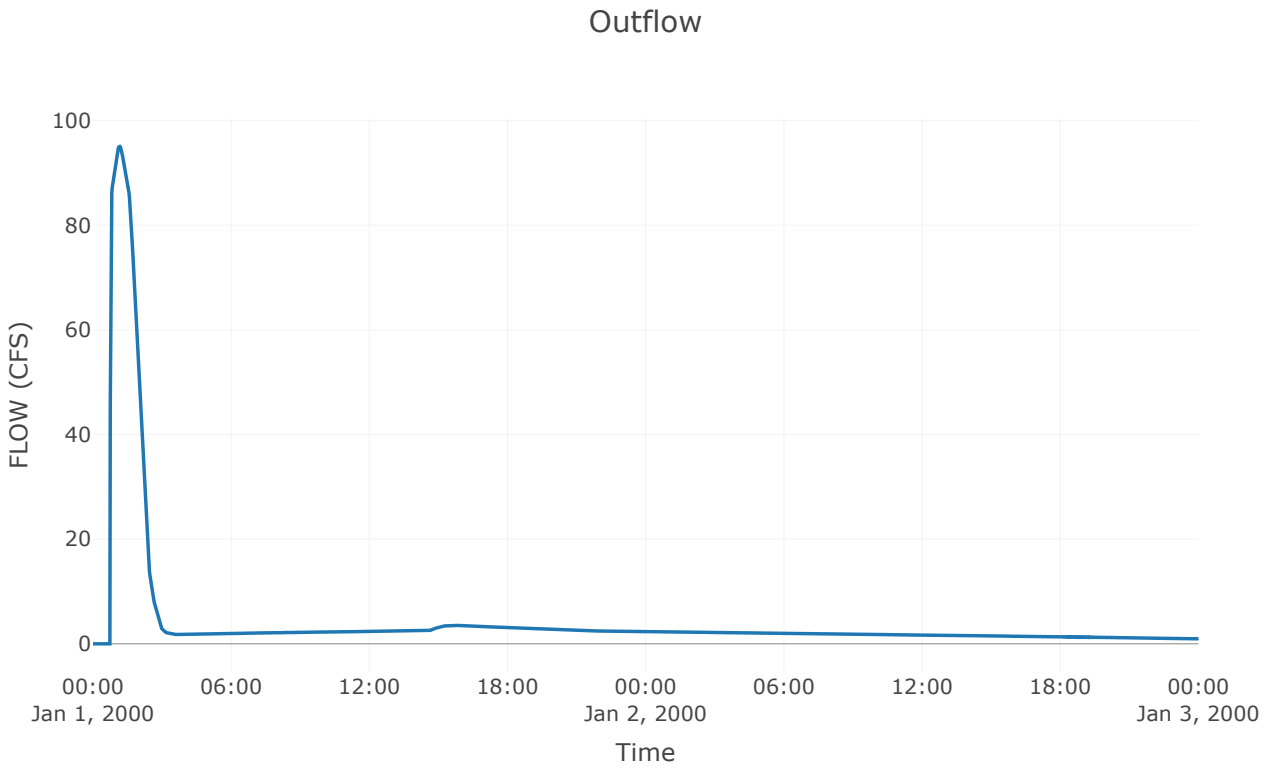

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

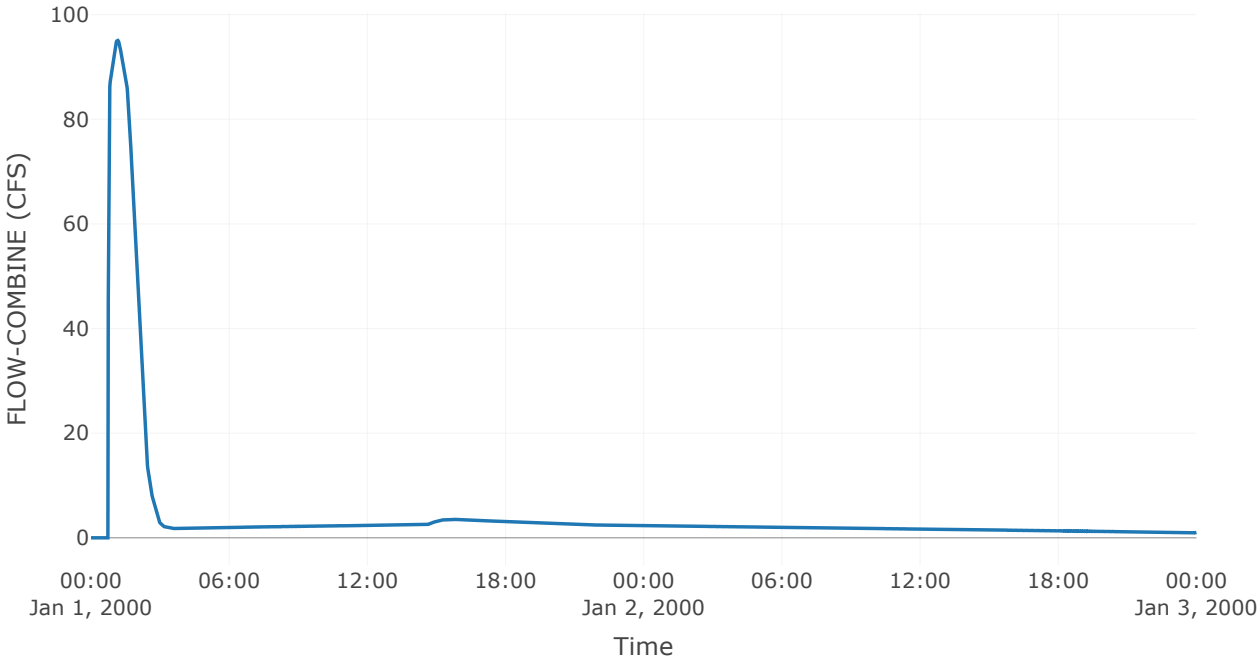



Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

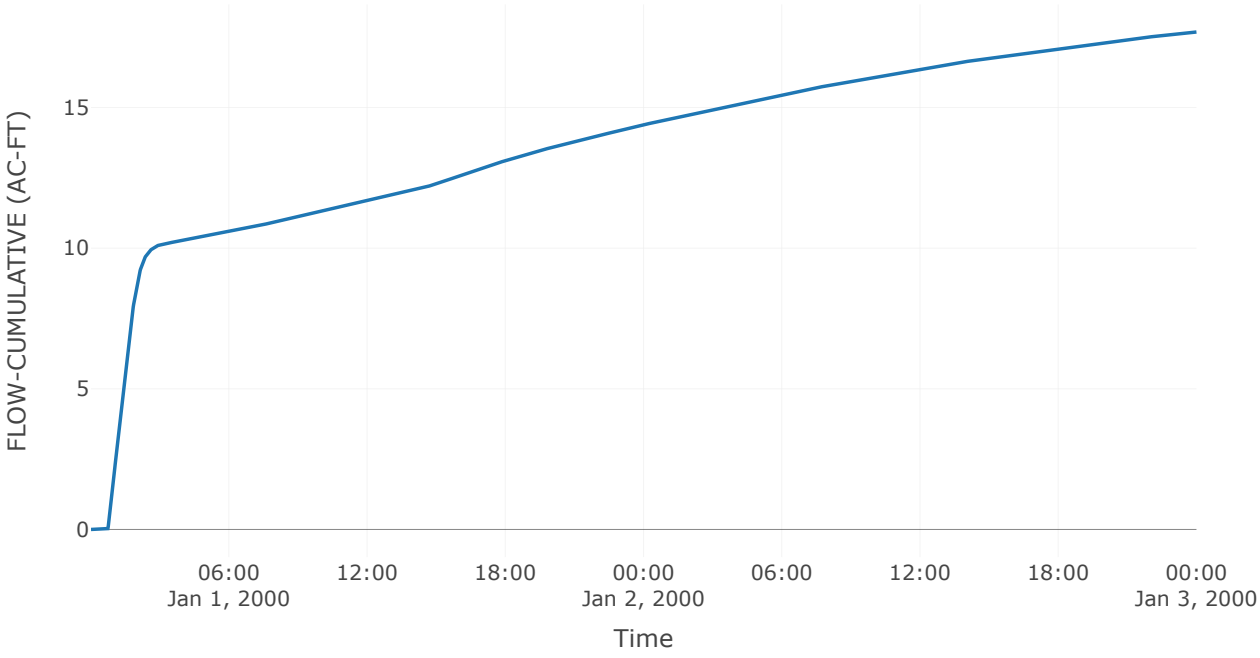
Sink: 55th Street Outlet

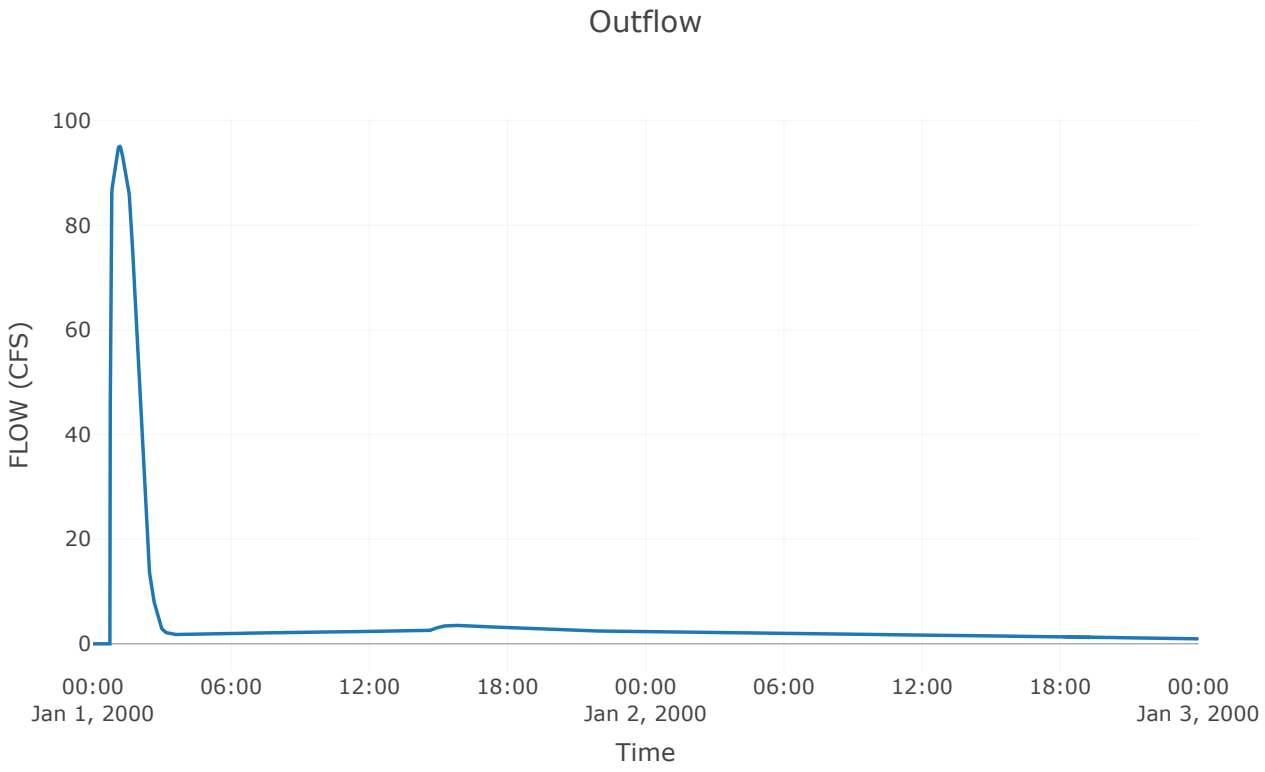
Results: 55th Street Outlet	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21

Combined Inflow



Cumulative Outflow




Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm	Number of lines: 2	Date: 12/17/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	163.13	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.6	0.0	163.1	362.0	12.09	48 x 72 b	1.37	650.50	651.36	652.36	654.20	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	163.1	360.4	9.57	48 x 72 b	1.35	651.36	654.50	654.20	657.34	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

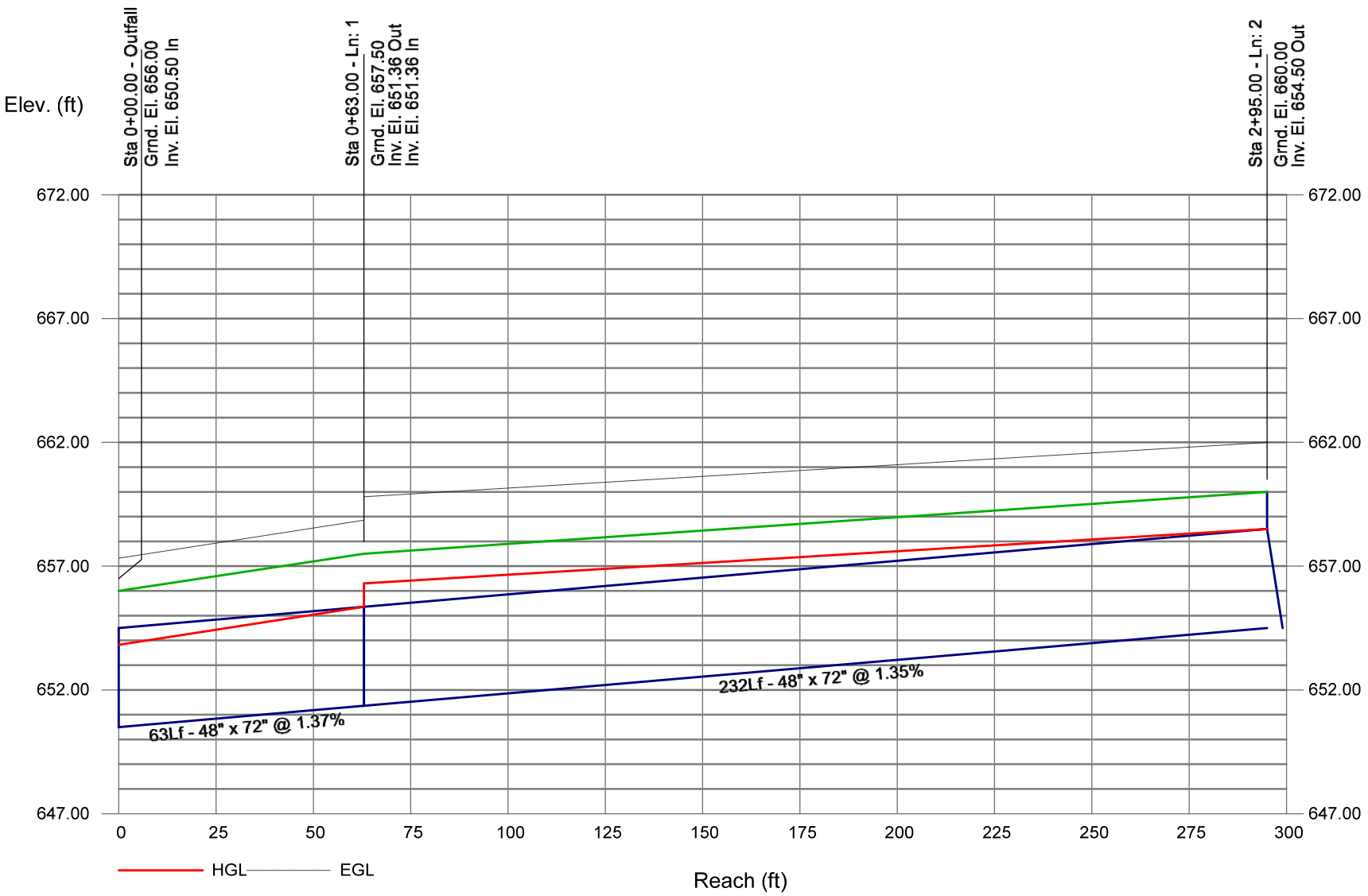
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert.stm



Bentley Systems

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	360.00	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.3	0.0	360.0	362.0	16.54	48 x 72 b	1.37	650.50	651.36	653.82	655.36	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	360.0	360.4	15.00	48 x 72 b	1.35	651.36	654.50	656.30	658.50	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm

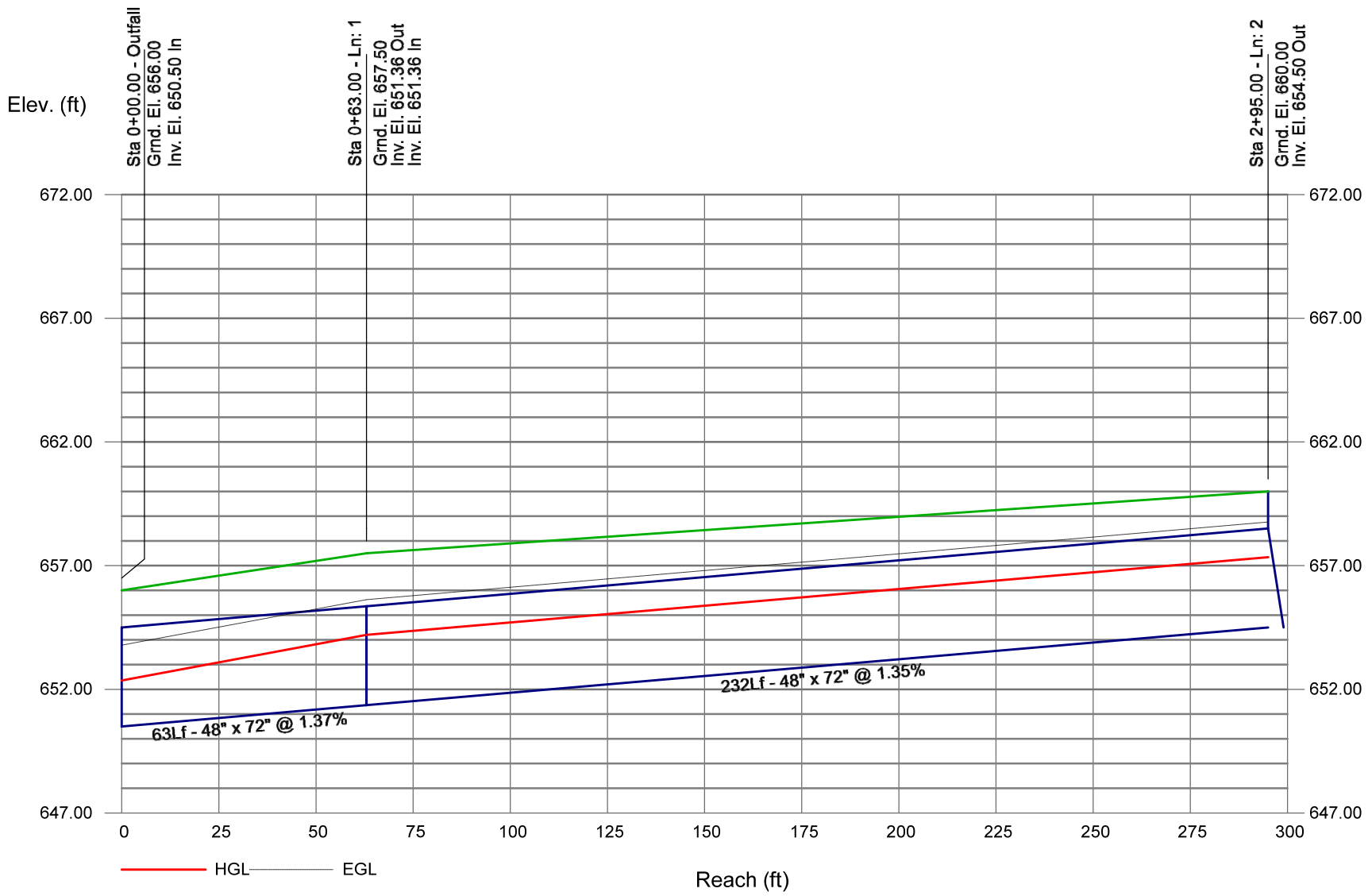
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm



Bentley Systems

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	75.98	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	1.2	0.0	75.98	362.0	9.46	48 x 72 b	1.37	650.50	651.36	651.60	653.07	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	75.98	360.4	7.42	48 x 72 b	1.35	651.36	654.50	653.07	656.21	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

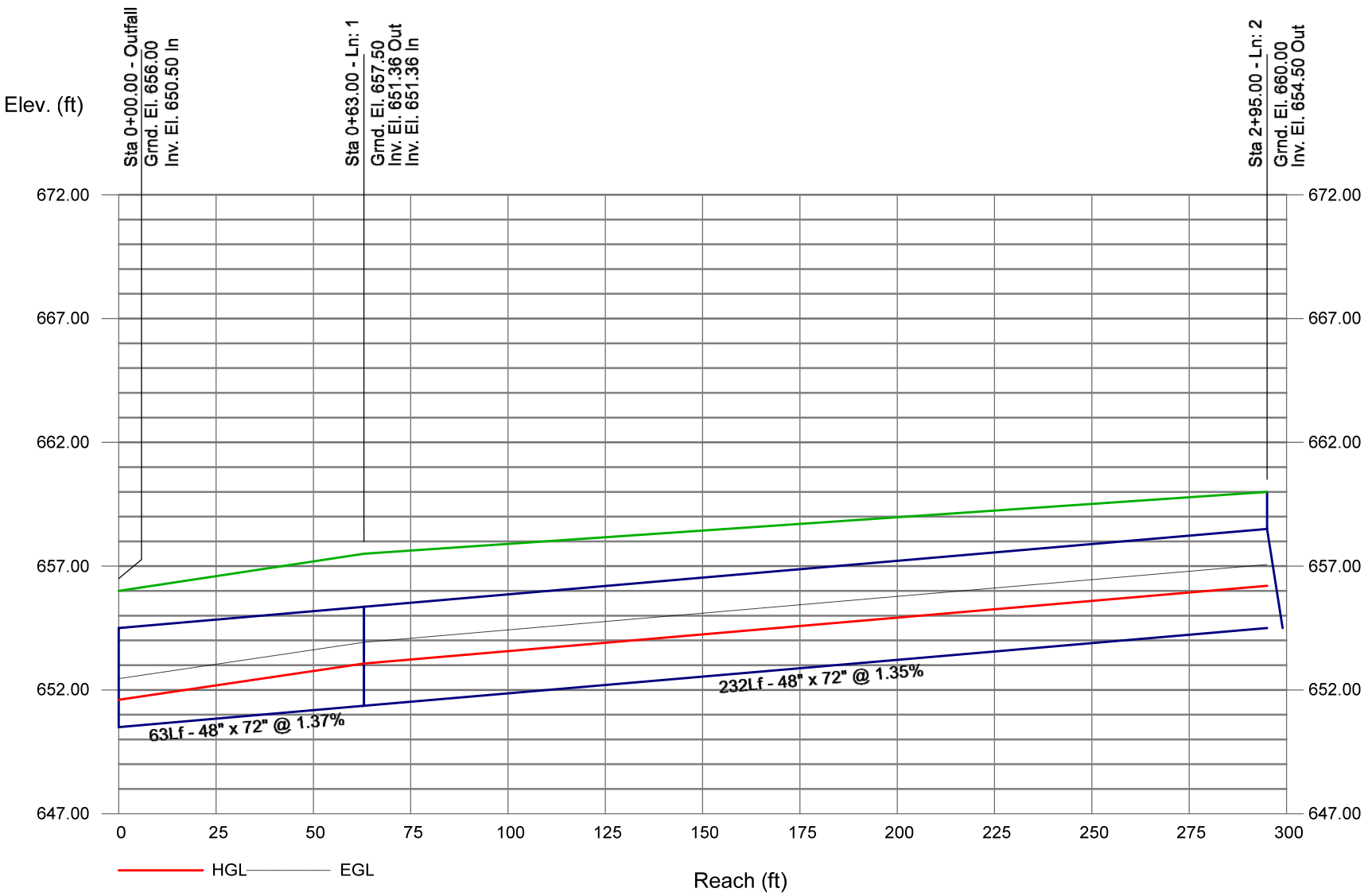
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm



Storm Sewers

Channel Report

HERITAGE CROSSING INTERIM SWALE CAPACITY CALCULATION

Trapezoidal

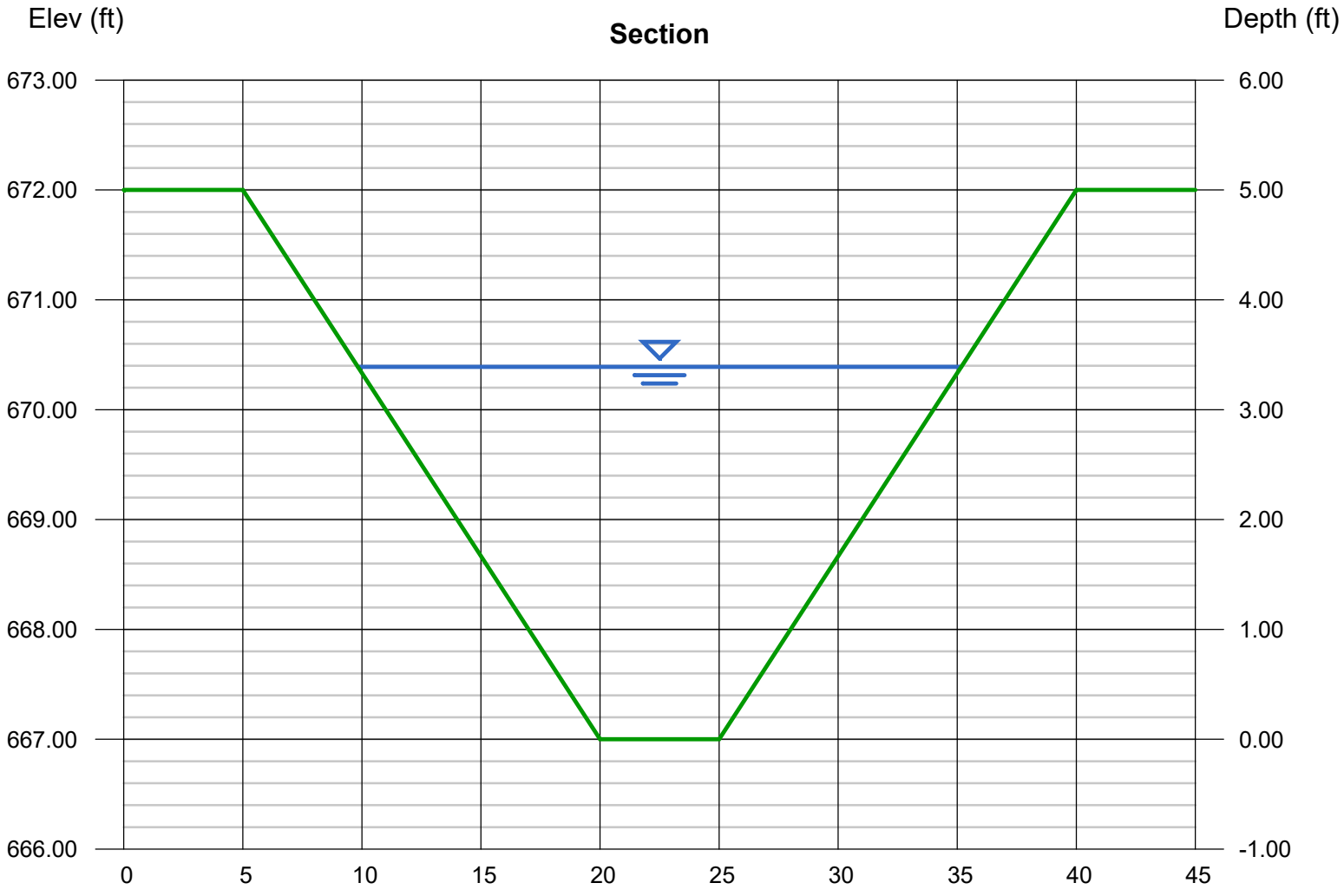
Bottom Width (ft)	= 5.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 5.00
Invert Elev (ft)	= 667.00
Slope (%)	= 1.00
N-Value	= 0.033

Calculations

Compute by:	Known Q
Known Q (cfs)	= 360.00

Highlighted

Depth (ft)	= 3.39
Q (cfs)	= 360.00
Area (sqft)	= 51.43
Velocity (ft/s)	= 7.00
Wetted Perim (ft)	= 26.44
Crit Depth, Yc (ft)	= 3.17
Top Width (ft)	= 25.34
EGL (ft)	= 4.15



Date: 11-25-2024
Calculations by: S.D.D.
Checked by: D.M.V.

County: Cook
LPA: Village of Western Springs
Section:
Route:
Location: Proposed Heritage Court

Limits of Analysis:
From:
To:
Length: _____ Feet _____ Miles

Structural Design Traffic: *(Section 44-1.03(c))*
Number of Lanes: 2
ADT: 210
Class of Road or Street: IV *(Section 44-1.01)*

Percent / Count *(Figure 44-1A as needed)*
PV: 88 % / 185
SU: 9 % / 19
MU: 3 % / 6
HCV: 12

Traffic Factor (Show Calculations): *(Figure 44-4A)*
Since the HCV's per day ≤ 48, use a minimum 5 in. HMA pavement.

Traffic Factor: N/A

Pavement Design:
Subgrade Support Rating (SSR): ☐ Poor ☐ Fair ☒ Granular *(Section 44-4.02(c) and Figure 44-6A)*
Working Platform: *(Figure 44-4B)* 9 in. improved granular base course (CA-6)
Selected Design PG Binder *(Figure 44-4C)*
Surface: PG 64-28
Remaining Lifts: PG 64-22

Design Pavement HMA Temp:	*(Figure 44-4E)*	N/A °F
Design HMA Microstrain:	*(Figure 44-4F or 44-4G)*	N/A
Design HMA Modulus (E_{HMA}):	*(Figure 44-4H)*	N/A ksi
Pavement Thickness:	*(Section 44-4.03) (Minimum of 6.0 in.)*	5.0 in.

Comments: Pavement Structure will be 5.0 in. of HMA over a 9 in. aggregate base course, Type A.

Attachments: Location Map / USDA Soil Map (as needed) / Completed Figures (as needed)

FULL-DEPTH HMA PAVEMENT
DESIGN CALCULATIONS FOR LOCAL PUBLIC AGENCIES
Figure 44-4N

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40. Traffic Factor (TF). The total number of 18-kip equivalent, single-axle load applications anticipated in the design lane during the design period, expressed in millions.

41. Untied Shoulder. Any shoulder that does not provide edge support. The shoulder may consist of earth, aggregate, or bituminous stabilized materials. PCC shoulders that are tied with smaller reinforcing steel than the size indicated in the *Illinois Highway Standards* are considered untied for purposes of determining pavement thickness.

44-1.02 Accessibility Requirements

All pavements constructed shall meet the accessibility requirements in Section 41-6 of this manual.

44-1.03 Basic Mechanistic Design Procedures

Mechanistic pavement design procedures use the actual stresses, strains, and deflections experienced by the pavement to determine its expected fatigue life.

44-1.03(a) Mechanistic Design Factors

Factors that are considered in mechanistic designs include:

- design HMA strain;
- design pavement HMA mixture temperature;
- design HMA mixture modulus (E_{HMA});
- subgrade support rating (SSR);
- design reliability;
- degree of PCC edge support;
- degree of PCC base erosion;
- PCC joint spacing; and
- PCC stresses.

44-1.03(b) Design Period

The level of traffic and type of facility to be constructed affect the selection of the design period. Generally, it is desirable to design highway pavements to carry traffic without necessitating the need for major rehabilitation for a period of 15 to 20 years. However, it may be advantageous to design lesser roadways (e.g., frontage roads, alleys, temporary roads) for shorter periods.

For all pavement types, the minimum design period allowed is 20 years for Class I and II roads and streets. For all pavement types, the minimum design period allowed is 15 years for Class III roads and streets. For Class IV roads and streets with 48 or fewer HCV's, pavement thicknesses provided in each Section 44-2, 44-3, 44-4, and 44-5 should be satisfactory for design periods of 15 years or 20 years.

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44-1.03(c) Structural Design Traffic

The structural design traffic is the estimated ADT for the year representing one-half of the design period. For example, when the design period is 20 years, the structural design traffic will be an estimate of the ADT projected to 10 years after the construction date.

1. Estimate ADT of PV, SU, and MU. Vehicular classification and traffic volume projections for structural design traffic are based on available traffic data (i.e., ADT). ADT and vehicular classification data for various roadway classes may be obtained from published IDOT traffic maps. If traffic data is unavailable or if published data is dated or does not appear to reflect known conditions or field observations (e.g., land uses, directional distributions), traffic volume and classification studies may be needed to establish a representative base of existing conditions. Factors that compound annual growth typically are used in traffic projections. It is important to consider any future land development or land use changes that may affect the volume or composition of traffic that will use the facility. If vehicular classification data is not available for Class III or Class IV facilities, use the percentages in Figure 44-1A to estimate the number of PV, SU, and MU vehicles from ADT. Also, consider the potential impacts of heavily loaded vehicles, especially in areas near mines, grain elevators, factories, and river ports. It may be necessary to specifically design for such vehicles.

2. Assign Traffic to the Design Lane. Although the sum of the PV, SU, and MU vehicular volumes determined in Step 1 represents the total ADT that will be carried by the highway facility in the year of the projection, the structural design of the pavement will be based on the lane which carries the greatest number of SU and MU vehicles (i.e., the design lane). The distribution factors in Figure 44-1B have been applied to TF equations contained in this chapter. Use the total two-way ADT for multilane facilities when calculating the structural design traffic as the distribution factors account for directional traffic and the percentage of vehicles in the design lane.

   Note that the design lane distribution factors in Figure 44-1B are based on previous traffic studies under average conditions. Unusual traffic control or design features may influence lane usage (e.g., lane restrictions of commercial vehicles, directional influence of major commercial generator). Adjustments may be necessary. Contact the CBLRS for additional guidance.

Class of Road or Street	Percentage of Structural Design Traffic		
	PV (%)	SU (%)	MU (%)
III	88	7	5
IV	88	9	3

TRAFFIC PERCENTAGE
(Class III and IV)

Figure 44-1A

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PG Binder Grade Selection [1]			
	Traffic Loading Rate (Adjustment)		
Districts 1 – 4	Standard Traffic [2]	Slow Traffic [3]	Standing Traffic [4]
Surface[5]	PG 58-28 [6][7]	PG 64-28 or SBS PG 64-28	SBS PG 70-28
Remaining Lifts[5]	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22
Districts 5 – 9			
Surface[5]	PG 64-22 [6][7]	PG 70-22 or SBS PG 70-22	SBS PG 76-22
Remaining Lifts[5]	PG 64-22	PG 64-22	PG 64-22

Notes:

1. *The binder grades provided in this table are based on the recommendations given in Illinois-Modified AASHTO* MP-2, Table 1, "Binder Selection on the Basis of Traffic Speed and Traffic Level."
2. *Standard traffic is used where the average traffic speed is greater than 43 mph (70 km/h).*
3. *Slow traffic is used where the average traffic speed ranges from 12 to 43 mph (20 to 70 km/h).*
4. *Standing traffic is used where the average traffic speed is less than 12 mph (20 km/h).*
5. *Consideration should be given to increasing the high temperature grade by one grade equivalent when 10 ≤ T.F. ≤ 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*
6. *Surface includes the top 2 in. (50 mm) of HMA. The remaining lifts of HMA may be the same PG binder grade as surface; however, this may increase or decrease the pavement design thickness. If multiple PG Binder grades are used in a HMA design, the predominant PG Binder grade should be used for determining HMA Modulus on Figure 44-4H.*
7. *The high temperature grade should be increased by one grade equivalent when T.F. > 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*

PG BINDER GRADE SELECTION FOR FULL-DEPTH HMA PAVEMENTS

Figure 44-4C

44-4.02(e) PG Binder Selection

The PG binder grade may affect the performance of a HMA mixture. The full-depth HMA pavement design procedure assumes that HMA rutting and thermal cracking are adequately considered in the material selection and mixture design process. Selection of the appropriate binder grade can impact the ability of the mix to resist rutting at higher temperatures and thermal cracking at lower temperatures. Both high and low temperature levels need to be considered when selecting the appropriate binder grade for full-depth HMA pavements.

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44-4.03 Thickness Design

The following processes are used to determine the design thickness:

1. Class I, II and III Roads and Streets. The design procedure is as follows:
   - Calculate the TF from the appropriate equation found in Figure 44-4A.
   - Use Figure 44-6A in conjunction with the subgrade soil grain-size analysis to determine the subgrade support rating.
   - Use Figure 44-4C in conjunction with traffic speed and location to determine the PG binder grade.
   - Use Figure 44-4E to determine the HMA pavement mixture temperature. The design mixture temperature should be interpolated to the nearest 0.5°F.

     Note: The design HMA mixture temperatures for conventional flexible and full-depth HMA pavements are not the same. For the same location, the conventional flexible HMA design mixture temperature is lower than the full-depth HMA design mixture temperature, because conventional flexible design time dates occur earlier in the spring.
   - Use Figure 44-4F (TF < 0.5) or Figure 44-4G (TF ≥ 0.5) to determine the design HMA strain.
   - Use Figure 44-4H to determine the design pavement HMA modulus (E_{HMA}).
   - Use Figures 44-4I, 44-4J, or 44-4K, depending on the subgrade support rating, to determine the design HMA thickness. Round the final design thickness to the next highest 0.25 in.
   - The minimum full-depth HMA design thickness is 6 in.
   - A 12 in. improved subgrade is required for Class I and II pavements and is optional for Class III pavements. Class III pavement subgrades must satisfy the requirements of Section 44-7 during construction.
2. Class IV Roads and Streets. The following procedure applies:
   - If HCV's per day ≤ 48, use a minimum 5 in. HMA pavement. A 12 in. improved subgrade layer is optional. Class IV pavement subgrades must satisfy the requirements of Section 44-7 during construction.
   - If HCV's per day > 48, use a Class III TF equation and design procedure.

44-4.04 Typical Sections

Figures 44-4L and 44-4M illustrate typical LPA full-depth HMA pavement designs.

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PLAT OF VACATION

OF

PUBLIC RIGHT OF WAY

FOR THE PURPOSE OF VACATING A HERETOFORE DEDICATED RIGHT OF WAY IN THE NORTHEAST FRACTIONAL 1/4 OF SECTION 18, IN TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

SITE DATA

AREA = 14,850 SQ. FT. OR 0.34 ACRES

PARCEL IDENTIFICATION NUMBER

UNKNOWN

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

- N NORTH
- S SOUTH
- E EAST
- W WEST
- (###') RECORD/DEED
- ###' MEASURED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED ARE THE OWNERS OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND THAT AS SUCH OWNERS, THEY HAVE CAUSED THE SAME TO BE PLATTED AND VACATED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, THEY DO HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF VACATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 10TH DAY OF JULY, A.D., 20 24.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

SEND FUTURE TAX BILLS TO:

_____
_____
_____

REVISIONS

NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF VACATION
FOR
LAWN AVENUE
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

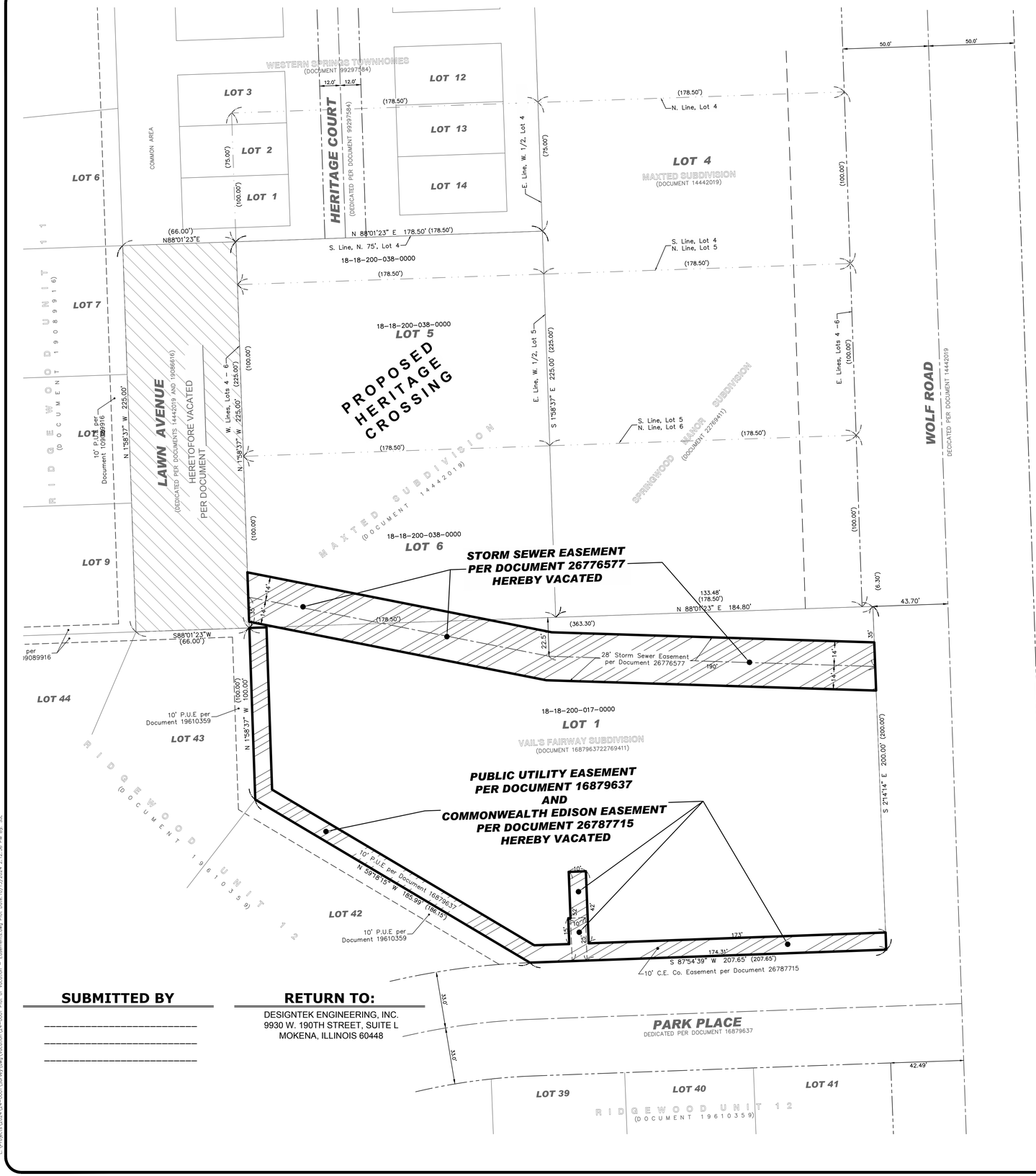
R/W VACATION

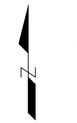
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PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT





GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

18-18-200-038-0000
18-18-200-017-0000

ADDRESSES

1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES

- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

N	NORTH
S	SOUTH
E	EAST
W	WEST
(####)	RECORD/DEED
####	MEASURED
P.U.E.	PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

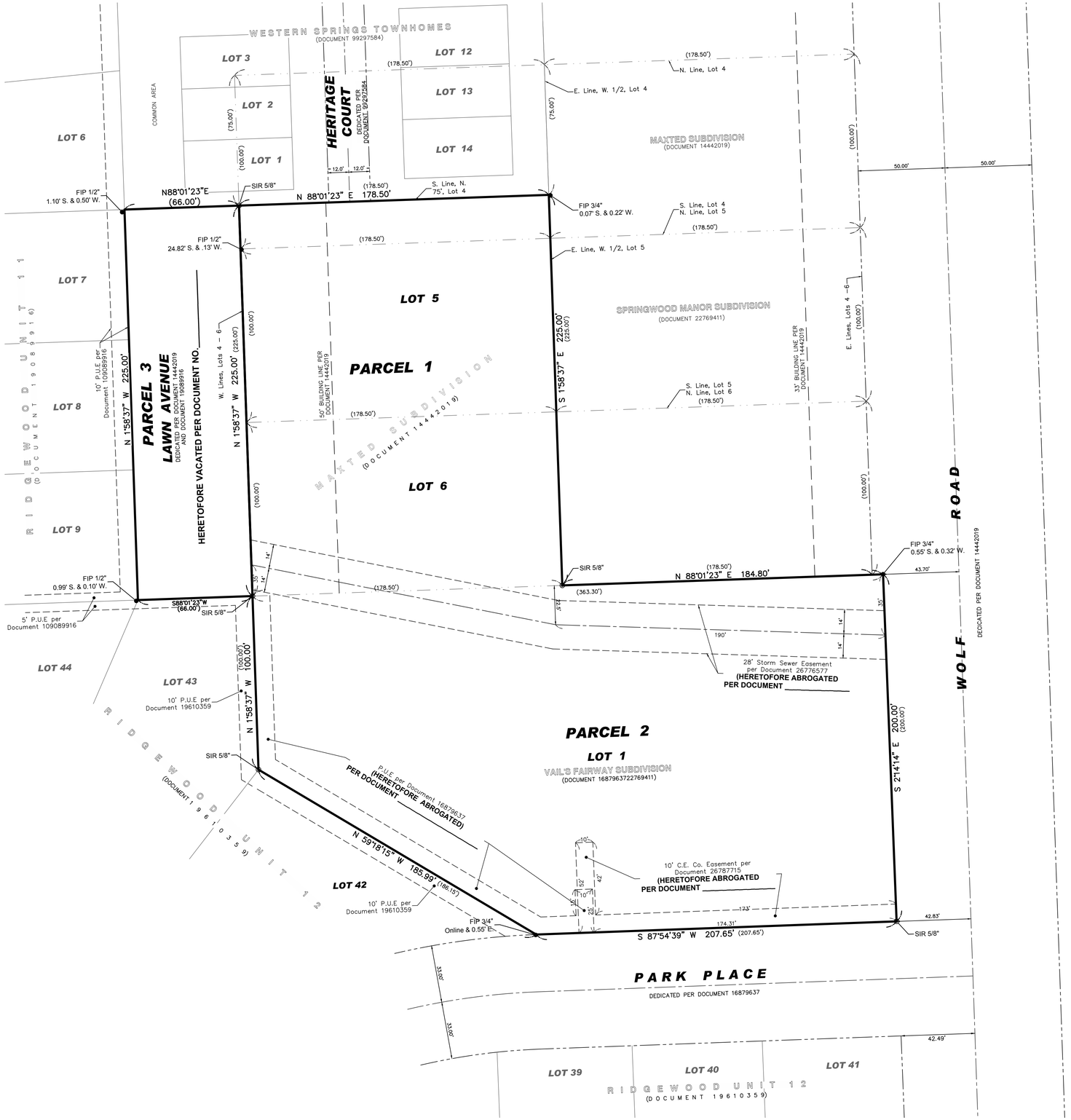
1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

ADDRESSES

PARCEL 1: 1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

PARCEL 2: 5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

EXISTING SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
AREA (PARCEL 3) =	14,850 SQ. FT. OR 0.34 ACRES
GROSS AREA =	120,009 SQ. FT. OR 2.75 ACRES

LEGEND

● FIP	FOUND IRON PIPE
○ SIR	SET 5/8" IRON ROD
———	BOUNDARY LINE
———	LOT LINE
——— · ———	RIGHT-OF-WAY LINE
——— · ———	CENTERLINE
– – – – –	EXISTING EASEMENT LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

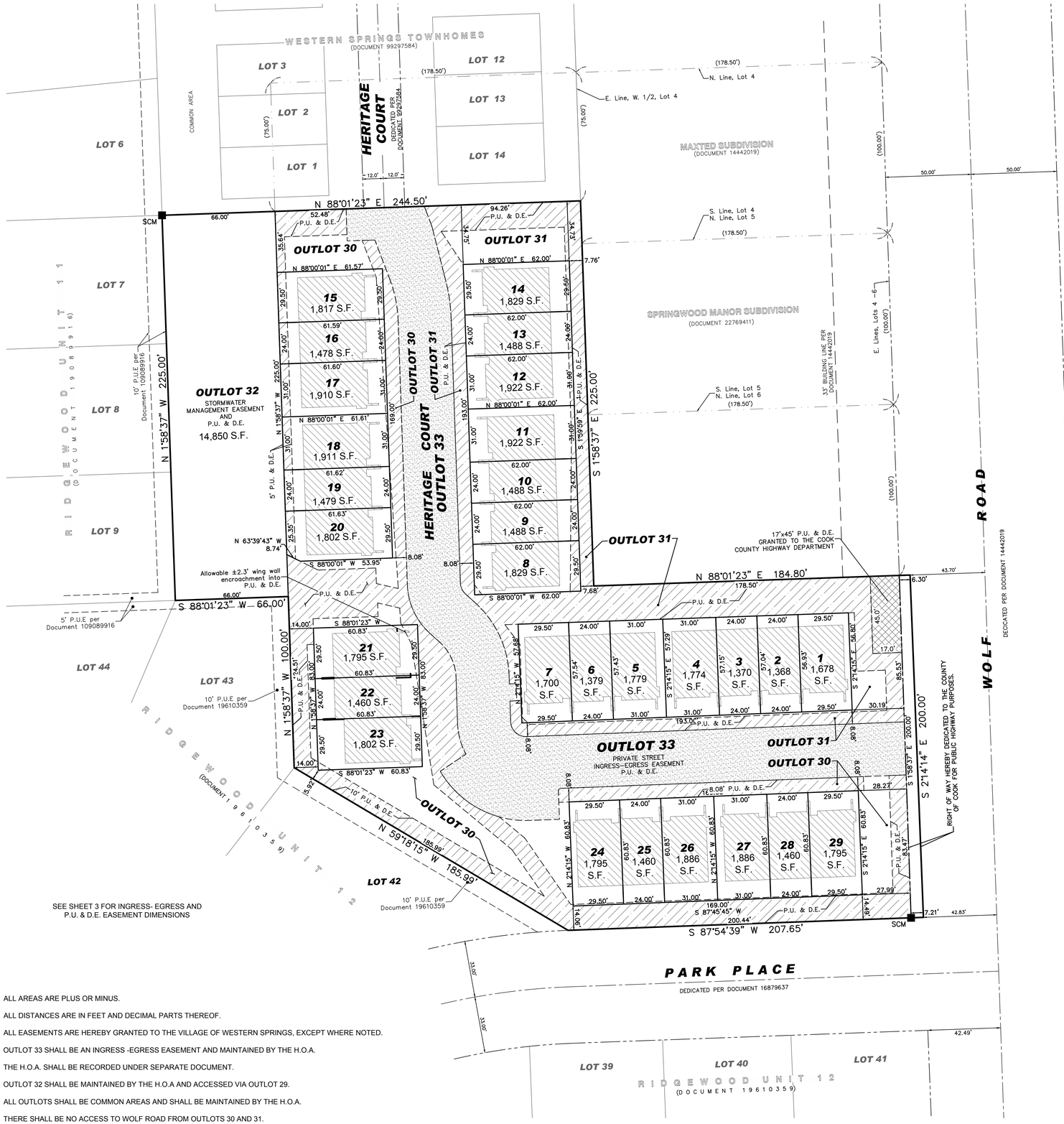
1 OF 4

EXISTING GEOMETRY

L:\Projects\2024\24-0001\Survey\Dwg\Subdivision\24-0001 FP Rev. 3.dwg Plot Date:12/17/2024 5:33:59 AM By: SJL

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



SEE SHEET 3 FOR INGRESS- EGRESS AND P.U. & D.E. EASEMENT DIMENSIONS

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
3. ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
4. OUTLOT 33 SHALL BE AN INGRESS -EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
5. THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
6. OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A AND ACCESSED VIA OUTLOT 29.
7. ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
8. THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

N

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE:	18-18-200-038-0000
PARCEL TWO:	18-18-200-017-0000
PARCEL THREE:	UNKNOWN

AREA SUMMARY

GROSS AREA:	120,009 SQ. FT. OR 2.75 AC.
BUILDABLE LOTS 1-29:	48,839 SQ. FT OR 1.18 AC.
OUTLOT 30	20,733 SQ. FT. OR 0.40 AC.
OUTLOT 31	14,952 SQ. FT. OR 0.43 AC.
OUTLOT 32	14,850 SQ. FT. OR 0.29 AC
OUTLOT 33:	19,393 SQ. FT. OR 0.34 AC.
WOLF RD. DEDICATION:	1,351 SQ. FT. OR 0.03 AC.

LEGEND

FIP	FOUND IRON PIPE
SIP	SET 1" x 24" IRON PIPE
SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
E.T.B.E.	EXCEPTION TO BLANKET EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		
L	ARC DIMENSION		
R	RADIUS DIMENSION		
CH	CHORD BEARING/DISTANCE		

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT RECONFIGURATION	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. No.: 184-003740

DEI

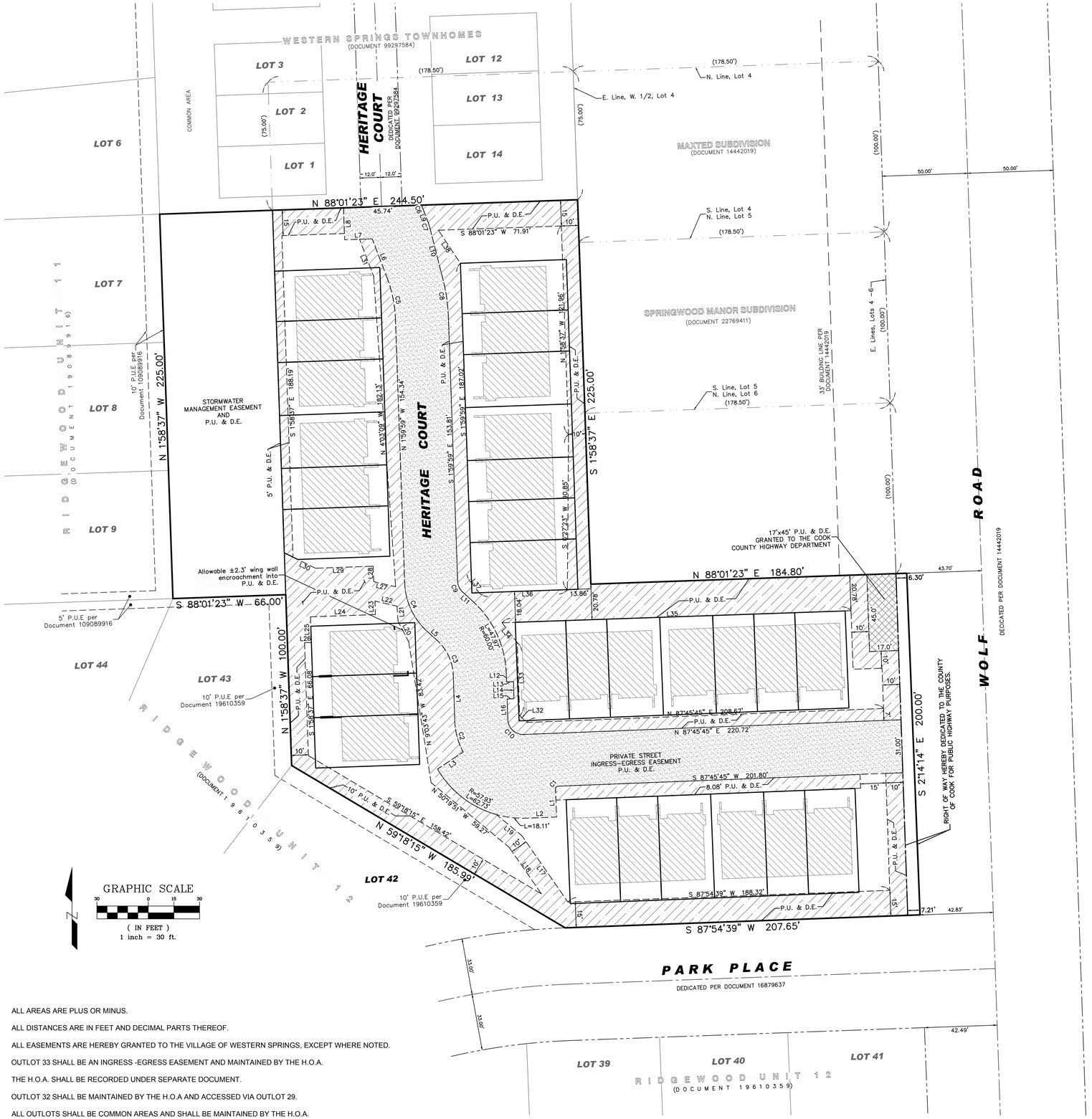
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

2 OF 4

PROPOSED GEOMETRY

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



LEGEND

● FIP	FOUND IRON PIPE
○ SIP	SET 1" x 24" IRON PIPE
■ SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

Parcel Line Table		
Line #	Length	Direction
L1	16.50	S02° 14' 15"E
L3	18.04	N56° 16' 49"E
L4	26.84	N01° 51' 56"W
L5	8.03	N47° 40' 37"W
L6	24.41	N20° 51' 06"W
L7	16.15	S88° 10' 48"W
L8	18.67	N01° 58' 35"W
L9	7.26	S20° 53' 37"E
L10	27.84	S14° 13' 17"E
L11	8.03	S47° 40' 37"E
L12	4.76	S01° 51' 56"E
L13	4.02	N87° 58' 53"E
L14	10.00	S01° 44' 56"E
L15	4.00	S87° 58' 53"W
L16	12.07	S01° 51' 56"E
L17	47.24	N34° 43' 32"W
L18	33.09	N34° 43' 32"W
L19	19.34	N50° 19' 51"W
L20	13.60	N27° 06' 22"W
L21	8.81	N04° 03' 09"W

Parcel Line Table		
Line #	Length	Direction
L22	13.22	S77° 07' 24"E
L23	7.91	N01° 58' 37"W
L24	38.00	N88° 01' 23"E
L25	15.00	S01° 58' 37"E
L26	4.00	N88° 01' 23"E
L27	13.14	N77° 07' 19"W
L28	9.06	N01° 58' 37"W
L29	33.80	S88° 01' 22"W
L30	14.63	S63° 39' 43"E
L31	23.08	S20° 51' 06"E
L32	5.78	S47° 02' 19"E
L33	42.73	S01° 52' 29"E
L34	14.62	S37° 20' 25"E
L35	204.14	N88° 01' 23"E
L36	51.58	N88° 00' 01"E
L37	7.33	N37° 20' 25"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	2.36	1.50	90.00	S42° 45' 45"W	2.12
C2	18.74	40.00	26.85	N15° 17' 25"W	18.57
C3	23.19	29.00	45.81	N24° 46' 16"W	22.57
C4	31.89	40.00	45.68	N24° 50' 18"W	31.05
C5	24.79	75.50	18.81	N11° 22' 59"W	24.68
C6	3.64	54.81	3.80	S20° 01' 02"E	3.64
C7	3.03	26.00	6.67	S17° 33' 27"E	3.03
C8	26.01	106.50	13.99	S08° 59' 46"E	25.94
C9	7.74	9.10	48.74	S23° 11' 03"E	7.51
C10	14.19	9.04	89.92	S47° 02' 25"E	12.77

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2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
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REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
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Drawn By: SJL
Checked By: SDD

3 OF 4

EASEMENT DETAIL

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.

RESERVED FOR: COOK COUNTY RECORDER

COOK COUNTY CLERK STAMP

OWNER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS SHOWN ON THIS PLAT OF SUBDIVISION, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED:

THE UNDERSIGNED FURTHER CERTIFIES THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS SUBDIVISION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE SUBDIVISION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THE SUBDIVISION PLAT.

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HEREBY CERTIFIES THAT THE SUBJECT PROPERTY IS LOCATED WITH THE FOLLOWING SCHOOL DISTRICTS:

ELEMENTARY: 106 (LA GRANGE HIGHLAND) HIGH SCHOOL: 204 (LYONS TOWNSHIP HIGH SCHOOL)

BY: McNAUGHTON DEVELOPMENT LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

BY: _____
MANAGER

ADDRESS: 11S220 JACKSON STREET, SUITE #101, BURR RIDGE, ILLINOIS 60527

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF MCNAUGHTON DEVELOPMENT, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THIS SUBDIVISION PLAT AS OWNER, AS SUCH MANAGER OF McNAUGHTON DEVELOPMENT LLC, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED THIS SUBDIVISION PLAT AS HIS FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY OR OTHER ENTITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, A.D. 20___.

_____
NOTARY PUBLIC

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, CHAIRMAN OF THE VILLAGE OF WESTERN SPRINGS PLAN COMMISSION, SO CERTIFY THAT

ON THIS _____ DAY OF _____, A.D., 20____, THIS PLAT OF SUBDIVISION WAS DULY APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF WESTERN SPRINGS.

BY: _____ ATTEST: _____
CHAIRMAN SECRETARY

VILLAGE TREASURER CERTIFICATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, COLLECTOR FOR THE VILLAGE OF WESTERN SPRINGS, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THERE ARE NO DELINQUENT OR UNPAID CURRENT FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF, THAT HAVE BEEN APPORTIONED AGAINST THE TRACT LAND LAND INCLUDED IN THIS PLAT.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D., 20____.

_____
VILLAGE TREASURER

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE PRESIDENT AND THE VILLAGE BOARD OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, IN ACCORDANCE WITH SUBDIVISION REGULATIONS AT A MEETING HELD THIS _____ DAY OF _____, A.D. 20____

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

IMPROVEMENTS CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE CLERK OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, HEREBY CERTIFY THAT THIS PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF SAID VILLAGE AT ITS MEETING HELD ON THE _____ DAY OF _____, A.D. 20____, AND THAT REQUIRED BOND OR OTHER GUARANTEES HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

BY: _____
VILLAGE CLERK

LAGRANGE HIGHLANDS SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, SUPERVISOR OF THE LAGRANGE HIGHLANDS SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS, OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE PROPOSED SUBDIVISION AND DULY APPROVED BY THE COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED AT _____, COOK COUNTY, ILLINOIS, THIS ___ DAY OF _____, A.D., 20____.

_____
SUPERVISOR

SURFACE WATER STATEMENT

To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, if such surface water drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains which the owner has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the adjoining property because of the construction of this subdivision.

_____ _____
Owner Professional Engineer

_____ _____
Printed Name Printed Name

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE ENGINEER OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS THIS _____ DAY OF _____, 20____.

_____
VILLAGE ENGINEER

REGISTRATION NUMBER _____

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT, CONFORMING TO THE STANDARDS OF THE COOK COUNTY HIGHWAY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS.

DATED THIS _____ DAY OF _____, A.D. 20____.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

RESPONSIBILITY OF H.O.A., VILLAGE OF WESTERN SPRINGS AND LAGRANGE HIGHLANDS SANITARY DISTRICT

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all landscaping areas within all Lots and Outlots within the subdivision, together with all improvements within the ingress-egress easement, and all storm sewers and structures. The individual homeowners shall be responsible for all sanitary and water services from the public sanitary service connections and B-Boxes to the constructed buildings. The Village of Western Springs shall be responsible for all watermain and structures attached thereto. The LaGrange Highlands Sanitary District shall maintain the sanitary sewer and all structures attached thereto. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

PRIVATE INGRESS - EGRESS PROVISIONS

An easement for ingress and egress over and across the Property for the benefit of the Owner(s) of Subdivision and/or Lots, their heirs, successors, assigns, guests and invitees, as more particularly bounded and described on the Plat. This easement shall be perpetual and shall run with the land.

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all improvements within said ingress and egress areas within the subdivision. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the City shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

STORMWATER MANAGEMENT EASEMENT

Declarant hereby reserves and grants to the Village of Western Springs (Village) easements in, over, under, through, and upon those areas designated on the Plat as 'Stormwater Management Easement,'including but not limited to all outlots (Outlot 30-33 inclusive), and all areas detailed in the Declaration of Covenants Conditions and Restrictions for the Heritage Crossing Townhome Association of Western Springs pertaining to maintenance, repair, and replacement of stormwater management facilities, for purposes of providing adequate stormwater drainage control together with reasonable access thereto. [Continue with the same language currently on the plat in this first paragraph, I don't want to rewrite it all].

In the event the Village shall perform, or have performed on its behalf, removal of any obstruction or alteration to or upon the stormwater facilities drainage easement, as set forth in this easement, The Village shall establish a Special Service Area, pursuant to 35 ILCS 200/27-5 et seq., that includes the entire Premises after the approval of the Planned Development by the Village but prior to the sale and conveyance of title to any Lot to any person by the Developer, which shall govern the Premises for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the SSA Maintained Improvements. The Special Service Area shall be an encumbrance on title to the Premises, including each Lot, Dwelling Unit and Common Areas. The Developer agrees to cooperate with the Village in creating the Special Service Area and agrees not to object to the formation of the Special Service Area, provided the terms of the Special Service Area are consistent with the Development Agreement and this Declaration. In the event the owner of any portion of the Premises (the Developer, the Declarant, the Association, a Dwelling Unit Owner or Owner), at any time, shall fail to maintain, repair or replace the SSA Maintained Improvements, as and when appropriate, and, after receipt of Village notice of such failure and opportunity to cure, the Village shall have the right to levy a special service tax on the parcel(s) where the owner(s) has failed to perform its maintenance, repair or replacement obligations on the Premises, perform such work and receive reimbursement of the costs and expenses it has incurred, including any legal fees and related expenses, engineering fees and related expenses, other consultant fees and related expenses and a reasonable allocation of Village staff and overhead costs. The Village shall not levy a tax in accordance with the Special Service Area unless the applicable owner(s) fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village, as contained in this Agreement and the Declaration. The tax levy by the Village may extend to one owner or a limited number of owners, and not the entire Premises, if such limited tax levy is appropriate. In the event the failure or refusal to fulfill maintenance, repair and replacement obligations or the reimbursement obligation to the Village relates to one or more components of the SSA Maintained Improvements that support or serve the entire Premises or the Development, then the levy shall extend to the Association and each of the property owners of the Development. The maximum tax established for the Special Service Area shall be based on the actual incurred expenses or, if the improvements have not been made yet, the Village Engineer's reasonable, estimated expense for maintenance, repair or replacement of such improvements. If the Association or a property owner(s) shall fail to pay the Special Service Area Tax, the Village shall be authorized to: (1) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations and shall be entitled to recover its actual incurred legal fees and related expenses from the owner(s) who fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village; and (2) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations of the Developer hereunder, including such lien foreclosure action authorized by 65 ILCS 5/11-31-1, as amended, or provided for in 65 ILCS 5-11-31-2, as amended, or similar applicable laws to foreclose on the lien and may collect its reasonable attorney's fees and litigation expenses incurred in the enforcement of the obligations.

COMED COMPANY AND AT & T CORPORATION

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to COMED COMPANY and AT & T CORPORATION, their respective licensees, successors, and assigns, jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked Public Utility & Drainage Easement, or P.U. & D.E." designation), the property designated in the Declaration of Condominium and/or on this plat as 'Common Elements'; and the property designated on the plat as 'common area or areas'; and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked 'Easement', 'Utility Easement', 'Public Utility Easement', 'P.U.E' (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term 'Common Elements' shall have the meaning set forth for such term in the 'Condominium Property Act', Chapter 765 ILCS 605/2, as amended from time to time.

The term 'common area or areas' is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as 'outlots', 'common elements', 'open space', 'open area', 'common ground', 'parking' and 'common area'. The term 'common area or areas', and 'Common Elements' include real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool, retention pond or mechanical equipment. Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

NICOR CORPORATION / NICOR GAS COMPANY PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY OF ILLINOIS, its successors and assigns, in all platted 'easement' areas, streets, alleys, other public ways and places shown on this plat, said easement to be for the installation, maintenance, relocation, renewal and removal of gas mains and appurtenances for the purpose of serving all areas shown on this plat as well as other property, whether or not contiguous thereto. No buildings or other structures shall be constructed or erected in any such 'easement' areas, streets, alleys, or other public ways or places nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

A non-exclusive perpetual easement is hereby reserved and granted to the Village of Western Springs (Village), LaGrange Highlands Sanitary District and their successors and assigns over all areas designated "Public Utility and Drainage Easement" and those areas designated "P.U. & D.E." on the plat, to construct, reconstruct, repair, inspect, maintain and operate various transmissions, distribution, and collection systems, including but not limited to water lines, sanitary sewers and storm sewers, together with any and all necessary valve vaults fire hydrants, manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said Village, over, upon, along, under and through the surface of the property shown on the plat, together with the right of access for necessary labor, materials and equipment to do any of the above work.

The right is also granted to cut down, trim or remove, without obligation to restore or replace any obstruction, including but not limited to trees, shrubs, other plants, structures or improvements on the easement that interfere with the operation of such lines and sewers. No permanent buildings or structures shall be placed on said easement, but same may be used for gardens, landscape areas, and other purposes that do not then or later interfere with the aforesaid uses or rights. Where an easement is used for both sewer and other utilities, the other utility installation shall be subject to the ordinance of the Village of Western Springs and to Village approval as to design and location.

Perpetual easements are hereby reserved for and granted to the Village of Western Springs and other governmental authorities having jurisdiction of the land, over the entire easement area for ingress, egress, and the performance of municipal and other governmental services including water, storm and sanitary sewer service and maintenance and emergency and routine police, fire, and other public safety related services.

COMCAST COMMUNICATIONS PROVISIONS

An easement is hereby reserved and granted to COMCAST COMMUNICATIONS CORPORATION, operating within the Village of Western Springs, it's successors and assigns, jointly and severally, for the installation, maintenance, relocation, renewal and removal of communication and broadcast signal systems in, under, across, along and upon the surface of the property shown on the plat and designated as "Public Utility and Drainage Easement" or "P.U. & D.E." and the property designated on the plat for streets and alleys as required to provide the planned unit development and other property, whether or not contiguous thereto, with communication and broadcast TV services, together with the right to install required service connections for each lot. No buildings or other obstructions shall be constructed or erected in any such "Public Utility and Drainage Easement" or "P.U. & D.E." areas, without the prior written consent of grantees. Nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 035-003160, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19810036, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, WHICH HAS ADOPTED A MUNICIPAL PLAN AND IS EXERCISING SPECIAL POWERS AUTHORIZED BY ARTICLE 11, DIVISION 12 OF THE ILLINOIS MUNICIPAL CODE, AS NOW AND HEREAFTER AMENDED AND THAT ALL REGULATIONS ENACTED BY THE VILLAGE OF WESTERN SPRINGS RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT IRON PIPE 1" X 24" WILL BE SET AT ALL LOT CORNERS, BLOCK CORNERS, POINTS OF CURVE, EXCEPT WHERE CONCRETE MONUMENTS ARE INDICATED, AND THAT THE PLAT HEREON DRAWN CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, MAP NUMBER 17031C0467J, EFFECTIVE DATE ON AUGUST 19, 2008.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

ALL CURVE LENGTHS SHOWN ARE ARC DIMENSIONS.

GIVEN UNDER MY HAND AND SEAL AT MOKENA, ILLINOIS, THIS 10th DAY OF JULY A.D., 2024.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. #035-003160
LICENSE EXPIRES ON NOVEMBER 30, 2026

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

Send all future tax bills to:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Submitted by:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Return the original Mylar to:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	CJL
2	11/26/24	LOT/ECOMM	CJL
3	12/30/24	VILLAGE COMMENTS	CJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: N/A
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: CJL
Checked By: SDD

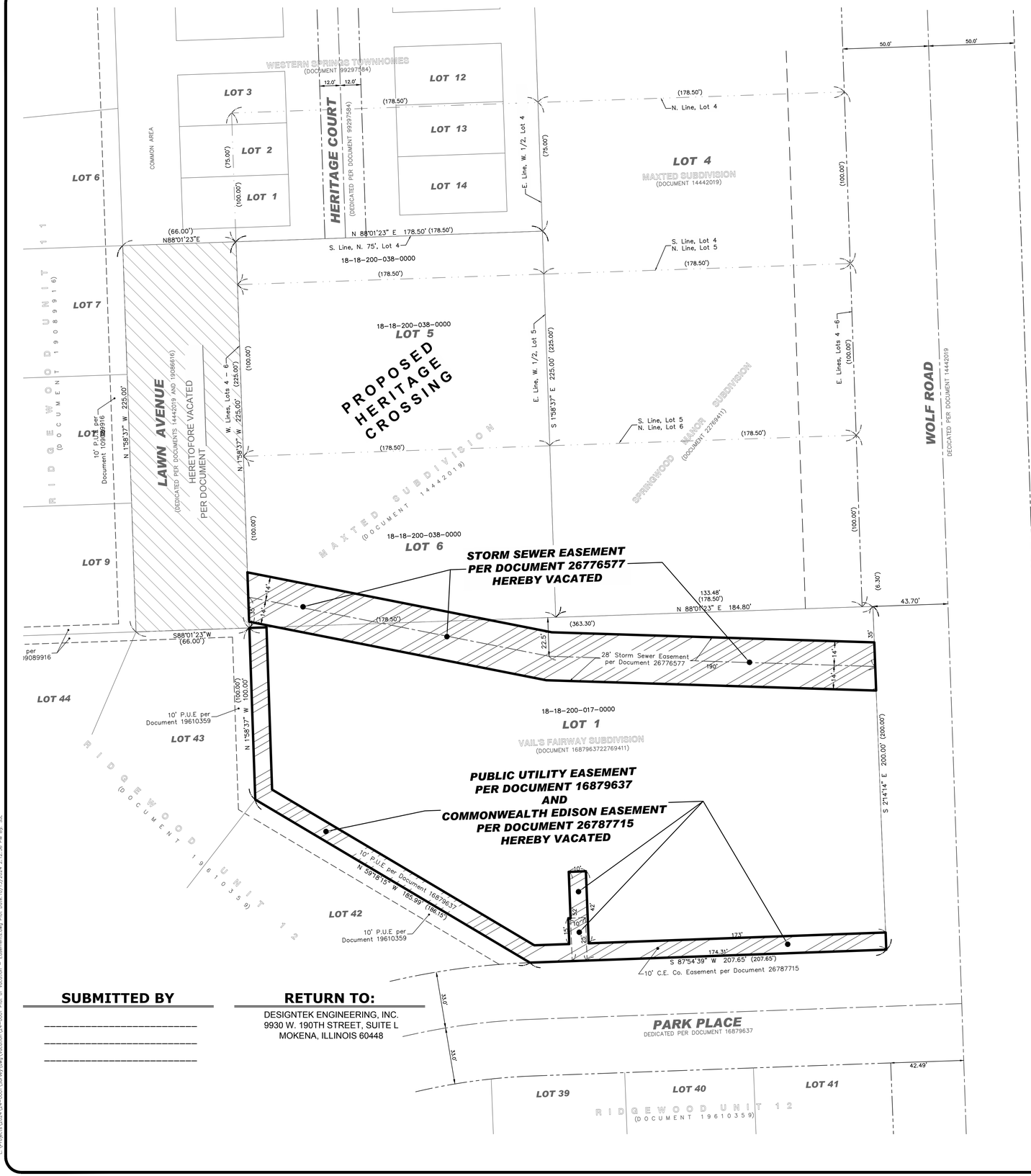
4 OF 4

CERTIFICATIONS

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

18-18-200-038-0000
18-18-200-017-0000

ADDRESSES

1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES

- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

N	NORTH
S	SOUTH
E	EAST
W	WEST
(####)	RECORD/DEED
####	MEASURED
P.U.E.	PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION
		BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

Traffic Impact Study
Proposed Residential Development
Western Springs, Illinois



Prepared For:

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

July 9, 2024 – Revised November 25, 2024

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Western Springs, Illinois. The site, which currently contains a medical office building, is located in the northwest corner of the intersection of Wolf Road (Cook County Highway W22) with Park Place. As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a full-movement access drive off Wolf Road at approximately the same location of the existing access drive serving the medical office building. A gated access will be provided on Heritage Court, only allowing cross-access between the proposed development and the existing Heritage Court townhomes.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

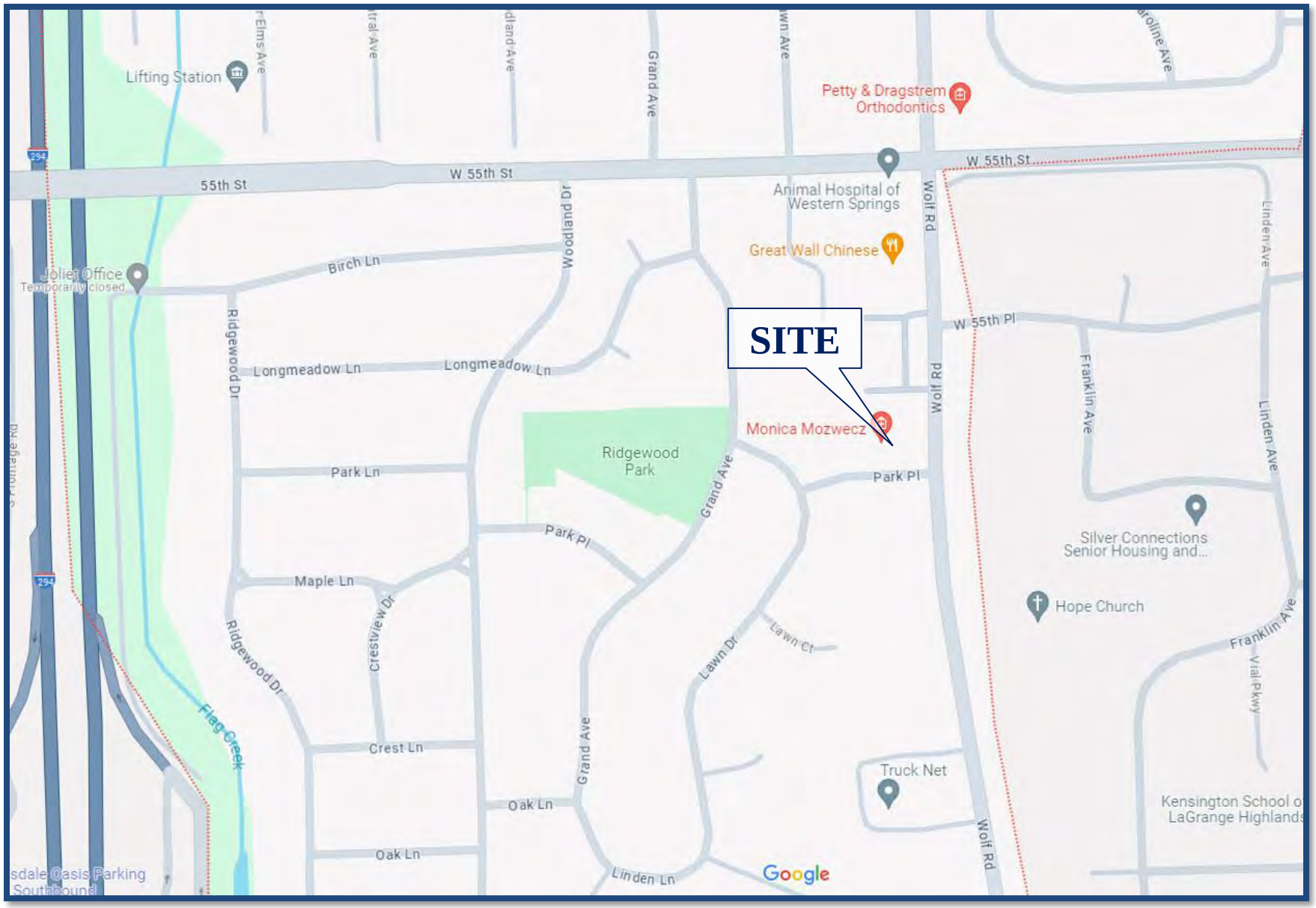
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday afternoon/evening peak hours for the following conditions:

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2030 no-build volumes and the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Proposed Residential Development
Western Springs, Illinois

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.



Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which currently contains a medical office building, is generally bounded by Springwood Manor condominiums and the Western Springs Heritage Townhomes to the north and single-family homes (Ridgewood of Western Springs) to the west and south. Wolf Road borders the site to the east. Land uses in the vicinity of the site are primarily residential in all directions.

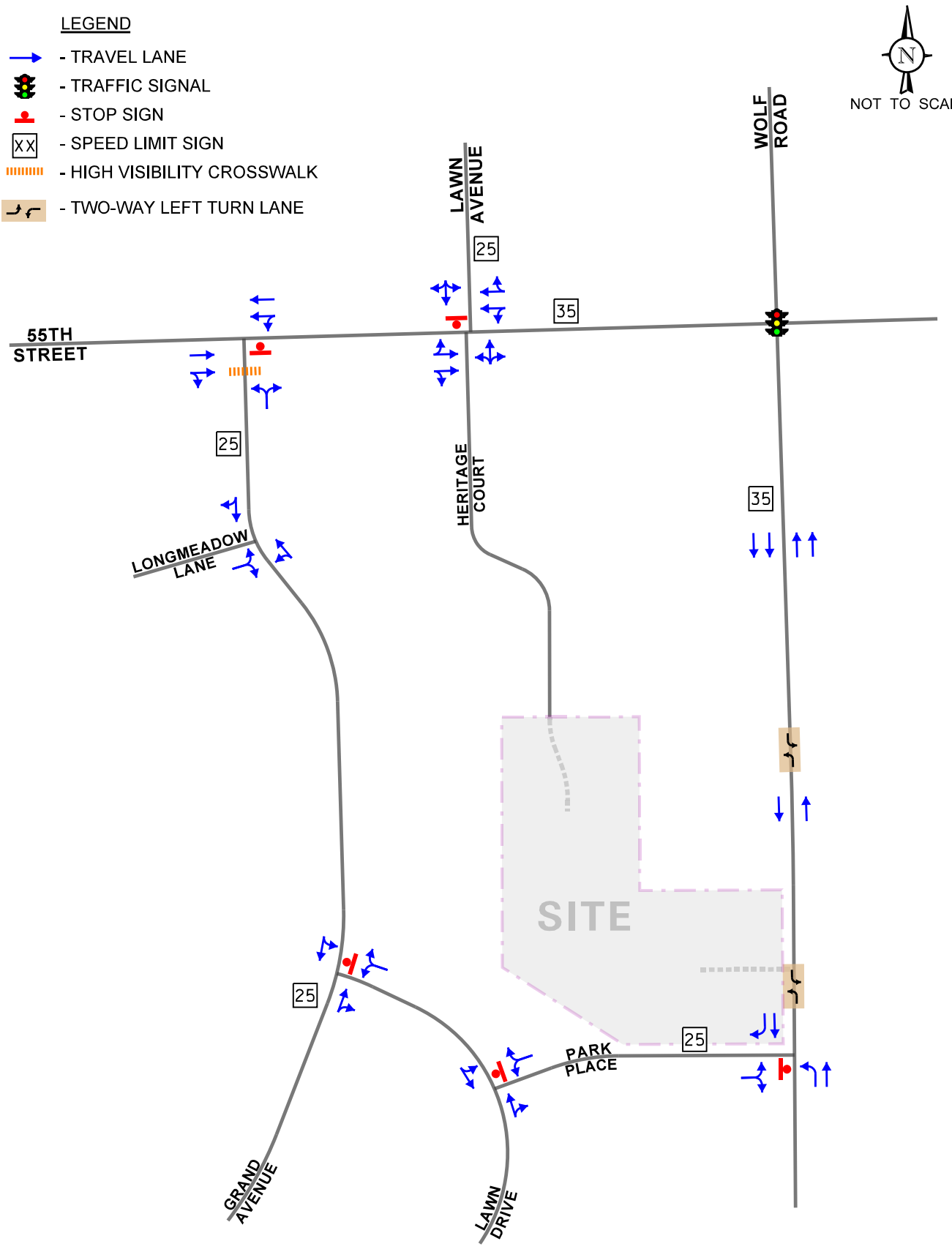
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Wolf Road (Cook County Highway W22) is a north-south minor arterial roadway that provides one lane in each direction divided by a striped median. At its unsignalized intersection with Park Place, Wolf Road provides an exclusive left-turn lane and a through lane on the northbound approach. The southbound approach provides a through lane and an exclusive right-turn lane. Wolf Road is under the jurisdiction of the Cook County Division of Transportation and Highways (CCDOTH), is not designated as a Strategic Regional Arterial (SRA), and has a posted speed limit of 35 miles per hour. According to the Illinois Department of Transportation (IDOT), Wolf Road carries an annual average daily traffic (AADT) volume of 9,150 vehicles (IDOT - 2022).

Park Place is an east-west local roadway that provides one lane in each direction. At its unsignalized intersection with Wolf Road, Park Place is under stop sign control and provides a shared left-turn/right-turn lane on the eastbound approach. At its unsignalized intersection with Lawn Drive, Park Place is under stop sign control and provides a shared left/right-turn lane on the westbound approach. Park Place is under the jurisdiction of the Village of Western Springs and has a posted speed limit of 25 miles per hour.

55th Street is an east-west minor arterial that provides two lanes in each direction divided by a painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Heritage Court/Lawn Avenue. However, it is important to note that eastbound and westbound left-turn movements are accommodated by the painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Grand Avenue. 55th Street has a posted speed limit of 35mph, carries an AADT volume of 16,600 vehicles (IDOT – 2022), and is under IDOT's jurisdiction.



Heritage Crossings
Western Springs, Illinois

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 3

Heritage Court is a north-south two-lane private road that serves the Western Springs Heritage townhomes and is aligned opposite Lawn Avenue. At its unsignalized intersection with 55th Street, Heritage Court provides a shared left/right-turn lane under stop sign control.

Grand Avenue is a local north-south two-lane roadway serving the Ridgewood of Western Springs subdivision. At its unsignalized intersection with 55th Street, Grand Avenue provides a shared left/right-turn lane under stop sign control. No exclusive turn lanes are provided at its unsignalized intersection with Lawn Drive. Grand Avenue has a posted speed limit of 25 mph and is under the jurisdiction of the Village of Western Springs.

Longmeadow Lane is an east-west two-lane local roadway. No traffic control is provided at its unsignalized intersection with Grand Avenue. Longmeadow Lane is under the jurisdiction of the Village of Western Springs.

Pedestrian Facilities

Based on our field visits, no sidewalks are provided along Park Place or any of the roads within the Ridgewood of Western Springs subdivision. However, a sidewalk is provided along the west side of Wolf Road. A north-south standard style crosswalk is provided on Park Place at its intersection with Wolf Road. Furthermore, a midblock east-west pedestrian high visibility crosswalk is provided on Wolf Road at its intersection with 59th Street. This mid-block pedestrian also provides rapid flashing beacons with proper signage. Additionally, push buttons are provided at each side of the roadway and advance signage is provided to vehicles to be aware of the upcoming crossing.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

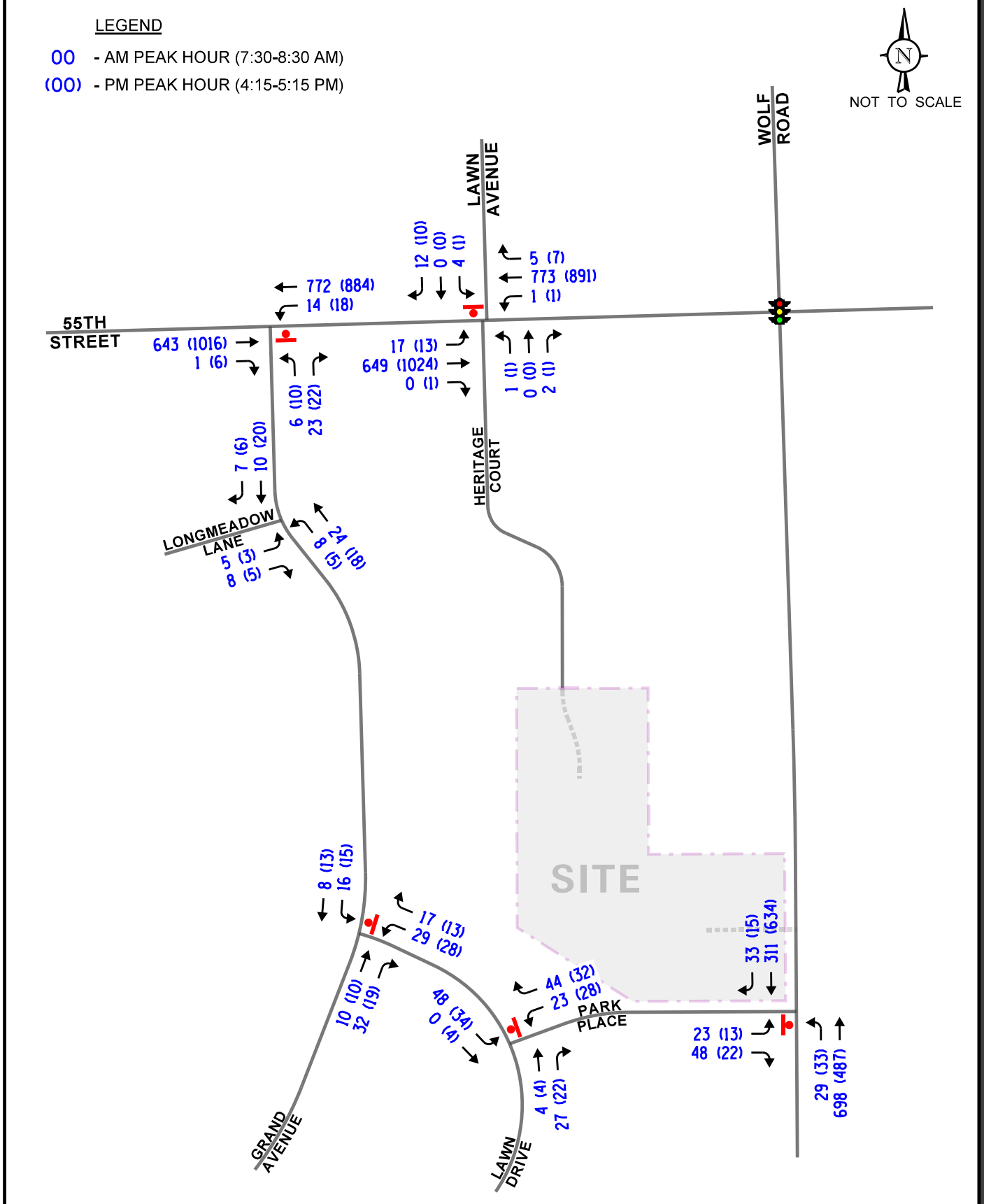
- Wolf Road with Park Place
- Park Place with Lawn Drive
- 55th Street with Heritage Court
- 55th Street with Grand Avenue
- Grand Avenue with Longmeadow Lane
- Grand Avenue with Lawn Drive

The traffic counts were conducted on Thursday, March 21, 2024 and on Tuesday, April 2, 2024, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday afternoon/evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:30 A.M. and 8:30 A.M. during the weekday morning peak period and between 4:15 P.M. and 5:15 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. The existing traffic volumes are illustrated in **Figure 4A**. **Figure 4B** shows the existing pedestrian and bicycle traffic volumes.

It is important to note that LaGrange Highlands Elementary School is located approximately 0.4 miles southeast of the intersection of Wolf Road with Park Place. Based on a review of the District 106 student calendar, all schools were in session when the traffic counts were conducted. Furthermore, the LaGrange Highlands Elementary School arrival is between 8:10 A.M. and 8:20 A.M. with class starting at 8:25 A.M. Upon further review of their website, the school's regular dismissal time is at 3:15 P.M. In order to determine the peak traffic and pedestrian volumes during the dismissal time, an additional traffic count was conducted at the intersection of Wolf Road with Park Place during the 3:00 P.M. to 4:00 P.M. hour.

Furthermore, in September 2024, the Village of Western Springs conducted an additional pedestrian count (walking, bicycle, scooter, etc.) for the west leg of the intersection of Wolf Road with Park Place. These volumes, which yielded a higher pedestrian volume than the March 2024 counts conducted by KLOA, Inc. were utilized for the purposes of this evaluation.

Figure 5A shows the existing school peak traffic volumes while **Figure 5B** shows the existing school peak pedestrian and bicycle traffic volumes.

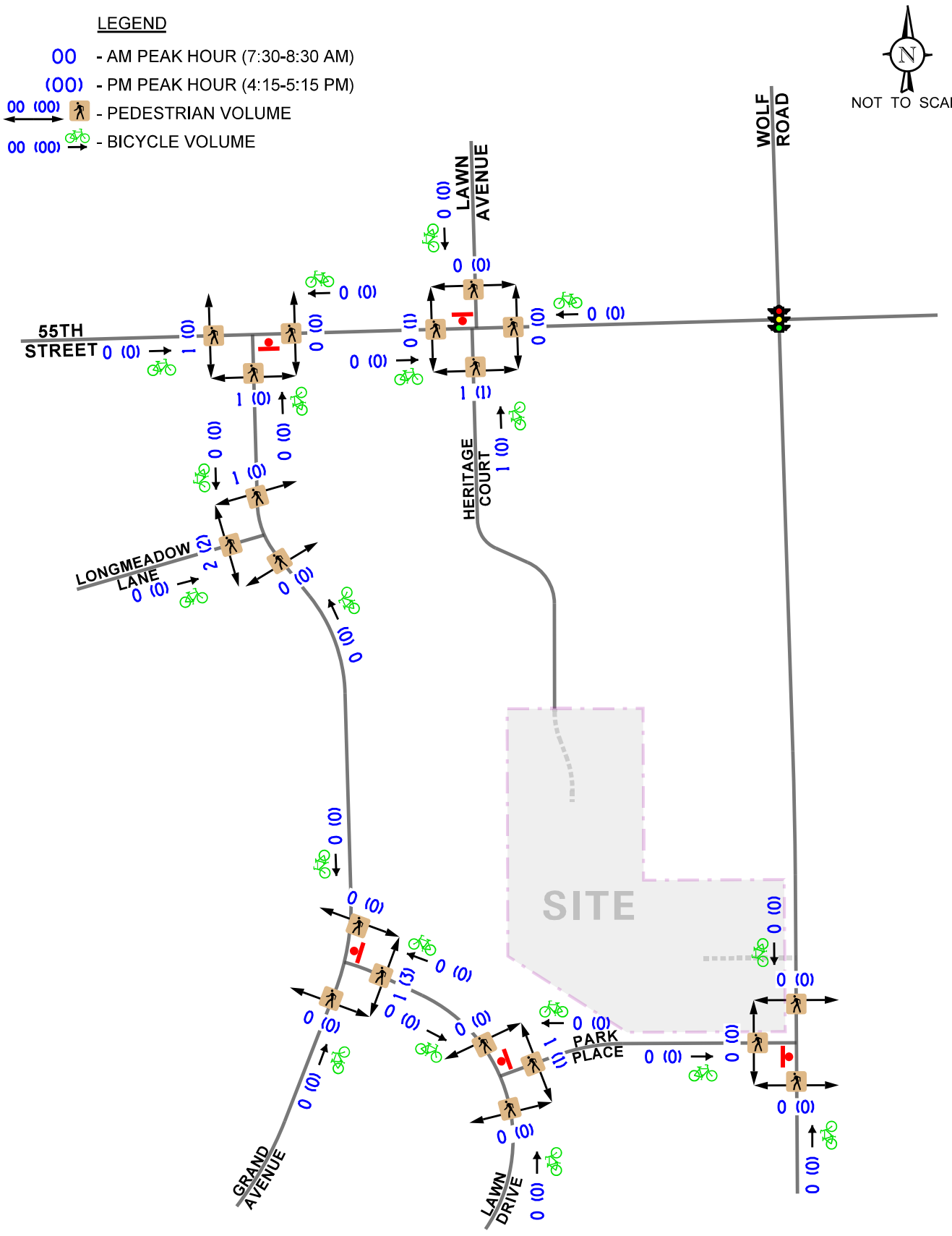


Heritage Crossings
Western Springs, Illinois

Existing Traffic Volumes

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Job No: 24-068 Figure: 4A



Heritage Crossings
Western Springs, Illinois

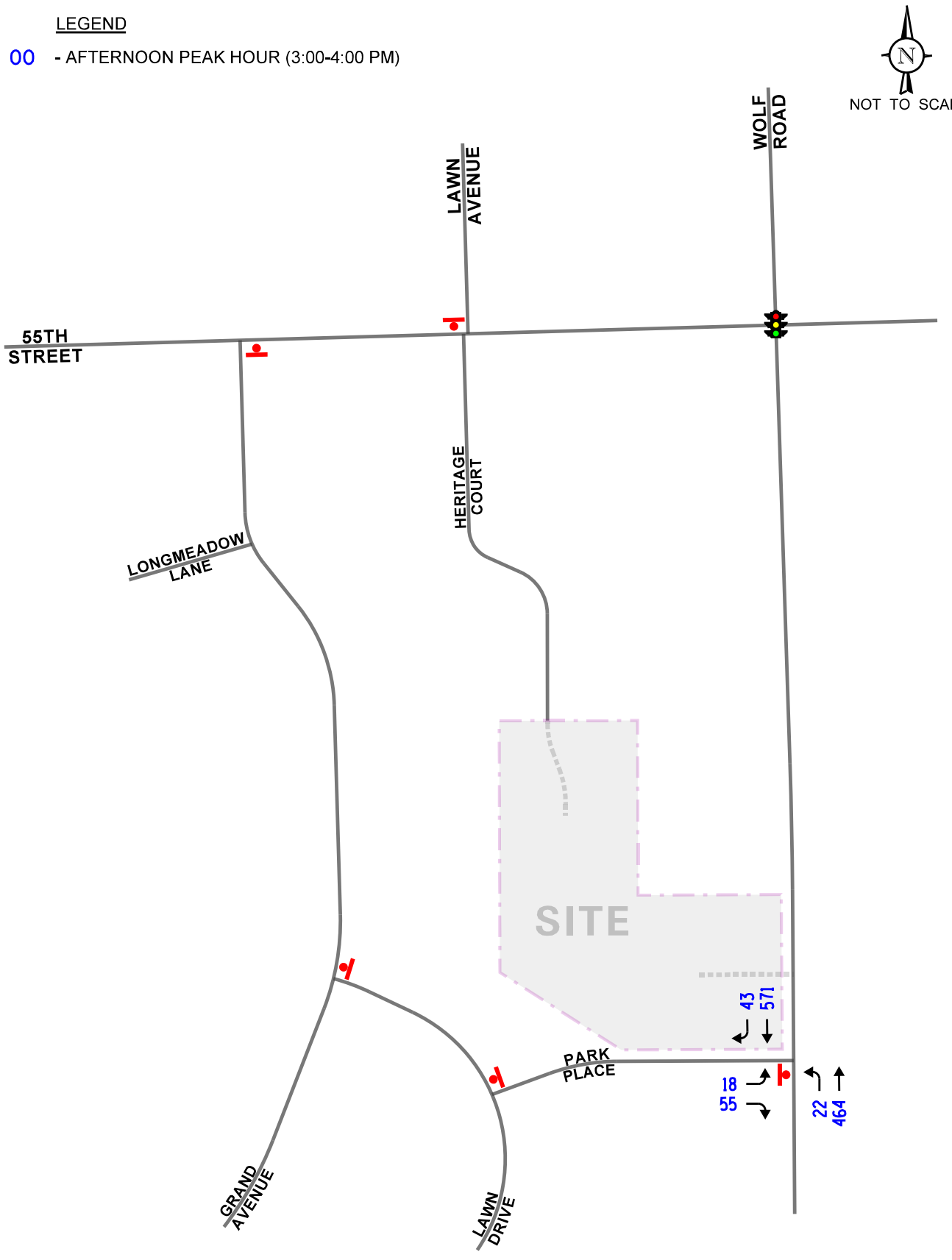
Existing Pedestrian and Bicycle Traffic Volumes

KLOA
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Job No: 24-068 Figure: 4B

LEGEND

00 - AFTERNOON PEAK HOUR (3:00-4:00 PM)

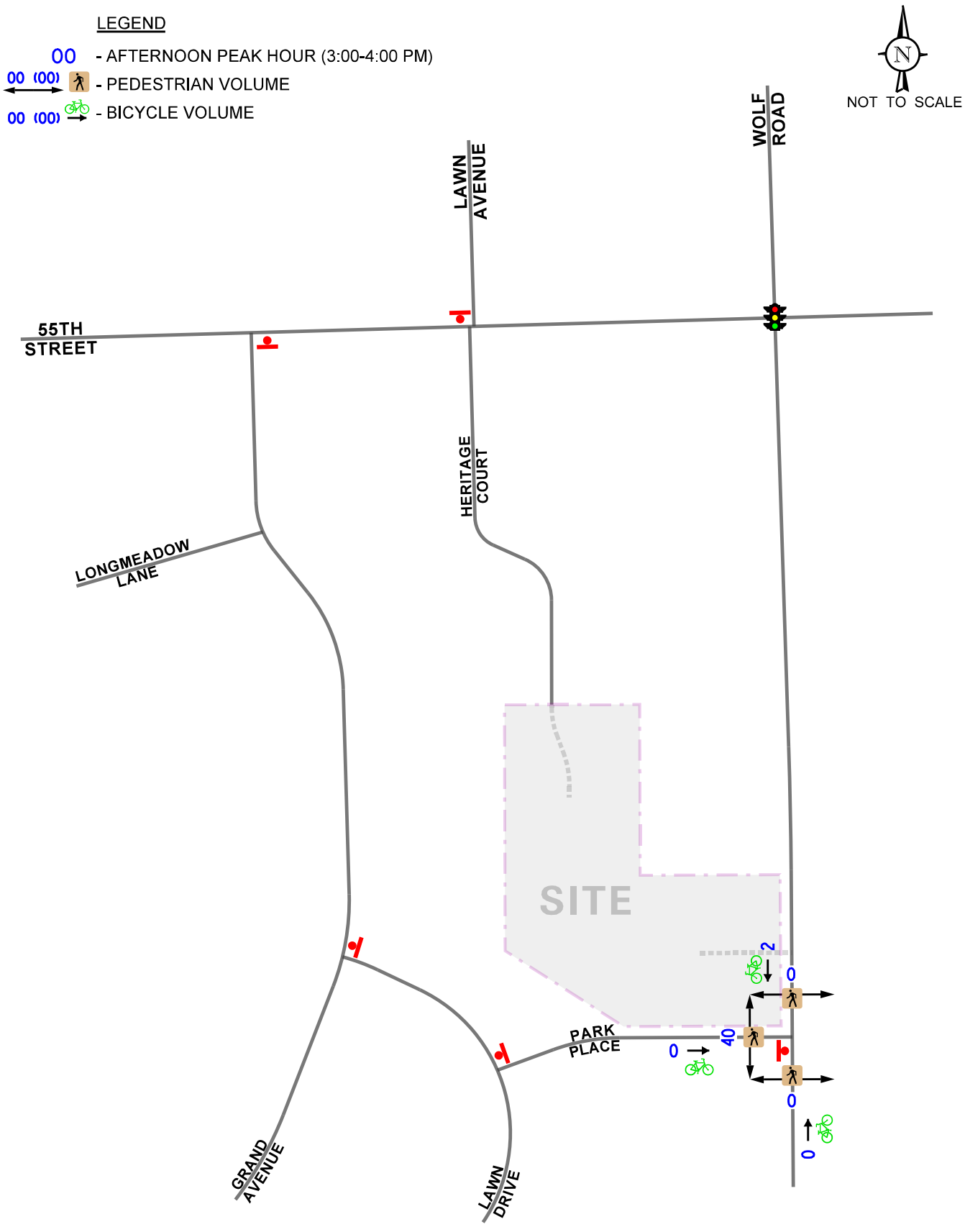


Heritage Crossings
Western Springs, Illinois

Existing Traffic Volumes
(Afternoon Peak Hour)

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Job No: 24-068 Figure: 5A



Heritage Crossings
Western Springs, Illinois

Existing Pedestrian and Bicycle
Traffic Volumes - (Afternoon Peak Hour)

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 5B

Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2018 to 2022) for the study area intersections. A summary of the crash data at the intersections of Wolf Road with Park Place and 55th Street with Grand Avenue is shown in **Tables 1** and **2**. No fatalities were reported at any of the studied intersections during the review period.

Table 1
WOLF ROAD WITH PARK PLACE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	0	0	1	0	1
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Average	**0**	**0**	**0**	**0**	**0**	**<1.0**	**0**	**<1.0**

Table 2
55th STREET WITH GRAND AVENUE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	2	1	0	0	3
2019	0	0	0	1	0	0	0	1
2020	0	0	0	0	0	1	0	1
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**4**	**1**	**1**	**0**	**6**
Average	**0**	**0**	**0**	**<1.0**	**<1.0**	**<1.0**	**0**	**1.2**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

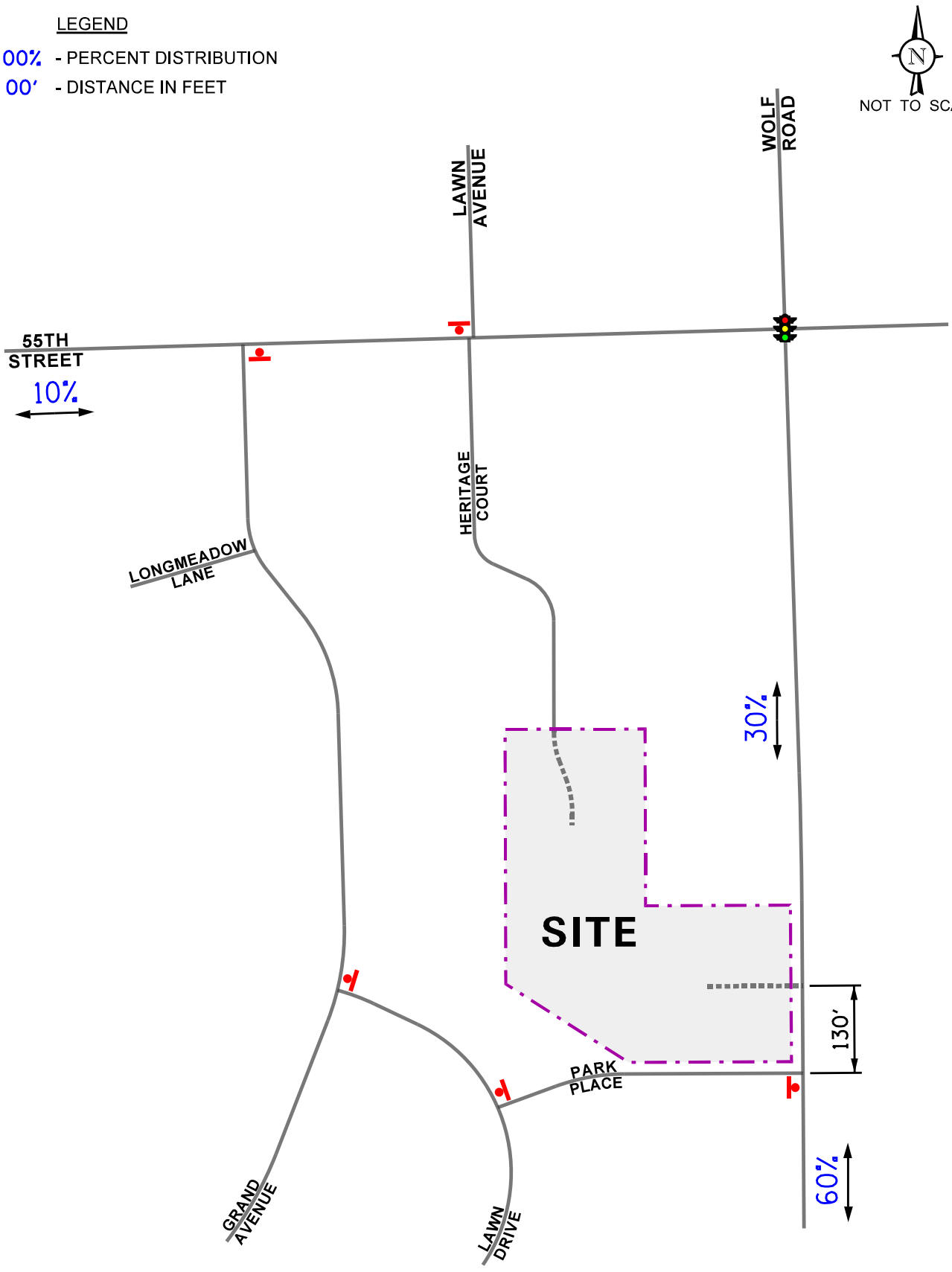
As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a proposed full-movement access drive on Wolf Road to be located at approximately the same location of the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. The existing access drive on Wolf Road will be eliminated. A gated access to the north with Heritage Court will also be provided. This access will only provide accessibility to the proposed development and to the existing Heritage townhomes and will be controlled via a clicker that will be provided to residents of both developments. A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic. Figure 6 also shows the distance, in feet, between the existing and proposed access intersections.

Peak Hour Traffic Volumes

The number of peak hour trips (vehicles, bicycles and pedestrians) estimated to be generated by the proposed residential development was based on trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Attached Housing" (Land-Use Code 215) rates were used to determine the traffic to be generated by the development. **Table 3** shows the weekday morning, weekday afternoon and weekday evening peak hour traffic, pedestrian, and bicycle trips to be generated by the proposed residential development as well as the daily total traffic volumes. It is important to note that the weekday afternoon peak hour volumes were estimated based on the time-of-day distribution Excel data provided within the *Trip Generation Manual* Appendices. Copies of the trip generation graphs and the hourly distribution Excel sheet are included in the Appendix.



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Directional Distribution

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Job No: 24-068 Figure: 6

Table 3
PROJECTED DEVELOPMENT-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
215	Townhomes (29 Units)	3	11	14	9	5	14	10	7	17	105	105	210
	Pedestrians [1]	1	2	3	3	3	6	3	3	6	N/A	N/A	N/A
	Bikes [1]	--	--	--	--	1	1	--	1	1	N/A	N/A	N/A

1 – Pedestrian and bicycle trip generation was assumed to be the same as during the evening peak hour

Trip Generation Comparison

As previously mentioned, the site currently contains a medical office building. The existing medical office building is approximately 21,536 square feet in size of which only 1,200 square feet are currently being utilized.

Given that the current zoning allows for both medical office and professional office uses, the volume of traffic that was generated by the full occupancy of the building assuming half of it as medical office and the other half as professional office and that of the proposed development during the weekday morning, afternoon, evening peak hours and on a daily basis was estimated based on the following trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition:

- Medical-Dental Office Building (Land-Use Code 720)
- General Office Building (Land-Use Code 710)
- Single-Family Attached Housing (Land-Use Code 215)

Table 4 shows a comparison of what the full occupancy of the medical office building was generating and what the proposed rowhomes would generate.

As can be seen, the proposed development will generate substantially less traffic than what the full occupancy of the previous land use was generating. Therefore, the proposed development will have a lower traffic impact than the previous land use.

Table 4
TRIP GENERATION COMPARISON

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
720	Medical Office Building (10,768 s.f.)	26	6	32	16	18	34	12	29	41	177	178	355
710	General Office Building (10,768 s.f.)	22	3	25	6	7	13	4	22	26	83	84	167
215	Townhomes (29 units)	3	11	14	9	5	14	10	7	17	105	105	210
Difference		**-45**	**+2**	**-43**	**-13**	**-20**	**-33**	**-6**	**-44**	**-50**	**-155**	**-157**	**-312**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). The traffic assignment for the development is illustrated in **Figure 7.** The re-assignment of the Heritage Court townhomes to take into account the proposed connection between the proposed development and the existing townhomes is illustrated in **Figure A** in the Appendix.

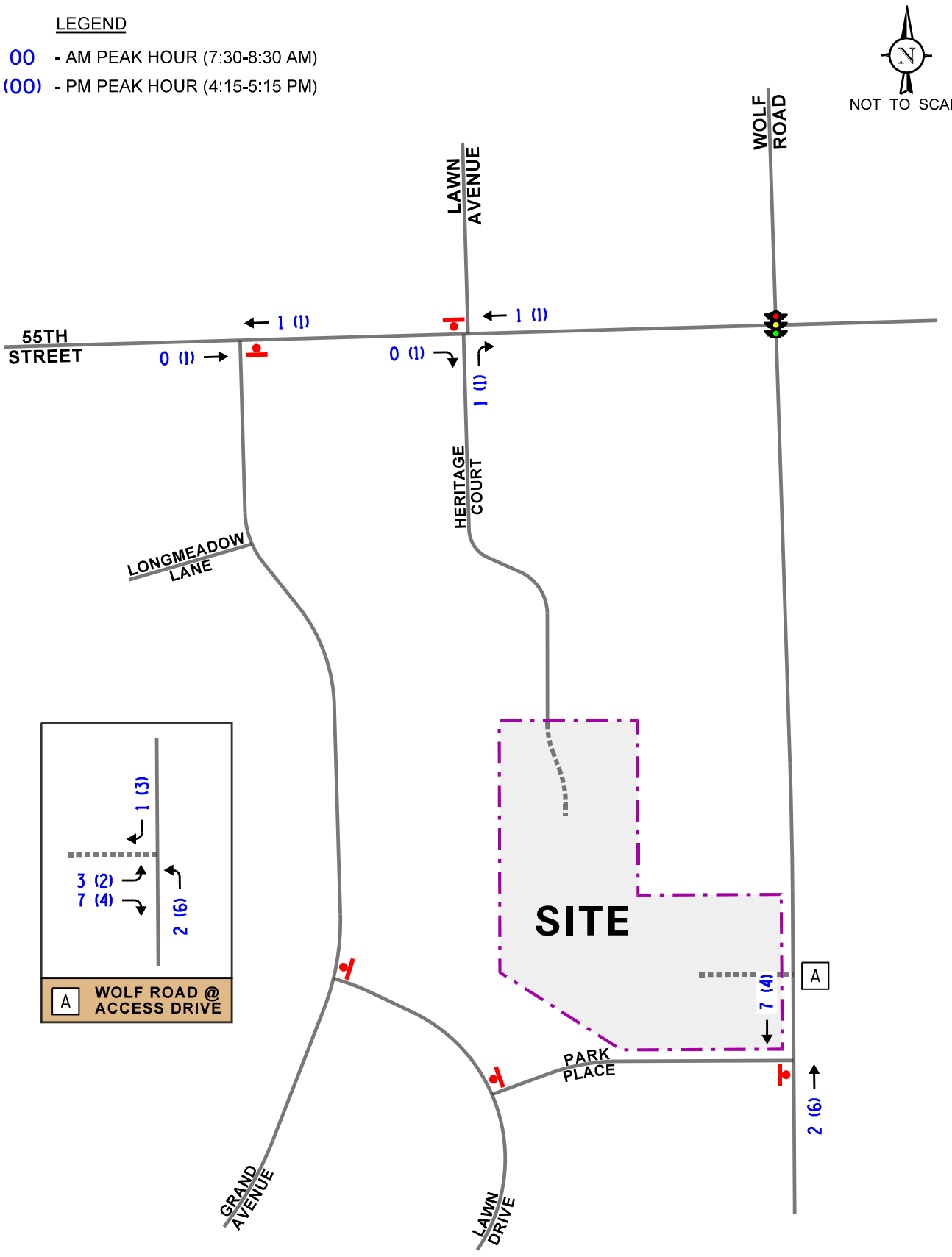
Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.4 percent per year for six years (buildout year plus five years) for a total of approximately 2.5 percent to project Year 2030 background conditions. **Figure 8** illustrates the Year 2030 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2030 no-build traffic volumes (Figure 7) to determine the Year 2030 total projected traffic volumes, shown in **Figure 9.** The Year 2030 total projected traffic volumes for the weekday afternoon peak hour is illustrated in **Figure B** in the Appendix.

The total projected traffic volumes also include the existing turning movements to and from the medical office building and in order to provide a conservative analysis, these vehicles were not removed from the area roadway system or the traffic volumes at other study area intersections.

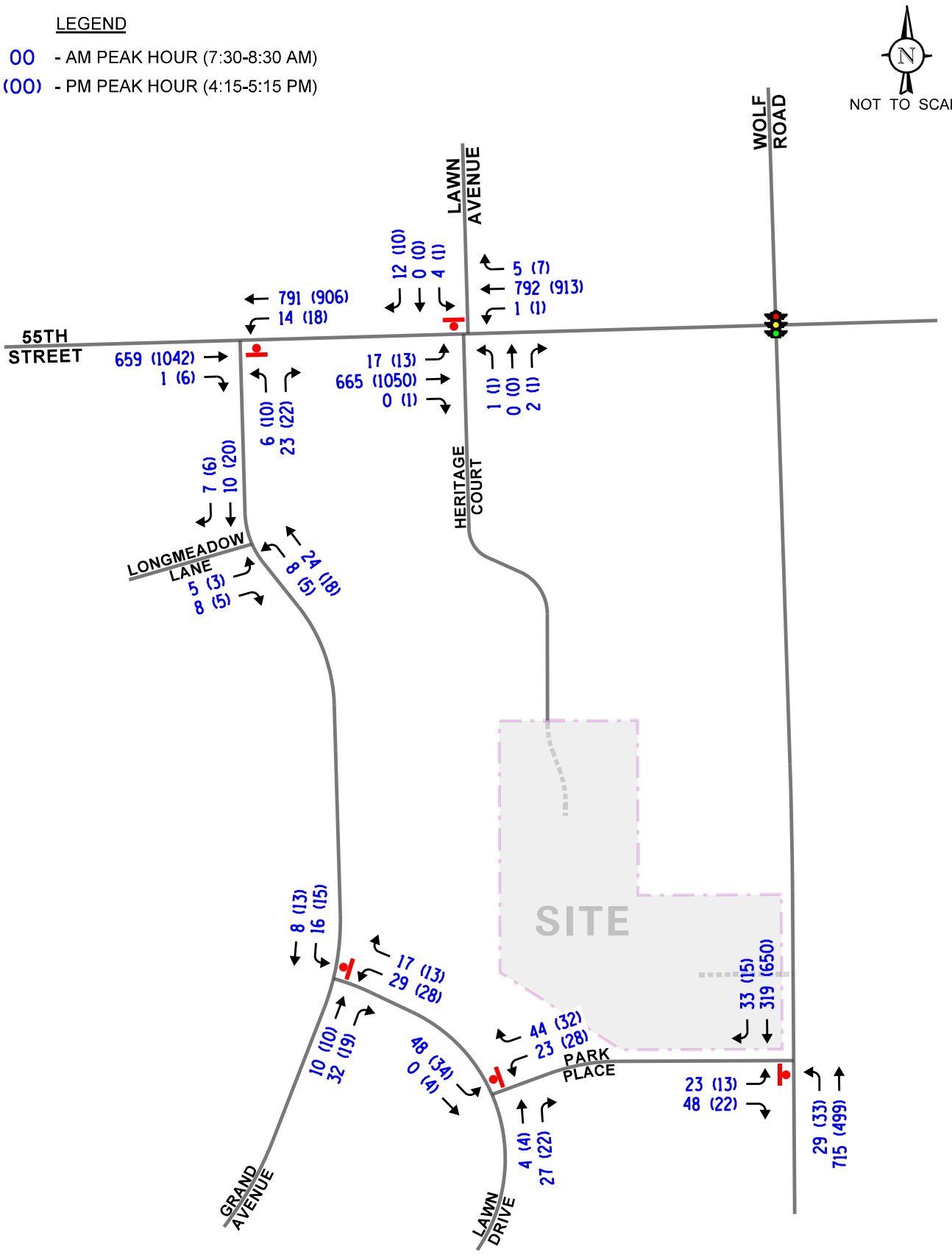


Heritage Crossings
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Site-Generated Traffic Volumes

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Job No: 24-068 Figure: 7

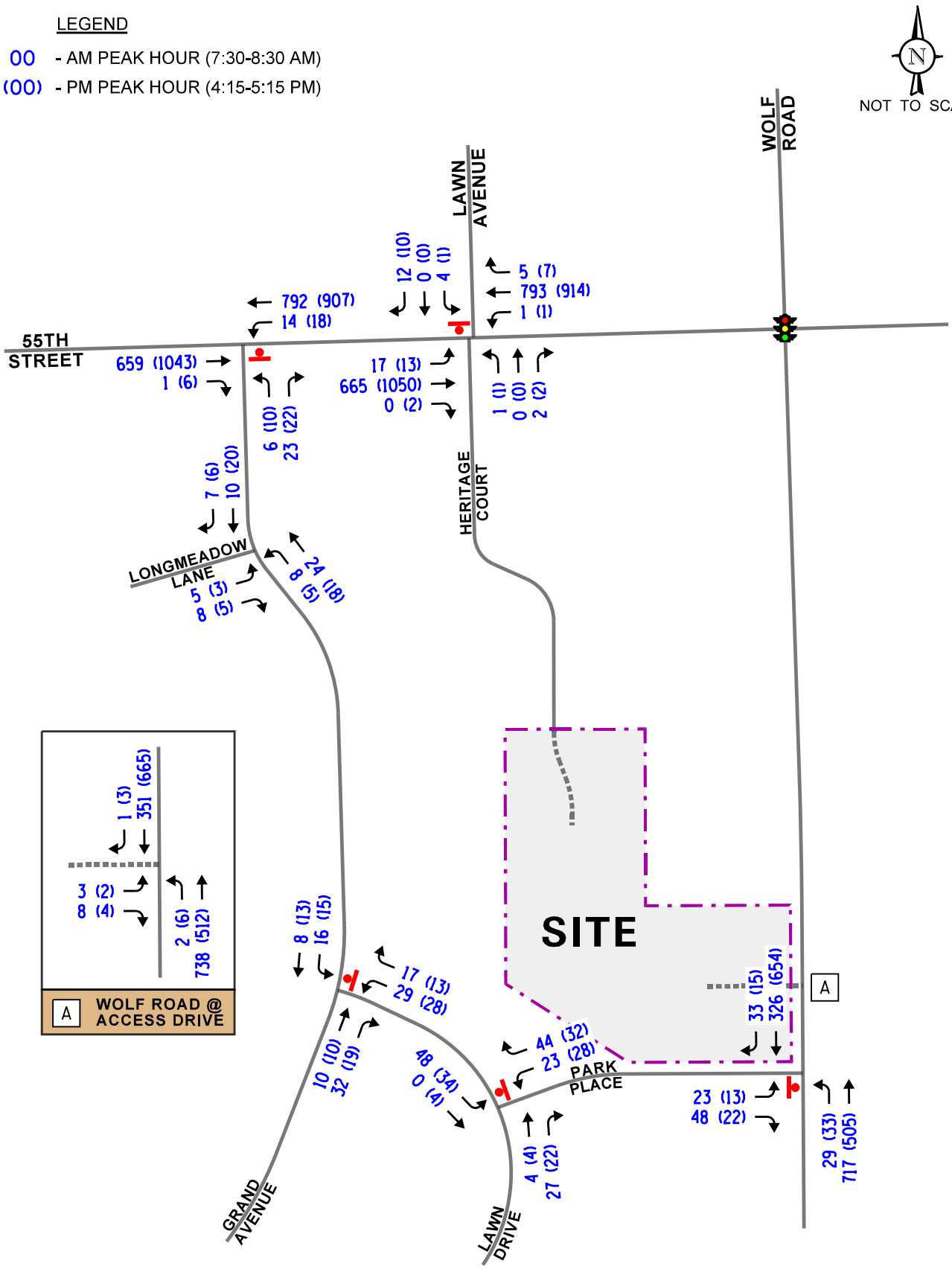


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Year 2030 No-Build Traffic Volumes

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Job No: 24-068 Figure: 8



Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes

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Job No: 24-068 Figure: 9

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 7th Edition and analyzed using Synchro/SimTraffic 12 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 5** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	16.7	C	20.6
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.3	B	10.8
• Northbound Approach	B	14.1	D	25.5
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.5	A	8.8
• Westbound Left Turn	A	8.9	B	10.5
• Northbound Approach	B	13.0	B	13.0
• Southbound Approach	B	12.0	B	11.5
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 5A
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	18.8
• Northbound Left Turn	A	9.3

LOS = Level of Service
Delay is Measured in Seconds

Table 6
CAPACITY ANALYSIS RESULTS – 2030 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.1	C	21.3
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	B	13.3
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 7
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.3	C	21.5
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	C	21.6
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Wolf Road with Access Drive				
• Eastbound Approach	B	13.5	C	17.0
• Northbound Left Turn	A	8.0	A	9.0

LOS = Level of Service
Delay is Measured in Seconds

Table 7A
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	19.8
• Northbound Left Turn	A	9.4
Wolf Road with Access Drive		
• Eastbound Approach	C	16.8
• Northbound Left Turn	A	8.9

LOS = Level of Service
Delay is Measured in Seconds

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Wolf Road with Park Place

The results of the capacity analyses indicate that the eastbound approach operates at Level of Service (LOS) C during the weekday morning, afternoon and weekday evening peak hours while the northbound left-turn movement operates at LOS A during all three peak hours. Based on the peak hour turning movement counts, Park Place is estimated to carry 1,250 – 1,300 daily trips. As stated in the publication titled *Residential Streets*, 3rd Edition published by the Urban Land Institute (ULI), the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE) and ITE, the average daily traffic volumes for a residential collector are typically greater than 1,500 vehicles. As such the road is operating below its typical design threshold.

Under Year 2030 no-build and total projected conditions, the eastbound approach and the northbound left-turn movement are projected to operate at the same existing levels of service during all three peak hours with increases in delay of less than two seconds. The 95th percentile queue for the eastbound approach is projected to be approximately one to two vehicles and will not extend back to the location of the proposed access drive. The 95th percentile queue for the northbound left-turn movement is projected to be approximately one vehicle and can be accommodated by the existing left-turn lane. As such, Park Place and its intersection with Wolf Road have sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Grand Avenue

The results of the capacity analyses indicate that the westbound left-turn/through movement operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. The northbound approach operates at LOS B during the weekday morning peak hour and LOS D during the weekday evening peak hour.

Under Year 2030 no-build and total projected conditions, all the approaches and their critical movements are projected to operate at the same existing levels of service during both peak hours with increases in delay of less than three seconds. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Heritage Court/Lawn Avenue

The results of the capacity analyses indicate that the northbound and southbound approaches currently operate at LOS B during the weekday morning and weekday evening peak hours. The eastbound and westbound left-turn movements operate at LOS B or better during both peak hours.

Under Year 2030 no-build and total projected conditions, the northbound and southbound approaches will operate at LOS B during the weekday morning and weekday evening peak hours except for the northbound approach that is projected to operate at LOS C during the weekday evening peak hour under projected conditions. The eastbound and westbound left-turn movements are projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than one second. It should be noted that based on the peak hour turning movement counts at this intersection, Heritage Court is estimated to carry approximately 40 to 50 daily trips and is anticipated to carry the same amount of daily traffic given the proposed connection to the south with the proposed development. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Longmeadow Lane

The results of the capacity analyses indicate that the eastbound approach and the northbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Lawn Drive

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lawn Drive with Park Place

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Wolf Road with Proposed Access Drive

As proposed, a full-movement access drive will be provided on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It is important to note that Wolf Road provides a two-way left-turn lane at the location of this access drive. As such, the analysis assumed a short (40-foot) exclusive left-turn lane.

Under Year 2030 total projected conditions, outbound movements from the access drive are projected to operate at LOS B and C during the weekday morning and weekday evening peak hours, respectively. The northbound left-turn movement will operate at LOS A. Furthermore, the 95th percentile queue for the northbound left turn is projected to be one vehicle, which will not interrupt the traffic flow on Wolf Road. As such, the proposed access drive will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

Sight Distance Evaluation

In order to determine if sufficient sight distance is provided along Wolf Road for a vehicle stopped at the access drive, a sight distance study was performed for the intersection of Wolf Road with the existing access drive. While intersection sight distance is desirable, *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements.

As previously indicated, Wolf Road has a posted speed limit of 35 mph. It is important to note that per the Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual design procedures, the intersection sight distance is obtained by providing clear sight triangles. Furthermore and as stated in the Manual, "The length of leg along the minor road is based on two parts. The first is the location of the driver's eye on the minor road. The distance is not wholly based on the location of the stop bar, but instead through research on how far away from through traffic the stopping motorist feels comfortable, even potentially after a two-stop process (stop at stop bar, then pull up and stop at a safe spot closer to the edge of pavement that maximizes sight lines). This distance is typically assumed to be 14.4 feet from the edge of the major road traveled way, but can be increased due to site specific issues".

The minimum stopping sight distance required along Wolf Road for a posted 35 mph speed limit (design speed of 40 mph) based on IDOT's BDE Manual and the *Bureau of Design and Environment (BDE*) Manual and the *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) is 305 feet.

As part of the proposed plans, the culvert will be reworked and the existing chain link fence will be moved further back west (For additional details, please refer to Design Tek Engineering, Inc. engineering plans). Based on Exhibit A (see Appendix), the location of the access drive meets the minimum stopping sight distance requirements for the posted speed limit. While the access drive is within the influence of the southbound right-turn lane taper, it is important to note that this is an existing access drive that was approved in the past and has been operating for many years with higher traffic volumes than what the proposed development will generate.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units.

- Access to the development will be provided via a full-movement access drive on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.

- The existing chain-link fence will be relocated further west and adequate sight distance will be provided at the full access drive's intersection with Wolf Road.

- A gated connection to the north with Heritage Court will be provided. This connection will only provide accessibility to the proposed development and the existing Heritage Townhomes and will be controlled via a clicker that will be provided to residents of both developments.

- The area roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development and no additional roadway improvements or traffic control modifications are required.

- The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development and will ensure efficient and flexible access will be provided.

- As part of the proposed plans, the existing chain link fence around the culvert will be moved further back west and as such, the location of the access drive will meet the minimum stopping sight distance requirements for the posted speed limit.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Graphs
Figure A
CMAP Projections Letter
Figure B
Level of Service Table
Capacity Analysis Summary Sheets
Exhibit A – Available Sight Distance

Traffic Count Summary Sheets

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

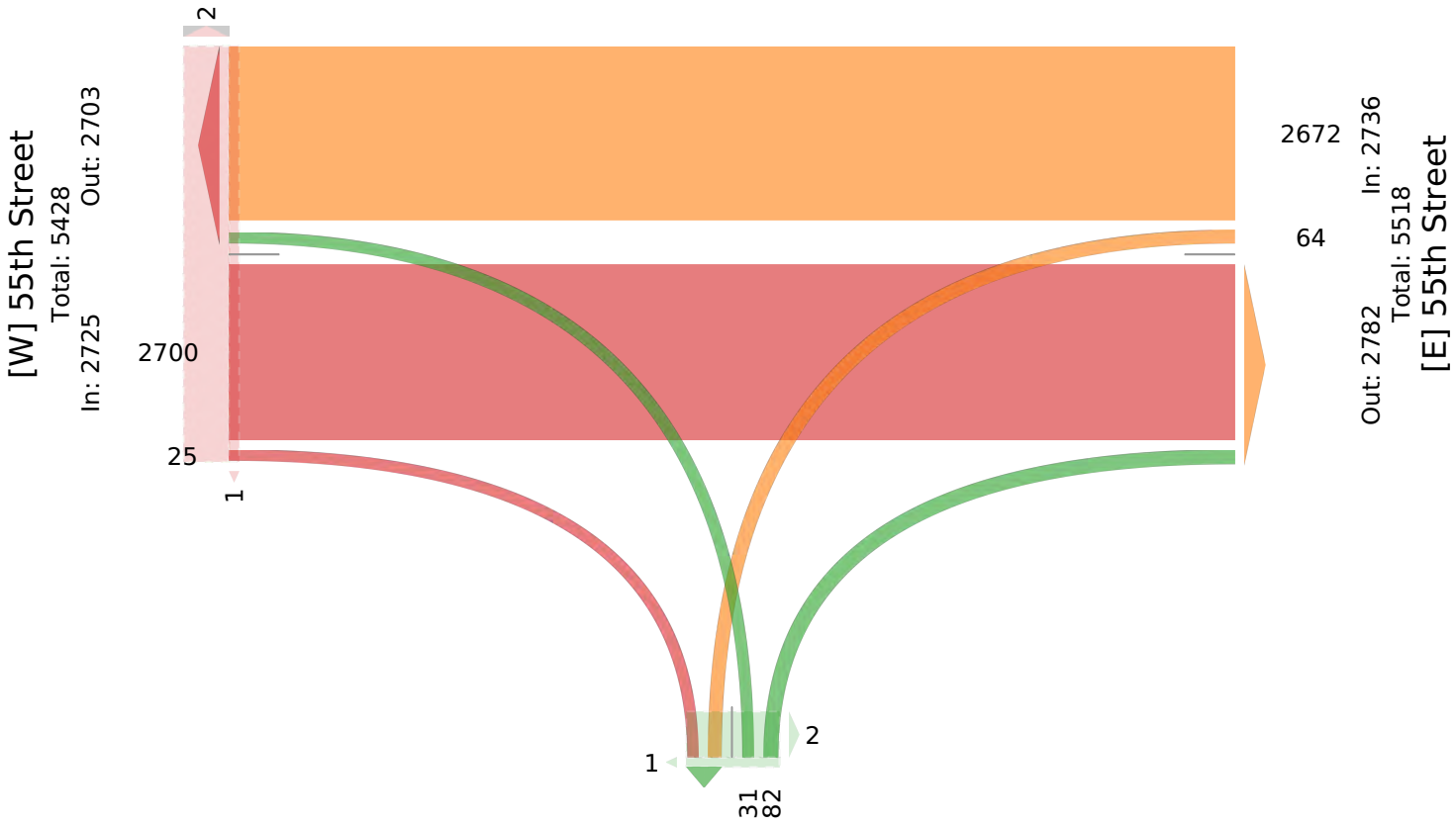
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Hourly Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
8:00AM	122	1	0	**123**	0	3	1	0	**4**	0	2	119	0	**121**	0	**248**
8:15AM	126	3	0	**129**	0	5	2	0	**7**	0	2	117	0	**119**	0	**255**
8:30AM	102	7	0	**109**	0	4	2	0	**6**	0	1	120	0	**121**	0	**236**
8:45AM	121	0	0	**121**	0	7	1	0	**8**	0	0	104	0	**104**	0	**233**
Hourly Total	471	11	0	**482**	0	19	6	0	**25**	0	5	460	0	**465**	0	**972**
4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Hourly Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
5:00PM	171	6	0	**177**	0	1	1	0	**2**	2	1	174	0	**175**	2	**354**
5:15PM	149	7	0	**156**	0	9	3	0	**12**	0	8	154	0	**162**	0	**330**
5:30PM	134	6	0	**140**	0	4	3	0	**7**	0	1	165	0	**166**	0	**313**
5:45PM	124	2	0	**126**	0	4	2	0	**6**	0	3	143	0	**146**	0	**278**
Hourly Total	578	21	0	**599**	0	18	9	0	**27**	2	13	636	0	**649**	2	**1275**
Total	2672	64	0	**2736**	0	82	31	0	**113**	3	25	2700	0	**2725**	3	**5574**
% Approach	97.7%	2.3%	0%	**-**	-	72.6%	27.4%	0%	**-**	-	0.9%	99.1%	0%	**-**	-	-
% Total	47.9%	1.1%	0%	**49.1%**	-	1.5%	0.6%	0%	**2.0%**	-	0.4%	48.4%	0%	**48.9%**	-	-
Lights	2617	63	0	**2680**	-	80	30	0	**110**	-	25	2643	0	**2668**	-	5458
% Lights	97.9%	98.4%	0%	**98.0%**	-	97.6%	96.8%	0%	**97.3%**	-	100%	97.9%	0%	**97.9%**	-	97.9%
Single-Unit Trucks	33	1	0	**34**	-	2	0	0	**2**	-	0	37	0	**37**	-	73
% Single-Unit Trucks	1.2%	1.6%	0%	**1.2%**	-	2.4%	0%	0%	**1.8%**	-	0%	1.4%	0%	**1.4%**	-	1.3%
Articulated Trucks	19	0	0	**19**	-	0	0	0	**0**	-	0	16	0	**16**	-	35
% Articulated Trucks	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	**0%**	-	0%	0.6%	0%	**0.6%**	-	0.6%
Buses	3	0	0	**3**	-	0	0	0	**0**	-	0	4	0	**4**	-	7
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	3.2%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

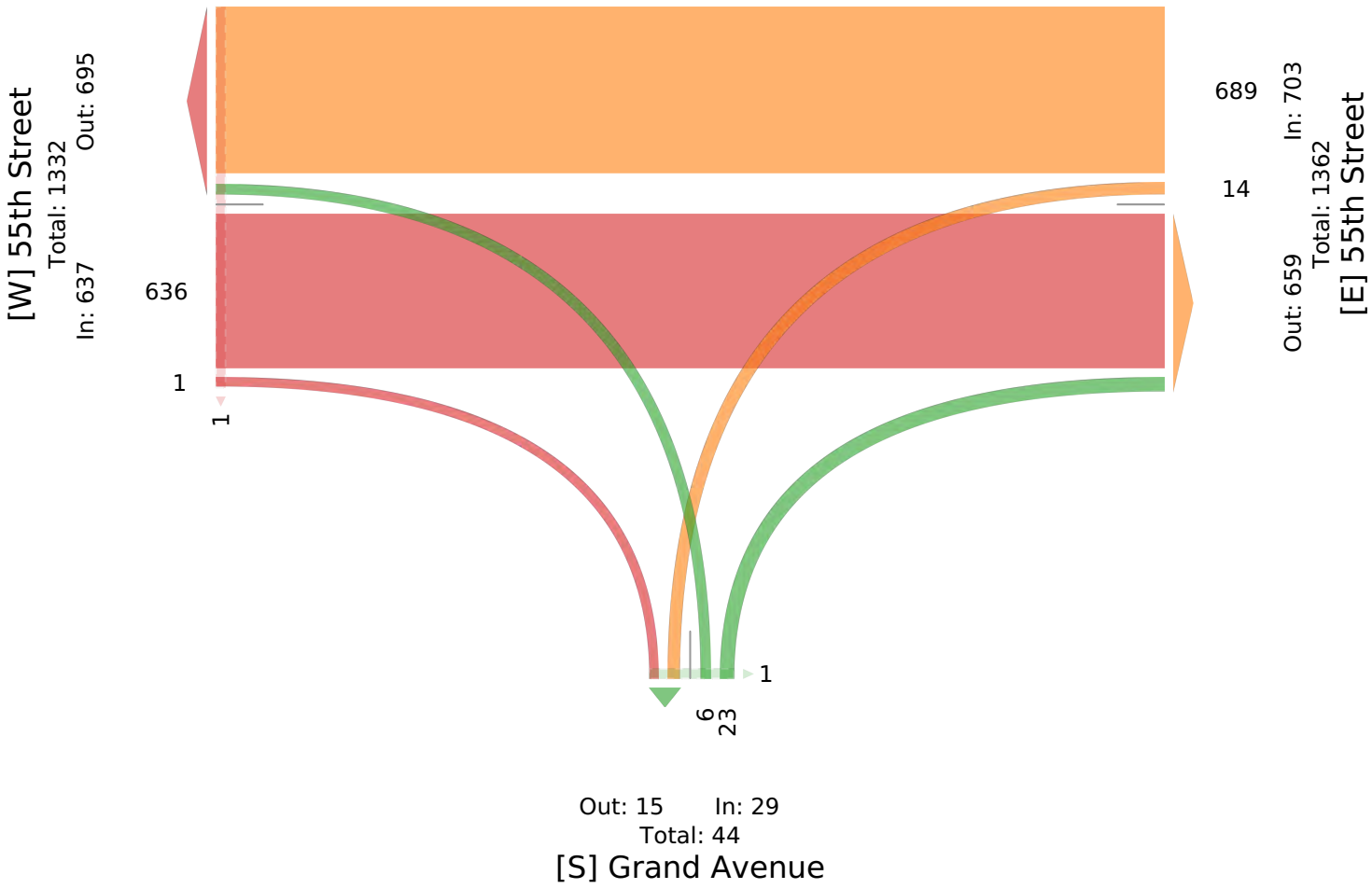
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
% Approach	98.0%	2.0%	0%	**-**	-	79.3%	20.7%	0%	**-**	-	0.2%	99.8%	0%	**-**	-	-
% Total	50.3%	1.0%	0%	**51.4%**	-	1.7%	0.4%	0%	**2.1%**	-	0.1%	46.5%	0%	**46.5%**	-	-
PHF	0.916	0.583	-	**0.920**	-	0.821	0.500	-	**0.806**	-	0.250	0.883	-	**0.885**	-	0.910
Lights	659	13	0	**672**	-	23	6	0	**29**	-	1	618	0	**619**	-	1320
% Lights	95.6%	92.9%	0%	**95.6%**	-	100%	100%	0%	**100%**	-	100%	97.2%	0%	**97.2%**	-	96.4%
Single-Unit Trucks	16	1	0	**17**	-	0	0	0	**0**	-	0	11	0	**11**	-	28
% Single-Unit Trucks	2.3%	7.1%	0%	**2.4%**	-	0%	0%	0%	**0%**	-	0%	1.7%	0%	**1.7%**	-	2.0%
Articulated Trucks	13	0	0	**13**	-	0	0	0	**0**	-	0	5	0	**5**	-	18
% Articulated Trucks	1.9%	0%	0%	**1.8%**	-	0%	0%	0%	**0%**	-	0%	0.8%	0%	**0.8%**	-	1.3%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.3%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

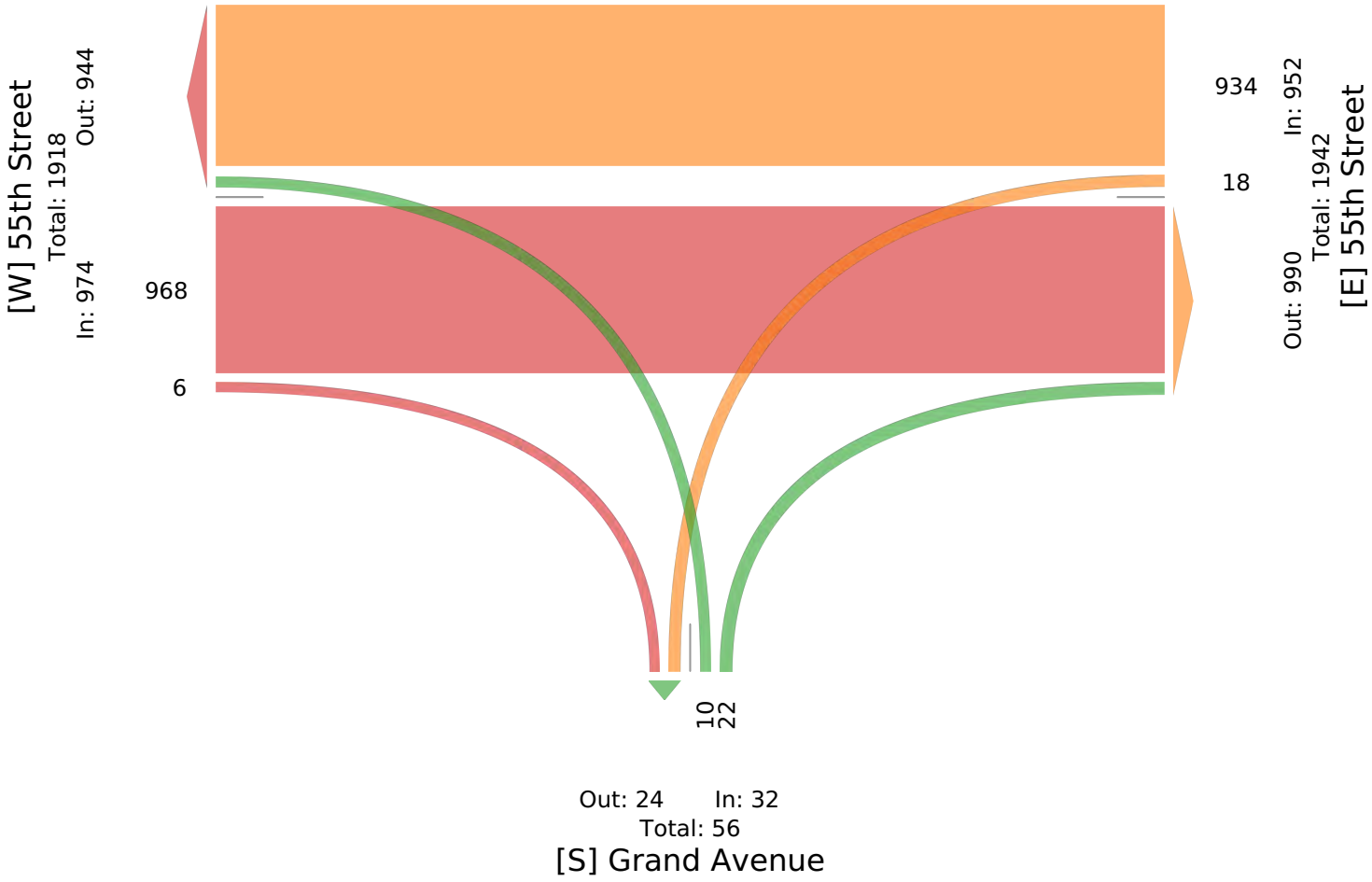
Leg Direction	55th Street Westbound					Grand Avenue Northbound					55th Street Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
% Approach	98.1%	1.9%	0%	**-**	-	68.8%	31.3%	0%	**-**	-	0.6%	99.4%	0%	**-**	-	-
% Total	47.7%	0.9%	0%	**48.6%**	-	1.1%	0.5%	0%	**1.6%**	-	0.3%	49.4%	0%	**49.7%**	-	-
PHF	0.888	0.750	-	**0.888**	-	0.688	0.833	-	**0.727**	-	0.500	0.874	-	**0.873**	-	0.932
Lights	927	18	0	**945**	-	21	10	0	**31**	-	6	950	0	**956**	-	1932
% Lights	99.3%	100%	0%	**99.3%**	-	95.5%	100%	0%	**96.9%**	-	100%	98.1%	0%	**98.2%**	-	98.7%
Single-Unit Trucks	6	0	0	**6**	-	1	0	0	**1**	-	0	6	0	**6**	-	13
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	4.5%	0%	0%	**3.1%**	-	0%	0.6%	0%	**0.6%**	-	0.7%
Articulated Trucks	1	0	0	**1**	-	0	0	0	**0**	-	0	10	0	**10**	-	11
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	1.0%	0%	**1.0%**	-	0.6%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	2	0	**2**	-	2
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

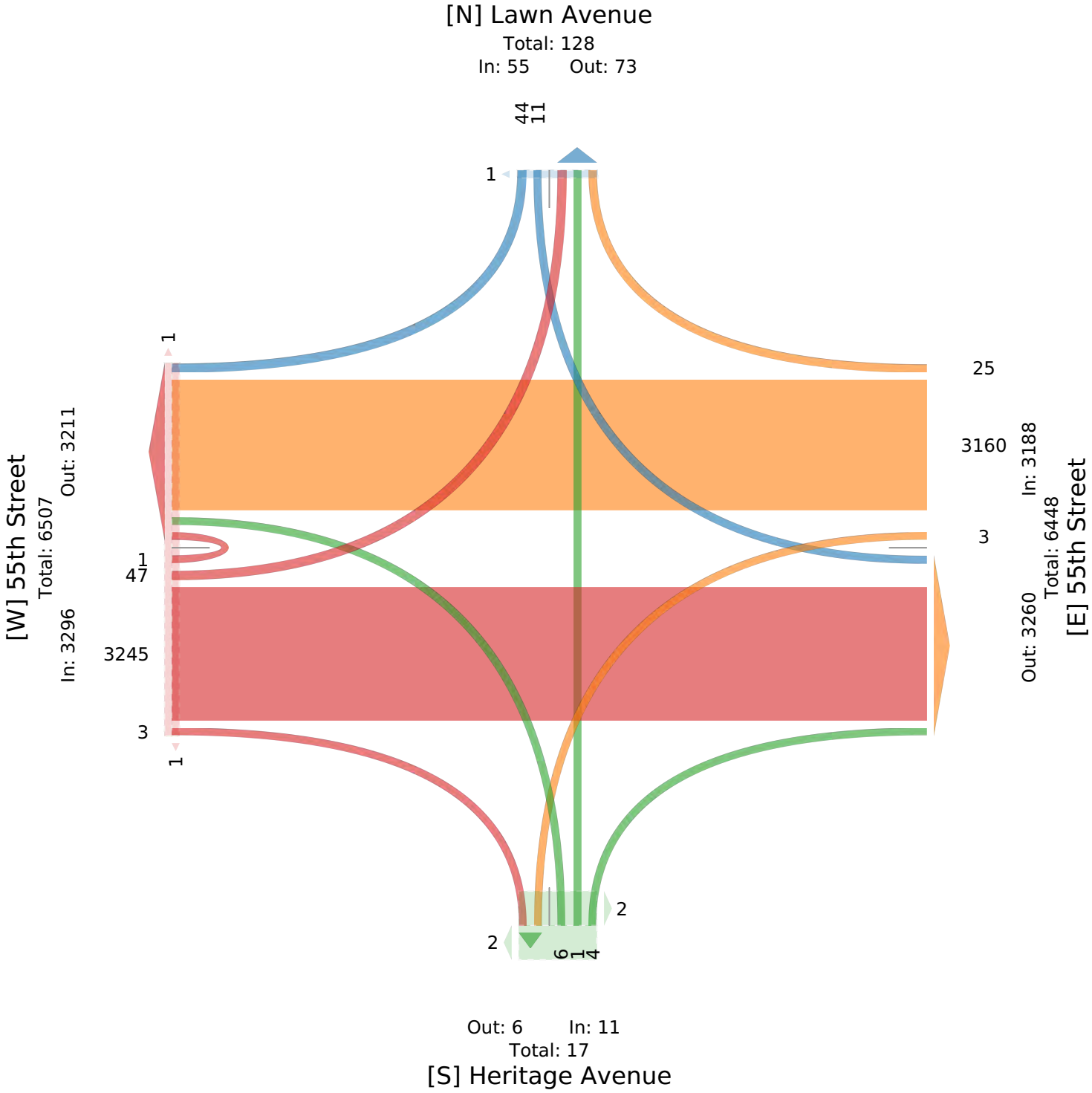
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Lawn Avenue						55th Street						Heritage Avenue						55th Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-03-21 7:00AM	1	0	0	0	**1**	0	2	132	0	0	**134**	0	1	0	1	0	**2**	0	0	125	1	0	**126**	0	**263**
7:15AM	6	0	1	0	**7**	0	3	154	0	0	**157**	0	0	0	1	0	**1**	0	0	187	2	0	**189**	0	**354**
7:30AM	4	0	0	0	**4**	0	0	174	0	0	**174**	0	0	0	2	0	**2**	0	1	185	2	0	**188**	0	**368**
7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
Hourly Total	12	0	2	0	**14**	0	7	685	0	0	**692**	0	3	0	4	0	**7**	0	1	644	8	0	**653**	0	**1366**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
8:45AM	1	0	1	0	**2**	0	2	163	0	0	**165**	0	0	0	0	0	**0**	0	0	139	2	0	**141**	0	**308**
Hourly Total	12	0	4	0	**16**	0	5	711	1	0	**717**	0	0	0	1	0	**1**	1	0	641	16	0	**657**	0	**1391**
4:00PM	5	0	4	0	**9**	0	2	210	1	0	**213**	0	0	0	0	0	**0**	0	1	252	3	0	**256**	0	**478**
4:15PM	1	0	0	0	**1**	0	1	190	0	0	**191**	0	0	1	0	0	**1**	0	0	246	6	0	**252**	1	**445**
4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
Hourly Total	13	0	5	0	**18**	0	6	865	2	0	**873**	0	1	1	0	0	**2**	0	1	976	13	0	**990**	1	**1883**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
5:30PM	2	0	0	0	**2**	0	2	245	0	0	**247**	0	0	0	0	0	**0**	0	0	218	1	0	**219**	0	**468**
5:45PM	2	0	0	0	**2**	1	1	228	0	0	**229**	0	0	0	0	0	**0**	2	0	220	0	0	**220**	0	**451**
Hourly Total	7	0	0	0	**7**	1	7	899	0	0	**906**	0	0	0	1	0	**1**	3	1	984	10	1	**996**	1	**1910**
Total	44	0	11	0	**55**	1	25	3160	3	0	**3188**	0	4	1	6	0	**11**	4	3	3245	47	1	**3296**	2	**6550**
% Approach	80.0%	0%	20.0%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	36.4%	9.1%	54.5%	0%	**-**	-	0.1%	98.5%	1.4%	0%	**-**	-	-
% Total	0.7%	0%	0.2%	0%	**0.8%**	-	0.4%	48.2%	0%	0%	**48.7%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	49.5%	0.7%	0%	**50.3%**	-	-
Lights	44	0	10	0	**54**	-	24	3100	3	0	**3127**	-	4	1	6	0	**11**	-	3	3181	47	1	**3232**	-	6424
% Lights	100%	0%	90.9%	0%	**98.2%**	-	96.0%	98.1%	100%	0%	**98.1%**	-	100%	100%	100%	0%	**100%**	-	100%	98.0%	100%	100%	**98.1%**	-	98.1%
Single-Unit Trucks	0	0	1	0	**1**	-	1	45	0	0	**46**	-	0	0	0	0	**0**	-	0	32	0	0	**32**	-	79
% Single-Unit Trucks	0%	0%	9.1%	0%	**1.8%**	-	4.0%	1.4%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	12	0	0	**12**	-	0	0	0	0	**0**	-	0	26	0	0	**26**	-	38
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	9
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

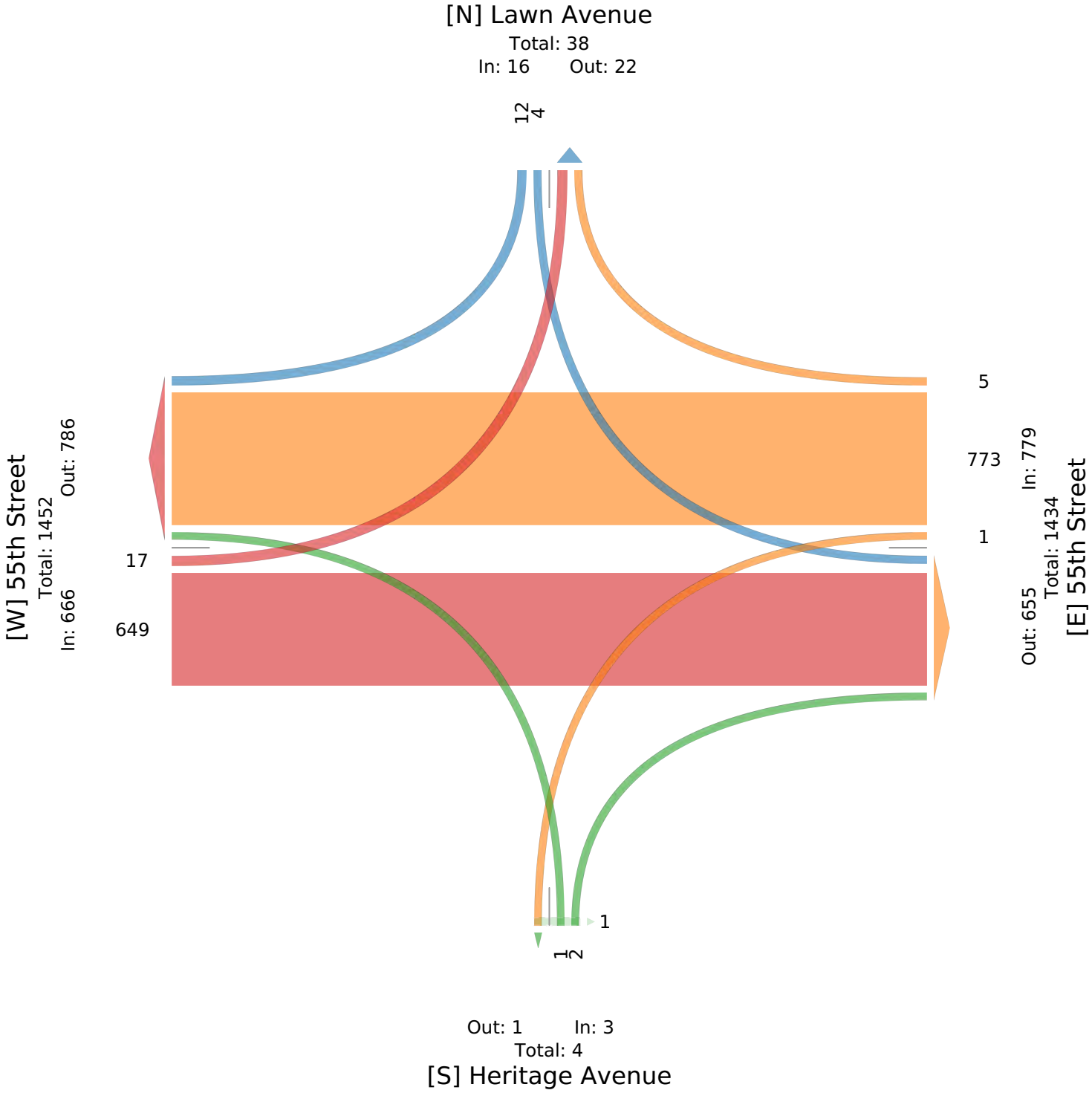
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
Total	12	0	4	0	**16**	0	5	773	1	0	**779**	0	2	0	1	0	**3**	1	0	649	17	0	**666**	0	**1464**
% Approach	75.0%	0%	25.0%	0%	**-**	-	0.6%	99.2%	0.1%	0%	**-**	-	66.7%	0%	33.3%	0%	**-**	-	0%	97.4%	2.6%	0%	**-**	-	-
% Total	0.8%	0%	0.3%	0%	**1.1%**	-	0.3%	52.8%	0.1%	0%	**53.2%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	44.3%	1.2%	0%	**45.5%**	-	-
PHF	0.600	-	1.000	-	**0.667**	-	0.417	0.859	0.250	-	**0.858**	-	0.250	-	0.250	-	**0.375**	-	-	0.891	0.607	-	**0.900**	-	0.961
Lights	12	0	4	0	**16**	-	4	746	1	0	**751**	-	2	0	1	0	**3**	-	0	634	17	0	**651**	-	1421
% Lights	100%	0%	100%	0%	**100%**	-	80.0%	96.5%	100%	0%	**96.4%**	-	100%	0%	100%	0%	**100%**	-	0%	97.7%	100%	0%	**97.7%**	-	97.1%
Single-Unit Trucks	0	0	0	0	**0**	-	1	22	0	0	**23**	-	0	0	0	0	**0**	-	0	9	0	0	**9**	-	32
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	20.0%	2.8%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.4%	0%	0%	**1.4%**	-	2.2%
Articulated Trucks	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	9
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

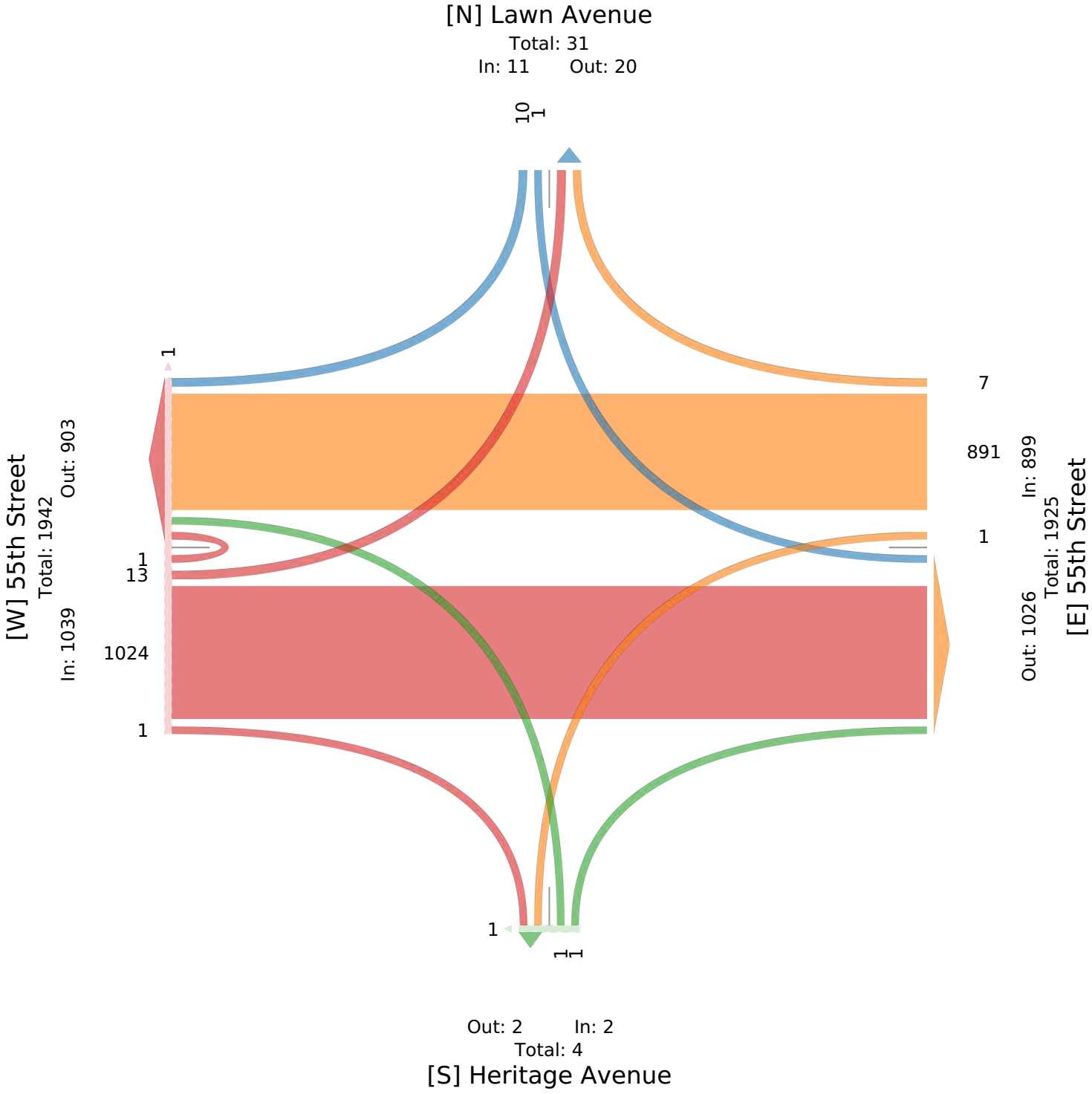
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
Total	10	0	1	0	**11**	0	7	891	1	0	**899**	0	1	0	1	0	**2**	1	1	1024	13	1	**1039**	1	**1951**
% Approach	90.9%	0%	9.1%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	50.0%	0%	50.0%	0%	**-**	-	0.1%	98.6%	1.3%	0.1%	**-**	-	-
% Total	0.5%	0%	0.1%	0%	**0.6%**	-	0.4%	45.7%	0.1%	0%	**46.1%**	-	0.1%	0%	0.1%	0%	**0.1%**	-	0.1%	52.5%	0.7%	0.1%	**53.3%**	-	-
PHF	0.417	-	0.250	-	**0.458**	-	0.875	0.936	0.250	-	**0.936**	-	0.250	-	0.250	-	**0.500**	-	0.250	0.921	0.542	0.250	**0.911**	-	0.953
Lights	10	0	0	0	**10**	-	7	888	1	0	**896**	-	1	0	1	0	**2**	-	1	1002	13	1	**1017**	-	1925
% Lights	100%	0%	0%	0%	**90.9%**	-	100%	99.7%	100%	0%	**99.7%**	-	100%	0%	100%	0%	**100%**	-	100%	97.9%	100%	100%	**97.9%**	-	98.7%
Single-Unit Trucks	0	0	1	0	**1**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	12
% Single-Unit Trucks	0%	0%	100%	0%	**9.1%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	12
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.2%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	4	0	0	0	0	0	4	0	0	0	1	9
715	0	1	0	0	0	0	0	10	0	2	0	5	18
730	0	5	0	0	0	0	0	4	1	2	0	1	13
745	2	2	0	0	0	0	0	8	2	1	0	1	16
800	0	2	0	0	0	0	0	3	2	5	0	1	13
815	2	5	0	0	0	0	0	7	3	1	0	1	19
830	3	1	0	0	0	0	0	6	1	1	0	2	14
845	0	2	0	0	0	0	0	3	1	0	0	0	6
1600	2	4	0	0	0	0	0	3	1	1	0	1	12
1615	0	4	0	0	0	0	0	6	4	3	0	0	17
1630	1	5	0	0	0	0	0	0	1	1	0	4	12
1645	1	5	0	0	0	0	0	4	1	1	0	2	14
1700	1	3	0	0	0	0	0	2	2	2	0	0	10
1715	0	9	0	0	0	0	0	8	2	1	0	0	20
1730	4	11	0	0	0	0	0	4	0	1	0	1	21
1745	1	5	0	0	0	0	0	3	2	1	0	1	13
Total	17	68	0	0	0	0	0	75	23	23	0	21	227

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	4	0	4	1	5	0	4	0	9
715	1	0	10	7	15	0	3	0	18
730	5	0	5	3	5	0	7	1	13
745	4	0	10	2	9	0	3	4	16
800	2	0	5	6	4	0	7	2	13
815	7	0	10	2	8	0	6	5	19
830	4	0	7	3	8	0	2	4	14
845	2	0	4	0	3	0	2	1	6
1600	6	0	4	2	4	0	5	3	12
1615	4	0	10	3	6	0	7	4	17
1630	6	0	1	5	4	0	6	2	12
1645	6	0	5	3	6	0	6	2	14
1700	4	0	4	2	2	0	5	3	10
1715	9	0	10	1	8	0	10	2	20
1730	15	0	4	2	5	0	12	4	21
1745	6	0	5	2	4	0	6	3	13
Total	85	0	98	44	96	0	91	40	227

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	16	0	0	0	0	0	16	0	0	0	4	36
715	0	4	0	0	0	0	0	40	0	8	0	20	72
730	0	20	0	0	0	0	0	16	4	8	0	4	52
745	8	8	0	0	0	0	0	32	8	4	0	4	64
800	0	8	0	0	0	0	0	12	8	20	0	4	52
815	8	20	0	0	0	0	0	28	12	4	0	4	76
830	12	4	0	0	0	0	0	24	4	4	0	8	56
845	0	8	0	0	0	0	0	12	4	0	0	0	24
1600	8	16	0	0	0	0	0	12	4	4	0	4	48
1615	0	16	0	0	0	0	0	24	16	12	0	0	68
1630	4	20	0	0	0	0	0	0	4	4	0	16	48
1645	4	20	0	0	0	0	0	16	4	4	0	8	56
1700	4	12	0	0	0	0	0	8	8	8	0	0	40
1715	0	36	0	0	0	0	0	32	8	4	0	0	80
1730	16	44	0	0	0	0	0	16	0	4	0	4	84
1745	4	20	0	0	0	0	0	12	8	4	0	4	52

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	16	0	16	4	20	0	16	0	36
715	4	0	40	28	60	0	12	0	72
730	20	0	20	12	20	0	28	4	52
745	16	0	40	8	36	0	12	16	64
800	8	0	20	24	16	0	28	8	52
815	28	0	40	8	32	0	24	20	76
830	16	0	28	12	32	0	8	16	56
845	8	0	16	0	12	0	8	4	24
1600	24	0	16	8	16	0	20	12	48
1615	16	0	40	12	24	0	28	16	68
1630	24	0	4	20	16	0	24	8	48
1645	24	0	20	12	24	0	24	8	56
1700	16	0	16	8	8	0	20	12	40
1715	36	0	40	4	32	0	40	8	80
1730	60	0	16	8	20	0	48	16	84
1745	24	0	20	8	16	0	24	12	52

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	2	12	0	0	0	0	0	26	3	5	0	8	56
715	2	10	0	0	0	0	0	25	5	10	0	8	60
730	4	14	0	0	0	0	0	22	8	9	0	4	61
745	7	10	0	0	0	0	0	24	8	8	0	5	62
800	5	10	0	0	0	0	0	19	7	7	0	4	52
815	5	8	0	0	0	0	0	16	5	2	0	3	39*
830	3	3	0	0	0	0	0	9	2	1	0	2	20*
845	0	2	0	0	0	0	0	3	1	0	0	0	6*
1600	4	18	0	0	0	0	0	13	7	6	0	7	55
1615	3	17	0	0	0	0	0	12	8	7	0	6	53
1630	3	22	0	0	0	0	0	14	6	5	0	6	56
1645	6	28	0	0	0	0	0	18	5	5	0	3	65
1700	6	28	0	0	0	0	0	17	6	5	0	2	64
1715	5	25	0	0	0	0	0	15	4	3	0	2	54*
1730	5	16	0	0	0	0	0	7	2	2	0	2	34*
1745	1	5	0	0	0	0	0	3	2	1	0	1	13*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	14	0	29	13	34	0	17	5	56
715	12	0	30	18	33	0	20	7	60
730	18	0	30	13	26	0	23	12	61
745	17	0	32	13	29	0	18	15	62
800	15	0	26	11	23	0	17	12	52
815	13	0	21	5	19	0	10	10	39*
830	6	0	11	3	11	0	4	5	20*
845	2	0	4	0	3	0	2	1	6*
1600	22	0	20	13	20	0	24	11	55
1615	20	0	20	13	18	0	24	11	53
1630	25	0	20	11	20	0	27	9	56
1645	34	0	23	8	21	0	33	11	65
1700	34	0	23	7	19	0	33	12	64
1715	30	0	19	5	17	0	28	9	54*
1730	21	0	9	4	9	0	18	7	34*
1745	6	0	5	2	4	0	6	3	13*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	2	0	0	1	1	2	0	0	0	0	6
715	0	0	2	2	0	2	4	5	0	0	0	0	15
730	0	3	3	4	0	5	3	2	0	0	0	0	20
745	0	0	3	7	0	4	2	3	0	0	0	0	19
800	0	0	8	3	0	5	17	2	0	0	0	0	35
815	0	5	2	3	0	15	10	3	0	0	0	0	38
830	0	0	2	4	0	1	3	3	0	0	0	0	13
845	0	1	0	2	0	2	2	1	0	0	0	0	8
1600	0	2	4	3	0	4	6	2	0	0	0	0	21
1615	0	1	3	4	0	5	3	1	0	0	0	0	17
1630	0	3	3	3	0	2	4	1	0	0	0	0	16
1645	0	1	5	2	0	4	4	2	0	0	0	0	18
1700	0	2	3	5	0	7	6	1	0	0	0	0	24
1715	0	6	4	4	0	6	3	5	0	0	0	0	28
1730	0	3	5	1	0	7	6	2	0	0	0	0	24
1745	0	2	3	3	0	8	4	2	0	0	0	0	22
Total	0	29	52	50	0	78	78	37	0	0	0	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	2	1	3	0	2	3	1	0	6
715	2	4	9	0	7	6	2	0	15
730	6	9	5	0	6	6	8	0	20
745	3	11	5	0	10	5	4	0	19
800	8	8	19	0	5	25	5	0	35
815	7	18	13	0	6	12	20	0	38
830	2	5	6	0	7	5	1	0	13
845	1	4	3	0	3	2	3	0	8
1600	6	7	8	0	5	10	6	0	21
1615	4	9	4	0	5	6	6	0	17
1630	6	5	5	0	4	7	5	0	16
1645	6	6	6	0	4	9	5	0	18
1700	5	12	7	0	6	9	9	0	24
1715	10	10	8	0	9	7	12	0	28
1730	8	8	8	0	3	11	10	0	24
1745	5	11	6	0	5	7	10	0	22
Total	81	128	115	0	87	130	107	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	8	0	0	4	4	8	0	0	0	0	24
715	0	0	8	8	0	8	16	20	0	0	0	0	60
730	0	12	12	16	0	20	12	8	0	0	0	0	80
745	0	0	12	28	0	16	8	12	0	0	0	0	76
800	0	0	32	12	0	20	68	8	0	0	0	0	140
815	0	20	8	12	0	60	40	12	0	0	0	0	152
830	0	0	8	16	0	4	12	12	0	0	0	0	52
845	0	4	0	8	0	8	8	4	0	0	0	0	32
1600	0	8	16	12	0	16	24	8	0	0	0	0	84
1615	0	4	12	16	0	20	12	4	0	0	0	0	68
1630	0	12	12	12	0	8	16	4	0	0	0	0	64
1645	0	4	20	8	0	16	16	8	0	0	0	0	72
1700	0	8	12	20	0	28	24	4	0	0	0	0	96
1715	0	24	16	16	0	24	12	20	0	0	0	0	112
1730	0	12	20	4	0	28	24	8	0	0	0	0	96
1745	0	8	12	12	0	32	16	8	0	0	0	0	88

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	8	4	12	0	8	12	4	0	24
715	8	16	36	0	28	24	8	0	60
730	24	36	20	0	24	24	32	0	80
745	12	44	20	0	40	20	16	0	76
800	32	32	76	0	20	100	20	0	140
815	28	72	52	0	24	48	80	0	152
830	8	20	24	0	28	20	4	0	52
845	4	16	12	0	12	8	12	0	32
1600	24	28	32	0	20	40	24	0	84
1615	16	36	16	0	20	24	24	0	68
1630	24	20	20	0	16	28	20	0	64
1645	24	24	24	0	16	36	20	0	72
1700	20	48	28	0	24	36	36	0	96
1715	40	40	32	0	36	28	48	0	112
1730	32	32	32	0	12	44	40	0	96
1745	20	44	24	0	20	28	40	0	88

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	3	10	13	0	12	10	12	0	0	0	0	60
715	0	3	16	16	0	16	26	12	0	0	0	0	89
730	0	8	16	17	0	29	32	10	0	0	0	0	112
745	0	5	15	17	0	25	32	11	0	0	0	0	105
800	0	6	12	12	0	23	32	9	0	0	0	0	94
815	0	6	4	9	0	18	15	7	0	0	0	0	59*
830	0	1	2	6	0	3	5	4	0	0	0	0	21*
845	0	1	0	2	0	2	2	1	0	0	0	0	8*
1600	0	7	15	12	0	15	17	6	0	0	0	0	72
1615	0	7	14	14	0	18	17	5	0	0	0	0	75
1630	0	12	15	14	0	19	17	9	0	0	0	0	86
1645	0	12	17	12	0	24	19	10	0	0	0	0	94
1700	0	13	15	13	0	28	19	10	0	0	0	0	98
1715	0	11	12	8	0	21	13	9	0	0	0	0	74*
1730	0	5	8	4	0	15	10	4	0	0	0	0	46*
1745	0	2	3	3	0	8	4	2	0	0	0	0	22*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	13	25	22	0	25	20	15	0	60
715	19	32	38	0	28	42	19	0	89
730	24	46	42	0	27	48	37	0	112
745	20	42	43	0	28	47	30	0	105
800	18	35	41	0	21	44	29	0	94
815	10	27	22	0	16	19	24	0	59*
830	3	9	9	0	10	7	4	0	21*
845	1	4	3	0	3	2	3	0	8*
1600	22	27	23	0	18	32	22	0	72
1615	21	32	22	0	19	31	25	0	75
1630	27	33	26	0	23	32	31	0	86
1645	29	36	29	0	22	36	36	0	94
1700	28	41	29	0	23	34	41	0	98
1715	23	29	22	0	17	25	32	0	74*
1730	13	19	14	0	8	18	20	0	46*
1745	5	11	6	0	5	7	10	0	22*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	3	1	0	4	4	0	0	0	0	0	12
715	0	0	5	2	0	2	5	2	0	0	0	0	16
730	0	0	7	9	0	7	3	0	0	0	0	0	26
745	0	0	4	8	0	4	3	2	0	0	0	0	21
800	0	0	25	8	0	5	13	1	0	0	0	0	52
815	0	0	12	19	0	7	8	1	0	0	0	0	47
830	0	1	4	3	0	4	7	2	0	0	0	0	21
845	0	0	2	3	0	4	2	1	0	0	0	0	12
1600	0	1	10	7	0	8	4	0	0	0	0	0	30
1615	0	1	5	8	0	4	5	1	0	0	0	0	24
1630	0	2	5	4	0	3	3	0	0	0	0	0	17
1645	0	1	10	6	0	6	5	0	0	0	0	0	28
1700	0	1	8	10	0	7	4	2	0	0	0	0	32
1715	0	1	6	9	0	8	6	1	0	0	0	0	31
1730	0	1	10	7	0	7	7	1	0	0	0	0	33
1745	0	0	6	10	0	5	3	1	0	0	0	0	25
Total	0	9	122	114	0	85	82	15	0	0	0	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	3	5	4	0	1	7	4	0	12
715	5	4	7	0	4	10	2	0	16
730	7	16	3	0	9	10	7	0	26
745	4	12	5	0	10	7	4	0	21
800	25	13	14	0	9	38	5	0	52
815	12	26	9	0	20	20	7	0	47
830	5	7	9	0	5	11	5	0	21
845	2	7	3	0	4	4	4	0	12
1600	11	15	4	0	7	14	9	0	30
1615	6	12	6	0	9	10	5	0	24
1630	7	7	3	0	4	8	5	0	17
1645	11	12	5	0	6	15	7	0	28
1700	9	17	6	0	12	12	8	0	32
1715	7	17	7	0	10	12	9	0	31
1730	11	14	8	0	8	17	8	0	33
1745	6	15	4	0	11	9	5	0	25
Total	131	199	97	0	129	204	94	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	12	4	0	16	16	0	0	0	0	0	48
715	0	0	20	8	0	8	20	8	0	0	0	0	64
730	0	0	28	36	0	28	12	0	0	0	0	0	104
745	0	0	16	32	0	16	12	8	0	0	0	0	84
800	0	0	100	32	0	20	52	4	0	0	0	0	208
815	0	0	48	76	0	28	32	4	0	0	0	0	188
830	0	4	16	12	0	16	28	8	0	0	0	0	84
845	0	0	8	12	0	16	8	4	0	0	0	0	48
1600	0	4	40	28	0	32	16	0	0	0	0	0	120
1615	0	4	20	32	0	16	20	4	0	0	0	0	96
1630	0	8	20	16	0	12	12	0	0	0	0	0	68
1645	0	4	40	24	0	24	20	0	0	0	0	0	112
1700	0	4	32	40	0	28	16	8	0	0	0	0	128
1715	0	4	24	36	0	32	24	4	0	0	0	0	124
1730	0	4	40	28	0	28	28	4	0	0	0	0	132
1745	0	0	24	40	0	20	12	4	0	0	0	0	100

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	12	20	16	0	4	28	16	0	48
715	20	16	28	0	16	40	8	0	64
730	28	64	12	0	36	40	28	0	104
745	16	48	20	0	40	28	16	0	84
800	100	52	56	0	36	152	20	0	208
815	48	104	36	0	80	80	28	0	188
830	20	28	36	0	20	44	20	0	84
845	8	28	12	0	16	16	16	0	48
1600	44	60	16	0	28	56	36	0	120
1615	24	48	24	0	36	40	20	0	96
1630	28	28	12	0	16	32	20	0	68
1645	44	48	20	0	24	60	28	0	112
1700	36	68	24	0	48	48	32	0	128
1715	28	68	28	0	40	48	36	0	124
1730	44	56	32	0	32	68	32	0	132
1745	24	60	16	0	44	36	20	0	100

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	19	20	0	17	15	4	0	0	0	0	75
715	0	0	41	27	0	18	24	5	0	0	0	0	115
730	0	0	48	44	0	23	27	4	0	0	0	0	146
745	0	1	45	38	0	20	31	6	0	0	0	0	141
800	0	1	43	33	0	20	30	5	0	0	0	0	132
815	0	1	18	25	0	15	17	4	0	0	0	0	80*
830	0	1	6	6	0	8	9	3	0	0	0	0	33*
845	0	0	2	3	0	4	2	1	0	0	0	0	12*
1600	0	5	30	25	0	21	17	1	0	0	0	0	99
1615	0	5	28	28	0	20	17	3	0	0	0	0	101
1630	0	5	29	29	0	24	18	3	0	0	0	0	108
1645	0	4	34	32	0	28	22	4	0	0	0	0	124
1700	0	3	30	36	0	27	20	5	0	0	0	0	121
1715	0	2	22	26	0	20	16	3	0	0	0	0	89*
1730	0	1	16	17	0	12	10	2	0	0	0	0	58*
1745	0	0	6	10	0	5	3	1	0	0	0	0	25*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	19	37	19	0	24	34	17	0	75
715	41	45	29	0	32	65	18	0	115
730	48	67	31	0	48	75	23	0	146
745	46	58	37	0	44	76	21	0	141
800	44	53	35	0	38	73	21	0	132
815	19	40	21	0	29	35	16	0	80*
830	7	14	12	0	9	15	9	0	33*
845	2	7	3	0	4	4	4	0	12*
1600	35	46	18	0	26	47	26	0	99
1615	33	48	20	0	31	45	25	0	101
1630	34	53	21	0	32	47	29	0	108
1645	38	60	26	0	36	56	32	0	124
1700	33	63	25	0	41	50	30	0	121
1715	24	46	19	0	29	38	22	0	89*
1730	17	29	12	0	19	26	13	0	58*
1745	6	15	4	0	11	9	5	0	25*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	5	102	0	0	0	0	0	151	3	13	0	7	281
1515	22	181	0	0	0	0	0	97	6	5	0	1	312
1530	11	158	0	0	0	0	0	100	9	21	0	5	304
1545	5	130	0	0	0	0	0	116	4	16	0	5	276
Total	43	571	0	0	0	0	0	464	22	55	0	18	1173

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 4 wolf/park

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1500	107	0	154	20	158	0	115	8	281
1515	203	0	103	6	98	0	186	28	312
1530	169	0	109	26	105	0	179	20	304
1545	135	0	120	21	121	0	146	9	276
Total	614	0	486	73	482	0	626	65	1173

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	20	408	0	0	0	0	0	604	12	52	0	28	1124
1515	88	724	0	0	0	0	0	388	24	20	0	4	1248
1530	44	632	0	0	0	0	0	400	36	84	0	20	1216
1545	20	520	0	0	0	0	0	464	16	64	0	20	1104

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	428	0	616	80	632	0	460	32	1124
1515	812	0	412	24	392	0	744	112	1248
1530	676	0	436	104	420	0	716	80	1216
1545	540	0	480	84	484	0	584	36	1104

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 4 wolf/park

Begin Time	N-Approach RT	TH	LT	E-Approach RT	TH	LT	S-Approach RT	TH	LT	W-Approach RT	TH	LT	Int Total
1500	43	571	0	0	0	0	0	464	22	55	0	18	1173
1515	38	469	0	0	0	0	0	313	19	42	0	11	892*
1530	16	288	0	0	0	0	0	216	13	37	0	10	580*
1545	5	130	0	0	0	0	0	116	4	16	0	5	276*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	614	0	486	73	482	0	626	65	1173
1515	507	0	332	53	324	0	511	57	892*
1530	304	0	229	47	226	0	325	29	580*
1545	135	0	120	21	121	0	146	9	276*

Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

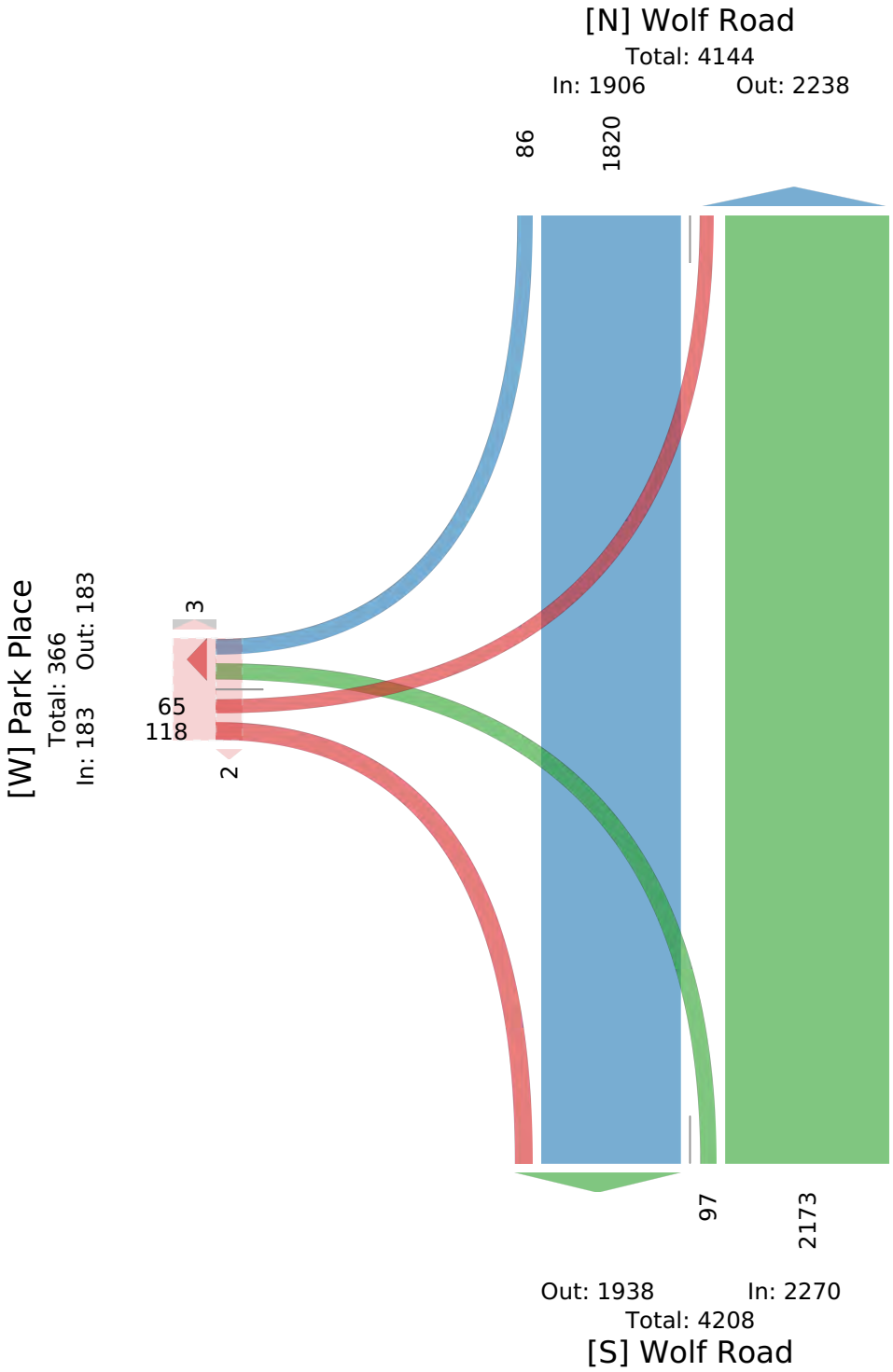
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Wolf Road					Wolf Road					Park Place					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	0	50	0	**50**	0	118	0	0	**118**	0	4	6	0	**10**	0	**178**
7:15AM	3	69	0	**72**	0	170	4	0	**174**	0	8	7	0	**15**	0	**261**
7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
Hourly Total	20	292	0	**312**	0	658	17	0	**675**	0	26	20	0	**46**	0	**1033**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
8:30AM	7	101	0	**108**	0	145	3	0	**148**	0	5	2	0	**7**	0	**263**
8:45AM	4	78	0	**82**	0	115	2	0	**117**	0	4	1	0	**5**	0	**204**
Hourly Total	27	317	0	**344**	0	588	21	0	**609**	0	43	19	0	**62**	0	**1015**
4:00PM	2	144	0	**146**	0	136	11	0	**147**	0	12	2	0	**14**	0	**307**
4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
Hourly Total	14	566	0	**580**	0	516	35	0	**551**	0	28	12	0	**40**	0	**1171**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
5:15PM	7	164	0	**171**	0	98	4	0	**102**	0	4	6	0	**10**	1	**283**
5:30PM	11	141	0	**152**	0	100	7	0	**107**	0	5	2	0	**7**	2	**266**
5:45PM	4	128	0	**132**	0	106	4	0	**110**	0	6	3	0	**9**	2	**251**
Hourly Total	25	645	0	**670**	0	411	24	0	**435**	0	21	14	0	**35**	5	**1140**
Total	86	1820	0	**1906**	0	2173	97	0	**2270**	0	118	65	0	**183**	5	**4359**
% Approach	4.5%	95.5%	0%	**-**	-	95.7%	4.3%	0%	**-**	-	64.5%	35.5%	0%	**-**	-	**-**
% Total	2.0%	41.8%	0%	**43.7%**	-	49.9%	2.2%	0%	**52.1%**	-	2.7%	1.5%	0%	**4.2%**	-	**-**
Lights	85	1787	0	**1872**	-	2126	94	0	**2220**	-	118	65	0	**183**	-	4275
% Lights	98.8%	98.2%	0%	**98.2%**	-	97.8%	96.9%	0%	**97.8%**	-	100%	100%	0%	**100%**	-	98.1%
Single-Unit Trucks	0	18	0	**18**	-	32	3	0	**35**	-	0	0	0	**0**	-	53
% Single-Unit Trucks	0%	1.0%	0%	**0.9%**	-	1.5%	3.1%	0%	**1.5%**	-	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	1	4	0	**5**	-	7	0	0	**7**	-	0	0	0	**0**	-	12
% Articulated Trucks	1.2%	0.2%	0%	**0.3%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.3%
Buses	0	11	0	**11**	-	8	0	0	**8**	-	0	0	0	**0**	-	19
% Buses	0%	0.6%	0%	**0.6%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

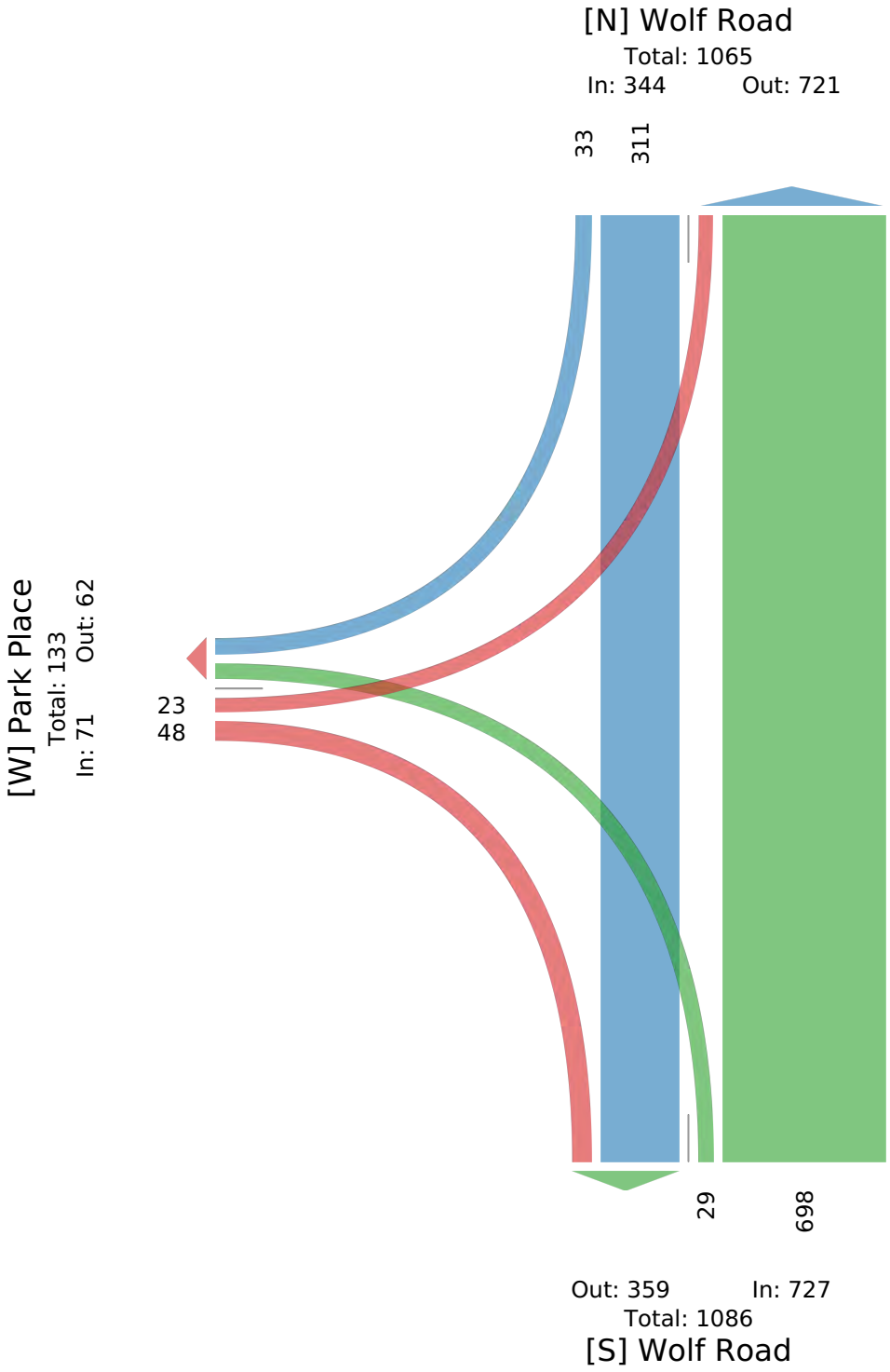
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
Total	33	311	0	**344**	0	698	29	0	**727**	0	48	23	0	**71**	0	**1142**
% Approach	9.6%	90.4%	0%	**-**	-	96.0%	4.0%	0%	**-**	-	67.6%	32.4%	0%	**-**	-	-
% Total	2.9%	27.2%	0%	**30.1%**	-	61.1%	2.5%	0%	**63.7%**	-	4.2%	2.0%	0%	**6.2%**	-	-
PHF	0.750	0.818	-	**0.827**	-	0.804	0.659	-	**0.815**	-	0.444	0.719	-	**0.507**	-	0.889
Lights	32	308	0	**340**	-	670	28	0	**698**	-	48	23	0	**71**	-	1109
% Lights	97.0%	99.0%	0%	**98.8%**	-	96.0%	96.6%	0%	**96.0%**	-	100%	100%	0%	**100%**	-	97.1%
Single-Unit Trucks	0	2	0	**2**	-	19	1	0	**20**	-	0	0	0	**0**	-	22
% Single-Unit Trucks	0%	0.6%	0%	**0.6%**	-	2.7%	3.4%	0%	**2.8%**	-	0%	0%	0%	**0%**	-	1.9%
Articulated Trucks	1	0	0	**1**	-	6	0	0	**6**	-	0	0	0	**0**	-	7
% Articulated Trucks	3.0%	0%	0%	**0.3%**	-	0.9%	0%	0%	**0.8%**	-	0%	0%	0%	**0%**	-	0.6%
Buses	0	1	0	**1**	-	3	0	0	**3**	-	0	0	0	**0**	-	4
% Buses	0%	0.3%	0%	**0.3%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

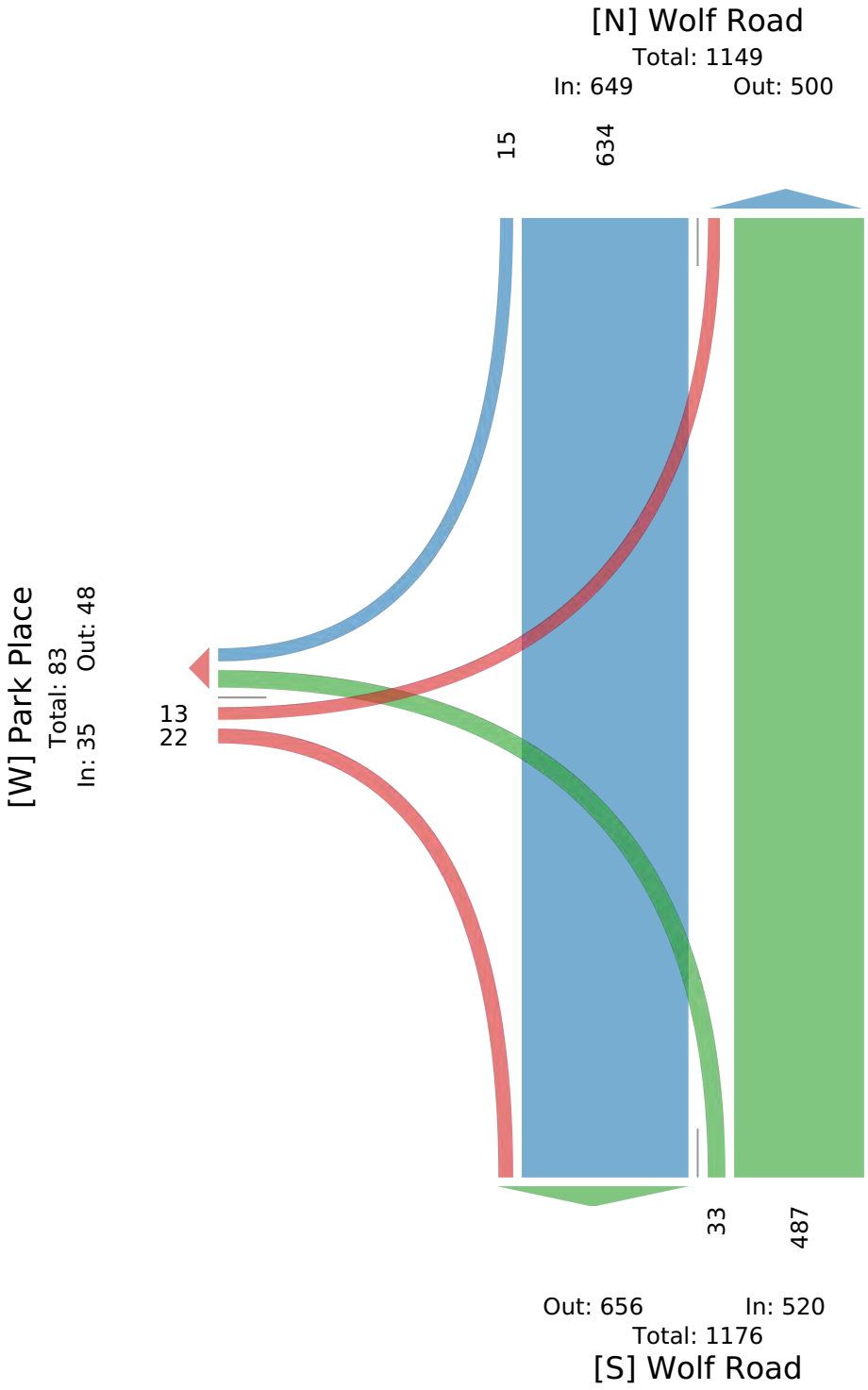
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
Total	15	634	0	**649**	0	487	33	0	**520**	0	22	13	0	**35**	0	**1204**
% Approach	2.3%	97.7%	0%	**-**	-	93.7%	6.3%	0%	**-**	-	62.9%	37.1%	0%	**-**	-	-
% Total	1.2%	52.7%	0%	**53.9%**	-	40.4%	2.7%	0%	**43.2%**	-	1.8%	1.1%	0%	**2.9%**	-	-
PHF	0.469	0.748	-	**0.755**	-	0.929	0.635	-	**0.949**	-	0.786	0.650	-	**0.729**	-	0.885
Lights	15	615	0	**630**	-	486	33	0	**519**	-	22	13	0	**35**	-	1184
% Lights	100%	97.0%	0%	**97.1%**	-	99.8%	100%	0%	**99.8%**	-	100%	100%	0%	**100%**	-	98.3%
Single-Unit Trucks	0	10	0	**10**	-	1	0	0	**1**	-	0	0	0	**0**	-	11
% Single-Unit Trucks	0%	1.6%	0%	**1.5%**	-	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.9%
Articulated Trucks	0	3	0	**3**	-	0	0	0	**0**	-	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.5%	0%	**0.5%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.2%
Buses	0	6	0	**6**	-	0	0	0	**0**	-	0	0	0	**0**	-	6
% Buses	0%	0.9%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.5%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

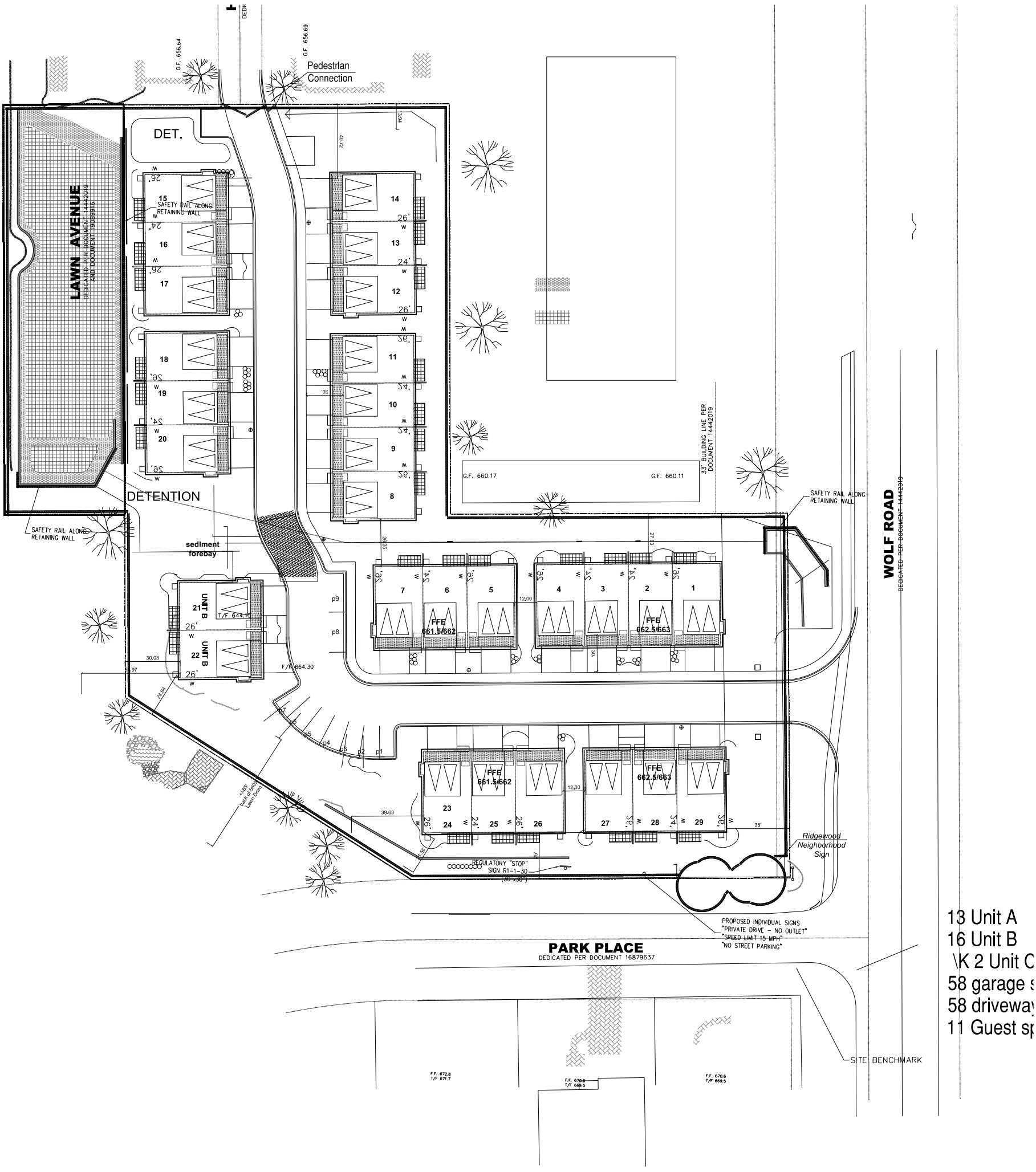
*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Site Plan


LAWN AVENUE
DEDICATED PER DOCUMENT 14442019 AND DOCUMENT 1908916
WOLF ROAD
DEDICATED PER DOCUMENT 14442019
PARK PLACE
DEDICATED PER DOCUMENT 16879637
DET.
DETENTION
Pedestrian Connection
G.F. 656.64
G.F. 656.69
G.F. 660.17
G.F. 660.11
33' BUILDING LINE PER DOCUMENT 14442019
SAFETY RAIL ALONG RETAINING WALL
sedlment forebay
UNIT B
T/F 644.15
F/F 664.30
FFE 661.5/662
FFE 662.5/663
REGULATORY "STOP" SIGN R1-1-30 (36"x36")
PROPOSED INDIVIDUAL SIGNS "PRIVATE DRIVE - NO OUTLET" "SPEED LIMIT 15 MPH" "NO STREET PARKING"
Ridgewood Neighborhood Sign
SITE BENCHMARK
F.F. 672.8 T/F 671.7
F.F. 670.6 T/F 669.5
F.F. 670.6 T/F 669.5
13 Unit A
16 Unit B
\K 2 Unit C
58 garage s
58 driveway
11 Guest sp

ITE Trip Generation Graphs

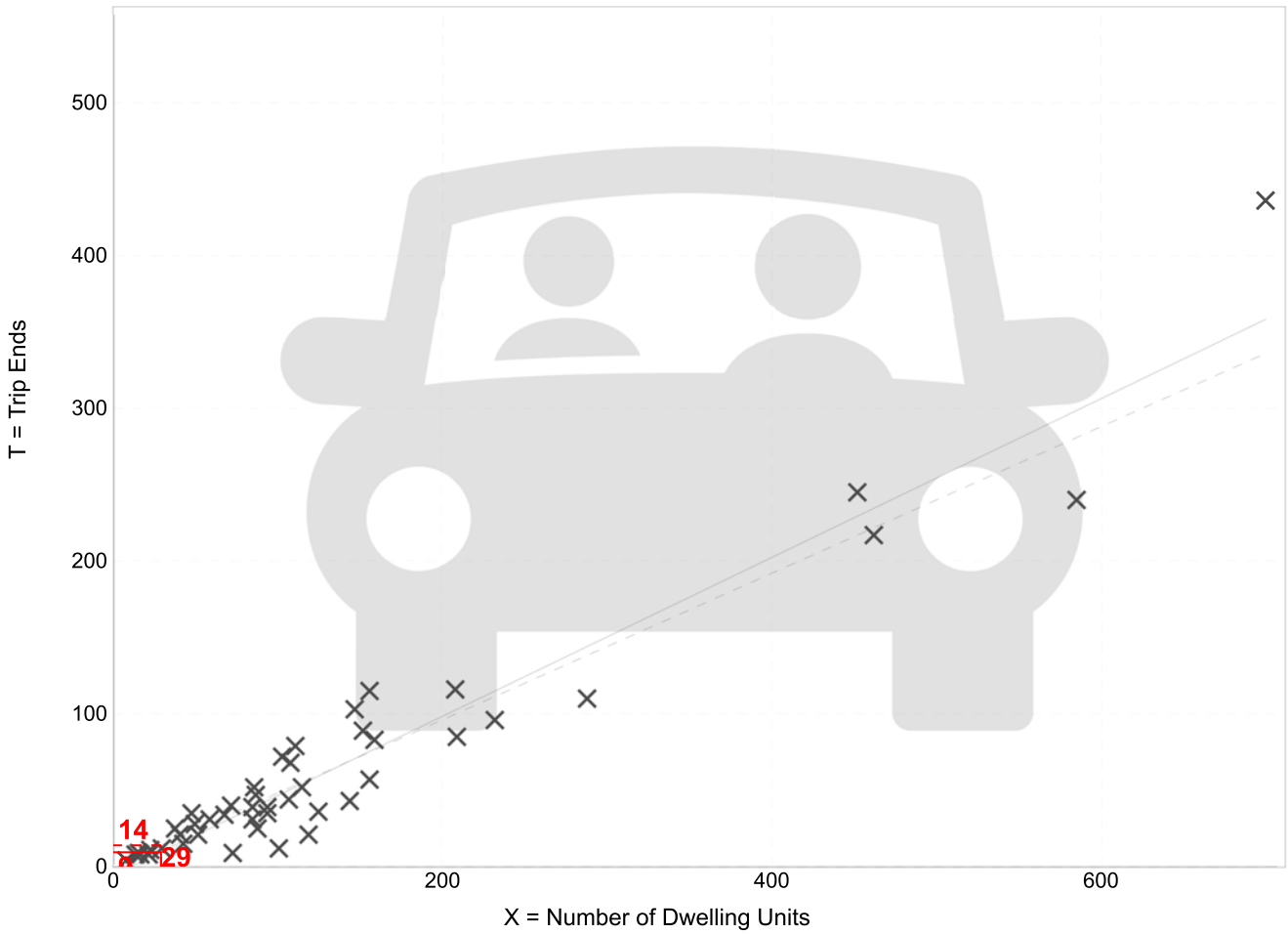
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.52(X) - 5.70

R^2= 0.92

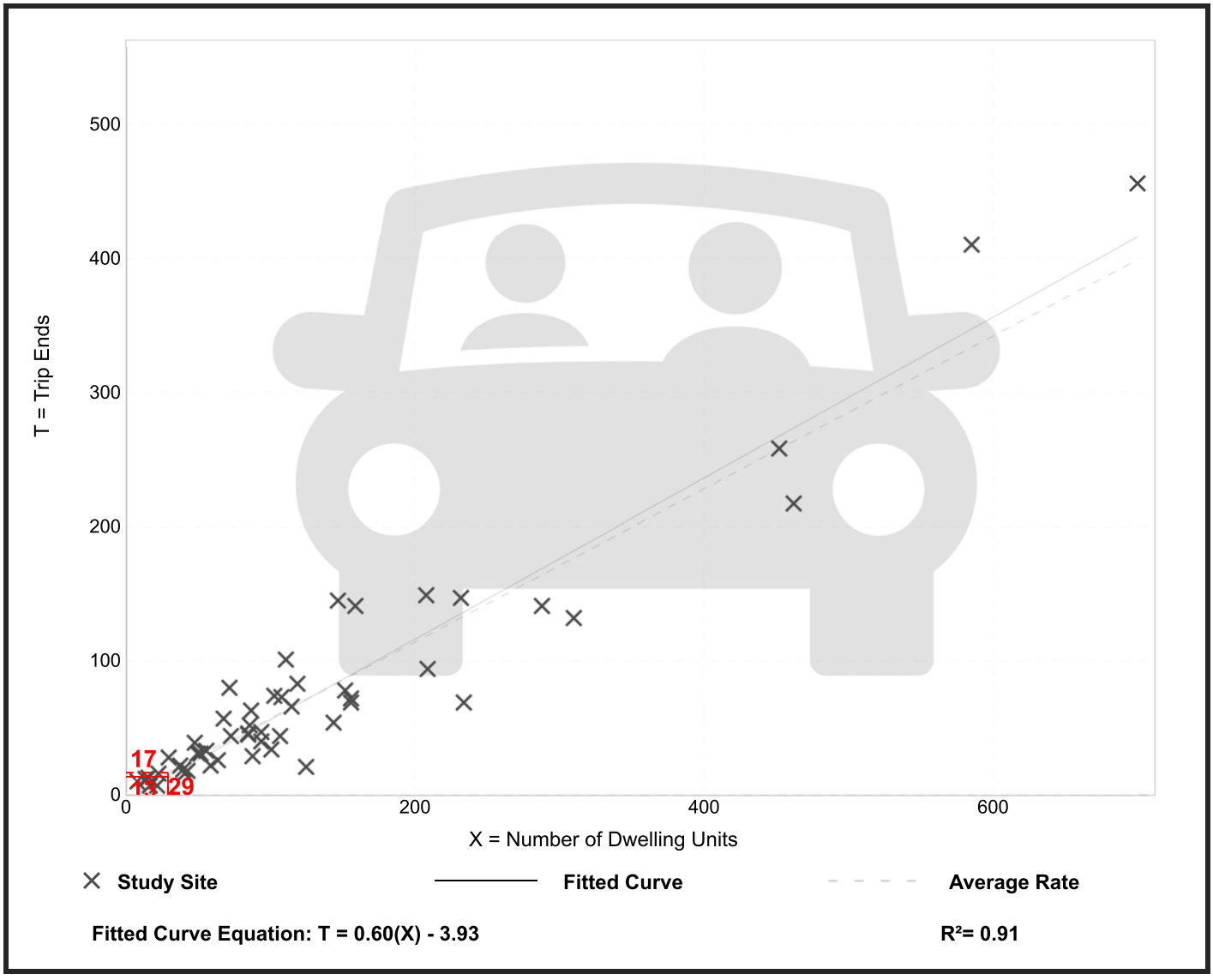
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Single-Family Attached Housing
(215)

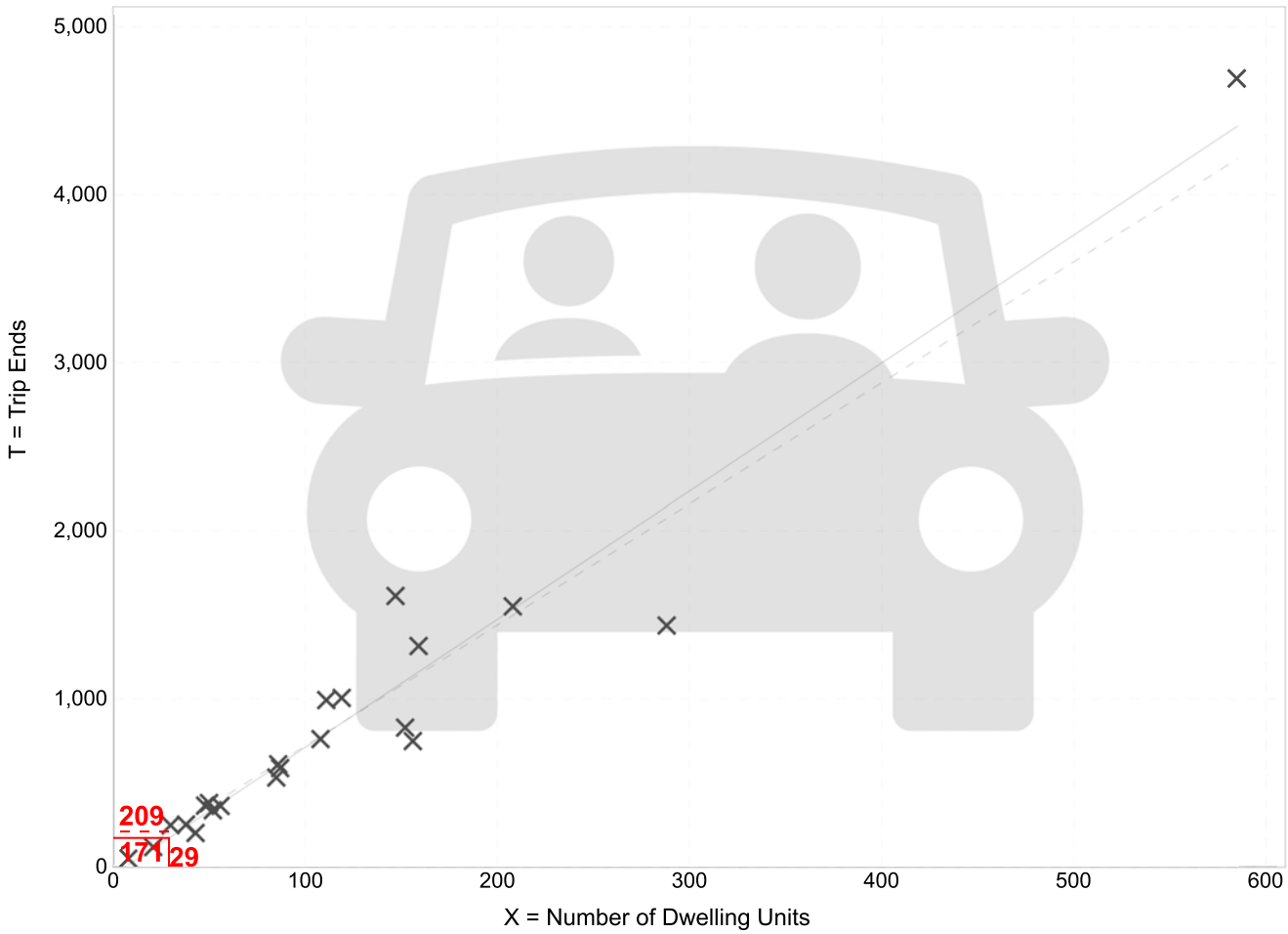
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Fitted Curve Equation: T = 7.62(X) - 50.48

R^2= 0.94

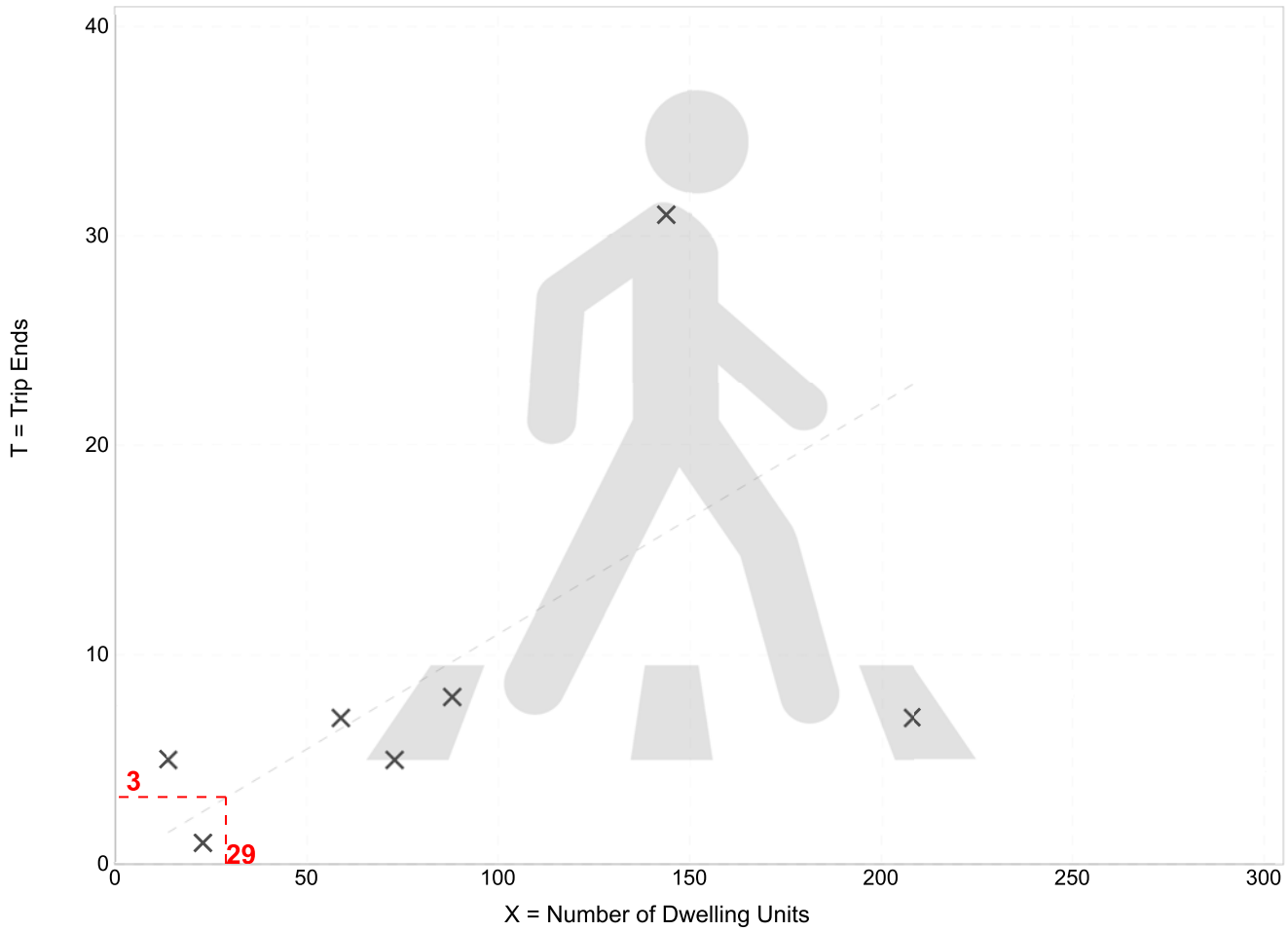
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	21% entering, 79% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.11	0.03 - 0.36	0.09

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

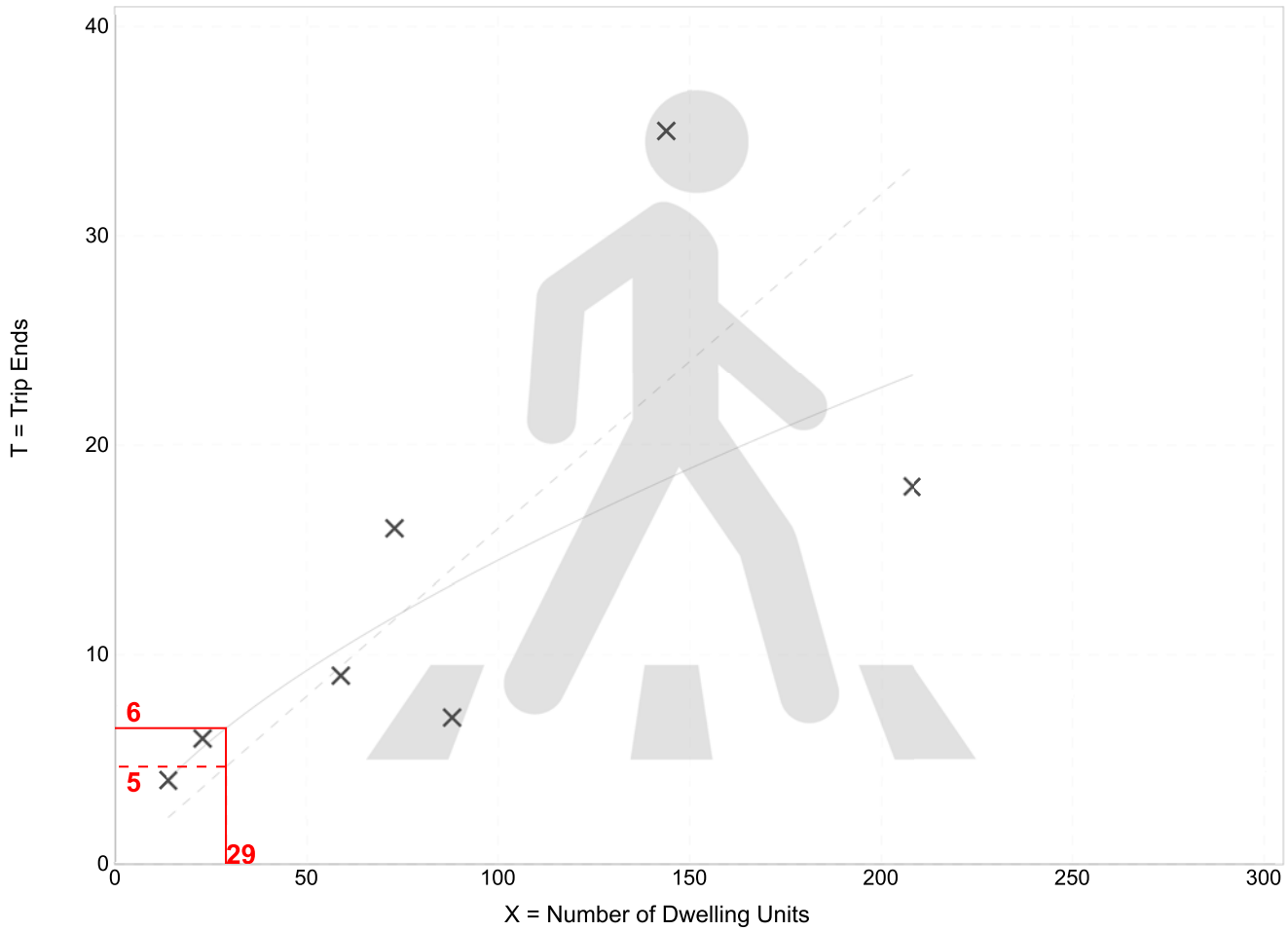
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	53% entering, 47% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.16	0.08 - 0.29	0.08

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.65 Ln(X) - 0.32

R^2= 0.70

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use			
Source: ITE *Trip Generation Manual* , 11th Edition			
Land Use Code	215		
Land Use	Single-Family Attached Housing		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	7		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.5%	0.7%	0.3%
1:00 - 2:00 AM	0.2%	0.4%	0.1%
2:00 - 3:00 AM	0.3%	0.2%	0.3%
3:00 - 4:00 AM	0.3%	0.3%	0.4%
4:00 - 5:00 AM	0.7%	0.4%	1.0%
5:00 - 6:00 AM	1.4%	0.1%	2.6%
6:00 - 7:00 AM	3.5%	1.1%	5.8%
7:00 - 8:00 AM	7.9%	2.7%	13.2%
8:00 - 9:00 AM	6.6%	3.8%	9.3%
9:00 - 10:00 AM	5.3%	3.7%	6.9%
10:00 - 11:00 AM	4.1%	4.0%	4.3%
11:00 - 12:00 PM	5.3%	4.8%	5.7%
12:00 - 1:00 PM	5.2%	5.4%	5.1%
1:00 - 2:00 PM	4.7%	4.5%	4.8%
2:00 - 3:00 PM	5.8%	5.5%	6.0%
3:00 - 4:00 PM	6.5%	8.2%	4.8%
4:00 - 5:00 PM	7.5%	9.8%	5.1%
5:00 - 6:00 PM	9.4%	12.1%	6.8%
6:00 - 7:00 PM	8.2%	9.8%	6.6%
7:00 - 8:00 PM	5.9%	7.3%	4.5%
8:00 - 9:00 PM	4.7%	5.9%	3.5%
9:00 - 10:00 PM	3.0%	4.8%	1.3%
10:00 - 11:00 PM	2.0%	3.0%	1.1%
11:00 - 12:00 AM	0.9%	1.5%	0.4%

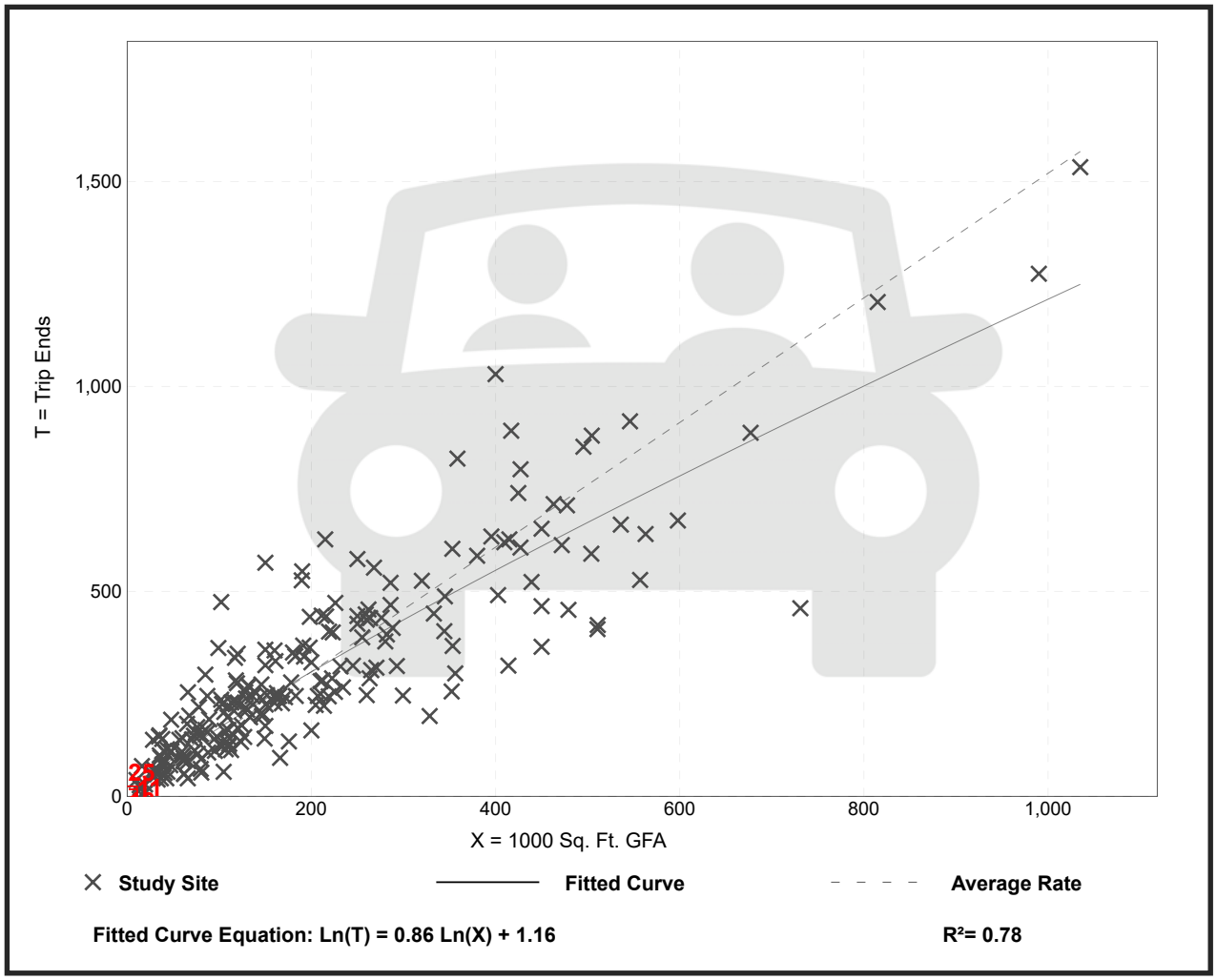
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



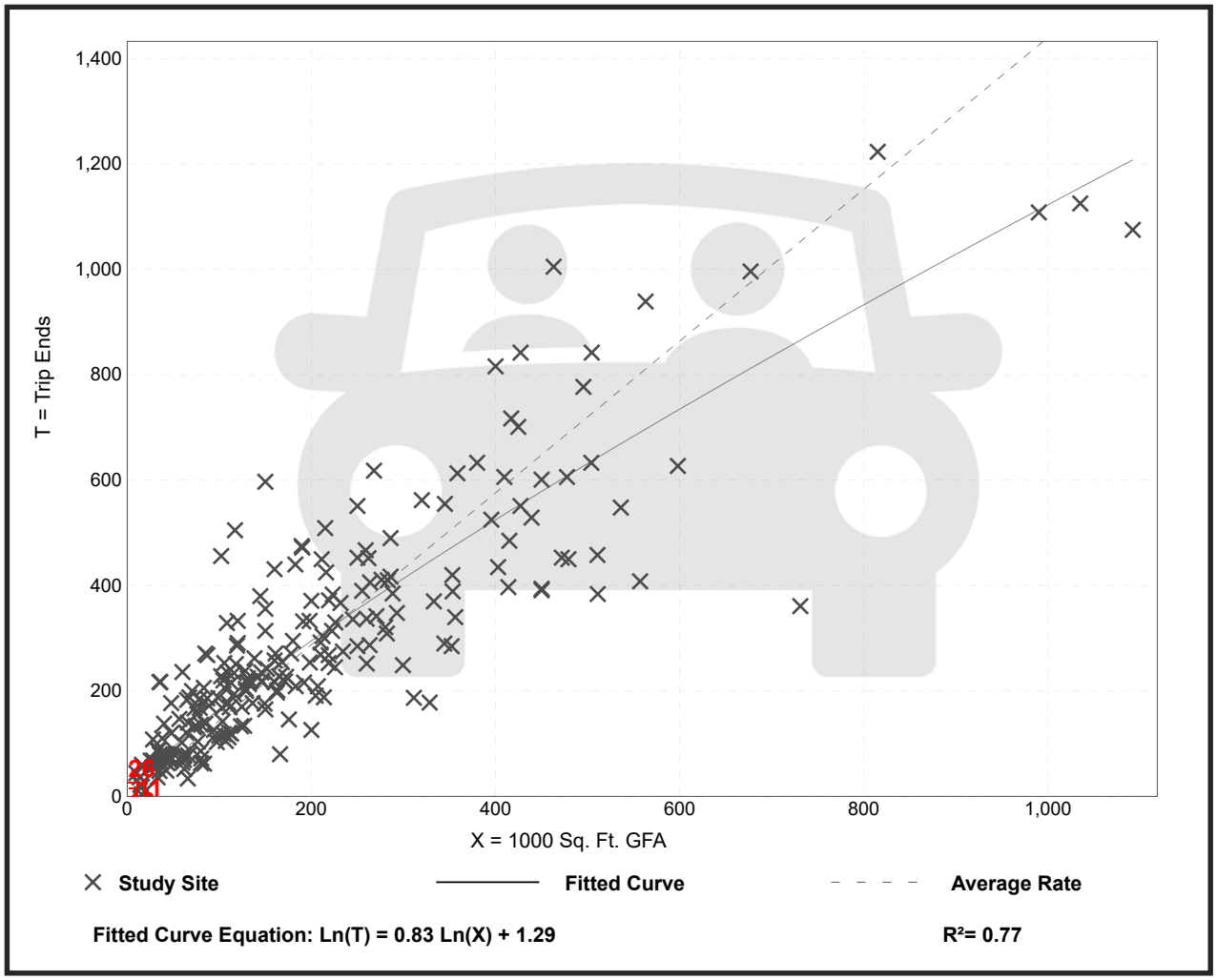
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building
(710)

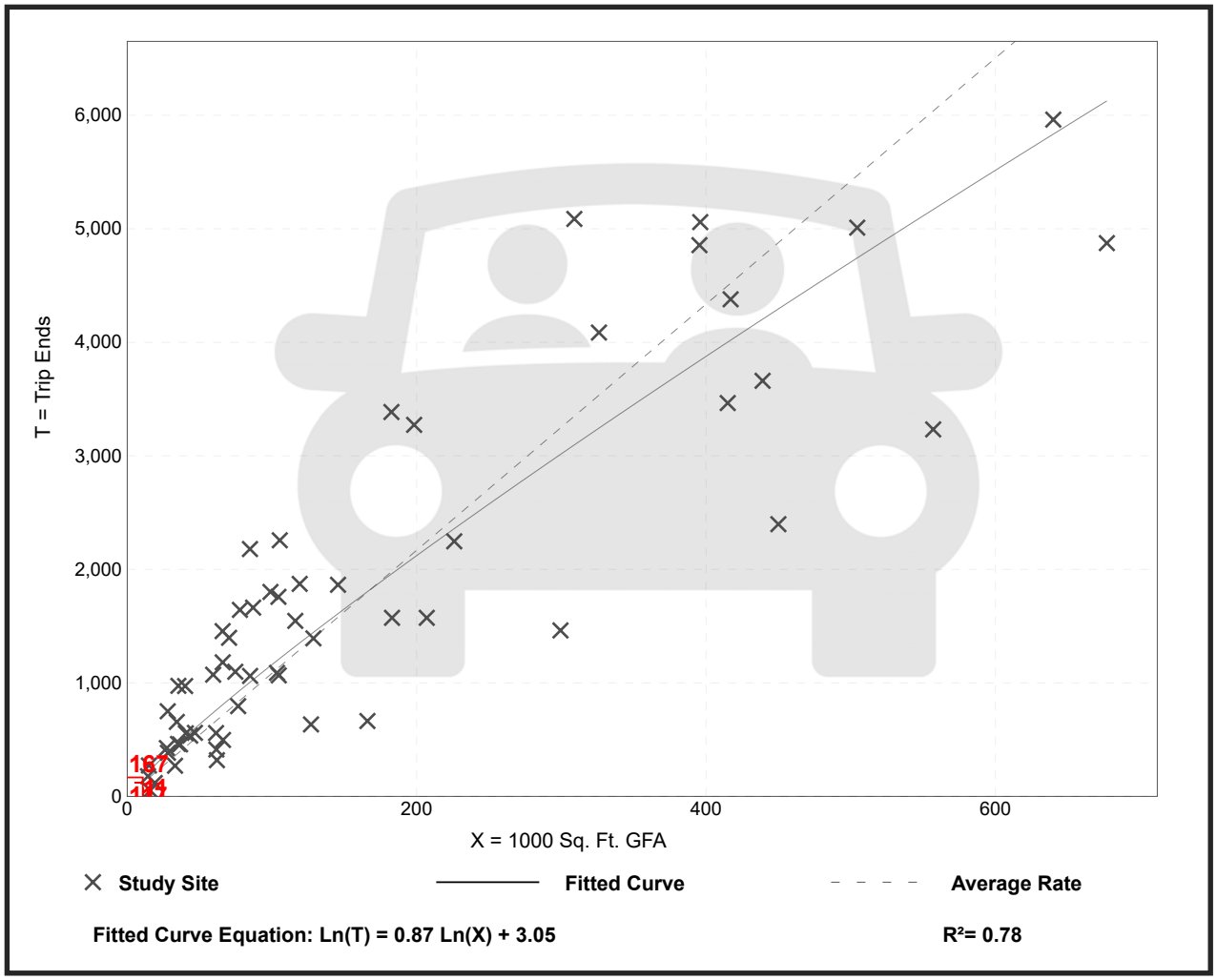
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

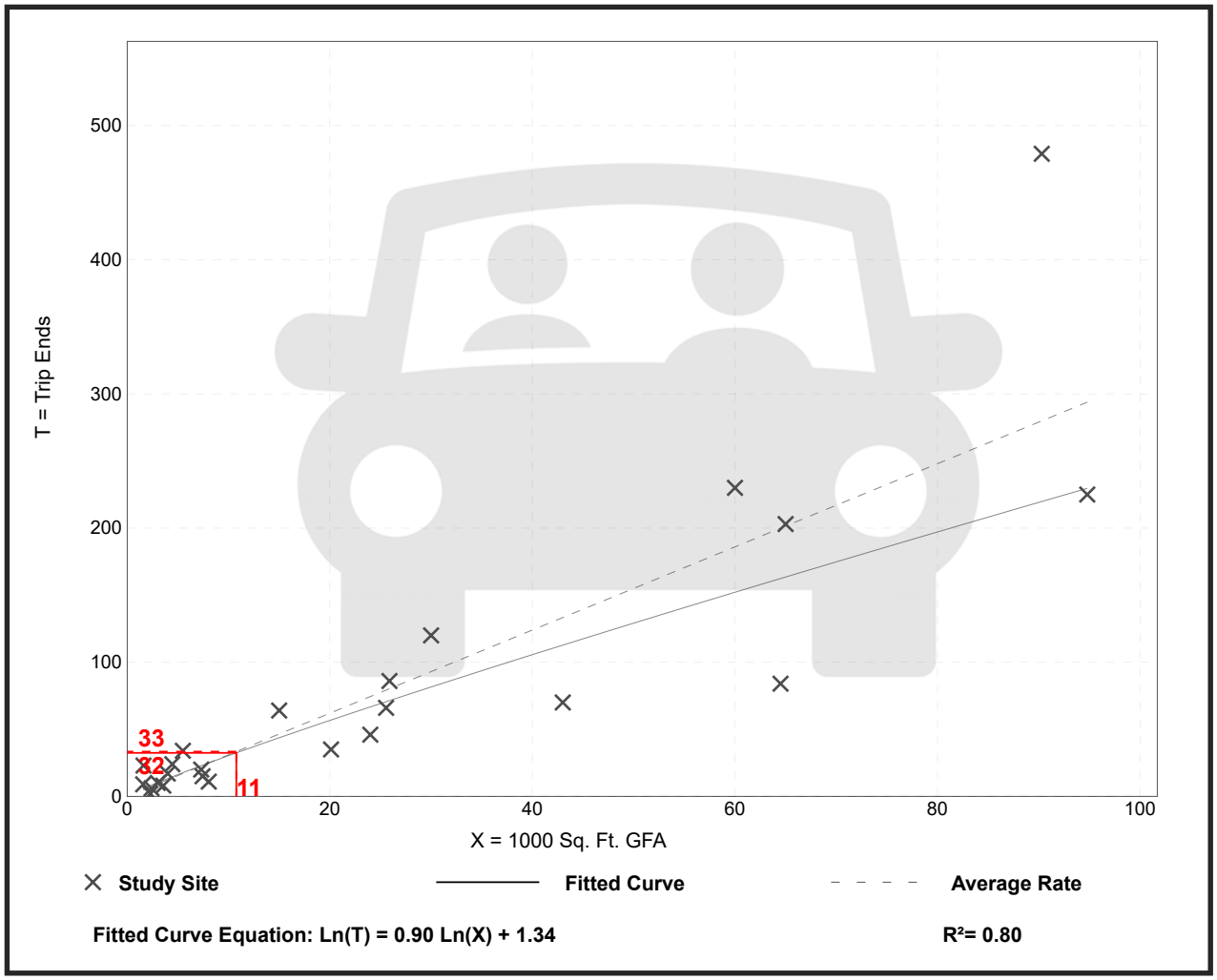
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 24
Avg. 1000 Sq. Ft. GFA: 25
Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

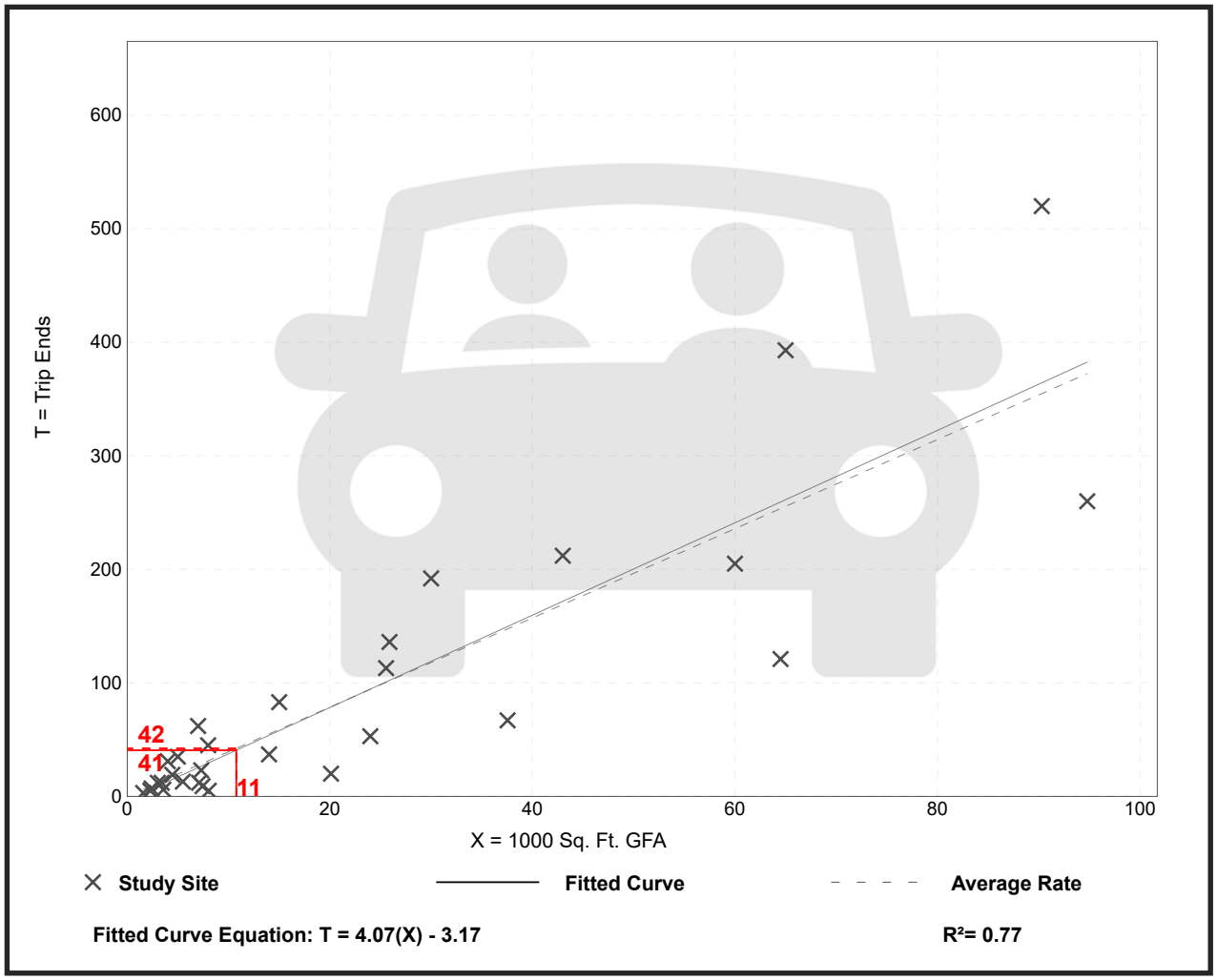
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 30
Avg. 1000 Sq. Ft. GFA: 23
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Medical-Dental Office Building - Stand-Alone
(720)

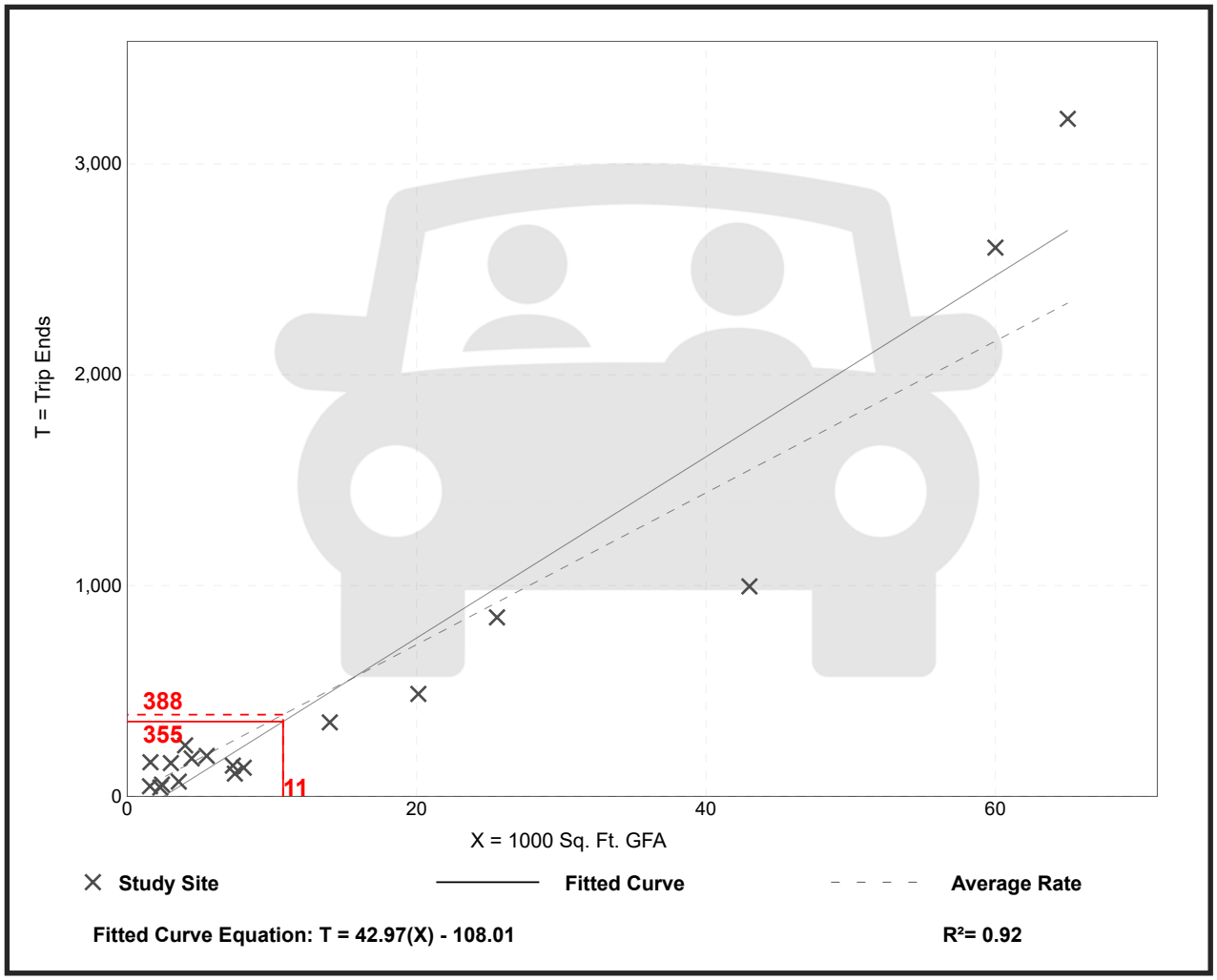
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

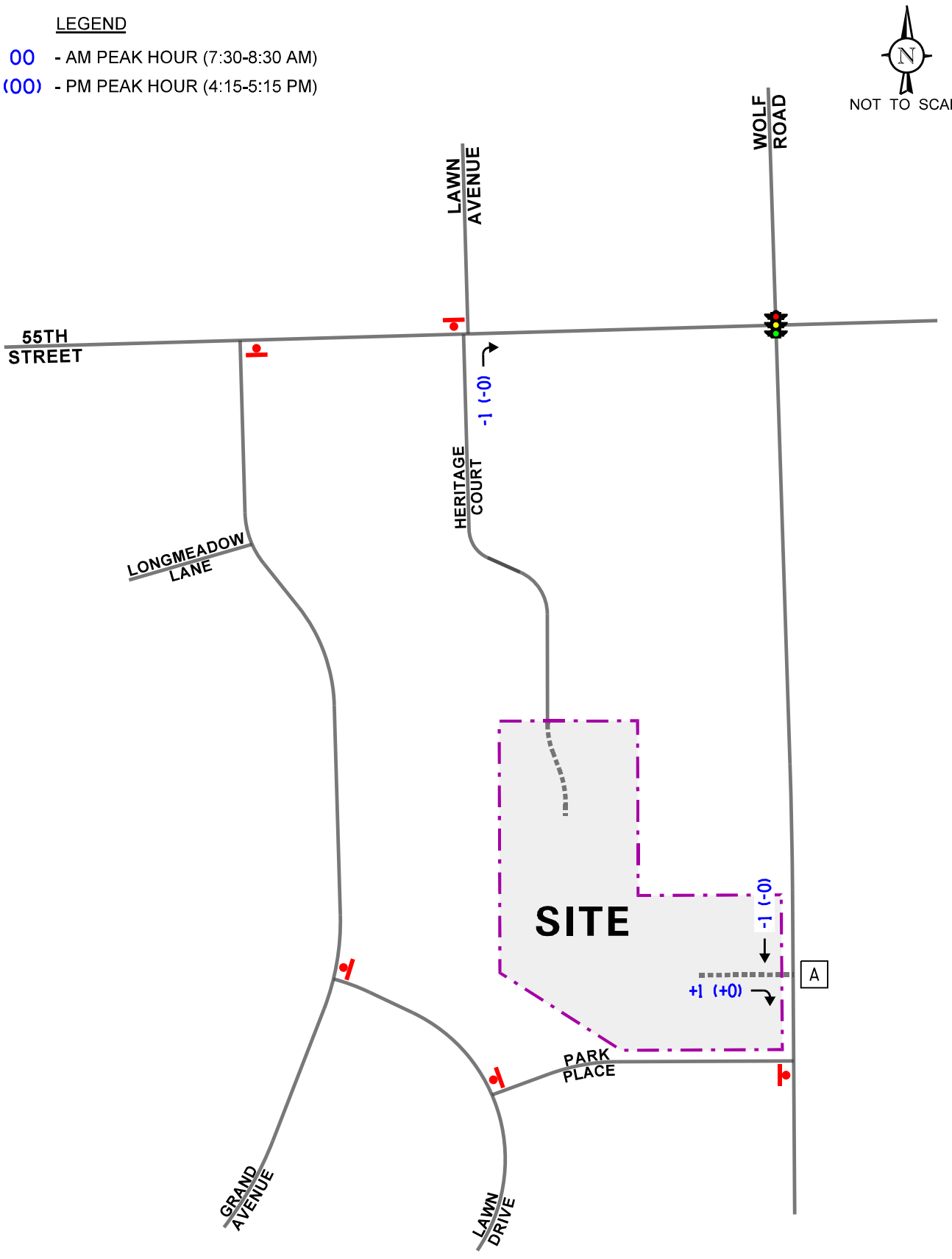
Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Figure A



Heritage Crossings
Western Springs, Illinois

Heritage Court Townhomes Reassignment

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: A

CMAP Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

March 6, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 55th Street @ Wolf Road \ Heritage Court \ Grand Avenue
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated March 5, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Wolf Rd, at 55th St	9,150	10,200
55th St, at Wolf Rd	16,600	18,500
Heritage Ct, at 55th St	375	410
Grand Ave, at 55th St	2,800	3,100

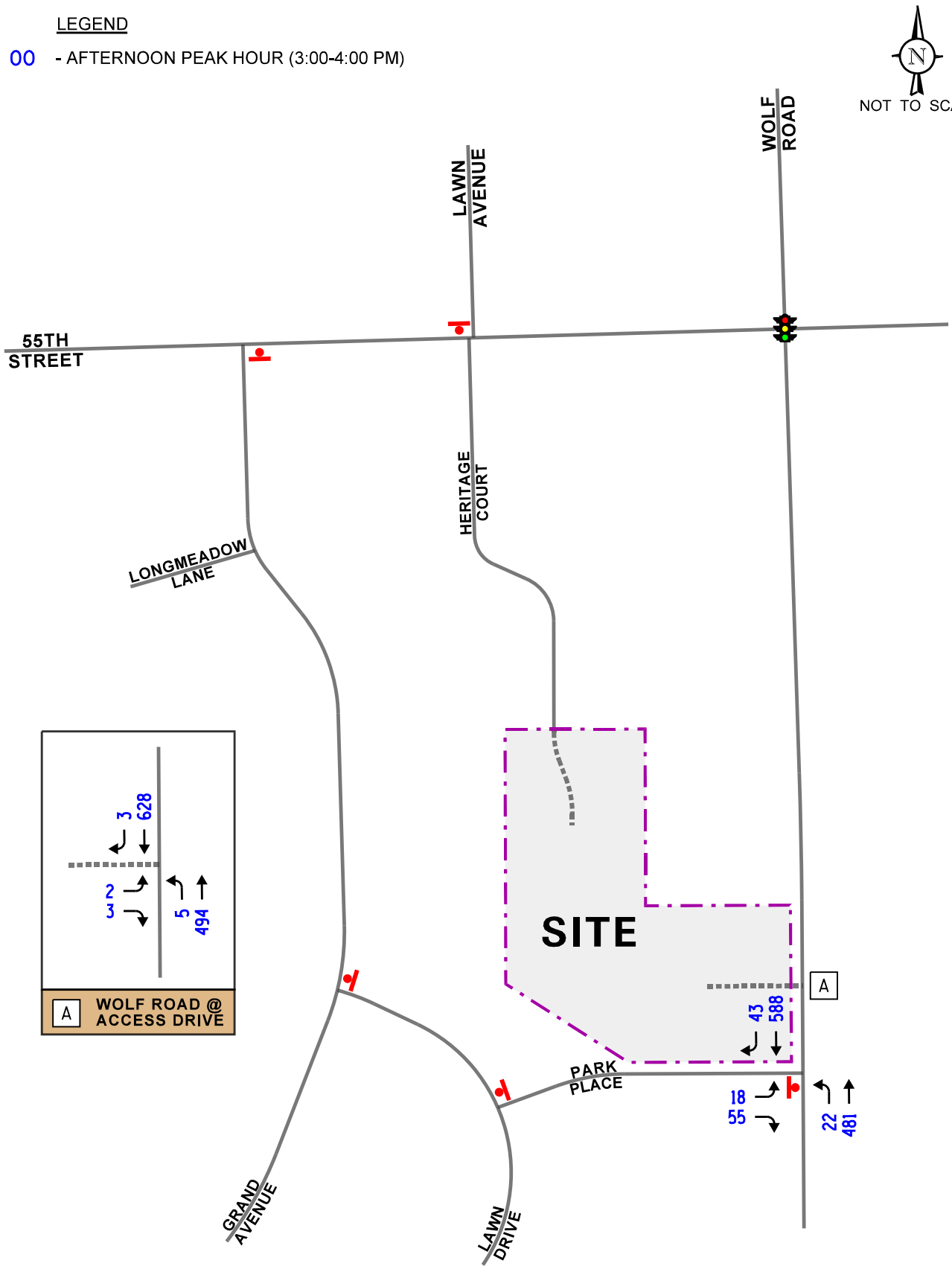
Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2024_TrafficForecasts\WesternSprings\ck-32-24\ck-32-24.docx

Figure B



Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes
(Afternoon Peak Hour)

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: B

Level of Service Table

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	643	1	14	772	6	23
Future Vol, veh/h	643	1	14	772	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	707	1	15	848	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	709	0	1164	355
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	456	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	854	-	191	647
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	853	-	186	647
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.37	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	64	-
HCM Lane V/C Ratio	0.075	-	-	0.018	-
HCM Control Delay (s/veh)	14.1	-	-	9.3	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Future Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	676	0	1	805	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	811	0	0	676	0	0	1116	1525	338	1184	1522	406
Stage 1	-	-	-	-	-	-	711	711	-	811	811	-
Stage 2	-	-	-	-	-	-	405	814	-	373	711	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1046	-	-	925	-	-	*287	158	664	249	159	*875
Stage 1	-	-	-	-	-	-	*394	439	-	576	553	-
Stage 2	-	-	-	-	-	-	*825	551	-	625	439	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1045	-	-	925	-	-	*277	154	664	243	155	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*277	154	-	243	155	-
Stage 1	-	-	-	-	-	-	*386	430	-	575	552	-
Stage 2	-	-	-	-	-	-	*812	550	-	610	430	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.01	12.02
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	453	92	-	-	5	-	-	530
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.031
HCM Control Delay (s/veh)	13	8.5	0.2	-	8.9	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	698	311	33
Future Vol, veh/h	23	48	29	698	311	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	784	349	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1199	349	387	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	207	698	1167	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	698	1167	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.68	0.33	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1167	-	388	-	-
HCM Lane V/C Ratio	0.028	-	0.206	-	-
HCM Control Delay (s/veh)	8.2	-	16.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1016	6	18	884	10	22
Future Vol, veh/h	1016	6	18	884	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1092	6	19	951	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1099	0	1610	549
Stage 1	-	-	-	-	1096	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	643	-	97	484
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	643	-	93	484
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	548	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.63	25.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	-	-	72	-
HCM Lane V/C Ratio	0.164	-	-	0.03	-
HCM Control Delay (s/veh)	25.5	-	-	10.8	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Future Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1078	1	1	938	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	945	0	0	1080	0	0	1579	2054	540	1510	2051	474
Stage 1	-	-	-	-	-	-	1107	1107	-	944	944	-
Stage 2	-	-	-	-	-	-	472	947	-	566	1107	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	959	-	-	653	-	-	*120	65	491	140	65	*836
Stage 1	-	-	-	-	-	-	*228	288	-	516	504	-
Stage 2	-	-	-	-	-	-	*789	502	-	481	288	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	959	-	-	653	-	-	*116	63	490	136	64	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*116	63	-	136	64	-
Stage 1	-	-	-	-	-	-	*223	282	-	515	503	-
Stage 2	-	-	-	-	-	-	*776	500	-	470	282	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.28	0.03	24.45	11.45
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	187	45	-	-	4	-	-	570
HCM Lane V/C Ratio	0.011	0.014	-	-	0.002	-	-	0.02
HCM Control Delay (s/veh)	24.4	8.8	0.2	-	10.5	0	-	11.5
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	487	634	15
Future Vol, veh/h	13	22	33	487	634	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	547	712	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1334	712	729	0	-	0
Stage 1	712	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	171	436	884	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	164	436	884	-	-	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	20.6	0.59	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	884	-	270	-	-
HCM Lane V/C Ratio	0.042	-	0.146	-	-
HCM Control Delay (s/veh)	9.3	-	20.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	464	571	43
Future Vol, veh/h	18	55	22	464	571	43
Conflicting Peds, #/hr	0	0	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	494	607	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1188	647	693	0	-	0
Stage 1	647	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	210	474	897	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	456	863	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	18.79	0.42	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	863	-	338	-	-
HCM Lane V/C Ratio	0.027	-	0.23	-	-
HCM Control Delay (s/veh)	9.3	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	791	6	23
Future Vol, veh/h	659	1	14	791	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	869	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1192	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.37
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	825	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	831	0	0	693	0	0	1143	1561	346	1212	1559	416
Stage 1	-	-	-	-	-	-	728	728	-	831	831	-
Stage 2	-	-	-	-	-	-	415	833	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1024	-	-	912	-	-	*272	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	557	539	-
Stage 2	-	-	-	-	-	-	*825	538	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1024	-	-	912	-	-	*262	145	656	229	146	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*262	145	-	229	146	-
Stage 1	-	-	-	-	-	-	*377	422	-	556	538	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.26
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	437	90	-	-	4	-	-	513
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	715	319	33
Future Vol, veh/h	23	48	29	715	319	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	803	358	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1227	358	396	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	199	690	1158	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	690	1158	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.1	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1158	-	377	-	-
HCM Lane V/C Ratio	0.028	-	0.212	-	-
HCM Control Delay (s/veh)	8.2	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1042	6	18	906	10	22
Future Vol, veh/h	1042	6	18	906	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1120	6	19	974	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1127	0	1649	563
Stage 1	-	-	-	-	1124	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	92	474
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	88	474
Mov Cap-2 Maneuver	-	-	-	-	88	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.77
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.172	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Future Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	1	1	961	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	968	0	0	1107	0	0	1618	2105	554	1547	2102	485
Stage 1	-	-	-	-	-	-	1134	1134	-	967	967	-
Stage 2	-	-	-	-	-	-	484	971	-	580	1135	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	935	-	-	638	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	496	489	-
Stage 2	-	-	-	-	-	-	*789	487	-	472	280	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	935	-	-	637	-	-	*106	58	481	126	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	126	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	495	488	-
Stage 2	-	-	-	-	-	-	*776	485	-	461	274	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	25.97	11.66
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	174	44	-	-	4	-	-	552
HCM Lane V/C Ratio	0.012	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	26	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	D	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	499	650	15
Future Vol, veh/h	13	22	33	499	650	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	561	730	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1365	730	747	0	-	0
Stage 1	730	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	164	425	870	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	425	870	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.28	0.58	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	260	-	-
HCM Lane V/C Ratio	0.043	-	0.151	-	-
HCM Control Delay (s/veh)	9.3	-	21.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	792	6	23
Future Vol, veh/h	659	1	14	792	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	870	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1193	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	467	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.38
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	826	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	832	0	0	693	0	0	1143	1562	346	1214	1560	417
Stage 1	-	-	-	-	-	-	728	728	-	832	832	-
Stage 2	-	-	-	-	-	-	415	834	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1023	-	-	912	-	-	*271	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	556	539	-
Stage 2	-	-	-	-	-	-	*825	537	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1022	-	-	912	-	-	*261	145	656	228	145	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*261	145	-	228	145	-
Stage 1	-	-	-	-	-	-	*377	422	-	555	537	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.27
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	90	-	-	4	-	-	512
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	717	326	33
Future Vol, veh/h	23	48	29	717	326	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	806	366	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1237	366	403	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	196	683	1150	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	683	1150	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.31	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	372	-	-
HCM Lane V/C Ratio	0.028	-	0.215	-	-
HCM Control Delay (s/veh)	8.2	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	2	738	351	1
Future Vol, veh/h	3	8	2	738	351	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	3	8	2	777	369	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1151	370	371	0	-	0
Stage 1	370	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	221	680	1199	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	680	1199	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.53	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1199	-	434	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s/veh)	8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1043	6	18	907	10	22
Future Vol, veh/h	1043	6	18	907	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1122	6	19	975	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1128	0	1651	564
Stage 1	-	-	-	-	1125	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	91	474
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	87	474
Mov Cap-2 Maneuver	-	-	-	-	87	-
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.82
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.173	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Future Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	2	1	962	7	1	0	2	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	969	0	0	1108	0	0	1619	2106	555	1548	2104	486
Stage 1	-	-	-	-	-	-	1135	1135	-	968	968	-
Stage 2	-	-	-	-	-	-	484	972	-	580	1136	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	934	-	-	637	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	495	488	-
Stage 2	-	-	-	-	-	-	*789	486	-	472	279	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	934	-	-	637	-	-	*106	58	480	125	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	125	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	494	487	-
Stage 2	-	-	-	-	-	-	*776	485	-	460	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	21.57	11.68
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	44	-	-	4	-	-	551
HCM Lane V/C Ratio	0.014	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	21.6	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	505	654	15
Future Vol, veh/h	13	22	33	505	654	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	567	735	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1376	735	752	0	-	0
Stage 1	735	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	162	423	867	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	423	867	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	528	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.51	0.57	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	867	-	257	-	-
HCM Lane V/C Ratio	0.043	-	0.153	-	-
HCM Control Delay (s/veh)	9.3	-	21.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	6	512	665	3
Future Vol, veh/h	2	4	6	512	665	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	2	4	6	539	700	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1253	702	703	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	192	442	904	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	442	904	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.98	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	904	-	307	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s/veh)	9	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	481	588	43
Future Vol, veh/h	18	55	22	481	588	43
Conflicting Peds, #/hr	0	0	46	0	0	46
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	512	626	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1230	672	717	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	198	460	879	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	439	841	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	551	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	19.76	0.41	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	841	-	321	-	-
HCM Lane V/C Ratio	0.028	-	0.242	-	-
HCM Control Delay (s/veh)	9.4	-	19.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	5	494	628	3
Future Vol, veh/h	2	3	5	494	628	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	2	3	5	520	661	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1193	663	664	0	-	0
Stage 1	663	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	208	465	934	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	465	934	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.8	0.09	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	934	-	310	-	-
HCM Lane V/C Ratio	0.006	-	0.017	-	-
HCM Control Delay (s/veh)	8.9	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Exhibit A – Available Sight Distance



IDOT BDE MANUAL - CHAPTER 31

$SSD = 1.47\ Vt + 1.075\ \frac{V^2}{a}$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, ft/s^2 (m/s^2)

$305 = 1.47\ 40(2.5) + 1.075\ (\frac{1600}{11.2})$

HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

AVAILABLE SIGHT DISTANCE

DRAWN: MD CHECKED: JM
DATE: 07-10-24 REV: 10-16-24
PROJECT #: 24-068
EXHIBIT: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Executive Summary
5/8/2024

Village of Western Springs
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Village	$	1,627,899
Total Costs to Village	$	0
Total (Cost)/Benefit to Village (Year 1 - Year 20)	**$**	**1,627,899**

School District 204
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 204	$	3,549,181
Total Costs to SD 204	$	1,125,605
Total (Cost)/Benefit to SD 204 (Year 1 - Year 20)	**$**	**2,423,575**

School District 106
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 106	$	5,429,840
Total Costs to SD 106	$	3,904,784
Total (Cost)/Benefit to SD 106 (Year 1 - Year 20)	**$**	**1,525,056**

Western Springs Library
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Library District	$	374,627
Total Costs to Library District	$	-
Total (Cost)/Benefit to Library District (Year 1 - Year 20)	**$**	**374,627**

Western Springs Park District
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Park District	$	210,634
Total Costs to Park	$	-
Total (Cost)/Benefit to Park District (Year 1 - Year 20)	**$**	**210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Village of Western Springs

Year	Village of Western Springs	Incremental Village Costs	Benefit/(Cost)
Year 1	$ 63,728	$ 0	$ 63,728
Year 2	$ 65,321	$ 0	$ 65,321
Year 3	$ 66,954	$ 0	$ 66,954
Year 4	$ 68,628	$ 0	$ 68,628
Year 5	$ 70,343	$ 0	$ 70,343
Year 6	$ 72,102	$ 0	$ 72,102
Year 7	$ 73,904	$ 0	$ 73,904
Year 8	$ 75,752	$ 0	$ 75,752
Year 9	$ 77,646	$ 0	$ 77,646
Year 10	$ 79,587	$ 0	$ 79,587
Year 11	$ 81,577	$ 0	$ 81,577
Year 12	$ 83,616	$ 0	$ 83,616
Year 13	$ 85,706	$ 0	$ 85,706
Year 14	$ 87,849	$ 0	$ 87,849
Year 15	$ 90,045	$ 0	$ 90,045
Year 16	$ 92,297	$ 0	$ 92,297
Year 17	$ 94,604	$ 0	$ 94,604
Year 18	$ 96,969	$ 0	$ 96,969
Year 19	$ 99,393	$ 0	$ 99,393
Year 20	$ 101,878	$ 0	$ 101,878
Total	**$ 1,627,899**	**$ 0**	**$ 1,627,899**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Library

Year	Library District	Incremental Costs	Benefit/(Cost)
Year 1	$ 14,666	$ 0	$ 14,666
Year 2	$ 15,032	$ 0	$ 15,032
Year 3	$ 15,408	$ 0	$ 15,408
Year 4	$ 15,793	$ 0	$ 15,793
Year 5	$ 16,188	$ 0	$ 16,188
Year 6	$ 16,593	$ 0	$ 16,593
Year 7	$ 17,008	$ 0	$ 17,008
Year 8	$ 17,433	$ 0	$ 17,433
Year 9	$ 17,869	$ 0	$ 17,869
Year 10	$ 18,315	$ 0	$ 18,315
Year 11	$ 18,773	$ 0	$ 18,773
Year 12	$ 19,243	$ 0	$ 19,243
Year 13	$ 19,724	$ 0	$ 19,724
Year 14	$ 20,217	$ 0	$ 20,217
Year 15	$ 20,722	$ 0	$ 20,722
Year 16	$ 21,240	$ 0	$ 21,240
Year 17	$ 21,771	$ 0	$ 21,771
Year 18	$ 22,315	$ 0	$ 22,315
Year 19	$ 22,873	$ 0	$ 22,873
Year 20	$ 23,445	$ 0	$ 23,445
Total	**$ 374,627**	**$ 0**	**$ 374,627**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Park District

Year	Western Springs Park District	Incremental Costs	Benefit/(Cost)
Year 1	$ 8,246	$ 0	$ 8,246
Year 2	$ 8,452	$ 0	$ 8,452
Year 3	$ 8,663	$ 0	$ 8,663
Year 4	$ 8,880	$ 0	$ 8,880
Year 5	$ 9,102	$ 0	$ 9,102
Year 6	$ 9,329	$ 0	$ 9,329
Year 7	$ 9,562	$ 0	$ 9,562
Year 8	$ 9,802	$ 0	$ 9,802
Year 9	$ 10,047	$ 0	$ 10,047
Year 10	$ 10,298	$ 0	$ 10,298
Year 11	$ 10,555	$ 0	$ 10,555
Year 12	$ 10,819	$ 0	$ 10,819
Year 13	$ 11,090	$ 0	$ 11,090
Year 14	$ 11,367	$ 0	$ 11,367
Year 15	$ 11,651	$ 0	$ 11,651
Year 16	$ 11,942	$ 0	$ 11,942
Year 17	$ 12,241	$ 0	$ 12,241
Year 18	$ 12,547	$ 0	$ 12,547
Year 19	$ 12,860	$ 0	$ 12,860
Year 20	$ 13,182	$ 0	$ 13,182
Total	**$ 210,634**	**$ 0**	**$ 210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Lyons 204

Year	School District 204 Property Taxes	Incremental Student Costs	Benefit/(Cost)
Year 1	$ 138,940	$ 37,909	$ 101,031
Year 2	$ 142,414	$ 39,415	$ 102,999
Year 3	$ 145,974	$ 40,980	$ 104,994
Year 4	$ 149,623	$ 42,608	$ 107,015
Year 5	$ 153,364	$ 44,301	$ 109,063
Year 6	$ 157,198	$ 46,060	$ 111,138
Year 7	$ 161,128	$ 47,890	$ 113,238
Year 8	$ 165,156	$ 49,792	$ 115,364
Year 9	$ 169,285	$ 51,770	$ 117,515
Year 10	$ 173,517	$ 53,827	$ 119,691
Year 11	$ 177,855	$ 55,965	$ 121,891
Year 12	$ 182,302	$ 58,188	$ 124,114
Year 13	$ 186,859	$ 60,499	$ 126,360
Year 14	$ 191,531	$ 62,902	$ 128,628
Year 15	$ 196,319	$ 65,401	$ 130,918
Year 16	$ 201,227	$ 67,999	$ 133,228
Year 17	$ 206,258	$ 70,700	$ 135,558
Year 18	$ 211,414	$ 73,508	$ 137,906
Year 19	$ 216,699	$ 76,428	$ 140,271
Year 20	$ 222,117	$ 79,464	$ 142,653
Total	**$ 3,549,181**	**$ 1,125,605**	**$ 2,423,575**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary LaGrange Highlands 106

Year	School District 106 Property Taxes	School District 106 Incremental Student Costs	Benefit/(Cost)
Year 1	$ 212,563	$ 131,508	$ 81,055
Year 2	$ 217,877	$ 136,732	$ 81,145
Year 3	$ 223,324	$ 142,163	$ 81,161
Year 4	$ 228,907	$ 147,810	$ 81,097
Year 5	$ 234,629	$ 153,681	$ 80,948
Year 6	$ 240,495	$ 159,786	$ 80,709
Year 7	$ 246,508	$ 166,133	$ 80,374
Year 8	$ 252,670	$ 172,732	$ 79,938
Year 9	$ 258,987	$ 179,593	$ 79,393
Year 10	$ 265,462	$ 186,727	$ 78,734
Year 11	$ 272,098	$ 194,144	$ 77,954
Year 12	$ 278,901	$ 201,856	$ 77,044
Year 13	$ 285,873	$ 209,874	$ 75,999
Year 14	$ 293,020	$ 218,211	$ 74,809
Year 15	$ 300,345	$ 226,879	$ 73,467
Year 16	$ 307,854	$ 235,891	$ 71,963
Year 17	$ 315,550	$ 245,261	$ 70,289
Year 18	$ 323,439	$ 255,003	$ 68,436
Year 19	$ 331,525	$ 265,133	$ 66,392
Year 20	$ 339,813	$ 275,664	$ 64,149
Total	**$ 5,429,840**	**$ 3,904,784**	**$ 1,525,056**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Fair Market Value Assumptions

Type of Units	Number of Units	Unit Chunk Price	Discount Factor	Estimated FMV for Purposes of County Assessor	Estimated Taxes Per Unit
End Units	10	$ 850,000	15%	$ 722,500	$ 15,714
Middle & Duplex Units	19	$ 800,000	15%	$ 680,000	$ 14,790
Total Units	29				

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Tax Assumptions - Tax Year 2022 Tax Rates

Assessment Ratio	10%
Equalization Multiplier	2.9237
Total Tax Rate	7.439%
Lyons School District 204 Tax Rate	2.3590%
LaGrange Highlands District 106 Tax Rate	3.6090%
Village of Western Springs	1.0820%
Western Springs Library	0.2490%
Western Springs Park District	0.1400%
Annual Reassessment Growth Rate	2.50%

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Estiamted Fair Market Value									
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255	$ 8,802,961
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820	$ 15,741,765
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075	$ 24,544,726
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 438,142	$ 449,095	$ 460,323	$ 471,831	$ 483,627	$ 495,717	$ 508,110	$ 520,813	$ 533,833

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18
Estiamted Fair Market Value									
End Units	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692
Middle & Duplex Units	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308
Total Estimated FMV	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 547,179	$ 560,858	$ 574,880	$ 589,252	$ 603,983	$ 619,083	$ 634,560	$ 650,424	$ 666,684

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 19	Year 20
Estiamted Fair Market Value		
End Units	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%
Equalization Multiplier	2.9237	2.9237
Total	7.4390%	7.4390%
Taxes to from the Development	$ 683,352	$ 700,435

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 63,728	$ 65,321	$ 66,954	$ 68,628	$ 70,343	$ 72,102	$ 73,904	$ 75,752

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 77,646	$ 79,587	$ 81,577	$ 83,616	$ 85,706	$ 87,849

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 90,045	$ 92,297	$ 94,604	$ 96,969	$ 99,393	$ 101,878

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 138,940	$ 142,414	$ 145,974	$ 149,623	$ 153,364	$ 157,198	$ 161,128	$ 165,156

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 169,285	$ 173,517	$ 177,855	$ 182,302	$ 186,859	$ 191,531

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 196,319	$ 201,227	$ 206,258	$ 211,414	$ 216,699	$ 222,117

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 212,563	$ 217,877	$ 223,324	$ 228,907	$ 234,629	$ 240,495	$ 246,508	$ 252,670

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 258,987	$ 265,462	$ 272,098	$ 278,901	$ 285,873	$ 293,020

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 300,345	$ 307,854	$ 315,550	$ 323,439	$ 331,525	$ 339,813

McNaughton Devleopment
Heritage Crossing
Total
Library District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Library District Rate	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
Taxes to from the Development	$ 14,666	$ 15,032	$ 15,408	$ 15,793	$ 16,188	$ 16,593	$ 17,008	$ 17,433

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
$ 17,869	$ 18,315	$ 18,773	$ 19,243	$ 19,724	$ 20,217	$ 20,722	$ 21,240	$ 21,771	$ 22,315	$ 22,873	$ 23,445

McNaughton Devleopment
Heritage Crossing
Total
Park District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Psrk Rate	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
Taxes to from the Development	$ 8,246	$ 8,452	$ 8,663	$ 8,880	$ 9,102	$ 9,329	$ 9,562	$ 9,802

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
$ 10,047	$ 10,298	$ 10,555	$ 10,819	$ 11,090	$ 11,367	$ 11,651	$ 11,942	$ 12,241	$ 12,547	$ 12,860	$ 13,182

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School Children

Single-Family Attached Townhomes

Grades K-8

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0.000	0%	0.000	0.000
End Unit 3-Bed	10	0.292	0%	0.292	2.920
Middle & Duplex Unit 3-Bed	19	0.292	0%	0.292	5.548
4-Bedroom	0	0.000	0%	0.000	0.000
Total K-8 Children Produced					8.468

Grades 9-12

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0	0%	0.000	0.000
End Unit Master Down 3-Bed	10	0.059	0%	0.059	0.590
Middle Unit Master Down 3-Bed	19	0.059	0%	0.059	1.121
4-Bedroom	0	0.000	0%	0.000	0.000
Total 9-12 Children Produced					1.711

Total Children Produced **10.179**

Population Figures Based on Illinois School Consulting Services - Associated Municipal Consultants, Inc. Naperville, Illinois Copyright 1996

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204 Cost
Cost Assumptions

Operational Cost Per Student 2023	$ 22,156	

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%
Five-Year Average		3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106 Cost
Cost Assumptions

Operational Cost Per Student	$	15,530

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%
Five-Year Average		3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 22,156	$ 23,036	$ 23,951	$ 24,903	$ 25,892	$ 26,920	$ 27,989	$ 29,101
Total Incremental Costs of Students to SD 204 from Development	$ 37,909	$ 39,415	$ 40,980	$ 42,608	$ 44,301	$ 46,060	$ 47,890	$ 49,792

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 30,257	$ 31,459	$ 32,709	$ 34,008	$ 35,359	$ 36,763
Total Incremental Costs of Students to SD 204 from Development	$ 51,770	$ 53,827	$ 55,965	$ 58,188	$ 60,499	$ 62,902

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 38,224	$ 39,742	$ 41,321	$ 42,962	$ 44,669	$ 46,443
Total Incremental Costs of Students to SD 204 from Development	$ 65,401	$ 67,999	$ 70,700	$ 73,508	$ 76,428	$ 79,464

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 15,530	$ 16,147	$ 16,788	$ 17,455	$ 18,148	$ 18,869	$ 19,619	$ 20,398
Total Incremental Costs of Students to SD 106 from Development	$ 131,508	$ 136,732	$ 142,163	$ 147,810	$ 153,681	$ 159,786	$ 166,133	$ 172,732

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 21,208	$ 22,051	$ 22,927	$ 23,838	$ 24,784	$ 25,769
Total Incremental Costs of Students to SD 106 from Development	$ 179,593	$ 186,727	$ 194,144	$ 201,856	$ 209,874	$ 218,211

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 26,793	$ 27,857	$ 28,963	$ 30,114	$ 31,310	$ 32,554
Total Incremental Costs of Students to SD 106 from Development	$ 226,879	$ 235,891	$ 245,261	$ 255,003	$ 265,133	$ 275,664

Heritage Crossing
Western Springs
Construction Schedule, Routing & Phasing
October 11, 2024

Construction Schedule

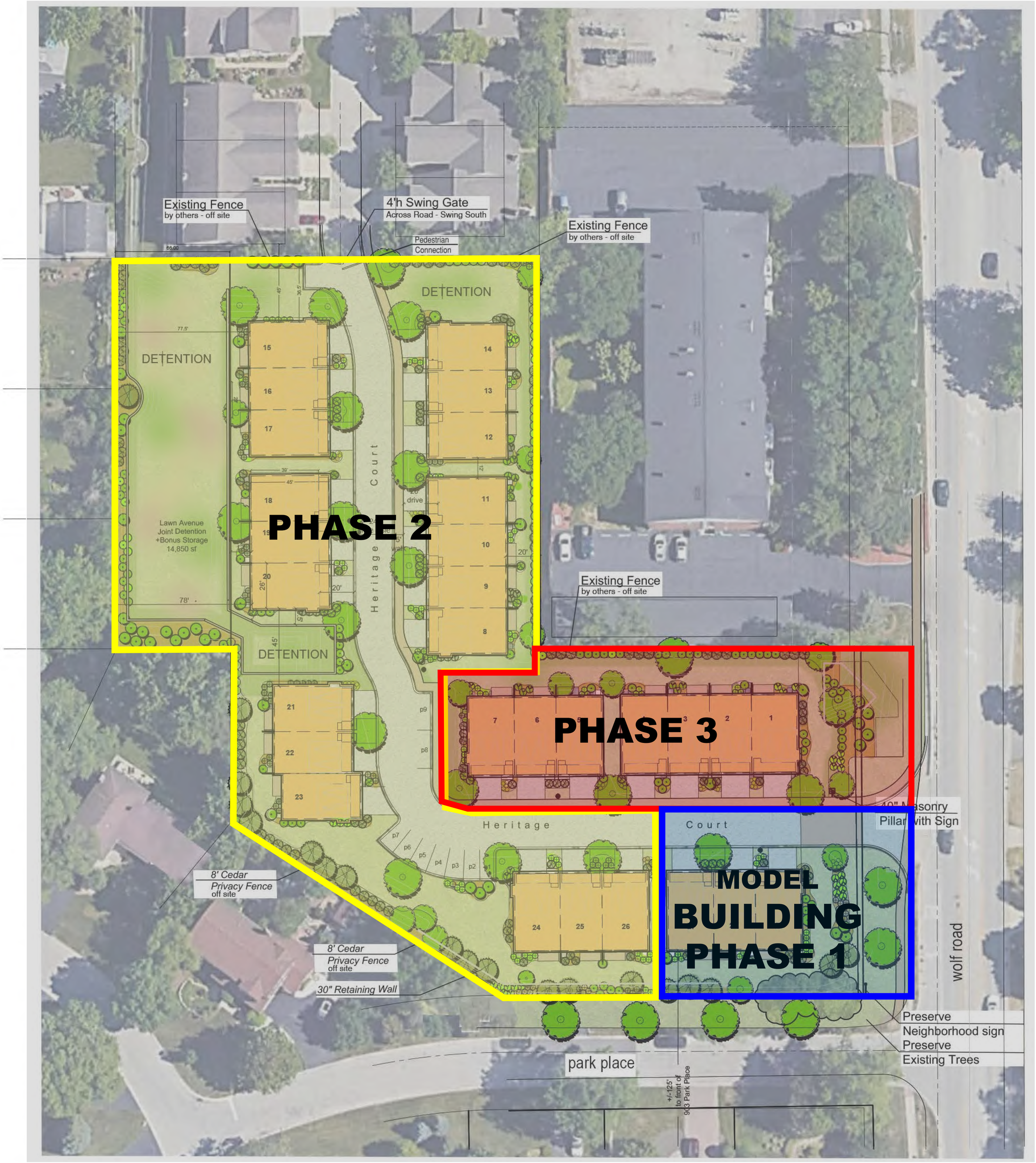
- Building demolition & site clearing of parking lot **– 1/13/025 – 2/7/2025**
- Site development work - **2/9/2025 – 4/18/2025**
    - Removal of existing storm sewer
    - Pond excavation and site grading
    - Commence construction on model home building Units #26 - # 28
    - Installation of new underground utilities – sanitary sewer, storm sewer and water main
    - Retaining wall construction
    - Site grading
    - Paving
- Commence construction on Units # 8 thru # 20 - **4/21/2025**
- Landscape – **5/5/2025 – 6/20/2025**
    - Native planting pond bottom / trees and shrubs
    - Fence replacement neighbors southwest of the site
    - Entryway landscaping
    - Installation of access gate at the existing Heritage Court
    - Common area landscaping to be complete with surrounding rowhome units
- Model Grand Opening - **9/5/2025**
- Commence construction on Units # 1 thru # 7 & # 21 thru #25 **– 1/5/2026**
- Close out sales - **12/31/2026**

Routing

All construction traffic will access and leave the property via the subdivision entrance at Wolf Road. Access to and from 55th Street via the existing Heritage Court is prohibited.

Phasing

- All development work shall be completed in a single phase of work
- To promote an orderly development of the site construction of the units will be completed in three phases according to the dates reference above
    - Model Building Units #26 - # 28
    - Northern Buildings Units # 8 thru # 20
    - Southern Buildings Units # 1 thru # 7 & # 21 thru #25



North

0 30 60 120

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: November 5, 2024

BSB DESIGN
BSBDESIGN.COM

L0.01
Site Plan

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)

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ACKNOWLEDGMENT AND AGREEMENT
TO COMPLY WITH THE OBLIGATIONS, CONDITIONS, TERMS AND PROVISIONS
SET FORTH IN WESTERN SPRINGS ORDINANCE NO. 25-_____

I, Paul McNaughton, Managing Member of McNaughton Development, LLC, the contract purchaser of the above-described Property (5600 South Wolf Road) and the prospective acquirer of the Lawn Avenue ROW Parcel, have read and understand each of the above obligations, conditions, terms and provisions of this Ordinance that are required of the McNaughton Development, LLC, including the obligations, conditions, terms and provisions set forth at Section 3 above, and have signed this ACKNOWLEDGMENT AND AGREEMENT, as an authorized corporate officer of McNaughton Development, LLC, to confirm that McNaughton Development, LLC shall be bound by such obligations, conditions, terms and provisions.

McNaughton Development, LLC

By:_____
Managing Member

Name:____Paul McNaughton_____

Date:_____, 2025.

By:_____
Notary Public

Date:_____, 2025.

Commission Expires:_____

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Ordinance now on file in my office, entitled:

AN ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting on the ___ day of _____, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the ____ day of _____, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this _____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

[SEAL]

2028786_2

ORDINANCE NO. 25-
VOTE:
AYES:
NAYS:
ABSTAIN:
ABSENT:
DATE: _____, 2025.
OTHER: None.
NOTE: Voting: 5 of 6 Affirmative Vote of Trustees for Passage.

AN ORDINANCE APPROVING AND AUTHORIZING THE VACATION OF THE 66.00 FEET BY 225.00 FEET PORTION OF THE LAWN AVENUE RIGHT-OF-WAY ADJACENT TO AND WEST OF THE 5600 SOUTH WOLF ROAD PROPERTY LOCATED IN WESTERN SPRINGS, ILLINOIS AND LOT 5 AND LOT 6 OF MAXTED SUBDIVISION, AND APPROVING A PLAT OF VACATION AND RESERVATION OF A STORMWATER DRAINAGE EASEMENT (APPLICANT: MCNAUGHTON DEVELOPMENT, LLC)

WHEREAS, the Village President and Board of Trustees (the "Village Board" or the "Corporate Authorities") of the Village of Western Springs ("Village") approved a revised policy governing the disposal of public right-of-way property on April 24, 2017, under Resolution No. 17-2384; said policy is entitled "Village Excess Rights-of-Way Disposal Policy and Procedures Dated April 24, 2017" (the "ROW Policy"). The ROW Policy incorporates the requirements for vacating public rights-of-way as set forth in the State Vacation Statute (65 ILCS 5/11-91-1, *et seq*.) and Section 10-10-20 (Vacations) of the Western Springs Municipal Code; and

WHEREAS, while not expressly listed in the ROW Policy, the sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of the Lawn Avenue right-of-way located adjacent to and immediately West of Lot 5 and Lot 6 of Maxted Subdivision (the "ROW Parcel") is public property that may be vacated by the Village, in the sole discretion of the Board of Trustees, in accordance with the provisions of the ROW Policy; and

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a plat of vacation relating to the ROW Parcel, which is utilized as a stormwater detention basin (the "Lawn Avenue Detention Basin"), so the Applicant could purchase title to the ROW Parcel and incorporate it into the Development. The Application also requested approval of a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary

Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief") in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "Lawn Avenue ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the Development; and

WHEREAS, the Applicant's Lawn Avenue ROW Parcel purchase proposal is an integral part of the Development because it allows for the Applicant to meet certain zoning bulk regulations and to expand the size and capacity of the existing Lawn Avenue Detention Basin and to construct two (2) additional, new on-site stormwater detention facilities referred to on the updated Site Plan as "Outlot 31 Detention Basin" and "Outlot 33 Detention Basin"; and

WHEREAS, a public hearing has been conducted by the Western Springs Plan Commission relative to the Application, including the requested purchase offer for the Lawn Avenue ROW Parcel, during public meetings held on August 13, 2024, September 24, 2024 and November 18, 2024, as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO. Prior to conducting the public hearing, a notice of public hearing was published in a newspaper, a "zoning application pending" sign was posted at the Property, a public hearing notice was mailed to those persons who are required to be mailed the public hearing notice in compliance with applicable State law and the DCO, and separate agendas for each of the Plan Commission meetings where the public hearing sessions were held were posted as required by the Open Meetings Act; and

WHEREAS, during the Plan Commission public hearing sessions, the Applicant's request to purchase the ROW Parcel and the Village's intent to consider the vacation of the Lawn Avenue ROW Parcel and conveyance to the Applicant for the purpose of incorporating the Lawn Avenue ROW Parcel into the Development and to require that the Applicant complete certain enhancements to the existing stormwater detention basin located within the Lawn Avenue ROW Parcel for the benefit of the Development were discussed with the attendees of the public hearing. The Plan Commission, in place of the Village Board, conducted the public hearing to consider the merits of the Applicant's purchase offer regarding the vacation of the Lawn Avenue ROW Parcel and provided an opportunity for the adjacent property owners and taxpayers of record to the Lawn Avenue ROW Parcel and the public to provide comments relative to the Applicant's purchase proposal and intended use for the Lawn Avenue ROW Parcel. With the passage of Plan Commission Recommendation No. 24-02, the Plan Commission favorably recommended the approval of the Development, the Development Zoning Relief, and the vacation of the Lawn Avenue ROW Parcel and its conveyance to the Applicant to allow the Lawn Avenue ROW Parcel to be incorporated into the Development and to require that the Applicant complete certain enhancements to the existing stormwater detention basin located within the Lawn Avenue ROW Parcel for the benefit of the Development; and

WHEREAS, after completion of the required public hearing before the Village Plan Commission, on **_____, 2025, with the passage of Ordinance No. 25-_____,** the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval of the Development Zoning Relief (the "Approval Ordinance"); and

WHEREAS, pursuant to Sections A and B of the ROW Policy, the Corporate Authorities of the Village may deviate from the ROW Policy or grant an exception or variation from any provision of the ROW Policy under the appropriate circumstances, provided such deviation, exemption or variation is approved by a three-fourths vote of the Corporate Authorities of the Village, and, in the case of a proposed residential planned development, the Village Board "reserves the right to set a price for the sale of such right-of-way based on: (1) the fair market value of the property; or (2) on the benefits (as documented in the public record by the Village Board) which will accrue to the Village as a result of the vacation and the incorporation of the vacated right-of-way into the Development." In lieu of paying the fair market value that is assigned to the Lawn Avenue ROW Parcel under the ROW Policy (which equals $408,375.00), the Applicant has requested that the Village Board approve the vacation of the Lawn Avenue ROW Parcel in exchange for the Applicant completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of $505,729.00 based on the Lawn Avenue Detention Pond Budget, which is part of the Application; and

WHEREAS, because the Application involves a proposed residential planned development, the Corporate Authorities of the Village find that it is appropriate to grant the following deviations, exceptions or variations from the ROW Policy: (1) to offer the Lawn Avenue ROW Parcel for sale only to the Applicant for purposes of its incorporation into the Development to provide for enhanced stormwater drainage facilities, and to not offer the Lawn Avenue ROW Parcel to all adjacent property owners for purposes of submitting competing purchase proposals; and (2) to vacate and convey title to the Lawn Avenue ROW Parcel to the Applicant, at no cost, in exchange for the construction of enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, provided that the final actual, documented construction costs are

approximately $505,729.00, as confirmed by the Village Engineer; and

WHEREAS, in accordance with the ROW Policy, the Board of Trustees of the Village has agreed to vacate and convey title to the Lawn Avenue ROW Parcel to the Applicant in exchange for the Applicant completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of $505,729.00 based on the Lawn Avenue Detention Pond Budget, subject to the Applicant agreeing to the conditions set forth in Section 3 below, including the acceptance **of a storm water drainage easement**, as shown on the attached Plat of Vacation of Public Right Of Way and Stormwater Drainage Easement dated **July 10, 2024** and prepared by DesignTek Engineering, Inc., a copy of which is attached hereto as **Exhibit "1"** (the "Plat of ROW Vacation"); and

WHEREAS, the Board of Trustees has determined that it is protective of the health, wealth and safety of and in the best interests of the Village to sell this Lawn Avenue ROW Parcel at the above-stated purchase contribution obligation (i.e., completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of $505,729.00) to the Applicant, based on the benefits that will accrue to the Village as a result of the development of the Lawn Avenue ROW Parcel in conjunction with the development of the adjacent 5600 South Wolf Road property by the Applicant, including the return of the property to the real estate tax rolls as a tax producing parcel and the removal of the property from the Village's inventory of property that has to be maintained and insured at the Village's cost; and

WHEREAS, pursuant to the State Vacation Statute (65 ILCS 5/11-91-1), Section 10-10-20 (Vacations) of the Western Springs Municipal Code, and the ROW Policy, the President and Board of Trustees have determined that the public interests of the Village will be subserved by vacating the Lawn Avenue ROW Parcel for the reasons stated in the Whereas paragraphs of this Ordinance, that the vacation will relieve the Village from the burden and responsibility of the Lawn Avenue ROW Parcel, and that, in the judgment of the President and Board of Trustees, based on a review of comparable real estate sales data, the estimated fair market value of the Lawn Avenue ROW Parcel to be acquired by the Applicant, subject to the conditions set forth in Section 3 below, is **Four Hundred Eight Thousand Three Hundred Seventy-Five and 00/100 Dollars ($408,375.00)**; and

WHEREAS, pursuant to Section A and Section B of the ROW Policy, the Corporate Authorities of the Village may deviate from the ROW Policy or grant an exception or variation from any provision of the ROW Policy under the appropriate circumstances, provided such deviation, exemption or variation is approved by a three-fourths vote of the Corporate Authorities of the Village; and

WHEREAS, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and the vacation of the Lawn Avenue ROW Parcel, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village consider the vacation of the Lawn Avenue ROW Parcel as part of the approval of the Development; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025,** the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the vacation of the Lawn Avenue ROW Parcel as part of the approval of the Development, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its February 10, 2025 open public meeting, the Corporate Authorities of the Village unanimously passed a motion finding and determining that there are appropriate circumstances, based on the statements set forth in the above Whereas paragraphs of this Ordinance and those other statements and documents that are part of the public record relating to this matter, to approve all necessary deviations from the ROW Policy and to grant all necessary exceptions or variations from any procedural requirements of the ROW Policy in order to approve this Ordinance; and

WHEREAS, the Board of Trustees of the Village is authorized to pass this Ordinance pursuant to the State Vacation Statute (65 ILCS 5/11-91-1, *et seq.*) and the applicable provisions of the ROW Policy.

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. Each of the Whereas paragraphs set forth above are incorporated into Section 1 of this Ordinance as material provisions.

SECTION 2. Approval of Right-of-Way Vacation. Pursuant to Chapter 65 of the Illinois Compiled Statutes, Section 5/11-91-1, as amended, the Board of Trustees of the Village of Western Springs vacate that portion of the dedicated Lawn Avenue right-of-way (the "Lawn Avenue ROW Parcel") legally described as follows:

> THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS

The Lawn Avenue ROW Parcel described above contains approximately 14,850.00 square feet.

The property legally described above is shown on the Plat of ROW Vacation and Reservation of Stormwater Drainage Easement dated **July 10, 2024** and prepared by DesignTek Engineering, Inc., a copy of which is attached hereto as **Exhibit "1"** (the "Plat of ROW Vacation"). The property legally described above is vacated, SUBJECT TO THE CONDITIONS SET FORTH IN SECTION 3 BELOW.

SECTION 3. Conditions of Approval for Right-of-Way Vacation. The vacation of the property legally

described in Section 2 above is subject to the following conditions, each of which have been agreed to by the Applicant, as evidenced by the Applicant's execution of the "Acknowledgement And Agreement To Comply With The Obligations, Conditions, Terms And Provisions" of this Ordinance, which is attached to this Ordinance as **Exhibit "1":**

A. **Payment of "Like-Kind, Like Value" Consideration / Purchase Price.** In lieu of paying the fair market value assigned to the Lawn Avenue ROW Parcel as set forth in the ROW Policy (which equals $408,375.00), the Village agrees to vacate and convey title to the Lawn Avenue ROW Parcel to the Applicant in exchange for the Applicant completing equivalent "like-kind, like value" improvements consisting of the enhanced stormwater drainage improvements to the existing Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin at an estimated construction cost of $505,729.00 based on the Lawn Avenue Detention Pond Budget and the Site Plan dated November 5, 2024 as part of the Applicant's construction of the Development. As part of the Village's construction inspection and post-construction approval process of the enhanced and newly constructed stormwater drainage facilities, including the Lawn Avenue Detention Basin, the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, within five (5) business days of any written request for Development-related documents from the Village, the Applicant shall provide the Village with true and accurate copies of expenditure summaries, as prepared and certified by the Applicant, with appropriate supporting documentation (i.e., construction escrow statements, paid invoices, proof of payment to contractors, subcontractors and suppliers, executed liens waivers, contractor's sworn statement and affidavit, lender financing statements, lender progress payments and evidence of wire transfers, etc.), as deemed reasonably necessary by the Village (i.e., Village Manager, Village Engineer or Village Attorney) to allow the Village Engineer to verify the actual incurred costs of the enhancements to and construction of those stormwater drainage facilities. If the actual cost of the construction of the stormwater drainage improvements is less than the fair market value assigned to the Lawn Avenue ROW Parcel as set forth in the ROW Policy ($408,375.00), as determined by the Village Engineer, the Applicant shall pay to the Village the dollar amount representing the difference between the actual cost of the construction of the stormwater drainage improvements and the fair market value assigned to the Lawn Avenue ROW Parcel ($408,375.00) upon written demand of the Village. If necessary, the Parties agree to meet and confer upon written notice delivered by the requesting Party to the other Party in order to discuss and attempt to resolve any dispute(s) relative to the Village Engineer's verification of the actual incurred costs of the enhancements to and construction of those stormwater drainage facilities. If the Parties are not able to resolve the dispute(s) within thirty (30) calendar days of their initial meet / confer session, the Village Engineer's final determination shall be a final, non-appealable decision within the Village's organizational hierarchy for purposes of resolving the matter and any further dispute of the matter shall be redressed in a court of equity or law. If, after acquiring title to the Lawn Avenue ROW Parcel, the Applicant, or its successors-in-interests, successor owners, assignees or transferees, do not construct the Development or do not complete the enhanced stormwater drainage improvements to the Lawn Avenue Detention Basin and the construction of the Outlot 31 Detention Basin and the Outlot 33 Detention Basin, as shown on the Village-approved Development Plans, the Applicant or its successors-in-interests, successor owners, assignees or transferees shall be obligated to pay the Village an amount equal to

$408,375.00 plus all of the incurred reimbursable costs and fees that are payable to the Village under the ROW Policy (e.g., engineering, legal, survey fees and 10% administrative fees, etc.) upon written demand of the Village.

B. Reservation of New Storm Water Drainage Easement. The reservation of a new sixty-six (66.00) foot by two hundred twenty-five (225.00) foot wide storm water drainage easement area that extends over the entire Lawn Avenue ROW Parcel, as shown on the attached Plat of ROW Vacation (**Exhibit "1"**), is agreed to by the Applicant for the purposes set forth in the easement description contained in the Plat of ROW Vacation.

C. No Effect on Other Recorded Easements and Encumbrances. This Vacation Ordinance does not affect or alter any other private or public easements or encumbrances of record.

D. Conveyance of Title. Title to the Lawn Avenue ROW Parcel shall be conveyed to and accepted by the Applicant by the passage of this Vacation Ordinance in "AS-IS, WHERE-IS" condition, including all known and unknown environmental conditions (including but not limited to soil and groundwater) and soil quality conditions. The Village makes no representations, warranties or guaranties of any kind in regard to the Lawn Avenue ROW Parcel to the Applicant, except that the Lawn Avenue ROW Parcel will be zoned as an R-4 - Multiple-Family Residence District property as defined under the Village's Development Control Ordinance.

E. Hold Harmless, Defense and Indemnity. In the event that litigation of any kind is filed by any person against the Village and/or its appointed or elected officials, president and trustees, agents, engineers, attorneys, employees and representatives ("Village Affiliates") relating to any matters covered by or contained in this Ordinance, the Applicant and/or their successors-in-interest, successor owners, assignees or transferees of the 5600 South Wolf Road property shall defend, hold harmless and indemnify the Village and the Village Affiliates from and against any and all claims, actions, lawsuits, damages, judgments, costs, expenses and liabilities of any kind, including the reasonable fees and expenses of any attorneys, expert witnesses, staff time and consultants, defenses costs, court costs and fines, asserted against the Village and/or the Village Affiliates or sought to be imposed upon the Village and/or the Village Affiliates, individually, jointly or severally, and which arise directly or indirectly out of or in connection in any way with this Ordinance or the vacation of the Lawn Avenue ROW Parcel. The Village shall select its own attorney(s) to defend itself and the Village Affiliates in any such litigation or claims. The scope of the above Hold Harmless, Defense and Indemnity provisions specifically include any claims, causes of action or lawsuits for damages or other relief filed by any person(s), and the award and/or payment of such damages, judgments, costs, expenses and liabilities of any kind or other relief arising out of or relating to the vacation and conveyance of the Lawn Avenue ROW Parcel to the Applicant where the claims, causes of action or lawsuits and damages, judgments, costs, expenses and liabilities of any kind or other relief are filed pursuant to 65 ILCS 5/11-91-1.

F. Reimbursement of Village for Enforcement of This Ordinance and its Conditions. If the Village files a lawsuit to enforce any provision or condition of this Ordinance, the Applicant and/or their successors-in-interest, successor owners, assignees or transferees of the 5600 South Wolf Road property shall reimburse the Village for its reasonable attorney's fees and litigation defenses

costs in prosecuting the litigation. This hold harmless and indemnity provision is a covenant that runs with the land and shall survive the vacation and conveyance of title of the Lawn Avenue ROW Parcel into the 5600 South Wolf Road property.

G. Compliance With ROW Policy. Compliance with the other applicable terms and conditions of the ROW Policy.

H. Acknowledgement and Agreement to Comply With the Obligations, Conditions, Terms and Provisions Set Forth in This Ordinance. The Applicant agrees to comply with all of the obligations, conditions, terms and provisions of this Ordinance. The Applicant acknowledges and agrees that the Village is not and will not be, in any way, liable for any damages or injuries that may be sustained as a result of the Village's approval of this Ordinance or its review and approval of any plans for the Development or the issuance of any permits for the Development, and that the Village's review and approval of any such plans and issuance of any such permits do not and will not, in any way, be deemed to insure the Applicant against third party claims, causes of action and damages or injuries of any kind at any time. The Applicant consents to the approvals granted in the Approval Ordinance and all conditions of those approvals and also to the recordation of the Approval Ordinance and this Ordinance with the CCCORD against title to the Property for the purpose of providing notice that the Applicant, and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property, are subject to the obligations, conditions, terms and provisions of the Approval Ordinance and this Ordinance.

Upon satisfaction of the above conditions, and the filing of this Ordinance and the Plat of ROW Vacation with the Cook County Clerk's Office, Recording Division ("CCCORD"), the Lawn Avenue ROW Parcel legally described in Section 2 above shall be vacated and title to the vacated right-of-way shall be conveyed and pass to the legal owner of the adjacent property commonly known as 5600 South Wolf Road, Western Springs, Illinois **(P.I.N.: 18-18-200-038-000).** In consideration of the vacation of the right-of-way, the Applicant agrees to each of the easement reservations specifically listed above in this Section 3 and as shown on the attached Plat of ROW Vacation.

SECTION 4. Filing Ordinance With the Cook County Clerk's Office, Recording Division. The Village shall cause a certified copy of this Ordinance and the original of the attached Plat of ROW Vacation to be recorded with the CCCORD upon satisfaction of the conditions set forth in Section 3 above. The Village shall provide the Applicant with a CCCORD-filed stamped copy of this Ordinance and the Plat of ROW Vacation.

SECTION 5. Repealer; Severability. All Ordinances or parts of Ordinances in conflict herewith are, to the extent of such conflict, hereby repealed, and each section, paragraph, clause and provision of this Ordinance is separable, and if any provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any part thereof, other than that part affected by such decision.

SECTION 6. Termination of Ordinance for Failure of Developer to Acquire Title to the Property. This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner.

In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract**.**

SECTION 7. Publication; Effective Date. This Ordinance shall be in full force and effect from and after its passage and due publication in pamphlet form according to law.

PASSED by an affirmative vote of at least five (5) of six (6) of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the ____ day of _____, 2025, and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the ____ day of _____, 2025.

_____
Ed Tymick, Village Clerk

Exhibit "1"

ORDINANCE NO. 25-_____

ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE OBLIGATIONS, CONDITIONS, TERMS AND PROVISIONS SET FORTH IN WESTERN SPRINGS ORDINANCE NO. 25-_____

I, Paul McNaughton, Member of McNaughton Development, LLC, the contract purchaser of the above-described Property and the prospective acquirer of the Lawn Avenue ROW Parcel, have read and understand each of the above obligations, conditions, terms and provisions of this Right-of-Way Vacation Ordinance that are required of the McNaughton Development, LLC, including the obligations, conditions, terms and provisions set forth at Section 3 above, and have signed this ACKNOWLEDGMENT AND AGREEMENT, as an authorized corporate officer of McNaughton Development, LLC, to confirm that McNaughton Development, LLC shall be bound by such obligations, conditions, terms and provisions.

McNaughton Development, LLC

By:_____
Paul McNaughton, Member

Date:_____, 2025.

Exhibit "2"

Plat of ROW Vacation and Reservation of Stormwater Drainage Easement dated July 10, 2024 and prepared by DesignTek Engineering, Inc.

(attached)

PLAT OF VACATION

OF

PUBLIC RIGHT OF WAY

FOR THE PURPOSE OF VACATING A HERETOFORE DEDICATED RIGHT OF WAY IN THE NORTHEAST FRACTIONAL 1/4 OF SECTION 18, IN TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

SITE DATA

AREA = 14,850 SQ. FT. OR 0.34 ACRES

PARCEL IDENTIFICATION NUMBER

UNKNOWN

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

- N NORTH
- S SOUTH
- E EAST
- W WEST
- (###') RECORD/DEED
- ###' MEASURED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED ARE THE OWNERS OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND THAT AS SUCH OWNERS, THEY HAVE CAUSED THE SAME TO BE PLATTED AND VACATED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, THEY DO HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF VACATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 10TH DAY OF JULY, A.D., 20 24.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

SEND FUTURE TAX BILLS TO:

_____
_____
_____

REVISIONS

NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF VACATION
FOR
LAWN AVENUE
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

R/W VACATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Lawn Avenue.dwg Plot Date:10/15/2024 2:08:47 PM By: SJL

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached document is a true and correct copy of that certain Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-____

AN ORDINANCE APPROVING AND AUTHORIZING THE VACATION OF THE 66.00 FEET BY 225.00 FEET PORTION OF THE LAWN AVENUE RIGHT-OF-WAY ADJACENT TO AND WEST OF THE 5600 SOUTH WOLF ROAD PROPERTY LOCATED IN WESTERN SPRINGS, ILLINOIS AND LOT 5 AND LOT 6 OF MAXTED SUBDIVISION ANDAPPROVING A PLAT OF VACATION AND RESERVATION OF A STORMWATER DRAINAGE EASEMENT (Applicant: McNaughton Development, LLC)

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting on the ___ day of _____, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the ____ day of _____, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ___ day of _____, 2025.

_____
Edward Tymick, Village Clerk

[SEAL]

ORDINANCE NO. 25-_____
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: _____, 2025.
OTHER: Published in pamphlet form.

AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A PLAT OF ABROGATION FOR STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT LOCATED WITHIN THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS FOR THE CONSTRUCTION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of vacation relating to a portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, , open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The

swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

WHEREAS, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

WHEREAS, after completion of the required public hearing before the Village Plan Commission, on **_____, 2025** with the passage of **Ordinance No. 25-_____**, the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval the Development Zoning Relief; and

WHEREAS, pursuant to Subsection 10-10-3(F) (Procedures And Requirements For Subdivision Approval; Final Plat) of the DCO and Section 11-12-8, Section 11-12-12 and Section 11-15-1 of the Illinois Municipal Code (65 ILCS 5/11-12-8; 11-12-12 and 11-15-1) (Approval of Maps and Plats; Prerequisite to Recording), the Applicant has filed with the Village for its approval a Plat of Abrogation For Storm Sewer Easement And Public Utility Easement prepared by DesignTek Engineering, Inc. with a **latest revision date of October 15, 2024** ("Plat"), which abrogates the easements imposed on the Property as legally described on the attached Plat. A copy of the Plat is attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, the Applicant desires to have the Plat approved by the Village prior to the Village's approval of the Applicant's "Final Plat of Heritage Crossing Resubdivision", that was prepared by DesignTek Engineering, Inc. with a latest revision date of **December 9, 2024** ("Plat of Subdivision"), which has been submitted to the Village for its review and approval in accordance with the applicable provisions of the DCO; and

WHEREAS, at open public meetings held on **January 9, 2025 and January 16, 2025,** the Village's Planning and Zoning Committee ("Committee") reviewed the Plat and Plan Commission

Recommendation No. 24-02 and received input from the Village staff and provided an opportunity for public input on the Plat. At its January 16, 2025 meeting, the Committee voted to recommend that the Village Board consider the Plat by the Village Board; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025,** the Village Board discussed the Plat and Plan Commission Recommendation No. 24-02 and the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the Plat. At the **_____, 2025** public meeting, the Village Board considered the findings and recommendations of the Plan Commission and the Committee, and the input from the Village staff and the public, and agreed to **approve / deny** the Plat; and

WHEREAS, in accordance with the authority set forth in the applicable provisions of the DCO and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including 65 ILCS 5/11-15-1, and the contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970, the Village President and Board of Trustees of the Village of Western Springs find that the **approval / denial** of this Ordinance and the Plat is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the general public.

BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Ordinance.

SECTION 2: Approval and Execution of Plat. The Village President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the attached "Plat of Abrogation For Storm Sewer Easement And Public Utility Easement" that was prepared by **DesignTek Engineering, Inc. with a latest revision date of October 15, 2024** ("Plat"), a copy of which is attached hereto as **Exhibit "A"**. The Village Board further authorizes and directs the Village President, the Village Clerk, the Village Plan Commission Chairperson, the Village Treasurer, the Village Engineer and the Village Attorney, or their designees, and any other Village officials, as needed, to execute the final version of the Plat, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and such other documents as are necessary to fulfill the Village's obligations under this Ordinance.

SECTION 3: Delivery of Executed Plat for Filing With the Cook County Clerk's Office, Recording Division. After approval of this Ordinance, certified copies of this Ordinance and a fully executed original of the attached Plat shall be filed by the Village, at the Applicant's cost, with the Cook County Clerk's Office, Recording Division. Thereafter, the Village shall provide the Applicant with Cook County Clerk's Office, Recording Division filed-stamped copies of this Ordinance and the Plat for purposes of record retention and compliance with the terms of this Ordinance.

SECTION 4: Repealer; Severability. Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict, and the text of this Ordinance shall control and govern**.** Each Section, paragraph, clause and provision of this Ordinance is separable, and if any such Section, paragraph, clause or provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any portion hereof, other than that part affected by such decision.

SECTION 5: Termination of Ordinance for Failure of Developer to Acquire Title to the Property. This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 6: Effective Date. This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by State law.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at Regular Meeting thereof, held on the ___ day of _____, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the ____ day of _____,, 2025.

_____
Edward Tymick, Village Clerk

Exhibit "A"

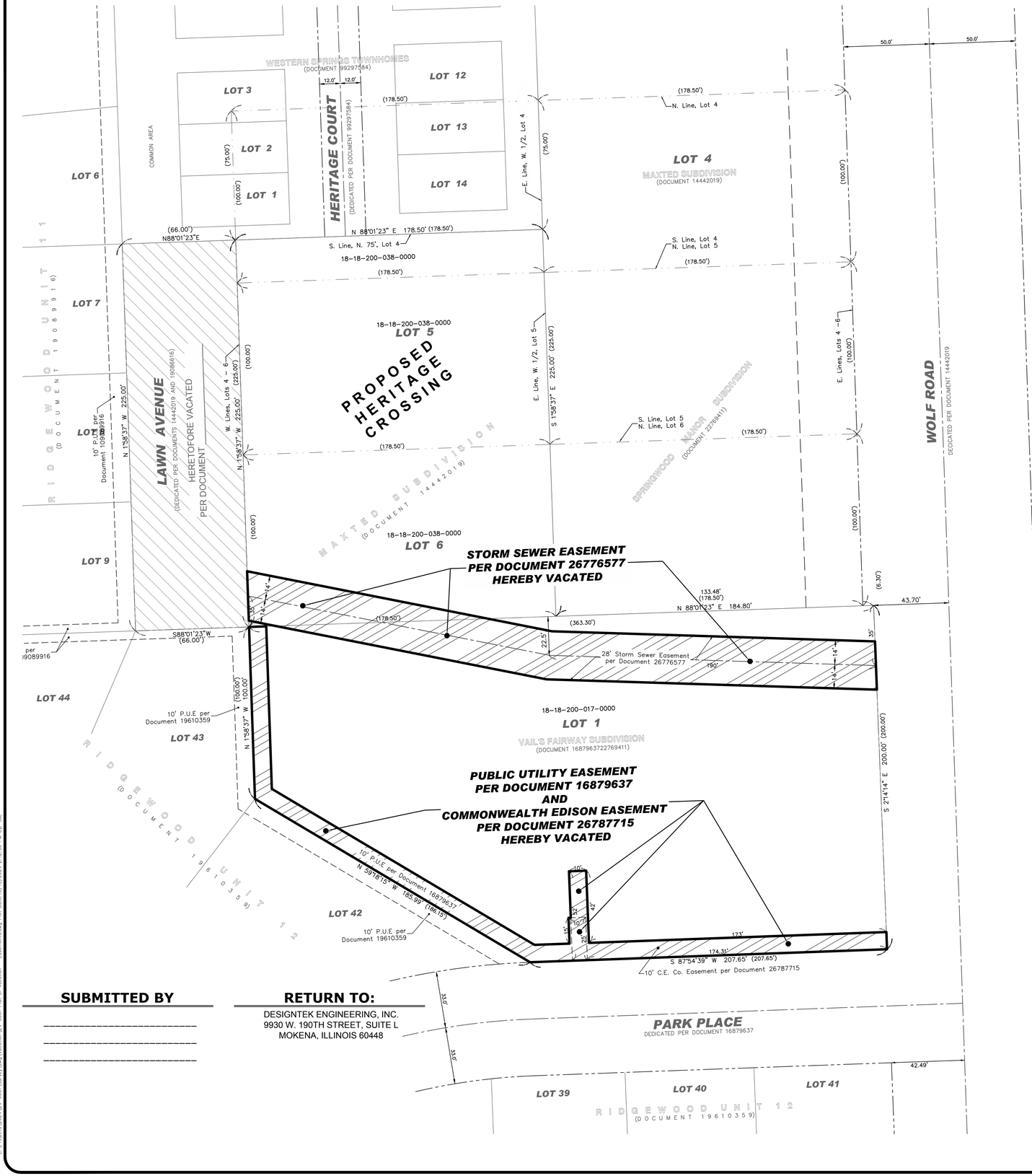
Plat of Abrogation For Storm Sewer Easement And Public Utility Easement
prepared by DesignTek Engineering, Inc.
with a latest revision date of October 15, 2024

(attached)

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER
18-18-200-038-0000
18-18-200-017-0000

ADDRESSES
1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES
- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS
- N NORTH
- S SOUTH
- E EAST
- W WEST
- (####) RECORD/DEED
- #### MEASURED
- P.U.E. PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-_____

AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A PLAT OF ABROGATION FOR STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT LOCATED WITHIN THE PROPERTY COMMONLY KNOWN AS 5600 SOUTH WOLF ROAD WESTERN SPRINGS, ILLINOIS FOR THE CONSTRUCTION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting thereof, held on the ___ day of _____, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the ____ day of _____, 2025.

I further certify that the vote on the question of the passage of the Ordinance by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this ___ day of _____, 2025.

_____
Edward Tymick, Village Clerk

ORDINANCE NO. 25-_____
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: _____, 2025.
OTHER: Published in pamphlet form.

AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A FINAL PLAT OF HERITAGE CROSSING RESUBDIVISION FOR THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT TO BE CONSTRUCTED AT 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC.

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue, which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, an expanded stormwater detention basin system and stormwater management facilities, open space, landscaped areas and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowner's Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent

subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

WHEREAS, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

WHEREAS, after completion of the required public hearing before the Village Plan Commission, on **_____, 2025, with the passage of Ordinance No. 25-_____,** the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval of the Development Zoning Relief (the "Approval Ordinance"); and

WHEREAS, pursuant to Subsection 10-10-3(F) (Procedures And Requirements For Subdivision Approval; Final Plat) of the DCO and Section 11-15-1 of the Illinois Municipal Code (65 ILCS 5/11-15-1) (Approval of Maps and Plats; Prerequisite to Recording), the Applicant is not allowed to subdivide or develop the Property until a final plat (excluding an administratively approved plat of consolidation) has been reviewed by the Western Springs Plan Commission ("Plan Commission") for its compliance with the applicable DCO provisions, subject to the Village Board approved variations, and has been reviewed and approved by the Village Board; and

WHEREAS, as part of the Village-approved single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Project per Subsection 10-8-8(C) of the DCO, the Applicant filed with the Village a "Final Plat of Heritage Crossing Resubdivision", that was prepared by DesignTek Engineering, Inc. with a latest revision date of **December 9, 2024** ("Plat"), for Village review and approval in accordance with the applicable provisions of the DCO. The Plat has been

reviewed and revised as part of the Village plan review process. A copy of the Plat is attached hereto as **Exhibit "A"** and made a part hereof; and

WHEREAS, at open public meetings held on **January 9, 2025 and January 16, 2025,** the Village's Planning and Zoning Committee ("Committee") reviewed the Plat and Plan Commission Recommendation No. 24-02 and received input from the Village staff and provided an opportunity for public input on the Plat. At its January 16, 2025 meeting, the Committee voted to recommend that the Village Board consider the Plat; and

WHEREAS, at open public meetings held on January 13, 2025, January 27, 2025 and February 10, 2025, the Village Board discussed the Plat and Plan Commission Recommendation No. 24-02 and the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the Plat. At the **_____, 2025** public meeting, the Village Board considered the findings and recommendations of the Plan Commission and the Committee, the input from the Village staff and the public, and agreed to **approve / deny** the Plat; and

WHEREAS, in accordance with the authority set forth in the applicable provisions of the DCO and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), including 65 ILCS 5/11-15-1, and the contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) of the Constitution of the State of Illinois of 1970, the Village President and Board of Trustees of the Village of Western Springs find that the **approval / denial** of this Ordinance and the Plat is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the general public.

BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Ordinance.

SECTION 2: Approval and Execution of Plat. The Village President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the attached "Final Plat of Heritage Crossing Resubdivision" that was prepared by **DesignTek Engineering, Inc. with a latest revision date of December 9, 2024** ("Plat"), a copy of which is attached hereto as **Exhibit "A"**. The Village Board further authorizes and directs the Village President, the Village Clerk, the Village Plan Commission Chairperson, the Village Treasurer, the Village Engineer and the Village Attorney, or their designees, and any other Village officials, as needed, to execute the final version of the Plat, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and such other documents as are necessary to fulfill the Village's obligations under this Ordinance.

SECTION 3: Delivery of Executed Plat for Filing With the Cook County Clerk's Office, Recording Division. After approval of this Ordinance, certified copies of this Ordinance and a fully executed original of the attached Plat shall be filed by the Village, at the Applicant's cost, with the Cook County Clerk's Office, Recording Division. Thereafter, the Village shall provide the Applicant with Cook County Clerk's Office, Recording Division filed-stamped copies of this Ordinance and the Plat for purposes of record retention and compliance with the terms of this Ordinance.

SECTION 4: Repealer; Severability. Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict, and the text of this Ordinance shall control and govern**.** Each Section, paragraph, clause and provision of this Ordinance is separable, and if any such Section, paragraph, clause or provision is held unconstitutional or invalid for any reason, such decision shall not affect the remainder of this Ordinance, nor any portion hereof, other than that part affected by such decision.

SECTION 5: Termination of Ordinance for Failure of Developer to Acquire Title to the Property. This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that could be filed against the Village arising out of or related to the termination of this Ordinance based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 6: Effective Date. This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by State law.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a **Regular Meeting thereof, held on the ____ day of _____, 2025,** and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on the ____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

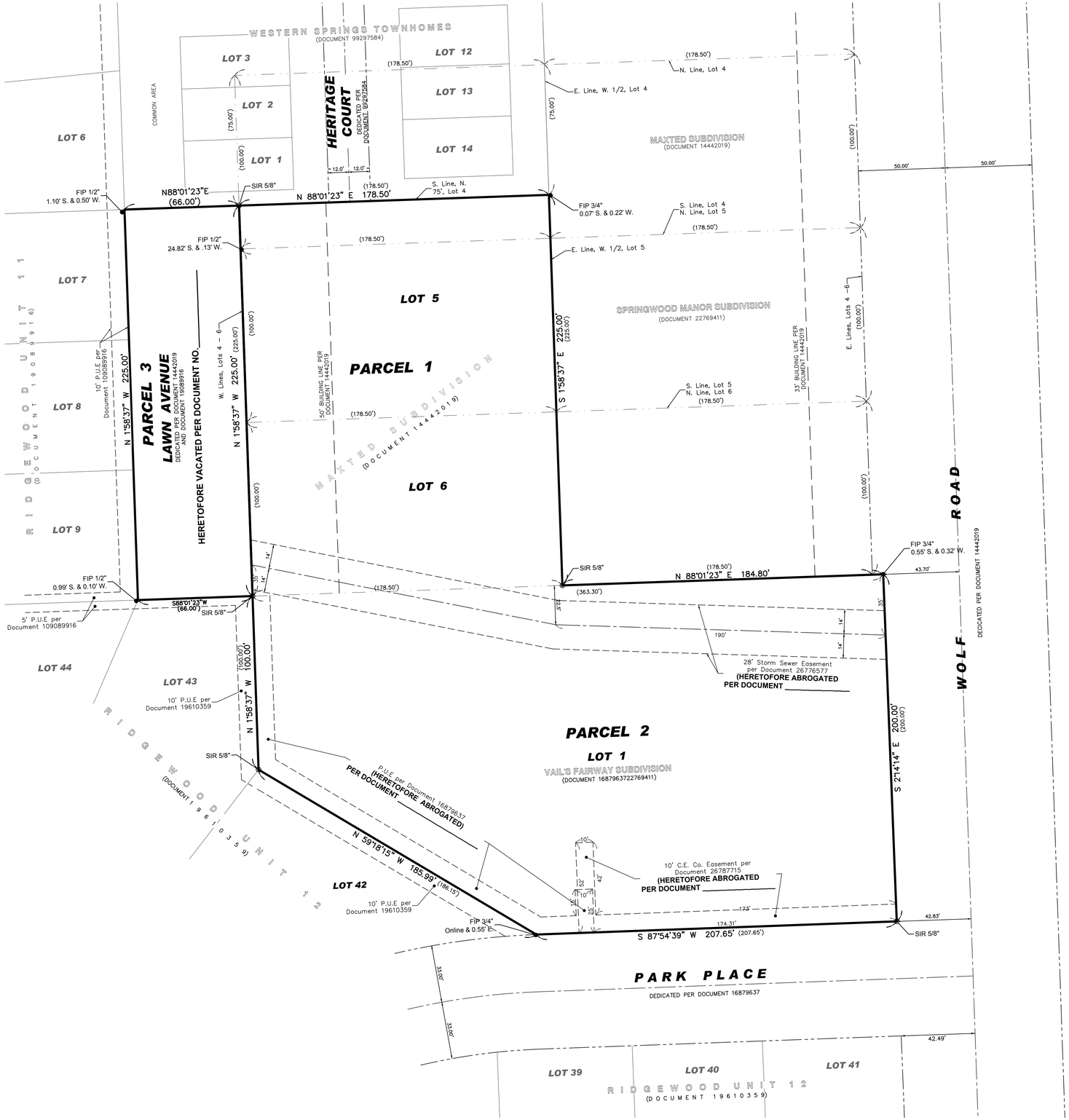
Exhibit "A"

Final Plat of Heritage Crossing Resubdivision prepared by DesignTek Engineering, Inc. with a latest revision date of December 9, 2024

(attached)

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

ADDRESSES

PARCEL 1: 1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

PARCEL 2: 5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

EXISTING SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
AREA (PARCEL 3) =	14,850 SQ. FT. OR 0.34 ACRES
GROSS AREA =	120,009 SQ. FT. OR 2.75 ACRES

LEGEND

● FIP	FOUND IRON PIPE
○ SIR	SET 5/8" IRON ROD
———	BOUNDARY LINE
———	LOT LINE
——— · ———	RIGHT-OF-WAY LINE
——— · ———	CENTERLINE
- - - - -	EXISTING EASEMENT LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

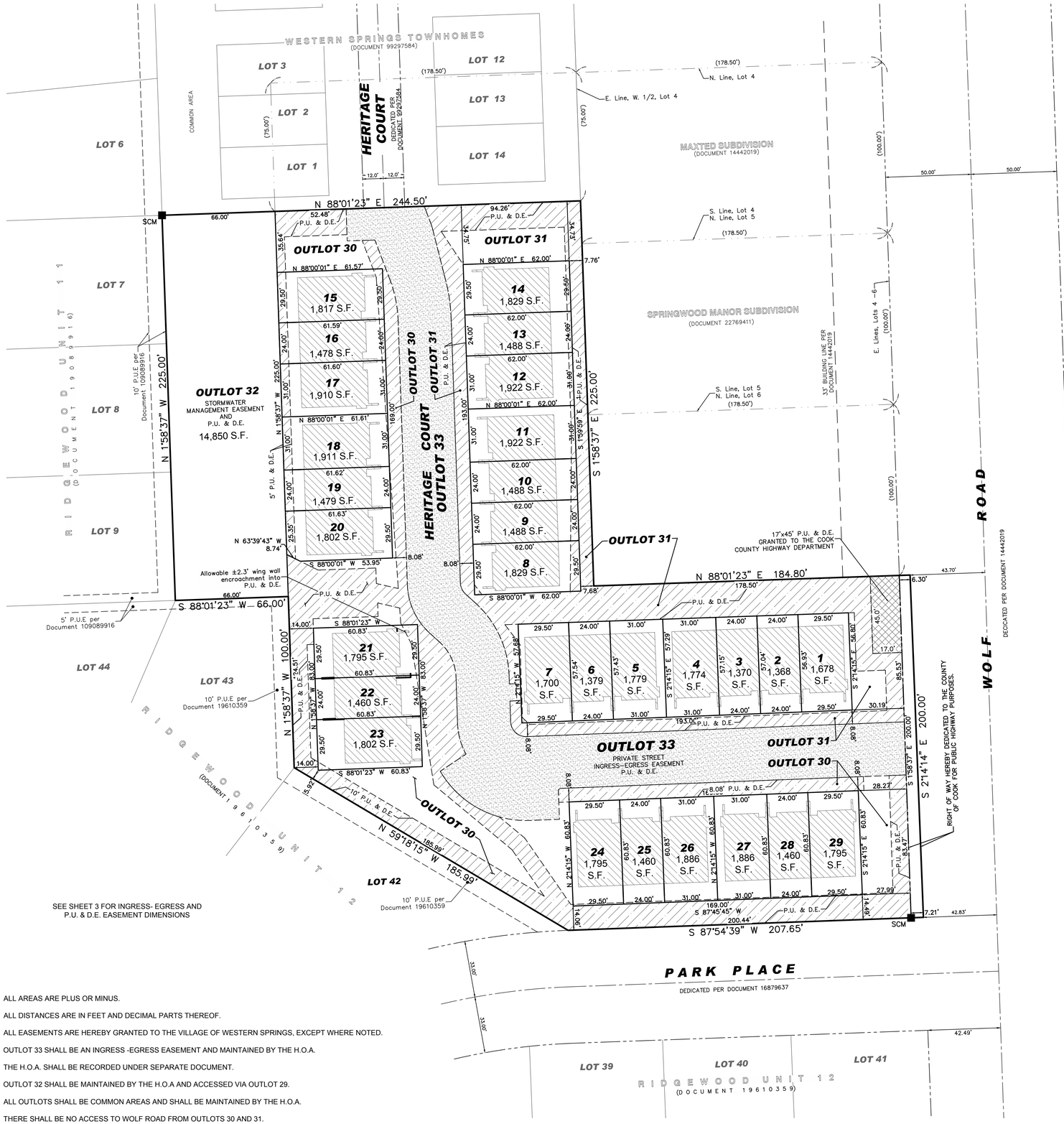
1 OF 4

EXISTING GEOMETRY

L:\Projects\2024\24-0001\Survey\Dwg\Subdivision\24-0001 FP Rev. 3.dwg Plot Date:12/17/2024 5:33:59 AM By: SJL

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



1. ALL AREAS ARE PLUS OR MINUS.
2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
3. ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
4. OUTLOT 33 SHALL BE AN INGRESS -EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
5. THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
6. OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A AND ACCESSED VIA OUTLOT 29.
7. ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
8. THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

N

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE:	18-18-200-038-0000
PARCEL TWO:	18-18-200-017-0000
PARCEL THREE:	UNKNOWN

AREA SUMMARY

GROSS AREA:	120,009 SQ. FT. OR 2.75 AC.
BUILDABLE LOTS 1-29:	48,839 SQ. FT OR 1.18 AC.
OUTLOT 30	20,733 SQ. FT. OR 0.40 AC.
OUTLOT 31	14,952 SQ. FT. OR 0.43 AC.
OUTLOT 32	14,850 SQ. FT. OR 0.29 AC
OUTLOT 33:	19,393 SQ. FT. OR 0.34 AC.
WOLF RD. DEDICATION:	1,351 SQ. FT. OR 0.03 AC.

LEGEND

FIP	FOUND IRON PIPE
SIP	SET 1" x 24" IRON PIPE
SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
E.T.B.E.	EXCEPTION TO BLANKET EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		
L	ARC DIMENSION		
R	RADIUS DIMENSION		
CH	CHORD BEARING/DISTANCE		

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT RECONFIGURATION	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. No.: 184-003740

DEI

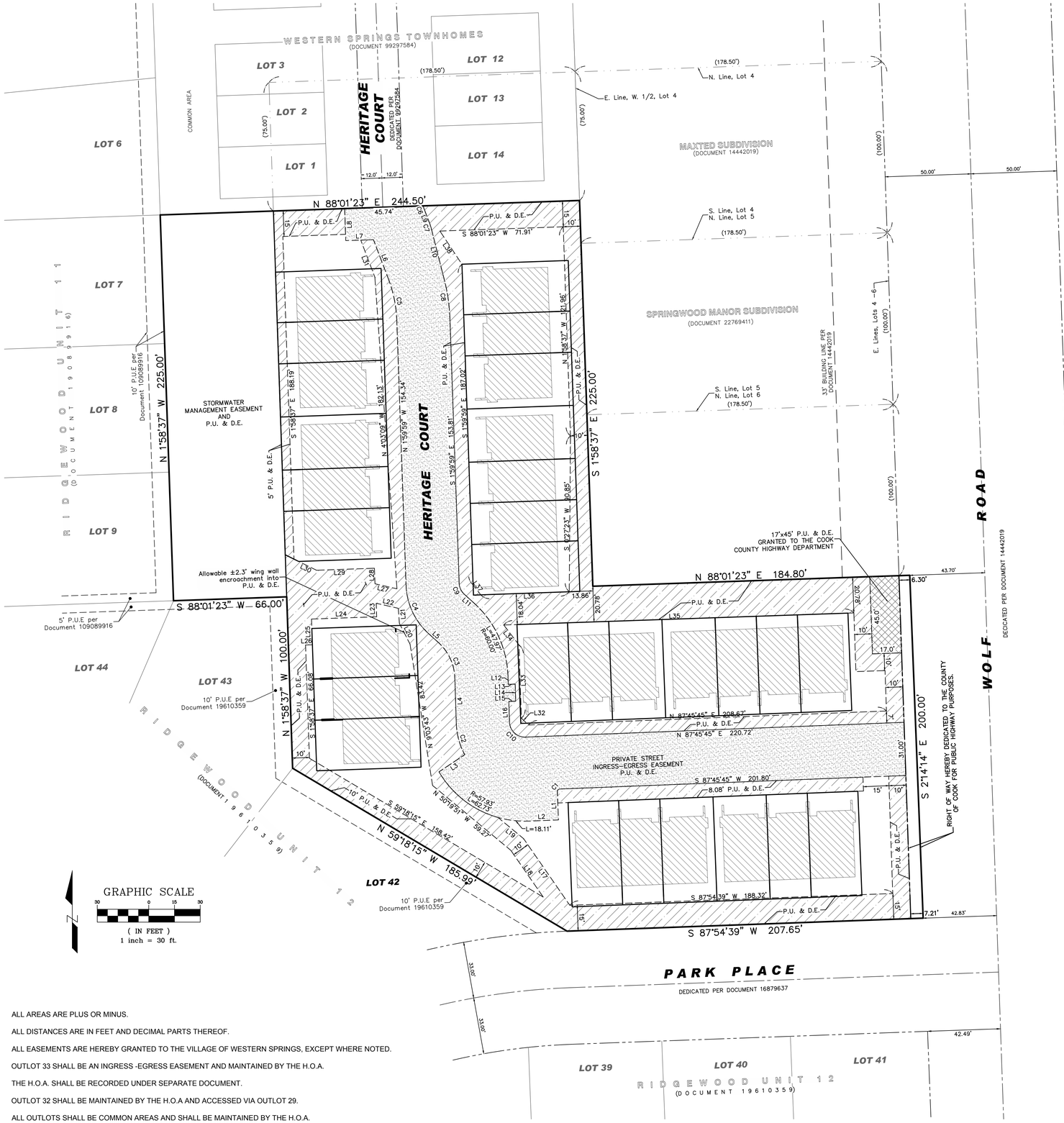
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

2 OF 4

PROPOSED GEOMETRY

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



LEGEND

● FIP	FOUND IRON PIPE
○ SIP	SET 1" x 24" IRON PIPE
■ SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

Parcel Line Table

Line #	Length	Direction
L1	16.50	S02° 14' 15"E
L3	18.04	N56° 16' 49"E
L4	26.84	N01° 51' 56"W
L5	8.03	N47° 40' 37"W
L6	24.41	N20° 51' 06"W
L7	16.15	S88° 10' 48"W
L8	18.67	N01° 58' 35"W
L9	7.26	S20° 53' 37"E
L10	27.84	S14° 13' 17"E
L11	8.03	S47° 40' 37"E
L12	4.76	S01° 51' 56"E
L13	4.02	N87° 58' 53"E
L14	10.00	S01° 44' 56"E
L15	4.00	S87° 58' 53"W
L16	12.07	S01° 51' 56"E
L17	47.24	N34° 43' 32"W
L18	33.09	N34° 43' 32"W
L19	19.34	N50° 19' 51"W
L20	13.60	N27° 06' 22"W
L21	8.81	N04° 03' 09"W

Parcel Line Table

Line #	Length	Direction
L22	13.22	S77° 07' 24"E
L23	7.91	N01° 58' 37"W
L24	38.00	N88° 01' 23"E
L25	15.00	S01° 58' 37"E
L26	4.00	N88° 01' 23"E
L27	13.14	N77° 07' 19"W
L28	9.06	N01° 58' 37"W
L29	33.80	S88° 01' 22"W
L30	14.63	S63° 39' 43"E
L31	23.08	S20° 51' 06"E
L32	5.78	S47° 02' 19"E
L33	42.73	S01° 52' 29"E
L34	14.62	S37° 20' 25"E
L35	204.14	N88° 01' 23"E
L36	51.58	N88° 00' 01"E
L37	7.33	N37° 20' 25"W

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	2.36	1.50	90.00	S42° 45' 45"W	2.12
C2	18.74	40.00	26.85	N15° 17' 25"W	18.57
C3	23.19	29.00	45.81	N24° 46' 16"W	22.57
C4	31.89	40.00	45.68	N24° 50' 18"W	31.05
C5	24.79	75.50	18.81	N11° 22' 59"W	24.68
C6	3.64	54.81	3.80	S20° 01' 02"E	3.64
C7	3.03	26.00	6.67	S17° 33' 27"E	3.03
C8	26.01	106.50	13.99	S08° 59' 46"E	25.94
C9	7.74	9.10	48.74	S23° 11' 03"E	7.51
C10	14.19	9.04	89.92	S47° 02' 25"E	12.77

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REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

3 OF 4

EASEMENT DETAIL

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.

RESERVED FOR: COOK COUNTY RECORDER

COOK COUNTY CLERK STAMP

OWNER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS SHOWN ON THIS PLAT OF SUBDIVISION, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED:

THE UNDERSIGNED FURTHER CERTIFIES THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS SUBDIVISION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE SUBDIVISION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THE SUBDIVISION PLAT.

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HEREBY CERTIFIES THAT THE SUBJECT PROPERTY IS LOCATED WITH THE FOLLOWING SCHOOL DISTRICTS:

ELEMENTARY: 106 (LA GRANGE HIGHLAND) HIGH SCHOOL: 204 (LYONS TOWNSHIP HIGH SCHOOL)

BY: McNAUGHTON DEVELOPMENT LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

BY: _____
MANAGER

ADDRESS: 11S220 JACKSON STREET, SUITE #101, BURR RIDGE, ILLINOIS 60527

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF MCNAUGHTON DEVELOPMENT, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THIS SUBDIVISION PLAT AS OWNER, AS SUCH MANAGER OF McNAUGHTON DEVELOPMENT LLC, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED THIS SUBDIVISION PLAT AS HIS FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY OR OTHER ENTITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, A.D. 20___.

_____
NOTARY PUBLIC

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, CHAIRMAN OF THE VILLAGE OF WESTERN SPRINGS PLAN COMMISSION, SO CERTIFY THAT

ON THIS _____ DAY OF _____, A.D., 20_____, THIS PLAT OF SUBDIVISION WAS DULY APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF WESTERN SPRINGS.

BY: _____ ATTEST: _____
CHAIRMAN SECRETARY

VILLAGE TREASURER CERTIFICATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, COLLECTOR FOR THE VILLAGE OF WESTERN SPRINGS, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THERE ARE NO DELINQUENT OR UNPAID CURRENT FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF, THAT HAVE BEEN APPORTIONED AGAINST THE TRACT LAND LAND INCLUDED IN THIS PLAT.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D., 20_____.

_____
VILLAGE TREASURER

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE PRESIDENT AND THE VILLAGE BOARD OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, IN

ACCORDANCE WITH SUBDIVISION REGULATIONS AT A MEETING HELD THIS _____ DAY OF _____, A.D. 20_____

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

IMPROVEMENTS CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE CLERK OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, HEREBY CERTIFY THAT THIS PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF SAID

VILLAGE AT ITS MEETING HELD ON THE _____ DAY OF _____, A.D. 20_____, AND THAT REQUIRED BOND OR OTHER GUARANTEES HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

BY: _____
VILLAGE CLERK

LAGRANGE HIGHLANDS SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, SUPERVISOR OF THE LAGRANGE HIGHLANDS SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS, OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE PROPOSED SUBDIVISION AND DULY APPROVED BY THE COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED AT _____, COOK COUNTY, ILLINOIS, THIS ___ DAY OF _____, A.D., 20_____.

_____
SUPERVISOR

SURFACE WATER STATEMENT

To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, if such surface water drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains which the owner has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the adjoining property because of the construction of this subdivision.

_____ _____
Owner Professional Engineer

_____ _____
Printed Name Printed Name

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE ENGINEER OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
VILLAGE ENGINEER

REGISTRATION NUMBER _____

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT, CONFORMING TO THE STANDARDS OF THE COOK COUNTY HIGHWAY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS.

DATED THIS _____ DAY OF _____, A.D. 20_____.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

RESPONSIBILITY OF H.O.A., VILLAGE OF WESTERN SPRINGS AND LAGRANGE HIGHLANDS SANITARY DISTRICT

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all landscaping areas within all Lots and Outlots within the subdivision, together with all improvements within the ingress-egress easement, and all storm sewers and structures. The individual homeowners shall be responsible for all sanitary and water services from the public sanitary service connections and B-Boxes to the constructed buildings. The Village of Western Springs shall be responsible for all watermain and structures attached thereto. The LaGrange Highlands Sanitary District shall maintain the sanitary sewer and all structures attached thereto. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

PRIVATE INGRESS - EGRESS PROVISIONS

An easement for ingress and egress over and across the Property for the benefit of the Owner(s) of Subdivision and/or Lots, their heirs, successors, assigns, guests and invitees, as more particularly bounded and described on the Plat. This easement shall be perpetual and shall run with the land.

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all improvements within said ingress and egress areas within the subdivision. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the City shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

STORMWATER MANAGEMENT EASEMENT

Declarant hereby reserves and grants to the Village of Western Springs (Village) easements in, over, under, through, and upon those areas designated on the Plat as 'Stormwater Management Easement,'including but not limited to all outlots (Outlot 30-33 inclusive), and all areas detailed in the Declaration of Covenants Conditions and Restrictions for the Heritage Crossing Townhome Association of Western Springs pertaining to maintenance, repair, and replacement of stormwater management facilities, for purposes of providing adequate stormwater drainage control together with reasonable access thereto. [Continue with the same language currently on the plat in this first paragraph, I don't want to rewrite it all].

In the event the Village shall perform, or have performed on its behalf, removal of any obstruction or alteration to or upon the stormwater facilities drainage easement, as set forth in this easement, The Village shall establish a Special Service Area, pursuant to 35 ILCS 200/27-5 et seq., that includes the entire Premises after the approval of the Planned Development by the Village but prior to the sale and conveyance of title to any Lot to any person by the Developer, which shall govern the Premises for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the SSA Maintained Improvements. The Special Service Area shall be an encumbrance on title to the Premises, including each Lot, Dwelling Unit and Common Areas. The Developer agrees to cooperate with the Village in creating the Special Service Area and agrees not to object to the formation of the Special Service Area, provided the terms of the Special Service Area are consistent with the Development Agreement and this Declaration. In the event the owner of any portion of the Premises (the Developer, the Declarant, the Association, a Dwelling Unit Owner or Owner), at any time, shall fail to maintain, repair or replace the SSA Maintained Improvements, as and when appropriate, and, after receipt of Village notice of such failure and opportunity to cure, the Village shall have the right to levy a special service tax on the parcel(s) where the owner(s) has failed to perform its maintenance, repair or replacement obligations on the Premises, perform such work and receive reimbursement of the costs and expenses it has incurred, including any legal fees and related expenses, engineering fees and related expenses, other consultant fees and related expenses and a reasonable allocation of Village staff and overhead costs. The Village shall not levy a tax in accordance with the Special Service Area unless the applicable owner(s) fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village, as contained in this Agreement and the Declaration. The tax levy by the Village may extend to one owner or a limited number of owners, and not the entire Premises, if such limited tax levy is appropriate. In the event the failure or refusal to fulfill maintenance, repair and replacement obligations or the reimbursement obligation to the Village relates to one or more components of the SSA Maintained Improvements that support or serve the entire Premises or the Development, then the levy shall extend to the Association and each of the property owners of the Development. The maximum tax established for the Special Service Area shall be based on the actual incurred expenses or, if the improvements have not been made yet, the Village Engineer's reasonable, estimated expense for maintenance, repair or replacement of such improvements. If the Association or a property owner(s) shall fail to pay the Special Service Area Tax, the Village shall be authorized to: (1) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations and shall be entitled to recover its actual incurred legal fees and related expenses from the owner(s) who fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village; and (2) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations of the Developer hereunder, including such lien foreclosure action authorized by 65 ILCS 5/11-31-1, as amended, or provided for in 65 ILCS 5-11-31-2, as amended, or similar applicable laws to foreclose on the lien and may collect its reasonable attorney's fees and litigation expenses incurred in the enforcement of the obligations.

COMED COMPANY AND AT & T CORPORATION

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to COMED COMPANY and AT & T CORPORATION, their respective licensees, successors, and assigns, jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked Public Utility & Drainage Easement, or P.U. & D.E." designation), the property designated in the Declaration of Condominium and/or on this plat as 'Common Elements'; and the property designated on the plat as 'common area or areas'; and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked 'Easement', 'Utility Easement', 'Public Utility Easement', 'P.U.E' (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term 'Common Elements' shall have the meaning set forth for such term in the 'Condominium Property Act', Chapter 765 ILCS 605/2, as amended from time to time.

The term 'common area or areas' is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as 'outlots', 'common elements', 'open space', 'open area', 'common ground', 'parking' and 'common area'. The term 'common area or areas', and 'Common Elements' include real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool, retention pond or mechanical equipment. Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

NICOR CORPORATION / NICOR GAS COMPANY PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY OF ILLINOIS, its successors and assigns, in all platted 'easement'areas, streets, alleys, other public ways and places shown on this plat, said easement to be for the installation, maintenance, relocation, renewal and removal of gas mains and appurtenances for the purpose of serving all areas shown on this plat as well as other property, whether or not contiguous thereto. No buildings or other structures shall be constructed or erected in any such 'easement' areas, streets, alleys, or other public ways or places nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

A non-exclusive perpetual easement is hereby reserved and granted to the Village of Western Springs (Village), LaGrange Highlands Sanitary District and their successors and assigns over all areas designated "Public Utility and Drainage Easement" and those areas designated "P.U. & D.E." on the plat, to construct, reconstruct, repair, inspect, maintain and operate various transmissions, distribution, and collection systems, including but not limited to water lines, sanitary sewers and storm sewers, together with any and all necessary valve vaults fire hydrants, manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said Village, over, upon, along, under and through the surface of the property shown on the plat, together with the right of access for necessary labor, materials and equipment to do any of the above work.

The right is also granted to cut down, trim or remove, without obligation to restore or replace any obstruction, including but not limited to trees, shrubs, other plants, structures or improvements on the easement that interfere with the operation of such lines and sewers. No permanent buildings or structures shall be placed on said easement, but same may be used for gardens, landscape areas, and other purposes that do not then or later interfere with the aforesaid uses or rights. Where an easement is used for both sewer and other utilities, the other utility installation shall be subject to the ordinance of the Village of Western Springs and to Village approval as to design and location.

Perpetual easements are hereby reserved for and granted to the Village of Western Springs and other governmental authorities having jurisdiction of the land, over the entire easement area for ingress, egress, and the performance of municipal and other governmental services including water, storm and sanitary sewer service and maintenance and emergency and routine police, fire, and other public safety related services.

COMCAST COMMUNICATIONS PROVISIONS

An easement is hereby reserved and granted to COMCAST COMMUNICATIONS CORPORATION, operating within the Village of Western Springs, it's successors and assigns, jointly and severally, for the installation, maintenance, relocation, renewal and removal of communication and broadcast signal systems in, under, across, along and upon the surface of the property shown on the plat and designated as "Public Utility and Drainage Easement" or "P.U. & D.E." and the property designated on the plat for streets and alleys as required to provide the planned unit development and other property, whether or not contiguous thereto, with communication and broadcast TV services, together with the right to install required service connections for each lot. No buildings or other obstructions shall be constructed or erected in any such "Public Utility and Drainage Easement" or P.U. & D.E." areas, without the prior written consent of grantees. Nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 035-003160, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19810036, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, WHICH HAS ADOPTED A MUNICIPAL PLAN AND IS EXERCISING SPECIAL POWERS AUTHORIZED BY ARTICLE 11, DIVISION 12 OF THE ILLINOIS MUNICIPAL CODE, AS NOW AND HEREAFTER AMENDED AND THAT ALL REGULATIONS ENACTED BY THE VILLAGE OF WESTERN SPRINGS RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT IRON PIPE 1" X 24" WILL BE SET AT ALL LOT CORNERS, BLOCK CORNERS, POINTS OF CURVE, EXCEPT WHERE CONCRETE MONUMENTS ARE INDICATED, AND THAT THE PLAT HEREON DRAWN CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, MAP NUMBER 17031C0467J, EFFECTIVE DATE ON AUGUST 19, 2008.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

ALL CURVE LENGTHS SHOWN ARE ARC DIMENSIONS.

GIVEN UNDER MY HAND AND SEAL AT MOKENA, ILLINOIS, THIS 10th DAY OF JULY A.D., 2024.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. #035-003160
LICENSE EXPIRES ON NOVEMBER 30, 2026

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

Send all future tax bills to:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Submitted by:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Return the original Mylar to:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	CJL
2	11/26/24	LOT/ECOMM	CJL
3	12/30/24	VILLAGE COMMENTS	CJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. No.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: N/A
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: CJL
Checked By: SDD

4 OF 4

CERTIFICATIONS

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-____

AN ORDINANCE AUTHORIZING THE APPROVAL AND EXECUTION OF A FINAL PLAT OF HERITAGE CROSSING RESUBDIVISION FOR THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT TO BE CONSTRUCTED AT 5600 SOUTH WOLF ROAD, WESTERN SPRINGS, ILLINOIS BY APPLICANT / CONTRACT PURCHASER MCNAUGHTON DEVELOPMENT, LLC

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting thereof, held on the ____ day of _____, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the ___ day of _____, 2025.

I further certify that the vote on the question of the passage of the Ordinance by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this ____ day of _____, 2025.

_____
Edward Tymick, Village Clerk

RESOLUTION NO. 25-_____
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: _____, 2025.
OTHER: None.

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)

WHEREAS, McNaughton Development, LLC, with its principal business office located at 11S220 Jackson Street, Burr Ridge, Illinois 60527 ("Applicant"), is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property"). Casey and Fran Gaik (collectively the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village of Western Springs ("Village") that allowed the Applicant to file with the Village a completed "General Information Application for Land Use and Development in the Village" form with supporting documents (the "Application") for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is on file with the Community Development Department and is incorporated herein by reference and made a part hereof. The Property is legally described in **Exhibit "A"** attached hereto and made a part hereof; and

WHEREAS, in 2024, the Applicant submitted the Application to the Village requesting approval of a conditional use permit for a planned development, a map amendment, an amendment to the Village's Comprehensive Land Use Plan, a plat of consolidation, a plat of abrogation for storm sewer easement and public utility easement, a plat of right-of-way vacation relating to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel"), which is utilized as a stormwater detention basin, certain development allowances, exceptions and variations, and other zoning relief as noted below in accordance with the applicable provisions of the Village's Development Control Ordinance ("DCO"), in order to construct the Development, which is commonly referred to as the Heritage Crossing Subdivision or the Heritage Crossing Townhome Development. A copy of the Application is on file with the Village's Community Development Department and is incorporated herein by reference; and

WHEREAS, the proposed Development consists of nine (9) townhome buildings with unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with a driveway accessed by a private street through the Development. The Development will have off-street community parking spaces, possible on street-parking, sidewalks, stormwater detention basins, open space and streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. The Applicant's plans indicate that the new portion of Heritage Court will match the existing road's width. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the

systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development; and

WHEREAS, based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development, pursuant to prior notice, postings and newspaper publication as required by the applicable provisions of State law, including the Illinois Open Meetings Act, 5 ILCS 120/ and Division 11-13 of the Illinois Municipal Code (65 ILCS 5/ 11-13), and the applicable provisions of the DCO (the "Public Hearing"). The Public Hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation, and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", and a single stage Final Plan review and approval process (i.e., a combined Preliminary Plan / Final Plan approval) for the Development per Subsection 10-8-8(C) of the DCO, provided that the Applicant complies with the submittal and plan review requirements of Section 10-8-5(C) (Final Plan) of the DCO, subject to certain stated conditions of approval (the "Development Zoning Relief"). A copy of Plan Commission Recommendation No. 24-02 is incorporated herein by reference and is on file with the Community Development Department; and

WHEREAS, after completion of the required public hearing before the Village Plan Commission, on _____, 2025 with the passage of **Ordinance No. 25-_____,** the President and Board of Trustees of the Village of Western Springs ("Corporate Authorities") granted approval the Development Zoning Relief; and

WHEREAS, as part of the conditions of approval of the Development contained in **Ordinance No. 25-_____,** it is necessary for the Village and the Developer to approve and enter into the attached "REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)"(the "Redevelopment Agreement") to provide for the redevelopment of the Property, including the construction of certain public improvements on behalf of the Village as described in the Redevelopment Agreement. A copy of the Redevelopment Agreement is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, at open public meetings held on January 9, 2025 and January 16, 2025, the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the proposed Heritage Crossing Townhome Development and the related Redevelopment Agreement, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village consider the Redevelopment Agreement; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025**, the Corporate Authorities of Village reviewed and discussed the Committee's recommendation regarding the proposed Heritage Crossing Townhome Development and the related Redevelopment Agreement, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its _____, **2025 meeting**, the Corporate Authorities of the Village accepted the Committee's recommendation regarding approval of the Redevelopment Agreement; and

WHEREAS, the Corporate Authorities of the Village of Western Springs are authorized, under the applicable provisions of the Illinois Municipal Code (65 ILCS 5/), and the intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, to approve and enter into the Redevelopment Agreement, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the Redevelopment Agreement.

BE IT ORDAINED BY THE VILLAGE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of Redevelopment Agreement and Other Related Documents. The Village President and Board of Trustees of the Village of Western Springs authorize the approval and execution of the attached Redevelopment Agreement, substantially in the form attached hereto as **Exhibit "B"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney, and all other instruments and documents that are necessary to fulfill the Village's obligations under the Redevelopment Agreement.

SECTION 3: Delivery of Redevelopment Agreement and Other Documents. After approval and execution of this Resolution and the Redevelopment Agreement by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and executed versions of the attached Redevelopment Agreement to the Applicant and the Developer for record retention purposes.

SECTION 4. Termination of Resolution for Failure of Developer to Acquire Title to the Property. This validity of this Resolution is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Resolution shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Resolution based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 5: Effective Date. This Resolution shall be in full force and effect from and after its passage and approval as provided by State law.

PASSED by the Village President and Board of Trustees of the Village of Western Springs, Cook County, Illinois, on a roll call vote at a Regular Meeting thereof, held on the ___ day of _____, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

Legal Description for 5600 South Wolf Road, Western Springs, Illinois.

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

Legal Description for the Lawn Avenue ROW Parcel:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000
18-18-200-038-0000
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

Exhibit "B"

REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)

(attached)

After Recording Return To:
Michael T. Jurusik
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane, Suite 301
Westmont, Illinois 60559

Common Address:
5600 South Wolf Road
Western Springs, Illinois 60558

This space for Recorder of Deeds Office use only

Property Identification Numbers:
18-18-200-017-0000
18-18-200-038-0000
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)

THIS REDEVELOPMENT AND MAINTENANCE AGREEMENT ("**Agreement**") is dated the ___ day of _____, 2025 ("**Effective Date**"), and is entered into by and between the **VILLAGE OF WESTERN SPRINGS** , an Illinois municipal corporation ("**Village**") and **MCNAUGHTON DEVELOPMENT, LLC**, an Illinois limited liability company, with its principal corporate office located at 11S220 Jackson Street, Suite #101, Burr Ridge, Illinois ("**Applicant**" or "**Developer**"), by and through their respective duly authorized agents and/or representatives. The Village and the Developer are at times referred to below individually as a "**Party**" and collectively as the "**Parties**".

IN CONSIDERATION OF the mutual covenants and promises as contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

SECTION 1. RECITALS.

The Village, a non-home rule municipality, is a duly constituted and existing municipality within the meaning of Section 1 (Municipalities And Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970.

The Village is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the State of Illinois Constitution of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The Village has the statutory authority to promote the health, safety and welfare of the Village and its residents, to encourage private development in order to enhance the local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives.

As of May 23, 2024, the Developer is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property") and has filed a General Information Application for Land Use and Development in the Village with supporting documents (the "Application") for the rezoning and redevelopment of the 5600 South Wolf Road Property. Casey and Fran Gaik (the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file the Application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development as described in more detail below (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof. The Property is approximately 2.755 acres, which consists of 2.414 acres of 5600 Wollf Road and the adjacent Lawn Avenue right-of-way. The Property Tax Index Numbers for the Property are identified as follows: (1) PIN: 18-18-200-017-0000, (2) PIN: 18-18-200-038-0000 , and (3) PIN: 18-18-200-001-0000 (collectively the "**Property PINs**").

D. The Developer proposes to redevelop the Property with twenty-nine (29) unit residential townhomes consisting of nine (9) townhome buildings with varying unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with driveways accessed by a private street through the Development. The Development will have off-street community parking spaces, on street-parking along the west and south sides of the proposed Heritage Court, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space areas, landscaped areas and private streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate, and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "Lawn Avenue ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. A copy of the Site Plan for the Development revised as of January 27, 2025 is attached hereto as **Exhibit "A"** and made a part hereof.

E. The Developer agrees to apply for and use commercially reasonable efforts to secure all required zoning and development permit approvals from the Village and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development in conformance with the Village-approved Final Development Plans, as amended by any Village-approved zoning relief and development entitlements and any approval conditions and requirements imposed by other governmental oversight agencies. The Developer agrees to actively participate in good faith in all required zoning hearing proceedings and development permit processes and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development.

F. Based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development. The public hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", subject to certain stated conditions of approval (the "Development Zoning Relief").

G. On February 10, 2025, the Corporate Authorities of the Village approved Ordinance No. 25-_____ that granted the Development Zoning Relief and a set of Final Development Plans, subject to final Village Engineer comments and Community Development Department comments and subject to final plan review comments at the time of application for a site development permit or a building permit, for purposes of encouraging the Developer to proceed with the necessary land acquisition, project financing, and other zoning, development or governmental permitting entitlement activities relative to securing final approvals to construct the Development (the "Approval Ordinance"). On February 10, 2025, the Corporate Authorities of the Village also approved Ordinance No. 25-_____, which vacated the Lawn Avenue ROW Parcel and approved a plat of right-of-way vacation and retention of stormwater facility easement for purposes of incorporating the Lawn Avenue ROW Parcel into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the Development. The Corporate Authorities of the Village will not unreasonably deny any requested zoning relief or permits that are consistent with the terms of this Agreement after completion of the required public hearing process or the permitting process.

H. To receive a site development permit or a construction permit for the Development, the Developer is required to submit and obtain the approval of the Corporate Authorities of the Village of a set of Final Development Plans, which shall incorporate and account for the Village-approved zoning relief after the required public hearing(s) are completed, including consideration of any recommendation issued by the advisory Village Plan Commission and public input, the Village plan review comments, the Village Engineer review comments and the Community Development Department review comments, and all required amendments issued by any other governmental authority with jurisdiction over the Development and proof of approval of all necessary development or governmental permits issued by any other governmental authority with jurisdiction over the Development.

I. The Developer intends that all roads, driveways, parking spaces, landscaping, stormwater management facilities and other infrastructure and improvements located within the Property will be privately owned and privately maintained in perpetuity, except only Public Infrastructure as defined in Section 2 of this Agreement.

J. The Developer intends to construct the Development continuously to completion once work on the Development commences.

K. The foregoing Recitals of this Section 1 are material terms and provisions and are incorporated herein and made a part of this Agreement.

SECTION 2. DEFINITIONS.

Whenever used in this Agreement, the following terms have the following meanings unless a different meaning is required by the context:

"Approval Ordinance": Western Springs Ordinance No. 25-_____ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions. See attached **Exhibit "B"**.

"Approved Plans": See Subsection 4.A. of this Agreement.

"Board of Trustees" or "Corporate Authorities": The President and Trustees of the Village of Western Springs.

"Certificate of Completion": means a certificate, issued by the Village, that confirms (a) the Development has been completed in substantial conformance with the Approval Ordinance and the Village-approved Final Development Plans; or (b) substantial completion of any significant milestone component of the Development (e.g., completion of the Infrastructure or the Stormwater Conveyance System or of a townhome building), as applicable.

Change in Law": Means the occurrence, after the Effective Date, of an event described below in this definition, provided such event materially changes the ability of the Party relying thereon to carry out its obligations under this Agreement and such event is not caused by the Party relying thereon. Change in Law means any of the following: (1) the enactment, adoption, promulgation or modification of any federal, State or local law, ordinance, code, rule or regulation (other than by the Village or with respect to those made by the Village, only if they violate the terms of this Agreement); (2) the order or judgment of any federal or State court, administrative agency or other governmental body (other than the Village); or (3) the adoption, promulgation, modification or interpretation in writing of a written guideline or policy statement by a governmental agency (other than the Village, or, with respect to those made by the Village, only if they violate the terms of this Agreement). Change in Law, for purposes of this Agreement, shall also include the imposition of any conditions on, or delays in, the issuance or renewal of any governmental license, approval or permit (or the suspension, termination, interruption, revocation, modification, denial or failure of issuance or renewal thereof) necessary for the undertaking of the actions to be performed under this Agreement (except any imposition of any conditions on, or delays in, any such issuance or renewal by the Village, except as provided herein).

"Development Director": The Village's Community Development Director.

"Developer": Includes McNaughton Development, LLC and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property.

"Effective Date": The date that the last signatory signs this Agreement, which shall be written in the first paragraph of this Agreement.

"Force Majeure": See definition of Uncontrollable Circumstance and Subsection 17.N. of this Agreement.

"IDOT": The Illinois Department of Transportation.

"IEPA": The Illinois Environmental Protection Agency.

"Infrastructure": All utilities including without limitation drinking water, sanitary sewer, storm sewer and detention basins, electric, gas, and telecommunication; stormwater system elements including without limitation detention facilities, streets, drive aisles, driveways, drive aprons, curbs, gutters, street lights, and parking spaces; sidewalks, other pedestrian ways, pedestrian amenities, pedestrian lighting, way-finding signs, and trees and other landscaping; and all related improvements for the Development, whether private or public and whether within the Property or within adjacent rights-of-way and property.

"Infrastructure Cost Estimate": See Subsection 4.B. of this Agreement.

"LOC": An irrevocable letter of credit issued by a lending institution licensed to do business in the State of Illinois, on a form approved by the Village Attorney.

"MWRD": The Metropolitan Water Reclamation District of Greater Chicago.

"Private Infrastructure": All Infrastructure other than Public Infrastructure, including the Stormwater Conveyance System.

"Property": The real property legally described and depicted in **Exhibit "C"** attached to this Agreement.

"Public Infrastructure": Infrastructure that is being dedicated to the Village or to other governmental agencies, including without limitation drinking water mains (but not water service lines to buildings), water hydrants, sanitary sewers and other elements determined by the Village. In the event of any ambiguity, the Village will determine whether an Infrastructure element is public or private.

"Director of Engineering Department": The Village's Village Engineer.

"Reimbursable Costs": See Subsection 8. of this Agreement.

"Requirements of Law": All applicable federal and State of Illinois laws and statutes, the Zoning Code, the Village Code, and the Village's building, stormwater management, and other codes and regulations. The Title 9 Building Regulations of the Village Code will apply to architectural and structural plans and specifications for all buildings within the Development unless preempted by State of Illinois or federal law or the Village designates, in writing, other applicable standards. Otherwise, Village-adopted model codes will apply and State of Illinois building codes will apply in the absence of an applicable Village-adopted model code. Accessibility standards of the Americans with Disabilities Act (42 U.S. Code § 12101) will apply to all common areas. The Title 9 Building Regulations of the Village Code reference to 2009 ICC Accessible and Usable Buildings and Facilities (ANSI) (2003 Safe Harbor of FHA) in conjunction with the standards of the Illinois Accessibility Code will be followed for all residential units.

"Site Work": Grading land, excavating soil and debris, environmental remediation, installation of underground utilities, and similar activities.

"Stormwater Conveyance System": All elements of Infrastructure that relate to the management, detention, storage, and conveyance of stormwater, which shall be privately owned and maintained by the Developer and then by the homeowners association.

"Uncontrollable Circumstance": An event that is beyond the reasonable control of and occurs without the fault of the involved party, including without limitation to the following events: (i) an insurrection, riot, civil disturbance, sabotage act of a public enemy, explosion, nuclear incident, war, or naval blockade; (ii) an epidemic, pandemic, hurricane, tornado, landslide, earthquake, lightning, fire windstorm, or other casualty or act of God, or persistent bad weather that impedes progress; (iii) a government condemnation or taking; (iv) a strike, lockout, or other labor dispute other than those caused by the unlawful acts of the Developer; and (v) a Change in Law. Uncontrollable Circumstance does not include any of the following events or conditions: Economic hardship, impracticability of performance, commercial, economic or market conditions, or a failure of performance by a contractor (except as caused by an event that is an Uncontrollable Circumstance as to that contractor). See Subsection 17.N. regarding Force Majeure.

"Village Code": The Western Springs Code of Ordinances.

"Village Manager": The Western Springs Village Manager, or their designee.

"Zoning Code" or "DCO": The Western Springs Development Control Ordinance.

SECTION 3. PROPERTY ACQUISITION; TERMINATION.

Property Acquisition. The Developer has entered into a real estate purchase contract with the Property Owner, and, subject to the terms and conditions of this Agreement, intends to acquire fee simple title to the Property on or before March _____, 2025 (the "**Acquisition Deadline Date**"). The closing date at which the Developer obtains fee simple title to the Property is referred to as the "Acquisition Date". If the Developer does not acquire fee simple title to the Property by 5:00 p.m. CST on the Acquisition Deadline Date, the Developer shall send written notice to the Village within five (5) calendar days after of the expiration of the Acquisition Deadline Date advising that the acquisition of the Property did not occur and providing a status on the acquisition consisting of one of these responses: (i) the Property Owner or the Developer has terminated the real estate purchase contract; or (ii) the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract; or (iii) the Developer and the Property Owner have extended the Acquisition Date and are actively working on matters to complete the acquisition of the Property by the extended Acquisition Date. If the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract, this Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party. In the event the Developer does not purchase the Property from the Property Owner, this Agreement shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable, and the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Agreement based on the Developer not purchasing the Property. If the Developer and the Property Owner extend the Acquisition Date and actively work on matters to complete the acquisition of the Property by the extended Acquisition Date, this Agreement shall remain in effect until either the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer mutually agree to terminate the real estate purchase contract, subject to the next sentence. This Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party, if the Developer does not acquire the Property within twelve (12) months of the approval date of the Approval Ordinance, based on the DCO's automatic expiration provision that applies to Village-approved conditional use permits (See, Section 10-3-14K (Condition Uses; Revocation)) of the DCO. Notwithstanding any other provision or term in this Agreement, each Party

expressly agrees that the cure remedy under Section 16 (Default; Cure) of this Agreement shall not apply to the automatic expiration provision that applies to Village-approved conditional use permits. The Corporate Authorities of the Village, in their sole discretion, may pass an ordinance for this Development that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer agrees to waive any claims or causes of action for damages of any kind that it could file against the Village for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer also agrees to indemnify, defend and hold harmless the Village and its appointed and elected officials, employees, engineers, attorneys, agents and representatives from any claims or causes of action or damages of any kind that could be filed against the Village by the Property Owner or any person for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property.

B. **Lawn Avenue Right-of-Way Vacation.** The Developer agrees to accept title to the Lawn Avenue ROW Parcel that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. The Village shall provide the Developer a title commitment free and clear of any tax liens or other financial encumbrances, subject to all conditions imposed by the Village under this Agreement and the Lawn Avenue right-of-way vacation Ordinance 25-_____.

SECTION 4. DEVELOPMENT PLANS.

A. **Development Plans.** Prior to the issuance by the Village of any permit for construction within the Property, the Developer must provide to the Village the following detailed Final Development Plans for the Development, all of which must be substantially consistent with **Exhibit "D"** to the Approval Ordinance and shall be reviewed by the Community Development Director, the Director of Fire and Emergency Medical Services and the Director of Law Enforcement Services, the Village Engineer, the Village Attorney, and other Village consultants (collectively, the "Village Staff") as part of the Village development plan review process, and shall be returned to the Developer for updating and corrections to comply with the Village Staff's development plan review comments and requirements (the "Approved Plans"). The final version of the Approved Plans shall be stamped by a licensed engineer or signed by a licensed architect. The Developer may re-submit updated Final Development Plans to address the Village Staff's plan review comments and requirements. If the Developer objects to any of the Village Staff's development plan review comments and requirements, the Developer may file a written request with the Village Board seeking approval of a modification(s) to the Village Staff's development plan review comments and requirements, which may or may not be granted by the Village Board, in its sole discretion, at an open public meeting. The Approved Plans, at a minimum, shall consist of final versions of:

(i) Detailed engineering plans, including without limitation civil, structural, architectural, lighting, construction staging, mechanicals screening, on-site and off-site storm water drainage plans, and Infrastructure plans.

(ii) Detailed, dimensioned site plans.

(iii) Detailed, dimensioned landscaping plans.

(iv) Building Elevations and Village-approved Exterior Building Materials List (color, material type, etc.).

(v) Signage plan for buildings, traffic, parking and other informational signs within the Development.

(vi) Stack wall for the townhouses. Prior to issuance by the Village of any permit for construction other than Site Work, the Developer must assemble a representative "stack" wall on the Property with the Village-approved masonry, wood, and other construction materials to be used on the townhouse buildings. The stack wall must precisely show the materials and techniques to be used for the walls of the townhouses. The stack wall will be reviewed by the Community Development Director and will be approved by the Community Development Director only if it conforms to the Approved Plans.

(vii) Such other plans and documents reasonably required by the Village Staff for the construction of the Development by the Developer.

B. **Infrastructure Cost Estimate.** The Developer must prepare an itemized estimate of the cost of construction of each component of the Infrastructure (the "Infrastructure Cost Estimate") and submit the estimate to the Village prior to the issuance by the Village of any permit for construction. The Village Engineer will review, revise as necessary, and approve the Infrastructure Cost Estimate.

SECTION 5. DEVELOPMENT AND USE OF THE PROPERTY.

Commencement and Completion of Construction.

(i) The Developer intends to commence site improvement or construction work on the Development not more than one hundred eighty (180) calendar days after the Village Board's approval of the Approval Ordinance (the "**Anticipated Commencement Date**"), subject only to Force Majeure.

(ii) The date the Developer receives a Village site development permit or a building permit authorizing work to proceed on the Development, or any part thereof, shall be the "**Commencement Date**".

(iii) Construction of the Development shall substantially comply with the provisions of the Approval Ordinance and each of the conditions of approval set forth in the Approval Ordinance.

(iv) Construction of the Development shall substantially comply with, and the Development shall be substantially completed in accordance with, the timeframes outlined on Developer's "Construction Schedule", attached hereto as **Exhibit "E"** and incorporated herein (the "Construction Schedule"), but not later than twenty-four (24) months after the Commencement Date, subject to Force Majeure, with the actual date of Substantial Completion being the "**Substantial Completion Date**". "Substantial Completion" or "Substantially Completed" shall mean that the residential component of the Development is eligible to receive a certificate of occupancy, and the public improvements are completed to the Village's dedication standard, to the extent applicable to such public improvements.

(v) Developer may start construction on its model home units numbers 1 to 4 and 27 to 29 prior to the completion of the extension of Heritage Court through the Property; however, the Developer shall install a gravel stone road within the proposed width of the Heritage Court extension from the west edge of Wolf Road to the frontage of the model units (approximately except for the 108 feet). The gravel stone road shall be continuously maintained free from of potholes and wheel ruts by the Developer, at its cost, to ensure that the gravel road can be used for emergency vehicle access. All underground utilities to the model units must be installed at the same time the binder course is installed.

B. **Substantial Compliance with Approved Plans.** Except for minor alterations due to field conditions approved by the Village Engineer or Development Director, the construction of the Development shall substantially conform with: (i) the Approval Ordinance, (ii) this Agreement, (iii) the Approved Plans, and (iv) the Requirements of Law; and shall not materially impact the exterior materials and/or exterior architectural designs included in the Approved Plans, were not rejected by the Village during the design phase of the Development, and are necessary for the Developer to complete the Development, or any portion thereof, within the applicable portion of the Development Construction Schedule. Any type of approved plan changes must comply with Section 10-8 of the Village Code.

C. **Plat of Subdivision; Easements for Cross Access.** Prior to the issuance of any permit for construction, the Developer must prepare and file the final Plat of Heritage Crossing Subdivision, in a form satisfactory to the Village, granting cross access easements by the general public and the property owners of the Heritage Springs Subdivision and the Heritage Crossing Subdivision onto and across the pedestrian ways, roads (Heritage Court), and other paths within the Property.

D. **Development – Prior to Property Acquisition or Issuance of Permits.** No construction, improvement or development of any kind by the Developer shall be permitted on any portion of the Property unless and until: (a) the Developer acquires title to the Property; and (b) the Developer has been issued either a Village site development permit, demolition permit, or a Village building permit. Further, no occupancy of the Development may occur prior to the issuance of a Village Certificate of Completion for the Infrastructure and a Village certificate of occupancy for the portion of the Development that occupancy is sought (i.e., individual certificates of occupancy shall be issued for individual townhome units only after the Village issues a Certificate of Completion for the individual townhome building) Model units will only be granted a certificate of completion for daytime (7:30 am to 8:00 pm) use for marketing purposes.

E. **Development – Failure to Complete.** In the event that the Developer fails to complete the Development on or prior to the Substantial Completion Date, or fails to comply with the Construction Schedule (in either case, subject to Force Majeure), and such failure continues for more than thirty (30) calendar days after notice thereof by the Village to the Developer, then:

(i) The Village, by delivery of written notice to the Developer, may require the Developer to submit, within fifteen (15) calendar days, a plan pursuant to which the Developer will: (i) avoid falling further behind the dates set forth in the Construction Schedule; and (ii) complete construction of the Development in accordance with the Construction Schedule, as modified to reflect the "catch-up" plan (a "**Catch-Up Plan**"), for approval by the Village Manager, which approval shall not be withheld unreasonably provided that the Catch-Up Plan has been approved by the Developer's construction lender (the "**Lender**"). At such time as the Village has approved a Catch-Up Plan, the Developer shall

use commercially reasonable efforts to implement, and diligently pursue and complete, the activities of the Catch-Up Plan.

(ii) If the Developer fails to timely: (i) submit a Catch-Up Plan to the Village that has been approved by the Lender, or (ii) implement or complete the Catch-Up Plan; which failure continues for more than thirty (30) calendar days, then the Developer shall be deemed to be in default under the Catch-Up Plan and the Village shall have the right, but not the obligation, to hire a replacement contractor to complete the unfinished Public Infrastructure and Stormwater Conveyance System ("Default Work") and shall have the right to use the Developer Security (as defined below) to pay the contractor to complete such Default Work. Upon such a default by the Developer, subject to and in accordance with the terms and conditions of any construction financing agreement, the Lender will have the right, but not the obligation, to exercise and perform the Developer's rights and obligations under this Agreement, including the hiring of a replacement contractor to complete the Default Work and/or to complete the Development. If the Village elects to complete the Default Work, then the Developer shall be obligated to pay, or to reimburse the Village for, all costs and expenses of completing such work that are in excess of the proceeds of the construction financing agreement and the Developer's Security.

(iii) The Developer shall be responsible for all costs and expenses to prepare and implement and complete the Catch-Up Plan.

(iv) The rights and remedies set forth in this Subsection 5.E. shall be the sole remedies available to the Village for the failures specified in this Subsection; provided that the Village shall have: (i) the remedy of specific performance to enforce the obligations of Developer pursuant to the terms and conditions of this Subsection; and (ii) the right to recover from the Developer all costs and expenses, including reasonable attorney fees, incurred by the Village in connection with exercising its rights and remedies under this Subsection, together with interest at the rate of eight percent (8%) per annum on any Village funds expended prior to reimbursement from the Developer Security.

F. **Dedication and Maintenance of Land.** The Developer shall comply with the dedication of land and maintenance of landscaping obligations as set forth in the Conditions of the Approval Ordinance. The Developer shall use commercially reasonable efforts to convey, transfer or dedicate any portion of Property to Cook County or any other necessary governmental agency that is required to provide for the street access (ingress and egress) point onto Wolf Road for the Development.

G. **Development Covenants, Conditions, and Restrictions.** Prior to the issuance by the Village of any building permit other than a permit for Site Work, the Developer must present to the Village for review and comment and approval a set of Covenants, Conditions, and Restrictions ("CC&Rs") for the Development. The CC&Rs may not be amended without the prior express written consent of the Village at any time or in any manner that alters or interferes with any easement, grant, right, or remedy granted or reserved to the Village, including without limitation the right of the Village: (i) to cure any violation of the CC&Rs, this Agreement, the Approval Ordinance, or any other Requirements of Law, (ii) to perform necessary maintenance and repairs, (iii) to be reimbursed for all of the Village's costs and expenses related to maintenance and repairs, and (iv) to have a lien against the Property for unpaid costs and expenses. After Village approval, the CC&Rs shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Developer, at its cost.

H. **Maintenance of and Damage to Public Property and Off-Site Improvements.** During construction of the Development, the Developer must: (i) maintain all streets, sidewalks, and other public property adjacent to the Property in a good and clean condition and free of hazards at all times, (ii) promptly clean all mud, dirt, or debris deposited on any street, sidewalk, or other public property in or adjacent to the Property by the Developer or any agent of or contractor hired by, or on behalf of, the Developer, and (iii) repair or replace all damage to any private or public utilities or other private or public improvements of any kind that are located on-site or off-site relative to the Property that may be caused by the activities of, or on behalf of, the Developer or any employees, contractors, subcontractors or agents hired by, or on behalf of, the Developer. The Developer agrees to promptly repair or replace or restore such damaged improvements with like-kind and like-quality materials. If, within twenty-four (24) hours after the Village gives the Developer notice to clean mud, dirt, or debris or to repair damage in compliance with this Subsection, the Developer neglects or fails to clean or repair or to undertake with due diligence to clean or repair the affected public property, then the Village may clean or repair the affected property, either with its own forces or with contracted forces, and recover from the Developer the greater of $750.00 or the sum equal to the total cost incurred by the Village including without limitation administrative costs. The

I. **Environmental Conditions.** The Developer must remain in compliance with all applicable federal and State of Illinois environmental laws and regulations while constructing the Development.

J. **Building Certification.** RESERVED.

K. **Estimated Site Development Costs and Construction Budget.** Based on the Approved Plans, the "Estimated Site Development Costs" to develop, construct and complete the Development's public and private infrastructure is $1,285,620.35. The Developer shall deliver to the Village an itemized letter from a licensed engineer, certifying to the Village that, to such engineer's knowledge following reasonable investigation and inquiry, the Estimated Development Costs will not be less than $1,285,620.35.

L. **Development Financing.** At the time the application for a site development permit is submitted, the Developer shall provide the Village Manager with a confidential letter issued by the Developer that lists the tiered funding sources to be used to complete the Development and includes marked-confidential copies of supporting financing documents consisting of secured, fully executed construction financing term sheets, loan obligations and written proof of Developer equity contributions and investor equity contributions acceptable to the Village and sufficient to demonstrate that adequate funds are available to Substantially Complete the Development, including a financing commitment letter or a construction loan commitment letter issued by a bank or other financial lender for the Development. The Developer's financing commitments shall be sufficient to cover the equity and debt financing, including the Developer Security, to Substantially Complete the Development. In the event the Developer is unable to provide the Village with written evidence of the Development financing sufficient to Substantially Complete the Development within the time frame set forth in this Agreement, the Village may, exercising its sole discretion, terminate this Agreement and all of the Parties' rights, duties and obligations under this Agreement shall terminate without any liability being imposed on the Village or the Developer. The confidential letter and supporting financial submittals shall be retained on file with the Village Clerk's Office and shall not be attached to this Agreement but is referenced as **Group Exhibit "F"** to this Agreement.

SECTION 6. CONSTRUCTION AND MAINTENANCE OF INFRASTRUCTURE.

A. Developer's Duty to Construct Infrastructure. The Developer, at its cost, must construct and install all of the Infrastructure.

B. Standards Applicable to Infrastructure. The following standards apply to the construction of the Infrastructure.

(i) General Standards. All Infrastructure must be constructed in compliance with the standards in this Agreement and all Requirements of Law. All work performed in the construction of the Infrastructure must be conducted in a good and workmanlike manner. All materials used for construction of the Infrastructure must be new and of first-rate quality.

(ii) Special Standards. Construction of the Infrastructure must conform to the applicable standards of the La Grange Highlands Sanitary District, MWRD, IDOT, Cook County and the IEPA.

(iii) Prosecution of the Work. Once Site Work has begun, the Developer and all of its contractors must use commercially reasonable efforts to prosecute work on the Infrastructure in a diligent manner until the work is properly completed.

(iv) Inspection, Engineering, Testing Services. In general conformance with the Village Development Control Ordinance 10-10-17C, the Developer must provide, at its cost, all inspection, engineering, and testing for construction of the Infrastructure, including without limitation: (a) on-site construction supervision services, (b) periodic inspections of construction of the Public Infrastructure conducted by a professional engineer, and (c) third-party materials sampling and testing services. The Developer must promptly provide the Village with the names of the project manager and project engineer and telephone numbers at which the project manager and project engineer can be reached at all times.

(v) Village Inspections and Approvals. Village representatives have the right and authority, and the permission of the Developer, to inspect all work on the Infrastructure at all times between 8:00 a.m. and 6:00 p.m. weekdays, and at any other time work is taking place within the Property, and in the case of an emergency at any time reasonably determined by the Village, to confirm compliance with all requirements of this Agreement and all Requirements of Law.

(vi) Other Approvals. When the construction of Infrastructure requires the permission or approval of a regulatory agency, including without limitation the La Grange Highlands Sanitary District, MWRD, IDOT, Cook County or the IEPA, then the Developer must use all commercially reasonable efforts required to obtain the required permission or approval. The Developer may not commence work requiring the permission or approval of any such agency in advance of receiving that permission or approval.

C. Approvals of Infrastructure. At the time the site development permit is issued, a list of required inspections will be provided to the Developer. The Developer will be responsible for completing all required inspections. In the event that a required inspection is not completed, the Village reserves the right to request that the Developer re-expose the Infrastructure at the Developer's cost for inspection. When an Infrastructure improvement has been completed, the Developer must request final inspection and approval of that Infrastructure improvement by the Village. The Village will inspect that Infrastructure improvement and may prepare a punch list of items requiring repair or correction. The Developer must promptly make all necessary repairs and corrections as specified on the punch list. The Village will not approve an Infrastructure

improvement until it has been fully and properly completed in accordance with the Approved Plans, including without limitation all punch list work for that Infrastructure improvement.

D. Acceptance, Dedication and Acceptance of Public Infrastructure. The Developer will dedicate to the Village or to any other governmental agency with oversight jurisdiction each Public Infrastructure improvement after it is approved by the Village or the other governmental agency with oversight jurisdiction. The Village will accept a Public Infrastructure improvement when it has been fully and properly completed, but nothing will constitute an acceptance by the Village of a Public Infrastructure improvement except express written acceptance by the Village. Prior to the Village's acceptance, the Developer must execute, or cause to be executed, all documents reasonably requested by the Village to transfer ownership of the Public Infrastructure improvement to the Village, free and clear of all liens, claims, and encumbrances or restrictions that would prevent the Village from operating, maintaining, repairing, or replacing that Public Infrastructure improvement. The documents transferring ownership of a Public Infrastructure improvement to the Village (e.g., bill of sale and affidavit of title, etc.) must be reasonably acceptable in form and substance to the Village Attorney. Within thirty (30) calendar days of the acceptance, dedication or conveyance, the Developer shall provide the Village Manager with final, executed copies of the acceptance, dedication or conveyance documents that relate to each component of the Public Infrastructure improvements after it is approved by the other governmental agencies with oversight jurisdiction.

E. Infrastructure Guarantees. The Developer guarantees the prompt and satisfactory correction of every defect or deficiency in any Infrastructure that occurs or becomes evident within two (2) years after Village approval and acceptance of that Infrastructure, and in the case of stormwater management system elements three (3) years, pursuant to this Agreement. If any defect or deficiency occurs or becomes evident during the 2-year or 3-year period, then the Village will give notice to the Developer stating the defect or deficiency and the Developer must correct the defect or deficiency within ten (10) calendar days after receipt of the notice or, if the defect or deficiency cannot reasonably be corrected within that 10-day period, then within a longer period of time as is reasonably necessary to correct the defect or deficiency so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the correction. If the defect or deficiency is not corrected within the required time period, then the Village may undertake the correction and then the Village will have the right to draw from the performance securities deposited pursuant to Section 9 of this Agreement to reimburse itself for all costs and expenses incurred in making the correction. If any Public Infrastructure is repaired or replaced by the Developer pursuant to the demand of the Village, then the guaranty provided by this Subsection 6.E. will be extended, as to the repair or replacement, for two (2) full years after the date of completion of the repair or replacement.

F. Perpetual Maintenance of Private Infrastructure. The Developer, and then the homeowners association, must maintain, at its cost and expense, all Private Infrastructure at all times in good and serviceable condition consistent with Village codes and generally accepted engineering practices, including without limitation Village codes and ordinances and MWRD standards, as applicable. If at any time the Developer, or the homeowners association, is in breach of this standard, as determined by the Village, then the Village may issue a citation to, and impose a fine on, the Developer, or the homeowners association, as provided in the Village Code. In addition, the Village may issue notice stating that the Developer, or the homeowners association, must cure the breach within thirty (30) calendar days or, if the breach cannot reasonably be cured

within thirty (30) calendar days, then within a date certain set by the Village. The Developer, or the homeowners association, must promptly commence the cure and use commercially reasonable efforts to diligently and continuously pursue the cure to completion. If the cure is not completed within the required time, then the Village may, but is not in any way obligated to, undertake the cure using its own forces or outside forces. The Developer, or the homeowners association, will be liable for, and must reimburse to the Village, all costs and expenses incurred by the Village to cure the breach. If the Village's costs and expenses have not been reimbursed in full within thirty (30) calendar days after notice from the Village, then all unpaid costs and expenses will become a lien against the Property in its entirety and the Village will have the right to collect the unpaid costs and expenses and to enforce the lien in the same manner as mortgage foreclosure proceedings. Under no circumstances will the Village ever be required or obligated to maintain or repair any Private Infrastructure. The terms of this Subsection 6.F. shall be incorporated in the CC&Rs. Maintenance obligations for the Stormwater Conveyance System shall consist of:

(i) **Operations and Maintenance Manual for Stormwater Conveyance System:** The Developer shall comply with the maintenance and operations obligations for the Stormwater Conveyance System set forth in and required by the Operations and Maintenance Manual, per the Approval Ordinance and Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO. A copy of the Operations and Maintenance Manual is attached hereto as **Exhibit "G**" and made a part hereof.

(ii) **Maintenance Obligations Imposed on the Developer and Then the Homeowners Association:** The maintenance of the Stormwater Conveyance System for the Development shall be the responsibility of the Developer and then the homeowners association. The Developer guarantees that it and all future owners of the Property shall maintain the Stormwater Conveyance System.

(iii) **Inspection Access by Village Representatives:** The Developer specifically authorizes representatives of the Village to enter onto the Property for the purpose of conducting inspections and testing of the Stormwater Conveyance System.

(iv) **Maintenance Schedule:** The Developer shall comply with the "Schedule for Regular Maintenance" of each aspect of the Stormwater Conveyance System and shall provide for access to the Stormwater Conveyance System for inspection and testing by authorized representatives of the Village. In the even that any authorized representatives of the Village notify the Developer, or the homeowners association, in writing of any maintenance problems which require correction, the Developer, or the homeowners association, shall make such corrections within thirty (30) calendar days of such notification. The Village shall be reimbursed by the Developer and then by the homeowners association for the actual costs and fees incurred relative to any inspection and/or testing conducted by its representatives. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the Developer or the or the homeowners association.

(v) **Annual Maintenance Inspections:** All components of the Stormwater Conveyance System shall be inspected by representatives of the Developer and then the homeowners association not less often than once per year. A written report shall be prepared of the results of any inspection and a copy of the report shall sent to the Village Manager detailing any problems which need

correction within thirty (30) calendar days of the date of the report or by no later than September 30 each year.

G. Abandonment of Construction. If the Developer abandons the Development or any part of the Development, then the Developer, within ninety (90) calendar days after notice from the Village, must: (i) remove all partially constructed improvements from the Property, (ii) backfill all excavations, and (iii) spread topsoil and plant grass seed throughout the Property, all to the satisfaction of the Village (collectively the "Required Restoration"). For purposes of this Subsection 6.G, "abandons" means cessation of construction for a continuous period of ninety (90) calendar days for any reason other than Force Majeure. If the Developer fails or refuses to complete the Required Restoration within the 90-day period, or such longer period of time as is reasonably necessary to complete the Required Restoration so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the Required Restoration, then the Village will have, and is granted in addition to all other rights afforded to the Village in this Agreement and by law, the right, at the Village's option, to hire a contractor to complete part or all of the Required Restoration. Thereafter, the Village may charge the Developer an amount equal to the Village's actual costs of the Required Restoration including without limitation contractor costs, disposal costs, administrative personnel fees and costs, and legal fees (collectively the "Charged Amount"). If the Charged Amount is not paid by the Developer within thirty (30) calendar days after notice from the Village, then the Charged Amount, and all costs incurred by the Village related to collection of the Charged Amount (the "Collection Costs"), may be deducted from the Developer Security and will become a lien against the Property, and the Village will have the right to collect the Charged Amount and the Collection Costs and to enforce the lien in the same manner as mortgage foreclosure proceedings.

H. Progress Meetings. At all times, the Developer and the Village shall each have an individual designated as the Developer's and the Village's primary point of contact for Development-related matters. The Developer shall meet on a monthly basis with the Development Director and Village Engineer, or their designee, and other Village staff as appropriate, to provide a comprehensive progress report on the Development. Appropriate Development team personnel shall attend the meeting on behalf of the Developer and the Village, and shall provide and exchange information regarding the status of construction and occupancy, pending permit requests and other appropriate information.

I. Village Construction Manager Consultant. The Village reserves the right to hire a construction manager consultant to assist the Village and its staff with all aspects of the Development, including but not limited to compliance with the terms of this Agreement, the plan review process, inspections, reporting and oversight of the construction of the Development. The compensation and other employment benefits payable to the construction manager consultant for their work relative to the Development qualifies as a charge under the Reimbursable Costs.

"As-Built" Development Plans. The Developer, at its cost, shall prepare and provide to the Development Director one (1) electronic copy of the "As-Built" Final Development Plans, with all minor modifications and in-field adjustments shown, at the time of issuance of the last occupancy permit for the final townhome unit as part of the Village's issuance of the Certificate of Completion for the Development. The "As-Built" Plans are subject to the review and approval by the Village Engineer and the Community Development Director, or their designees.

SECTION 7. CONSTRUCTION STAGING, TRAFFIC, PARKING; STREETS.

A. **Construction Staging.** The staging of construction work and materials must be in conformance with the Village-approved construction staging plan. The Developer must submit a staging plan for Village review and approval prior to the issuance of the permit for construction of the Development. The Developer shall not allow for the staging any construction equipment, materials or vehicles within the right-of-way of Park Place. The Developer shall not allow the staging of any construction equipment, materials or vehicles on the Property in a manner that creates sight-line issues for vehicle traffic traveling on Wolf Road or Park Place or Heritage Court, as determined by the Village Manager. The Developer or its any contractor, subcontractor or material supplier who violates the Village-approved construction staging plan or this subsection shall each be subject to a $750.00 per day fine for each separate violation that occurs.

B. **Designated Traffic Routes.** The Village, in consultation with the Developer, may designate routes of access to the Property for construction traffic to protect pedestrians and to minimize disruption of traffic and damage to particular streets.

C. **Parking.** All construction-related vehicles, including passenger vehicles and construction equipment, must be parked within the Property or in areas specifically designated in advance in writing by the Village. The Developer shall not allow construction-related vehicles, including passenger vehicles of employees of the Developer, contractors, subcontractors or material suppliers, to be parked on Park Place or Wolf Road during the construction of the Development. The Developer or its any contractors, subcontractors or material suppliers who violates this subsection shall each be subject to a $750.00 per day fine for each separate violation that occurs.

D. **Streets, Sidewalks, and Other Rights-Of-Way.** Any work on streets, sidewalks, and other rights-of-way related to the Development, public or private, must meet the following standards:

(i) Compliance with Plans. All work must comply with the Village-approved plans for that work.

(ii) Protection of Final Surface Course; Restoration. Except with the prior express written consent of the Village, no construction traffic may use any improved public right-of-way after installation of the final surface course of that right-of-way. If the Developer uses an improved public right-of-way for construction traffic, then the Developer must keep that right-of-way free and clear of mud, dirt, debris, obstructions and hazards, and must, after the use is no longer necessary, restore and repair that right-of-way to Village standards.

SECTION 8. DEVELOPER PAYABLE COSTS, FEES, AND EXPENSES AND ESCROW.

A. **Negotiation, Review, Inspection Fees.** In addition to all other costs, payments, fees, or other charges required by this Agreement or by the Requirements of Law or by the Village Code, the Developer must pay to the Village, promptly after receipt of a written demand or demands for payment:

(i) All reimbursable costs, fees, payments, charges, and expenses (collectively "Reimbursable Costs") for outside engineering, outside legal, outside building, and other outside consulting or administrative services incurred or accrued in connection with the review and processing of plans for the development of the Property and in connection with the negotiation, preparation, consideration, and review of this Agreement, at the standard rates charged to the Village, as required

by the Village Code. All Reimbursable Costs for which demand has been made, but payment has not been received, by the Village prior to execution of this Agreement must be made by a certified or cashier's check contemporaneous with the execution of this Agreement by the Village.

(ii) All Reimbursable Costs for inspections of the Property and the Development conducted by outside inspectors.

(iii) All Reimbursable Costs for inspections of an individual dwelling unit until issuance of a final certificate of occupancy for that unit.

(iv) All Reimbursable Costs incurred in connection with a future application, document or proposal, whether formal or informal, of whatever kind submitted by the Developer (or its successor) to the Village in connection with the Development or the use or future development of the Property.

(v) All Reimbursable Costs incurred by the Village for publications and recordings required in connection with the Development or the Property.

B. **Other Village Fees.** In addition to all other Reimbursable Costs required by this Agreement, the Developer must pay to the Village (as applicable): (i) all standard application, plan review, inspection, and permit fees, (ii) all standard water and sewer fees, tap-on fees, and charges, (iii) compensation for trees removed from public parkways or other public right-of-way, (iv) all costs for replacement trees, and (v) all other standard fees, charges, impact fees to the Village and to any other governmental agency with an impact fee ordinance and contributions pursuant to the Requirements of Law and the Village Code.

C. **Reimbursement for Village Work on Utilities.** If during construction of the Development the Developer discovers a water main, sewer main, or other utility that must be relocated to avoid conflict with the Development, then the Developer and the Village will determine how, where, and by whom the utility will be relocated and the Developer must pay all costs and expenses of that relocation.

D. **Developer Escrow.** The Developer shall maintain a "Developer Cash Escrow" with the Village for purposes of payment of the Reimbursable Costs and other costs payable to the Village by the Developer as required by this Agreement, and shall comply with the funding terms of the Developer Escrow as set forth in the Approval Ordinance and Section 9. below.

E. **Compensation for Development Impacts.** RESERVED.

SECTION 9. PERFORMANCE SECURITY.

A. **Developer Cash Escrow; Letter of Credit ("LOC").** As security to the Village for the performance by the Developer of the Developer's obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, the Developer shall deposit with the Village the following:

(i) Developer Cash Escrow. The sum of $58,000.00 cash (the "Developer Cash Escrow") shall be paid by the Developer to be held by the Village and drawn on to reimburse the Village for Reimbursable Costs incurred by the Developer described in Section 8. above. Any interest earned on the Developer Cash Escrow will be added to the escrow, but the Village is not required to cause interest to be earned. If draws on the Developer Cash Escrow reduce the balance in the Escrow to $10,000.00 or below at any time, then the Developer

must restore the Developer Cash Escrow to a level determined by the Village (but not exceeding $30,000.00) until the Certificate of Completion is issued by the Village for the Development. Any money remaining in the Developer Cash Escrow will be distributed to the Developer within sixty (60) calendar days after notice from the Developer to the Village requesting release of such funds, after issuance of the full, final certificate of occupancy for the final townhome building constructed within the Development.

(ii) Performance and Payment Letter of Credit. A performance and payment letter of credit in an amount equal to one hundred ten percent (110%) of the Infrastructure Cost Estimate (the "Performance LOC") in the form required in Subsection 9.E. below.

(iii) Condition Precedent. The deposit of the Performance LOC and the Developer Cash Escrow is a condition precedent to issuance of any permit by the Village for work on the Development.

B. **Maintenance of Performance LOC.** The Performance LOC shall be maintained and renewed by the Developer, and will be held in escrow by the Village, until completion of the Infrastructure and the Public Infrastructure, as determined by the Village, and the approval by the Village Manager and dedication to the Village of the Public Infrastructure, if any, and until the posting of the Guaranty Bonds required by Subsection 9.C. below. After the acceptance and posting of the Guaranty Bonds, the Village will release the Performance LOC and return it to the Developer.

C. **Guaranty Bonds.** As a condition of the Village's approval of the Public Infrastructure and the Village's acceptance, where appropriate, of any or all of the Infrastructure pursuant to Subsections D. and E. of this Section, the Developer must post two (2) Guaranty Bonds, in the form required by Subsection 9.E. below (each a "Guaranty Bond") as follows:

(i) General Guaranty Bond: This Guaranty Bond shall be security for the performance of the Developer's obligations under this Agreement related to Infrastructure. The General Guaranty Bond will be in the amount of ten percent (10%) of the Infrastructure Cost Estimate and will be held by the Village in escrow until the end of the two-year guaranty period set forth in Subsection 6.E. of this Agreement . or until two (2) years after any necessary modification to or correction of any defect or deficiency in a Public Infrastructure improvement pursuant to Section 6.E. above and payment therefor, whichever occurs later. At the end of the two-year guaranty period, the Village will inspect the Infrastructure to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the General Guaranty Bond, shall be retained for two-year period by the Village in accordance with this Subsection.

(ii)

Stormwater Detention Guaranty Bond: This Bond shall be security for the proper construction and operation of the Stormwater Conveyance System. The Stormwater Detention Guaranty Bond will be in the amount of ten percent (10%) of the elements of the Stormwater Conveyance System within the Infrastructure Cost Estimate and will be held by the Village in escrow for a three (3) year period after the certificate completion is issued by the Village for the Development, or for a two (2) year period after any necessary modification to or correction of any defect or deficiency in the Stormwater Conveyance System, whichever occurs later. At the end of the three-year guaranty period, the Village will inspect the Stormwater Conveyance System to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the

Stormwater Detention Guaranty Bond , shall be retained for two-year period by the Village in accordance with this Subsection.

If the Village is required to draw on a Guaranty Bond by reason of the Developer's failure to fulfill its obligations under this Agreement, then the Developer, within twenty (20) calendar days thereafter, must cause the Guaranty Bond to be increased to its full original amount. "Developer Security" shall consist of the Developer Cash Escrow, the Performance LOC the General Guaranty Bond and the Stormwater Detention Guaranty Bond.

D. **Costs of Developer Security.** The Developer is responsible for the full cost of securing and maintaining the Developer Cash Escrow, the Performance LOC and the Guaranty Bonds.

E. **Forms of Letters of Credit.** The Performance LOC and the Guaranty Bonds must be in substantially the forms attached to this Agreement as **Exhibit "H",** with minor revisions as may be requested by the issuer and approved by the Village Attorney. Each letter of credit also must be from a bank having capital resources of at least $25,000,000, with an office in the Chicago Metropolitan Area or other location acceptable to the Village and insured by the Federal Deposit Insurance Corporation. Each letter of credit must, at a minimum, provide that: (i) it will expire no earlier than the later of two (2) years after the date of its issuance or thirty (30) calendar days after delivery to the Village, in the manner provided in Subsection 9.G. below, of written notice that the letter of credit will expire, (ii) it may be drawn on based on the Village Manager's certification that the Developer has failed to fulfill any of the obligations secured by the letter of credit, (iii) it does not require the consent of the Developer prior to any draw on it by the Village, (iv) it cannot be canceled without the prior written consent of the Village, and (v) if at any time it will expire within thirty (30) or any lesser number of calendar days, and if it has not been renewed, and if any obligation of the Developer secured by the letter of credit remains uncompleted or unsatisfactory, then the Village may call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all Developer obligations or employ the proceeds to complete all obligations and to reimburse the Village for any and all costs and expenses, including legal fees and administrative costs, incurred by the Village in connection therewith, as the Village may determine.

After completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, and after reimbursement of the Village for all costs and expenses incurred by the Village, including without limitation legal fees and administrative costs, then the Village will release to the Developer any proceeds remaining on deposit with the Village drawn from the Performance LOC and return the Performance LOC to the Developer. The Performance LOC will provide that the aggregate amount of the Performance LOC may be reduced once, upon joint written direction by the Developer and the Village, to the amount of twenty-five percent (25%) of the Infrastructure Cost Estimate when Infrastructure totaling seventy-five percent (75%) of Infrastructure Cost Estimate have been completed and accepted by the Village. The reduction to reimburse the Developer for payment of Infrastructure Improvement work satisfactorily completed will be allowed only after the Developer has provided certified contractors' sworn statements, certified schedule of values, partial or final waivers of lien, proof of payment of contractors and subcontractors, bank statements, etc., as may be appropriate, and all additional documentation as the Village may reasonably request to demonstrate satisfactory completion of the Infrastructure Improvement in question and full payment of all contractors, subcontractors, and material suppliers.

The Guaranty Bonds shall not be reduced to reimburse the Developer for any cost incurred in satisfaction its obligations under Section 8. or Section 9. of this Agreement.

F. **Replenishment of Developer Security.** If at any time the Village reasonably determines that the funds remaining in the Developer Cash Escrow or the Performance LOC or a Guaranty Bond are not sufficient to pay in full the remaining unpaid cost of all Infrastructure and all unpaid or reasonably anticipated Village costs, fees, and expenses, or that the funds remaining in a Guaranty Bond are not, or may not be, sufficient to pay all unpaid costs of correcting any and all defects and deficiencies in the Public Infrastructure and all unpaid or reasonably anticipated Village fees, costs, and expenses, then, within twenty (20) calendar days after a demand by the Village, the Developer must increase the amount of the Developer Cash Escrow or the Performance LOC or a Guaranty Bond to an amount, as determined by the Village Engineer, to be sufficient to pay unpaid costs, fees, and expenses. Failure by the Developer to increase the amount of the Developer Security will be grounds for the Village to retain any remaining balance of the Developer Cash Escrow and to receive the proceeds of, or to draw down, as the case may be, the entire remaining balance of the Performance LOC or a Guaranty Bond.

On completion of the Developer's obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, and after reimbursement of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village, then the Village will release to the Developer any remaining funds in the Developer Cash Escrow and any proceeds remaining on deposit with the Village from the Performance LOC or a Guaranty Bond and will return the letters of credit to the Developer.

G. **Use of Funds in the Event of Breach of Agreement**. If the Developer, after all required notices and cure periods under this Agreement have been provided, fails or refuses to complete the Infrastructure in accordance with this Agreement, or fails or refuses to correct any defect or deficiency in the Public Infrastructure as required by Section 6 above or this Section 9, or fails or refuses to clean or repair property in accordance with a demand made pursuant to Subsection 5.E. or Subsection 7.D.(ii) of this Agreement, or fails or refuses to pay any amount pursuant to Section 8. above within five (5) business days after demand by the Village, or in any other manner fails or refuses to meet fully any of its obligations under this Agreement secured by a letter of credit, then the Village, in its discretion and after a delivery of a 5-day notice to the Developer and the Developer's failure to cure its failure or refusal within that 5-day period, may retain all or any part of the Developer Cash Escrow and/or draw on and retain all or any of the funds remaining in the appropriate letter of credit.

The Village thereafter will have the right to exercise its rights under Subsection 5.E. above and under this Subsection 9.G., to take any other action it deems reasonable and appropriate to mitigate the effects of any failure or refusal, and to reimburse itself from the proceeds of the Developer Cash Escrow and the appropriate letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the Developer's failure or refusal to fully meet its obligations under this Agreement.

If the funds remaining in the Developer Cash Escrow or the appropriate letter of credit are insufficient to repay fully the Village for all costs and expenses, and to maintain a cash reserve equal to a required Guaranty LOC during the entire time the Guaranty LOC should have been maintained by the Developer, then the Developer, on demand of the Village therefor, must immediately deposit with the Village any additional funds as the Village reasonably determines are necessary to fully repay such costs and expenses and to establish such cash reserve.

After: (i) completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, (ii) correction of all defects and deficiencies in the Public Infrastructure as required by Subsection 6.E. above, (iii) repair of property in accordance with a demand made pursuant to Subsection 5.E. above, (iv) payment of all amounts demanded by the Village pursuant to this Section 9, (v) compliance with all other terms of this Agreement secured by a letter of credit, and (vi) reimbursement

of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village; then the Village will release to the Developer any remaining Developer Cash Escrow and any proceeds remaining on deposit with the Village from any letter of credit and return the letter of credit to the Developer.

H. **Village Lien Rights.** If any money, property, or other consideration due from the Developer to the Village pursuant to this Agreement is not either recovered from the performance security deposits required in this Section 9. or paid or conveyed to the Village by the Developer within thirty (30) calendar days after a demand for payment or conveyance, then the money, or an amount equal to the Village's reasonable estimate of the value of the property or other consideration, together with interest and costs of collection, including legal fees and administrative expenses, will become a lien upon the Property and the Village will have the right to collect the amount or value, with interest and costs, including legal fees and administrative expenses, and the right to enforce the lien in the same manner as in statutory mortgage foreclosure proceedings.

SECTION 10. INFRASTRUCTURE SSA.

The Village will establish a special service area (the "Private Infrastructure SSA"), the boundaries of which will include all of the Property. The purpose of the Private Infrastructure SSA is to generate funds (the "Private Infrastructure SSA Tax Fund") that the Village may use to provide the special services of maintaining the Private Infrastructure if the Developer fails at any time to properly maintain the Private Infrastructure. The Private Infrastructure SSA will authorize the levy of a special service area tax from time to time on the Property to establish, replenish, and maintain the Private Infrastructure SSA Tax Fund sufficiently to pay for the special services only if the Developer or the homeowners association fails to pay for such services. The Village may from time to time levy the special service tax to replenish the Private Infrastructure SSA Tax Fund in a dollar amount, as determined by the Corporate Authorities of the Village, in their sole discretion, as reasonably necessary to pay for any special services. The Village will not levy a special service tax for collection prior to the issuance of a Certificate of Completion for the Development. The Developer approves, and agrees not to object to, the establishment of the Private Infrastructure SSA as provided in this Section 10 and the levying and expending the Private Infrastructure SSA Funds by the Village, at the Corporate Authorities of the Village's sole discretion, consistent with this Section 10. Nothing regarding the Private Infrastructure SSA will compel or require the Village to provide special services or to levy the SSA tax. The obligation to maintain the Private Infrastructure rests entirely and in perpetuity on the Developer as provided in Subsection 6.N . of this Agreement.

SECTION 11. LIABILITY AND INDEMNITY OF VILLAGE.

A. **No Village Liability.** The Developer acknowledges and agrees that the Village is not, and will not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of: (i) the Village's review and approval of any plan or specification provided by the Developer or the Developer's representatives for the Development; or (ii) the issuance of any approvals, permits, certificates, or acceptances for the Development or use of the Property and that the Village's reviews, approvals, and issuances do not, and will not in any way, be deemed to insure the Developer or any of its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, and or any other person, and each and all homeowners associations or their equivalent within the Property, against damage or injury of any kind at any time.

B. **Village Procedures.** The Developer agrees not to challenge the Village's approval of this Agreement or of the Approval Ordinance or any other Village approved document that relates to the Development.

C. **Indemnification.** The Developer acknowledges that the accuracy and sufficiency of the Developer's Development Plans and related specifications for the Development are entirely the responsibility of the Developer and are not the responsibility of the Village, regardless of whether the Village reviews or approves the Developer's Development Plans and related specifications for apparent consistency with the Village's codes. The Developer agrees to indemnify the Village and all Village elected or appointed officials, officers, employees, agents, representatives, engineers, and attorneys (collectively the "Indemnitees") from any and all third party claims and causes of action of any kind that may be asserted at any time against the Village and any of the Indemnitees in connection with: (i) any design defect in the Developer's Development Plans and related specifications for the Development or any Infrastructure, regardless of the Village's review and approval of any Developer Development Plans or related specification for the Development or the Infrastructure or the Village's issuance of any approval, permit, certificate, or acceptance for the Development based on the apparent consistency of any Developer Development Plans or related specification for the Development or any Infrastructure Improvement; or (ii) the design, development, construction, maintenance, or use of any portion of the Property or the Infrastructure (each a "Claim" and collectively "Claims"). This indemnity does not apply or extend to any matter concerning maintenance by the Village of any Public Infrastructure after that Public Infrastructure has been accepted by the Village in accordance with this Agreement D.

D. **Defense Expenses.** The Developer agrees to pay all reasonable expenses, including without limitation attorney fees, litigation defense fees and costs, consultant fees and administrative expenses incurred by the Village in examining and tendering the defense of any Claim to the Developer in accordance with Subsection 11.C. above. The Village must promptly notify the Developer in writing of any Claim.

SECTION 12. BINDING NATURE OF AGREEMENT.

The obligations assumed by the Developer under this Agreement are binding on the Developer, on all of the Developer's transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property and each and all homeowners associations or their equivalent within the Property.

SECTION 13. TERM.

This Agreement will run with and bind the Property as long as the Development and its homeowners association continues to exist and operate, and will inure to the benefit of and be enforceable by the Developer, the homeowners association and the Village.

SECTION 14. ENFORCEMENT.

Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the Developer agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any Village elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

In addition to every other remedy permitted by law for the enforcement of the terms of this Agreement, the Village will be entitled to withhold the issuance of a building permit or a certificate of occupancy for work or occupancy within the Property at any time when the Developer has failed or refused to comply with a material obligation under this Agreement and has not, after the required notices stated herein, cured that failure or refusal within the cure periods, if any, allowed for that failure or refusal.

A. **Compliance with Laws.** The Developer agrees to comply with all applicable laws, rules and regulations of any federal, State or local entity or agency relating to the Development. The Developer will not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex or national origin. To the fullest extent permitted by law, the Developer will take affirmative action to ensure that applicants are employed and treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rate of pay or other forms of compensation, and selection for training, including apprenticeship.

B. **Conflict of Interest and Prohibited Interest Disclosures.** Upon the Village's request from time to time during the Term of this Agreement, the Developer will provide a list of all entities owning a greater than one percent (1%) interest in the Developer. Based in part on the information provided by the Developer and in part on information from the Village's independent investigation, the Village will affirm that its Corporate Authorities, and all appropriate Village elected and appointed officials, officers, employees, agents and representatives of the Village, have or will comply with the disclosure and conflict-of-interest provisions of the Public Officer Prohibited Activities Act (50 ILCS 105/3), the TIF Act (65 ILCS 5/11-74.4-4(n)) and the Illinois Governmental Ethics Act (5 ILCS 420). Upon the Village's request, the Developer shall provide the Village with all information required for compliance with the annual TIF report that the Village is required to file with the State of Illinois Comptroller or any such similar financial information, and required for the Village to comply with any disclosure and transparency ordinance or law enacted by the State of Illinois or DuPage County. In addition, the Developer shall provide, on an annual basis, the information required by the TIF Act.

C**.** **Successors and Assigns.** The Developer shall be liable for all of the Developer's obligations under this Agreement. All obligations assumed by the Developer under this Agreement shall be binding on the Developer, and on any and all of the Developer's successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the Developer's successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the Developer shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the Acquisition Date, any consents or other documents necessary to authorize the Village to record a Memorandum of this Agreement, in form and substance reasonably acceptable to the Developer and the Village, in the Office of the Recorder of Deeds of Cook County, Illinois;
2. Notify the Village in writing at least thirty (30) calendar days prior to any date that the Developer intends to transfer fee title to any portion of the Property to any person not a party to this Agreement;
3. Include in the Restrictive Covenant a memorandum or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement; and

4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the Substantial Completion Date, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "**Transferee Assignment and Assumption Agreement**"), agreeing to be bound by this Agreement and to provide the Village, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Village and the Developer shall record against the Property a memorandum of this Agreement that obligates the owner of the Property from time to time to perform the obligations of the Developer under this Agreement and shall require notice to the Village of any transfer of the Property, which memorandum shall be in form and substance reasonably satisfactory to the Village and the Developer.

The Village agrees that, after a successor becoming bound to the obligations of the Developer created in the manner provided in this Agreement, and providing the financial assurances required in this Section, the liability of the Developer shall be deemed automatically released. The failure of the Developer to provide the Village with a fully executed copy of a Transferee Assignment and Assumption Agreement before completing the transfer shall result in the Developer remaining fully liable for all of the Developer's obligations under this Agreement, but shall not relieve the transferee of its liability for those obligations as a successor to the Developer.

D. **Representations and Warranties of the Developer.**

1. No Gifts. The Developer covenants that no officer, member, manager, stockholder, employee or agent of the Developer, or any other person connected with the Developer, have made, offered or given, either directly or indirectly, to any member of the Corporate Authorities, or any officer, employee or agent of the Village, or any other person connected with the Village, any money or anything of value as a gift or bribe or other means of influencing his or her action in his or her capacity with the Village.
2. Assignment. The Developer may not assign or transfer some or all of its rights or obligations under this Agreement without the prior written consent of the Village, the granting or denial of which consent shall be in the sole discretion of the Village; provided, however, that, without the Village's prior consent, the Developer may assign this Agreement to an entity controlling, controlled by, or under common control with the Developer and/or assign or collaterally assign any of the Developer's rights and/or obligations to the Lender.
3. Prevailing Wage. The Developer and its contractors and subcontractors are required to pay prevailing wages for all or portions of the Development work only if the Illinois Prevailing Wage Act (820 ILCS 130/) (the "IPWA") requires payment of prevailing wages.
4. Property Acquisition. The Developer shall provide the Village with sufficient documentation regarding Developer's ownership of the Property for the Development.
5. Corporate Authorization. This Agreement has been submitted for consideration and review by the board of directors, corporate officers, shareholders, members and/or managers of the Developer, and the Developer's board of directors, corporate officers, shareholders, members and/or managers have taken all

actions required to be taken prior to the execution of this Agreement in order to make the same binding upon the Developer according to the terms hereof, and any and all actions of the Developer's board of directors, corporate officers, shareholders, members and/or managers, as the case may be, precedent to the execution of this Agreement have been undertaken and performed in the manner required by law.

Agreement shall be deemed to be the agreement of any official, agent, employee, consultant or attorney of the Village, in their individual capacity, and no official, employee or attorney of the Village shall be liable personally under this Agreement or be subject to any personal liability or accountability by reason of or in connection with or arising out of the execution, delivery and performance of this Agreement, or any failure in connection therewith.

SECTION 15. INSURANCE AND INDEMNIFICATION.

A. Liability Insurance Prior to Completion. Prior to issuance of Permits, the Developer shall procure and deliver evidence of such policies to the Village, at the Developer's cost and expense, and shall maintain in full force and effect during any period of construction and through completion of construction of the Development, for both ongoing and completed operations, the following types of insurance, written on the comprehensive form and as an "occurrence" policy, in not less than the following amounts:

1. Commercial General Liability Insurance (including property damage insurance): $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
2. Contractor's Liability Insurance: $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
3. Automobile Insurance: $1,000,000.00 per occurrence and $1,000,000.00 in the aggregate.
4. Umbrella Coverage or Excess Liability Coverage: $5,000,000.00 in the aggregate.
5. Workers Compensation Insurance: Statutory Amount.

Said insurance shall state that the insurance provided by the Developer shall be primary and that any provision of any contract of insurance or other risk protection benefit or self-insurance policy purchased or in effect or enacted by the Village and any other insurance or benefit of the Village shall be in excess of the Developer's insurance. All such policies shall be in such form and issued by such companies as shall be reasonably acceptable to the Village. Each such policy, including any related insurance certificates, endorsements and riders, shall expressly name "the Village of Western Springs and its appointed and elected officials, mayor and trustees, employees, engineers, attorneys, agents and representatives" as additional insureds.

Prior to commencement of construction of the Development, the Developer shall furnish to the Village the above-required certificates of insurance, policies, riders and policy endorsements, with premiums paid in full that contain the insurer(s) written confirmation that the nature, scope, duration and amount of insurance coverage meets the requirements of this Agreement and shall remain in effect for all aspects of the Development for both ongoing and completed operations. The Developer shall provide the Village with satisfactory proof of the above insurance requirements in the form of a certificate executed by an insurer with no less than an A rating by the most recent "AM Best Insurance Rating Guide."

The Village shall be given written notice at least thirty (30) calendar days prior to any cancellation or material amendment of the Developer's insurance policies required hereunder. Alternatively, the Developer may satisfy its insurance obligations in this **Subsection 15.A.** by way of a blanket policy or policies, which includes other liabilities, properties and locations meeting the minimum insurance coverage amounts. The Developer shall provide to the Village a replacement certificate prior to expiration, cancellation or material modification of any policy.

B. Developer's Risk Prior to Completion. Prior to completion of the construction of the Development, as certified by the Village, the Developer shall keep in force at all times builders risk insurance or similar insurance coverage, on a completed value basis, in non-reporting form, against all risks of physical loss, including collapse, covering the total value of work performed and equipment, supplies and materials furnished for the Development (including on-site stored materials), all as to work by the Developer. Such insurance policies shall be issued by companies satisfactory to the Village. The Developer shall provide written notice to the Village at least twenty-one (21) calendar days before any such policy is cancelled or materially modified.

C. Village Review. The Developer acknowledges and agrees that, except for breaches of this Agreement by the Village, the Village is not, and shall not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of the Village's review, approval or denial of any plans or failure to review any plans for the Property or the Development, or the issuance of any approvals, permits, certificates or acceptances for the development or use of the Property or the Development, and that the Village's review and approval of those plans and the Development and issuance of those approvals, permits, certificates or acceptances does not, and shall not, in any way be deemed to insure the Developer, or any of its heirs, successors, assigns, tenants, invitees and licensees, or any other person, against damage or injury of any kind at any time.

D. Village Procedure. The Developer has been advised by the Village that notices, meetings and hearings have been properly given and held by the Village with respect to the approval of this Agreement, and the Developer agrees not to challenge the Village's approval of this Agreement on the grounds of any procedural infirmity or of any denial of any procedural right.

E. Indemnity and Defense Expense. The Developer undertakes and assumes all potential liability for any injuries, deaths, losses, damages, claims or judgments of any nature whatsoever resulting from or in connection with its/their redevelopment activities at the Property, and the Developer shall hold harmless, indemnify and defend the Village against any such losses, except to the extent that the same is caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives, or by the breach of this Agreement by the Village.

1. Developer Defense Expense. The Developer shall, and does, agree to pay all reasonable expenses incurred by the Village, the Village's Corporate Authorities, and all Village elected and appointed officials, officers, employees, agents, contractors and representatives in defending against any and all claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties of any kind that may, at any time, be asserted against any of the Parties by any person(s) in connection with the Development, the approval of this Agreement, any terms or provisions of this Agreement, or the Developer's duties, obligations and performance under this Agreement, including, without limitation, any claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties related to or associated with environmental conditions, matters or contaminants concerning or relating to the Property, in each case,

except to the extent caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives. These expenses shall include, without limitation, all reasonable out-of-pocket expenses, such as attorneys' and experts' fees and other litigation costs.

2. Mutual Indemnification. Each Party shall indemnify, hold harmless and defend the other Party and their respective officers, employees, agents, contractors and representatives against all injuries, deaths, losses, damages, claims, suits, liabilities, liens, including mechanic's liens, judgments, costs and expenses, including reasonable attorney fees, which may in any way arise from or accrue against the other Party as a consequence of this Agreement or which may in any way result therefrom, other than those indemnified matters which arise from or relate to the negligence or willful misconduct of the other Party or its officials, officers, employees, agents, contractors and representatives. The provisions of this Subsection and any other indemnification obligations on the part of either Party shall survive the termination or expiration of this Agreement for a period of two (2) years. In any such action against either Party, the other Party shall, at its own expense, appear, defend and pay all charges of reasonable attorney fees and all reasonable costs and other reasonable expenses arising therefrom or incurred in connection therewith; and, if any judgment shall be rendered against the Party in any such action, the other Party shall, at its own expense, satisfy and discharge such judgment. The prevailing Party shall indemnify the other Party for any costs, including reasonable attorney fees, in enforcing the provisions of this Agreement.

SECTION 16. DEFAULT; CURE.

In addition to any other "Event of Default" identified in this Agreement, an "**Event of Default**" shall mean a failure on the part of either Party to comply with any material term, representation, warranty, covenant, agreement or condition of this Agreement, which failure is not cured within thirty (30) calendar days after written notice thereof; provided, however, if the failure is of a nature that it cannot be cured within thirty (30) days, then the defaulting Party shall have such additional time as is reasonably necessary to cure such failure so long as the defaulting Party commences activities designed or intended to cure such Event of Default within such thirty (30) calendar day period and thereafter diligently pursues activities designed or intended to cure such Event of Default to completion. Upon an Event of Default by the Village in the performance of any of its obligations under this Agreement, the Developer's remedies shall include specific performance (including statutory interest on any sums deemed to be improperly withheld), and any and all rights and remedies available to the Developer at law or in equity, including termination of this Agreement. The Village shall not be liable for punitive damages, consequential damages or lost profits. Upon an Event of Default by the Developer in the performance of any of its obligations under this Agreement, the Village shall be entitled to take such action as authorized by this Agreement and pursue any other remedies available at law or in equity; provided, however, that the Developer shall in no event be liable for punitive or consequential damages. Notwithstanding anything to the contrary in this Agreement, the Developer's defaults, and the Village's remedies upon such defaults, described in **Subsections 3.A.** and **5.E.** and shall be only as expressly set forth in **Subsection 3.A.** and **5.E.**, respectively.

SECTION 17. GENERAL PROVISIONS.

A. **Notice.** Any notice or communication required or permitted to be given under this Agreement shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight

courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Agreement, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this **Subsection 17.A.**, each Party to this Agreement shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Direct: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

Paul McNaughton McNaughton Development, LLC 11S220 Jackson Street Burr Ridge, Illinois 60527 Direct: 630.325.4048 Email: pmcnaughton83@yahoo.com	With a copy to: James E. Olguin, Esq. 16101 South 108th Avenue, 1st Floor Orland Park, Illinois 60467 Direct: 630.403.8003 Email: jim@olguinlawllc.com

B. **Time of the Essence.** Time is of the essence in the performance of this Agreement.

C. **Rights Cumulative.** Unless expressly provided to the contrary in this Agreement, each and every one of the rights, remedies and benefits provided by this Agreement shall be cumulative and shall not be exclusive of any other rights, remedies and benefits allowed by law.

D. **Non-Waiver.** The Village shall be under no obligation to exercise any of the rights granted to it in this Agreement. The failure of the Village to exercise at any time any right granted to the Village shall not be deemed or construed to be a waiver of that right, nor shall the failure void or affect the Village's right to enforce that right or any other right.

E. **Consents**. Unless otherwise provided in this Agreement, whenever the consent, permission, authorization, approval, acknowledgement, or similar indication of consent of any Party to this Agreement, or of any duly authorized officer, employee, agent, or representative of any Party to this Agreement, is required in this Agreement, the consent, permission, authorization, approval, acknowledgement, or similar indication of consent will be in writing. The Property Owner has further

executed a "Written Consent of the Property Owner" to allow the Developer to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof.

F. **Facilitation of Agreement**. The Village and the Developer will act in good faith and in a reasonable and cooperative manner with respect to consents, approvals, and other matters contemplated under this Agreement. No consent or approval may be unreasonably delayed, conditioned, or withheld. The Village and the Developer will execute, acknowledge, and deliver reasonable documents and other instruments necessary to fully carry out the terms of this Agreement.

G. **Governing Law.** This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Illinois.

H. **Severability.** It is the intent of the Parties that, should any provision, covenant, agreement or portion of this Agreement or its application to any person or property be held invalid by a court of competent jurisdiction, the remaining provisions of this Agreement and the validity, enforceability and application to any person or property shall not be impaired thereby, but the remaining provisions shall be interpreted, applied and enforced so as to achieve, as near as may be, the purpose and intent of this Agreement to the greatest extent permitted by applicable law.

I. **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties and supersedes any and all prior agreements and negotiations between the Parties, whether written or oral, relating to the subject matter of this Agreement.

J. **Interpretation.** This Agreement shall be construed without regard to the identity of the Party who drafted the various provisions of this Agreement. Moreover, each and every provision of this Agreement shall be construed as though all Parties to this Agreement participated equally in the drafting of this Agreement. As a result of the foregoing, any rule or construction that a document is to be construed against the drafting Party shall not be applicable to this Agreement.

K. **Amendments and Modifications.** No amendment or modification to this Agreement shall be effective until it is reduced to writing and approved and executed by all Parties to this Agreement in accordance with all applicable statutory procedures.

L. **Authority to Execute.** The Village warrants and represents to the Developer that the persons executing this Agreement on its behalf have been properly authorized to do so by the Corporate Authorities of the Village. The Developer warrants and represents to the Village that: (i) the Developer has the full and complete right, power and authority to enter into this Agreement and to agree to the terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the Developer have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the Developer will: (a) result in a breach or default under any agreement to which the Developer is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the Developer or the Property are subject.

M. **No Third-Party Beneficiaries/No Joint Venture.** Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any other entity other than the Village and the Developer, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third persons to either the Village or the Developer, nor shall any provision give any third parties any rights or subrogation or action over or against either the

Village or the Developer. This Agreement is not intended to and does not create any third-party beneficiary rights whatsoever. Nothing in this Agreement, or any actions of the Parties to this Agreement, shall be construed by the Parties or any third-party person to create the relationship of a partnership, agency or joint venture between or among such Parties.

N. **Force Majeure**. Either Party will be temporarily excused from the performance of its obligations under this Agreement when and to the extent the non-performing Party's performance is delayed or prevented by any circumstances beyond the non-performing Party's control, including but not limited to fire, flood, explosion, epidemic, pandemic, strikes or other labor disputes, acts of God or public emergency, war, rioting, malicious damage, acts or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment or service from a public utility needed for their performance or action or omission of the other Party (collectively, "Force Majeure"), provided that:

a. The non-performing Party gives the other Party reasonably prompt written notice describing the particulars of Force Majeure including, but not limited to, the nature of the occurrence, and continues to furnish timely reports with respect thereto during the period of Force Majeure;
b. The excuse of performance is of no greater scope and of no longer duration than is required by Force Majeure;
c. No obligations of either Party that arose before Force Majeure causing the excuse of performance are excused as a result of Force Majeure; and
d. The non-performing Party uses commercially reasonable and diligent efforts to remedy its inability to perform.

Economic hardship or other financial considerations, including but not limited to increases in the costs of construction materials, equipment or construction labor, of the Developer will not constitute an event of Force Majeure.

O. **Counterparts.** This Agreement may be executed in counterparts, each of which shall constitute an original document, which together shall constitute one and the same instrument.

P. **Enforcement of Agreement.** The provisions of this Agreement shall be enforceable in any action in law or in chancery. The Parties hereto agree that any legal action to enforce any right or obligation contained in or arising out of this Agreement shall be brought in the Circuit Court of Cook County, Illinois.

Q. **Exhibits.** The following Exhibits are attached hereto and made a part hereof or incorporated herein by reference and made a part hereof:

Exhibit "A":	Site Plan for the Development, Revised as of January 27, 2025 (attached)
Exhibit "B":	"Approval Ordinance": Western Springs Ordinance No. 25-_____ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions (attached)
Exhibit "C":	Legal Description of the Property (attached)
Exhibit "D":	Final Development Plans (to be attached after Village Board approval)
Exhibit "E":	Construction Schedule (attached)
Group Exhibit "F":	**Confidential** Developer Letter of funding sources for completion of the Development and Supporting Submittals and Developer's Lender's

	Financing Commitment Letter issued by _____ Bank and dated _____, 2025 (not attached; on file with the Village Clerk's Office)
Exhibit "G":	Operations and Maintenance Manual and Specifications and Maintenance Schedule for Stormwater Conveyance System
Exhibit "H":	Forms of Letters of Credit (attached)
Exhibit "I":	Written Consent of the Property Owner to Allow Developer to Enter into Redevelopment and Maintenance Agreement (attached)

In the event of a conflict between an Exhibit and the text of this Agreement, the text of this Agreement shall control.

R. **Estoppels.** Within ten (10) business days following request by either Party from time to time, the other Party shall execute and deliver to the requesting Party an estoppel certificate that certifies: (i) that this Agreement is unmodified and in full force and effect or, if there had been modifications, that this Agreement is in full force and effect as modified, (ii) that the Party is not in default of this Agreement or specifying any defaults, and (iii) such other information that may be reasonably requested by the Party.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates set forth below, and the date of the last signatory below shall be inserted on page 1 of this Agreement, as the Effective Date of this Agreement.

McNaughton Development, LLC,
A limited liability company

By:_____
Paul McNaughton
Member

Date:_____

ATTEST:

By:_____

Name:_____

Title:_____

Date:_____

VILLAGE OF WESTERN SPRINGS ,
an Illinois municipal corporation

By:_____
Heidi Rudolph
Village President

Date:_____

ATTEST:

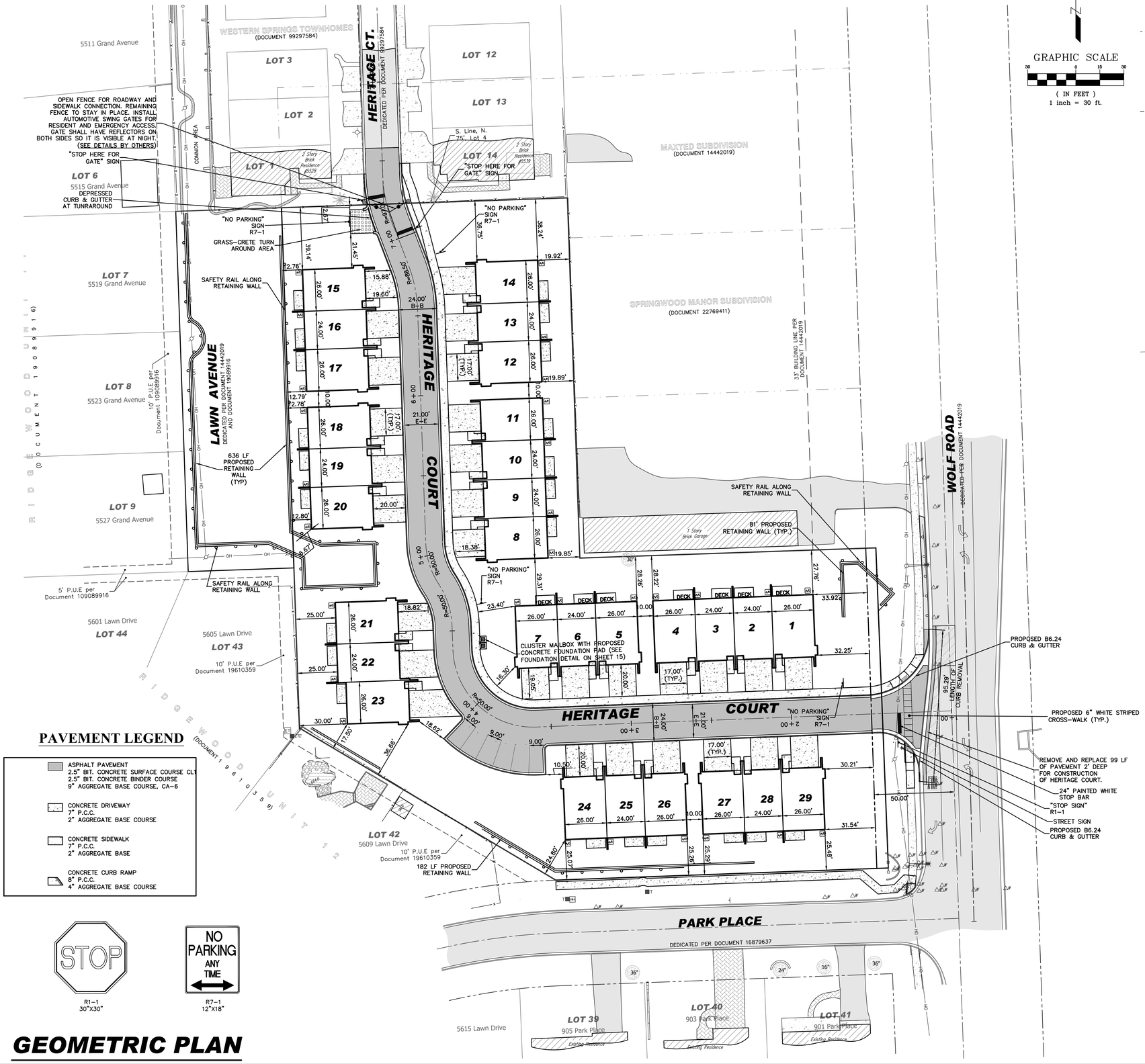
By:_____
Edward Tymick
Village Clerk

Date:_____

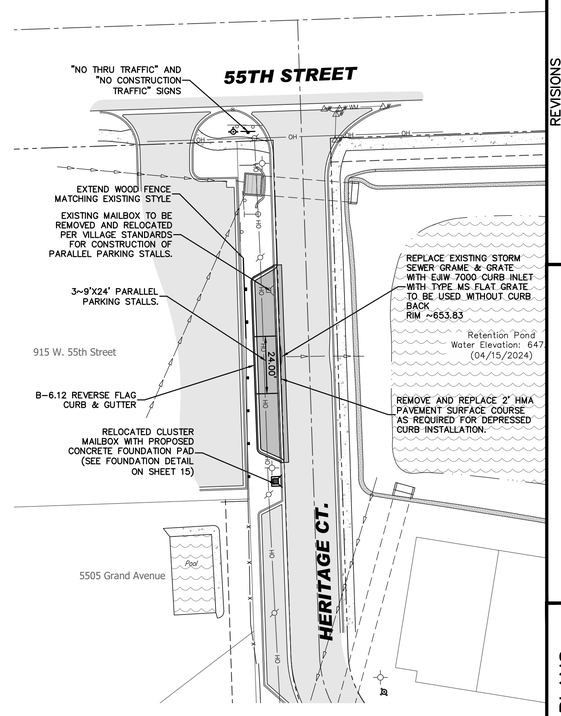
Exhibit "A"

Site Plan for the Development,
Revised as of January 27, 2025

(attached)



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

PAVEMENT LEGEND

- ASPHALT PAVEMENT — 2.5" BIT. CONCRETE SURFACE COURSE CL1; 2.5" BIT. CONCRETE BINDER COURSE; 9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY — 7" P.C.C.; 2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK — 7" P.C.C.; 2" AGGREGATE BASE
- CONCRETE CURB RAMP — 8" P.C.C.; 4" AGGREGATE BASE COURSE

R1-1
30"X30"

R7-1
12"X18"

GEOMETRIC PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

7
OF
20

GEOMETRIC PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date:1/27/2025 2:45:05 PM By:dvanh

Exhibit "B"

"Approval Ordinance": Western Springs Ordinance No. 25-_____

ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS

(attached)

Exhibit "C"

Legal Description for 5600 South Wolf Road, Western Springs, Illinois.

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

Legal Description for the Lawn Avenue ROW Parcel:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000
18-18-200-038-0000
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

(attached)

Exhibit "D"

Final Development Plans

(To be attached and incorporated herein
after Village Board approval)

Group Exhibit A

GENERAL INFORMATION APPLICATION
For Land Use and
Development in the Village

Applicant(s)

Name: McNaughton Development LLC

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

E-mail johnb@mcnaughtondevelopment.com

Property Owner(s)

Name: Casey & Fran Gaik

Address: 8541 Pavia Way

Lakewood Ranch, Florida 34202

Telephone: 630-408-8833

E-mail: ibitmog@gmail.com

Agent/Attorney

Name: John Barry

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

Engineer

Name: DesignTek Engineering & Survey

Address: 9930 W. 190th Street

Mokena, Illinois 60448

Telephone: (708) 326-4961

Fax: (708) 3264962

If the property is in a trust, provide name, address and number of trust. Also provide name, address and percentage ownership of trust beneficiaries.
____N/A_____

I hereby make application for the following (check as appropriate).

Annexation	_____	Map Amendment	___X___
Subdivision	_____	Resubdivision	___X___
Planned Development	X_____	Conditional Use	___X___
Variation(s)	_____	Outdoor dining	_____
Other: Comp. Plan Amendment to the Long-Range Land Use Map	X_____	Appeal	_____

Briefly describe your request (or attach a cover letter/narrative): Refer to the attached Application for Development Approval and Zoning Relief

DocuSign Envelope ID: 22C151EA-279C-4841-A603-1B35A92C1BF3

GENERAL INFORMATION APPLICATION (continued)

1. Common address or location of subject property: 5600 S. Wolf Road, Western Springs, Illinois 60558

2. Legal Description (Attach additional sheet if necessary): Refer to the attached Application for Development Approval and Zoning Relief

3. Permanent Index Number: 18-18-200-038, 18-18-200-017 & 18-18-200-001

4. Parcel Size (sq. ft. or acres): 2.755

5. Applicant is (check one):
___ Property Owner __ Attorney ___ **Contract Purchaser X** Agent ____ Other (specify)

* Provide one copy of the executed sales contract or written permission from the current owner to petition the Village

6. What are the current land uses and zoning on and around the site?

	Current Zoning	Land Uses
On Site	O-Limited Office	Office Building
North of Site	C2-Community Shop	Gas Station/ Community Shops
	A-Single Family	ComEd Facility
	R4-Multi-Family	Condominiums and Townhomes
South of Site	A-Single Family	Single Family Homes
East of Site	Unincorporated R4	Single Family Homes
West of Site	A-Single Family	Single Family Homes

7. Describe any existing structures and the site: The property is improved with a 24,000 square foot with its associated parking lots.

I hereby certify that all information contained in this application and accompanying documentation is true and correct to the best of my knowledge.

Date 5/13/2024 Signature _____
(Applicant or Contract Purchaser)

Date 5/9/2024 Signature DocuSigned by: Fran Gaik 2DDB531924AB443...
(Property Owner)

5/9/2024 DocuSigned by: CASEY Gaik 95445F2250CF41A...

APPLICATION FOR DEVELOPMENT APPROVAL AND ZONING RELIEF;

MAP AMENDMENT AND CONDITION USE PERMIT FOR PLANNED DEVELOPMENT

To: Heather Valone
Director of Community Development
Village of Western Springs
4353 Wolf Road
Western Springs, IL 60558

By: Paul R. McNaughton
John Barry
McNaughton Development, LLC
11S220 Jackson Street
Burr Ridge, Illinois 60527

Project Summary: McNaughton Development LLC, as the contract purchaser of the property at 5600 S. Wolf Road in Western Springs is making the following application to allow for the demolition of the existing underutilized office building and its associated parking lots and for the construction of twenty-nine new three-story townhome units. The current 24,000 square foot office building and the parking lot sit on two parcels of land that total 2.414 acres. The final development will also include 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. This Lawn Area right-of-way is currently being maintained by the Heritage Estates Townhome Association as a detention facility. The Heritage Crossing townhome development would require the vacation of the Lawn Avenue right-of-way and the consolidation of it and the two existing parcels creating a 2.755-acre parcel to be rezoned under a Planned Development with an underlaying zoning district of R4 – Multi Family Residence District.

Applicant: McNaughton Development LLC, will be the owner and general contractor for the new twenty-nine three-story for sale townhome units within the Heritage Crossing development.

Subject Property Address: 5600 S. Wolf Road, Western Springs, Illinois 60558

Legal Description:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

LAWN AVENUE: THAT PART OF THE 66 FEET WIDE VACATED LAWN AVENUE (VACATED PER DOCUMENT NO. 96138577), LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PIN:

PARCEL 1:	18-18-200-038
PARCEL 2:	18-18-200-017
LAWN AVENUE RIGHT-OF-WAY:	18-18-200-001

Lot Size: Approximately 2.755 Acres

Current Zoning District:

PARCELS 1 & 2: O – Limited Office District
LAWN AVENUE
RIGHT-OF-WAY: R4PUD – Residential Planned Unit Development

Zoning Approval & Relief Requested:
Comprehensive Land Use Plan Amendment: Amend the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

Zoning Map Amendment: Amend to rezone the property to R4 – Multiple Family Residence District (Chapter 10-6-5) allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building

Plat of Consolidation: Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development

Resubdivision: Approval of a Plat of Resubdivision (10-10-3) to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road

Conditional Use for a Planned Development: Approval of Conditional Use for a Plan Development with requested deviations from the R4 – Multi Family Residence District as reflected in the following exhibits.

Vacation of Right-of-Way: Approval of the Vacation of the existing Lawn Avenue as depicted in the preceding legal description and included in the following plat of consolidation.

PROJECT NARRATIVE DESCRIPTION
McNaughton Development LLC is the contract purchaser and Casey & Fran Gaik are the owners of the property located at 5600 S. Wolf Road, Western Springs. The property is currently zoned O – Limited Office District. It is one of just five properties within the Village of Western Springs with this zoning designation. The site is improved with a 24,000 square foot office building with its associated parking lots. The property, originally developed as a private school in the 1960's was later converted into and expanded for its current office use in the early 1990's. In recent years the tenant base has vacated the property to the point where the building is at five percent occupancy due to the building's obsolescence. The owners have aggressively marketed the property to other prospective tenants with no success. In addition, it has not been attractive to owner users for any other permitted or conditional use under the O – Limited Office District. It was then decided by the owner, at the suggestion of their real estate broker, that after great effort, the property value would most likely be found in redevelopment for multi-family residential use.

The proposed multi-family residential use will continue to provide for an orderly zoning transition from the intersection of 55th Street and Wolf Road. The existing zoning classification at that corner is C2 – Community Shopping District surrounded by a small A – Single Family Residence parcel

improved with a ComEd facility, a R4 – Multi-Family Residence District improved with condominium units and a R4 – Multi-Family Residence District Planned development improved with townhome units.

The proposed zoning request would permit the resubdivision of and the redevelopment of the property into twenty-nine three-story townhome units. The twenty-nine units will be constructed in eight different buildings ranging from duplex units to four, five and six wide unit buildings. The units will be three stories tall with a two-car garage and recreation room on the ground level, the main living areas on the middle level and the bedrooms on the third level. There are no roof top deck options being offered at this time. The buildings will be 38 feet tall as measured from the proposed final grade to the midpoint of the roof. The living area within the units will range from 2,400 to 2,600 square feet. All of the units will have three bedrooms, two full and two one-half bathrooms and two-car garages. None of the units will have a basement.

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place, and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. By offsetting the access to Park Place, providing entry monumentation and proposing offsite landscaping site access has been proposed in such a way to lessen the impact on the current property owners along the south side of Park Place. A preliminary application was made to the Cook County Highway Department and their response noted that they agreed with the above noted reasoning for the applicant's decision to provide access from Park Place and not directly from Wolf Road. The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

The property will comply with the stormwater ordinances of both the Metropolitan Water Reclamation District (MWRD) and the Village of Western Springs. The proposed redevelopment will result in a reduction in the site's impervious surface as compared to the existing conditions, volume control storage and stormwater detention storage. The applicant is aware of the downstream flooding issue that are a result of approximately one hundred eighty acres of undetained stormwater from the LaGrange Highlands area east of Wolf Road which is directed through this site and ultimately reaching Flagg Creek. The proposed development will have no detrimental effect to downstream owners and the stormwater improvements will provide for marginal improvements to the area.

The proposed development is a for sale townhome development with private improvements that will be managed by its homeowner's association. The expected base purchase price is anticipated to be between $800,000.00 and $850,000.00. The exterior and interior finishes will be of the utmost quality to support the anticipated base pricing. At the same time, interior finish upgrades will be offered to the purchaser. It is anticipated that the target market will be young professionals with no or very young children and active adult move down buyers native to Western Springs and the surrounding communities. Elevator options will be possible in at least fifty percent of the units. The private improvements to be owned and maintained by the association will include the common area landscaping, stormwater improvements and the extended Heritage Crossing. Water main improvements will be turned over to Village of Western Springs and the sanitary sewer improvements to the La Grange Highlands Sanitary District.

I. PETITION FOR REQUESTED ZONING RELIEF

The applicant is requesting the following zoning relief and approvals as part of this applications:

(1) Amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

(2) Zoning Map Amendment

Existing Zoning and Land Use:	O – Limited Office District / 24,000 square foot office building	
Adjacent Zoning and Land Use:	**North**	C2 – Community Shopping District/ gas station and community shopping, A – Single Family Residence parcel / ComEd facility, R4 – Multi-Family Residence District / condominium units and R4 – Multi-Family Residence District Planned development / townhome units.
	South	A – Single Family Residence
	East	Unincorporated Cook County Single-Family Residence District R4
	West	A – Single Family Residence
Proposed Zoning and Land Use:	R4 – Multi Family Residence District allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building	

(3) Plat of Consolidation
Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development. The consolidation of the parcels will allow for an orderly redevelopment of the property, particularly as it relates to stormwater management.

(4) Resubdivision
Approval of a Final Plat of Resubdivision to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road on a parcel of less than the five acres minimum requirement. The applicant is requesting to bypass the Resubdivision requirement to submit preliminary plans and simply request final plan approvals in light of the size of the property.

(5) Conditional Use Permit
Approval of a Conditional Use to allow for a Planned Development with the following deviations from the requirements R4 – Multi Family Residence District and per the following plans and exhibits.

R4 – Multiple Family Residence District Requirements vs Requested Relief:

Minimum Development Parcel Size
Required: 5 Acres
Requested: 2.755 Acres

Front Yard Setback
Required: Twenty-Five Feet (25)
Requested: Twenty Feet (20) Garage Face to the Closer of the Sidewalk or Curb with the permitted encroachment of the Middle Level Deck and Third Level Living Area

Interior Sideyard Yard Setback
Required: Thirty Feet (30)
Requested: Eight Feet (8) with the permitted encroachment of bay windows

Corner Sideyard Yard Setback
Required: Twenty Feet (25)
Requested: Twenty Feet (25) with the permitted encroachment of bay windows

Rear Yard Setback
Required: Thirty Feet (30)
Requested: Twenty-Five Feet (25) with the permitted encroachment of Middle and Third Level Projections and Balconies

Multiple – Family Dwelling Height
Required: Thirty-Five (35) Feet
Requested: Thirty-Eight (38) Feet

Maximum Building FAR
Required: 54,311.51 SF
Requested: 126,008.40 SF

Vacation of Right-of-Way

Approval of the vacation of the 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. The applicant is requesting that the acquisition cost of this vacation be made at no cost to the applicant. The applicant feels that its offer to make stormwater improvements to the site, including to the detention facility, and its commitment and its successors commitment of perpetual care and maintenance is sufficient compensation.

(1) MAP AMENDMENT STANDARDS

Pursuant to Section 10-3-12(F)(1) (Map Amendments) of the DCO, the Applicant must provide the information relative to each of the Standards that are to be used by the Plan Commission and the Village Board to evaluate the suitability of a map amendment.

a. Existing uses of property within the general area of the property in question. The property is currently zoned O – Limited Office District and is along Wolf Road which is under the jurisdiction of the Cook County Highway Department.

North Parcels: Gas station and community shopping, ComEd facility, condominium units and townhome units.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: Single Family Home

b. The zoning classification of property within the general area of the property in question.

North Parcels:
C2 – Community Shopping District
A – Single Family Residence
R4 – Multi-Family Residence District
R4 – Multi-Family Residence District Planned Development.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: A- Single Family Residence

c. The suitability of the property in question to the uses permitted under the existing zoning classification.

The property is not suitable for uses permitted under the O – Limited Office District. This zoning district permits for professional offices, including, but not limited to, offices for attorneys, physicians, dentists, architects, consulting engineers, insurance agents, and village government offices. This use has proven to have failed in light of the current building occupancy being at 5% for an extended period of time. The zoning district does permit for multi-family however, when placed on the second floor of the other permitted uses within the development.

d. **The trend of development, if any, in the general area of the property in question, including changes, if any, which have taken place in its present zoning classification.**

The trend of development is for multi-family residential construction. In fact, the existing office building is not compatible to the trend of development. The existing office uses and commercial developments are all located along 55th Street. Wolf Road in the southwest portion of Western Springs is dominated by residential development. This property is bounded of the north with a three-story condominium building and two-story townhomes. Due to the unique shape of this parcel and its size, the continuation of a multi-family product is an appropriate transition to the single-family development to the west and south

e. **The suitability of the property in question for permitted uses listed in the proposed zoning classification.**

The property is suitable for the uses within the R4 – Multi-Family Residence District Planned Development.

The compatibility of the surrounding property with the permitted uses listed in the proposed zoning classification.

Being residential in nature, the proposed R4 – Multi-Family Residence District Planned Development is compatible with the surrounding residential uses.

The objectives of the current comprehensive plan for the village and the impact of the proposed amendment on the said objectives.

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). This amendment will not result in any detrimental effects within the village or the neighborhood. The amendment will allow for the demolition of an underperforming building, orderly redevelopment of the site providing a positive tax generating use for the village, school districts and other taxing bodies.

(2) CONDITIONAL USE PERMIT STANDARDS

Pursuant to Section 10-3-14(G) of the DCO, the following Standards need to be satisfied in order for the Village Board to approve the Conditional Use Permit establishing the Planned Development.

1. **That the establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare.**

The granting of the conditional use permit to allow for a R4 – Multi-Family Residence District Planned Development on a site less than 5 acres will not be detrimental to or, endanger the public health, safety, morals, comfort or general welfare or injurious to other nearby property or improvements. The proposed conditional use permit will allow for the development of a well-designed townhome development that reduces current impervious services and provides storm management facilities which results in downstream benefits. According to

a traffic study prepared by KLOA, no significant negative impacts on the surrounding road network would result from the development. Given the foregoing, granting the conditional use permit will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located.

2. **That the conditional use will not be injurious to the uses and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located.**

The proposed conditional use will allow a well-designed townhome development that minimizes impact on natural areas and is well separated from existing development with the use of landscaping fencing and setbacks. Setbacks within the development allow adequate light and air while preserving views across the site. Density is consistent with surrounding multi-family developments and according to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated. Site engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so as to provide marginal improvements to the overall area.

As represented in the applicant's materials, a fiscal analysis indicates a positive impact on property values and real estate taxes. Given the foregoing, the proposed conditional use permit will not impair an adequate supply of light and air to adjacent property or substantially increase the congestion of the public streets, or increase the danger of fire, or impair natural drainage or create drainage problems on adjacent properties, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.

3. **That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The subject property is in an immediate area dominated by commercial development, multi-story attached single family, attached single family and detached single-family residential development. The anticipated density of the proposed development is consistent with the requested comprehensive plan amendment and is appropriate in light of the intensity of the surrounding uses and the local roadway system.

Given the foregoing, the proposed development will not impede the normal and orderly development of surrounding property but will in fact be complimentary to existing and future uses.

Those adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.

There is an adequate supply of public utilities in the vicinity of the property. The property can be served easily by public sewer and public water. The development will cause no substantial impact on the surrounding street system. Site

engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so to provide marginal improvements to the overall area.

4. **That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.**

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. The access to Park Place has been engineered in such a way to lessen the impact on the current property owners along the south side of Park Place.

The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

According to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated.

5. **That the proposed conditional use is not contrary to the objectives of the current comprehensive plan for the Village of Western Springs.**

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). However, the proposed amendment and the proposed plan do meet the goals set forth in the of the Comprehensive Land Use Plan for residential areas. The proposal enhances and protects the overall single family residential feel of the village. The product provides variety in housing types available in the village to entice new residents to the village and also allow for long-term residents to remain in the community. The proposal is compatible with the commercial and multi-family uses to the north and provides for an orderly transition to the south and west.

6. **That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the plan commission and approved by the village board.**

The proposed development will conform with the R4 – Multi-Family Residence District except for the requested deviations requested for approval by the Village Board.

(3) ADDITIONAL SUBMITTAL REQUIREMENTS

Pursuant to DCO 10-8-8, the Applicant would like to specifically address the following submittal requirements.

3. Project Design Features:

a. A detailed site plan has been provided illustrating street and pedestrian ways, typical building layouts, setbacks building heights, open spaces and site data

b. Final engineering plans are provided with complete topographical information and stormwater calculations

c. Final engineering plans are provided indicating the feasibility of providing utility service to the site via water mains, sanitary, and storm sewers and storm water detention facilities.

d. Final landscape plans are provided depicting project signage. Project marketing signage has not been developed as of this submittal. Any public facing signage shall be submitted for review to village staff for comment and approval.

e. Final landscape plans are provided indicating the location, number and desired effect of proposed landscaping.

f. Character elevations are provided along with floor plans and exterior color pallets

g. Final engineering plans are provided indicating street lighting

h. Final engineering plans are provided including a sediment and erosion control plan indicating methods to control erosion and sedimentation on and adjacent to the site.

4. Other Requirements: Applications for planned developments shall also include the submission of the following:

a. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the Village of Western Springs and School Districts 106 & 204

b. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the school districts from a fiscal and population standpoint

c. Traffic impact study has been provided by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA)

d. The applicant has provided comparable sales research and a letter from a local real estate professional in lieu of a full market study report.

e. Final engineering plans are provided indicating how construction activity will be controlled by addressing contractor ingress/egress, construction parking, street cleaning and pest control.

f. The applicant has a forty-year track record of custom development and construction will provide financial references upon request.

g. Proposed covenants are provided.

i. The applicant is a contract purchaser of the property and has included a letter from the owner authorizing the applicant to make this application.

j. Notification list for public hearing to be provided by the village.

k. Development schedule.
- Application submittal 5/10/2024
- Community meeting 6/5/2024
- Plan Commission meeting 6/19/2024
- Planning and Zoning Committee Meeting 7/2/2024
- Village Board Workshop / Village Board Meeting 7/22/2024
- Site demolition 8/19/2024
- Site grading and underground utilities 9/2/2024
- Start construction on model building 9/16/2024
- Site pavement 9/30/2024
- Model grand opening 3/1/2025

l. Final engineering plans are provided with this submittal, which complies with of all applicable plans and materials required in Chapter 11 of this Ordinance, "Flood Plain and Storm Water Management".

DEVELOPER/BUILER & PROJECT TEAM INFORMATION

McNaughton Development LLC is a custom home builder and land development company that builds architecturally exciting high-end, distinctive homes. It has extensive experience in the construction of high-end residential product. It has developed numerous properties from one to three hundred acres. McNaughton Development is a family owned and operated company that is deeply rooted in Chicagoland area since 1981 and believes that a custom home is the product of the customers ideas and dreams and our commitment to making it a reality.

DesignTek Engineering has been an established civil engineering design and consulting firm servicing the Chicagoland region, surrounding suburbs, and northwest Indiana for over 20 years. Founded in 2003, DesignTek has expanded its services and client base by providing personalized attention to the needs and expectations of their clients. Their team of professional engineers, surveyors, and support staff tackle a wide variety of diverse projects in all fields of land development including residential, commercial, industrial, institutional, and municipal projects.

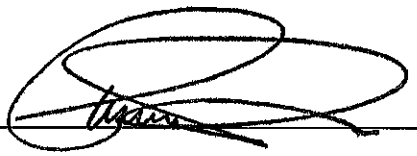
BSB Design, founded in 1966 by Jack Bloodgood, began as a one-man shop operating out of a barn in Des Moines, Iowa. Today, it has grown into a renowned architectural and design firm,

making an impact on much more than just the single-family home market. With offices coast to coast, they offer national experience with regional sensitivity. As a preeminent design firm, it has leveraged its unique abilities to see the future more clearly and to create environments that transform lives.

Kenig, Lindgren, O'Hara, Aboona, Inc. was formed in 1995 by Neil Kenig, Gerald Lindgren, Donald O'Hara and Luay Aboona. Today, Luay Aboona continues with his partner Michael Werthmann to lead the firm in providing quality traffic, transportation, and parking consulting services to its clients. KLOA, Inc.'s staff of transportation engineers and planners represent over 150 years of professional experience. Their high standards, commitment to the industry, and concern for each client assure the KLOA, Inc. mission to provide superior service in a timely and cost-effective manner. They approach each project as a special assignment that requires critical analysis, detailed research, creative thinking, and communicative interaction to develop practical solutions.

VII. CONCLUSION

McNaughton Development LLC is pleased to submit this application and is confident, with the approval of the village board, that the development will be an excellent addition to the Village of Western Springs.

By: 

Date: May 15, 2024.

5/10/2024

McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

With Over 40 Years of Experience

McNaughton Development LLC is Proud to Have Developed and/or Built in All of These Superior Location and Premier Communities

* not all communities are represented with a site plan

Waterfall Glen Executive Office Center
11S220 Jackson Street, Suite 100, Burr Ridge, Illinois 60527
P: 630.325.3400 F: 630.325.3402 W: mcnaughtondevelopment.com

Burr Ridge:
- Devon Woods (2)
- Longwood (1)
- Madison Estates II
- Briddle Path
- Waterfall Glen Executive Office Center
- Lakeside Pointe
- Burr Ridge Estates
- Waterview Estates

Darien:
- Rolling Knolls

Downers Grove:
- Copper Leaf
- Longfellow

Frankfort:
- Butternut Creek (10)
- Charrington
- Georgetown
- Settlers Pond
- Crystal Brook

Flossmoor:
- Ballantrae

Highland Park:
- The Highlands
- Hidden Oak

Hinsdale:
- Heather Highlands

Homer Glen:
- Meadows Edge
- Silver Leaf

Joliet:
- Deer Crossing

Killdeer:
- Preserves of Kildeer at Kemper Lakes

LaGrange Park:
- Heatherdale
- Kensington Place

Lake Forest:
- Amberly Woods

Lakewood:
- Red Tail

Lemont:
- Equestrian Estates (5)
- Equestrian Woods (5)
- Ruffled Feathers
- Briarcliffe Estates

Lockport:
- Steeplechase Farms

Long Grove:
- Royal Melbourne (2)

Mokena:
- Whispering Creek
- Foxborough Estates

Naperville:
- Silverleaf

Orland Park:
- Crystal Tree
- Cascade Ridge
- Cedar Crossing (6)
- Brittney Glen (10)
- Mallard Landings
- Fawn Creek I and II
- Evergreen View
- Meadowbrook
- Orland Woods III
- Muirfield
- Park Corners II
- Bluff Pointe
- Cascade Ridge
- Timber Lake

Oswego:
- Saddlebrook

Palos Heights:
- One Palos Place (4)
- Misty Meadows
- Keystone Crossing
- Westgate Valley Estates

Palos Park:
- Woodland Shores (5)
- Misty Harbour
- McCord Place

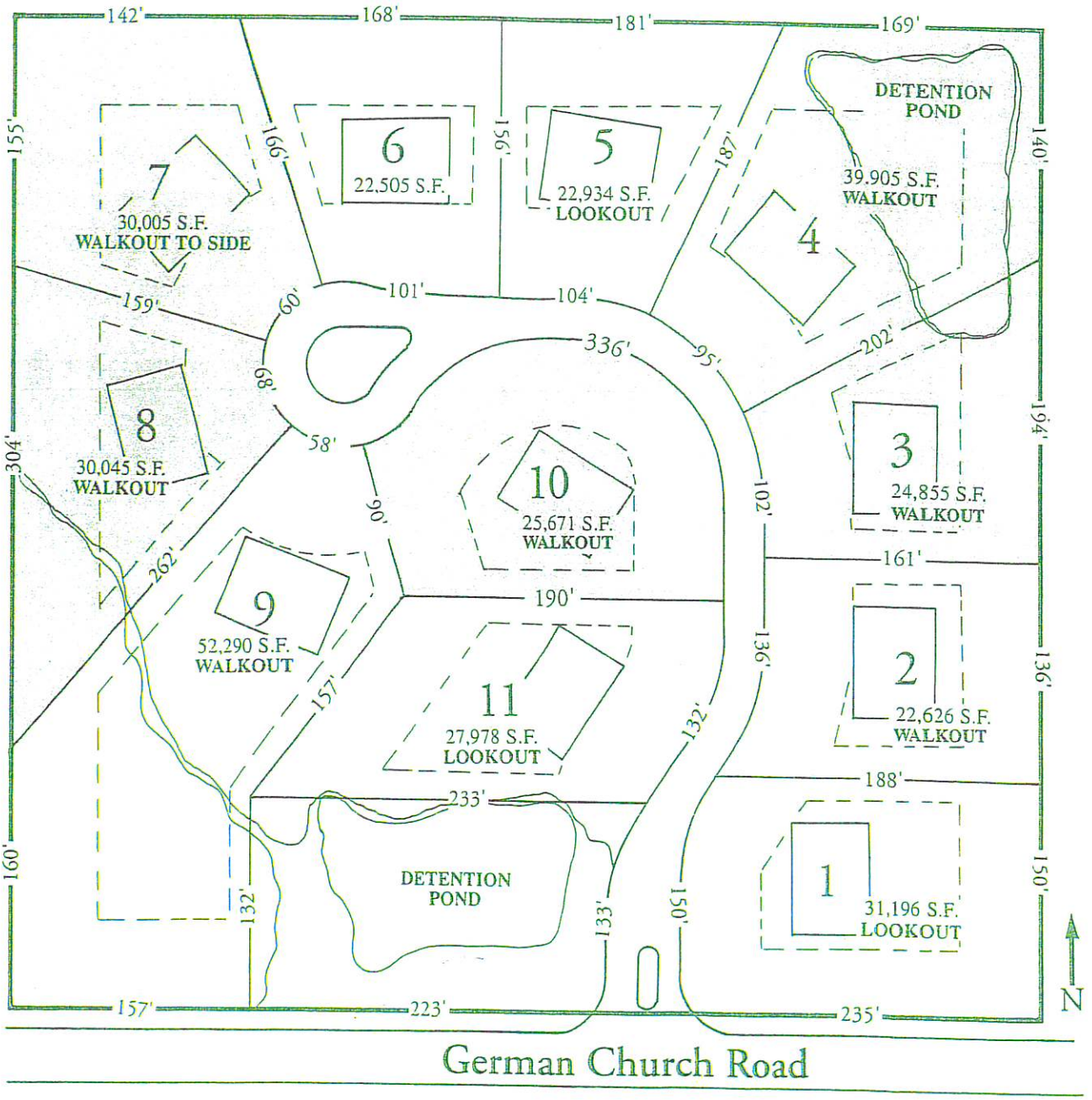
Tinley Park:
- Pheasant Lake

Western Springs:
- Timber Trails

Westmont
- Kaila's Crossing

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

BRIDLE PATH

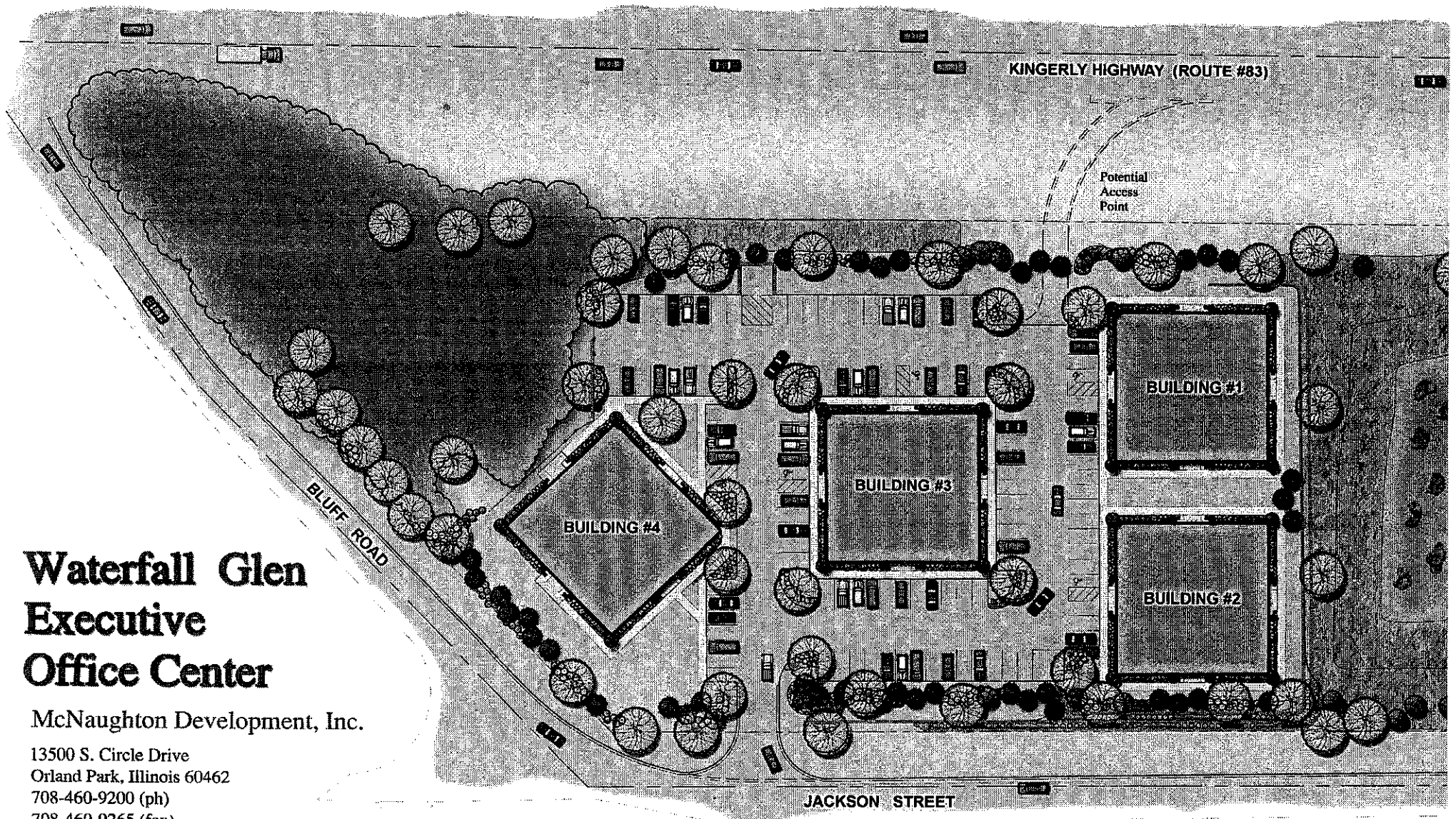


German Church Road

Located 1500 feet east of County Line Road on German Church Road
Burr Ridge, Illinois

NOTE:
THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464
Phone: (708) 361-8300 Fax: (708) 361-6754



Waterfall Glen Executive Office Center

McNaughton Development, Inc.

13500 S. Circle Drive
Orland Park, Illinois 60462
708-460-9200 (ph)
708-460-9265 (fax)

McNaughton DEVELOPMENT, INC.

LAND DEVELOPMENT – CUSTOM CONSTRUCTION

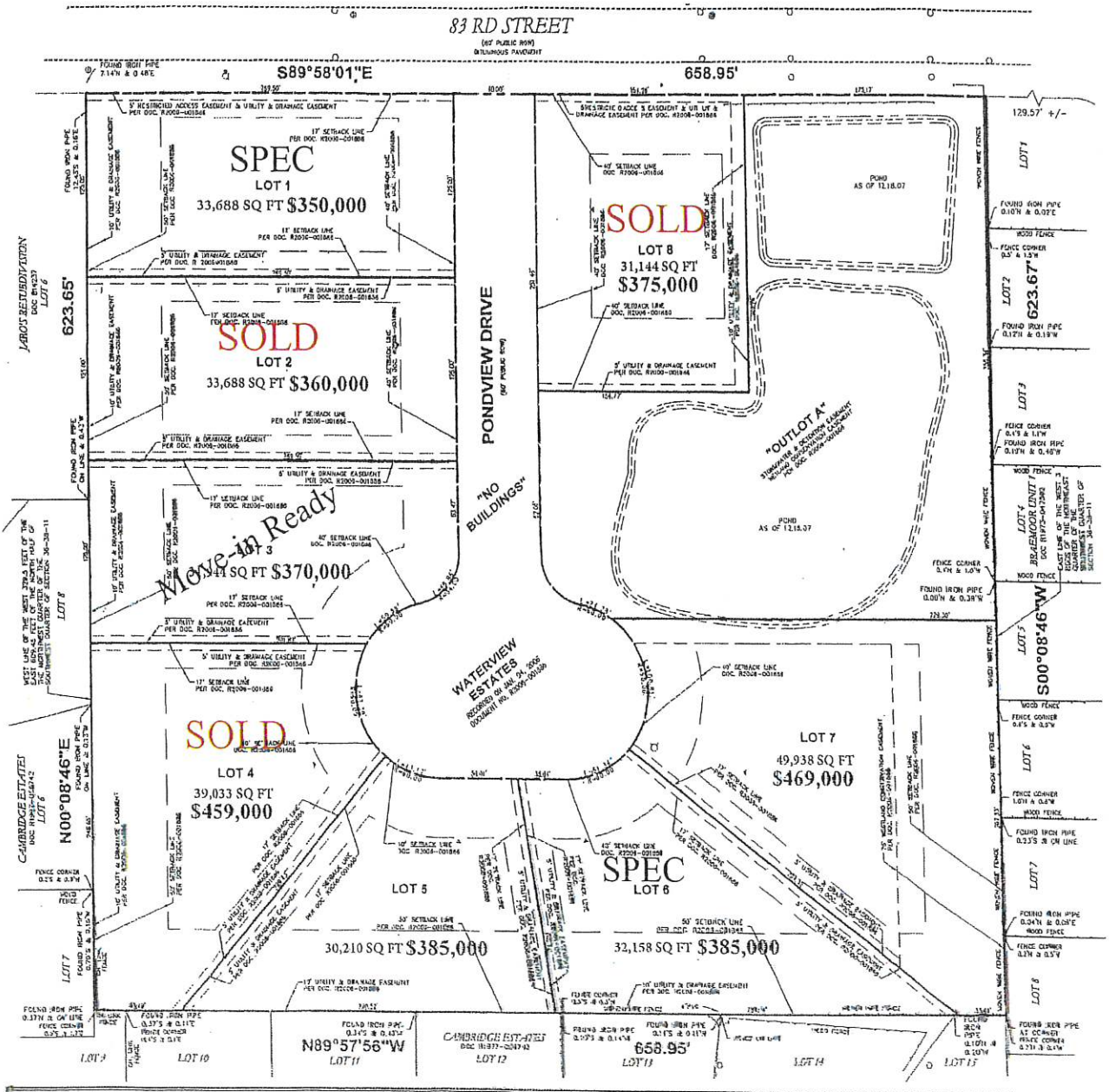
Waterview Estates

of Burr Ridge

Lot Pricing for 8

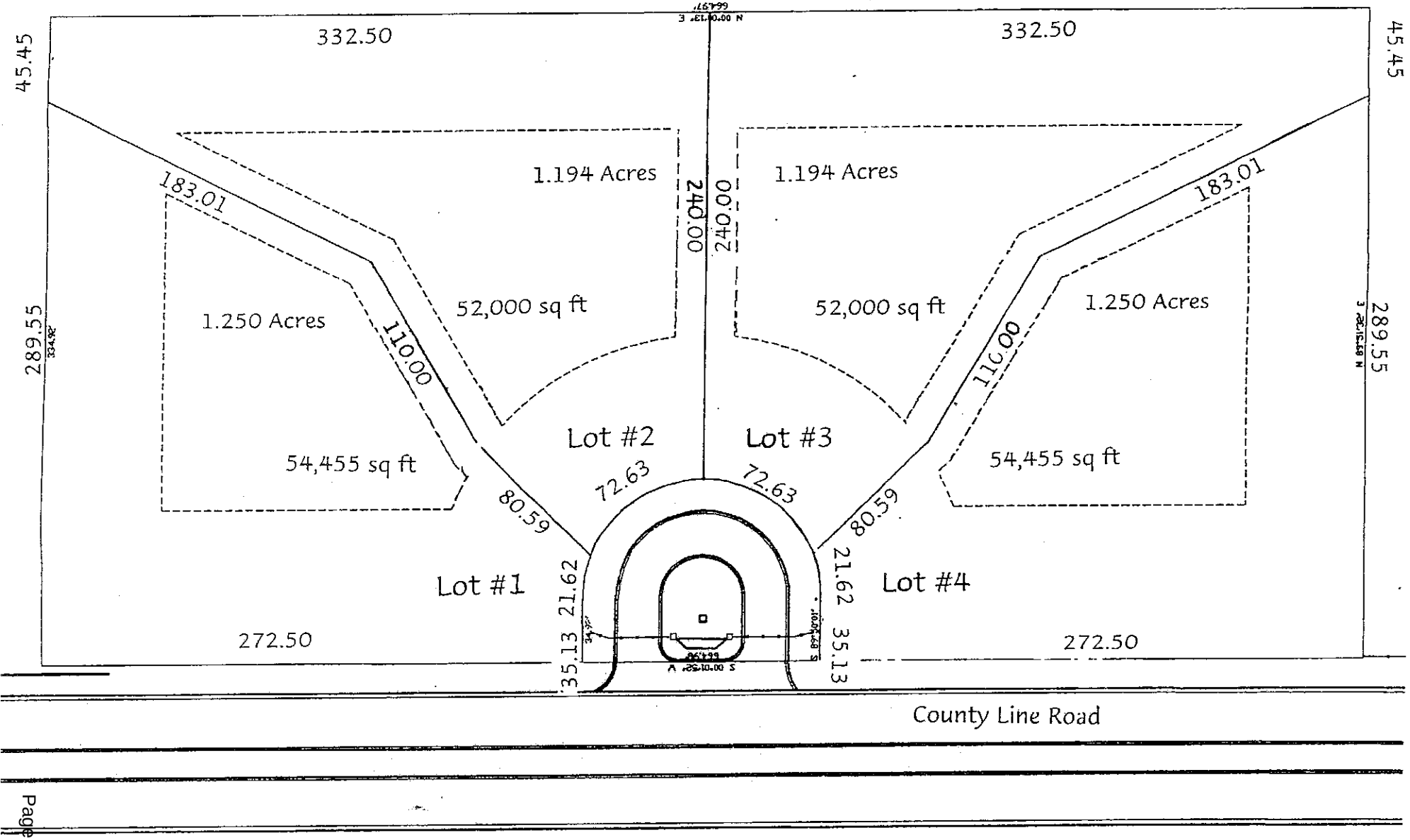
Luxury Single Family Home Sites

For built orders *only,* unless agreed to by owner.



Burr Ridge Estates

McNaughton DEVELOPMENT, INC.
CUSTOM DESIGNED HOMES



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Waterfall Glen Executive Office Center * 11S 220 Jackson Street* Suite 101* Burr Ridge* IL 60527

LAKESIDE POINTE

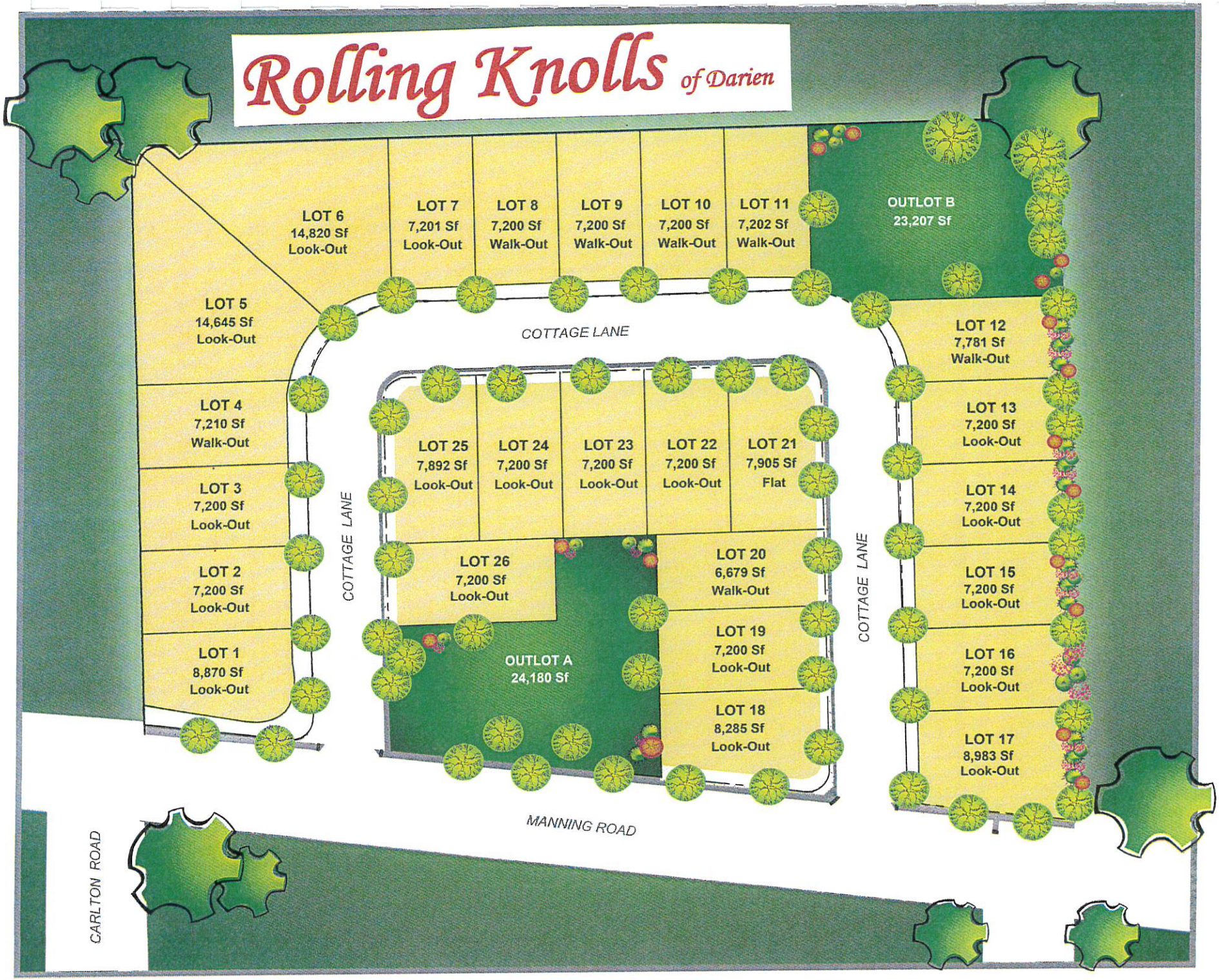
BURR RIDGE, ILLINOIS



LEGEND

B =	BRICK THROUGHOUT
L/O =	LOOKOUT
W/O =	WALKOUT
G =	THIRD CAR GARAGE

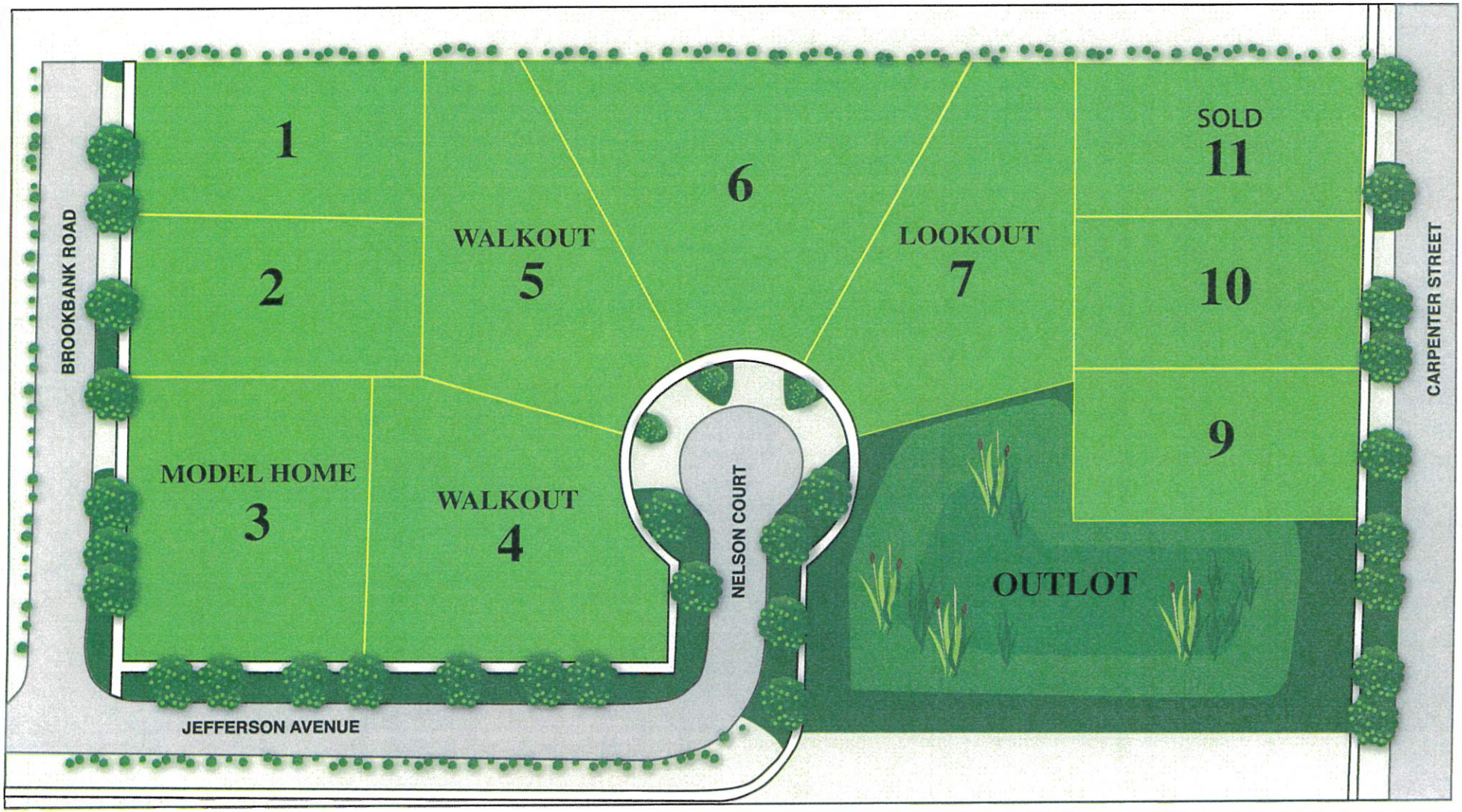
McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT – CUSTOM CONSTRUCTION


Rolling Knolls of Darien
LOT 6
14,820 Sf
Look-Out
LOT 7
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Look-Out
LOT 8
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Walk-Out
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Look-Out
MANNING ROAD
CARLTON ROAD

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT CUSTOM CONSTRUCTION

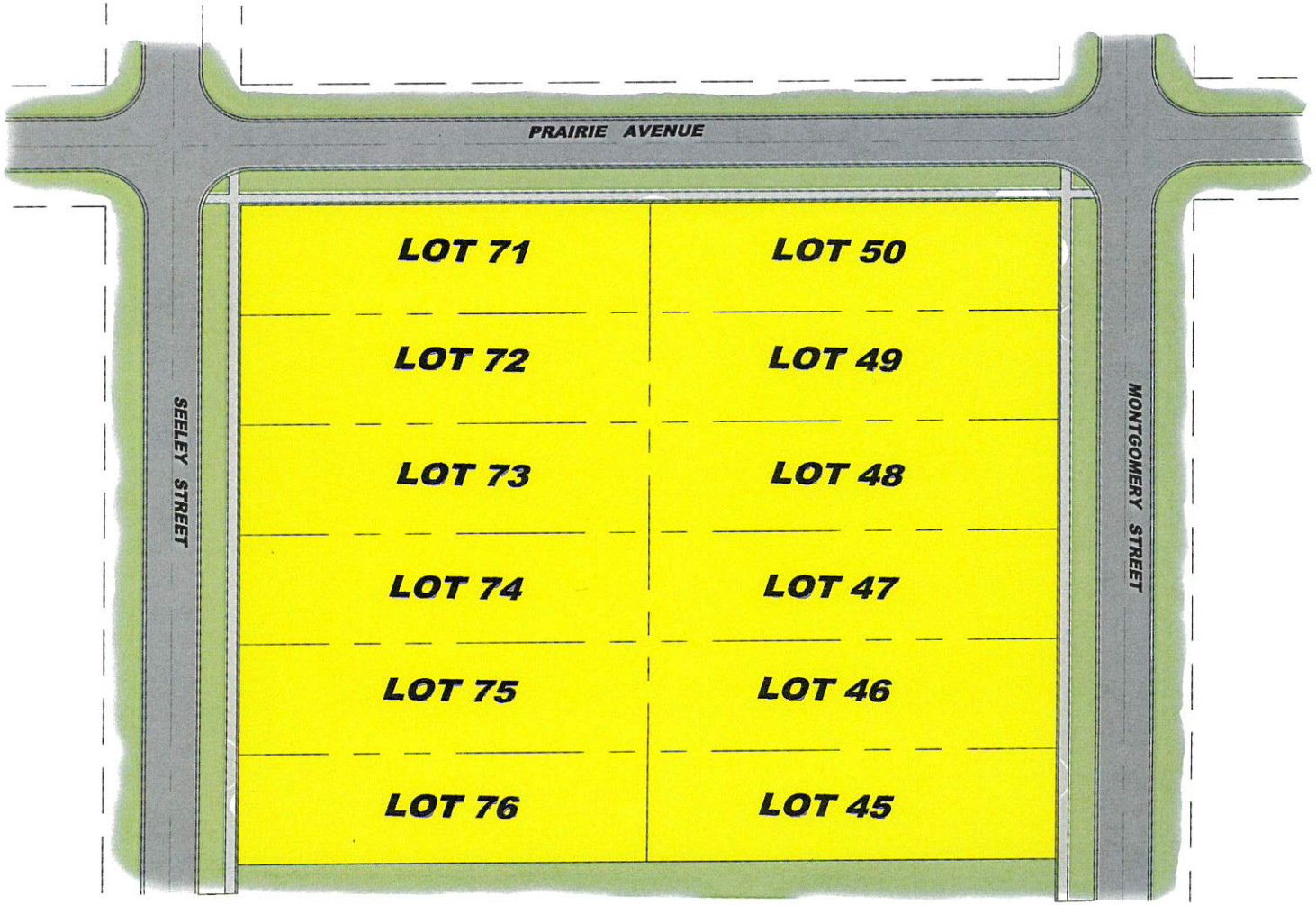
Copper Leaf

Downers Grove



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

LONGFELLOW
ON PRAIRIE

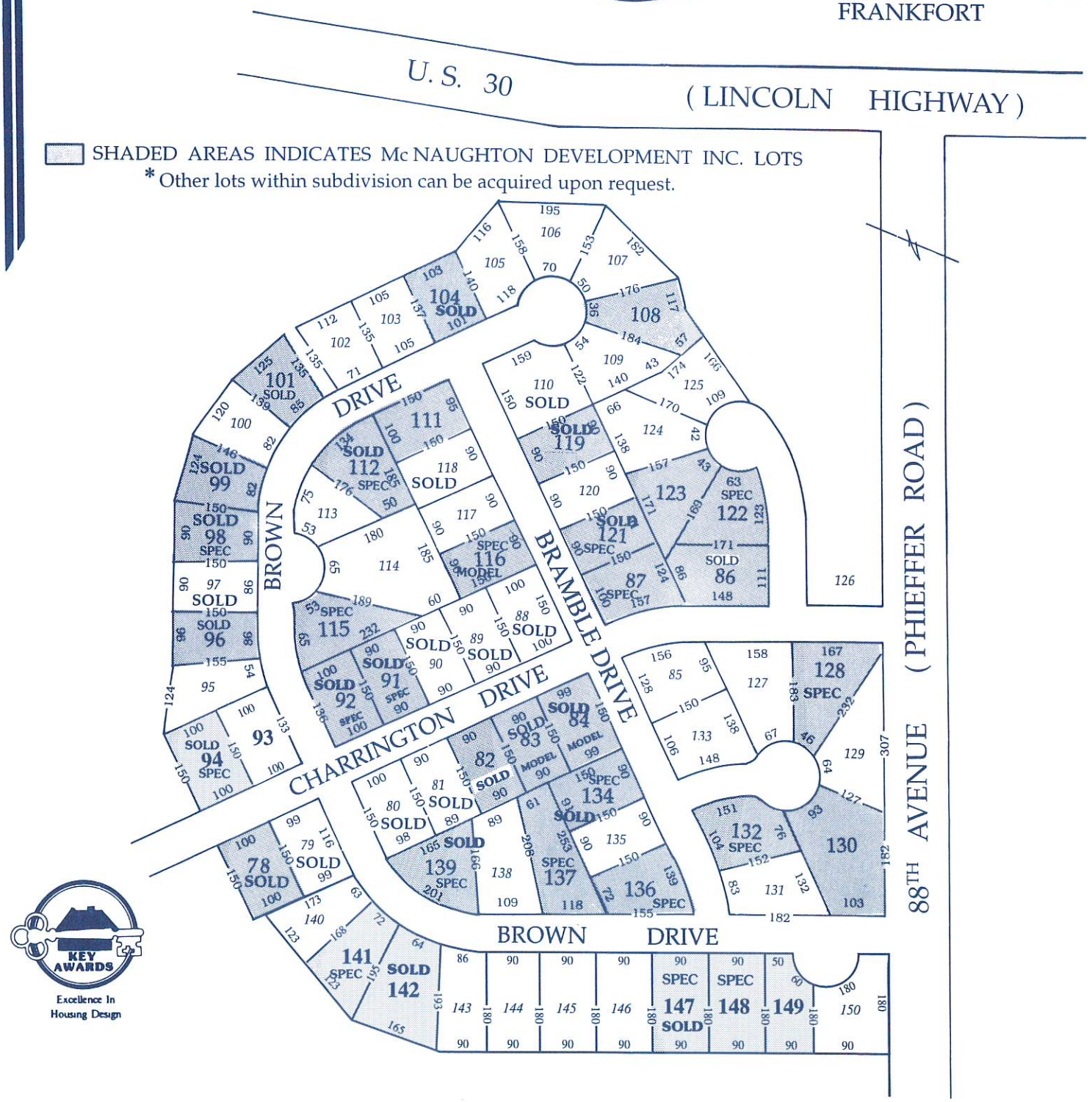


Mc Naughton Development Inc.

General Contractor • Builder
Custom Designed Homes **708/361-8300**

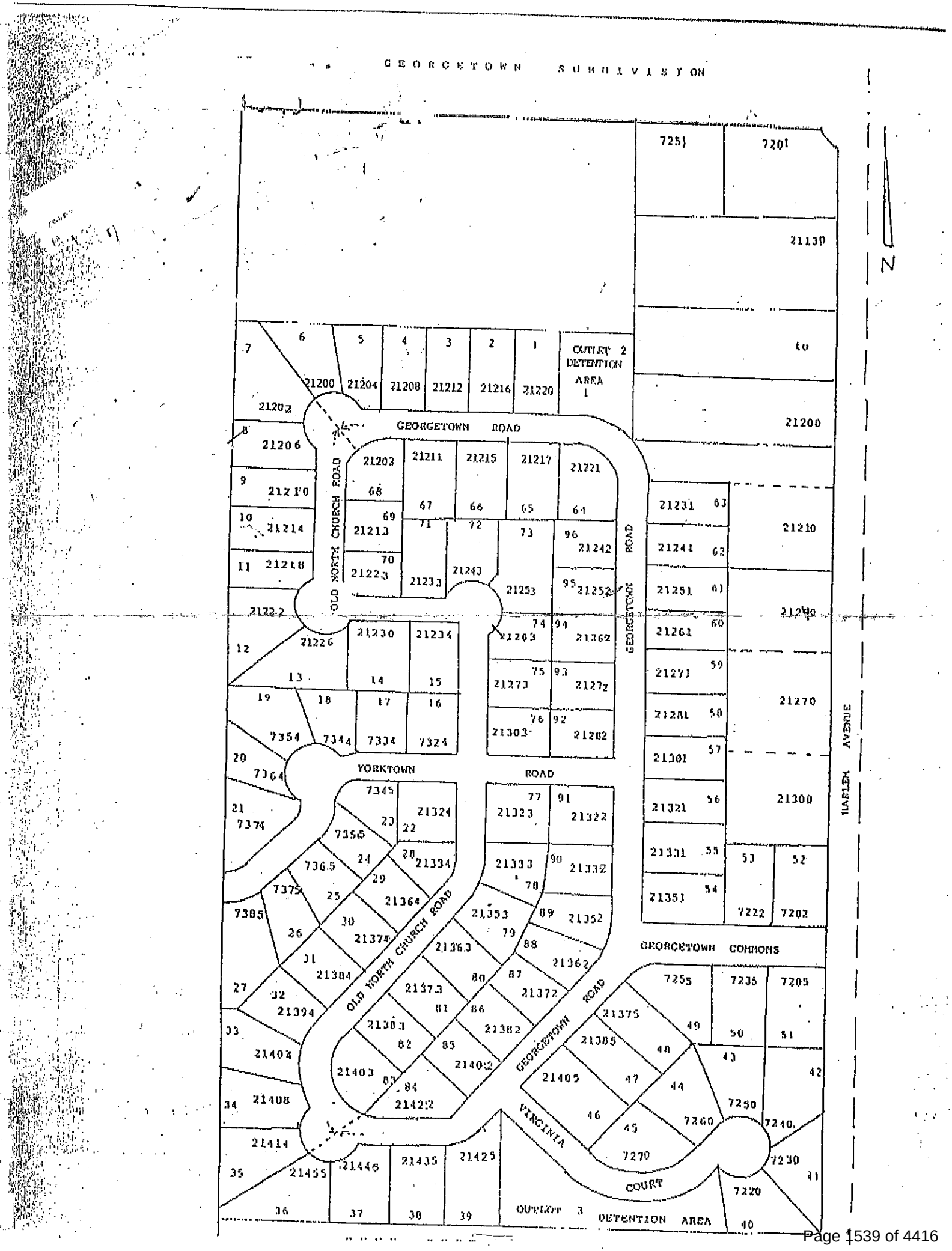
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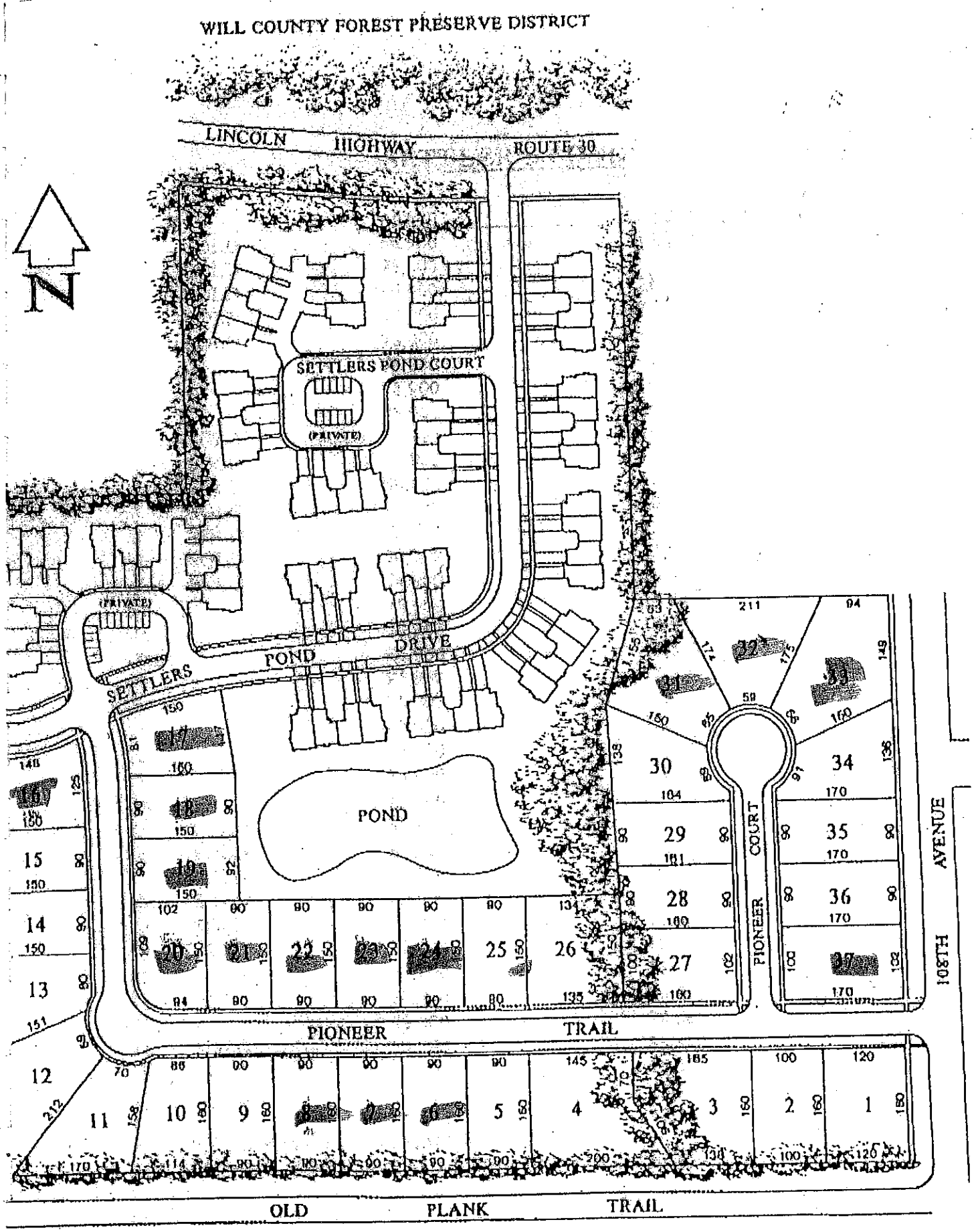
ROUTE 30 & 88TH AVENUE,
FRANKFORT



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McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.


GEORGETOWN SUBDIVISION
GEORGETOWN ROAD
OLD NORTH CHURCH ROAD
YORKTOWN ROAD
OLD NORTH CHURCH ROAD
GEORGETOWN ROAD
VIRGINIA COURT
HARLEM AVENUE
GEORGETOWN COMMONS
OUTLOT 1 DETENTION AREA 1
OUTLOT 3 DETENTION AREA
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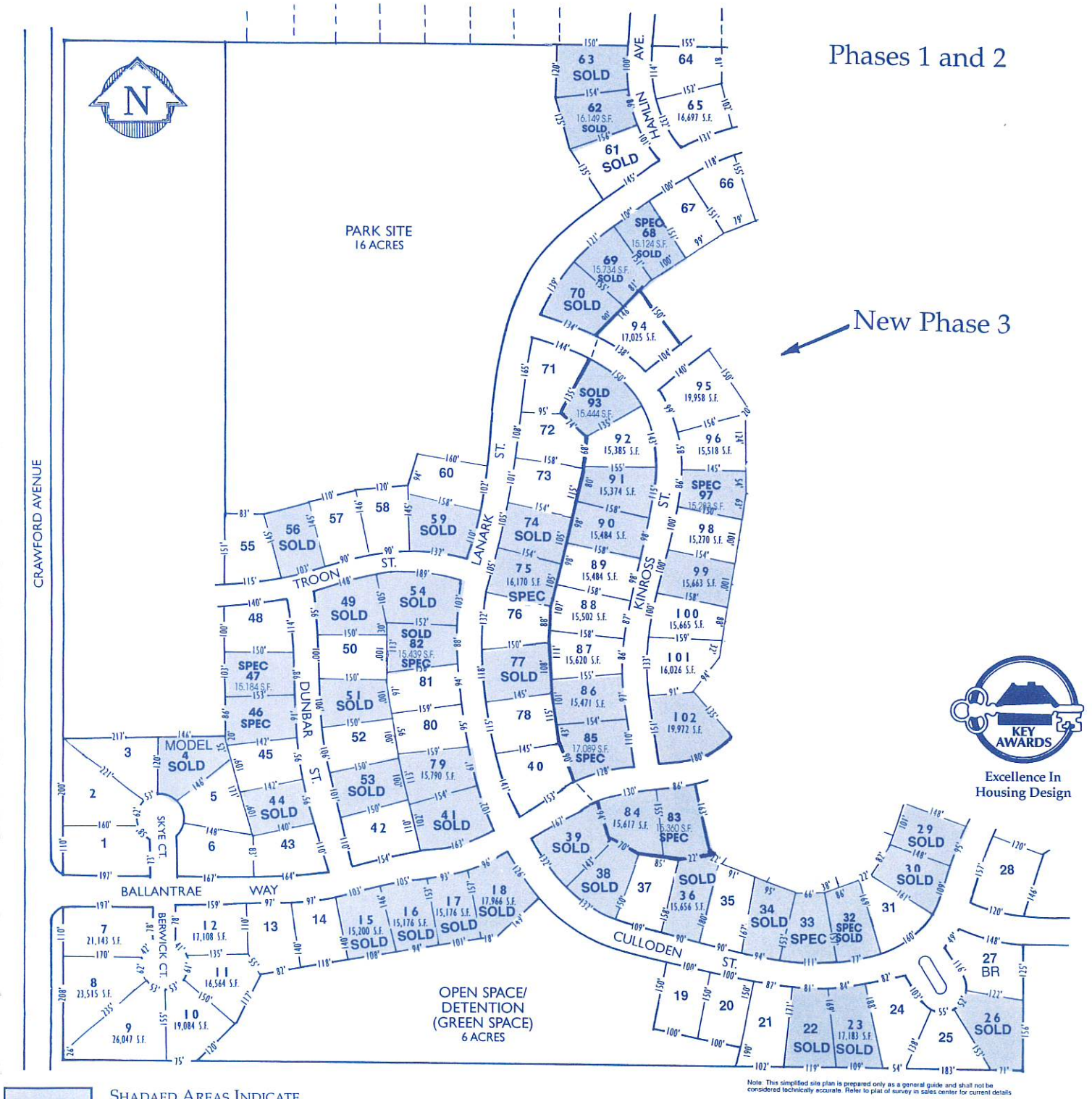
Seller's Pond of Frankfort

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Ballantrae of Flossmoor



Note: This simplified site plan is prepared only as a general guide and shall not be considered technically accurate. Refer to plat of survey in sales center for current details

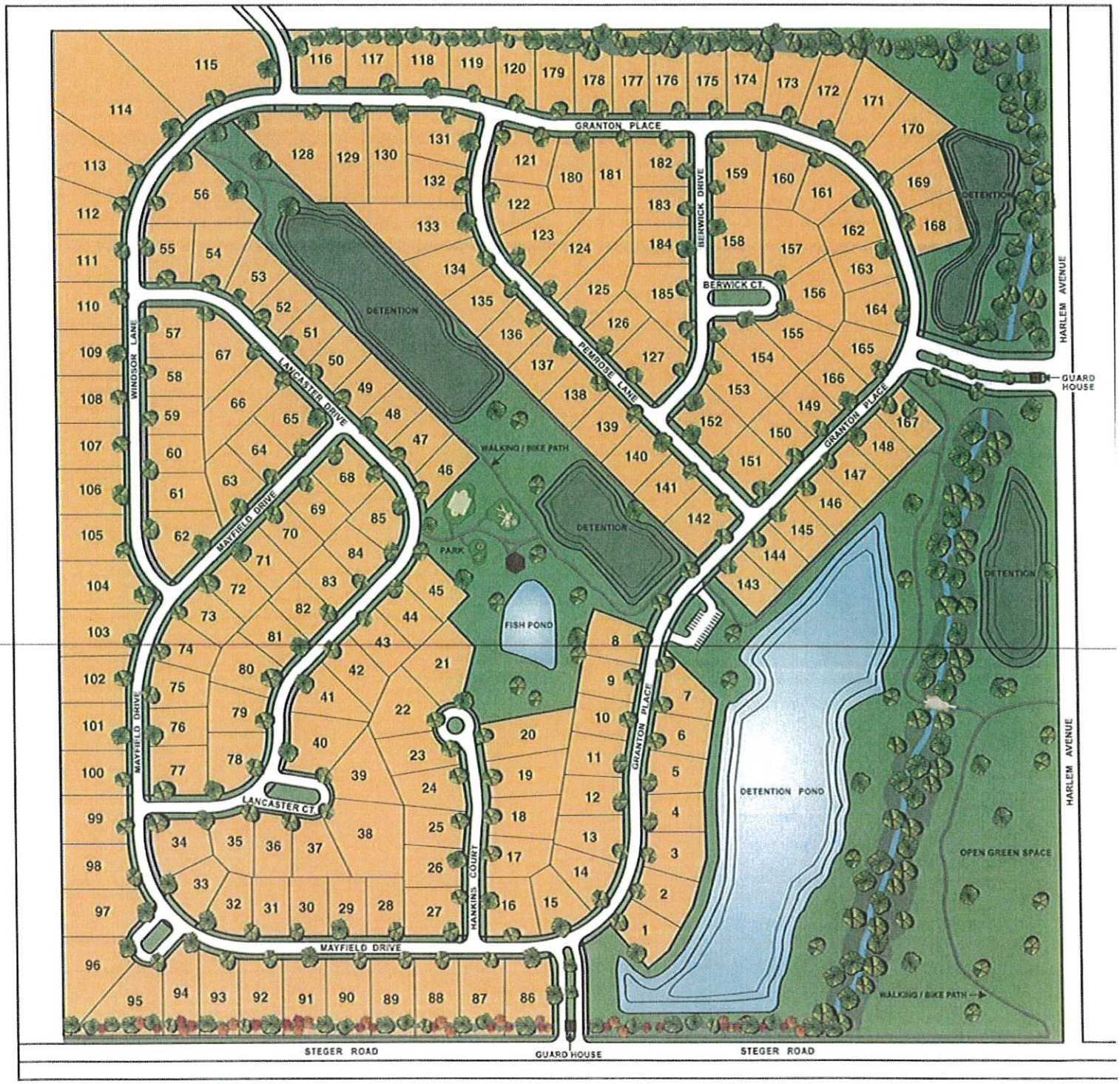
NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway - Suite 101 • Palos Park, IL 60464

www.mcnaughtondevelopment.com

Site Map

CRYSTAL BROOK OF FRANKFORT



McNaughton Development, Inc.
11900 Southwest Highway, Suite 101 • Palos Park, IL 60464
(708) 361-8300 • Fax (708) 361-6754
E-mail: sales@mcnaughtondevelopment.com



HIDDEN OAK SUBDIVISION

HIGHLAND PARK, ILLINOIS

NORTH

SCALE: 1"=20'

McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

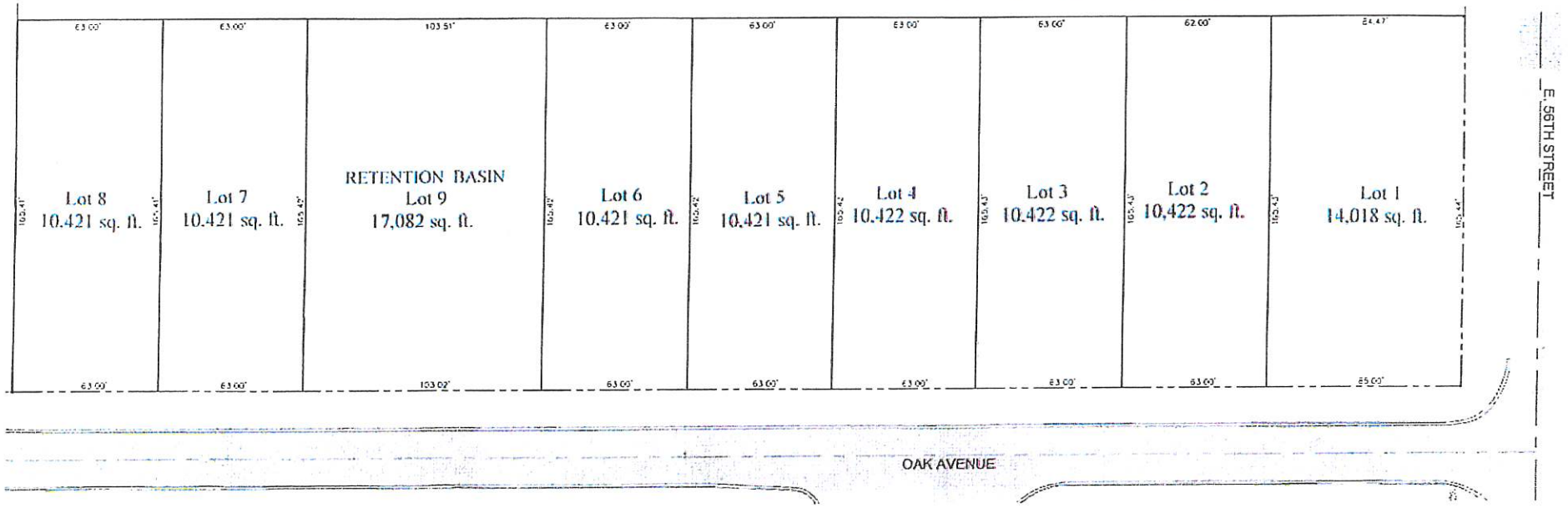
COMING SOON ...

McNaughton DEVELOPMENT, INC.

LAND DEVELOPMENT – CUSTOM CONSTRUCTION

Kaila's Crossing

56th & Oak Avenue



- 8 Single Family Lots
- Will Design & Build to Suit
- Walk-out & Look-out Lots
- Desirable Westmont Location
- Hinsdale Central School District
- 2013 Availability

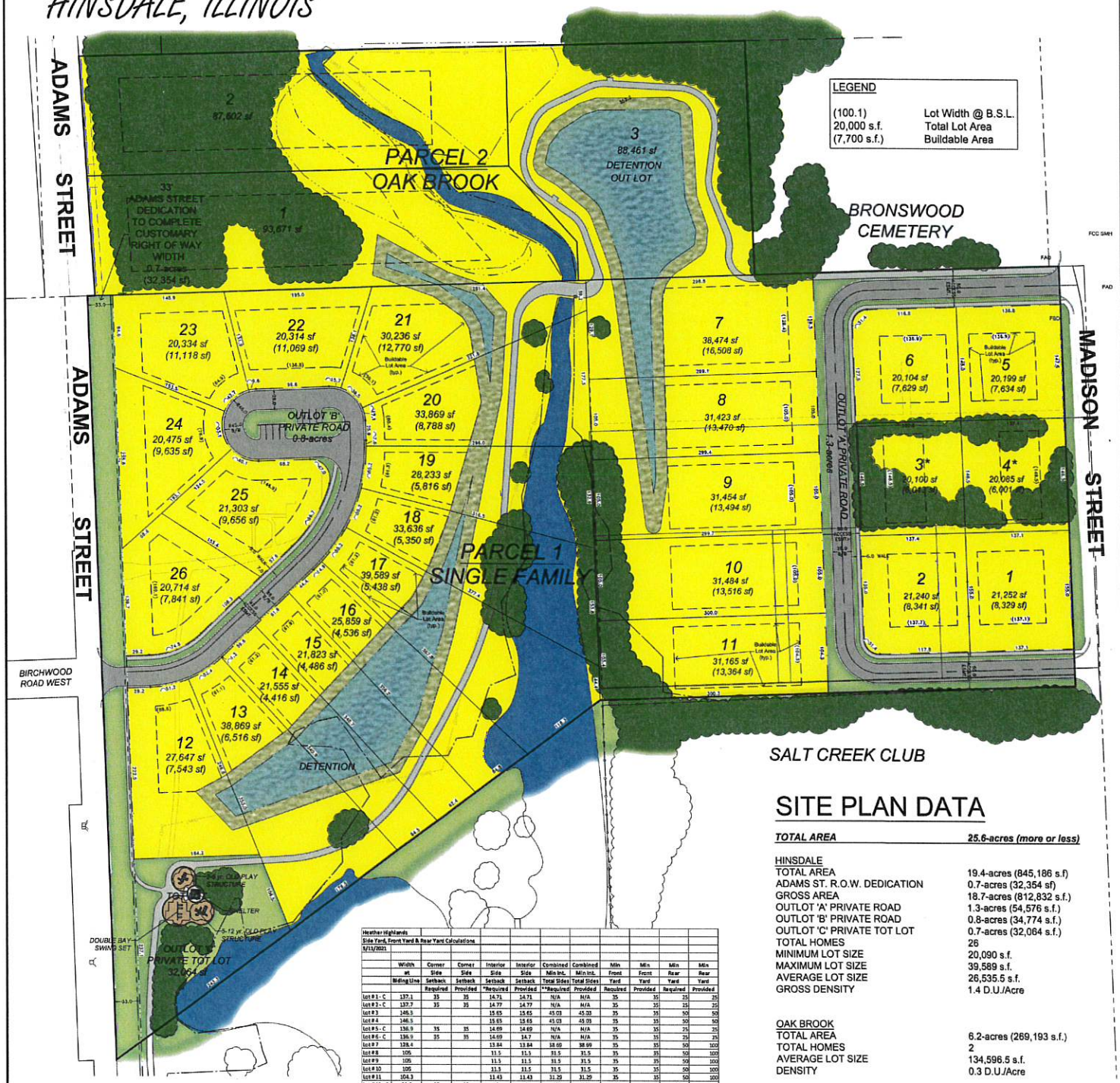
Call Today for Details and More Information

(630) 325-3400

Site Plan

HEATHER HIGHLANDS

HINSDALE, ILLINOIS



Heather Highlands Side Yard, Front Yard & Rear Yard Calculations 9/13/2021											
	Width at Bldng Line	Corner Side Setback Required	Corner Side Setback Provided	Interior Side Setback *Required	Interior Side Setback Provided	Combined Min Int. Total Sides **Required	Combined Min Int. Total Sides Provided	Min Front Yard Required	Min Front Yard Provided	Min Rear Yard Required	Min Rear Yard Provided
Lot # 1 - C	137.1	35	35	14.71	14.71	N/A	N/A	35	35	50	25
Lot # 2 - C	137.7	35	35	14.77	14.77	N/A	N/A	35	35	25	25
Lot # 3	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 4	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 5 - C	136.9	35	35	14.69	14.69	N/A	N/A	35	35	25	25
Lot # 6 - C	136.9	35	35	14.69	14.7	N/A	N/A	35	35	25	25
Lot # 7	128.4			13.84	13.84	38.69	38.99	35	35	50	103
Lot # 8	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 9	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 10	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 11	104.3			11.43	11.43	31.29	31.29	35	35	50	103
Lot # 11 - C	88.6	35	35	10	8	N/A	N/A	35	25	33.38	85
Lot # 13	61.1			10	8	20	16	35	25	50	212.3
Lot # 14	61.2			10	8	20	16	35	25	50	218.7
Lot # 15	61.9			10	8	20	16	35	25	50	229.8
Lot # 16	63			10	8	20	16	35	25	50	244.3
Lot # 17	61.2			10	8	20	16	35	25	50	268.7
Lot # 18	61.2			10	8	20	16	35	25	50	214.1
Lot # 19	61.3			10	8	20	16	35	25	50	177.4
Lot # 20	60.4			10	8	20	16	35	25	50	144.7
Lot # 21	59.1			10	8	20	16	35	25	50	25
Lot # 22	136.8			14.68	8	41.03	16	35	25	50	25
Lot # 23	64.9			10	8	20	16	35	25	50	25
Lot # 24	76.9			10	8	20	16	35	25	50	33
Lot # 25 - C	146.3	35	25	15.69	15.69	N/A	N/A	35	25	25	25
Lot # 26 - C	169.1	35	25	17.91	17.91	N/A	N/A	35	25	33.65	25
*INTERIOR SIDE YARD REQUIRMENT FIGURED AS 8 FEET PLUS 10% OVER 50 FEET											
**COMBINED INTERIOR SIDE YARDS FIGURED AS 30% OF THE FIRST 125 FEET IN WIDTH & THEN 35% OF EVERYTHING OVER 125 FEET											
***Lots # 13 - # 25 LOT WIDTH IS BASED ON THE MEASUREMENT AT THE PROPOSED 25 FOOT FRONT YARD											

SITE PLAN DATA

TOTAL AREA	***25.6-acres (more or less)***

HINSDALE

TOTAL AREA	19.4-acres (845,186 s.f)
ADAMS ST. R.O.W. DEDICATION	0.7-acres (32,354 sf)
GROSS AREA	18.7-acres (812,832 s.f.)
OUTLOT 'A' PRIVATE ROAD	1.3-acres (54,576 s.f.)
OUTLOT 'B' PRIVATE ROAD	0.8-acres (34,774 s.f.)
OUTLOT 'C' PRIVATE TOT LOT	0.7-acres (32,064 s.f.)
TOTAL HOMES	26
MINIMUM LOT SIZE	20,090 s.f.
MAXIMUM LOT SIZE	39,589 s.f.
AVERAGE LOT SIZE	26,535.5 s.f.
GROSS DENSITY	1.4 D.U./Acre

OAK BROOK

TOTAL AREA	6.2-acres (269,193 s.f.)
TOTAL HOMES	2
AVERAGE LOT SIZE	134,596.5 s.f.
DENSITY	0.3 D.U./Acre

* The existing home and garage at 942 N. Madison, on the proposed Lots #3 & #4 are to remain.

Lots #3 & #4 are made up of the existing property at 942 Madison plus an additional ten (10) feet from the properties along Brook Place.

The bulk regulations for Lots #3 & #4 shall be determined prior to the plan commission.

McNaughton DEVE
LAND DEVELOPMENT – CUSTOM CONSTRUCTION

0' 25' 50' 100'
SCALE: 1" = 50'-0"
April 23, 2021
Rev. May 11, 2021

NORTH

CIVIL ENGINEER:
V3 COMPANIES
7325 JANES AVE.
WOODRIDGE, IL 60517
T: (630) 724-9200
www.v3co.com

METZ & COMPANY
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

This plan was prepared to illustrate the development potential for the site. As a Site Plan, it is conceptual in nature. Therefore, all dimensions are subject to verification and the Site Plan is subject to modification pending a final planning, engineering, architecture and municipal approval.

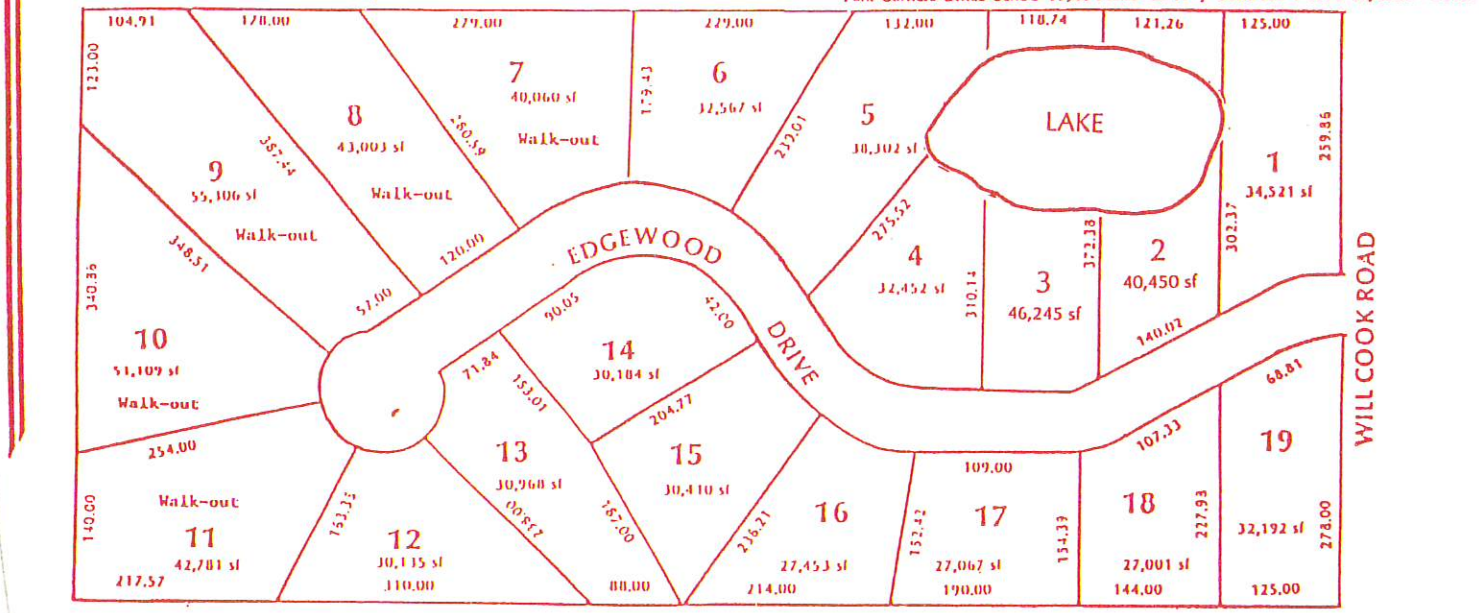


MEADOWS EDGE

McNaughton Development Inc.

General Contractor • Builder
Custom Designed Homes 708/361-8300

McNAUGHTON REALTY GROUP INC.
Park Corners Office Centre 11900 Southwest Hwy Suite 101 Palos Park, Illinois 60464



"MEADOWS EDGE" is a planned development consisting of 19 rolling homesites, many of which are wooded "walk-outs". This exclusive development provides the home owner with the serenity of a country setting with city conveniences only minutes away.

These choice lots range in size from 3/4 acre to over 1 acre. A scenic private lake will compliment this beautiful serene community. Located on Will cook Road at 14900 South, just 3 miles west of LaGrange Road (Route 45) makes this the location for your dream home!

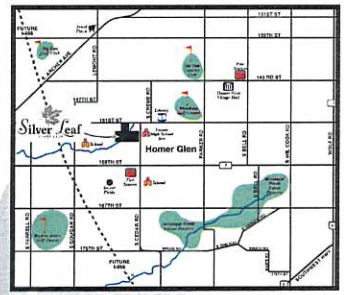
LOT #1	SPEC. HOME
LOT #2	$130,000
LOT #3	SOLD
LOT #4	$120,000
LOT #5	SOLD
LOT #6	SOLD
LOT #7	$125,000
LOT #8	$130,000
LOT #9	$135,000
LOT #10	$135,000
LOT #11	$130,000
LOT #12	$125,000
LOT #13	$120,000
LOT #14	$120,000
LOT #15	$115,000
LOT #16	SOLD
LOT #17	SOLD
LOT #18	$90,000
LOT #19	SOLD

— Prices subject to change without notice —

OVERALL SITE PLAN

Silver Leaf
HOMER GLEN





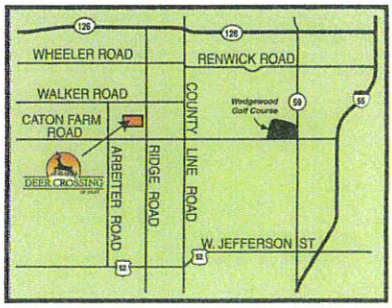
McNaughton Development, Inc.
708-361-8300
E-mail: sales@mcnaughtondevelopment.com | www.mcnaughtondevelopment.com

This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering. Refer to approved plans for specific details.

DEER CROSSING
OF JOLIET



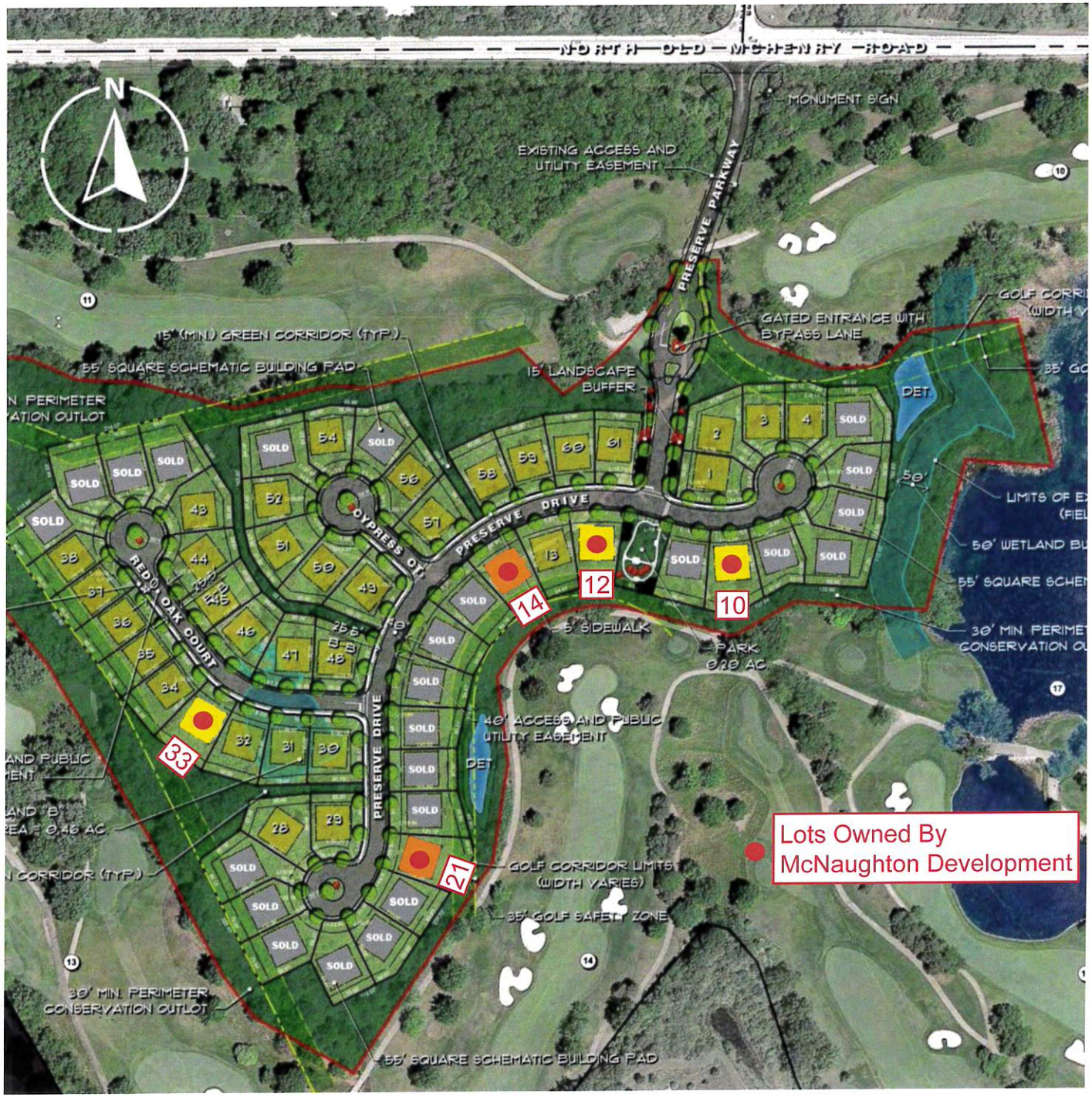




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PRESERVES OF KILDEER AT

KEMPER LAKES

LEGEND

- Available Lots
- Sold

Lots Owned By McNaughton Development

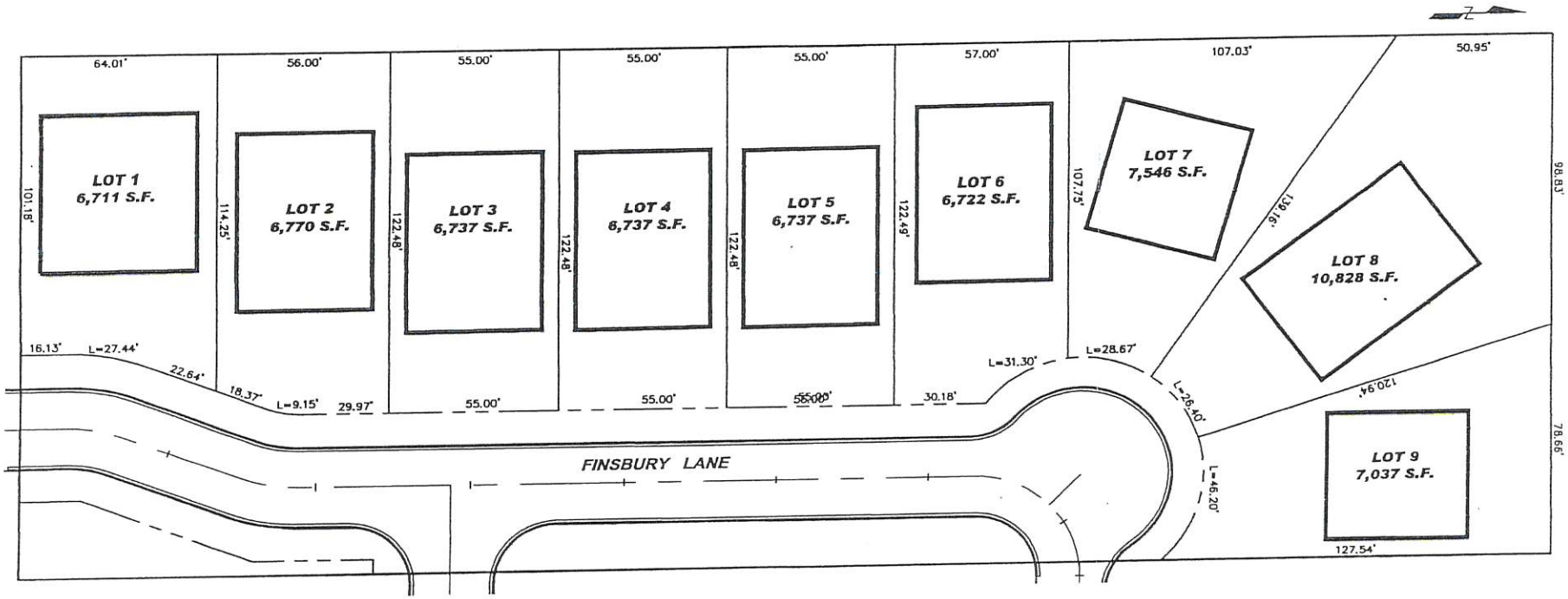
McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT — CUSTOM CONSTRUCTION

Coming Soon...

Heatherdale *of LaGrange Park*



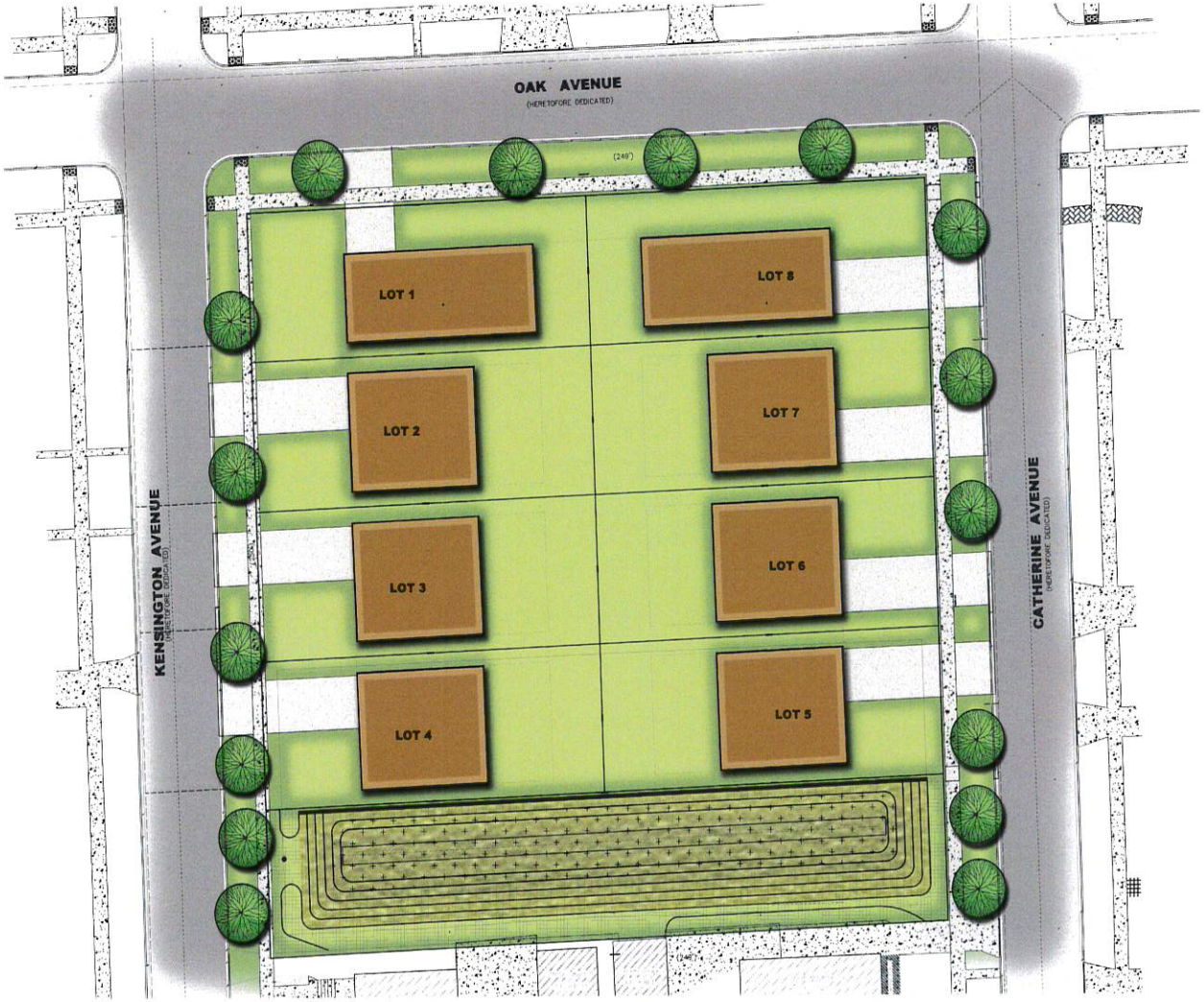
- 9 Single Family Lots
- Will design & build to suit
- Rare new construction opportunity in the desirable Village of LaGrange Park
- Lyons Township High School
- Forest Preserve views

Call Today for Details and More Information

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KENSINGTON PLACE

LaGrange Park, Illinois



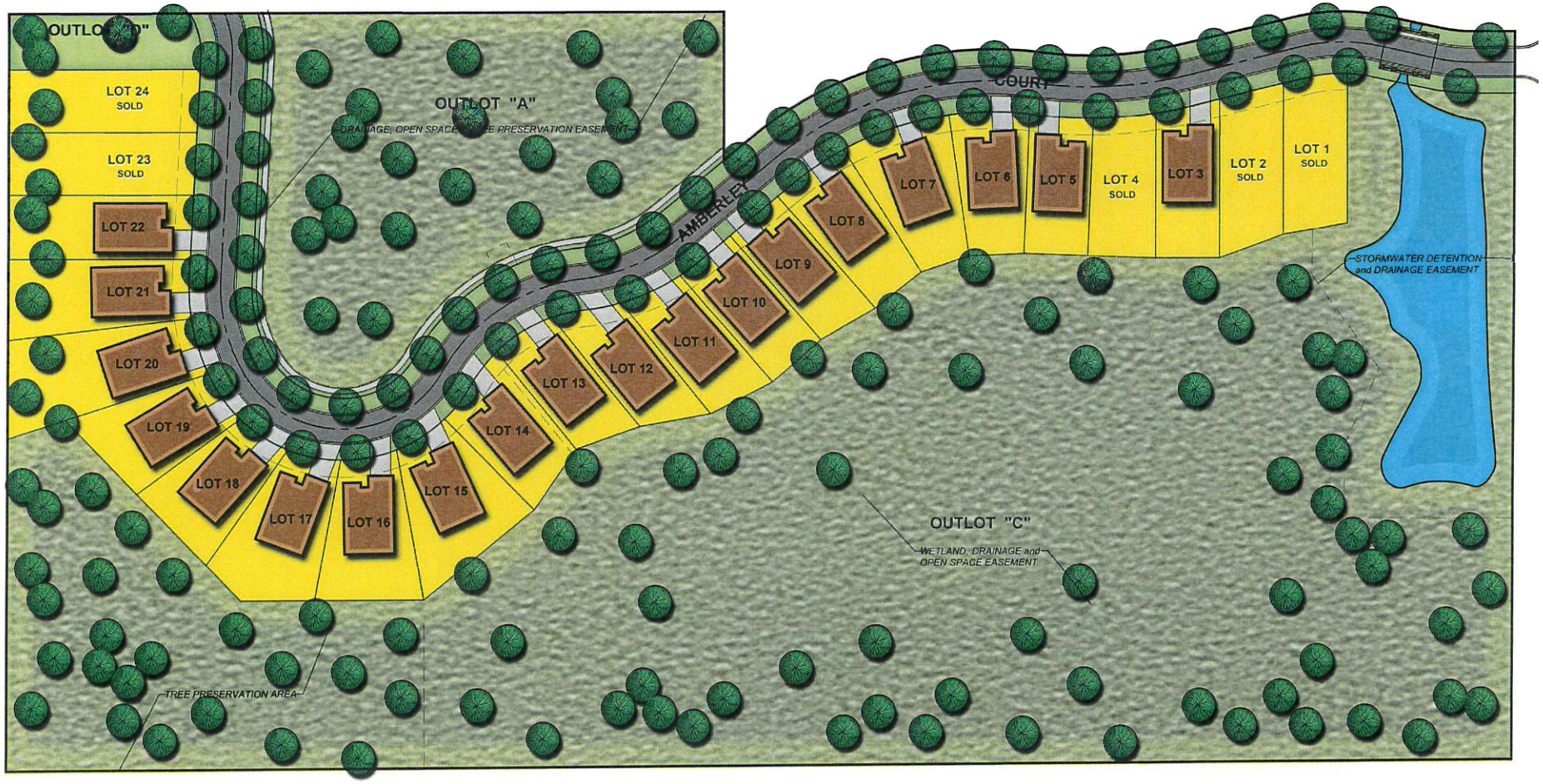
McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

SITE PLAN

AMBERLEY WOODS

LAKE FOREST, ILLINOIS

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

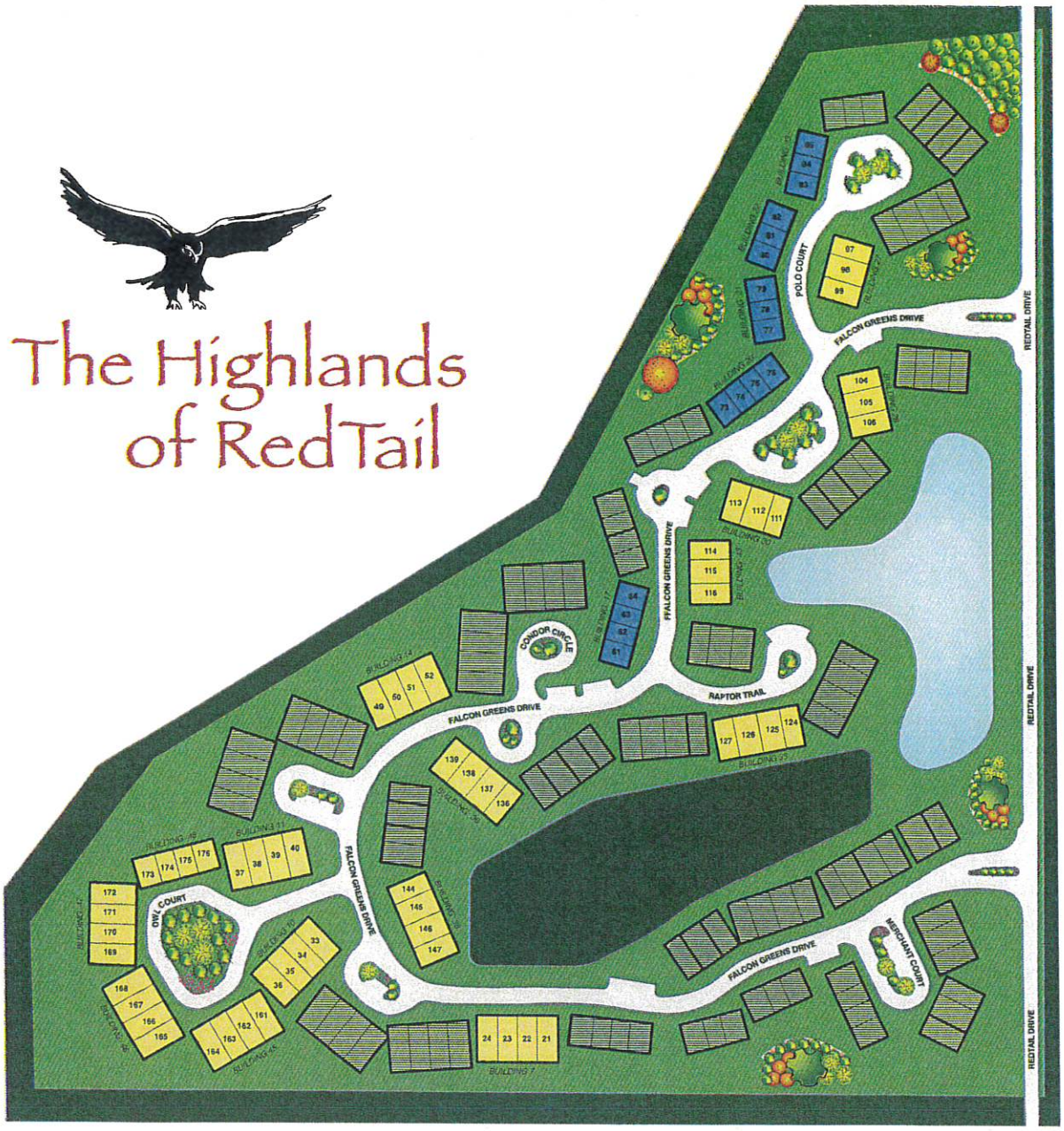




AMBERLEY WOODS - BRIDGE

NORTH

The Highlands of RedTail



N
W E
S

TOWNHOME UNITS | WALK-UP UNITS | SOLD UNITS

McNaughton DEVELOPMENT, INC.

LAND DEVELOPMENT – CUSTOM CONSTRUCTION

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sales@mcnaughtondevelopment.com

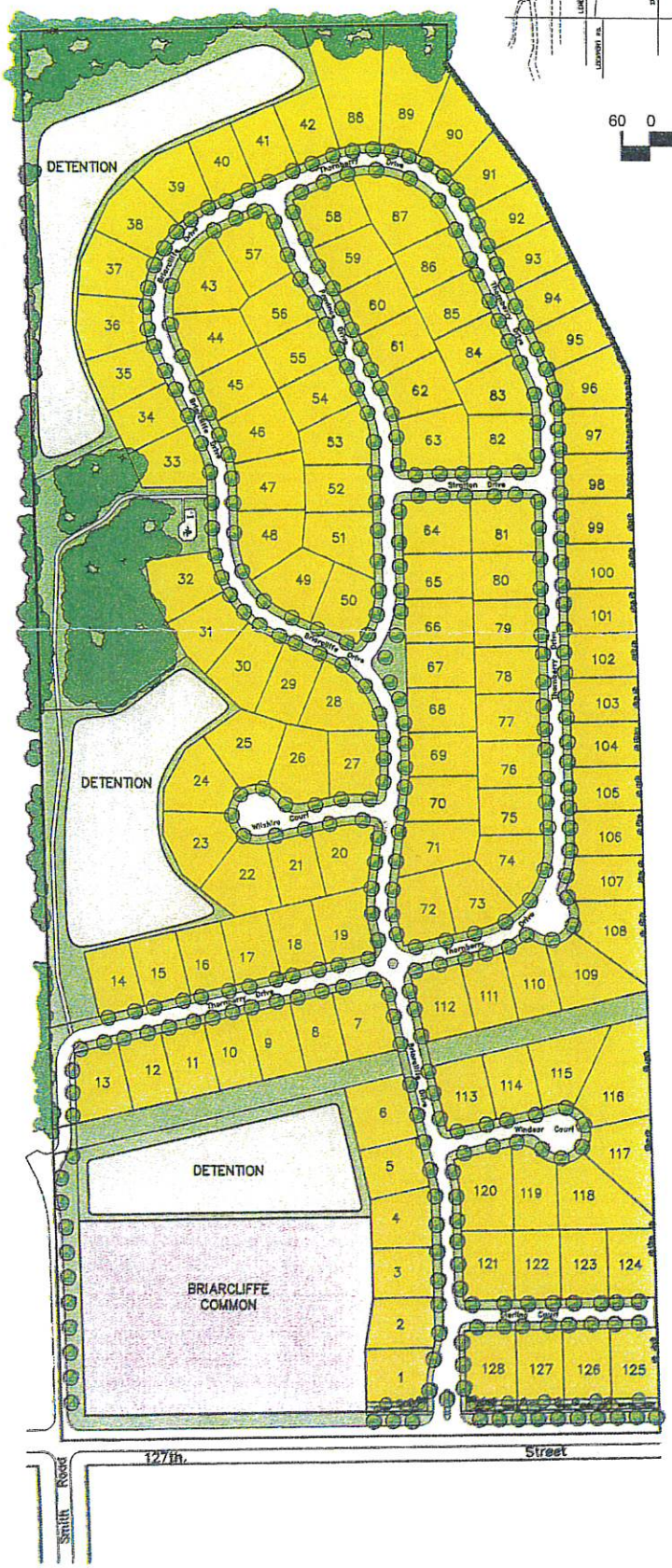
mcnaughtondevelopment.com

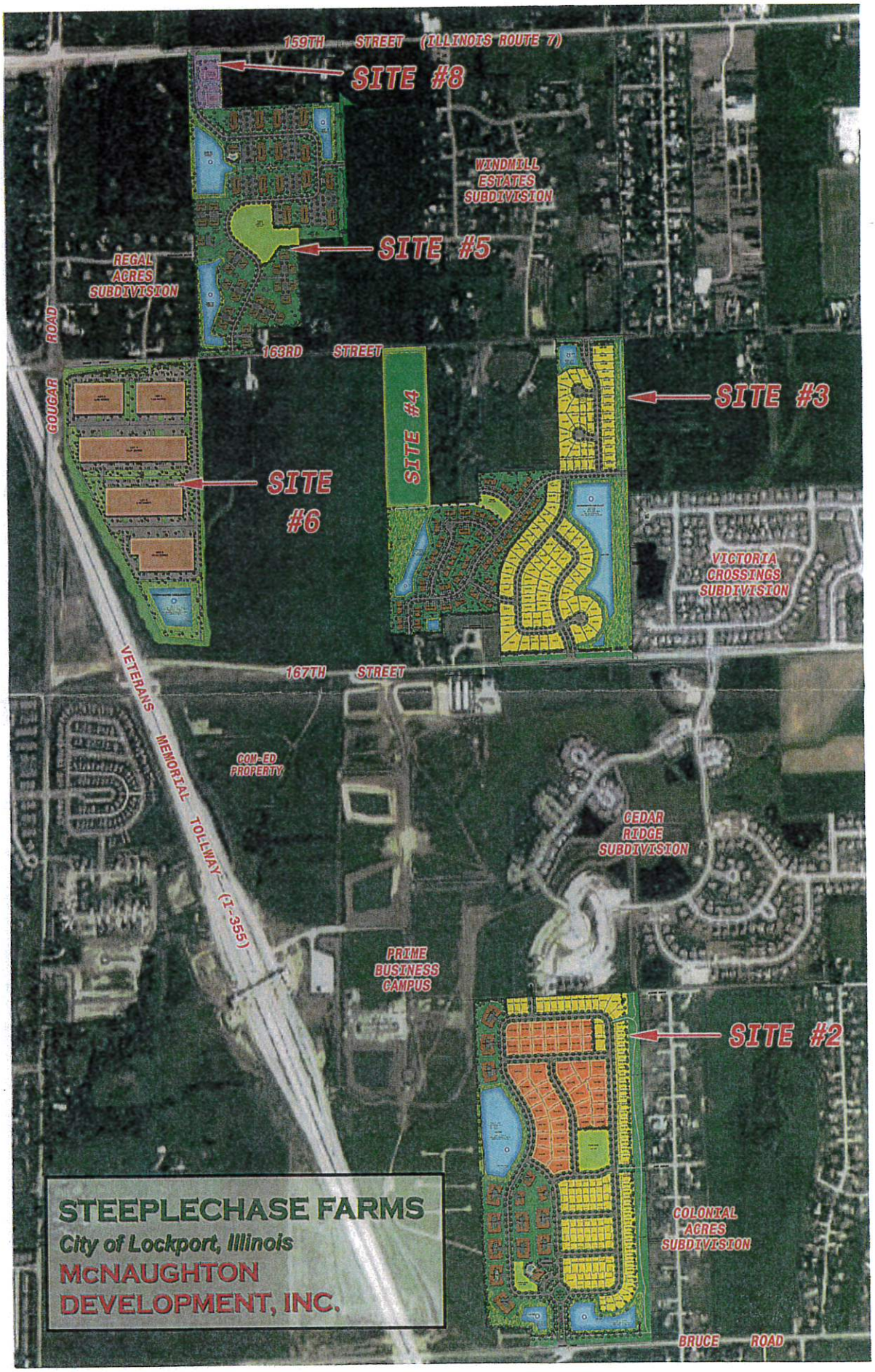


This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering. Refer to approved plans for specific details. 12/2014.

BRIARCLIFFE ESTATES






159TH STREET (ILLINOIS ROUTE 7)
SITE #8
WINDMILL ESTATES SUBDIVISION
SITE #5
REGAL ACRES SUBDIVISION
COUGAR ROAD
163RD STREET
SITE #4
SITE #3
SITE #6
VICTORIA CROSSINGS SUBDIVISION
167TH STREET
VETERANS MEMORIAL TOLLWAY (I-355)
COM-ED PROPERTY
CEDAR RIDGE SUBDIVISION
PRIME BUSINESS CAMPUS
SITE #2
COLONIAL ACRES SUBDIVISION
BRUCE ROAD
STEEPLECHASE FARMS
City of Lockport, Illinois
McNAUGHTON DEVELOPMENT, INC.

Overall Site Plan

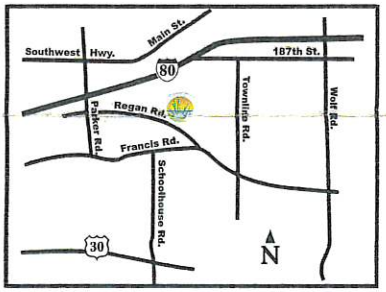


N
W E
S

Single Family Homes
Mokena Elementary School Dist. 159
Lincoln-Way High School Dist. 210

Single Family Homes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210

Townhomes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210



Whisper Creek
MOKENA

REGAN ROAD FARM DEVELOPMENT I, LLC
708-361-8300 | 815-485-8500
E-mail: sales@mcnaughtondevelopment.com

This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering.

A PROUD MEMBER OF SSHBA

MOKENA

FOXBOROUGH ESTATES

"Mokena's Premier Master-Planned Community"

Overall Site Plan



- **PHASE I** THE MEADOWS OF FOXBOROUGH ESTATES
- **PHASE II** THE LAKES OF FOXBOROUGH ESTATES
- **PHASE III** THE PRESERVES OF FOXBOROUGH ESTATES
- **PHASE IV** THE DEN OF FOXBOROUGH ESTATES

Note: This simplified site plan and landscaping are artist's conception, and are prepared only as a general guide not to be considered technically accurate. Refer to sales center for current details.

GRUBB FARM DEVELOPMENT, LLC

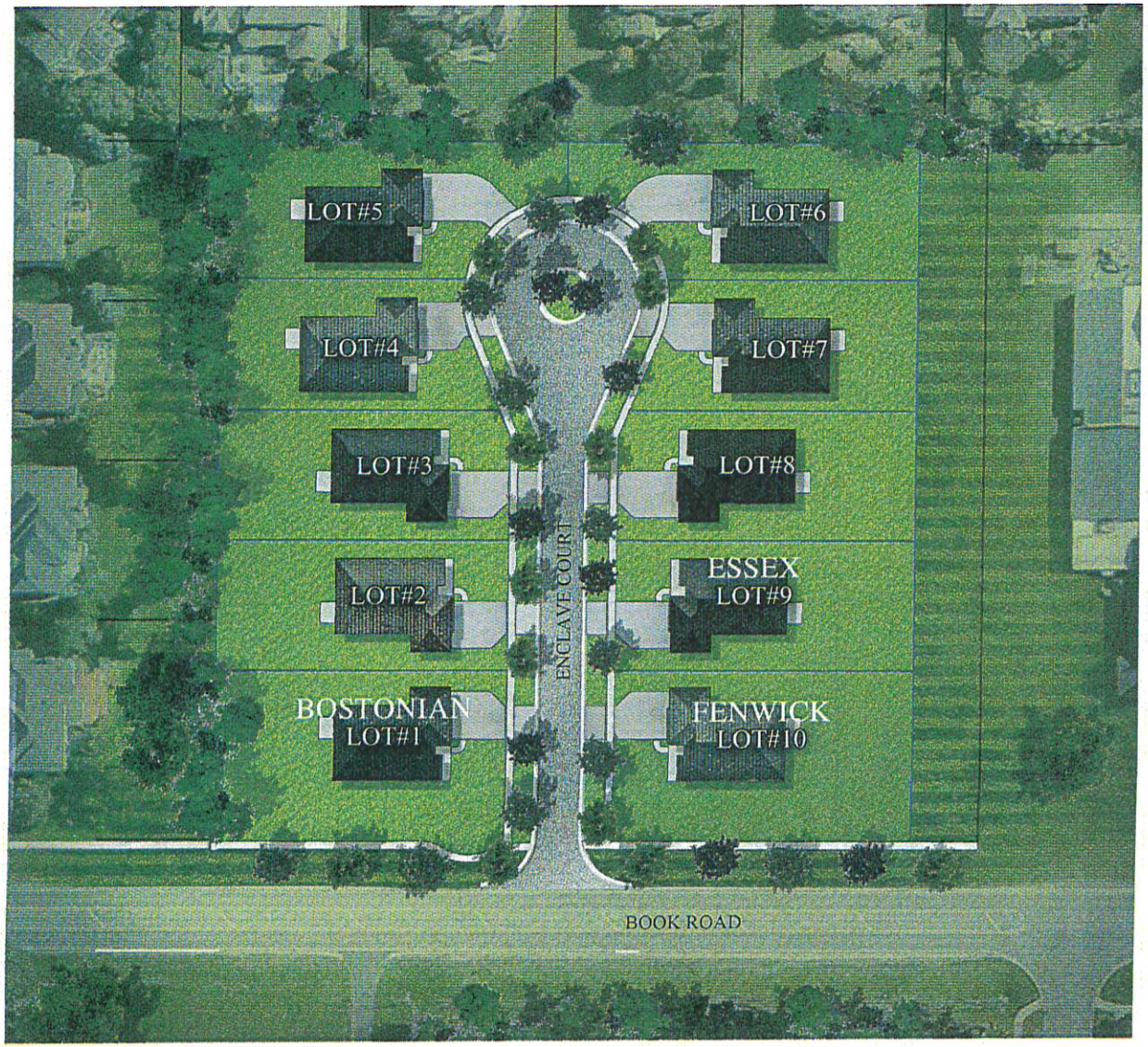
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EQUAL HOUSING OPPORTUNITY

A PROUD MEMBER OF SSHBA

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SILVER LEAF
OF NAPERVILLE



CRYSTAL TREE
ORLAND PARK



SCORECARD

HOLE	GOLD	WHITE	BLUE	RED	PAR	HOLE	GOLD	WHITE	BLUE	RED	PAR
1	410	395	370	315	4	10	425	415	345	305	4
2	375	370	305	275	4	11	210	180	145	120	3
3	350	330	295	255	4	12	405	390	355	295	4
4	515	495	480	425	5	13	410	395	345	300	4
5	170	160	135	85	3	14	510	495	450	405	5
6	430	405	375	335	4	15	185	165	140	105	3
7	165	145	115	90	3	16	575	550	495	440	5
8	425	375	340	285	4	17	155	135	105	95	3
9	490	480	445	385	5	18	530	515	465	400	5
	3330	3155	2860	2450	36		3405	3240	2845	2465	36
							3330	3155	2860	2450	36
						TOTAL	6735	6395	5705	4915	72

Golf Course Designed by
Robert Trent Jones Jr.

Prepared by: The Ives/Ryan Group, Inc.
for Corley Real Estate and Financial.
Golf course design by Robert Trent Jones Jr.

This is an artist's conception and subject to modification pending final engineering.

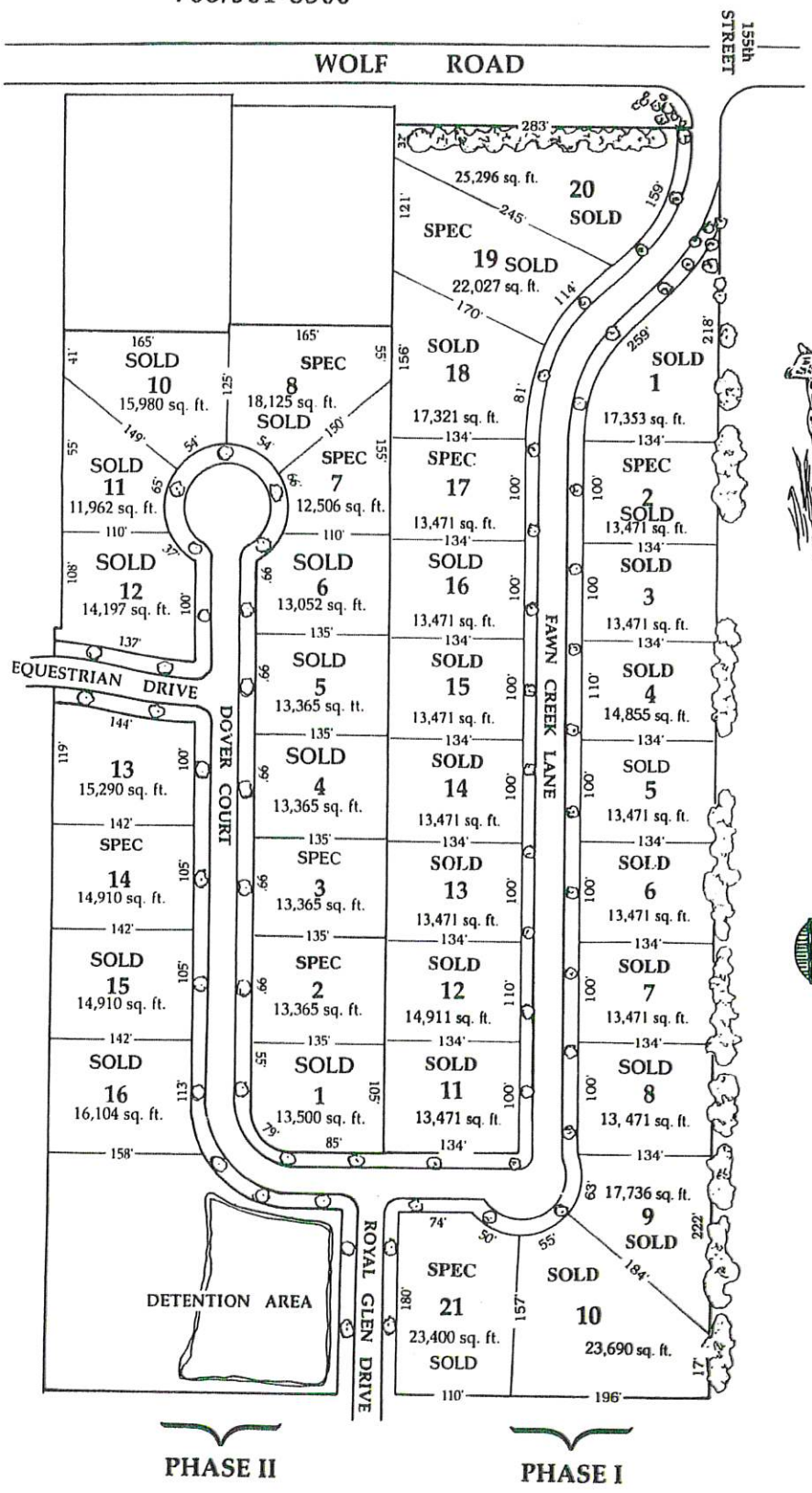
McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

KEY AWARDS

Excellence in Housing Design



FAWN CREEK OF ORLAND PARK

PHASE I and II

EQUAL HOUSING OPPORTUNITY

N

PHASE I

Lots 11 through 18 Walkouts

Lots 19 and 20 Lookouts or Walkouts

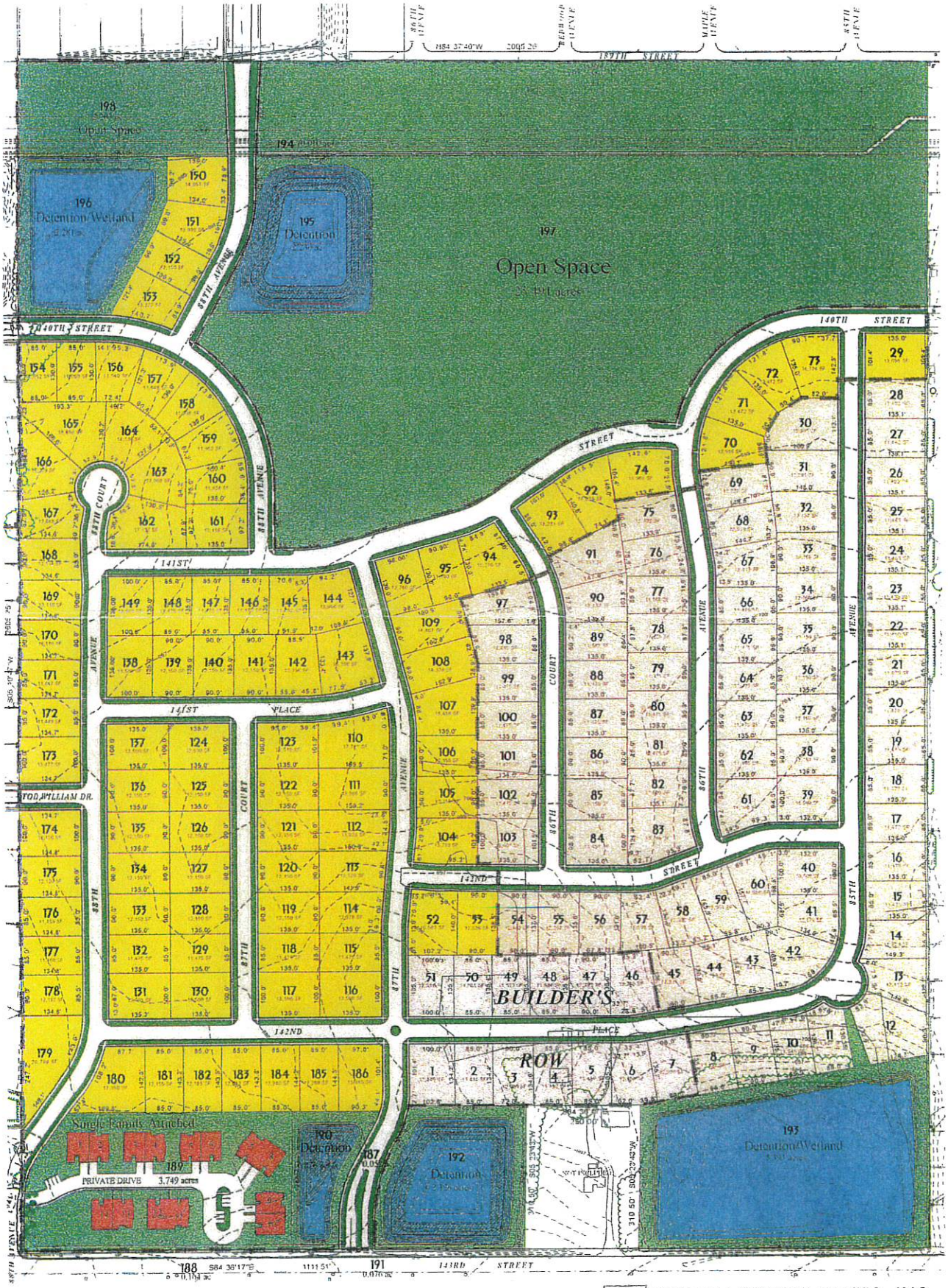
NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALES CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway - Suite 101 • Palos Park, IL 60464

EVERGREEN VIEW SUBDIVISION

Park Enterprises & McNaughton Development

Orland Park, Illinois



PHASE I | PHASE II | BUILDER'S ROW

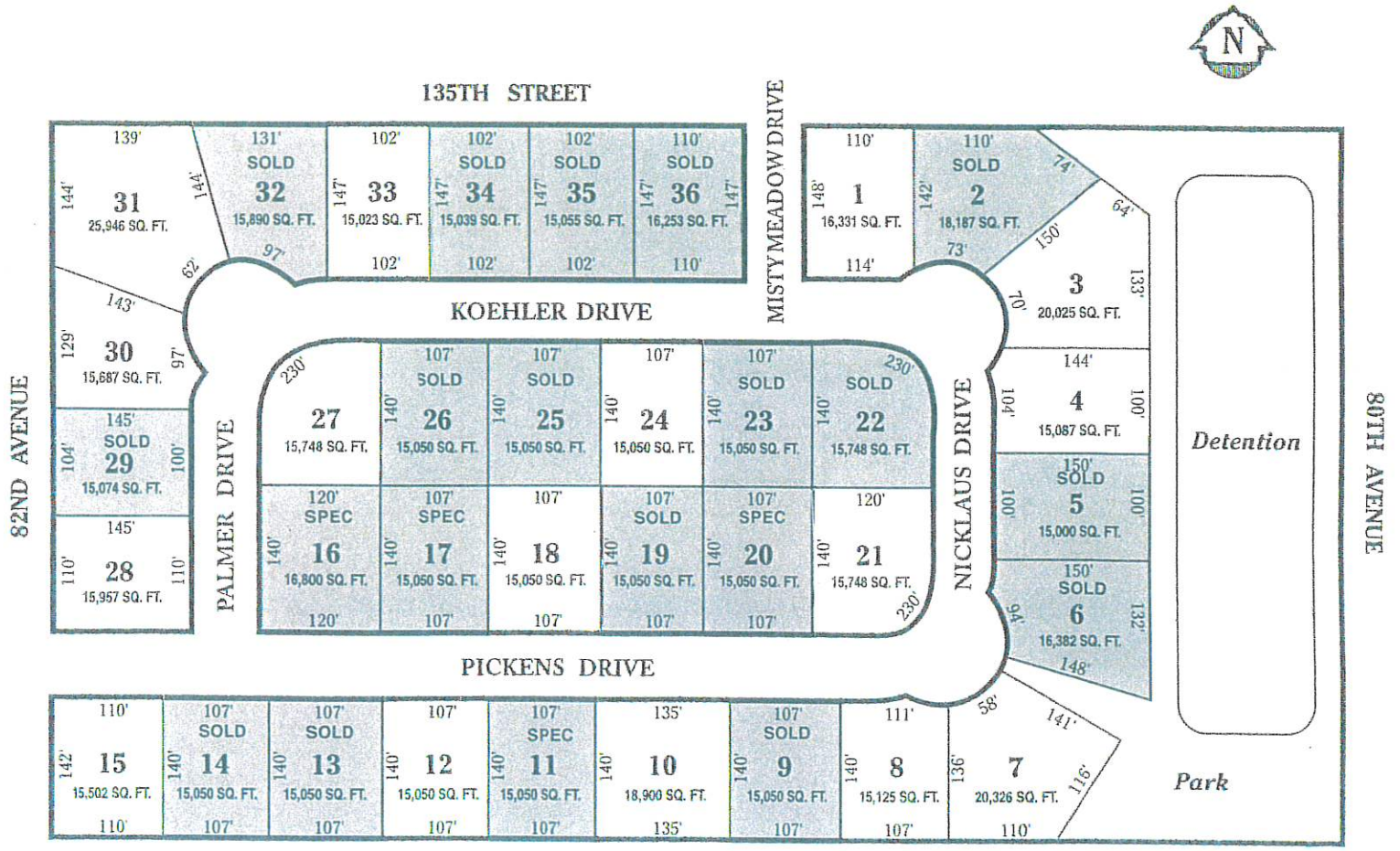
INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Meadowbrook Estates Of Orland Park



SHADED AREAS INDICATE MCNAUGHTON DEVELOPMENT INC. LOTS

KEY AWARDS

Excellence In Housing Design

NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

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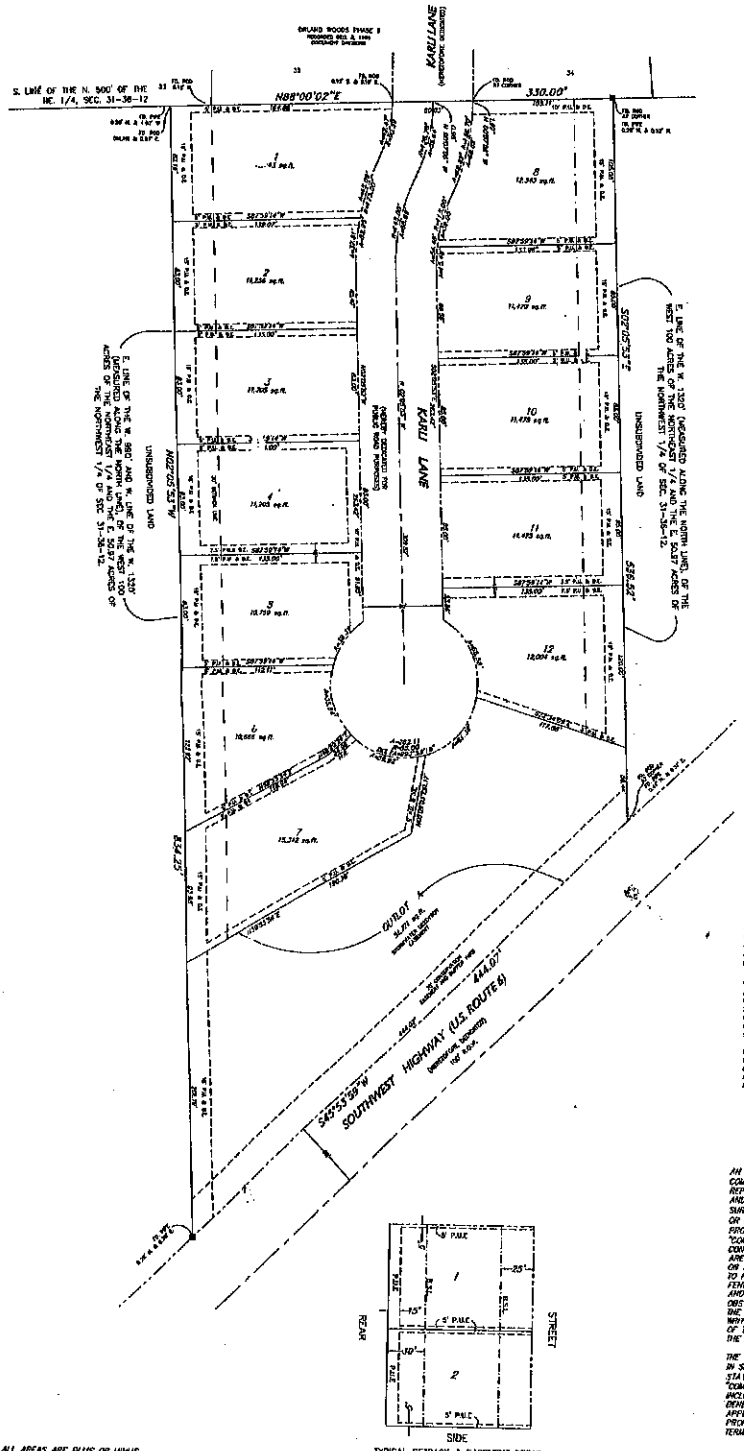
FINAL PLAT
OF
ORLAND WOODS III

BEING A SUBDIVISION IN THE NORTHEAST QUARTER OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN COOK COUNTY, ILLINOIS.

CLK 27-31-200-005

C:\Land Projects\03045\topo\dwg\LOCMAP.bmp
SITE

LOCATION MAP



BASIS OF BEARINGS
ASSUMED

GRAPHIC SCALE

1" IN FEET
1 inch = 30 ft.

LEGEND

● FIP	FOUND IRON PIPE
● FIR	FOUND IRON ROD
○ SIP	SET IRON PIPE
○ SMN	SET MAG. NAIL
■	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	PROFF-OF-WAY LINE
	CENTERLINE
	EASEMENT LINE
	BUILDING SETBACK LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(100.00')	RECORD DIMENSION	S	SOUTH
100.10'	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
FIR	FOUND IRON ROD OR PIN		
A	ARC DIMENSION		
R	RADIUS		
CH.	CHORD DIMENSION		
CB	CHORD BEARING		
D	DELTA		
P.C.	POINT OF CURVE		
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		

EASEMENT PROVISIONS

Easements are hereby reserved for and granted to the Village of Orland Park, Illinois and to those public utility companies operating under franchise from the Village of Orland Park, including, but not limited to Ameritech, Northern Illinois Gas Company (NICOR), Commonwealth Edison Company, Cable Television and their successors and assigns, over all the areas marked "Public Utilities and Drainage Easement" (P.U. & D.E.) on the plat for the perpetual right, privilege and authority to construct, reconstruct, repair, inspect, maintain and operate various utility transmission and distribution systems, community antenna television systems and including storm and/or sanitary sewers, together with any and all necessary manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said village, over, upon, along, under and through said indicated easements, together with right of access across the property for necessary men and equipment to do any of the above work.

No right is also granted to trim or remove trees, shrubs or other plants on the easements that interfere with the operation of the sewers or other utilities. No permanent buildings shall be placed on said easements, but same may be used for gardens, shrubs, landscaping and other purposes that do not harm or later interfere with the aforesaid uses or rights, where an easement is used both for sewers and other utilities, the other utility installation shall be subject to the ordinances of the Village of Orland Park.

Easements are hereby reserved for and granted to the Village of Orland Park and other governmental authorities having jurisdiction of the land platted hereon over the entire easement area for ingress, egress and the performance of municipal and other governmental services, including water, storm, and sanitary sewer services and maintenance.

NICOR GAS COMPANY

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR, REPLACE AND REMOVE FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT," "COMMON AREA OR AREAS" AND STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS," TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, ON OR ADJACENT LOTS, AND COMMON AREA OR AREAS, AND TO SERVE OTHER PROPERTY, ADJACENT OR OTHERWISE, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS' FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NICOR. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THAT MEANING SET FORTH FOR SUCH TERM IN SECTION 605/2(e) OF THE "CONDOMINIUM PROPERTY ACT" (ILLINOIS COMPILED STATUTES, CH. 765, SEC. 605/1(e)), AS AMENDED FROM TIME TO TIME. THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH AREAS MAY BE DESIGNED ON THIS PLAT BY OTHER TERMS.

TYPICAL SETBACK & EASEMENT DETAIL
(UNLESS OTHERWISE SHOWN)

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL EASEMENTS ARE HEREBY GRANTED.
3. ALL DISTANCE ARE IN FEET AND DECIMAL PARTS THEREOF.
4. THERE SHALL BE NO INGRESS OR EGRESS FROM OUTLOT "A" TO SOUTHWEST HIGHWAY.

PROFESSIONAL LAND SURVEYOR — STEVEN J. LAMB — STATE OF ILLINOIS — 035-003160 — BELVIDERE, IL

DIGITAL SURVEY & DESIGN, LTD.
5249 Stone Quarry Road
Belvidere, IL 61008
Phone: 815-547-1130
Fax: 815-547-0430

PREPARED FOR:
McNAUGHTON DEVELOPMENT, INC.
11900 SOUTHWEST HIGHWAY
PALOS PARK, ILLINOIS 60464
(708) 361-8300

NO.	DATE	REVISIONS DESCRIPTION
2	11/19/03	DELETED FRONT SETBACK LINES
1	10/31/03	ADDED EASEMENT

FINAL PLAT
ORLAND WOODS III

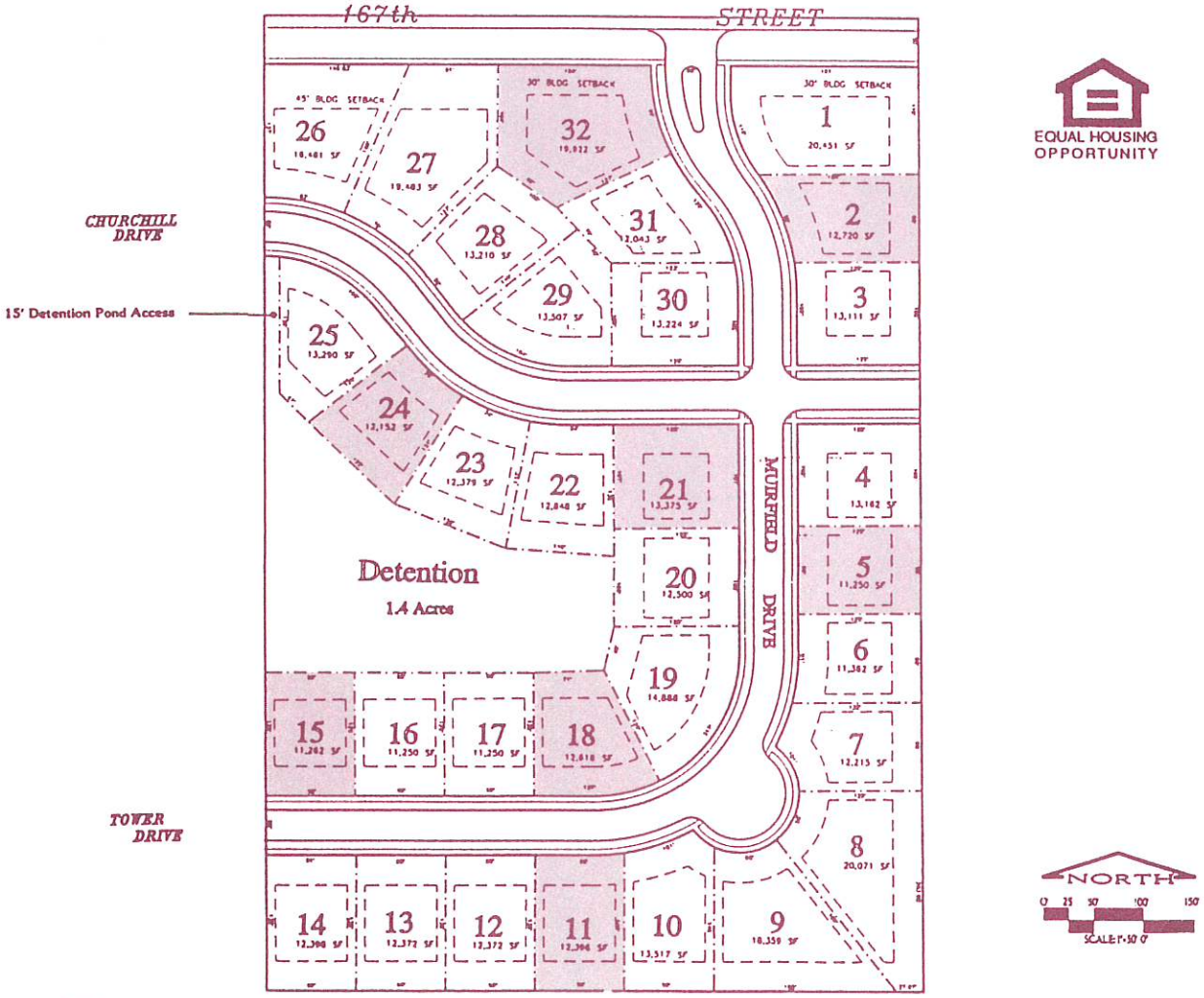
DRAFTING COMPLETED: 08/22/03 DRAWN BY: S.J. PROJECT MANAGER: S.J.
FIELD WORK COMPLETED: 08/29/03 CHECKED BY: SCALE: 1" = 40'

Project No: 03045
Group No: 03
SHEET NO. 1 of 2

MUIRFIELD

167th & 106th Avenue
ORLAND PARK

** wooded / walk-out lots



EQUAL HOUSING OPPORTUNITY

SHADED AREAS INDICATE McNAUGHTON DEVELOPMENT LOTS

*Other lots within subdivision can be acquired upon request.

PLAN DATA	
TOTAL AREA	+/-15.0 ACRES
EXTERIOR R.O.W.	0.8 ACRES
DETENTION	1.4 ACRES
NET AREA	12.8 ACRES
TOTAL HOMES	32
MIN. LOT SIZE	11,250 SF
AVERAGE LOT SIZE	13,889 SF
NET DENSITY	2.5 DU/AC.
PROPOSED ZONING	R-3

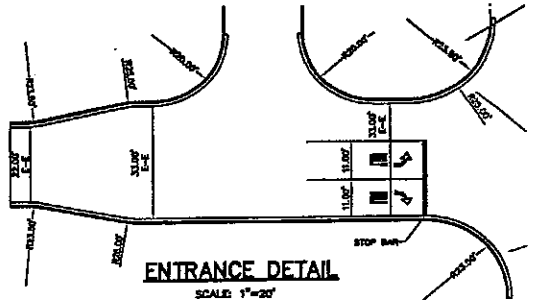
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
phone (708) 361-8300 fax (708) 361-6754

This plan is preliminary in nature and was prepared to illustrate design intent, therefore it is subject to modification pending final planning, engineering and landscape design.

FINAL SITE PLAN
FOR
PARK CORNERS II

ORLAND PARK, ILLINOIS

SITE ADDRESS:
13510 CIRCLE DRIVE, ORLAND PARK, ILLINOIS 60462
ORLAND TOWNSHIP



END

PROPOSED

(S1) STOP R1-1

(S2) NO OUTLET W14-2 36"X36" BACKGROUND - YELLOW

NOTES:
1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS BOOK.
2. THE PLACEMENT AND SPACING OF SIGNS SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

BY OWNER.

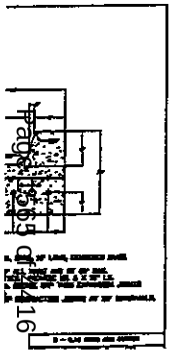
MENTS BY I.D.O.T.

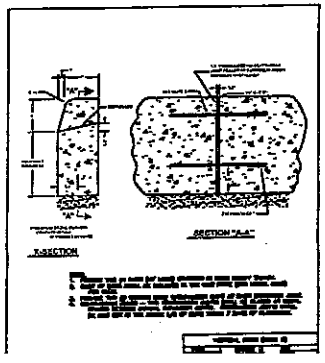
= 0.99 ac = 43,164 SF
= 0.13 ac = 5,659 SF
= 0.86 ac = 37,523 SF
= 0.40 ac = 17,233 SF
STORY) = 11,420 SF
= 0.30
= 38 SPACES
= 38 SPACES

= 5,632 SF (15%)
REA = 14,640 SF (39%)
= 1
= 1 (BIZ ZONED)

ALL BE PLANTED WITH MATERIALS TO BE
OF ORLAND PARK. THESE SWALES
TANDARDS NECESSARY TO MEET BMP

THAT PART OF SAID LOTS 37 AND 38 CONVEYED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, BY DOCUMENT AS NUMBER LR3479161, MORE PARTICULARLY DESCRIBED AS THE NORTHWEST CORNER OF SAID LOT 38; THENCE ON AN TH 89 DEGREES 37 MINUTES 32 SECONDS EAST, ALONG THE 38, A DISTANCE OF 56.42 FEET; THENCE SOUTH 56 DEGREES WEST 96 FEET; THENCE SOUTH 1 DEGREE 01 MINUTES 30 ET TO THE SOUTHERLY LINE OF SAID LOT 37; THENCE SOUTH 50 SECONDS WEST, ALONG SAID SOUTHERLY LINE, 30.63 FEET ER OF SAID LOT 37, SAID POINT BEING A 31,302.28 FEET R OF CIRCLE OF SAID CURVE BEARS NORTH 89 DEGREES 13 T FROM SAID POINT; THENCE NORTHERLY 300.22 FEET, ALONG T LINE OF SAID LOTS 37 AND 38 THROUGH A CENTER ANGLE 57 SECONDS, TO THE POINT OF BEGINNING) IN BLOCK 4 IN DITION, BEING A SUBDIVISION OF PART OF THE WEST HALF OF NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN





REVIEW SET

REVISIONS

MCNAUGHTON DEVELOPMENT
11900 SOUTHWEST HIGHWAY
PALOS PARK, ILLINOIS 60464

FINAL SITE PLAN
FOR
PARK CORNERS II

DESIGNTEK ENGINEERING, INC.
CONSULTING AND SITE DESIGN ENGINEERS
9500 BORNHIT DRIVE, SUITE 304
MOKENA, ILLINOIS 60448

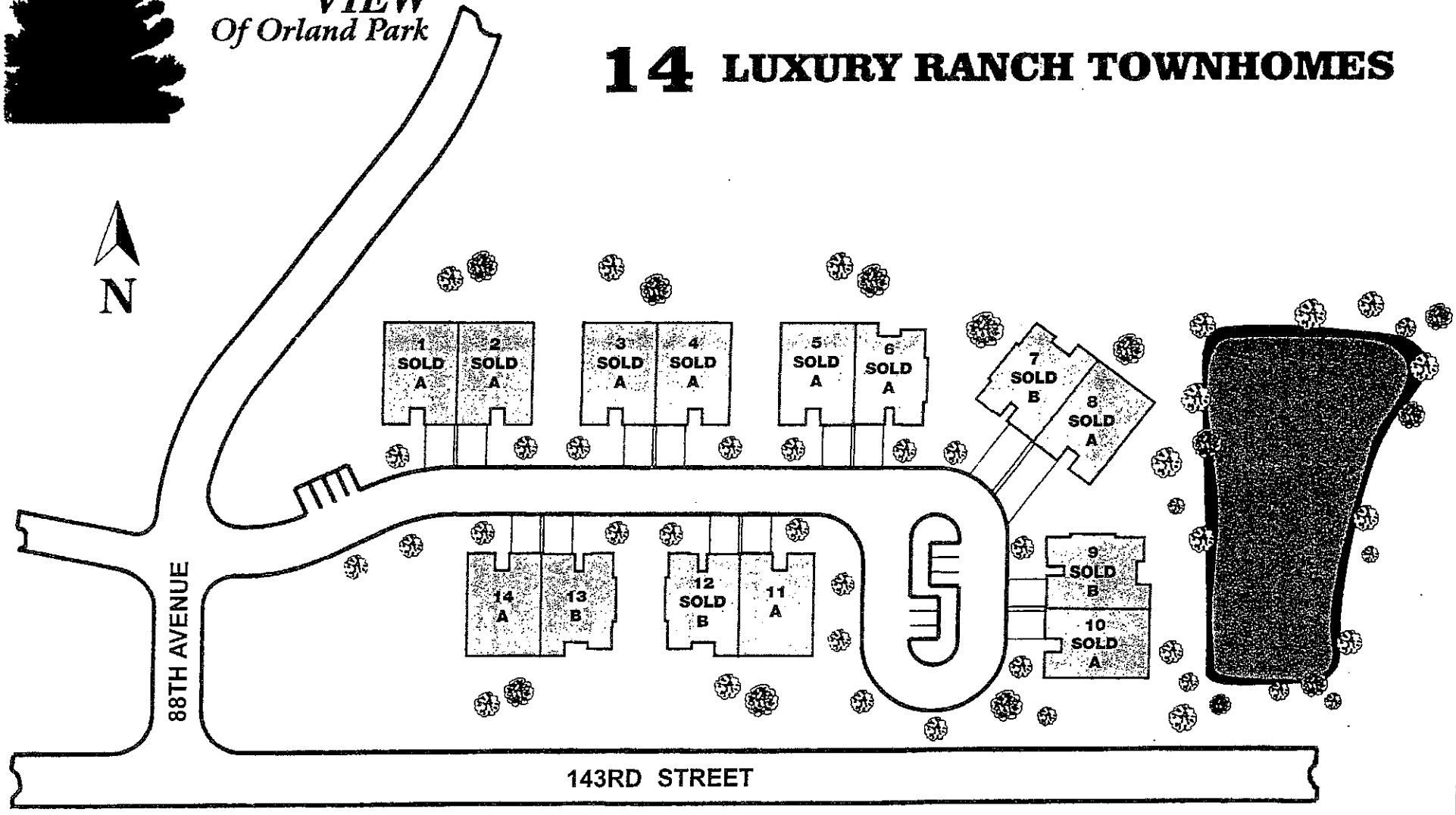
PROJECT INFO
Project No.: 07
Scale: 1"=20'
Date: 03-27-0
Design By: ADM
Drafted By: ADS
Checked By: SD

1 OF


6
7
5
8
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A
171ST
STREET
WOLF
ROAD
37
38
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48
49
BLUFF POINTE
Orland Park, Illinois
McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER
N

Evergreen VIEW Of Orland Park

14 LUXURY RANCH TOWNHOMES



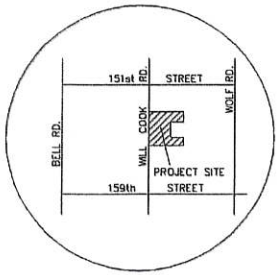
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
708/361-8300

This site plan in an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

SSHBA

EQUAL HOUSING OPPORTUNITY

PRELIMINARY SITE PLAN
TIMBERLAKE
ORLAND PARK, ILLINOIS



LOCATION MAP
N.T.S.



REVISIONS

NO.	DATE	DESCRIPTION

McNAUGHTON DEVELOP, INC.
11900 SOUTHWEST HIGHWAY
PALOS PARK, IL. 60464

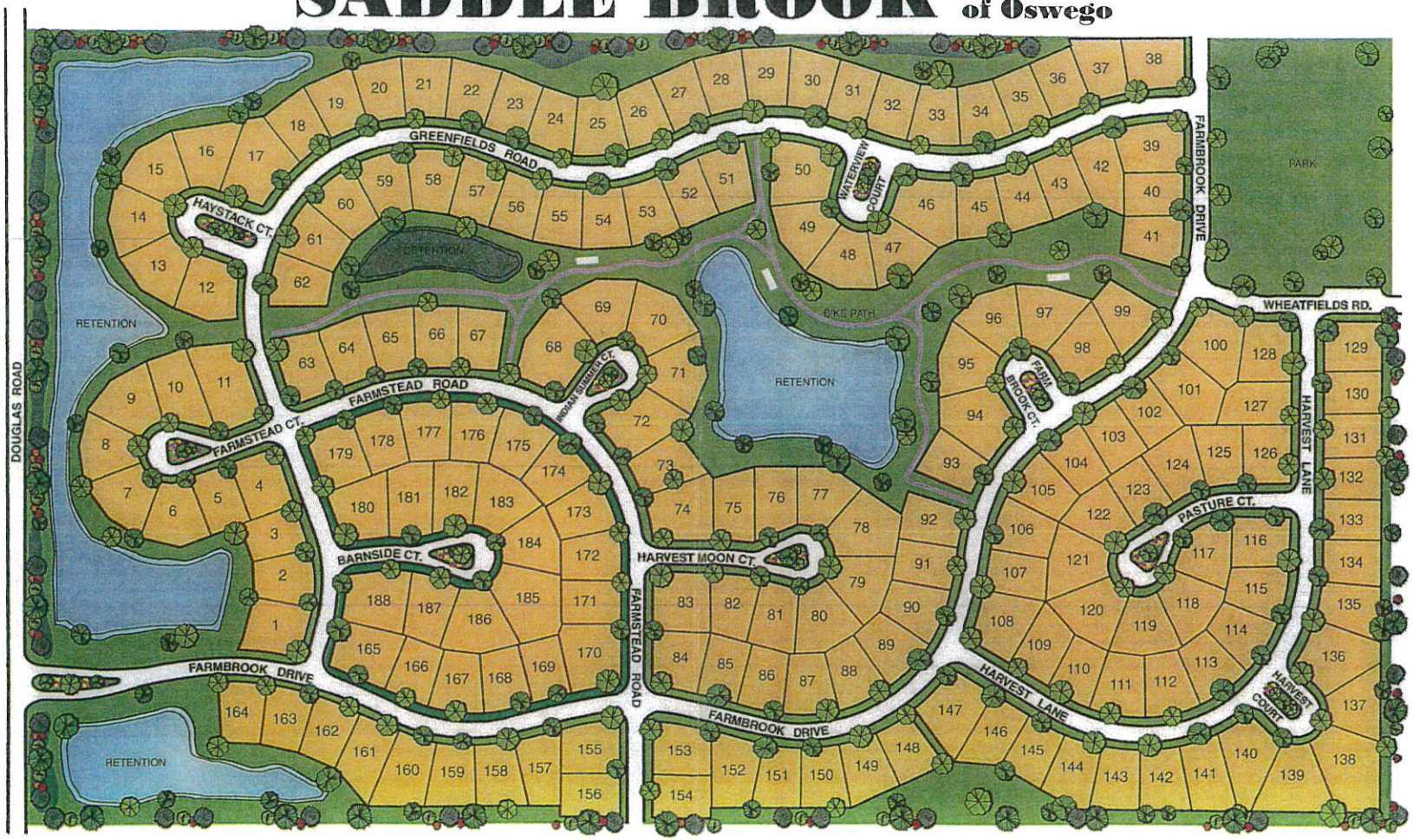
TIMBERLAKE
PRELIMINARY SITE PLAN
ORLAND PARK, ILLINOIS

Design Tech Associates, Inc.
ENGINEERING • REAL ESTATE DEVELOPMENT
13159 West 143rd Street
Homer Glen, Illinois 60441
Phone: 708-301-0311
Illinois Professional Design Firm #184-002201

PROJECT INFORMATION	
Project No.:	02-115C
File:	COLOR.DWG
Scale:	1"= N.T.S.
Date:	07-18-02
Design By:	SDS
Drafted By:	RSM
Checked By:	SDS

SHEET No.
1
of
1

SADDLE BROOK of Oswego



McNaughton DEVELOPMENT, INC

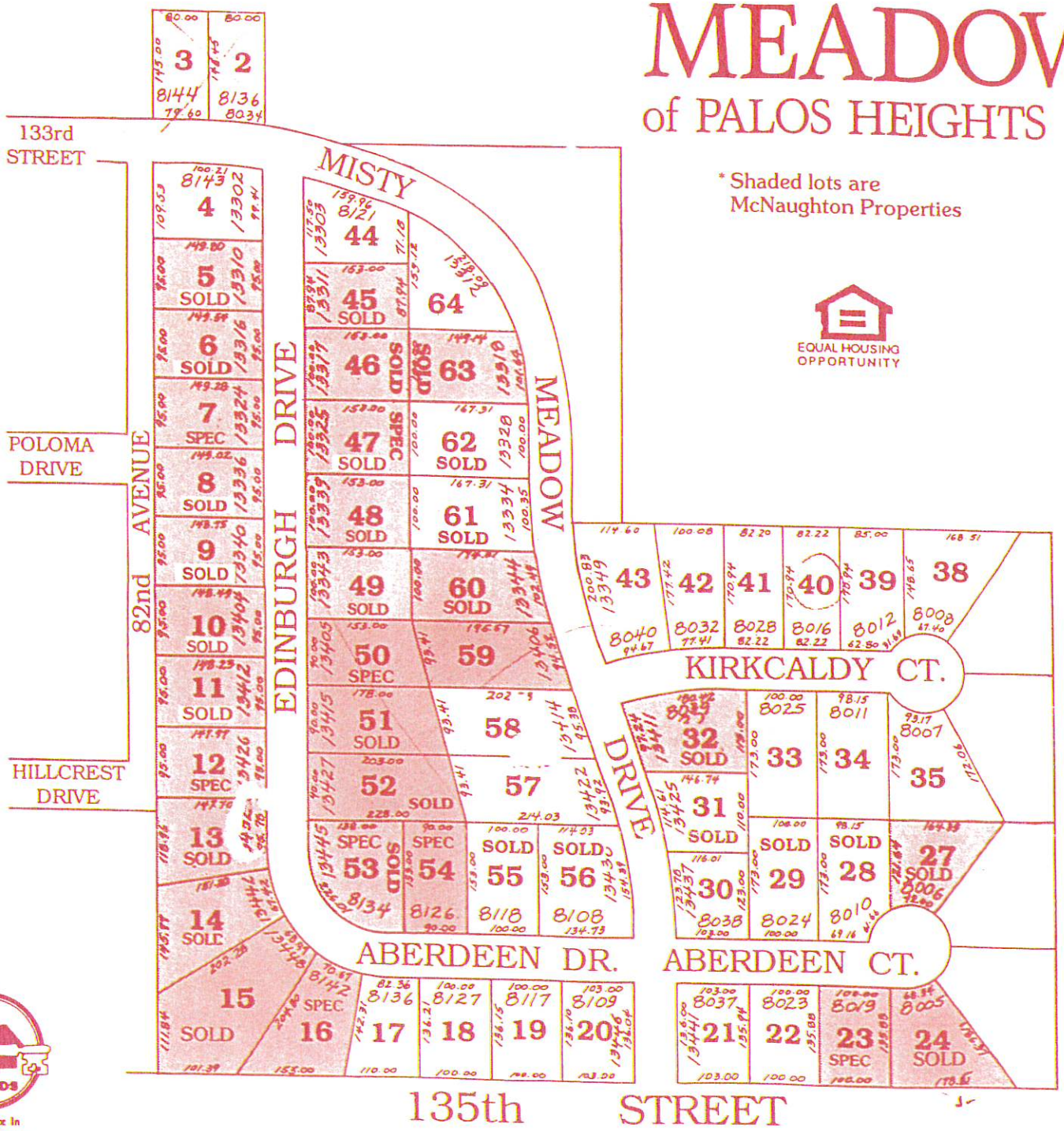
CUSTOM DESIGNED HOMES

708/361-8300

MISTY MEADOW of PALOS HEIGHTS

* Shaded lots are McNaughton Properties

EQUAL HOUSING OPPORTUNITY



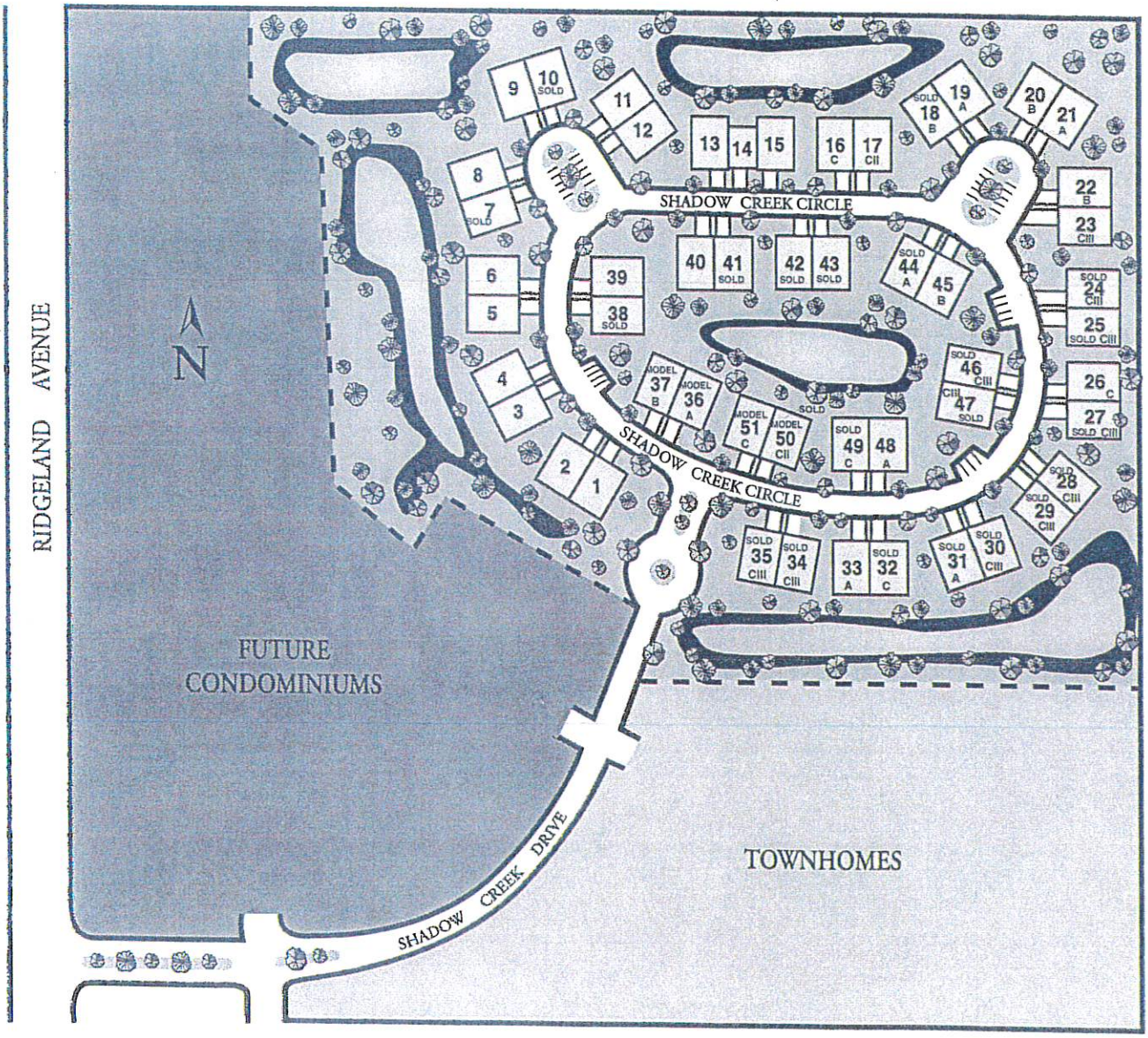
KEY AWARDS
Excellence In Housing Design

Park Corners Office Centre • 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464

McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.

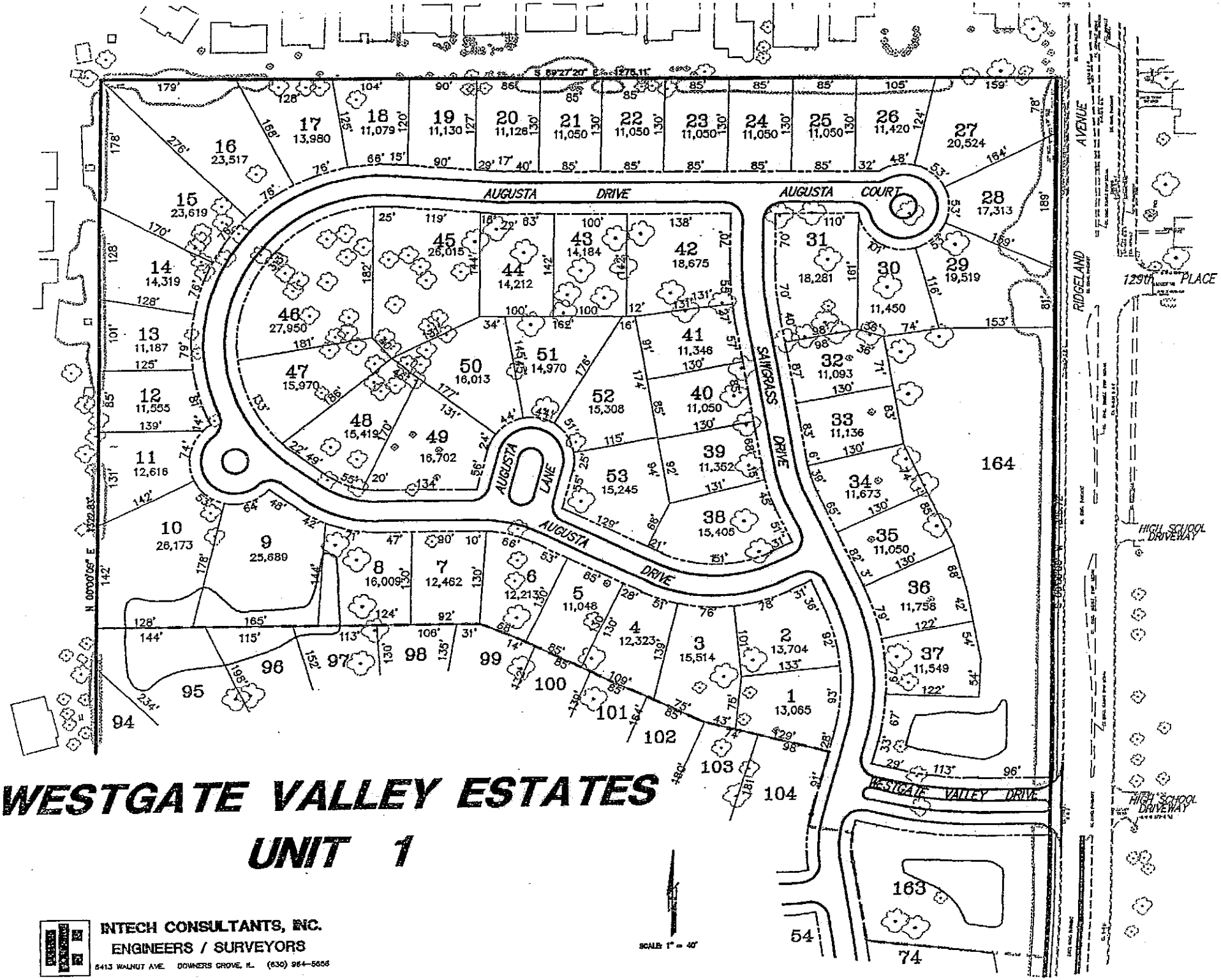
KEYSTONE CROSSING

Of Westgate Valley



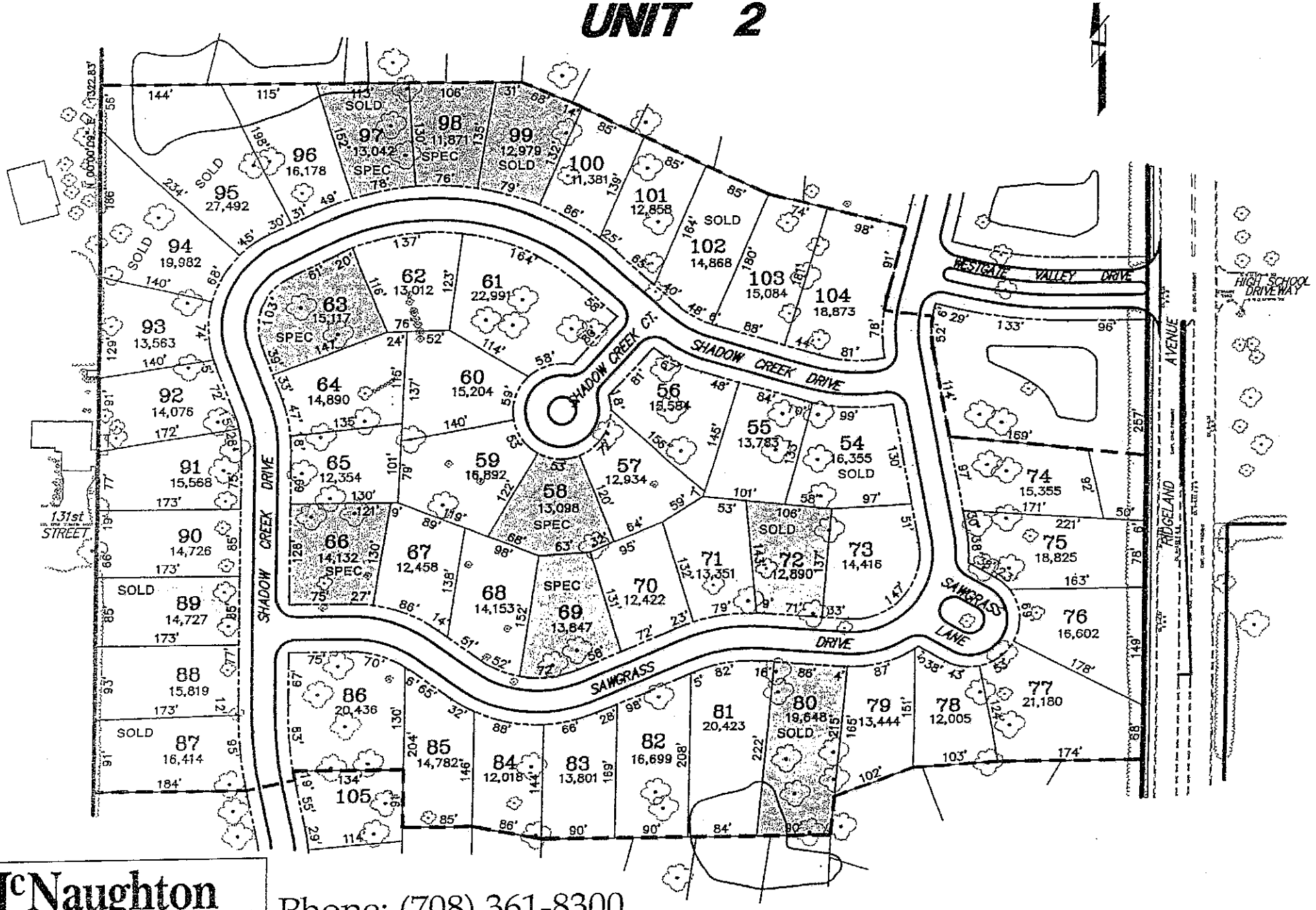
This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES


AUGUSTA DRIVE
AUGUSTA COURT
AUGUSTA LANE
SAWGRASS DRIVE
RIDGELAND AVENUE
129th PLACE
WESTGATE VALLEY DRIVE
HIGH SCHOOL DRIVEWAY
HIGH SCHOOL DRIVEWAY
WESTGATE VALLEY ESTATES
UNIT 1
INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS
5413 WALNUT AVE. DOWNERS GROVE, IL. (630) 964-5656
SCALE: 1" = 40'

WESTGATE VALLEY ESTATES

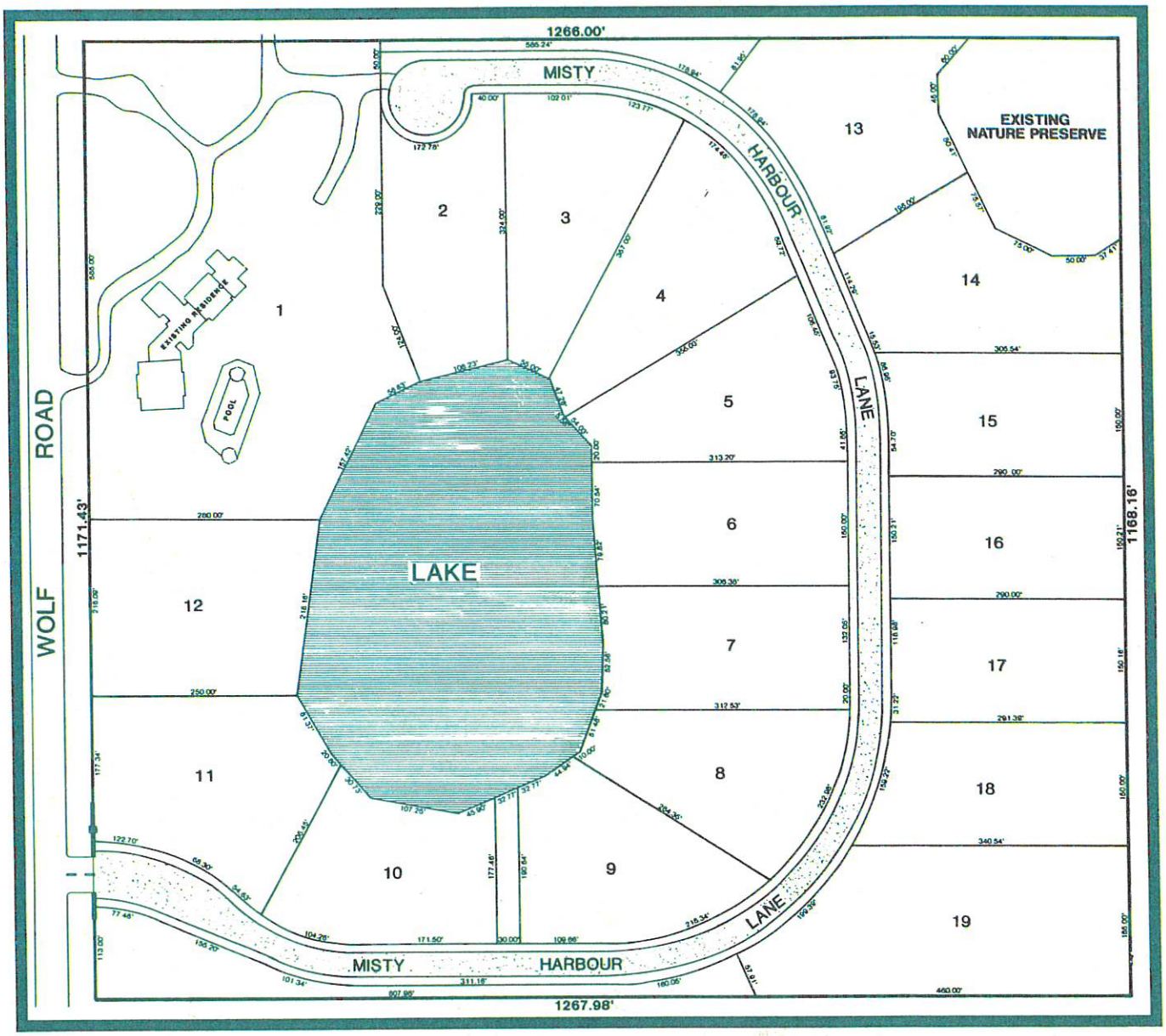
UNIT 2



McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

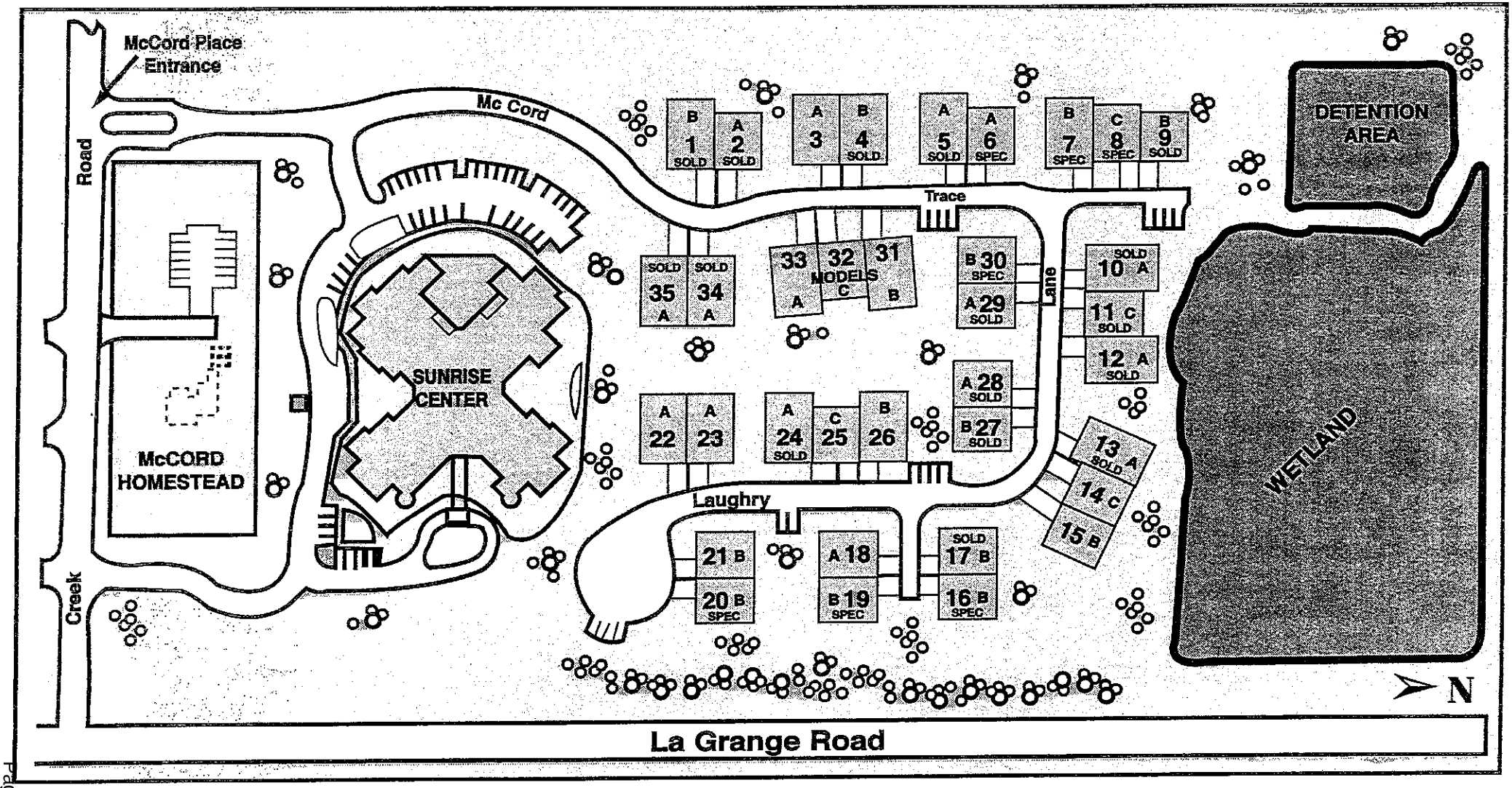
Phone: (708) 361-8300
www.mcnaughtondevelopment.com

MISTY HARBOUR



Homesite Offerings

McCord Place
OF PALOS PARK



This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

EQUAL HOUSING OPPORTUNITY

TIMBER TRAILS
of WESTERN SPRINGS



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

McNaughton Development, Inc.

Burr Ridge, IL

BAB Building Front Perpective

Park Place Townhomes

Western Springs, IL

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.) © 2023 BSB Design, Inc.

November 6, 2024

BSB DESIGN

BSBDesign.com



Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

BAB Elevations
Park Place Townhomes
Western Springs, IL

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McNaughton Development, Inc.
Burr Ridge, IL

4-Unit Building Front Perpective

Park Place Townhomes
Western Springs, IL

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November 6, 2024

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Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

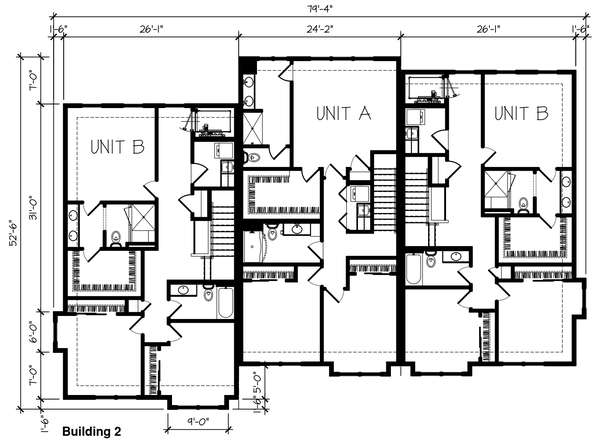
McNaughton Development, Inc.
Burr Ridge, IL

Building Type 2 Elevations
Park Place Townhomes
Western Springs, IL

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November 6, 2024

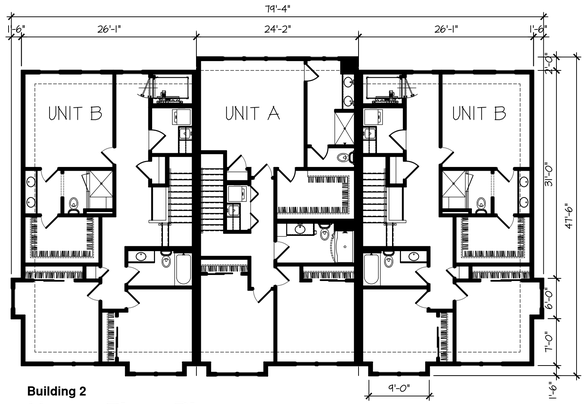
BSB DESIGN
BSBDesign.com



Building 2

Upper Floor Plan

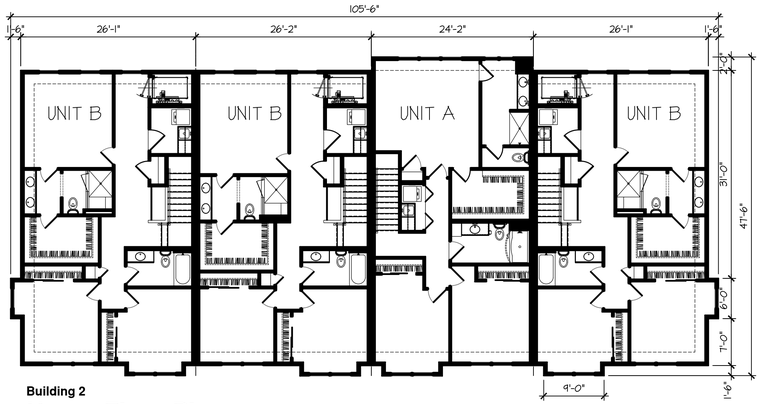
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Building 2

Upper Floor Plan

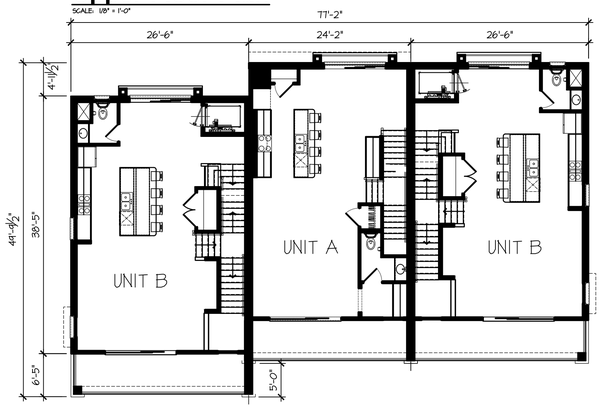
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Building 2

Upper Floor Plan

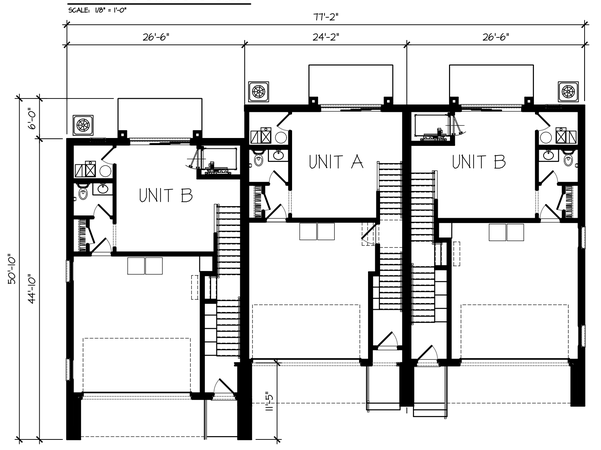
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Building 2

Main Floor Plan

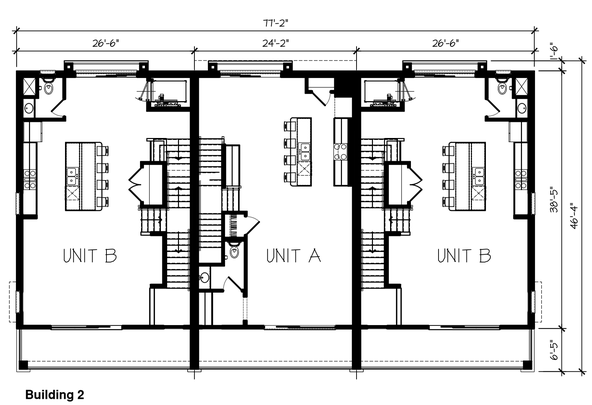
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Building 2

Lower Floor Plan

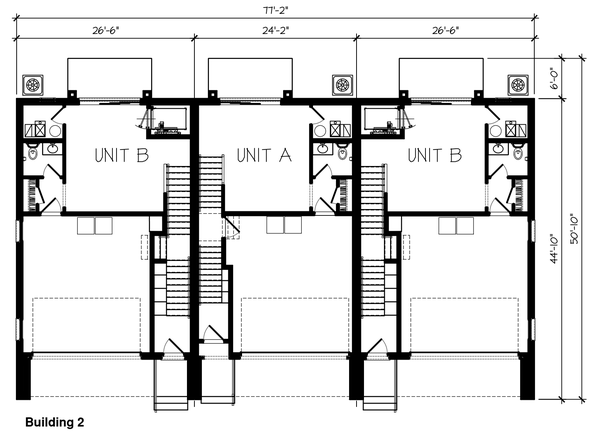
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Building 2

Main Floor Plan

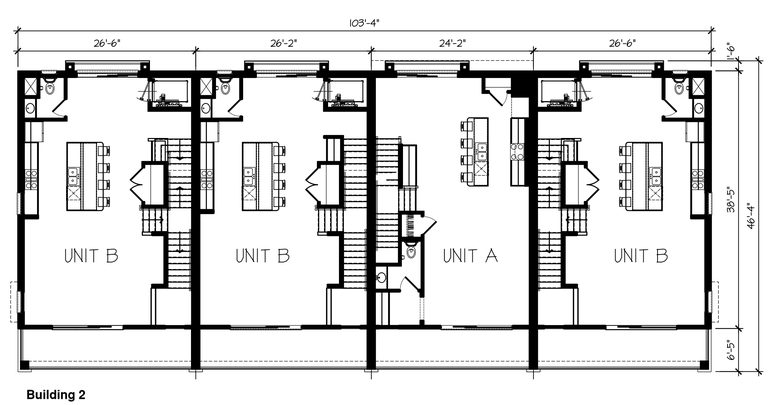
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Building 2

Lower Floor Plan

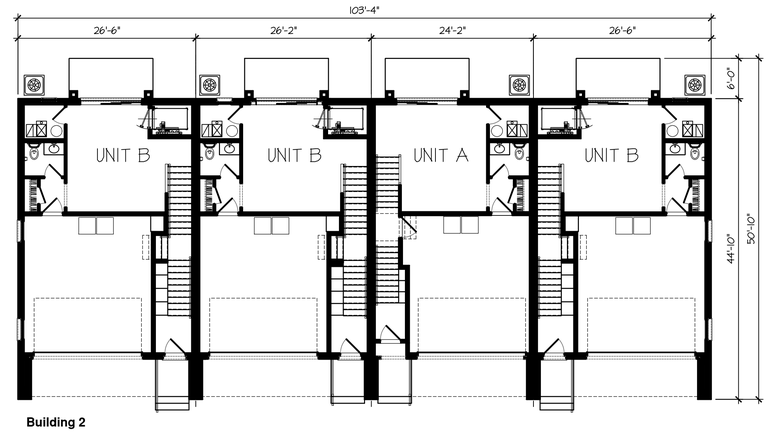
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

SCALE: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

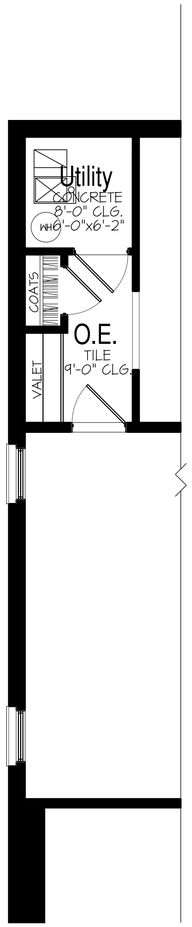
3 Unit & 4 Unit Building Assemblies

Park Place Townhomes
Western Springs, IL

BSB DESIGN
BSBDESIGN.COM

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.) © 2022 BSB Design, Inc.

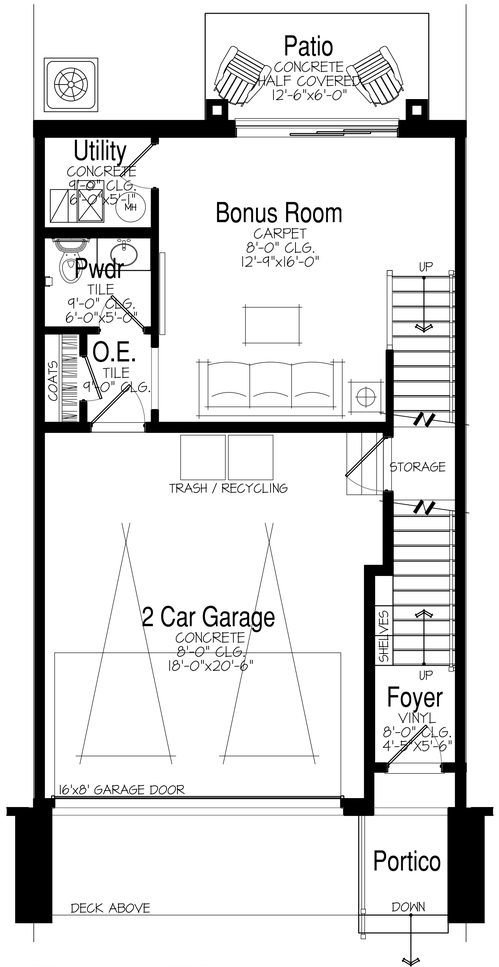
November 6, 2024



506 SF + Garage 399 SF

End Cond.

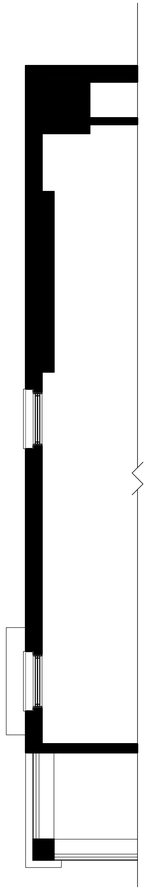
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506 SF + Garage 399 SF

Lower Floor Plan

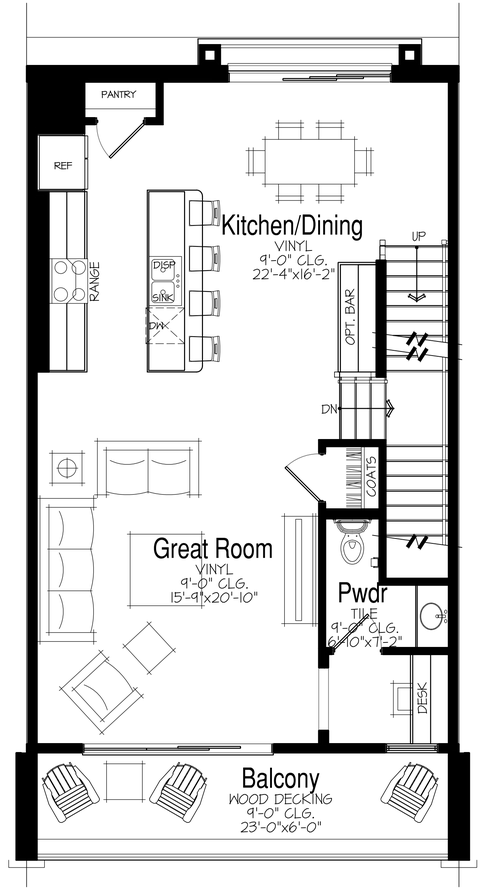
SCALE: 1/4" = 1'-0"



889 SF

End Cond.

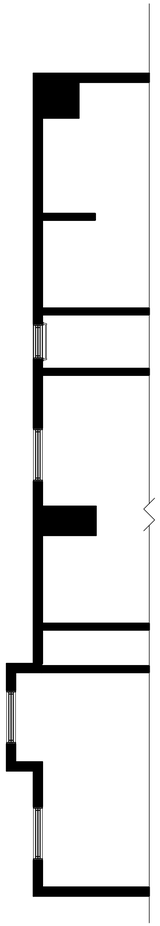
SCALE: 1/4" = 1'-0"



866 SF

Main Floor Plan

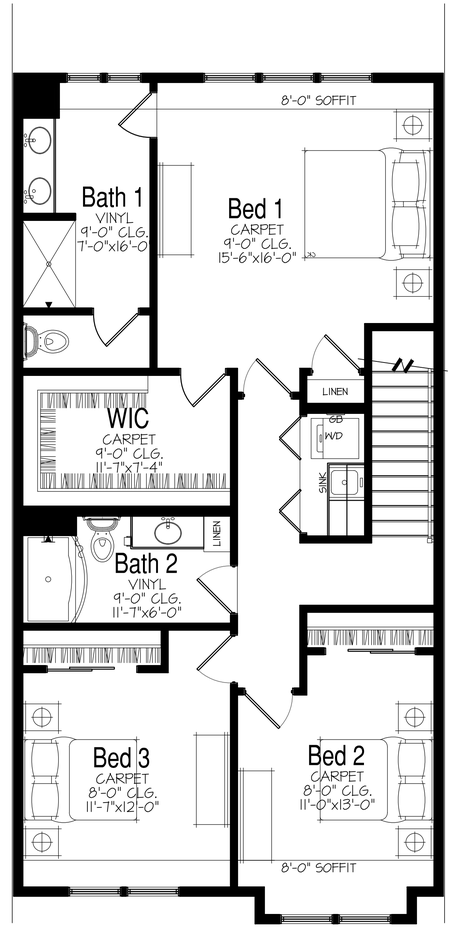
SCALE: 1/4" = 1'-0"



1080 SF

End Cond.

SCALE: 1/4" = 1'-0"



1071 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

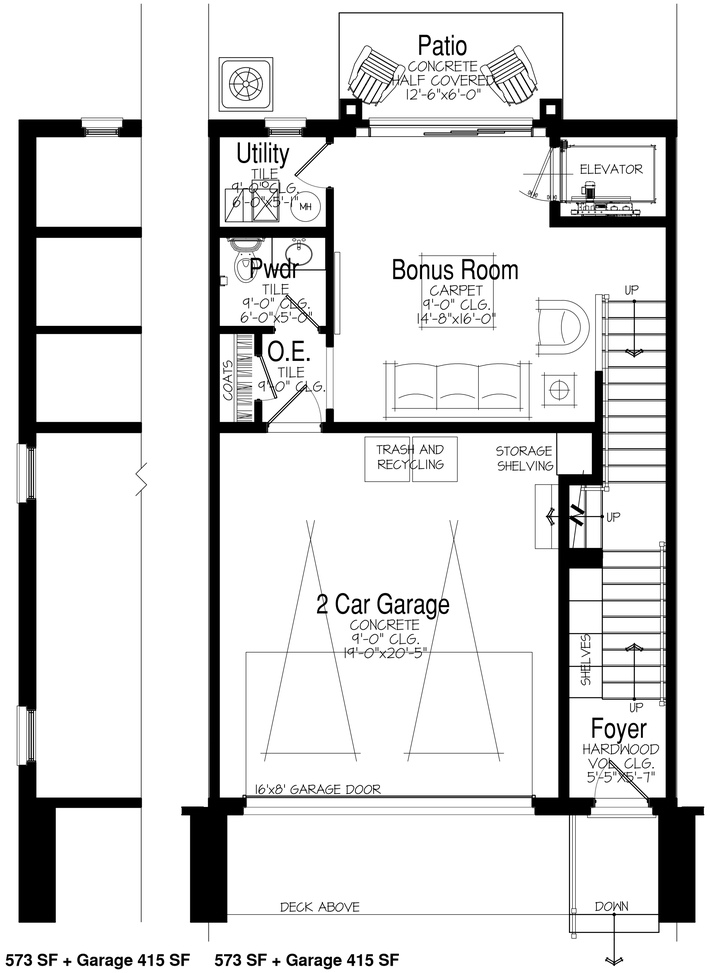
Townhome Unit A: 2,443 Total SF

Park Place Townhomes
Western Springs, IL

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November 6, 2024



573 SF + Garage 415 SF

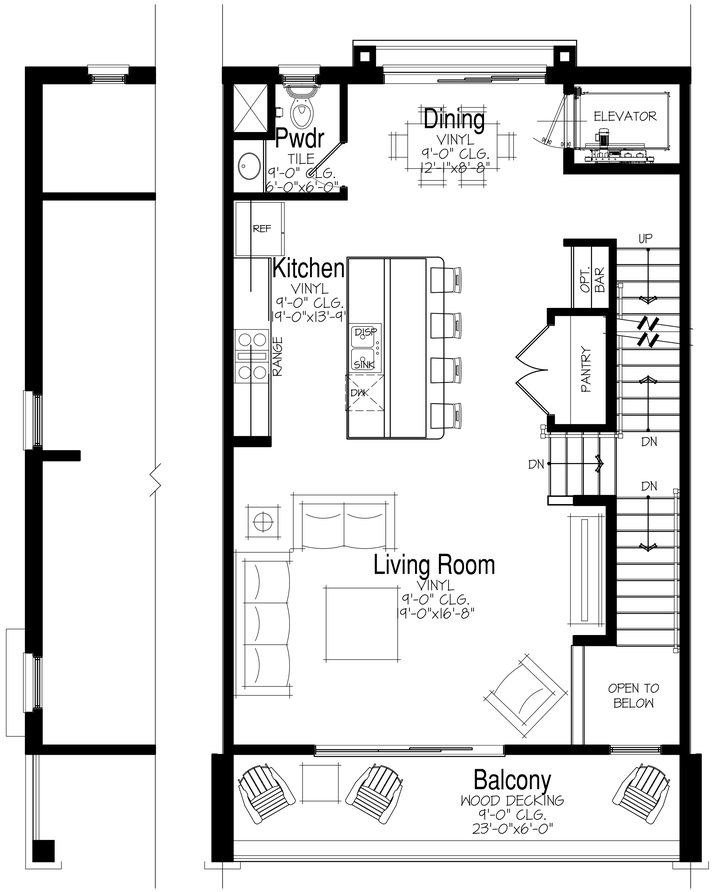
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

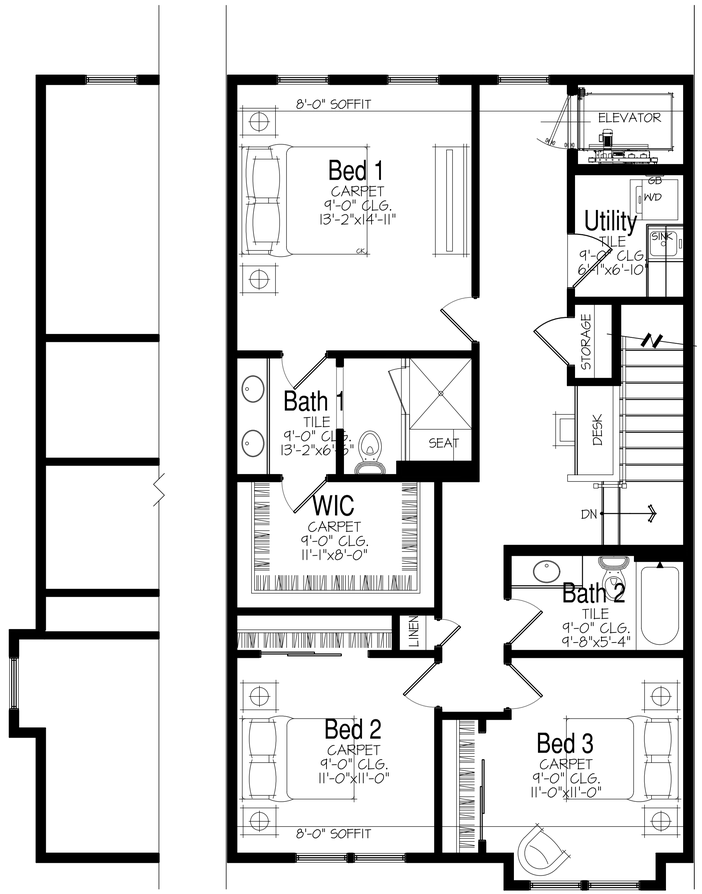
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

Townhome Unit B: 2,561 Total SF

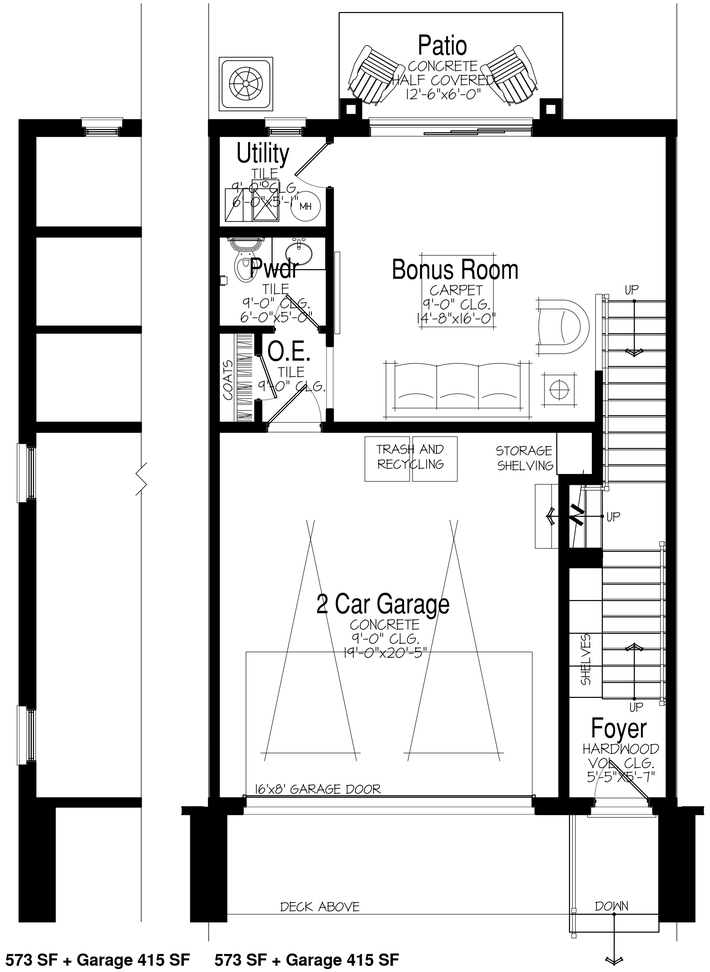
Park Place Townhomes

Western Springs, IL

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November 6, 2024



573 SF + Garage 415 SF

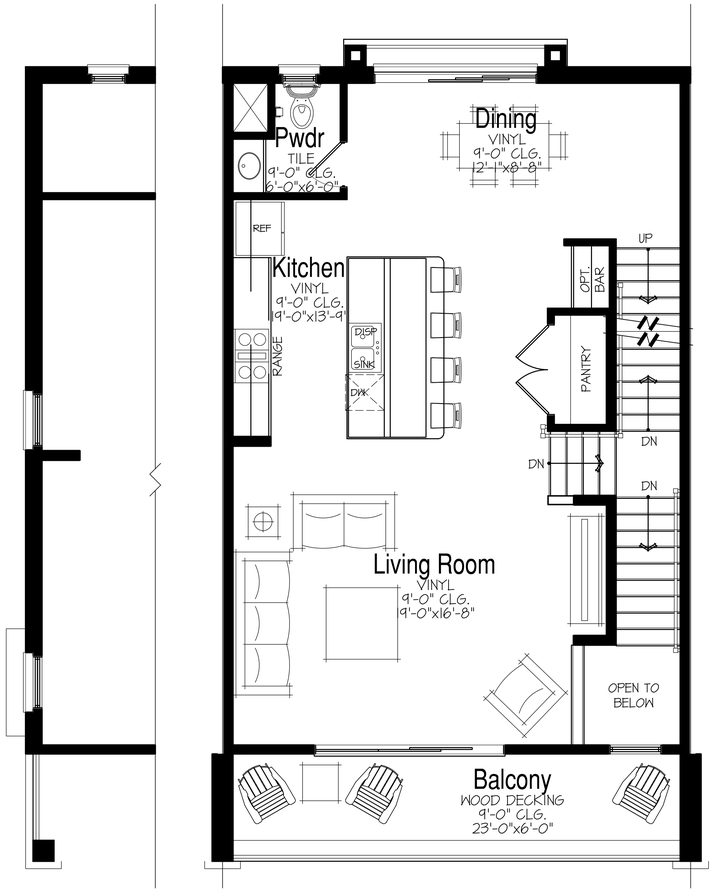
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

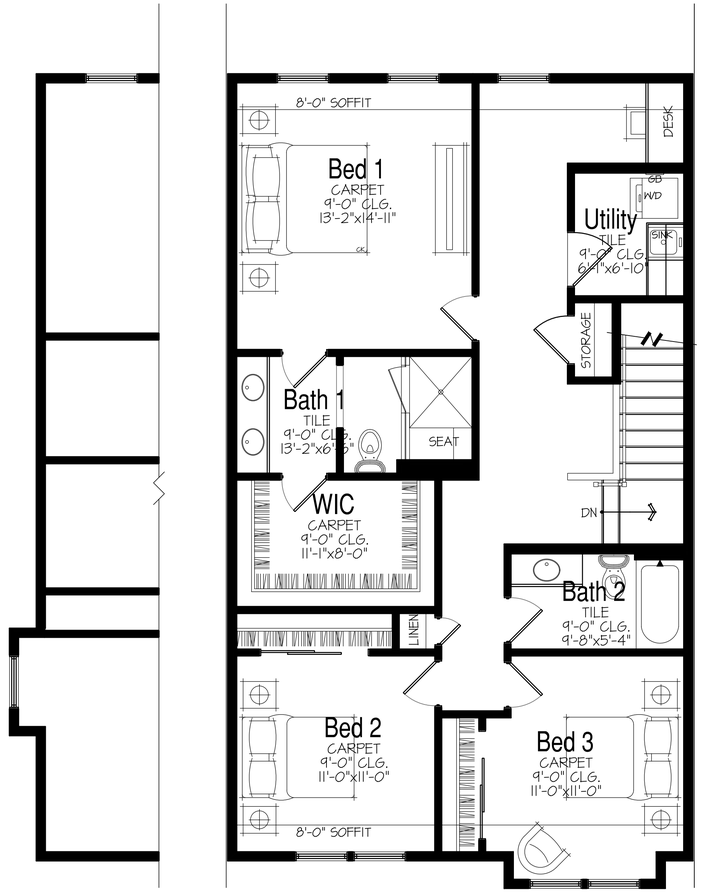
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

Townhome Unit B - No Elevator: 2,561 Total SF

Park Place Townhomes
Western Springs, IL

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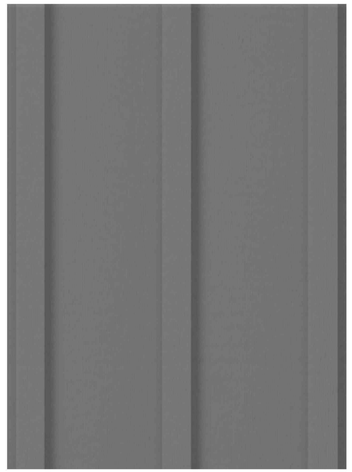
November 6, 2024



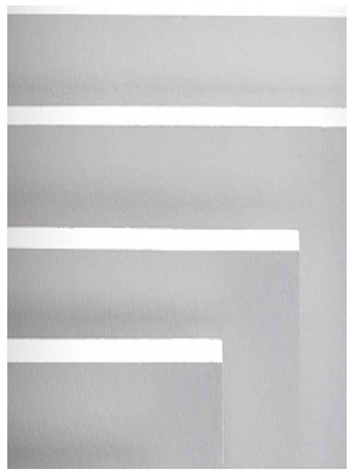
Architectural Asphalt Shingles
Owens Corning Duration
“Onyx Black”



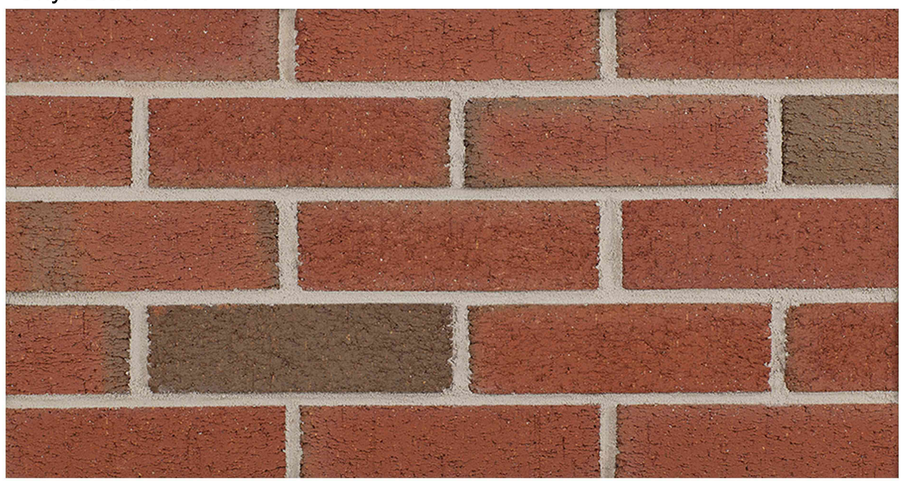
Standing Seam Metal Roof
PAC-CLAD “Black Aluminum”



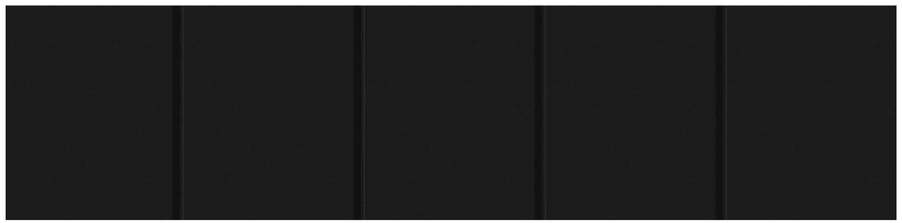
LP Smartside Vertical Siding
“SW7067 Cityscape”



Engineered Trim & Wood Columns
“SW7666 Fleur De Sel”



Glen-Gery Brick
Brick Veneer - 3-5/8 “ Standard Brick
“200 Flashed Matt”



Standing Seam Metal Roof
PAC-CLAD “Traditional Black”

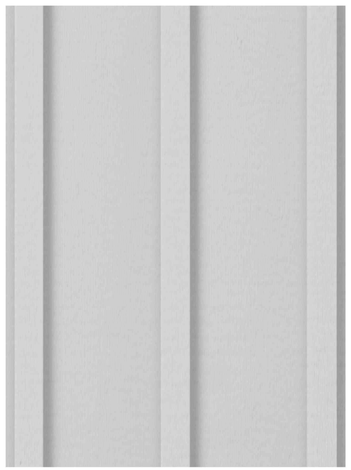


LP SmartSide Shake Siding
“SW1015 Skyline Steel”



Pre-Finished Trex Railings
“Black”

Vinyl Garage Doors
“SW6258 Tricorn Black”



LP Smartside Vertical Siding
“SW7666 Fleur De Sel”

Aluminum Gutters,
Downspouts & Soffits “White”

“White” Vinyl Single-Hung Windows

“White” Vinyl Patio Doors



Vinyl Front Entry Doors
“SW2839 Roycroft Copper Red”



Vinyl Front Entry Doors
“SW7018 Dovetail”



Vinyl Front Entry Doors
“SW2739 Charcoal Blue”



LP Smartside Panel Siding
“SW7666 Fleur De Sel”

Exterior Materials, Colors & Products

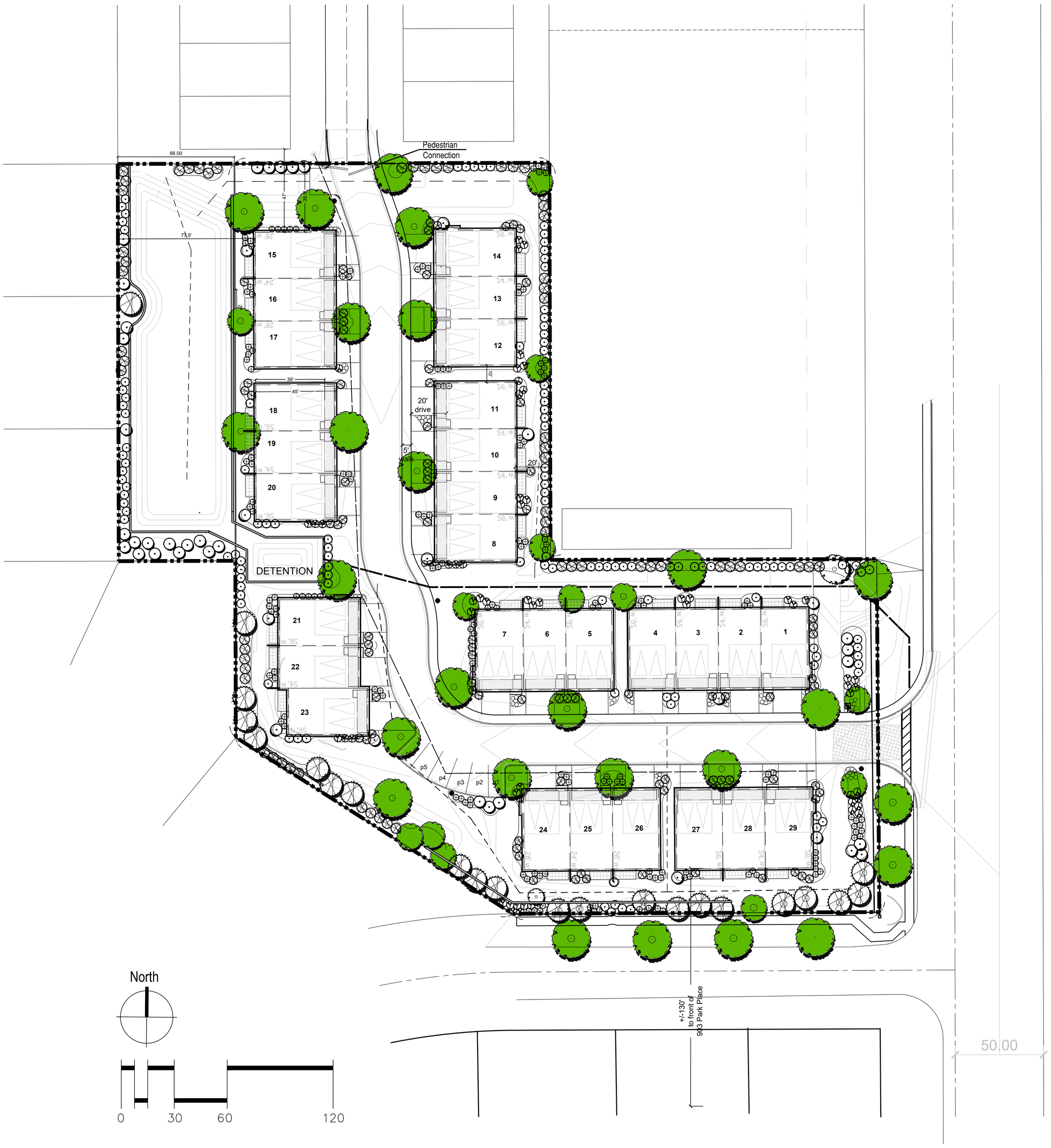
Park Place Townhomes

Western Springs, IL

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November 6, 2024



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YOUR LUXURY HOME BUILDER

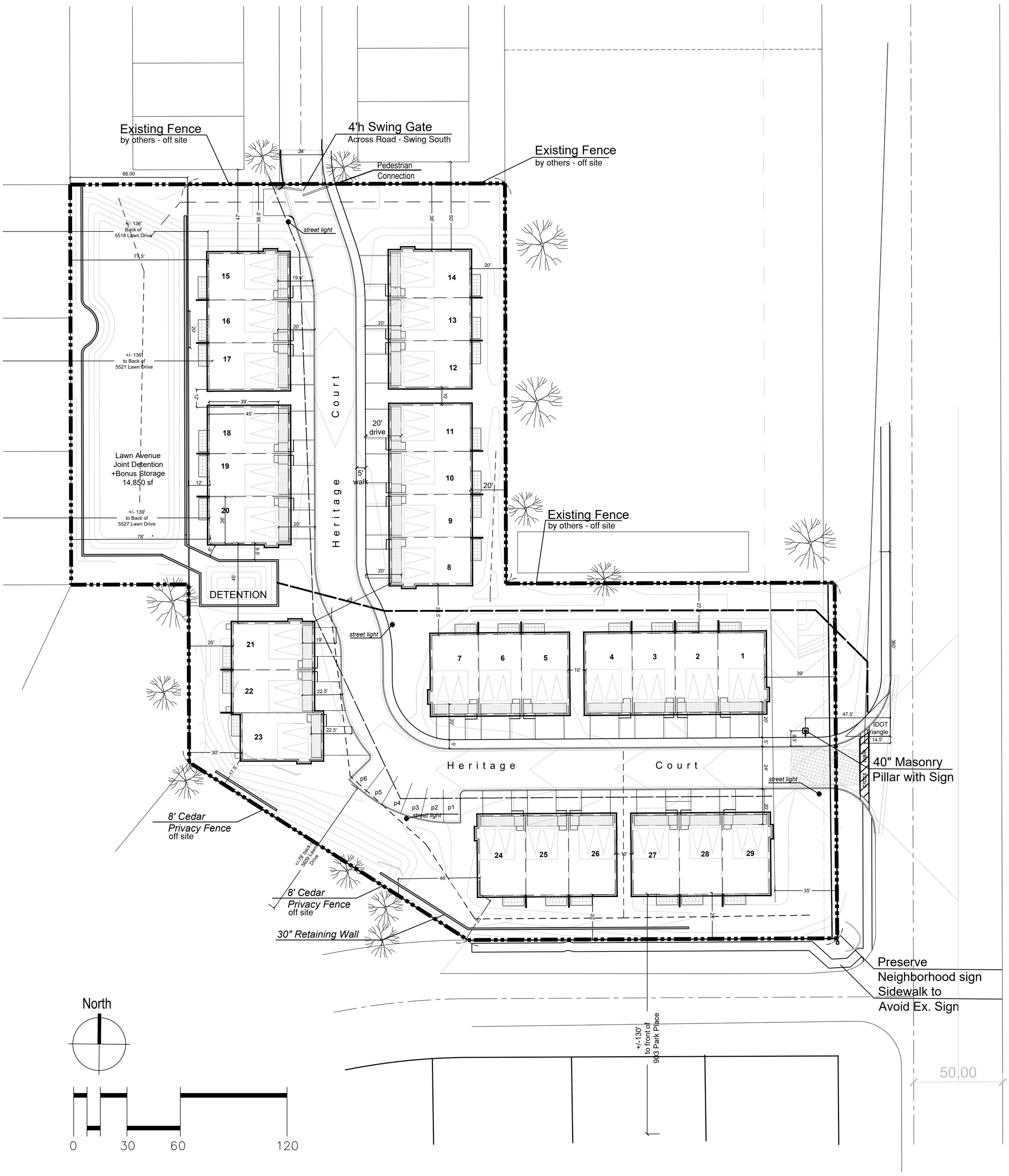
SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

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L0.01
Site Plan

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SITE DIMENSION PLAN

Heritage Crossing

Western Springs, Illinois

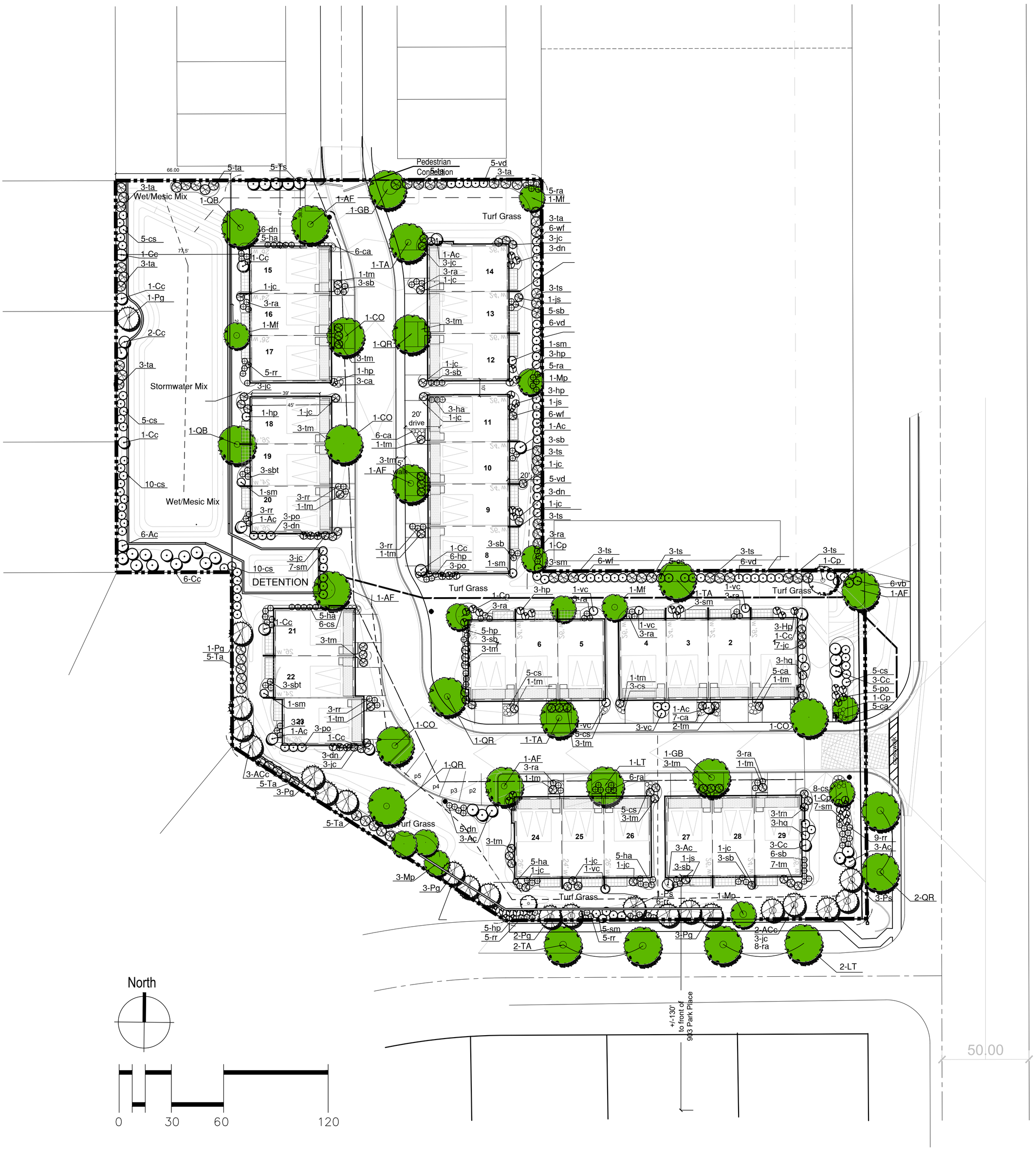
Revised: January 29, 2025

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L0.02

Dimension Plan

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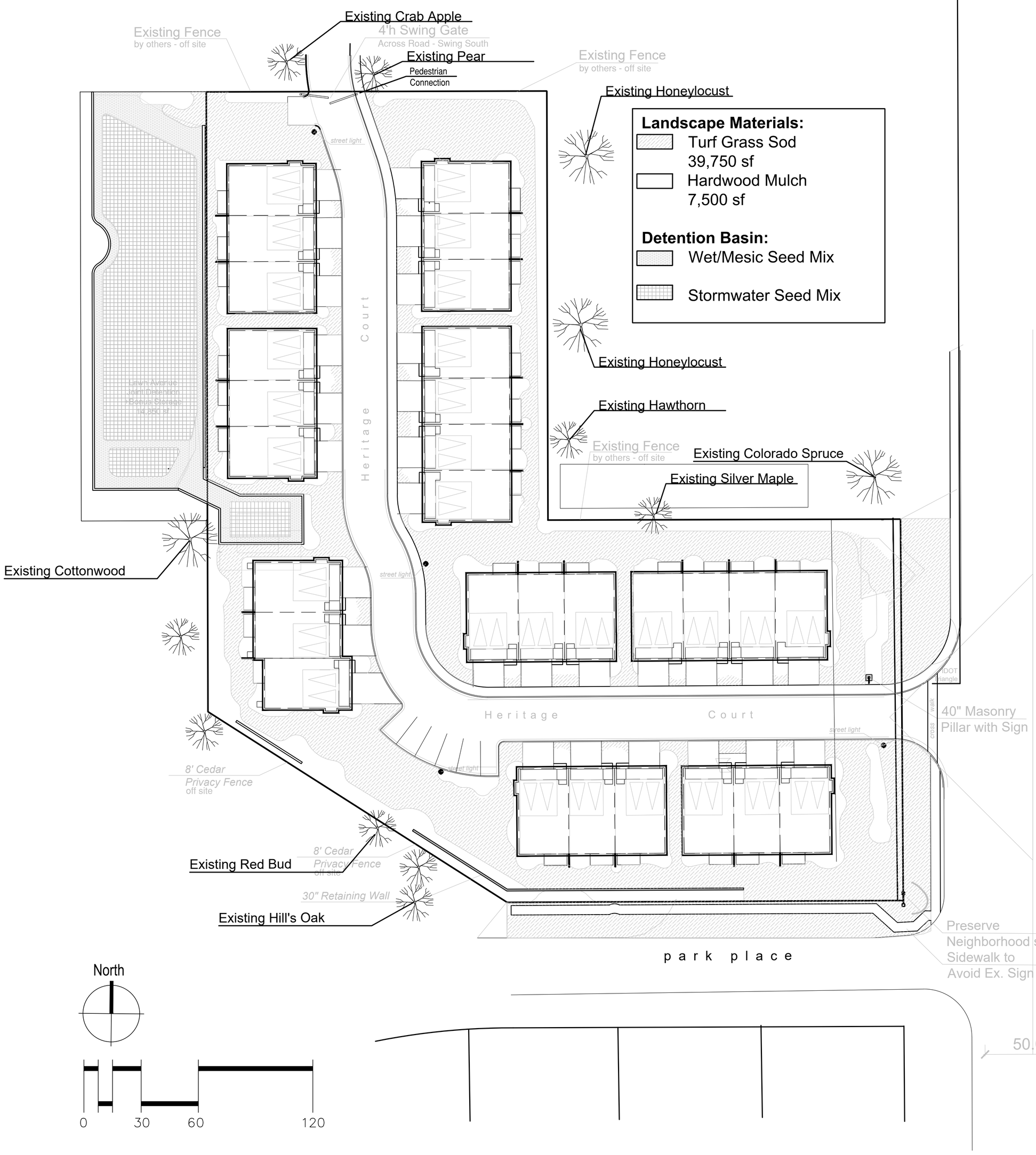
PLANTING PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

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L0.03
Planting Plan

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SITE MATERIAL PLAN
Heritage Crossing
Western Springs, Illinois

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L0.04
Material Plan

CONCEPT PLANT SCHEDULE

SHADE TREE		Size	Quant.
AF	Acer x freemanii 'Marmo' Red Maple	2.5" Cal.	5
CO	Cercis Occidentalis / Hackberry	2.5" Cal.	4
GB	Gingko biloba 'Autumn Gold' / Male var. Gingko	2.5" Cal.	2
LT	Liriodendron tulipifera / Tulip Poplar	2.5" Cal.	3
QB	Quercus bicolor / Swamp White Oak	2.5" Cal.	2
QR	Quercus rubrum / Red Oak	2.5" Cal.	6
TA	Tilia americana/Redmond Linden	2.5" Cal.	4
ORNAMENTAL TREE			
ACc	Abies concolor / Concolor Fir	6' Ht.	5
Ac	Amelanchier canadensis / Canadian Serviceberry	7' clump	17
Cc	Cercis canadensis / Eastern Redbud	1.5" Cal.	27
Cp	Crataegus phaenopyrum/Washington Hawthorn	1.5" Cal.	5
Mp	Malus x 'Prairiefire' / Prairiefire Crabapple	1.5" Cal.	5
Mf	Malus floribunda / Flora Crab	1.5" Cal.	3
Pg	Picea glauca 'Densata' / Black Hills White Spruce	6' Ht.	13
Ps	Pinus strobus / Eastern White pine	6' Ht	4
SHRUBS			
cs	Cornus sericea / Red Twig Dogwood	5 gal.	74
dn	Deutzia x 'NCDX1' / Yuki Snowflake® Deutzia	3 gal.	23
ha	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	3 gal.	23
hp	Hydrangea paniculata 'Jane' / Little Lime® Panicle Hydrangea	5 gal.	31
hq	Hydrangea quercifolia / Oak leaved Hydrangea	5 gal.	6
jc	Juniperus chinensis 'Sea Green' / Sea Green Juniper	5 gal.	39
po	Physocarpus opulifolius 'Monlo' / Diabolo® Ninebark	3 gal.	14
ra	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	51
rr	Rosa rugosa 'Purple Pavement;'	3 gal.	45
sb	Spiraea betulifolia 'Tor' / White Frost™ Birchleaf Spirea	3 gal.	34
sm	Syringa meyeri 'Palibin' / Dwarf Korean Lilac	3 gal.	29
ta	Thuja americana 'Dark Green' Dark American Arborvitae	10 gal.	40
ts	Thuja smoragd 'Pyramidal' Arborvitae	10 gal.	26
tm	Taxus x media 'tautoni' / Tauton Yew	5 gal.	47
vc	Viburnum carlesii 'Compactum' / Compact Koreanspice Viburnum	3 gal.	7
Vd	Viburnum dentatum / Arrowwood Viburnum	5 gal.	28
wf	Weigela florida 'Red Prince' / Red Prince Weigela	3 gal.	18
ORNAMENTAL GRASS			
ca	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	3 gal.	27
SOD			
Poa pratensis / Kentucky Bluegrass			28,500 sf
GROUNDCOVER/PERENNIALS			
Echinacea purpurea / Coneflower		1 qt.	25
Hemerocallis x 'Mary Todd' / Mary Todd Daylily		1 qt.	25
Hosta x 'Guacamole' / Guacamole Hosta		1 qt.	25
Hosta x 'Hadspen Blue' / Hadspen Blue Hosta		1 qt.	25
Monarda fistulosa / Bergamot		1 qt.	20
Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint		1 qt.	20
Rudbeckia newmanii 'Summer Blaze' / Coneflower		1 qt.	30

DETENTION BASIN

* See Accompanying Stormwater Basin Plan by Gary Weber and Associates

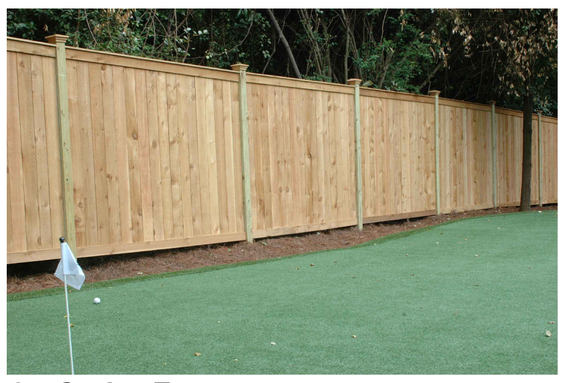
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY
1	Glen Gery Jamestown 3.5"x9.5" pavers	As Shown
2	48"h x 28" square brick pillar with limestone cap & 4' Sign Post (Brick to match residence)	
3	96"h Vertical Cedar Fence with 4" horizontal cap	AS
4	Unilock Concord Wall in Granite Blend	AS
5	Safety Gate	1



1 - Jamestown Pavers

2 - Brick Sign Pillar



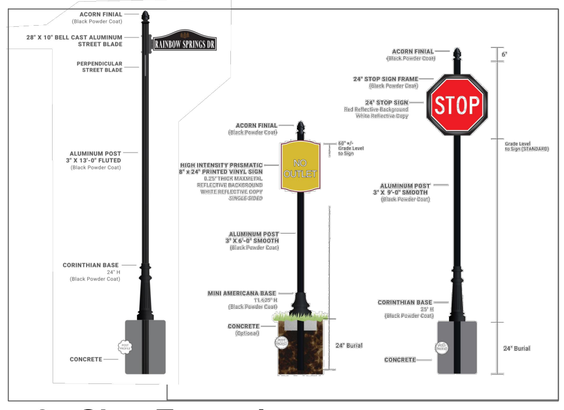
3 - Cedar Fence



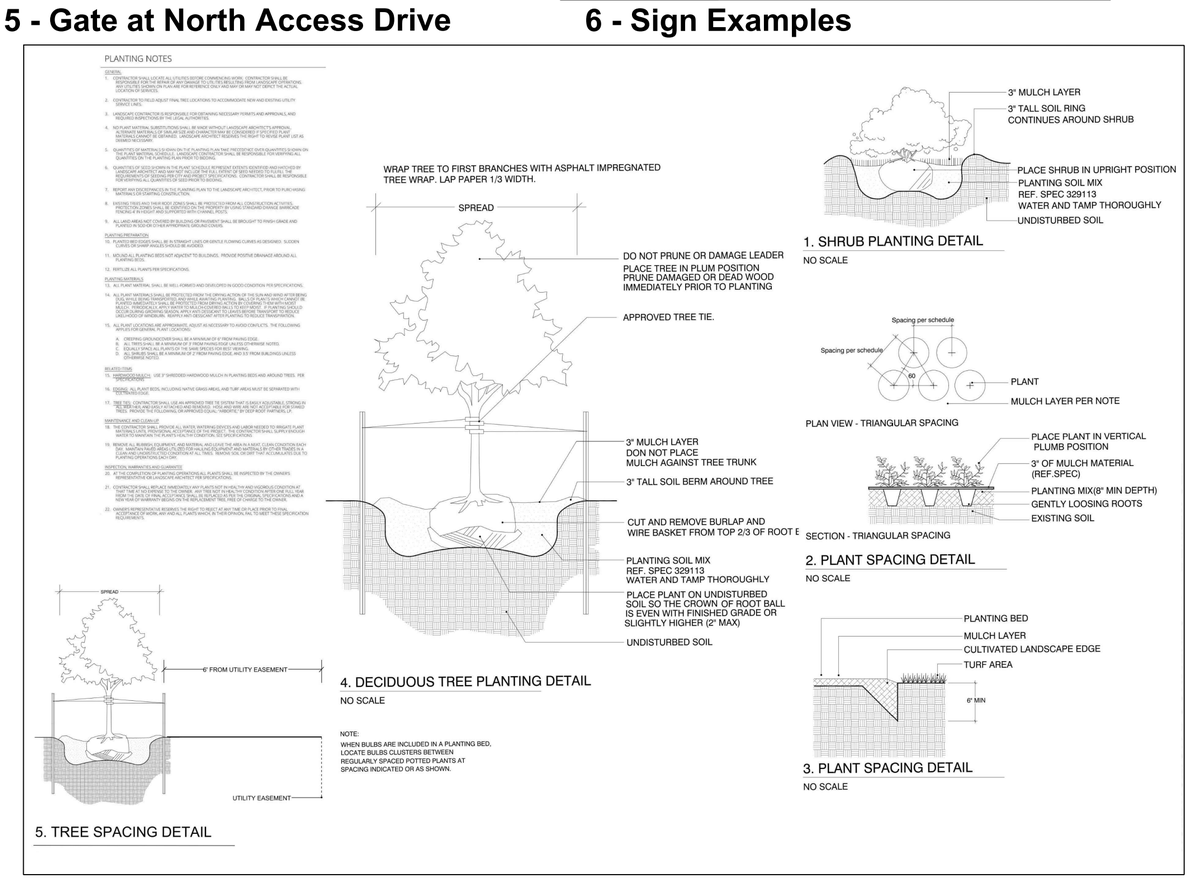
4 - Concord Retaining Wall



5 - Gate at North Access Drive



6 - Sign Examples



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YOUR LUXURY HOME BUILDER

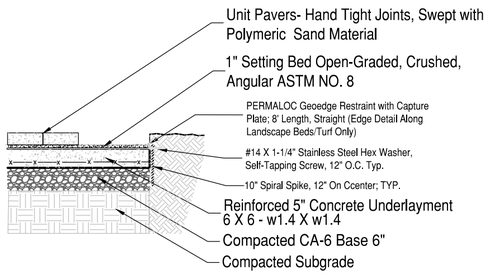
PLANT LIST
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

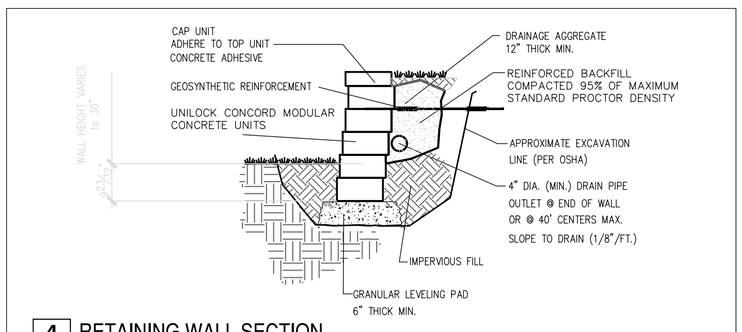
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L0.05
Plant List/ Details

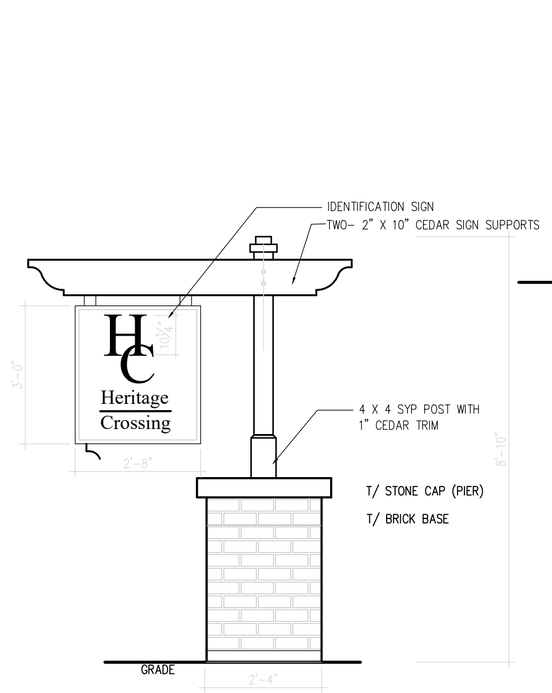
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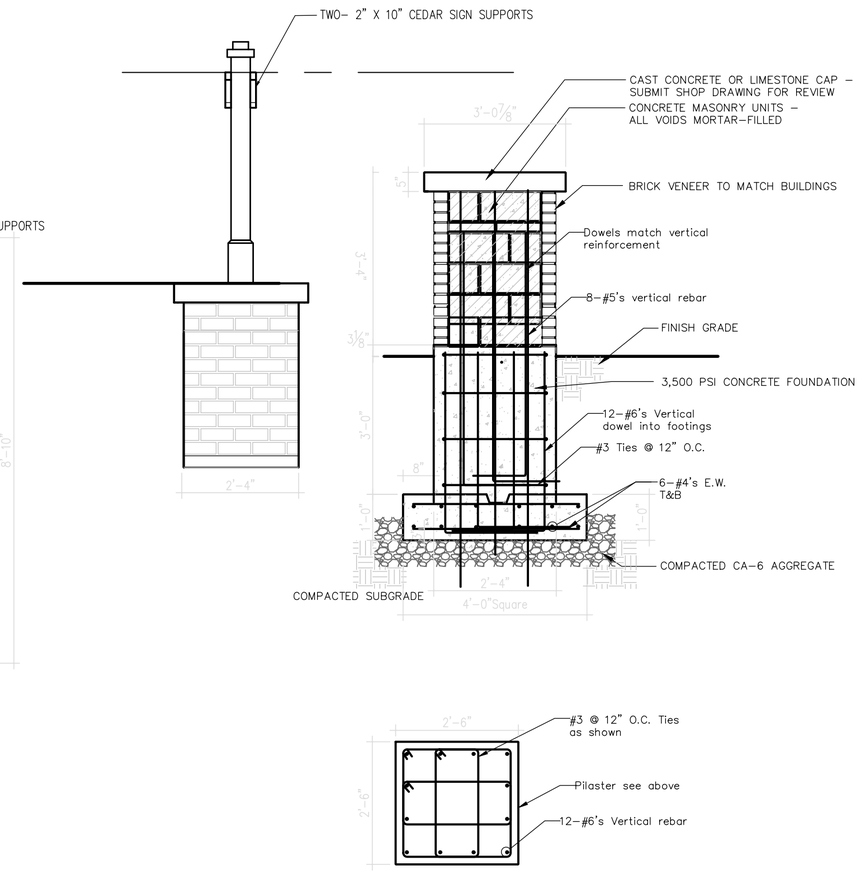
1 SIDEWALK PAVER SECTION



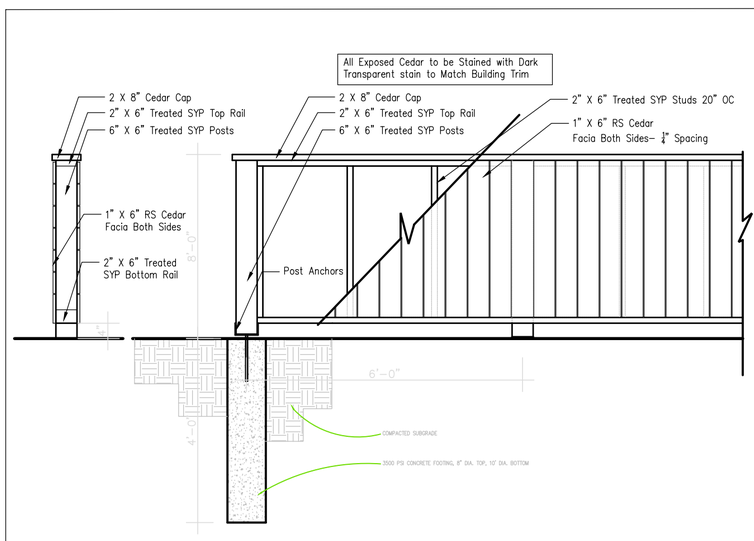
4 RETAINING WALL SECTION



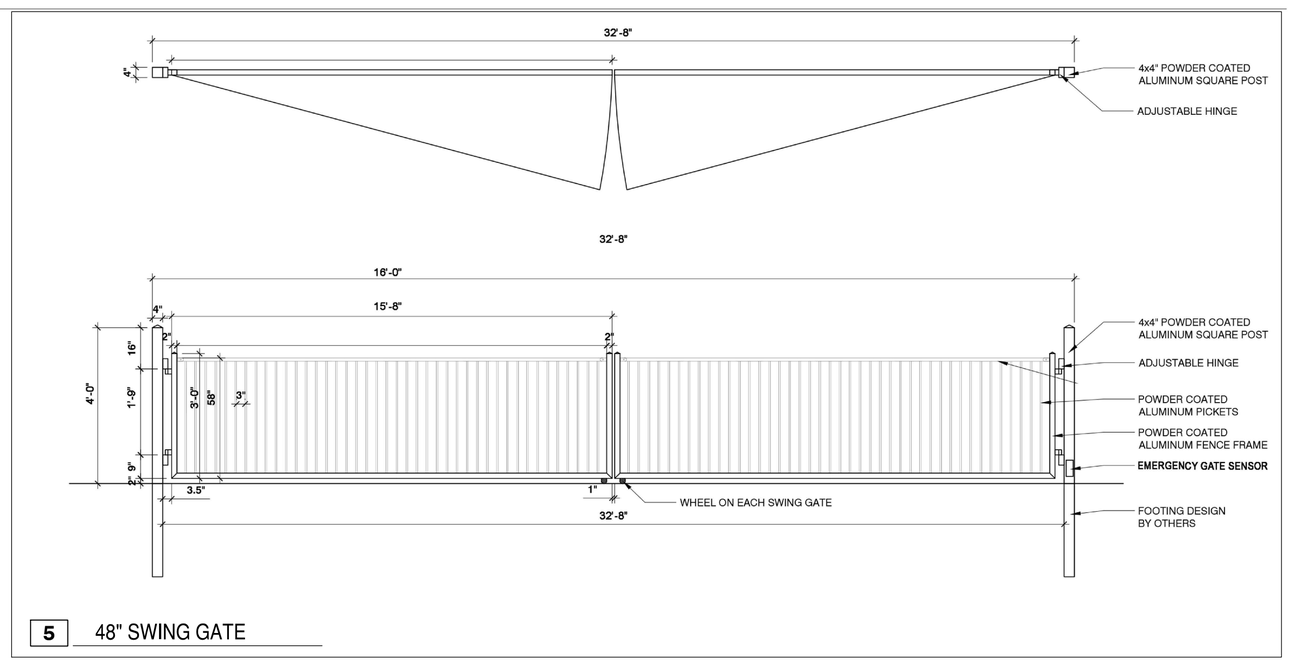
2 40" SIGN PILLAR SECTION



2 40" SIGN PILLAR SECTION



3 96" CEDAR FENCE



5 48" SWING GATE

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YOUR LUXURY HOME BUILDER

DETAILS
Heritage Crossing
Western Springs, Illinois

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L0.06
Details

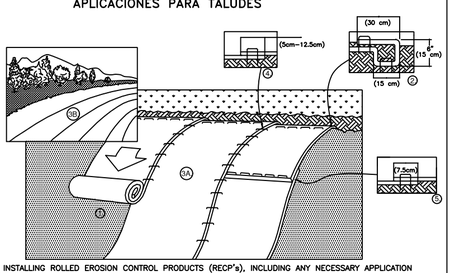
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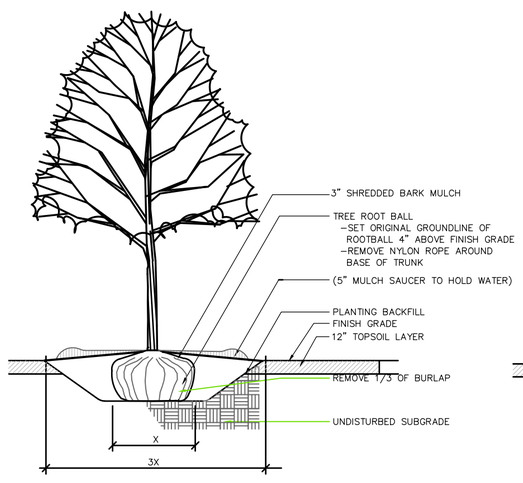


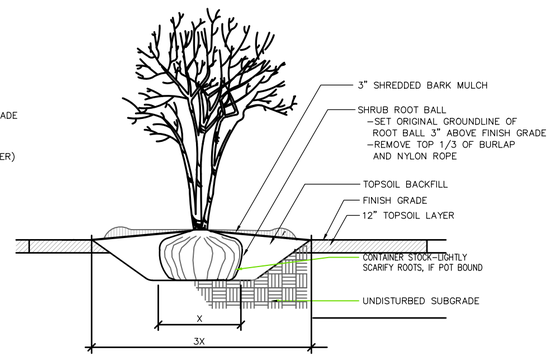
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

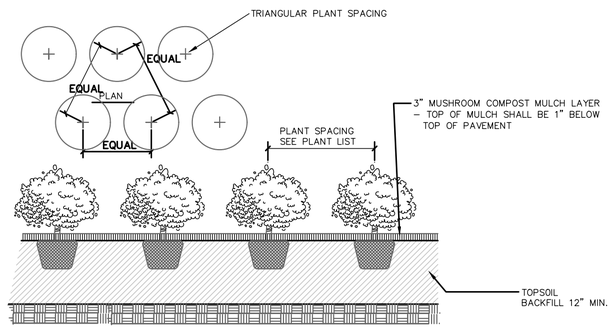
1. PREPARE EL TERRENO ANTES DE INSTALAR LAS MANTAS, INCLUYENDO LA APLICACION DE CAL, FERTILIZANTE Y SEMILLA.
   NOTA: CUANDO ESTE USANDO CELL-O-SEED NO SIEMBRE EL AREA PREPARADA. CELL-O-SEED TIENE QUE INSTALARSE CON EL LADO DE PAPEL HACIA ABAJO.
2. COMIENCE EN LA CABECERA DEL TALUD SUJETANDO LA MANTA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD FOR 6" (15 CM) DE ANCHO CON APROXIMADAMENTE 12" (30 CM) DE LA MANTA EXTENDIDA MAS ALLA DE LA PENDIENTE ALTA DE LA ZANJA. SUJETE LA MANTA AL FONDO DE LA ZANJA CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA. RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE. RIEGE LA SEMILLA EN EL SUELO COMPACTADO Y DOBLE LAS 12" (30 CM) REMANENTES DE MANTA SOBRE LA SEMILLA EL SUELO COMPACTADO. ASEGURE LA MANTA SOBRE EL SUELO CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA A TRAVES DEL ANCHO DE LA MANTA.
3. DESENROLLE LAS MANTAS (3A) HACIA ABAJO U (3B) HORIZONTALMENTE A TRAVES DEL TALUD CON EL LADO APROPIADO HACIA LA SUPERFICIE DEL SUELO. TODAS LAS MANTAS DEBERAN ASEGURARSE A LA SUPERFICIE DEL SUELO POR MEDIO DE GRAPAS O ESTACAS EN LUGARES APROPIADOS TAL Y COMO SE INDICA EN EL PATRON GUIA DE ENGRAPADO. CUANDO ESTE USANDO EL DOT SYSTEM™, LAS GRAPAS O ESTACAS DEBEN COLOCARSE A TRAVES DE CADU UNDO DE LOS PUNTOS CON COLOR CORRESPONDIENTES AL PATRON DE ENGRAPADO APROPIADO.
4. LOS BORDES DE LAS MANTAS PARALELAS TIENEN QUE ENGRAPARSE CON UN TRASLAPE DE APROXIMADAMENTE 2" – 5" (5 CM – 12.5 CM) DEPENDIENDO DEL TIPO DE MANTA.
5. MANTAS CONSECUTIVAS UNIDAS EN LA BAJADA DE LOS TALUDES, DEBEN COLOCARSE ORILLA SOBRE ORILLA (TIPO ESCALONADO) CON UN TRASLAPE DE APROXIMADAMENTE 3" (7.5 CM). ENGRAPE EL AREA TRASLAPADA CON UNA SEPARACION DE APROXIMADAMENTE 12" (30 CM) A TRAVES DE TODO EL ANCHO DE LA MANTA.

   NOTA:
   * EN CONDICIONES DE SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

REV. 01/05







LANDSCAPE SPECIFICATIONS

1.11 GENERAL LANDSCAPE NOTES

A. Unless stated otherwise herein, all seeding, sodding and landscape planting work shall be performed in accordance with the Iowa Department of Transportation (IDOT) Standard Specifications for Highway and Bridge Construction (latest edition) as specified in Section 200 (Earthwork, Landscaping and Erosion Control).

B. Unless stated herein, all materials shall meet the requirements of the following Articles of Standard the Iowa DOT Specifications for Road and Bridge Construction Section 1000 – Materials:

Item	Section
Erosion Control	2601
Furnish Install Trees Shrubs/Warranty	2611
Erosion Control Materials	4169
Landscape Plant Materials	4170

1.12 TOPSOIL/FINE GRADING

A. Approved topsoil shall be supplied and installed at the following depths:
Seeded and sodded areas – 8-12" depth
Shrub bed areas and landscaped islands – 12" depth
Groundcover/perennial areas – 12" depth (amended soil mix as shown in detail)

B. Approved topsoil shall be free of roots, noxious weed seeds, sticks, rocks or miscellaneous debris which may impair plant growth. Topsoil shall not be worked or graded while frozen or in an excessively wet or dry condition. Topsoil shall not be accessibly acidic or alkaline and shall not contain any herbicide residue. The Owner reserves the right to have representative samples of the topsoil tested by a qualified soil testing laboratory at no cost to the Owner.

C. All top-soiled areas shall be fine graded to elevations indicated on the grading plan prior to receiving sod or landscaping. All areas shall drain properly so that there are no puddles or standing water in any lawn or plant bed areas. Areas improperly graded shall be regarded at the Contractor's expense.

D. Remove rocks, stones and other foreign debris while spreading and grading. If necessary, had spread topsoil around buildings, structures, walks, drives or trees to avoid damage.

E. Where graded areas interface with non-graded undisturbed edges, remove turf along edge to create a straight smooth transition line between graded and non-graded areas. Fine grade transition area so that finis grades of graded and non graded areas are flush.

1.13 SEEDING/SODDING

A. Seeding work shall conform to Section 4169 of the IDOT Standard Specifications for Highway and Bridge Construction.

B. Seed mix for seeded turf grass areas shall be the following:

1. Type A Seed Mix (General Lawn Area). Field of Dreams Reseeder Seed Mix- Blend

25% Accent Perennial Ryegrass
25% Caddieshack Perennial Ryegrass
25% Blue Chip Kentucky Bluegrass
25% Freedom III Kentucky Bluegrass

Apply at the rate of five pounds per 1,000 SF. Supplier- National Seed Company,4720 Yender Avenue, Lisle, Illinois (630) 417-9055

C. Prior to work, submit three copies of seed vendor's certificate for grass seed mixture, indicating weight, and percentages of purity, germination and weed seed.

D. Sodding work, if provided, shall conform to Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

E. Prior to work, submit three copies of sod grower's location for approval. Sod shall be from a locally grown source. Sod shall be in healthy growing condition, free of weeds, pests and cut to the specified thickness. The Owner has the right to reject unacceptable sod at the growing site.

F. All fine grading for seeded and sodded areas shall be approved by the Owner prior to work.

G. Install seeding on prepared, finished graded areas and in favorable weather conditions within the following periods: April 1st through May 31st; and August 15th through October 15th.

H. Install sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

I. Fertilize seeded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction. Fertilizer shall be a 10-10-10 Max Lawn mix (or Equal) and applied to 14.4 pounds per 1,000 square feet.

J. Fertilize sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

K. Apply seed blanket to all lawn seeded areas per the details indicated on the drawings.

L. Guarantee all seeding and sodding work for a period of one year following final acceptance. Areas not accepted upon completion of the guarantee period shall be resodded to fill in voids and areas not covered in seed or sod.

M. Maintain seeded and sodded areas for a period of 45 days following installation. Maintenance shall consist of watering, mowing and weeding. Repair and reseed bare spots or seeded and sodded areas that have not established or have washed out due to erosion.

N. Initial mowing shall be done at a 3" cutting height so than not more than 33% of the grass is removed in a single mowing. Cutting heights on follow up mowings can be readjusted to a 2.5" grass blade height.

1.14 TREE, SHRUB AND GROUNDCOVER PLANTING

A. The Owner reserves the right to inspect all material at the nursery. Only nursery grown stock will be permitted to be used on the Project.

B. All tree, shrub and groundcover planting shall be performed between the dates of March 15 and May 31, and August 15 and October 15. Actual planting shall be performed only during periods within this season when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the Owner's Representative.

A. Location for all trees, intermediate trees and evergreen trees shall be staked and outlines of bed areas shall be clearly marked on the ground by a qualified landscape representative of the Contractor, and shall be subject to approval by the Owner's Representative prior to commencement of planting.

B. All shrub beds shall be mulched with 3" of shredded hardwood bark mulch. Groundcover beds shall be mulched with 2" of mushroom compost. Provide shredded hardwood bark mulch rings (3" depth) for all shade and flowering trees. Diameter of mulch rings shall be equal to diameter of root ball.

C. Mulch shall comprise partially decomposed shred hardwood bark. Mulch shall be a brown-black color, and, free of oversized pieces (1/2" x4") and fine particles. Prior to work, Contractor shall submit three mulch samples for approval for use prior to work.

D. Imported topsoil, if necessary, shall consist of fertile, friable natural topsoil typical for this locality. It shall not contain a mixture of subsoil or slag and free of lumps, stones, plants and their roots, stalks and other extraneous matter and shall not be used while in a frozen or muddy condition. Topsoil shall have a pH range of 6.0-7.0 and shall not contain less than 12 percent organic matter.

E. Tree, Shrub and Groundcover Establishment Period, Inspections and Guarantees.

1. Establishment Period. For a period of 60 days after planting of trees, shrubs, and groundcovers, (not including dormancy periods), the Contractor shall properly care for all plants, and planning beds including watering, weeding fertilizing, cultivating, adjusting or bracings or other maintenance work which is necessary to keep the plants in a healthy condition and in a plumb position. All plants shall be watered as season conditions require, and as directed by the Owner, until provisional acceptance of the planting.

2. Provisional Acceptance. At the end of the Establishment period, the planting shall be inspected by the Owner for provisional acceptance of the planting. Any plant material which is dead, damaged, untrue to natural form of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense. The Owner shall accept maintenance responsibilities of the planting after the provisional acceptance.

3. Guarantee and Final Acceptance. The Contractor shall guarantee that all plants shall be in a healthy and vigorous condition one full growing season after the provisional acceptance. The planting shall be inspected by the Owner at the end of the guarantee period. Any plant material which is dead, damaged, untrue to natural for of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense.

4. Provisional acceptance and guaranteed periods of landscaped plantings may be in part or whole.
NATIVE PLANTING SPECIFICATIONS

2.0 PURPOSE

These specifications, and the plan drawing, detail the standards and procedures required to successfully establish native plant communities within and adjacent to the on-site stormwater detention basin (SDB). Upon successful establishment, the native vegetation will provide water quality benefits to the surrounding area by filtering sediments and pollutants from stormwater runoff generated on-site. Additionally, the floral diversity created by these plantings will provide a valuable source of wildlife habitat, as well as a unique and aesthetically pleasing landscape.

2.01 CONTRACTOR QUALIFICATIONS

The Native Landscape Contractor chosen for the establishment and enhancement of the natural areas must be experienced in the restoration, installation, and management of said areas. They must have a minimum of five years experience in the field. There shall be a supervisor available at all times that can identify non-native and native plants by genus and species. The goal of installing successful native plant communities is a long-term process. Therefore, it is imperative that a qualified Native Landscape Contractor perform the initial installation and maintenance.

2.02 QUALITY AND CONDITION

1. Native seed shall be obtained from sources east of the Mississippi River, within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Plant origins outside of the Ecoregion shall be approved by the Wetland Consultant.

2. Native seeds shall be blended by the vendor, and the mixture and ratio shall be guaranteed in writing to be as specified. The amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre for all species listed. It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.

3. Native Landscape Contractor shall provide the Wetland Consultant with the name and location of the seed supplier, origin of the various kinds of plants, and a statement of the purity of the seed.

4. Seed shall conform to applicable State and Federal regulations as in effect on the date of letting. Unless otherwise specified, seed shall not contain in excess of 1 percent weed seeds; 0 percent is desirable.

5. All storage requirements, stratification, and scarification considerations shall be the sole responsibility of the Native Landscape Contractor.

6. Mycorrhizal inoculants shall be palletized and mixed at 1 lb. per acre with the fine seeds before installation. The inoculants shall contain a diverse mixture of Glomales fungal species (Glomus spp.) in palletized form.

2.03 HANDLING

1. Native Landscape Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.

2. All native seeds shall be packed and covered in such a manner as to ensure adequate protection against damage and maintain dormancy while in transit, storage, or during planting operations.

3. Seed shall be kept dry and unopened until needed for use. Seed shall not be stored or temporarily stored in locations or vehicles where the temperature will be in excess of 90 degrees F.

Table 4. Erosion Control Blanket Details
See Plans

2.04 SITE PREPARATION

1. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Underground utility location maps and plans should be reviewed prior to work. Equipment having low unit pressure ground contact shall be utilized within the planting areas.

2. Unless the Landscape Architect agrees to another approach, the seedbed shall be prepared by working the topsoil to a depth of 3 inches. Site preparation equipment shall be of a design that can be utilized efficiently by the Native Landscape Contractor to meet the requirements for the work specified. The equipment proposed for use by the Native Landscape Contractor for disking and herbicide applications shall be subject to approval by the Landscape Architect.

3. Prior to seeding, at least 6 inches of topsoil shall be present and free of all clods, stones, roots, sticks, rivulets, gullies, crusting, and cracking. The soil aggregate size will be no greater than 2 inches in the largest diameter.

4. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to disking. If compaction is not a concern and the seedbed needs to be loosened prior to seeding to ensure good seed-soil contact, disking or raking shall be performed using equipment and the approach recommended by the Native Landscape Contractor, subject to approval by the Wetland Consultant.

5. If needed, cultivation shall occur within 24 hours prior to seeding. Seeding should occur immediately after the last cultivation preferably before a rain.

2.05 PLANT MATERIALS

See accompanying storm water Basin Plan
by Gary Weber and Associates

2.12 MANAGEMENT PLAN

See accompanying storm water Basin Plan
by Gary Weber and Associates

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

DETAILS
Heritage Crossing
Western Springs, Illinois

January 29, 2025

BSB DESIGN
BSBDESIGN.COM

L0.07
Details

The drawings presented are illustrative of character and design intent only,
and are subject to change based upon final design considerations
(i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)
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FIRE STROBE 2OOO

EMERGENCY VEHICLE STROBE DETECTOR

The FIRE STROBE 2OOO provides rapid access to automatic gates and secured areas. The FIRE STROBE 2OOO opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (14Hz).

Now with STROBEWATCH™.





FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2OOO can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2OOO is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

DISTRIBUTED BY:

FIRE STROBE 2OOO Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2OOO signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately .5 seconds.

The FIRE STROBE 2OOO is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM* STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2OOO for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2OOO system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2OOO transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM* emitters, double, quad flash strobes 140-170 fpm. 100 % digital.
2. The FIRE STROBE 2OOO is fully compatible with the OPTICOM* priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2OOO has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2OOO has been abused, over voltaged, or altered in any way, The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

ACCESS PRODUCTS, INC. • (858) 292-1561 • www.firestrobe.com

LEGEND

EXISTING		PROPOSED
SS	SANITARY SEWER	SS
SS	SANITARY SERVICE	SS
	SANITARY MANHOLE	
SD	STORM SEWER	SD
SD	STORM SERVICE	SD
	CATCH BASIN	
	OPEN LID STORM MANHOLE	
	CLOSED LID STORM MANHOLE	
	STORM INLET	
	FLARED END SECTION	
WM	WATER MAIN	WM
WS	WATER SERVICE	WS
	VALVE VAULT	
	B-BOX	
	HYDRANT	
	VALVE BOX	
	STREET LIGHT	
	UTILITY POLE	
	RETAINING WALL	
	SILT FENCE	
XXX	CONTOUR	XXX
FM	FORCE MAIN	FM
XXX.X x	SPOT GRADES	XXX.XXx
	OVERFLOW ARROW	
TF XXX.XX	TOP OF FOUNDATION	TF=XXX.XX
FG XXX.XX	FINISH GRADE	FG=XXX.XX
FF XXX.XX	FINISH FLOOR	FF=XXX.XX
GF XXX.XX	GARAGE FLOOR	GF=XXX.XX

LEGAL DESCRIPTION

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

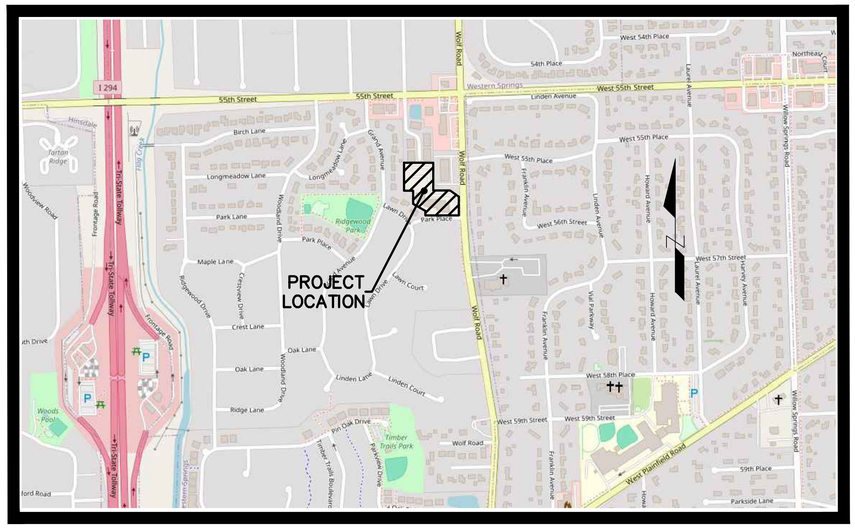
PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

FINAL ENGINEERING PLANS

FOR

HERITAGE CROSSING

WESTERN SPRINGS, ILLINOIS



LOCATION MAP

NOT TO SCALE

BENCHMARKS

BENCHMARK: (INITIAL) NGS PID: ME1716

BRASS DISK SET IN TOP OF CONCRETE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF 55TH STREET AND WOLF ROAD. MONUMENT IS 80' NORTH OF THE CENTERLINE OF 55TH STREET AND 40' WEST OF THE CENTERLINE OF WOLF ROAD.

ELEVATION = 662.19' (NAVD 88)

BENCHMARK: (ON-SITE)

CROSS CUT IN TOP OF CURB LOCATED 47.71' SOUTH AND 3.55' EAST OF THE SOUTHEAST CORNER OF PARCEL 2 AS SHOWN HEREON.

ELEVATION = 665.70' (NAVD 88)

SITE DATA

AREA (PARCEL 1) = 40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) = 64,996 SQ. FT. OR 1.49 ACRES
TOTAL AREA = 105,159 SQ. FT. OR 2.41 ACRES

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000

INDEX OF PLAN SHEETS

1. COVER SHEET
2-3. PROJECT SPECIFICATIONS, GENERAL NOTES & EXHIBITS
4. EXISTING CONDITIONS & REMOVAL
5. SOIL EROSION & SEDIMENT CONTROL PLAN , NOTES & SPECIFICATIONS.
6. SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET
7. GEOMETRIC PLAN
8. GRADING PLAN
9. UTILITY PLAN
10. UTILITY SERVICES PLAN
11. PLAN & PROFILE
12. INTERIM BY-PASS DRAINAGE SWALE PLAN
13-16. PROJECT CONSTRUCTION DETAILS
17-18. CROSS SECTION WOLF ROAD
19. ADA INTERSECTION DETAILS
20. WOLF ROAD DETAILS

OWNER:
McNAUGHTON DEVELOPMENT
11S220 JACKSON STREET
SUITE #101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

ENGINEER:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961

SURVEYOR:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961

NOTES:

1. THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, ELECTRIC, CABLE TV AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123 OR 811) AND ALL OTHER UTILITY OWNERS WHICH ARE IN THE PROJECT LIMITS BEFORE COMMENCING EXCAVATION.

2. THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI / ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILTIY DATA."

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

THE TOPOGRAPHY AND BOUNDARY SHOWN HEREON WAS PREPARED BY WOLFPAK CONSULTING, LLC AND SUPPLIED BY THE CLIENT STATED HEREON.

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

SUPPLEMENTAL TOPOGRAPHY SHOWN HEREON WAS PREPARED BY DESIGNTEK ENGINEERING, INC.

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF WILL)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THESE LOT IMPROVEMENTS.

DATED 13TH DAY OF DECEMBER, 2024

LICENSED PROFESSIONAL ENGINEER
DENISE M. VIETH
062-052247
STATE OF ILLINOIS
exp 11/30/2025

PERMIT TABLE

AGENCY	PERMIT #	APPROVAL DATE
MWRD	XXXXXXX	XX-XX-24
IEPA – WATER	XXXXXXX	XX-XX-24
IEPA – SANITARY	XXXXXXX	XX-XX-24
LaGRANGE HIGHLANDS – SANITARY SEWER MAIN	XXXXXXX	XX-XX-24
NPDES AND APPROPRIATE SCD	XXXXXXX	XX-XX-24
CCDOTH	XXXXXXX	XX-XX-24

Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.

P (708) 588-4055
E WMOJobStart@mwrd.org

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
CALL 1-800-892-0123 or 811
AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE YOU DIG
WWW.ILLINOIS1CALL.COM

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS DESCRIPTION	BY
1	08-26-24	PER LOCAL LANDS SD	DMV
2	09-26-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS NOTED
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

1 OF 20

COVER SHEET

EARTHWORK

1. Topsoil Excavation Includes:
   a. Excavation of topsoil and other structurally unsuitable materials within those areas that will require earth excavation or compacted earth fill material, in order to achieve the plan subgrade elevations. The amount of topsoil to be stripped shall be verified in the field by a soils engineer.
   b. Placement of the excavated material in OWNER designated areas for future use within areas to be landscaped, and those areas not requiring structural fill material.
   c. Compaction of the excavated material where placed in areas not requiring structural fill material, shall be moderate.
   d. Excess materials, if not utilized as fill or if not stockpiled for future landscaping, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
2. Earth Excavation Includes:
   a. Excavation of earth and other materials which are suitable for use as structural fill. The excavation shall be to within a tolerance of 0.3 feet (+) of the plan subgrade elevations. The (+) tolerance within pavement areas shall be such that the earth material shall "balance" as part of the fine grading operation.
   b. Placement of the earth and other suitable materials shall be within those areas requiring structural fill in order to achieve the plan subgrade elevations to within a tolerance of 0.3 feet (+). The fill material shall be placed in loose lifts that shall not exceed eight (8) inches in thickness, and the water content shall be adjusted in order to achieve the required compaction. Earth material may be placed within those portions of the building site not requiring structural fill, to within four (4) inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by a Soils Engineer with the concurrence of the OWNER.
   c. Compaction of the earth and other suitable materials, shall be to at least 95% of the maximum dry density as determined by the Modified Proctor Test, ASTM D1557 laboratory procedure within proposed pavement areas and building areas, an rear yards abutting to the proposed lakes. Moderate compaction is required elsewhere. All fill shall be placed in 8" lifts, loose measure.
   d. Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
3. Unsuitable Material
   a. Unsuitable material shall be considered as material which is not suitable for the support of pavement and building construction, and is encountered below normal topsoil depths and the proposed subgrade elevation. The decision to remove said material, and to what extent, shall be made by a Soils Engineer with the concurrence of the OWNER in writing.
4. General

   The Grading CONTRACTOR shall:
   a. Maintain proper site drainage at all times during the course of construction, and prevent storm water from running into or standing in excavated areas.
   b. Spread and compact uniformly to the degree specified all excess trench spoil after completion of the underground improvements.
   c. Scarify and compact to the degree specified the upper twelve (12) inches of the suitable subgrade material, in all areas that may be soft due to excess moisture content. This applies to cut areas as well as fill areas.
   d. Provide water to add to dry material in order to adjust the moisture content for the purpose of achieving the specified compaction.
5. Testing and Final Acceptance
   a. The CONTRACTOR shall provide as a minimum, a fully loaded tri-axle dumptruck or similar equipment for proof rolling the pavement subgrade prior to the placement of the curb and gutter and the base material. In addition, the pavement aggregate base course shall also be proof rolled. The Village Engineer shall be notified 48 hours in advance of any proof roll.
   b. Specific compaction testing may be required by the OWNER in selected fill areas. The CONTRACTOR shall bear the cost of any compaction testing which does not meet specification as well as the responsibility and cost for the necessary correction(s).
   c. Approval of the pavement subgrade by the OWNER shall be required prior to the placement of the pavement materials.
   d. The subgrade soil shall be tested by a professional geotechnical engineer at the developer's expense and shall have a minimum designated Illinois Bearing Ratio (IBR equal to three (3).
   e. A soil investigation report shall be provided to the Village to verify the in situ IBR value. Pavement structures with subgrade soil having an IBR value less than three (3) shall have an increased pavement structure as necessary to carry the design traffic loading.
6. Method of Measurement
   a. As-built measurements of earthwork for the purpose of payment shall not apply. the quantities shown in the engineer's "quantity estimate" shall be utilized unless said quantities are adjusted by mutual consent of the owner and contractor prior to the signing and acceptance of a contract.
   b. The quantities as shown in the engineer's "quantity estimate" are those estimated by the engineer and are provided solely for the convenience of the contractor. the contractor by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. the contractor is therefore encouraged to make his own independent earthwork calculation, and to visit the site prior to the preparation of his bid.
   c. Prior to the removal of unsuitable material, the contractor shall notify the owner for authorization to remove said material, upon authorization and removal, the contractor shall request that the unsuitable material shall be field measured by the engineer in place.
7. Basis of payment
   a. Payment for all earthwork shall be "lump sum". the contractor shall provide unit prices for earthwork for the purpose of contract adjustment, if required.
   b. Payment for the removal of unsuitable material shall be based on the quantities as field measured by the engineer. the contractor shall provide as part of his bid a unit price per cubic yard for the removal of unsuitable material. said unit price shall include the complete removal of the material, replacement with a suitable material obtained by the contractor from a borrow source, and compaction to the required specification.

UNDERGROUND UTILITIES - GENERAL

1. The Underground CONTRACTOR Shall:
   a. Adhere to the criteria for the separation between water mains and sanitary sewers, storm sewers, combined sewers, sewer services and septic fields according to the requirements stated in the IEPA Rules for Public Water Supplies (the formal citation is Title 35, Subtitle F, Chapter II, Parts 651-654). All sewer water main separations shall be constructed per the "Standard Specifications for Water and Sewer Main Construction in Illinois".
   b. Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.
   c. Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements. Should unforeseen conflicts be found, the CONTRACTOR shall contact the ENGINEER prior to constructing the proposed improvements.
   d. Adjust or reconstruct any existing utility structure to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than two adjusting rings within a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   e. Provide poured concrete fillets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.
   f. Be responsible for maintaining the top of any utility trench at least three (3) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.
   g. Be responsible for the dewatering of utility trenches during construction and providing the necessary trench bracing that may be required to assure safe working conditions.
   h. Remove soft material that may be encountered at the pipe invert elevation to a depth of at least one (1) ft. below the bottom of the pipe, and backfill with compacted bedding material.
   i. No damage to the road subgrade with excessive water saturation from hydrant flushing or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).
   j. Repair any existing field drainage tile damaged during construction, and properly reroute and/or connect said tile to the nearest storm sewer outlet. All locations of encountered field drainage tile shall be properly indicated on the CONTRACTOR'S record drawing.
   k. Furnish one (1) set of Record drawings to the ENGINEER upon completion of the sanitary sewers and water mains. Drawings (or table of locations) shall indicate the location of all sanitary sewer wyes (measured from the nearest downstream manhole), sewer stubs, water service along main and b-boxes. The CONTRACTOR shall also furnish linear distance along water main from appurtenances to appurtenance (valve vault to tee, tee to bend, etc.).
   l. Be responsible for implementation of the "Soil Erosion and Sedimentation Control Measures" as applicable.
   m. Maintain erosion control measures (straw bales and filter fabric) until grass is established.
2. Method of Measurement
   a. All sanitary sewer, storm sewer, and water main pipe shall be measured in the field after its installation. Payment shall be based on these field measurements.
   b. All appurtenances such as manholes, catchbasins, inlets, valves and valve vaults, valve boxes, and fire hydrants, shall be paid for on the basis of in-place quantities.
   c. Trench backfill material shall be measured by multiplying the as-constructed length of pipe (where applicable) by the average depth of the pipe by the "Payment Quantities per foot of Conduit" listed in Table 1, pg. 138 and "Typical Detail of Conduit Installation", pg. 137 of the Standard Specification for Sewer and Water in Illinois. If requested, the CONTRACTOR shall provide load tickets to the ENGINEER for verification of the trench backfill material delivered to the construction site. Load tickets for bedding material shall be submitted separately.
3. Basis of Payment
   a. All sanitary sewer, water main, and storm sewer pipe shall be paid for at the contract unit price per LINEAL FOOT. The price shall include the necessary labor and material for a complete in-place installation, as well as all incidental construction, testing, bedding material, and connections to existing utilities.
   b. All appurtenances for the underground improvements shall be paid for at the contract unit price EACH, said price to include the necessary labor and material for a complete in-place installation. The price for manholes, inlets, and catchbasins shall also include the frame and grate and all incidental construction. The price for fire hydrants shall also include a six (6) inch valve and box, and all incidental construction.
   c. Trench backfill material shall be paid for at the contract unit price per CUBIC YARD. Compaction must be made by mechanical methods.
4. As-Built Water & Sanitary Services
   a. As-built locations shall be provided for all water and sanitary sewer stubs. They shall also be stamped on the curb.
5. Structure Castings
   a. Frames and lids (or grates) for sanitary, watermain and storm sewer structures shall be as indicated on the plans, and the cost of same shall be integrated into the representative structure costs. Each structure lid shall be cast with text identifying the type of structure (storm, sanitary, water).
   b. Manhole castings shall be adjusted to finished grade using precast adjusting rings set on bitumastic material. All structures shall have no more than two adjusting rings w/ a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   c. All frames shall be set on a mastic bed with all gaps tuck pointed.
   d. All castings shall be made in the U.S.A. with U.S.A. materials.
6. Trench Backfill
   a. Bedding, haunching and the initial backfill shall consist of IDOT CA-7, CA-11 OR CA-19 aggregate. The initial backfill shall be placed to at least 12" above the pipe.
   b. Final backfill of the trench shall be accomplished by careful replacement of the excavated material. Any pipe installed under or within a 45 degree angle of repose (1:1) from the top of pipe to the edge of pavement, driveway (when driveway location is known) or curb and gutter shall be backfilled to the top of the trench with compacted IDOT CA-7, CA-11 or CA-19 material.
   c. Compaction shall be in achieved using 8" lifts (uncompacted) and mechanical compaction to 95% density. All costs for compaction and testing shall be paid for by the Developer or Contractor. Results shall be copied to the Village Engineer.

SANITARY SEWER

1. Material shall be:
   a. Green polyvinyl chloride pipe (PVC) SDR 26.
   b. PVC SDR 26 or D.I.P. CL 52.
   c. sewer pipe and fittings shall be in accordance with ASTM D-3034 for sizes 4"-15" (100-375 mm).
2. Joints shall be:
   a. for PVC; flexible elastomeric seal joints, ASTM D-3139, pressure joint.
   b. for DIP; rubber gasket joints, ANSI A21.11
3. Bedding shall be as detailed on the Engineering Plan.
4. Minimum size for mains shall be eight inches (8") and the minimum size for services shall be 6".
5. Wyes or Tees shall be provided on the new sanitary sewers for proposed building services.
6. "Band Seal" or similar couplings shall be used when joining pipes of dissimilar materials.
7. All sanitary structures shall have an external wrap, MAC or approved equal.
8. Polyethylene encasement shall be provided for all DIP sanitary sewer in accordance with AWWA latest standards.
9. Prior to pipe laying and jointing, the trench shall be sufficiently dewatered to maintain the water level in the trench at or below the base of the bedding. State / Federal permits, license agreements or other required approvals shall be obtained prior to dewatering.
10. Where separation from water main cannot be maintained as required per Illinois specifications, the sanitary sewer shall be mechanical joint PVC pressure pipe meeting C-900 or C-905.
11. Sewers shall be laid straight in both horizontal and vertical planes between manholes with a minimum cover of 4 feet.
12. Sanitary sewers shall be located a minimum of 10 feeet from any building and meet separation requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
13. Services shall be a minimum 6 inches and extend to the property line or beyond any utility located in the front yard of a lot being served (single-family development), or to within five (5) feet from the face of a proposed building being served (multi-family and commercial development). The termination points shall be clearly located with a green-topped 4 inch x 4 inch stake extending a minimum 3 feet above final grade. The service lines shall be connected to the sewer using a wye at the 10:00 and 2:00 positions. Service lines not immediately connected to the building to be served shall be tightly plugged, using a plug provided by the pipe manufacturer for such use.
14. Testing and Final Acceptance
   a. Sanitary sewer mains and services shall be tested for exfiltration of air under pressure and deflection for flexible thermoplastic pipe in accordance with the Standard Specifications for Water and Sewer Construction in Illinois prior to their final acceptance. Allowable testing limits shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. Service stubs must be properly plugged and sealed and clearly located at their termination points prior to testing. All sewer mains, service lines and manholes shall be clean and free of debris prior to their final acceptance. Sanitary Sewer shall be inspected and tested in accordance with the local jurisdictional requirements for television inspection and reviewed by the Village Engineer. Two copies of all test results shall be provided to the Municipality.
   b. Sanitary Manhole structures shall be tested, prior to acceptance, for watertightness by either of the following methods in conformance with the requirements specified: ASTM C 969: "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines." OR ASTM C 1244: "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test."
   c. All public sanitary sewer extensions shall be internally video taped by remote camera. Tapes shall be in color using VHS or CD-ROM format and submitted with written reports to the Village Engineer for review and approval priot to acceptance of the sewer improvements by the Village.
   d. LaGrange Highlands will be the agency responsible for sewer main acceptance.

WATER MAIN

1. The Village of Western Springs is the agency responsible for the water main.
2. All installations shall conform to the requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
3. Material for main pipe and fittings shall be class 52 ductile iron pipe with poly wrap for the public water main per AWWA C-151, with mechanical and push-on joints complying with AWWA C-111.
4. Material for the services shall be soft temper, Type K, copper water tubing, conforming to ASTM latest standard w/ compression fittings, unless otherwise noted on the plans.
5. Sizes for main & service lines shall be as indicated on the Engineering Plan.
6. Connections to Village water system shall be made under full water service pressure. Unless noted on plans and Village approval granted for shutdown. Shutdown requests need to be made to municipal services department 4 days prior to desired shutdown date. Contractor required to distribute shutdown notices to any impacted customers 2 business days prior. Village to provide notice text.
   a. Tapping sleeves shall include two piece bolted sleeve type with mechanical joints, Mueller-H615, or equal with joint accessories.
   b. Tapping valves shall include fully ported gate valves complying with AWWA C500 and mechanical joints type, Mueller-H667 or equal. Tapping valves shall be placed in precast concrete vaults.
7. The shut-off valve or curb stop for services shall be located as shown on the plans and shall be installed with a valve box of design approved by the Municipality. The termination point shall be clearly located with a blue-topped 4 inch x 4 inch stake extending a minimum of 3 feet above and below final grade.
8. Valves: Mueller, Clow or equal mechanical joint, resilient wedge seat, cast iron, bronze-mounted, O-ring seal, bronze non-rising stems, gate valves. Valvesshall open left and be tested to 500 psi with a 250 psi working pressure.
9. Water services, where indicated on the "Quantity Estimate" as "long" or "short", shall include the necessary length of Type "K": copper water tube of the size shown on the plans, corporation stop, curb stop, and service box, and all necessary labor, tools, equipment, excavation & backfill, for a complete installation as shown on the Engineering plans. Trench backfill will be paid for separately, when required.
10. Valve Boxes
    a. Valve boxes shall be adjustable, 3-piece cast iron, 5-1/4 inch shaft roadway-type and no-tilit drop cover with "WATER" cast into it.
    b. Valve box stabilizer of PVC manufactured by Valve Box Stabilizer, Inc. for six-inch (6") and eight-inch (8") valve boxes shall be provided.
    c. Valve box must have additional upward or downward travel when adjusted to finished grade.
11. Valve Vaults
    a. All valve vaults shall be precast reinforced concrete only.
    b. All valve vaults shall have no more than two adjusting rings with a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
    c. All lifting holes, joints between precast reinforced concrete sections, rubber gaskets cast into concrete structures need to be water tight and shall be tuckpointed with hydraulic cement.
    d. All castings shall be set on bitumastic material.
    e. Bitumastic material shall be placed between precast reinforced concrete sections.
    f. All valve vaults shall have neoprene coated or fiberglass steps.
    g. Vaults and boxes shall not be allowed under streets, sidewalks or driveways.

WATER MAIN

11. Fire Hydrants
    a. Fire Hydrants shall be Mueller super centurian 250. Factory painted safety red with 5-1/4 inch valve opening and shall be painted red.
    b. The hydrant shall be for a five foot (5') bury with mechanical joint shoe and have two 2-1/2 inch hose connections and one four and one-half inch (4-1/2") male pumper connection. Thread shall be National Standard.
    c. The hydrant shall have a break-away traffic flange and connections.
    d. All fire hydrants not in service shall be bagged.
    e. Hydrants leads shall be six-inch (6") swivel anchoring coupling. Hydrant tees shall be used in lieu of swivel anchoring coupling pipe where required to meet plan locations.
    f. The maximum distance between fire hydrants shall be 350 feet.
    g. All fire hydrants shall be kept clear of obstructions within three (3) feet in all directions. This shall include posts, fences, vehicles, growth, trash, storage, and any other material or objects.
    h. All fire hydrants to have a 10 pound anode bag attached to the hydrant.
12. Pipe Cover and Separation
    a. Cover over water pipes shall be a minimum of 5.5 feet.
    b. Horizontal and vertical separation shall meet requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois." Locations requiring alternative materials are noted on the plans.
13. Pipe Laying
    a. The contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Village Engineer.
    b. Adequate provisions shall be made for the safety, storage, and protection of all water pipe prior to installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or other debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying of the pipe. Proper equipment shall be used for the safe handling, conveying, and laying of the pipe so as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.
    c. In making joints, all portions of the jointing materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the jointing shall be in accordance with the manufacturer's installation instructions. During construction, until jointing operations are complete, the open ends of all pipes shall at all times be protected and sealed with temporary watertight plugs.
    d. During water main installation, to make a closure between two pipe ends, or between pipe end fittings, or between pipe end and valve, short lengths shall be used with proper connections or couplings. Repair sleeves shall not be used to make closures during new construction.
    e. All pipe and trenching shall be viewed and approved by the Municipality prior to cover and backfill.
    f. All bends of 22-1/2 degrees or greater, and all tees and plugs shall be thrust protected to prevent movement of the line under pressure. Thrust protection may also be attained by the use of a combination or retaining glands and threaded rods. All locations of thrust blocking or retaining glands/rods need to be marked on the as built drawing.
14. Testing and Disinfection
    a. Water main shall be tested in accordance with AWWA C-600 & the local jurisdictional requirements prior to it final acceptance. A 24 hour system pressure test needs to be performed as per the Standard Specifications. The pressure and leakage tests and disinfection of the mains shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. All valve vaults shall be clean and free of debris and water, and individual service boxes shall be visible and clearly located prior to their final acceptance.
    b. The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The injector for delivering the chlorine gas into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.
    c. Water from the existing distribution system or any other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine-gas. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty parts-per-million (50ppm), or enough to meet the requirements during the retention period.
    d. Valves shall be manipulated so that the strong chlorine solution in the line being treated shall not flow back into the line supplying the water. The pipe section being chlorinated shall be kept at a lower pressure than the water system pressure.
    e. Treated water shall be retained in the pipe long enough to destroy all spore-forming bacteria. This retention period shall be at least twenty-four (24) hours. After the chlorine-treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least twenty five parts-per-million (25ppm).
    f. In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.
    g. After all mains have been pressure tested, they shall be disinfected and tested according to the requirements of the Standards for Disinfecting Water Mains, AWWA C-601 and C-651, and as required by this Section. All disinfection, as required by this Section, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the Village Public Works Department. The contractor shall obtain two samples of water from the main for bacteriological testing. A second series of samples shall be collected no less than 24 hours after the first set of samples has been collected. The contractor and the Village will be furnished with copies of the bacteriological report for their records.

STORM SEWER

1. All storm sewer shall conform to the requirements of The Standard Specifications for Water and Sewer Main Construction in Illinois
2. Storm sewers shall be reinforced concrete pipe conforming to ASTM C76 minimum Class III with O-ring joints conforming to ASTM C443.
3. Bedding shall be minimum of 6" of CA-7.
4. Minimum size shall be twelve inches (12").
5. Storm Structures
   a. Rear yard catch basins are not allowed.
   b. All storm structures shall be precast reinforced concrete only.
   c. All storm structures shall be set on a six-inch (6") CA-7 cushion.
   d. All storm structures shall have no more than two adjusting rings within a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
   e. All lifting holes, joints between precast reinforced concrete sections, gaps between pipes and structures shall be tuckpointed with hydraulic cement.
   f. Bitumastic material shall be placed between precast reinforced concrete sections.
   g. All steps shall be fiberglass or neoprene coated.
   h. All structure connections shall be concrete sewer pipe, ASTM C14 for extra strength pipe
6. Storm sewer and all storm structures shall be clean and free of debris prior to their final acceptance. Storm Sewer shall be inspected and tested in accordance with the local jurisdictional requirements including television inspection for review by the Village Engineer.
7. All flared end sections less than 48" (effective diameter) require grates in accordance with IDOT specifications.
8. All castings shall be made in the USA with USA materials. Closed covers shall be stamped per Exhibit 2B. Open covers shall have the grates as specified in the plans.

PAVING CURBS AND SIDEWALK

1. Fine Grading
   a. Prior to the construction of the curb and gutter and the placement of the base material, the streets shall be fine graded to within 0.1 feet + of final subgrade elevation, to a point two (2) feet beyond the back of the proposed curb.
2. Curb and Gutter
   a. The curb and gutter shall be the type as detailed on the Engineering Plans.
   b. The curbs shall be backfilled after their construction and prior to the placement of the base course.
3. Pavement
   a. The pavement materials shall be as detailed on the Engineering Plans. Thickness specified shall be considered to be the minimum compacted thickness.
4. General. The Paving Contractor shall:
   a. Repair any base course and binder course failures prior to the installation of the final bituminous concrete surface course.
   b. Sweep clean the binder course prior to the installation of the final bituminous concrete surface course. Excessive cleaning of the binder course that may be required, and is not the fault of the Paving CONTRACTOR, shall be paid for on a time and material basis by prior agreement with the OWNER.
   c. Permit the bituminous concrete binder course to weather one (1) winter season prior to the installation of the bituminous concrete surface course.
   d. Street signs & Traffic signs.
5. Testing and Final Acceptance
   a. Prior to the placement of the base course, the subgrade must pass a proof roll test to be approved by the local jurisdictional authority. The Village shall be contacted at least 2 business days in advance of the proof roll. (See "Testing and Final Acceptance for Earthwork")
   b. Prior to placement of the bituminous concrete surface course, the CONTRACTOR if requested by the OWNER, shall obtain specimens of the binder course with a core drill where directed by the ENGINEER, for the purpose of thickness verification. Coring shall be in accordance with the applicable provisions of ART.406.15 of the Standard Specification entitled "Standard Specifications for Road and Bridge Construction". The cost for obtaining cores, which meet or exceed the specification, shall be borne by the OWNER.
   c. Deficiencies in the bituminous concrete binder course shall be adjusted for by increasing the plan thickness of the surface course with no additional cost to the OWNER.
   d. A nuclear density test must be conducted on asphalt pavement in accordance with IDOT standards.
   e. Final acceptance of the total pavement installation shall be subject to the testing and checking requirements cited above.
6. Method of Measurement
   a. Curb and Gutter, and base course shall be measured in the field by the CONTRACTOR. The quantities shall be submitted to the OWNER for verification.
   b. When requested by the OWNER, documentation for the installed base course, bituminous concrete binder, and surface, shall be submitted to the ENGINEER for verification. Deficiencies in total bituminous concrete pavement thickness shall be adjusted for in accordance with the requirements of the jurisdictional authority.
7. Basis of Payment
   a. Curb and Gutter will be paid for at the contract unit price per LINEAL FOOT.
   b. Prime Coat material will be paid for at the contract unit price per GALLON.
   c. Base Course will be paid for at the contract unit price per SQUARE YARD.
   d. Bituminous Concrete will be paid for at the contract unit price per SQUARE YARD.

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WSP VILLAGE REVIEW	SDD
3	10-17-24	PER CCDOTH REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
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DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

PROJECT SPECIFICATIONS

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GENERAL NOTES

1. Definition of Terms
   a. The CONTRACTOR is the individual, firm, partnership or corporation contracting with the OWNER for performance of the prescribed work.
   b. The OWNER is the individual, firm, partnership or corporation having the authority to award the contract for the prescribed work.
   c. The ENGINEER where specifically referred to in the Specifications shall be the OWNER'S representative.
2. All CONTRACTORS shall be responsible for the following, which shall also be incidental to the cost of construction:
   a. Examination of the Engineering Plans and Specifications and the existing site conditions prior to submitting a bid, and notifying the ENGINEER at once of any discrepancies.
   b. The obtaining of any necessary permits not previously applied for by the OWNER, and posting of the necessary bonds.
   c. The notification of the start of construction to theVillage of WESTERN SPRINGS Public Services Dept. at (708) 246–8540, utility companies, and the ENGINEER at least two (2) working days prior to said start. All existing utilities must be staked prior to construction. All construction, including equipment startup, shall be between the hours of 7:00 a.m. to 8:00 p.m. weekdays, and 8:00 a.m. to 7:00 p.m. weekends and holidays.
   d. Calling attention to the OWNER of any errors or discrepancies, which may be suspected in lines and grades, which are established by the OWNER. The CONTRACTOR shall not proceed with the work until the lines and grades which are believed to be in error have been verified or corrected by the OWNER. Additional staking that may be required due to CONTRACTOR negligence shall be paid for by the CONTRACTOR.
   e. The providing of safe and healthful working conditions throughout the prosecution of the construction work. This shall include, but not be limited to: the removal of debris, the protecting of construction hazards with barricades and the keeping of public street pavements clean of construction dirt and debris.
   f. The restoration to the original condition or better of any areas that are damaged by the CONTRACTOR during construction.
   g. The testing of materials, if required by the OWNER and/or the jurisdictional agencies.
   h. The guarantee of all materials and workmanship for a period of one (1) year upon final acceptance by the OWNER and other jurisdictional agencies.
   i. Trees shall be installed a minimum of five (5) feet horizontally from sanitary sewers, sanitary services, watermains, and water services. Trees and light poles shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including but not limited to manholes, valve vaults, valve boxes and fire hydrants.
   j. The contractor shall be responsible for implementation & maintenance of all soil erosion & sedimentation control measures throughout the entire project.
   k. Contractors are required to obtain applicable permits from the Municipality.
3. The OWNER shall be responsible for the following:
   a. Scheduling the necessary preconstruction meeting(s) with the jurisdictional agencies at least two (2) working days prior to the commencement of work.
   b. Insurance certificates from all contractors, naming the Village of WESTERN SPRINGS as additional insured, prior to preconstruction meeting being set.
   c. Providing the CONTRACTOR with one (1) set of control line and grade stakes (at offsets mutually agreed upon) for the proper prosecution and control of the work.
   d. Applying for IEPA, IDOT, and all applicable County, Municipal and Sanitary District Permits. Other necessary permits shall be the responsibility of the CONTRACTOR.
4. The ENGINEER shall be responsible for the following:
   a. To periodically visit the construction site in order to better carry out the duties and responsibilities assigned by the OWNER and undertaken by the ENGINEER.
   b. The ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR(S)' work in progress, supervise, direct or have control over the CONTRACTOR(S)' work nor shall the ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by the CONTRACTOR(S)', for safety precautions and programs incident to the work of the CONTRACTOR(S) or for any failure of the CONTRACTOR(S) to comply with laws, rules, regulations, ordinances, codes or orders applicable to the CONTRACTOR(S) furnishing and performing their work. Accordingly, the ENGINEER can neither guarantee the performance of the construction contracts by the CONTRACTOR(S) nor assume responsibility for the CONTRACTOR(S)' failure to furnish and perform their work in accordance with the Contract Documents.
5. Except where modified by the contract documents, all work proposed herein shall be in accordance with the following specifications, which are hereby made a part hereof:
   a. "Standard Specifications for Road and Bridge Construction", and "Supplemental Specifications and Recurring Special Provisions", latest edition, prepared by the Illinois Department of Transportation (IDOT Standard Specifications).
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as adopted by the Illinois Society of Professional Engineers, etal.
   c. Illinois Urban Manual, latest edition.
   d. Village of WESTERN SPRINGS Codes and Ordinances, current edition when these plans were approved.
   e. American With Disabilities Act, Standards for Accessible Design, latest ed.
6. In the event of a conflict between statements, which apply to the construction work, the OWNER should contact the Public Works Director for direction.

MWRD SPECIFICATIONS

A. Referenced Specifications

1. All construction shall be in accordance with the applicable sections of the following, except as modified herein or on the plans;
   a. Sstandard Sspecifications for Road and Bridge Construction (latest edition), by the Illinois Department of Transportation (IDOTt SS) for all improvements except sanitary sewer and water main construction;
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition (SSWS) for sanitary sewer and water main construction;
   c. Village of WESTERN SPRINGS municipal code (latest edition);
   d. The Metropolitan Water Reclamation District of Greater Chicago (NWRD) Watershed Management Ordinance and Technical Guidance Manual (latest edition);
   e. In case of conflict between the applicable ordinances noted, the more stringent shall take precedence and shall control all construction.

B. Notifications

1. The MWRD local sewer systems section field office must be notified at least two (2) working days prior to the commencement of any work (call 708–588–4055).
2. The Village of WESTERN SPRINGS Engineering Department and Public Works must be notified at least 24 hours prior to the start of construction and prior to each phase of work. Contractor shall determine items requiring inspection prior to start of construction or each work phase.
3. The Contractor shall notify all utility companies prior to beginning construction for the exact locations of utilities and for their protection during construction. If existing utilities are encountered that conflict in location with new construction, immediately notify the engineer so that the conflict can be resolved. call J.U.L.I.E. at 1–800–892–0123.

C. General Notes

1. All elevations shown on plans reference the north american vertical datum of 1988 (NAVD88). Conversion factor is XXXX ft.
2. MWRD, the Municipality and the Owner or Owner's Representative shall have the authority to inspect, approve, and reject the construction improvements.
3. The Contractor(s) shall indemnify the Owner, Engineer, Municipality, MWRD, and their Agents,from all liability involved with the construction, installation, or testing of this work on the project.
4. The proposed improvements must be constructed in accordance with the engineering plans as approved by mwrd and the municipality unless changes are approved by MWRD, the Municipality, or authorized agent. The construction details, as presented on the plans, must be followed. Proper construction techniques must be followed on the improvements indicated on the plans.
5. The location of various underground utilities which are shown on the plans are for information only and represent the best knowledge of the Engineer. Verify locations and elevations prior to beginning the construction operations.
6. Any existing pavement, sidewalk, driveway, etc., damaged during construction operations and not called for to be removed shall be replaced at the expense of the Contractor.
7. Material and compaction testing shall be performed in accordance with the requirements of the Municipality, MWRD, and Owner.
8. The Underground Contractor shall make all necessary arrangements to notify all inspection agencies.
9. All new and existing utility structures on site and in areas disturbed during construction shall be adjusted to finish grade prior to final inspection.
10. Record drawings shall be kept by the Contractor and submitted to the Engineer as soon as underground improvements are completed. Final payments to the Contractor shall be held until they are received. Any changes in length, location or alignment shall be shown in red. All wyes or bends shall be located from the downstream manhole. All valves, B–Boxes, tees or bends shall be tied to a fire hydrant.

D. Sanitary Sewer

1. The Contractor shall take measures to prevent any polluted water, such as ground and surface water, from entering the existing sanitary sewers.
2. A water–tight plug shall be installed in the downstream sewer pipe at the point of sewer connection prior to commencing any sewer construction. the plug shall remain in place until removal is authorized by the Municipality and/or MWRD after the sewers have been tested and accepted.
3. Discharging any unpolluted water into the sanitary sewer system for the purpose of sewer flushing of lines for the deflection test shall be prohibited without prior approval from the Municipality or MWRD.
4. All sanitary sewer construction shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition).
5. All floor drains shall discharge to the sanitary sewer system.
6. All downspouts and footing drains shall discharge to the storm sewer system.
7. All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to the following:

Pipe Material	Pipe Specifications	Joint Specifications
Vitrified Clay Pipe	ASTM C–700	ASTM C–425
Reinforced Concrete Sewer Pipe	ASTM C–76	ASTM C–443
Cast Iron Soil Pipe	ASTM A–74	ASTM C–564
Ductile Iron Pipe	ANSI A21.51	ANSI A21.11
Polyvinyl Chloride (PVC) Pipe 6–inch to 15–inch Diameter SDR 26 18–inch to 27–inch Diameter F/DY=46	ASTM D–3034 ASTM F–679	ASTM D–3212 ASTM D–3212
High Density Polyethylene (HDPE)	ASTM D–3350 ASTM D–3035	ASTM D–3261, F–2620 (heat fusion) ASTM D–3212, F–477 (gasketed)
Water Main Quality PVC 4–inch to 36–inch 4–inch to 12–inch 14–inch to 48–inch	ASTM D–2241 AWWA C900 AWWA C905	ASTM D–3139 ASTM D–3139 ASTM D–3139

The following materials are allowed on a qualified basis subject to District review and approval prior to permit issuance. A special condition will be added to the permit when the pipe material below is used for sewer construction or a connection is made.

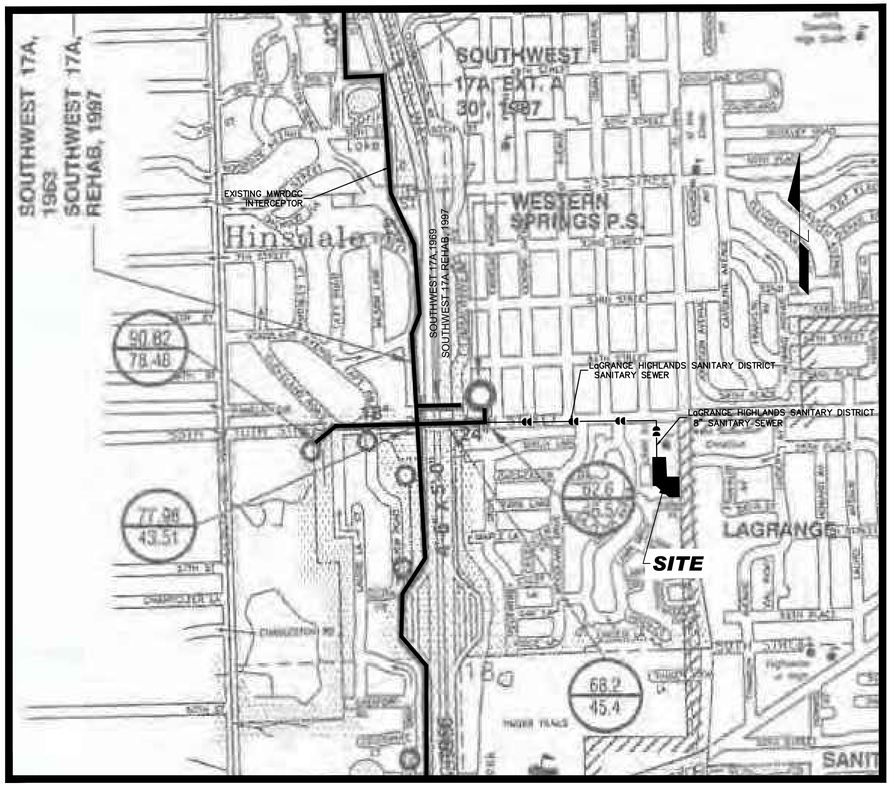
Pipe Material	Pipe Specification	Joint Specification
Polypropylene (PP) Pipe		
12–inch to 24–inch Double Wall	ASTM F–2736	ASTM D–3212,F–477
30–inch to 60–inch Triple Wall	ASTEM F–2764	ASTM D–3212, F–477

8. All sanitary sewer construction (and storm sewer construction in combined sewer areas), requires stone bedding with stone ¼" to 1" in size, with minimum bedding thickness equal to ¼ the outside diameter of the sewer pipe, but not less than four (4) inches or more than eight (8) inches. Material shall be CA–7, CA–11 or CA–13 and shall be extended at least 12" above the top of the pipe when using PVC.
9. Non–shear flexible–type couplings shall be used in the connection of sewer pipes of dissimilar pipe materials.
10. All manholes shall be provided with bolted, watertight covers. Sanitary lids shall be constructed with a concealed pickhole and watertight gasket with the word "sanitary" cast into the lid.
11. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
    a. A circular saw–cut of sewer main by proper tools ("shewer–Tap" machine or similar) and proper installation of hubwye saddle or hub–tee saddle.
    b. Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
    c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "band seal" or similar couplings to hold it firmly in place.
12. Whenever a sanitary/combined sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the bottom of the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, the sewer shall be constructed to water main standards or it shall be encased with a water main quality carrier pipe with ends sealed.
13. All existing septic systems shall be abandoned. Abandoned tanks shall be filled with a granular material or removed.
14. All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or pre–cast reinforced concrete.
15. All sanitary manholes, (and storm manholes in combined sewer areas), shall have precast "rubber boots" that conform to ASTM C–923 for all pipe connections. Precast sections shall consist of modified groove tongue and rubber gasket type joints.
16. All abandoned sanitary sewers shall be plugged at both ends with at least 2 feet long non–shrink concrete or mortar plug.
17. Except for foundation/footing drains provided to protect buildings, or perforated pipes associated with volume control facilities, drain tiles/field tiles/underdrains/perforated pipes are not allowed to be connected to or tributary to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers in combined sewer areas. Construction of new facilities of this type is prohibited, and all existing drain tiles and perforated pipes encountered within the project area shall be plugged or removed, and shall not be connected to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers.
18. A backflow preventer is required for all detention basins tributary to combined sewers. Required backflow preventers shall be inspected and exercised annually by the property owner to ensure proper operation, and any necessary maintenances shall be performed to ensure functionality. In the event of a sewer surcharge into an open detention basin tributary to combined sewers, the permittee shall ensure that clean up and wash out of sewage takes place within 48 hours of the storm event.

MWRD SPECIFICATIONS CONT'D

E. Erosion and Sediment Control

1. The contractor shall install the erosion and sediment control devices as shown on the approved erosion and sediment control plan.
2. Erosion and sediment control practices shall be functional prior to hydrologic disturbance of the site.
3. All design criteria, specifications, and installation of erosion and sediment control practices shall be in accordance with the Illinois urban manual.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Inspections and documentation shall be performed, at a minimum:
   a. Upon completion of initial erosion and sediment control measures, prior to any soil disturbance.
   b. Once every seven (7) calendar days and within 24 hours of the end of a storm event with greater than 0.5 inch of rainfall or liquid equivalent precipitation.
6. Soil disturbance shall be conducted in such a manner as to minimize erosion. If stripping, clearing, grading, or landscaping are to be done in phases, the co–permittee shall plan for appropriate soil erosion and sediment control measures.
7. A stabilized mat of crushed stone meeting the standards of the illinois urban manual shall be installed at any point where traffic will be entering or leaving a construction site. Sediment or soil reaching an improved public right–of–way, street, alley or parking area shall be removed by scraping or street cleaning as accumulations warrant and transported to a controlled sediment disposal area.
8. Concrete washout facilities shall be constructed in accordance with the Illinois Urban Manual and shall be installed prior to any on site construction activities involving concrete.
9. Mortar washout facilities shall be constructed in addition to concrete washout facilities for any brick and mortar building envelope construction activities.
10. Temporary diversions shall be constructed as necessary to direct all runoff from hydrologically disturbed areas to an appropriate sediment trap or basin. Volume control facilities shall not be used as temporary sediment basins.
11. Disturbed areas of the site where construction activities have temporarily or permanently ceased shall be stabilized with temporary or permanent measures within seven (7) days.
12. All flood protection areas and volume control facilities shall, at a minimum, be protected with a double–row of silt fence (or equivalent).
13. Volume control facilities shall not be constructed until all of the contributing drainage area has been stabilized.
14. Soil stockpiles shall, at a minimum, be protected with perimeter sediment controls. Soil stockpiles shall not be placed in flood protection areas or their buffers.
15. Earthen embankment side slopes shall be stabilized with appropriate erosion control blanket.
16. Storm sewers that are or will be functioning during construction shall be protected by appropriate sediment control measures.
17. The contractor shall either remove or replace any existing drain tiles and incorporate them into the drainage plan for the development. Drain tiles cannot be tributary to a sanitary or combined sewer. Drain tiles allowed in combined sewer area for green infrastructure practices.
18. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion and sedimentation. Dewatering systems should be inspected daily during operational periods. the site inspector must be present at the commencement of dewatering activities.
19. The contrctor shall be responsible for trench dewatering and excavation for the installation of sanitary sewers, storm sewers, watermains as well as their services and other appurtenances. Any trench dewatering, which contains sediment shall pass through a sediment settling pond or equally effective sediment control device. Alternatives may include dewatering into a sump pit, filter bag or existing vegetated upslope area. sediment laden waters shall not be discharge to waterways, flood protection areas or the combined sewer system.
20. All permanent erosion control practices shall be initiated within seven (7) days following the completion of soil disturbing activities.
21. All erosion and sediment control measures shall be maintained and repaired as needed on a year–round basis during construction and any periods of construction shutdown until permanent stabilization is achieved.
22. All temporary erosion and sediment control measures shall be removed within thirty (30) days after permanent site stabilization.
23. The erosion and sediment control measures shown on the plans are the minimum requirements. additional measures may be required, as directed by the Engineer, Site Inspector, or MWRD.



SANITARY ROUTING EXHIBIT



STORM ROUTING EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DMV
2	10–17–24	PER WSPRINGS REVIEW	SDD
3	10–29–24	PER VILLAGE REVIEW	SDD
4	11–04–24	PER CDDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

DEI

PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

3 OF 20

PROJECT SPECIFICATIONS & GENERAL NOTES

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EXISTING CONDITIONS & REMOVAL PLAN

REMOVE EXISTING CONCRETE & ASPHALT PAVEMENT TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).
OBTAIN APPROVAL FROM ADJACENT H.O.A. PRIOR TO CONSTRUCTION TWO DAYS ADVANCED NOTICE IS REQUIRED FOR ALL WORK ON PRIVATE PROPERTY.

REMOVE EXISTING PAVEMENT & CURB AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).

EXISTING RETAINING WALL TO BE REMOVED TO LIMITS SHOWN.

CONTRACTOR SHALL COORDINATE WITH COMED TO BRACE POWER POLES ADJACENT TO RETAINING WALL DURING REMOVAL AND CONSTRUCTION OF NEW WALL.

REMOVE EXISTING TREE (TYPICAL).

REMOVE EXISTING LOW FLOW STORM SEWER & STRUCTURES TO CONSTRUCT PROPOSED IMPROVEMENTS (TYPICAL).

EXISTING BUILDING & ADJACENT WALKS, WALLS, ENTRY'S & UTILITIES TO BE REMOVED AS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).

EXISTING STONE RIP-RAP SWALE TO BE REMOVED AS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS (TYPICAL).

PROVIDE 6' HIGH POST-DRIVEN CHAIN LINK CONSTRUCTION FENCE WITH METAL POSTS SPACED NO FURTHER THAN 10' APART AROUND SITE PERIMETER WITH LOCKABLE GATES AT CONSTRUCTION ENTRANCE (TYPICAL)

EXISTING BUILDING & ADJACENT WALKS, STAIRS, ENTRY'S & UTILITIES TO BE REMOVED AS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).

REMOVE EXISTING WATER SERVICE ON-SITE ONLY

REMOVE EXISTING WATER SERVICE & B-BOX (TYP.) IN RIGHT-OF-WAY. DISCONNECTION SHALL BE MADE AT THE MAIN IN ACCORDANCE WITH VILLAGE SPECIFICATIONS.

REMOVE EXISTING PAVEMENT & CURB AND GUTTER AS NECESSARY AT LOCATION OF EXISTING DRIVEWAY TO BE CLOSED/REMOVED IN ACCORDANCE WITH VILLAGE SPECIFICATIONS.

REMOVE EXISTING WATER SERVICE & B-BOX (TYP.) IN RIGHT-OF-WAY. DISCONNECTION SHALL BE MADE AT THE MAIN IN ACCORDANCE WITH VILLAGE SPECIFICATIONS.

EXISTING BUILDING & ADJACENT WALKS, ENTRY'S & UTILITIES TO BE REMOVED AS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).

REMOVE EXISTING TREE (TYPICAL).

S. Line, Lot 4
N. Line, Lot 5

E. Line, W. 1/2, Lot 5

REMOVE EXISTING PAVEMENT & CURB TO CONSTRUCT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH VILLAGE SPECIFICATIONS (TYPICAL).

S. Line, Lot 5
N. Line, Lot 6

EXISTING STONE RIP-RAP SWALE TO BE REMOVED AS REQUIRED TO CONSTRUCT PROPOSED IMPROVEMENTS (TYPICAL).

REMOVE EXISTING STORM SEWER & STRUCTURES & BACKFILL TO CONSTRUCT PROPOSED IMPROVEMENTS (TYPICAL).

EXISTING GRATE, CONCRETE END SECTION ON, RETAINING WALL AND CHAIN LINK FENCE TO BE REMOVED TO LIMITS INDICATED. REMOVAL WILL ALLOW FOR EXTENSION OF 6'X4' CONCRETE BOX CULVERT.

EXISTING DRIVEWAY APRON AND SIDEWALK SHALL REMAIN IN PLACE DURING SITE CONSTRUCTION.

REMOVE 2' HMA FULL DEPTH PAVEMENT ADJACENT TO CURB & GUTTER REMOVAL. REMOVAL AND REPLACEMENT SHALL EXTEND 2 FEET BEYOND EXISTING TRANSITION ON BOTH ENDS OF DRIVEWAY. REMOVAL SHALL BE IN ACCORDANCE WITH CCDOTH PERMIT REQUIREMENTS.

EXISTING FENCE TO BE REMOVED AS NECESSARY TO MAKE PROPOSED IMPROVEMENTS (TYP.).

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

NOTES:

1. HERITAGE SPRINGS HOA SHALL BE NOTIFIED AT LEAST 2 DAYS IN ADVANCE FOR ALL WORK TO BE COMPLETED ON PRIVATE PROPERTY.

HERITAGE SPRINGS HOA
RON LEJCAR
rpmrekcar@gmail.com
(630) 841-5560

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER VILLAGE REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
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McNAUGHTON DEVELOPMENT
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BURR RIDGE, ILLINOIS 60527
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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
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MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

4
OF
20

EXISTING CONDITIONS AND REMOVAL PLAN

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EROSION CONTROL & SEDIMENTATION NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL, LATEST EDITION, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. THE APPLICANT AND/OR CONTRACTOR IS RESPONSIBLE FOR INSURING THE OBTAINED PERMIT WITH THE COMPLETED SWPPP IS POSTED ON SITE IN A PROMINENT LOCATION BEFORE COMMENCEMENT OF ANY WORK ON SITE AND SHALL CONTACT THE VILLAGE AT LEAST 2 WORKING DAYS BEFORE THE START OF CONSTRUCTION, INSTALLATION OF SEDIMENT AND EROSION MEASURES AND COMPLETION OF FINAL LANDSCAPING.
3. THE VILLAGE SHALL BE PROVIDED WITH A COPY OF THE IEPA LETTER OF NOTIFICATION OF COVERAGE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE DEVELOPER IS RESPONSIBLE FOR HAVING THE SWPPP AND A STAMPED AND SIGNED COPY OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN ON SITE AT ALL TIMES AND BE PRESENTED WHEN REQUESTED BY ANY AUTHORIZED AGENCY.
5. THE DEVELOPER SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES EVERY SEVEN (7) DAYS AND AFTER 0.5" OR MORE RAINFALL. IMMEDIATE REPAIR SHALL BE MADE OF ANY DAMAGED EROSION CONTROL ELEMENTS THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
6. ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE ONLY AT PROPOSED STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON PLANS.
7. ALL DIRT, MUD, OR DEBRIS THAT REACHES THE PUBLIC ROADS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR.
8. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
9. SILT FENCE, SILT BASINS, AND STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE CONSTRUCTED AS DETAILED ON THE FINAL ENGINEERING PLANS PRIOR TO THE START OF CONSTRUCTION AND SHALL REMAIN IN PLAN UNTIL THE DISTURBED AREA IS STABILIZED. IN ADDITION, SILT FENCE SHALL BE PROVIDED FOR AREAS DRAINING 200' AND GREATER IN ACCORDANCE WITH NRCS CODE 920.
10. SCHEDULE OF CONTROL MEASURE IMPLEMENTATION:
    A. CONSTRUCT THE APPLICABLE PORTIONS OF THE EROSION AND SEDIMENTATION CONTROLS PRIOR TO SITE CLEARING.
    B. CONTROL SITE DEVELOPMENT IN ACCORDANCE WITH THE SPECIFICATIONS.
    C. MAINTAIN INLET PROTECTION, CONSTRUCTION TRAFFIC SURFACES, CLEANING OF STORM STRUCTURES AND THE LIKE ON A REGULAR BASIS AFTER EACH HEAVY RAIN OR AS OTHERWISE REQUIRED.
11. THE ESTIMATED CONSTRUCTION SCHEDULE IS AS FOLLOWS:

DEMOLITION	WINTER	2025
MASS EARTHWORK	SPRING	2025
TEMPORARY BASIN STABILIZATION	SPRING	2025
UNDERGROUND IMPROVEMENTS	SPRING/SUMMER	2025
ROADWAY (CURB & PAVEMENT)	SUMMER	2025
BUILDING CONSTRUCTION	SUMMER	2025
FINAL GRADING	SUMMER	2025
BASIN STABILIZATION	SUMMER	2025
FINAL LANDSCAPING	SUMMER	2026

    THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD AT THE CLOSE OF THE CONSTRUCTION SEASON.
12. DISTURBED AREAS WITHIN ALL PUBLIC R.O.W.'S SHALL BE RESTORED W/ 6" MIN. TOPSOIL & SOD. RESTORATION SHALL OCCUR IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION, WEATHER PERMITTING. ALL OTHER DISTURBED AREAS SHALL BE RESTORED WITH 4" TOPSOIL & SEED.
13. STRAW BALES ARE NOT PERMITTED IN AREAS OF CONCENTRATED FLOW. ROCK CHECK DAMS SHALL BE USED IN THESE AREAS. TECHNIQUES THAT DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED.
14. THE PROTECTION OF THE OPEN LID DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AS SPECIFIED IN DETAILS. ALL OPEN LID DRAINAGE STRUCTURES LOCATED IN YARD AREAS AND THE SEDIMENTATION BASIN MUST BE PROTECTED PER INLET PROTECTION DETAILS UNTIL SUCH A TIME THAT THE LANDSCAPING IS IN PLACE AND EFFECTIVELY PREVENTING POTENTIAL SILTATION OF THESE STRUCTURES. ALL OPEN LID DRAINAGE STRUCTURES IN PAVED AREAS SHALL HAVE FILTER BASKETS INSTALLED UNDER THE LIDS. IN THE EVENT THE GRAVEL BASE IS NOT IN PLACE UPON INSTALLATION, INLET PROTECTION SHALL BE PROVIDED AS INDICATED PER INLET PROTECTION DETAIL.
15. EROSION CONTROL BLANKET (ECB) SHALL BE INSTALLED TO ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 5H:1V AND IN CRITICAL AREAS (EX: DETENTION BASIN PERIMETERS, STREAMBANKS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING. S175 NORTH AMERICAN GREEN (OR SIMILAR) ECB SHALL BE USED. ECB WITH GREEN DYE IS NOT ACCEPTABLE.
16. SOIL STOCKPILES SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.
17. DURING DEWATER OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
18. AN INCIDENT OF NON-COMPLIANCE (ION) MUST BE COMPLETED AND SUBMITTED BY THE OWNER TO THE IEPA AND COPIED TO THE VILLAGE IF, AT ANY TIME, AN EROSION OR SEDIMENT CONTROL DEVICE FAILS.
19. A NOTICE OF TERMINATION (NOT) SHALL BE COMPLETED BY THE OWNER IN COMPLIANCE WITH THE NPDES PHASE II REQUIREMENTS WHEN ALL PERMANENT EROSION CONTROL MEASURES ARE IN PLACE WITH A 70% ESTABLISHED RATE OF VEGETATION. THE NOTICE OF TERMINATION SHALL BE SENT TO THE IEPA AND THE VILLAGE.
20. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

EROSION CONTROL LEGEND

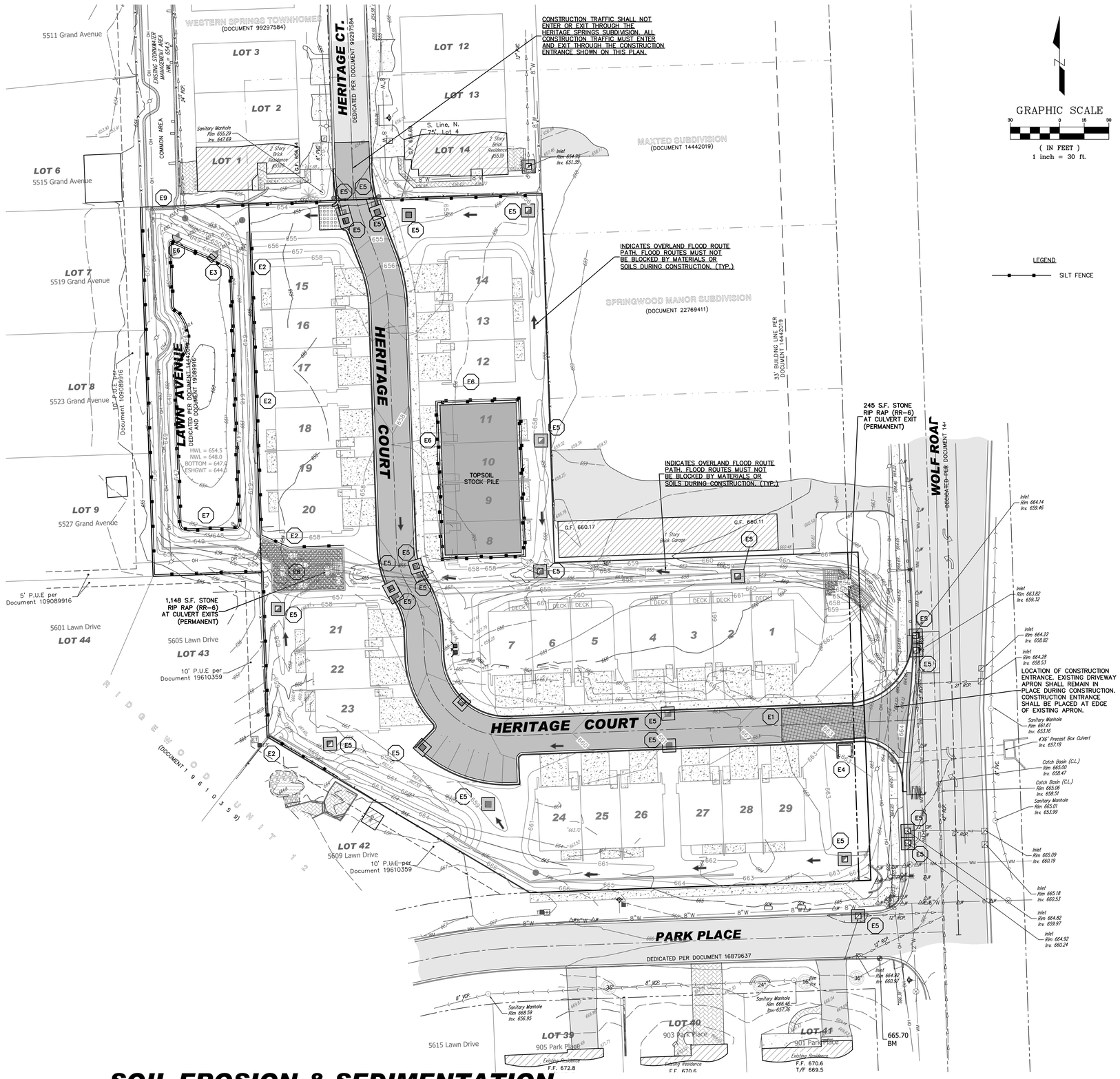
- E1 — CONSTRUCTION ENTRANCE PER NRCS SPECIFICATIONS
- E2 — SILT FENCE PER NRCS SPECIFICATIONS
- E3 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-610
- E4 — CONCRETE WASHOUT AREA
- E5 — INLET PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS
- E6 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-508SF
- E7 — DOUBLE ROW OF SILT FENCE PER NRCS SPECIFICATIONS
- E8 — SEDIMENT FOREBAY (SEE MWRD DETAIL SHEET XX)
- E9 — ROLLED EROSION CONTROL

STABILIZATION TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C			*	D*					
SODDING			E**									
MULCHING	F											

A. KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYEGRASS 30 LBS/AC
B. KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYEGRASS 45 LBS/AC + 2 TONS STRAW MULCH/AC
C. SPRING OATS 100 LBS/AC
D. WHEAT OR CEREAL RYE 150 LBS/AC
E. SOD
F. STRAW MULCH 2 TONS/AC

* IRRIGATION NEEDED DURING JUNE AND JULY.
** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SOIL PROTECTION CHART



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

LEGEND
SILT FENCE

SOIL EROSION & SEDIMENTATION CONTROL PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-19-24	PER MWRD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

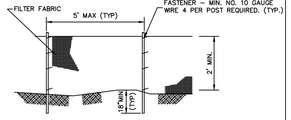
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

5 OF 20

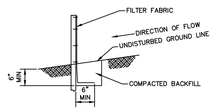
SOIL EROSION SEDIMENTATION & CONTROL PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date=1/27/2025 2:44:56 PM By:dneth

SILT FENCE PLAN



ELEVATION

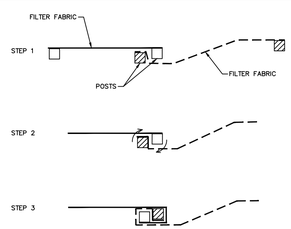


FABRIC ANCHOR DETAIL

NOTES:
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 509 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
3. FENCE POSTS SHALL BE WITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS–SECTIONAL AREA OF 3.0 SQ. IN.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 11-20-01
Approved Date		

SILT FENCE

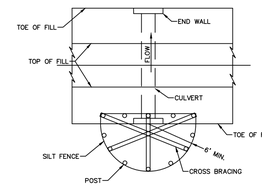


ATTACHING TWO SILT FENCES

NOTES:
1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 18 INCHES INTO THE GROUND AND BURY THE FLAP.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620(W)
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 1-29-99
Approved Date		

CULVERT INLET PROTECTION - SILT FENCE

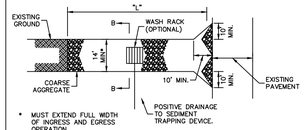


PLAN VIEW

NOTES:
1. THE SILT FENCE SHALL MEET THE REQUIREMENTS AS SHOWN ON STANDARD DRAWING IL-620 SILT FENCE EXCEPT THE MINIMUM POST SPACING SHALL BE 3 FEET AND THE TOPS OF POSTS SHALL BE CROSS BRACED.
2. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE HEIGHT OF THE SLT FENCE.
3. THE MAXIMUM DRAINAGE AREA TO THE CULVERT BEING PROTECTED IS 1 ACRE.

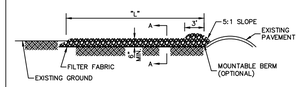
REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-508SF
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 1-29-99
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.

PLAN VIEW

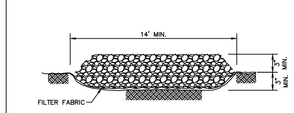


SIDE ELEVATION

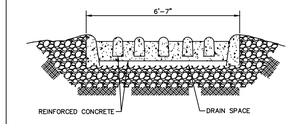
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I,II OR IV AND SHALL BE PLACED OVER CLEARED AREA PRIOR TO THE PLACING OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATION, CA–1, CA–2, CA–3, OR CA–4 AND BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 25 ROCKFILL USING PLACEMENT METHOD 1 AND CLASS III COMPACTION.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 4
Checked Date		DATE 8-15-94
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A–A



SECTION B–B

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 4
Checked Date		DATE 8-15-94
Approved Date		

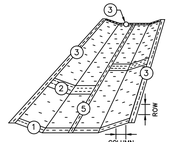
PIPE OUTLET SEDIMENT TRAP - ST I

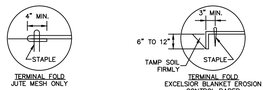
NOT TO SCALE

6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH 1/2" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SLIT AND 6" BELOW THE LOWEST SLIT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND–COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER AND 12" DEEP WITH THE RISER EMBEDDED 9". STEEL PLATE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, 1/4" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.
15. ANTI SEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 16 AND DETAILS 13 AND 14).
16. CONCENTRIC TRASH RACK AND ANTI–VORTEX DEVICE DESIGN DETAILS ARE ON DETAIL 16.
17. REFER TO SECTION D FOR DEWATERING REQUIREMENTS OF SEDIMENT TRAPS.
18. OUTLET – AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.
19. WHERE DISCHARGE OCCURS AT THE PROPERTY LINE, LOCAL ORDINANCES AND DRAINAGE EASEMENT REQUIREMENTS SHALL BE MET.

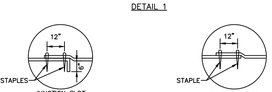
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE D–15–8	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

EROSION BLANKET PLAN





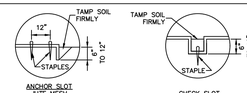
DETAIL 1



DETAIL 2

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 5-24-94
Approved Date		

EROSION BLANKET PLAN



DETAIL 3 DETAIL 4

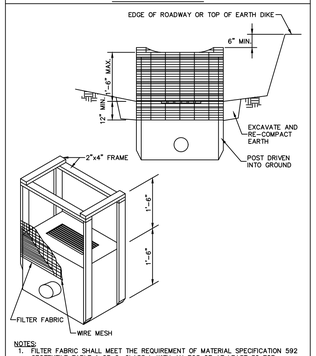


DETAIL 5

NOTES:
1. ON EROSION CONTROL PAPER, CHECK SLOTS, IN DITCH CHANNEL SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6% ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'x 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'x 150 ROLL OF MATERIAL.
3. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
4. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 2
Checked Date		DATE 3-1-95
Approved Date		

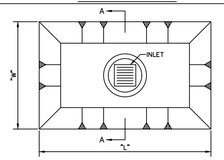
INLET PROTECTION - FABRIC DROP PLAN



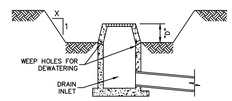
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENT OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, WITH AN EOS OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. THE WIRE MESH SHALL HAVE A MAXIMUM OPENING OF AT LEAST 6 INCHES.
3. LIMIT DRAINAGE AREA TO THE INLET PROTECTION TO 1 ACRE.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-560
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 6-29-93
Approved Date		

INLET PROTECTION - EXCAVATED DRAIN PLAN



PLAN VIEW



TYPICAL SECTION A–A

NOTES:
1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED ON A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
2. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
3. ALL CUT SLOPES SHALL BE 2:1 OR FLATTER.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-555
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 3-11-93
Approved Date		

TABLE 1

ROCK RIPRAP SIZES AND THICKNESS

IDOT Gradation Number	d50 (in.)	dmax (in.)	Minimum Blanket Thickness (in.)
RR-3 1/	5	10	15
RR-4	9	14	20
RR-5	12	19	28
RR-6	15	22	32
RR-7	18	27	32

1/ Concrete block may be used to replace RR-3.

TABLE 2

MINIMUM IDOT ROCK SIZES AND APRON LENGTH FOR MAXIMUM AND MINIMUM TAILWATER CONDITIONS

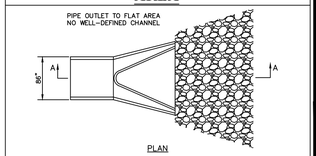
Culvert Dia., (in.)	Minimum Tailwater				Maximum Tailwater			
	5 fps 1/		10 fps 1/		5 fps 1/		10 fps 1/	
	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)
12	No. 3	10	No. 3	12	No. 3	12	No. 3	15
18	No. 3	14	No. 4	16	No. 3	12	No. 3	16
24	No. 3	16	No. 4	20	No. 3	14	No. 4	17
30	No. 3	18	No. 4	22	No. 3	16	No. 4	20
36	No. 4	20	No. 5	24	No. 3	16	No. 4	22
48	No. 4	24	No. 6	28	No. 4	20	No. 4	24
60	No. 5	32	No. 6	36	No. 4	22	No. 5	26
72	No. 6	40	No. 6	44	No. 5	24	No. 5	29
96	No. 7	50	No. 7	54	No. 5	26	No. 5	32

1/ Maximum conduit velocity fps.

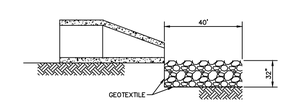
Rock Gradation source: Illinois Department of Transportation, 1997.

910-5

4'X6' " PIPE OUTLET TO FLAT AREA



PLAN



SECTION A–A

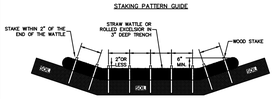
NOTES:
1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II OR III.
2. THE ROCK RIPRAP SHALL MEET THE IDOT REQUIREMENTS FOR THE FOLLOWING GRADATION: RR R–$\frac{6}{7}$, QUALITY A.
3. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-610
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 9-15-93
Approved Date		

ROLLED EROSION CONTROL PRODUCTS

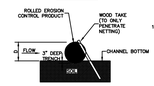
NOT TO SCALE

STAKING PATTERN GUIDE



NOTES:
1. OVERLAP MINIMUM IS THE DIAMETER OF THE ROLL.
2. 4' SPACING FOR MATTLES.
3. 2' SPACING FOR ROLLED EXCELSIOR.
4. OR SPACE ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

STAKE DETAIL



COMPOST FILTER SOCK DETAIL



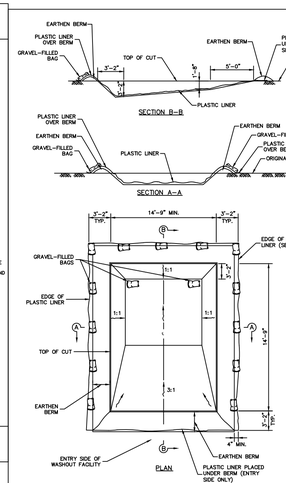
WHEN COMPOST FILTER SOCK DITCH CHECK IS USED, PLACE A COMPOST BERM UPSTREAM OF THE FILTER SOCK (SEE ILM 805). A TRENCH IS NOT REQUIRED.

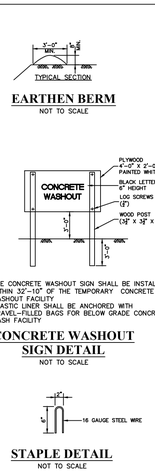
NOTES:
1. DRAWINGS ARE NOT TO SCALE
2. ENDS OF MATTLES OR ROLLED EXCELSIOR SHALL BE TURNED AT LEAST 6" UPSLOPE.
3. STAKES SHALL BE DRIVEN FLUSH WITH THE GROUND, BUT TOP NOT BURIED.
4. STAKES SHALL NOT EXTEND ABOVE THE STRAW MATTLE MORE THAN 2".
5. SPACING THE TOE OF THE UPSTREAM DITCH CHECK SHALL CREATE A HORIZONTAL LINE WITH THE TOP OF THE DOWNSTREAM DITCH CHECK.
6. WHEN COMPOST FILTER SOCK DITCH CHECK IS USED, PLACE A COMPOST BERM UPSTREAM OF THE FILTER SOCK (SEE ILM 805). A TRENCH IS NOT REQUIRED.

REFERENCE		STANDARD DWG. NO.
Project		IUM-514
Designed Date		SHEET 1 OF 1
Checked Date		DATE 8-19-11
Approved Date		

TEMPORARY CONCRETE WASHOUT FACILITY

(BELOW GRADE)





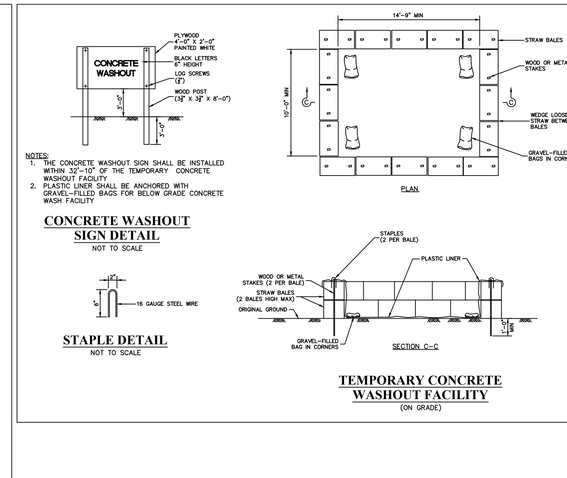
NOTES:
1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 32'–10" OF THE TEMPORARY CONCRETE WASHOUT FACILITY
2. PLASTIC LINER SHALL BE ANCHORED WITH GRAVEL–FILLED BAGS FOR BELOW GRADE CONCRETE WASH FACILITY

CONCRETE WASHOUT SIGN DETAIL

NOT TO SCALE

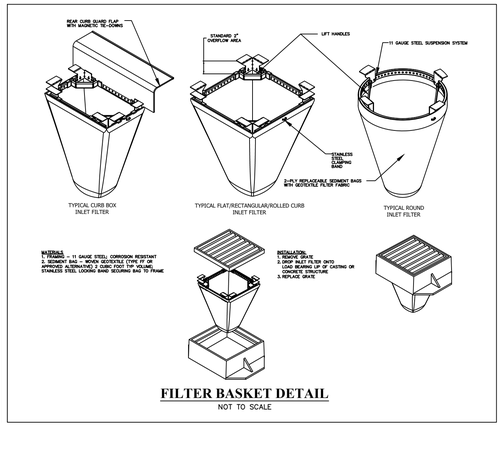
STAPLE DETAIL

NOT TO SCALE



TEMPORARY CONCRETE WASHOUT FACILITY

(ON GRADE)



FILTER BASKET DETAIL

NOT TO SCALE

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WILL COUNTY REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION

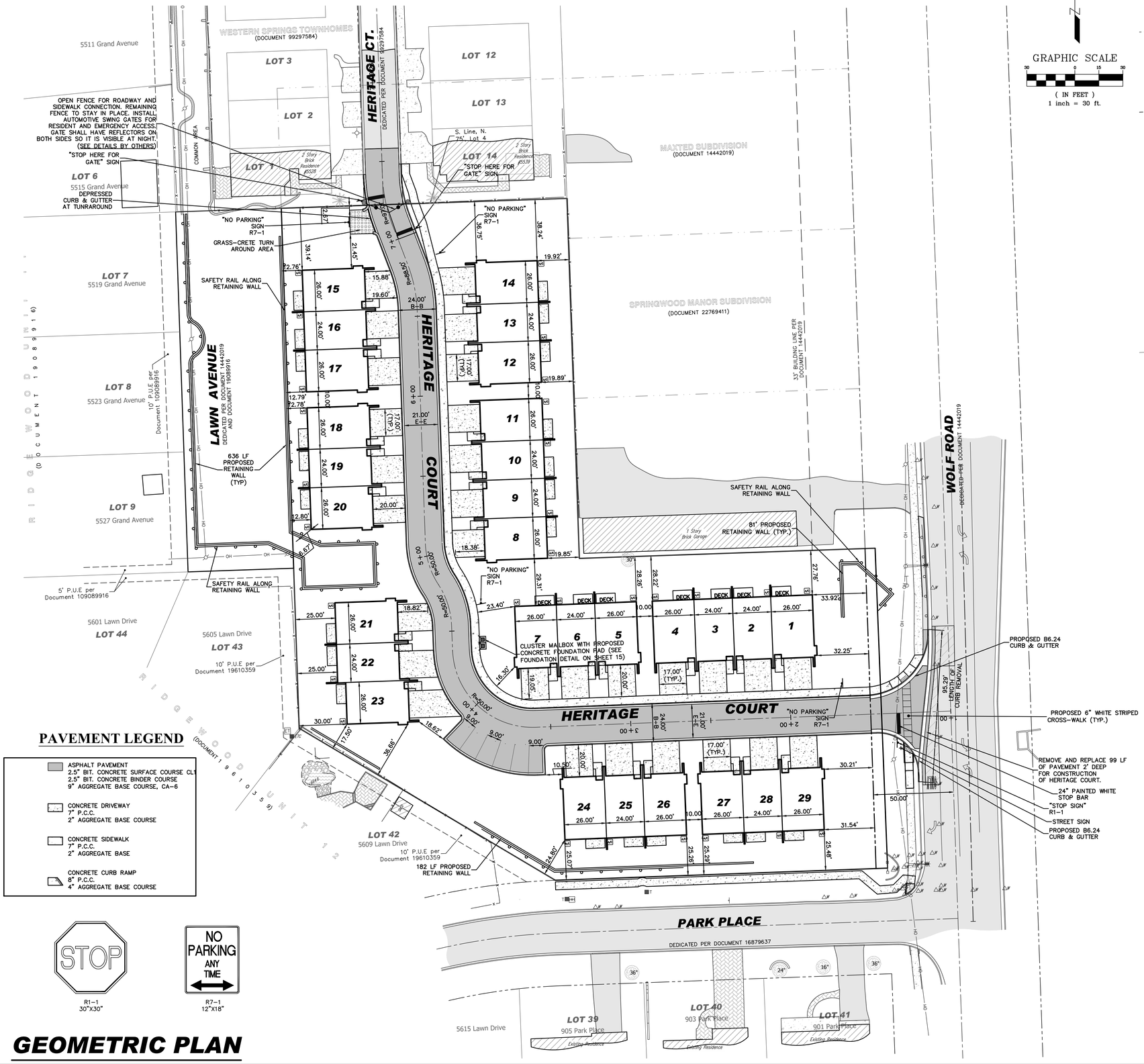
Project No.: 24–0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

SOIL EROSION SEDIMENTATION & CONTROL DETAILS

REVIEW SET
NOT FOR CONSTRUCTION

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PAVEMENT LEGEND

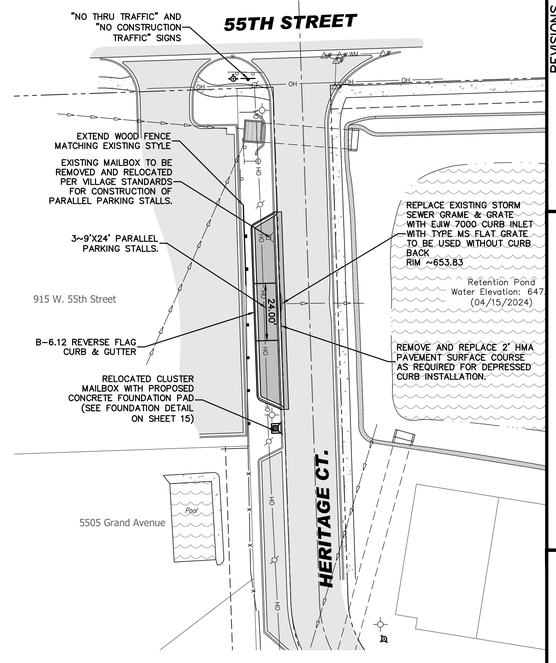
- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

STOP
R1-1
30"X30"

NO PARKING ANY TIME
R7-1
12"X18"

GEOMETRIC PLAN

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

REVIEW SET
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REVISIONS			
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1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
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FINAL ENGINEERING PLANS
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5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

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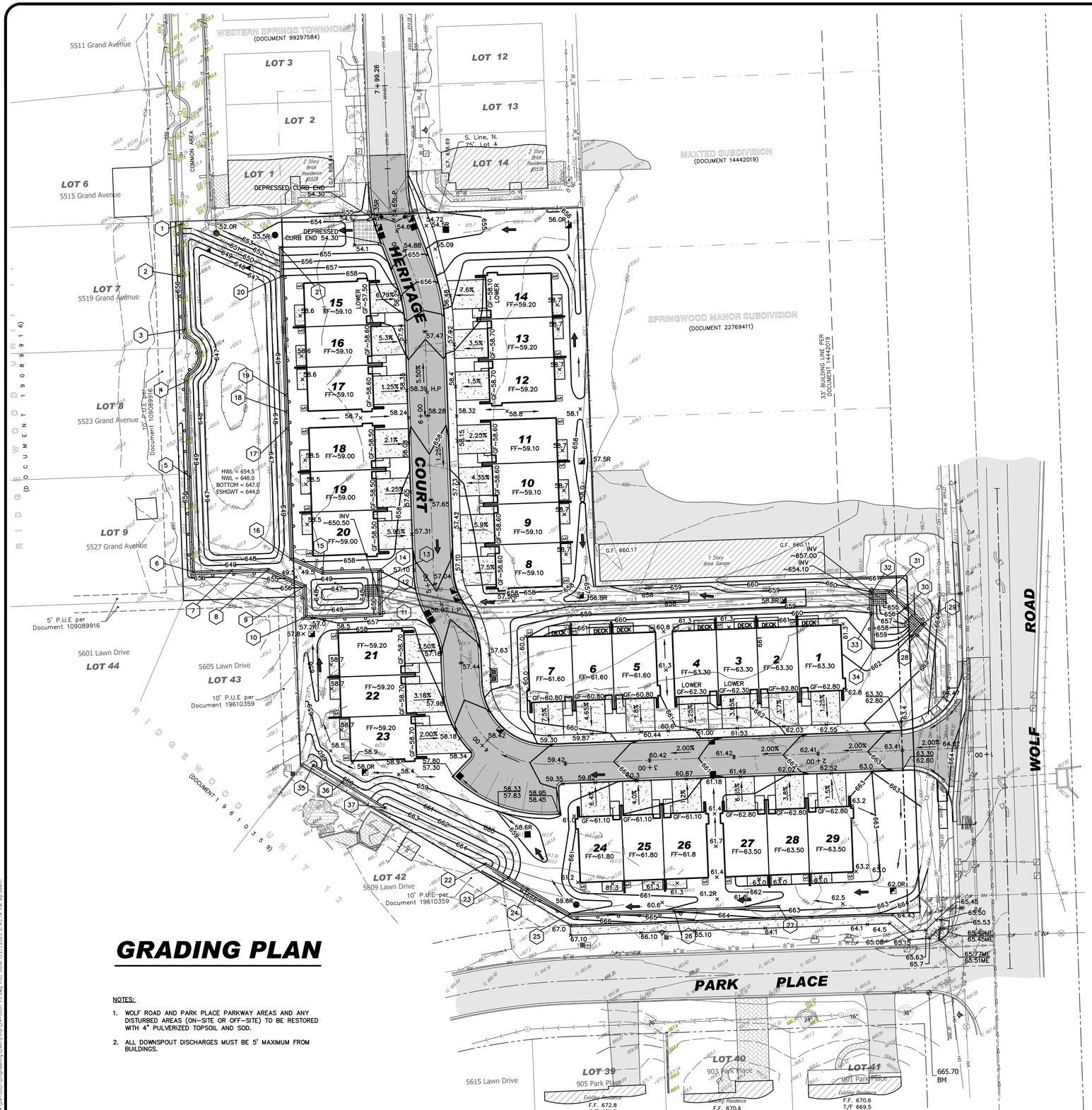
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

GEOMETRIC PLAN

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GRADING PLAN

NOTES:

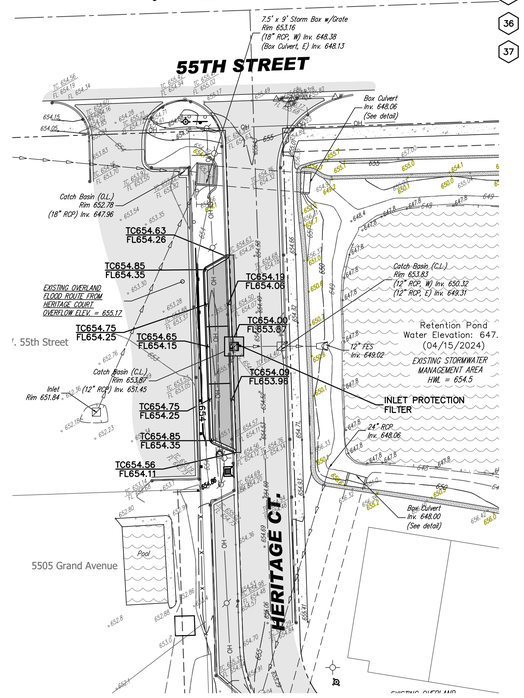
1. WOLF ROAD AND PARK PLACE PARKWAY AREAS AND ANY DISTURBED AREAS (ON-SITE OR OFF-SITE) TO BE RESTORED WITH 4" PULVERIZED TOPSOIL AND SOD.
2. ALL DOWNSPOUT DISCHARGES MUST BE 5' MAXIMUM FROM BUILDINGS.

REVIEW SET
NOT FOR CONSTRUCTION

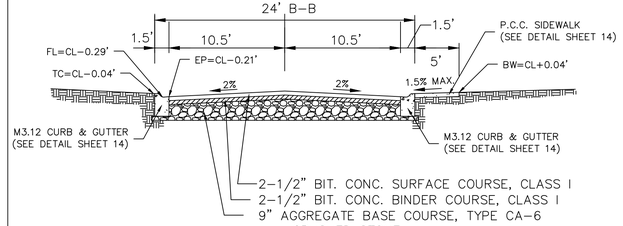
RETAINING WALL (XX)

(1)	TW=656.00 BW=652.00 EX TW=655.99	(12) TW=656.00 BW=650.50	(23) TW=665.00 BW=660.00
(2)	TW=656.50 BW=650.00 EX TW=655.98	(13) TW=656.00 BW=650.50	(24) TW=655.50 BW=660.00
(3)	TW=656.50 BW=650.00 EX TW=656.26	(14) TW=657.00 BW=650.50	(25) TW=666.00 BW=660.00
(4)	TW=656.50 BW=650.00 EX TW=656.25	(15) TW=657.00 BW=650.00	(26) TW=664.00 BW=661.00
(5)	TW=656.50 BW=650.00 EX TW=656.16	(16) TW=658.00 BW=650.00	(27) TW=662.50 BW=662.50
(6)	TW=656.50 BW=650.00 EX GND=656.00	(17) TW=658.00 BW=650.00	(28) TW=662.50 BW=662.50
(7)	TW=655.00 BW=650.00	(18) TW=658.00 BW=650.00	(29) TW=662.50 BW=662.50
(8)	TW=654.00 BW=650.00	(19) TW=656.50 BW=650.00	(30) TW=661.00 BW=656.00
(9)	TW=656.00 BW=650.00	(20) TW=658.50 BW=650.00	(31) TW=660.00 BW=654.10
(10)	TW=657.50 BW=65000	(21) TW=654.00 BW=654.00	(32) TW=660.00 BW=654.10
(11)	TW=656.50 BW=650.50	(22) TW=665.00 BW=665.00	(33) TW=660.00 BW=658.00
			(34) TW=661.00 BW=661.00
			(35) TW=662.50 BW=662.50
			(36) TW=663.00 BW=660.50
			(37) TW=663.50 BW=663.50

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN



TYPICAL ROADWAY SECTION

NOT TO SCALE

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WSFD FIRST REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

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MOKENA, ILLINOIS 60448
(708) 326-4961
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IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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GRADING PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date:1/27/2025 2:45:14 PM By:dseth

UTILITY PLAN

NOTES:

1. ALL PIPE LENGTHS ARE APPROXIMATE. THOSE WHICH INCLUDE A FLARED END SECTION ARE TO THE END OF THE SECTION.
2. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.

= TRENCH BACKFILL

SANITARY STRUCTURES (XX)

1. EX. 48" M.H., C.L.
   EX. RIM 655.29
   EX. INV 647.69
   PR. INV 647.69
2. 48" M.H., C.L.
   RIM 656.00
   INV 647.90
3. 48" M.H., C.L.
   RIM 657.00
   INV 648.71
4. 48" M.H., C.L.
   RIM 656.90
   INV 649.17
5. 48" M.H., C.L.
   RIM 663.10
   INV 650.01

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

WATER VALVE VAULTS (XX)

1. 8" VALVE IN 60" VAULT
   RIM 657.00
2. 8" VALVE IN 60" VAULT
   RIM 658.00
3. 8" PRESSURE CONNECTION IN 60" VAULT
   RIM 665.00

FIRE HYDRANTS (XX)

1. FIRE HYDRANT ASSEMBLY
   GRADE RING 662.90
2. FIRE HYDRANT ASSEMBLY
   GRADE RING 660.00
3. FIRE HYDRANT ASSEMBLY
   GRADE RING 658.20
4. FIRE HYDRANT ASSEMBLY
   GRADE RING 656.50

STORM SEWER STRUCTURES (XX)

- A1 12" FES W/ GRATE
  INV 648.00
- A2 48" DIA. MH., C.L.
  RIM 653.50
  INV 650.30 (E, 12")
  INV 649.00 (SW, 12")
- A3 48" DIA. CATCHBASIN, O.L.
  RIM 654.37 (FL)
  INV 651.09 (W&E, 12")
  INV 651.30 (N, 12")
- A3d 24" DIA. INLET
  RIM 654.35 (FL)
  INV 651.35 (N, 12")
- A4 48" DIA. MH., O.L.
  RIM 654.37 (FL)
  INV 651.29 (N,W&E 12")
- A4d 24" DIA. INLET
  RIM 654.35 (FL)
  INV 651.35 (S 12")
- A5 48" DIA. MH., O.L.
  RIM 654.50
  INV 651.50 (E&W, 12")
- A6 24" DIA. INLET
  RIM 656.00
  INV 653.00 (W 12")
- C1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.65 (N, 12")
- C2 24" DIA. INLET
  RIM 656.80
  INV 653.70 (S, 12")
- C3 24" DIA. INLET
  RIM 657.50
  INV 654.50 (S, 12")
- D1 CONNECT TO 4'X6' BOX CULVERT
  INV ~653.05 (S, 15")
- D2 48" DIA. CATCHBASIN
  RIM 656.68 (FL)
  INV 653.13 (SW, 15")
- D3 60" DIA. M.H., O.L.
  RIM 656.68 (FL)
  INV 653.20 (NW&SE, 15")
- D4 72" DIA. M.H., O.L.
  RIM 657.30
  INV 654.20 (NW, 15")
  INV 654.45 (NE,W, E&SE, 12")
- D5 48" DIA. M.H., C.L.
  RIM 659.60
  INV 655.60 (NW&SE, 12")
- D6 48" DIA. M.H., C.L.
  RIM 659.60
  INV 656.60 (NW&E, 12")
- D7 24" DIA. INLET
  RIM 662.00
  INV 659.00 (W, 12")
- D8 48" DIA. M.H., O.L.
  RIM 660.93 (FL)
  INV 657.73 (N&W, 12")
- D9 24" DIA. INLET
  RIM 660.93 (FL)
  INV 657.93 (S, 12")
- D10 24" DIA. INLET
  RIM 658.17 (FL)
  INV 655.17 (S, 12")
- D11 24" DIA. INLET
  RIM 658.00
  INV 655.00 (E, 12")
- E1 24" PVC RISER
  RIM 658.80
- F1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.10 (N, 12")
- F2 24" DIA. INLET
  RIM 656.99 (FL)
  INV 653.13 (N&S, 12")
- F3 24" DIA. INLET
  RIM 656.69 (FL)
  INV 653.18 (S, 12")
- G1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.24 (N, 12")
- G2 24" DIA. INLET
  RIM 657.20
  INV 654.20 (N, 12")
- H1 24" FES W/ GRATE
  INV 648.00
- H2 48" DIA. MH., C.L.
  RIM 652.00
  EX INV 646.34 (N, 24")
  PR INV 646.34 (SW, 24")

STORM SEWER GRATES

ROADWAY: EJIW 7525Z & EJIW 7525M
GRASS: EJIW 6527
(UNLESS OTHERWISE NOTED ON PLANS)

UTILITY CROSSING INFORMATION (XX)

1. MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN WATERMAIN AND STORM/SANITARY SEWERS.
2. DEPTHS OF EXISTING WM ARE ASSUMED AND MUST BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION.
3. WHEN THE WM CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS THAT COMPLY WITH 35 IAC 653.119 OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WM TO THE SEWER IS AT LEAST 10 FEET. IN ADDITION, THE WM MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER. THIS 18 INCHES IS A STRUCTURAL PROTECTION TO PREVENT THE SEWER FROM SETTLING AND BREAKING THE WM.
4. WHEN THE WM CROSSES ABOVE A SEWER AND IT IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHERE THE PIPE CROSSES, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS (COMPLIANCE SAME AS ABOVE) OR A CASING PIPE CAN BE INSTALLED AROUND THE WM OR THE SEWER. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WM. CONCRETE IS NOT AN ACCEPTABLE ENCASEMENT.
5. WHEN THE ENCASEMENT OPTION IS USED, IT SHALL BE ONE CONTINUAL SECTION (NO JOINTS).

(XX)

ID	BOTTOM OF PIPE	TOP OF PIPE	VERTICAL SEPARATION	CROSSING INFO.
1	650.83	648.47	2.36'	STORM OVER SANITARY
2	651.24	649.18	2.06'	STORM OVER WATERMAIN (STORM SEWER TO BE C900 PIPE)
3	650.20	649.37	0.83'	STORM OVER SANITARY
4	650.83	649.30	1.53'	STORM OVER WATERMAIN (LOWER AND ENCASE WATERMAIN)
5	653.39	649.55	3.84'	STORM OVER SANITARY
6	654.58	649.75	4.83'	STORM OVER SANITARY
7	654.76	649.83	4.93'	STORM OVER SANITARY

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER VILLAGE REVIEW	SDD
3	11-04-24	PER CDDOTH REVIEW	DMV
4	12-12-24	PER VILLAGE REVIEW	DMV
5	01-27-25	PER REVISED GEOMETRY	DMV
6			

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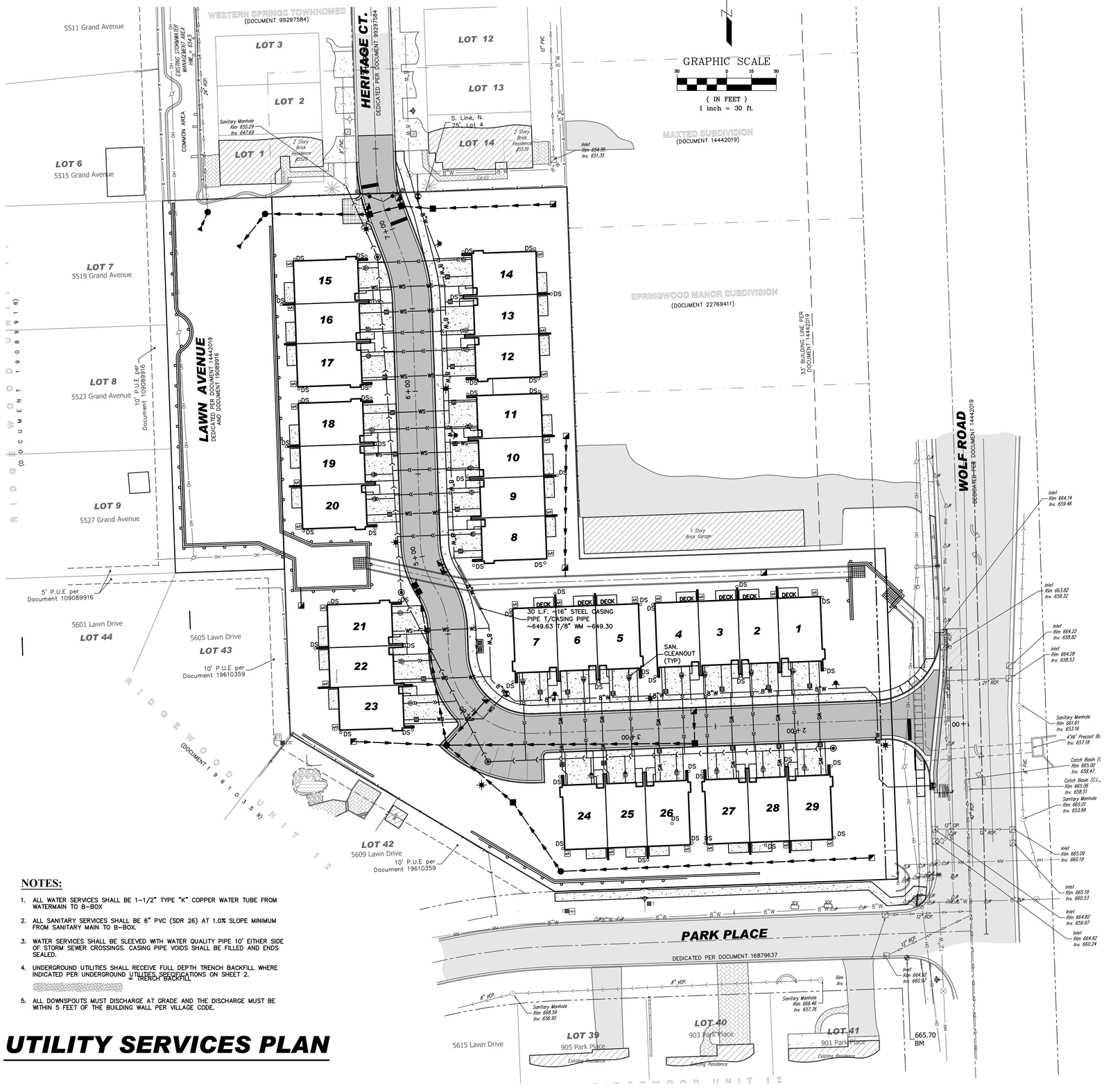
DESIGNTEK ENGINEERING, INC.
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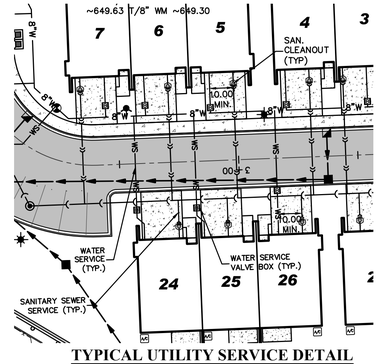
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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UTILITY PLAN





TYPICAL UTILITY SERVICE DETAIL

NOTES:

1. ALL WATER SERVICES SHALL BE 1-1/2" TYPE "K" COPPER WATER TUBE FROM WATERMAIN TO B-BOX
2. ALL SANITARY SERVICES SHALL BE 6" PVC (SDR 26) AT 1.0% SLOPE MINIMUM FROM SANITARY MAIN TO B-BOX.
3. WATER SERVICES SHALL BE SLEEVED WITH WATER QUALITY PIPE 10' EITHER SIDE OF STORM SEWER CROSSINGS. CASING PIPE VOIDS SHALL BE FILLED AND ENDS SEALED.
4. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.
   = TRENCH BACKFILL
5. ALL DOWNSPOUTS MUST DISCHARGE AT GRADE AND THE DISCHARGE MUST BE WITHIN 5 FEET OF THE BUILDING WALL PER VILLAGE CODE.

UTILITY SERVICES PLAN

REVIEW SET
NOT FOR
CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

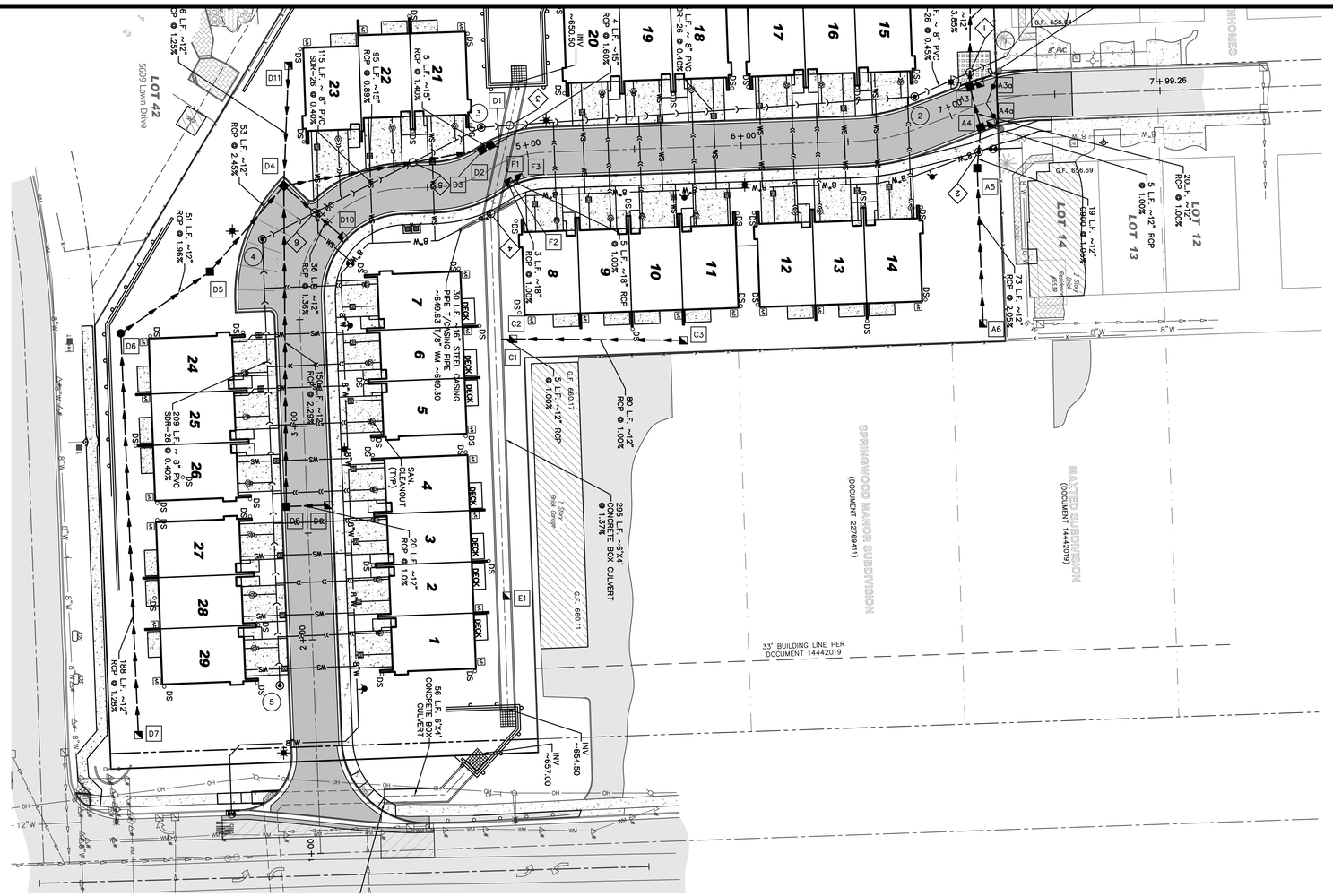
DEI

PROJECT INFORMATION
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Scale: 1" = 30'
Date: MAY 22 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

10
OF
20

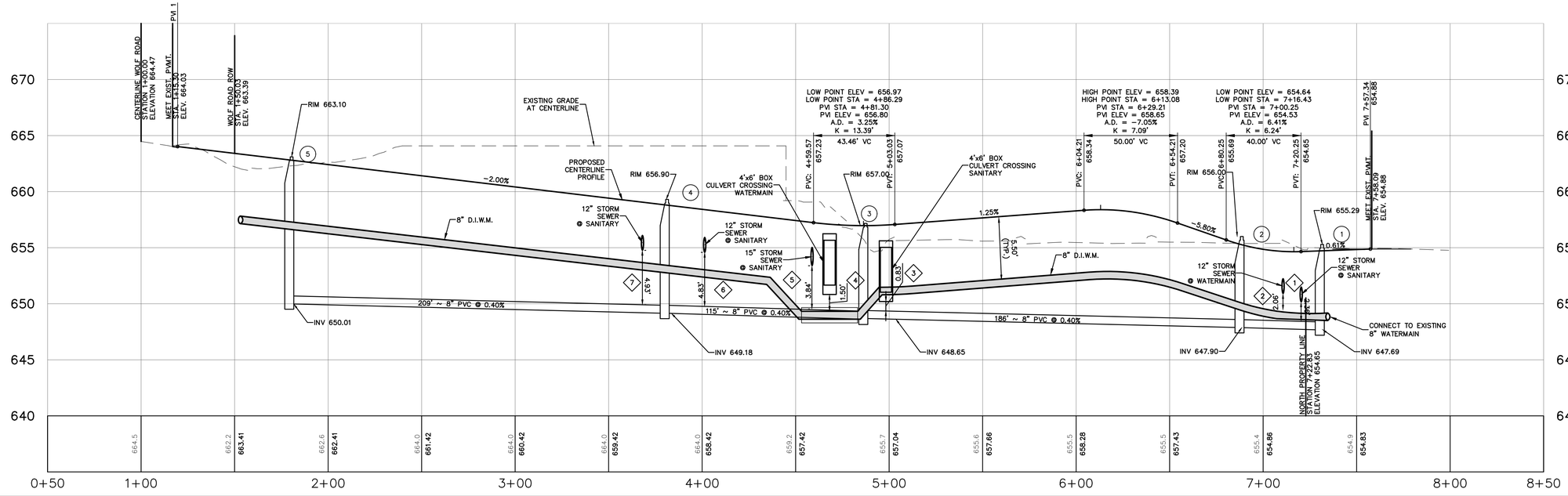
UTILITY SERVICES PLAN

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HERITAGE COURT

STATION: 0+50.00 TO 8+50.00



PROFILE SCALE
H: 1" = 30'
V: 1" = 5'

REVIEW SET NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

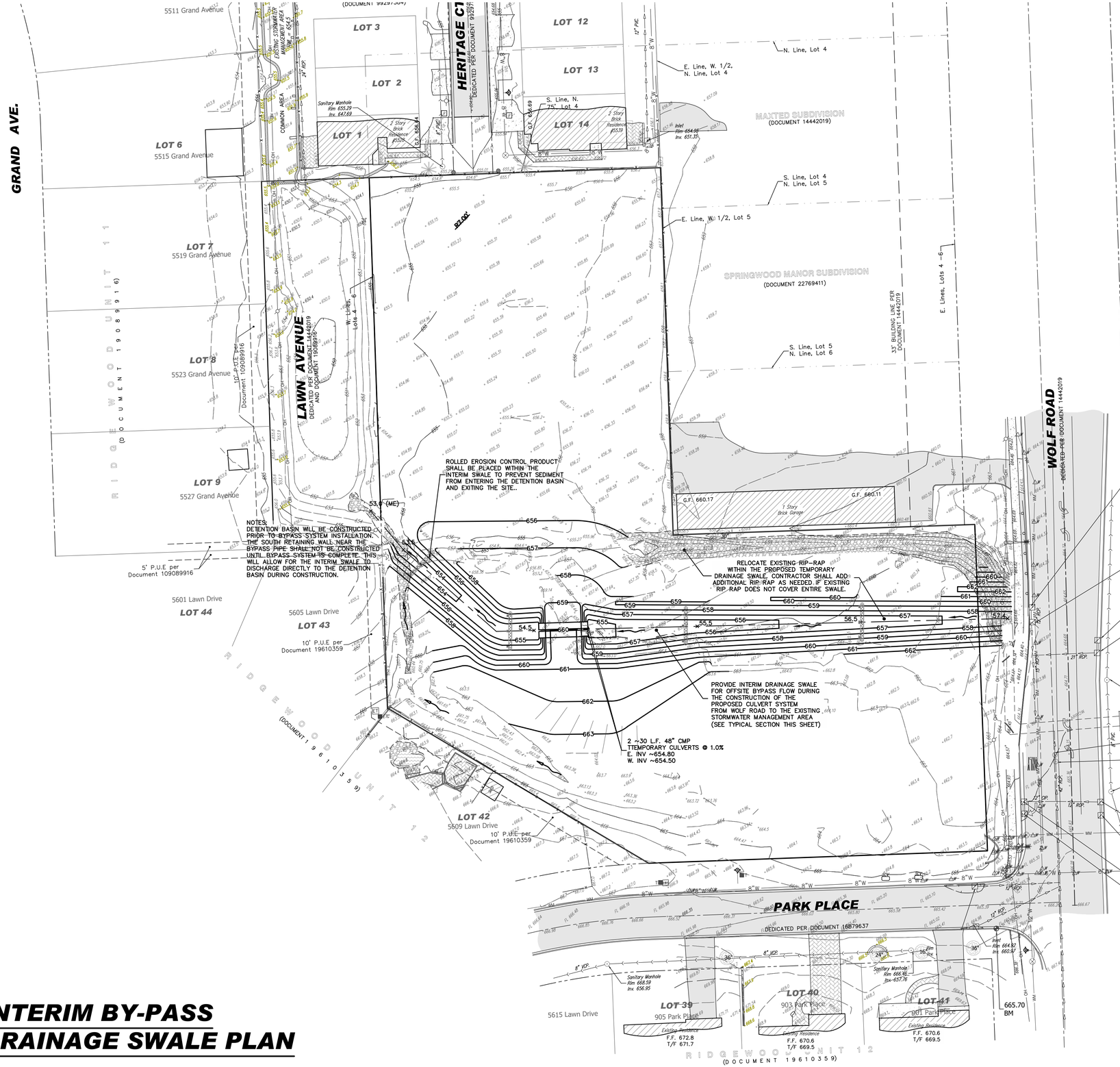
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PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

HERITAGE COURT PLAN & PROFILE 1+00 TO 8+50

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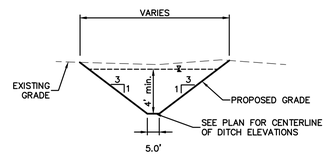


N

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.



TEMPORARY DRAINAGE SWALE SECTION
NOT TO SCALE

INTERIM BY-PASS DRAINAGE SWALE PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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11S220 JACKSON ST. Ste. 101
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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
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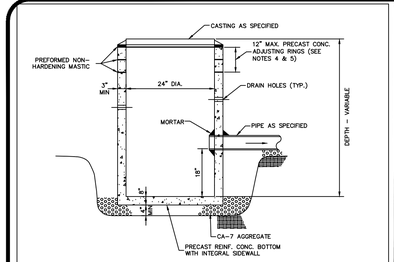
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

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OF
20

INTERIM BY-PASS DRAINAGE SWALE PLAN

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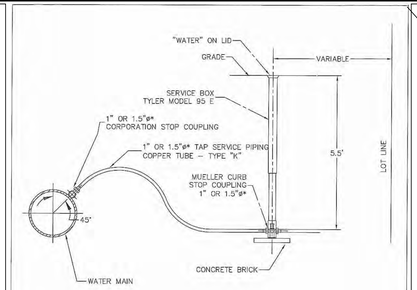


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA- 11 AROUND CATCH BASIN TO SUBGRADE IN PAVED AREAS
2. ALTERNATE INLET BOTTOM – PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON-SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (RUB-R-NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

CATCH BASIN TYPE C

NOT TO SCALE

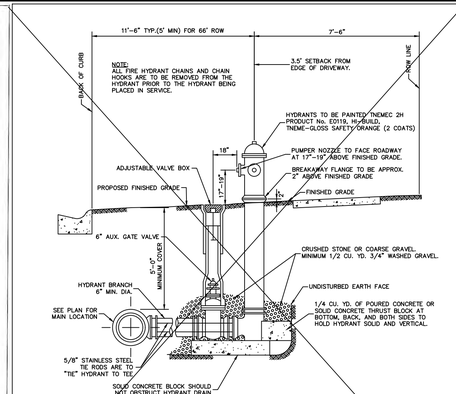


NOTES:

1. ALL FITTINGS SHALL BE COMPRESSION TYPE.
2. TRENCH BACKFILL (CA–7 CRUSHED LIMESTONE) SHALL BE USED UNDER AND WITHIN 2 FEET OF ALL PAVED AREAS (SIDEWALK, DRIVEWAY AND ROADWAY).
3. NO OPEN CUTTING OF PAVEMENT WILL BE PERMITTED. AUGER AND PUSH OR DIRECTIONAL BORE TO RECEIVING PIT IF MAIN IS UNDER PAVEMENT. SEE VILLAGE STANDARD DETAILS FOR PAVEMENT, SIDEWALK OR DRIVEWAY REPLACEMENT. ALL PAVEMENT, SIDEWALK, CURB AND DRIVEWAYS MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
4. ON 4" WATER MAINS, AN ALL STAINLESS STEEL TAPPING CLAMP SHALL BE USED. IN ADDITION, THE HOLE DRILLED IN THE MAIN SHALL NOT EXCEED 1". EXCEPT FOR THE HOLE DRILLED IN THE MAIN, ALL HARDWARE FOR A 1.5" SERVICE SHALL BE SIZED FOR 1.5"ø.
5. Abandonment of existing water service requires removal of the corporation stop and placement of a stainless solid sleeve repair clamp.
6. NEW SERVICES SHALL BE TAPPED MIN. OF 2 FT. FROM EXISTING TAP.
7. RESTORATION OF PARKWAY SHALL BE MINIMUM 4" OF TOPSOIL AND SOD.
8. ANY DEVIATION FROM THIS PLAN SHALL BE APPROVED IN WRITING BY THE DEPARTMENT OF PUBLIC WORKS (708)246–1800 EXT. 200

**SIZE DETERMINED BY FIXTURE LOAD PER ILLINOIS PLUMBING CODE*

VILLAGE OF WESTERN SPRINGS WATER SERVICE revised 6/28/2002

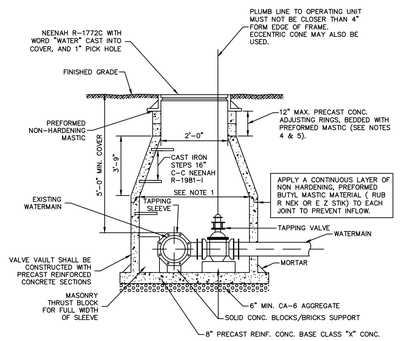


PERMITTED TYPES

FOR RESIDENTIAL AREAS ON 6" OR 8" MAINS	FOR ALL OTHER AREAS
WATEROUS TREND WB–77 4–3/4" VALVE OPENING	WATEROUS PACER WB–67 5–1/4" VALVE OPENING
CLOW F–2900 4–1/2" VALVE OPENING	CLOW F–2500 6–1/4" VALVE OPENING
MUELLER CENTURION A–421 4–1/2" VALVE OPENING	MUELLER CENTURION A–423 5–1/4" VALVE OPENING

FIRE HYDRANT

NOT TO SCALE

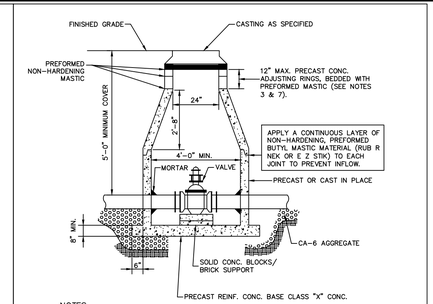


NOTES:

1. 60" DIA FOR ALL PRESSURE CONNECTIONS.
2. PIPE OPENINGS TO BE CAST INTO WALL.
3. PROVIDE CA–6 AGGREGATE BACKFILL AROUND WAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
4. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED;HOWEVER NO MORE THAT ONE TWO INCH ADJUSTING RING OR NO MORE THAN TWO RINGS IN TOTAL MAY BE USED.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PERFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT FOR PRESSURE CONNECTION

NOT TO SCALE



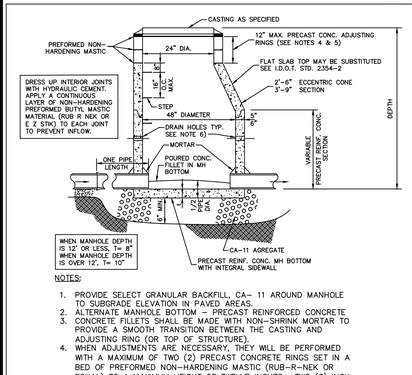
NOTES:

1. VAULT DIAMETER TO BE ONE FOOT LARGER, WHERE VALVE IS LOCATED AT TEE CONNECTION OF MAIN.
2. PROVIDE CA–6 AGGREGATE BACKFILL AROUND VAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
3. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED. HOWEVER NO MORE THAN ONE, TWO INCH ADJUSTING RING OR NO MORE TAN TWO RINGS IN TOTAL MAY BE USED.
4. VALVE MUST BE ALIGNED WITH CENTER OF VAULT OPENING.
5. CONES MUST BE CONCENTRIC WITH VALVES 12" AND SMALLER.
6. BUTTERFLY VALES REQUIRE ECCENTRIC CONES.
7. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT TYPE A

(WATER TIGHT)

NOT TO SCALE

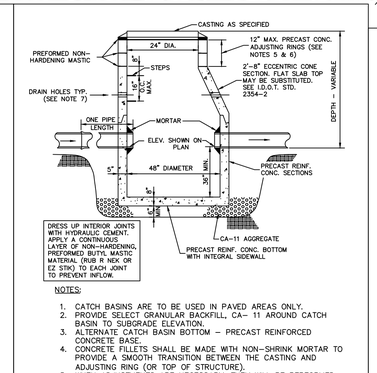


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE MANHOLE BOTTOM – PRECAST REINFORCED CONCRETE
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL MANHOLES IN PAVED AREAS.

STORM MANHOLE TYPE A

NOT TO SCALE

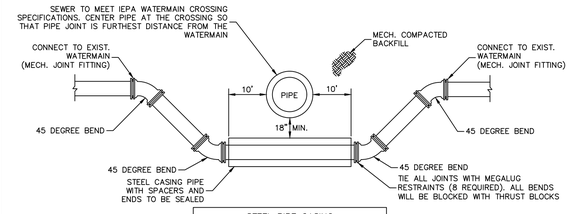


NOTES:

1. CATCH BASINS ARE TO BE USED IN PAVED AREAS ONLY.
2. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND CATCH BASIN TO SUBGRADE ELEVATION.
3. ALTERNATE CATCH BASIN BOTTOM – PRECAST REINFORCED CONCRETE BASE.
4. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
6. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
7. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE CATCH BASIN WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL CATCH BASINS.

CATCH BASIN TYPE A

NOT TO SCALE



STEEL PIPE CASING		
WM DIA	STEEL CASING PIPE DIA	MIN. THICKNESS STEEL CASING
6"	12"	0.188"
8"	16"	0.219"
10"	18"	0.250"
12"	20"	0.281"
14"	24"	0.344"
16"	24"	0.344"
18"	30"	0.406"
20"	30"	0.406"
24"	30"	0.406"

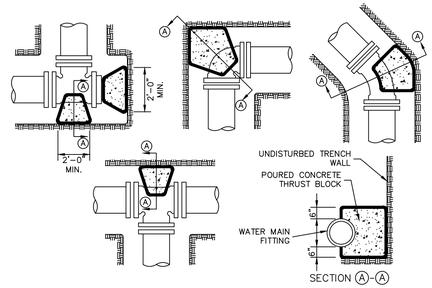
NOTES:

1. IN LIEU OF 45 DEGREE BENDS, WATER MAIN DEPRESSION MAY BE CONSTRUCTED BY DEFLECTING WATERMAIN PER MANUFACTURERS RECOMMENDATION TO ACHIEVE THE MINIMUM 18" OF VERTICAL SEPARATION.
2. ALL FITTINGS AND JOINT RESTRAINTS ARE INCIDENTAL TO COST OF WATERMAIN.
3. THIS TYPE OF CROSSING CASING SHALL BE INSTALLED WHENEVER THE WATERMAIN IS CONSTRUCTED BELOW SEWERS.
4. THE STEEL CASING SHALL BE ONE CONTINUAL SECTION (NO JOINTS).
5. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

WATERMAIN DEPRESSION WITH CASING PIPE

NOT TO SCALE

THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE T BENDS (11 1/4 DEGREES OR MORE), TEES, CAPS, VALVES, HYDRANTS AND AT POINT SPECIFIED BY THE ENGINEER SHALL BE CLASS "SI" CONCRETE, MIN. 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTINGS, AND SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS.

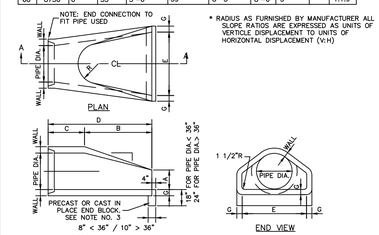


TYPICAL WATER MAIN THRUST BLOCKING

NOT TO SCALE

PIPE DIA.	APPROX. WT.(LBS)	WALL	A	B	C	D	E	G	R	SLOPE
12"	530	2"	4"	24"	4'–0 7/8"	6'–0 7/8"	24"	2"	9"	1:2.4
15"	740	2 1/4"	6"	27"	3'–10"	6'–1"	30"	2 1/4"	11"	1:2.4
18"	990	2 1/2"	9"	27"	3'–10"	6'–1"	36"	2 1/2"	12"	1:2.4
21"	1280	2 3/4"	9"	35"	38"	6'–1"	3'–6"	2 3/4"	13"	1:2.4
24"	1520	3"	9 1/2"	3'–7 1/2"	30"	6'–1 1/2"	4'–0"	3"	14"	1:2.5
30"	2190	3 1/2"	12"	4'–6"	19 3/4"	6'–1 3/4"	5'–0"	3 1/2"	15"	1:2.5
36"	4100	4"	15"	5'–3"	34 3/4"	8'–1 3/4"	6'–0"	4"	20"	1:2.5
48"	8550	5"	24"	6'–0"	28"	8'–2"	7'–0"	5"	22"	1:2.5
60"	8730	6"	35"	5'–0"	39"	8'–3"	8'–0"	5"	*	1:1.9

* RADIUS AS FURNISHED BY MANUFACTURER ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICLE DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H)

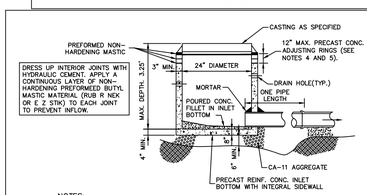


NOTES:

1. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M–170 CLASS III, WALL "B" REINFORCED CONCRETE PIPE.
2. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
3. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS ADOPTED 7–1–94. COST INCIDENTAL TO END SECTION.
4. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD 2449–1.
5. ALL FLARED END SECTIONS FOR PIPE GREATER THAN 12" IN DIAMETER SHALL BE PROVIDED WITH A GRATE.

PRECAST REINFORCED CONCRETE FLARED END SECTION

NOT TO SCALE

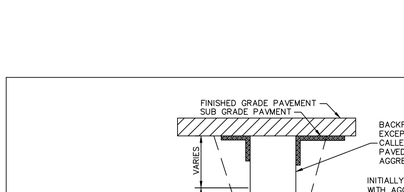


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA–11 AROUND INLET TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE INLET BOTTOM: PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE)
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

INLET TYPE A

NOT TO SCALE

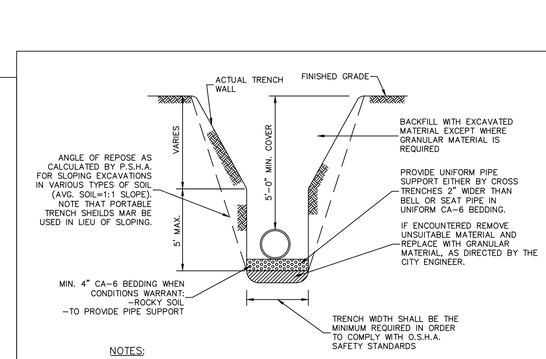


NOTE:
ALL TRENCHES UTILIZING TRENCH BACJFILL SHALL BE COMPACTED USING METHOD 1 IN CONFORMANCE WITH SEC. 550.07(a)–(METHOD 1) OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, AS ADOPTED 1–1–12 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR BACKFILL DETERMINATION

FOR STORM SEWER

NOT TO SCALE

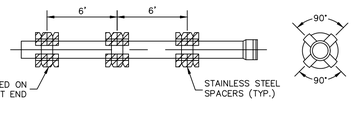


NOTES:

1. IN PAVED AREAS ALL TRENCHES SHALL BE JETTED IN CONFORMANCE WITH SEC. 550.07 (METHOD 3) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED 1–1–97 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR WATER MAIN

NOT TO SCALE



NOTES:

1. SPACERS TO BE SIZED TO ALLOW CARRIER PIPE TO BE CENTERED IN CASING LOCATE SPACERS 2' FROM END OF CASING AND EVERY 6' EACH PIPE LENGTH
2. CASING TO BE SEALED AT BOTH ENDS WITH WATERTIGHT BITUMINOUS PLUG.
3. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

CASING SPACER DETAIL

NOT TO SCALE

REVIEW SET NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DNV
2	09–19–24	PER VILLAGE REVIEW	SDD
3	10–17–24	PER VILLAGE REVIEW	SDD
4	11–04–24	PER CCDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

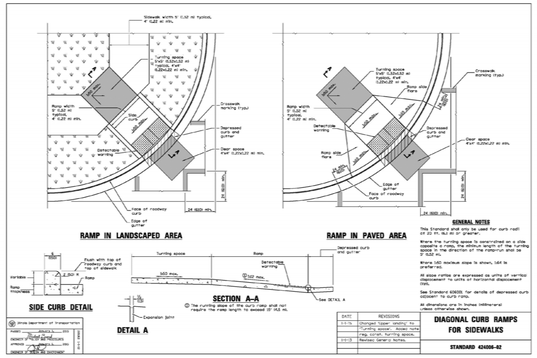
DEI

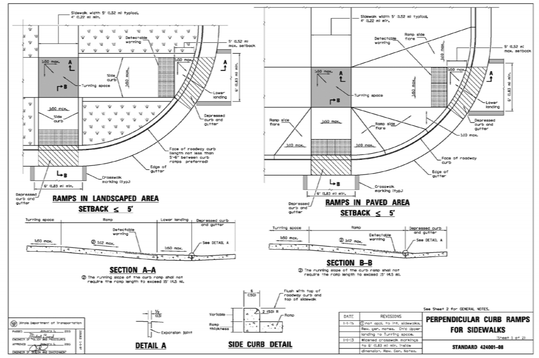
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Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

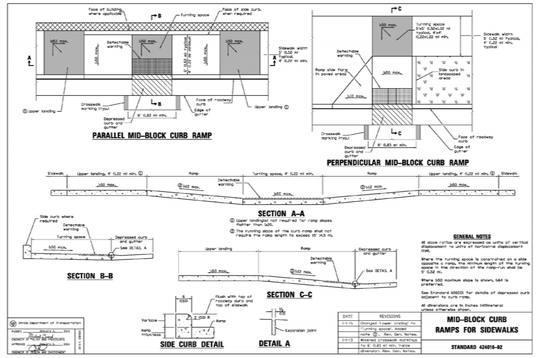
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OF
20

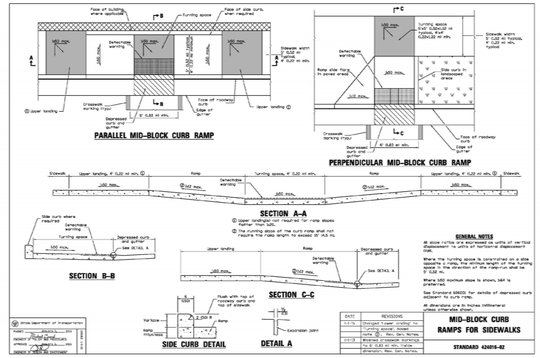
PROJECT DETAILS

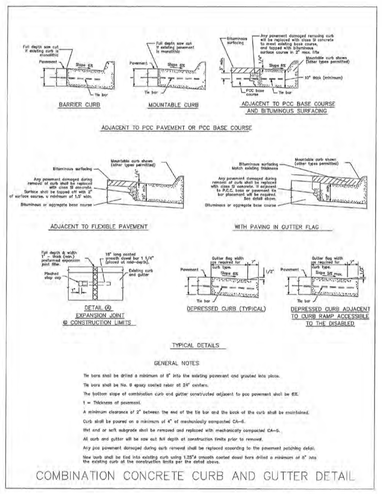
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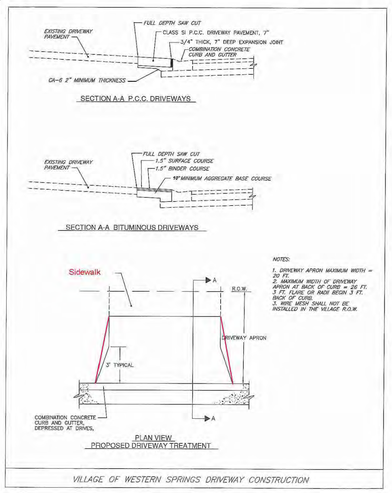


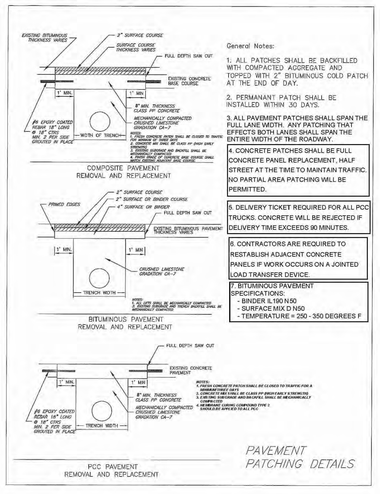


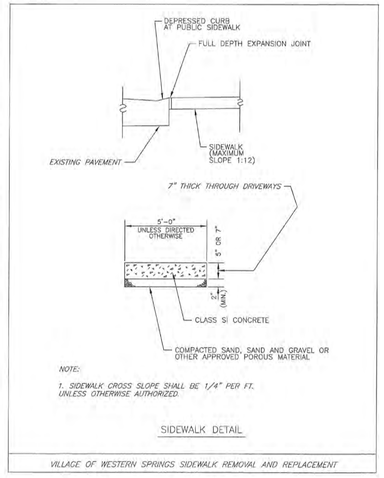


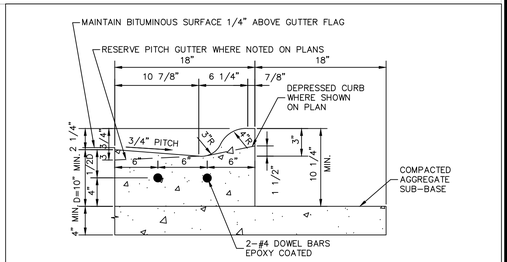




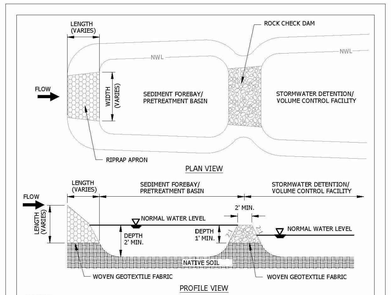


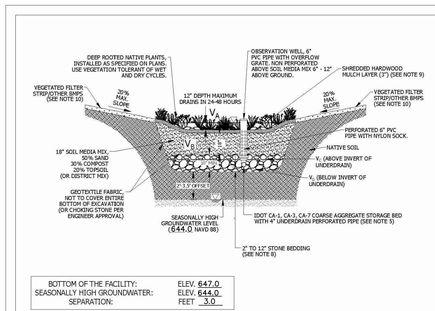






M3.12 CURB AND GUTTER
NOT TO SCALE



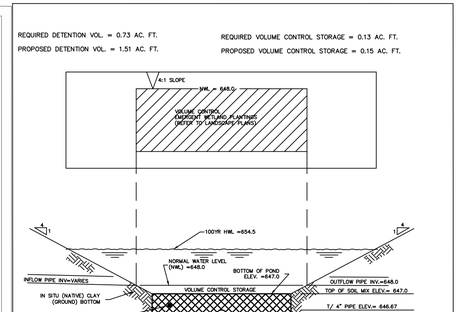


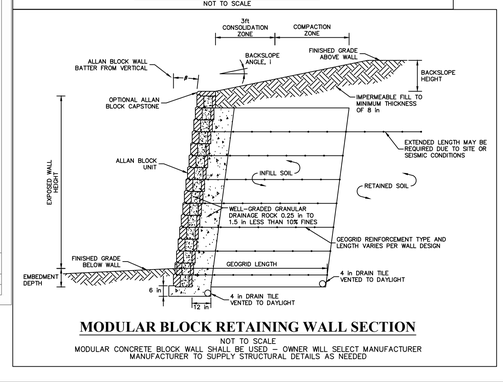
BOTTOM OF THE FACILITY:	ELEV. 647.0
SEASONALLY HIGH GROUNDWATER SEPARATION:	ELEV. 644.0 FEET 3.0

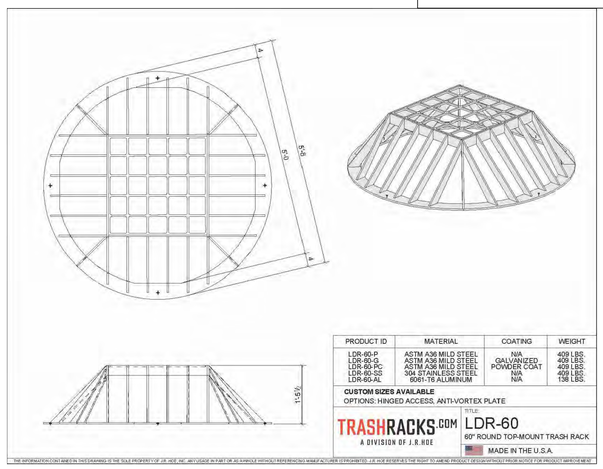
VOLUME TYPE	SURFACE AREA	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_A : SURFACE STORAGE	7,261	1.0'	1.00	1.00 X V_A	7,261 ft³
V_B : SOIL MEDIA MIX	N/A	N/A	0.25	0.50 X 0.25 X V_B	0
V_C : COARSE AGGREGATE (ABOVE INVERT)	N/A	N/A	0.36	0.50 X 0.36 X V_C	0
V_D : COARSE AGGREGATE (BELOW INVERT)	N/A	N/A	0.36	0.36 X V_D	0
				TOTAL	7,261 ft³

NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20-FEET FROM ROADWAY GRAVEL SHOULDER; AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. AVOID INSTALLATION ON SLOPES GREATER THAN 3.00%. AVOID COMPACTING NATIVE SOILS. SCARIFY ANY COMPACTED SOIL.
4. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF IUM MATERIAL SPECIFICATION 592, FOR WOVEN: APPARENT OPENING SIZE OF 0.50 MM (TABLE 1, CLASS 1). FOR NON WOVEN: APPARENT OPENING SIZE OF 0.30 MM (TABLE 2, CLASS II).
5. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, DISTRICT VULCAN MIX, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
6. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF BMP AND SEASONALLY HIGH GROUNDWATER LEVEL.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN EVERY 30 FEET ON CENTER. PROVIDE A SOIL REPORT DOCUMENTING NATIVE INFILTRATION RATE TO FOREGO UNDERDRAINS. NO FILTER FABRIC COVER/SOCK.
8. MINIMUM UNDERDRAIN BEDDING OF 2 INCHES, MAXIMUM OF 12 INCHES.
9. MULCH LAYER SHALL BE HARDWOOD MULCH OR OTHER NON-FLOATING GROUND COVER.
10. FOLLOW THE REQUIRED PRETREATMENT MEASURES LISTED ON THE VOLUME CONTROL PRETREATMENT MEASURES DETAIL.

NOT TO SCALE
TECHNICAL GUIDANCE MANUAL
10/11/18
BIORETENTION FACILITY DETAIL
STD. DWG. NO.1
PAGE NO.1







PRODUCT ID	MATERIAL	COATING	WEIGHT
LDR-60-P	ASTM A36 MILD STEEL	N/A	409 LBS.
LDR-60-G	ASTM A36 MILD STEEL	GALVANIZED	409 LBS.
LDR-60-PC	ASTM A36 MILD STEEL	POWDER COAT	409 LBS.
LDR-60-SS	304 STAINLESS STEEL	N/A	409 LBS.
LDR-60-AL	6061-T6 ALUMINUM	N/A	138 LBS.

CUSTOM SIZES AVAILABLE.
OPTIONS: HINGED ACCESS, ANTI-VORTEX PLATE

TRASHRACKS.COM
A DIVISION OF J.R.HOE
TITLE: LDR-60
60" ROUND TOP-MOUNT TRASH RACK
MADE IN THE U.S.A.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF J.R. HOE, INC. ANY USAGE IN PART OR AS A WHOLE WITHOUT PERMISSION IS STRICTLY PROHIBITED. J.R. HOE RESERVES THE RIGHT TO MAKE PRODUCT DESIGN IMPROVEMENTS FROM TIME TO TIME WITHOUT PRIOR NOTICE

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WSPRINGS REVIEW	SDD
3	10-29-24	PER VILLAGE REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
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WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

14
OF
20

PROJECT DETAILS

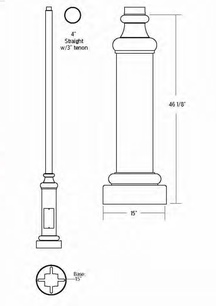
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HADCO by @ignify | Outdoor | Poles and Brackets | P4030 Straight Round Smooth

4" Straight w/3" tenon

P4030 Poles and Brackets

Straight Round Smooth



Project:
Location:
QM NO.
Type:
Catalog #:
Notes: QTY:

example P4030 S 4 F D

Order guide

Product Code	Pole Height	Finish	Outlet Location	Outlet Options
P4030	14	A		
	12'	A Black	T 12" Down from Top - Aligned with Hinge Side	D Standard Duplex
	14'	W White	B 4" Up from Top of Base - Aligned with Hinge Side	S GFI Duplex
	16'	N Bronze		
		G Green		

EPA calculated based on deductive break loading. For AASHTO clothing, contact factory.

Pole Data

Pole Model	Pole Shape	Pole Type	Shaft Dimensions	Pole Fluted	Anchor Base Shape	Bolt Circle	Base Dim (W)	Hand Hole Dim (H)
P4030	Round	Straight	4	Smooth	round	8 to 12	15 x 45.125	6 x 12

Pole Family	Catalog Number	Nominal Height (ft)	Tenon Section (in)	Wall Thickness (in)	EPA Rating 90 MPH (sq. ft)	EPA Rating 100 MPH (sq. ft)	Anchor Bolts (in)
P4030	P4030-12	12	3	0.125	10.69	11.61	3/4-10 by
P4030	P4030-14	14	3	0.125	12.16	7.16	3/4-39 by
P4030	P4030-16	16	3	0.125	12.71	6.00	3/4-10 by
P4030	P4030-18	18	3	0.125	11.40	4.83	3/4-39 by

Specifications

HOUSING:
16GA HH high-strength, low-copper, proprietary cast aluminum alloy. 6005-T5 extruded aluminum. Anchor rods are hot dipped galvanized steel. Tenon is 356 HM sand cast aluminum.

FINISH:
A durable polyurethane enamel finish is applied after assembled are shot blasted to create a surface profile which allows for the highest level of paint adhesion. Laboratory tested for superior weatherability and fade resistance in accordance with ASTM B-117-64 and ANSI/ASTM G53-77 specifications. For larger projects where a custom color is required, contact the factory for more information.

WARRANTY:
Please visit **www.signify.com/warranties** for more details on structural and finish warranty.

OUTLET:
Standard DuplexOutlet has universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant. GFI Duplex OutLet has dual-function indicator light, universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant.

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Hadco_P4030_R14_SpecSheet 11/19 page 2 of 2

HADCO by @ignify | Urban | Hagerstown | TX03 Post top



Hadco's Hagerstown LED post top gives you the ability to create a unique style through our modular post top concepts to blend into any residential and historic urban settings. With the latest LED technology you can seamlessly replace traditional HID technology to maximize energy savings and significantly reduce total cost of ownership. The Hagerstown luminaire provides excellent uniformity, traditional cosmopolitan look, with the benefits of modern technology.

Project: HERITAGE CROSSING
Location: WESTERN SPRINGS
Qty: 56
Type: TX03
Catalog #:
Notes: QTY: 1

Ordering guide

example TX03-32-12B-3-A-A-E-N-363-A-E-SP1

Series	LEDs	Gen.	Pods	Finials	Fasteners	Finishes	Optical System	Photo controls
TX03 Hagerstown LED post top	32 32 LED 48 48 LED 64 64 LED	03 Gen3	B Octagonal fitter N Round fitter w/sculptured petals C Octagonal fitter w/scalloped flower petals D Smooth tapered hourglass fitter E Tapered fluted fitter w/sculptured flower petals F Tall round fluted fitter G Round contemporary fitter H Tall round fitter w/sculptured petals L Round fluted long fitter P Decorative leaf fitter w/sculptured petals	A Finial B Ball finial C Orbital D Urn E Vase F Pinial G Urn H Finial N No finial	1 Hot-headed bolts 3 Allen head bolts A Anchor bolts	A Black B White G Green N Verde S Silver W Bronze	2 Type 2 3 Type 3 4 Type 4 5 Type 5 RWM Type 3 Rotating Wide Medium (FSS)	A 120 VAC B 208-240/277 VAC C 347 VAC N None

Bottom gasketed hinged door

Ordering guide (continued)

Future Proof controls	Color Temp	Voltages	Drivers	Driver Options	Surge protection
N	740	A	S	N	SP1
R7 7-Pin Receptacle* N None	T30 3000K T40 4000K	120-277 VAC 347-480 VAC	3 350mA 4 530mA 5 700mA 6 1000mA 9 1050mA	4N 4 hrs 25% reduction* 4S 4 hrs 50% reduction* 4T 4 hrs 70% reduction* 5N 5 hrs 25% reduction* 5S 5 hrs 50% reduction* 5T 5 hrs 70% reduction* DN 8 hrs 25% reduction* DS 8 hrs 50% reduction* DT 8 hrs 70% reduction* DL Compatible with DALI 0N No dimming SD Sensor ready driver (dimming configured) SRD Sensor ready driver (dimming configured)*	SP1 10kV/10kA (standard) SP2 20kV/20kA (optional)

1. Configuration arrives with 4 LEDs and one (1) LED array board as is not compatible with the 1050mA (9) three current.
2. HALDS are limited to 16C ambient rating with 1050mA driver current.
3. (Closed Fixtures)
4. Future Proof controls with (L)(L) (L)(L) are not compatible with the Twist Lock receptacle (R) photo control.
5. *R7 should be on the top of the roof, NEMA fitter is required.

Urban_SpecSheet_TX03.pdf 03/22 page 1 of 8

Dimensions



Max. EPA: 1.72 sq. ft.
Max. Weight: 37 lbs.

Finials



Decorative Pods



Urban_SpecSheet_TX03.pdf 03/22 page 2 of 8

TX03 Hagerstown

Post top

Lumen Charts

	Type 2				Type 3				Type 3W			
LED mode 4000K	LED qty*	System Current	Color Temp	Average System Wattage**	Lumen Output	Bug Rating	Efficacy	Lumen Output	Bug Rating	Efficacy	Lumen Output	Bug Rating	Efficacy
TX0332-Gb-w740-3	32	350	4000	35.4	4284	B1-U2-G1	121	4261	B1-U2-G1	120	4455	B1-U2-G1	126
TX0332-Gb-w740-5	32	530	4000	51.8	6977	B2-U3-G2	135	6972	B1-U3-G1	135	6958	B2-U3-G2	134
TX0332-Gb-w740-7	32	700	4000	71.9	7829	B2-U3-G2	109	8125	B2-U3-G2	109	8066	B2-U3-G2	112
TX0332-Gb-w740-9	32	900	4000	93.9	8536	B2-U3-G2	91	9521	B2-U3-G2	101	8925	B2-U3-G2	95
TX0332-Gb-w740-1	32	1050	4000	107.7	10814	B2-U3-G2	100	10806	B2-U3-G2	100	11141	B3-U3-G3	103
TX0348-Gb-w740-5	48	350	4000	51.4	6247	B2-U3-G2	122	6241	B2-U3-G2	121	6438	B2-U3-G2	125
TX0348-Gb-w740-7	48	530	4000	75.5	8942	B2-U3-G2	118	8935	B2-U3-G2	118	9213	B2-U3-G2	122
TX0348-Gb-w740-9	48	700	4000	98.3	10258	B2-U3-G2	104	11784	B2-U3-G2	120	11784	B3-U3-G3	120
TX0348-Gb-w740-1	48	900	4000	126.8	14301	B3-U3-G3	113	14324	B3-U3-G3	113	14326	B3-U3-G3	113
TX0364-Gb-w740-5	64	350	4000	68.7	8172	B2-U3-G2	119	8165	B2-U3-G2	119	8419	B2-U3-G2	123
TX0364-Gb-w740-7	64	530	4000	100.5	11697	B3-U3-G3	116	11688	B3-U3-G3	116	12033	B3-U3-G3	120
TX0364-Gb-w740-7	64	700	4000	138.4	14437	B3-U3-G3	104	14424	B3-U3-G3	104	15389	B3-U3-G3	111
TX0364-Gb-w740-9	64	900	4000	179.9	17668	B3-U3-G3	98	17648	B3-U3-G3	98	18548	B3-U3-G3	103

	Type 4				Type 5			
LED mode 4000K	LED qty*	System Current	Color Temp	Average System Wattage**	Lumen Output	Bug Rating	Efficacy	Lumen Output
TX0332-Gb-w740-3	32	350	4000	35.4	4349	B1-U2-G1	123	4524
TX0332-Gb-w740-5	32	530	4000	51.8	6964	B1-U3-G1	134	7372
TX0332-Gb-w740-7	32	700	4000	71.9	7943	B2-U3-G2	110	8368
TX0332-Gb-w740-9	32	900	4000	93.9	9635	B2-U3-G2	103	10011
TX0332-Gb-w740-1	32	1050	4000	107.7	10971	B2-U3-G2	102	11420
TX0348-Gb-w740-5	48	350	4000	51.4	6337	B1-U3-G2	123	6587
TX0348-Gb-w740-7	48	530	4000	75.5	9072	B2-U3-G2	120	9443
TX0348-Gb-w740-9	48	700	4000	104.7	11064	B2-U3-G2	118	12059
TX0348-Gb-w740-1	48	900	4000	126.8	14369	B3-U3-G3	113	14686
TX0364-Gb-w740-5	64	350	4000	68.7	8291	B2-U3-G2	121	8630
TX0364-Gb-w740-7	64	530	4000	100.5	11867	B2-U3-G2	112	12353
TX0364-Gb-w740-7	64	700	4000	138.4	16164	B3-U3-G3	109	16774
TX0364-Gb-w740-9	64	900	4000	179.9	19254	B3-U3-G3	102	19012

Lumen charts continue on next page.

* Configurations with 64 (64) LED array boards are limited to a 25C ambient rating with the 900mA (9) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Equivalence should always be confirmed by a photometric report.

Note: Equivalence should always be confirmed by a photometric layout. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

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TX03 Hagerstown

Post top

Lumen Charts

	Type 2				Type 3				Type 3W			
LED mode 3000K	LED qty*	System Current	Color Temp	Average System Wattage**	Lumen Output	Bug Rating	Efficacy	Lumen Output	Bug Rating	Efficacy	Lumen Output	Bug Rating	Efficacy
TX0332-Gb-w730-3	32	350	3000	35.4	4003	B1-U2-G1	113	4001	B1-U2-G1	113	4125	B1-U2-G1	117
TX0332-Gb-w730-5	32	530	3000	51.8	6516	B2-U3-G2	126	6511	B2-U3-G2	126	6581	B2-U3-G2	127
TX0332-Gb-w730-7	32	700	3000	71.9	7311	B2-U3-G2	102	7591	B2-U3-G2	102	7539	B2-U3-G2	105
TX0332-Gb-w730-9	32	900	3000	93.9	8573	B2-U3-G2	91	8895	B2-U3-G2	95	8382	B2-U3-G2	89
TX0332-Gb-w730-1	32	1050	3000	107.7	10107	B2-U3-G2	94	10068	B2-U3-G2	94	10412	B2-U3-G2	97
TX0348-Gb-w730-5	48	350	3000	51.4	5838	B2-U3-G2	114	5833	B2-U3-G2	113	6016	B2-U3-G2	117
TX0348-Gb-w730-7	48	530	3000	75.5	8357	B2-U3-G2	111	8350	B2-U3-G2	111	8610	B2-U3-G2	114
TX0348-Gb-w730-9	48	700	3000	104.7	10671	B2-U3-G2	102	10662	B2-U3-G2	102	11784	B3-U3-G3	113
TX0348-Gb-w730-9	48	900	3000	126.8	12997	B3-U3-G3	95	12985	B3-U3-G3	95	13930	B3-U3-G3	98
TX0348-Gb-w730-1	64	350	3000	68.7	7597	B2-U3-G2	111	7591	B2-U3-G2	111	7831	B2-U3-G2	115
TX0364-Gb-w730-5	64	530	3000	100.5	10832	B3-U3-G3	108	10823	B3-U3-G3	108	11263	B3-U3-G3	112
TX0364-Gb-w730-7	64	700	3000	138.4	13990	B3-U3-G3	101	13948	B3-U3-G3	101	14382	B3-U3-G3	104
TX0364-Gb-w730-7	64	700	3000	179.9	16803	B3-U3-G3	94	16811	B3-U3-G3	93	17354	B3-U3-G3	96

	Type 4				Type 5			
LED mode 3000K	LED qty*	System Current	Color Temp	Average System Wattage**	Lumen Output	Bug Rating	Efficacy	Lumen Output
TX0332-Gb-w730-3	32	350	3000	35.4	4082	B1-U2-G1	115	4228
TX0332-Gb-w730-5	32	530	3000	51.8	6667	B1-U2-G2	109	6899
TX0332-Gb-w730-7	32	700	3000	71.9	7423	B2-U3-G2	103	7727
TX0332-Gb-w730-9	32	900	3000	93.9	9042	B2-U3-G2	96	9402
TX0332-Gb-w730-1	32	1050	3000	107.7	10253	B2-U3-G2	95	10673
TX0348-Gb-w730-5	48	350	3000	51.4	5977	B2-U3-G2	116	6185
TX0348-Gb-w730-7	48	530	3000	75.5	8478	B2-U3-G2	112	8825
TX0348-Gb-w730-7	48	700	3000	104.7	10826	B2-U3-G2	103	11268
TX0348-Gb-w730-9	48	900	3000	126.8	13186	B3-U3-G3	96	13725
TX0364-Gb-w730-3	64	350	3000	68.7	7748	B2-U3-G2	113	8085
TX0364-Gb-w730-5	64	530	3000	100.5	11091	B3-U3-G3	110	11548
TX0364-Gb-w730-7	64	700	3000	138.4	14193	B3-U3-G3	102	14742
TX0364-Gb-w730-9	64	900	3000	179.9	17200	B3-U3-G3	96	17358

* Configurations with 64 (64) LED array boards are limited to a 25C ambient rating with the 900mA (9) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Equivalence should always be confirmed by a photometric report.

Note: Equivalence should always be confirmed by a photometric layout. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

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TX03 Hagerstown

Post top

Specifications

Roof
Roof (0.090" thick spun aluminum (12"x1/4"x 16"x1/4"). Easy fuse replacement of either roof or bottom globe section if required.

Globe
Narrow body globe is constructed of clear injection-molded vertically ribbed UV stabilized acrylic globe. Globe is secured to the cast aluminum wheels gasking of .1"x.1" and an ourabberstrick diameter of 9". Globe (wasroof) has a 13"x14"x 14"x14"W".

Cage
Cage for narrow body globes (10" dia.) is constructed of die-cast 360 aluminum alloy with hinged door providing 180° entry into the fitter lower. Solid rectangular bars on each of cage. Height of cage is 17" and width of cage is 10". Finish is powder coated to your specification.

Pods
Wiring block to accept three #8 solid or stranded wires keep cast aluminum post securely in place. Pod is secured to the fitter by stainless steel set screws (Hex head or Allen head as specified) for mounting to 3" O.D. post tenon. Glass holder has an interior water trap to prevent water from entering ballast compartment. Glass is secured to holder by 5/16-18 black cadmium stainless steel fasteners (Hex head or Allen head as specified). All hardware is to be stainless steel captive

Optional Decorative Pods
Octagonal fitter (A) is constructed of die-cast 360 aluminum alloy with bottom-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (3"H x 1"W x 1"W).

Round fitter with sculptured petals (B)
is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (3"H x 1"W x 1"W).

Fluted tapered hourglass fitter (D)
is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (3"H x 1"W x 1"W).

Smooth tapered hourglass fitter (D)
is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (3"H x 1"W x 1"W).

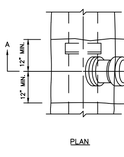
Tapered fluted fitter with sculptured flower petals (E) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell (10"H x 1"W x 1"W).

Tall round fluted fitter (G) is constructed of die-cast 360 aluminum alloy with removable door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (14"H x 1"W).

Round contemporary fitter (H) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Easy access to photo eye through the door on the pod (10"H x 1"W).

Round fluted long fitter (L) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with a side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or button eye photocell. Two easy access to photo eye through the door on the pod (15"L x 1"W x 1"W).

Decorative leaf fitter with sculptured petals (P) is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"L x 1"W x 1"W).

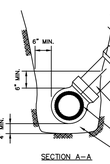


Tall round fluted fitter (G) is constructed of die-cast 360 aluminum alloy with removable door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (14"H x 1"W).

Round contemporary fitter (H) is constructed of 356 HM High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Easy access to photo eye through the door on the pod (10"H x 1"W).

Round fluted long fitter (L) is constructed of 356 HM High-Strength, Low-Copper cast aluminum with a side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or button eye photocell. Two easy access to photo eye through the door on the pod (15"L x 1"W x 1"W).

Decorative leaf fitter with sculptured petals (P) is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (15"L x 1"W x 1"W).



Finials
All finials are cast aluminum mounted with 1/4-20 stainless steel threaded studs. Standard finial is Ball finial. Optional finials finish as specified. Finish is Powdercoat to customer.



Fasteners
Used to secure post fitter to post tenon and globe to globe holder: Hex Head (T) and Allen Head (A) are both Electro Hexture Black cadmium stainless steel.

Light Engine
LED grid is composed of five plain components: Base, Sink, Lens, LED lamp, Optical System, and Driver. Electrical components are RoHS compliant.

LED Engine
Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA (on - Neutral White, 4000 kelvin nominal (3985K to 4509K) or 3000 kelvin nominal (2870K to 3220K), CRI 70 Min. 75 Typical.

Heat Sink
Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Future Proof Control
R7 - Receptacle with 7 pin enabling dimming and additional functionality (to be determined). Can be used with a twist lock nute or a shorting cap. Will ship with a shorting cap installed for ease of wiring. Remove shorting cap when you're ready to install your node.

Optical System
2= Type 2
3= Type 3
3L= Type 3 with House side shield
3HL= Type 3 with House side shield
3W= Type 3 Wide
3WHL= Type 3 Wide with House side shield
4= Type 4
5= Type 5

Above options are all composed of high performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is sealed to IP66 to protect against dust and water. LM-79, LM-79 and TM-15 (IESNA) certifying its photometric performance. Street side indicated.

Surge Protection
Surge protector tested in accordance with ANSI/IEEE C62.41 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-0-ruund, Line-Neutral and Line-Neutral. Surge protector tested per DOE (US Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) solid state lighting (SSL) recommended practice for electrical immunity requirements for High Test Level 10kV / 10kA. Option for SP2 20kV/20kA.

Finish
Color in accordance with the ASMA 2603 standard. Application of polyester powder coating. Super durable TGIC polyester, 2.5 mil minimum of bakeware. The Thermosetting resins provides a discoloration resistant finish, superior gloss and color fastness. The finish as well as outer retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 1000 hours salt spray resistance testing and accordance with testing performed and per ASTM B117 standard.

Luminaire's Useful Life
The LED's high efficacy, energy consumption and delivered lumens for each option. Based on IESNT in situthermal testing in accordance with LM-80 and TM-21 projections, using LM-80 data from LED manufacturers and engineering estimates. Luminaire's useful life is expected to reach 70,000+ hours with >L70 lumen maintenance @ 25°C. Luminaire useful life accounts for LED lumen maintenance and additional factors, including LED life, driver life, PCB substrate, solder joints and flexpoints and burning hours for nominal applications.

Driver Options
4RD: Sensor Ready Driver including SR functionality but with 4 hrs dimming and other functionalities, 24V auxiliary supply and a signal signal input (LSI) not connected to the top NEMA twist lock receptacle.
5RDR: Sensor Ready Driver including SR functionality but with 5 hrs dimming and other functionalities but with 24V auxiliary supply and a signal signal input (LSI) not connected to the top NEMA twist lock.
DA: 4 Hrs 25% Reduction
DB: 4 Hrs 50% Reduction
DC: 4 Hrs 70% Reduction
DD: 6 Hrs 25% Reduction
DE: 6 Hrs 50% Reduction
DF: 6 Hrs 70% Reduction
DG: 8 Hrs 25% Reduction
DH: 8 Hrs 50% Reduction
DJ: 8 Hrs 70% Reduction
DL: Pre-set driver compatible with the DALI hypothetic control system

Predicted Lumen Performance Data

Predicted lumen depreciation data*			
Ambient Temperature (°C)	Driver no.	Calculated L(p)hours^	Lumen Maintenance % at 60,000 hours
25°C	up to 1050 mA	>100,000 hrs	92.49%

1. Predicted performance derived from LED manufacturer's lateral exposure to design estimates, based on IESNA LM-80 methodology. Actual exposure may vary due to field application conditions.
2. Per IESNA TM-21 methodology and based upon operating at 25°C ambient.
3. Calculated per IESNA TM21-11. Published L_xxxx hours limited to fifteen times (15) test hours.

LED product is manufacturing standard
This electronic component is in accordance to the standard document IEC 62031 and has light emitting diodes (LEDs) are in accordance in compliance with IEC61347-1 and ANSI/ESD S20.20 standards so to eliminate ESD events that could decrease the useful life of the product.

Quality Control
The manufacturer must provide a written commitment to ISO 9001:2008 and ISO 14001:2004 International Quality standards Certification.

Vibration Resistance
Meets the ANSI C136.31-2001, American National Standard for Roadway Luminaire's Vibration specifications for normal Applications.

Certifications and Compliance
UL listed to Canadian safety standards for luminaires and poles in accordance with CSA Standards UL 8750 and UL8750 compliant. ETL listed to U.S. safety standards for wet locations: cETL listed to Canadian safety standards for wet locations. LM80 & LM79 tested.

IP Rating: The LED optics chamber is IP66 rated. The LED driver is IP66 rated.

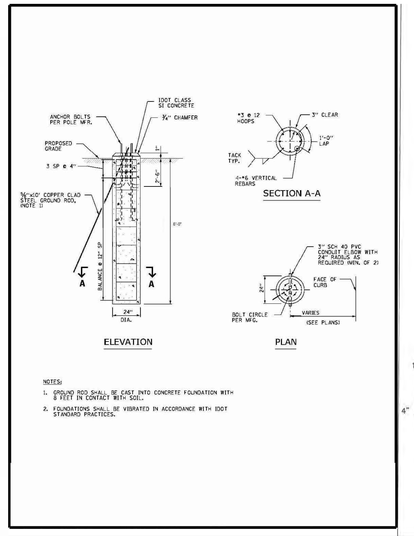
Warranty: 5-year extended warranty.

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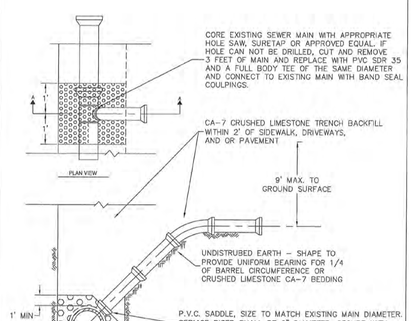
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Hadco_P4030_R14_SpecSheet 11/19 page 1 of 2

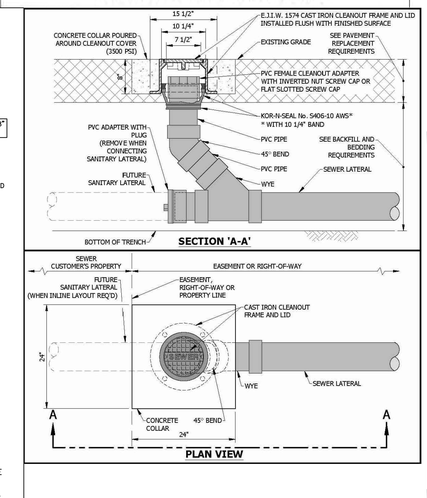


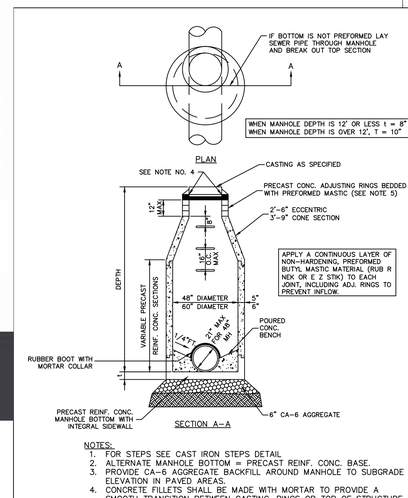
NOTES:
1. GROUND ROD SHALL BE CAST INTO CONCRETE FOUNDATION WITH 8 FEET IN CONTACT WITH SOIL.
2. FOUNDATIONS SHALL BE VIBRATED IN ACCORDANCE WITH IDOT STANDARDS PRACTICES.



NOTES:
1. ALL PAVEMENT, SIDEWALK, DRIVEWAYS, AND CURB MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
2. UNDER NO CIRCUMSTANCES SHALL AN EXTERNAL CLEANOUT BE PLACED IN VILLAGE RIGHT OF WAY.

SANITARY SEWER SERVICE DETAIL




IF BOTTOM IS NOT PREFORMED LAY SEWER PIPE THROUGH MANHOLE AND BREAK OUT TOP SECTION
A
A
WHEN MANHOLE DEPTH IS 12' OR LESS t = 8"
WHEN MANHOLE DEPTH IS OVER 12', T = 10"
PLAN
SEE NOTE NO. 4
CASTING AS SPECIFIED
PRECAST CONC. ADJUSTING RINGS BEDDED WITH PREFORMED MASTIC (SEE NOTE 5)
2'-6" ECCENTRIC
3'-9" CONE SECTION
APPLY A CONTINUOUS LAYER OF NON-HARDENING, PREFORMED BUTYL MASTIC MATERIAL (RUB R NEK OR E Z SEAL) TO EACH JOINT, INCLUDING ADJ. RINGS TO PREVENT INFLOW.
DEPTH
VARIABLE PRECAST REINF. CONC. SECTIONS
48" DIAMETER
60" DIAMETER
5"
6"
POURED CONC. BENCH
RUBBER BOOT WITH MORTAR COLLAR

FIRE STROBE 2000

EMERGENCY VEHICLE STROBE DETECTOR

The FIRE STROBE 2000 provides rapid access to automatic gates and secured areas. The FIRE STROBE 2000 opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (1440).

Now with STROBEWATCH™.





FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2000 can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2000 is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

DISTRIBUTED BY:

FIRE STROBE 2000 Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2000 signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately 5 seconds.

The FIRE STROBE 2000 is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM® STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2000 for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed.

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2000 system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2000 transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM® emitters, double, quad flash strobes 140-170 fpm. 100% digital.
2. The FIRE STROBE 2000 is fully compatible with the OPTICOM® priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2000 has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2000 has been abused, over voltaged, or altered in any way. The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

INSTALLATION

⚠CAUTION

- *To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging more than 18 inches (46 cm) deep.*
- ALWAYS wear protective gloves and eye protection when changing the battery or working around the battery compartment.

Installation Tips

Do's

- Weld a horizontal bar across entire gate on any installation for strength. Make sure that the operator is mounted level or it will not function properly.
- Make sure there is slack in the operator cable.
- The operator can be mounted on top of the gate frame.
- The operator must be installed at least 12" (30 cm) from the ground.





Don'ts

- DO NOT install upside-down.
- DO NOT install next to sprinklers or any area that may expose the bottom of operator to water.
- DO NOT install on uphill or downhill gates.
- DO NOT install on ANY pedestrian passageways, doorways, or gates.
- DO NOT over-bend the operator cable. Doing this will cause the wires to eventually break.
- DO NOT weld the crossbar on just a few pickets, or they could bend.

INSTALLATION

Large Metal Control Box

The control box MUST be mounted within 5 feet (1.52 m) of the gate operator. Mount the control box as high as possible for best radio reception. Make sure the control box is level.
NOTE: *The Large Metal Solar Control Box (Model XLSOLARCONTUL) does not have the electrical outlets or the expansion board shown in the images.*

Wall or Column Mount

1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. Remove the toroid assembly from the control box by loosening the three screws and lifting the assembly up and out.
3. Use knock outs located at the 4 corners of the control box and knock out using a screwdriver and hammer.
4. Secure the control box to mounting surface using the provided screws (4).

Post Mount

NOTE: *The post mount option is not recommended for the 33AH battery application.*

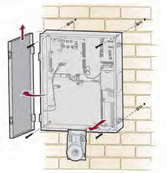
1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. The control box can be mounted to a post with 'U' bolts (refer to chart). The knock out will accommodate a 3/8" diameter 'U' bolt. Select center mounting holes (top and bottom) and knock out using a screwdriver and hammer.
3. Secure the control box to mounting surface with U-bolts and rubber washers (not provided) to ensure a watertight seal.

TYPE AND SIZE	'U' BOLT OPENING
Standard 2" Round Pipe	3-1/2"
Standard 4" Square Post	4"
Standard 6" Square Post	6"

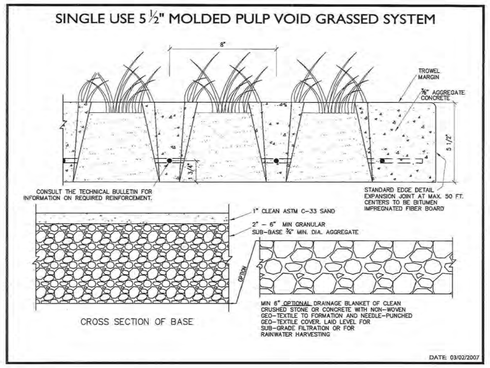
Wall or Column Mount



Post Mount



SINGLE USE 5 ½" MOLDED PULP VOID GRASSED SYSTEM



DATE: 03/02/2007

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WILLAGE REVIEW	SDD
3	10-19-24	PER CDDOTH REVIEW	DMV
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

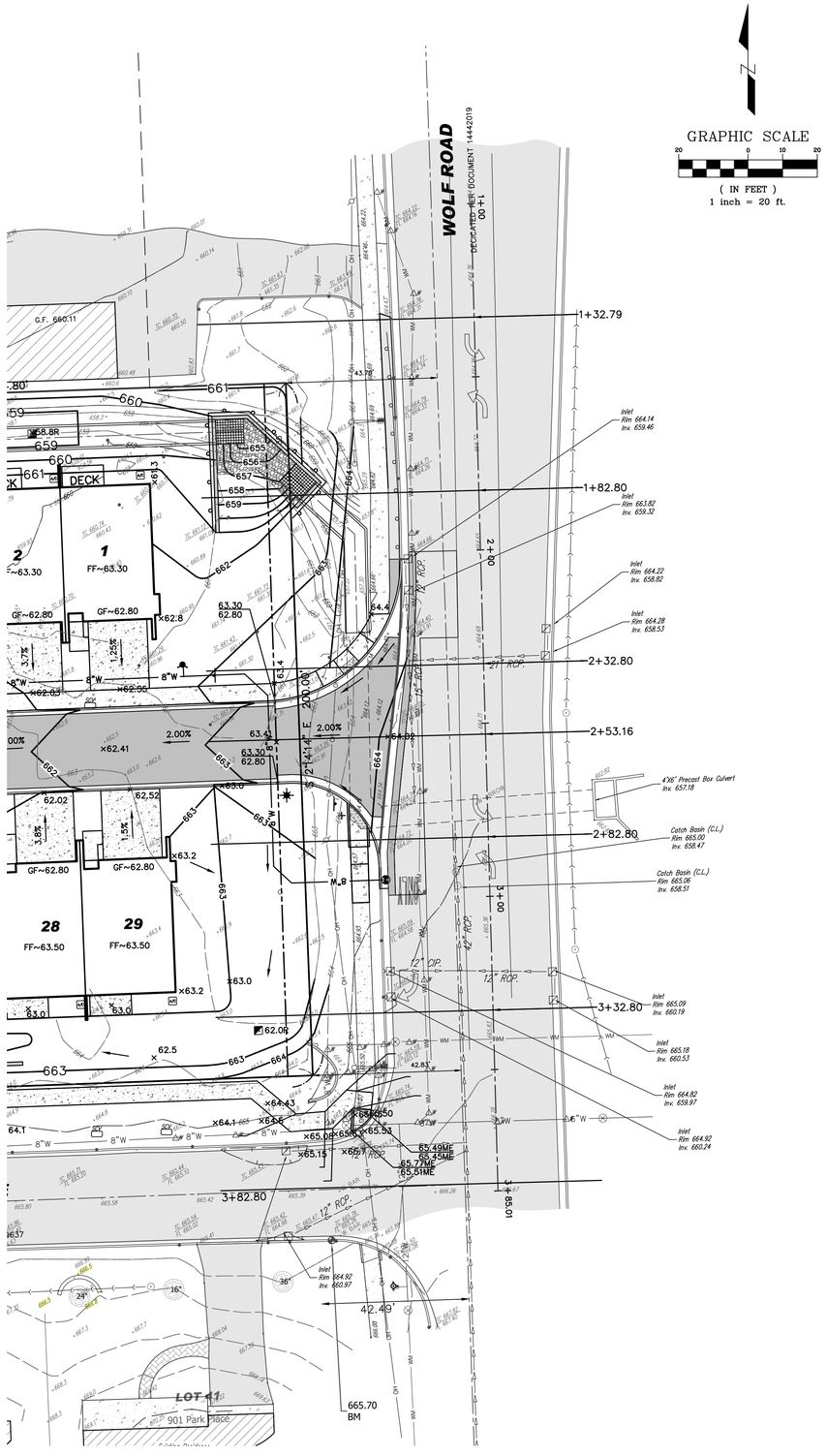
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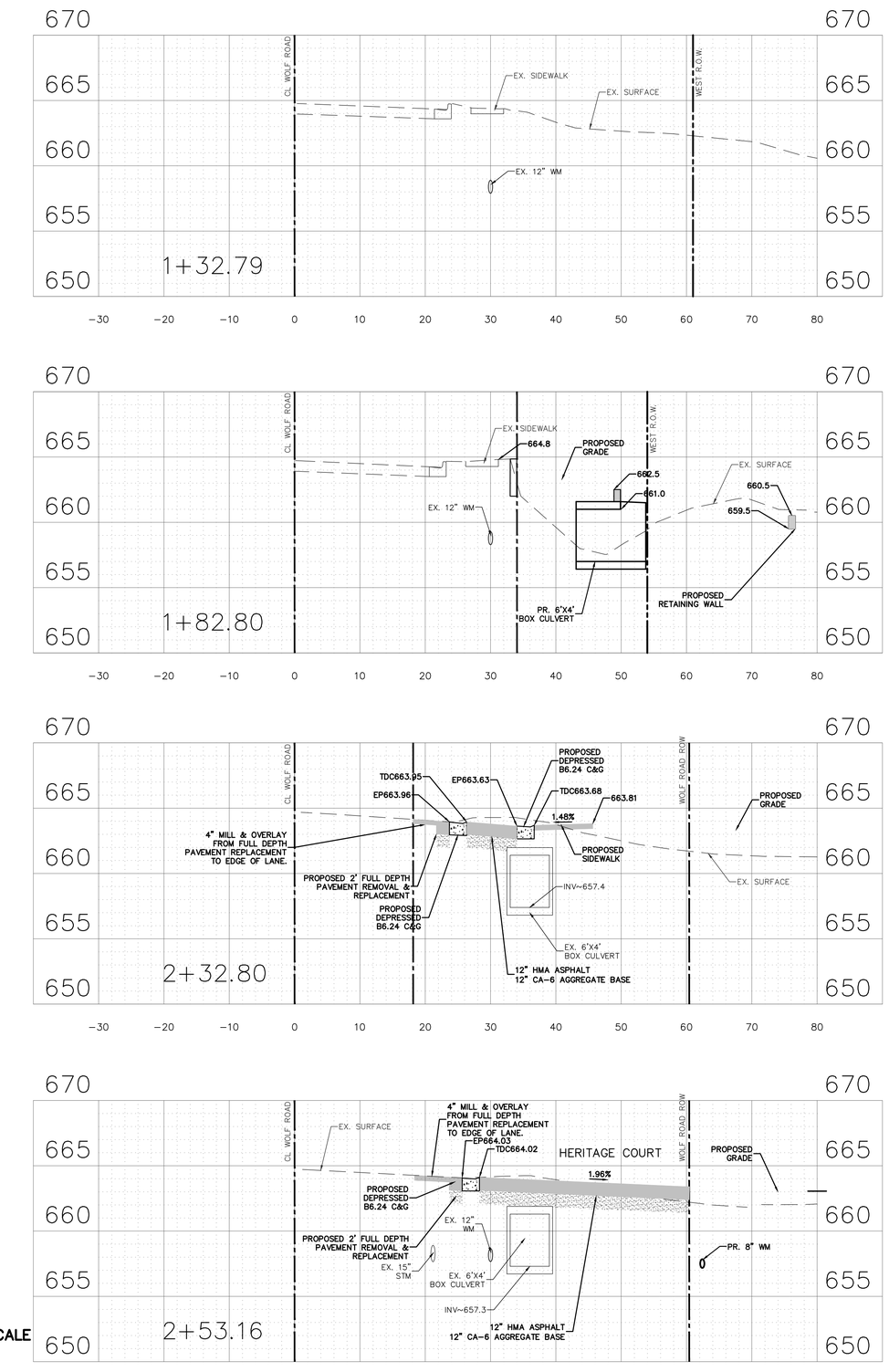
PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

PROJECT DETAILS

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CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAKEMOOR HIGHLANDS SD	DMV
2	08-16-24	PER WESTERN SPRINGS REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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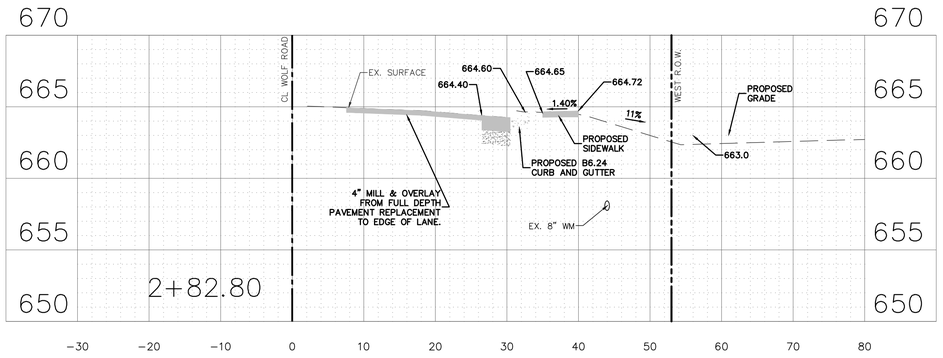
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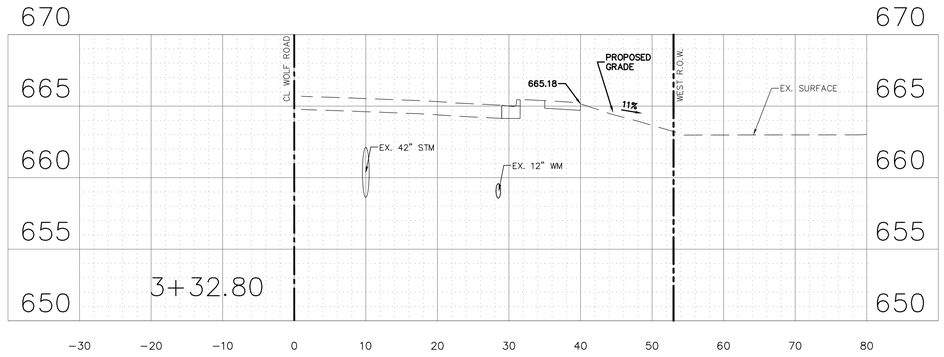
PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

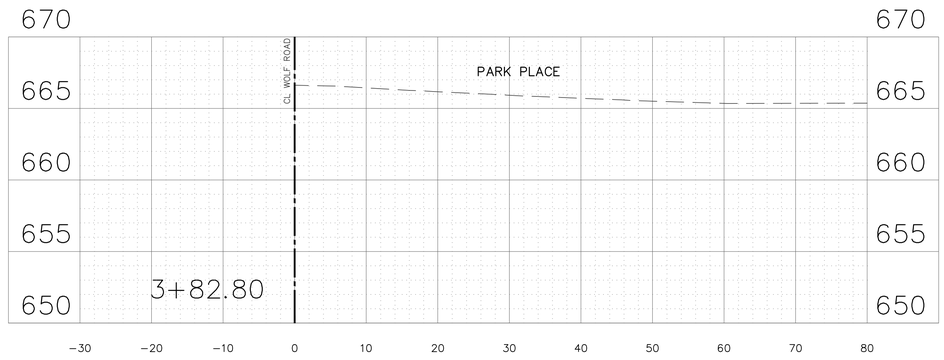
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OF
20

CROSS SECTIONS STA. 1+32.79 TO 2+53.16

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CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-28-24	PER WSSD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
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FINAL ENGINEERING PLANS
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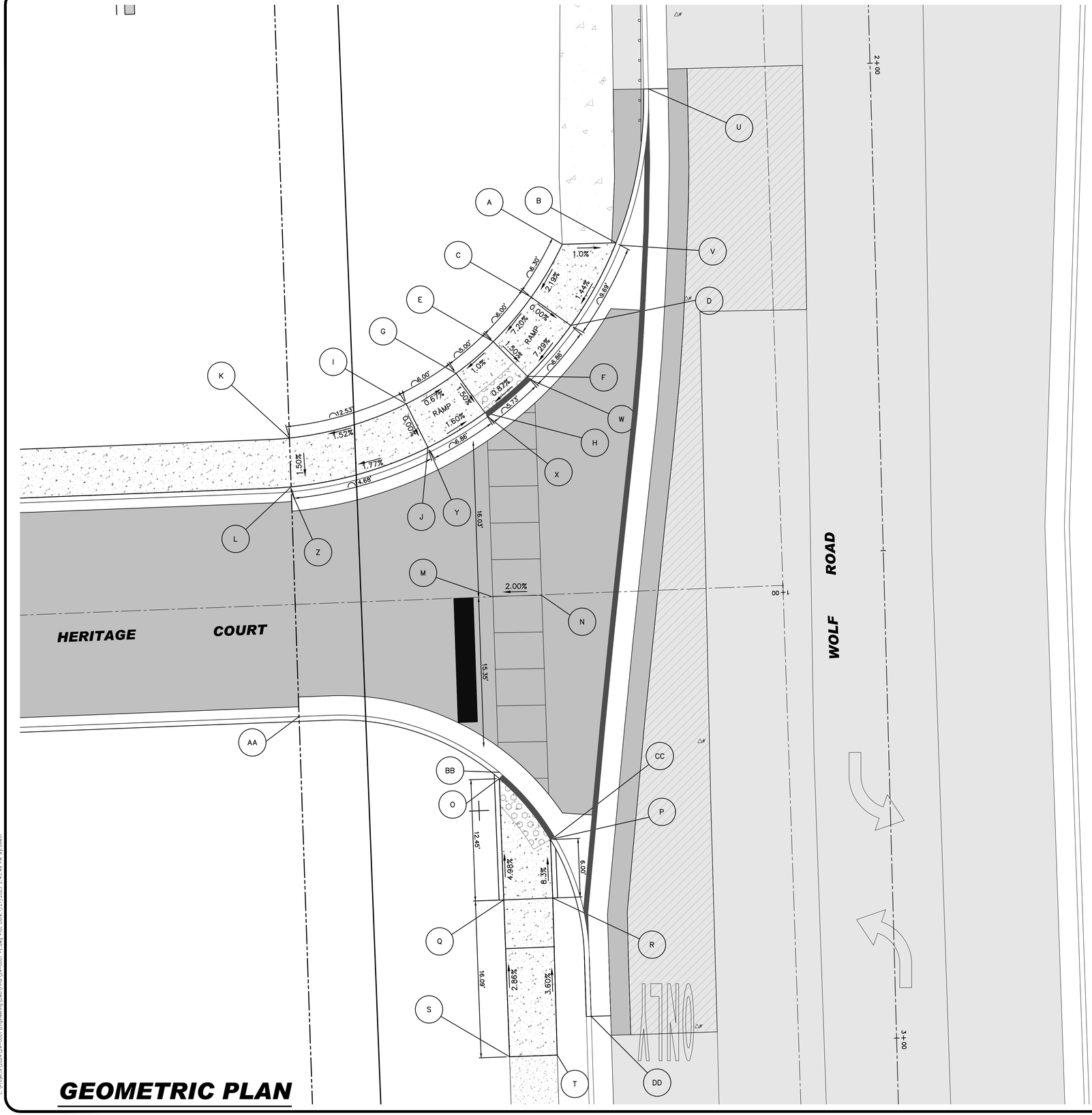
DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

18
OF
20

CROSS SECTIONS STA. 2+82.80 TO 3+82.80

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GEOMETRIC PLAN

	STATION	OFFSET	ELEV.
A	2+17.70	32.03' R.	664.47ME
B	2+17.70	26.96' R.	664.42ME
C	2+23.03	33.37' R.	664.21
D	2+26.03	31.40' R.	664.21
E	2+27.48	39.38' R.	663.85
F	2+31.14	35.97' R.	663.78
G	2+30.63	43.28' R.	663.78
H	2+34.74	40.42' R.	663.71
I	2+33.62	48.48' R.	663.82
J	2+38.14	46.37' R.	663.82
K	2+36.79	60.53' R.	663.63
L	2+41.80	60.50' R.	663.56
M	2+53.63	40.21' R.	664.15
N	2+53.57	35.20' R.	664.05
O	2+72.59	39.99' R.	663.69
P	2+78.55	34.99' R.	663.81
Q	2+84.61	39.84' R.	664.31
R	2+84.56	34.93' R.	664.31
S	3+00.83	39.71' R.	694.77ME
T	3+00.79	34.82' R.	664.89ME
U	2+02.01	22.76' R.	664.14ME
V	2+17.98	26.08' R.	663.92
W	2+31.50	35.63' R.	663.65
X	2+35.15	40.14' R.	653.58
Y	2+38.61	46.15' R.	663.32
Z	2+42.30	60.49' R.	663.06
AA	2+65.37	60.33' R.	663.06
BB	2+71.65	39.96' R.	663.56
CC	2+78.44	34.48' R.	663.78
DD	2+96.92	31.23' R.	664.36ME

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

PAVEMENT LEGEND

- 4" MIL AND OVERLAY
- ASPHALT PAVEMENT CCDOTH ROW
  12" HMA CONCRETE SURFACE COURSE CL1
  12" AGGREGATE BASE COURSE, CA-6
- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

ADA DETAIL

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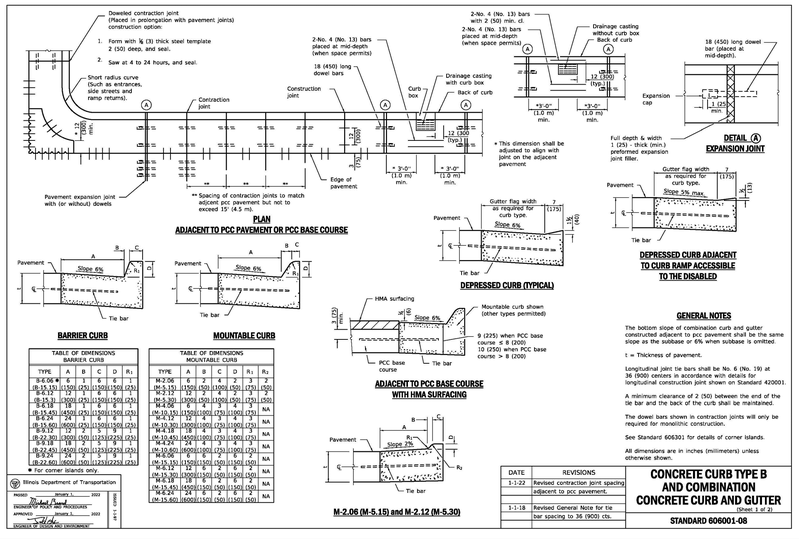


TABLE OF DIMENSIONS BARRIER CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06 ● (M-5.15)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.12 (M-5.30)	1 [150]	12 [300]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.18 (M-5.45)	1 [150]	18 [450]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.24 (M-5.60)	1 [150]	24 [600]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.30 (M-5.75)	1 [150]	30 [750]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.36 (M-5.90)	1 [150]	36 [900]	6 [150]	1 [25]	3 [75]	3 [75]

● For corner islands only.

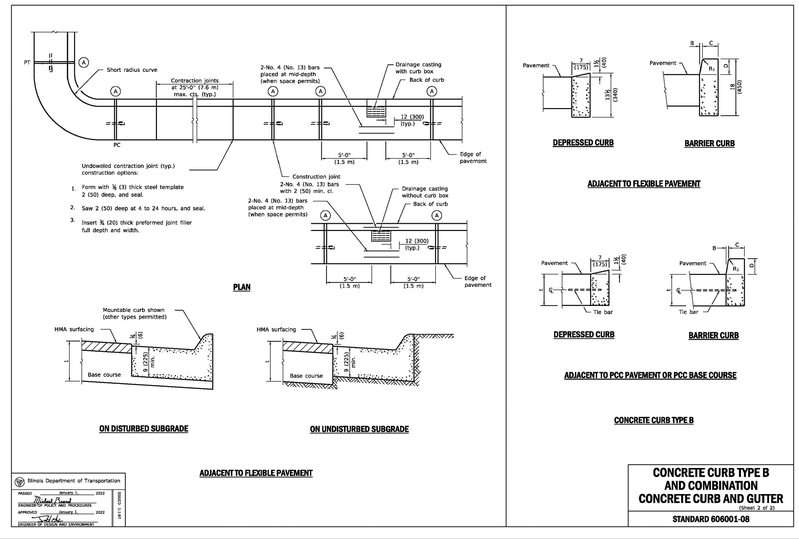
TABLE OF DIMENSIONS MOUNTABLE CURB

TYPE	A	B	C	D	R_1	R_2
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M-2.12 (M-5.30)	1 [150]	12 [300]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.18 (M-5.45)	1 [150]	18 [450]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.24 (M-5.60)	1 [150]	24 [600]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.30 (M-5.75)	1 [150]	30 [750]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.36 (M-5.90)	1 [150]	36 [900]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.42 (M-6.05)	1 [150]	42 [1050]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.48 (M-6.20)	1 [150]	48 [1200]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.54 (M-6.35)	1 [150]	54 [1350]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.60 (M-6.50)	1 [150]	60 [1500]	6 [150]	1 [25]	3 [75]	3 [75]
M-6.06 (M-10.15)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	NA
M-6.12 (M-10.30)	1 [150]	12 [300]	6 [150]	1 [25]	3 [75]	NA
M-6.18 (M-10.45)	1 [150]	18 [450]	6 [150]	1 [25]	3 [75]	NA
M-6.24 (M-10.60)	1 [150]	24 [600]	6 [150]	1 [25]	3 [75]	NA
M-6.30 (M-10.75)	1 [150]	30 [750]	6 [150]	1 [25]	3 [75]	NA
M-6.36 (M-10.90)	1 [150]	36 [900]	6 [150]	1 [25]	3 [75]	NA
M-6.42 (M-11.05)	1 [150]	42 [1050]	6 [150]	1 [25]	3 [75]	NA
M-6.48 (M-11.20)	1 [150]	48 [1200]	6 [150]	1 [25]	3 [75]	NA
M-6.54 (M-11.35)	1 [150]	54 [1350]	6 [150]	1 [25]	3 [75]	NA
M-6.60 (M-11.50)	1 [150]	60 [1500]	6 [150]	1 [25]	3 [75]	NA
M-8.06 (M-15.45)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	NA
M-8.12 (M-15.60)	1 [150]	12 [300]	6 [150]	1 [25]	3 [75]	NA
M-8.18 (M-15.75)	1 [150]	18 [450]	6 [150]	1 [25]	3 [75]	NA
M-8.24 (M-15.90)	1 [150]	24 [600]	6 [150]	1 [25]	3 [75]	NA

Illinois Department of Transportation
PASSED January 1, 2022 — Engineer of Policy and Procedures
APPROVED January 1, 2022 — Engineer of Design and Environment
BDE 2105 (ILLINOIS)

DATE	REVISIONS
1-1-22	Revised contraction joint spacing adjacent to pcc pavement.
1-1-18	Revised General Note for tie bar spacing to 36 (900) ctr.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 1 of 2)
STANDARD 606001-08



Illinois Department of Transportation
PASSED January 1, 2022 — Engineer of Policy and Procedures
APPROVED January 1, 2022 — Engineer of Design and Environment
BDE 2105 (ILLINOIS)

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 2 of 2)
STANDARD 606001-08

SPECIAL PROVISION FOR DETECTABLE WARNINGS (SPECIAL)

Effective: *10/01/18 (Modification of IDOT D1 Special Provision for Detectable Warnings (Special) in City of Chicago)*
Revised: *4/13/21 (added Galvanized and Stainless Steel material options)*

Description:

Work under this item shall consist of installing cast iron or steel detectable warning tiles as shown on the plans. Work shall be performed according to Section 424 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, except as herein modified.

Materials:

Detectable warning tiles shall be of uniform quality, and free of surface defects. The detectable warnings shall be constructed out of one of the following:
1) Cast iron meeting requirements of ASTM A 48 Class 30 or better.
2) Galvanized steel – 10 gauge, C90 galvanization or better
3) Stainless steel – 10 gauge or better

The dome size and spacing of the detectable warnings shall meet all requirements of sections R305.1.1 and R305.1.2 of PROWAG.

The color of the detectable warning tiles is to be approved by the Engineer unless otherwise specified in the plans and comply with the requirements of section R305.1.3 of PROWAG.

If a concrete border is required for installation of the detectable warnings, it shall comply with section R305.2 of PROWAG.

Responsibility of the Contractor:

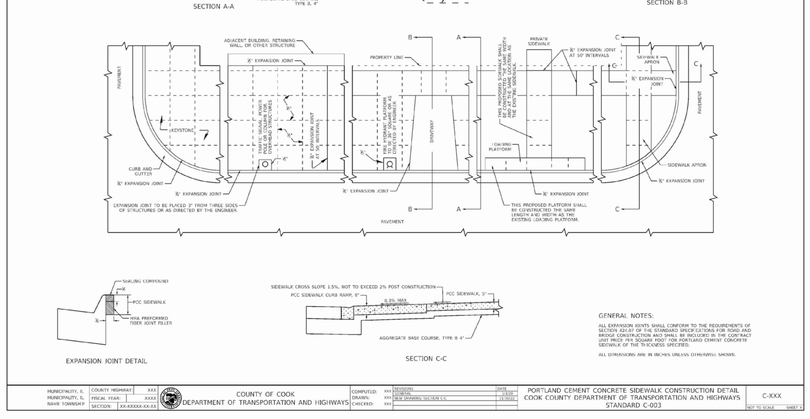
The contractor shall verify all dimensions with the product manufacturer. If using radial units, the contractor shall verify that the radius of the detectable warnings supplied by the manufacturer matches that of the curb radius.

The contractor shall ensure that the supplied detectable warnings allow placement of the rows of domes that are aligned parallel with the path of travel. Where detectable warnings are radial, dome orientation is not significant.

The contractor shall ensure a maximum vertical transition of ¼" between the edge of the detectable warnings and adjacent concrete.

Measurement and Payment:

This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).



MUNICIPALITY, IL MUNICIPALITY, IL MAINE TOWNSHIP	COUNTY HIGHWAY	XXX	COUNTY OF COOK DEPARTMENT OF TRANSPORTATION AND HIGHWAYS	COMPUTED: XXX	PROGRAM: DATE
	FISCAL YEAR	XXXX		DRAWN: XXX	FILE NO. CLIENT
	SECTION	XX-XXXXX-XX-XX		CHECKED: XXX	NEW SIDEWALK SELECTION C-0 11/2021

PORTLAND CEMENT CONCRETE SIDEWALK CONSTRUCTION DETAIL
COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS
STANDARD C-003

C-XXX — NOT TO SCALE — SHEET 2

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WILLAGE REVIEW	SDD
3	10-17-24	PER CCDOTH REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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FINAL ENGINEERING PLANS
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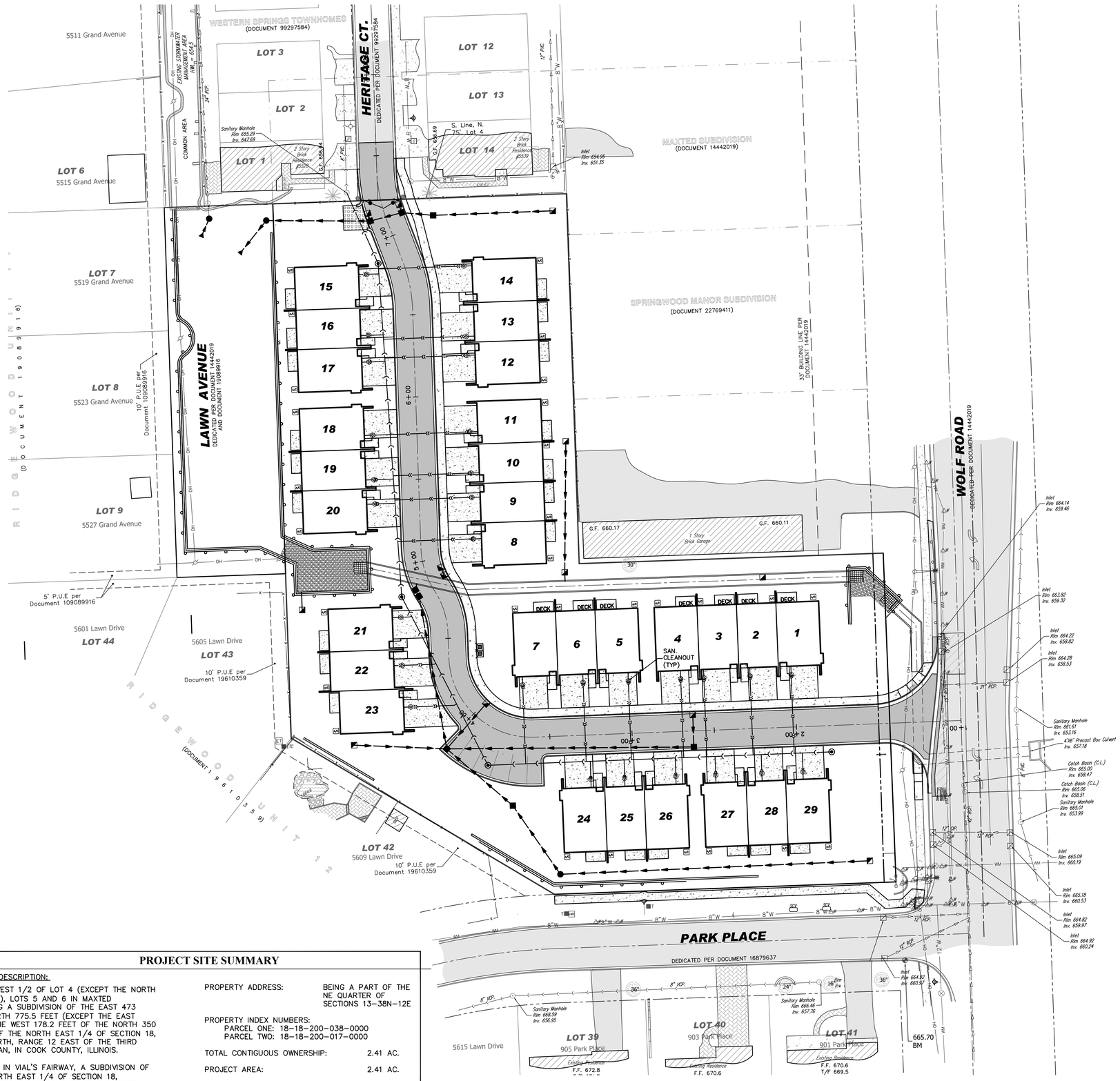
PROJECT INFORMATION

Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

20 OF 20

CCDOTH DETAILS

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THE OWNER OF HERITAGE CROSSING SUBDIVISION, MCNAUGHTON DEVELOPMENT, LLC. WITH FACILITIES AS SHOWN ON THIS EXHIBIT (EXHIBIT R), SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING MAINTENANCE ACTIVITIES, UNTIL SUCH TIME WHERE CERTAIN REQUIREMENTS ARE MET. STORM WATER RETENTION AND DETENTION FACILITIES SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (H.O.A.)

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

1. General
Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
- X Litter and debris shall be controlled
- X Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- X Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- X Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- X Roads shall be swept, vacuumed and/or washed on a regular basis

2. Stormwater Management Facilities
All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

Side Slopes/Embankment/Emergency Overflow Structure
- X Inspect embankments for settlement and erosion
- X Remove woody growth from the embankment
- X Any breaks, hire Registered Professional Engineer for design resolution
- X Seed and sod any eroded areas
- X Signs of piping (leakage) or seepage, repair
- ___ Stabilize emergency overflow structure if erosion observed
- ___ Remove obstructions blocking emergency overflow spillway

Vegetated Areas
- X Regular mowing to control vegetation, no cutting of native vegetation
- X Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes or other vehicles, repair
- X Check for invasive vegetation, remove where possible
- X All vegetation must be maintained per the approved planting plan

Outlet Control Structure
- ___ Inspect restrictor and remove debris if clogged or discharge reduced
- ___ Remove accumulated sediment at outlet
- ___ Scour and erosion at outlet, repair and reseed
- ___ Any ice damage to outlet of pipe, repair if necessary
- ___ Condition of trash tracks, remove debris
- ___ Outlet channel conditions downstream

Access for Maintenance Equipment
- X Remove any obstructions placed in maintenance easements

Safety Features
- ___ Access controls to hazardous areas
- X Fences
- X Loose or damaged posts
- X Loose or broken wires
- X Condition of gates
- X Signs

Detention Volume
- X Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

3. Volume Control Facility
Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
- ___ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
- ___ Surface of permeable pavement shall be cleaned with low-pressure power washer.
- X Accumulated sediment from surface shall be vacuumed out and disposed of properly.
- X Appropriate signage shall be repaired if damaged or illegible.

4. Stormwater Collection System
The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
- X Remove accumulated leaves and other debris from grates
- X Reset covers/lids on as-needed basis
- X Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers/Culverts
- X Visually inspect pipes by removing manhole lids, make repairs as necessary
- X Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- X Restore riprap at outfalls if erosion observed
- X Restore riprap at outfalls
- X Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)
- X Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
- X Remove any obstructions that have been placed in the drainage path
- X Seed and sod any eroded areas
- X Restore riprap as necessary
- X Regrade to provide positive drainage as necessary
- X Regular mowing to control vegetation

5. Vegetated Areas
- X Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes, or other vehicles, repair.
- X Check for invasive vegetation, remove when possible.
- X Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
- X Dead or damaged non-native grassy areas – repair with seeding with fertilization or seeding with mulch.
- ___ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

6. Qualified Sewer Construction
- X Perform manhole inspections once every five years, make repairs as necessary.
- X Perform sewer inspections once every five years, make repairs as necessary.
- X Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
- X Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

PROJECT SITE SUMMARY

PROPERTY LEGAL DESCRIPTION:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PROPERTY ADDRESS: BEING A PART OF THE NE QUARTER OF SECTIONS 13-38N-12E

PROPERTY INDEX NUMBERS:
PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000

TOTAL CONTIGUOUS OWNERSHIP: 2.41 AC.

PROJECT AREA: 2.41 AC.

TOTAL MULTI FAMILY RESIDENTIAL UNITS: 29

STORMWATER SUMMARY

	REQUIRED (AC. FT.)	PROVIDED (AC. FT.)
VOLUME CONTROL STORAGE	0.13	0.15
DETENTION VOLUME	1.51	0.729

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WRD REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

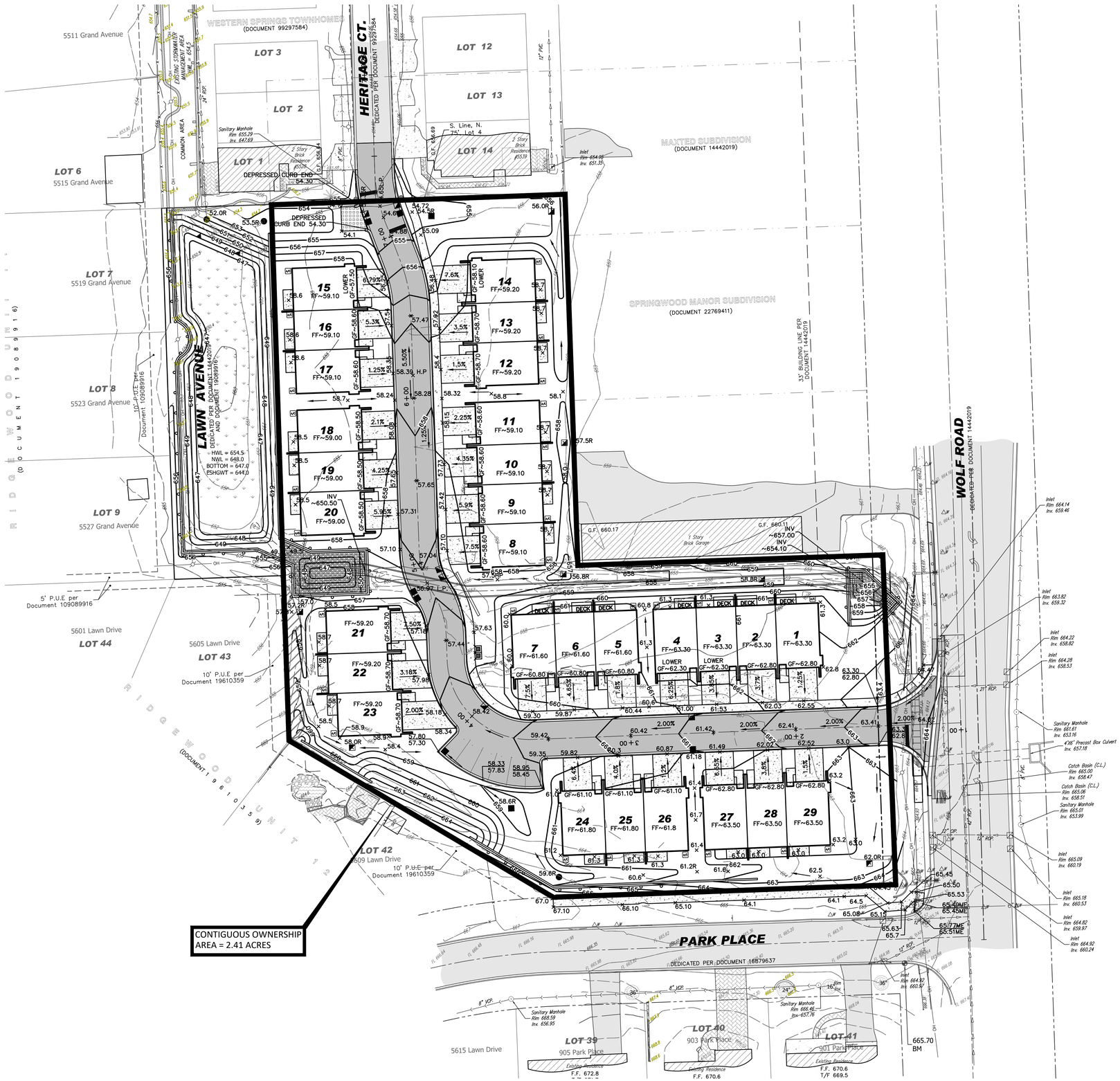
PROJECT INFORMATION

Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

MW1
OF
MW1

MWRD EXHIBIT R

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date:1/27/2025 2:45:54 PM By:dvanh



GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

TRIBUTARY
IMPERVIOUS AREA =1.50 ACRES

TRIBUTARY
PERVIOUS AREA = 0.89 ACRES

VOLUME CONTROL

DEVELOPMENT AREAS NOT
TRIBUTARY TO POND = 0.02 ACRES

STORM WATER REQUIREMENTS

VCBMP:
VOLUME REQUIRED = 0.13 Ac. Ft.
OR
65,114 x (1"/12) = 5,426 Cu. Ft.

VCBMP VOL. PROVIDED = 0.15 Ac. Ft.
648–647 = 1.0' x (6,621) = 6,621 Cu. Ft.
(STORM WATER LOT)

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WESTERN SPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
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FINAL ENGINEERING PLANS
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5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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MOKENA, ILLINOIS 60448
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IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

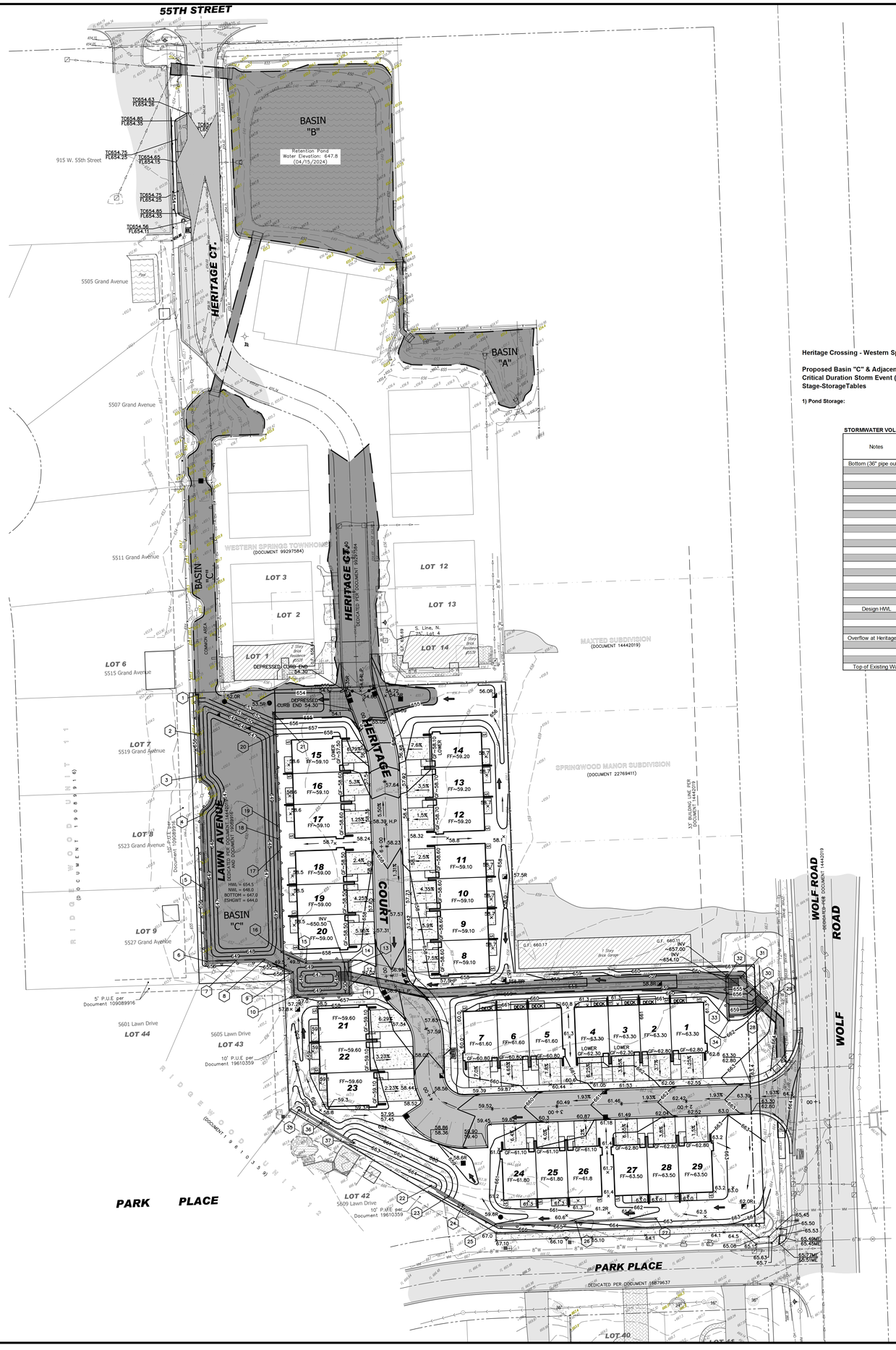
MW2
OF
MW2

MWRD DRAINAGE EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

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55th STREET
GRAND AVENUE
LAWN AVENUE
WOLF ROAD
PARK PLACE
HERITAGE COURT
BASIN "A"
BASIN "B"
BASIN "C"
Detention Pond
Water Elevation: 647.8
(04/15/2024)
BASIN B
BASIN C
BASIN A
PARCEL 1
PARCEL 2
LOT 1
LOT 2
LOT 3
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 12
LOT 13
LOT 14
LOT 42
LOT 43
LOT 44
WESTERN SPRINGS TOWNHOMES
(DOCUMENT 99297584)
MASTER SUBDIVISION
(DOCUMENT 14442019)
SPRINGWOOD MANOR SUBDIVISION
(DOCUMENT 22769411)
VAILS FAIRWAY SUBDIVISION
(DOCUMENT 16879637227694 11)
RIDGEWOOD COURT
(DOCUMENT 19089918)
RIDGEWOOD TERRACE
(DOCUMENT 19160359)
Box Culvert Inv. 648.50 (See detail)
Box Culvert Inv. 648.00 (See detail)
Box Culvert Inv. 648.02 (See detail)
Box Culvert Inv. 649.55 (See detail)
Box Culvert Inv. 647.90 (See detail)
Box Culvert Inv. 657.18
12" RCP Inv. 649.02
24" RCP Inv. 648.68
18" RCP Inv. 650.32
48" RCP Inv. 650.69
30" RCP Inv. 654.09
30" RCP Inv. 653.58
Inlet Rim 650.17 (18") Inv. 649.00
Catch Basin (CL) Rim 652.78 (18" RCP) Inv. 647.96
7.5' x 9' Storm Box w/Grate Rim 653.16 (15" RCP, W) Inv. 648.38 (Box Culvert, E) Inv. 648.11
Catch Basin (CL) Rim 653.82 (12" RCP, W) Inv. 650.32 (12" RCP, E) Inv. 649.31
Catch Basin (CL) Rim 653.67 (12" RCP) Inv. 650.43
Inlet Rim 650.84
Catch Basin (CL) Rim 655.26 (24" RCP) Inv. 646.81
Catch Basin (CL) Rim 656.18 (36" RCP) Inv. 645.21
Catch Basin (CL) Rim 655.30 (36" RCP) Inv. 645.98
Catch Basin (CL) Rim 655.47 (36" RCP) Inv. (No Data)
Inlet Rim 654.17 Catch Basin (DL) Rim 654.10
Inlet Rim 654.85 Inv. 651.35
Catch Basin (CL) (under eyebrow tree) Rim 655.05 Inv. (no data)
Inlet Rim 649.12 Inv. 646.87
Inlet Rim 652.71 Inv. 649.11
Inlet Rim 654.62 Inv. 652.42
Inlet Rim 652.32
Inlet Rim 657.05 Inv. 653.95
Inlet Rim 664.14 Inv. 659.46
Inlet Rim 663.82 Inv. 659.32
Inlet Rim 664.22 Inv. 658.62
Inlet Rim 664.28 Inv. 658.53
Box Culvert Inv. 657.18
Catch Basin (CL) Rim 665.50 Inv. 658.47
Catch Basin (CL) Rim 665.08 Inv. 658.58
Inlet Rim 665.09 Inv. 660.19
Inlet Rim 665.18 Inv. 660.53
Inlet Rim 664.82 Inv. 659.97
Inlet Rim 664.92 Inv. 660.24
Inlet Rim 664.79 Inv. 660.59
Inlet Rim 664.92 Inv. 660.37
G.F. 660.17
G.F. 660.11
1 Story Brick Garage
2 Story Brick Building T/F 644.15
T/F 664.30'
1 Story Brick Building #900
2 Story Brick Residence #5539
2 Story Brick Residence #5539
Pool
Shed
Shed
Shed



GRADING PLAN

N

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

LEGEND

- EXISTING EMERGENCY OVERFLOW ROUTE
- PROPOSED EMERGENCY OVERFLOW ROUTE
- LIMITS OF PROPOSED FLOODING PER DETAILED FLOOD ANALYSIS PREPARED BY DESIGNTEK ENGINEERING, INC. (CRITICAL DURATION STORM EVENT WHICH IS THE 100YR, 1-HOUR RAINFALL EVENT)

Heritage Crossing - Western Springs, IL

12/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 1hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

REVISIONS		
NO.	DATE	DESCRIPTION
1	12/17/24	PER VILLAGE REVIEW

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

PROPOSED FLOODING EXHIBIT
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1"=30'
Date: 09-05-2024
Design By: SDD
Drawn By: SDD
Checked By: DMV

1 OF 1

PROPOSED CONDITIONS FLOODING EXHIBIT

DESIGNTEK ENGINEERING, INC.
CONSULTING AND SITE DESIGN ENGINEERS
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
PHONE: (708) 326-4961
FAX: (708) 326-4962

FINAL STORMWATER MANAGEMENT REPORT



FOR:

HERITAGE CROSSING
WSTERN SPRINGS, ILLINOIS

Prepared For:

McNaughton Development
11S220 Jackson Street – Suite 101
Burr Ridge, Illinois 60527
(630) 325-3400

December 13, 2024

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Off-Site Upstream Tributary Area Analysis Documentation

Stormwater Management Analysis Existing Conditions

- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)

Stormwater Management Analysis Proposed Conditions

- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)
- Bypass System Capacity calculations
- Interim Swale Capacity Calculation

SUMMARY

The Heritage Crossing re-development is approximately 2.41 gross acres with the current use being professional office buildings and associated parking lot areas. An existing stormwater detention basin is located adjacent to the site in a 0.34-acre parcel dedicated as Lawn Avenue. The proposed re-development consists of twenty-nine residential single family attached units with related roadway, utilities, and a stormwater management area. The existing stormwater management facility (South Detention Pond) owned by the Village of Western Springs and maintained by the Heritage Springs HOA will be enhanced to provide the MWRD required volume control elements and will include increased stormwater storage volume to provide additional detention to attenuate more of the off-site upstream stormwater run-off prior to being released downstream. The FEMA FIRM map 17031CO467J effective 8/19/2008 indicates that there are no special flood hazard areas (floodplain) on the subject property (Zone "X"). The intent of this report is to convey the existing site conditions along with the final planning development and calculations that have been completed to support Final Engineering.

The existing site is not located in the FEMA mapped floodplain. Evidence has shown that the existing site and the Heritage Springs subdivision experience flooding during large storm events. DesignTek Engineering was contracted to complete a detailed flood analysis for the detention system maintained by the Heritage Springs HOA. An off-site area of approximately172.3 acres, to the east of Wolf Road was determined to be tributary to the subject site via an existing 4'x6' concrete box culvert that crosses under Wolf Road. The upstream off-site area is developed, and the area was divided into two sub-areas. They were delineated as Ashbrook Subdivision and LaGrange Highlands offsite with areas 42.90 acres and 129.40 acres, respectively. Time of concentrations and curve numbers were calculated for each area. MWRD permit number 99-0525 was obtained for the Ashbrook Subdivision. This information was used in HEC HMS computer modeling software to analyze the system and determine a 100-year critical duration peak flowrate of 359.61 cfs. This occurs during the 1-hour event. The high-water level (HWL) for the existing detention basin (basin C) was determined to be 655.16.

To allow for the required Cook County DOTH site distance requirements the existing box culvert under Wolf Road will be extended 66 feet away from the proposed Heritage Court intersection. A bypass system will be constructed to collect and convey the peak discharge through a proposed 4'x6' concrete box culvert. The box culvert matches the upstream condition. The calculated peak HWL was determined to be 655.11 for the proposed condition. This is a reduction of 0.05'. The site will be inundated with water at the north end of Heritage Court, near the property line. Under existing conditions this area was also inundated with water. The proposed condition will have no significant impacts when compared to existing conditions. An interim swale will be constructed on site to convey the discharge during rainfall events during the construction of the bypass system. The swale was designed to carry the peak discharge.

The existing condition (professional office buildings) has a total impervious area of 1.67 acres with the proposed re-development (residential) consisting of 1.50 acres equating to a total reduction in impervious area of 0.17 acres or 10%. Utilizing the proposed impervious area within the re-development site, the required MWRD volume control storage has been calculated to be 0.13 ac-ft. This volume is proposed as surface storage (elevations 647.0 – 648.0) below the NWL in the stormwater management pond and has a proposed volume of 0.15 ac-ft. A PVC underdrain is proposed below the volume control area. Recent soil investigation for the existing south detention pond revealed that the Estimated Seasonal High Groundwater Table (ESHGWT) is at

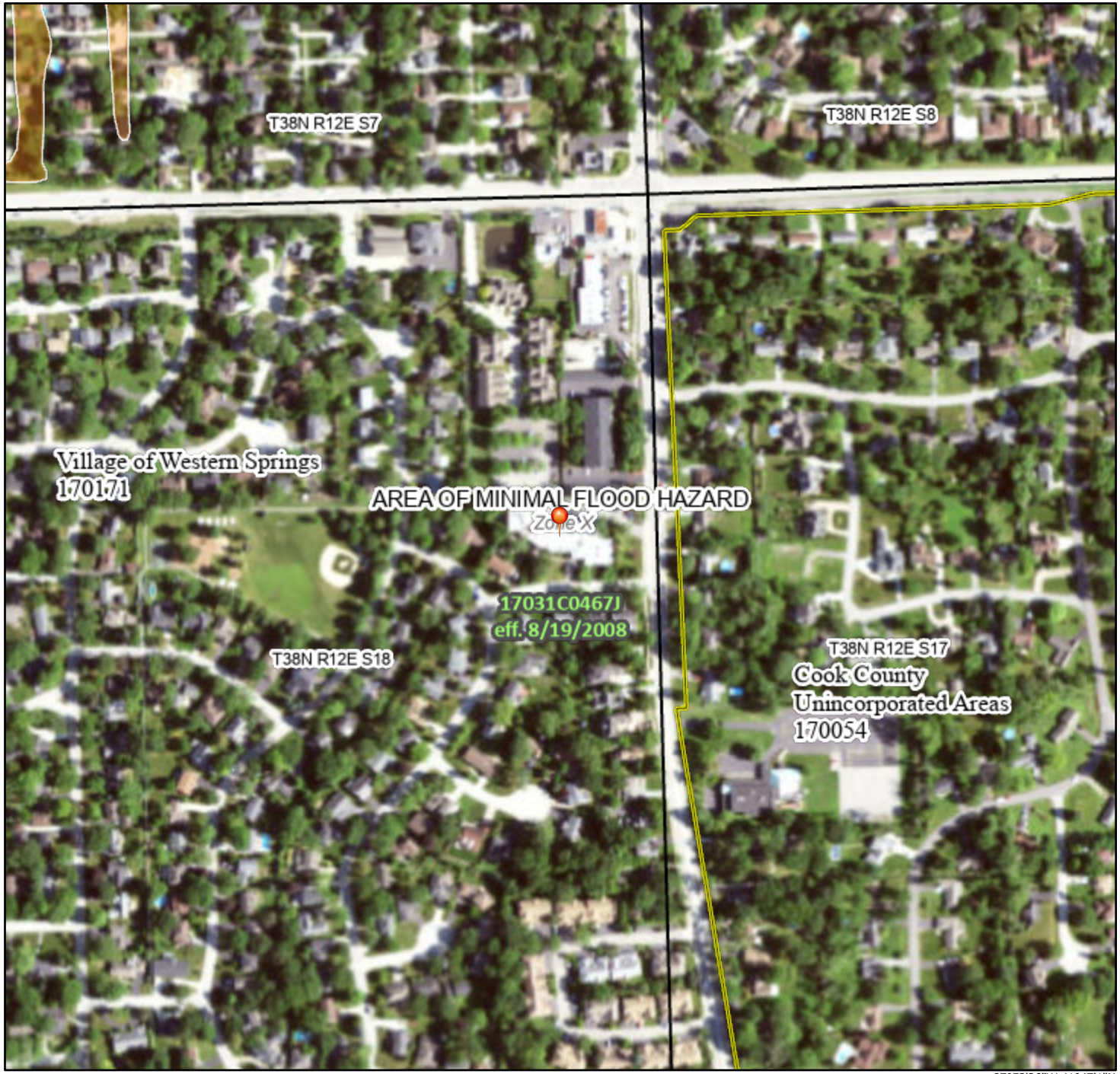
elevation 644.0, 3’ feet below the proposed pond bottom. See enclosed Soil Investigation Report within the appendix section of this report for reference.

The previously issued MWRD permit (99-228) for the original development was obtained and is included in the appendix for reference. Upon examination the detention review sheet within the permit does not depict any detention volume requirements for the original development. Although the as-built plan dated (09-29-2007) for the original development depicts the volume provided for the subject “South Detention Pond” as 0.729 Ac-Ft. and based on the recent topographic survey for the proposed re-development we have calculated the South Detention Pond storage volume to currently be 0.76 Ac-Ft. which appears to match the original intent. Initial conversations with Village staff revealed that even though the re-development has a decrease in impervious area they have experienced stormwater flooding issues off-site and further downstream within the same tributary of the subject site and expansion of the existing stormwater facility, if possible, would be a regional benefit. Taking this into account the proposed re-development will include an expansion of the South Detention Pond volume to 1.64 Ac-Ft increasing the storage volume by 0.85 Ac-Ft which essentially doubles the volume. The 100-year peak flowrate for the development site will also be reduced to 13.96 cfs from the existing condition of 15.64 cfs (+/- 11% reduction). The proposed residential buildings also will not have basements and therefore no sump pump discharges will be tributary to the stormwater management area.

National Flood Hazard Layer FIRMette

FEMA

87°54'14"W 41°47'28"N



87°53'36"W 41°47'1"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/22/2024 at 1:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cook County, Illinois

Heritage Crossing



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 17, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 13, 2020—Jul 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
854B	Markham-Ashkum-Beecher complex, 1 to 6 percent slopes	3.0	100.0%
Totals for Area of Interest		**3.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cook County, Illinois

854B—Markham-Ashkum-Beecher complex, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 28shj
Elevation: 510 to 930 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Markham and similar soils: 40 percent
Ashkum and similar soils: 30 percent
Beecher and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Markham

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 21 inches: silty clay loam
H3 - 21 to 32 inches: silty clay loam
H4 - 32 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 55 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Description of Ashkum

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium and in the underlying till

Typical profile

H1 - 0 to 12 inches: silty clay loam
H2 - 12 to 29 inches: silty clay
H3 - 29 to 54 inches: silty clay loam
H4 - 54 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

Description of Beecher

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 24 inches: silty clay loam
H3 - 24 to 36 inches: silty clay loam
H4 - 36 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 24 to 45 inches to densic material
Drainage class: Somewhat poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Minor Components

Orthents, clayey

Percent of map unit: 5 percent
Landform: Lake plains, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

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Associated Engineering & Technology, Inc.

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Phone: (630) 420-8300
www.soiltesting.biz

CONFIDENTIAL

SOIL INVESTIGATION REPORT
5600 S. Wolf Road
(North of Park Place & S. Wolf Road)
Western Springs, IL 60480

AET Project Number: Geo – 9951
April 29, 2024

Prepared for:

McNaughton Development

Mr. John Barry
McNaughton Development
11S220 Jackson Street, Suite # 101
Burr Ridge, Illinois 60527

April 29, 2024

Soil Investigation Report
5600 S. Wolf Road
Western Springs, IL

AET Project Number: Geo – 9951

Gentleman / Madam,

Associated Engineering & Technology, Inc. (AE&T) has completed two (2) soil borings and sampling of soils to determine the Estimated Seasonal High Groundwater Level (ESHGWL) at the above referenced site in Western Springs, IL. The borings were done at the existing detention pond area and the locations are shown in the appendix of this report. The soil samples were analyzed in the laboratory for soil description, visual classification and moisture content by a geotechnical engineer. Munsell Chart and FEMA maps were also used to estimate the seasonal high groundwater elevations. Based upon our investigation the ESHGWL was noted to be at six (6) feet below the bottom of existing pond.

If you have any questions regarding this report, please contact us.

Sincerely,
Associated Engineering & Technology, Inc.



Ashok Medhi, M.S.
Geotechnical Engineer

Toby C. Mickey, P.E.
Senior Engineer

1.0 SOIL BORING

A total of two (2) soil borings were done were done at the proposed development to 10 feet depth each in accordance with American Society for Testing and Materials procedure for Standard Penetration Test and Split Barrel Sampling of Soils (ASTM 1586). The borings were done with a CME 45 drill rig mounted on All-Terrain Vehicle.

The soil samples were collected at 2-1/2 feet interval to a depth of 10 feet and thereafter at 5 feet interval. The boreholes were backfilled with auger cuttings after completion of drilling.

The soil samples were placed in glass containers and brought to our laboratory. A site plan showing the approximate soil boring locations is included in appendix. Log of the soil borings along with lab classifications are included in Appendix B.

2.0 LABORATORY TESTING

All samples were visually classified according to the Unified Soil Classification System (ASTM D-2488) by a geotechnical engineer. The Auger boring samples are disturbed and were generally used for classification testing (D2487, D2488), moisture content and pocket penetrometer test (ASTM D 854) to evaluate unconfined compressive strength for clayey and clayey silt soils. The primary purpose of this investigation was to determine the Estimated Seasonal High Groundwater Elevation. The boring logs with soil description are included in the Appendix.

3.0 SOIL DESCRIPTION & ANALYSIS

The sub-surface materials in the borings (B-1 & B-2) comprised 8 to 10 inches of black topsoil with roots.

It was underlain by very stiff to hard moist **brown silty Clay** with fine sand and gravel (CL) to depths of about 6.0 feet. Beneath it, medium dense moist **brownish gray fine to medium Sand** trace small gravel (SP) was noted to depths of 8 feet and changed color to **gray** Fine Sand trace small gravel (SP) to the boring depths of 10 feet.

Groundwater was **not** encountered during and after completion of the borings.

3.1 Estimated Seasonal High Ground Water Level

The Estimated seasonal high groundwater level (ESHGWL) at Borings B-1 and B-2 located at existing Detention Pond is at about (six) 6 feet. It is based upon visual classification of the soil samples, existing groundwater levels, site topography, soil conditions, color description and change of color from brown to brownish gray at 6 feet, FIRM maps and Munsell chart (10 YR**).**

Note: Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles.

Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

5.0 Warranty / Limitations of liability

Associated Engineering & Technology, Inc. understands that the Boring log depicts conditions disclosed at the particular location and date indicated and may vary within 5 feet of vertical and lateral distance from the borings.
If significant variations or changes are in evidence during construction, it may then be necessary to re-evaluate the recommendations of this report.
In no event shall Associated Engineering & Technology, Inc. be liable for any indirect, special, consequential or incidental damages, of any kind or nature however caused and based on any theory of liability, arising out of or relating to this report, whether or not such party has been advised of the possibility of such damages.

APPENDICES

BORING LOCATION

BORING LOGS

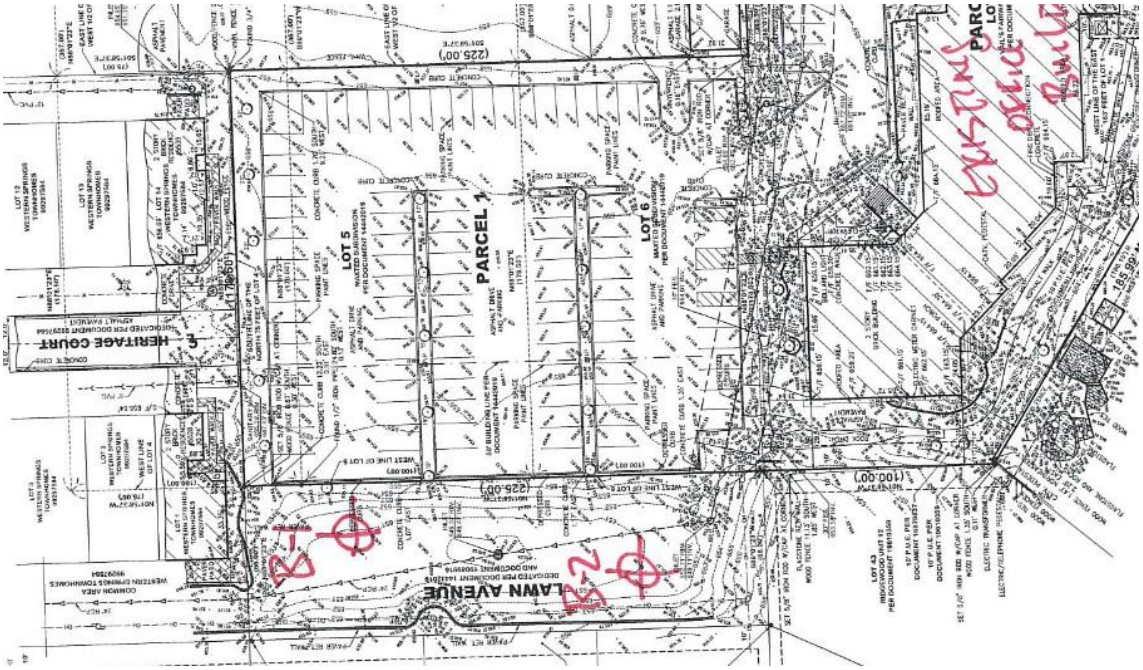
GENERAL NOTES &

USCS CLASSIFICATION CHART

MUNSELL CHART (10 YR)

BORING LOCATION PLAN

(Not to Scale)



BORING LOG

BORING NO. **B – 1**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Very stiff to hard Brown Silty Clay Sand and gravel (CL) -		2.5	1	AU		16.5	3.0	8	
None			5	2	AU		16	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

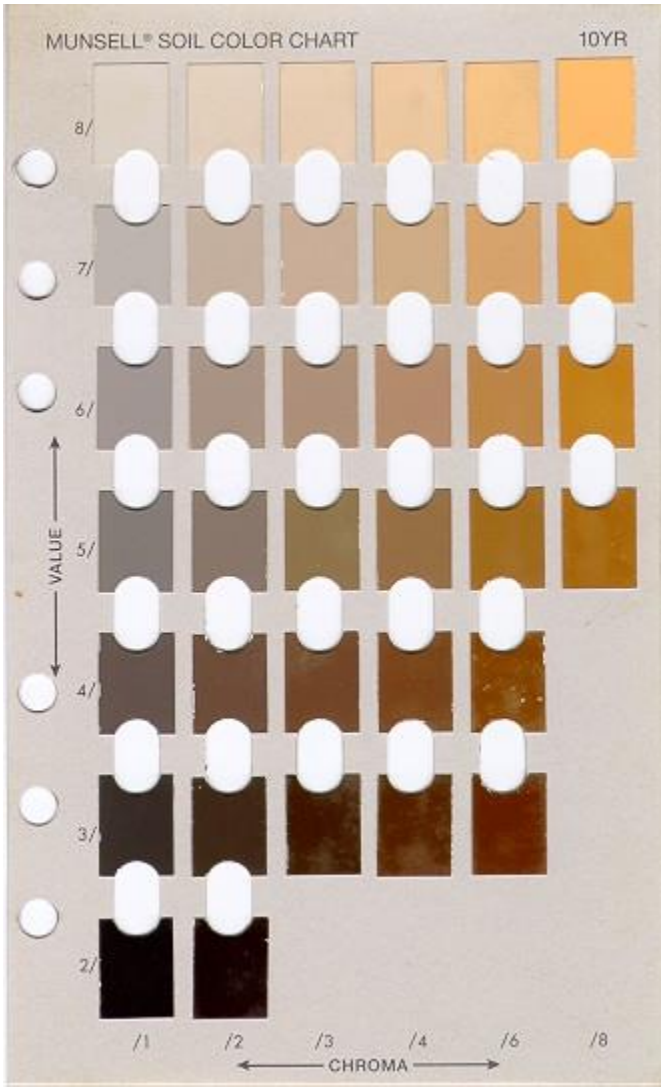
BORING LOG

BORING NO. **B – 2**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Hard moist Brown Silty Clay Trace fine sand And gravel (CL)		2.5	1	AU		15	4.0	8	
None			5	2	AU		15.5	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

MUNSELL SOIL COLOR CHART



Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles. Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

GENERAL NOTES

In order to provide uniformity throughout our project, the following system has Been adopted to describe each soil sample. Rock Shale and other materials will be described in detail as encountered.

CONSISTENCY OF COHESIVE SOIL		RELATIVE DENSTY OF GRANULAR SOIL	
UNCONFINED COMPRESSIVE STRENGTH **QU(TSF)**	**CONSISTENCY**	**"N" VALUE (Blows/foot)**	**RELATIVE DENSITY**
<0.25	VERY SOFT	0 – 3	VERY LOOSE
0.26 – 0.49	SOFT	4 – 9	LOOSE
0.50 – 0.99	MEDIUM STIFF	10 – 29	MEDIUM DENSE
1.00 – 1.99	STIFF	30 – 49	DENSE
2.00 – 3.99	VERY STIFF	50 – 80	VERY DENSE
4.00 – 8.00	HARD	>80	EXTREMELY DENSE
> 8	VERY HARD		

- **Number of blows per foot required to drive a 2" O.D. split-spoon sampler using a140lb. Weight falling free for 30 inches, except where otherwise noted.**

COLOR AS DETERMINED ON THE FRESH, MOST SAMPLES

PREDOMINATE COLORS		SHADES	MODIFYING ADJECTIVE
Black	Yellow	Light	Vari-colored
Brown	Red	Dark	Streaked
Gray	Blue		Mottled

GRADATION DESCRIPTION AND TERMINOLOGY

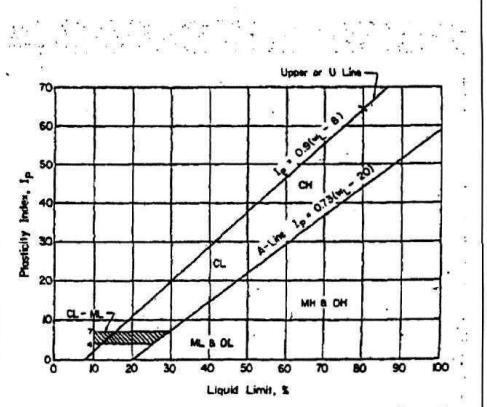
COMPONENTS	**SIZE RANGE**
BOULDER	OVER 8 INCHES
COBBLE	8 INCHES TO 30 INCHES
GRAVEL	3 INCHES TO #4 SIEVE (4.75 mm)
SAND	#4 SIEVE TO #200 SIEVE (0.075 mm)
SILT	PASSING # 200 SIEVE (0.075 mm)
CLAY	SMALLER THAN 0.005 mm.

DESCRIPTION OF COMPONENT ALSO PRESENT IN SAMPLE	**PERCENT OF DRY WEIGHT**
TRACE	1 – 9
LITTLE	10 –19
SOME	20 - 34
AND	35 - 50

GROUND WATER LEVEL

Water levels are those observed when boring were made, or as noted. Porosity of soil strata, variation of rainfall, Site topographic, ect., may cause changes on these levels.

Associated Engineering & Technology, INC.

MAJOR DIVISIONS			GROUP SYMBOL	TYPICAL NAMES	UNIFIED SOIL CLASSIFICATION SYSTEM
COARSE- GRAINED SOILS More than 50 % of coarse retained on # 4	GRAVEL 50% or more of coarse fraction Related of # 4 Sieve	LEAN GRAVEL	GW	WELL GRADED GRAVELS AND GRAVELS. SAND MIXTURES LITTLE OR NO FINE	CLASSIFICATION ON BASIS OF PERCENTAGE OF FINES GW,GP,SW, GM,GC,SM,SC borderline cases requiring use of dual symbols. Less than 5% passing sieve No.200 sieve More than 12% passing No.200 sieve 5% To 12% passing No.200 sieve
			GP	POORLY GRADED GRAVELS AND GRAVEL – SAND MIXT--URE LITTLE OR NO FINES	$CU = \frac{D60}{D10}$ GREATER THAN 4 $Cc = \frac{(D30)^2}{D10 \times D60}$ Between 1 and 3
		GRAVELS WITH FINE	GM	SILTY GRAVELS AND GRAVELS-SAND-SILT MIXTURE	NOT MEETING BOTH CRITERIA FOR GW
			GC	CLAYEY GRAVELS GRAVEL – SAND – CLAY MIXTURE	ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4 / ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7 — ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
	SAND > 50 % of coarse fraction < # 4 sieve		SW	WELL GRADED SAND AND GRAVELY SAND, LITTLE OR NO FINES	$CU = \frac{D60}{D10}$ GREATER THAN 4 $Cc = \frac{(D30)^2}{D10 \times D60}$ Between 1 and 3
			SP	POORLY GRADED GRAVEL AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	NOT MEETING BOTH CRITERIA FOR GW
			SM	SILTY – SANDS SAND SILT MIXTURE	ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4 / ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7 — ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
			SC	CLAYEY SANDS SAND-CLAY MIXTURE	
FINE – GRAINED SOIL More than 50% passes on # 200 sieve	SILTS AND CLAY Liquid limit 50% or less		ML	INORGANIC SILTS,VERY FINE SAND,ROCKS,FLOUR SILTY OR CLAYEY FINE SANDS	
			CL	INORGANIC CLAYS, OF LOW TO HIGH PLASTICITY,GRAVELY CLAY, SANDY CLAYS, SILTY CLAYS, LEAN CLAY	
			OL	ORGANIC SILT AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAY Liquid limit Grater than 50%		MH	INORGANIC SILTS,MICACEOUS DIATOMACEOUS FINE SAND OR SILTS, ELASTIC SILTS	
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY	
HIGHLY ORGANIC SOIL			PT	PEAT, HIGHLY ORGANIC SOIL	PLASTICITY CHART(USCG)

Associated Engineering & Technology, INC.

Existing Detention Basins
Stormwater Storage Volume Verification

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "A" (Siebert Engineers) & East Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.6	0				0.0000
			0.45	10	0.000	
	650.0	65				0.0002
			1.00	383	0.009	
	651.0	849				0.0090
			1.00	1,371	0.031	
	652.0	1,970				0.0405
			1.00	2,288	0.053	
	653.0	2,622				0.0930
			1.00	3,004	0.069	
	654.0	3,402				0.1620
			0.50	1,919	0.044	
Design HWL	654.5	4,292				0.2060

2007 As-Builts (Kudrna & Associates, LTD) = 0.212 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "B" (Siebert Engineers) & North Retention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.8	10,543				0.0000
			0.20	2,139	0.049	
	648.0	10,848				0.0491
			1.00	11,883	0.273	
	649.0	12,948				0.3219
			1.00	14,312	0.329	
	650.0	15,720				0.6504
			1.00	16,448	0.378	
	651.0	17,186				1.0280
			1.00	17,186	0.395	
	652.0	17,186				1.4226
			1.00	17,186	0.395	
	653.0	17,186				1.8171
			1.00	17,186	0.395	
	654.0	17,186				2.2116
			0.50	8,593	0.197	
Design HWL	654.5	17,186				2.4089
			0.50	8,826	0.203	
	655.0	18,123				2.6115
			1.00	18,123	0.416	
	656.0	18,123				3.0276
			0.30	5,437	0.125	
Overland Flow Out Elevation	656.3	18,123				3.1524

2007 As-Builts (Kudrna & Associates, LTD) = 2.201 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & South Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.4	0				0.0000
			0.60	101	0.002	
	650.0	506				0.0023
			1.00	2,244	0.052	
	651.0	4,685				0.0538
			1.00	5,880	0.135	
	652.0	7,163				0.1888
			1.00	8,277	0.190	
	653.0	9,443				0.3788
			1.00	10,449	0.240	
	654.0	11,489				0.6187
			0.50	5,962	0.137	
Design HWL	654.5	12,366				0.7556

2007 As-Builts (Kudrna & Associates, LTD) = 0.729 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & West Channel Between Retaining Walls (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	650.3	0				0.0000
			0.70	224	0.005	
	651.0	962				0.0052
			1.00	2,389	0.055	
	652.0	4,195				0.0600
			1.00	4,289	0.098	
	653.0	4,384				0.1585
			1.00	4,477	0.103	
	654.0	4,570				0.2612
			0.50	2,312	0.053	
Design HWL	654.5	4,679				0.3143

2007 As-Builts (Kudrna & Associates, LTD) = 0.309 AC-FT

UTILITY AND GRADING AS-BUILT PLAN
HERITAGE SPRINGS TOWNHOMES
WESTERN SPRINGS, ILLINOIS

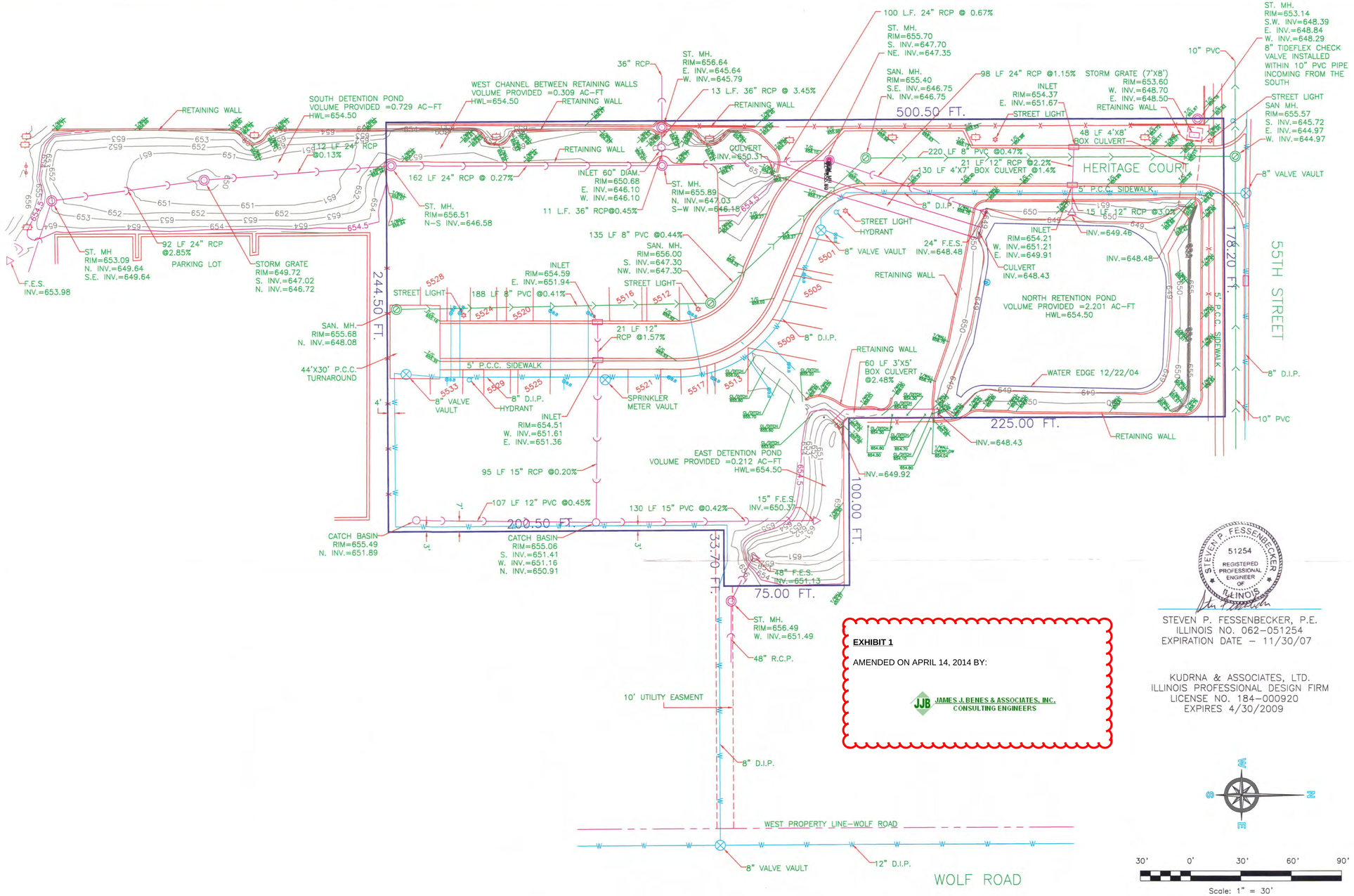


EXHIBIT 1

AMENDED ON APRIL 14, 2014 BY:

JAMES J. BENES & ASSOCIATES, INC.
CONSULTING ENGINEERS

STEVEN P. FESSENBECKER
51254
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

STEVEN P. FESSENBECKER, P.E.
ILLINOIS NO. 062-051254
EXPIRATION DATE – 11/30/07

KUDRNA & ASSOCIATES, LTD.
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000920
EXPIRES 4/30/2009

30' 0' 30' 60' 90'
Scale: 1" = 30'

LEGEND	ITEM	OWNERSHIP (MAINTENANCE RESPONSIBILTY)
W	8" WATER MAIN Including Hydrants	VILLAGE OF WESTERN SPRINGS
☼	STREET LIGHTS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	SANITARY SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	WATER SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	STORM SEWER	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	DETENTION PONDS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	RETENTION POND	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	8" SANITARY SEWER	LAGRANGE HIGHLANDS SANITARY DISTRICT

VILLAGE OF WESTERN SPRINGS

REVISIONS

KUDRNA & ASSOCIATES, LTD.
CIVIL ENGINEERING
PLANNING • DESIGN • LAND SURVEY • CONSTRUCTION MANAGEMENT
203 NORTH CASS AVENUE • WESTMONT, ILLINOIS • 60559 • (630) 969-3060
400 SOUTH GREEN STREET • SUITE 304 • CHICAGO, ILLINOIS • 60607 • (312) 738-1522

Checked By
GDL

Drawn By
AJP/FJS

Date
SEPTEMBER 29, 2007

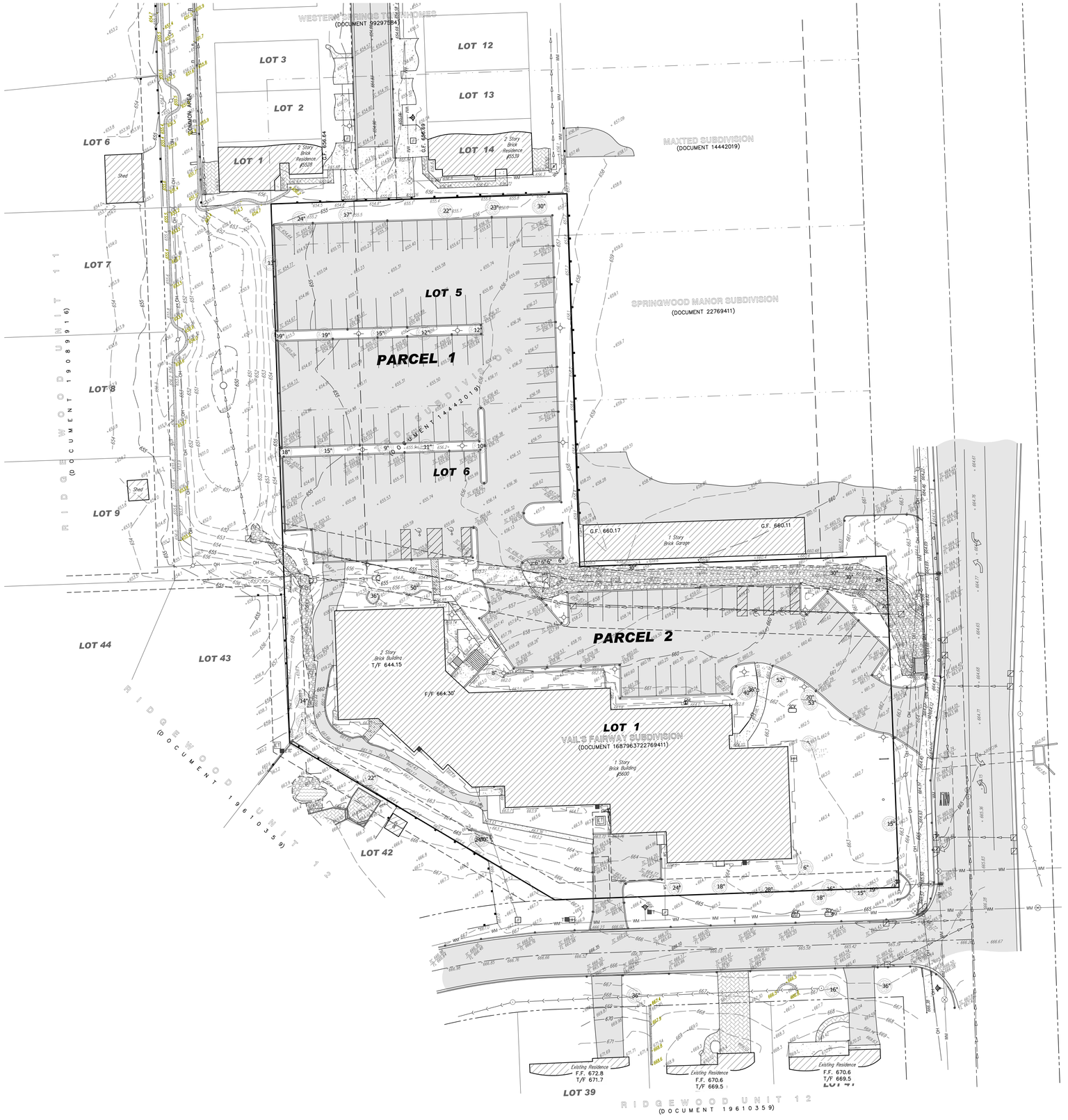
Scale
1"=30'

Job Number
5294

Title
HERITAGE SPRINGS TOWNHOMES

Sheet
1 of 1

P:\5294 00 - Community 55th and Wolf\dwg\5294-rev.dwg, 9/27/2007 2:53:11 PM



N

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

LEGEND

- ANCHOR
- B-BOX
- BENCHMARK
- GROUND FLOOD LIGHT
- POWER POLE
- SIGN
- SPRINKLER CONTROL VALVE
- HANDHOLD
- TRANSFORMER PAD
- CATCH BASIN
- STORM INLET
- FLARED END SECTION
- CLOSED LID MANHOLE
- WATER VALVE
- HYDRANT
- C CABLE TV PEDESTAL
- E ELECTRIC PEDESTAL
- T TELEPHONE PEDESTAL
- C E T TEL., ELEC., CABLE PEDESTALS
- E ELECTRIC METER
- G GAS METER
- FIP FOUND IRON PIPE
- 10" DECIDUOUS TREE W/ TRUNK SIZE
- LIGHT POLE W/MAST ARM
- PARKING LOT LIGHT (1)

HATCHING

- ASPHALT SURFACE
- ADA DETECTABLE WARNING
- BRICK SURFACE
- BUILDING LIMITS
- CONCRETE SURFACE
- RIP-RAP
- WATER

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- WOOD FENCE
- GUARDRAIL
- OH OVERHEAD WIRES
- WM WATER MAIN
- SANITARY SEWER
- SS SANITARY SERVICE
- STORM SEWER
- EDGE OF WATER
- BARRIER CURB
- DEPRESSED CURB
- CURB & GUTTER
- DEPRESSED CURB & GUTTER
- RETAINING WALL
- ### CONTOUR LINE

ABBREVIATIONS

◦ ###	EXIST. SPOT ELEVATION
CMP	CORRUGATED METAL PIPE
D.E.	DRAINAGE EASEMENT
DIP	DUCTILE IRON PIPE
F.F.	FINISHED FLOOR
INV	INVERT
MH	MANHOLE
P.U.E.	PUBLIC UTILITY EASEMENT
RCP	REINFORCED CONCRETE PIPE
T/F	TOP OF FOUNDATION
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
N	NORTH
S	SOUTH
E	EAST
W	WEST
(###.##')	RECORD/DEED
###.##	MEASURED

REVISIONS

NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

TOPOGRAPHIC MAP
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 04/02/2024
Field Date: BY OTHERS
Drawn By: SJL
Checked By: SDS

2 OF 2

EXISTING CONDITIONS - GRADING

L:\Projects\2024\24-0001\Survey\dwg\Topography\24-0001 Topo.dwg Plot Date:4/26/2024 8:47:08 AM By: SJL

HERITAGE SPRINGS STORMWATER EXHIBIT

55TH STREET

HERITAGE CT.

915 W. 55th Street

5505 Grand Avenue

5507 Grand Avenue

5511 Grand Avenue

5515 Grand Avenue

5519 Grand Avenue

Retention Pond
Water Elevation: 647.8
(04/15/2024)

WESTERN SPRINGS TOWNHOMES
(DOCUMENT 99297584)

HERITAGE CT.
DEDICATED PER DOCUMENT 99297584

MAXTED SUBDIVISION
(DOCUMENT 14442019)

SPRINGWOOD MANOR SUBDIVISION

LOT 1 (100.00')
LOT 2
LOT 3
LOT 5
LOT 6
LOT 7
LOT 12
LOT 13
LOT 14

EXISTING OVERLAND FLOOD ROUTE

COMMON AREA

Inlet
Rim 650.17
(18") Inv. 648.00

Catch Basin (CL)
Rim 652.78
(18" RCP) Inv. 647.96

7.5' x 9' Storm Box w/Grate
Rim 653.16
(18" RCP, W) Inv. 648.38
(Box Culvert, E) Inv. 648.13

Catch Basin (CL)
Rim 653.83
(12" RCP, W) Inv. 650.32
(12" RCP, E) Inv. 649.31

Catch Basin (CL)
Rim 653.87
(12" RCP) Inv. 651.45

Inlet
Rim 651.84

Box Culvert
Inv. 648.06
(See detail)

12" YES
Inv. 649.02

24" RCP
Inv. 648.06

Box Culvert
Inv. 648.00
(See detail)

Box Culvert
Inv. 648.02
(See detail)

Box Culvert
Inv. 649.55
(See detail)

18" YES
Inv. 650.32

Catch Basin (CL)
Rim 655.26
(24" RCP) Inv. 646.81

Box Culvert
Inv. 649.90
(See detail)

Catch Basin (CL)
Rim 656.18
(36" RCP) Inv. 645.23

Catch Basin (CL)
Rim 650.30
(36" RCP) Inv. 645.98

Catch Basin (CL)
Rim 655.47
(36" RCP) Inv. (No Data)

Sanitary Manhole
Rim 655.29
Inv. 647.69

2 Story Brick Residence
#528

2 Story Brick Residence
#555

Inlet
Rim 654.95
Inv. 651.35

S. Line, N. 75', Lot 4

E. Line, W. 1/2, N. Line, Lot 4

N. Line, Lot 4

S. Line, Lot 4
N. Line, Lot 5

E. Line, W. 1/2, Lot 5

Curb is 0.9" E.

Curb is 1.7" S.E.

Retaining Wall

Wood Fence

Vinyl Fence

Existing Stormwater Basin

8" PVC

12" PVC

24" RCP

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-26-24	PER WESTERN SPRINGS REVIEW	SDD

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

1 OF 1

HERITAGE SPRINGS STORMWATER EXHIGIT

REVIEW SET
NOT FOR CONSTRUCTION

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date: 7/12/2024 2:18:09 PM By dsteh

On-Site & Off-Site
Existing & Proposed Conditions
Summary Analysis Tables

Heritage Crossing
On-Site Reservoir & Peak Flow Rate Summary Analysis

Storage West Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	658.86	656.77	-2.09
2YR - 2HR	658.88	656.81	-2.07
2YR - 3HR	658.84	656.72	-2.12
2YR - 6HR	658.72	656.38	-2.34
2YR - 12HR	658.58	656.00	-2.58
2YR - 24HR	658.41	655.62	-2.79
2YR - 48HR	657.56	655.35	-2.21
10YR - 1HR	659.44	658.54	-0.90
10YR - 2HR	659.44	658.55	-0.89
10YR - 3HR	659.38	658.36	-1.02
10YR - 6HR	659.17	657.70	-1.47
10YR - 12HR	658.93	656.96	-1.97
10YR - 24HR	658.69	656.28	-2.41
10YR - 48HR	658.52	655.84	-2.68
100YR - 1HR	660.32	660.39	0.07
100YR - 2HR	660.30	660.36	0.06
100YR - 3HR	660.15	660.20	0.05
100YR - 6HR	659.84	659.82	-0.02
100YR - 12HR	659.42	658.47	-0.95
100YR - 24HR	659.11	657.52	-1.59
100YR - 48HR	658.85	656.75	-2.10

Basin "C"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET	Existing Discharge C.F.S.	Proposed Discharge C.F.S.
2YR - 1HR	650.72	650.61	-0.11	59.54	58.39
2YR - 2HR	650.78	650.71	-0.07	60.13	59.40
2YR - 3HR	650.67	650.61	-0.06	59.05	58.35
2YR - 6HR	650.27	650.22	-0.05	54.59	54.05
2YR - 12HR	649.51	649.49	-0.02	45.02	44.70
2YR - 24HR	648.76	648.75	-0.01	32.26	32.16
2YR - 48HR	648.31	648.31	0.00	23.95	23.89
10YR - 1HR	652.46	652.44	-0.02	75.73	75.49
10YR - 2HR	652.49	652.47	-0.02	75.96	75.77
10YR - 3HR	652.31	652.30	-0.01	74.48	74.37
10YR - 6HR	651.70	651.69	-0.01	69.14	69.03
10YR - 12HR	650.95	650.94	-0.01	61.89	61.82
10YR - 24HR	650.13	650.13	0.00	52.97	52.92
10YR - 48HR	649.15	649.14	-0.01	39.37	39.28
100YR - 1HR	655.16	655.11	-0.05	95.49	95.13
100YR - 2HR	655.14	655.08	-0.06	95.38	94.97
100YR - 3HR	654.64	654.50	-0.14	92.00	91.08
100YR - 6HR	653.74	653.74	0.00	85.65	85.64
100YR - 12HR	652.47	652.46	-0.01	75.75	75.72
100YR - 24HR	651.52	651.51	-0.01	67.42	67.38
100YR - 48HR	650.71	650.71	0.00	59.43	59.42

Basin "A" & "B"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	649.47	649.07	-0.40
2YR - 2HR	650.20	649.85	-0.35
2YR - 3HR	649.81	649.48	-0.33
2YR - 6HR	648.54	648.33	-0.21
2YR - 12HR	647.80	647.80	0.00
2YR - 24HR	647.80	647.80	0.00
2YR - 48HR	647.80	647.80	0.00

10YR - 1HR	653.41	653.39	-0.02
10YR - 2HR	653.41	653.41	0.00
10YR - 3HR	653.39	653.38	-0.01
10YR - 6HR	653.33	653.32	-0.01
10YR - 12HR	653.29	653.29	0.00
10YR - 24HR	648.95	648.90	-0.05
10YR - 48HR	647.80	647.80	0.00
100YR - 1HR	654.19	654.18	-0.01
100YR - 2HR	654.19	654.18	-0.01
100YR - 3HR	654.07	654.01	-0.06
100YR - 6HR	653.72	653.72	0.00
100YR - 12HR	653.41	653.41	0.00
100YR - 24HR	653.31	653.31	0.00
100YR - 48HR	653.28	653.28	0.00

2.41 Acre Developmental Site (Peak Flow Rates)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Reduction %
2YR - 1HR	3.91	2.97	-24.04%
2YR - 2HR	3.15	2.53	-19.68%
2YR - 3HR	2.53	2.10	-17.00%
2YR - 6HR	1.63	1.41	-13.50%
2YR - 12HR	1.05	0.93	-11.43%
2YR - 24HR	0.65	0.60	-7.69%
2YR - 48HR	0.45	0.43	-4.44%
10YR - 1HR	7.75	6.45	-16.77%
10YR - 2HR	5.91	5.14	-13.03%
10YR - 3HR	4.59	4.08	-11.11%
10YR - 6HR	3.01	2.62	-12.96%
10YR - 12HR	1.78	1.66	-6.74%
10YR - 24HR	1.05	1.02	-2.86%
10YR - 48HR	0.72	0.70	-2.78%
100YR - 1HR	15.64	13.96	-10.74%
100YR - 2HR	11.43	10.41	-8.92%
100YR - 3HR	9.07	8.21	-9.48%
100YR - 6HR	5.72	5.31	-7.17%
100YR - 12HR	3.14	3.04	-3.18%
100YR - 24HR	1.81	1.78	-1.66%
100YR - 48HR	1.21	1.19	-1.65%

Heritage Crossing
Off-Site Reservoir & Peak Flow Rate Summary Analysis

Box Inlet East Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	660.51	660.47	-0.04
2YR - 2HR	660.55	660.51	-0.04
2YR - 3HR	660.46	660.42	-0.04
2YR - 6HR	660.11	660.08	-0.03
2YR - 12HR	659.73	659.70	-0.03
2YR - 24HR	659.35	659.32	-0.03
2YR - 48HR	659.08	659.05	-0.03
10YR - 1HR	662.29	662.24	-0.05
10YR - 2HR	662.30	662.25	-0.05
10YR - 3HR	662.11	662.06	-0.05
10YR - 6HR	661.45	661.40	-0.05
10YR - 12HR	660.70	660.66	-0.04
10YR - 24HR	660.02	659.98	-0.04
10YR - 48HR	659.57	659.54	-0.03
100YR - 1HR	664.98	664.94	-0.04
100YR - 2HR	664.96	664.92	-0.04
100YR - 3HR	664.86	664.78	-0.08
100YR - 6HR	663.86	663.57	-0.29
100YR - 12HR	662.23	662.17	-0.06
100YR - 24HR	661.27	661.22	-0.05
100YR - 48HR	660.49	660.45	-0.04

Storage East Side of Wolf Road

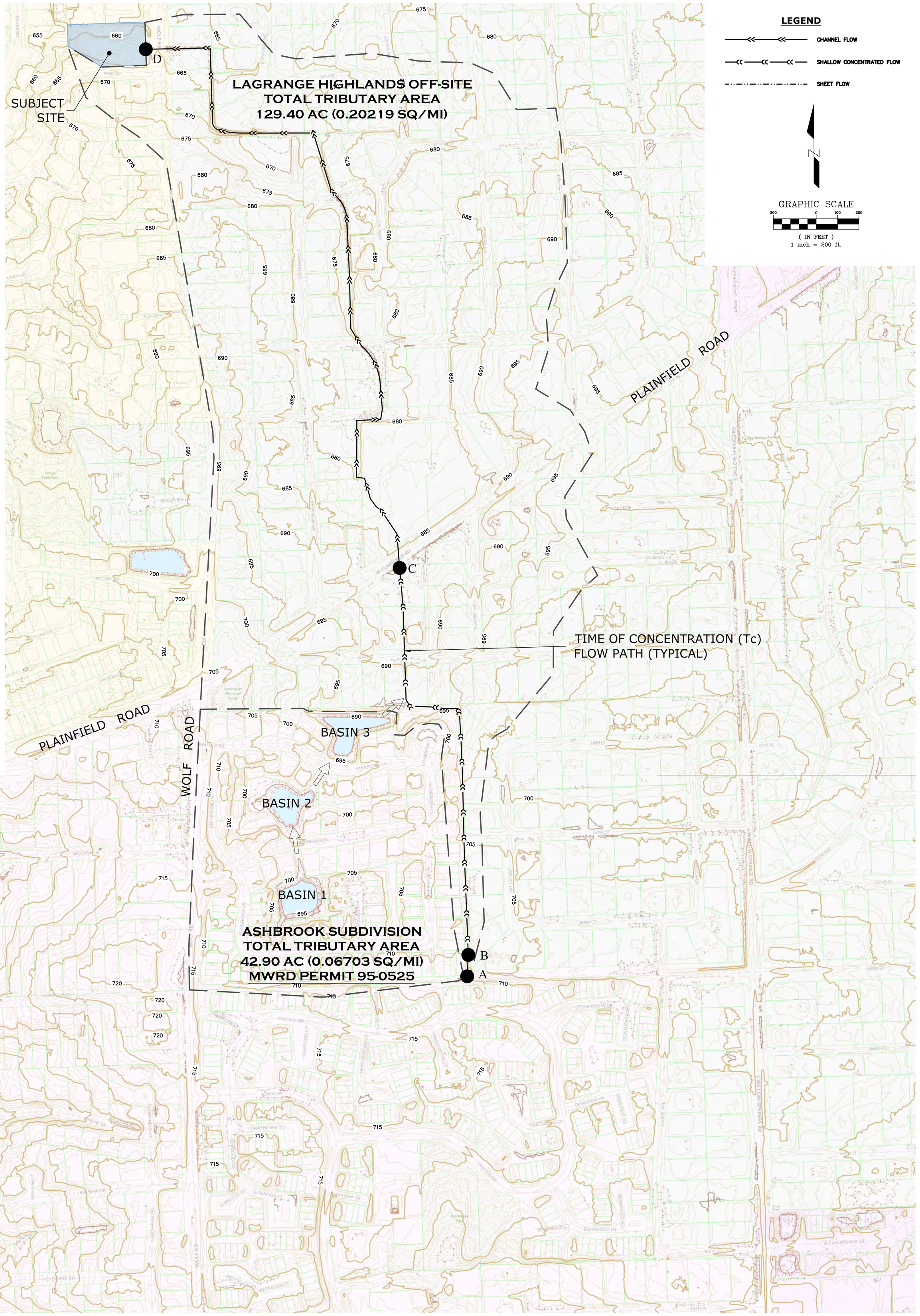
STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	661.95	661.95	0.00
2YR - 2HR	662.02	662.02	0.00
2YR - 3HR	661.86	661.86	0.00
2YR - 6HR	661.18	661.18	0.00
2YR - 12HR	660.28	660.28	0.00
2YR - 24HR	659.53	659.53	0.00
2YR - 48HR	659.08	659.08	0.00
10YR - 1HR	663.56	663.56	0.00
10YR - 2HR	663.56	663.56	0.00
10YR - 3HR	663.53	663.53	0.00
10YR - 6HR	663.09	663.09	0.00
10YR - 12HR	662.20	662.20	0.00
10YR - 24HR	660.98	660.98	0.00
10YR - 48HR	659.92	659.92	0.00
100YR - 1HR	664.00	664.00	0.00
100YR - 2HR	663.98	663.98	0.00
100YR - 3HR	663.91	663.91	0.00
100YR - 6HR	663.72	663.72	0.00
100YR - 12HR	663.54	663.54	0.00
100YR - 24HR	662.90	662.90	0.00
100YR - 48HR	661.92	661.92	0.00

Off-Site Tributary Area East of Wolf Road (LaGrange Highlands)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Differential CFS
2YR - 1HR	74.30	74.30	0.00
2YR - 2HR	75.98	75.98	0.00
2YR - 3HR	72.01	72.01	0.00
2YR - 6HR	58.07	58.07	0.00
2YR - 12HR	44.10	44.10	0.00
2YR - 24HR	31.65	31.65	0.00
2YR - 48HR	23.52	23.52	0.00
10YR - 1HR	163.13	163.13	0.00
10YR - 2HR	162.60	162.60	0.00
10YR - 3HR	150.72	150.72	0.00
10YR - 6HR	116.39	116.39	0.00
10YR - 12HR	81.52	81.52	0.00
10YR - 24HR	54.17	54.17	0.00
10YR - 48HR	38.67	38.67	0.00
100YR - 1HR	359.61	359.61	0.00
100YR - 2HR	349.64	349.64	0.00
100YR - 3HR	317.93	317.93	0.00
100YR - 6HR	257.01	257.01	0.00
100YR - 12HR	154.46	154.46	0.00
100YR - 24HR	106.91	106.91	0.00
100YR - 48HR	72.59	72.59	0.00

Off-Site Upstream Tributary Area Analysis Documentation

L:\Projects\2024\24-0001\Engineering\Storm Water\24-0001 Off-Site Upstream Tributary Area.dwg Plot Date:11/6/2024 1:27:17 PM By:sdudak



EX1
OF
EX1

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 200'
Date: 04-11-24
Design By: SSD
Drawn By: AJS
Checked By: SSD

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326 - 4962
DEI
IL PROF. LIC. NO.: 184 - 003740

TRIBUTARY AREA EXHIBIT
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 S. JACKSON STREET
BURR RIDGE, ILLINOIS
(630) 325-3400

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	07-12-24	PER VILLAGE REVIEW	SSD

UPSTREAM TRIBUTARY AREA EXHIBIT

Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t)

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

Conditions (i.e. Present / Developed) Existing conditions - LaGrange Highlands Off-Site 129.4 Acre

NOTES: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet Flow: (Applicable to T_c only)		Segment ID	AB			
1 Surface Description (Table 3-1)			grass			
2 Manning's Roughness Coeff., '**n**' (Table 3-1)			0.24			
3 Flow Length, **L** (Total < 300 ft)		ft	100			
4 Two-year, 24-hour Rainfall, P_2		in	3.34	3.34		
5 Land slope, **S**		ft / ft	0.0200	0.0100		
6 $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}S^{0.4}}$	Compute T_t	hr	0.23	+ 0.00	=	0.23

Shallow Concentrated Flow:		Segment ID	BC			
7 Surface Description (paved or unpaved)			unpaved			
8 Flow Length, **L**		ft	2028			
9 Watercourse slope, **S**		ft / ft	0.0180			
10 Average Velocity, **V** (Figure 3-1)		ft / s	2.2			
11 $T_t =$ **L** / 3600**V**	Compute T_t	hr	0.26	+	=	0.26

Channel Flow:		Segment ID	CD			
12 Cross Sectional Flow Area, **a**		ft^2				
13 Wetted Perimeter, p_w		ft				
14 Hydraulic Radius, **R** = **a**/p_w		ft				
15 Channel Slope, **S**		ft / ft				
16 Manning's Roughness Coeff., '**n**'						
17 **V** = [1.49$R^{2/3}S^{1/2}$]/**n**		ft / s	3	3		
18 Flow Length, **L**		ft	3436	0		
19 $T_t =$ **L** / 3600**V**	Compute T_t	hr	0.32	+ 0.00	=	0.32
20 Watershed or Subarea T_c or T_t (add T_t in steps 6, 11, and 19)					hr	**0.81**

L:\Projects\2024\24-0001\Engineering\Storm Water\Reports - Preliminary\Initial Submittal\Tributary Area Calcs\[24-0001 Tc Calc.xls]Trib. to Site 129

Curve Number

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

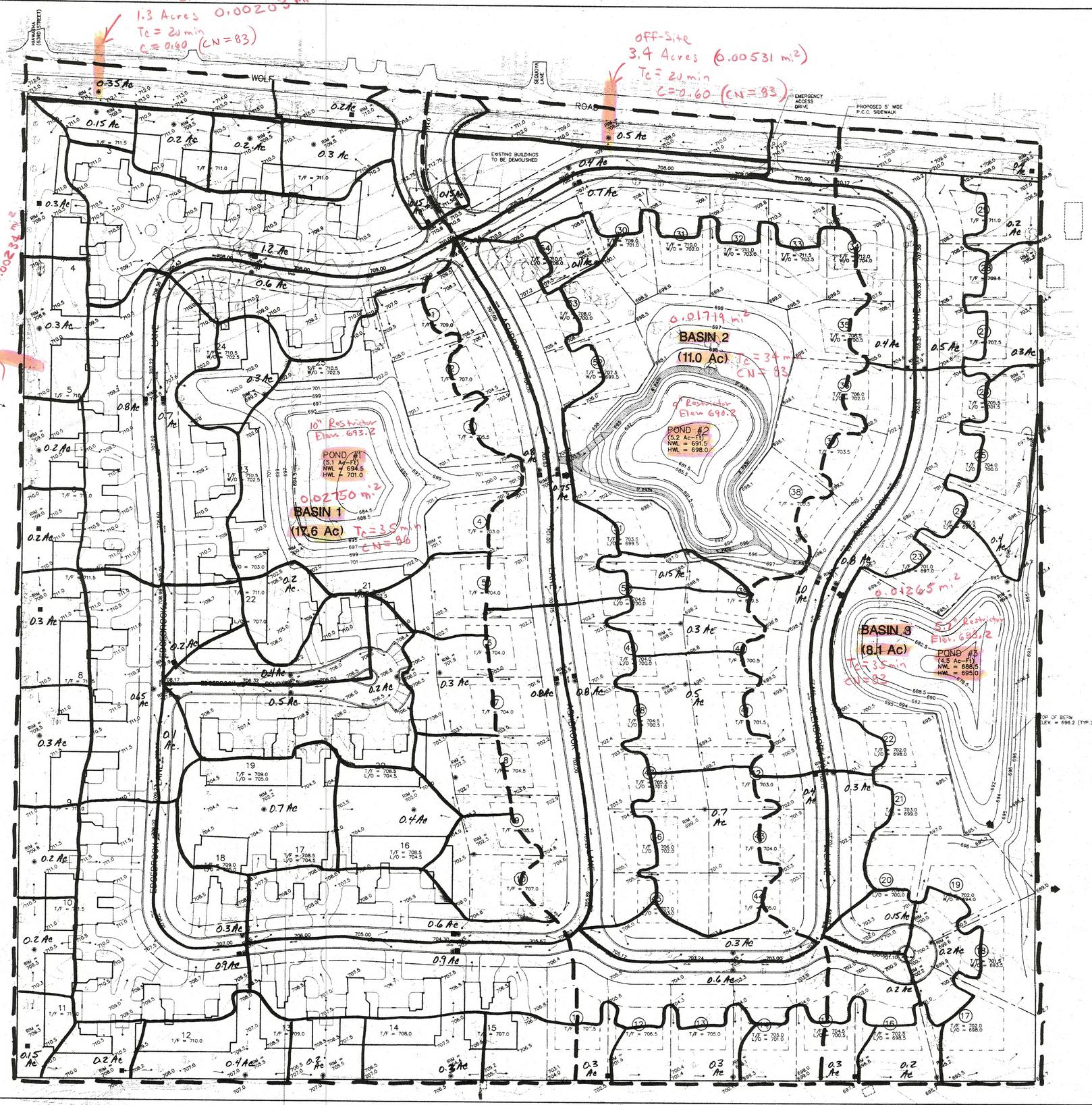
Conditions (i.e. Present / Developed): Existing conditions - Tributary

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	School / Church	94			23.1100	2172.34
C	Residential (town houses)	90			30.1400	2712.60
C	Residential 1/4 acre lots	83			31.5300	2616.99
C	Residential 1/2 acre lots	80			44.6200	3569.60
				Totals =	129.4000	11071.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{11071.53}{129.4000} =$ 85.56 ; use CN = **85.56**



ASHBROOK SUBDIVISION

1" = 50'
10/31/95

STORM WATER MANAGEMENT PLAN

LEGEND

BASIN BOUNDARY

STORM STRUCTURE
DRAINAGE AREA LIMIT

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVE. NORTHFIELD, IL 60093 PH. (708) 446-1000 FAX (708) 446-1002

NOTE:
REFER TO SEPARATE MODEL AND SALES CENTER EXHIBIT BY DONVEN HOMES FOR MORE INFORMATION REGARDING MODEL PHASE SITE PLAN.

NOTE:
REFER TO SEPARATE PLANS FOR PROPOSED WOLF ROAD IMPROVEMENTS

EXISTING GRAVEL PARKING LOT TO BE REMOVED. GRAVEL TO BE REUSED ON-SITE AT TEMPORARY CONSTRUCTION ENTRANCE.

PROPOSED 5' WIDE P.C.C. SIDEWALK

18' WIDE EMERGENCY ACCESS DRIVE (SEE PAVEMENT DETAIL ON SHEET CE-21)

EXISTING BUILDINGS TO BE DEMOLISHED. EXSISTING SEPTIC TANK AND FIELD TO BE REMOVED.

MODEL PHASE

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #1
(5.1 Ac-Ft)
NWL = 694.5
HWL = 701.0

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #2
(5.2 Ac-Ft)
NWL = 691.5
HWL = 698.0

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #3
(4.5 Ac-Ft)
NWL = 688.5
HWL = 695.0

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EXISTING PLEASANT VIEW ESTATES SUBDIVISION

MATCH LINE

MATCH LINE

ASHBROOK LANE

EDGEBROOK LANE

EDGEBROOK COURTYARD

GLENBROOK LANE

SEE SHEET CE-4 FOR CONTINUATION

SECTION A-A

SECTION B-B

SECTION C-C

GRADING PLAN (WEST)

REVISIONS

DATE	DESCRIPTION
2/21/95	PER VILLAGE, SAN. DIST. FIRE DEPT., & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

DESIGN: T.M.L. | DRAFTING: M.J.
SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-3

SEE SHEET CE-3 FOR CONTINUATION

MATCH LINE

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EDGEBROOK

EDGEBROOK COURT

ASHBROOK LANE

GLENBROOK LANE

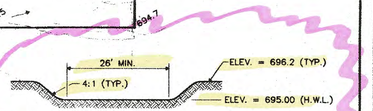
POND #3
LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)
4.5 Ac-Ft
NWL = 688.5
HWL = 695.0

TOP OF BERM ELEV. = 696.2 (TYP.)

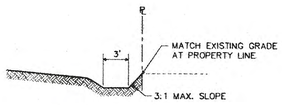
EXISTING PLEASANT VIEW ESTATES SUBDIVISION

EXISTING ACACIA ACRES SUBDIVISION

SECTION D–D



NOTE:
DOWNSPOUTS FOR HOMES ON LOTS 66 & 67 ARE TO BE CONNECTED TO STORM SEWER.



SECTION E–E

TYPICAL SWALE SECTION ALONG EAST PROPERTY LINE

GRADING PLAN (EAST)

REVISIONS

DATE	DESCRIPTION
12/21/95	PER VILLAGE, SAN. DIST., FIRE DEPT., & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

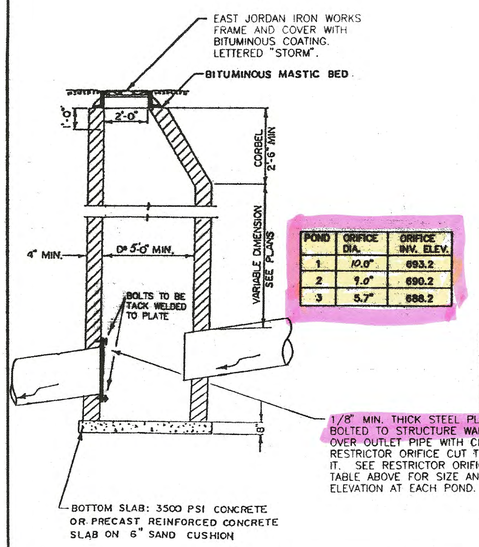
GRADING PLAN (EAST)

DESIGN: T.M.L. | DRAFTING: M.J.
SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

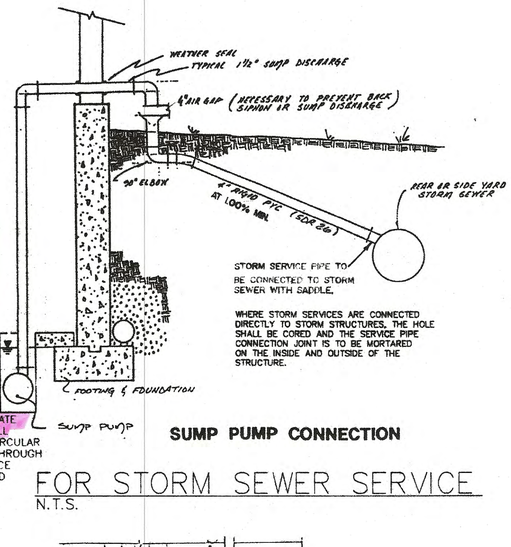
PROJECT No. 95233

CE – 4



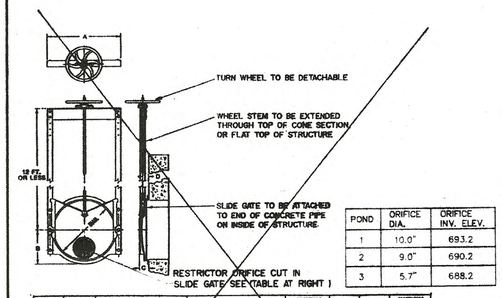
POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

CATCH BASIN W/RESTRICTOR
N.T.S.



SUMP PUMP CONNECTION

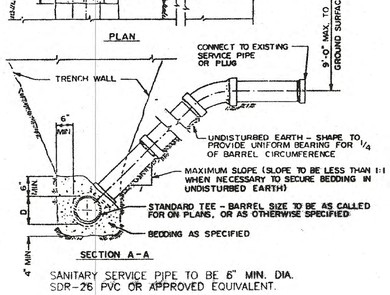
FOR STORM SEWER SERVICE
N.T.S.



POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

GATE SIZE (mm)	A	SPIGOT BACK GATE B	C	D	FLAT BACK GATE B	C	D	MINIMUM FRAME WEIGHT (LB)	STEM DIA.	TYPE LIFT	MAXIMUM WORKING HEAD (FT)
6	9.37	4.37	4.12	2.50	4.37	4.12	2.50	2	¾	H1-10	20
8	11.37	5.12	3.37	1.75	5.37	4.12	2.50	2	¾	H1-10	20
10	13.37	6.12	3.37	1.75	6.37	4.12	2.50	2	¾	H1-10	20
12	15.37	7.12	3.37	1.75	7.37	4.12	2.50	3	¾	H1-10	20
15	18.37	8.62	3.37	1.75	8.87	4.12	2.50	3	¾	H1-10	20
18	22.87	10.50	3.37	2.25	10.75	5.12	3.12	3	1¼	H1-14	20
21	25.87	12.00	4.85	2.25	12.25	5.12	3.12	4	1¼	H1-14	16
24	28.87	13.50	4.25	2.25	13.75	5.12	3.12	4	1¼	H1-14	12
30	35.87	17.37	5.12	3.00	17.12	5.87	3.75	5	1½	H1-14	10
36	41.87	20.37	5.75	3.00	20.12	6.50	3.75	6	1½	H2-24	8
42	47.87	23.40	5.75	3.00	23.12	6.50	3.75	6	1½	H2-30	8
48	53.87	26.75	5.75	3.00	26.12	6.87	4.12	7	1½	H8-24	7
54	61.0	29.25	7.75	4.87	29.25	7.75	4.87	8	2"	H8-30	5
60	68.0	32.25	9.0	5.50	32.25	9.0	5.50	8	2"	H8-30	4

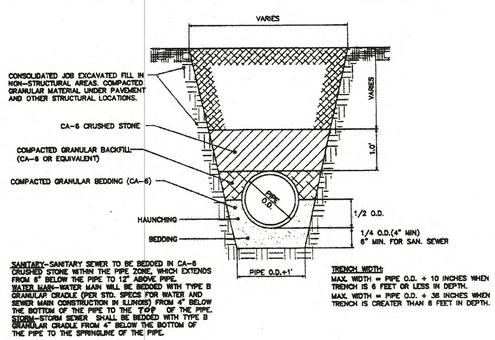
SLIDE GATE RESTRICTOR DETAIL



SANITARY SERVICE PIPE TO BE 6" MIN. DIA. SDR-26 PVC OR APPROVED EQUIVALENT.

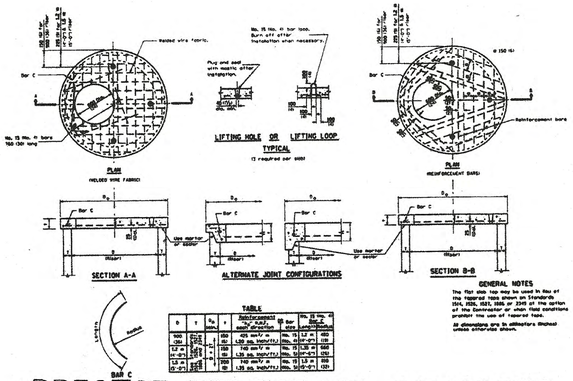
NOTES:
1. RISERS TO BE CONSTRUCTED IN LIEU OF WYES WHERE SEWER DEPTH EXCEEDS 12'-0" FOR PIPE MATERIAL AND CONCRETE. SEE SPECIFICATIONS.
2. ALL SANITARY SERVICES SHALL BE INSPECTED BY THE LA GRANGE HIGHLANDS SANITARY DISTRICT OR THE VILLAGE OF INDIAN HEAD PARK PRIOR TO THE TRENCH BEING BACKFILLED.

SANITARY SEWER SERVICE



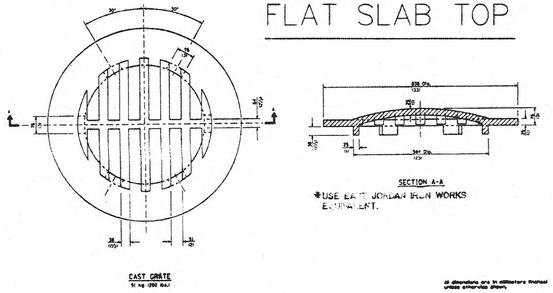
SANITARY-SANITARY SEWER TO BE BEDDED IN CA-6 CRUSHED STONE WITHIN THE PIPE ZONE, WHICH EXTENDS FROM 6" BELOW THE PIPE TO 12" ABOVE PIPE.
WATER MAIN-WATER MAIN WILL BE BEDDED WITH TYPE B GRANULAR CRADLE (PER STD. SPECS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS) FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE TOP OF THE PIPE.
STORM-STORM SEWER SHALL BE BEDDED WITH TYPE B GRANULAR CRADLE FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE OF THE PIPE.

PIPE BEDDING AND BACKFILL

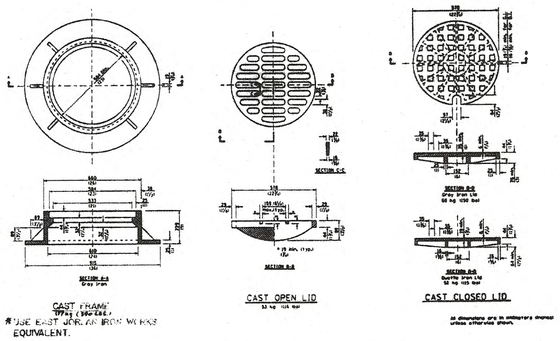


D	t	A_s	s	Reinforcement per foot of circumference	Min. A_s per foot of circumference	Min. A_s No. of bars	Min. A_s Bar size designation
18"	2½"	0.12	3"	480 mm²/m (.227 in²/ft)	120 mm²/m (.057 in²/ft)	Min. 15	13 mm (#4)
24"	2½"	0.16	3"	640 mm²/m (.303 in²/ft)	160 mm²/m (.076 in²/ft)	Min. 15	13 mm (#4)
30"	2½"	0.20	3"	800 mm²/m (.379 in²/ft)	200 mm²/m (.095 in²/ft)	Min. 15	13 mm (#4)
36"	2½"	0.24	3"	960 mm²/m (.454 in²/ft)	240 mm²/m (.114 in²/ft)	Min. 15	13 mm (#4)

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

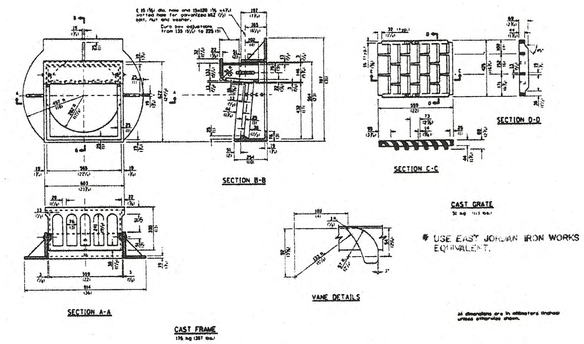


TYPE 8 GRATE *
(FOR ALL OPEN LID STORM STRUCTURES IN GRASS AREAS)



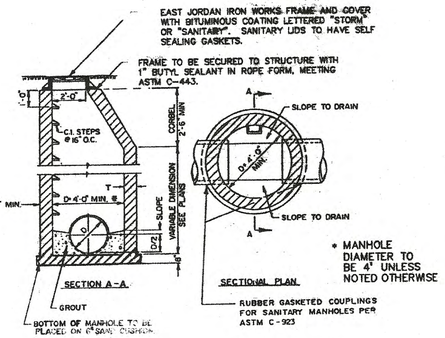
EQUIVALENT.

TYPE 1* FRAME AND LIDS
(FOR ALL CLOSED LID STRUCTURES OR STRUCTURES IN PAVEMENT AREAS OUTSIDE OF CURB AND GUTTER)



TYPE 3V* FRAME AND GRATE
(FOR ALL STORM STRUCTURES WITHIN B-6.12 CURB AND GUTTER)

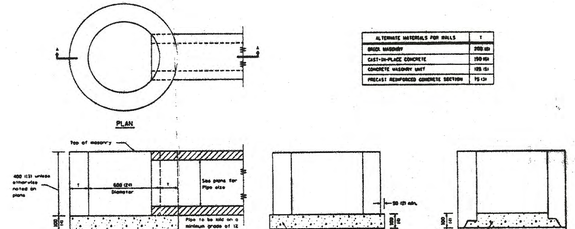
MATERIAL WALL THICKNESS
PRE-CAST CONC. MIN. 1/12 "D"
CONC. MASONRY UNITS MIN. 3"
CAST-IN-PLACE CONC. MIN. 6"
BRICK MASONRY UNITS MIN. 8"



* MANHOLE DIAMETER TO BE 4' UNLESS NOTED OTHERWISE

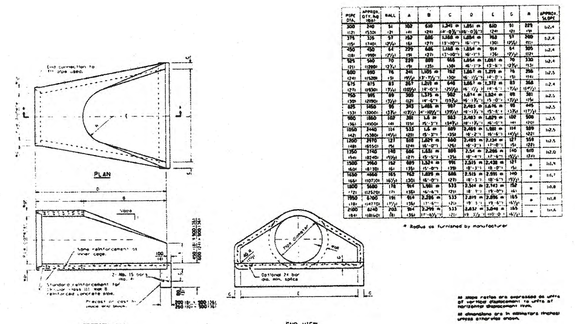
NOTE:
1. MANHOLE BARREL SECTIONS SHALL BE SEALED WITH 1" BUTYL JOINT SEALANT IN ROPE FORM, MEETING ASTM C-443.
2. SANITARY MANHOLES SHALL HAVE MONOLITHICALLY CAST BOTTOM SECTIONS.

STORM & SANITARY MANHOLE STRUCTURE



ALTERNATE MATERIALS FOR WALLS	t
BRICK MASONRY	8"OR 20
CAST-IN-PLACE CONCRETE	6"OR 150
CONCRETE MASONRY UNIT	8"OR 150
PRECAST REINFORCED CONCRETE SECTION	5"OR 125

STORM INLET STRUCTURE



PIPE DIA.	APPROX. WT. OF BARREL	WALL	A	B	C	D	L	S	APPROX. SLOPE
300	1100	1¼	900	600	1,200	1,200	600	14	8.0%
375	1325	1¼	900	600	1,200	1,200	750	17	8.0%
450	1550	1¼	900	600	1,200	1,200	900	20	8.0%
525	1775	1¼	900	600	1,200	1,200	1050	23	8.0%
600	2000	1¼	900	600	1,200	1,200	1200	26	8.0%
675	2225	1¼	1200	600	1,800	1,800	1350	29	8.0%
750	2450	1¼	1200	600	1,800	1,800	1500	32	8.0%
825	2675	1¼	1200	600	1,800	1,800	1650	35	8.0%
900	2900	1¼	1200	600	1,800	1,800	1800	38	8.0%
1050	3350	1¼	1200	600	1,800	1,800	2100	44	8.0%
1200	3800	1¼	1200	600	1,800	1,800	2400	50	8.0%
1350	4250	1¼	1200	600	1,800	1,800	2700	56	8.0%
1500	4700	1¼	1200	600	1,800	1,800	3000	62	8.0%
1650	5150	1¼	1200	600	1,800	1,800	3300	68	8.0%
1800	5600	1¼	1200	600	1,800	1,800	3600	74	8.0%
1950	6050	1¼	1200	600	1,800	1,800	3900	80	8.0%
2100	6500	1¼	1200	600	1,800	1,800	4200	86	8.0%
2250	6950	1¼	1200	600	1,800	1,800	4500	92	8.0%
2400	7400	1¼	1200	600	1,800	1,800	4800	98	8.0%
2550	7850	1¼	1200	600	1,800	1,800	5100	104	8.0%
2700	8300	1¼	1200	600	1,800	1,800	5400	110	8.0%
2850	8750	1¼	1200	600	1,800	1,800	5700	116	8.0%
3000	9200	1¼	1200	600	1,800	1,800	6000	122	8.0%

* Radius as furnished by manufacturer

PRECAST REINFORCED CONCRETE FLARED END SECTION

REVISIONS

DATE	DESCRIPTION
12/20/95	PER VILLAGE, SAN. DIST., FIRE DEPT., AND DEVELOPER.
1/3/96	POND RESTRICTORS PER WMRD
1/26/96	PER VILLAGE, I.E.P.A., M.W.R.D. & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (847) 446-1000 FAX (847) 446-1002

DESIGN: T.L. DRAFTING: V.B. G.F.
SCALE: NONE DATE: 10/31/95

CONSTRUCTION STANDARDS

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-23

ASHBROOK SUBDIVISION

Indian Head Park, Illinois

FINAL
STORM WATER MANAGEMENT CALCULATIONS

October 31, 1995
REVISED 1/22/96 (per MWRD) OFFICE COP

95-525

Prepared By:

INFRACON, Inc.
495 Central Avenue
Northfield, IL 60093
(708) 446 - 1000

LOCAL SEWER SYSTEMS SECTION
96 FEB -1 AM 10: 32
M.W.R.D. OF GRT. CHGO.

CONTENTS

Section

1. Storm Water Management Summary

2. HydroCAD 100-Year Storm Routing Calculations

3. Bypass Flow, Pond Overflow Weir Sizing, and Downstream Sewer Calculations

4. Proposed Storm Sewer Sizing Calculations

5. Miscellaneous Technical Reference Data

Exhibit: Storm Water Management Plan

SECTION 1

Storm Water Management Summary

Storm Water Management Summary

Existing Conditions:

The subject 37.9 acre property is located along the east side of Wolf Road between 60th and 63rd Streets in Indian Head Park, Illinois (refer to the location map included in this section). The site is lightly wooded and currently consists of a par three golf course with a small clubhouse building and gravel parking lot. It is bounded by single family homes to the west, north and east and the Acacia multi-family development along its entire southern border. Except for approximately one half acre in the southeast corner of the property, the parcel drains unrestricted in a northerly direction to a pair of 12" diameter storm sewer pipes at the north boundary which in turn discharge to an existing 24" x 18" corrugated metal pipe under 60th street. This culvert then conveys storm water to a drainage swale which flows northerly to Plainfield Road.

There are approximately 6.2 acres of tributary watershed to the west and south of the site (refer to the USGS map copies in section 3). This upstream area is comprised of three separate drainage areas. The first two are approximately 3.4 and 1.3 acres in size and drain to the property through separate 18" diameter culverts under Wolf Road. The third off-site area consists of an estimated 1.5 acres of rear yards of the adjacent Acacia development along the south boundary of the property. Record drawings for the Acacia development indicate that the majority of that site now drains to the southeast and away from the proposed Ashbrook Subdivision.

Proposed Development Conditions:

The proposed Ashbrook Subdivision will occupy 36.4 acres of the 37.9 gross acreage, with 1.5 acres being dedicated to the Wolf Road right-of-way. The development will consist of 25 multi-family buildings containing a total of 112 townhome units and 54 single family home sites. Wolf Road will be widened to provide a left turn lane into the site.

A proposed storm sewer system and drainage swales will convey storm water to three on-site storm water retention ponds which will provide the necessary detention storage in the event of a 100-year frequency storm event. The high water level on each of the three retention ponds has been designed at a minimum of 1.5 feet below the lowest adjacent proposed foundation elevation. Each pond will contain an overflow weir to accommodate the appropriate off-site 100-year bypass flow without exceeding a flow depth of 0.5 feet. The discharge from each pond will be restricted by a circular orifice cut into a metal plate permanently mounted (in accordance with MWRD regulations) over the outflow pipe inside of a downstream catch basin. The site release has been reduced beyond typical allowable rates so that only one of the two existing downstream 12" diameter storm sewer pipes will be needed to convey it. Finally, the existing 24" x 18" culvert under 60th Street, which is in poor condition, will be replaced with a brand new pipe of the same material and size.

Storm Water Management Calculations:

HydroCAD storm water modeling software, which employs the SCS TR-20 and TR-55 methods, was utilized along with Bulletin 70 rainfall intensities in determining the 100-year storm runoff hydrographs for the site and routing the resultant flows through the proposed retention ponds. Section 2 includes all data calculated for basin characteristics, times of concentration, runoff hydrographs, detention storage, and pond routing. The off-site bypass flows were calculated using the rational method and Bulletin 70 rainfall intensities and are shown in Section 3. Storm sewers on the site have been designed, utilizing the rational method and the Bulletin 70 rainfall data to convey a 10-year frequency storm flow. The calculations for these are in Section 4. Supporting technical reference data can be found in Section 5.

The primary calculated hydrologic information is as follows:

POND	TRIBUTARY BASIN AREA (Ac)	N.W.L. ELEV.	H.W.L. ELEV.	STORAGE VOLUME (Ac-Ft)	RESTRICTOR ORIFICE DIAMETER (in)	MAX.100-YR STORM RELEASE (cfs)
1	17.57	694.5	701.0	5.1	10.0	4.2
2	11.02	691.5	698.0	5.2	9.0	3.5
3	8.07	688.5	695.0	4.5	5.7	2.2

Total Development Area = 36.4 Ac

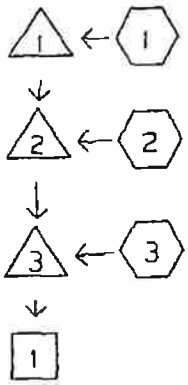
Total Proposed Detention Volume = 14.8 Ac-Ft

Proposed Site Release = 2.2 cfs (0.06 cfs/Ac)

SECTION 2

HydroCAD 100-Year Storm Routing Calculations

WATERSHED ROUTING ==========



SUBCATCHMENT REACH POND LINK

SUBCATCHMENT 1	= BASIN NO. 1	-> POND 1
SUBCATCHMENT 2	= BASIN NO. 2	-> POND 2
SUBCATCHMENT 3	= BASIN NO. 3	-> POND 3
REACH 1	= EXISTING 12" DIA. STORM PIPE	->
POND 1	= RETENTION POND NO. 1	-> POND 2
POND 1 secondary	= RETENTION POND NO. 1	-> POND 2
POND 2	= RETENTION POND NO. 2	-> POND 3
POND 2 secondary	= RETENTION POND NO. 2	-> POND 3
POND 3	= RETENTION POND NO. 3	-> REACH 1
POND 3 secondary	= RETENTION POND NO. 3	-> REACH 1

RUNOFF BY SCS TR-20 METHOD: TYPE II 24-HOUR RAINFALL= 7.4 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	17.57	35.5	1%98 3%99 34%98 2%98 9%98 52%74 - -	86	-	76.4	12.25	7.41
2	11.02	34.4	1%98 4%99 20%98 11%98 64%74 - - -	83	-	46.4	12.24	4.42
3	8.07	35.0	0%98 5%99 21%98 11%98 63%74 - - -	83	-	33.6	12.25	3.23

POND 3 INFLOW PEAK= 37.1 CFS @ 12.25 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.8
11.00	2.0	2.3	2.6	3.0	3.4	4.0	4.8	6.2	8.8	13.8
12.00	21.5	30.7	36.4	36.2	31.7	25.7	20.4	16.7	14.0	12.0
13.00	10.5	9.5	8.7	8.1	7.6	7.2	6.9	6.7	6.4	6.3
14.00	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.4
15.00	5.3	5.3	5.3	5.2	5.2	5.1	5.1	5.1	5.0	5.0
16.00	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7
17.00	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6
18.00	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4
19.00	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3
20.00	4.3									

POND 3 TOTAL OUTFLOW PEAK= 2.2 CFS @ 20.00 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	.1	.2
11.00	.2	.3	.3	.4	.5	.6	.7	.7	.8	.8
12.00	1.0	1.1	1.2	1.4	1.5	1.6	1.6	1.7	1.7	1.7
13.00	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9
14.00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
15.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
17.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19.00	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2
20.00	2.2									

SECTION 3

Off-site Bypass Flow, Overflow Weir Sizing, and Downstream Sewer Calculations

INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY DATE
SCALE

SITE BYPASS FLOW

1. OFF-SITE AREA A ≈ 3.4 Ac ON WEST SIDE OF WOLF RD. (SEE ATTACHED USGS MAP'S)

ASSUME T_c = 20 MIN & C = 0.60

Q_{100} = C · I · A = 0.60 × 6.9"/HR × 3.4 ≈ 14.1 cfs

2. OFF-SITE AREA B ≈ 1.3 Ac ON WEST SIDE OF WOLF ROAD (SEE ATTACHED USGS MAPS)

ASSUME T_c = 20 min & C = 0.60

Q_{100} = 0.60 × 6.9"/HR × 1.3 ≈ 5.4 cfs

3. OFF-SITE AREA C ≈ 1.5 Ac ALONG ACACIA DEVELOPMENT TO SOUTH (BASED ON 1275' × 50' AVG BACK YARD AREA. REMAINING PORTION OF ACACIA DRAINS TO SOUTH PER SITE RECORD DRAWINGS.)

ASSUME T_c = 10 min & C = 0.50

Q_{100} = 0.50 × 10.02"/HR × 1.5 ≈ 7.5 cfs

∴ BYPASS FLOW THROUGH POND #1 = 5.4 + 7.5
= 12.9 cfs

BYPASS FLOW THROUGH POND #'S 2 & 3 = TOTAL BYPASS FLOW
= 27.0 cfs

PRODUCT 204-1 (Single Sheets) 205-1 (Packets) ACCO Inc., Gilroy, Mass. 01471. To Order PHONE TOLL FREE 1-800-225-6380

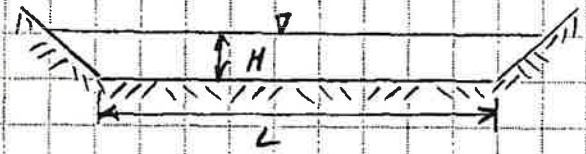
INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY _____ DATE _____
SCALE _____

POND OVERFLOW WEIRS (FOR 100-YR BYPASS FLOWS)

POND #1:

100-YR BYPASS FLOW = 12.9 CFS



LET H = 0.5' (LEAVING 1.0' FREEBOARD TO T/F'S)

$Q = 3LH^{3/2}$

$12.9 = 3L(0.5^{3/2}) \Rightarrow L = 12.2'$ MIN.

POND #'S 2 & 3:

100-YR BYPASS FLOW = 27.0 CFS

$Q = 3LH^{3/2}$

$27 = 3L(0.5)^{3/2} \Rightarrow L = 25.5'$ MIN.

PRODUCT 204-1 (Single Sheets) 205-1 (Padded) NEBS, Inc., Groton, Mass. 01471 To Order PHONE TOLL FREE 1-800-225-6380

Stormwater Analysis
Existing Conditions

Curve Number

Project: Western Springs By: AJS Date: 1/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 1/26/2024

Conditions (i.e. Present / Developed): Existing

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			0.6635	49.10
C	Pavement, parking, Curb and Gutter	98			1.6663	163.30
C	Rock Ditch	89			0.0802	7.14
				Totals =	2.4100	219.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{219.53}{2.4100} = 91.09$; use CN = **91.09**

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			2.90	38	0.001	
	649.37	13				0.0009
			0.63	126	0.003	
	650.00	506				0.0038
			1.00	2,614	0.060	
	651.00	5,647				0.0638
			1.00	8,338	0.191	
	652.00	11,358				0.2552
			1.00	12,572	0.289	
	653.00	13,827				0.5439
			1.00	14,929	0.343	
	654.00	16,059				0.8866
			0.50	8,275	0.190	
Design HWL	654.50	17,045				1.0765
			0.50	11,383	0.261	
	655.00	29,013				1.3379
			0.70	27,797	0.638	
Overflow at Heritage Ct.	655.70	51,472				1.9760
			0.30	16,943	0.389	
	656.00	61,632				2.3649
			0.10	6,357	0.146	
Top of Existing Wall	656.10	65,528				2.5109

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081

Heritage Crossing - Western Springs, IL

8/20/2024

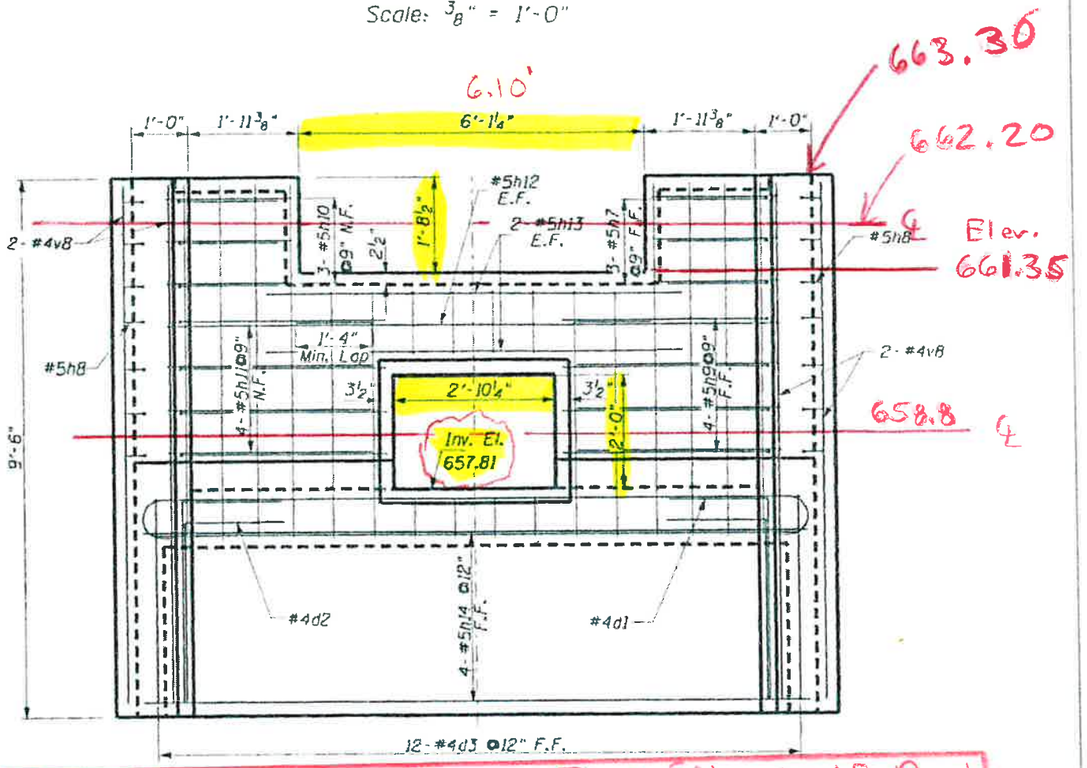
Existing Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	653.95	13				0.0000
			0.05	1	0.000	
	654.00	13				0.0000
			1.00	13	0.000	
	655.00	13				0.0003
			1.00	13	0.000	
	656.00	13				0.0006
			1.05	14	0.000	
	657.05	13				0.0009
			0.95	183	0.004	
	658.00	484				0.0051
			1.00	702	0.016	
	659.00	946				0.0212
			1.00	1,156	0.027	
	660.00	1,379				0.0478
			1.00	2,051	0.047	
	661.00	2,806				0.0948

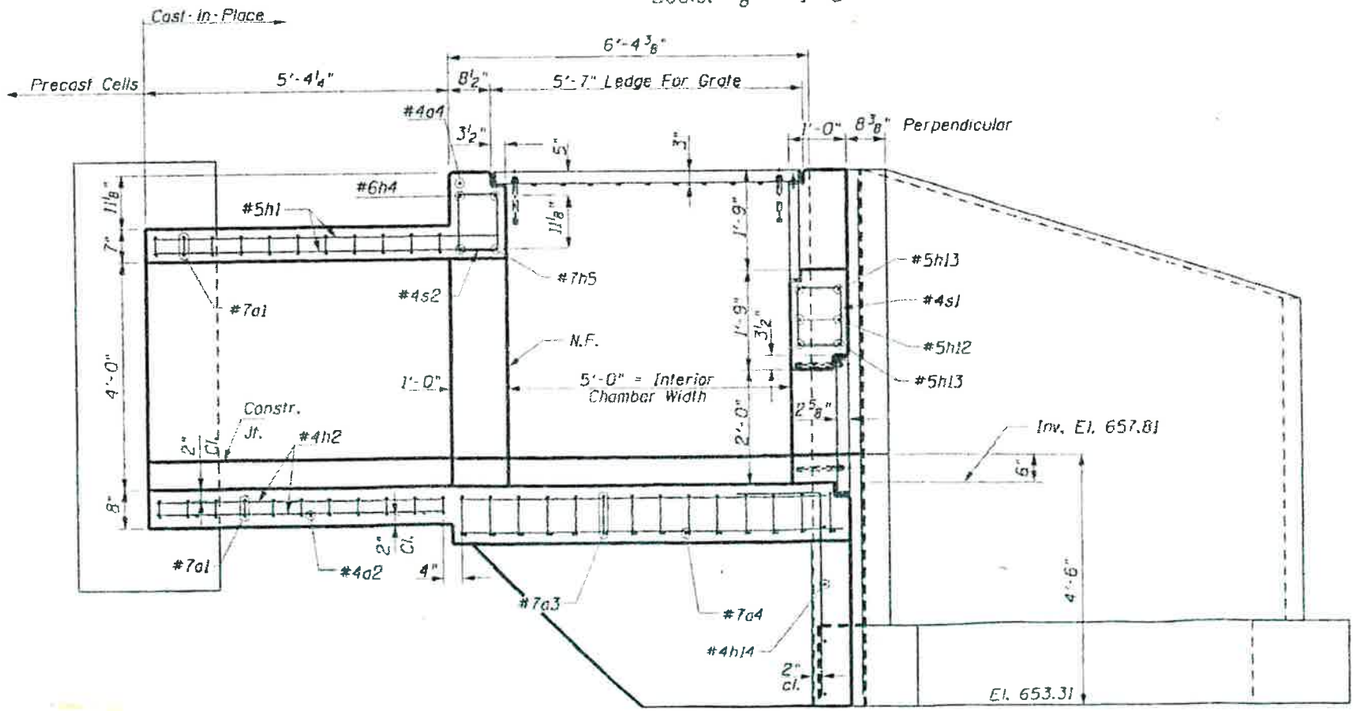
Showing Top Slab Reinforcement
Scale: $\frac{3}{8}$" = 1'-0"

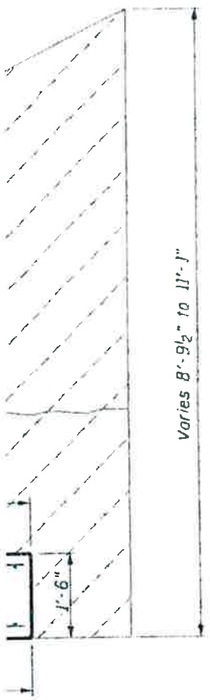


Flood Control Box Inlet East Side Wolf Road

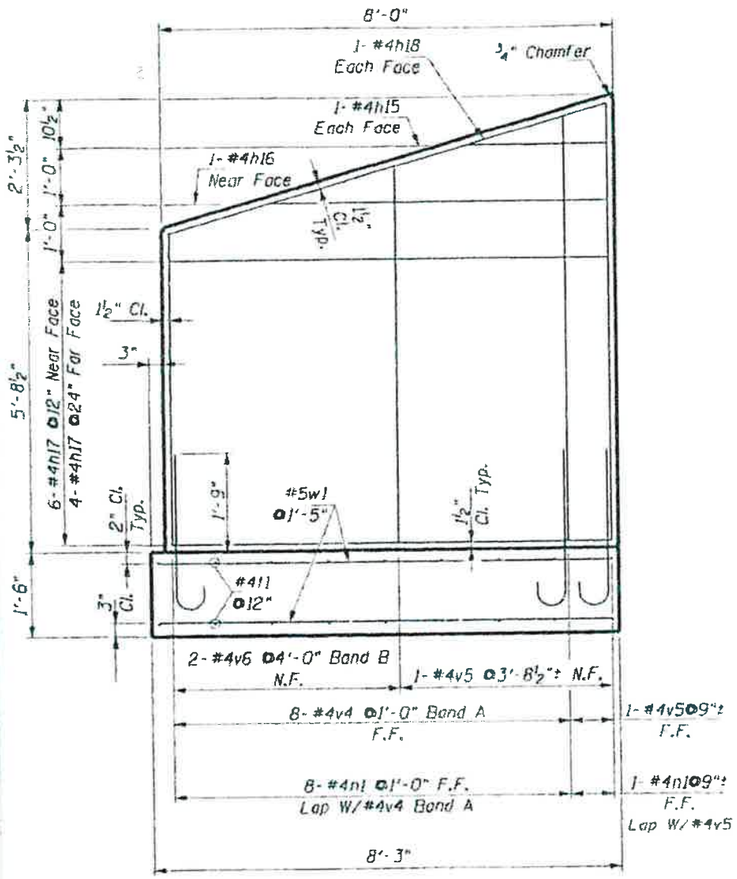
HEADWALL ELEVATION VIEW F-F

Scale: $\frac{3}{8}$" = 1'-0"





TION



WINGWALL ELEVATION VIEW G-G

Scale: $\frac{3}{8}$" = 1'-0"

Concret
Reinfor
Fine or
Concret

JOHI
PRESIDE

(REVISION)

DATE | BY

Heritage Crossing- Western Springs, IL

8/21/2024

East Side of Wolf Road - Flood Control Structure / Box Inlet
Stage-Discharge Tables

1) Tributary Areas:

Tributary Area

Delineated Area: 172.30 acres
0.2692188 Square Miles

2) Curve Numbers:

See attached Worksheet 2 for each area.

3) Time of Concentration:

See attached Worksheet 3 for each area.

Notes	Elevation	Bottom Orifice Flow (cfs)	Rectangular Weir Flow (cfs)	Inlet Box Structure Flow (cfs)	Total Flow (cfs)
Orifice	657.80	0.00			0.00
	658.00	3.67			3.67
	659.00	22.00			22.00
	659.80	36.66			36.66
	660.00	40.16			40.16
	661.00	54.37			54.37
Weir	661.35	58.54			58.54
	662.00	65.58	8.63		74.21
	663.00	75.13	34.91		110.03
Inlet Box Grate	663.30	77.76	44.85		122.61
	663.40	78.62	48.34	1.90	128.86
	663.50	79.47	51.92	5.37	136.76
	663.60	80.31	55.59	9.86	145.76
	663.70	81.15	59.33	15.18	155.66
	663.80	81.97	63.16	21.21	166.34
	663.90	82.79	67.07	189.59	339.44
	664.00	83.59	71.05	204.78	359.42
	664.10	84.39	75.11	218.92	378.42
	664.20	85.19	79.24	232.20	396.63
	664.30	85.97	83.45	244.76	414.18
	664.40	86.75	87.73	256.71	431.19
	664.50	87.52	92.08	268.12	447.72

1) Bottom Orifice Flow

C = 0.80
Rectangular Orifice 2.0' x 2.85'
Area = 5.71 feet

Centerline of Orifice = 658.80

2) Rectangular Weir

Weir Flow

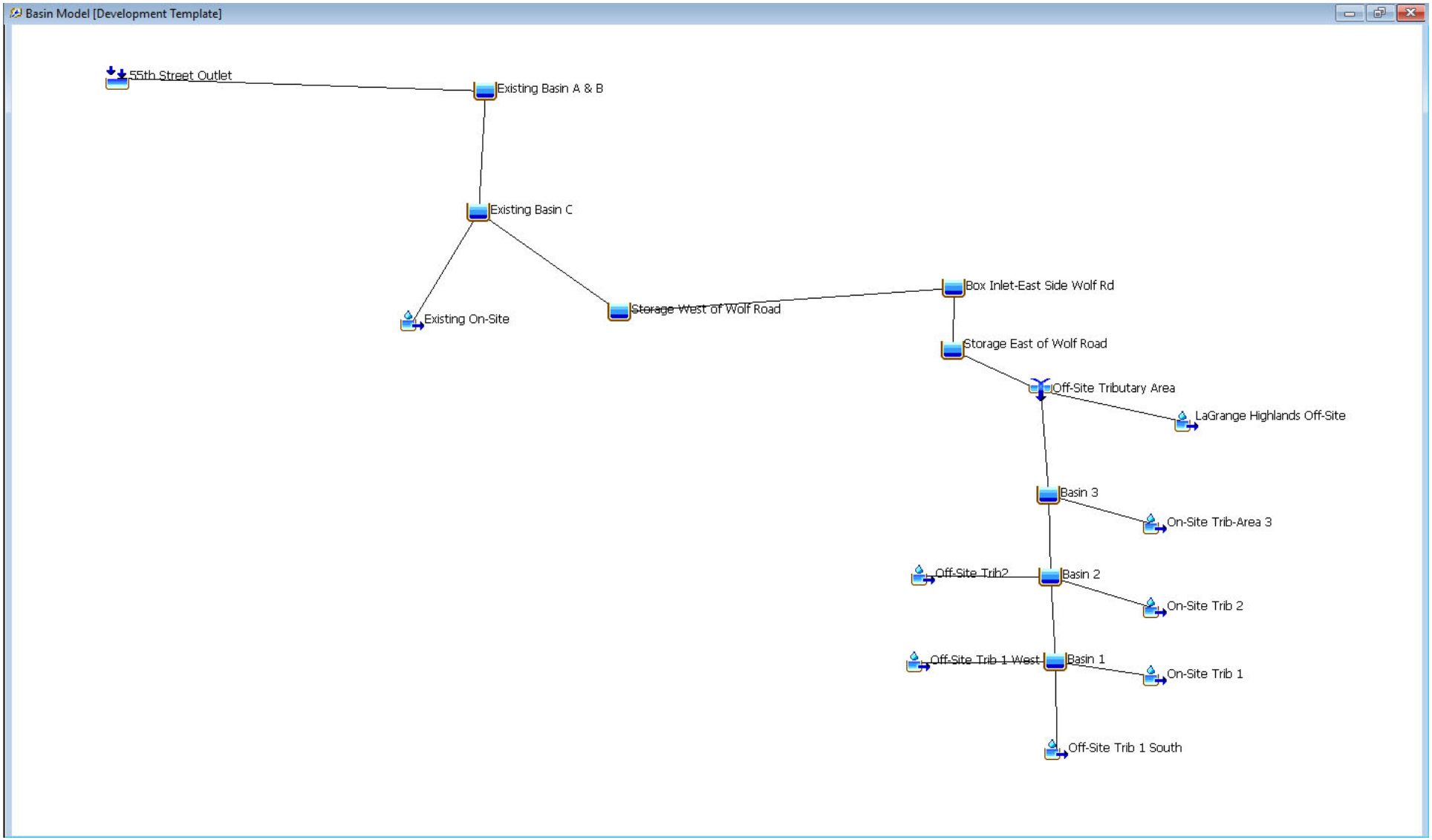
C = 2.700
Length = 6.1
Elevation = 661.35

3) Inlet Box Structure

10'x5' Grate

Water Elevation (feet)	Head (feet)	Weir Flow (cfs)	Orfice Flow (cfs)
663.30	0.00	0.00	
663.40	0.10	1.90	
663.50	0.20	5.37	
663.60	0.30	9.86	
663.70	0.40	15.18	
663.80	0.50	21.21	
663.90	0.60		189.59
664.00	0.70		204.78
664.10	0.80		218.92
664.20	0.90		232.20
664.30	1.00		244.76
664.40	1.10		256.71
664.50	1.20		268.12

Weir Formula	Orfice Formula
Q = CLH^3/2	Q = AC √64.4(H)
Q = (3)(20)H^3/2	Q = (50)(0.61) √64.4(H)
Q = (60)H^3/2	Q = (30.5) √64.4(H)


Basin Model [Development Template]
55th Street Outlet
Existing Basin A & B
Existing Basin C
Existing On-Site
Storage West of Wolf Road
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:29

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Storage West of Wolf Road	0.27	75.02	01Jan2000, 01:10	0.77
Existing On - Site	0	3.15	01Jan2000, 00:33	1.12
Existing Basin C	0.27	60.13	01Jan2000, 01:11	0.72
Existing Basin A & B	0.27	60.11	01Jan2000, 01:12	0.57

55th Street Outlet	0.27	60.11	01Jan2000, 01:12	0.57

Subbasin: On-Site Trib 1

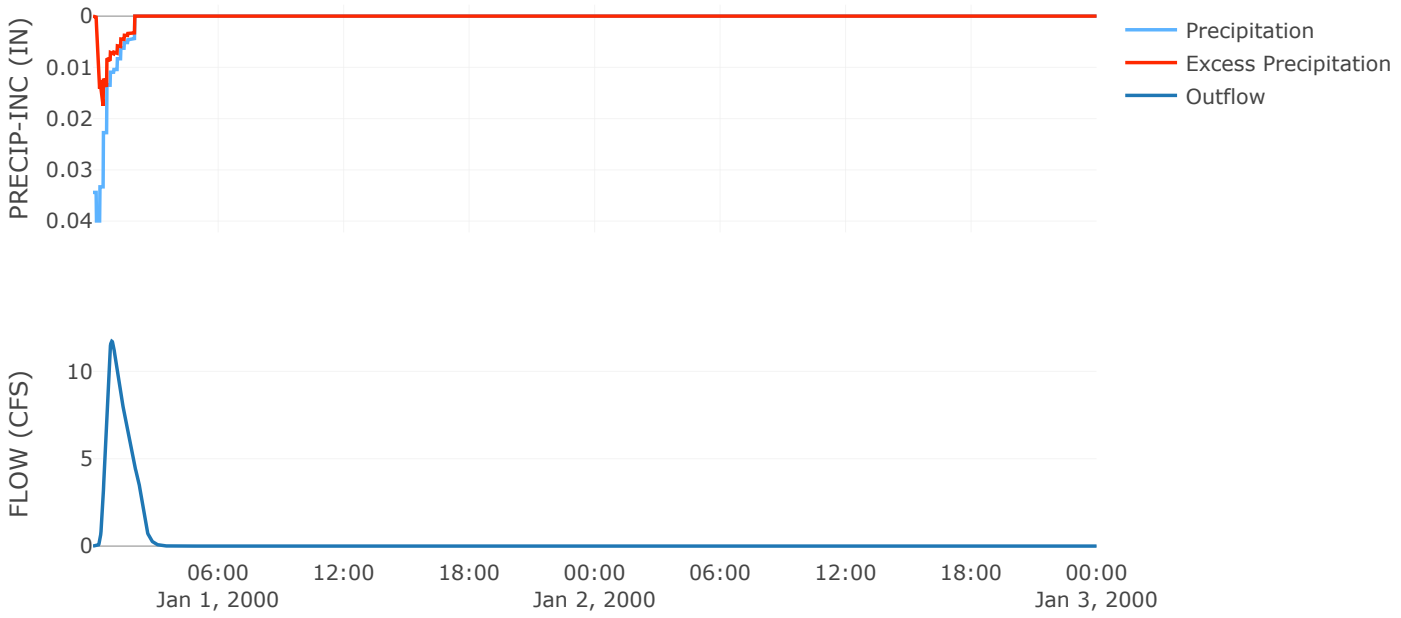
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

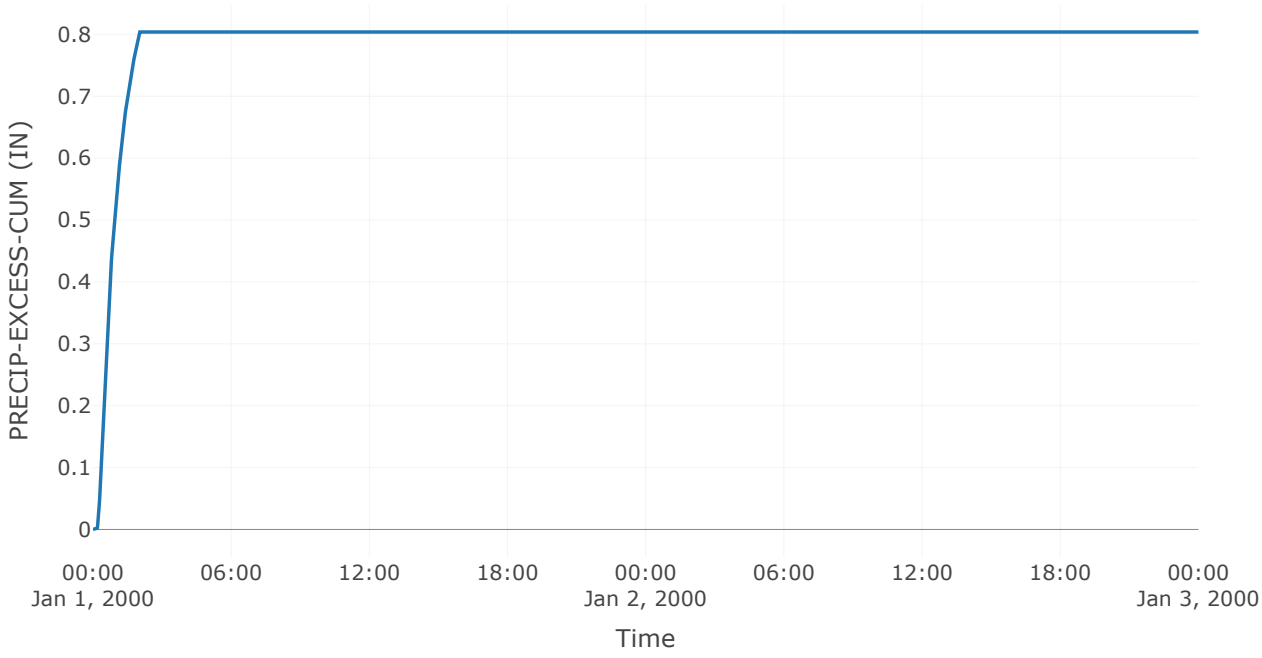
Transform: Scs	
Lag	21
Unitgraph Type	Standard

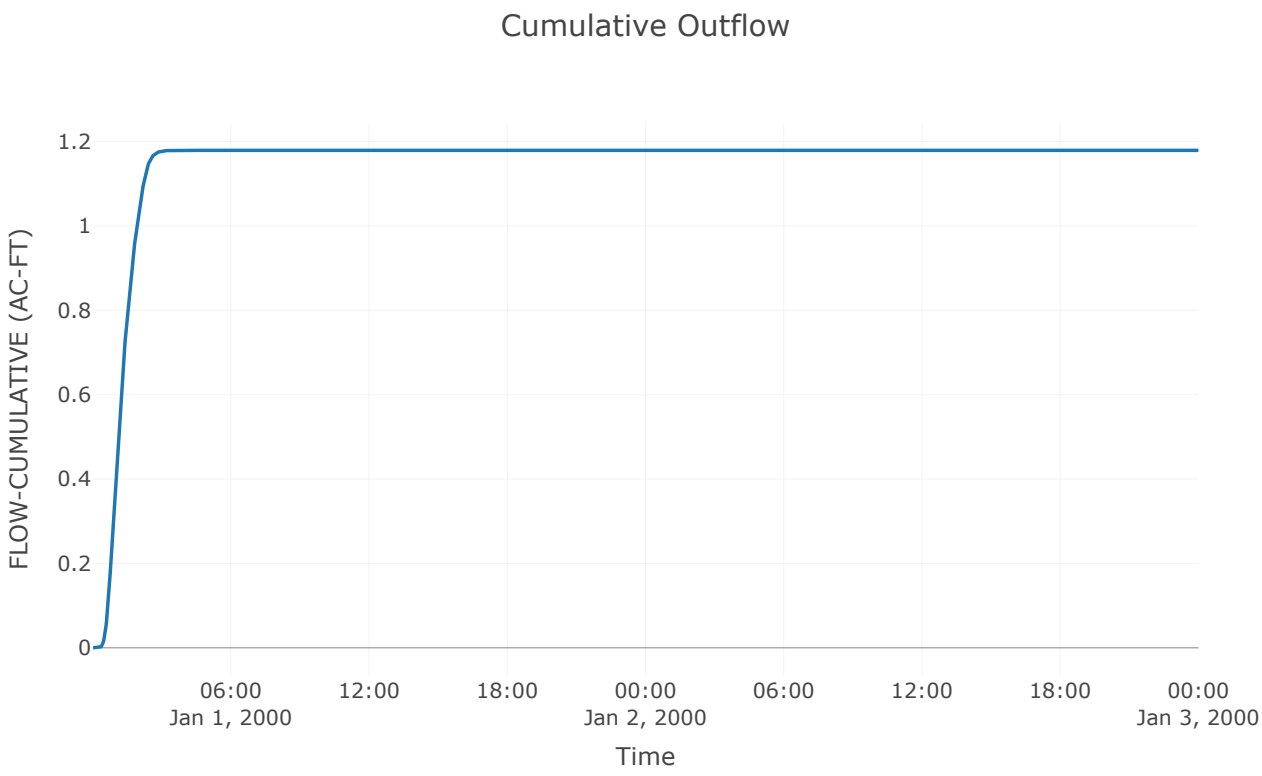
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

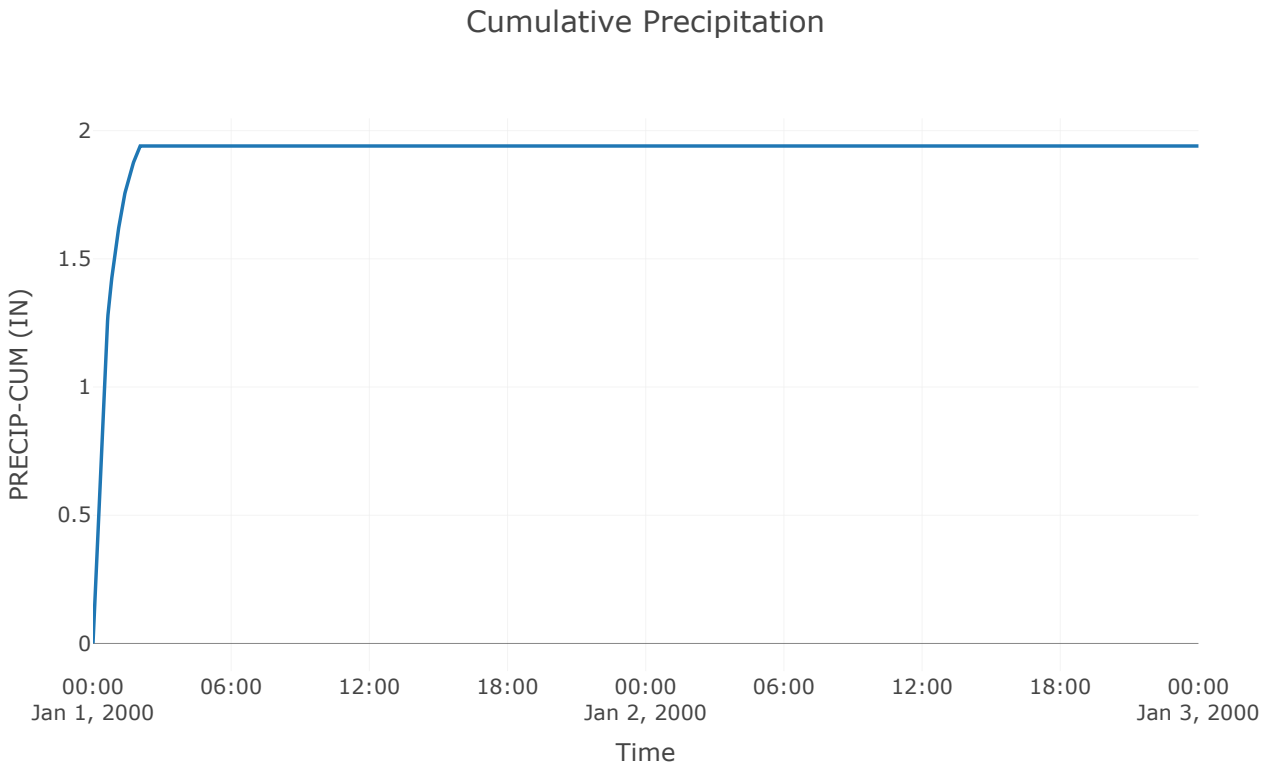
Precipitation and Outflow

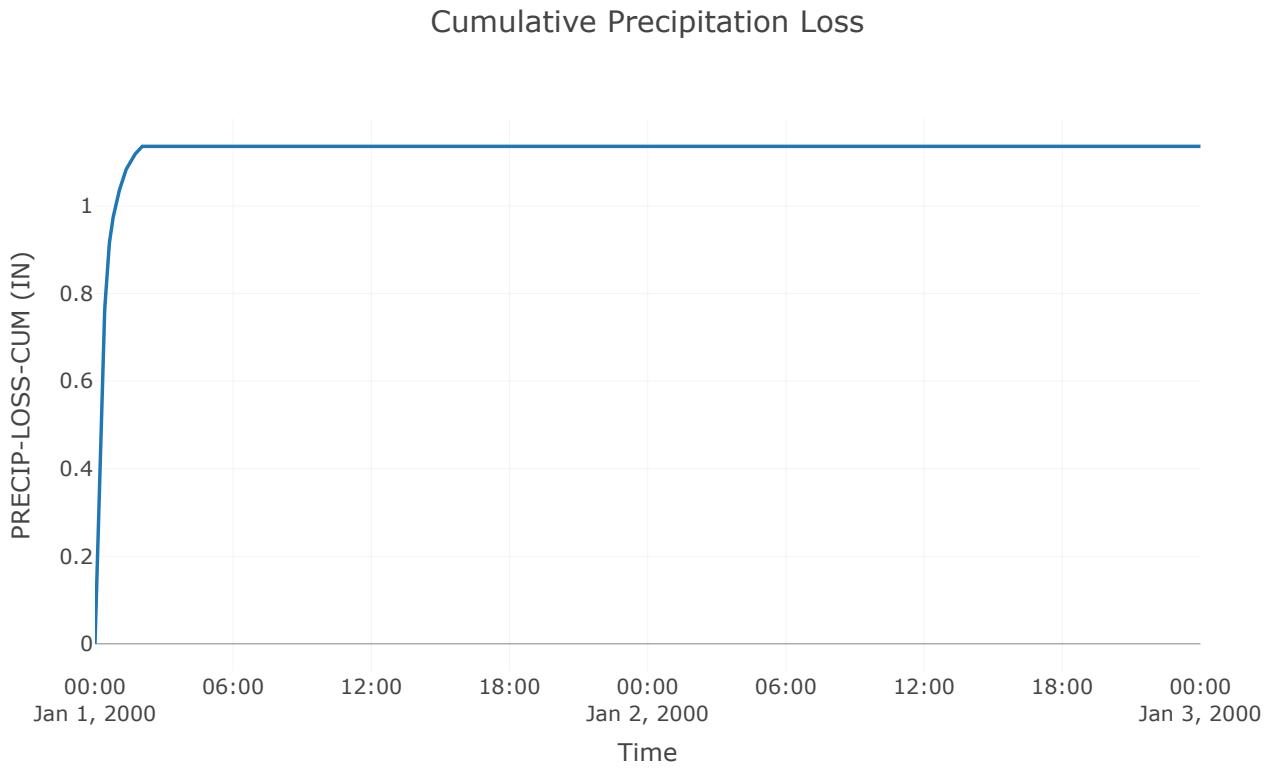


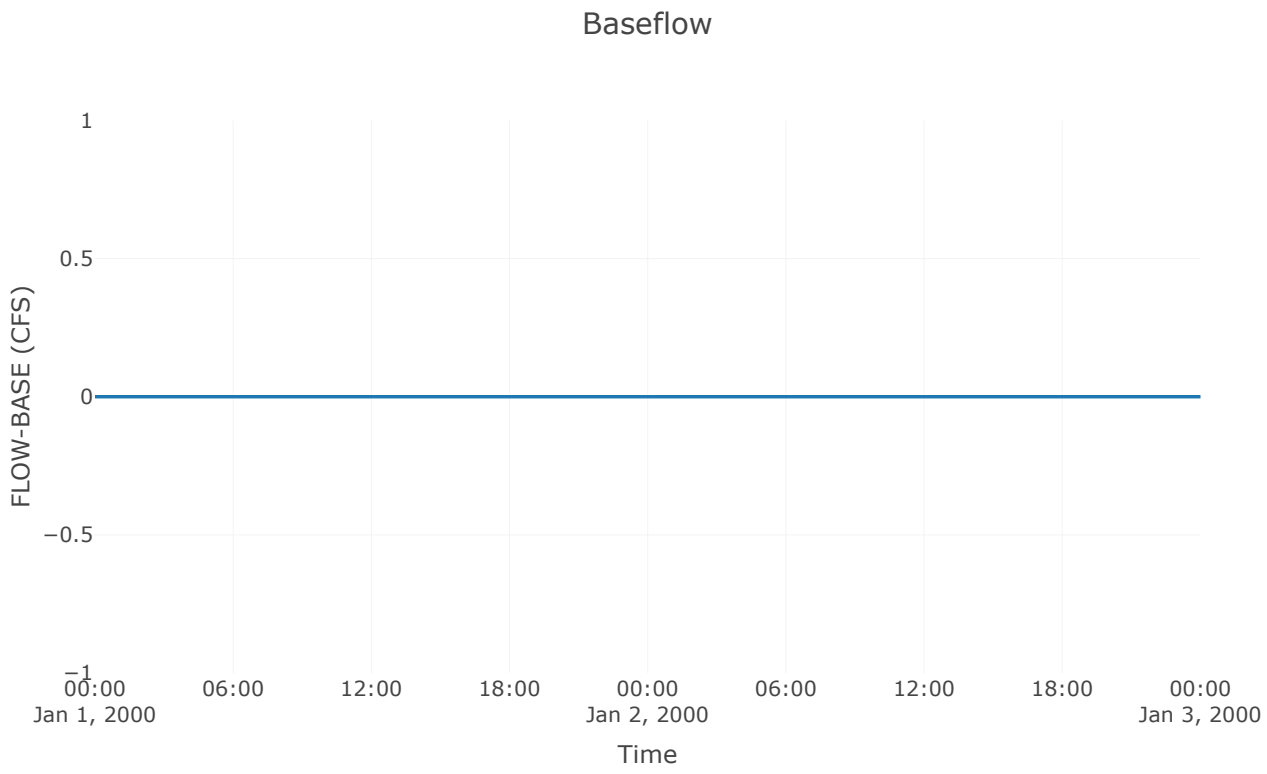
Cumulative Excess Precipitation

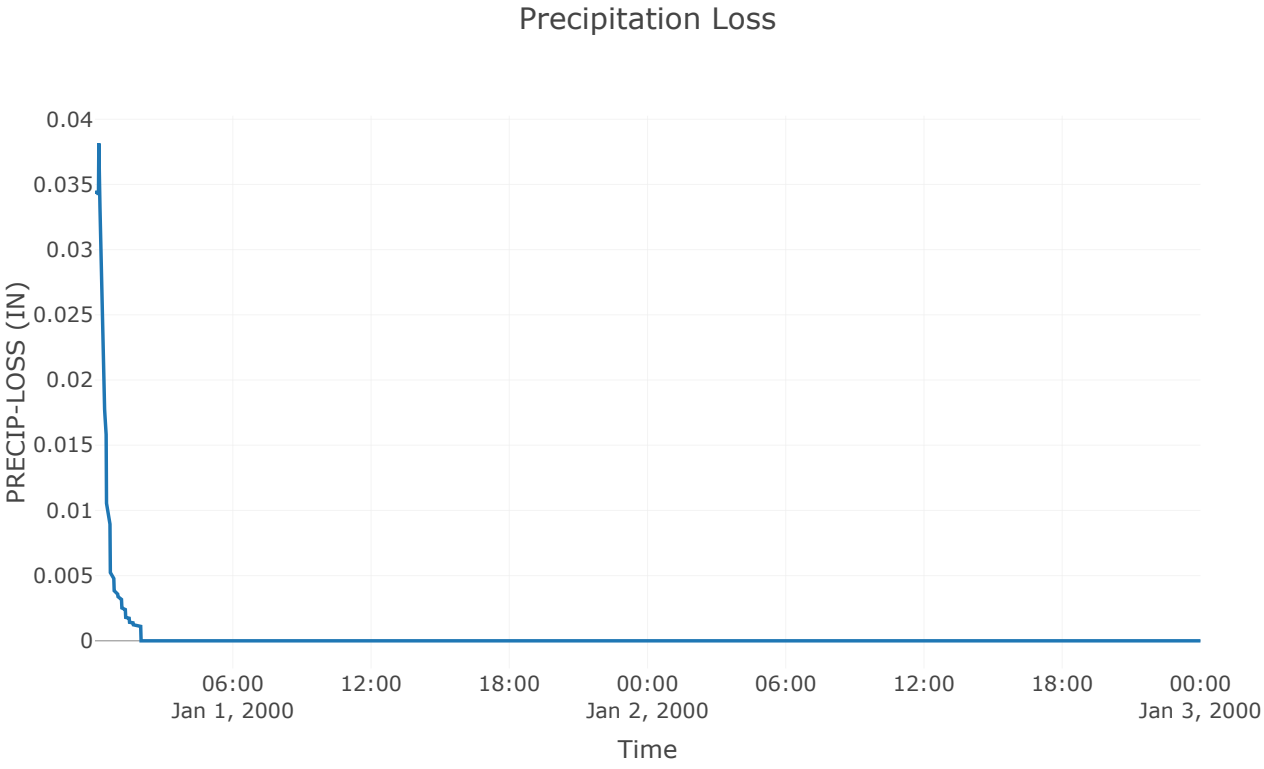


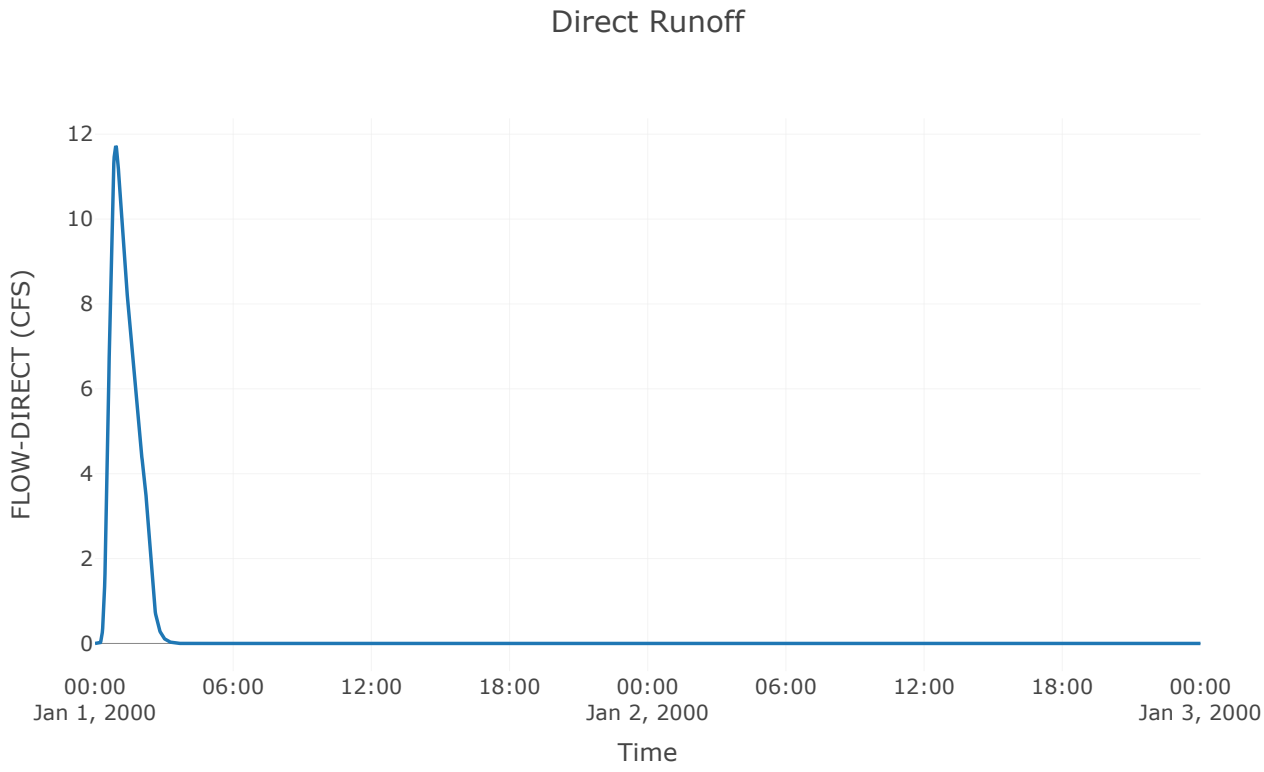

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

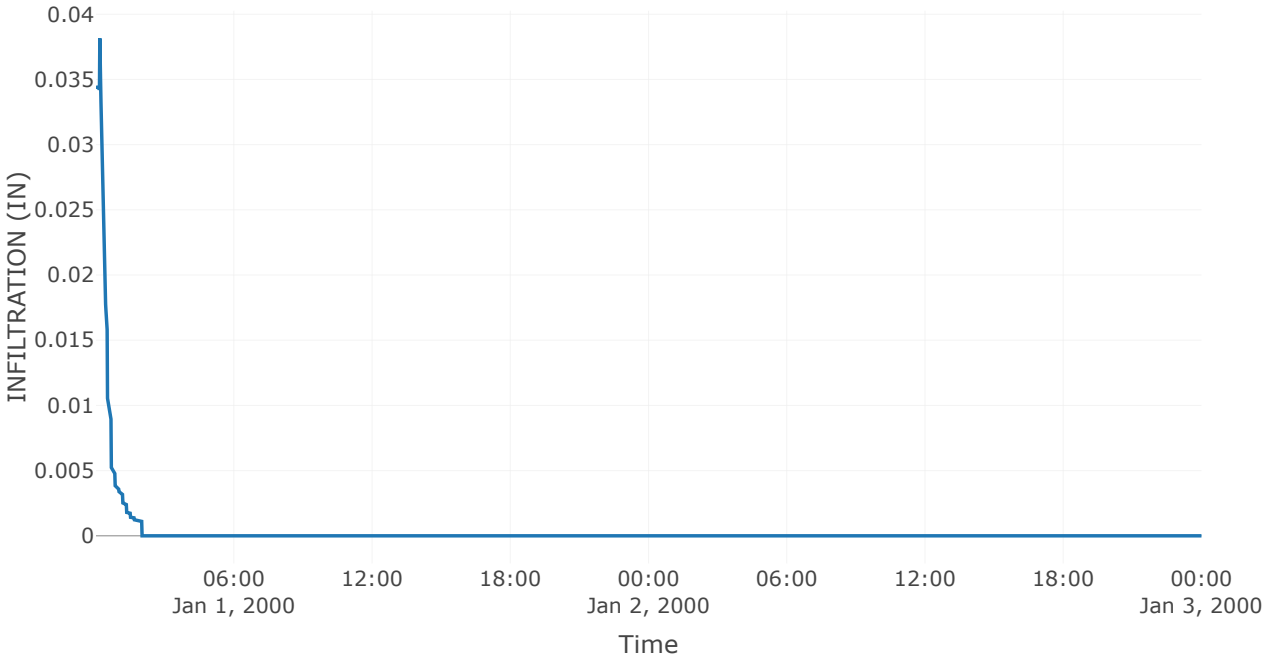

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

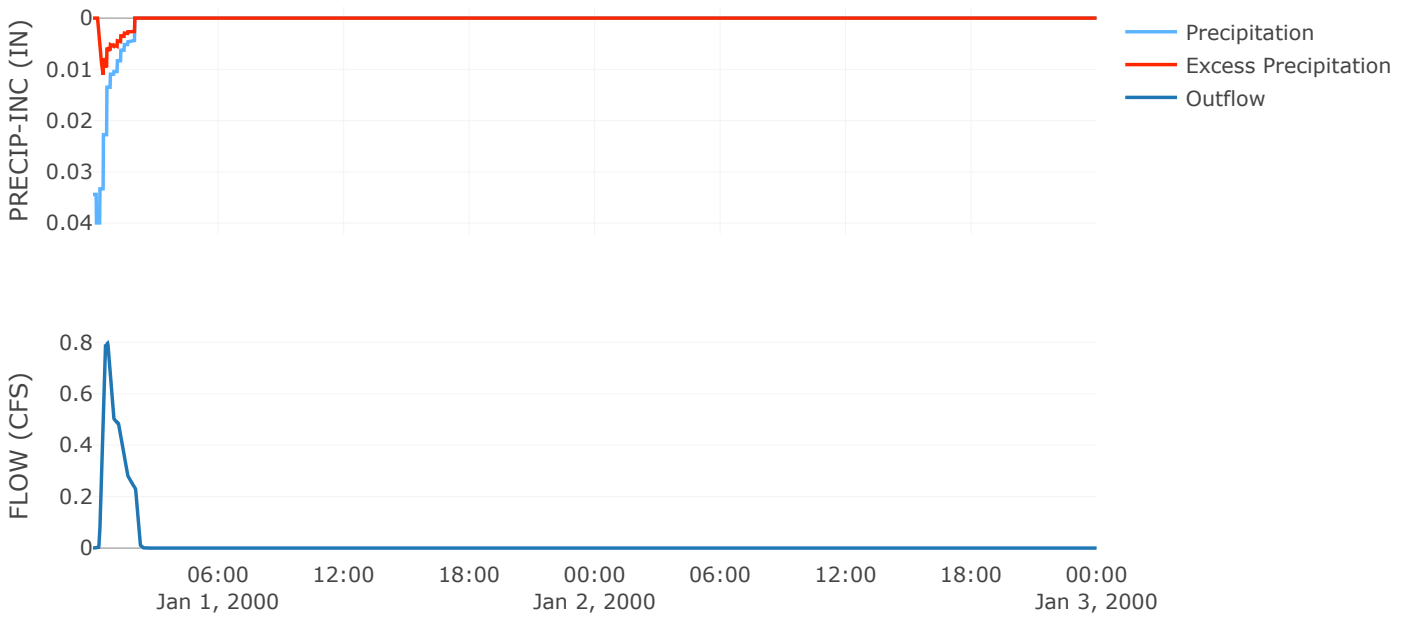
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

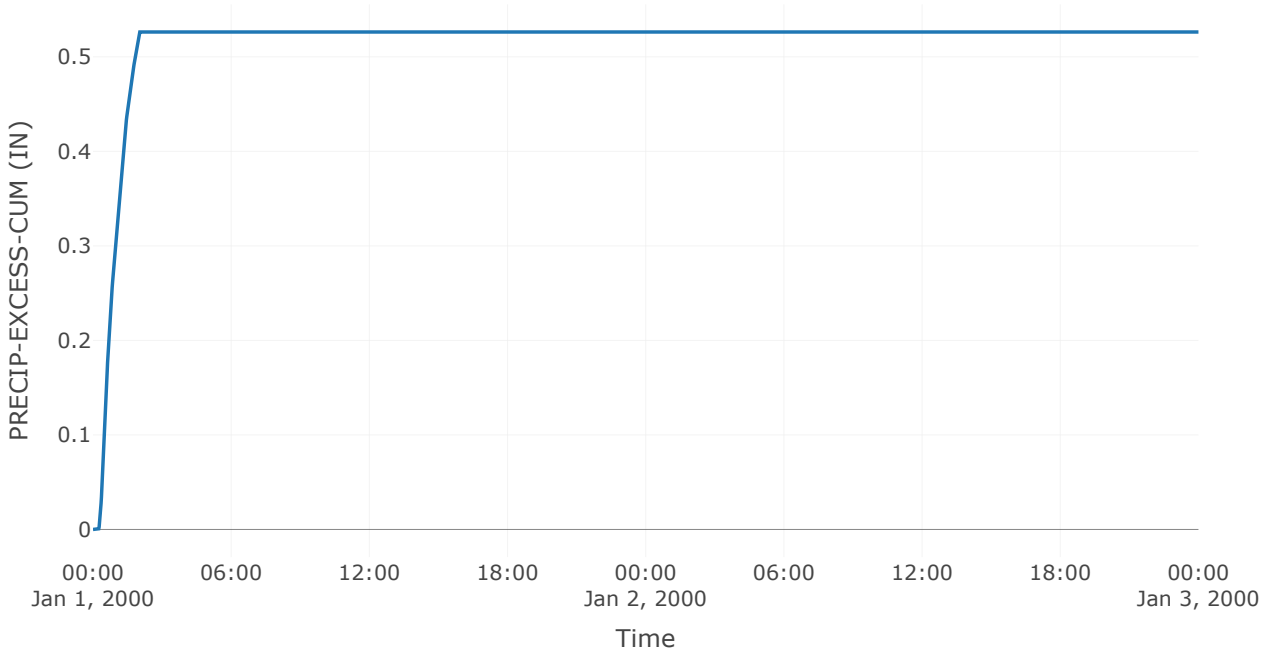
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

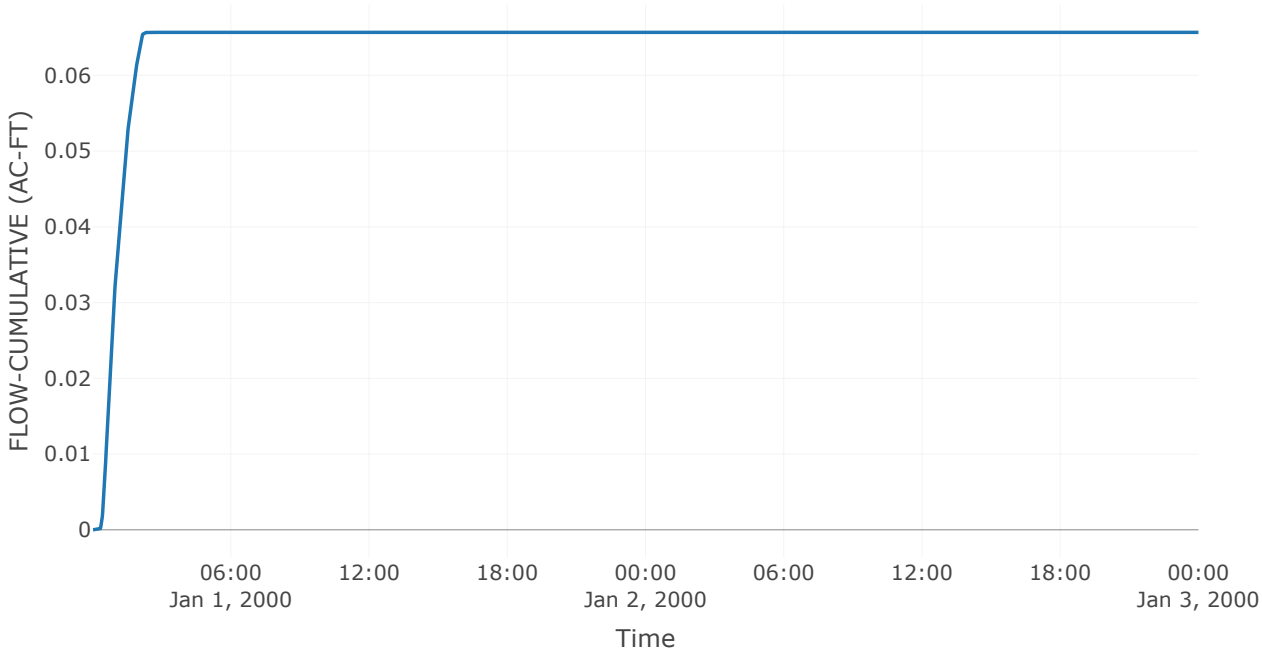
Precipitation and Outflow



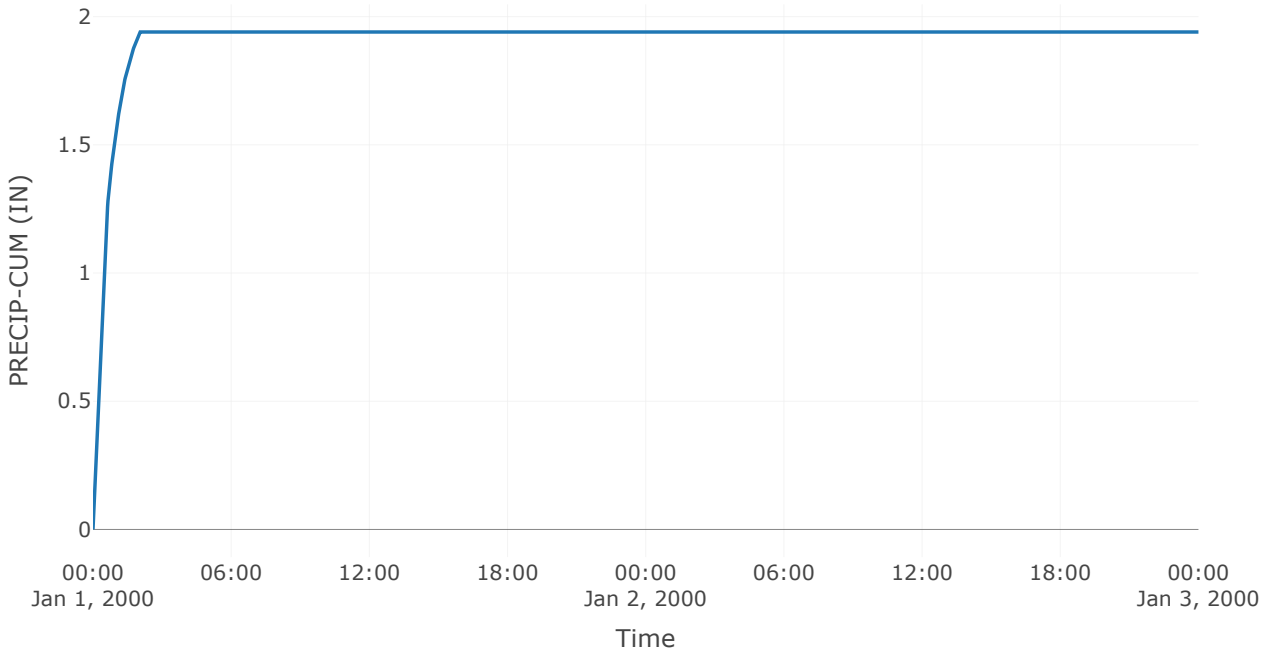
Cumulative Excess Precipitation

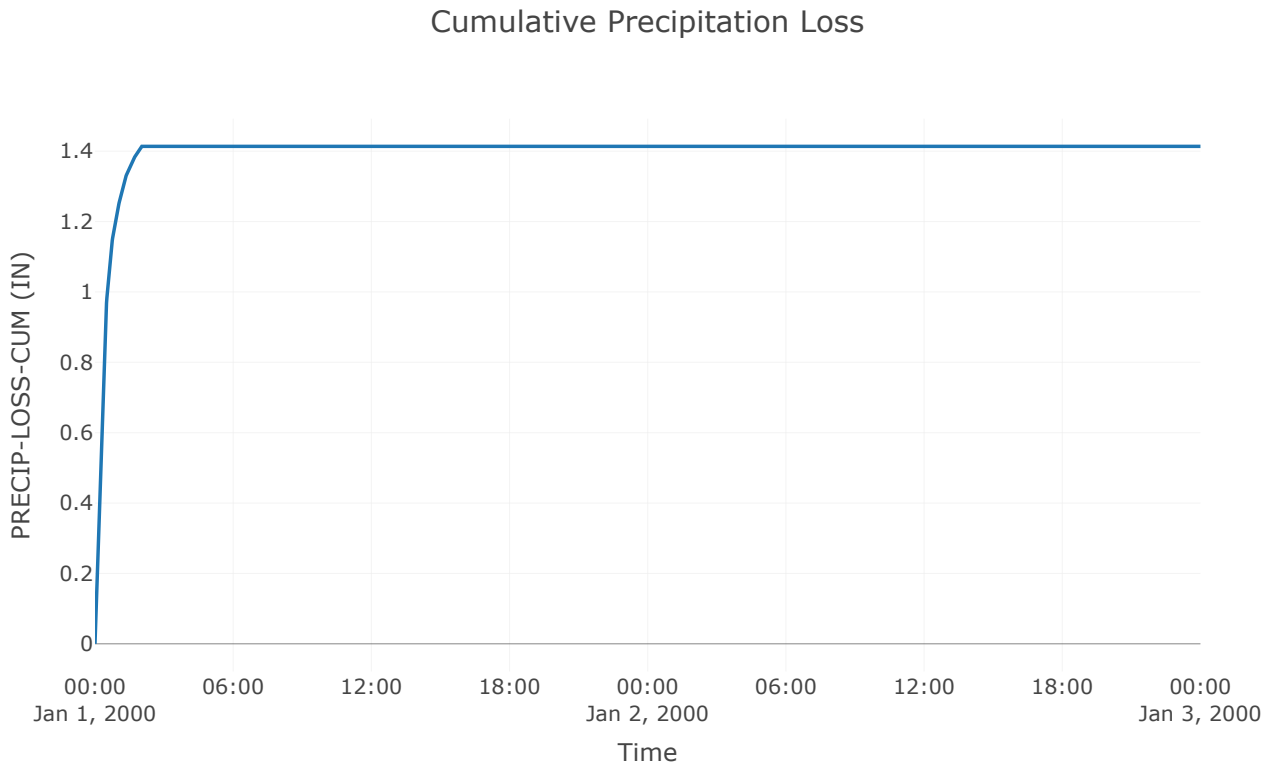


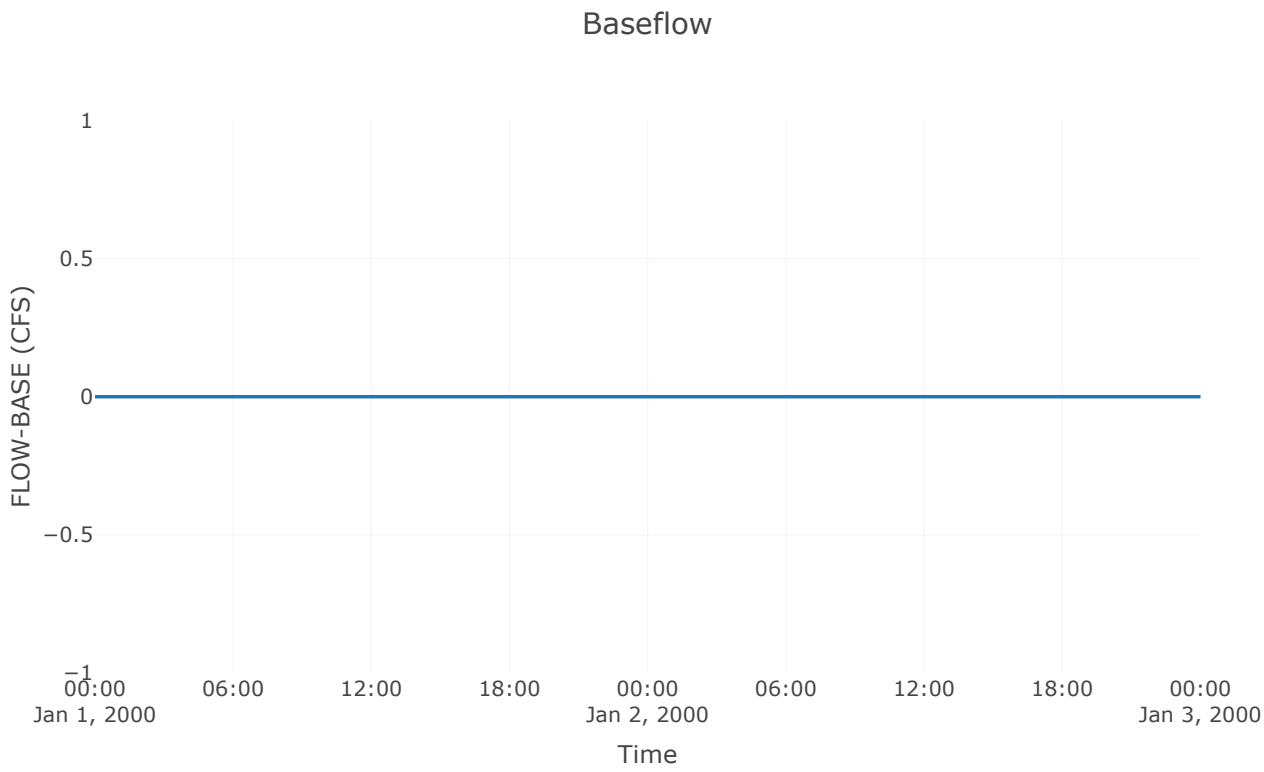
Cumulative Outflow



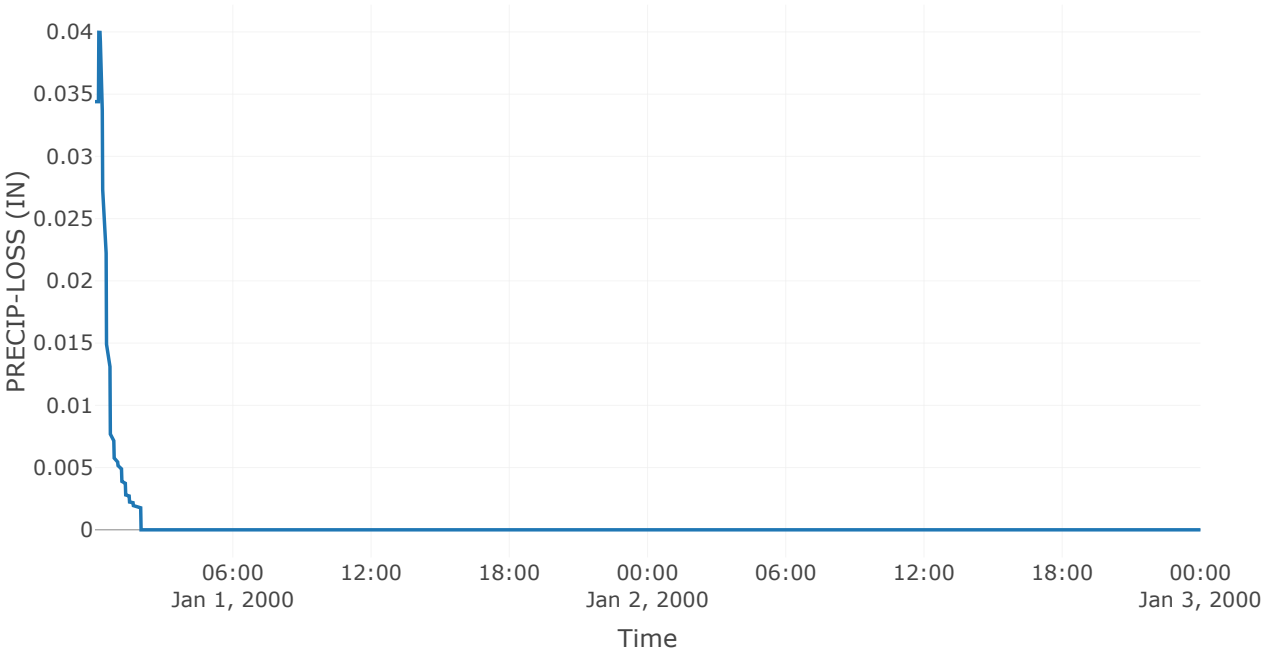
Cumulative Precipitation



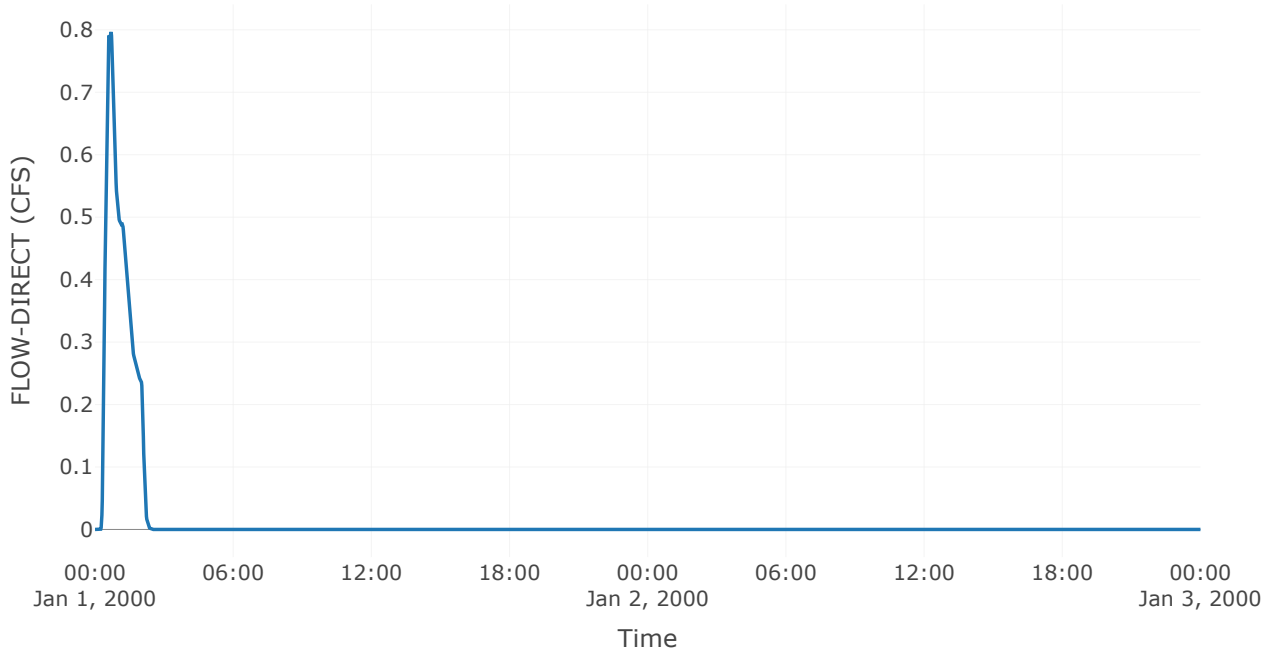

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

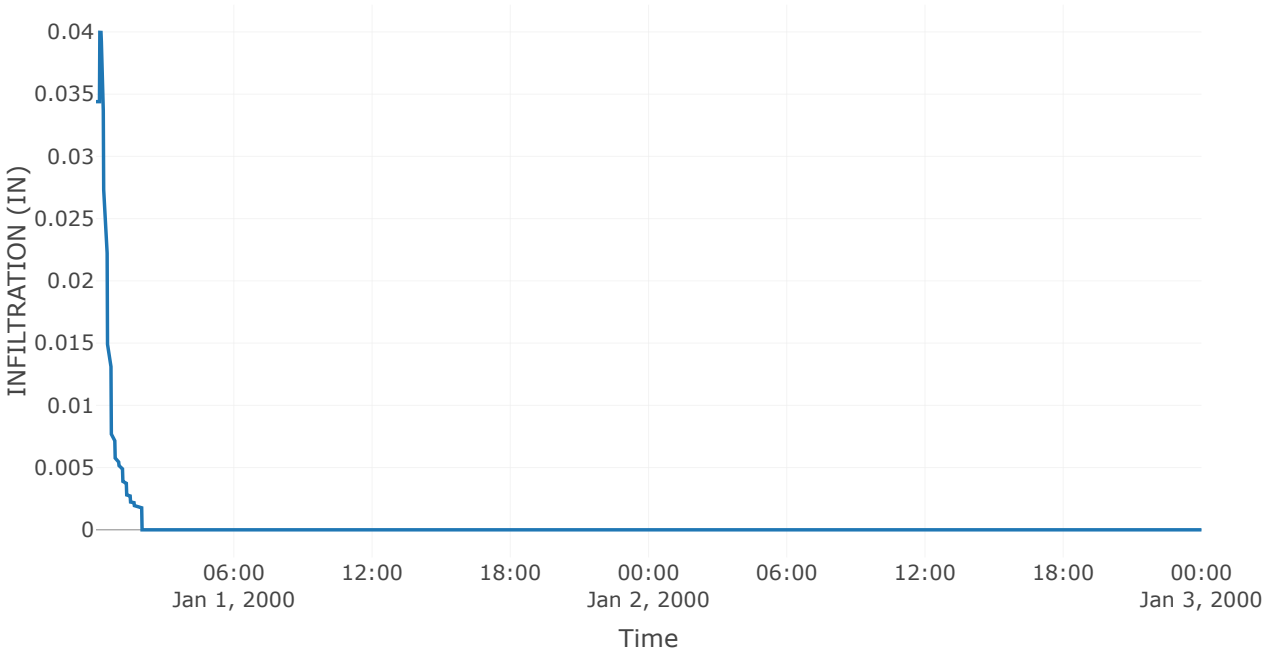

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

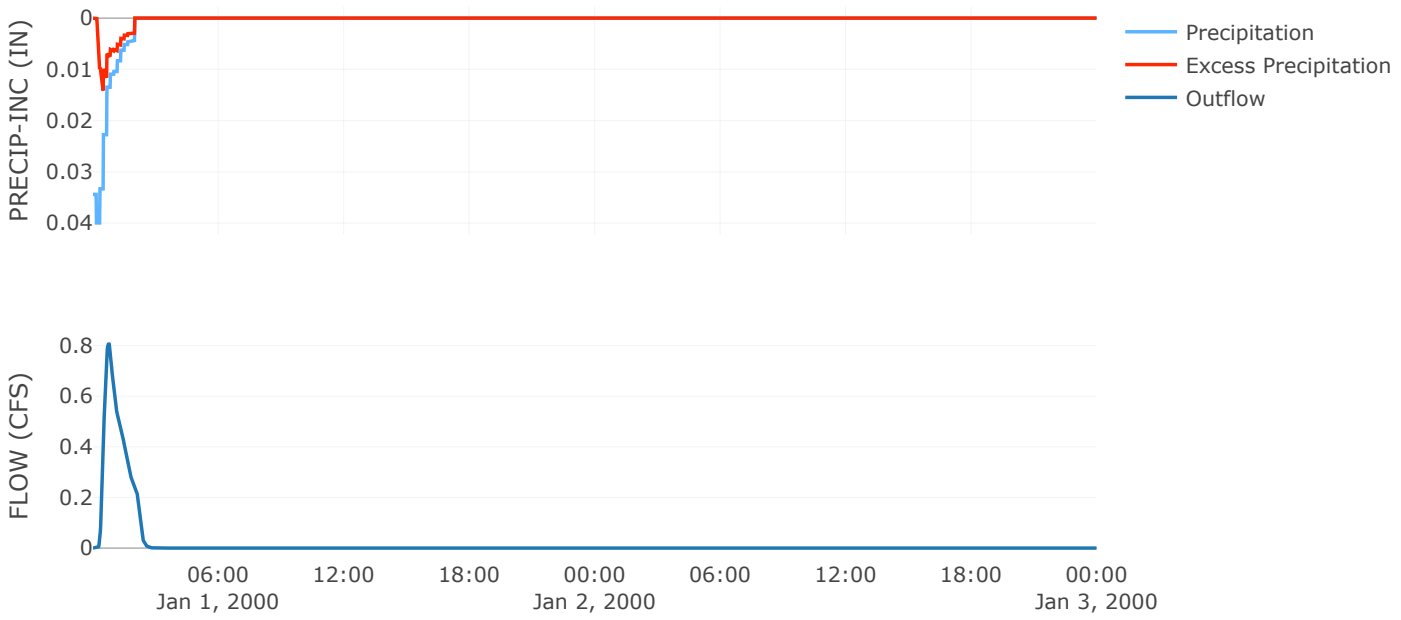
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

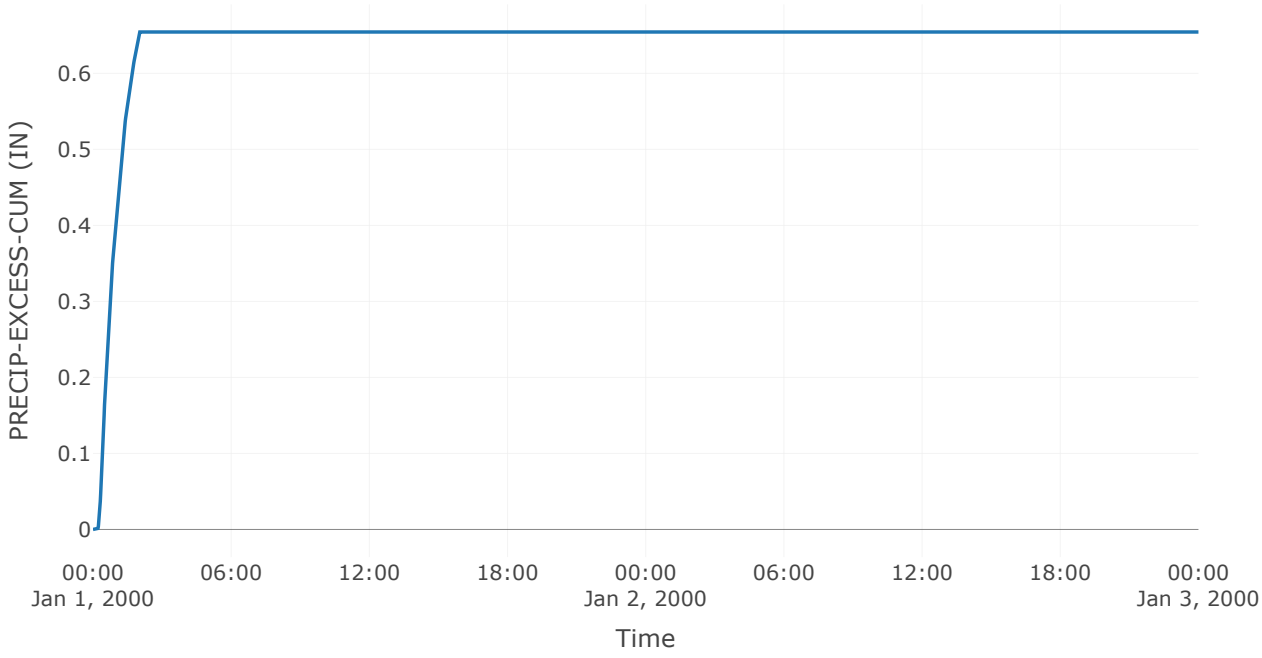
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

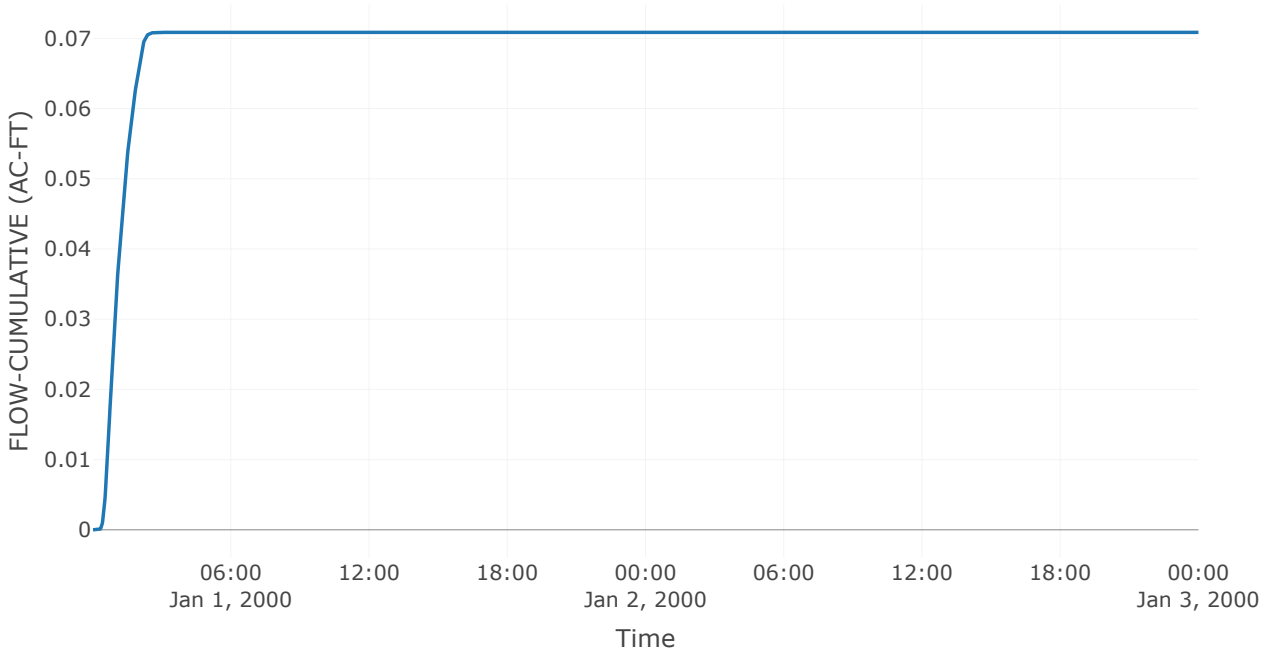
Precipitation and Outflow



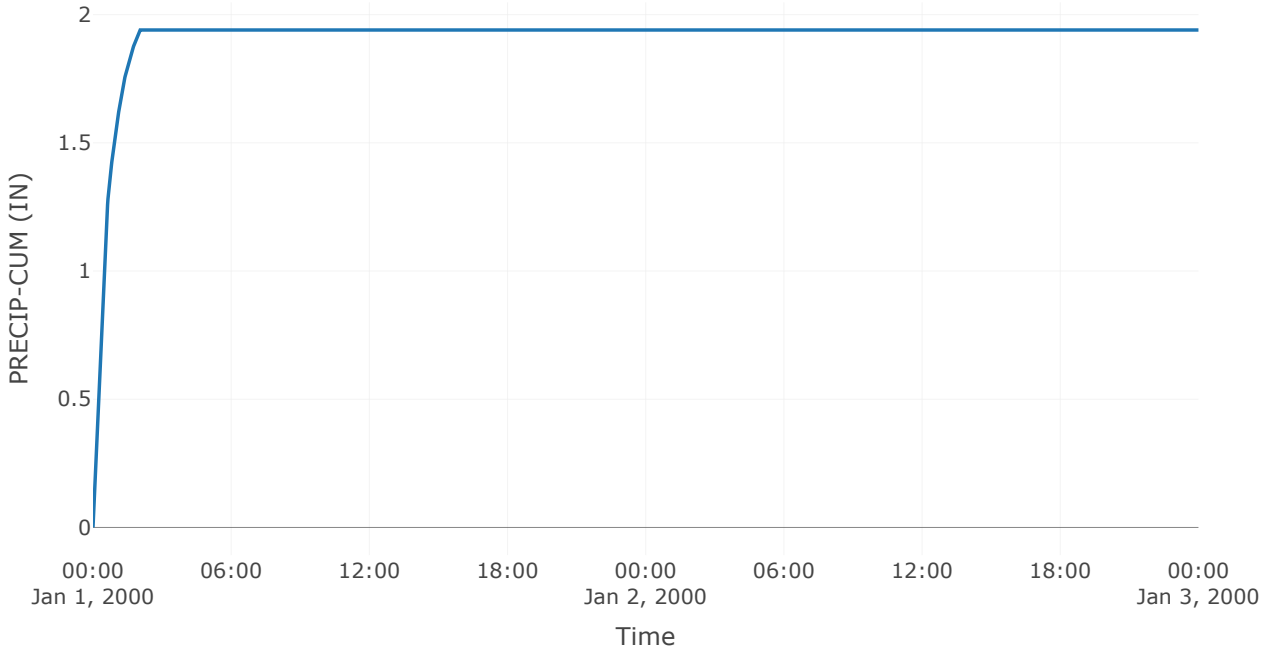
Cumulative Excess Precipitation

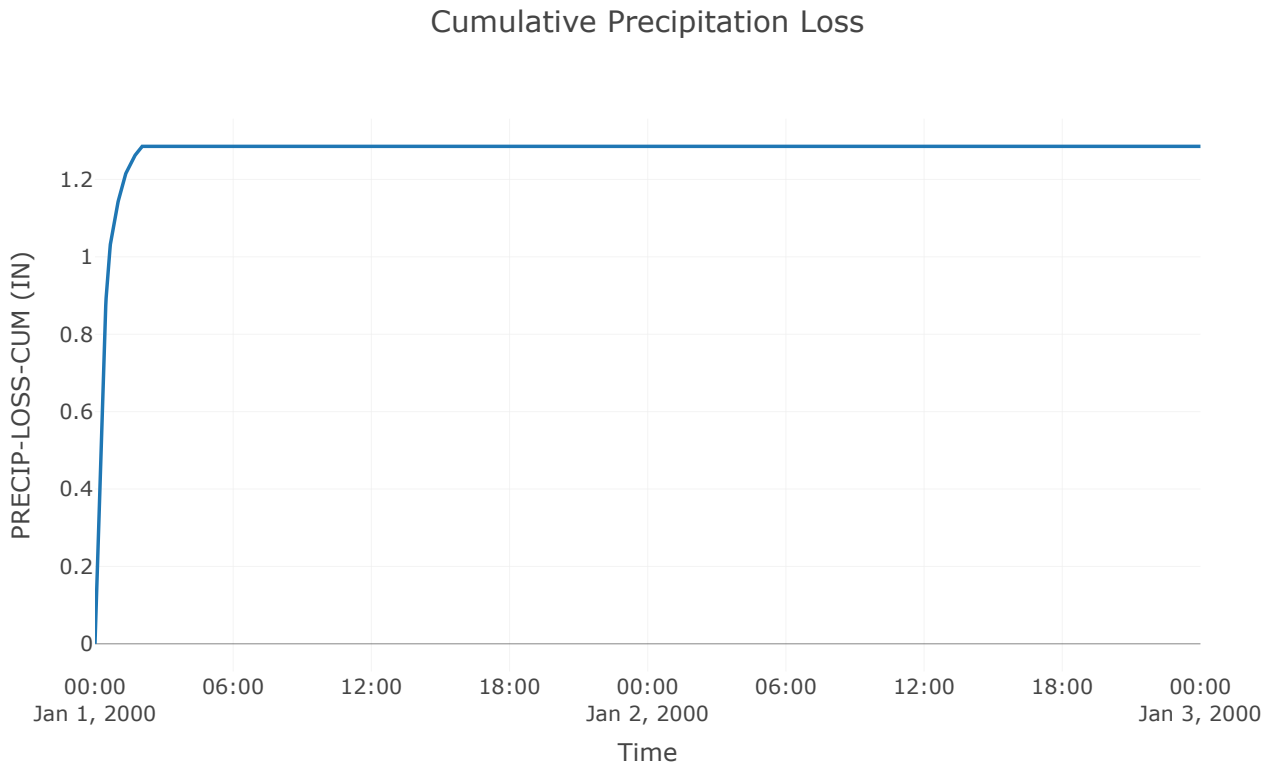


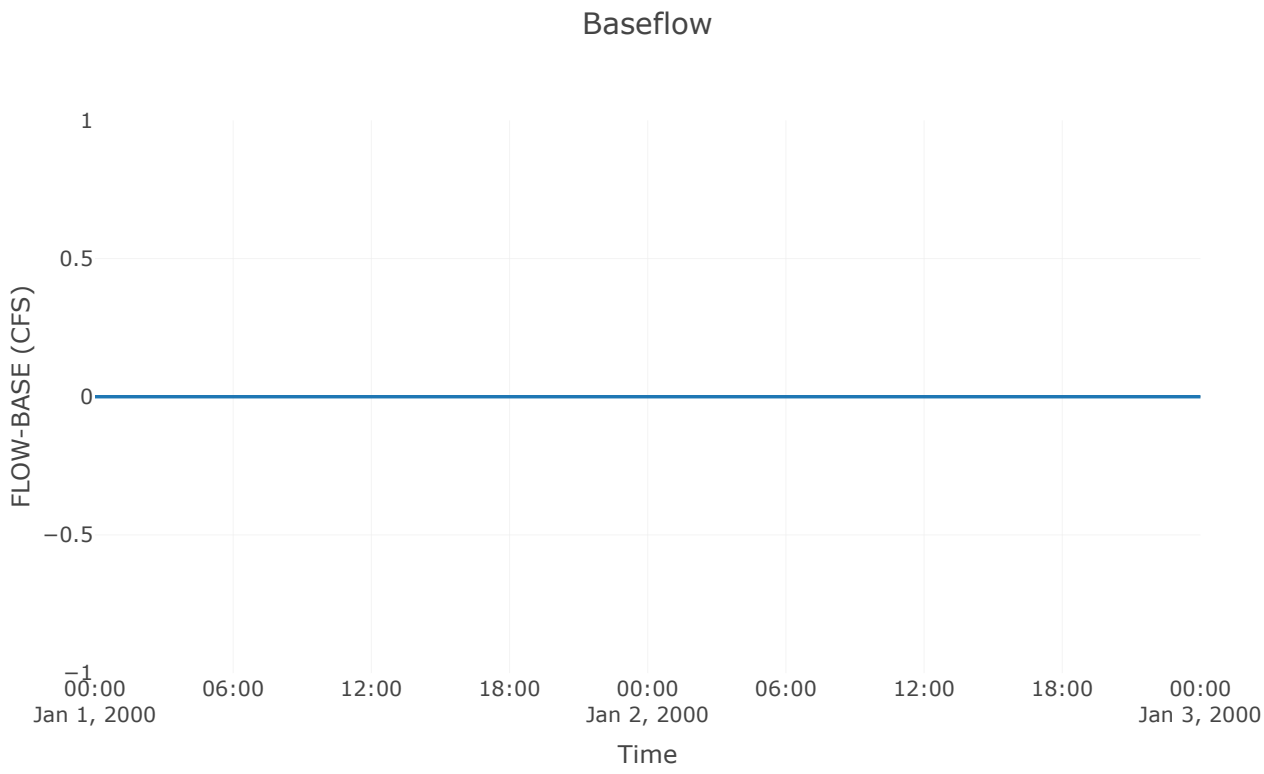
Cumulative Outflow

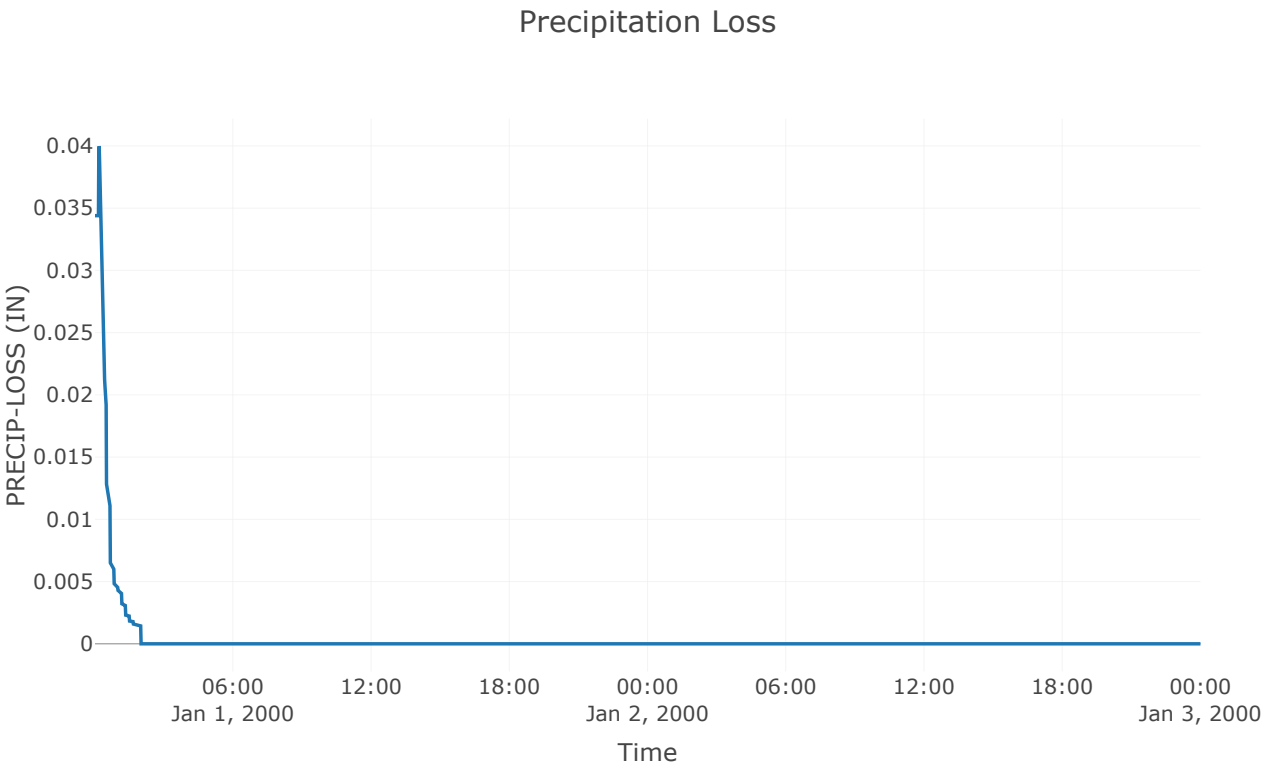


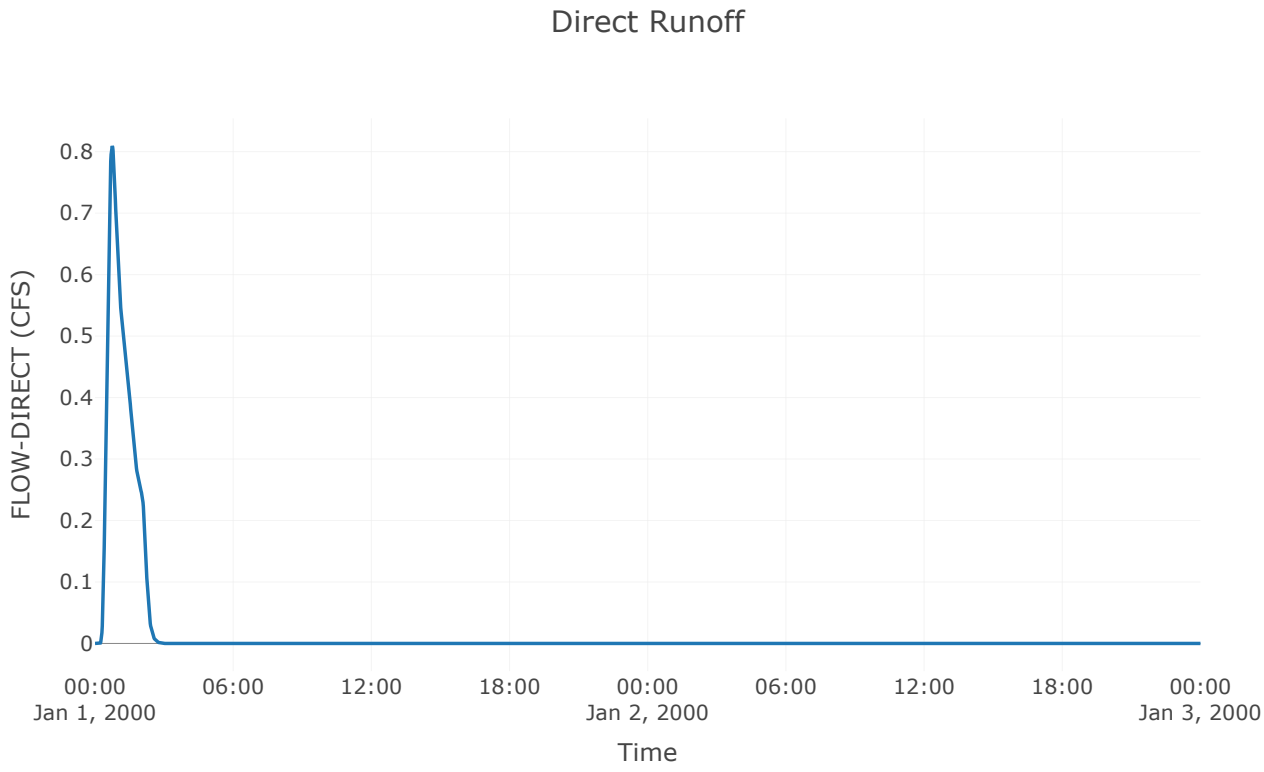
Cumulative Precipitation

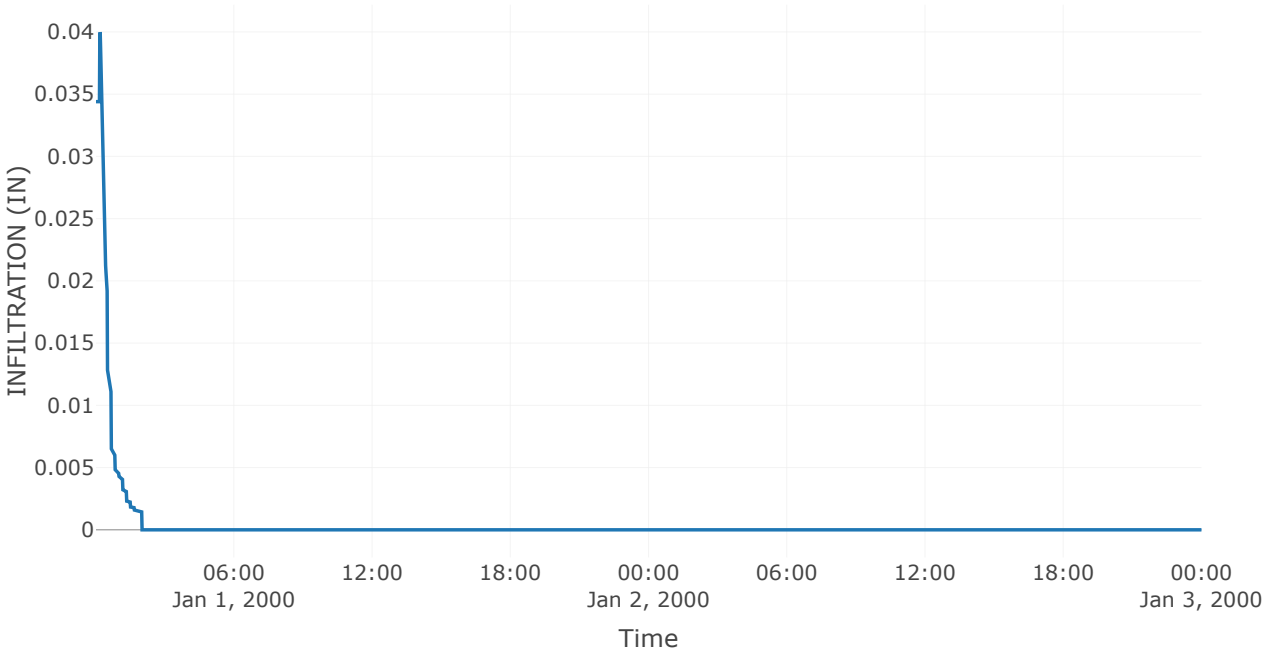



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

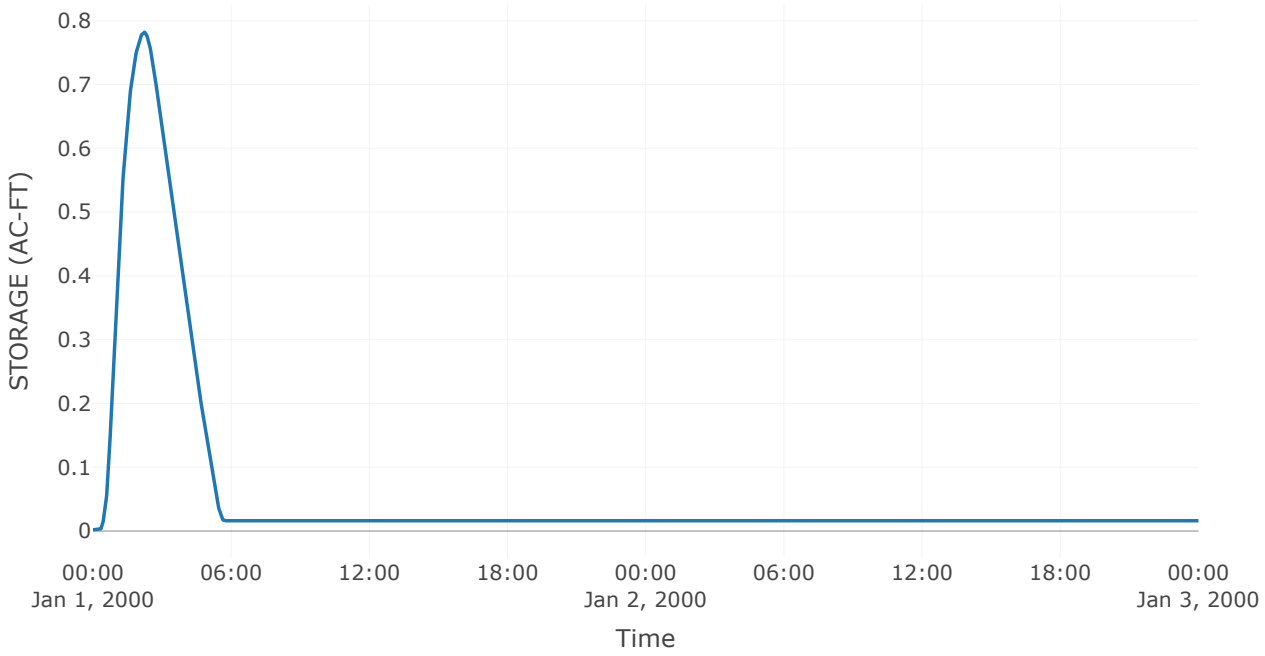

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

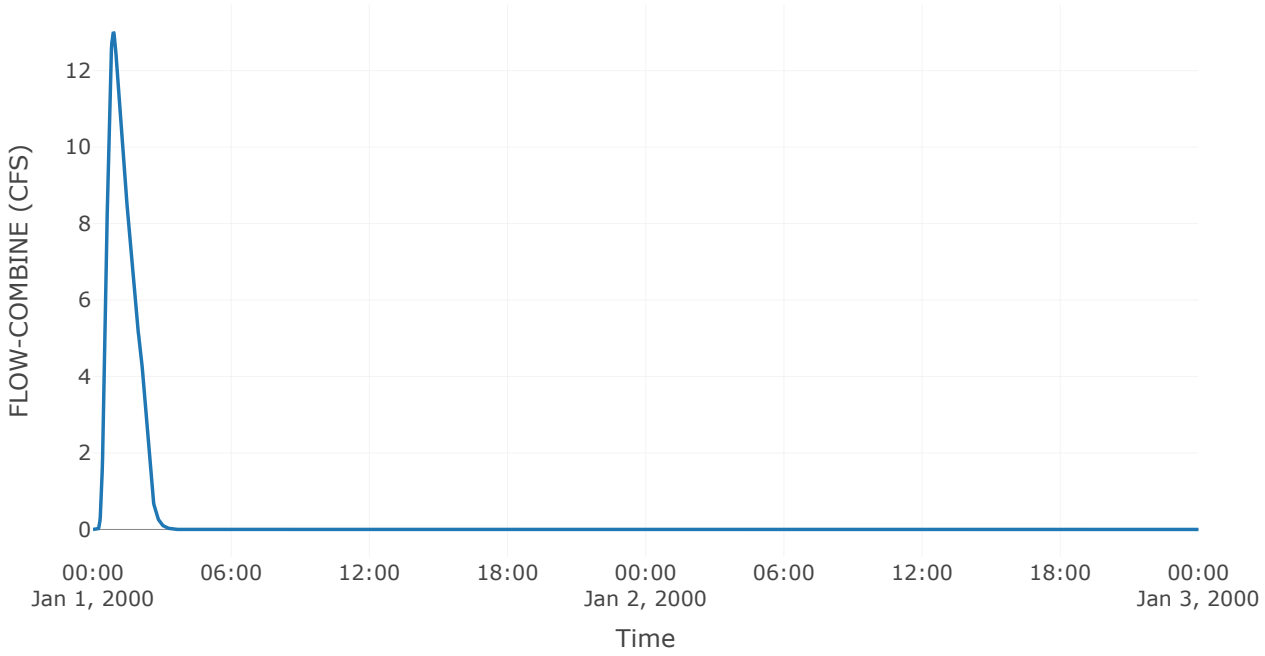
Downstream : Basin 2

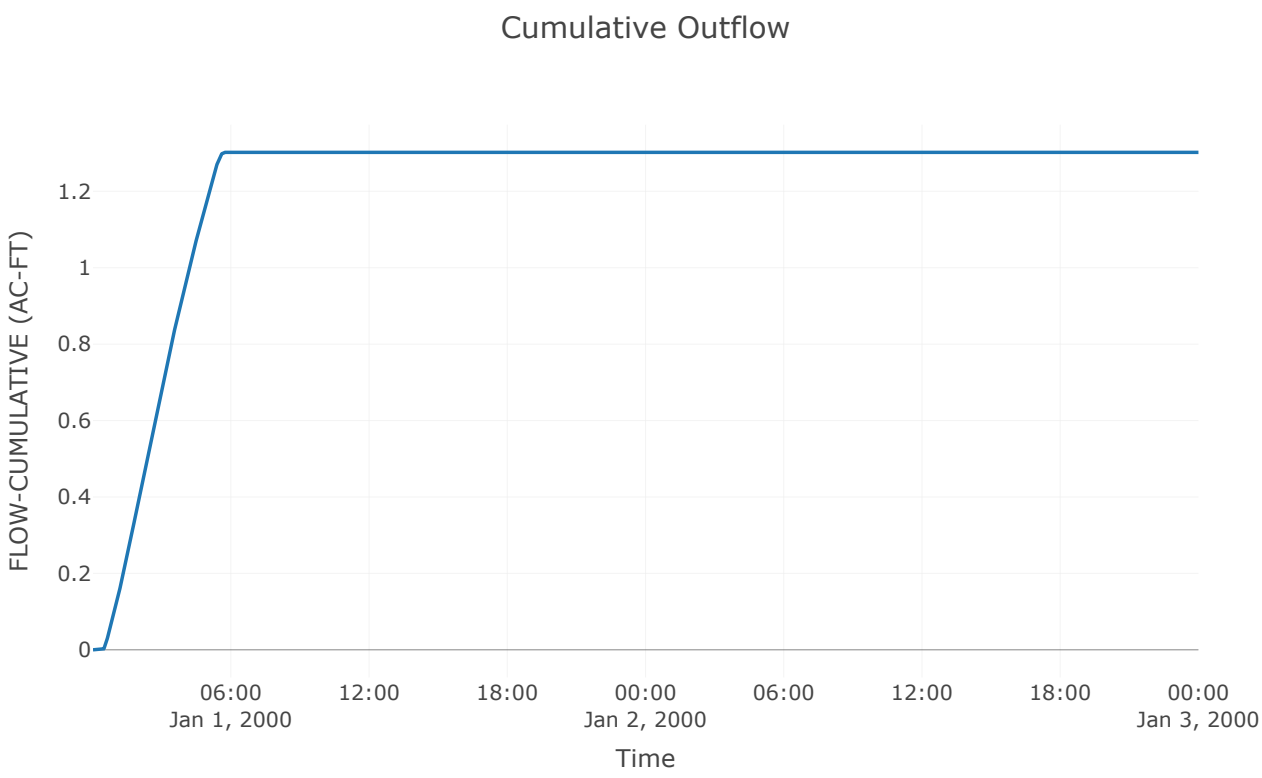
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

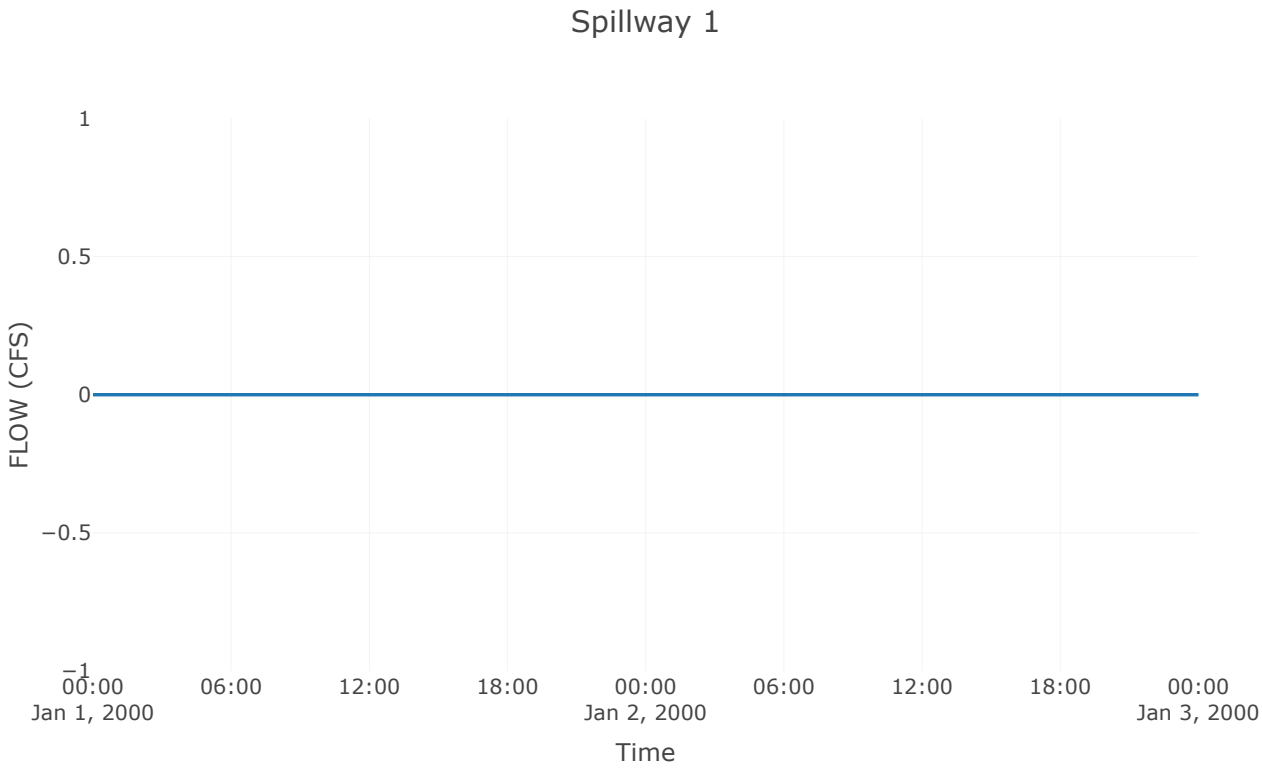
Storage

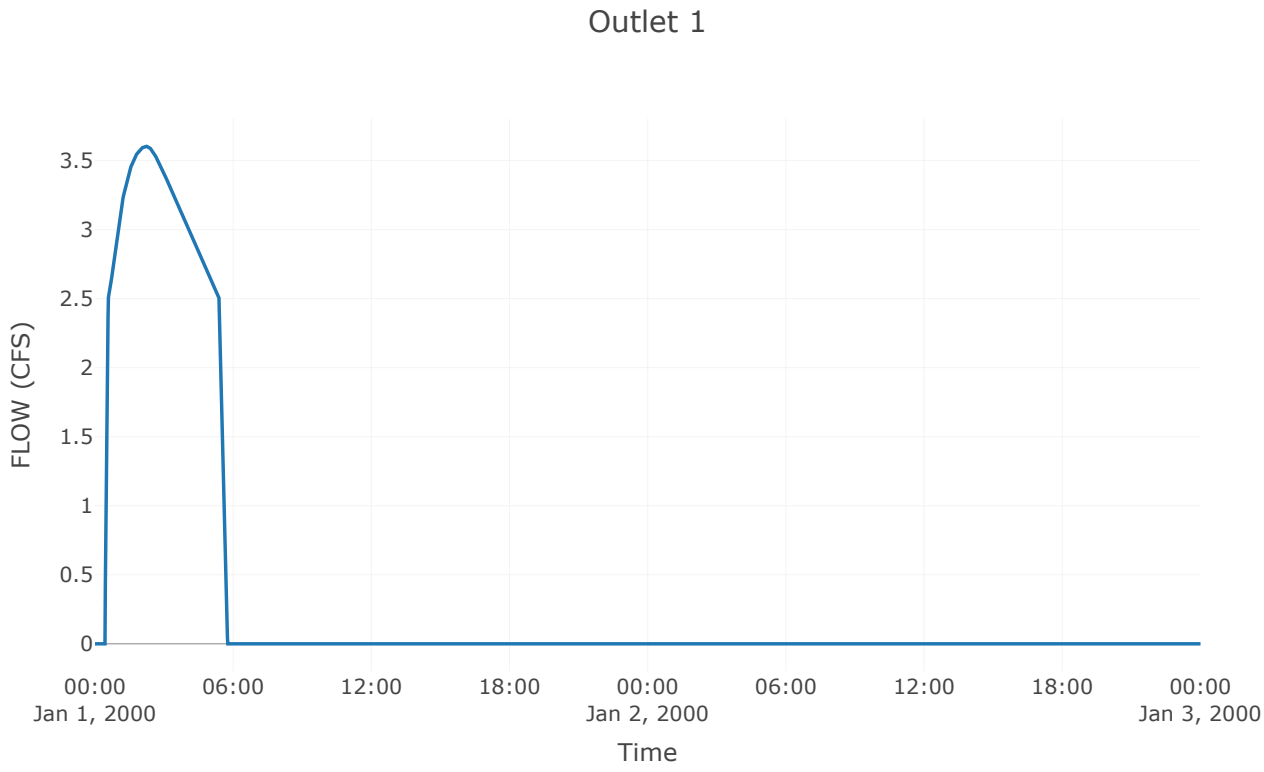


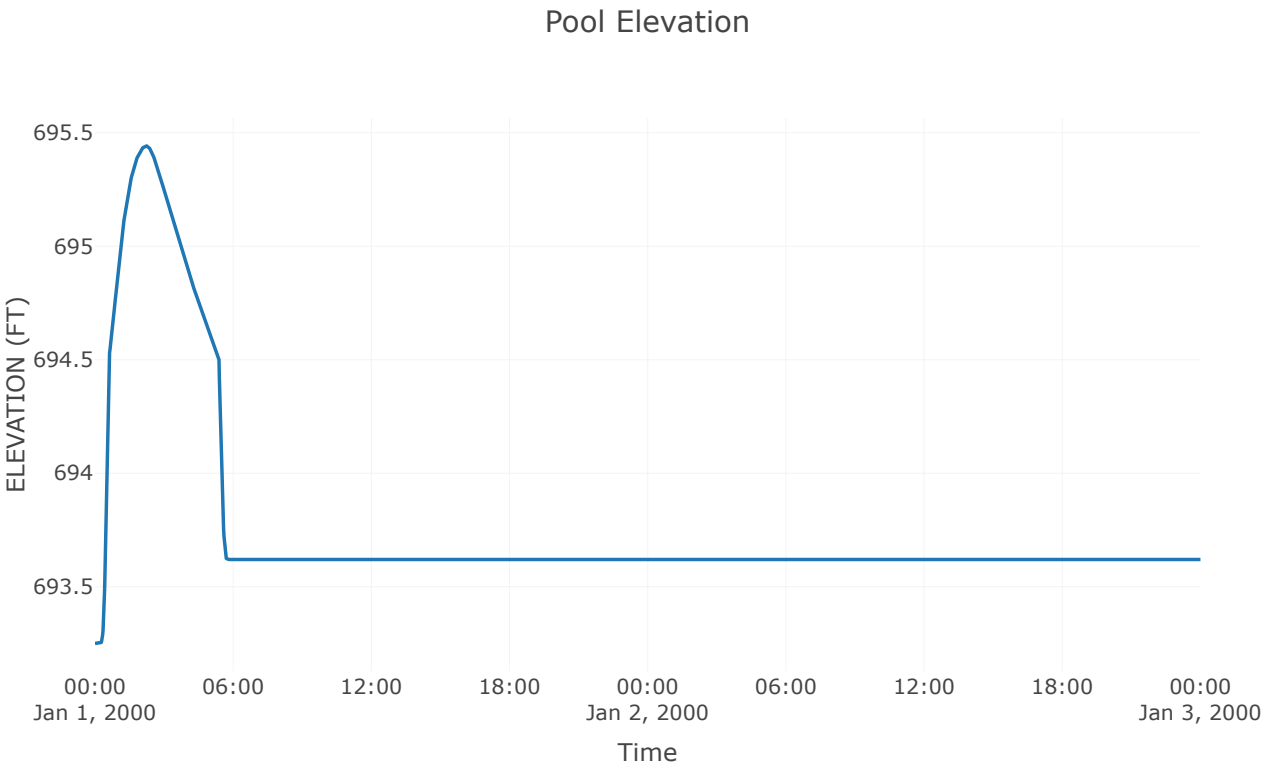
Combined Inflow

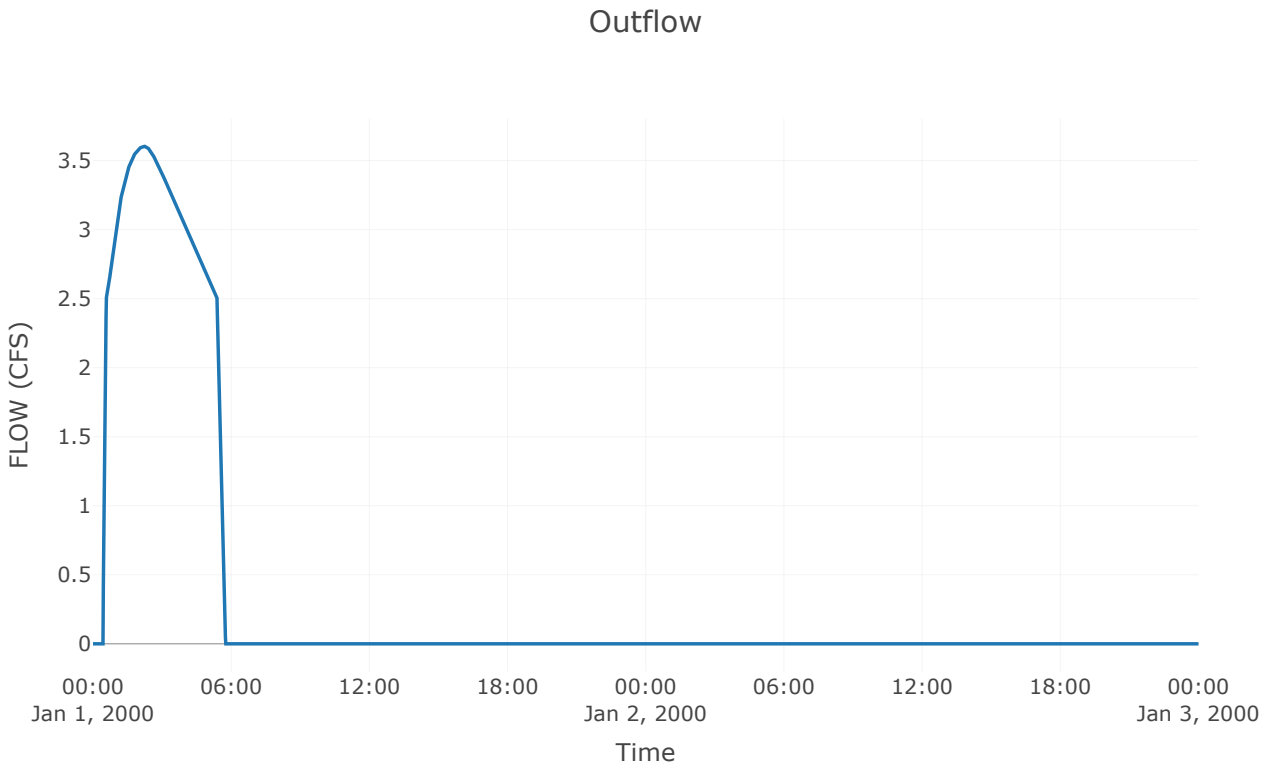



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695.5
695
694.5
694
693.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

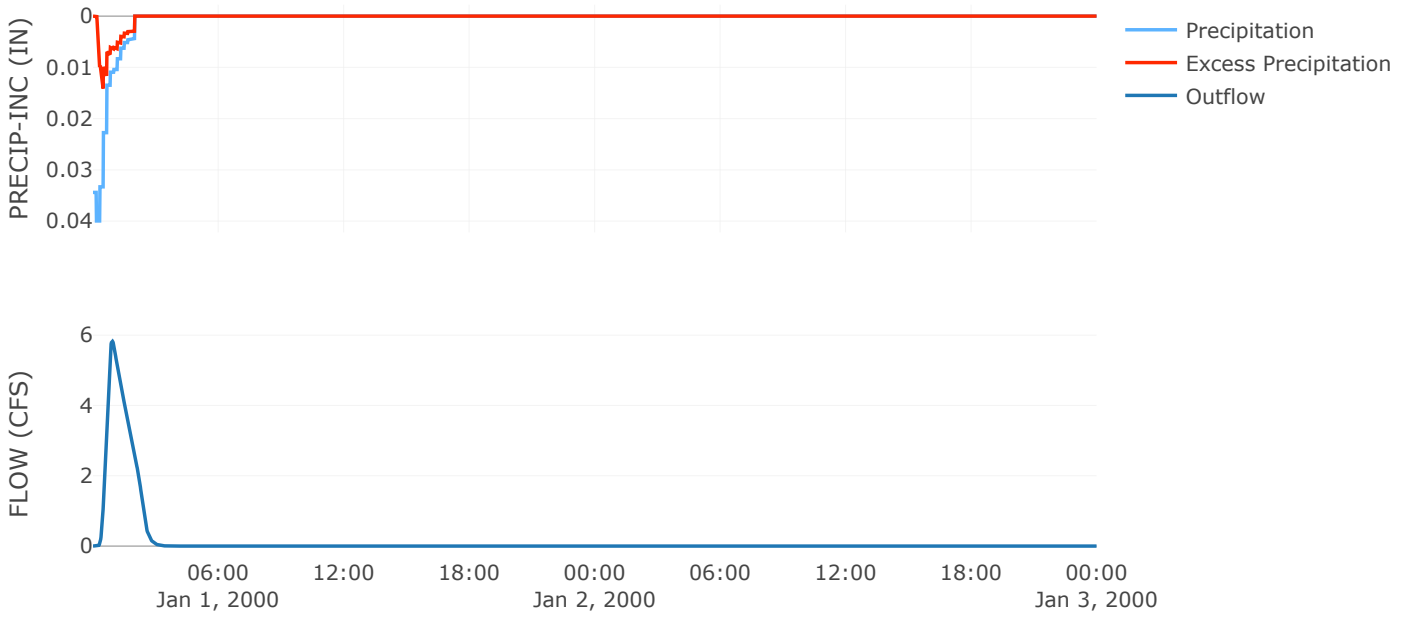
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

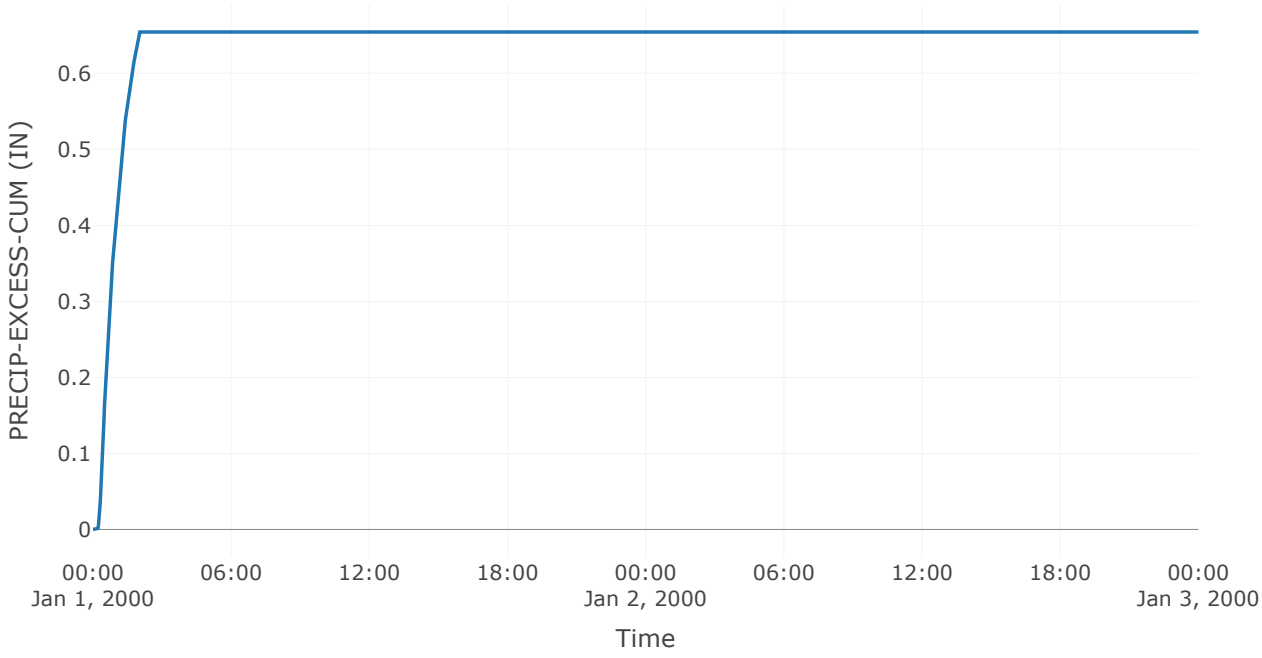
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

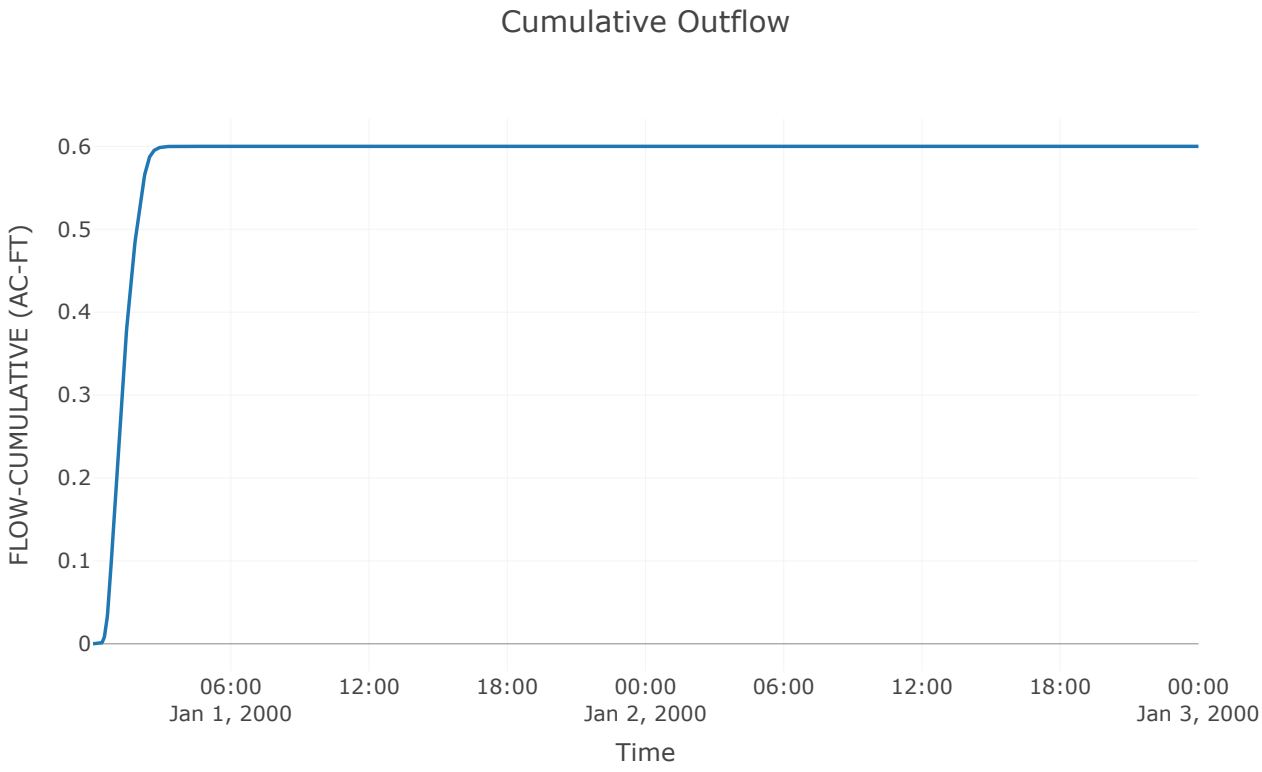
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

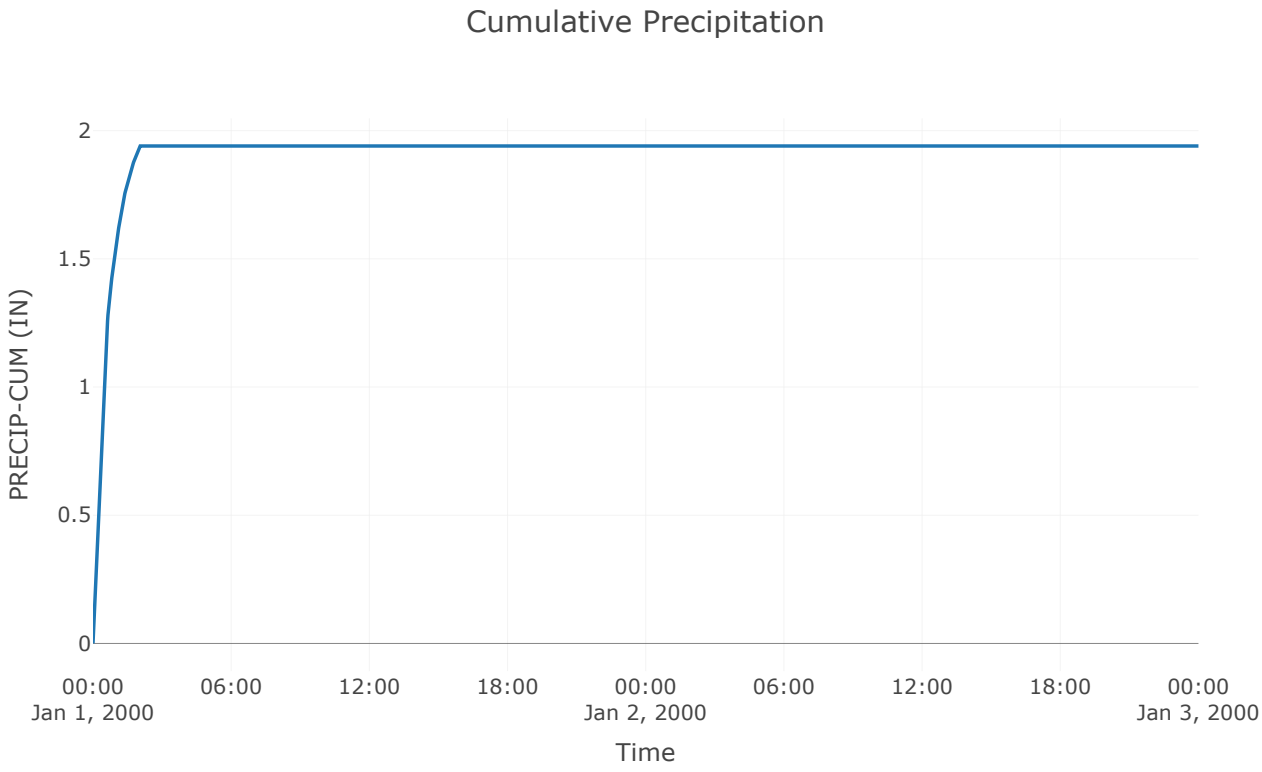
Precipitation and Outflow

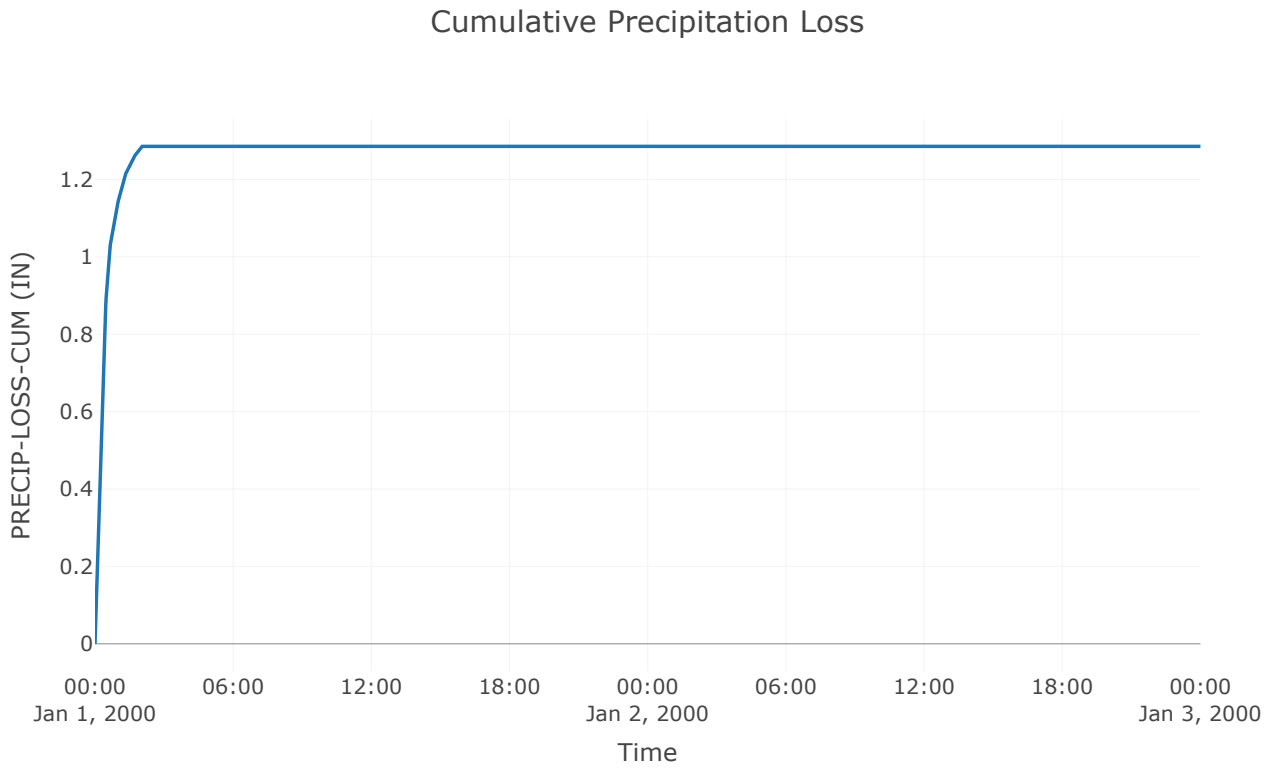


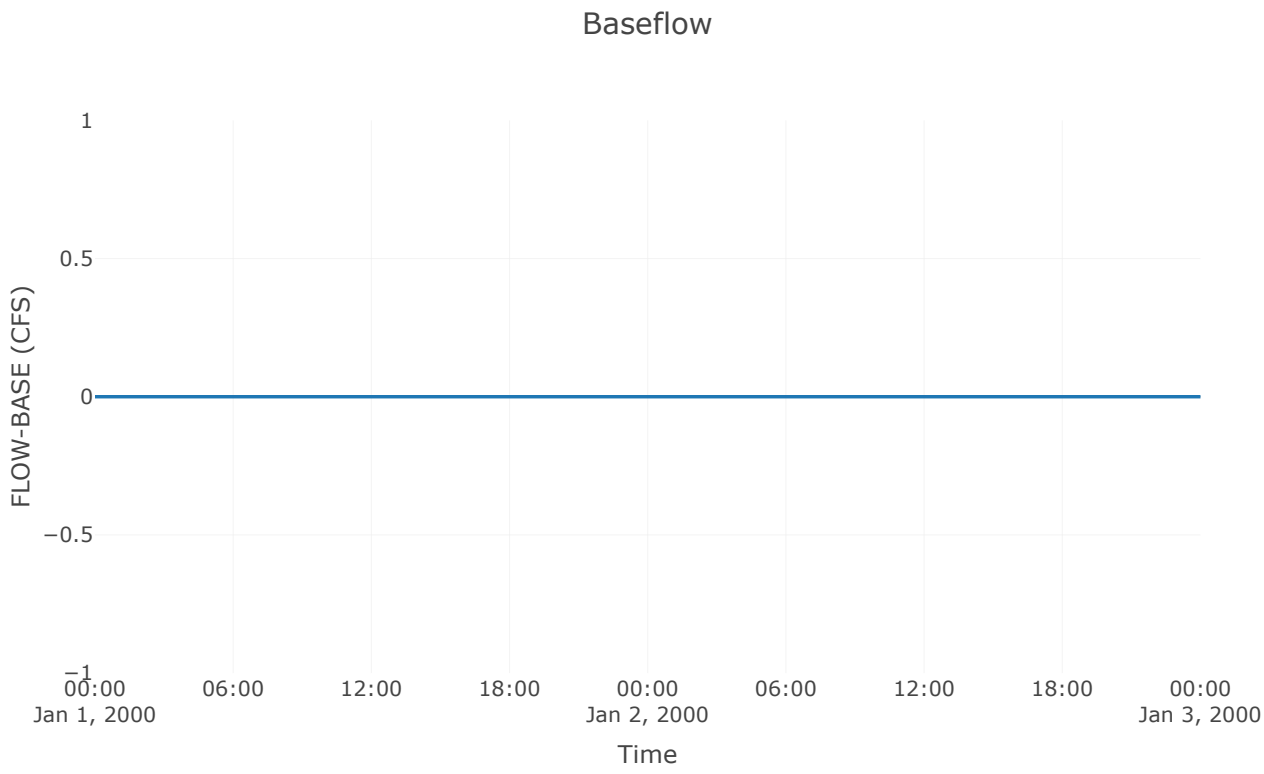
Cumulative Excess Precipitation



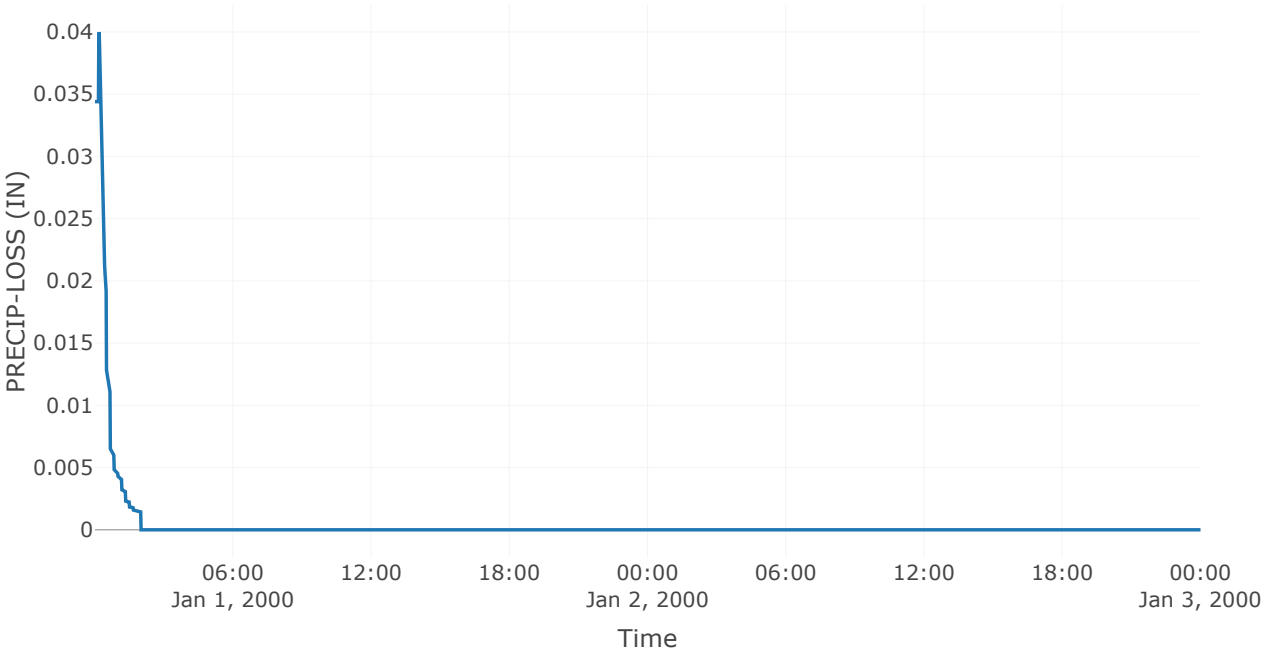

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

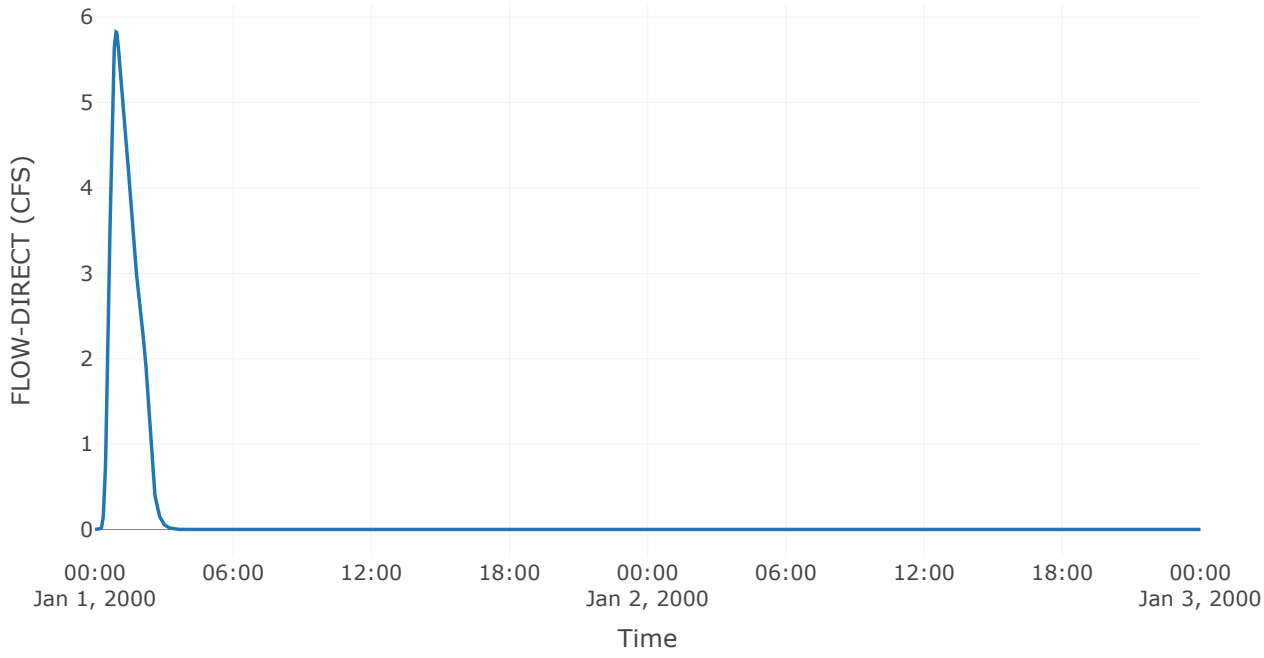

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

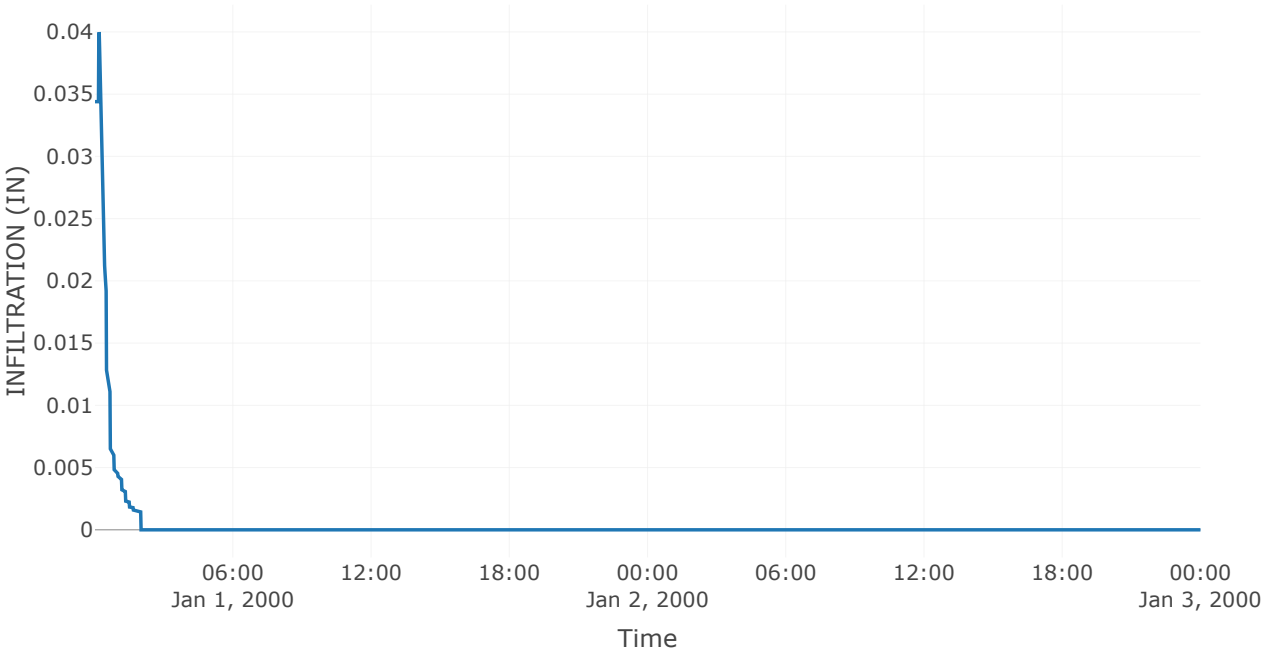

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

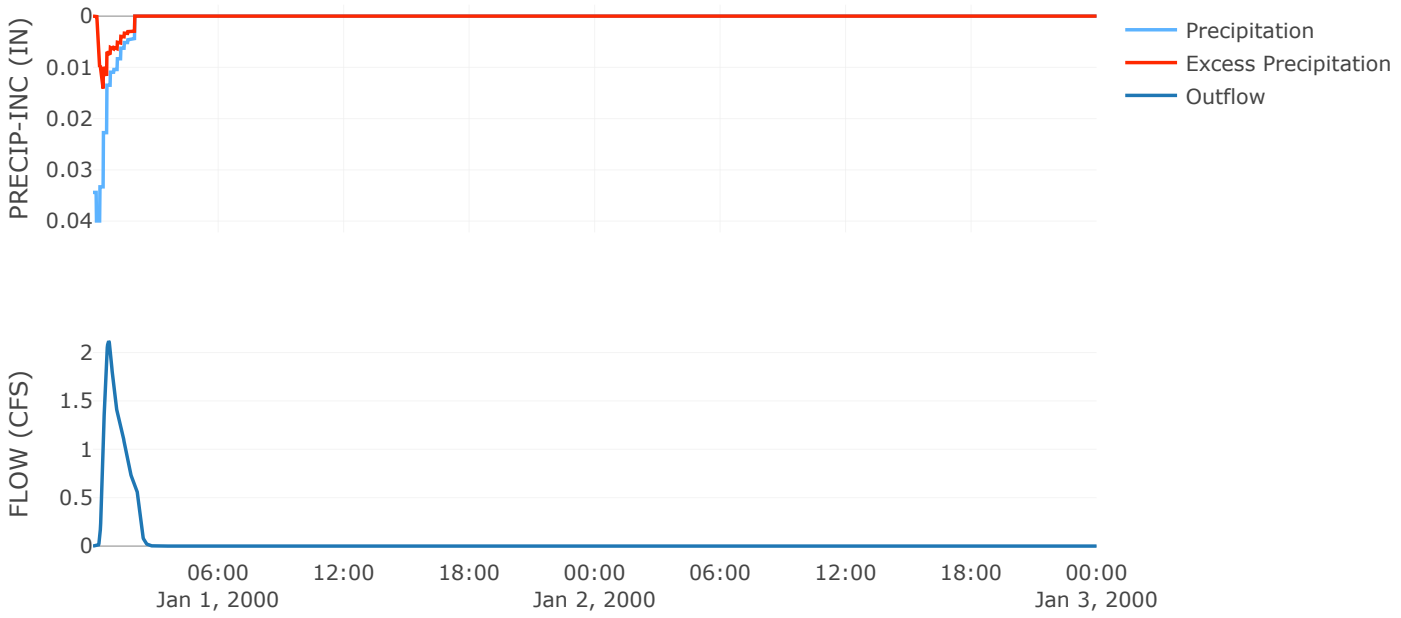
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

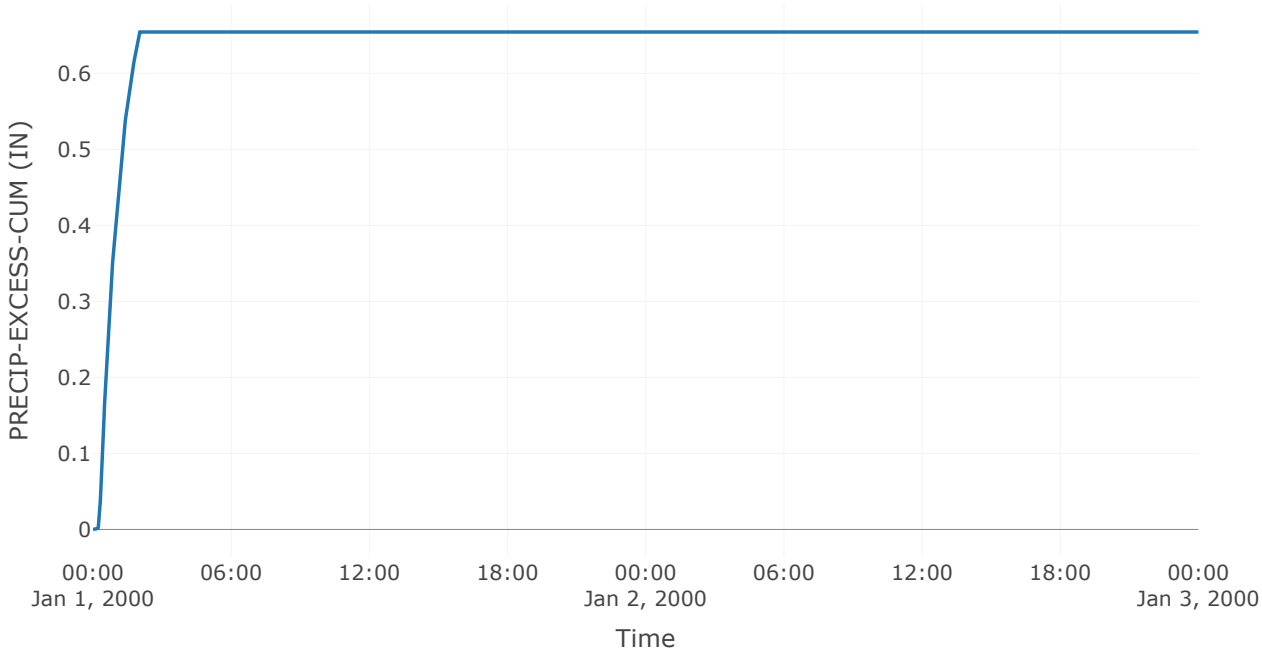
Transform: Scs	
Lag	12
Unitgraph Type	Standard

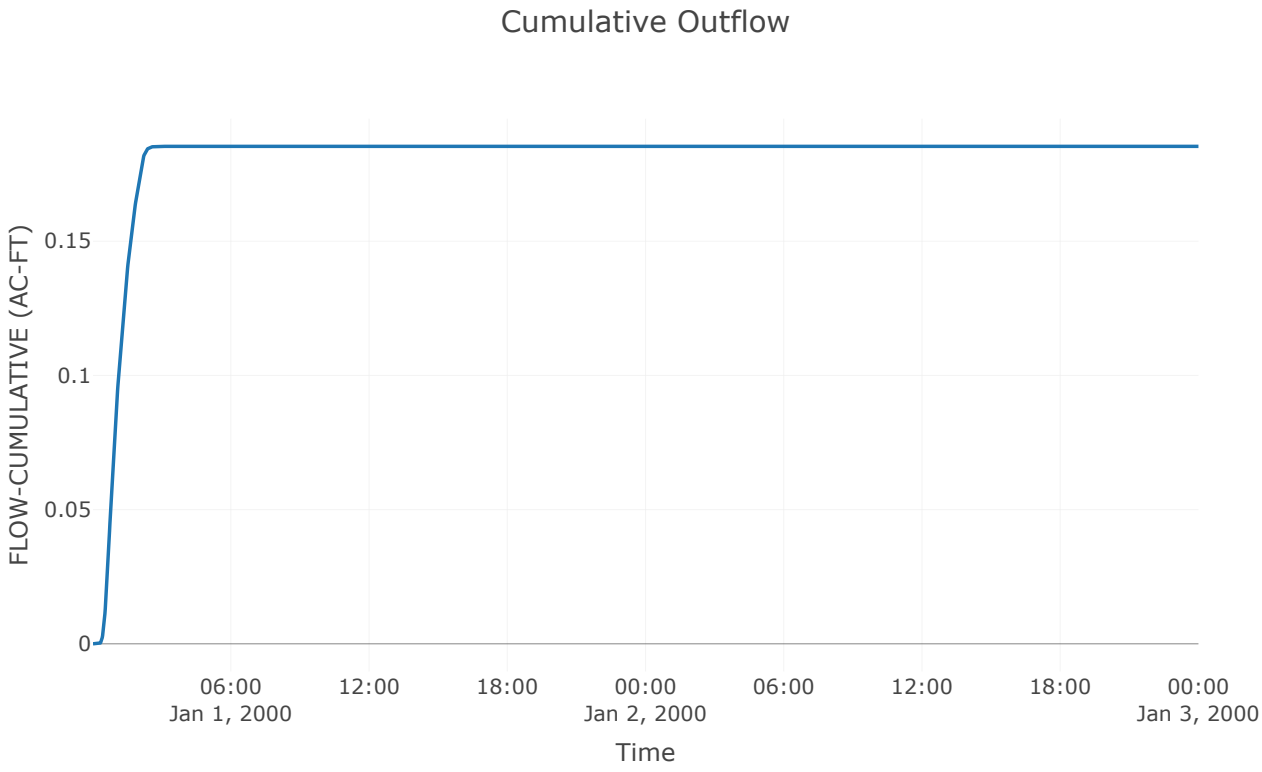
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

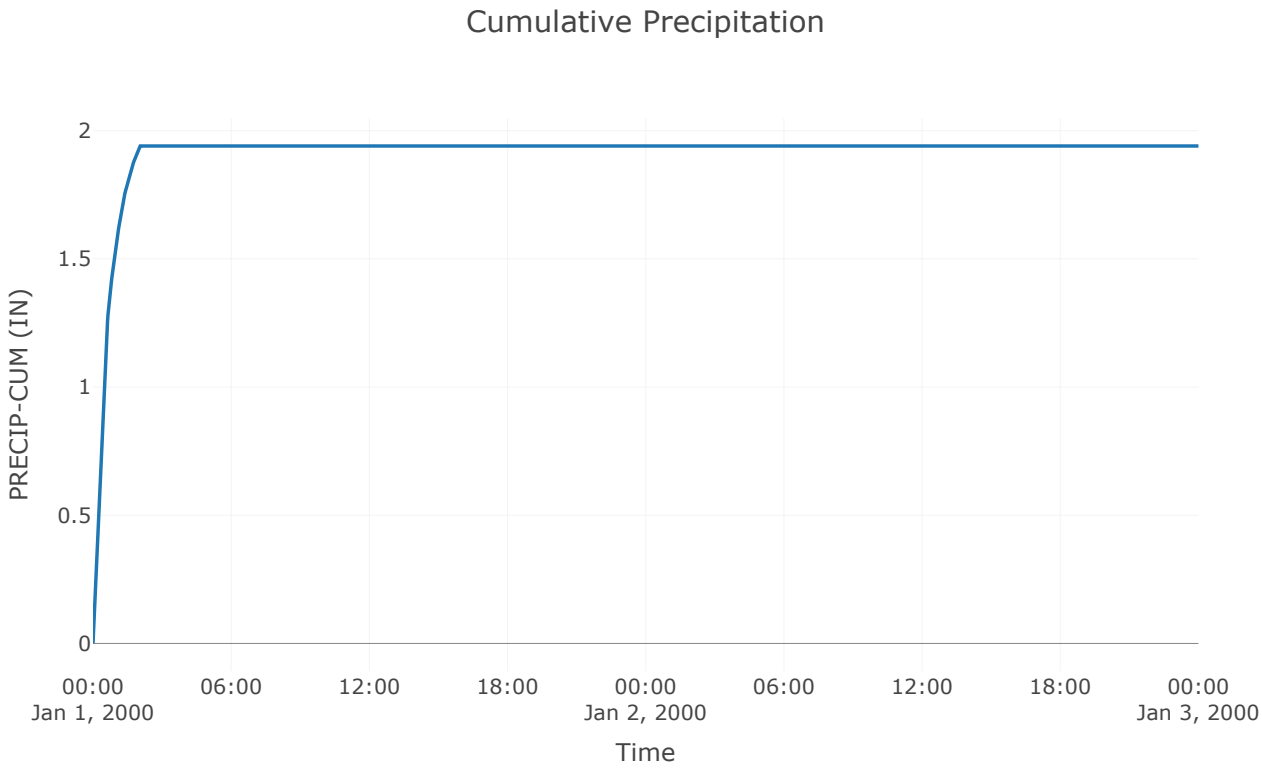
Precipitation and Outflow

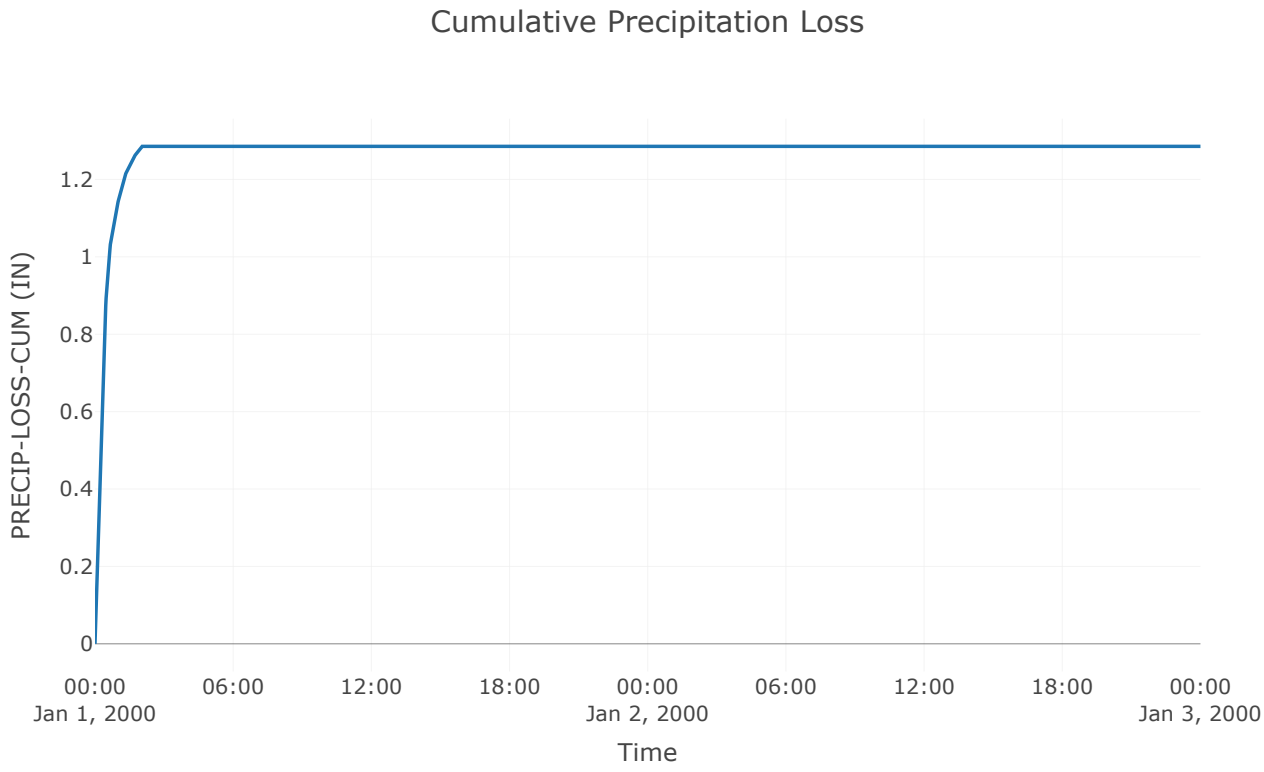


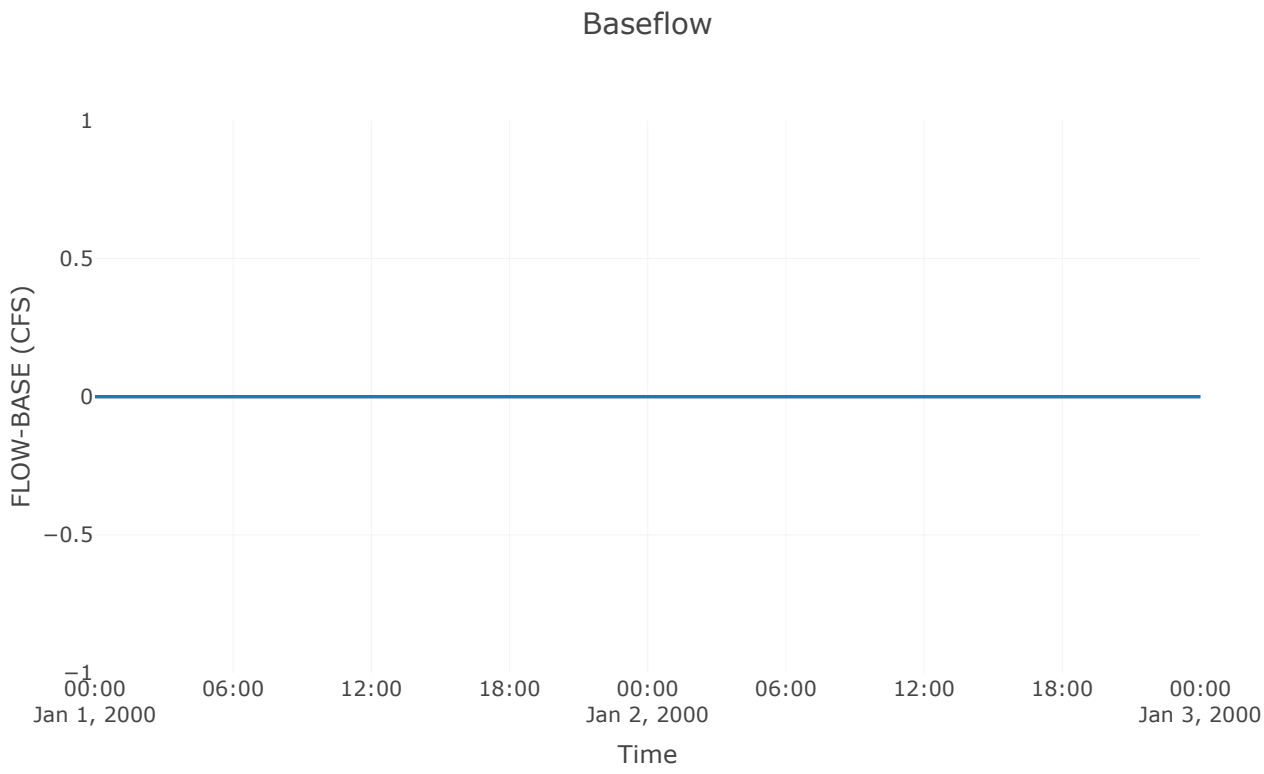
Cumulative Excess Precipitation



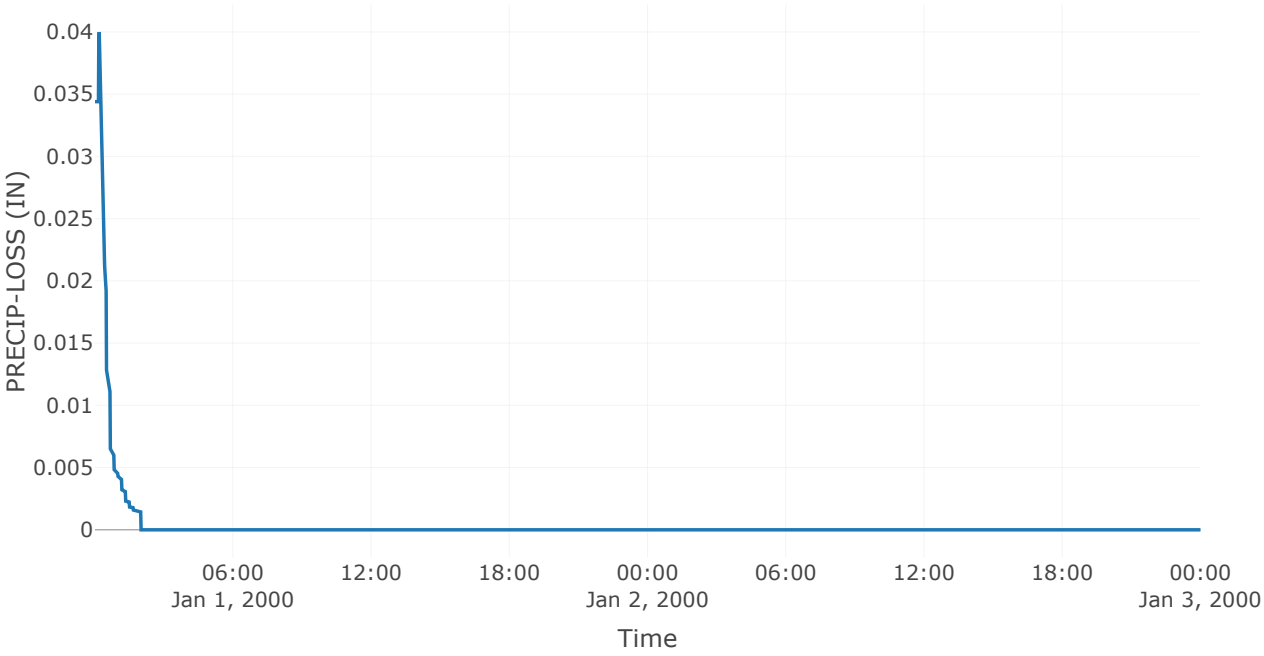

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

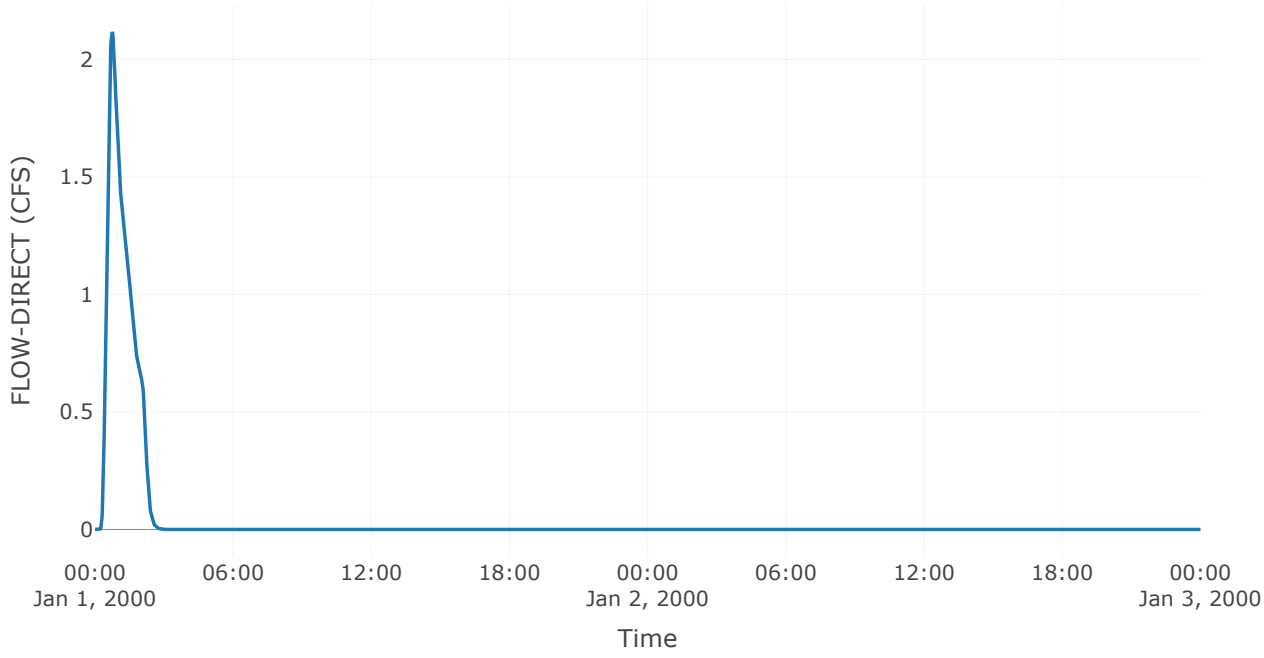

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

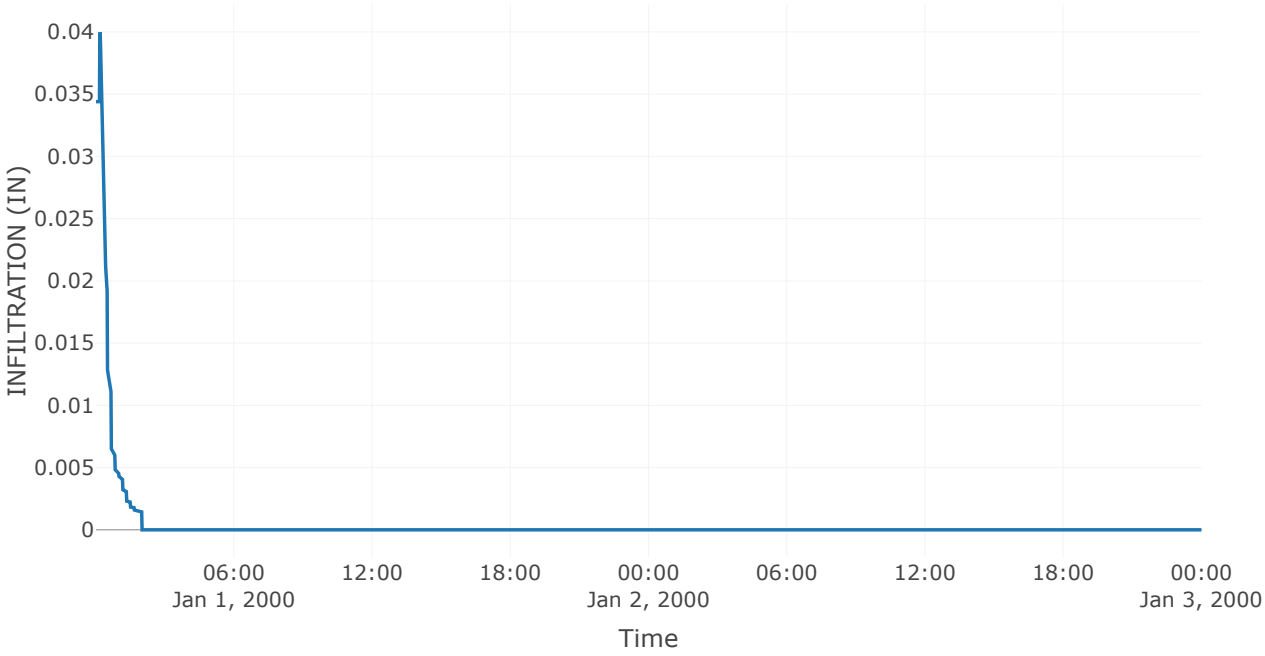

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

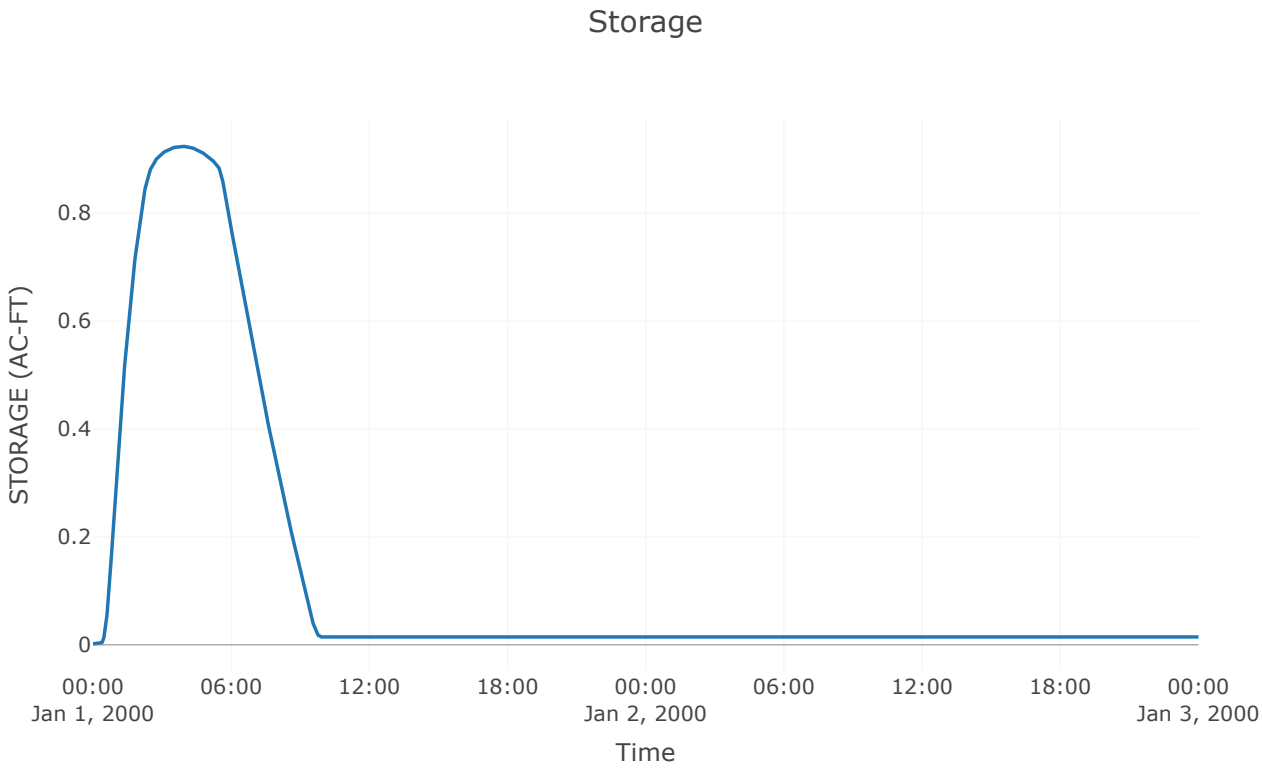


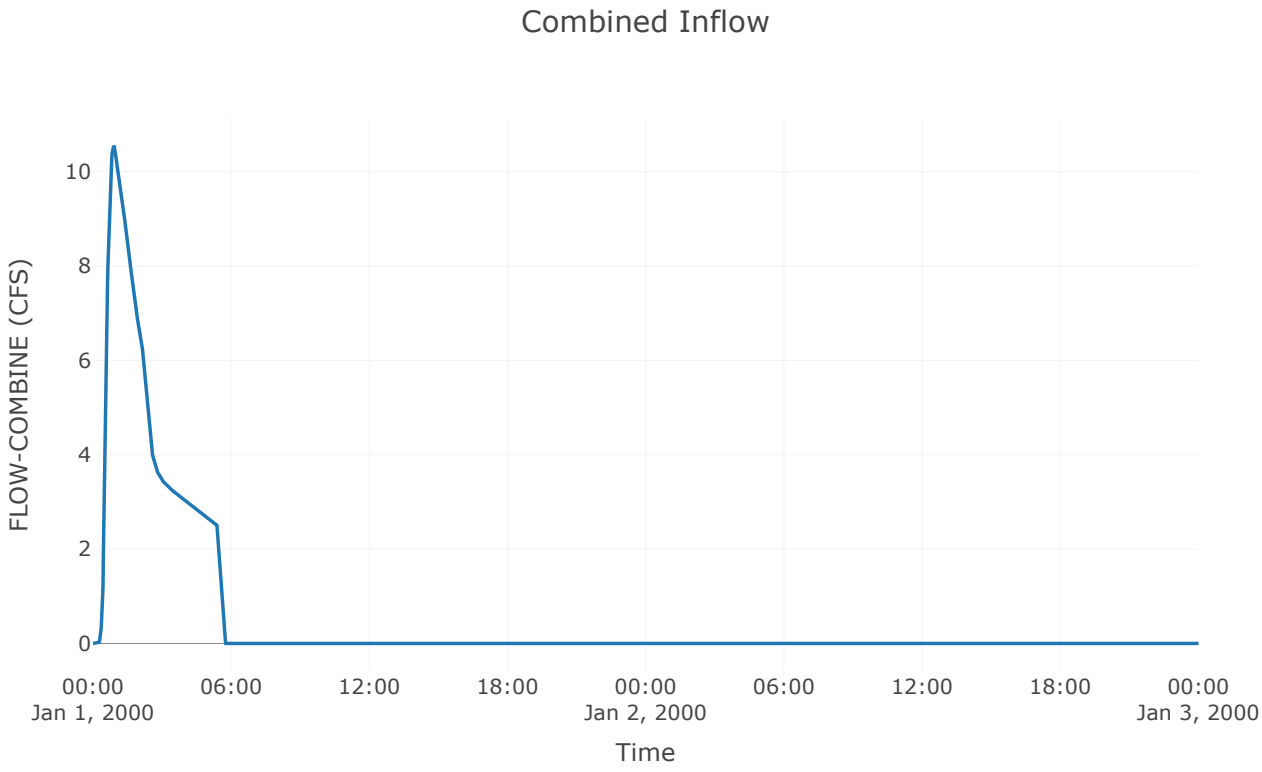

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

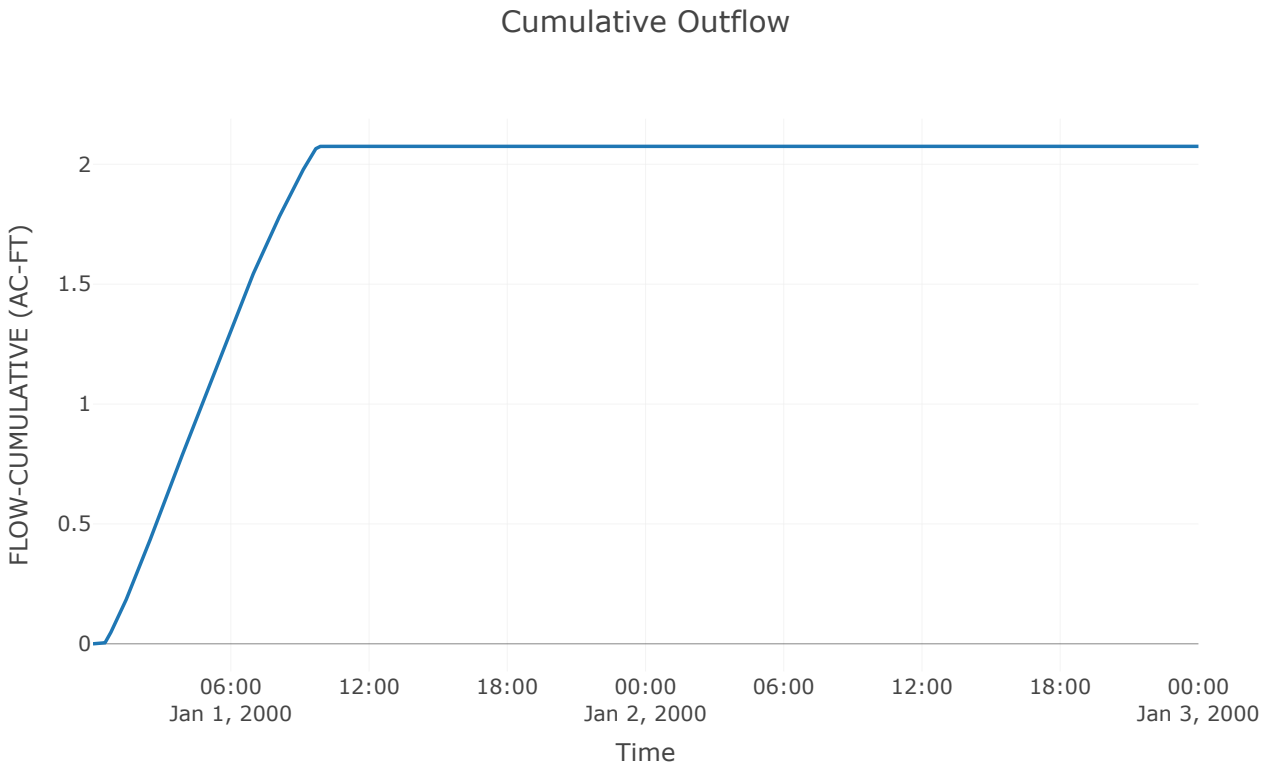
Reservoir: Basin 2

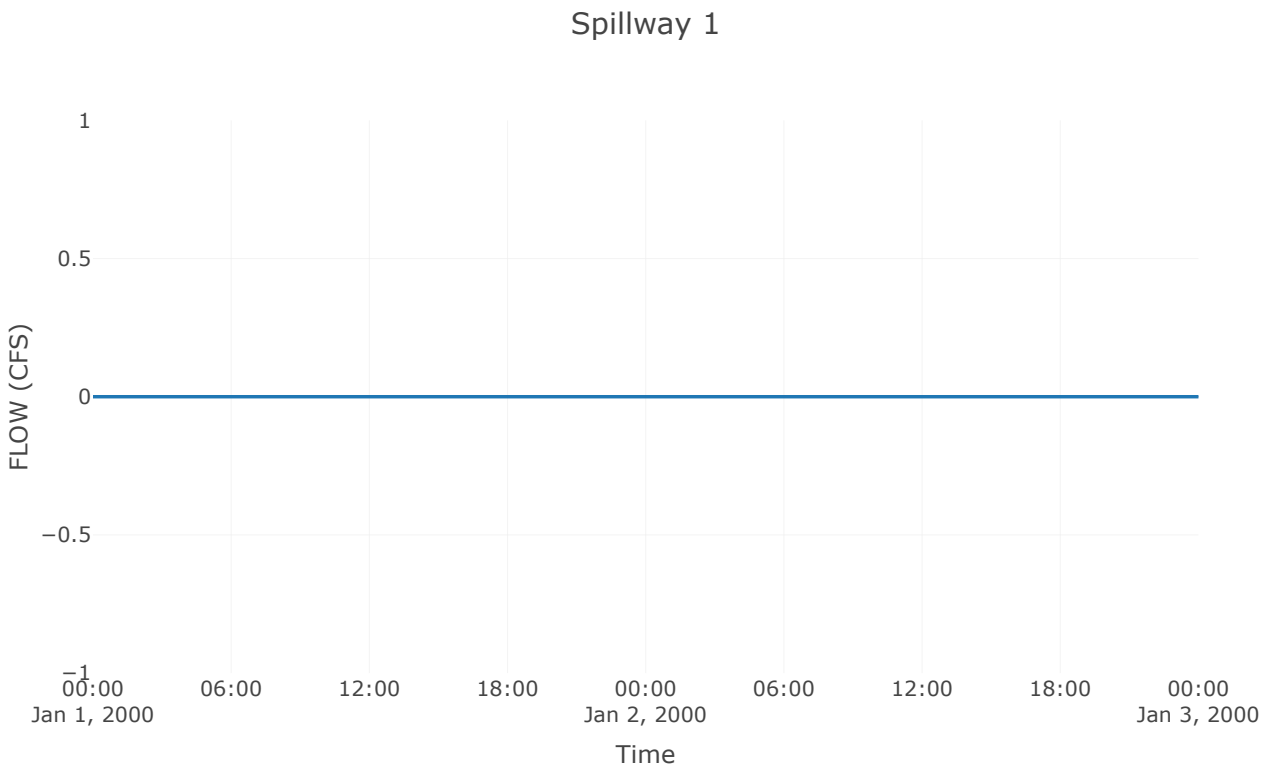
Downstream : Basin 3

Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

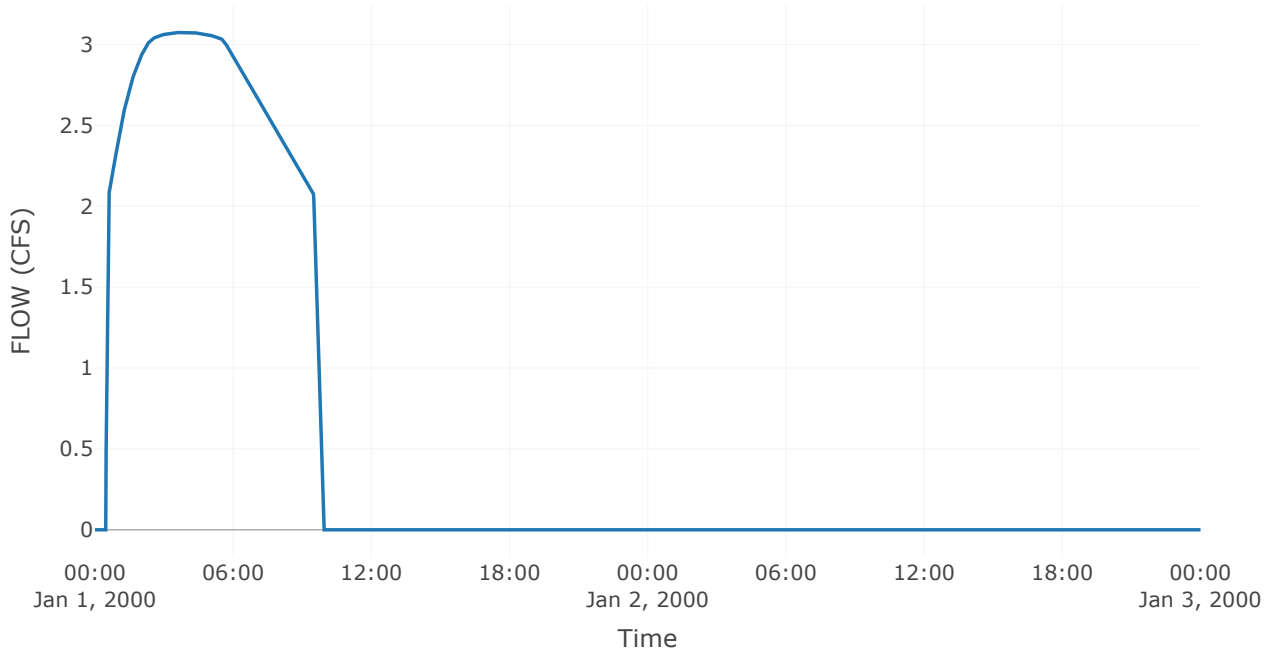

Storage
STORAGE (AC-FT)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

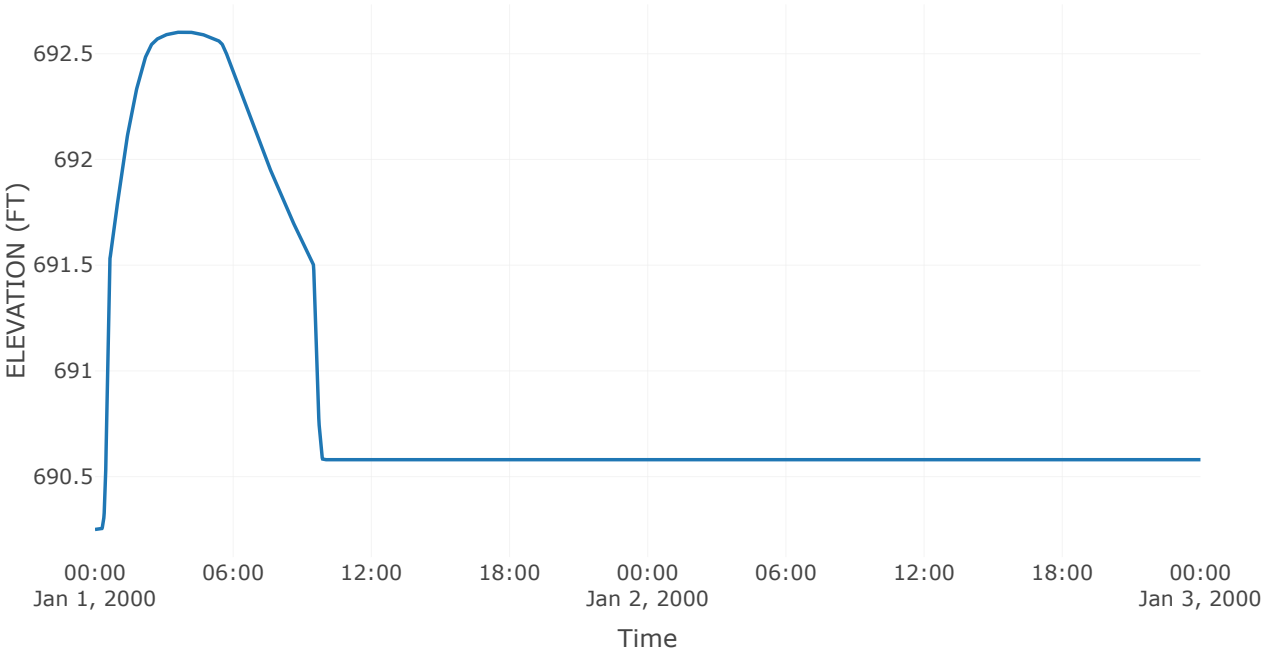

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

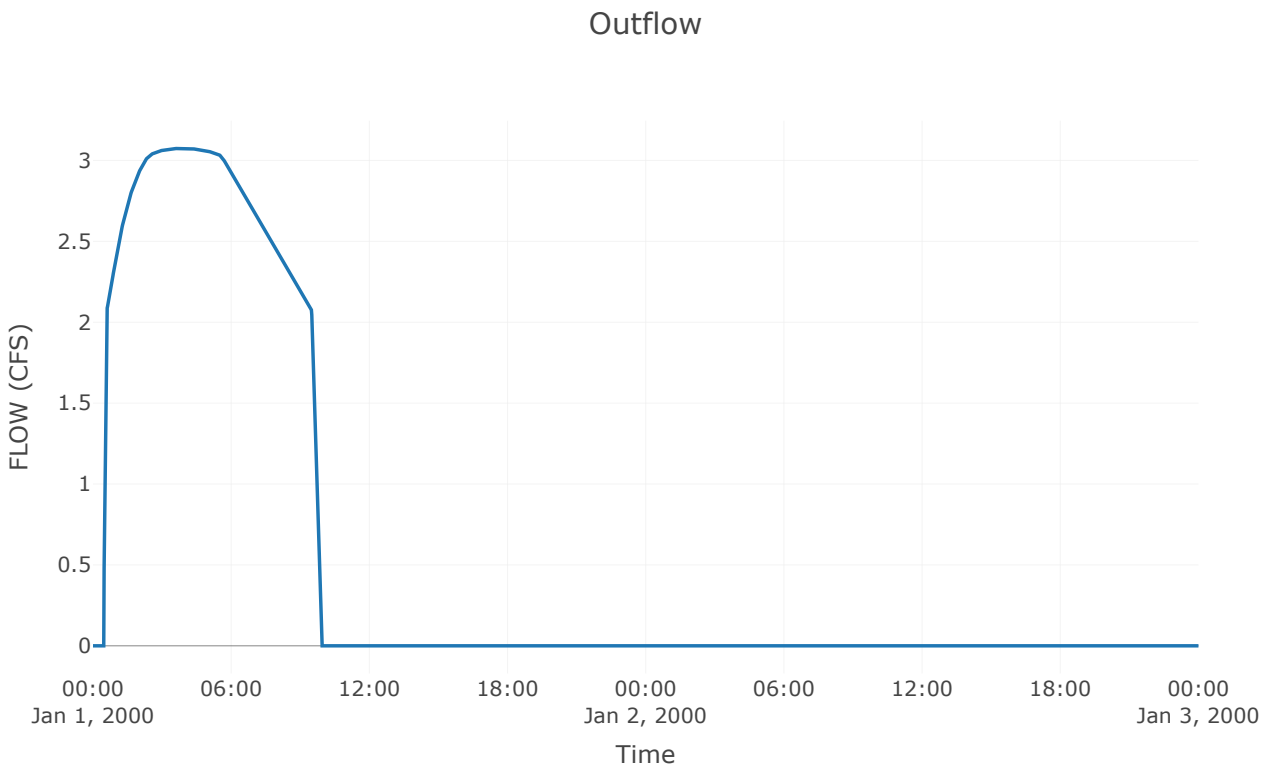

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

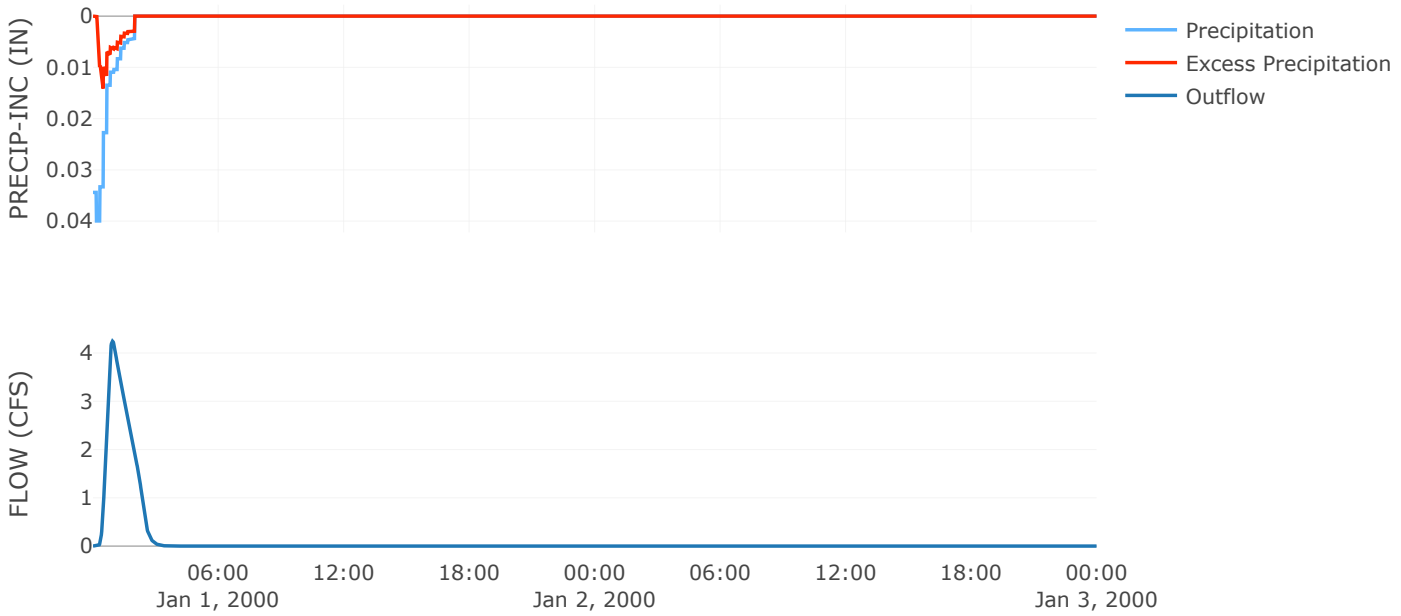
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

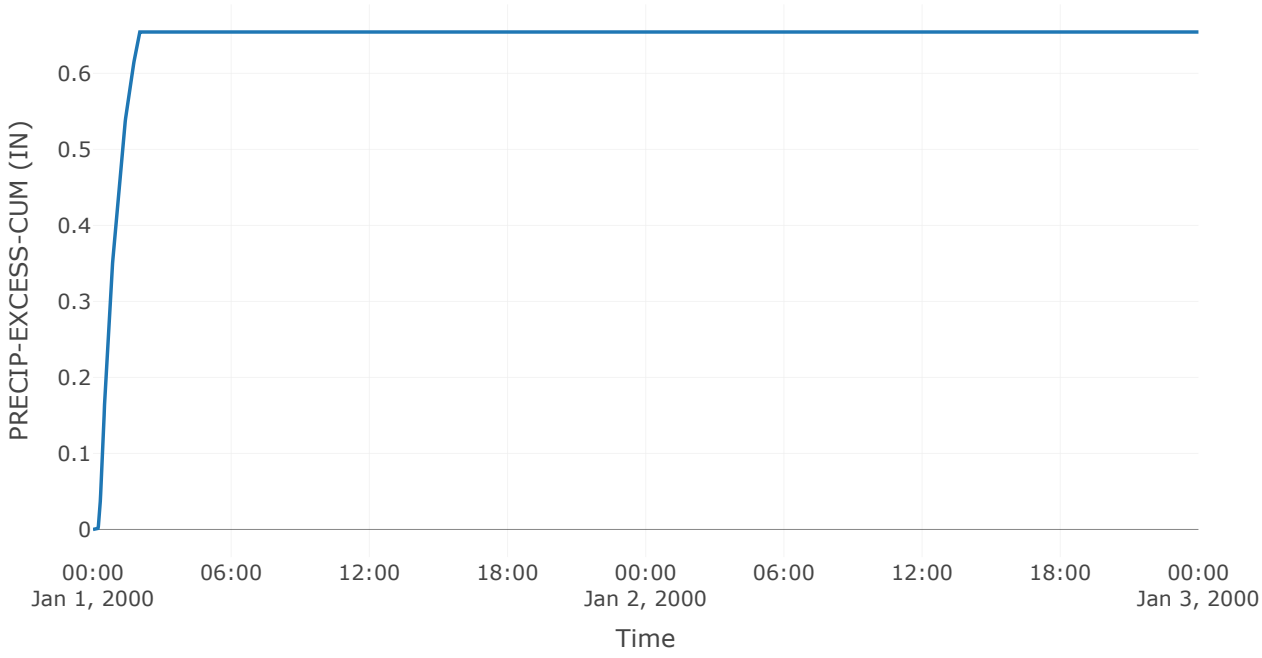
Transform: Scs	
Lag	21
Unitgraph Type	Standard

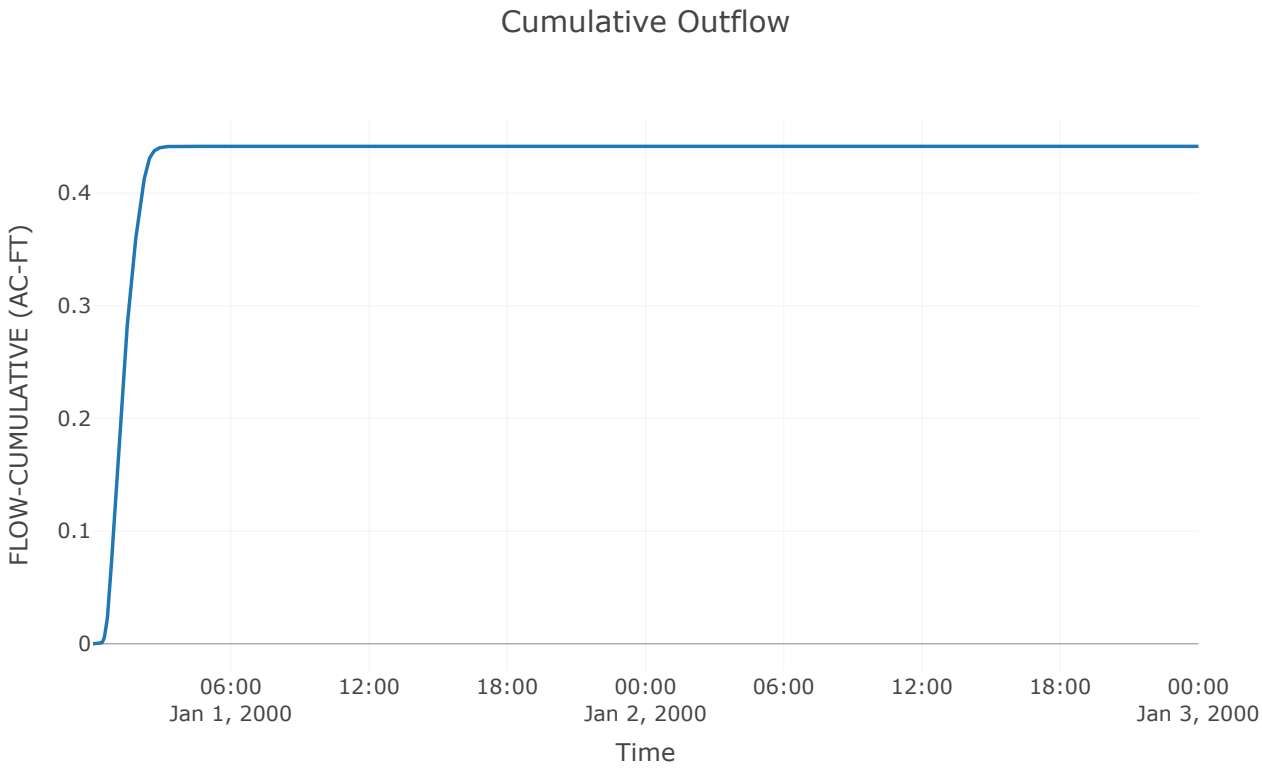
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

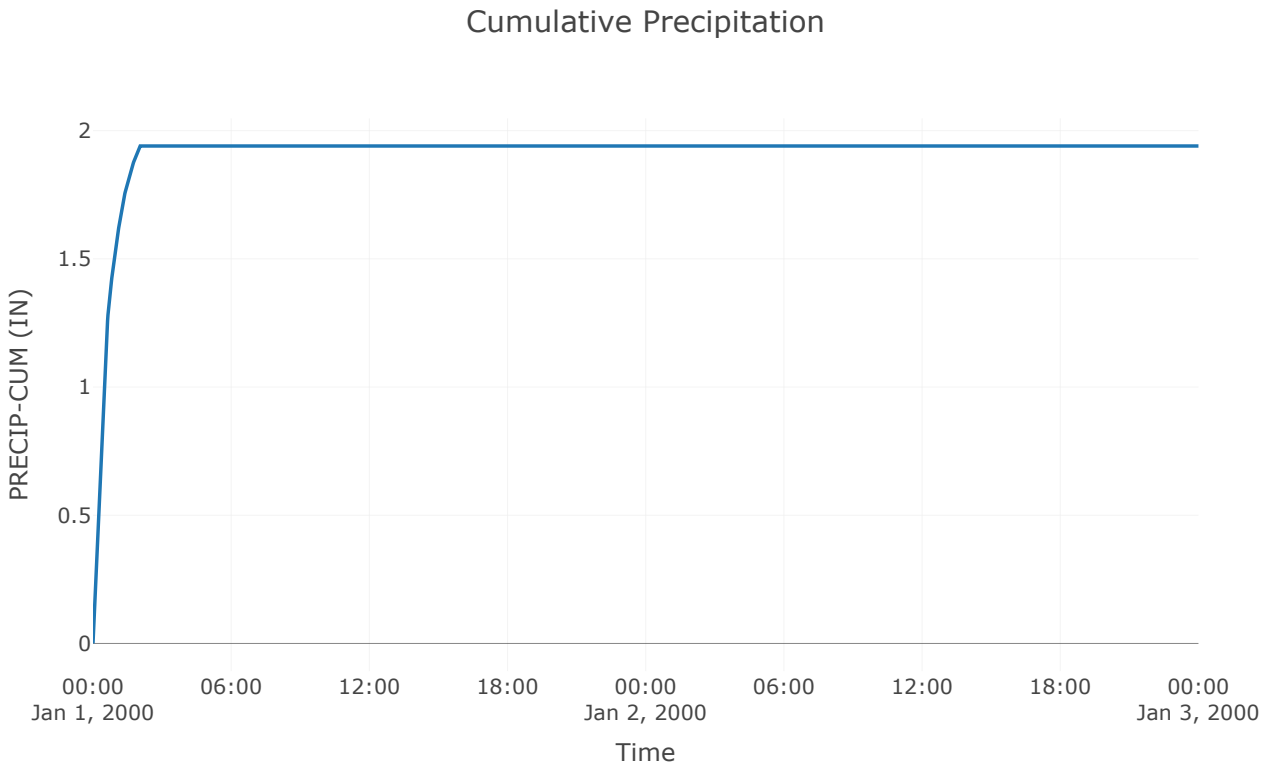
Precipitation and Outflow

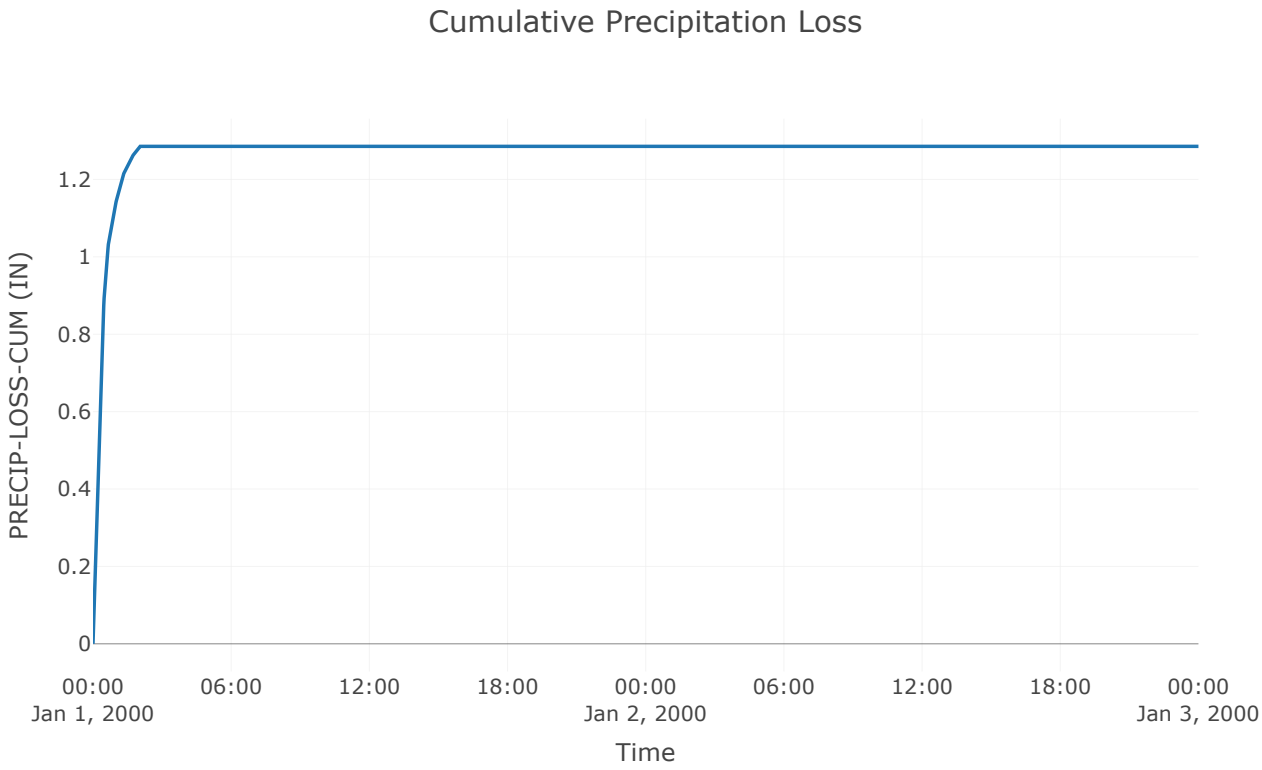


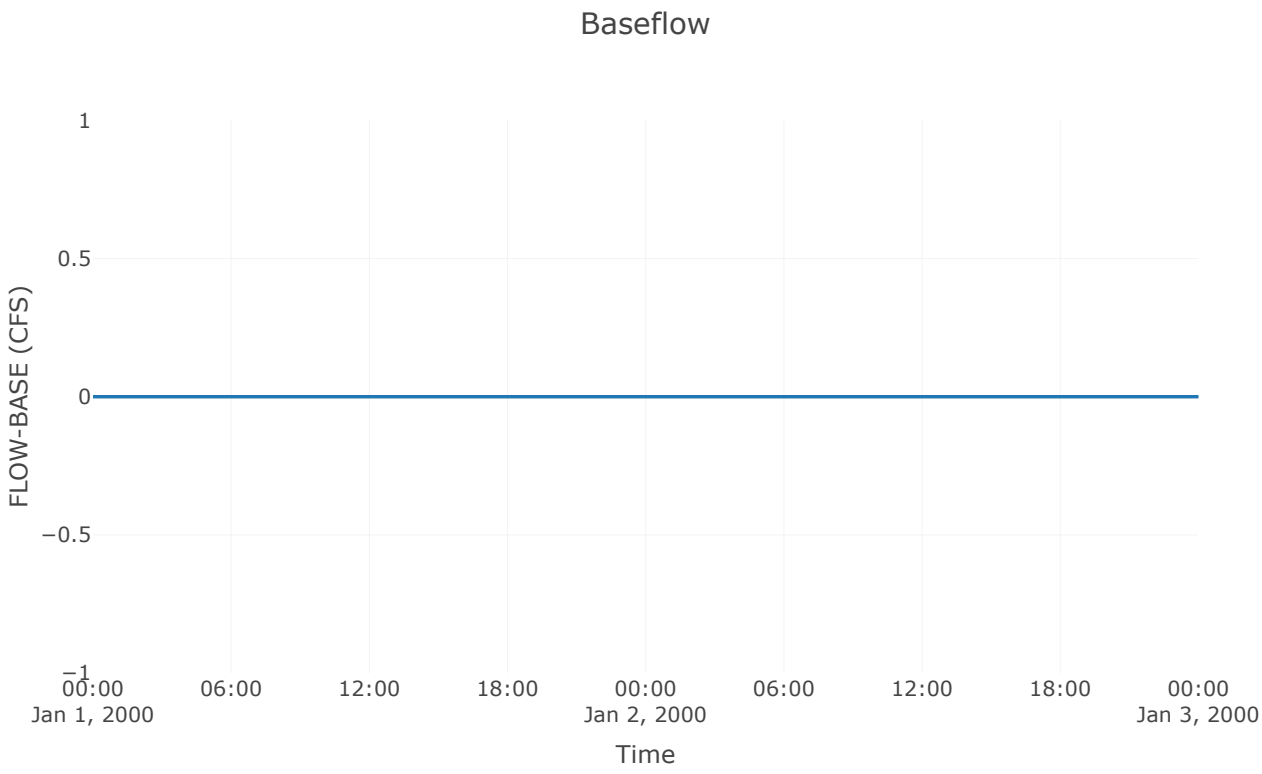
Cumulative Excess Precipitation



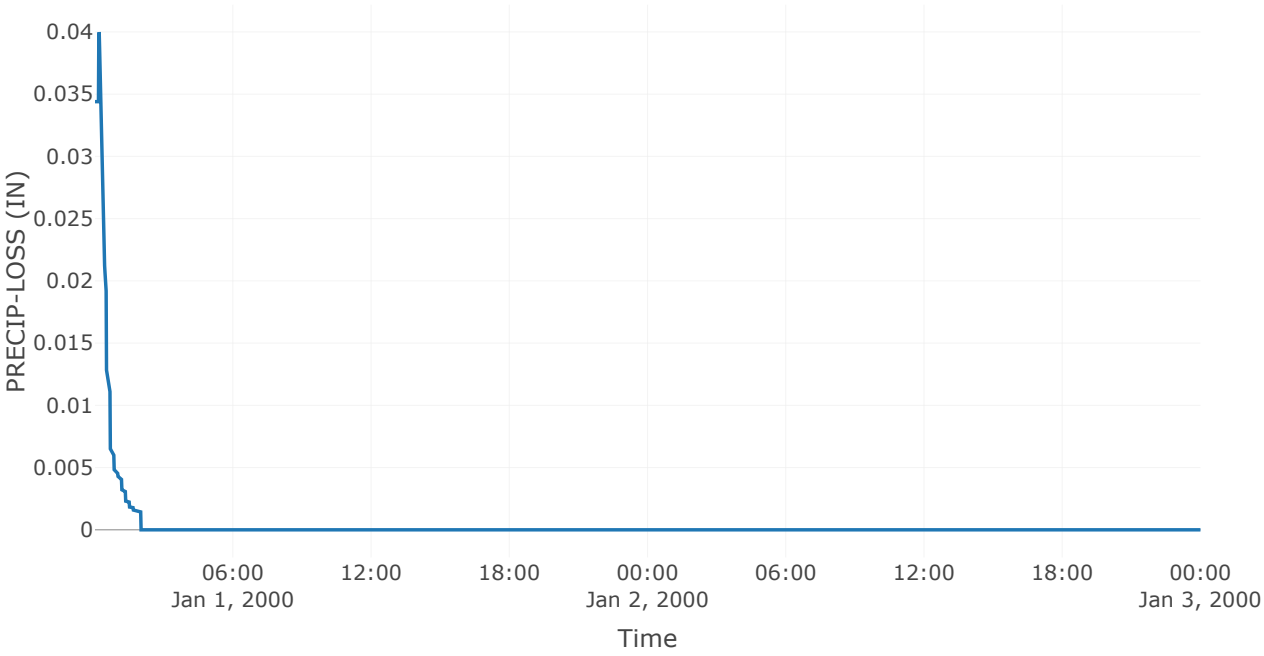

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

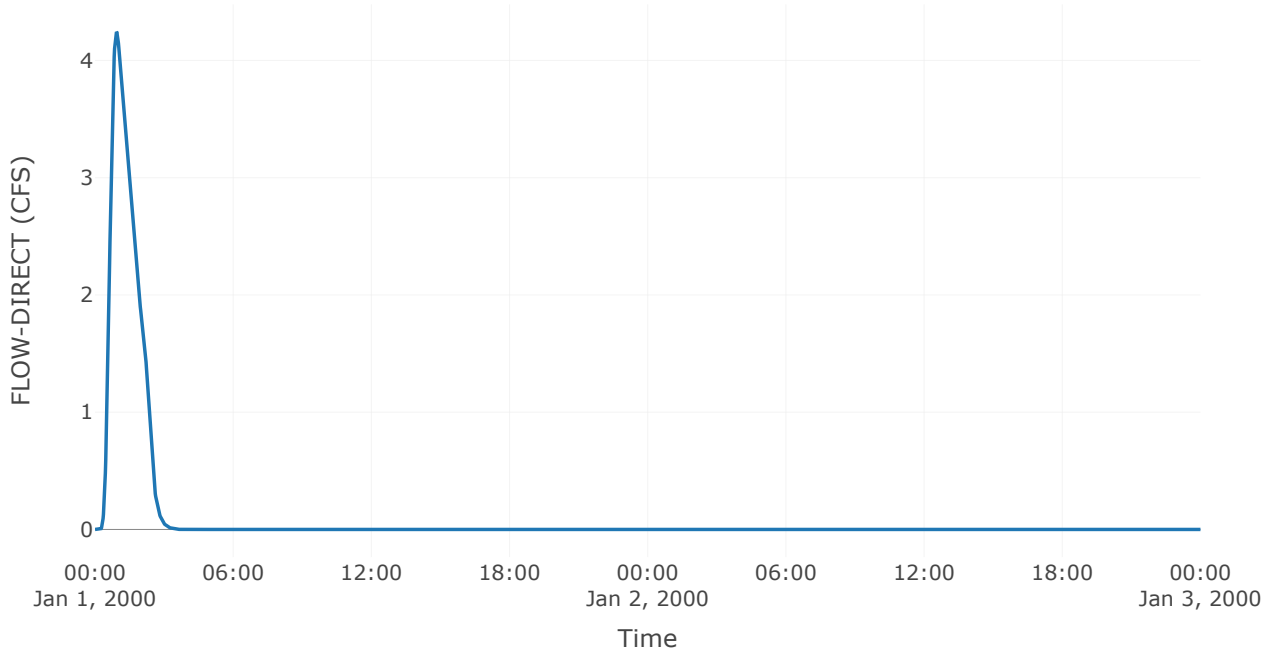

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

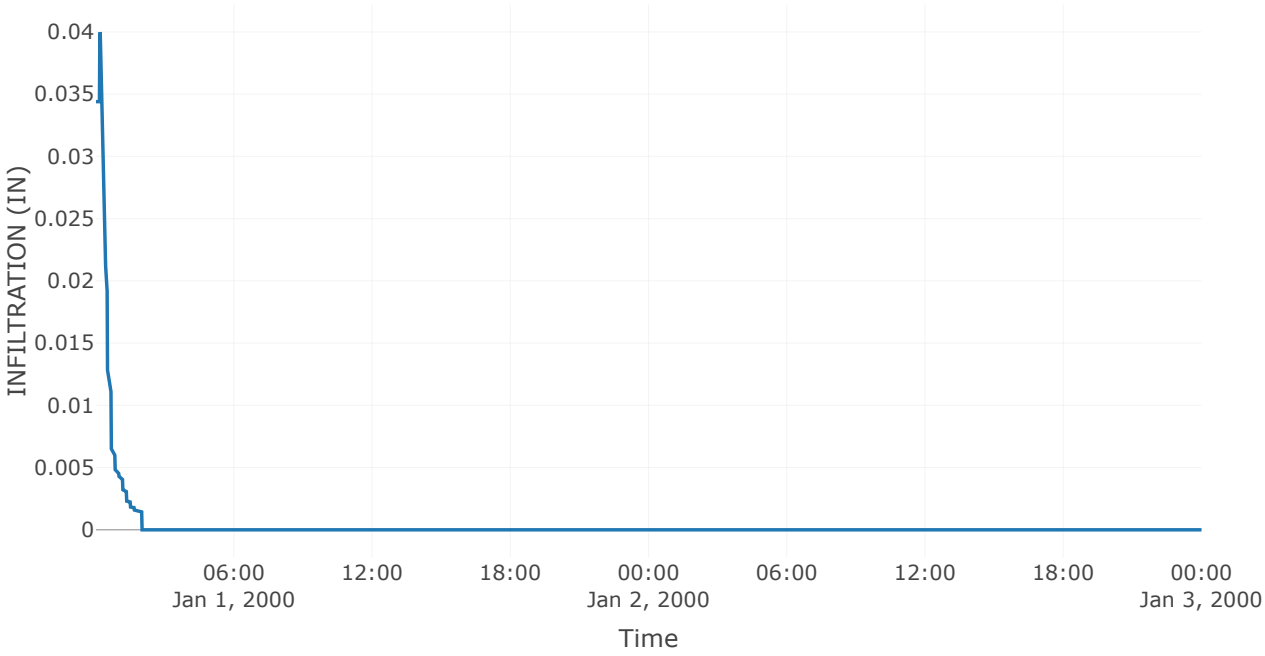

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

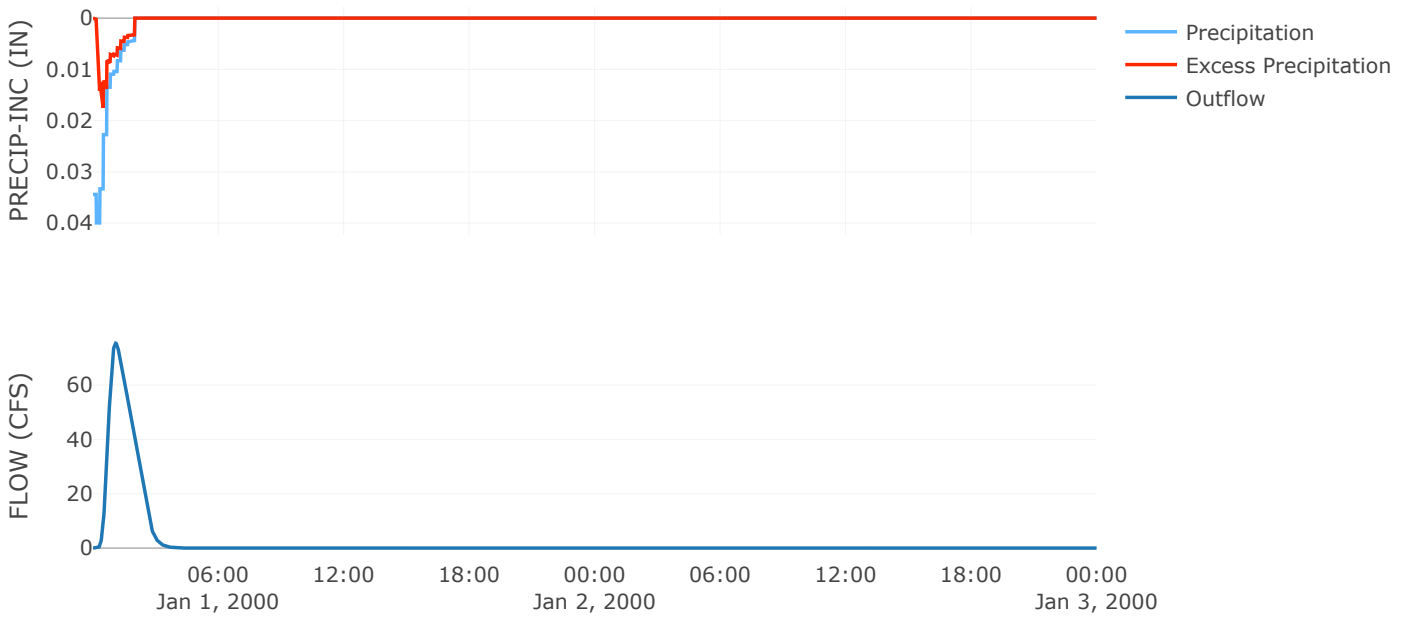
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

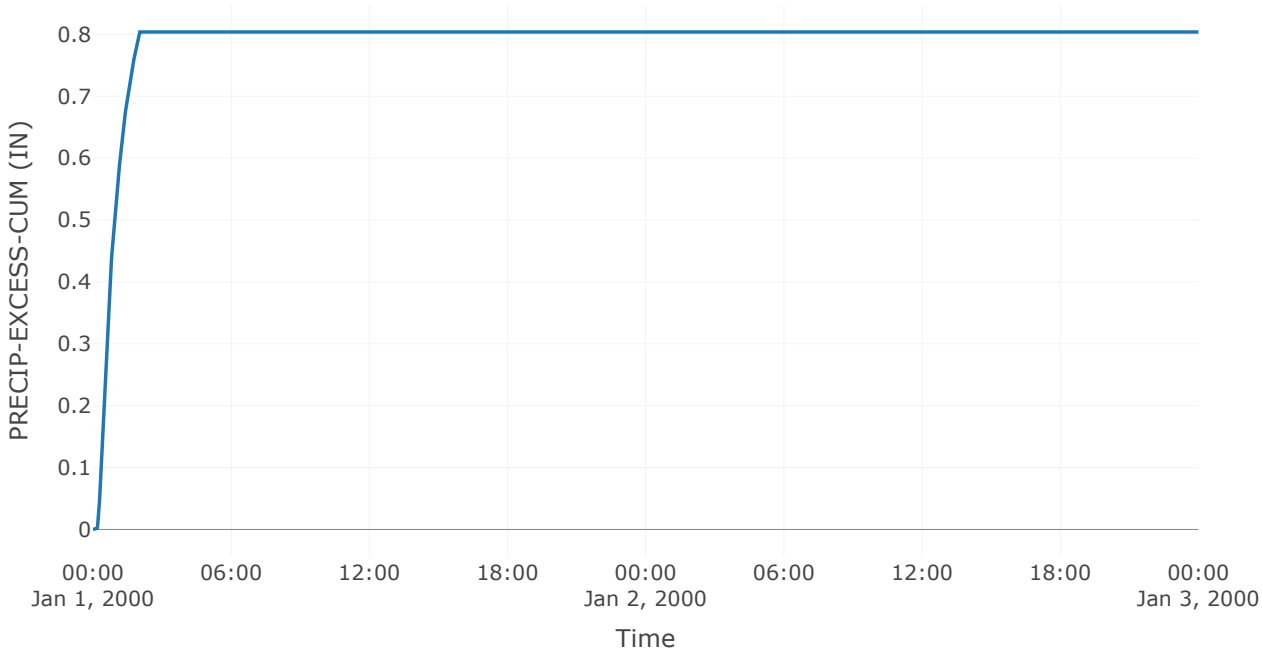
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

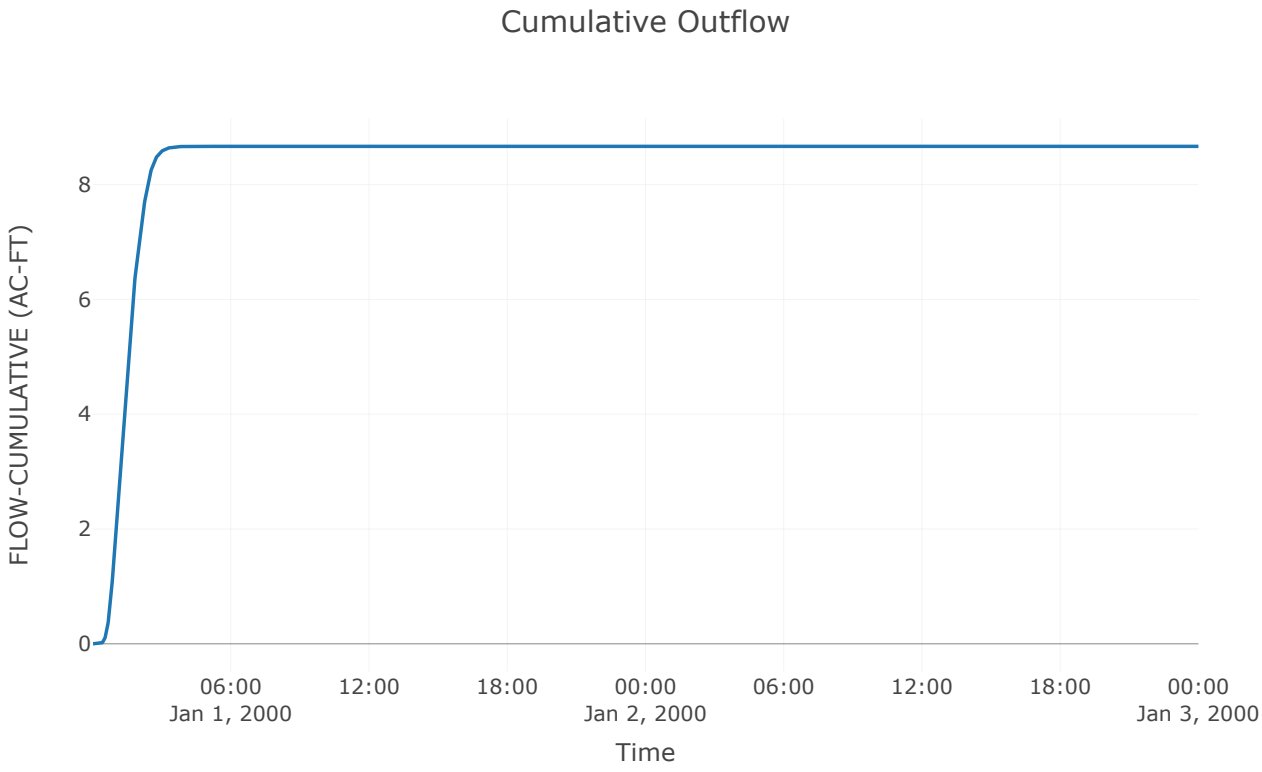
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

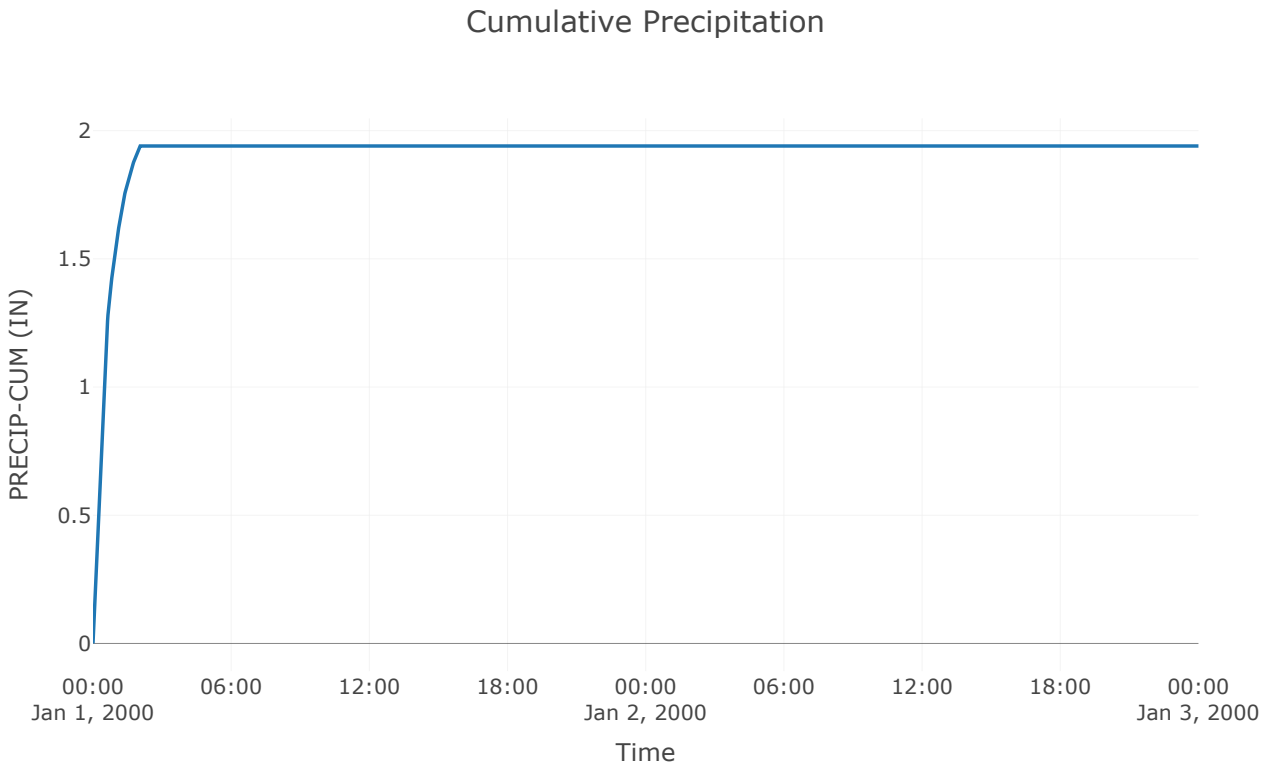
Precipitation and Outflow

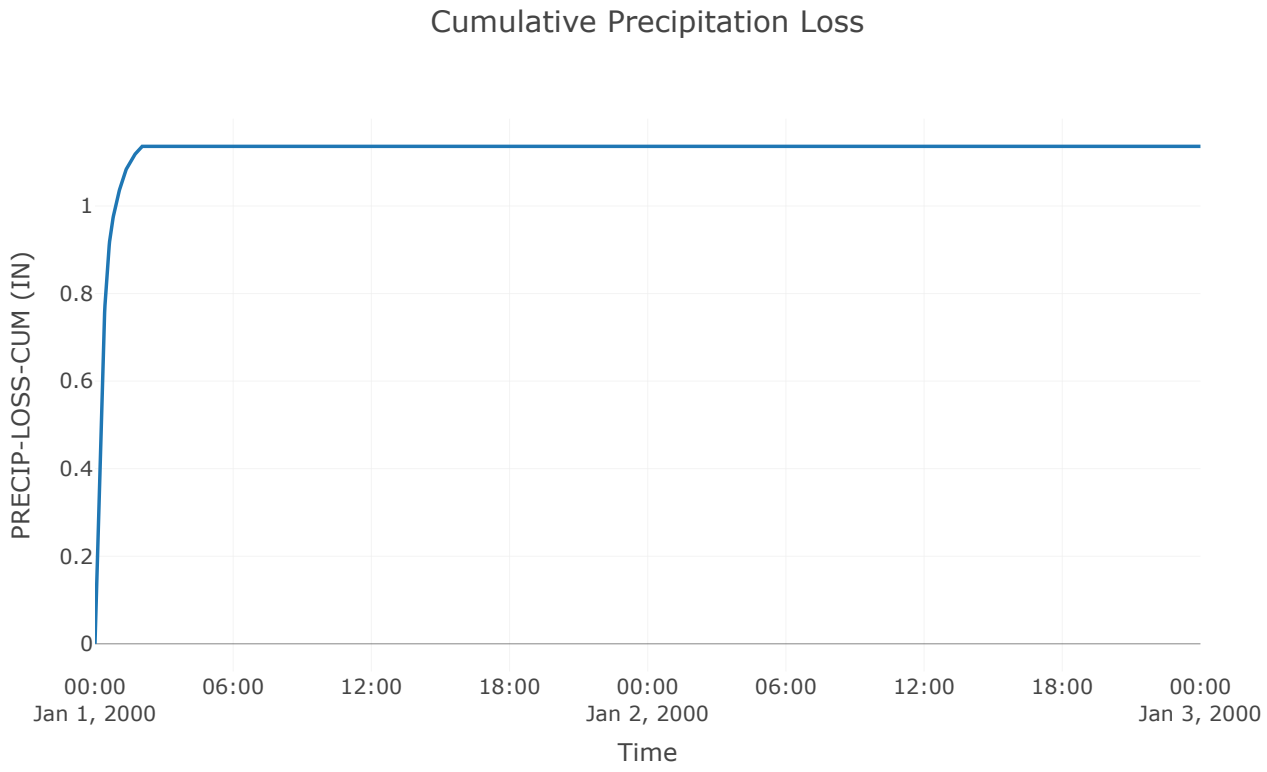


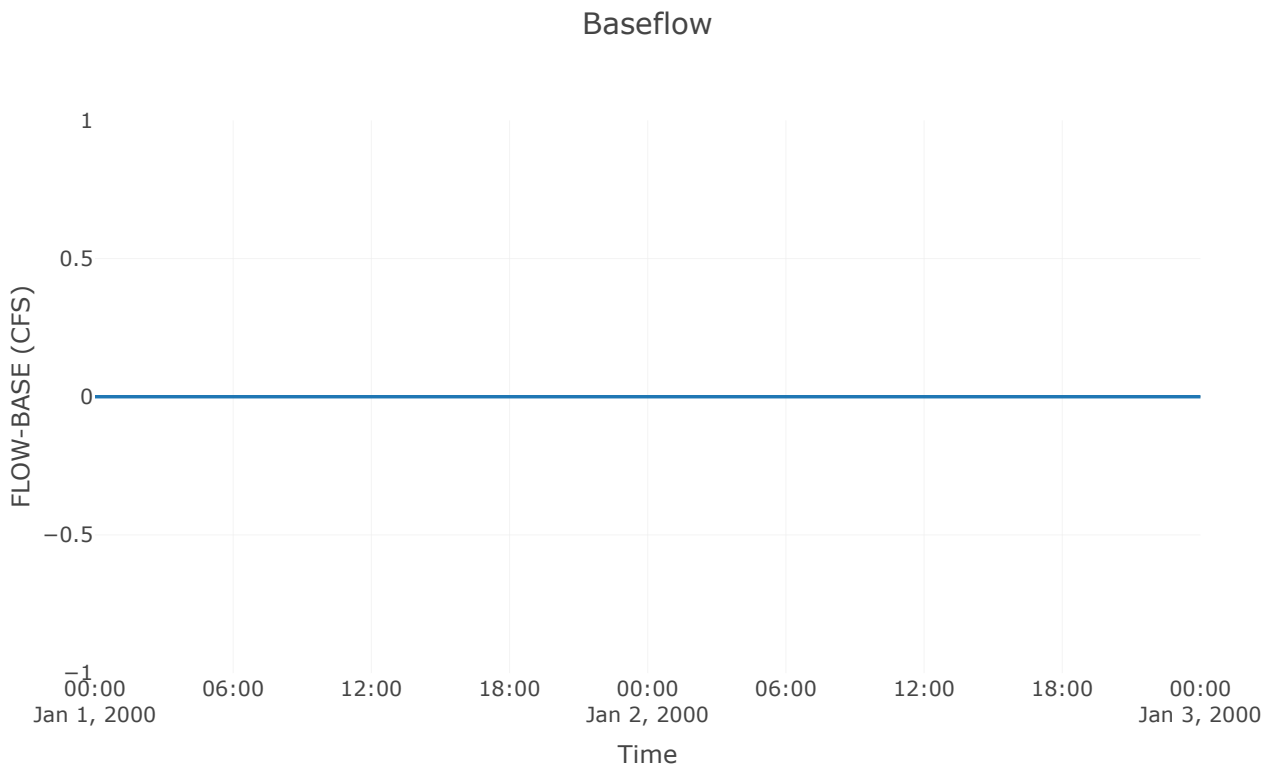
Cumulative Excess Precipitation

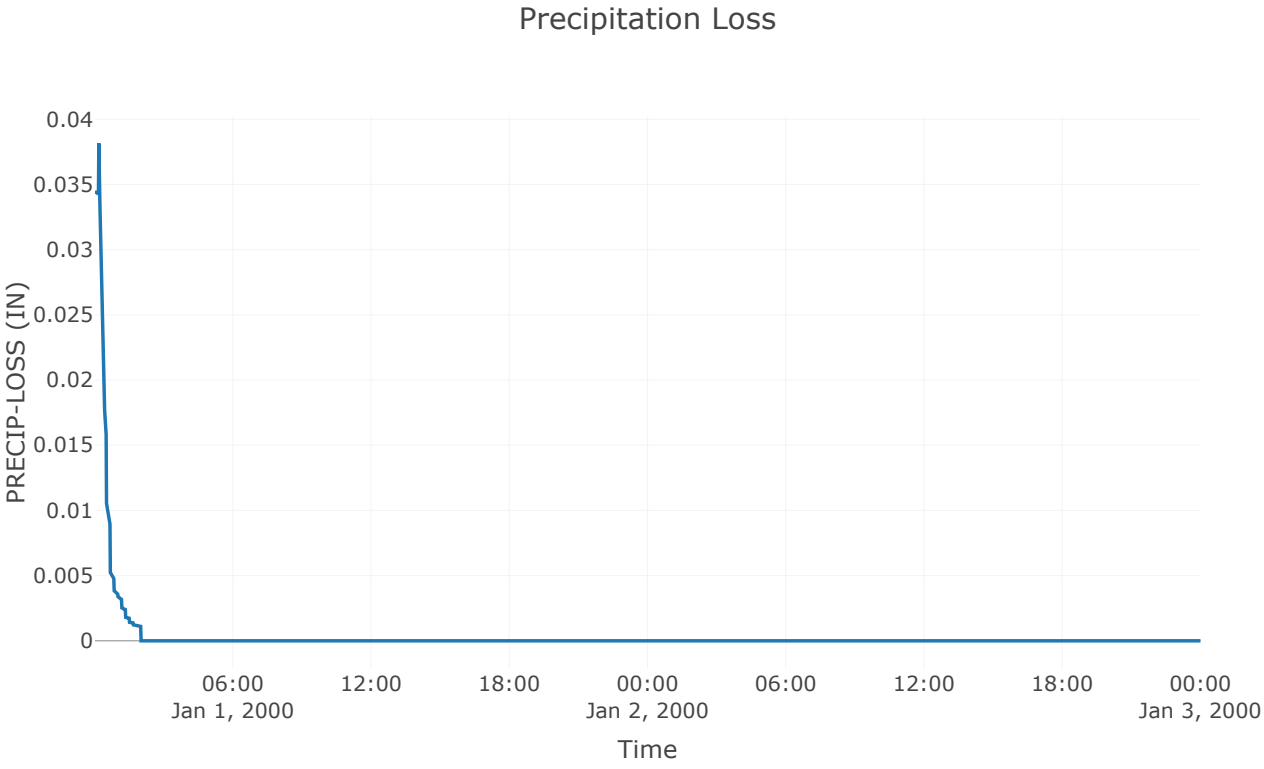


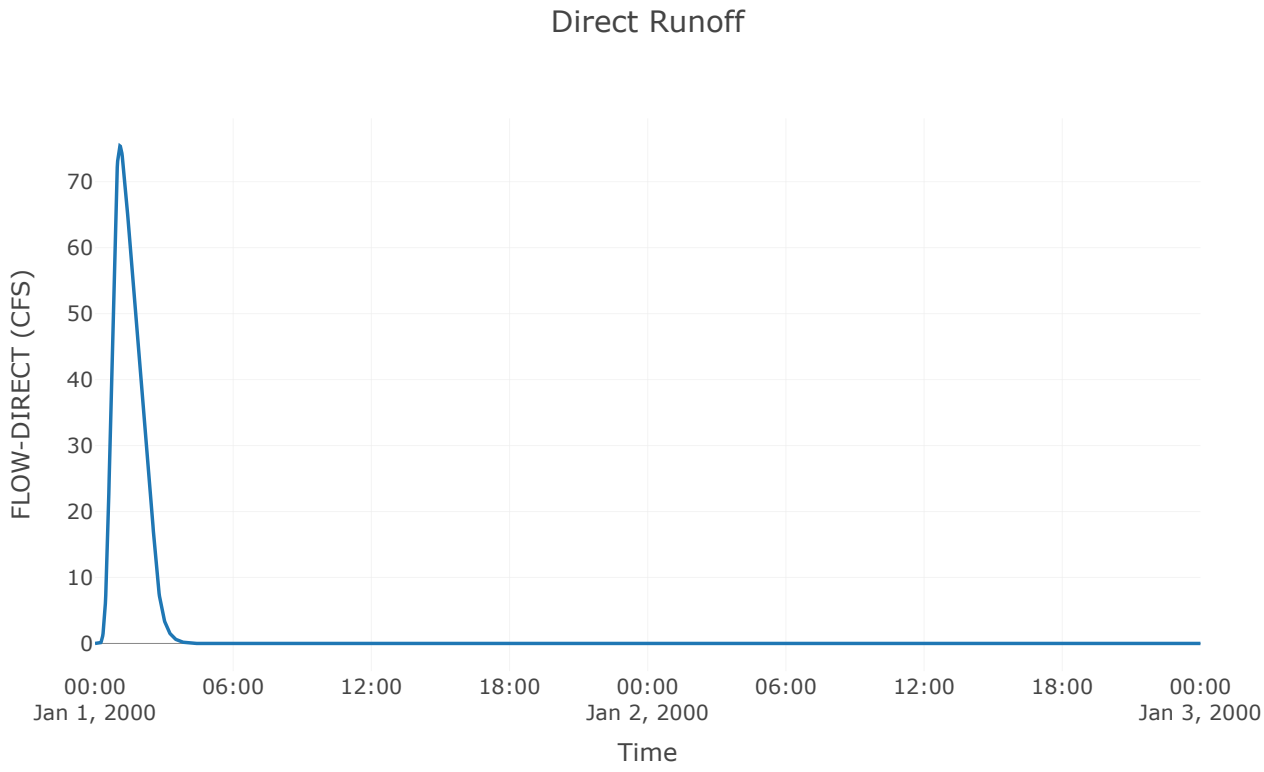

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

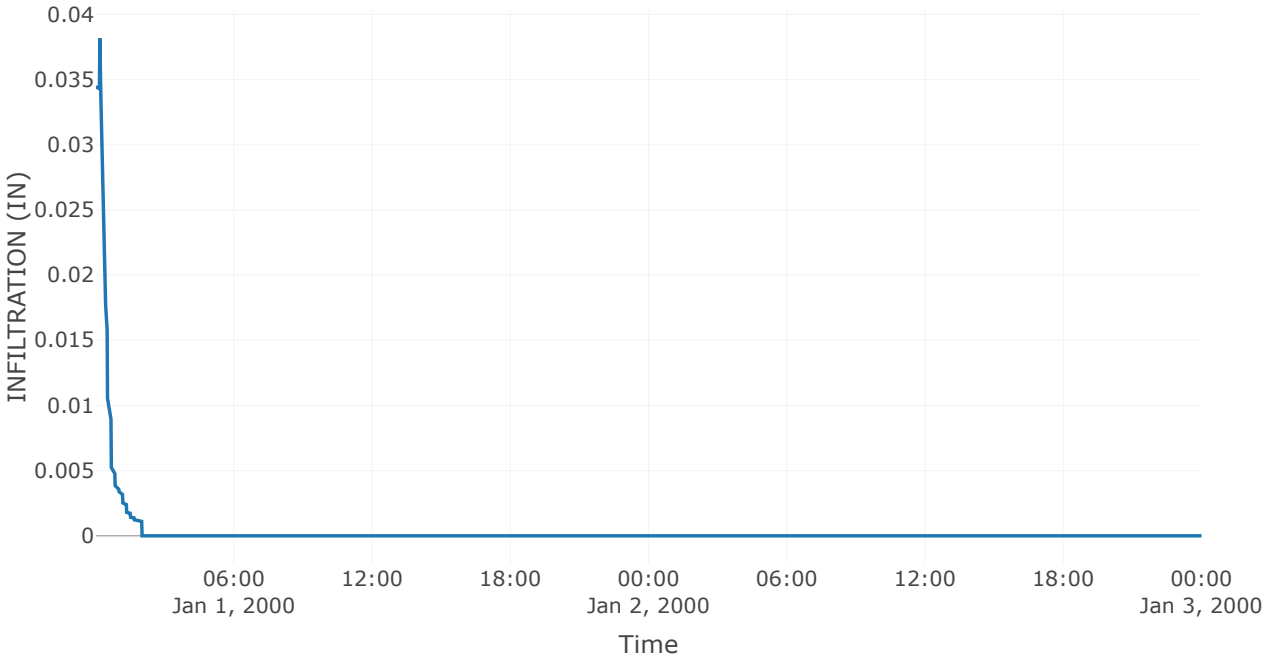

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

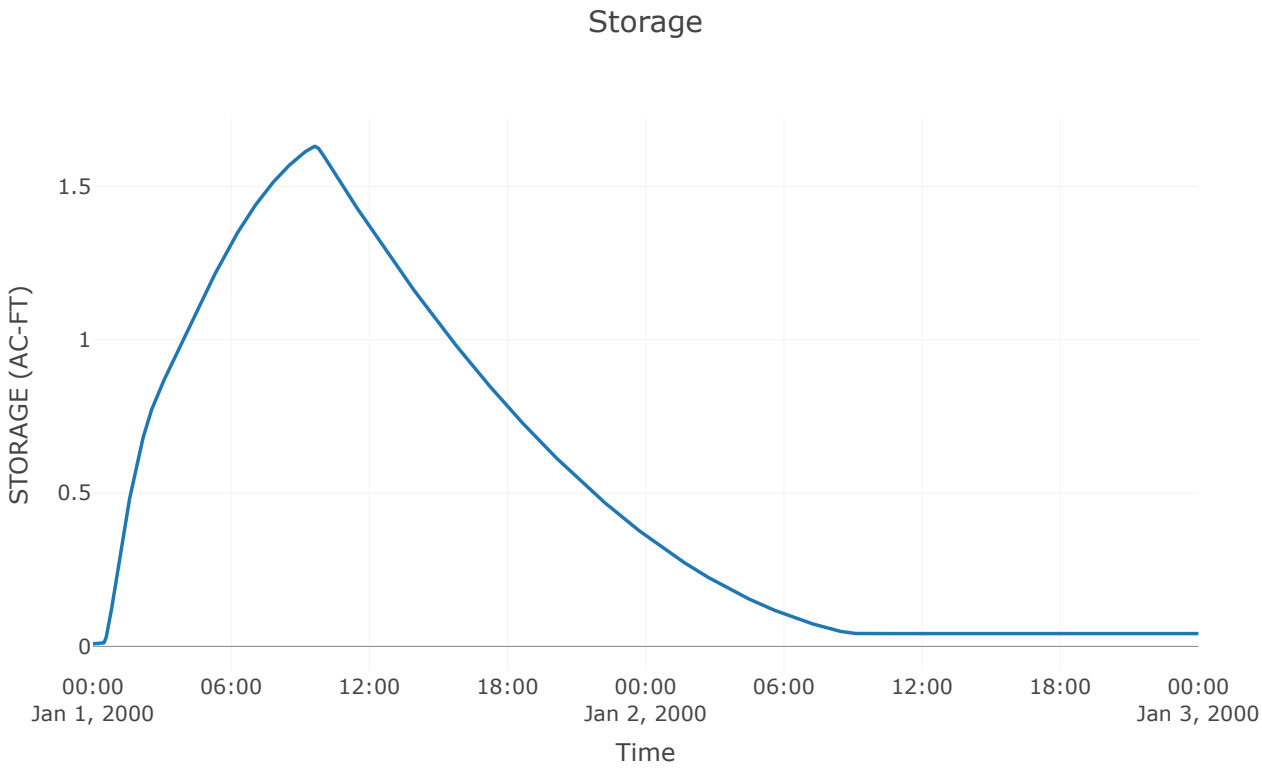

Direct Runoff
FLOW-DIRECT (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

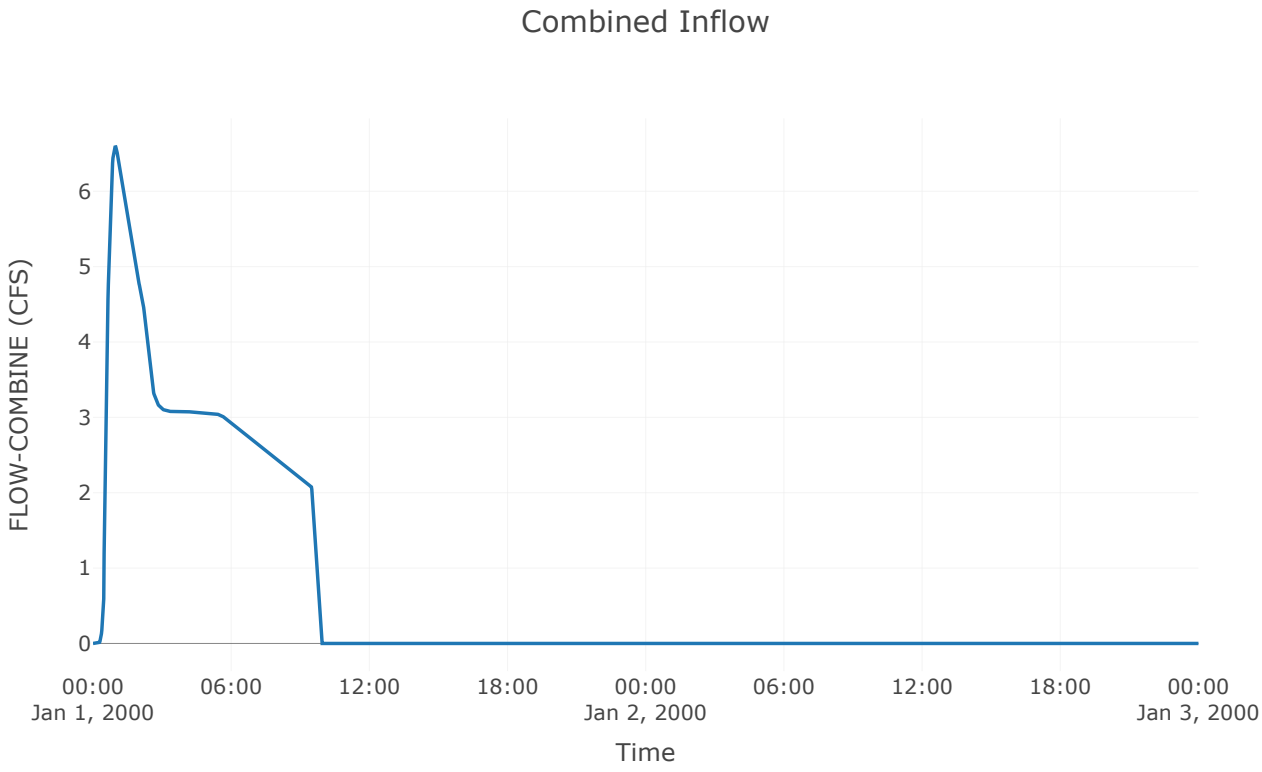

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

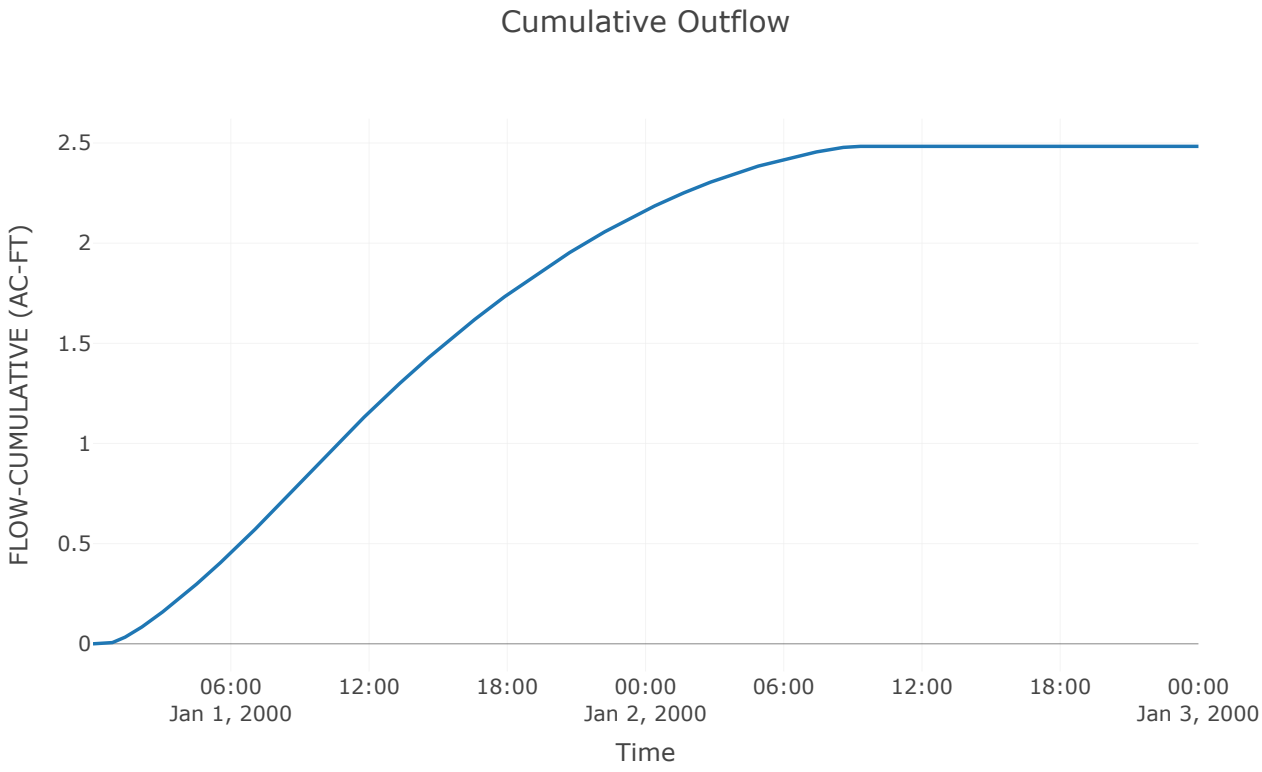
Reservoir: Basin 3

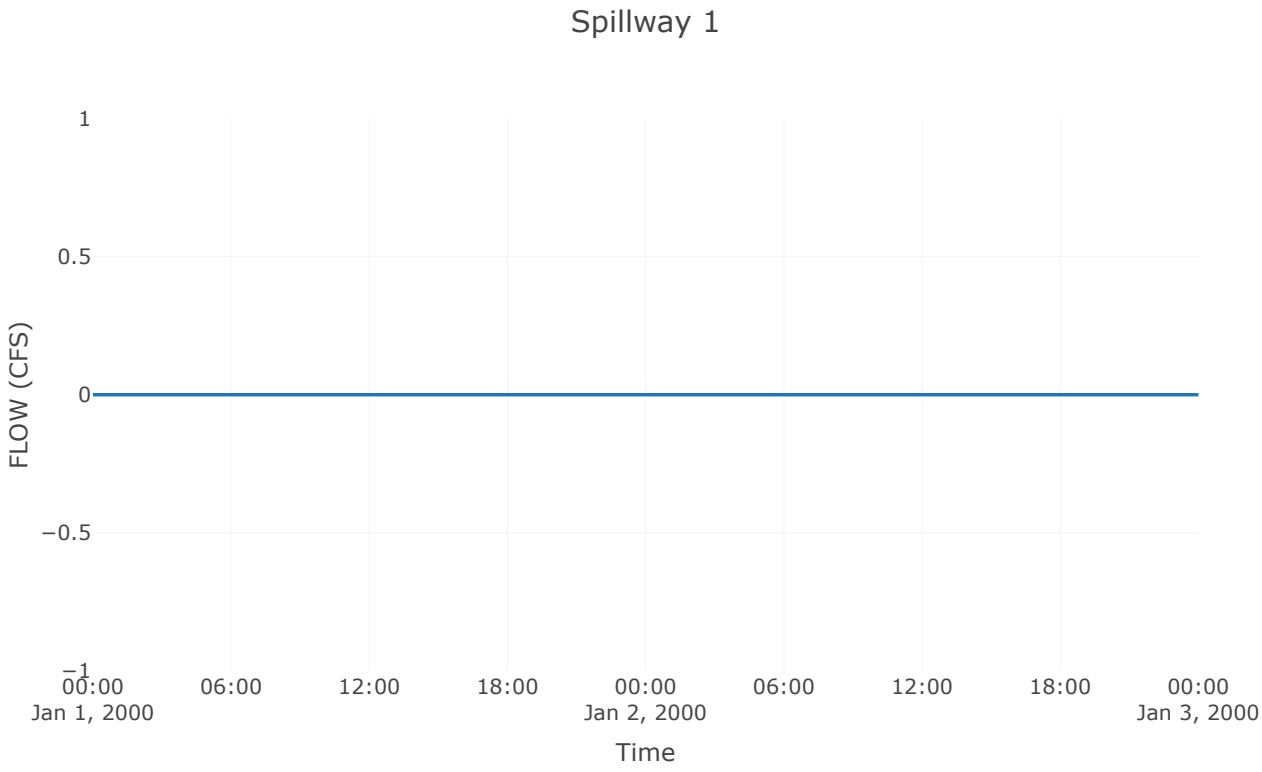
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

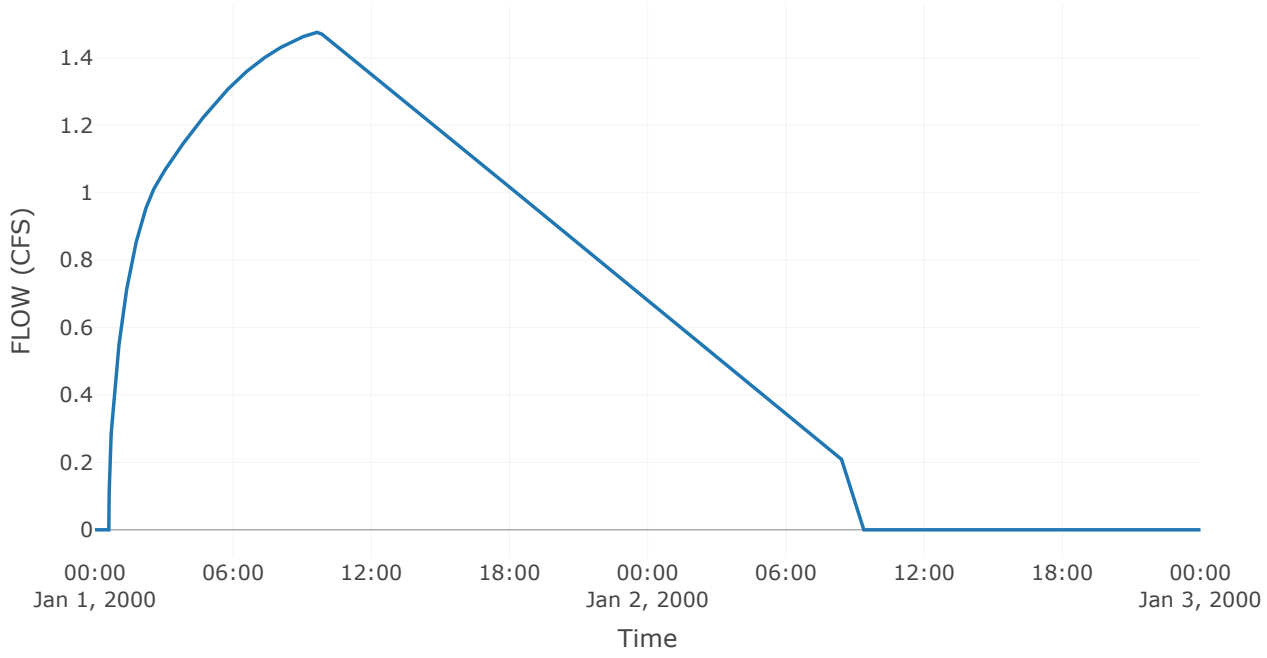

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

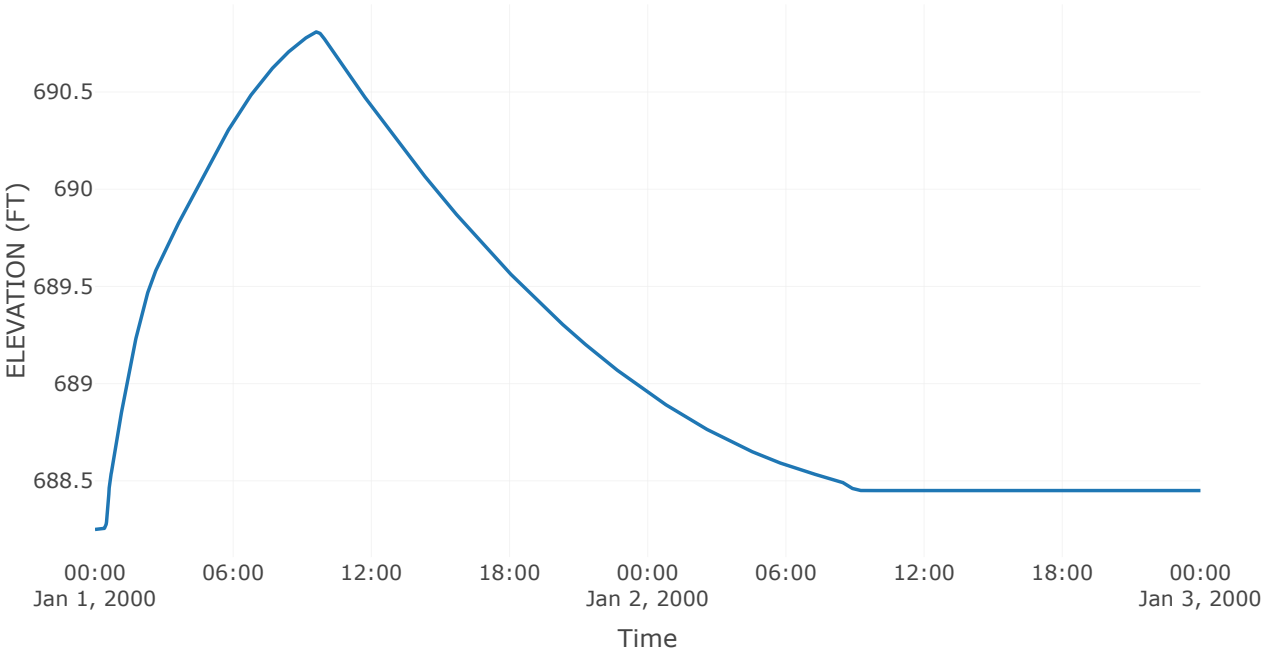

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

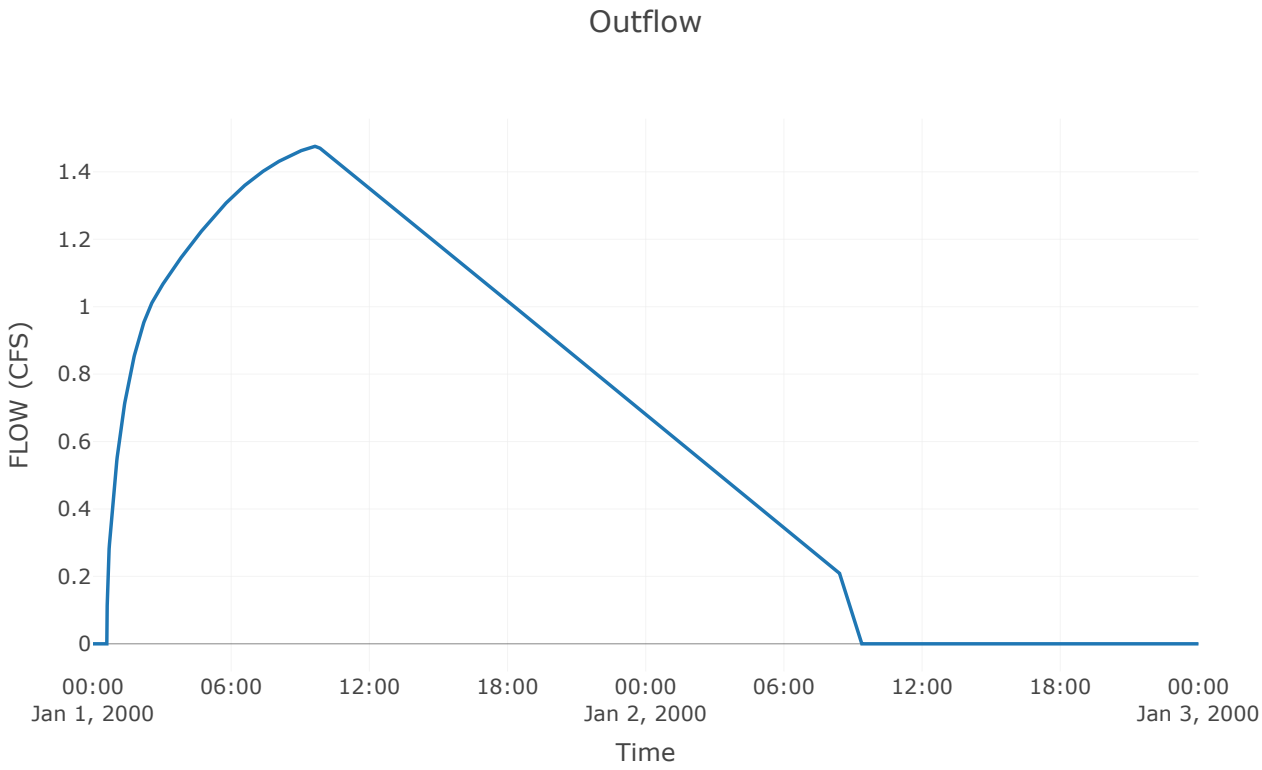

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

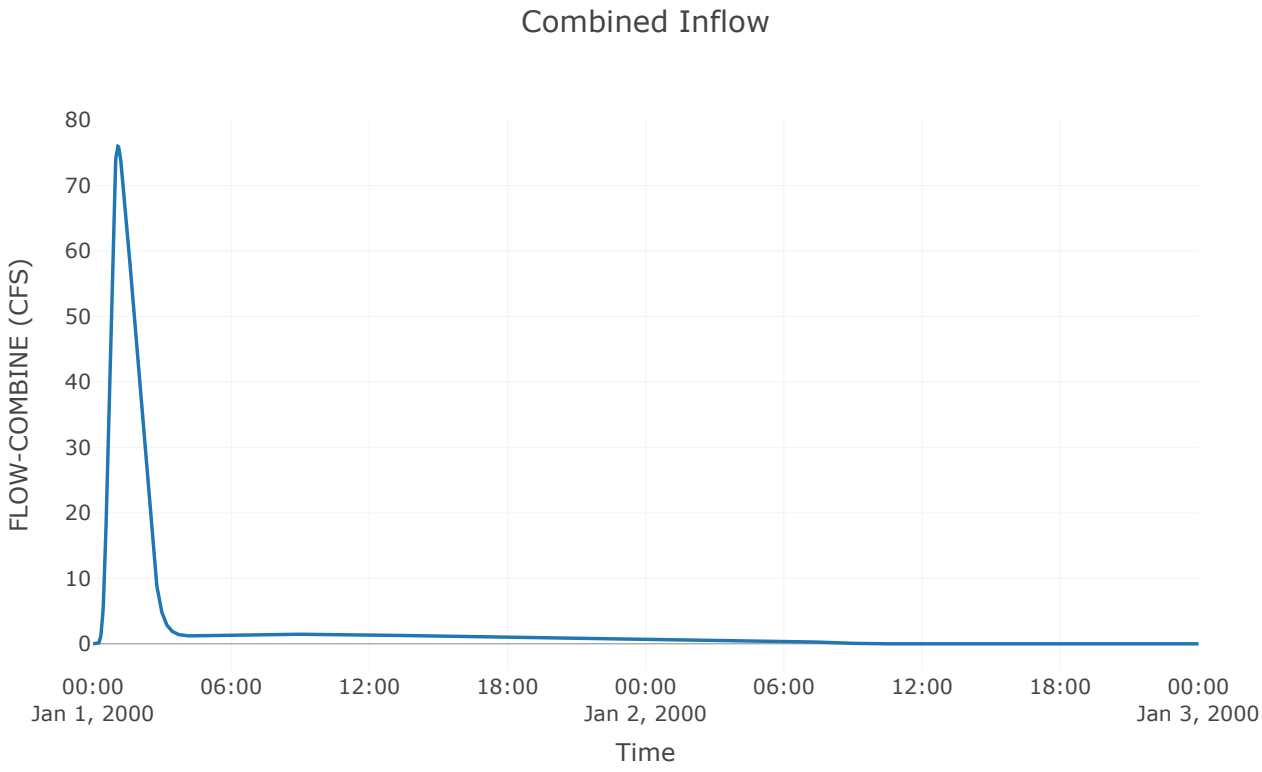


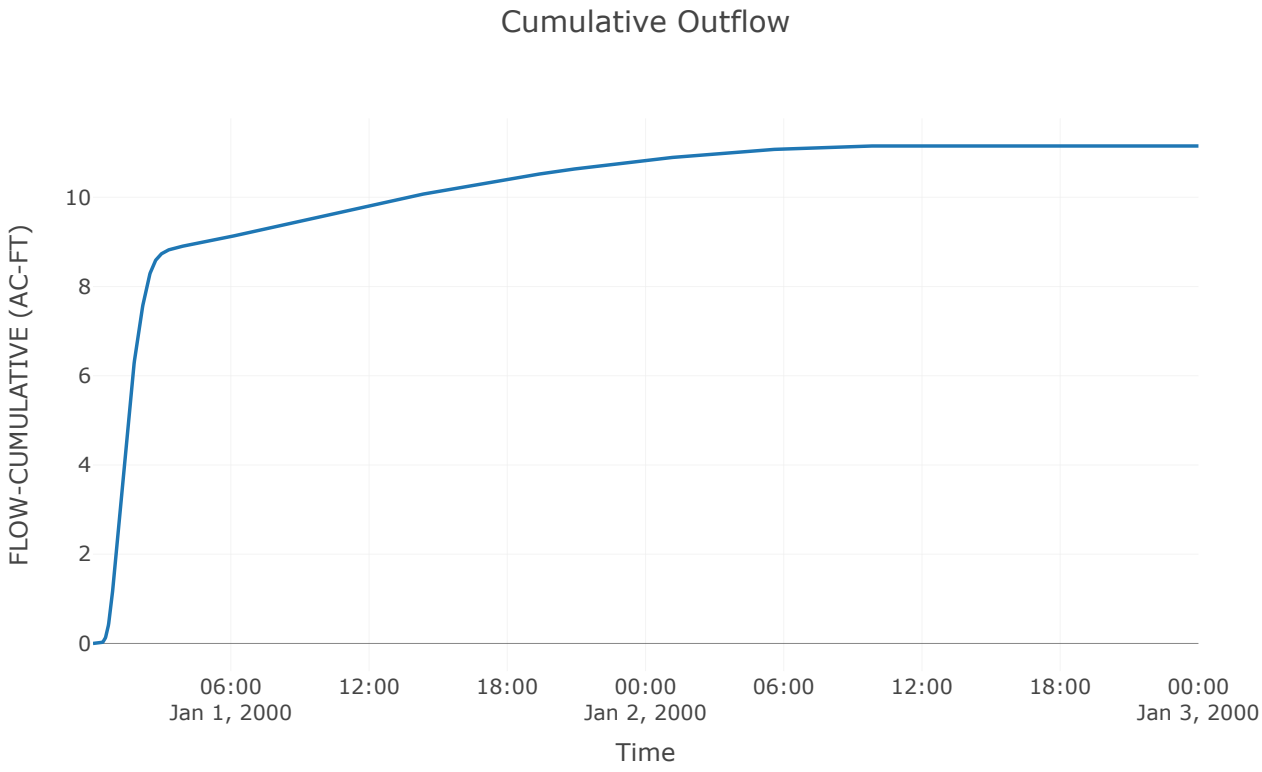

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

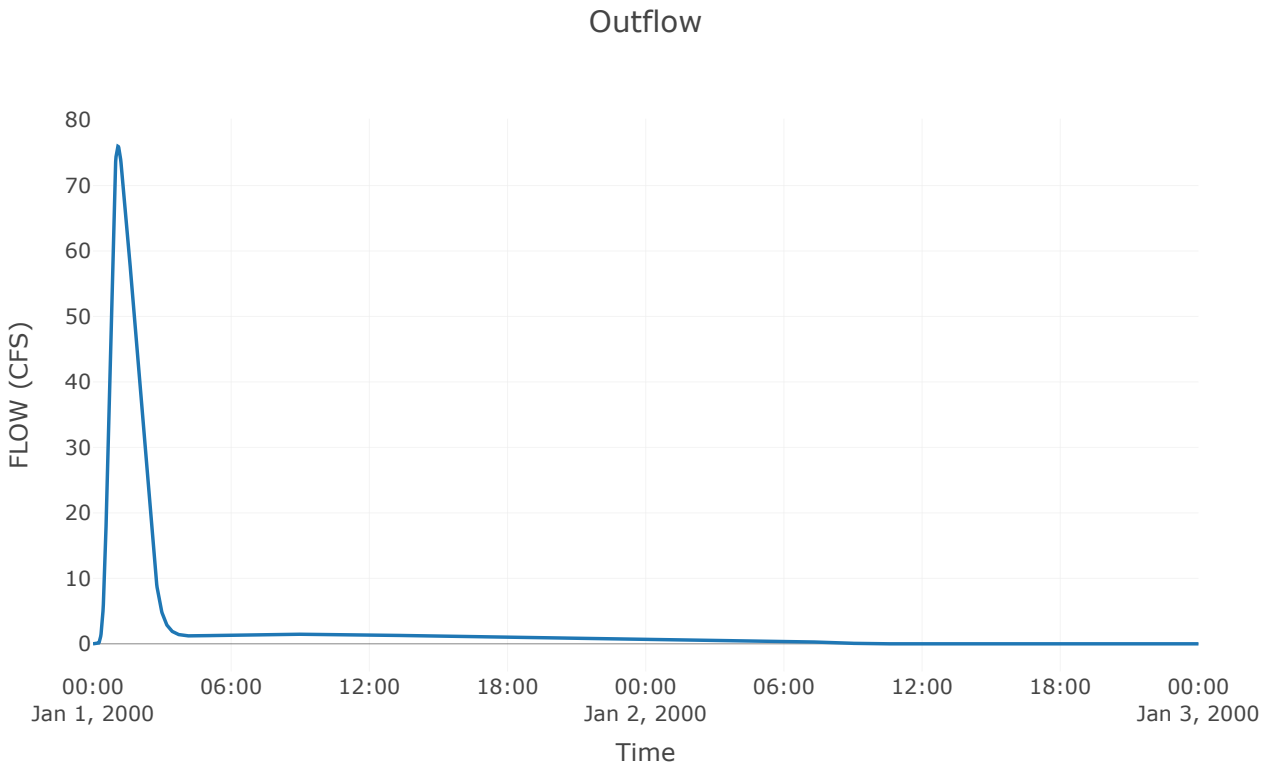
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

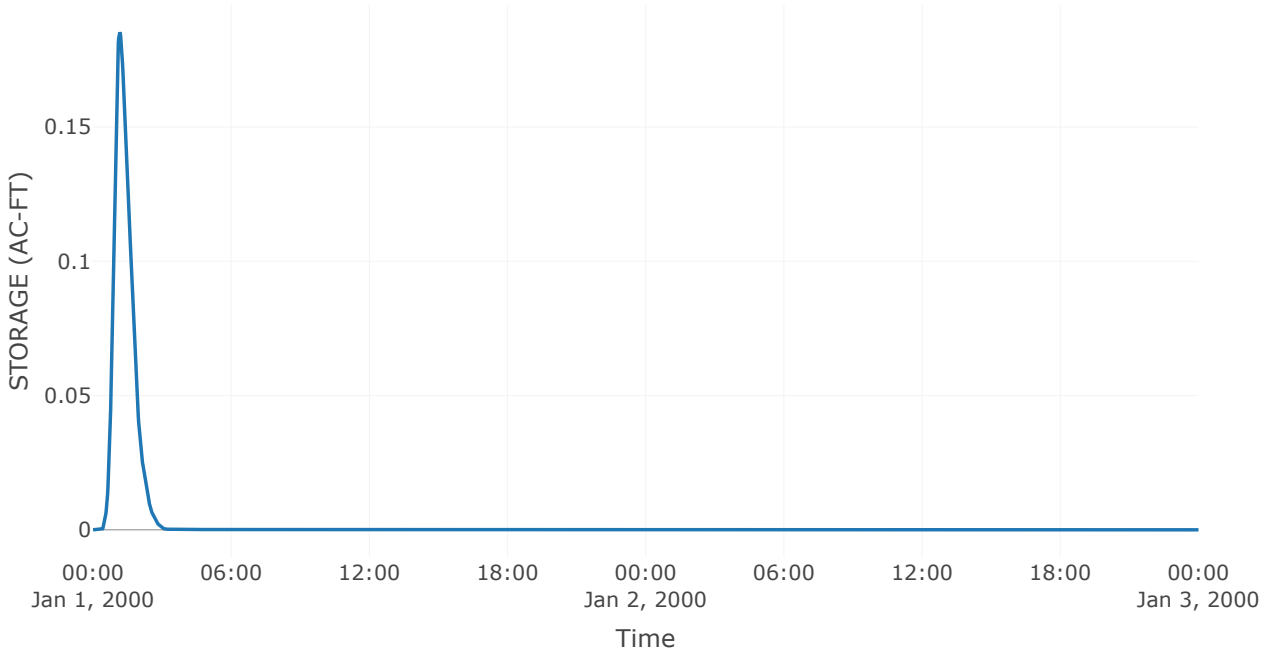

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

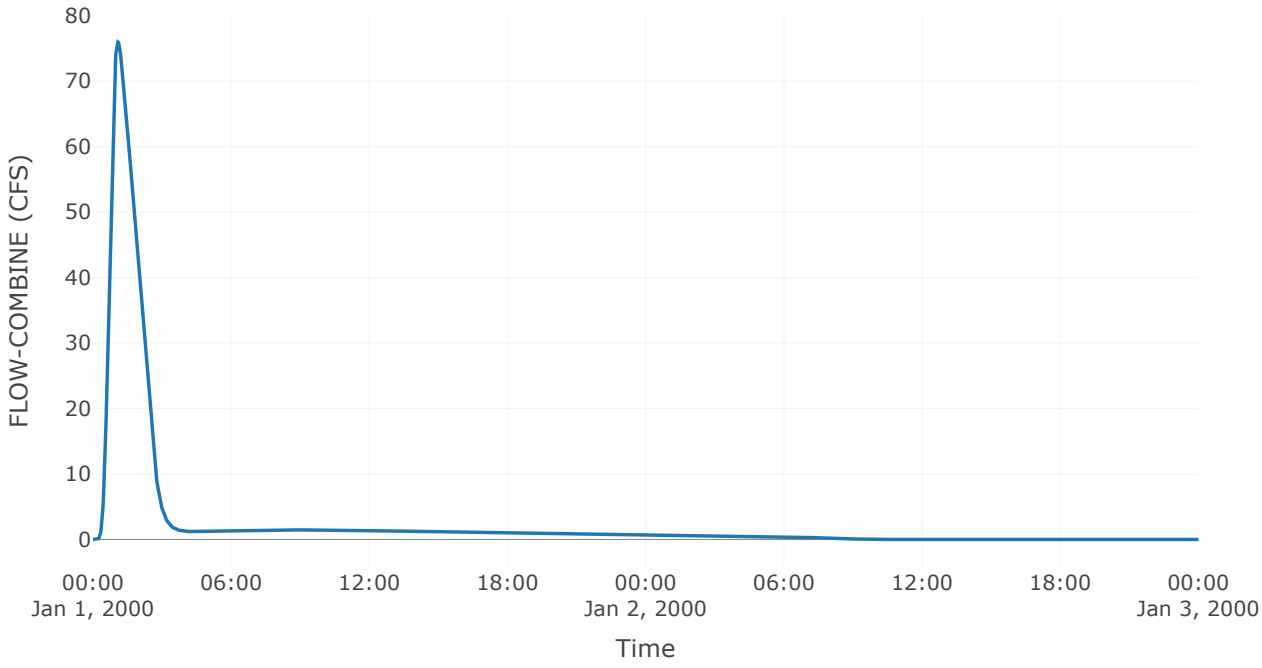
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

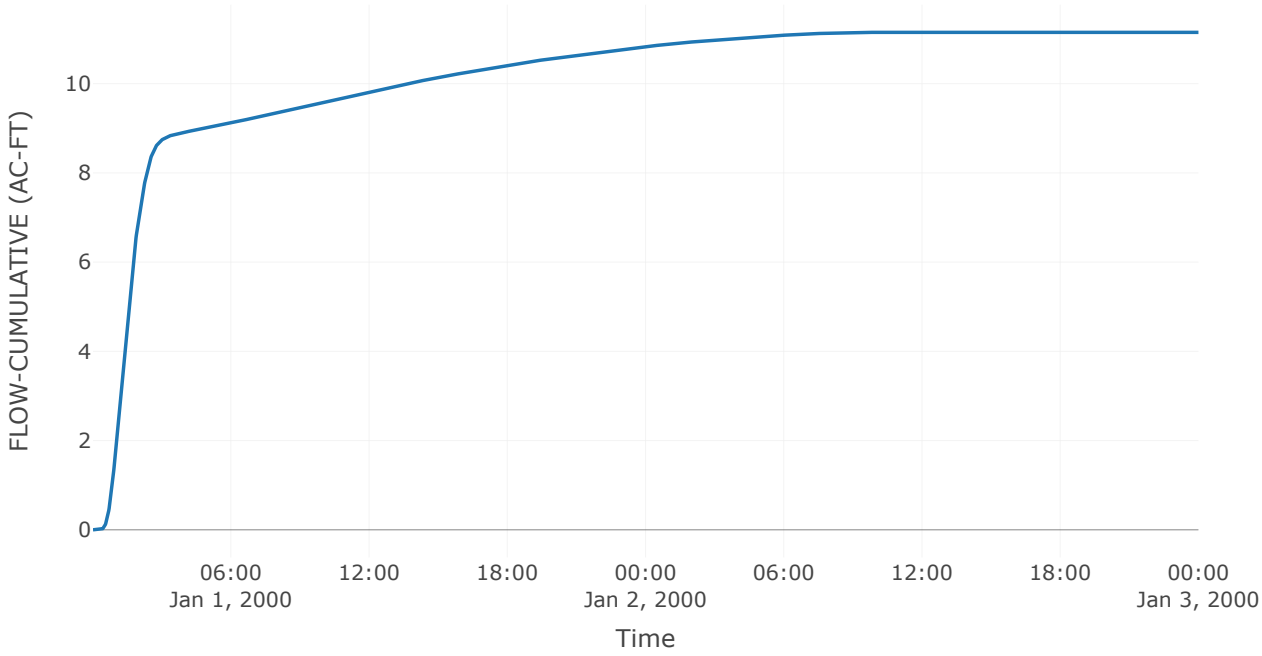
Storage



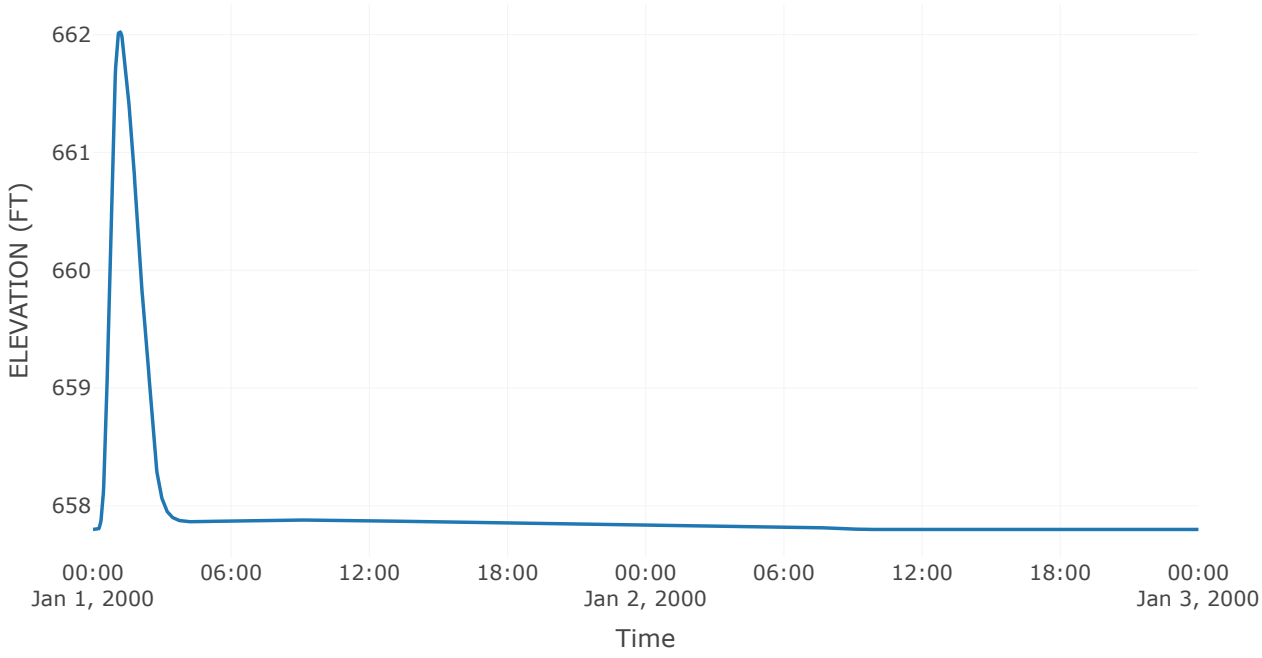
Combined Inflow

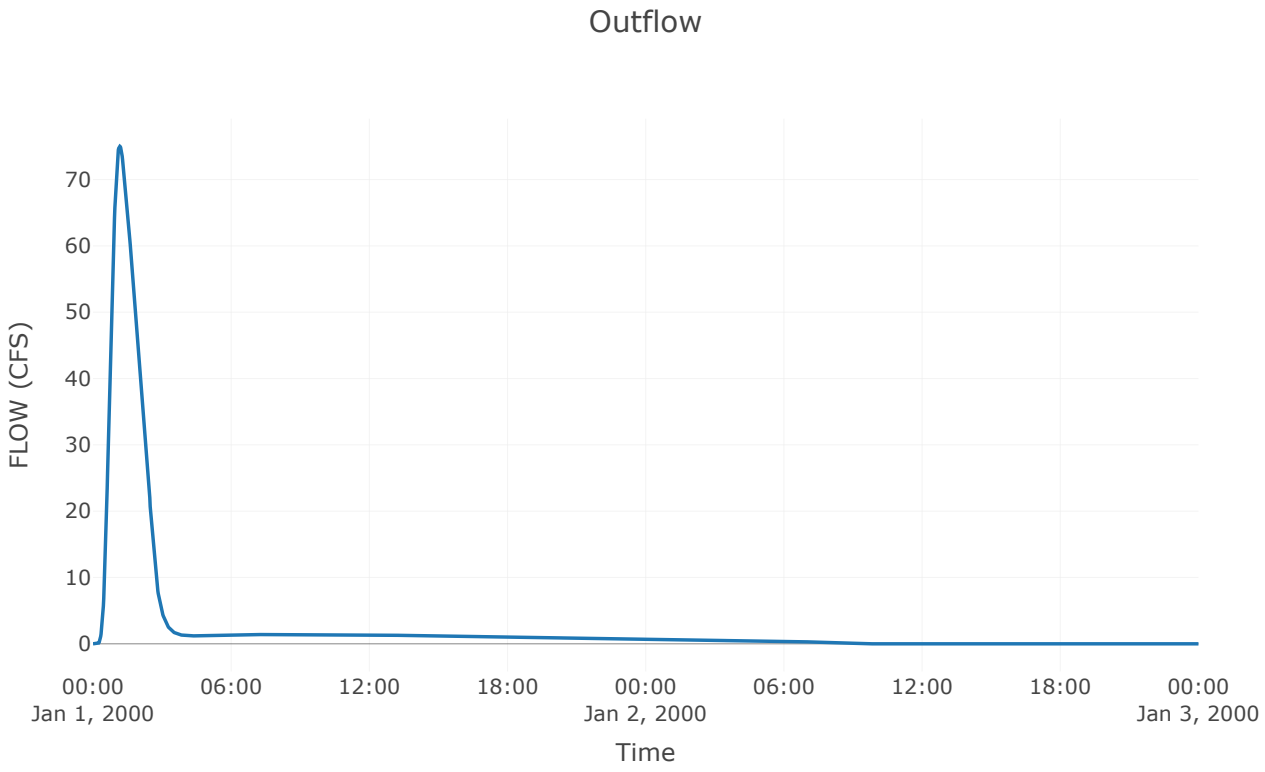


Cumulative Outflow



Pool Elevation



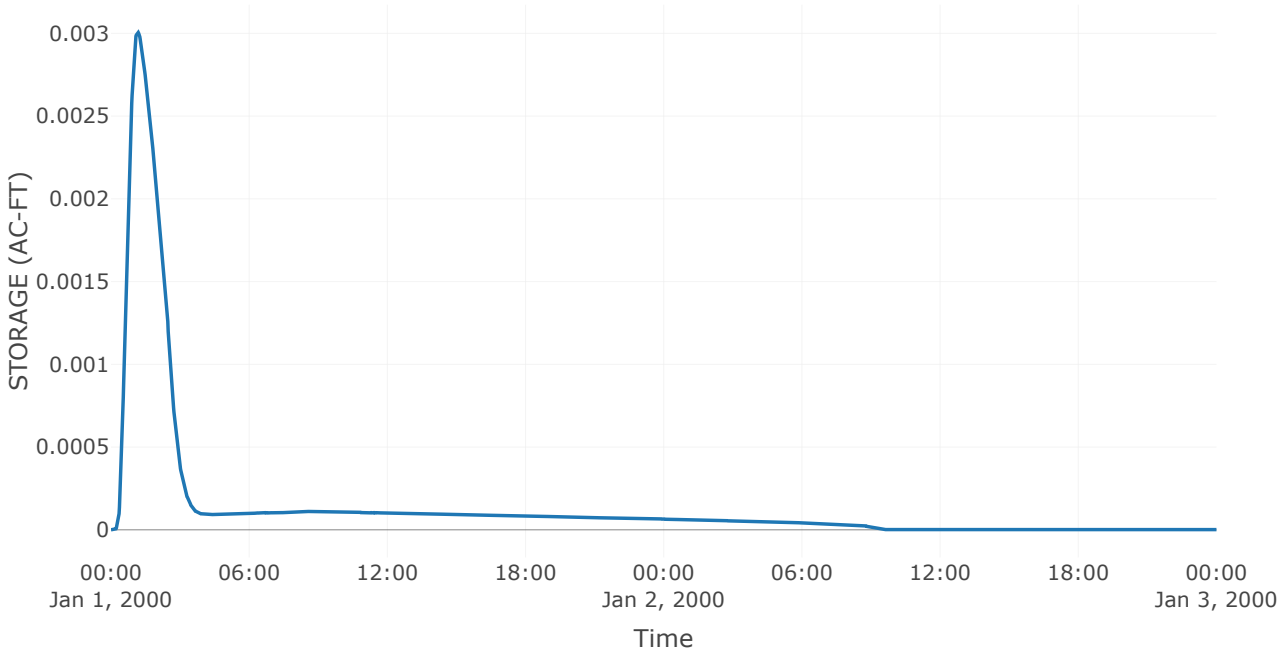

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

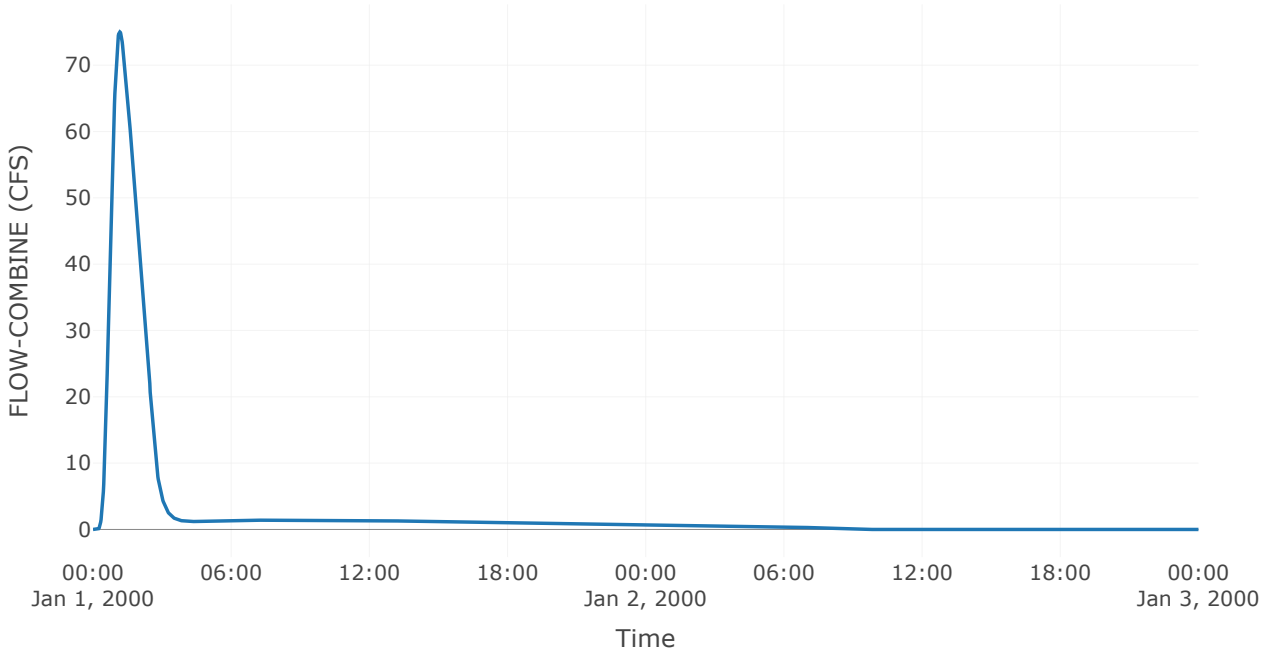
Downstream : Storage West of Wolf Road

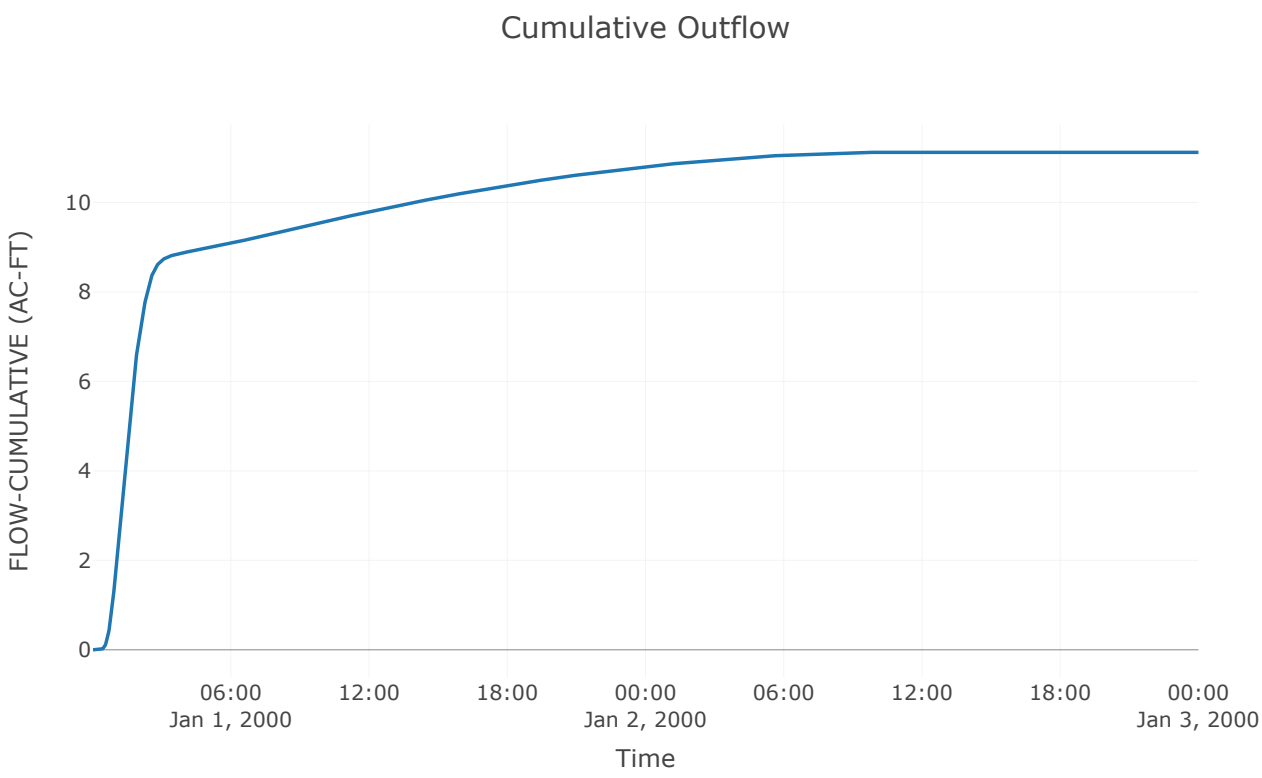
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.55
Discharge Volume (AC - FT)	11.12

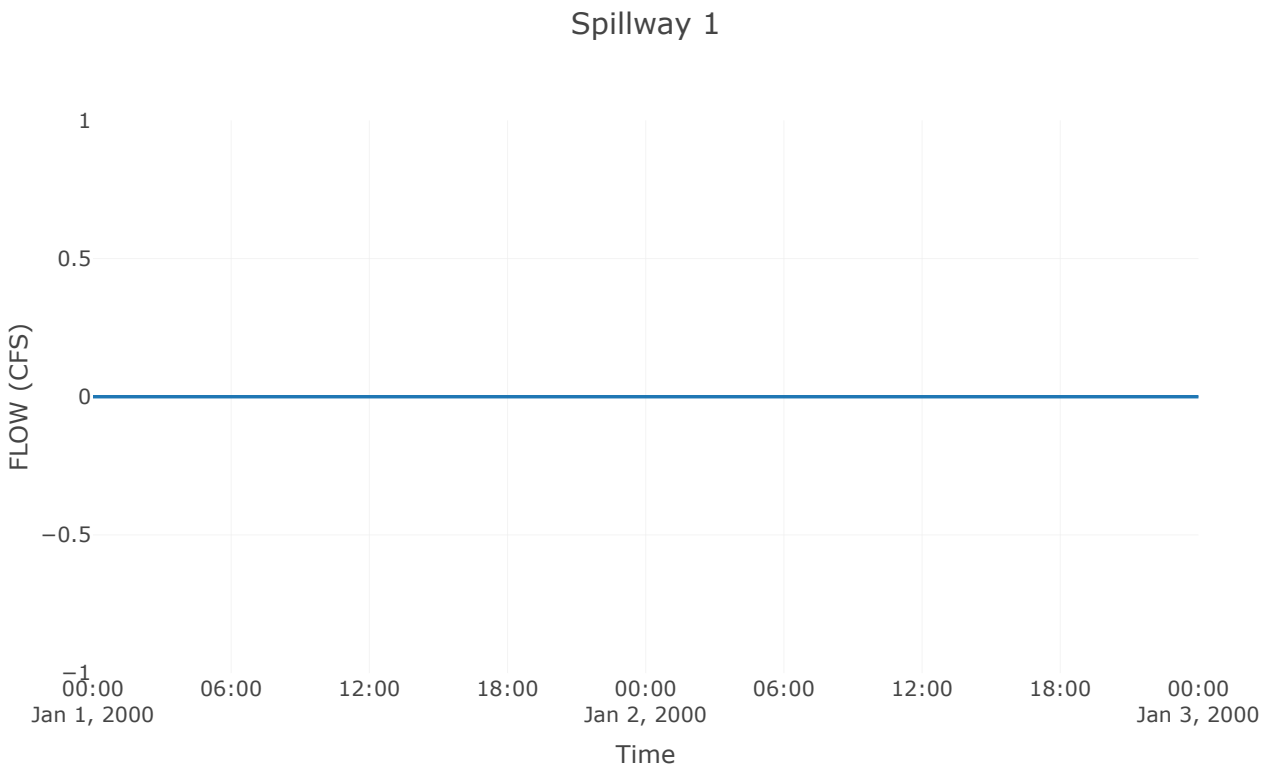
Storage



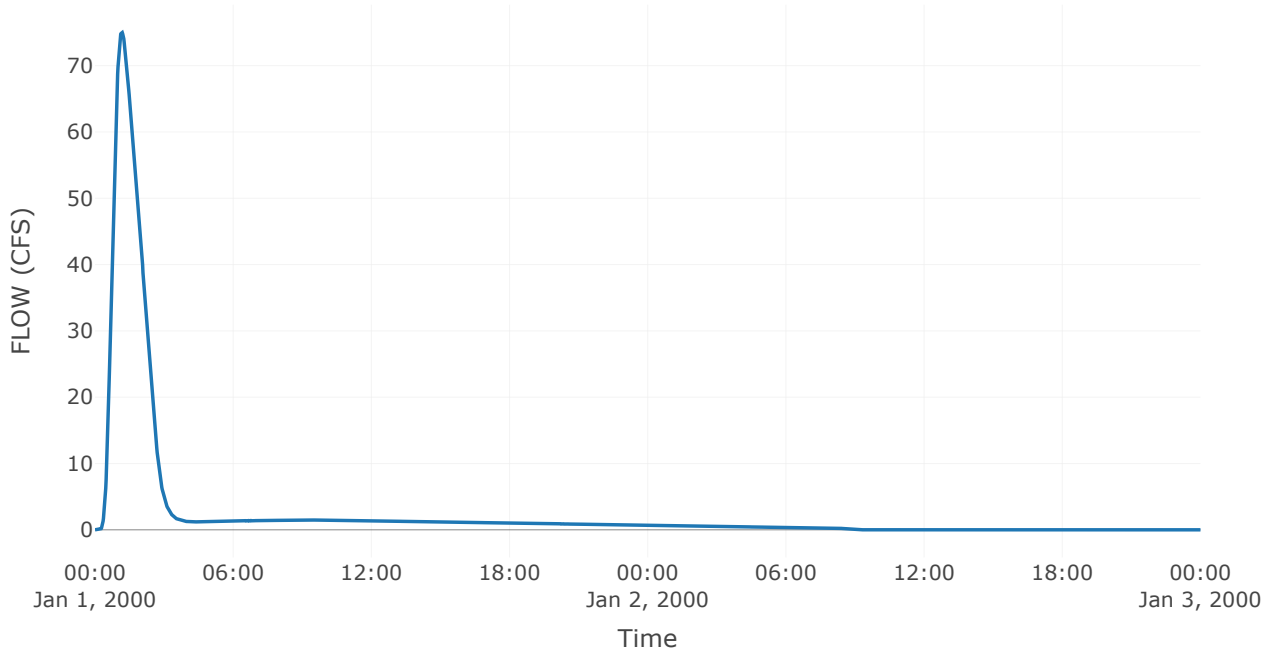
Combined Inflow



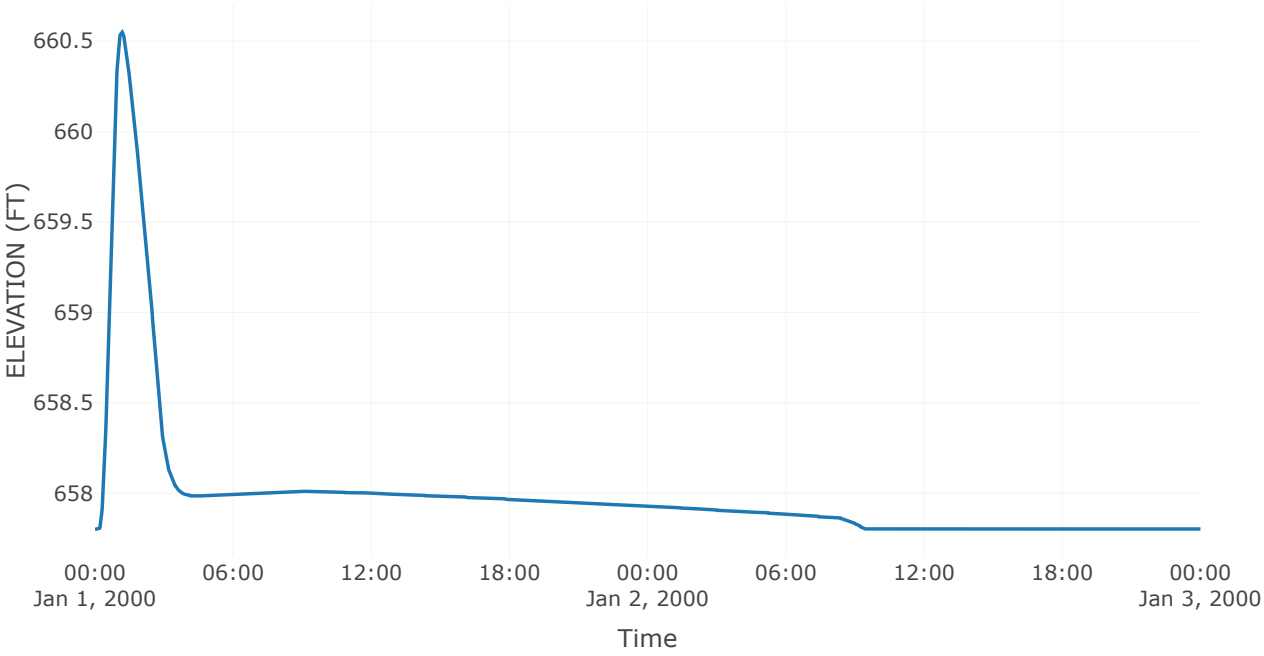

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

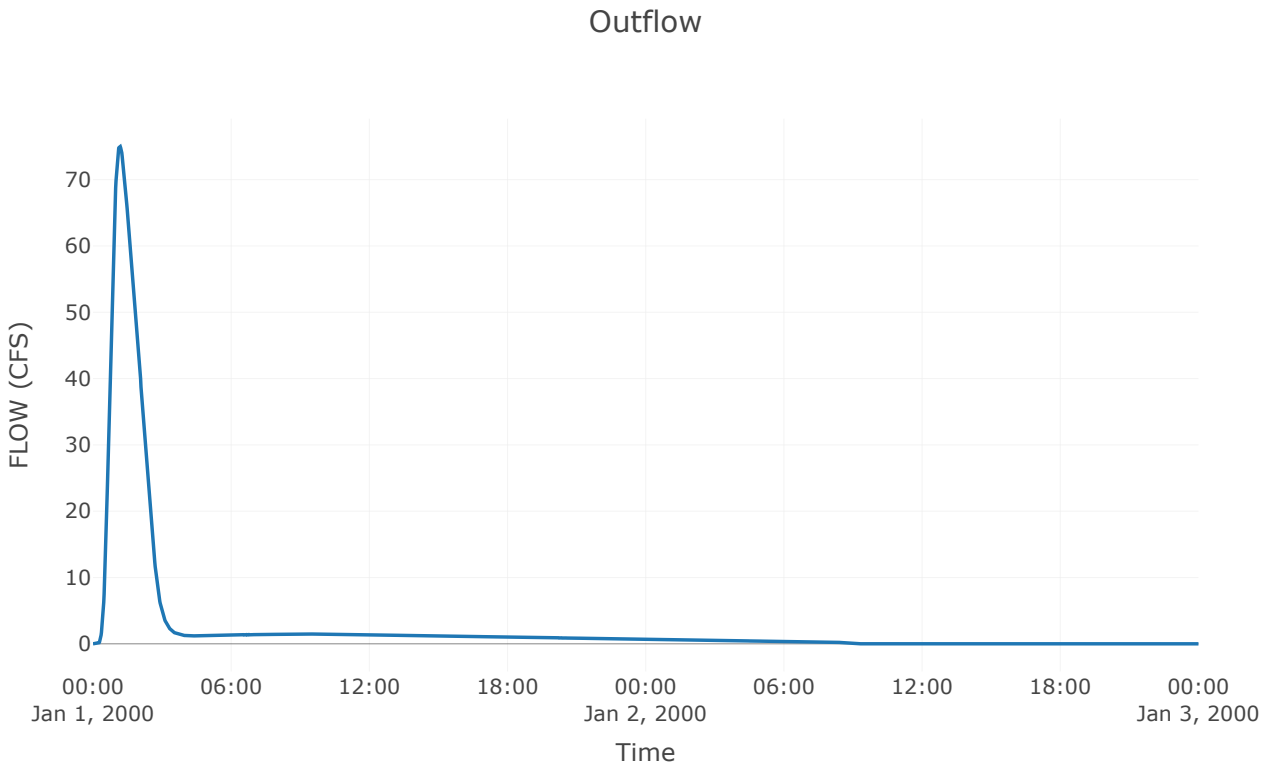

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



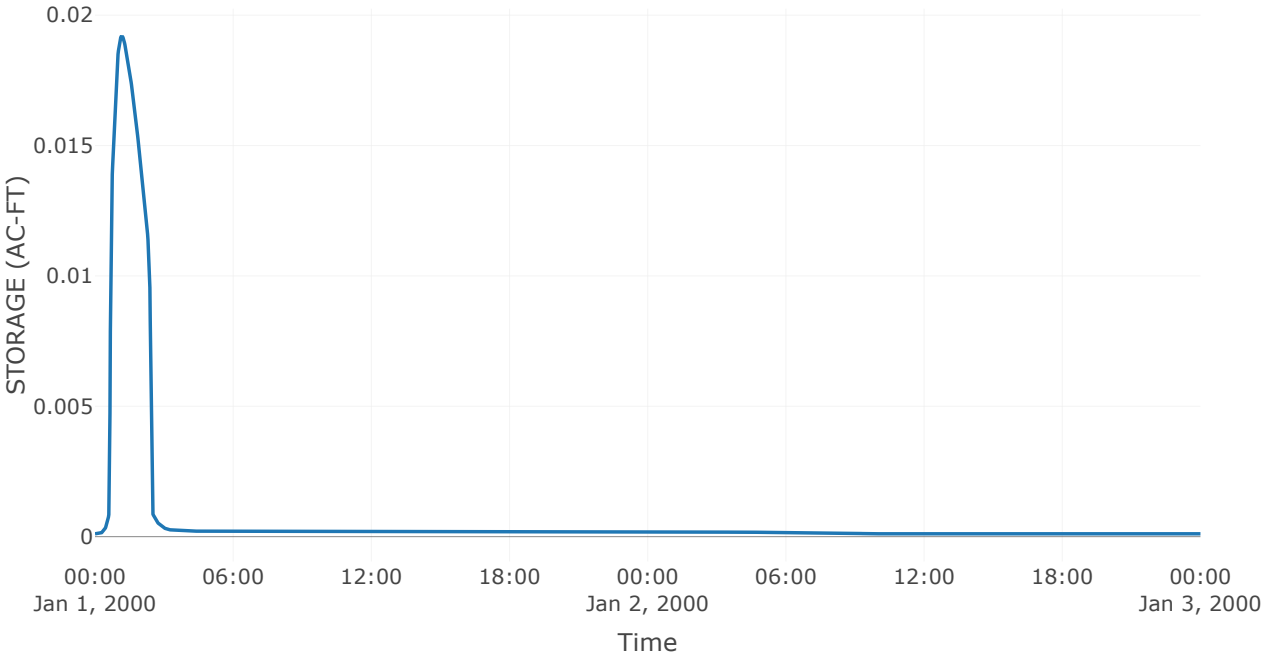

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

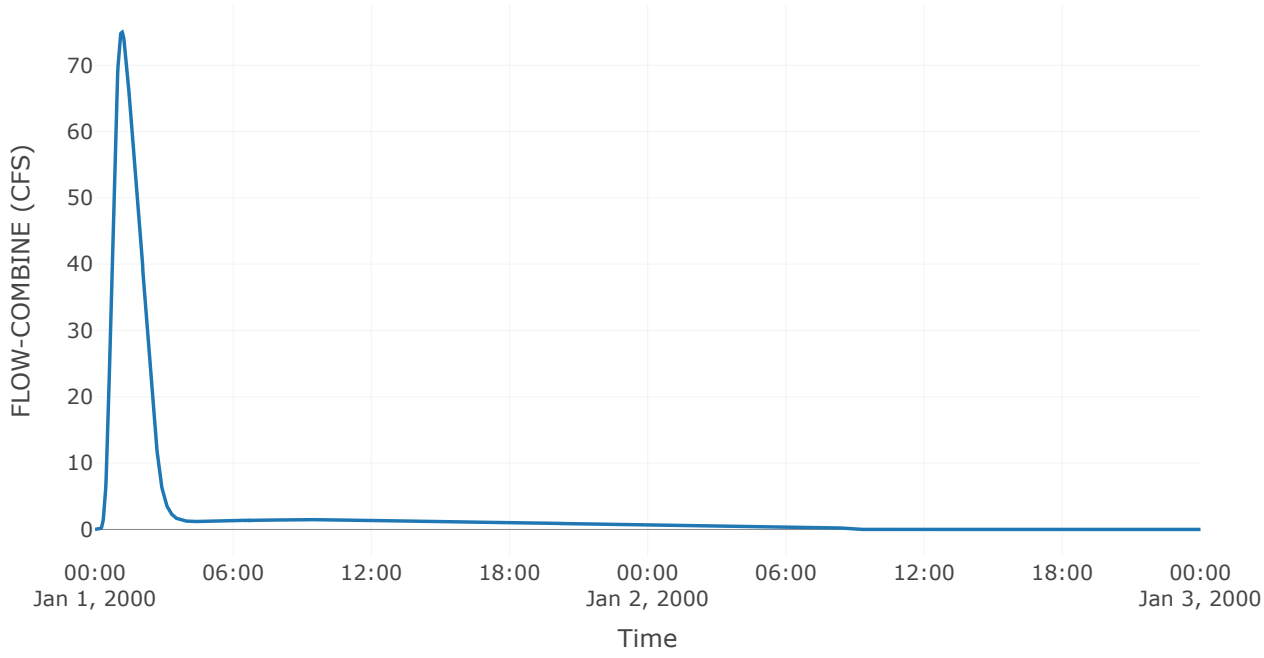
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	658.88
Discharge Volume (AC - FT)	11.1

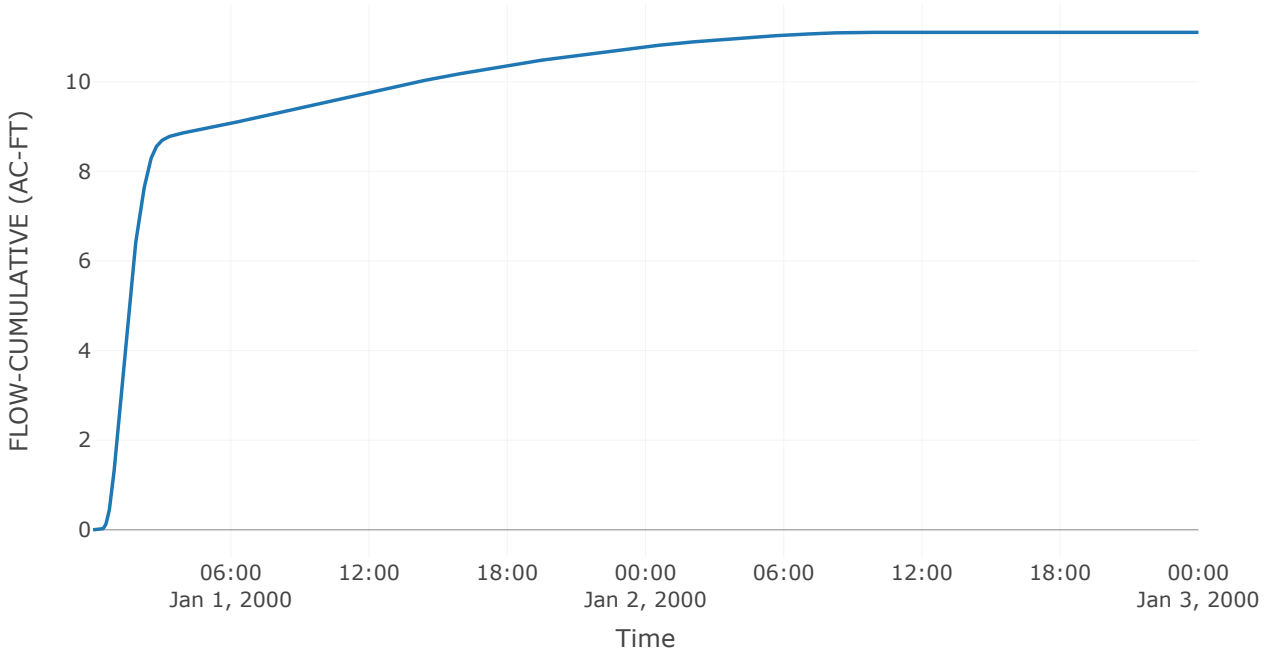
Storage



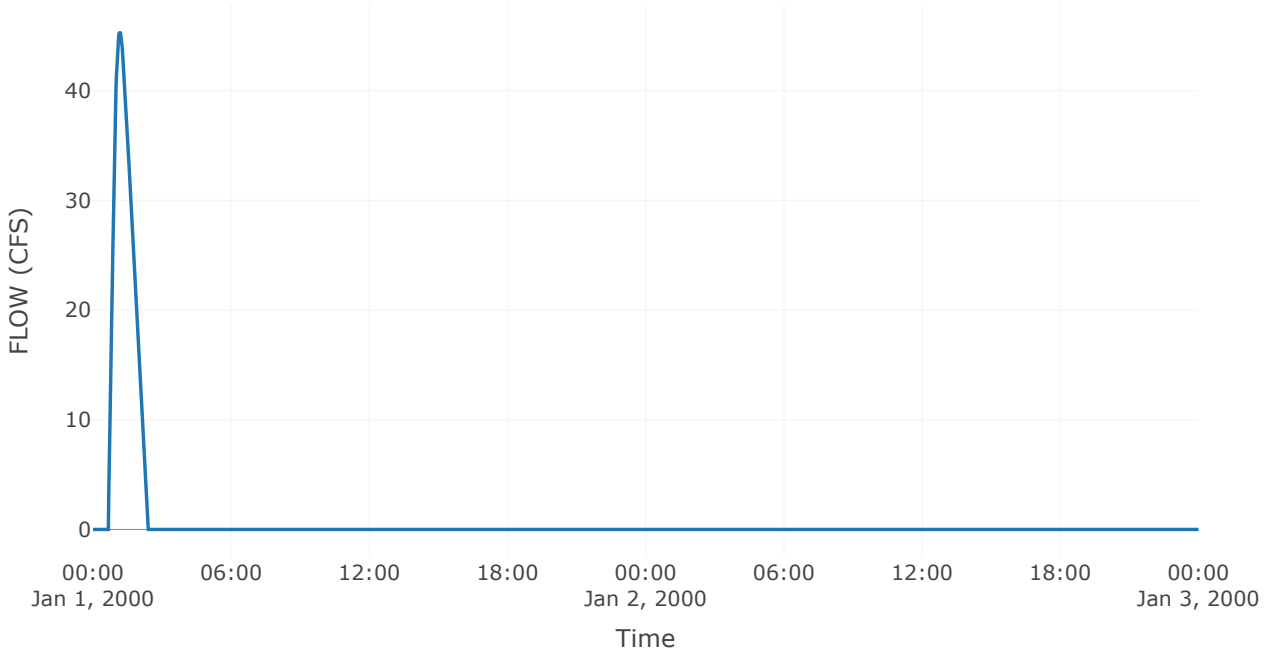
Combined Inflow



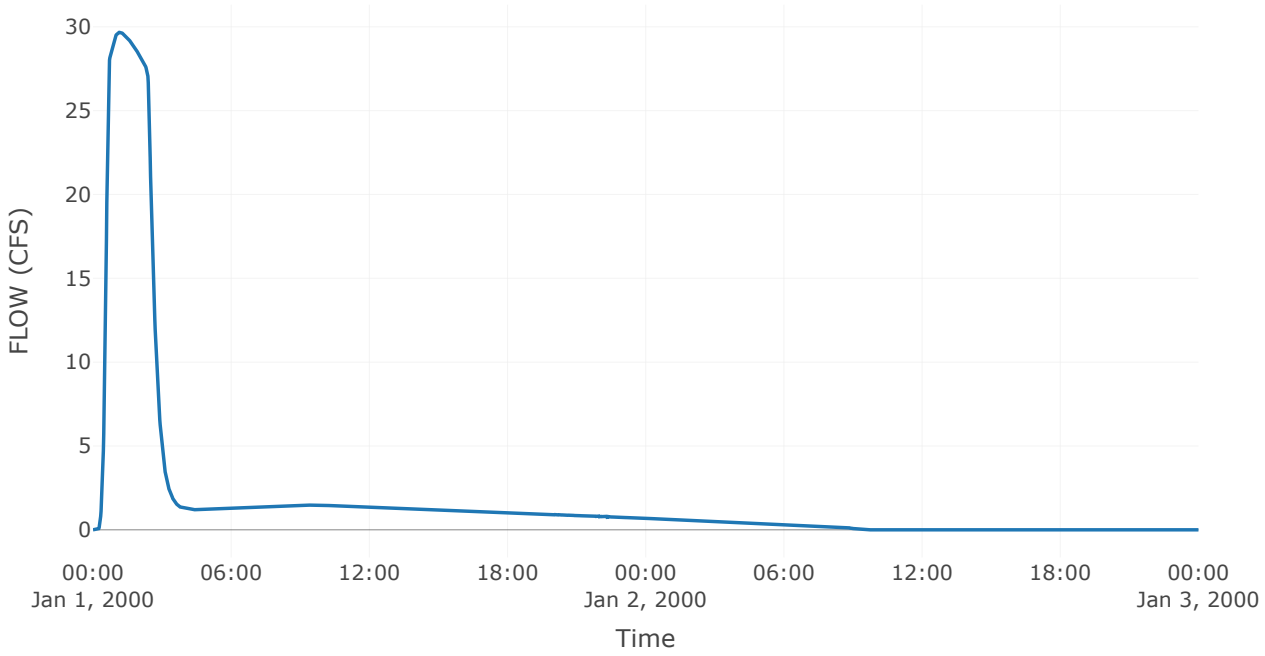
Cumulative Outflow



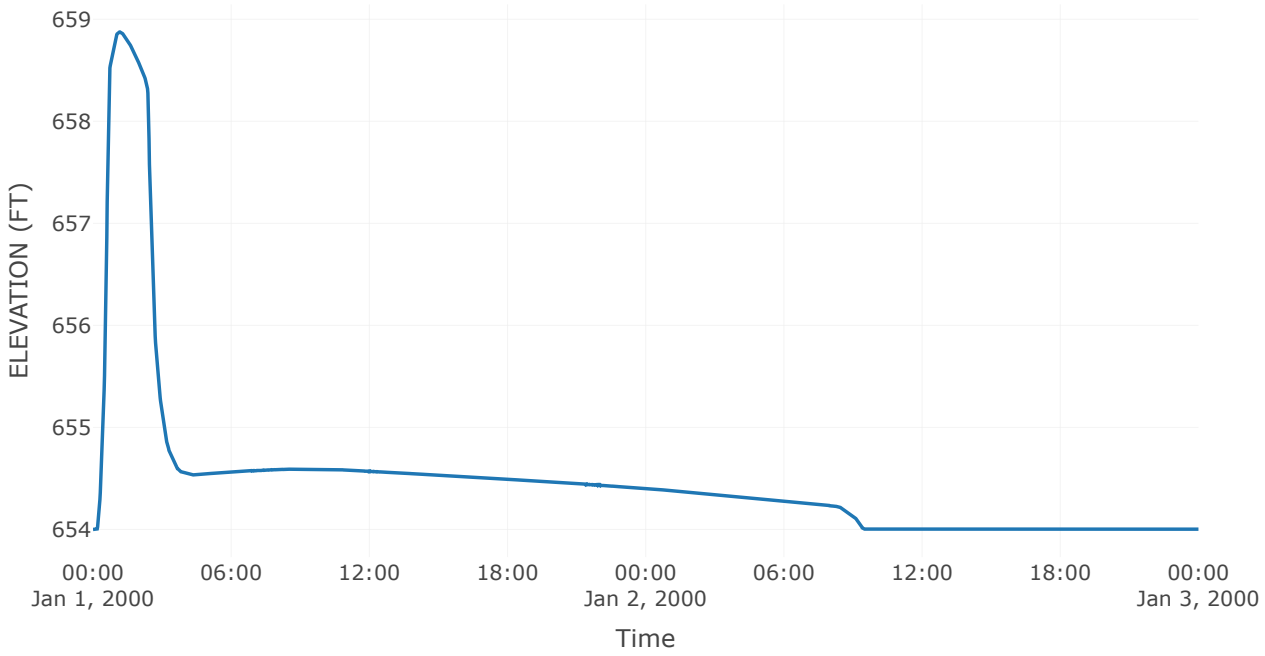
Spillway 1

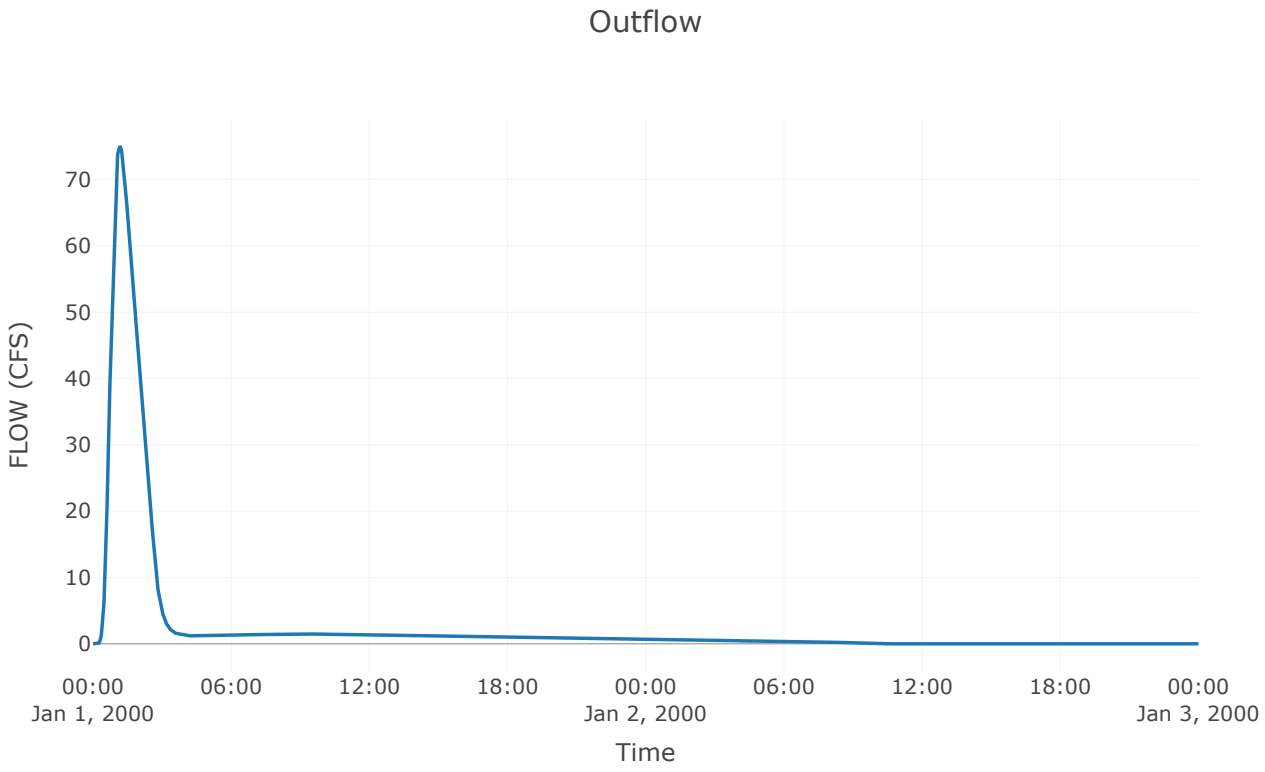


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

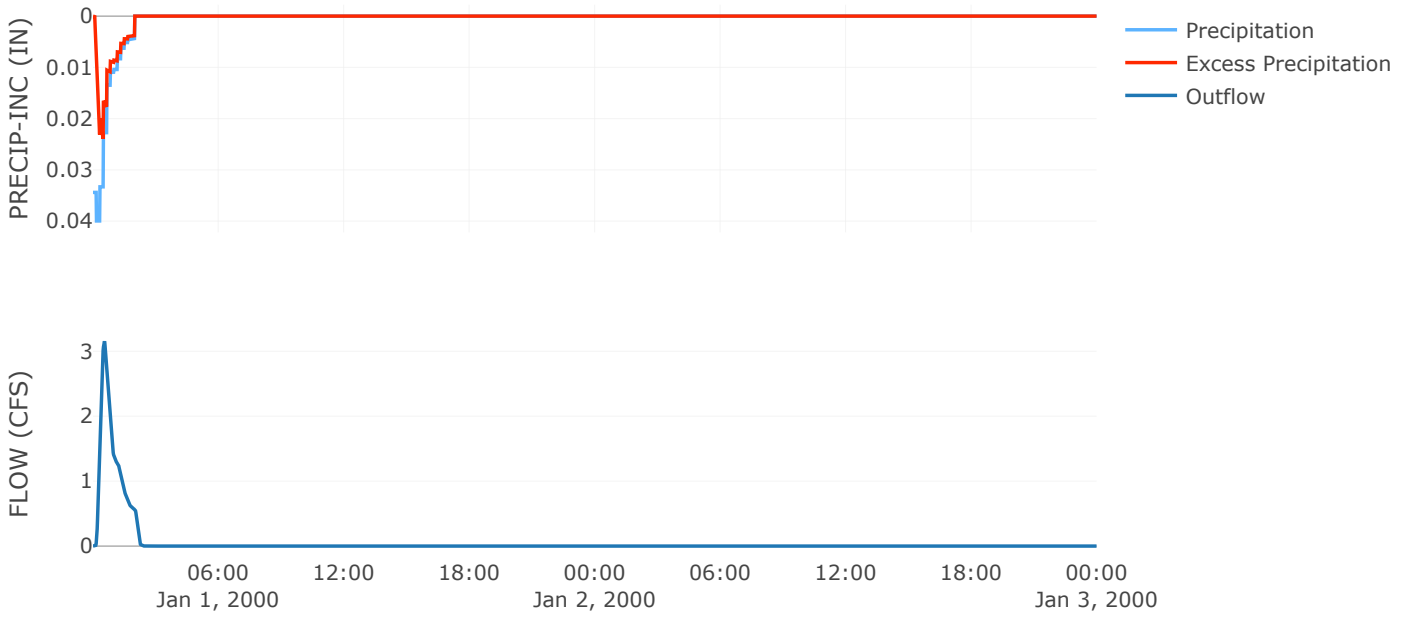
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

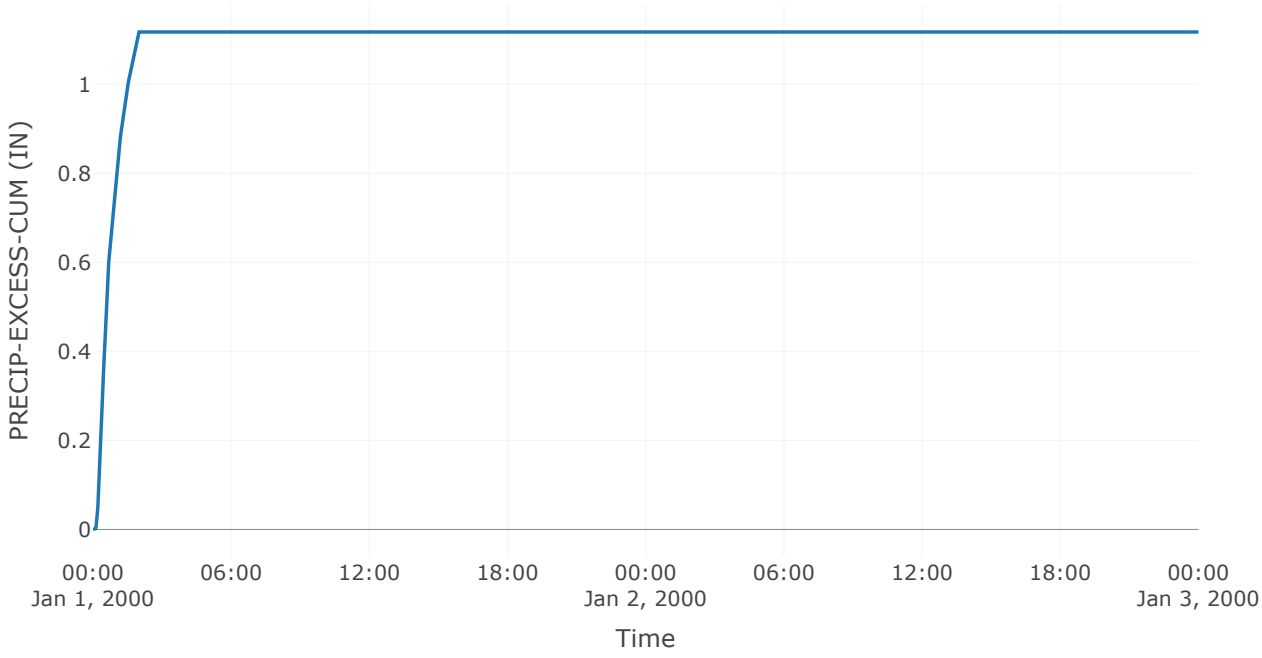
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	3.15
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	1.12
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.22
Direct Runoff Volume (AC - FT)	0.22
Baseflow Volume (AC - FT)	0

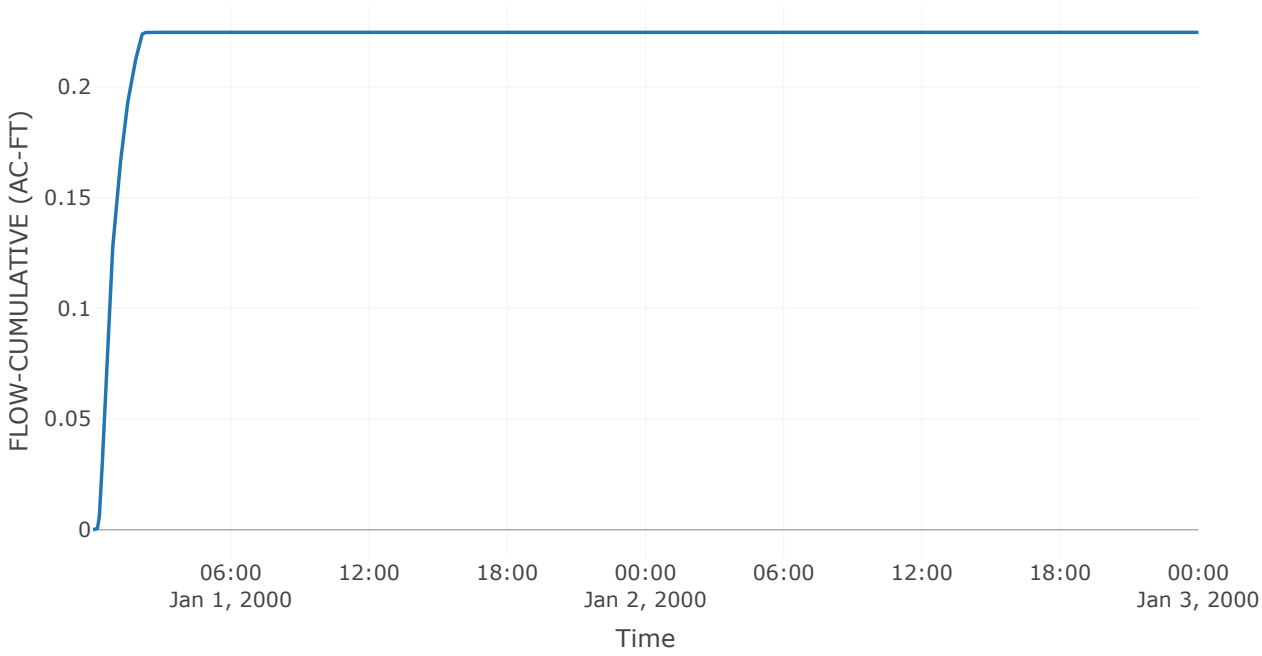
Precipitation and Outflow



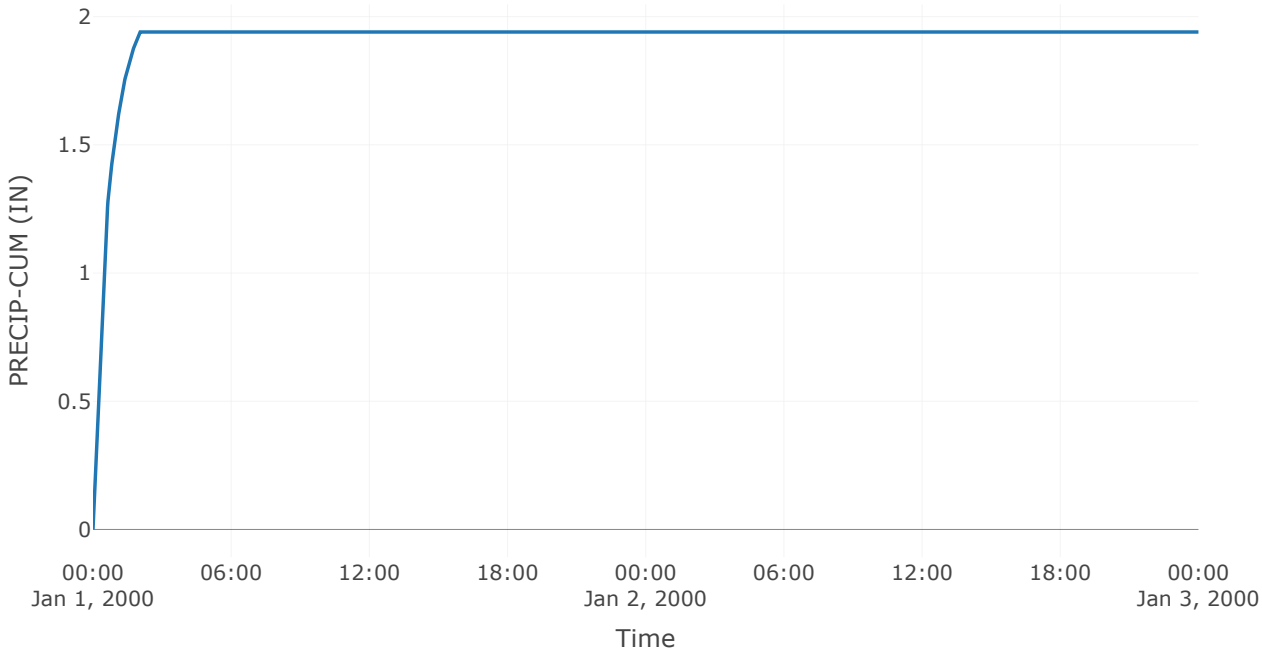
Cumulative Excess Precipitation

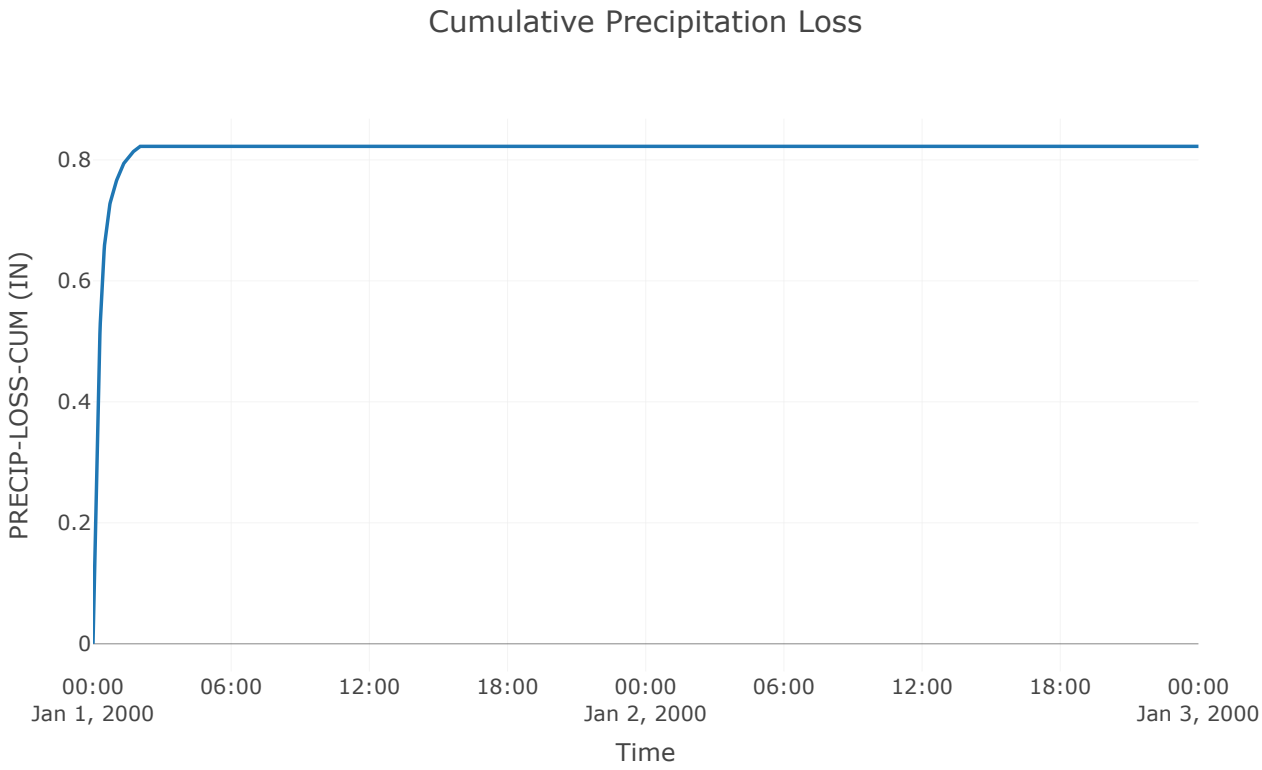


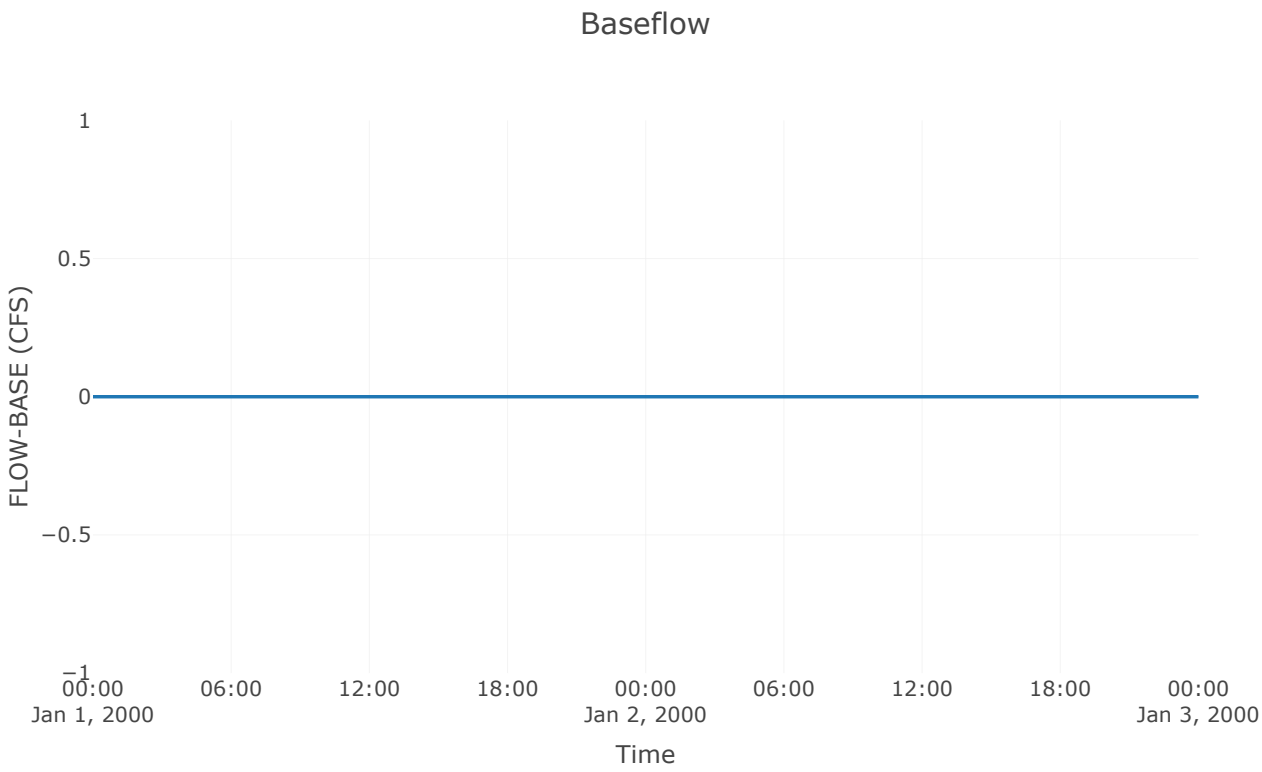
Cumulative Outflow



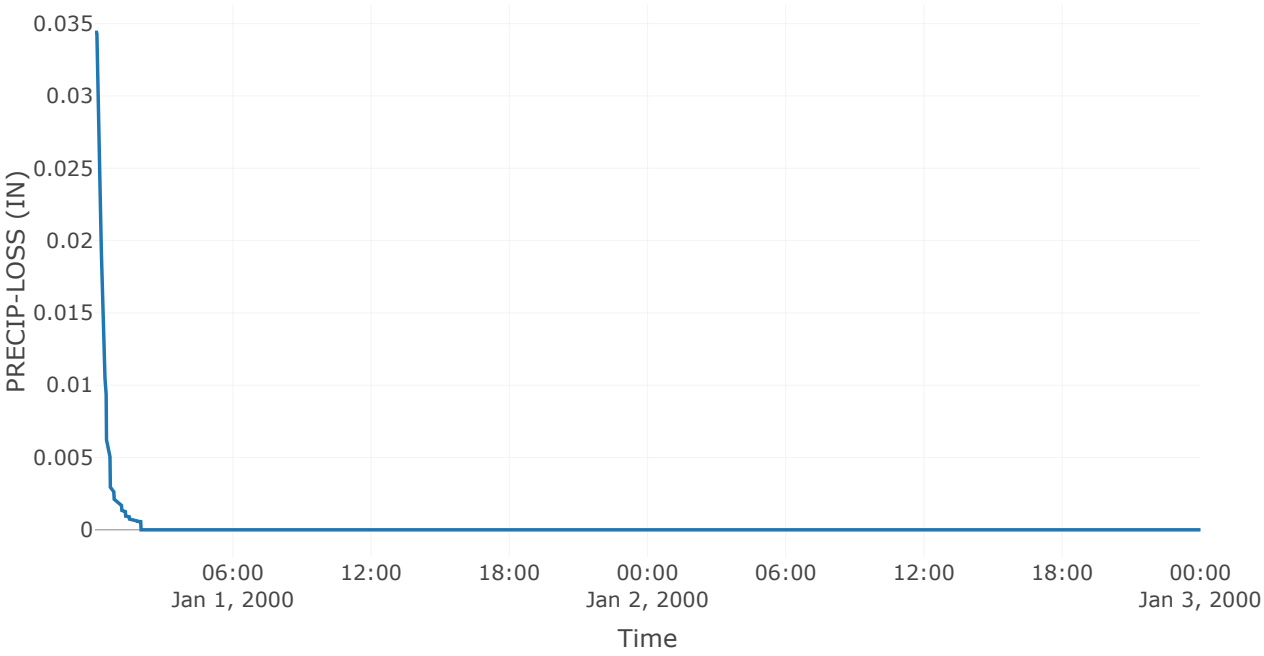
Cumulative Precipitation



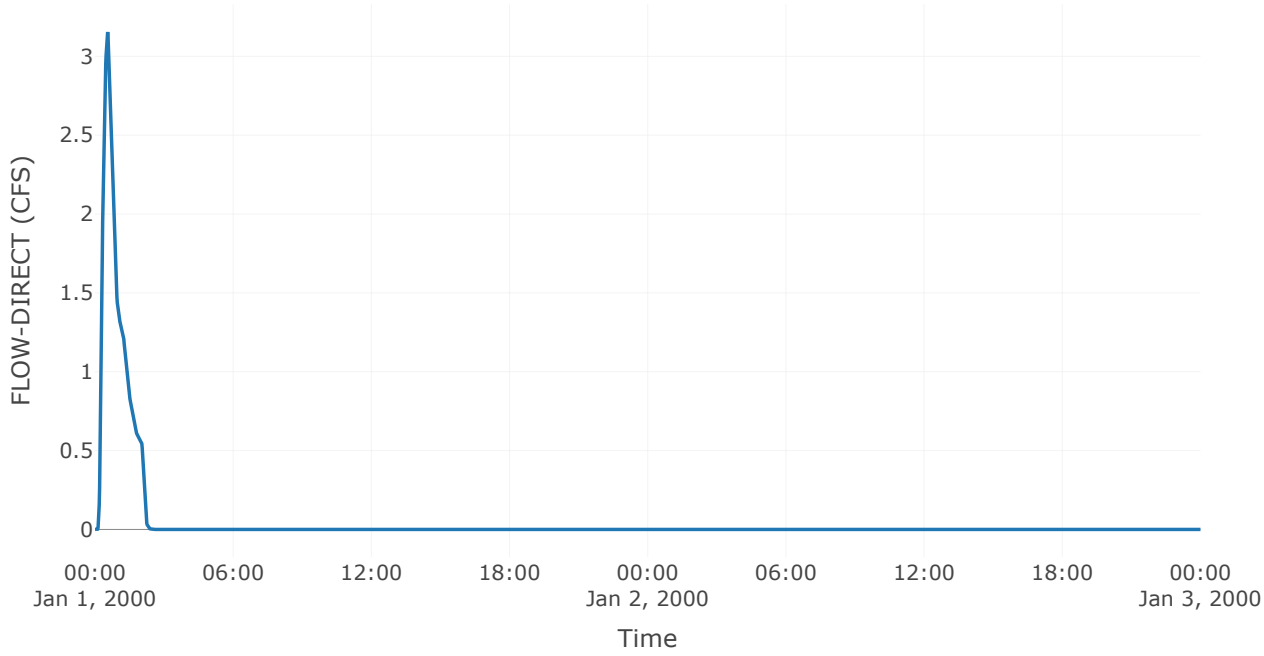

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

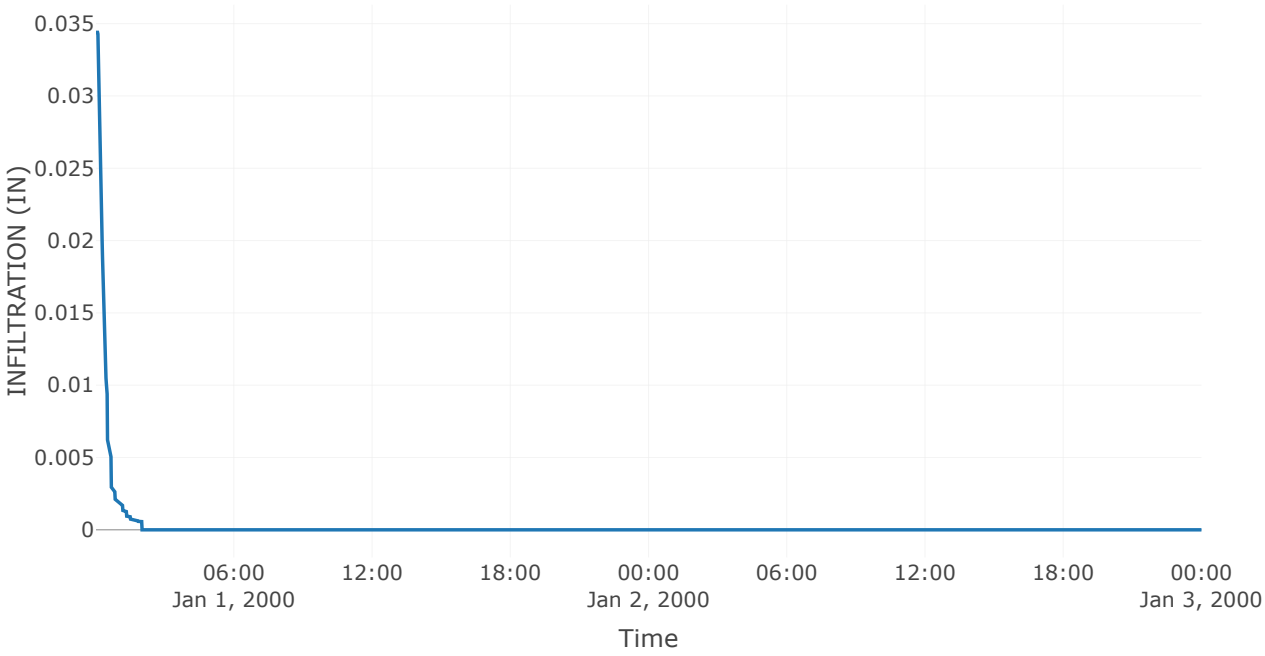

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



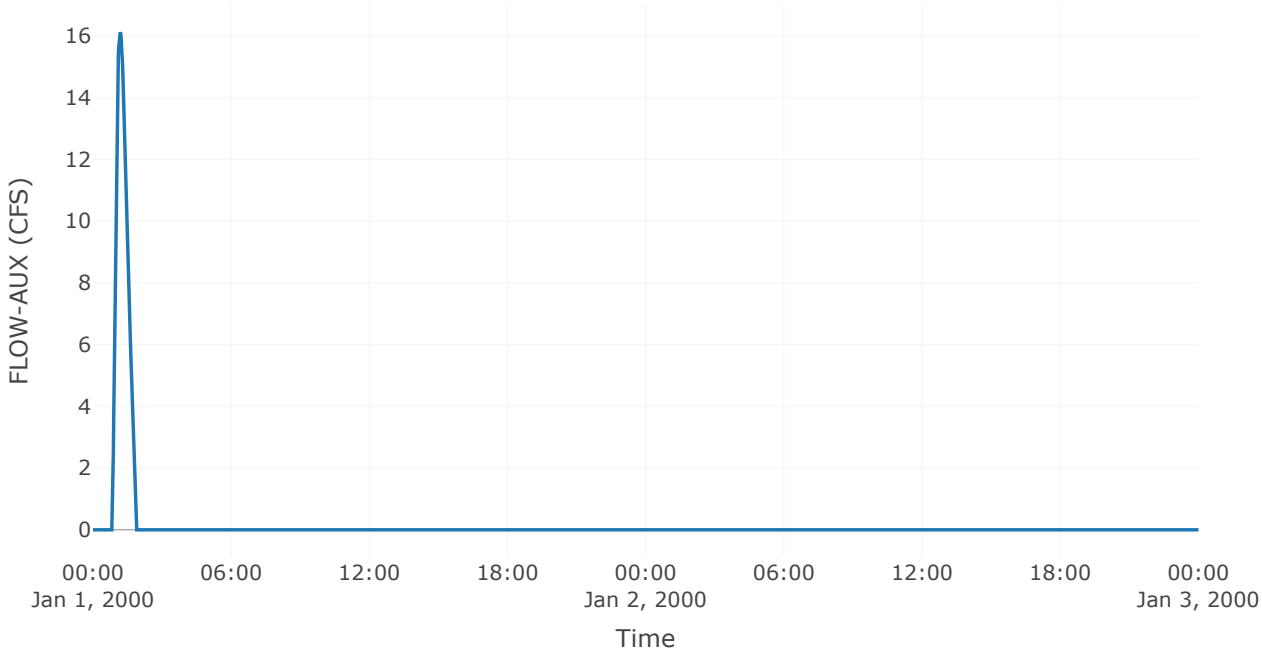

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

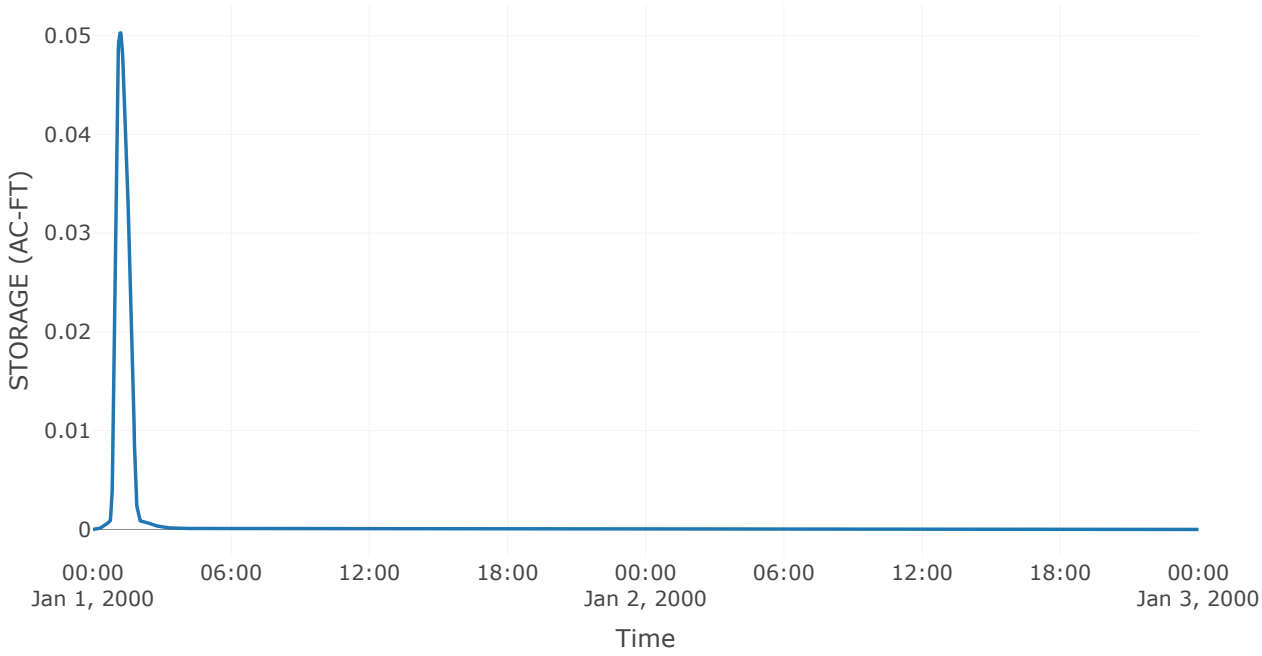
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	60.13
Time of Peak Discharge	01Jan2000, 01:11
Volume (IN)	0.72
Peak Inflow (CFS)	76.3
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.33
Maximum Storage (AC - FT)	0.05
Peak Elevation (FT)	650.78
Discharge Volume (AC - FT)	10.53

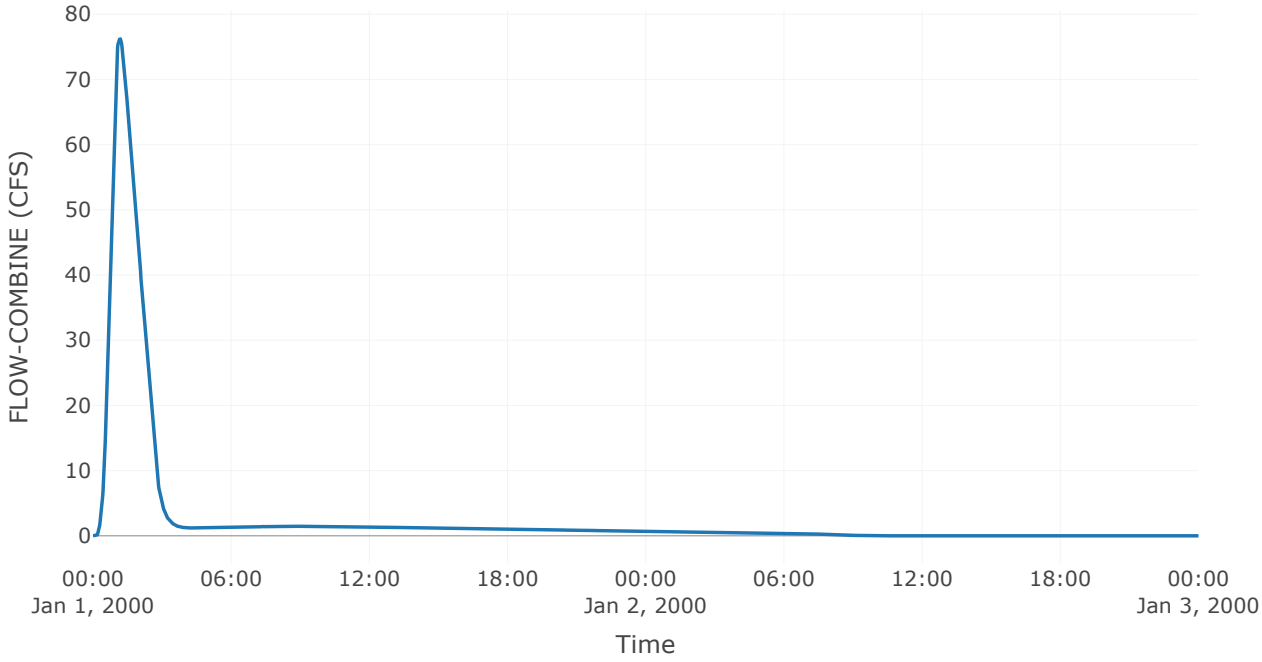
Auxiliary Outflow



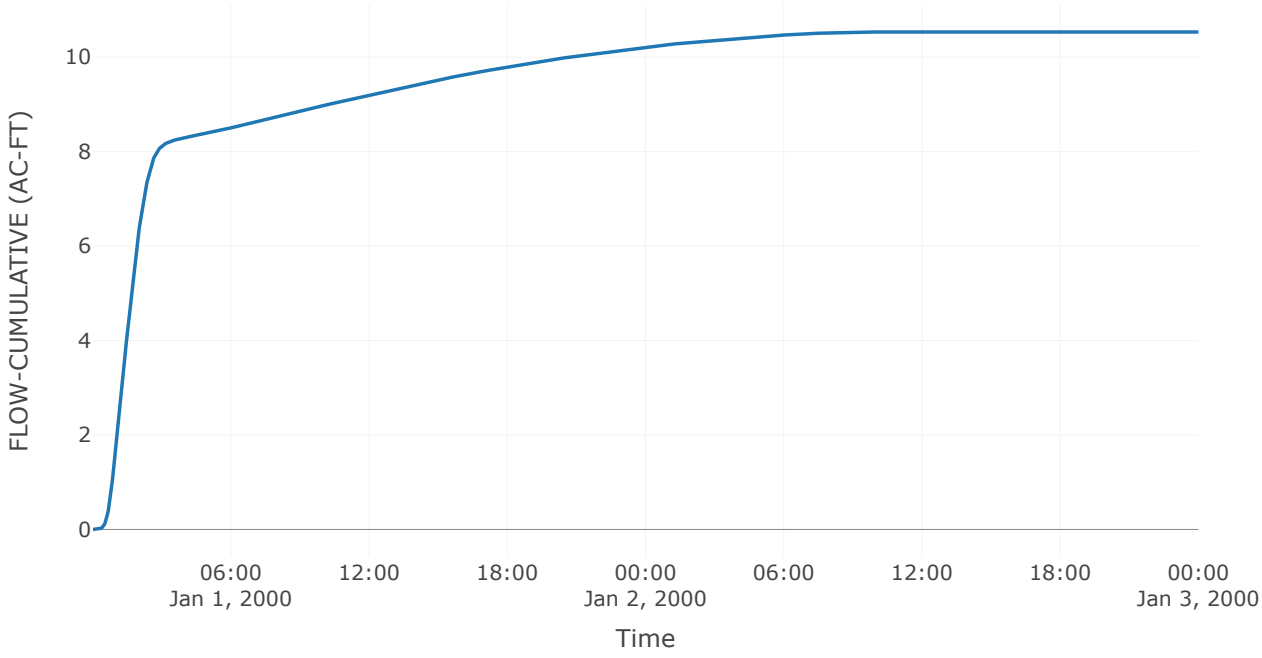
Storage

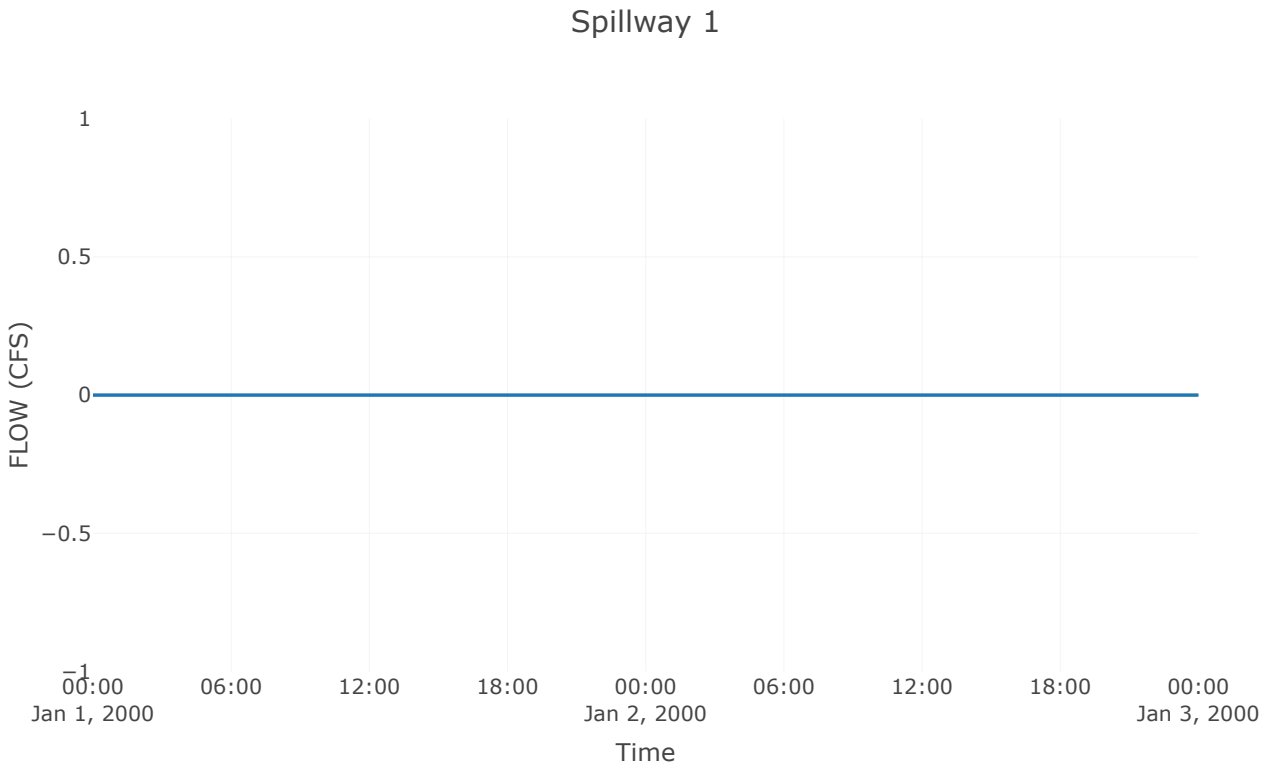


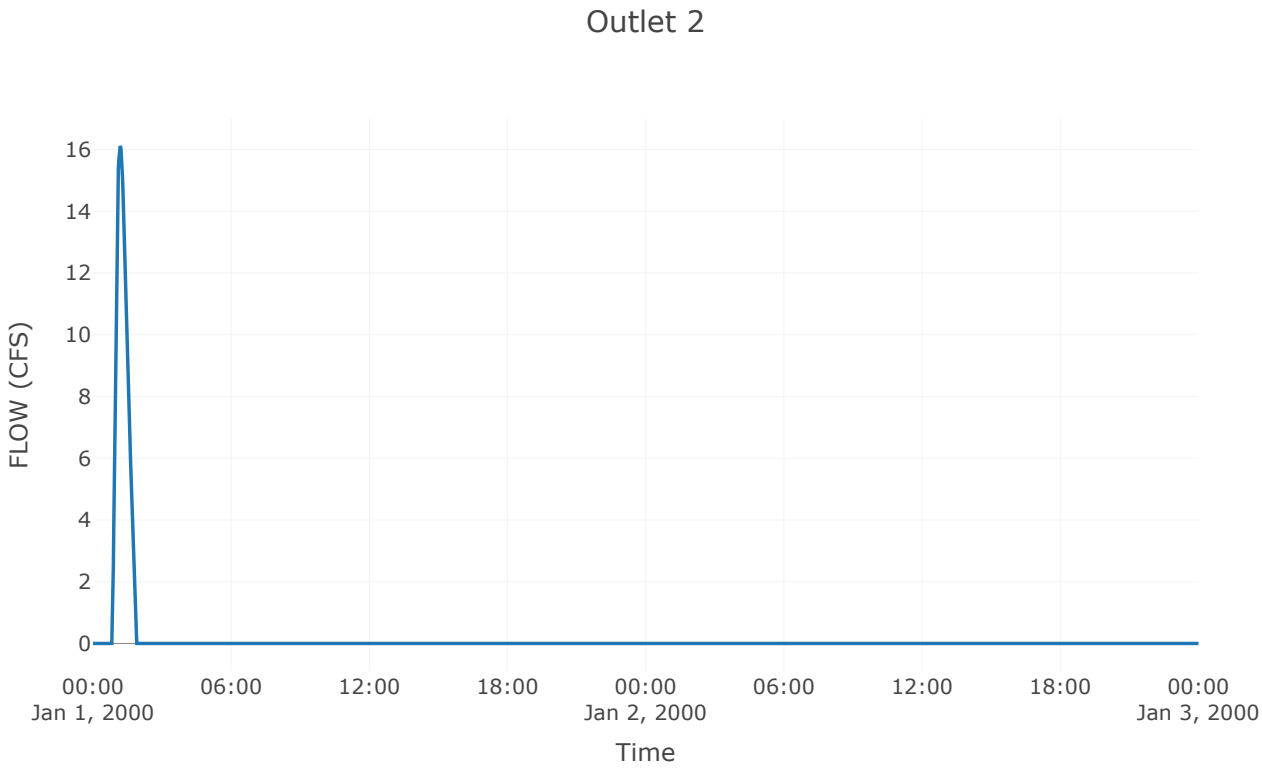
Combined Inflow



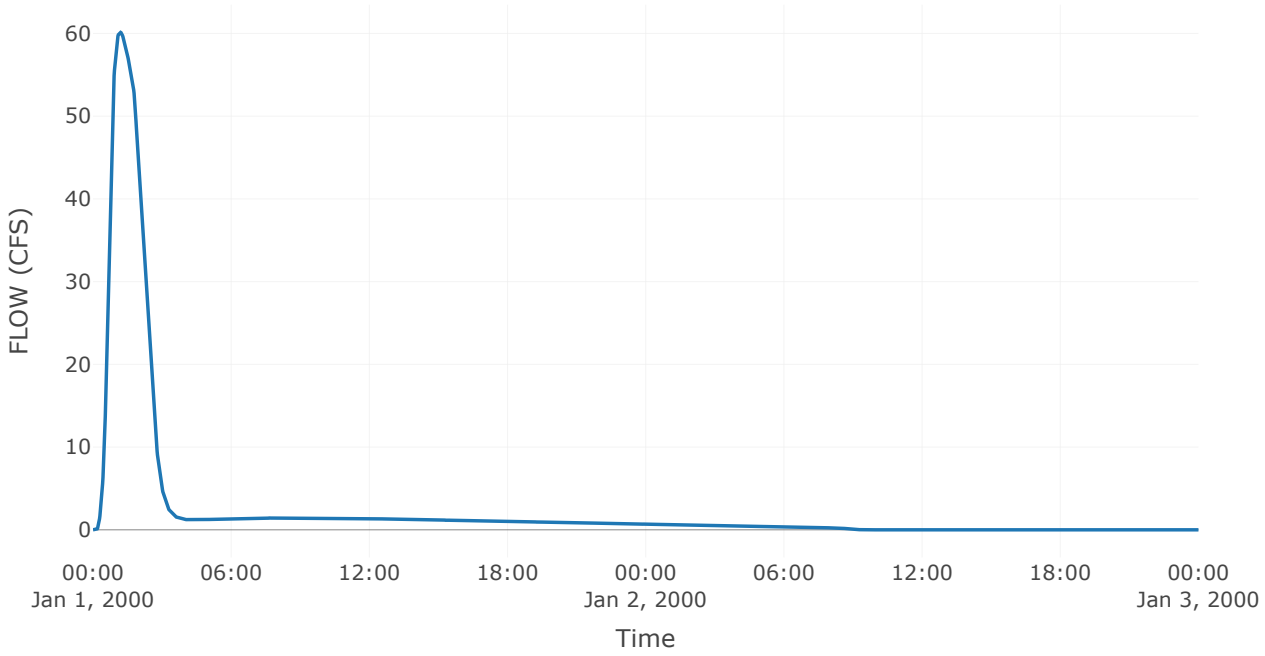
Cumulative Outflow



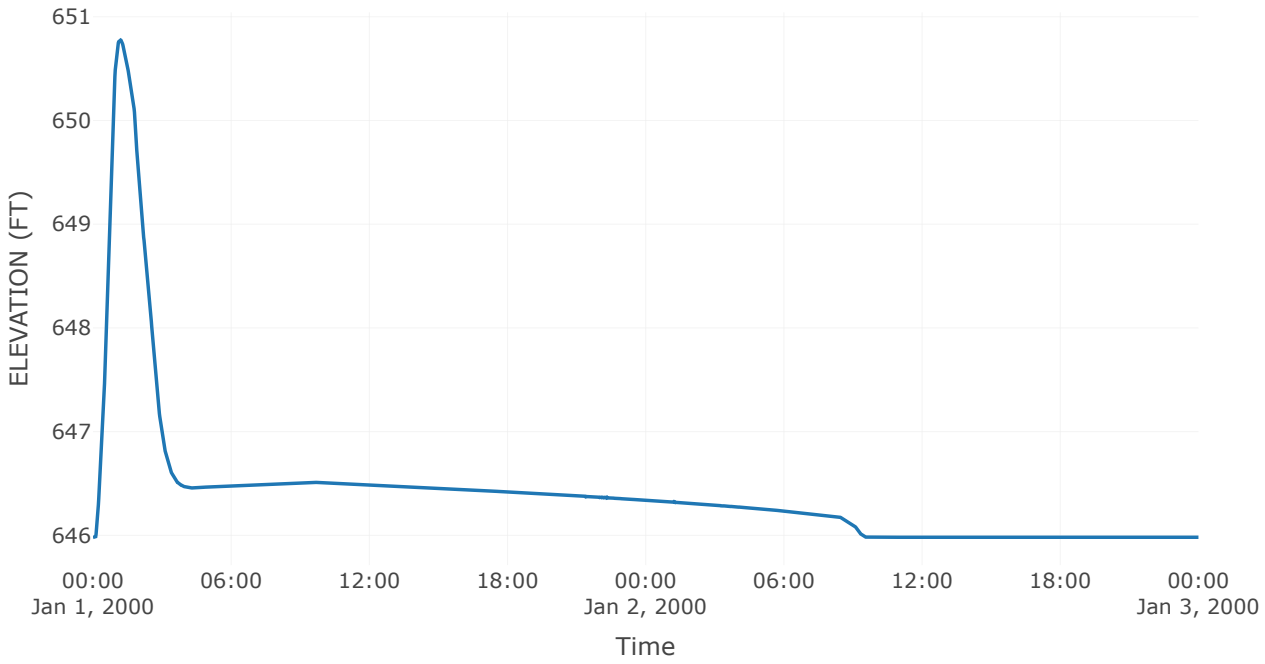

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

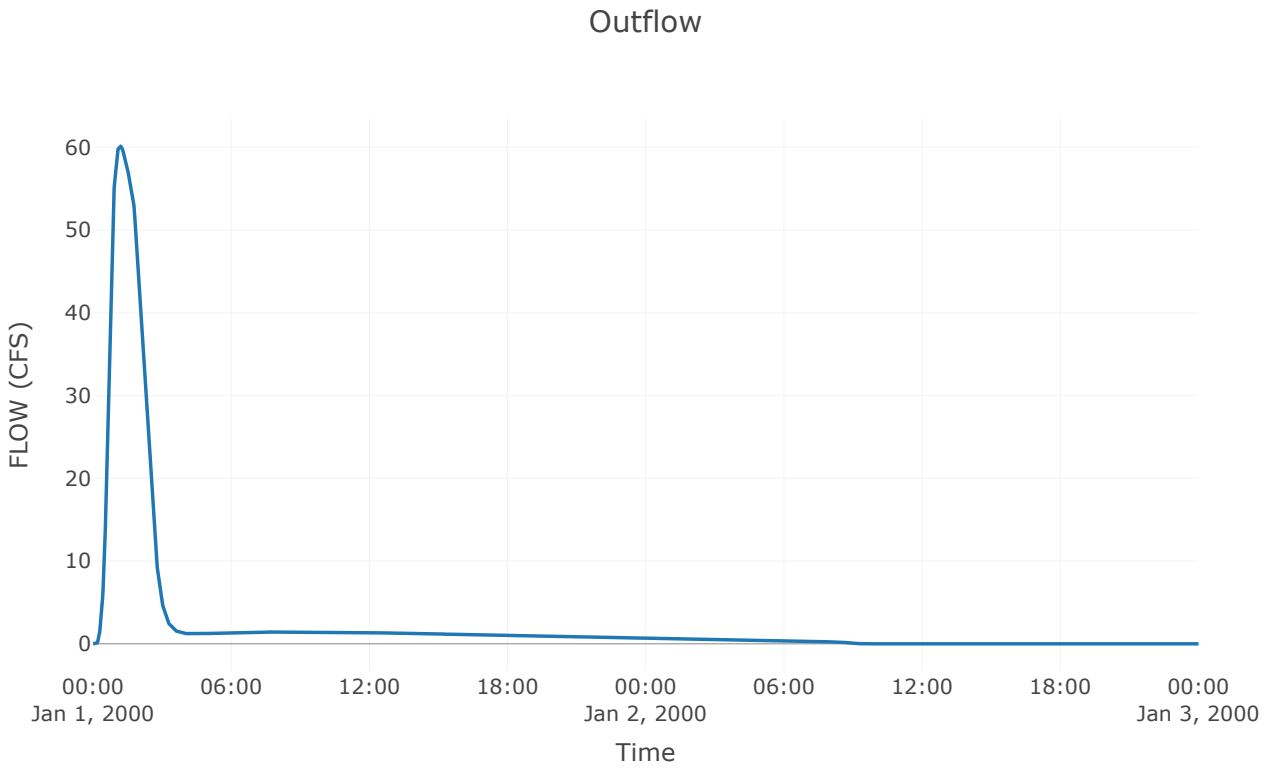

Outlet 2
16
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

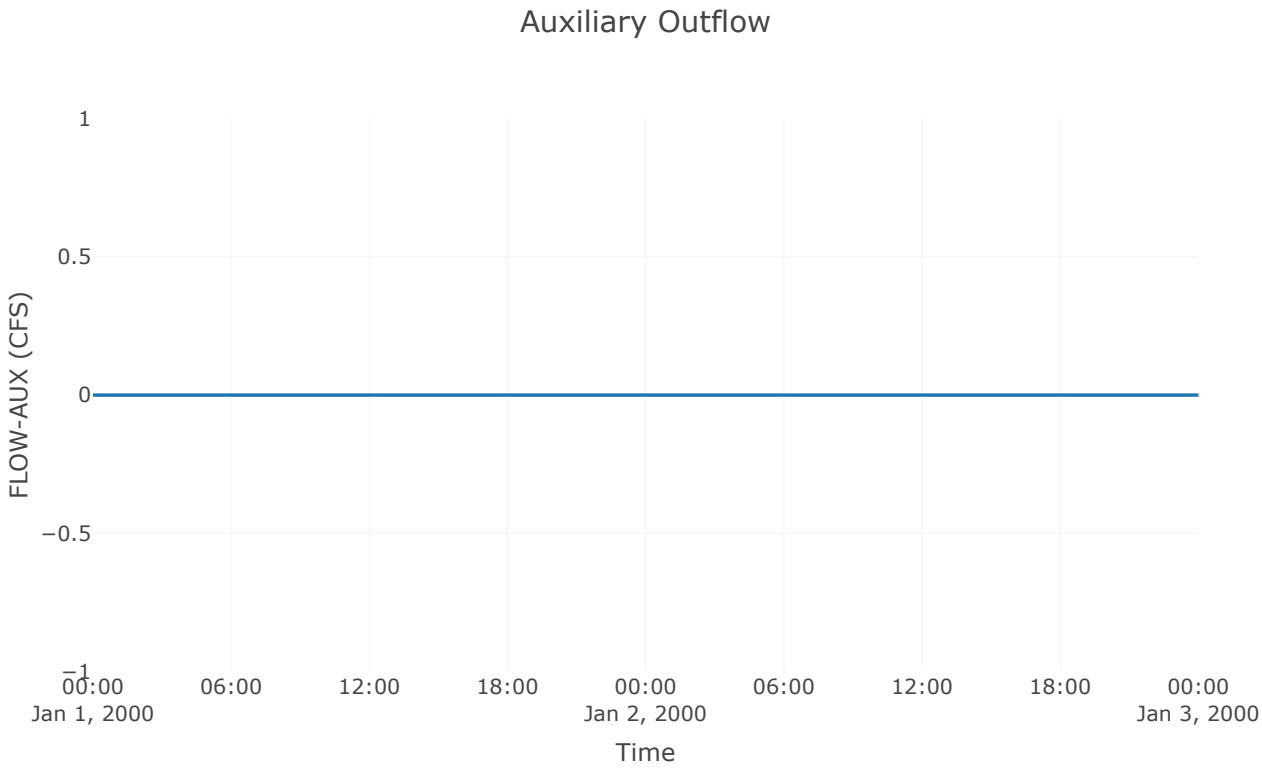


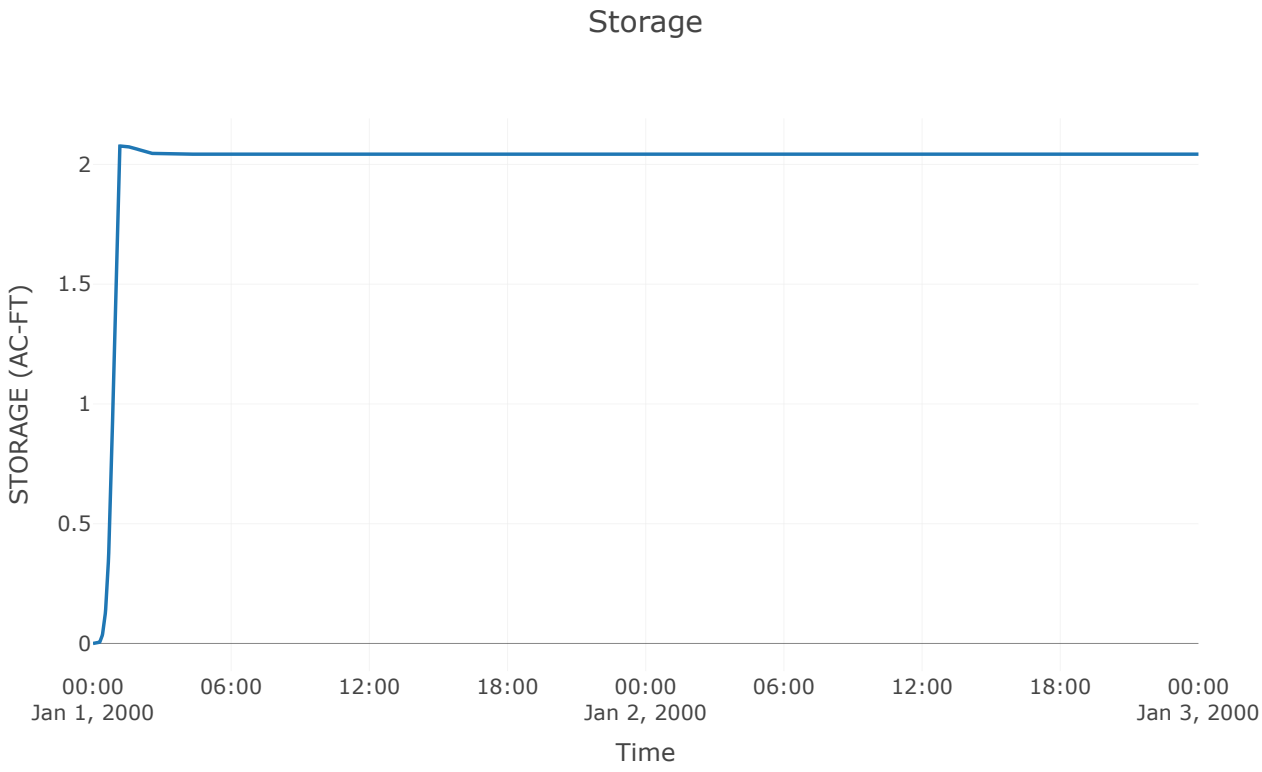

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

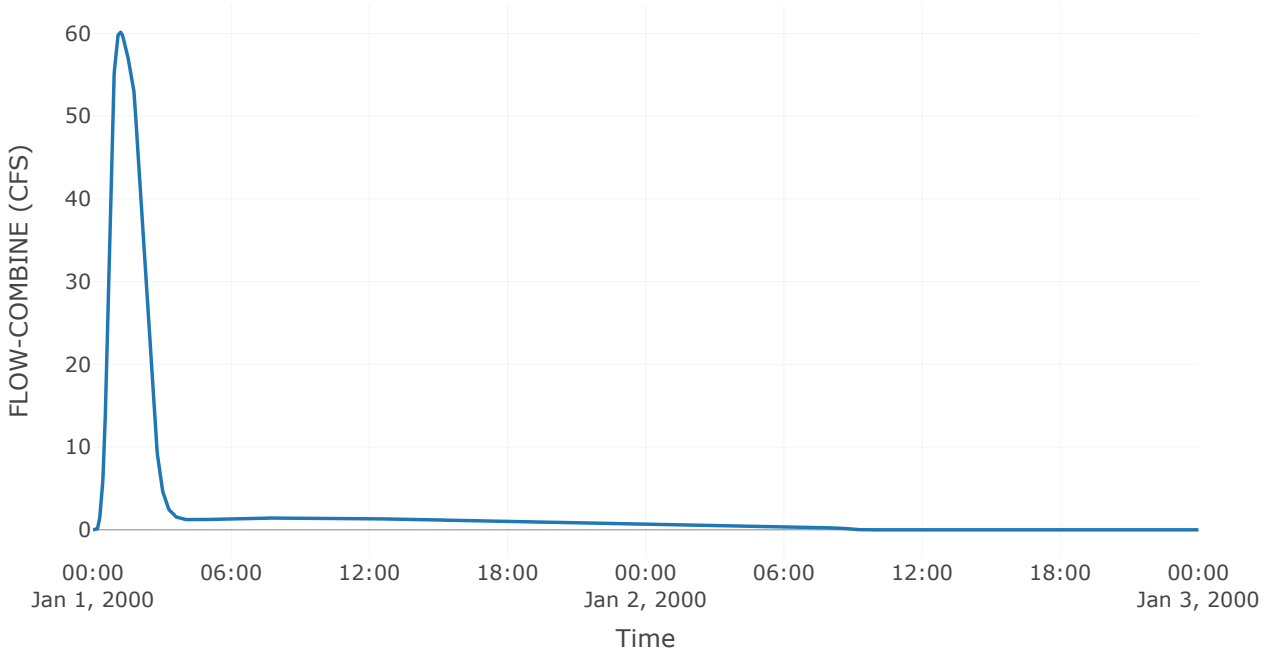
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57
Peak Inflow (CFS)	60.13
Time of Peak Inflow	01Jan2000, 01:11
Inflow Volume (AC - FT)	10.53
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.3

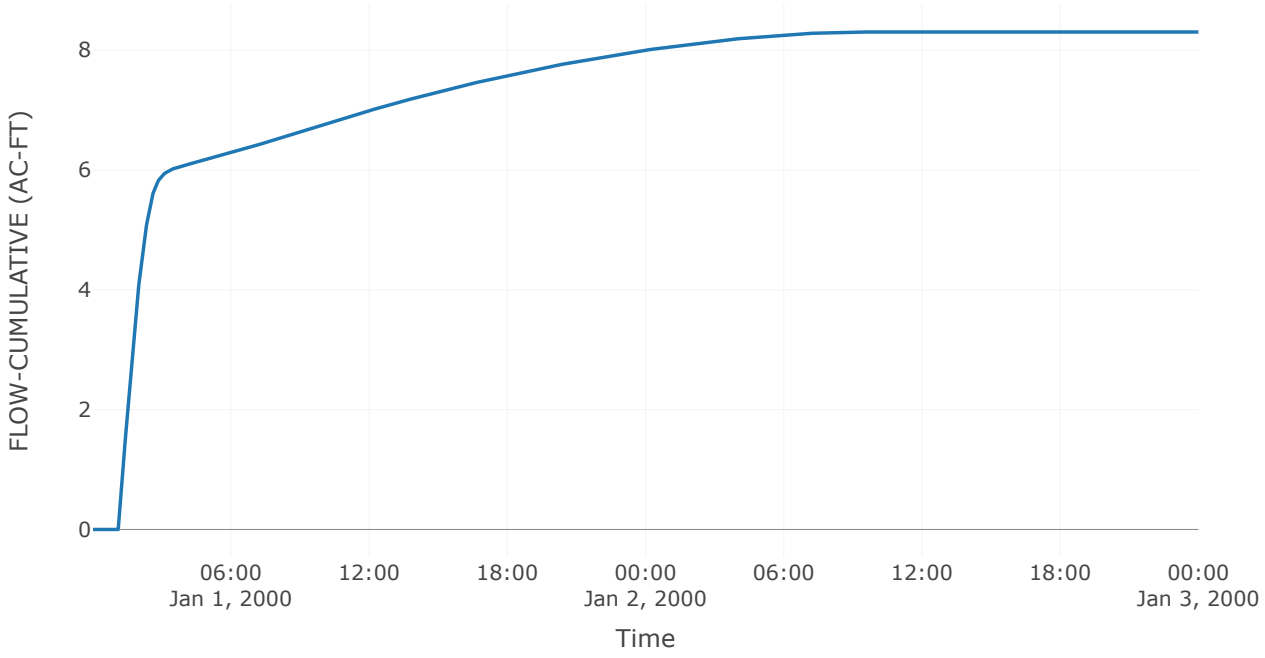

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

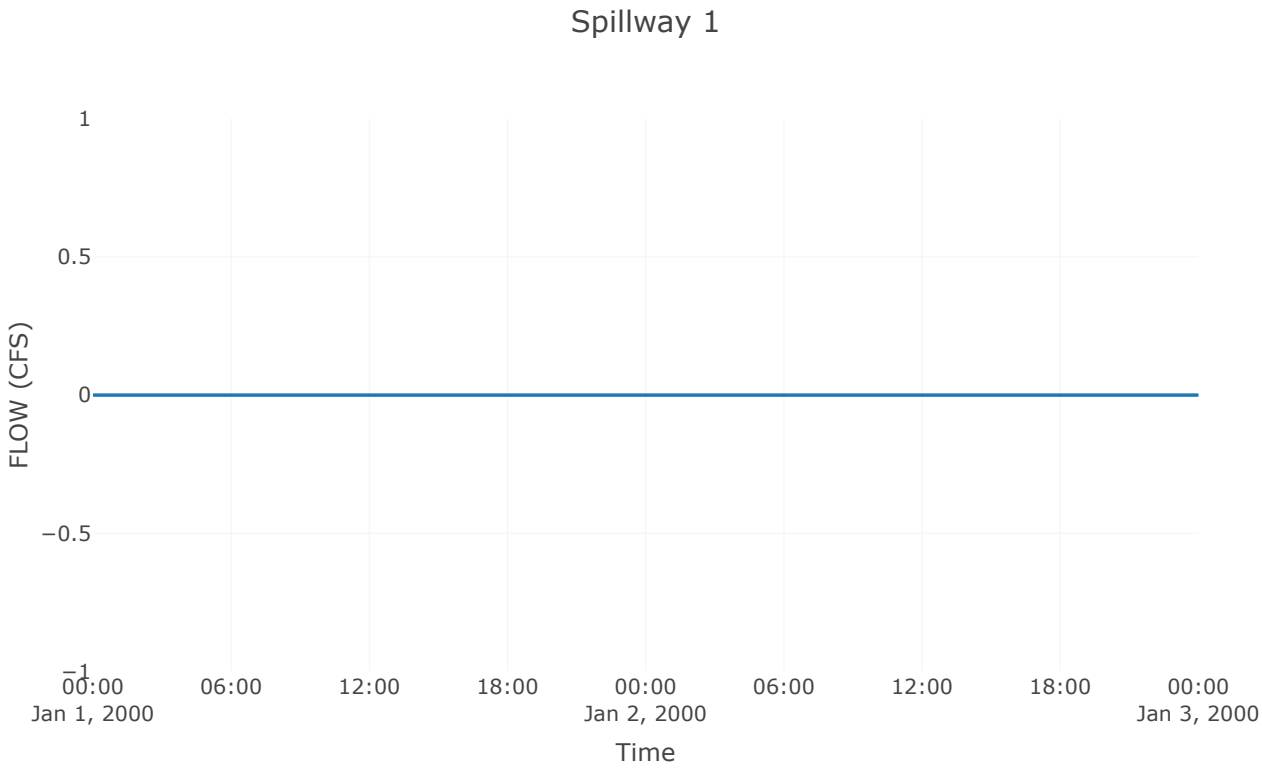

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

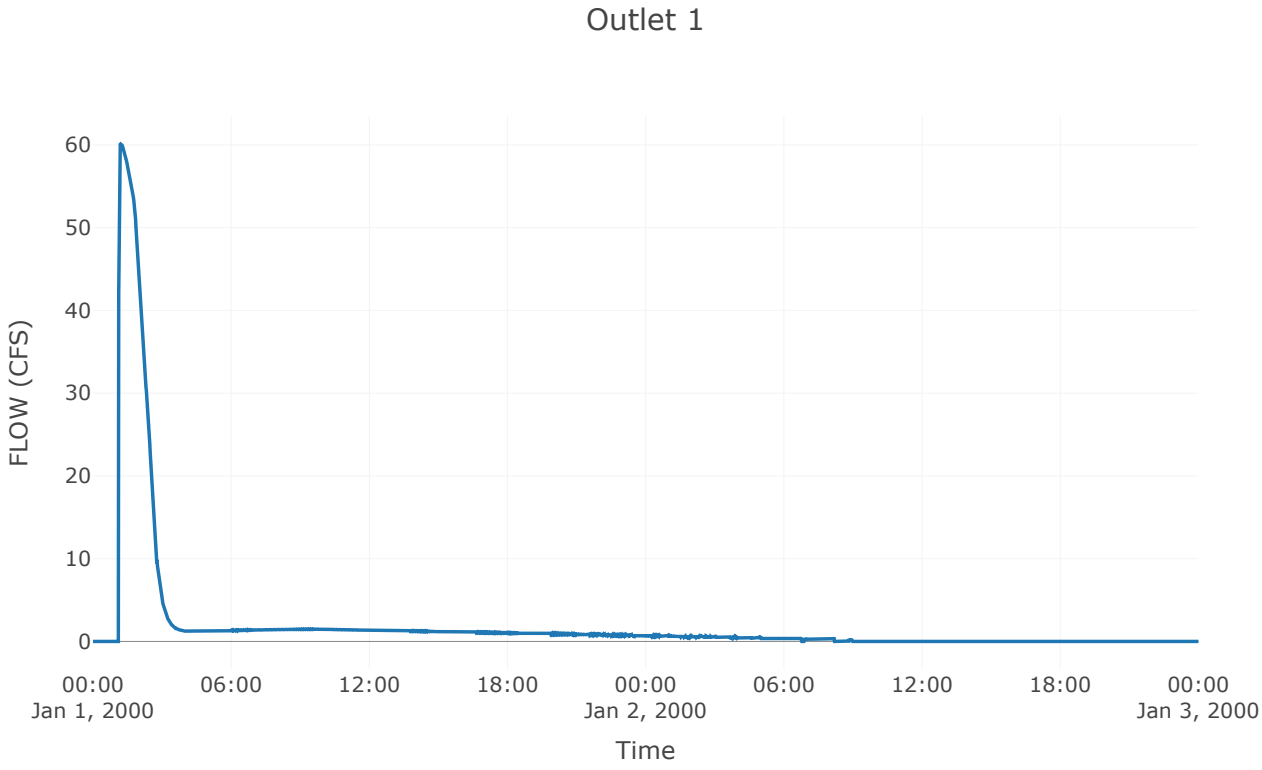
Combined Inflow



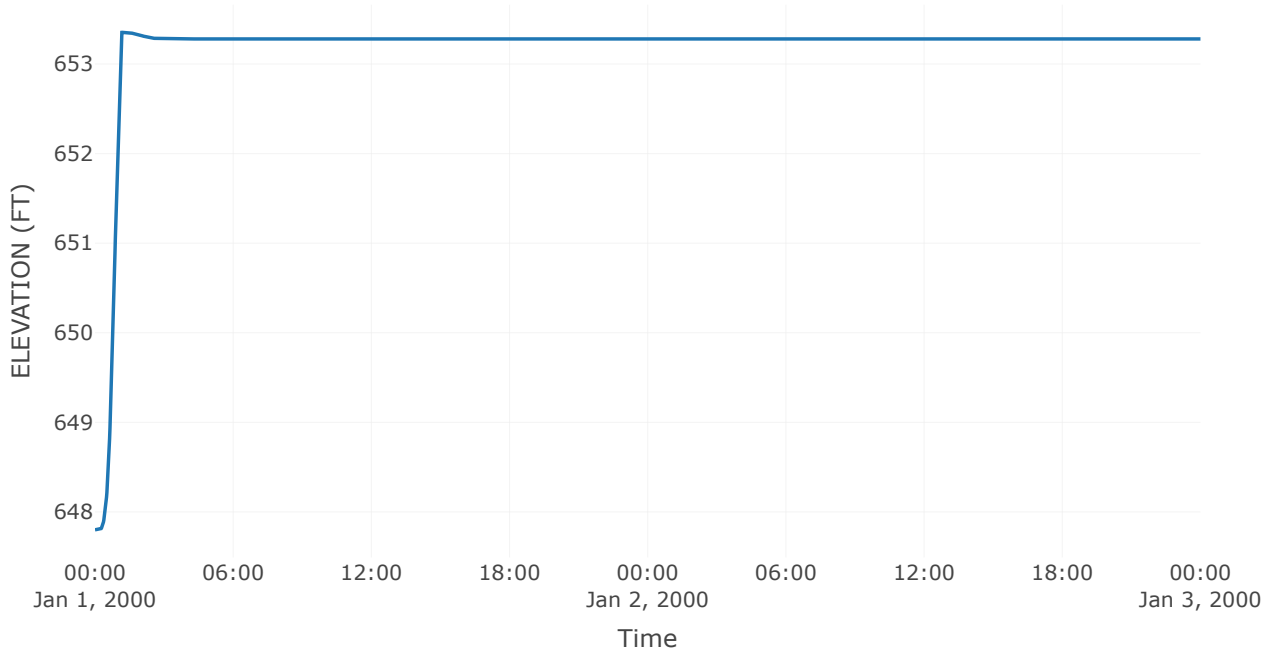
Cumulative Outflow



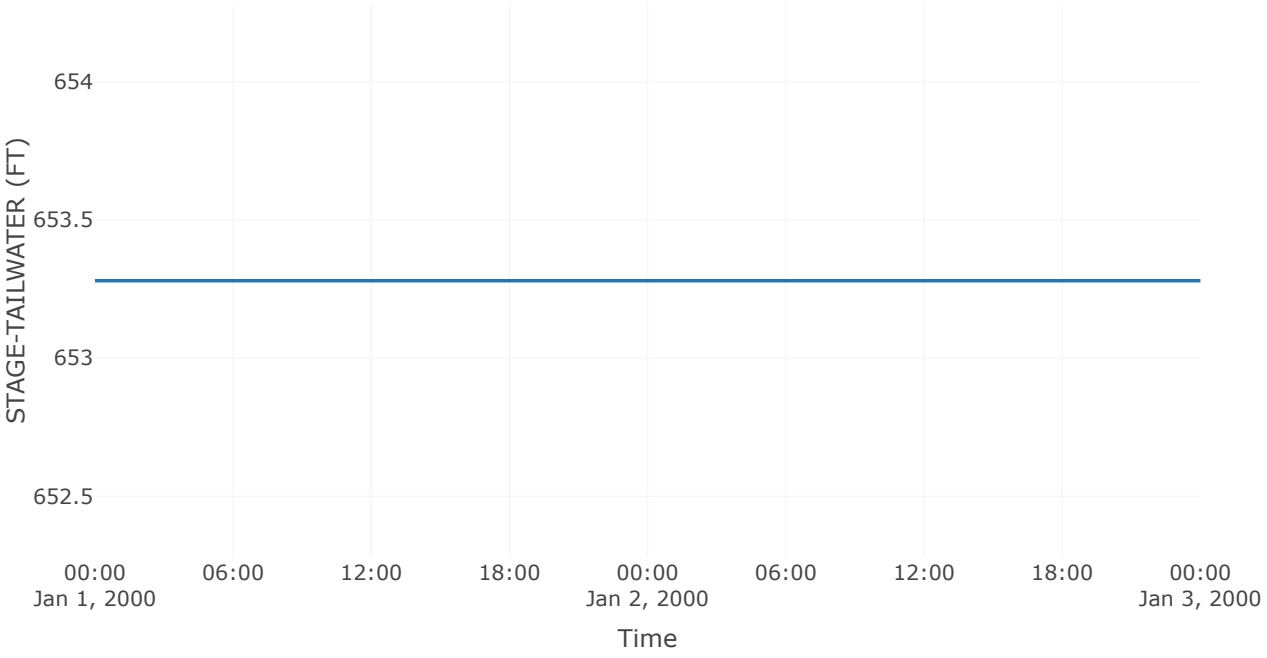

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

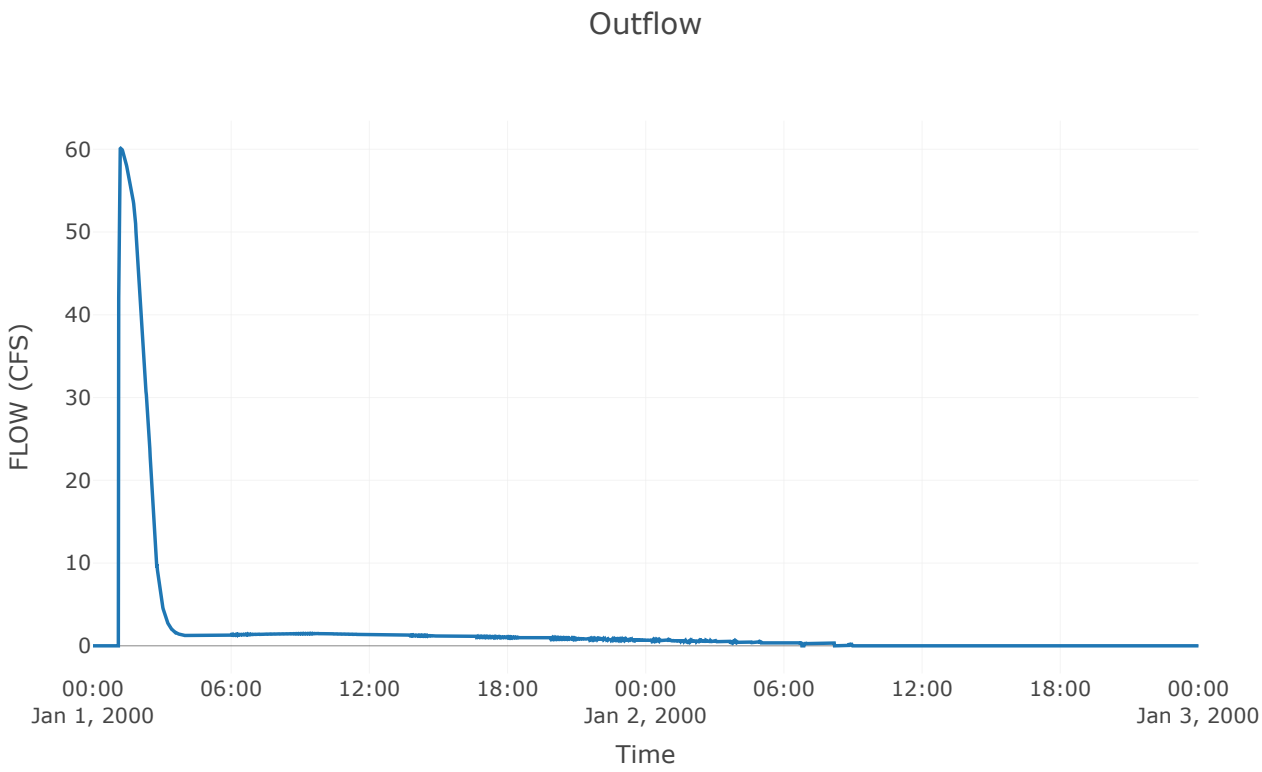

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



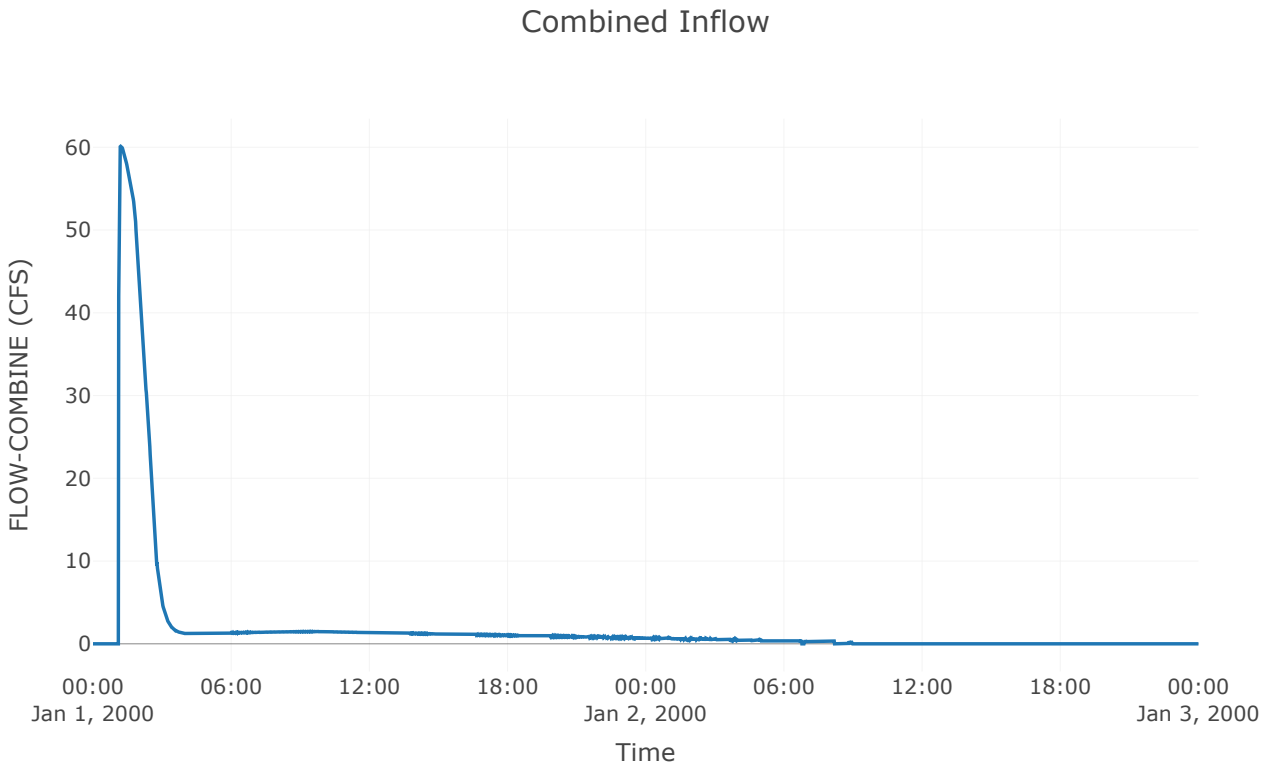
Tailwater Stage

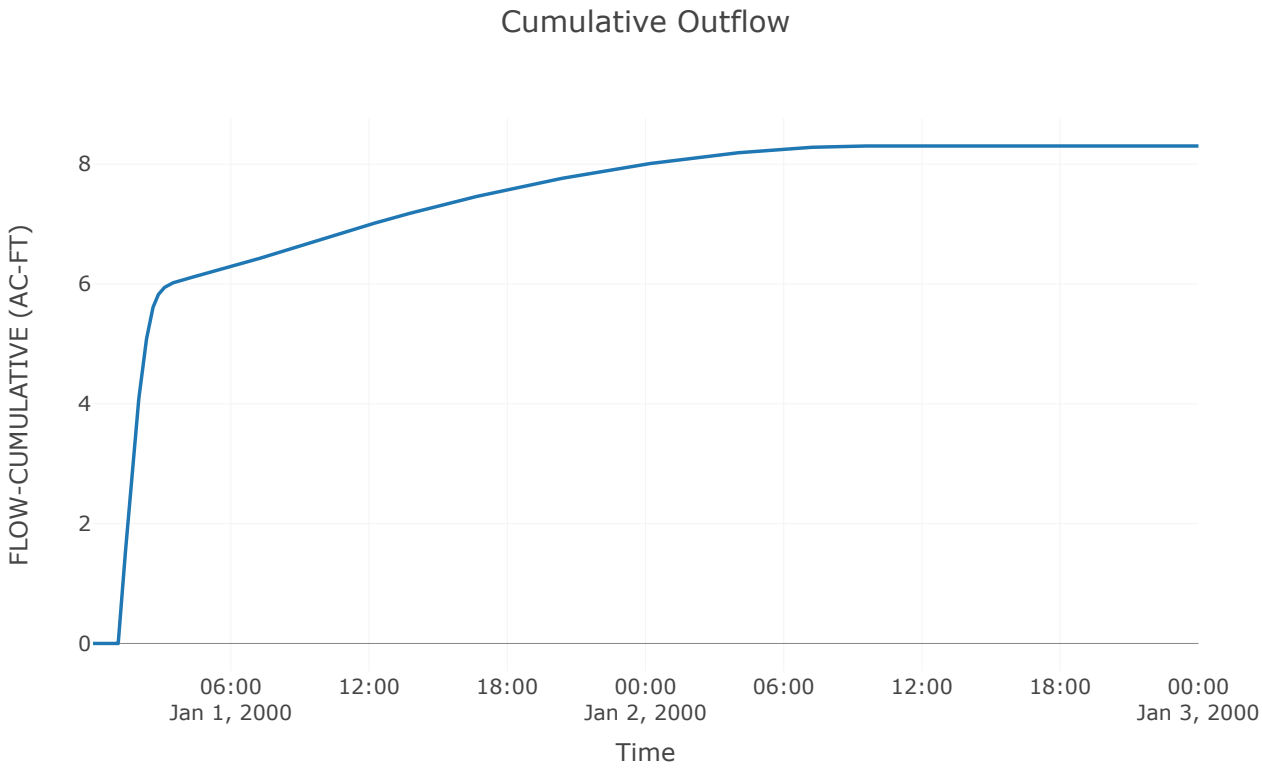


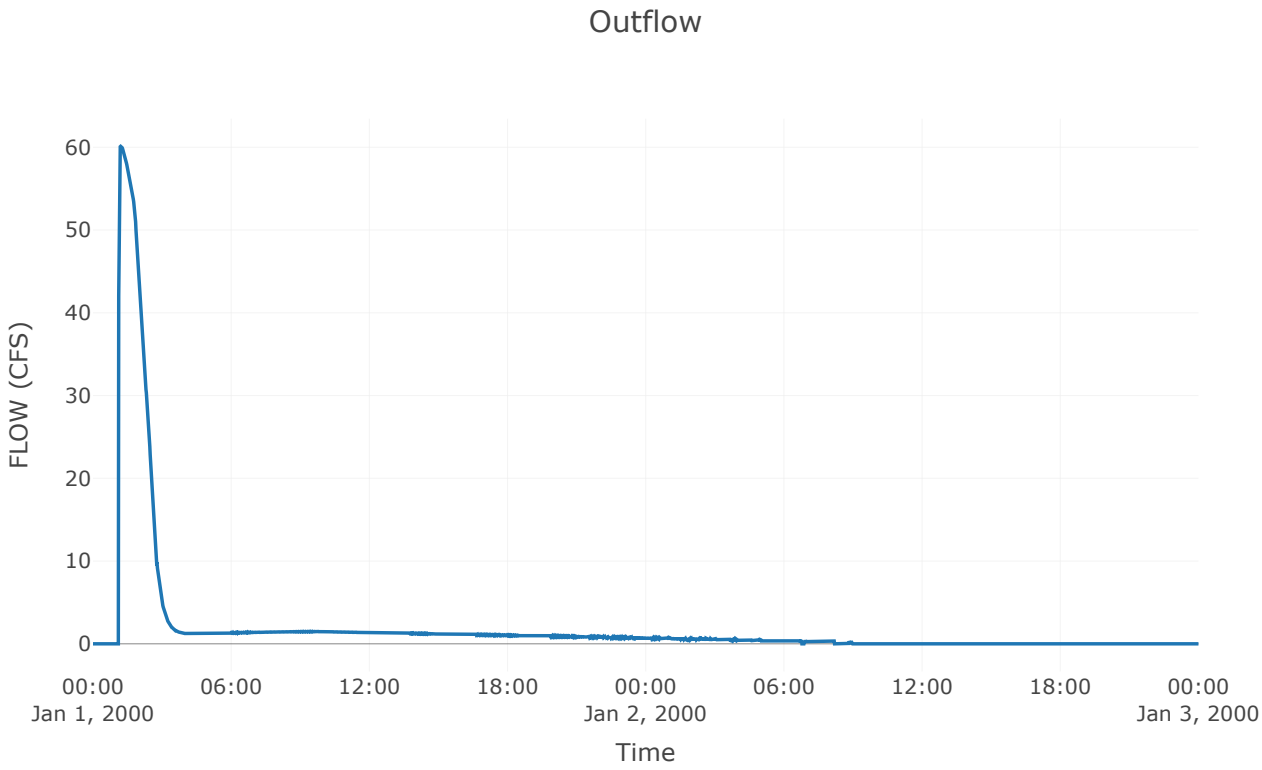

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Sink: 55th Street Outlet

Results: 55th Street Outlet	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57


Combined Inflow
FLOW-COMBINE (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:34

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.38	01Jan2000, 01:10	1.61
Storage West of Wolf Road	0.27	157.38	01Jan2000, 01:10	1.6
Existing On - Site	0	5.91	01Jan2000, 00:32	2.07
Existing Basin C	0.27	75.96	01Jan2000, 01:14	1.17
Existing Basin A & B	0.27	75.95	01Jan2000, 01:15	1.02

55th Street Outlet	0.27	75.95	01Jan2000, 01:15	1.02

Subbasin: On-Site Trib 1

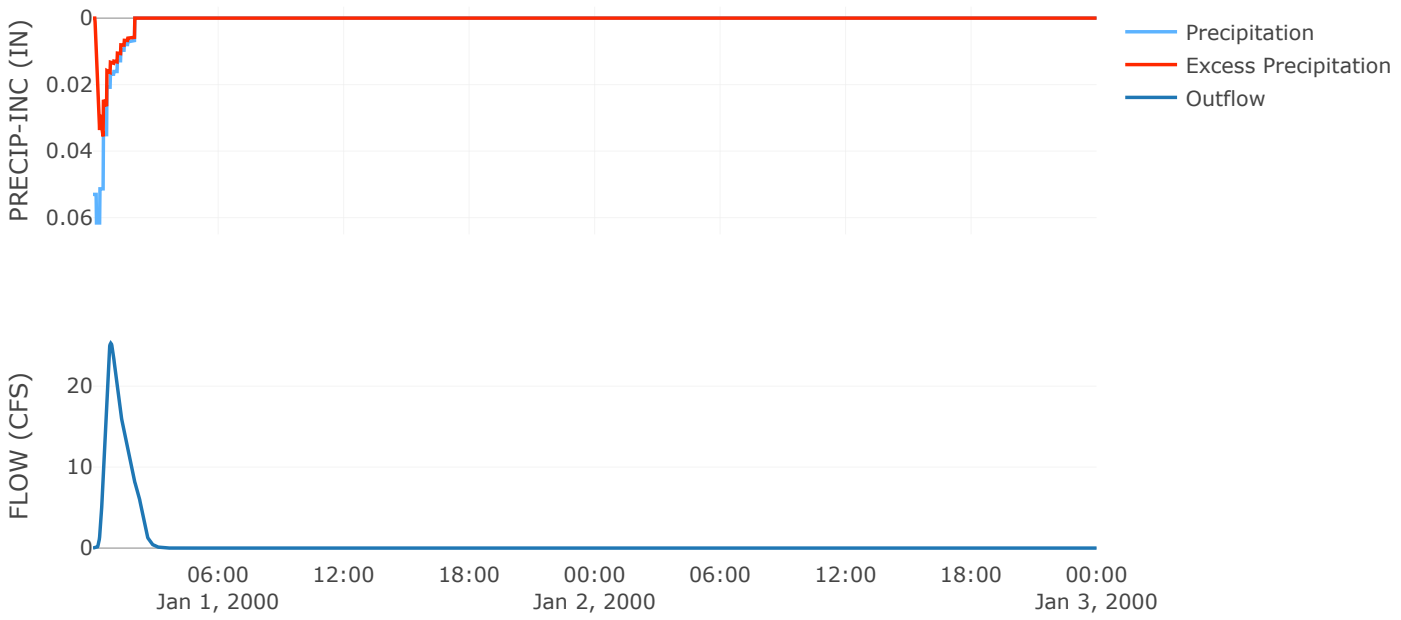
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

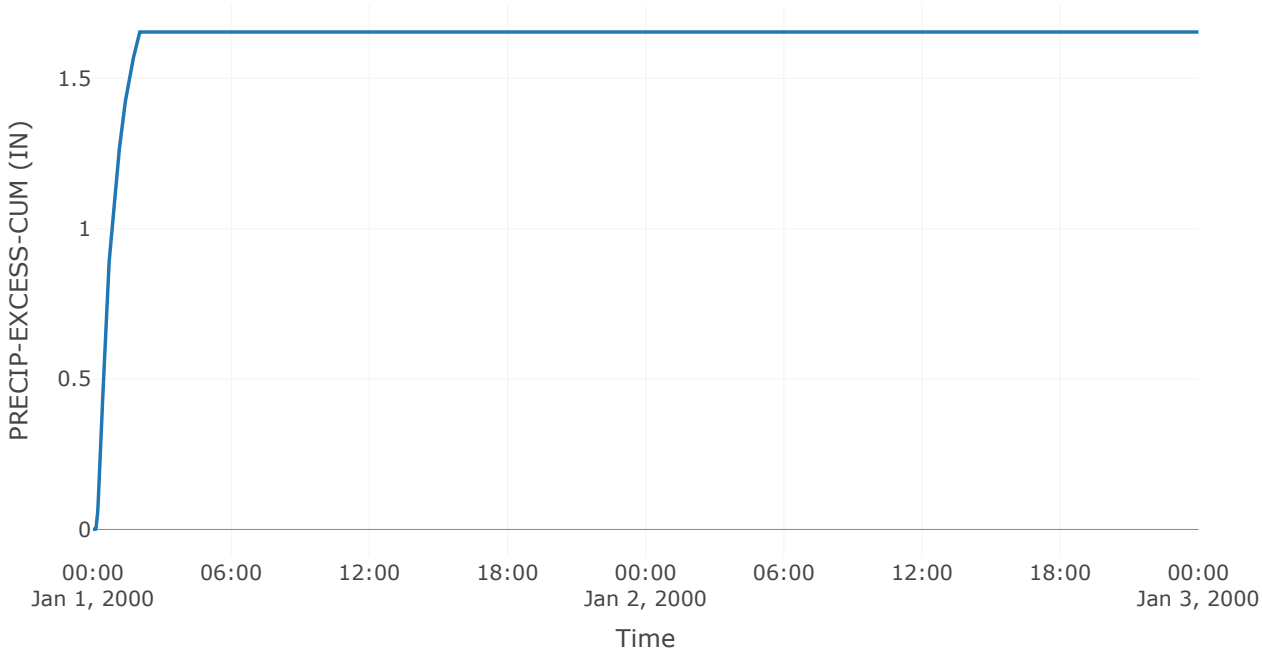
Transform: Scs	
Lag	21
Unitgraph Type	Standard

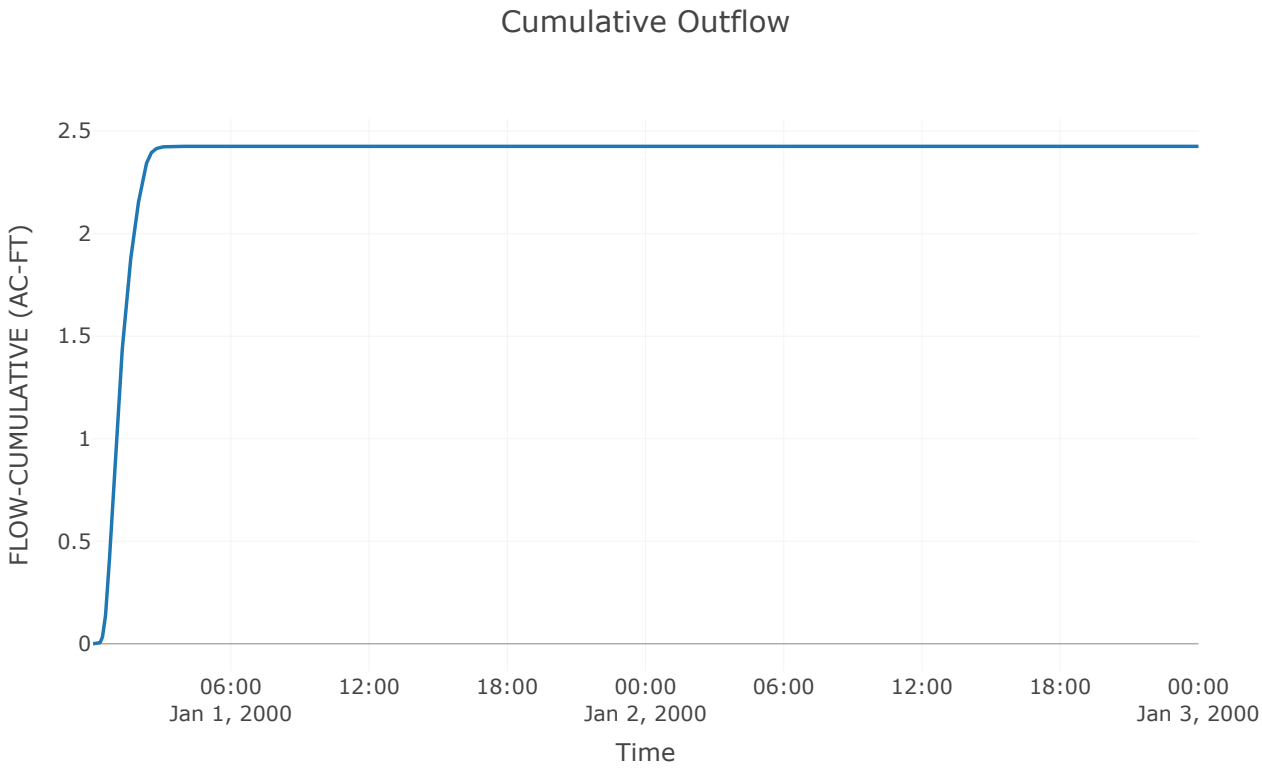
Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

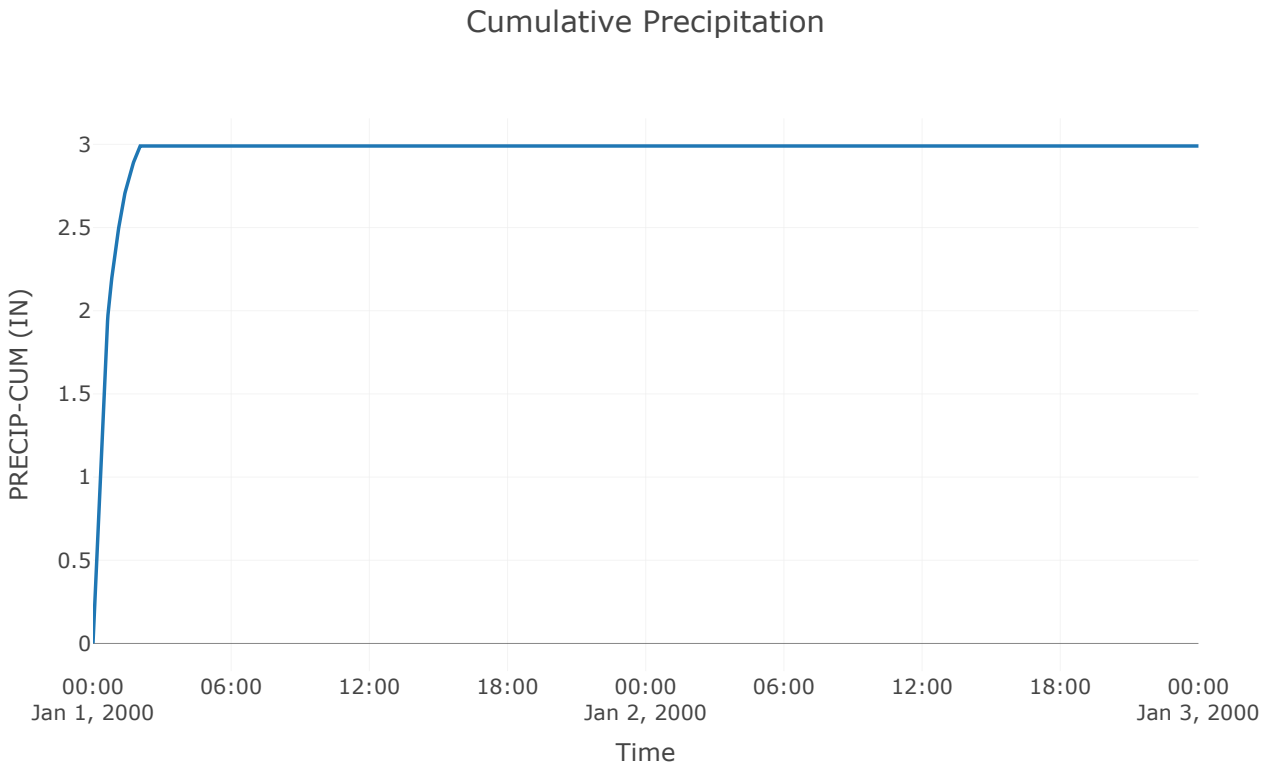
Precipitation and Outflow

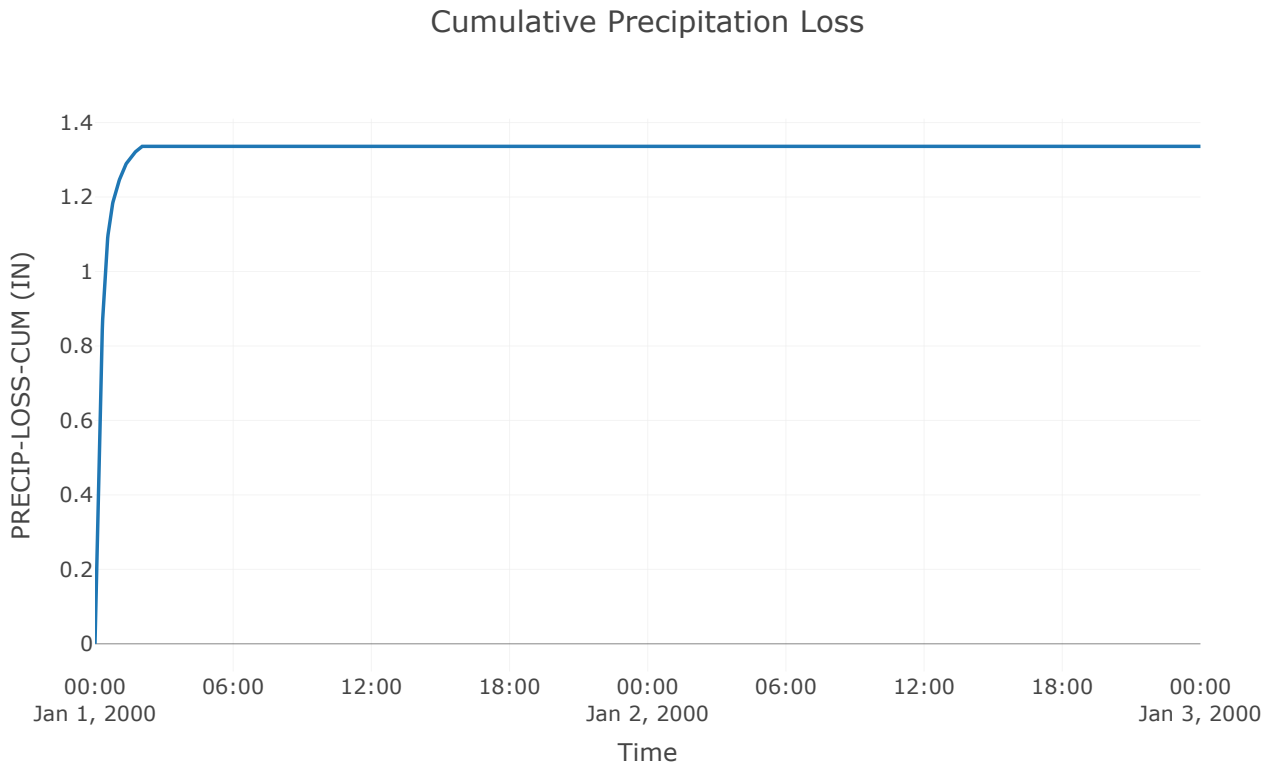


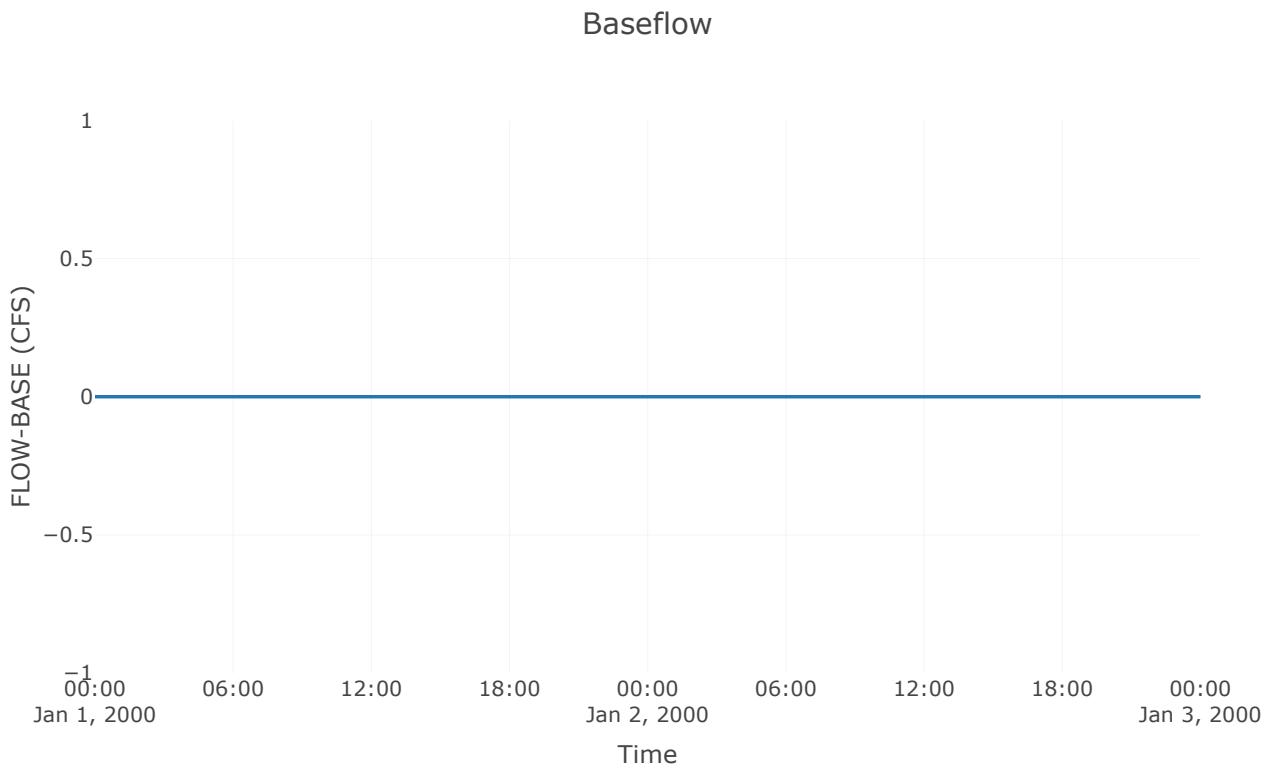
Cumulative Excess Precipitation



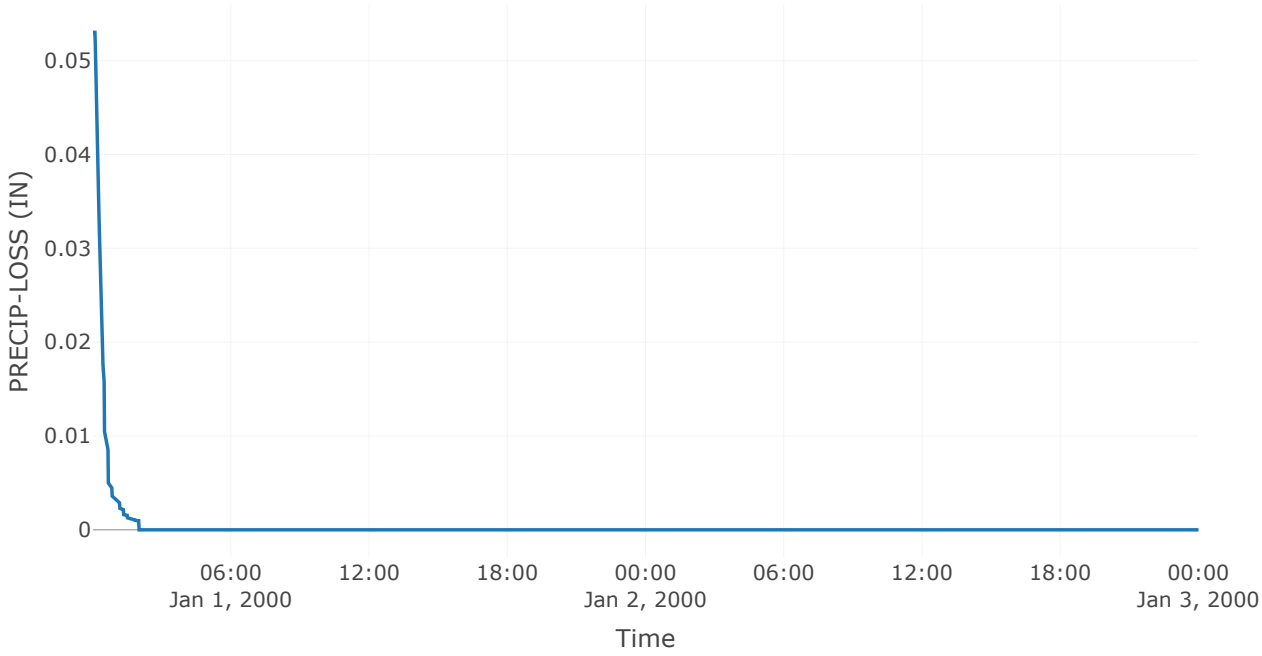

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

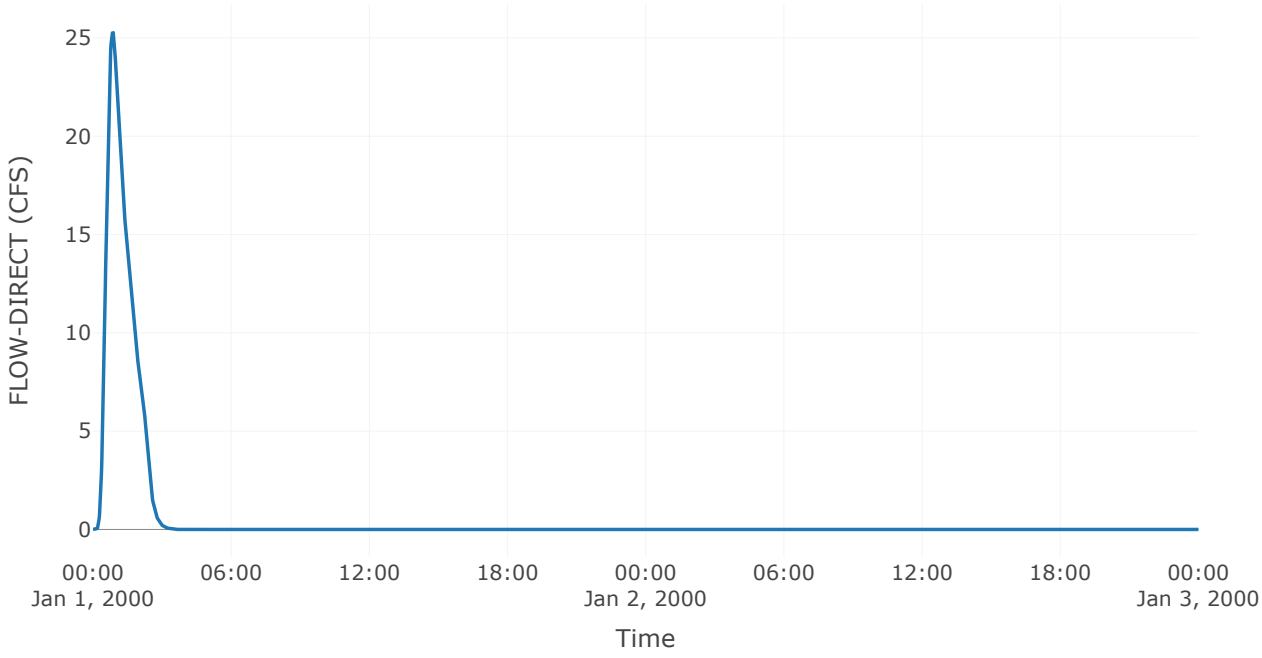

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

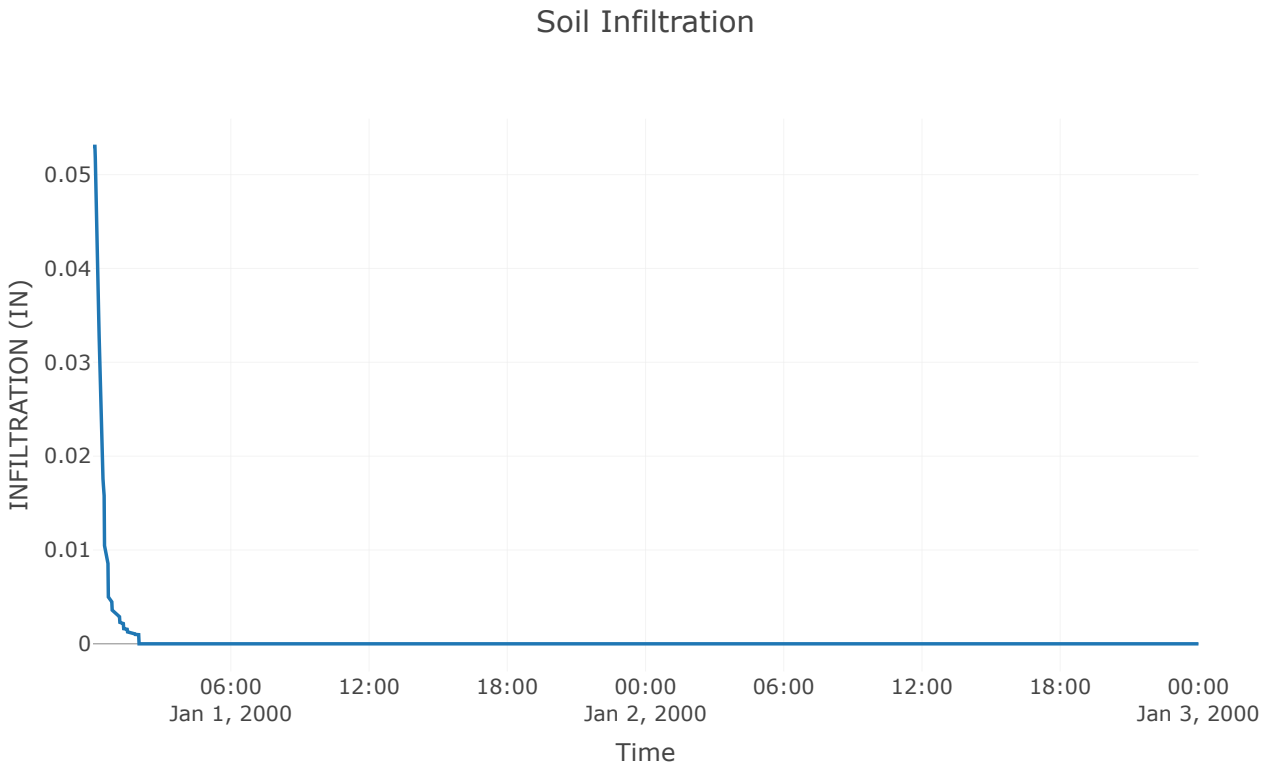

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

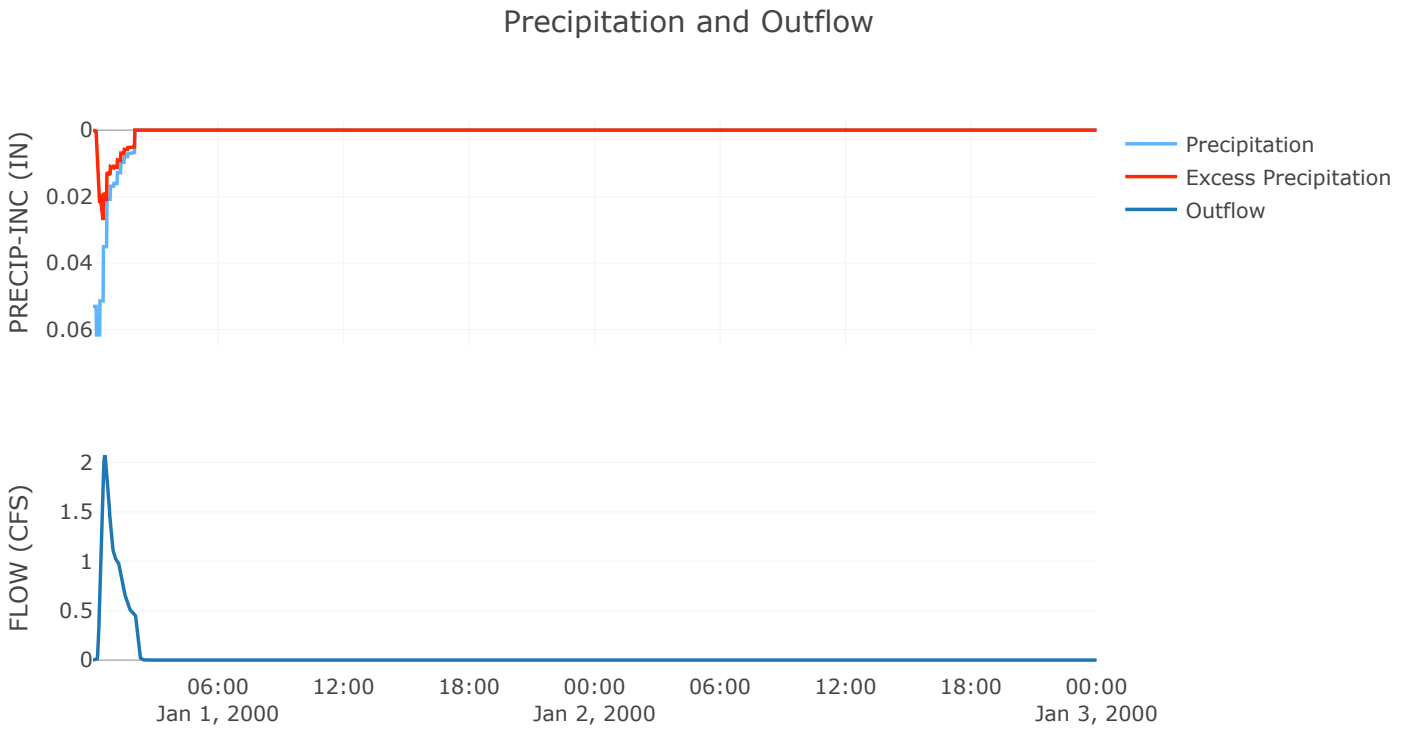
Subbasin: Off-Site Trib 1 South

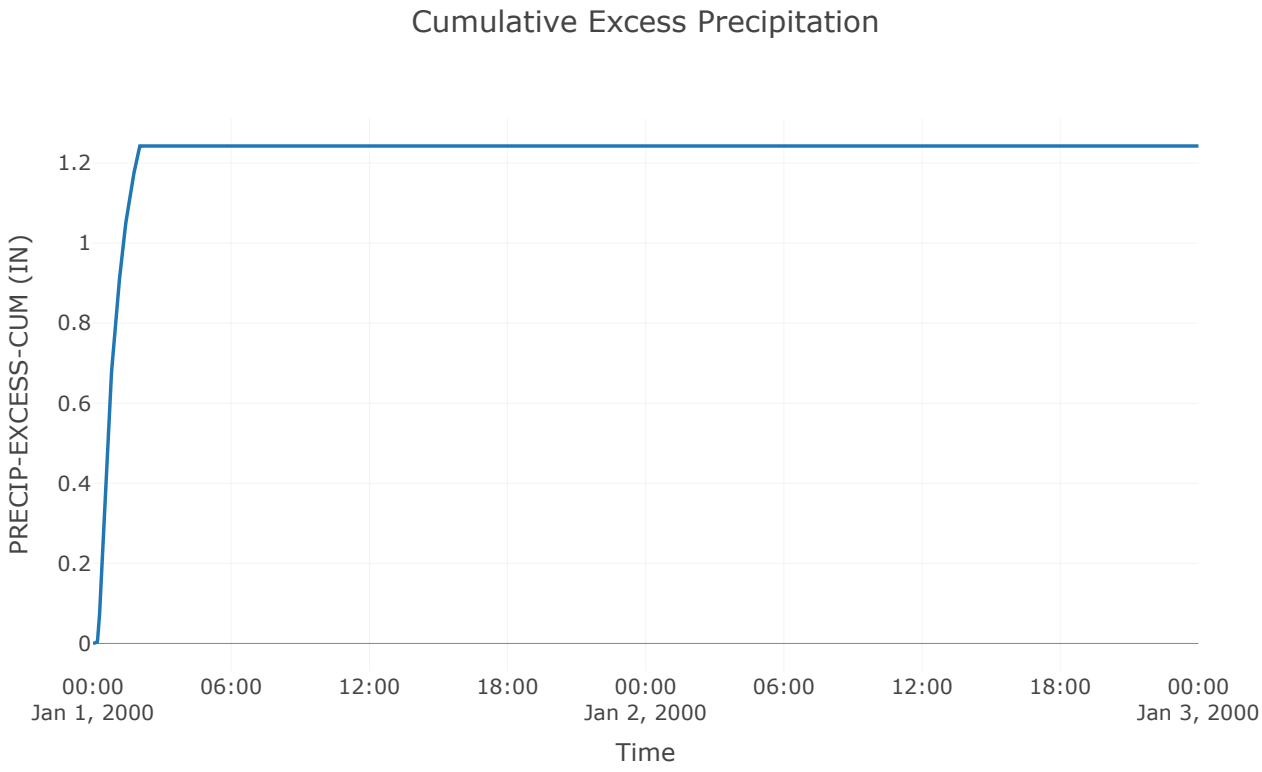
Area (MI2) : 0
Downstream : Basin 1

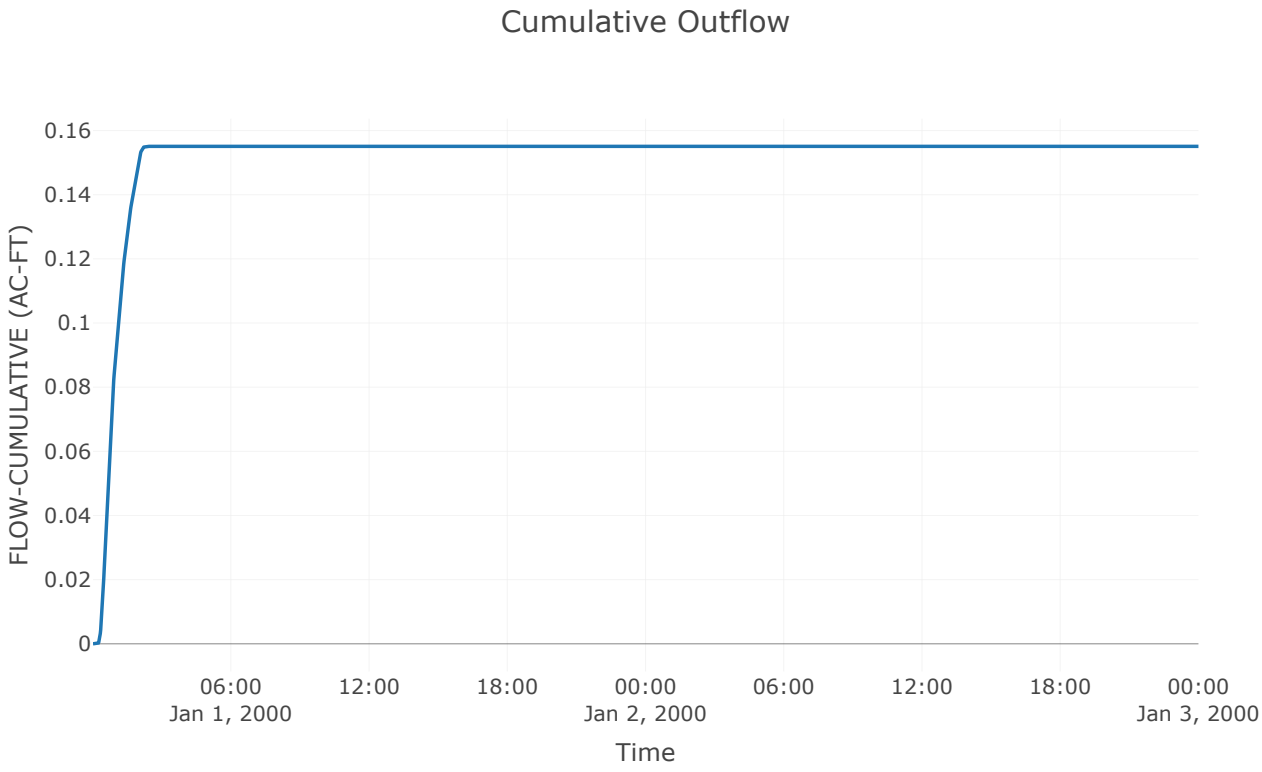
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

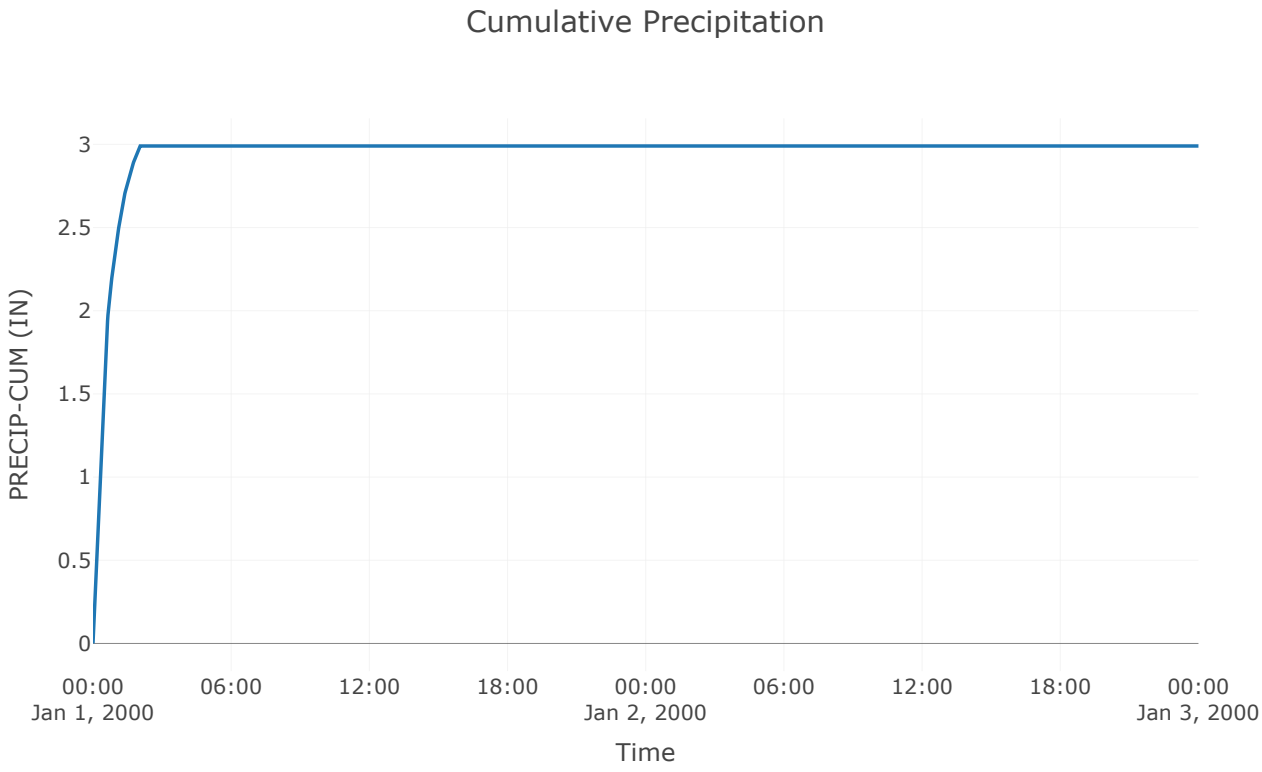
Transform: Scs	
Lag	6
Unitgraph Type	Standard

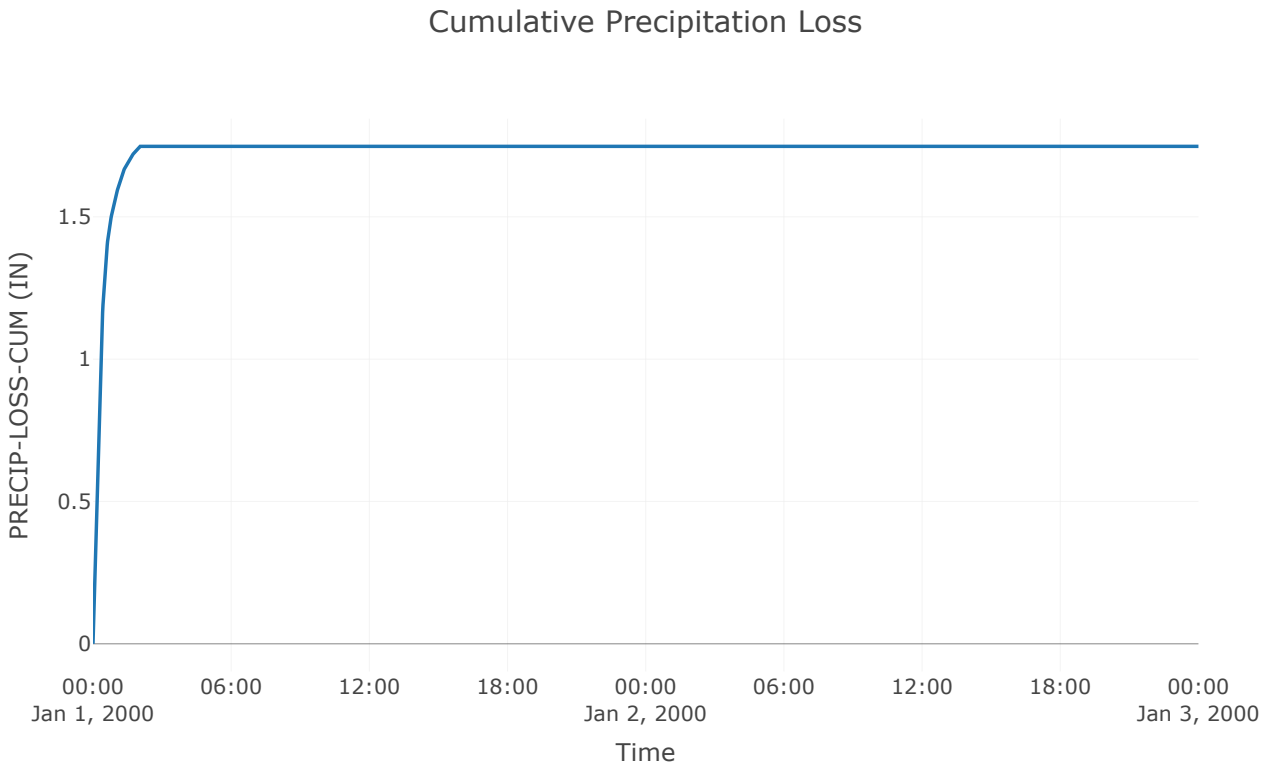
Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

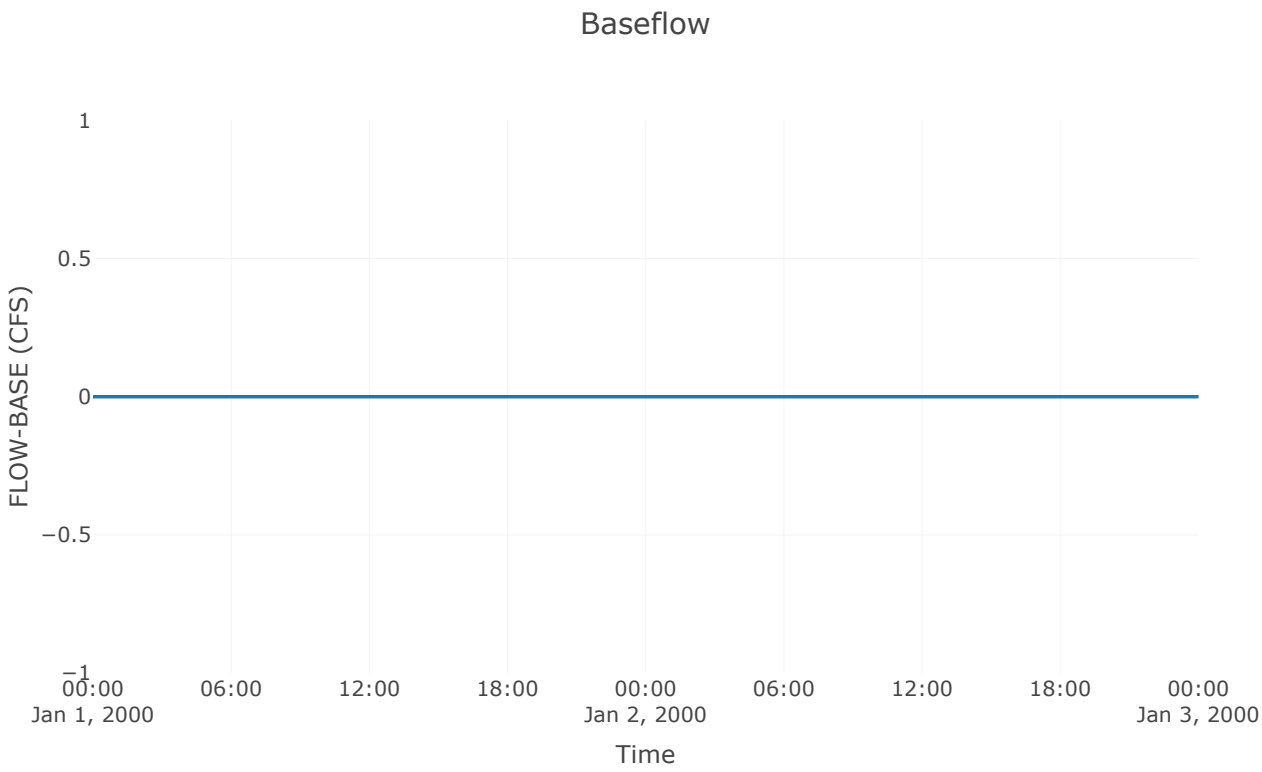

Precipitation and Outflow
PRECIP-INC (IN)
0
0.02
0.04
0.06
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
2
1.5
1
0.5
0
06:00
12:00
18:00
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000


Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

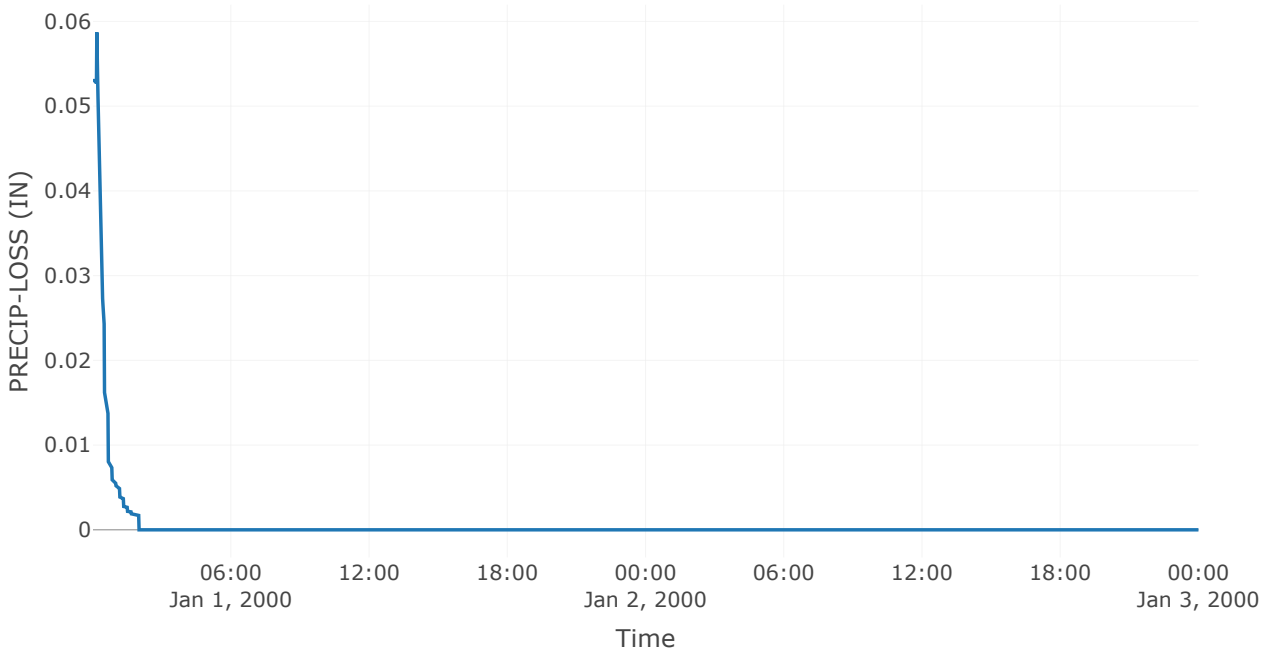

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

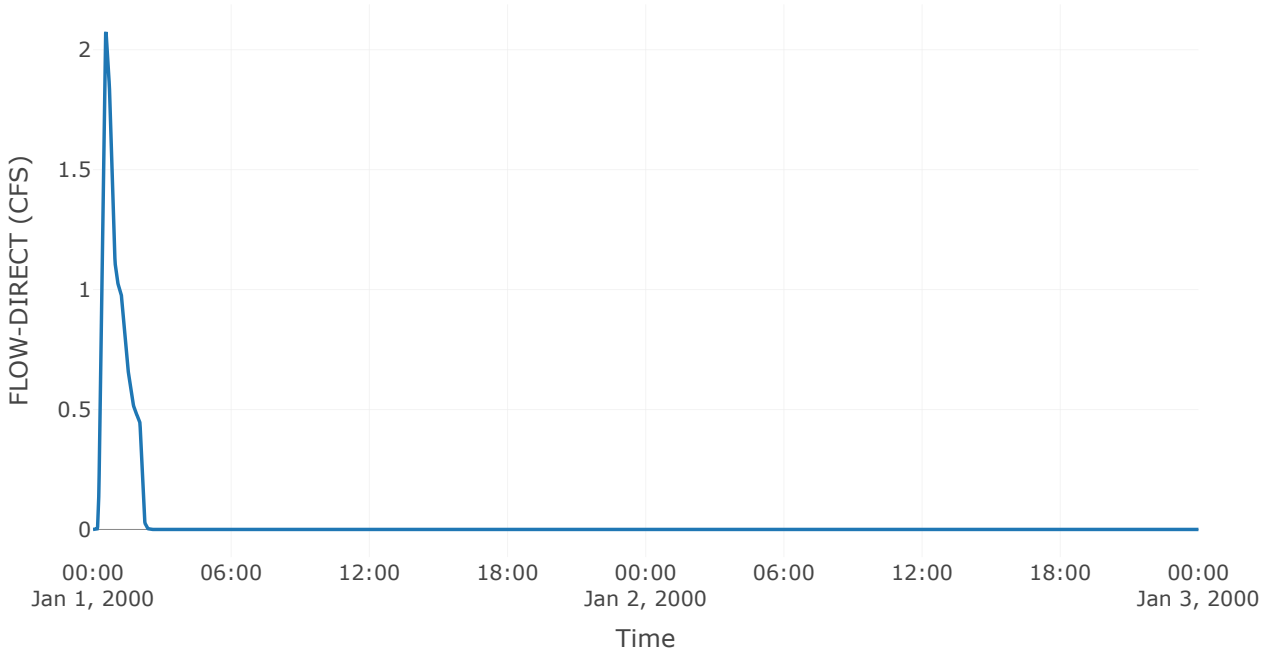

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

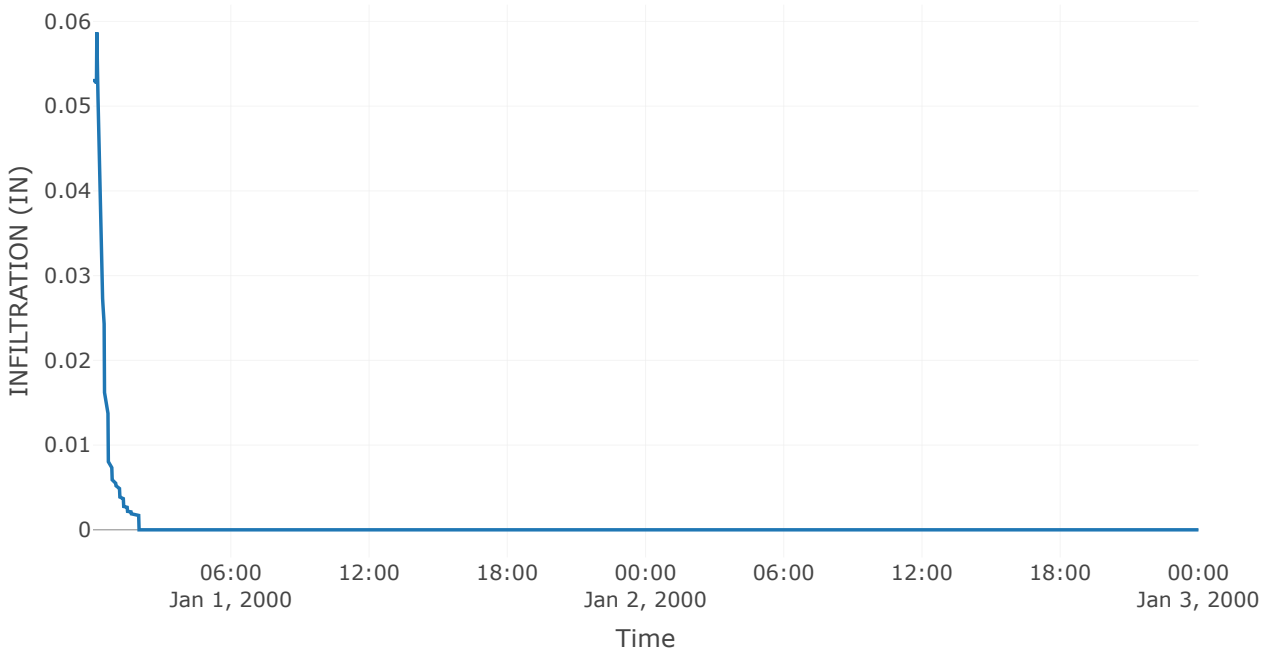

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

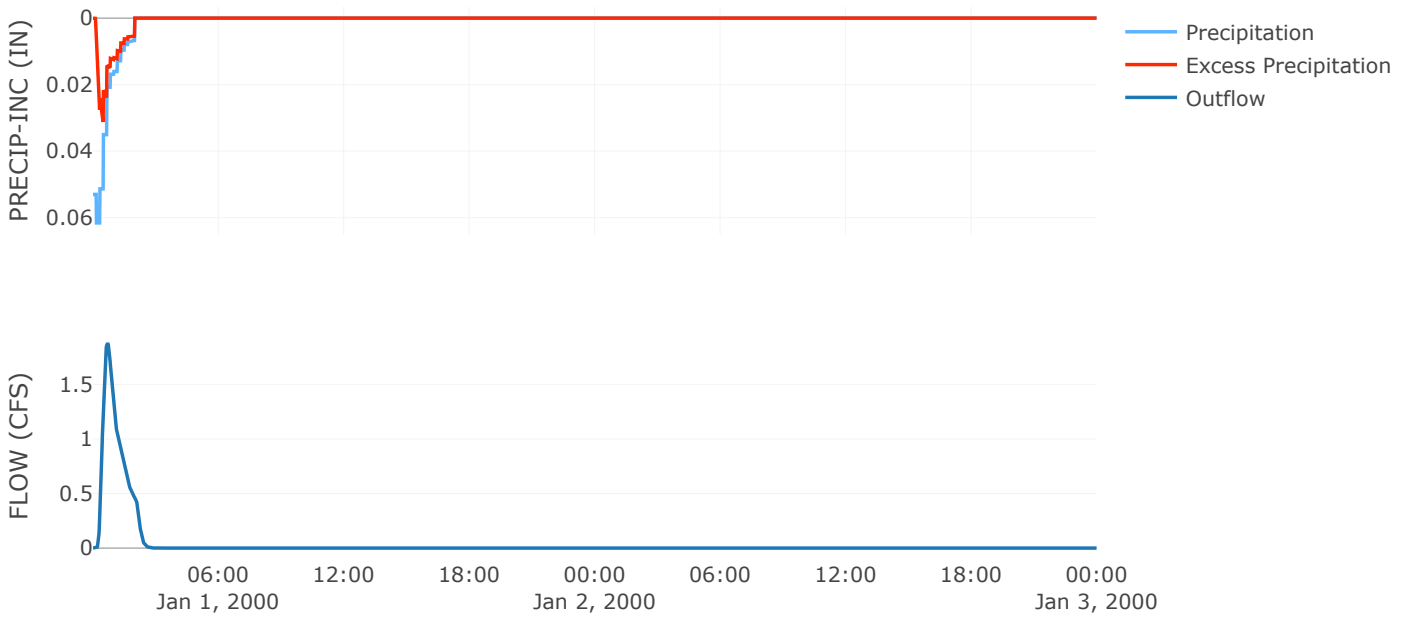
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

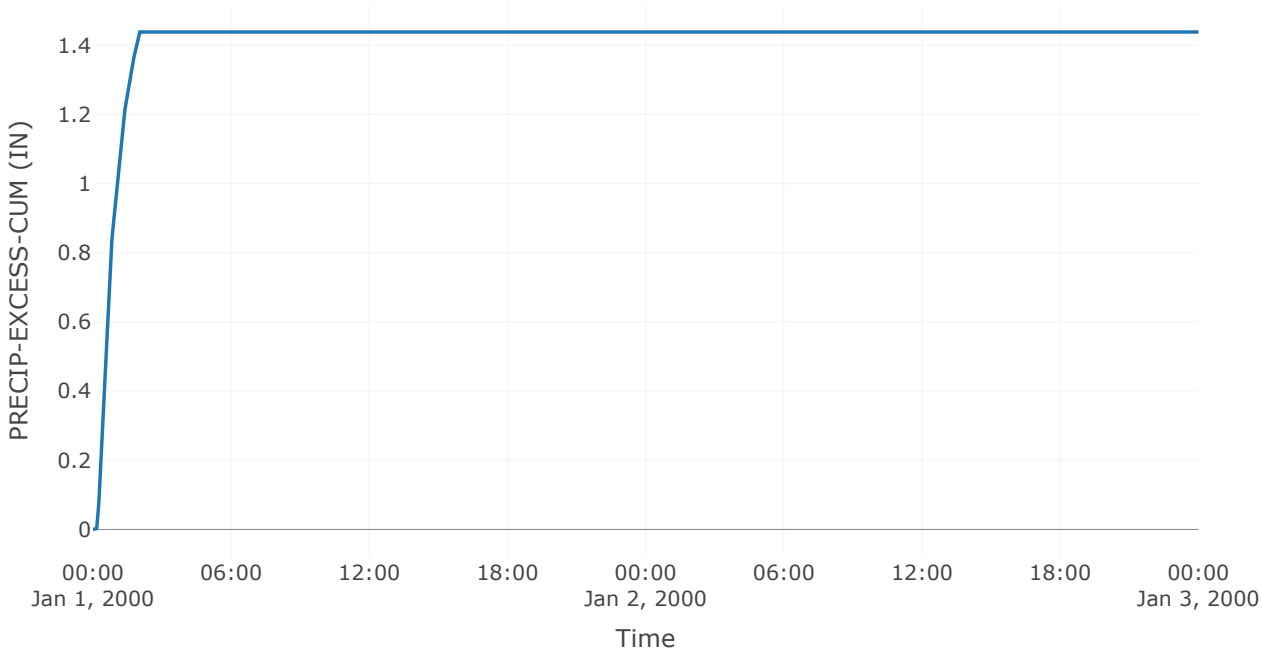
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

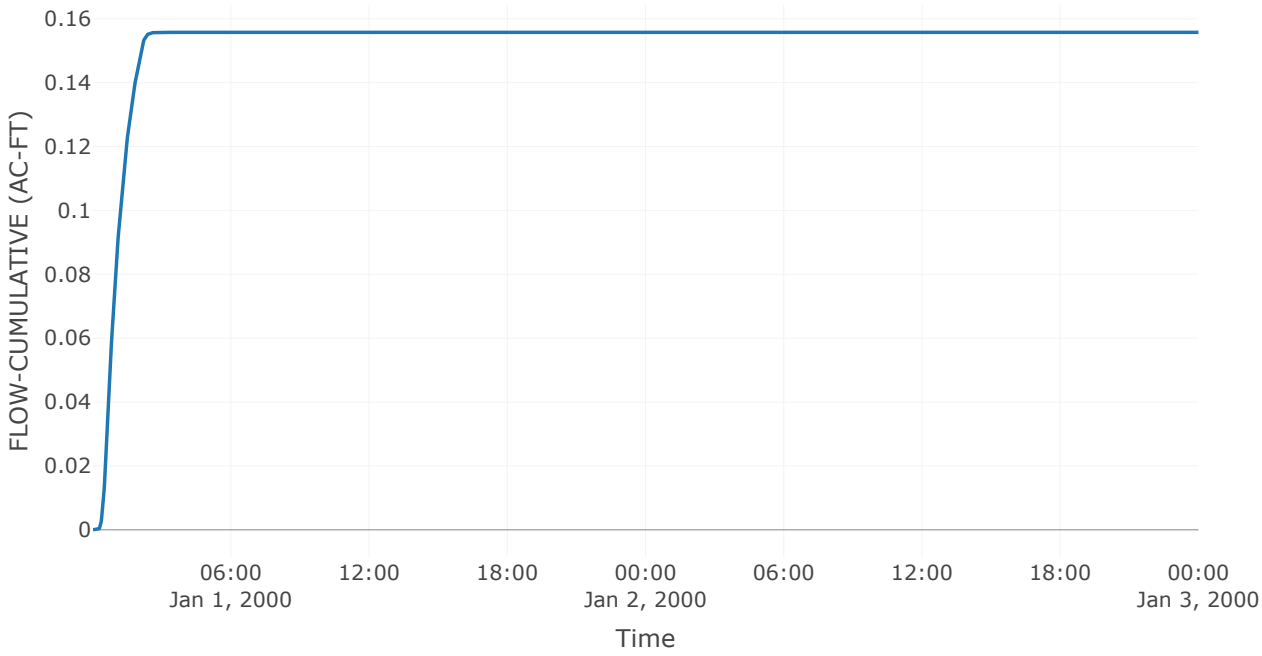
Precipitation and Outflow



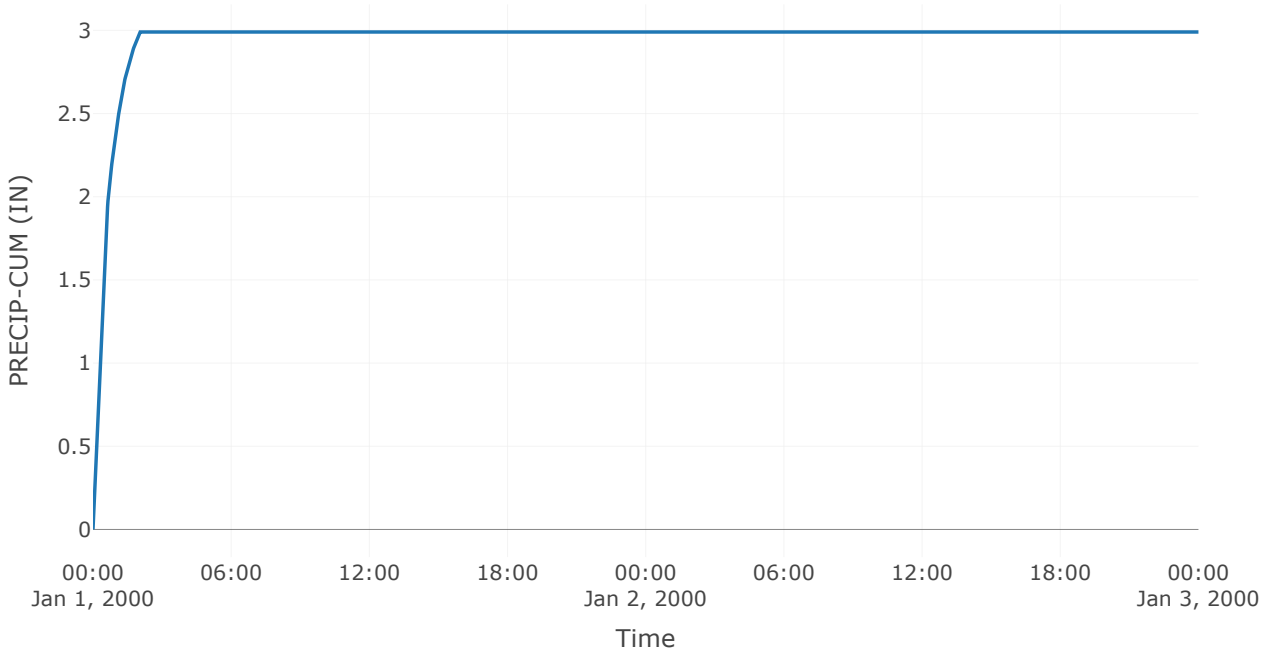
Cumulative Excess Precipitation

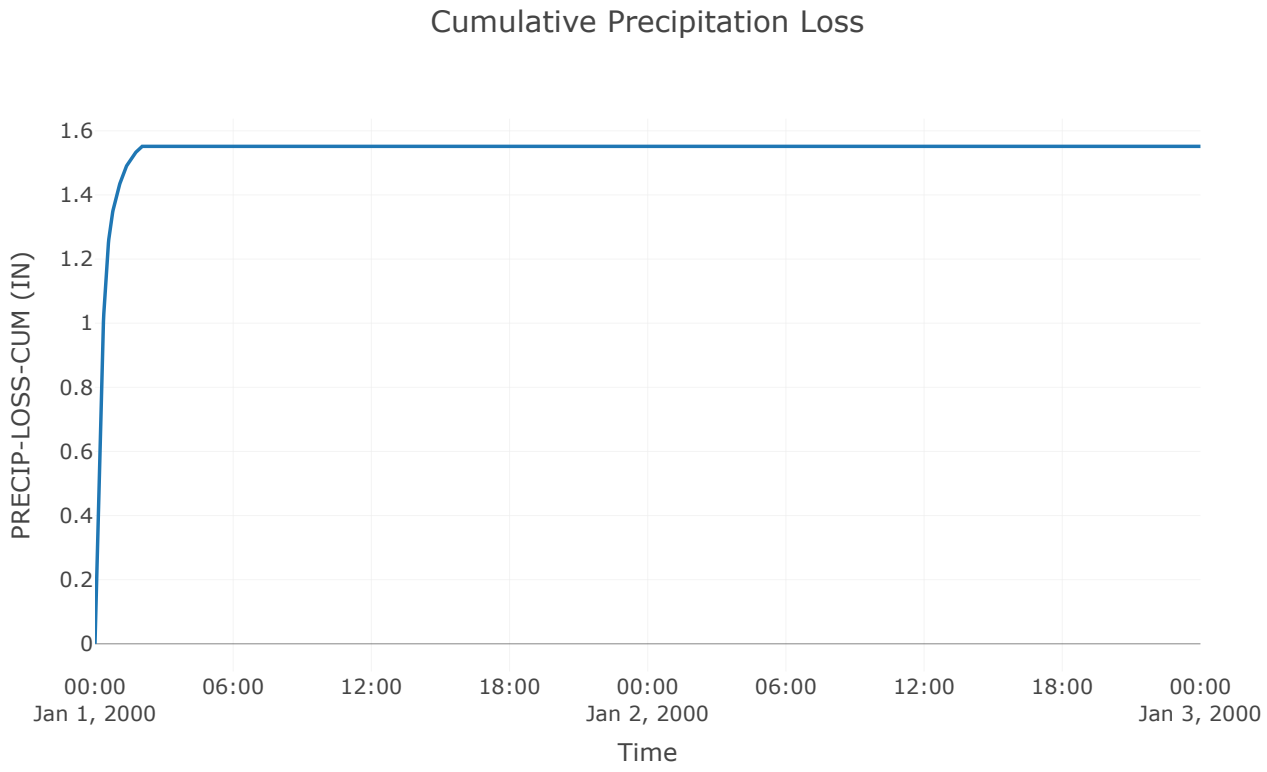


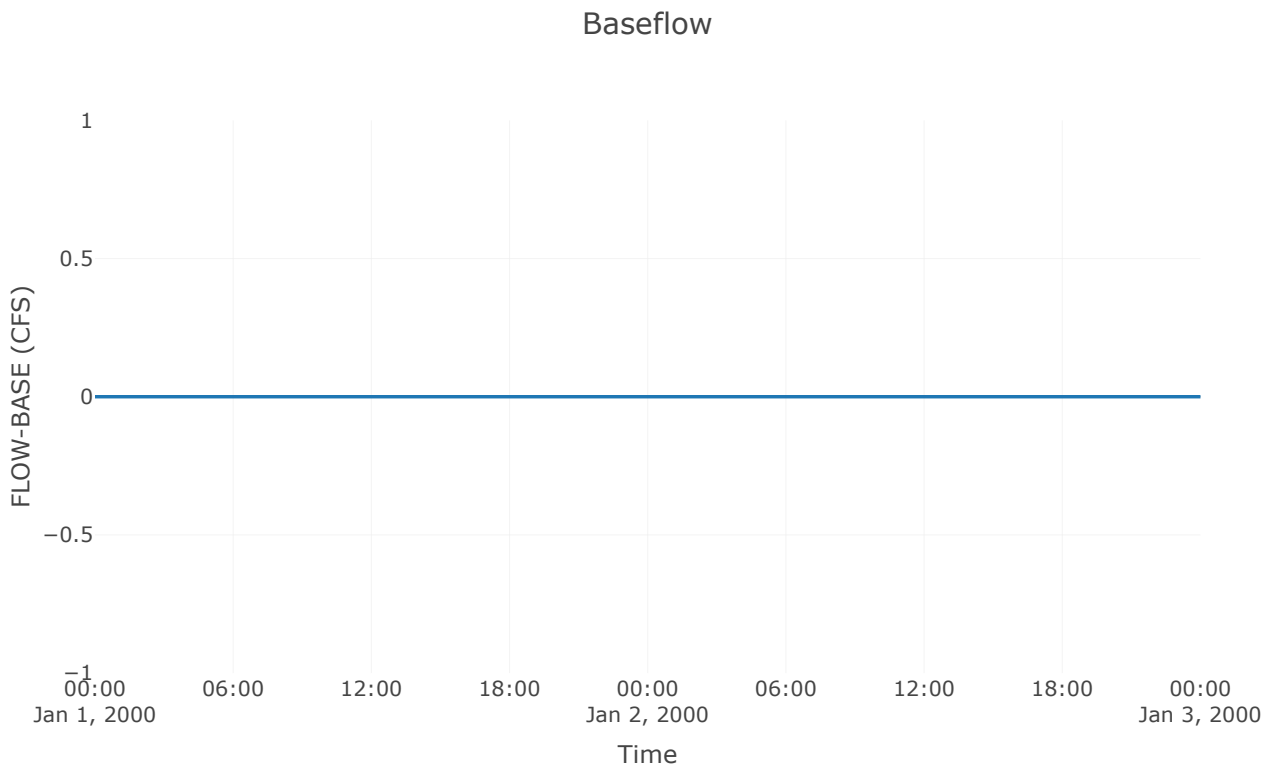
Cumulative Outflow

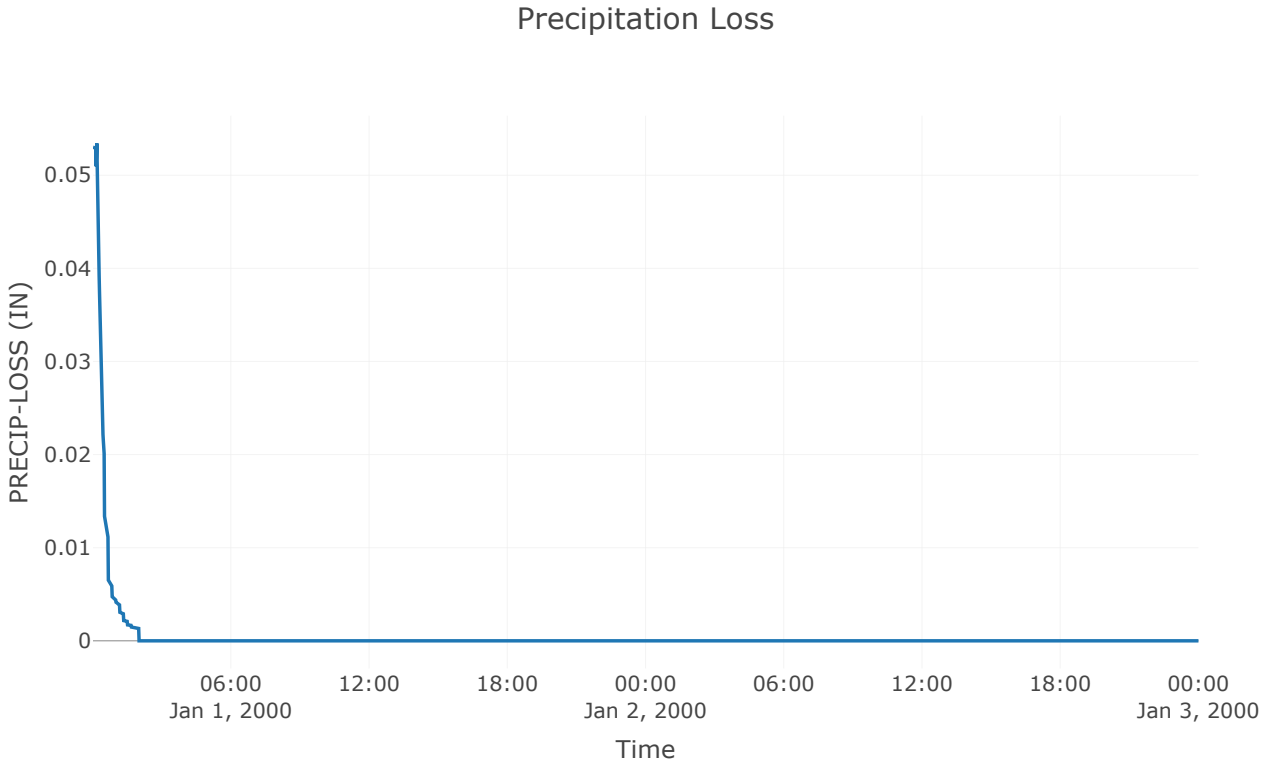


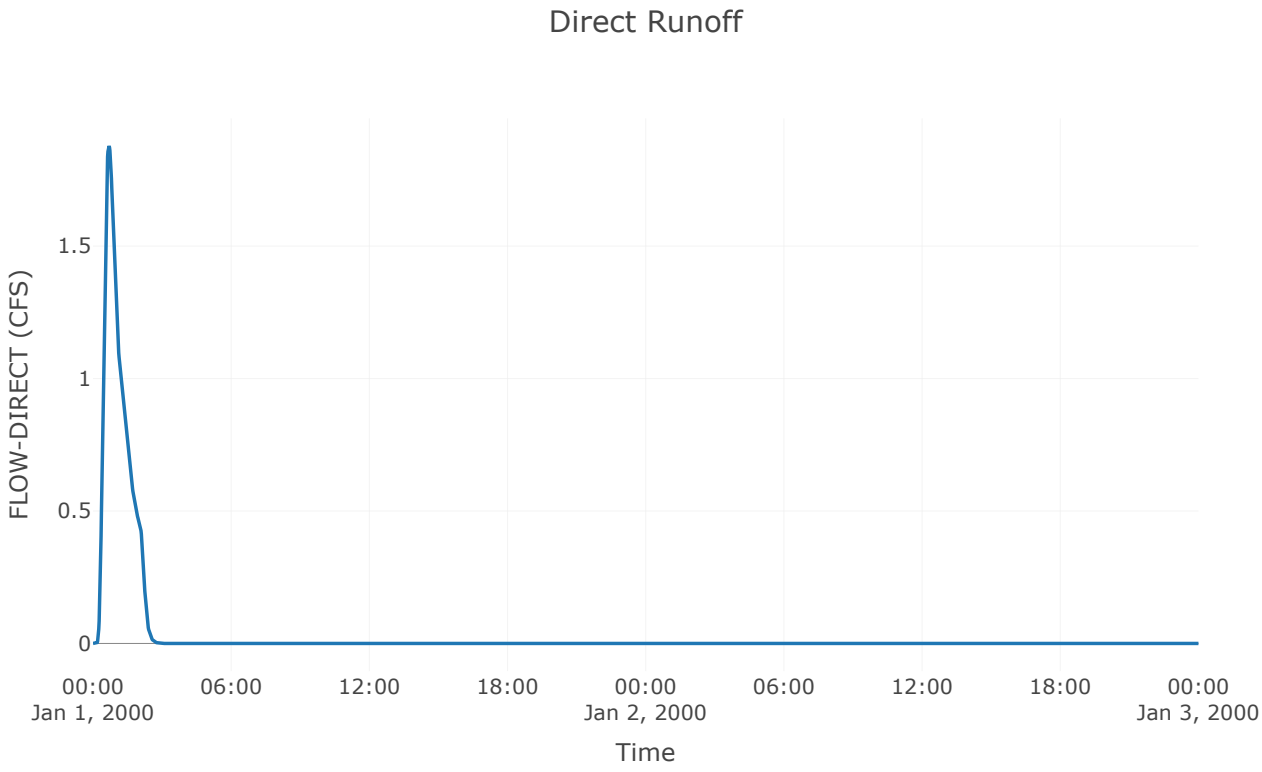
Cumulative Precipitation

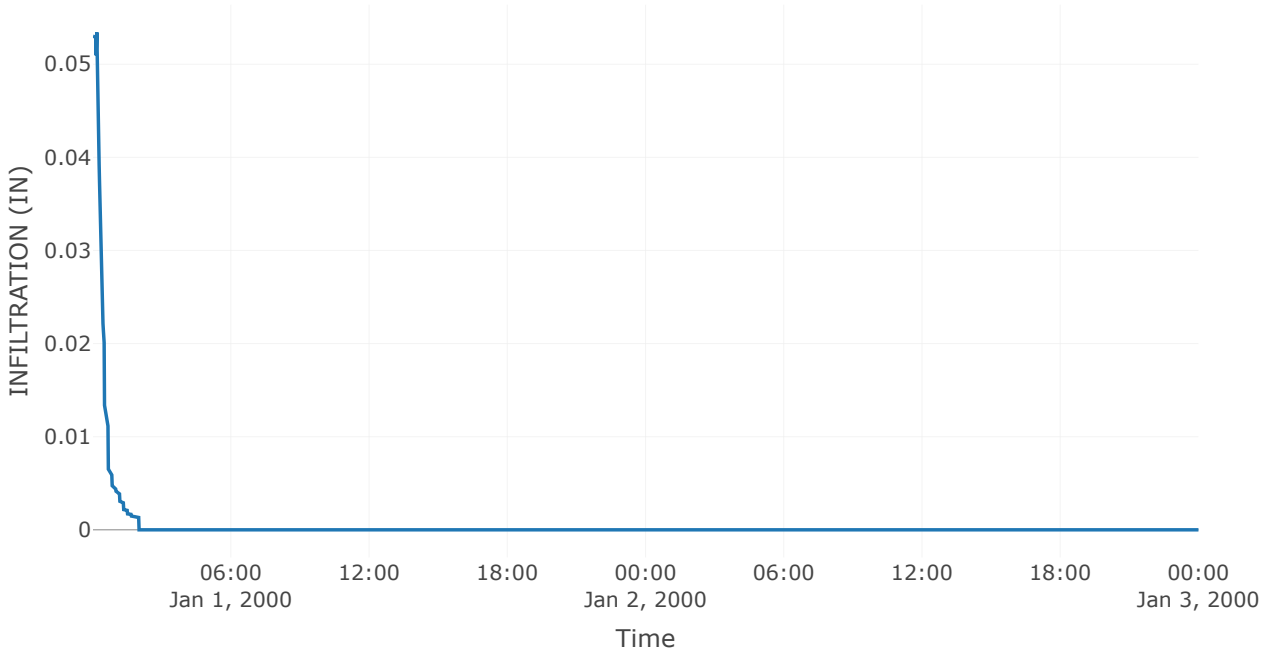



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

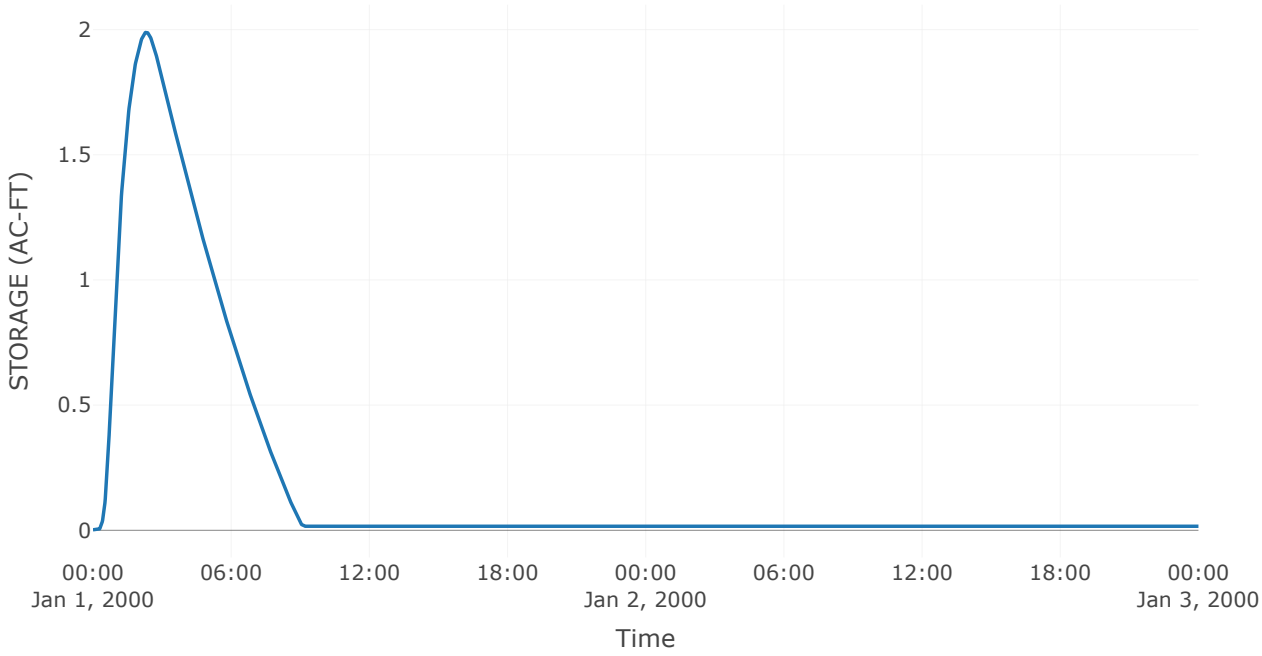

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

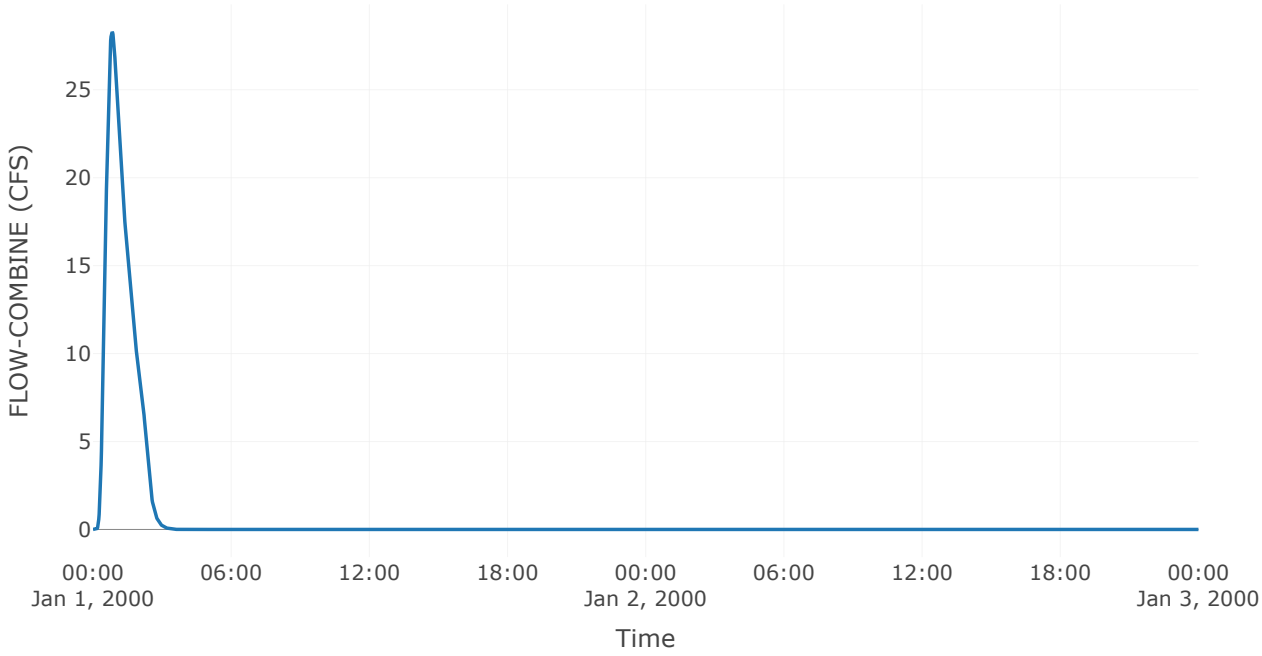
Downstream : Basin 2

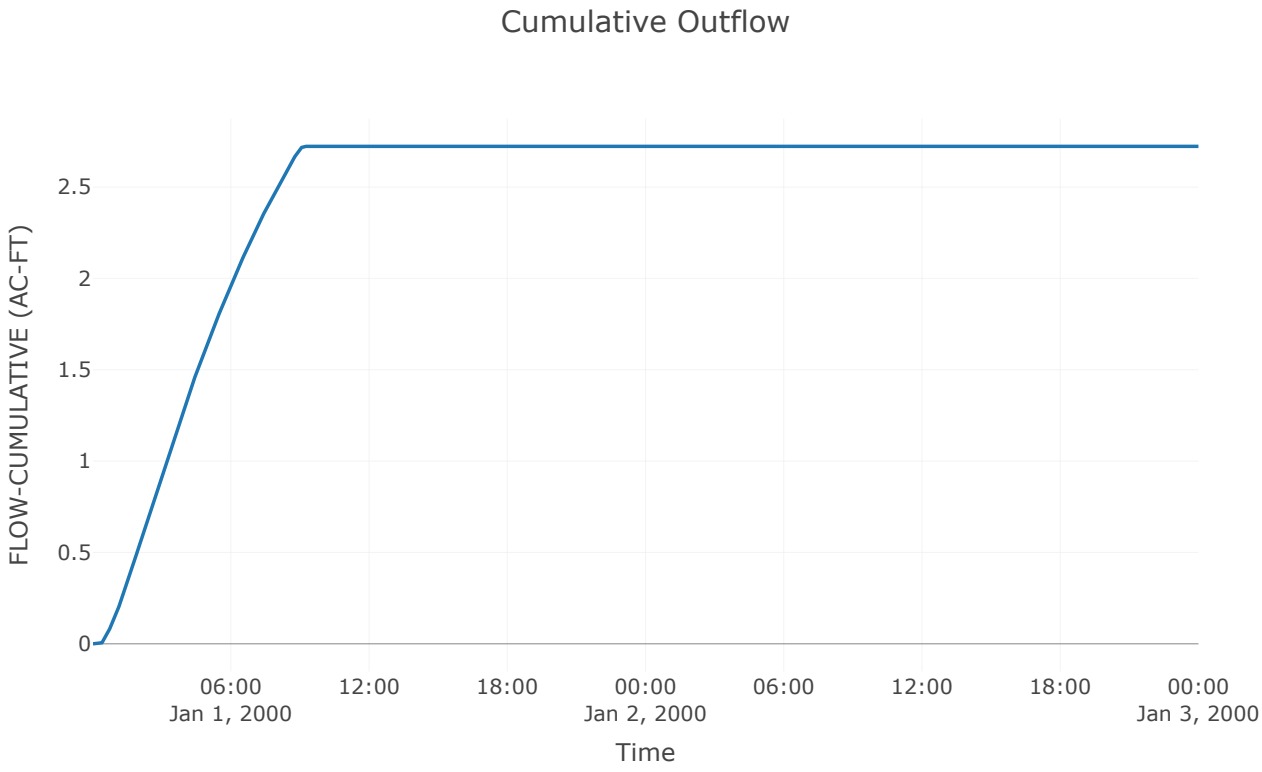
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

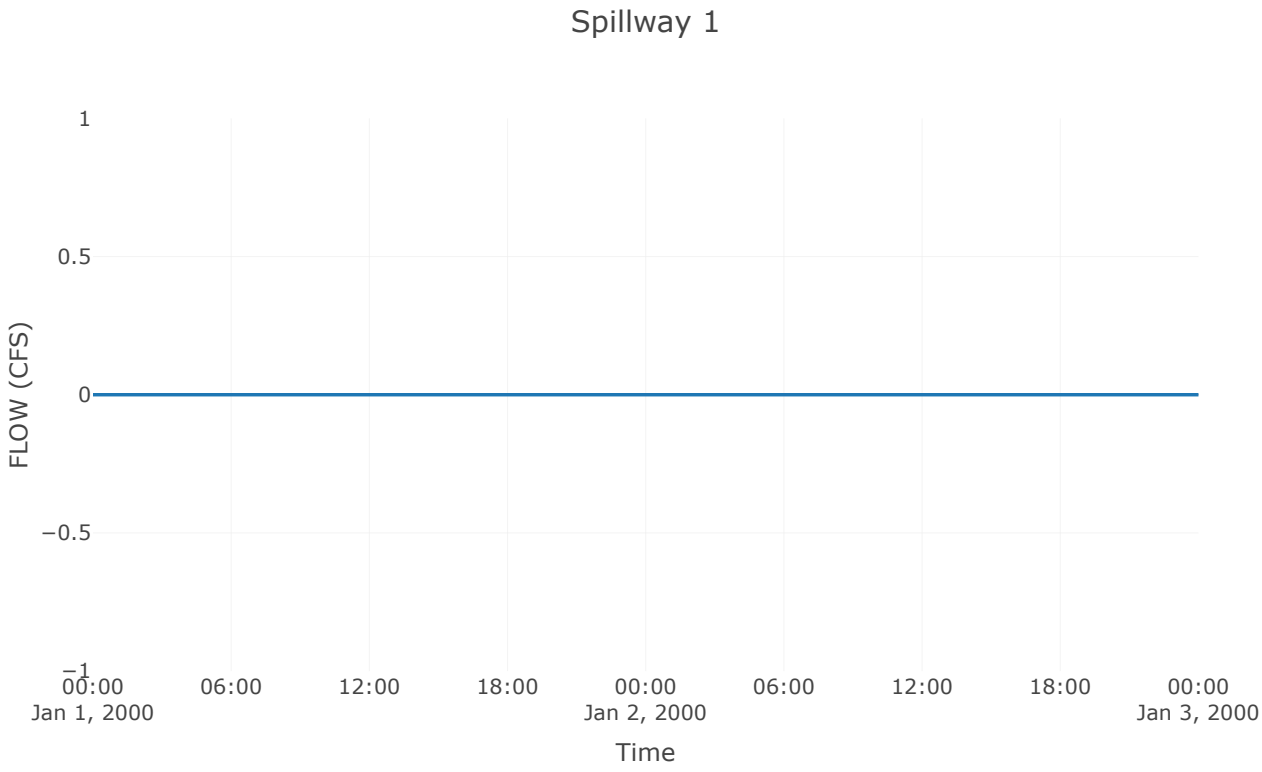
Storage



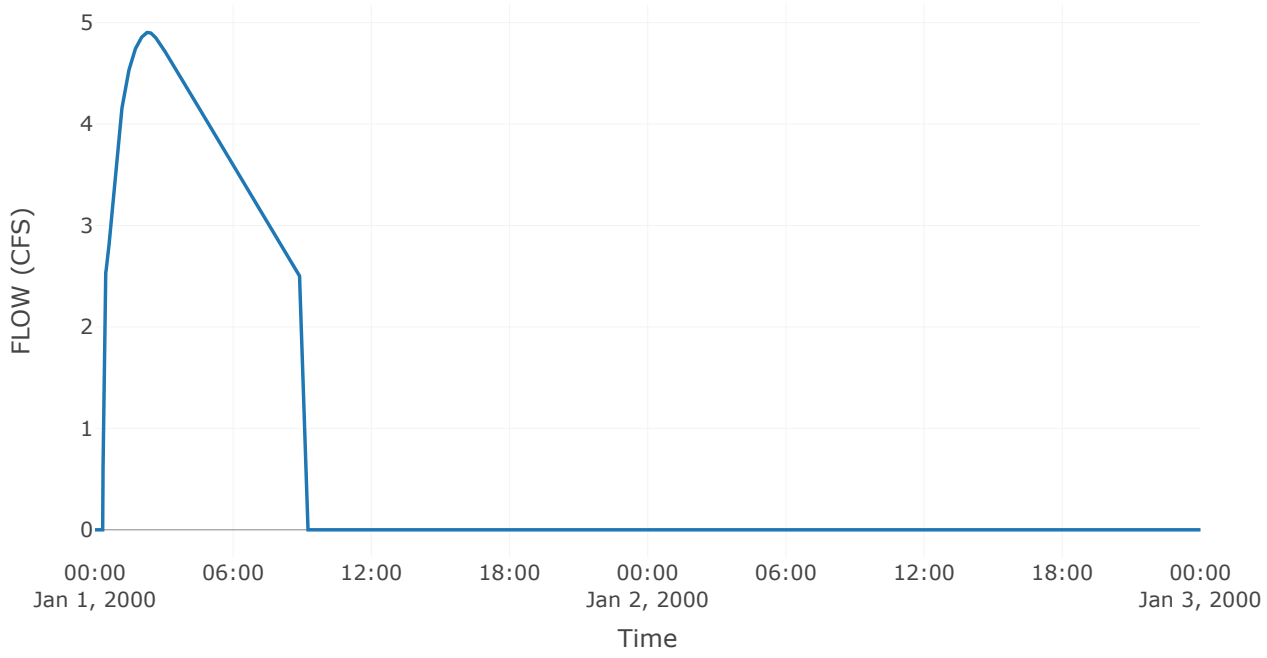
Combined Inflow



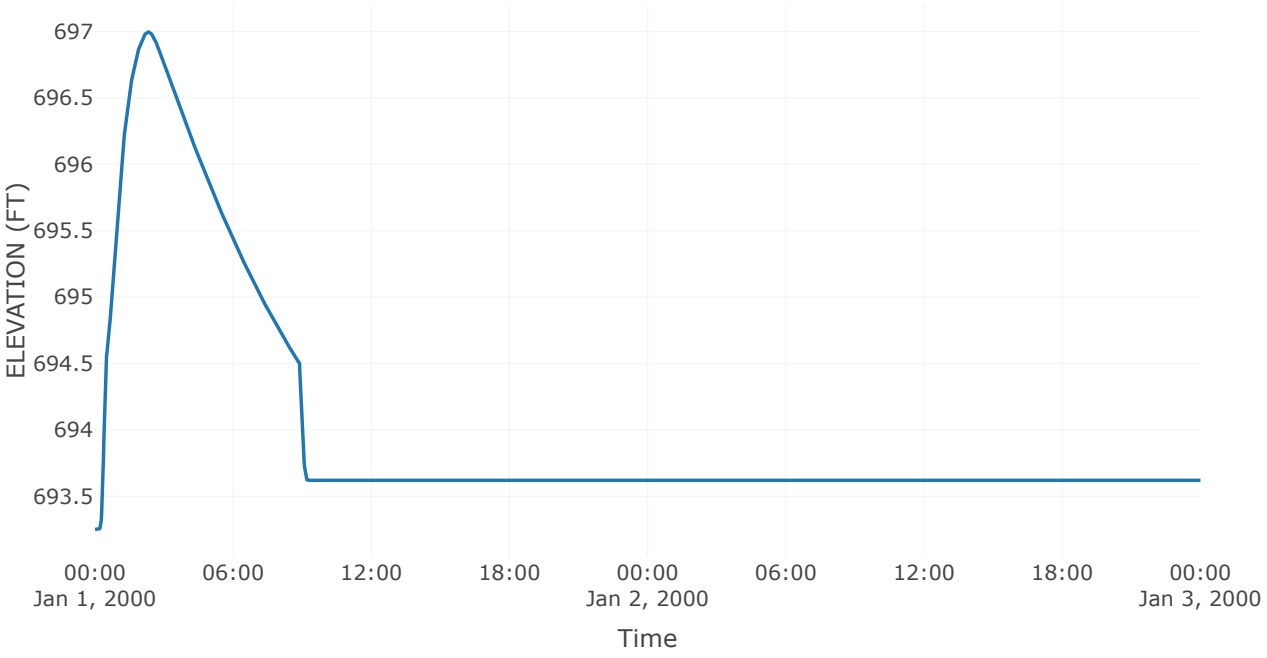

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

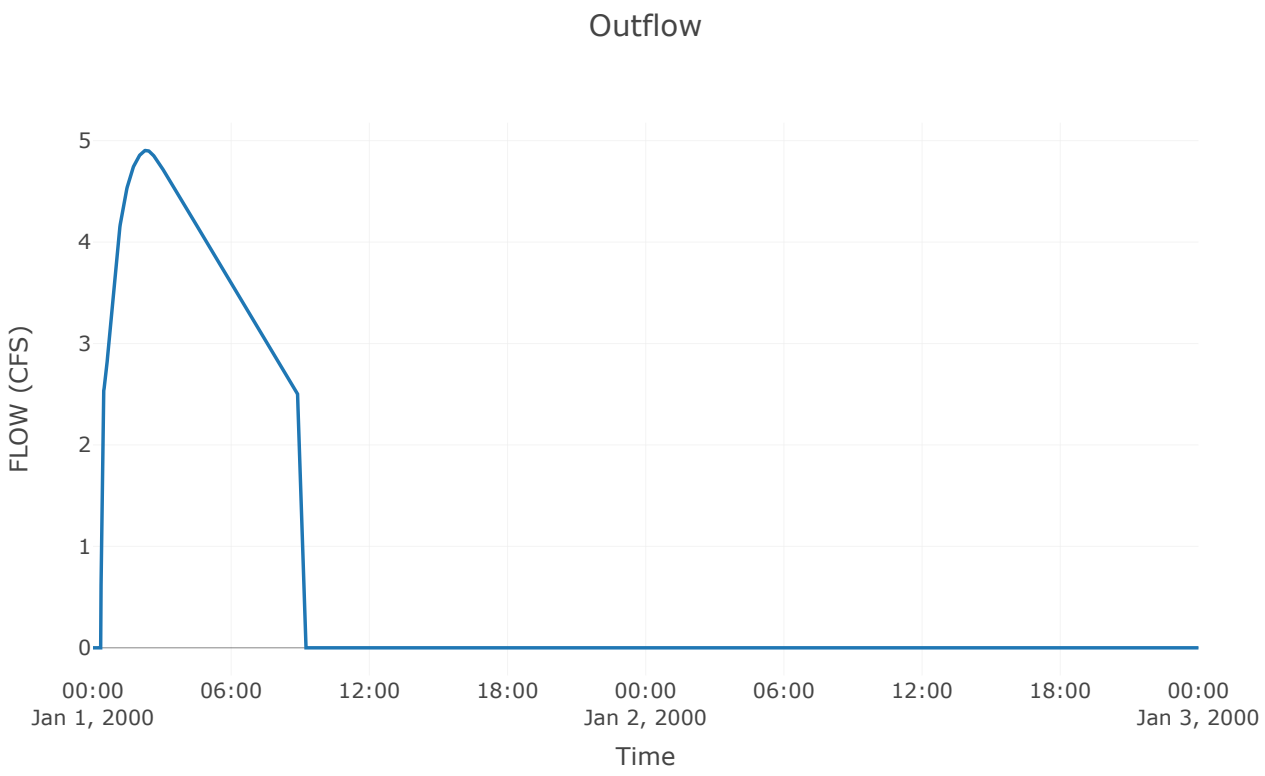

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

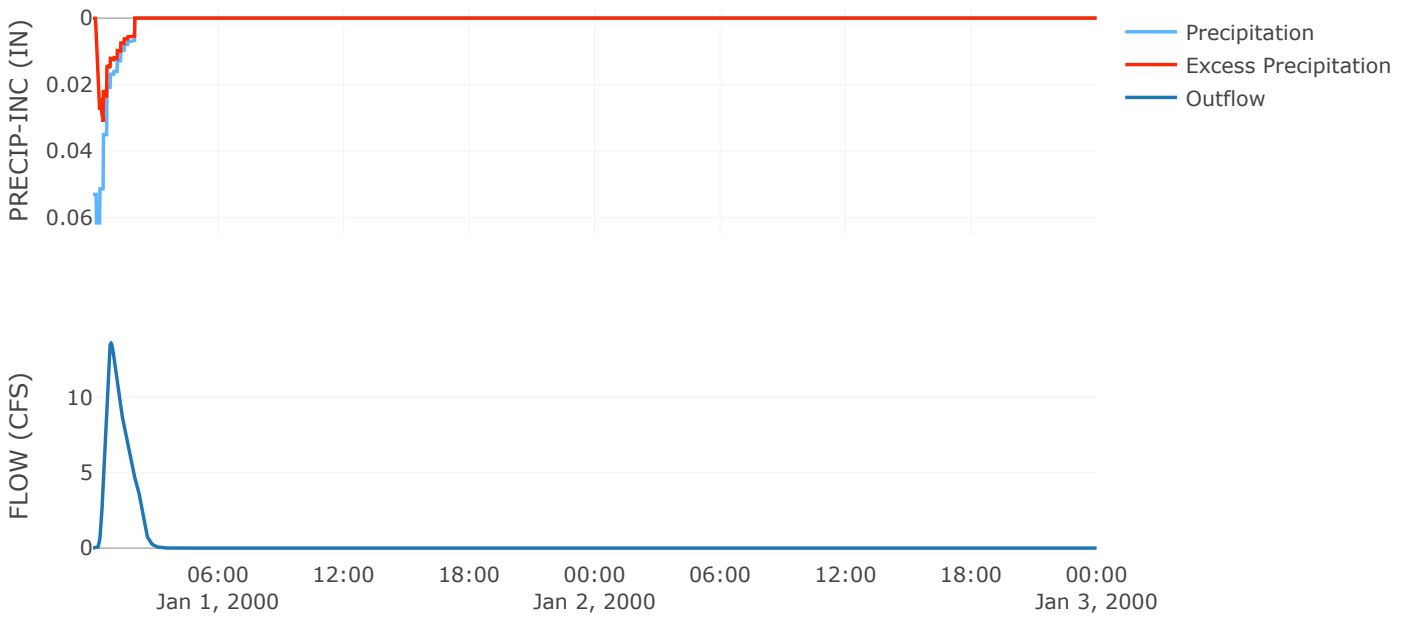
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

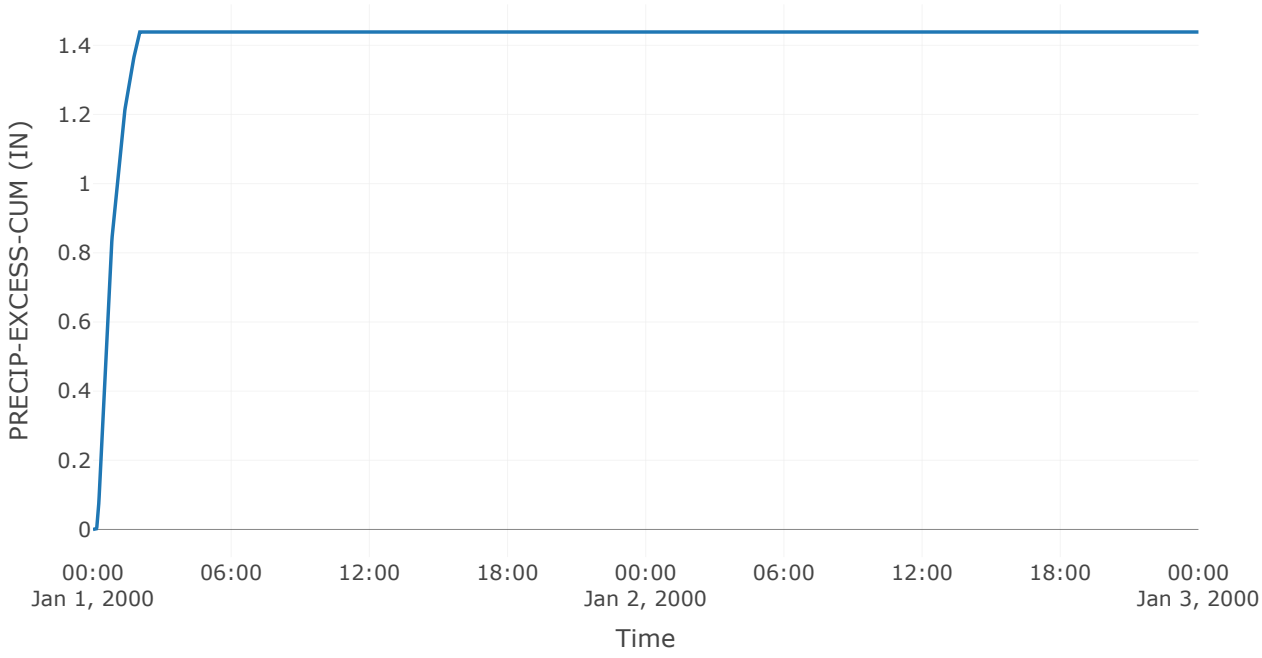
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

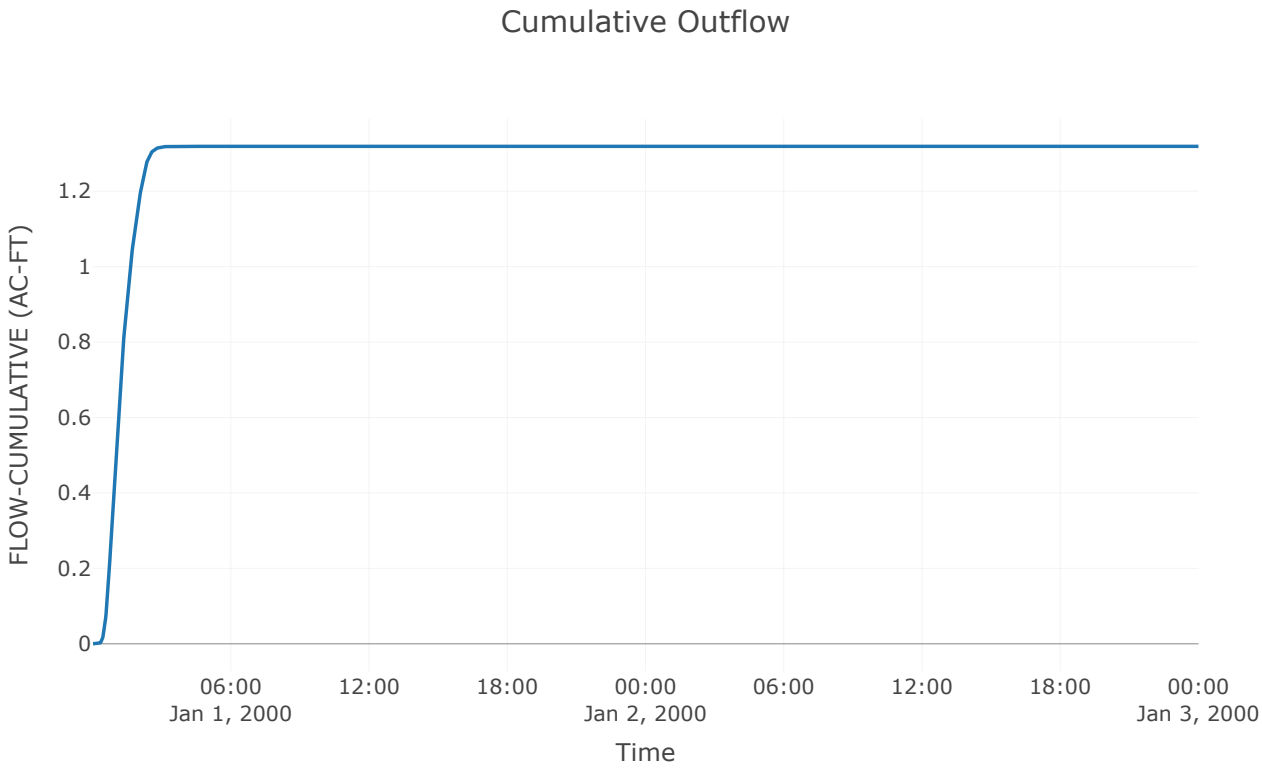
Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

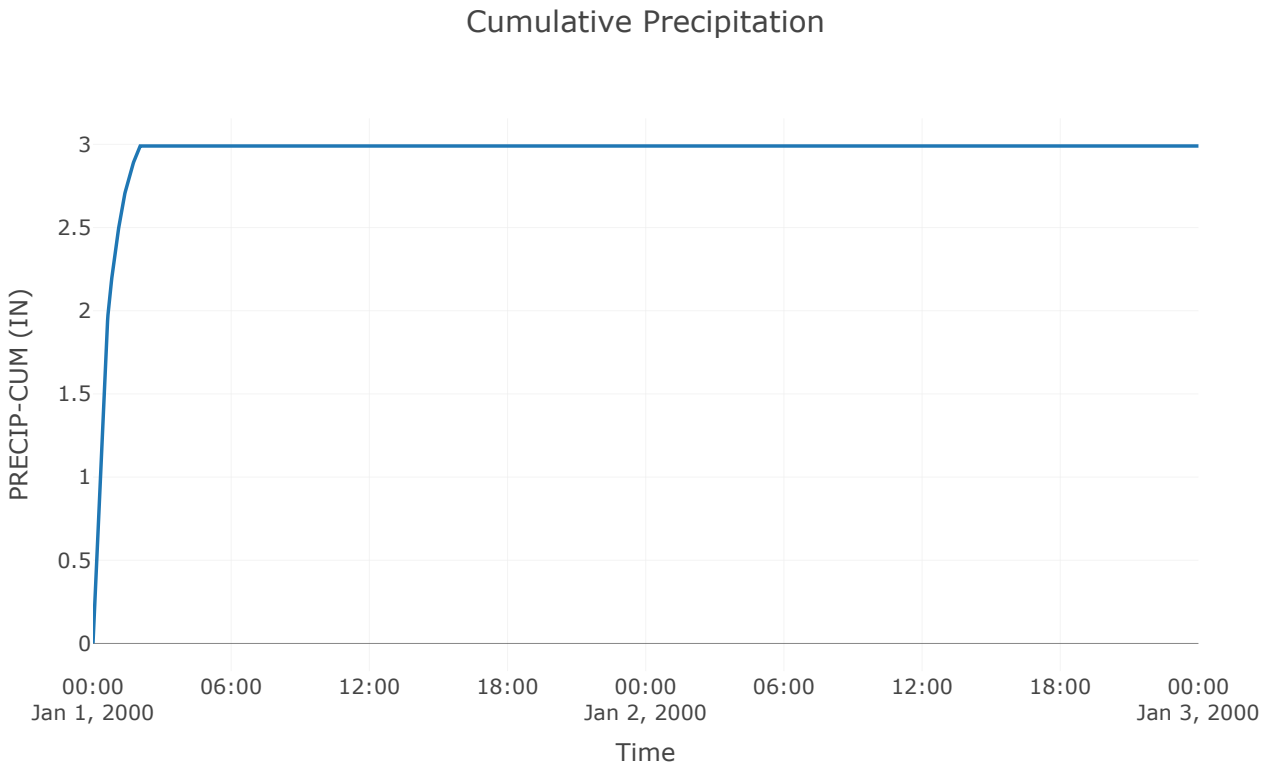
Precipitation and Outflow

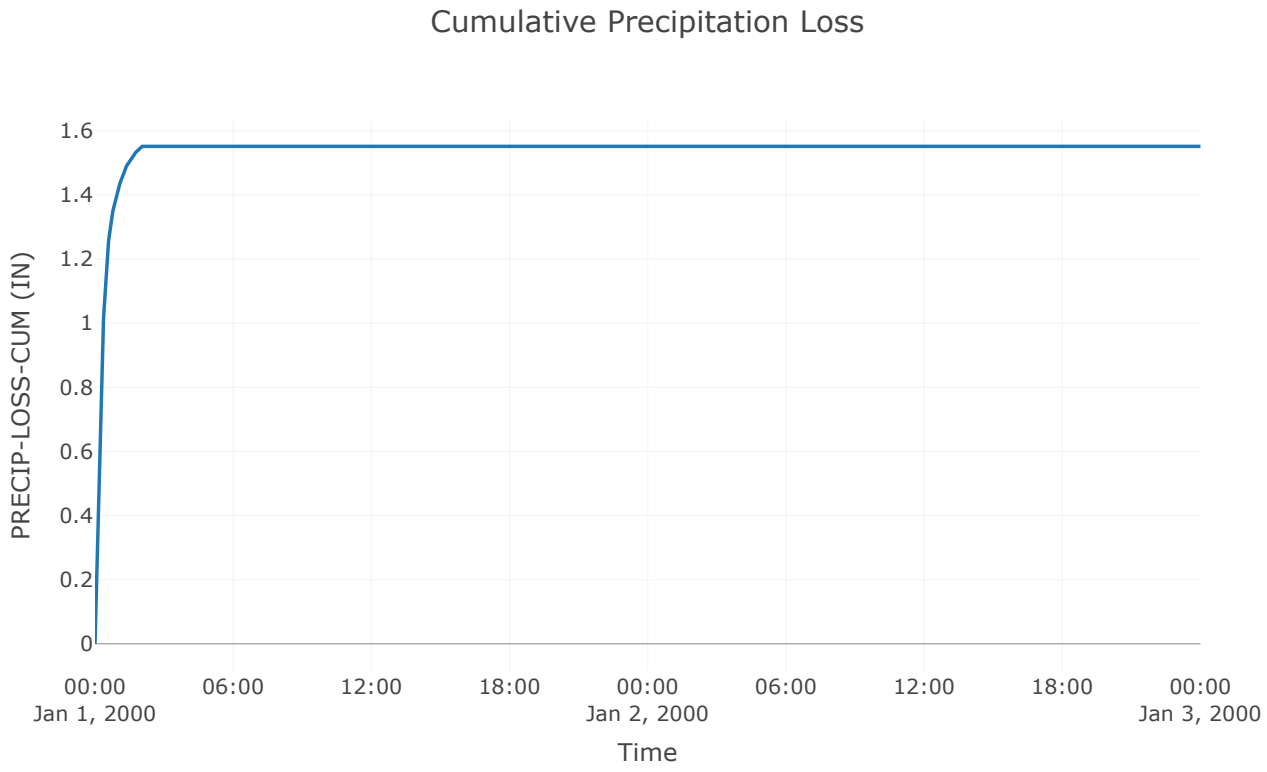


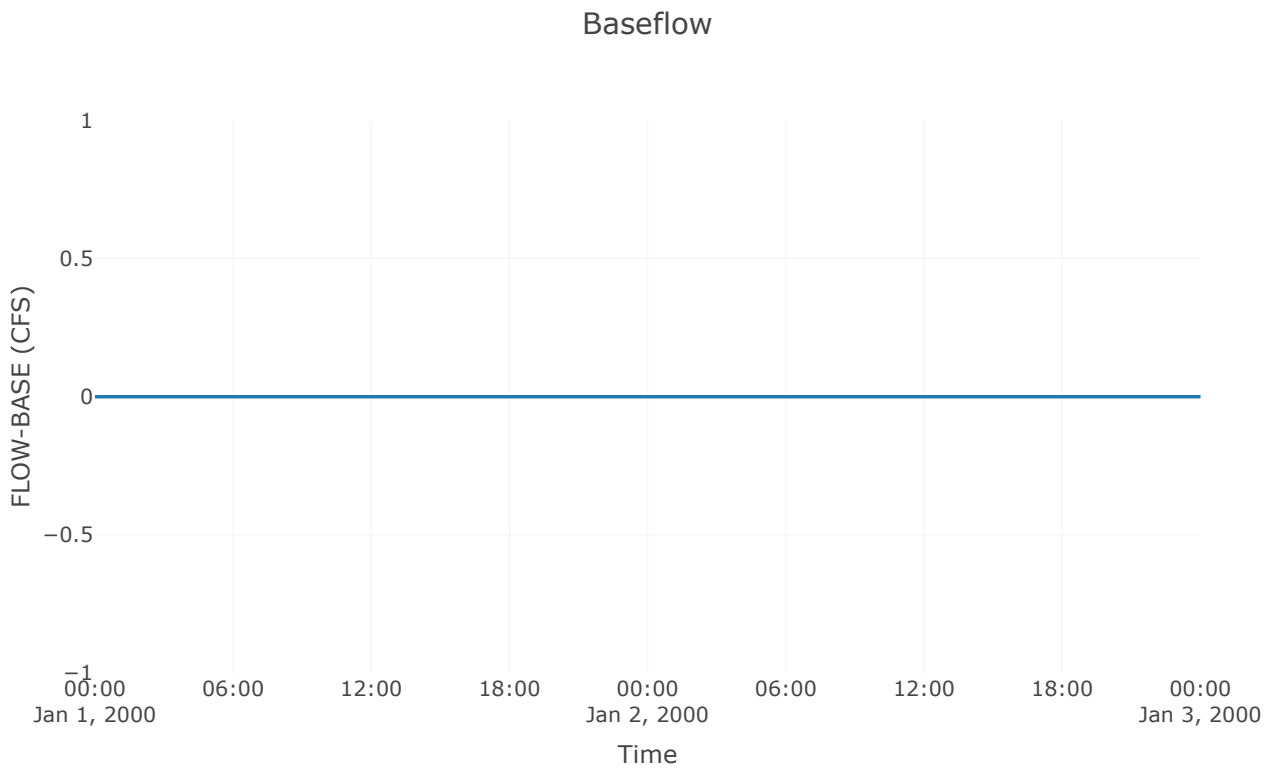
Cumulative Excess Precipitation



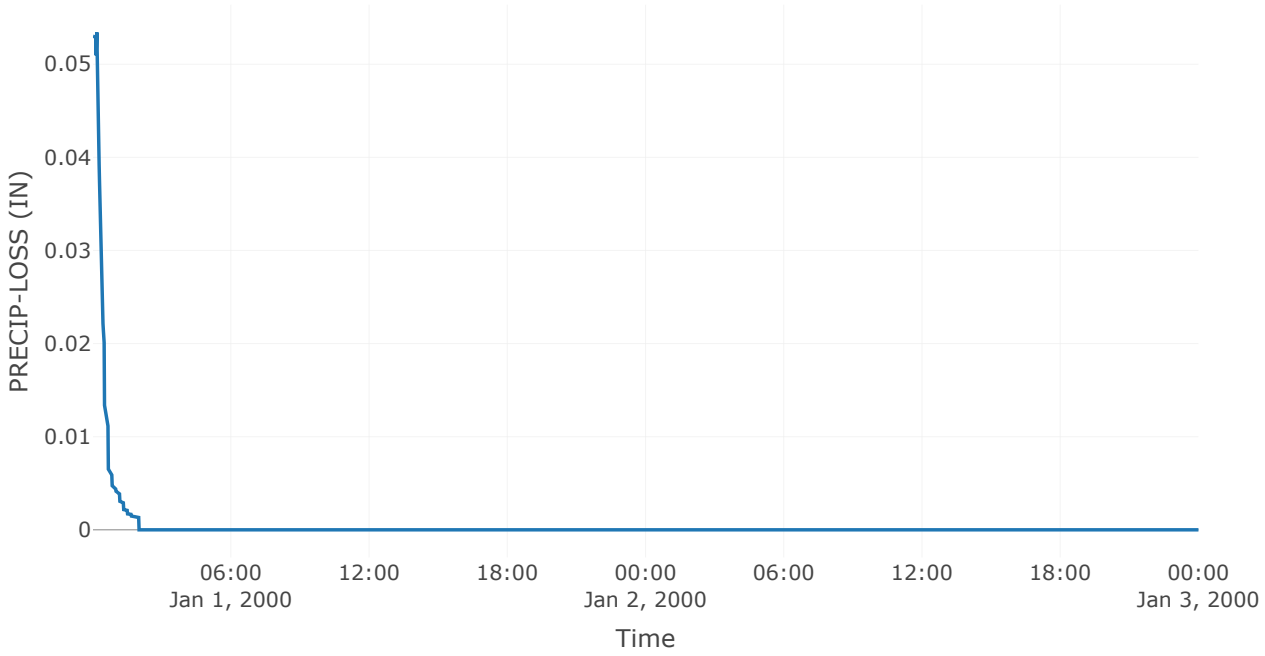

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

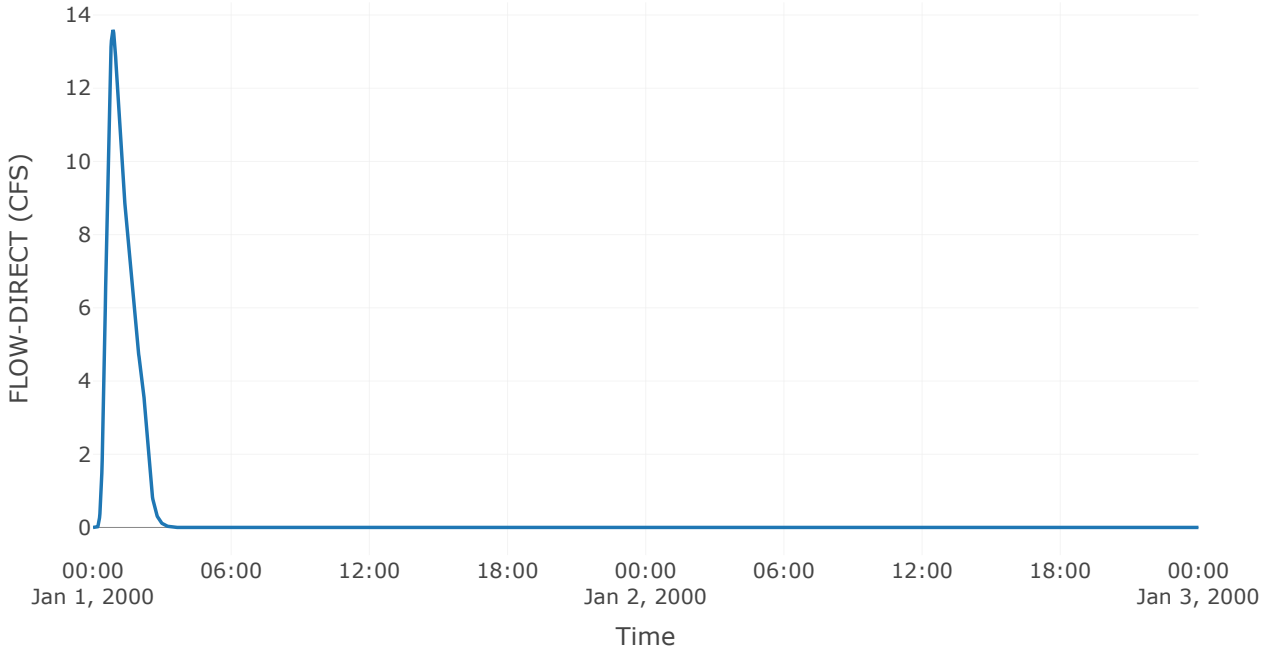

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

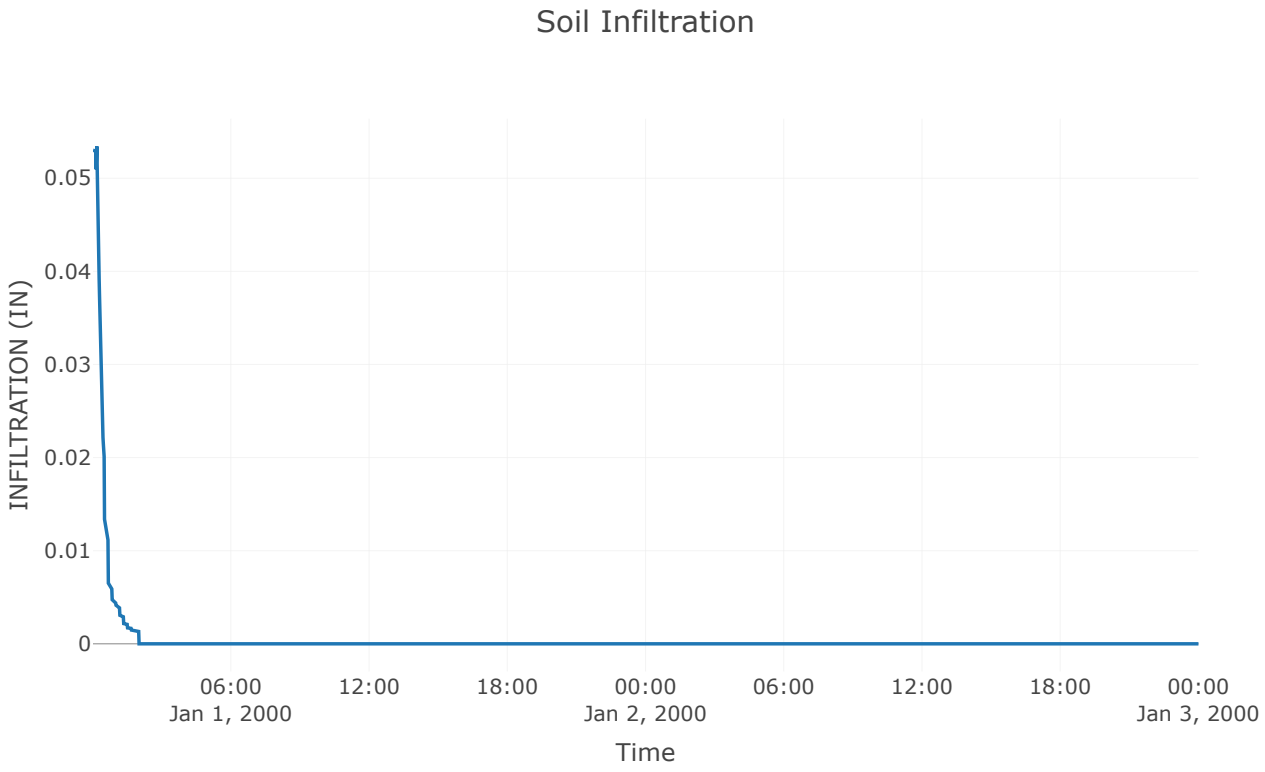

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

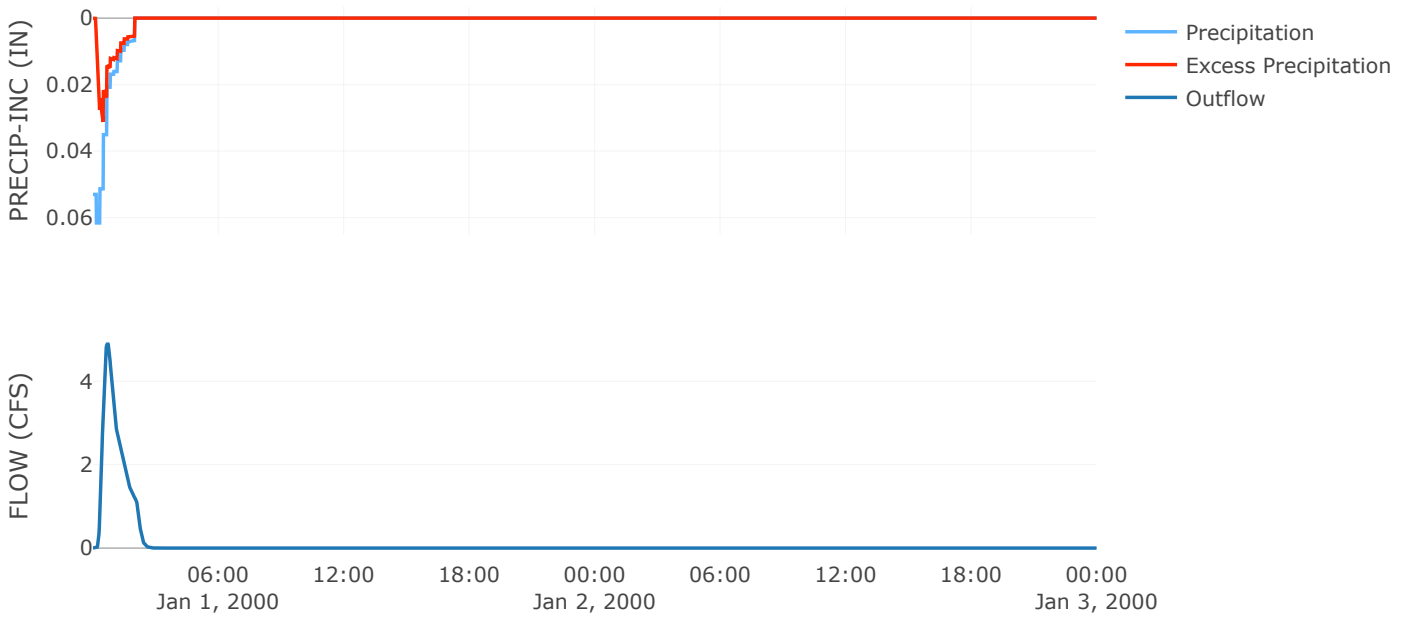
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

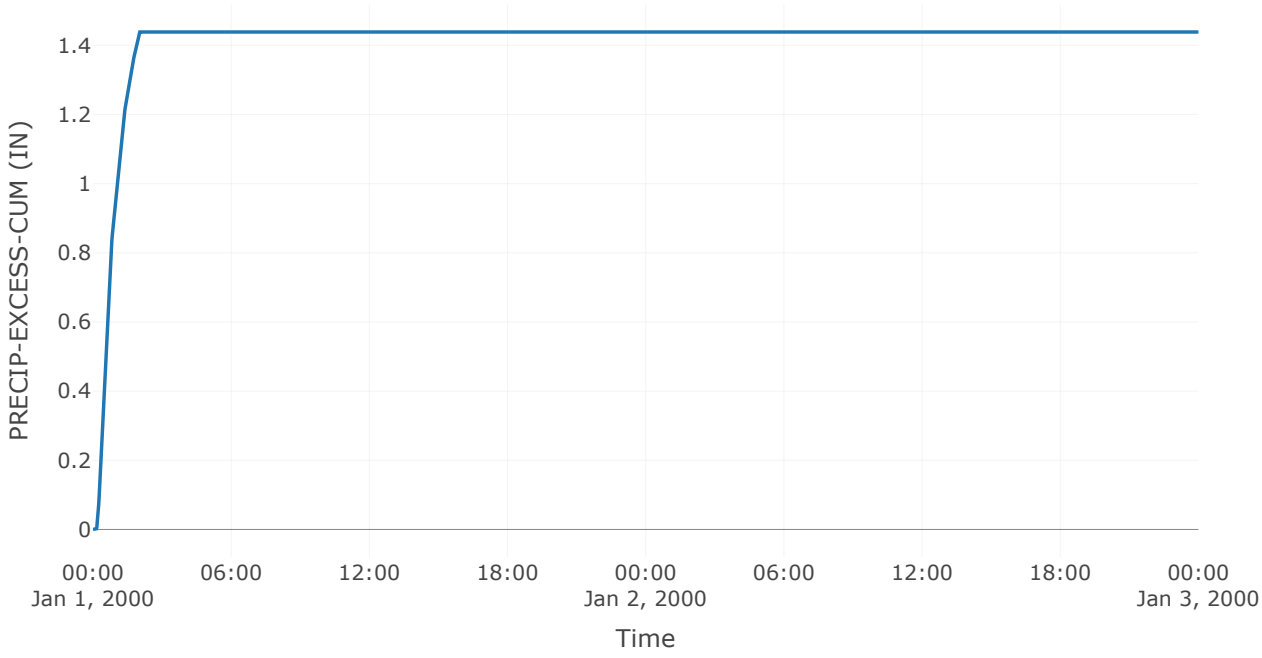
Transform: Scs	
Lag	12
Unitgraph Type	Standard

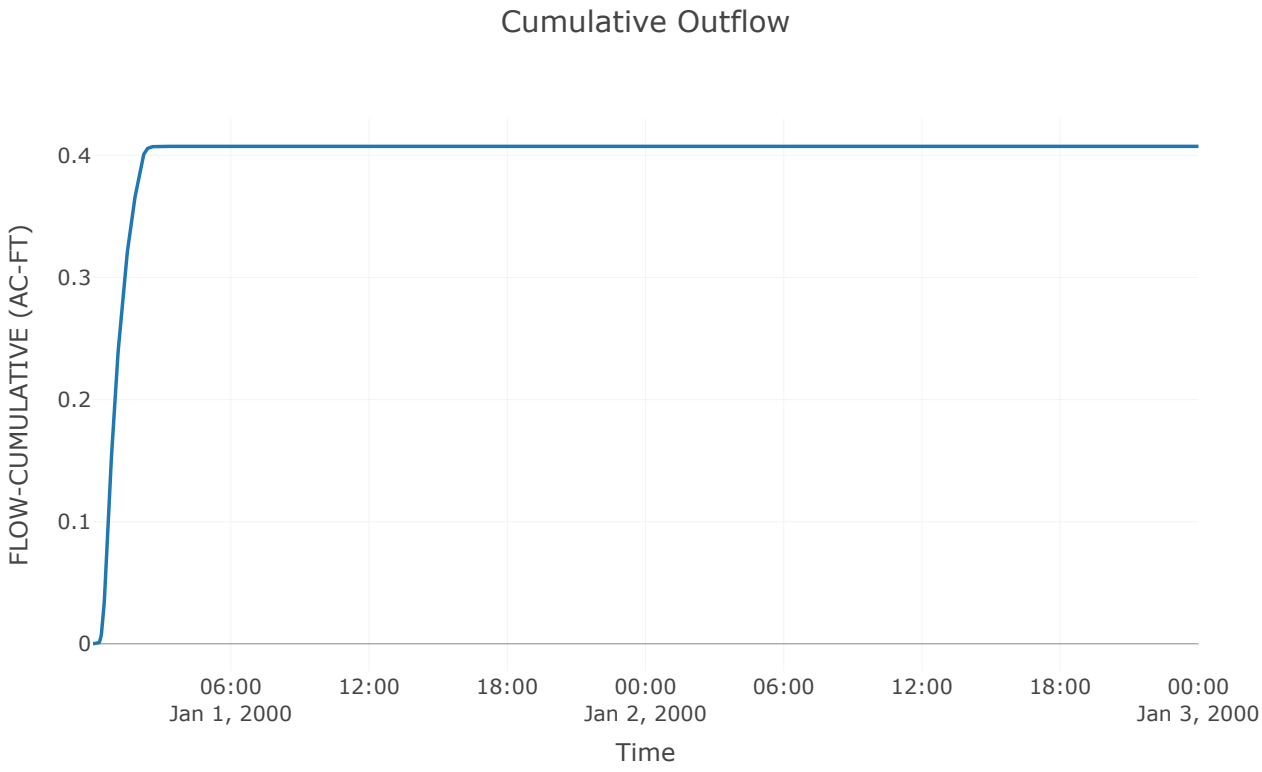
Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

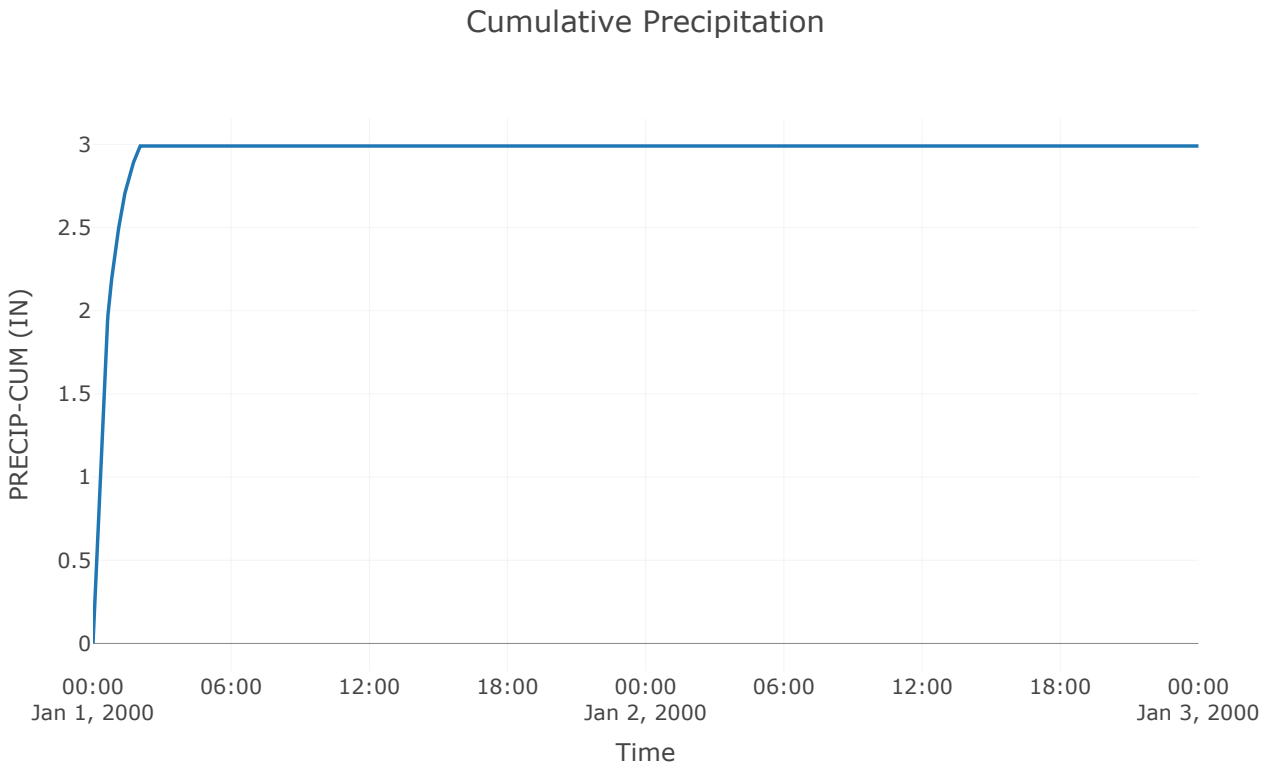
Precipitation and Outflow

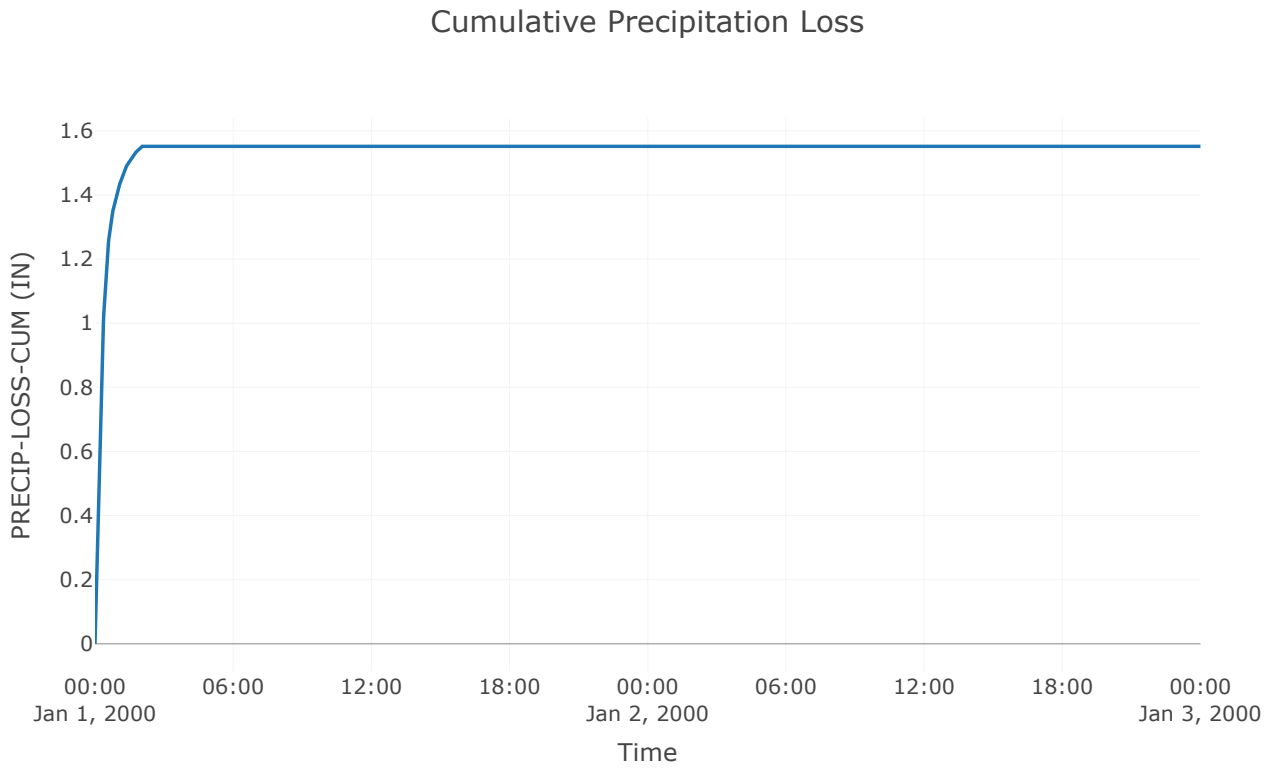


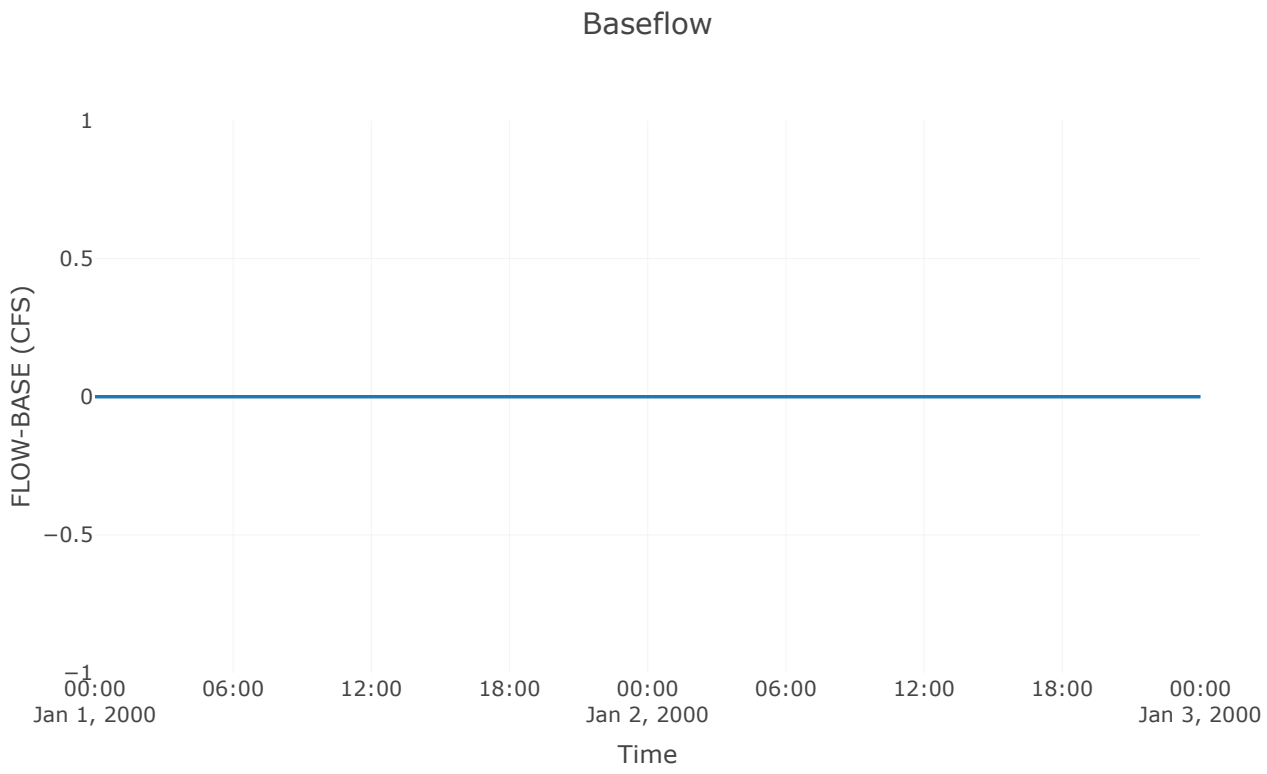
Cumulative Excess Precipitation



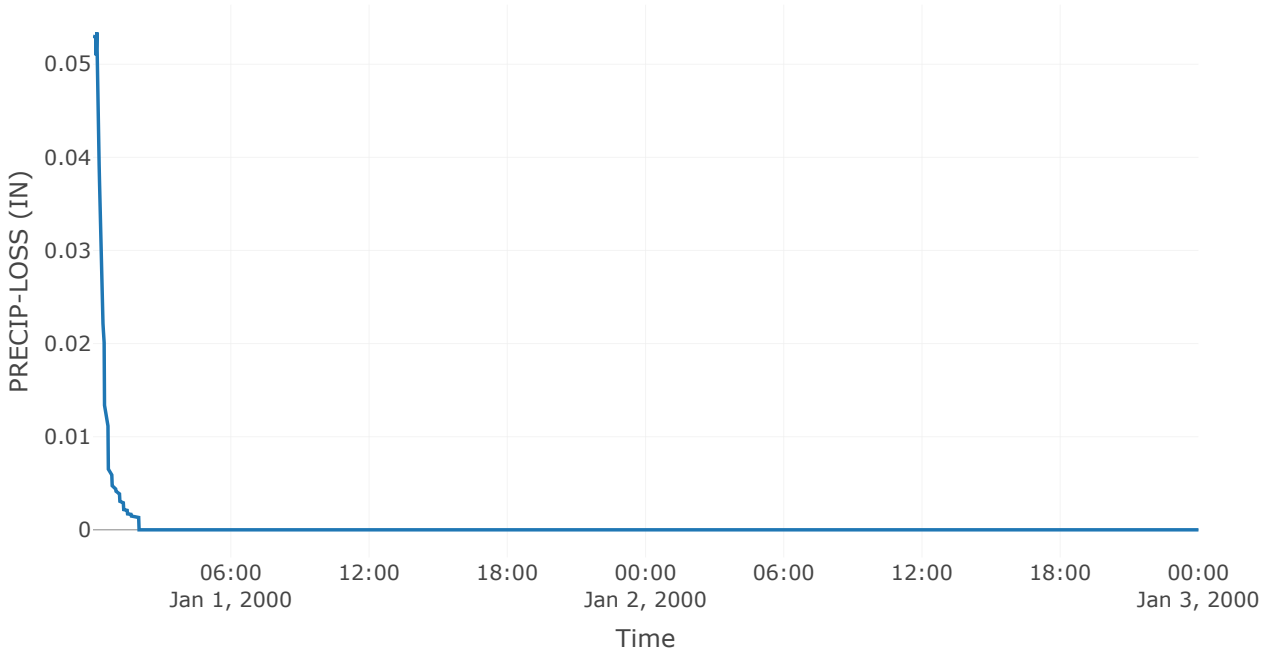

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

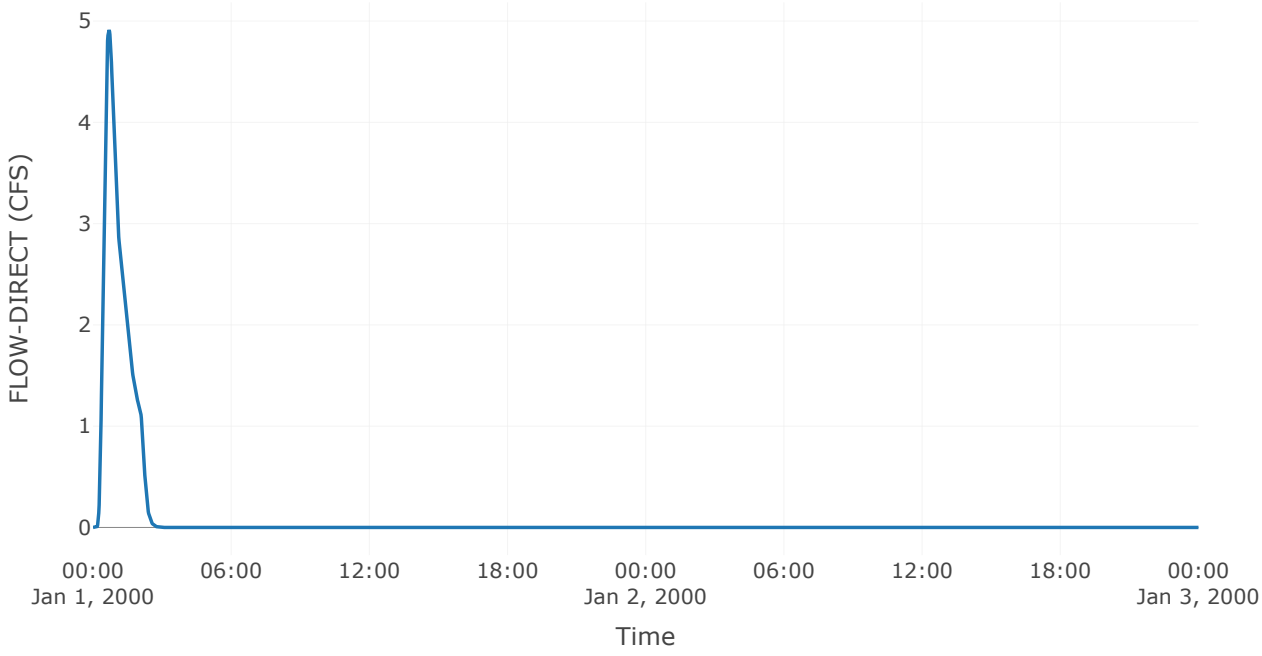

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

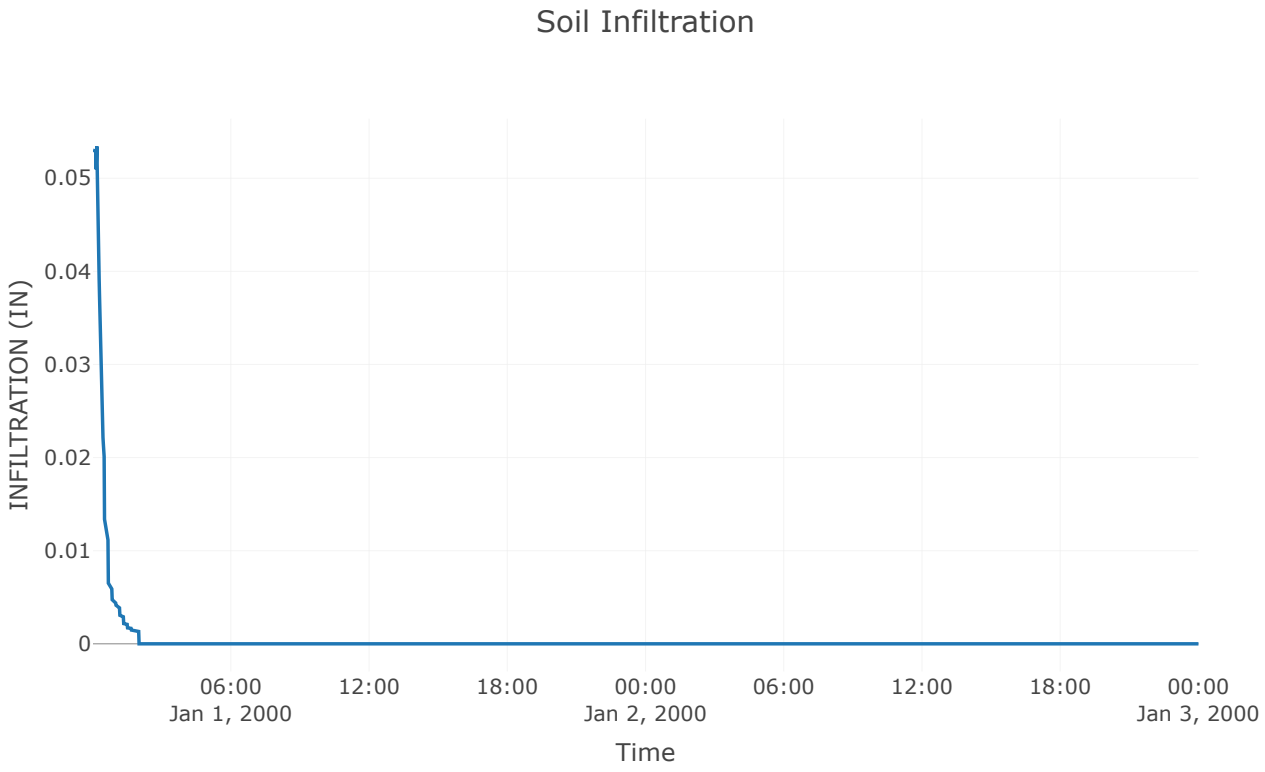

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



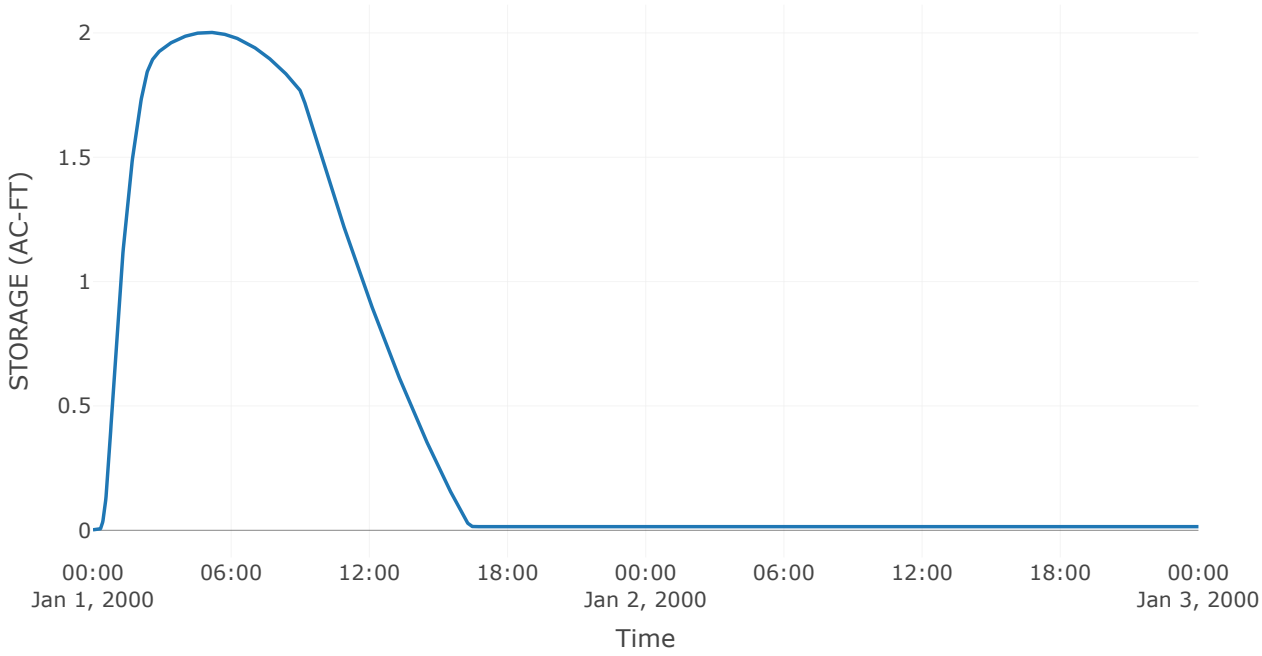

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

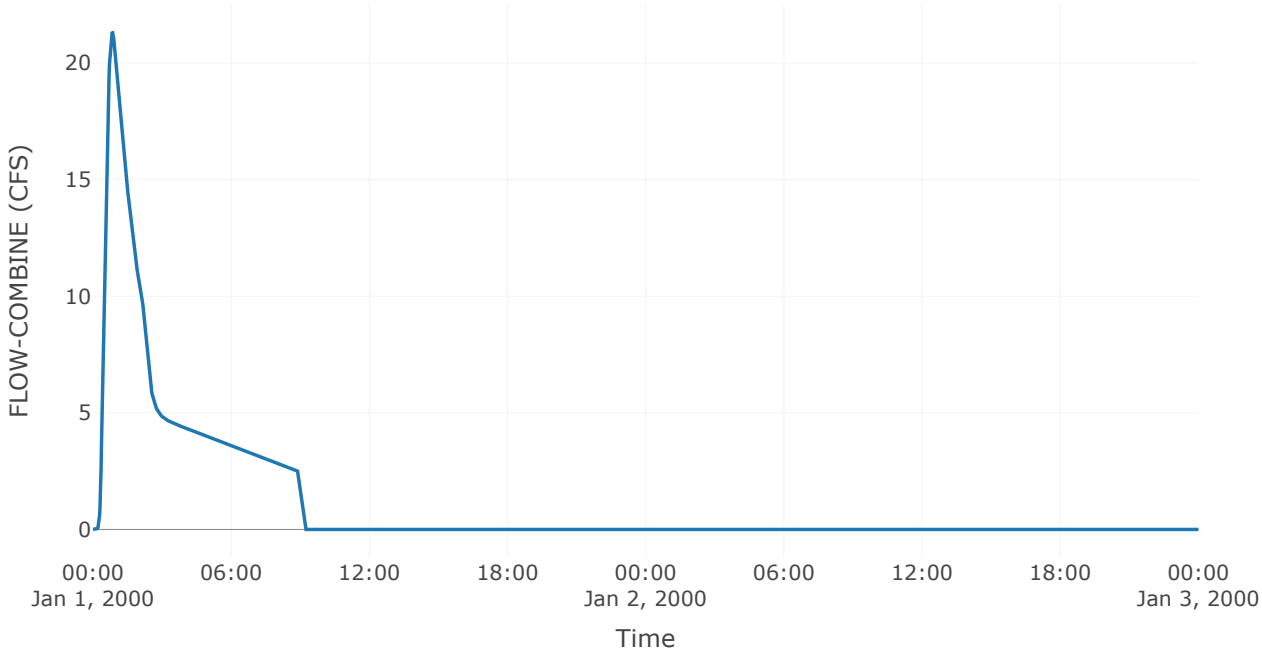
Downstream : Basin 3

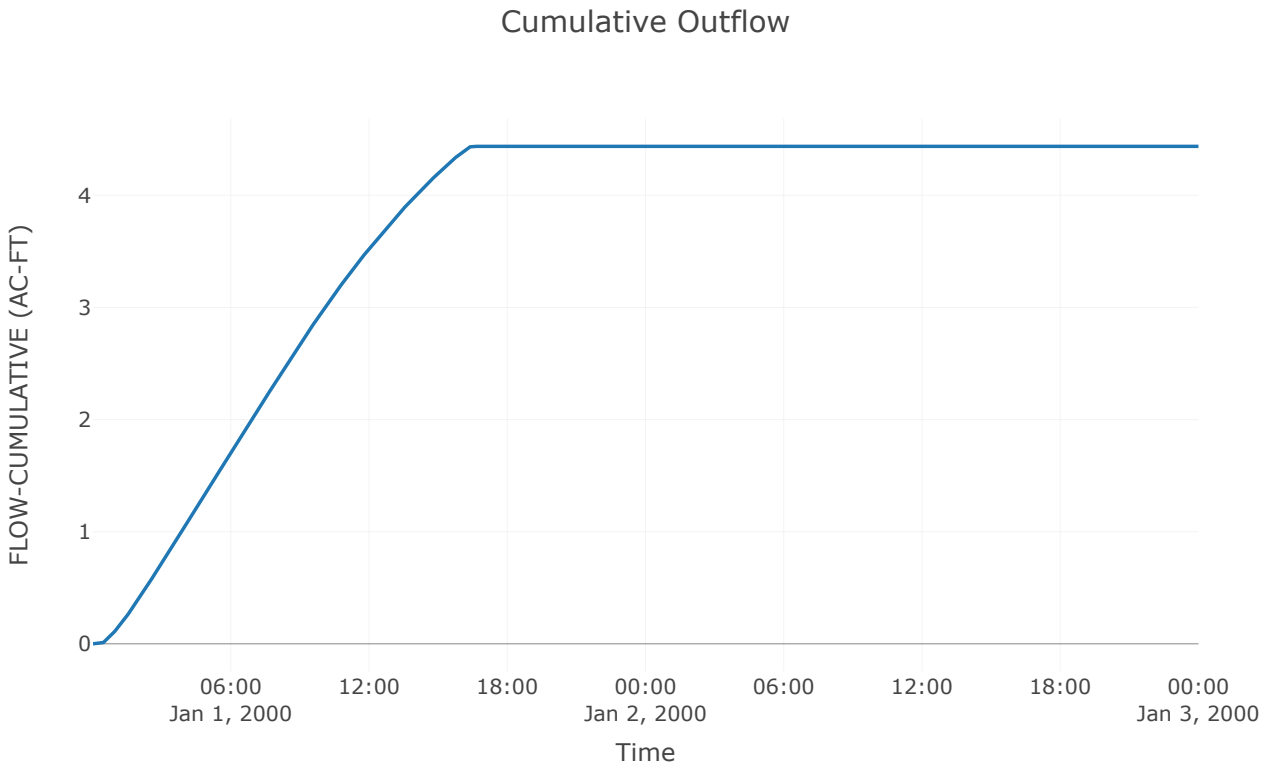
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

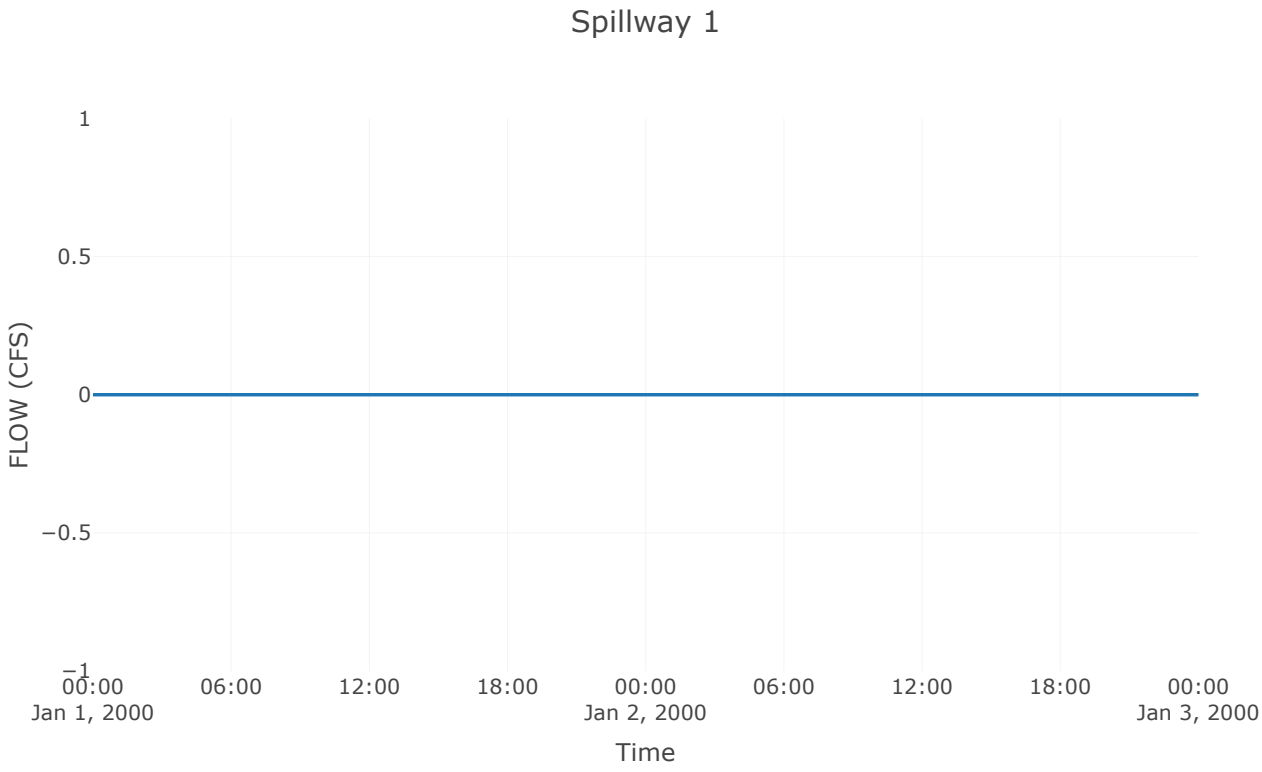
Storage



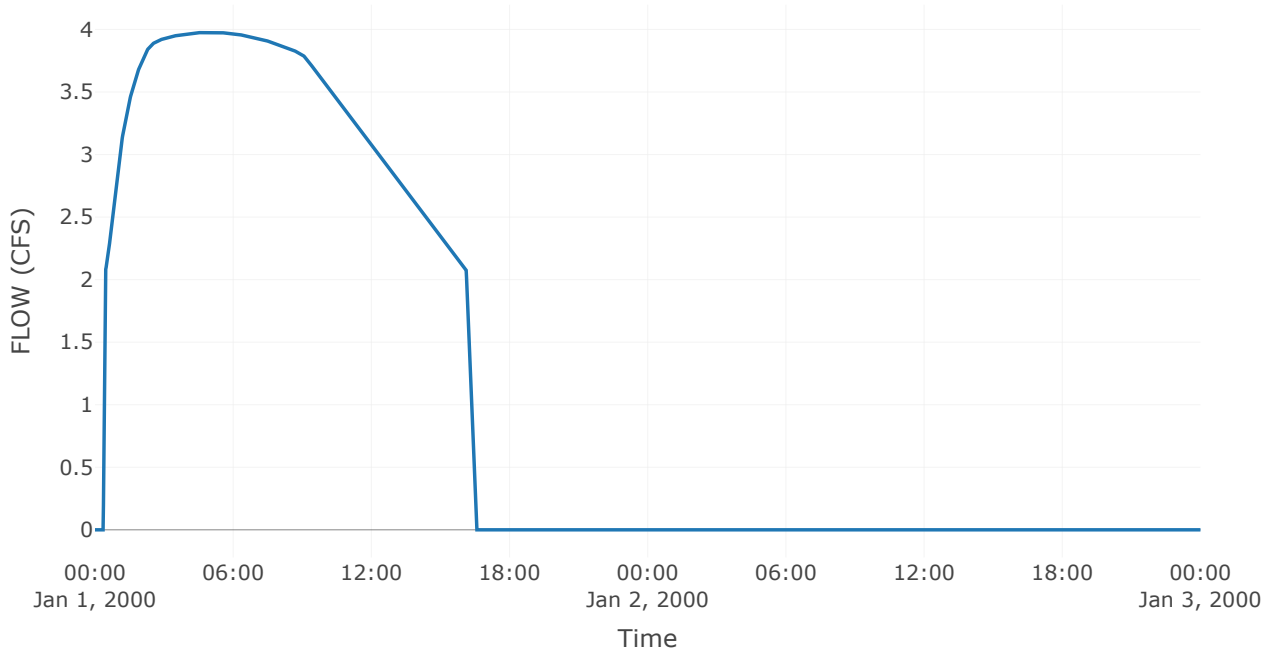
Combined Inflow



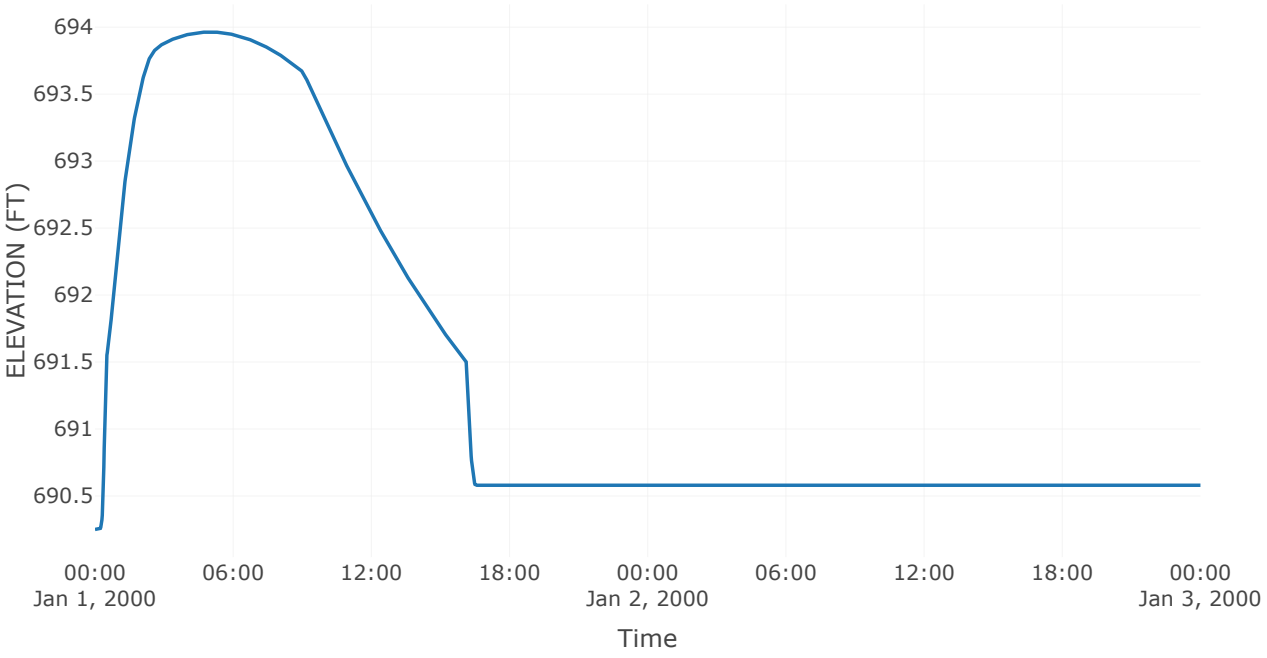

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

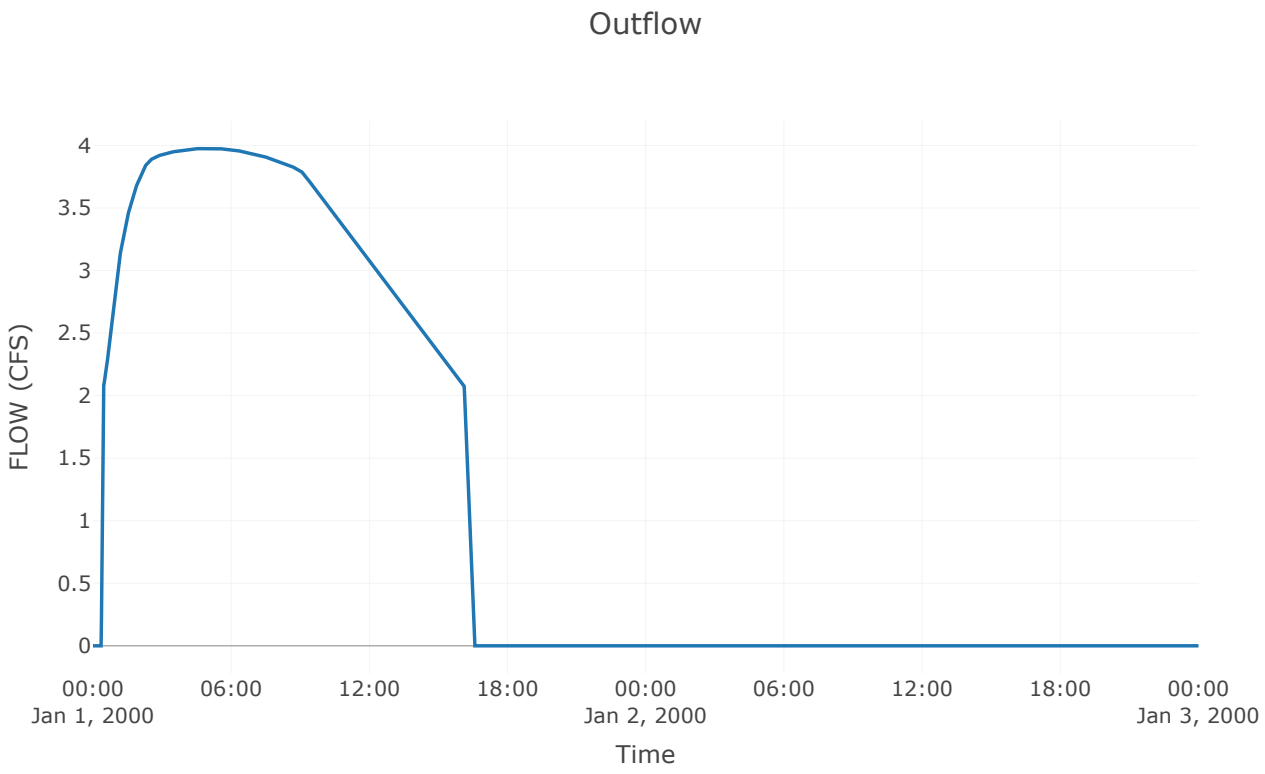

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

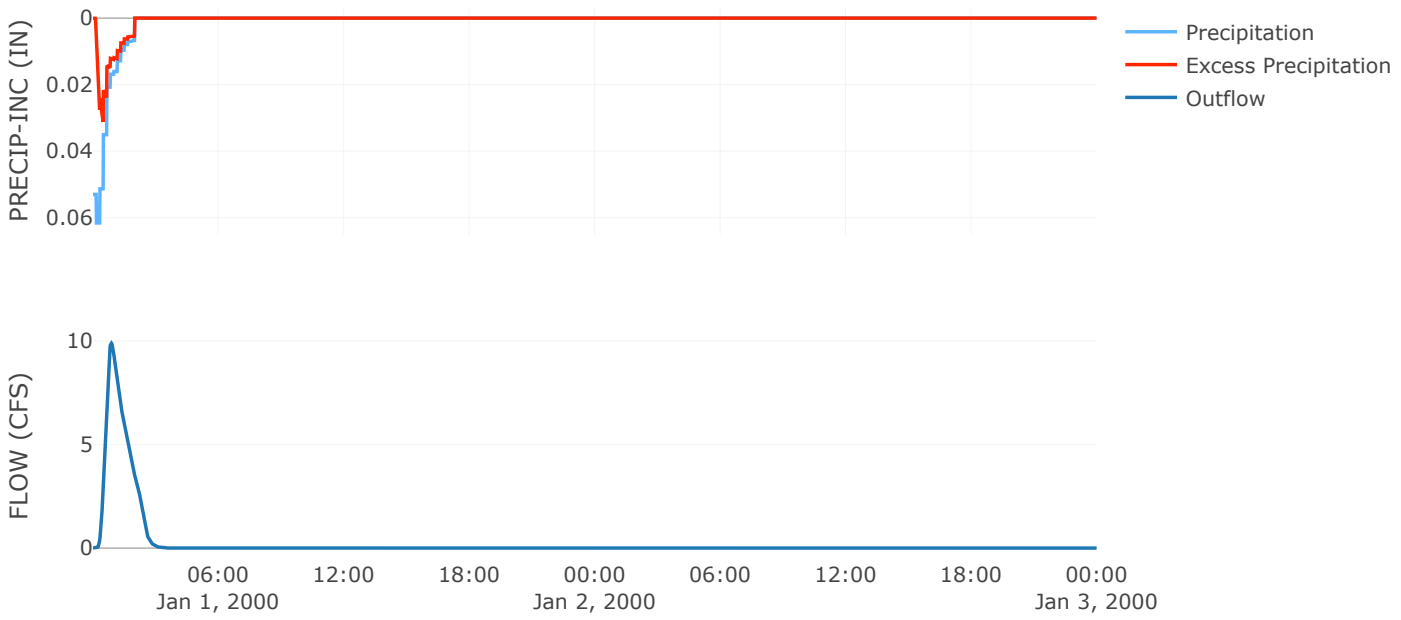
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

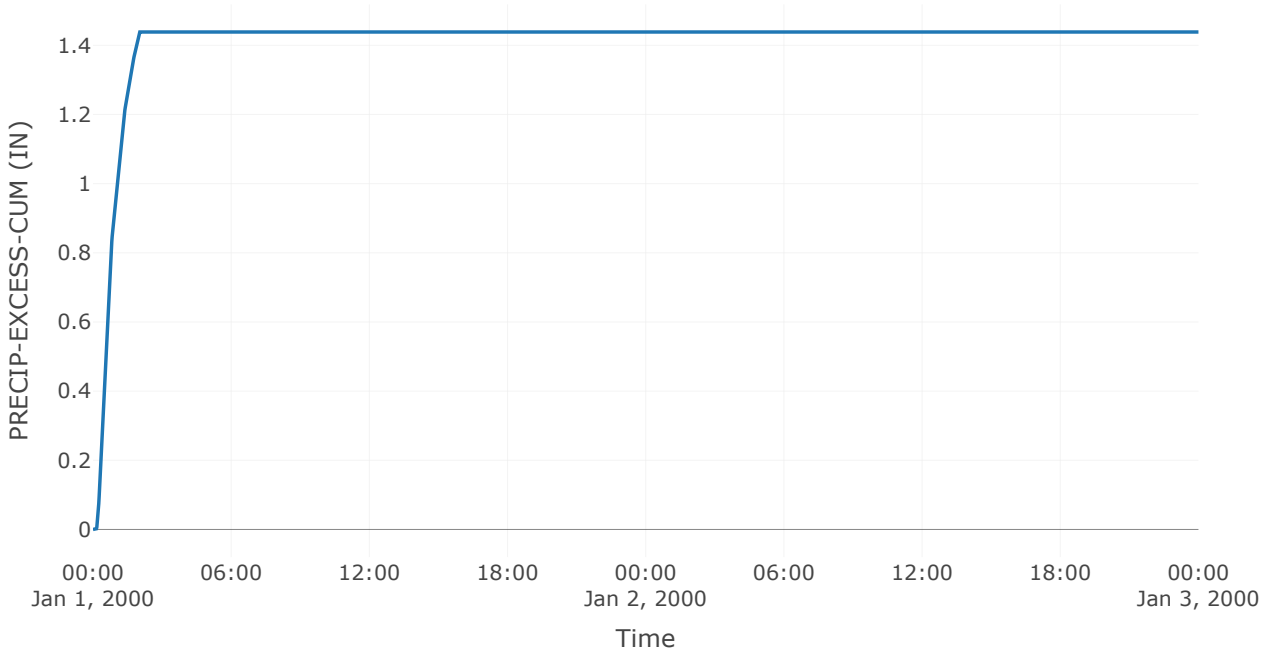
Transform: Scs	
Lag	21
Unitgraph Type	Standard

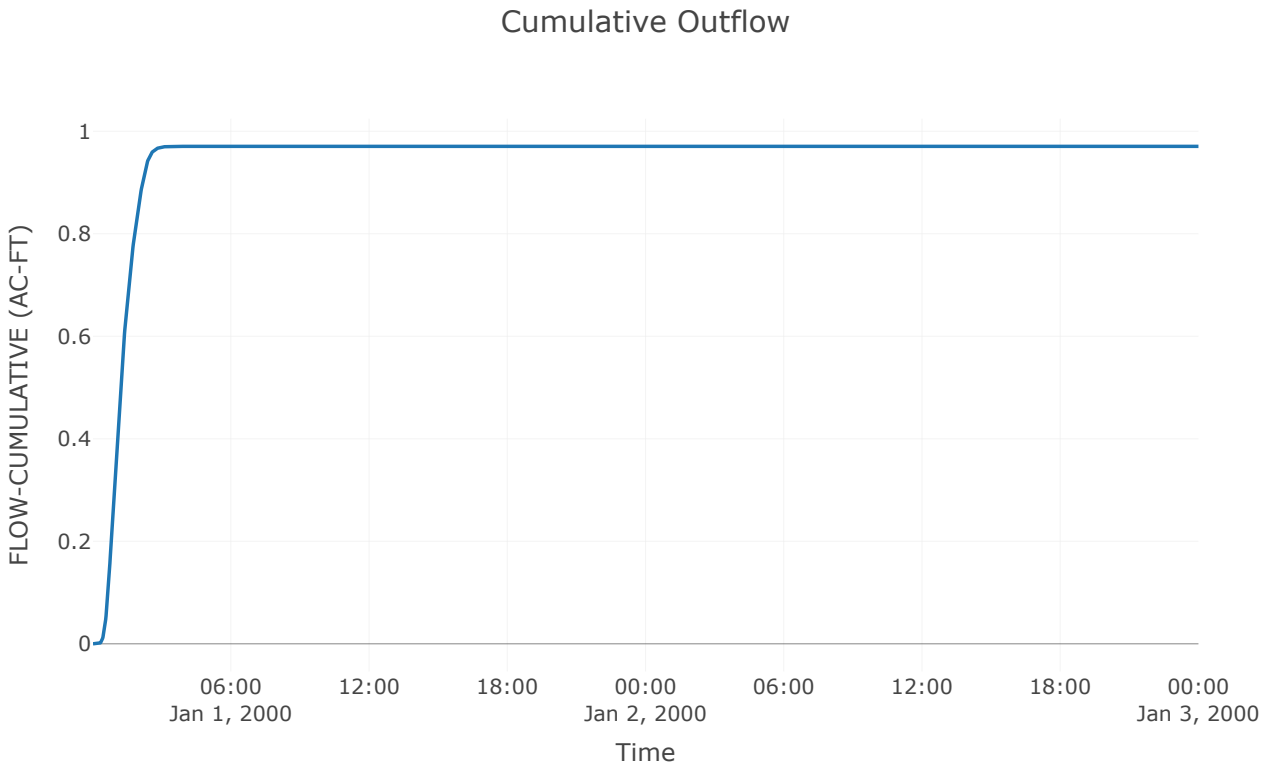
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

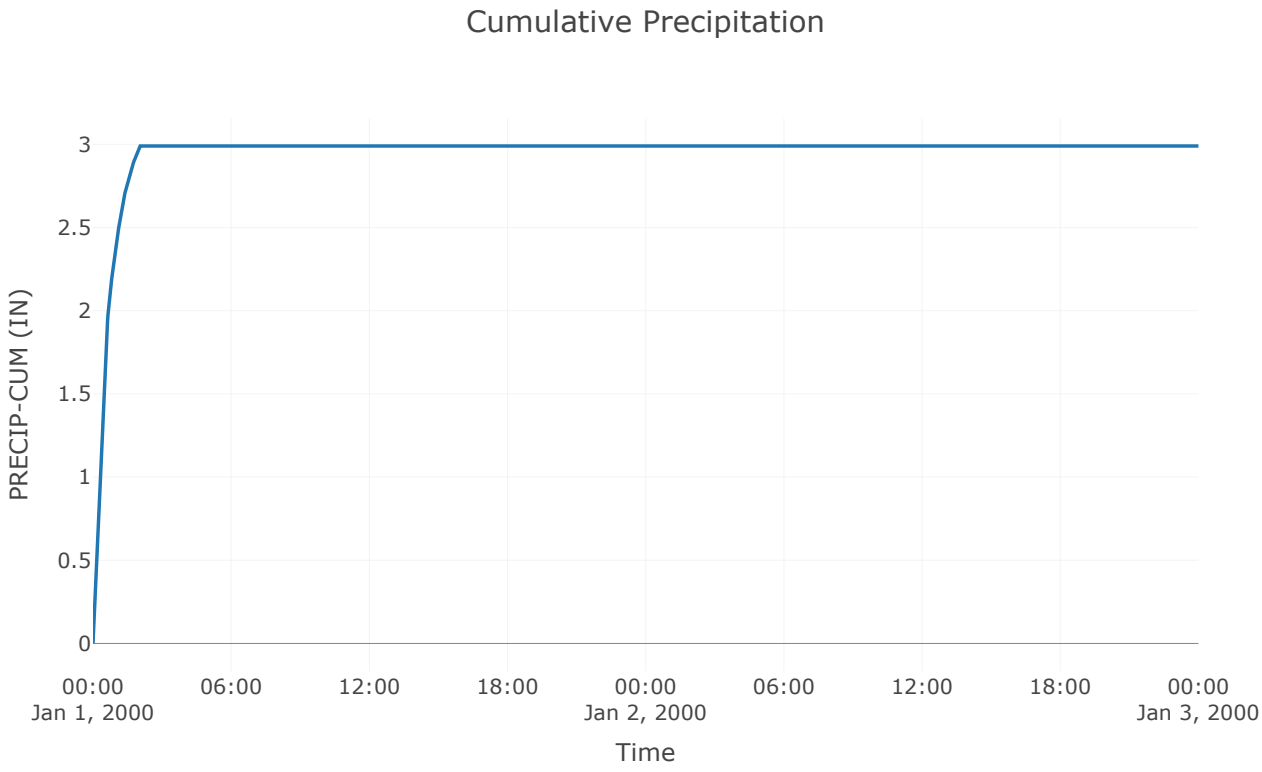
Precipitation and Outflow

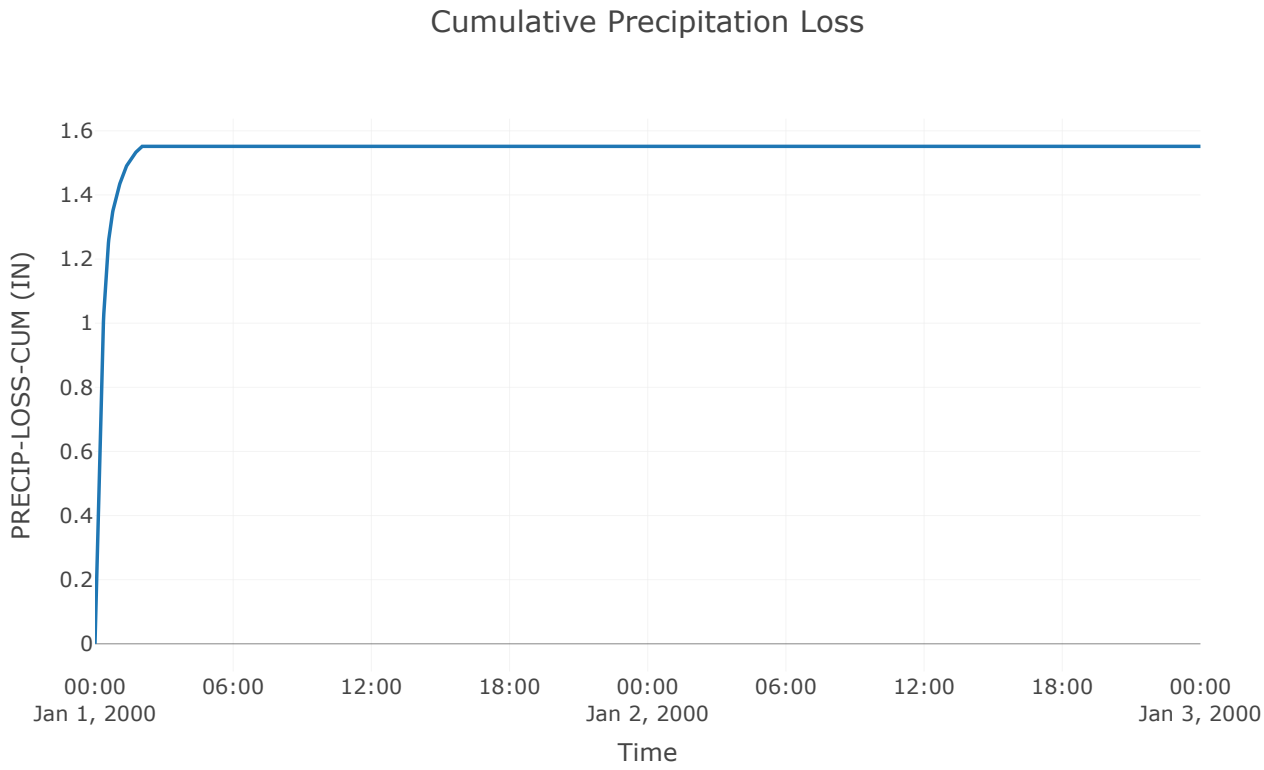


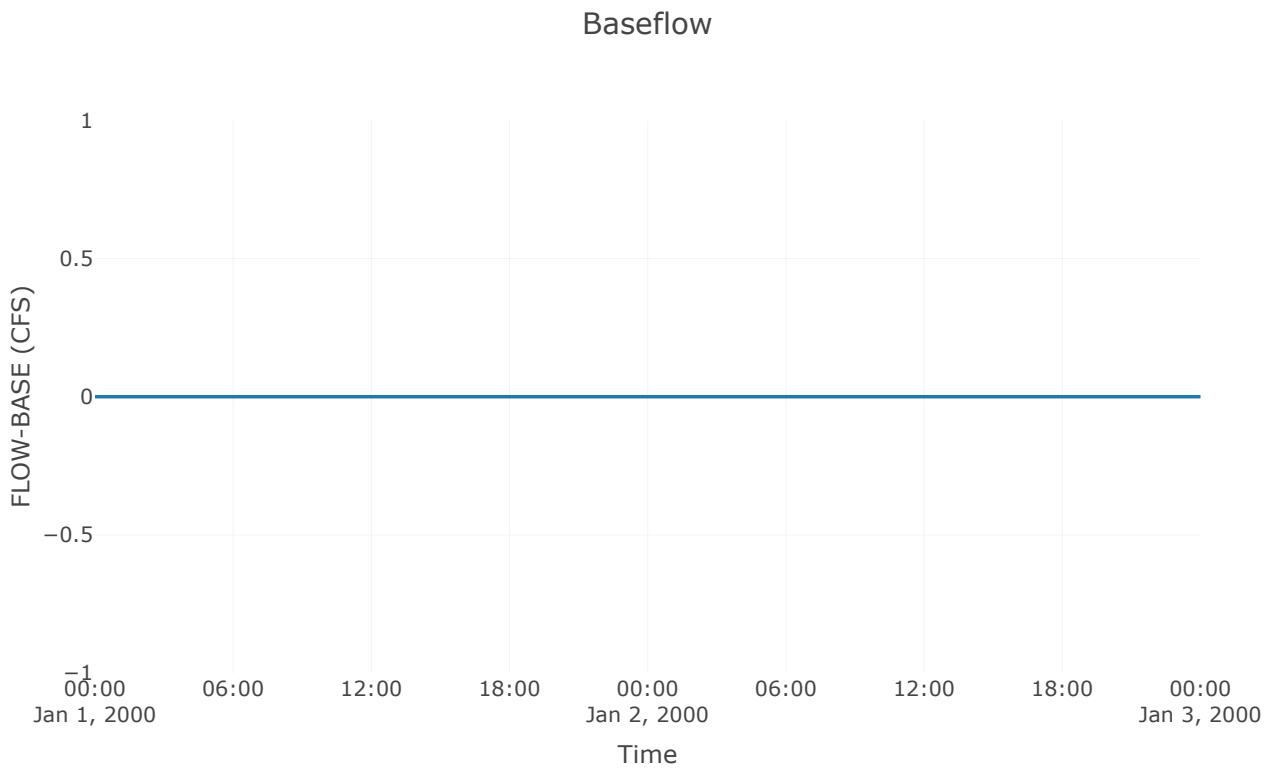
Cumulative Excess Precipitation

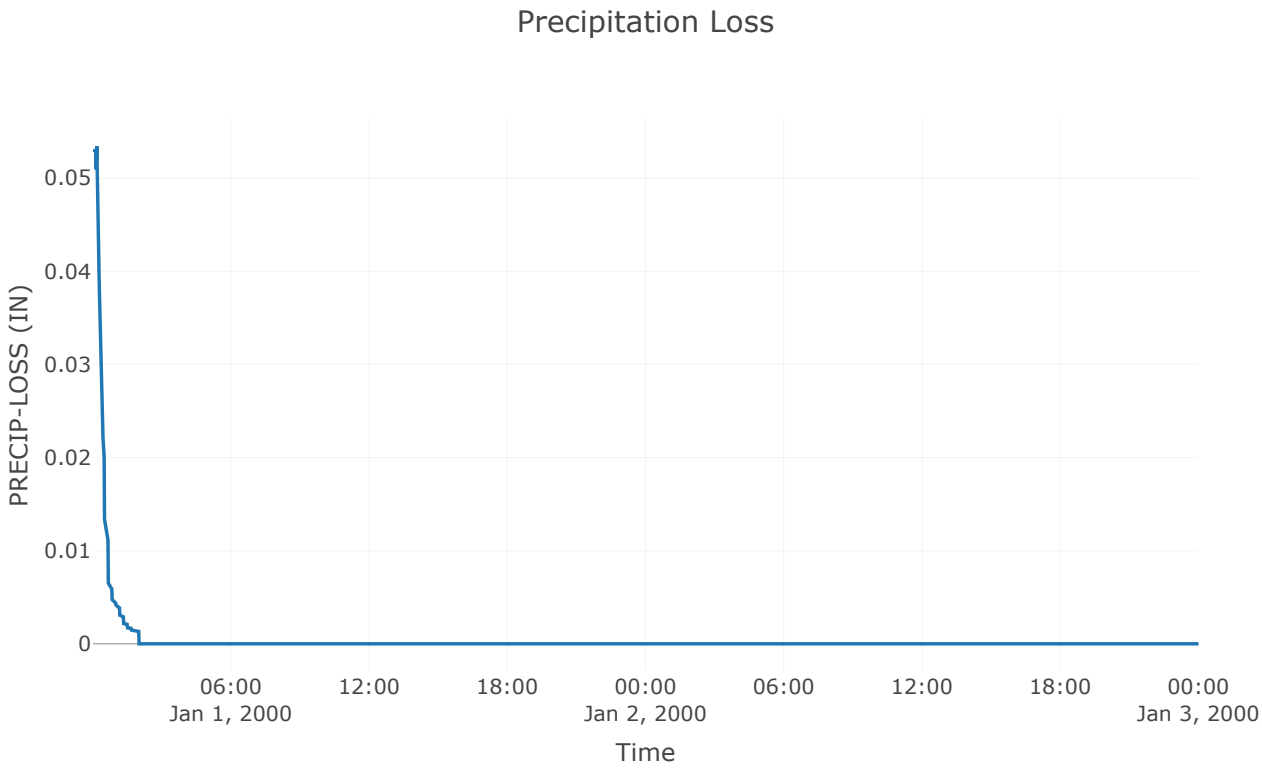


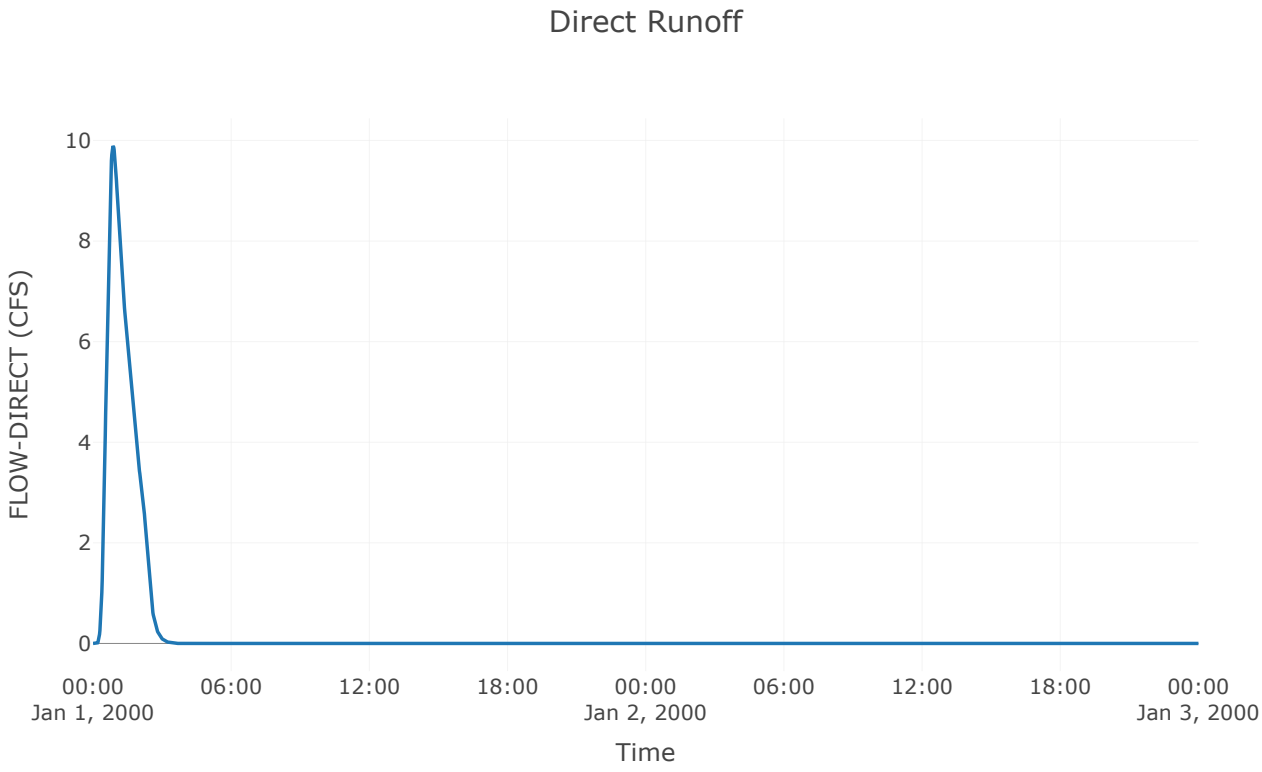

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

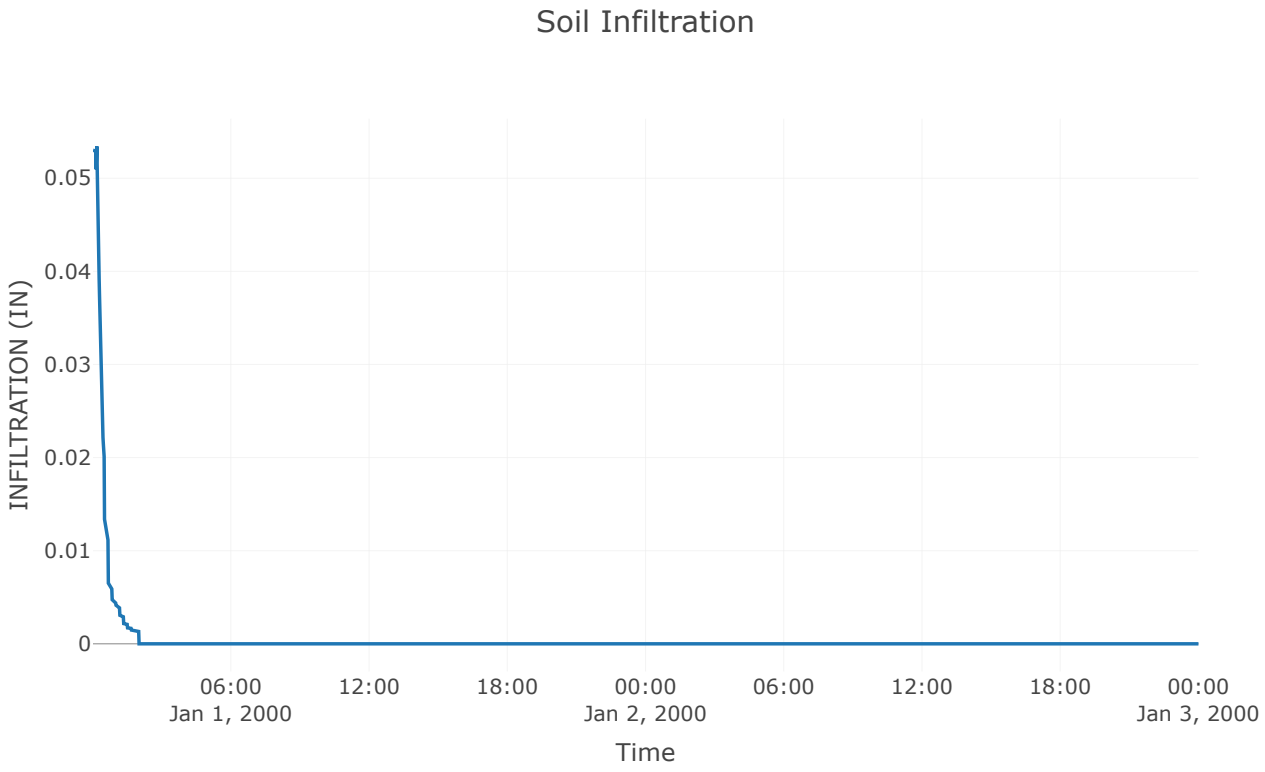

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

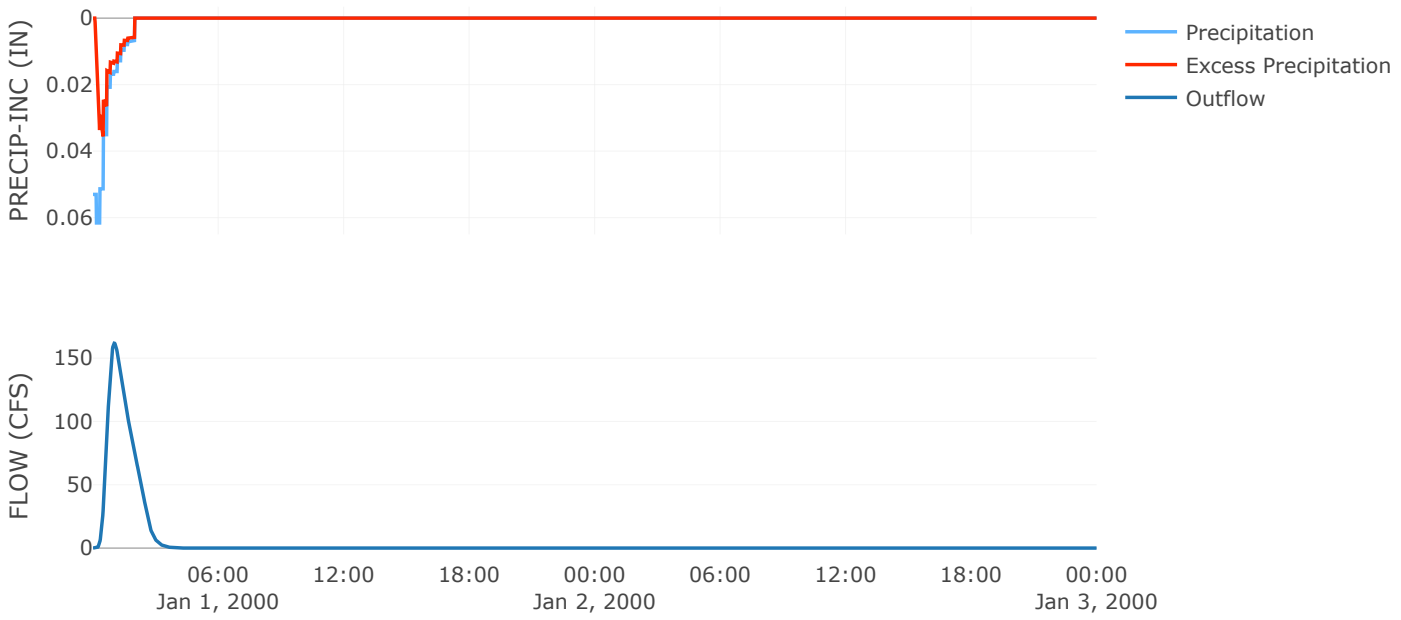
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

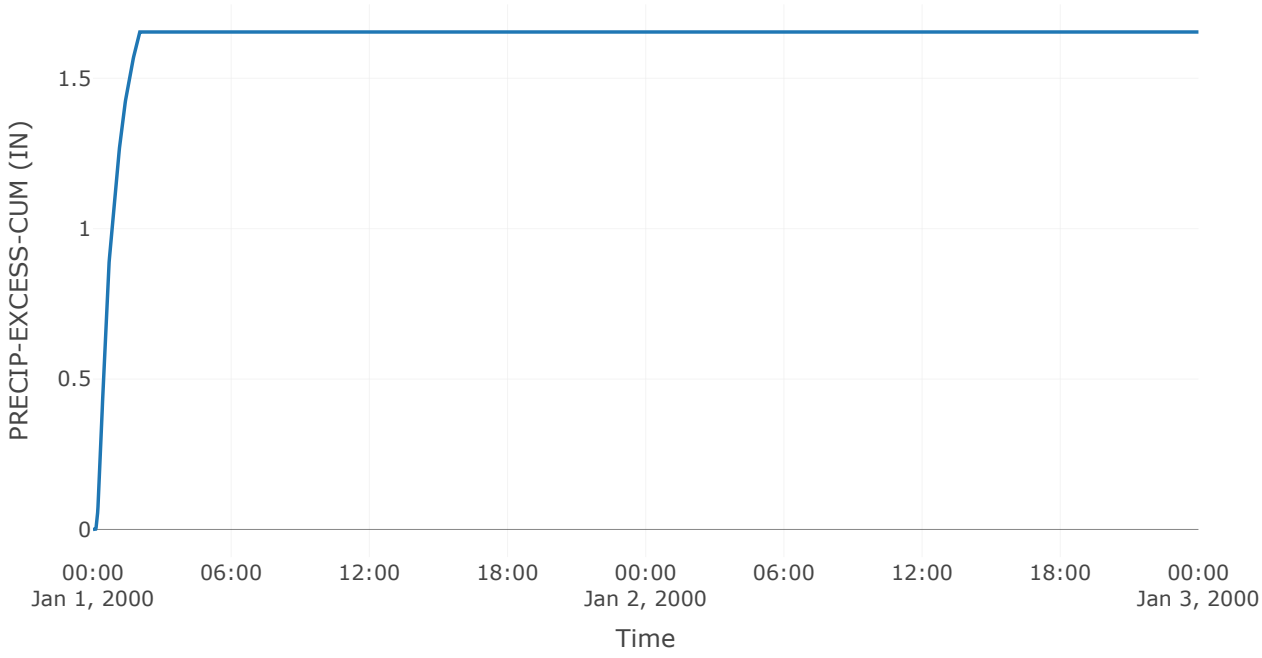
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

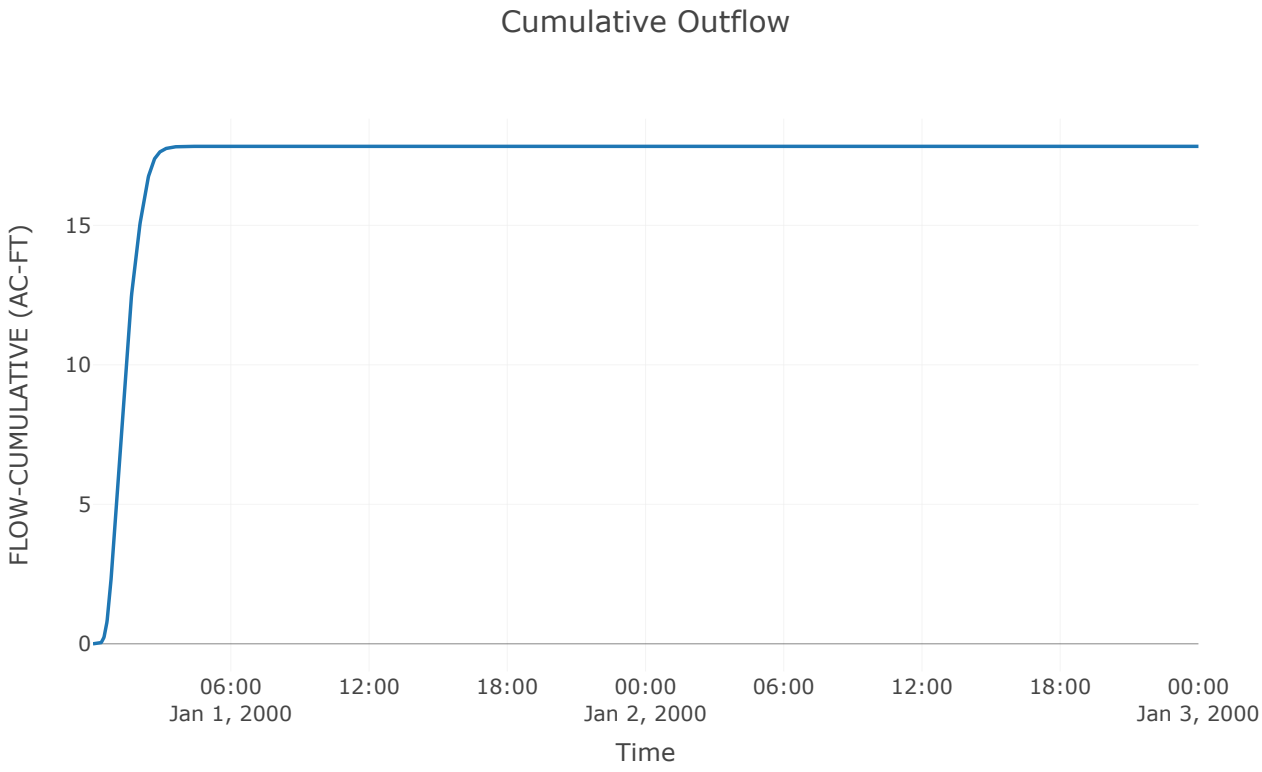
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

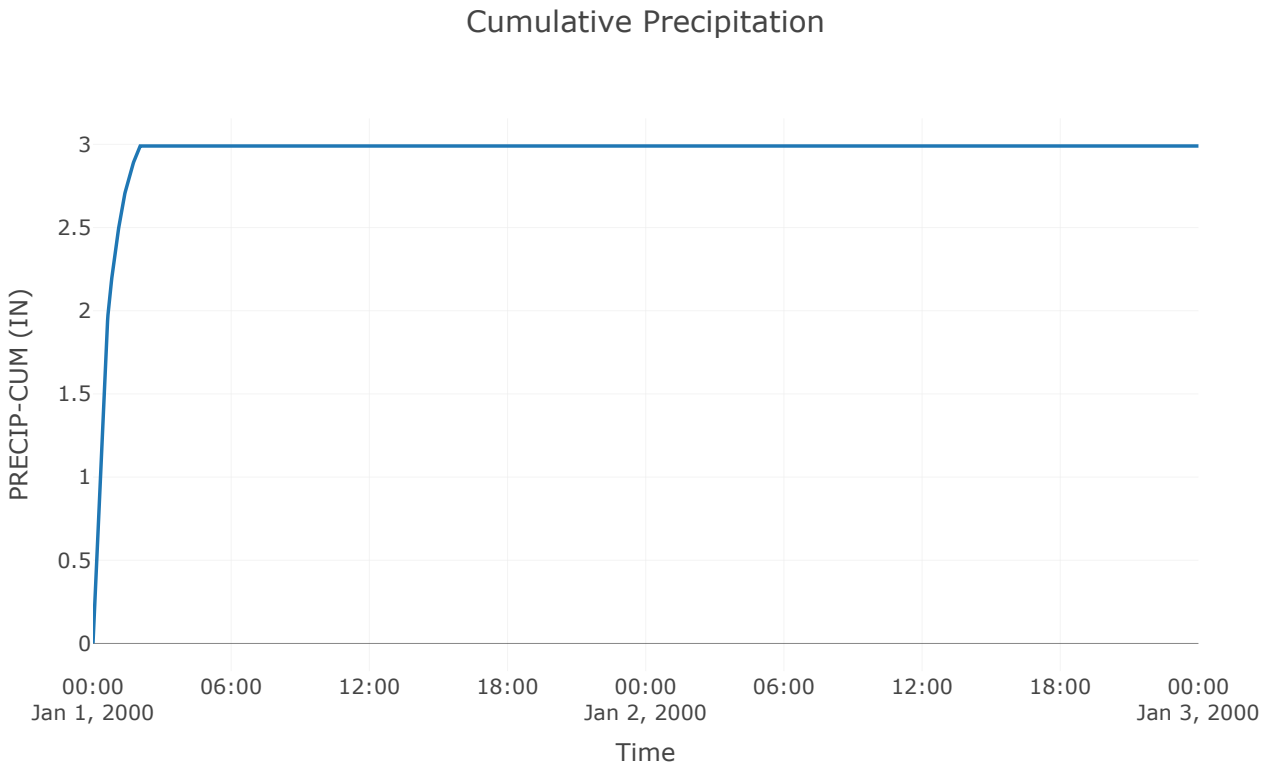
Precipitation and Outflow

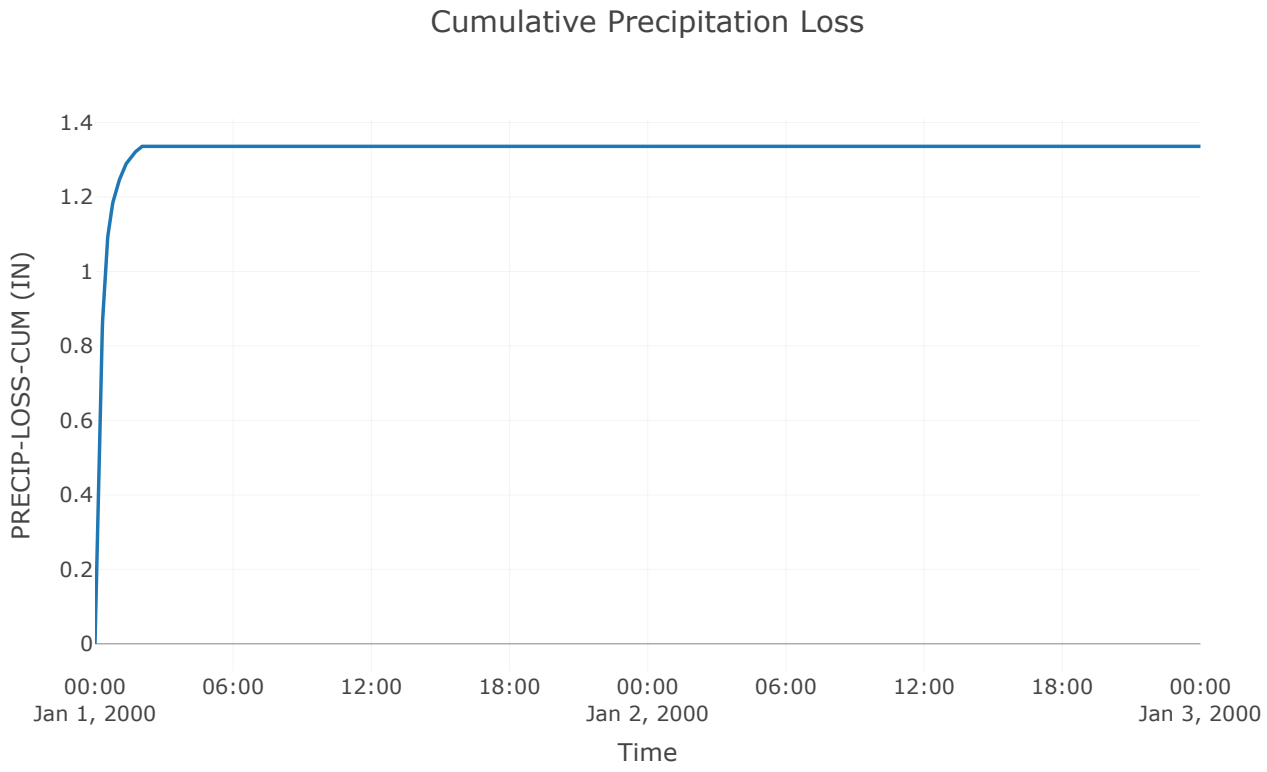


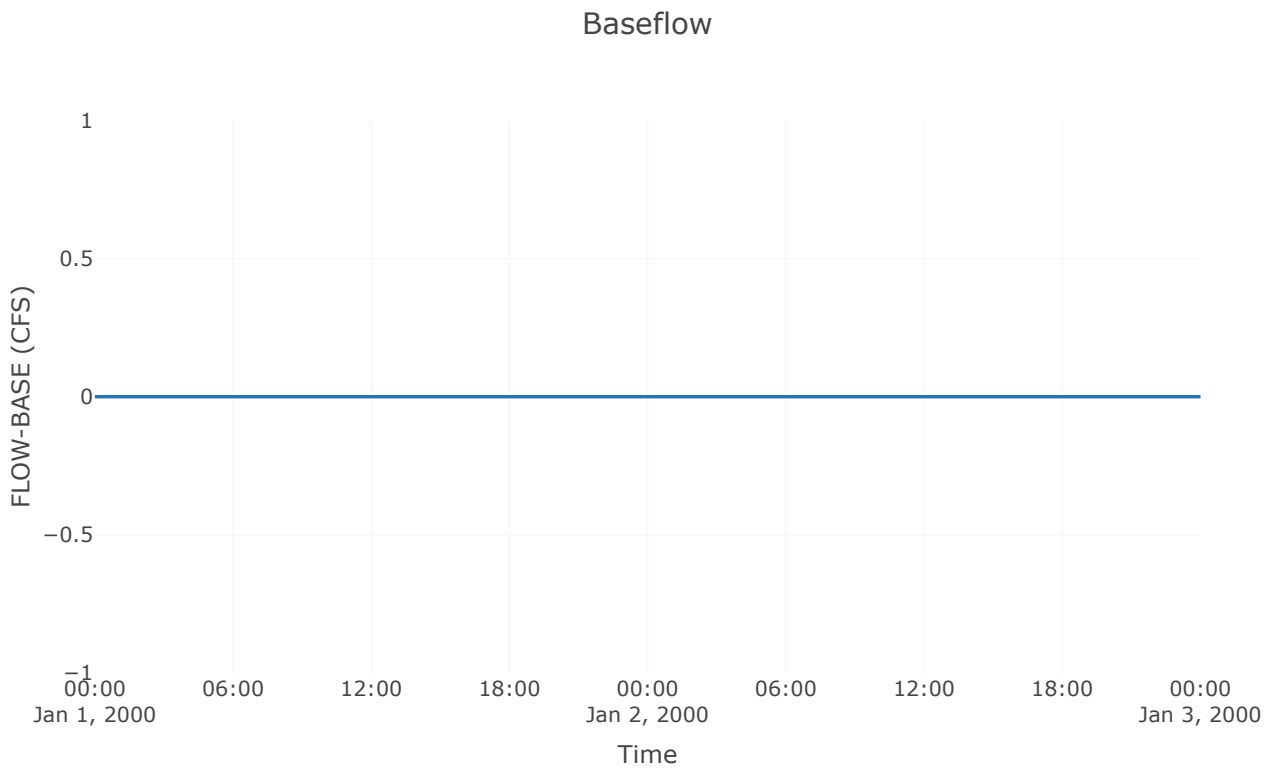
Cumulative Excess Precipitation



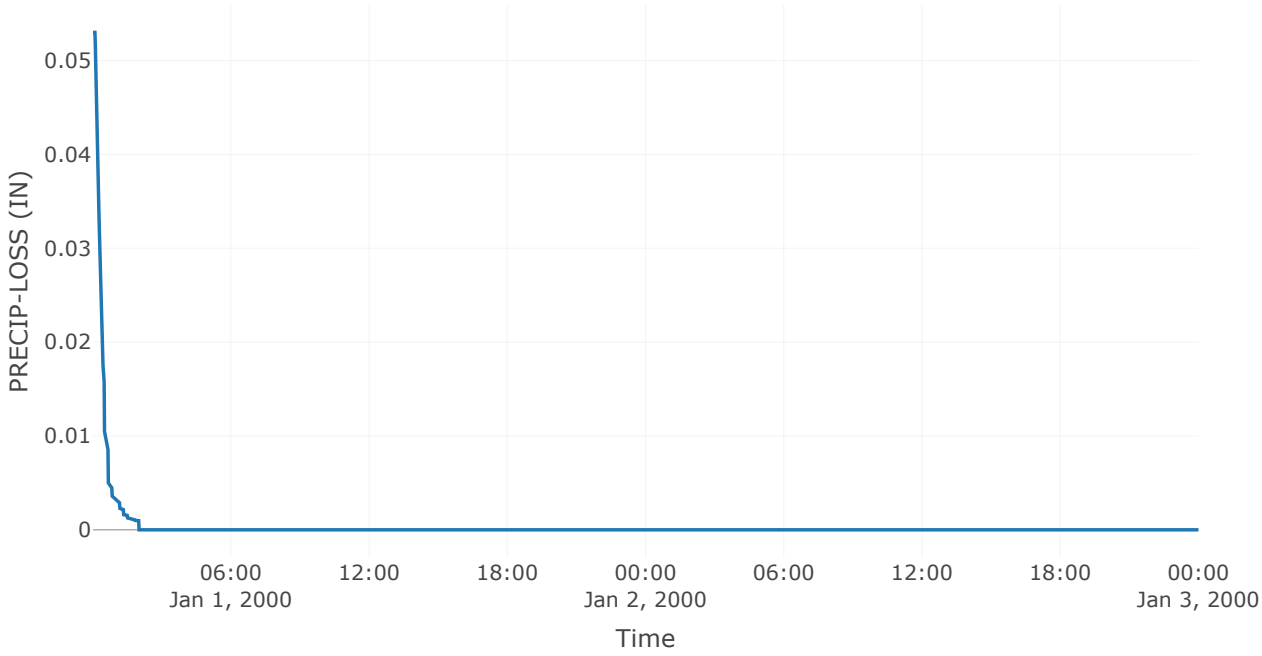

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

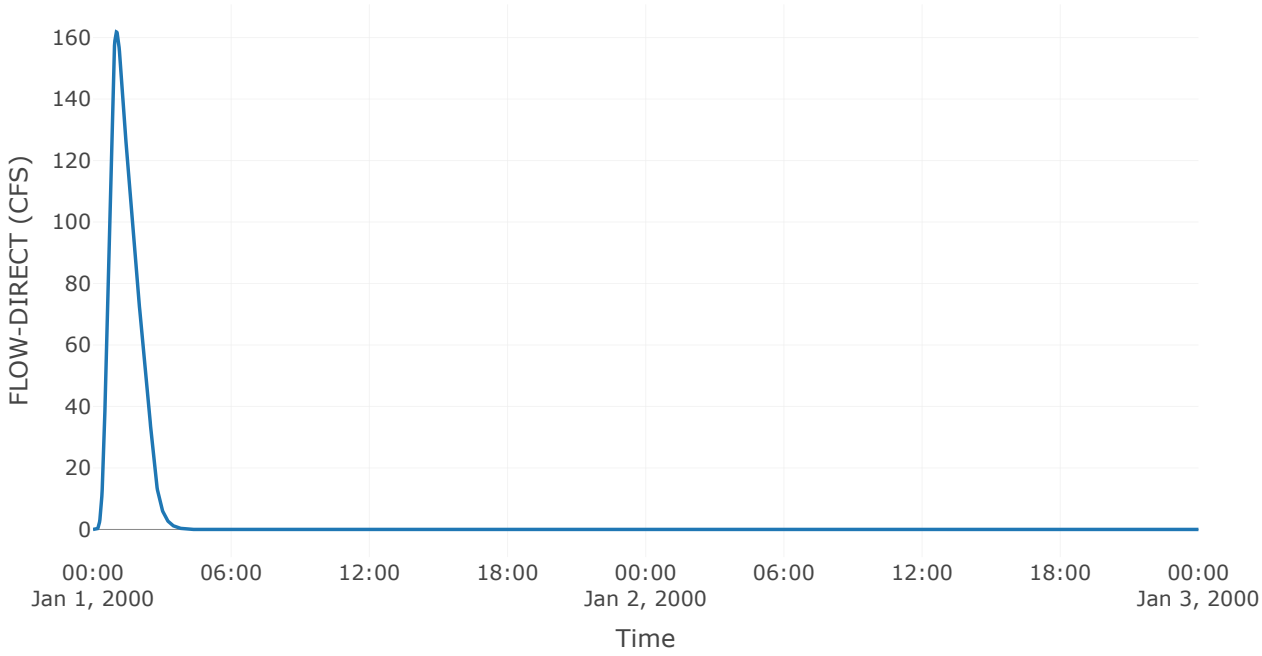

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

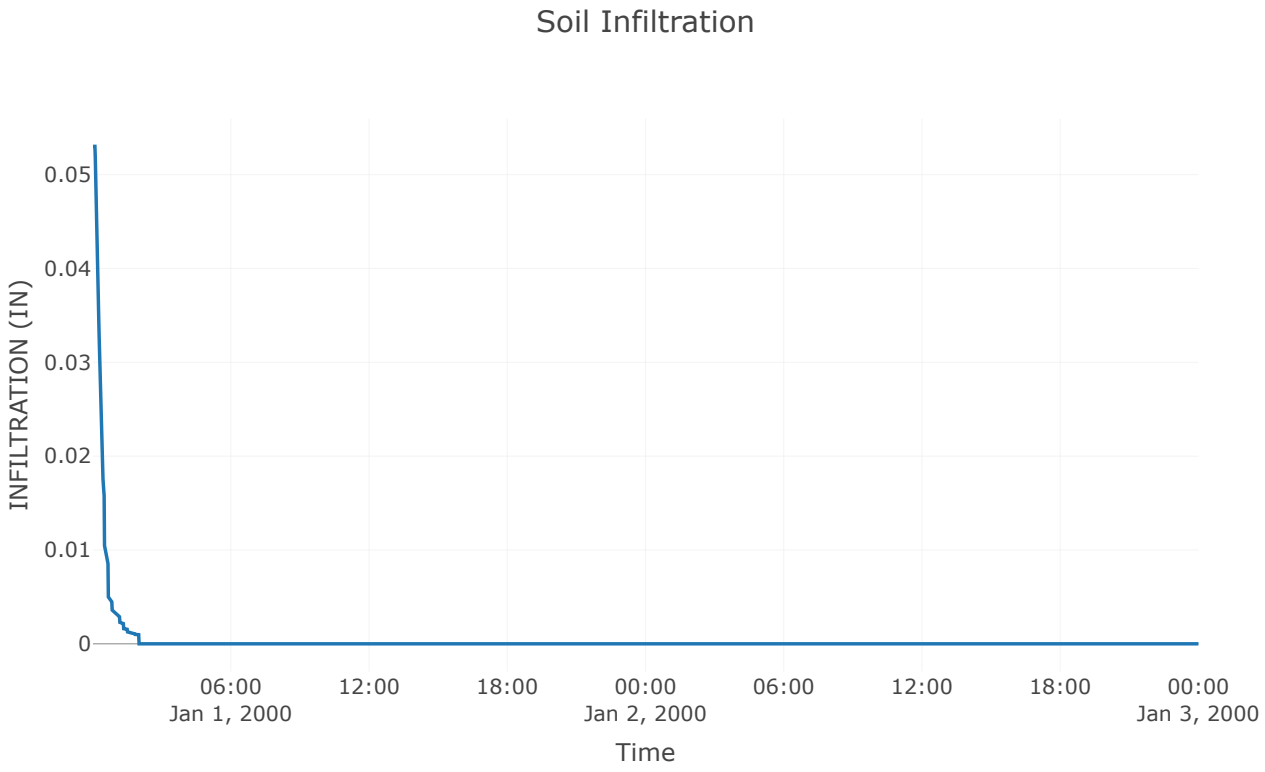

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



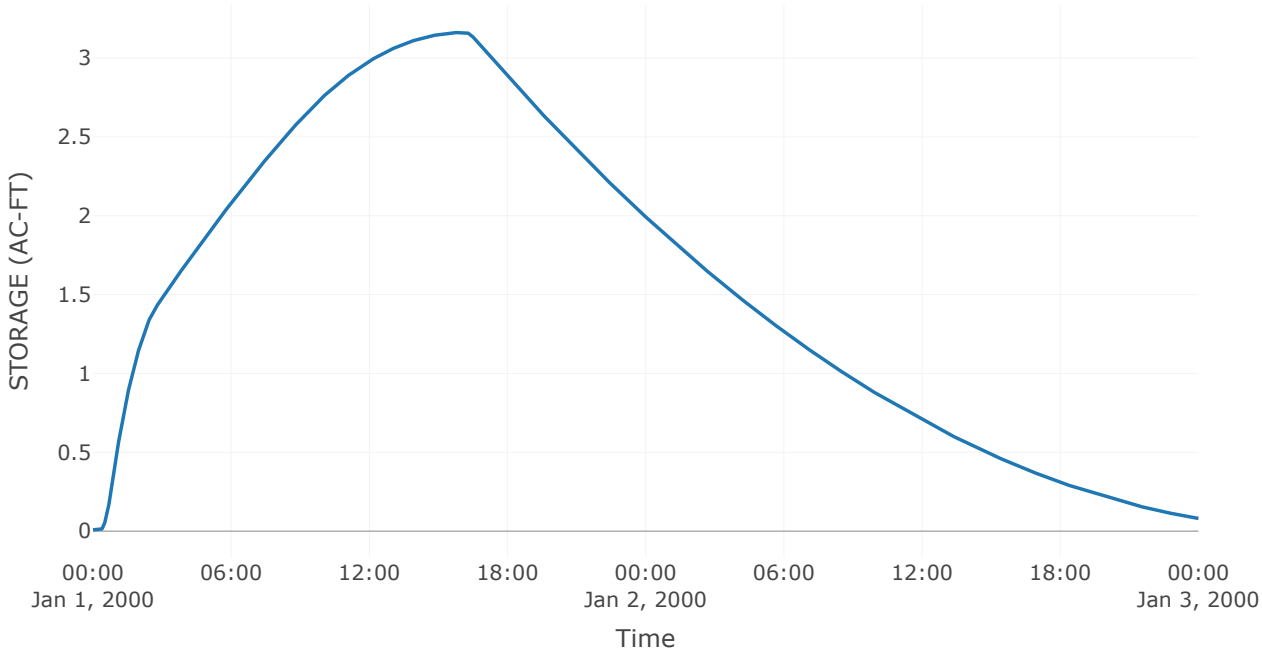

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

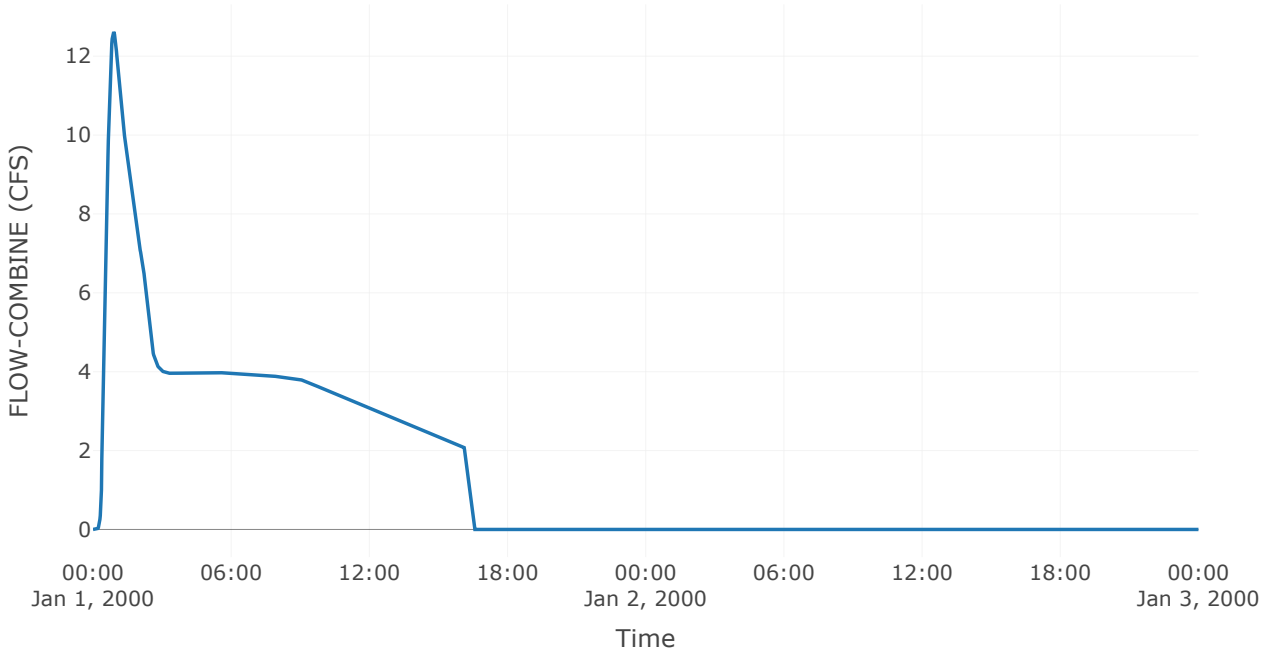
Downstream : Off - Site Tributary Area

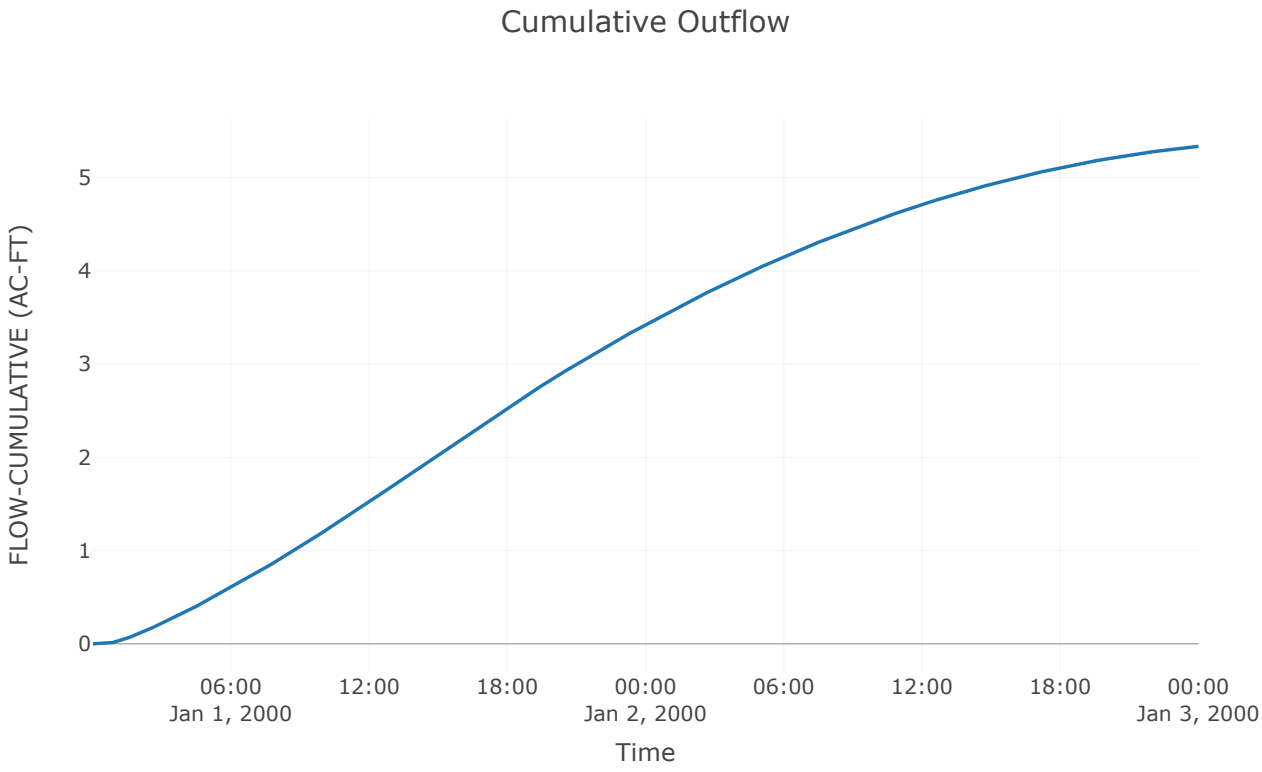
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

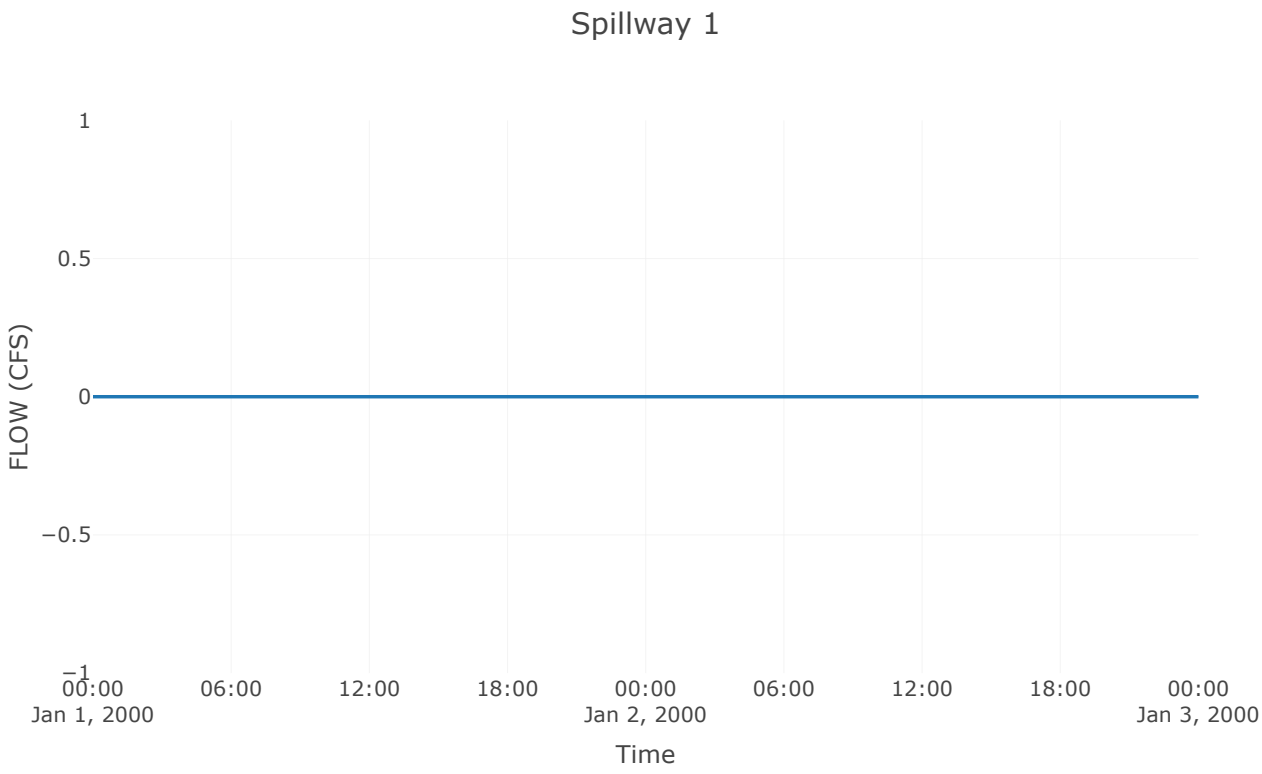
Storage

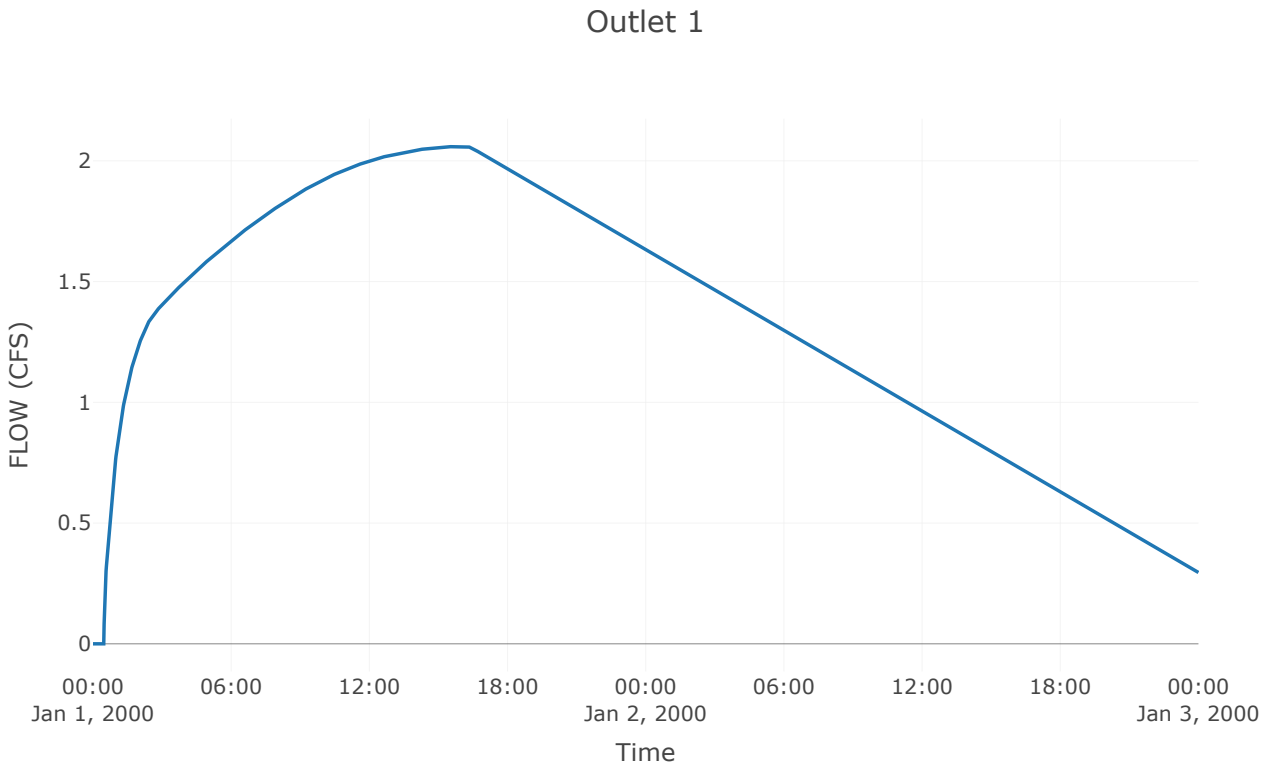


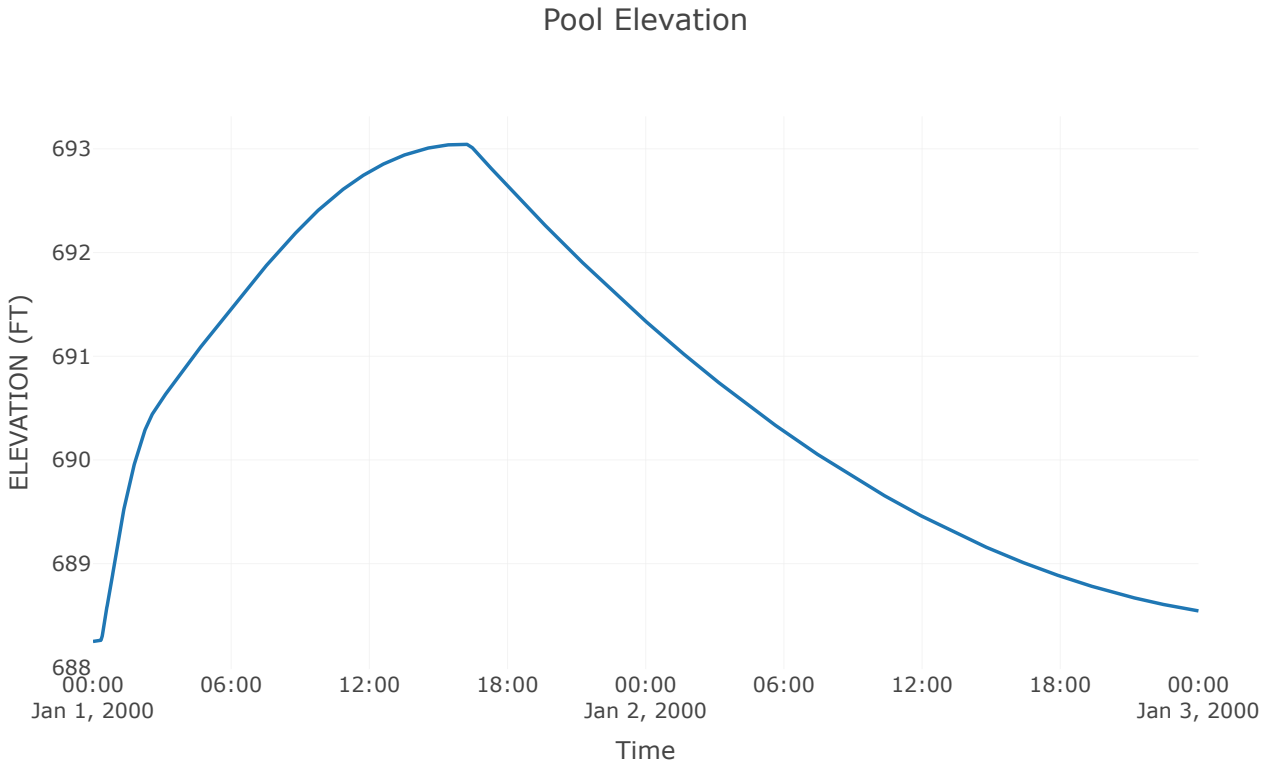
Combined Inflow

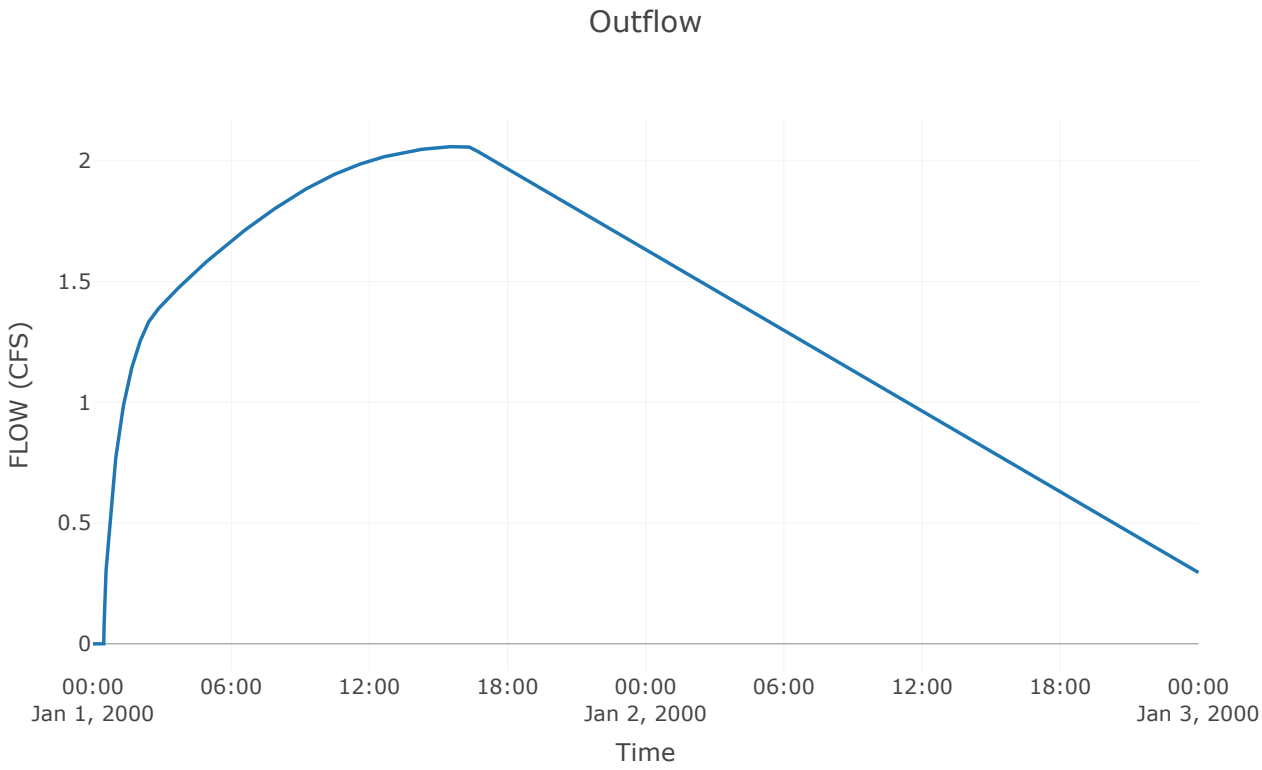



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

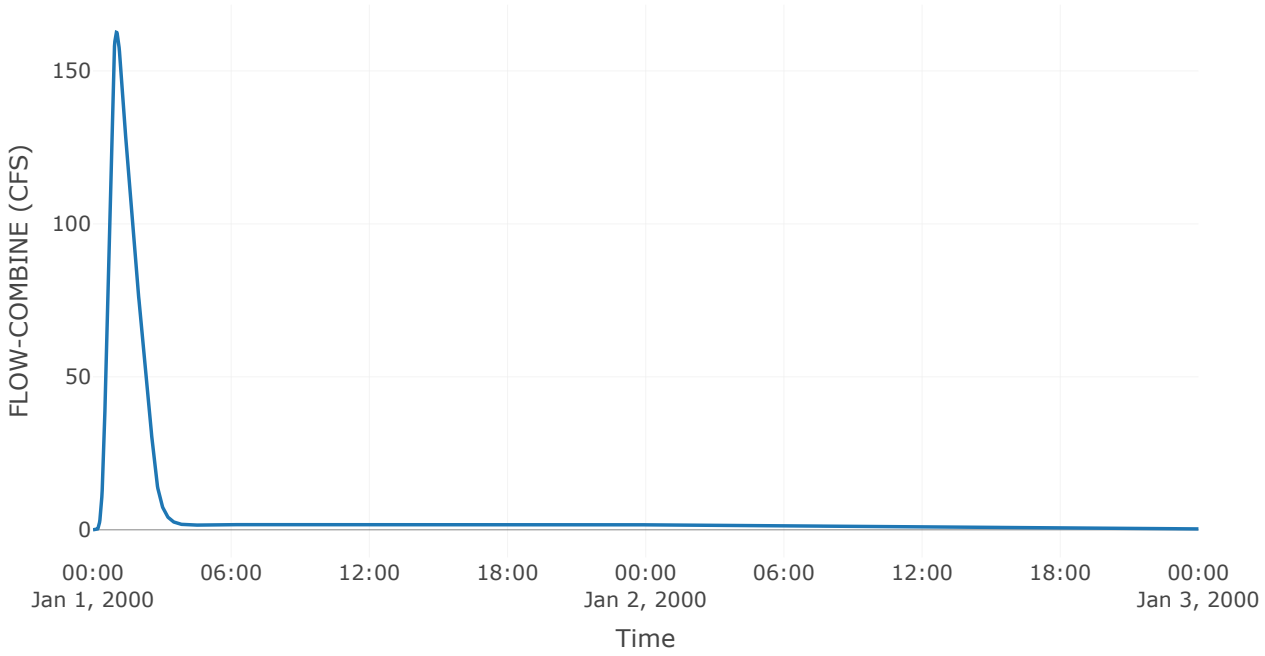

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

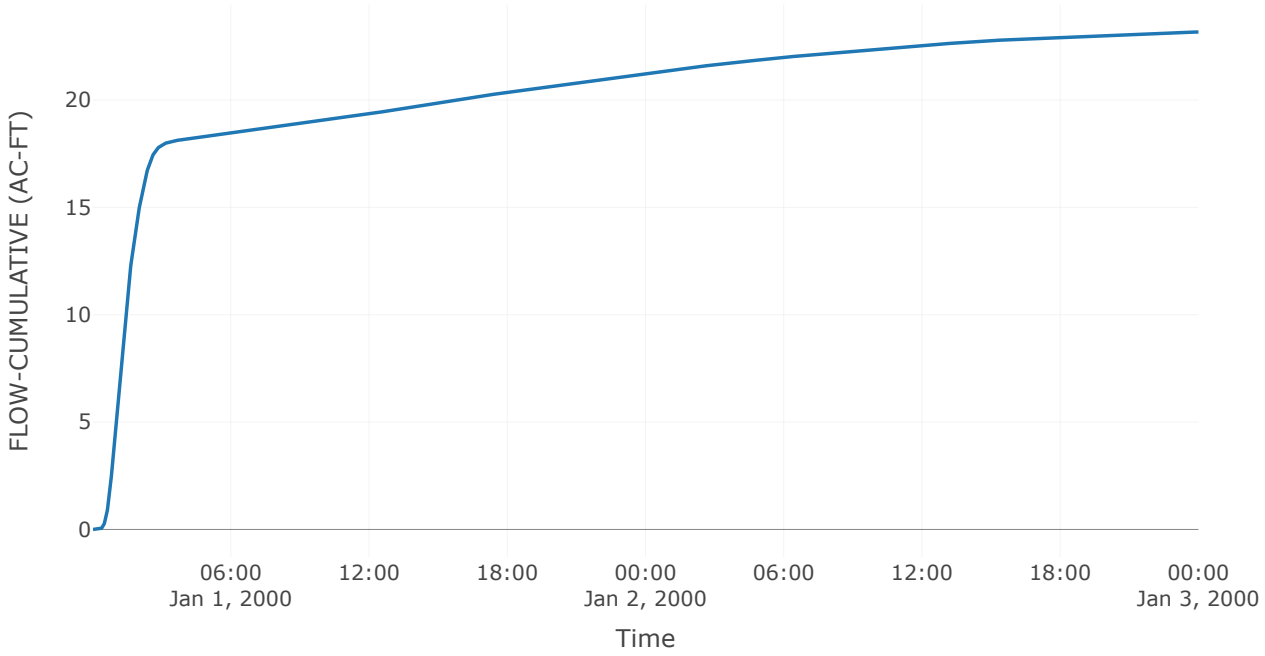
Downstream : Storage East of Wolf Road

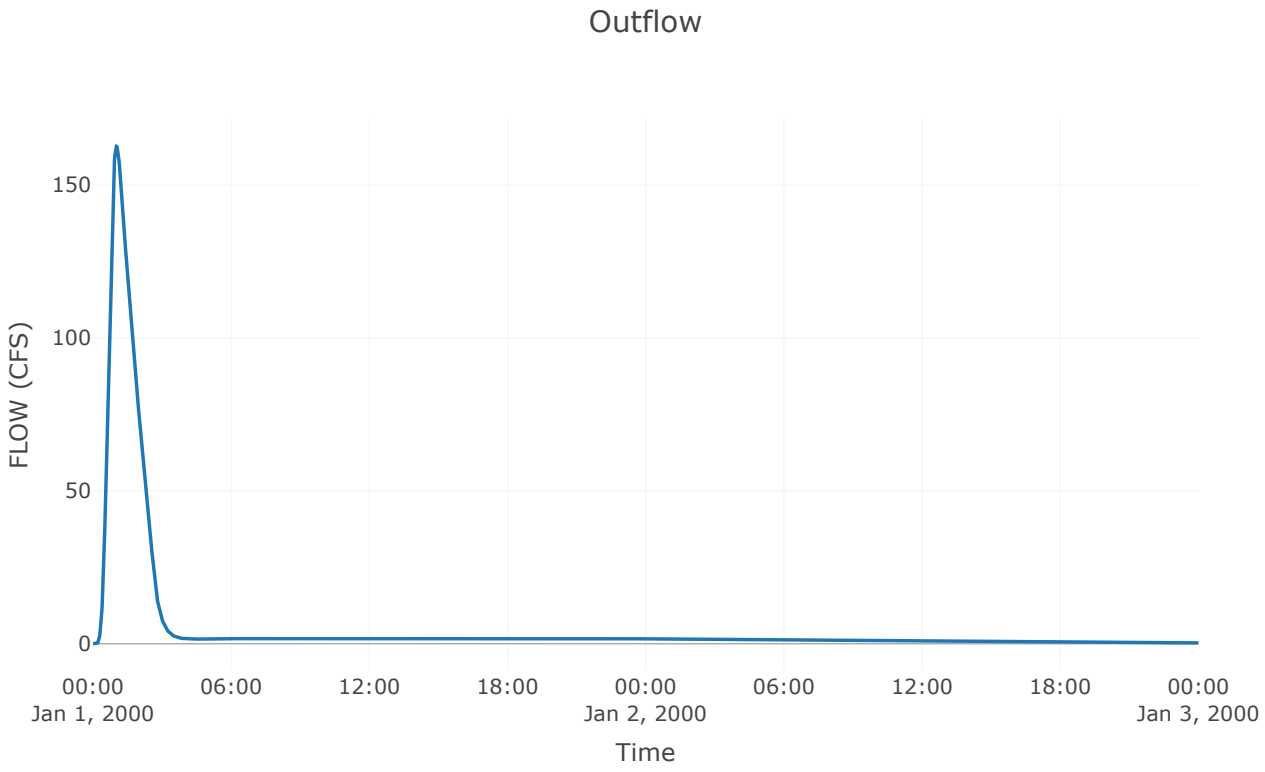
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61

Combined Inflow



Cumulative Outflow

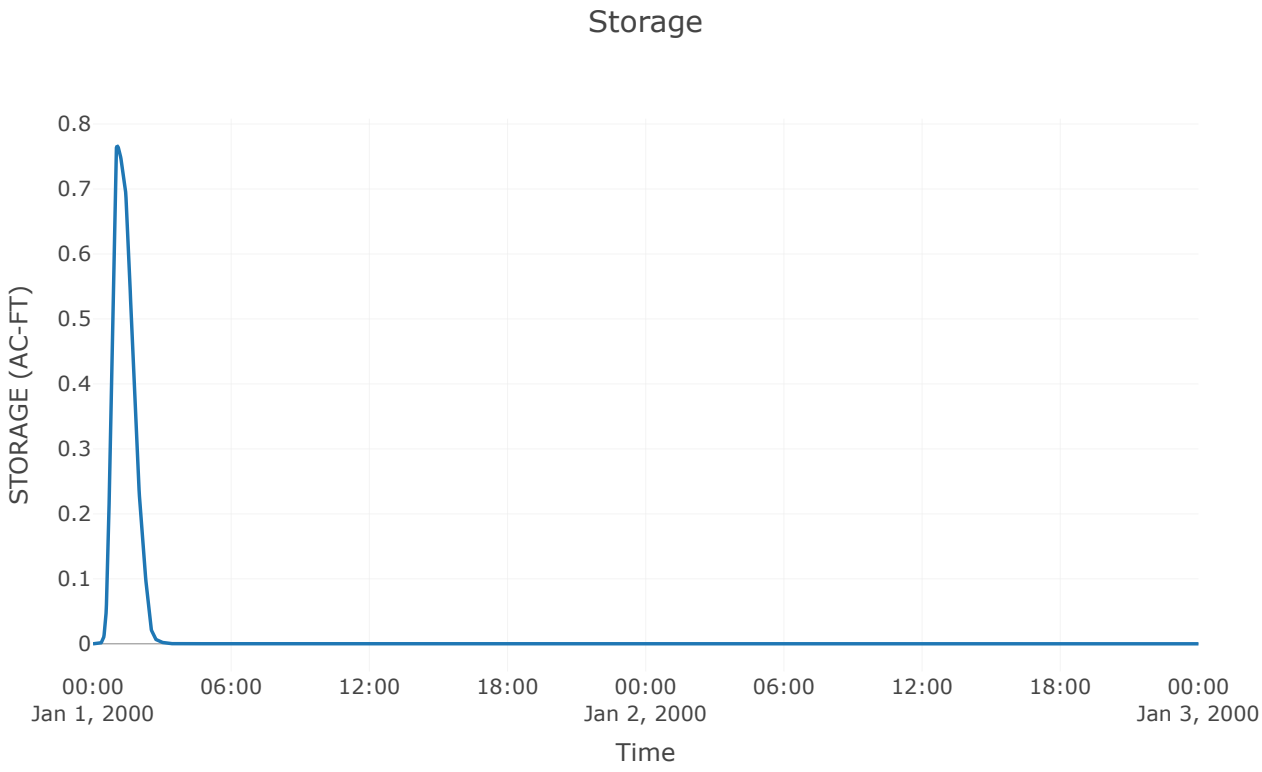


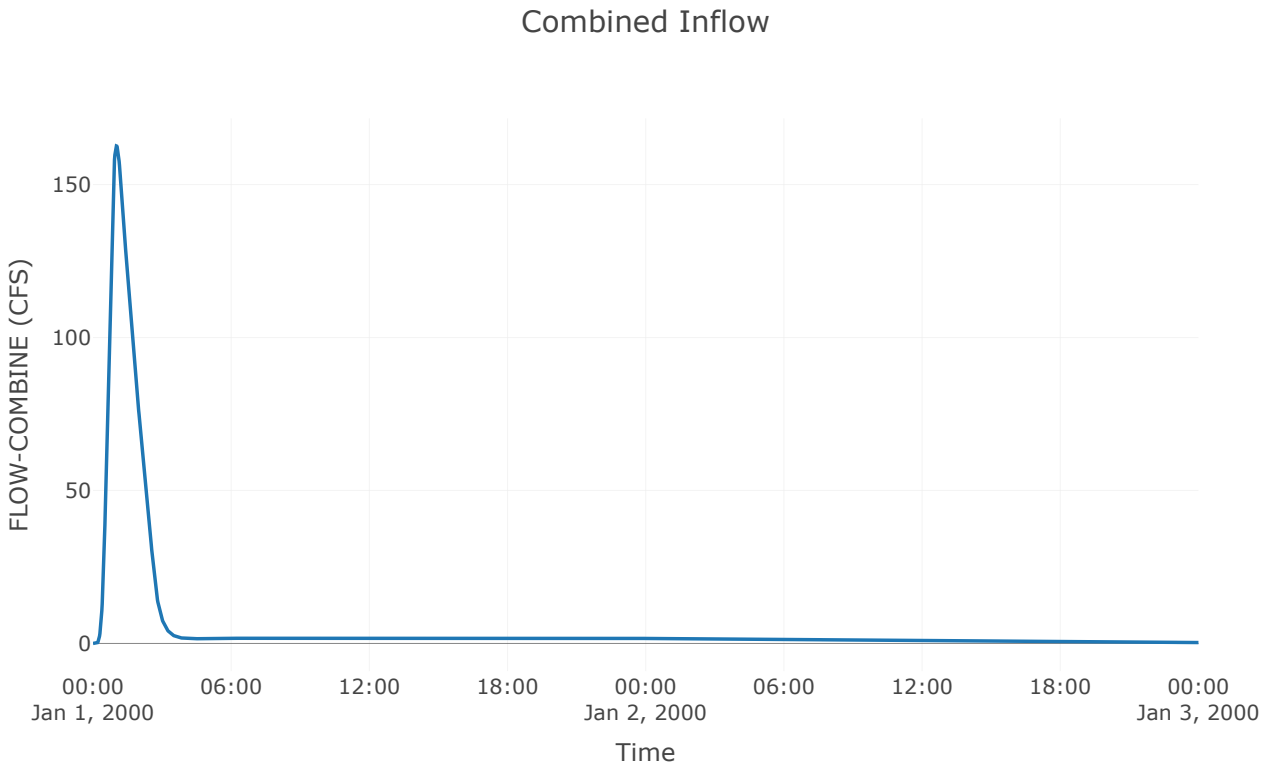

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

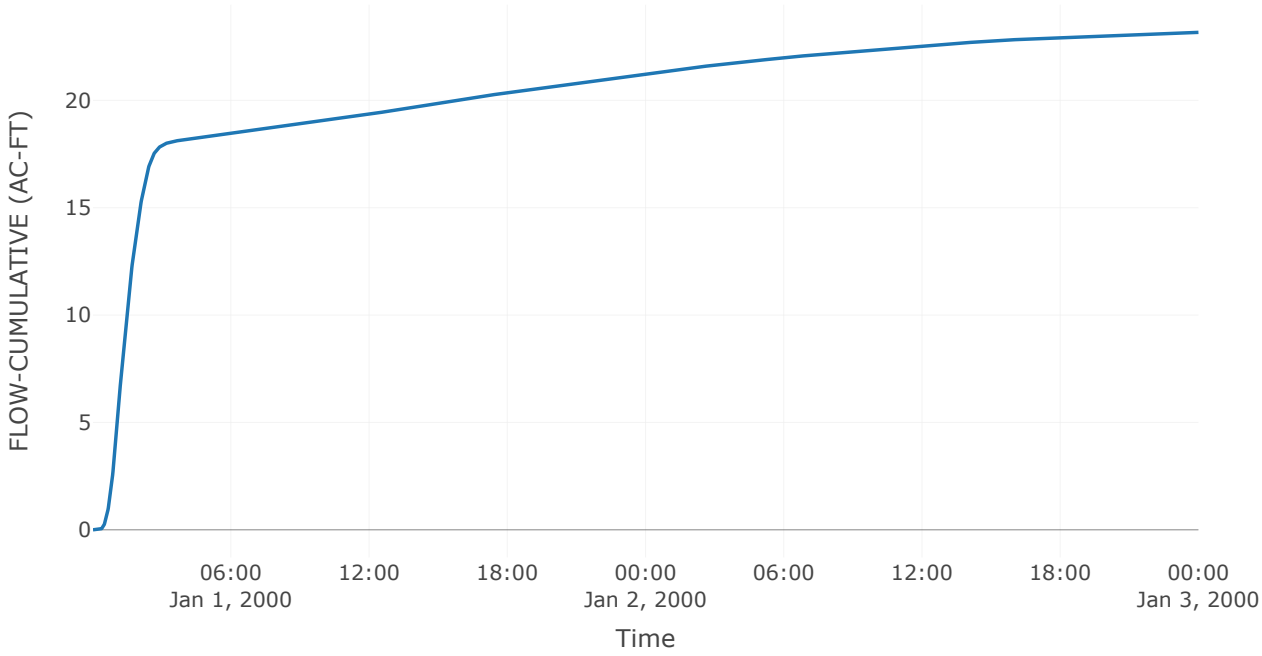
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

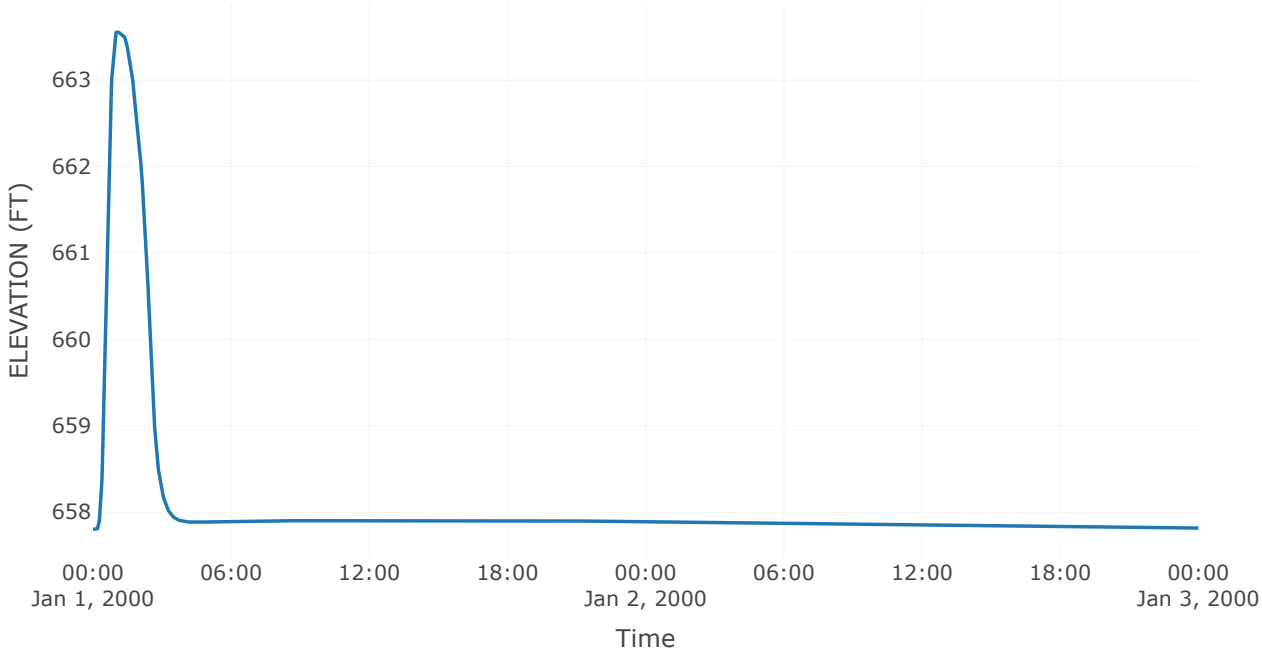

Storage
STORAGE (AC-FT)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

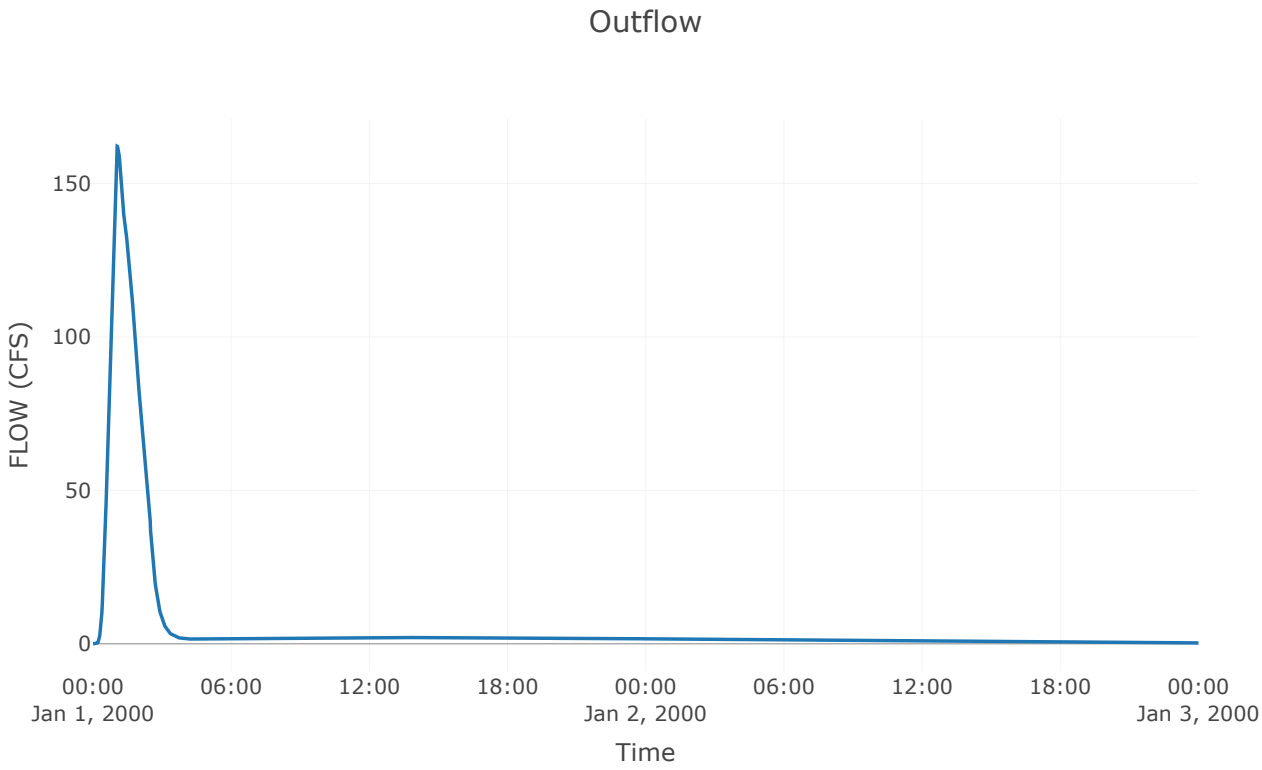

Combined Inflow
FLOW-COMBINE (CFS)
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Cumulative Outflow



Pool Elevation



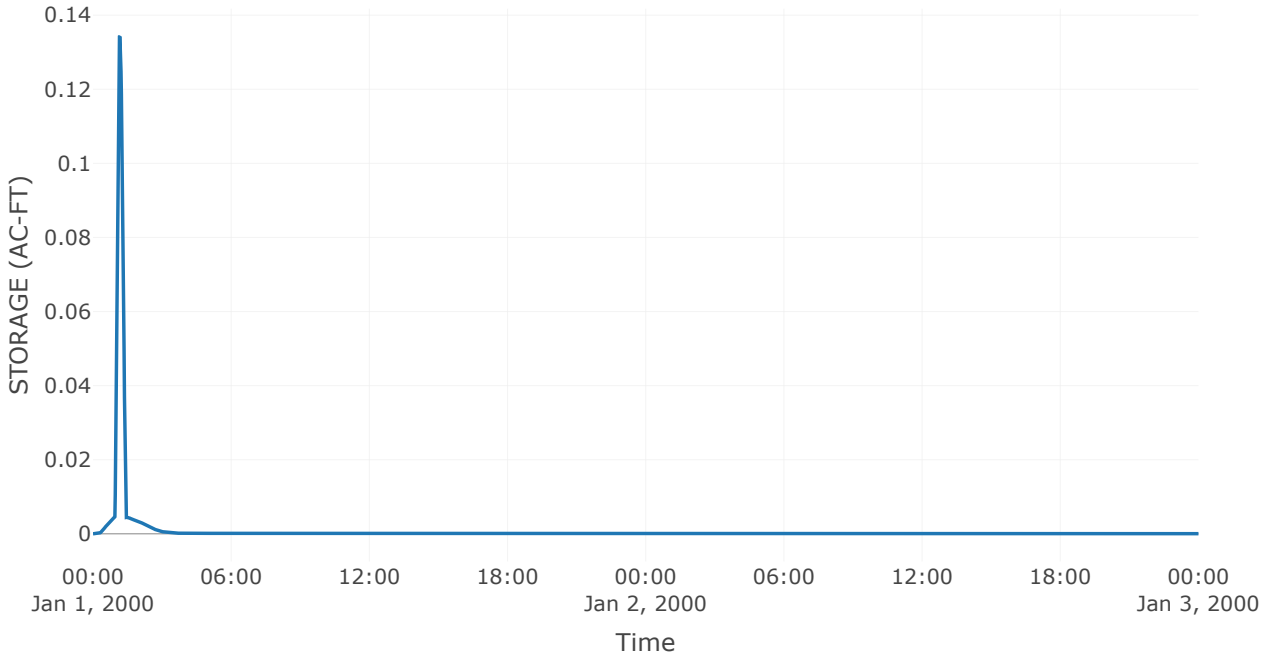

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

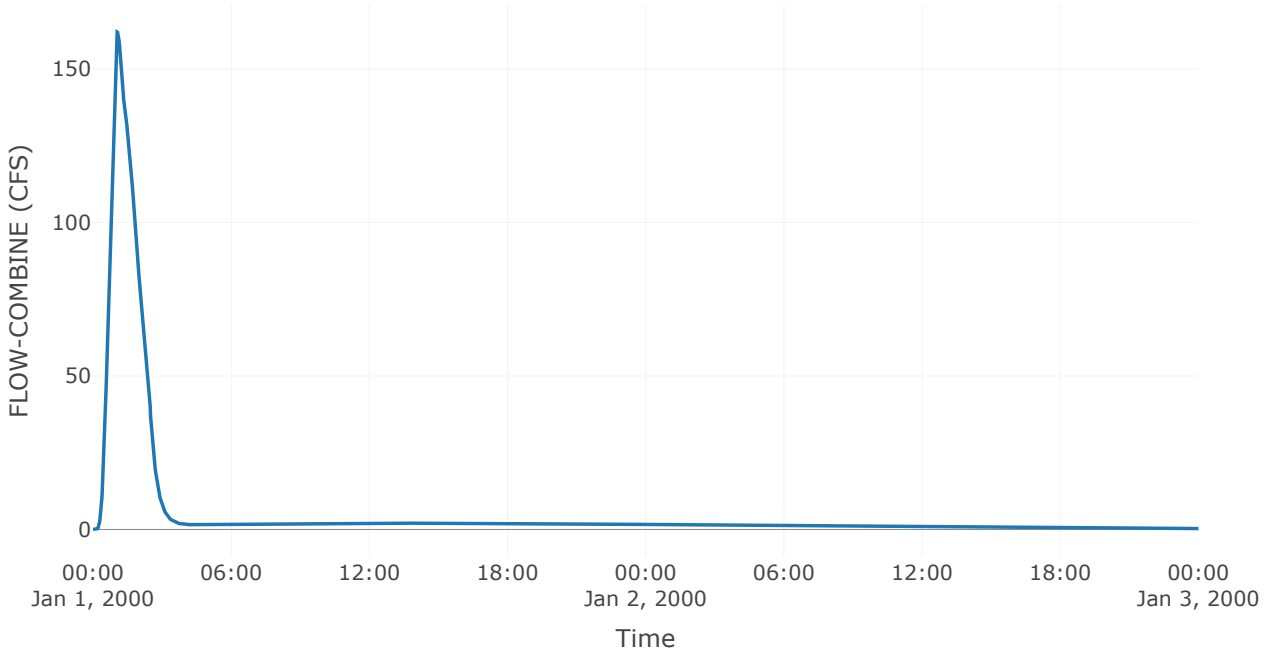
Downstream : Storage West of Wolf Road

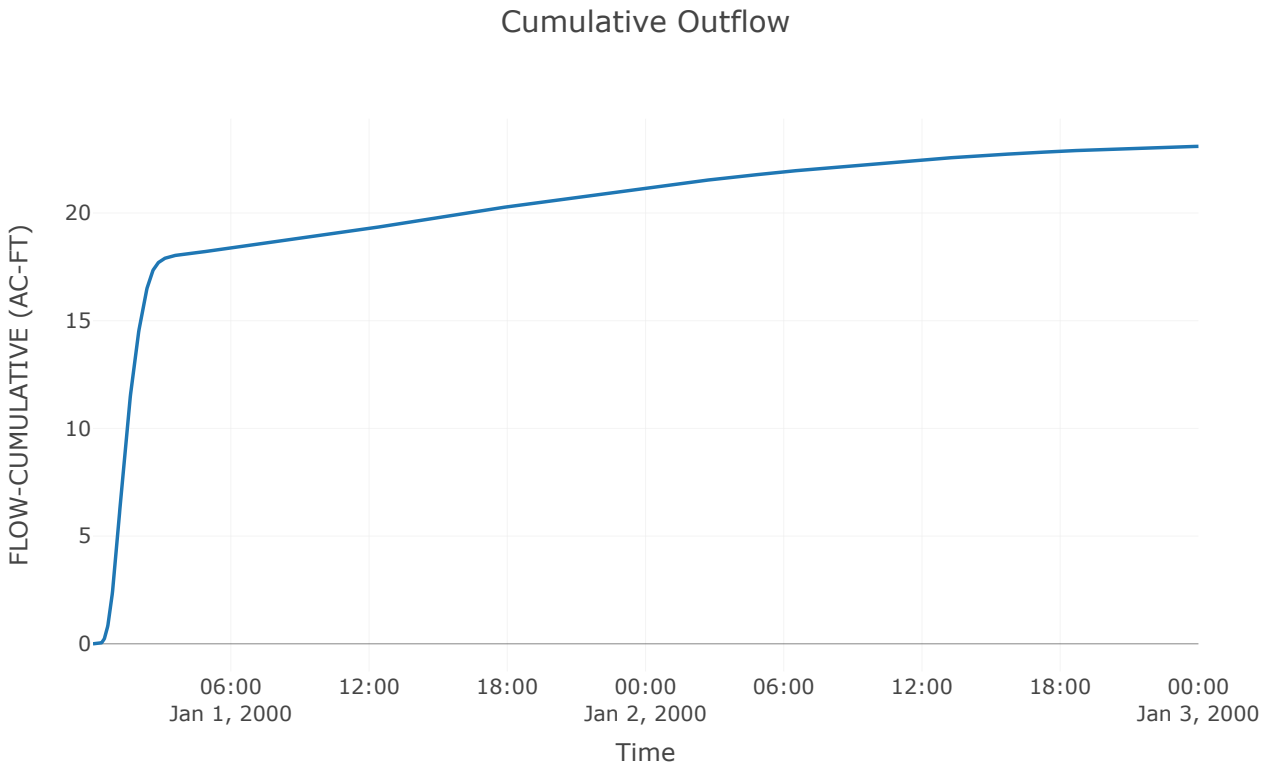
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.13
Peak Elevation (FT)	662.3
Discharge Volume (AC - FT)	23.09

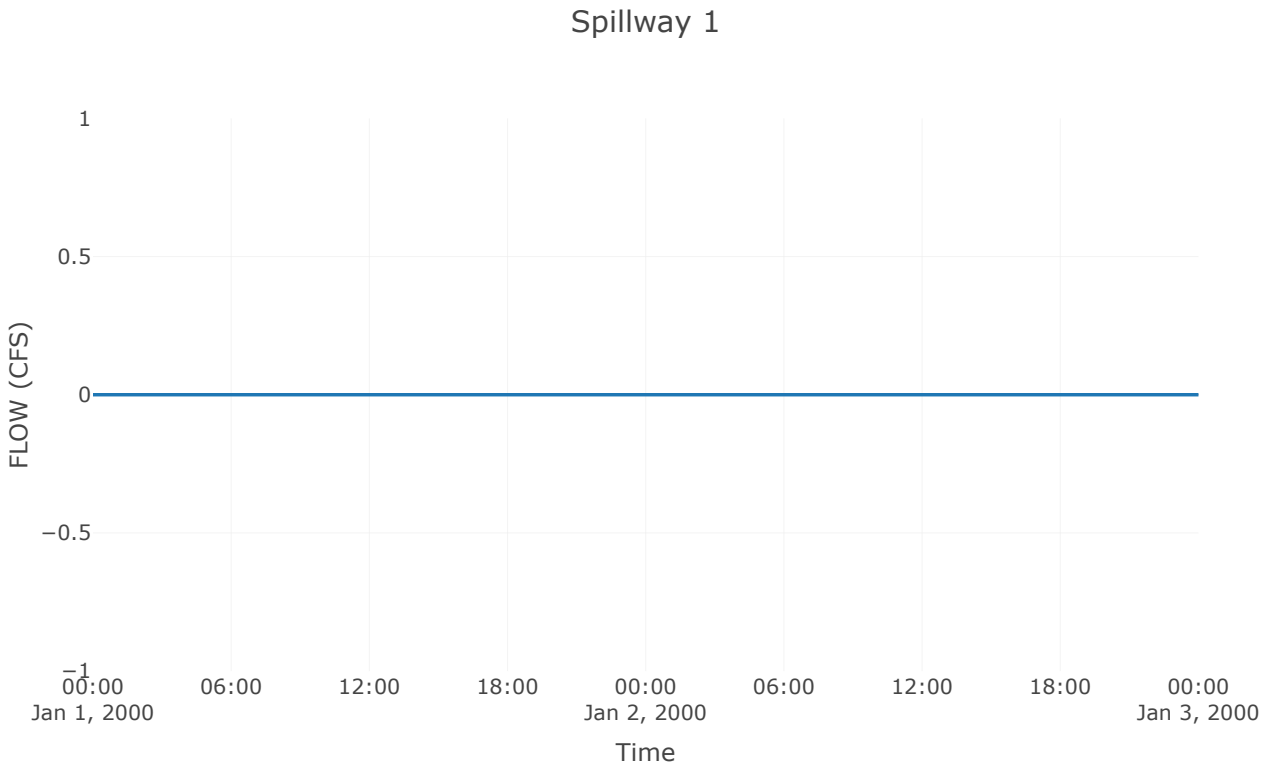
Storage



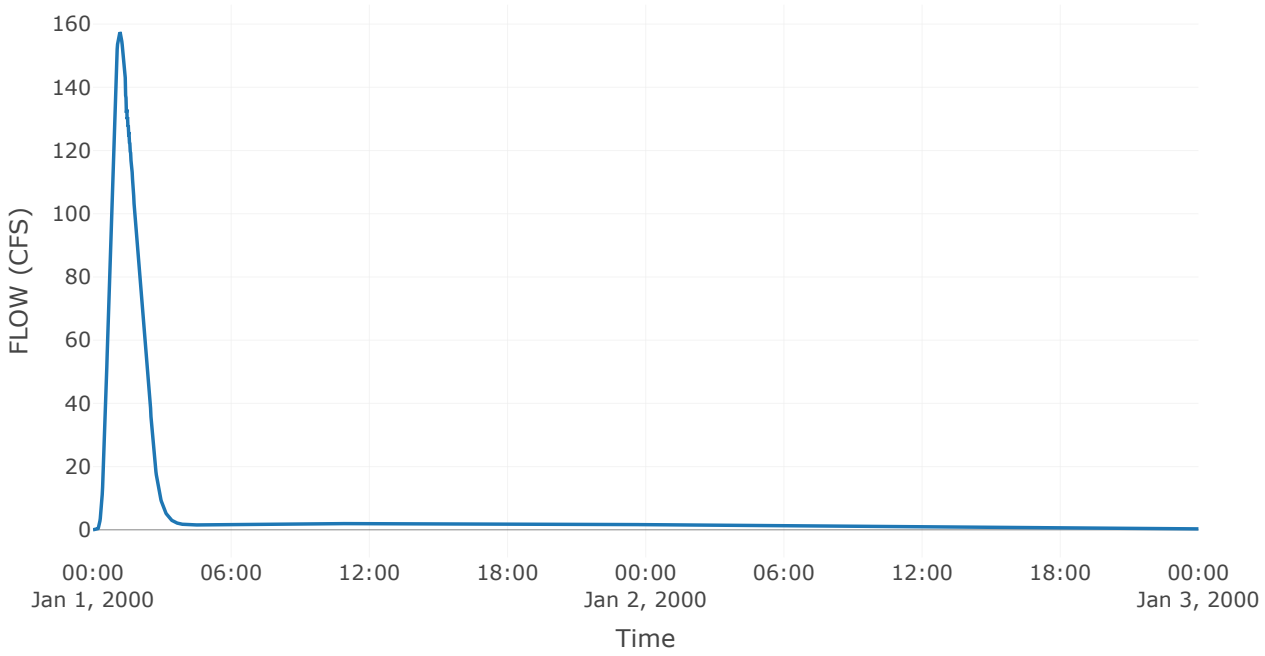
Combined Inflow



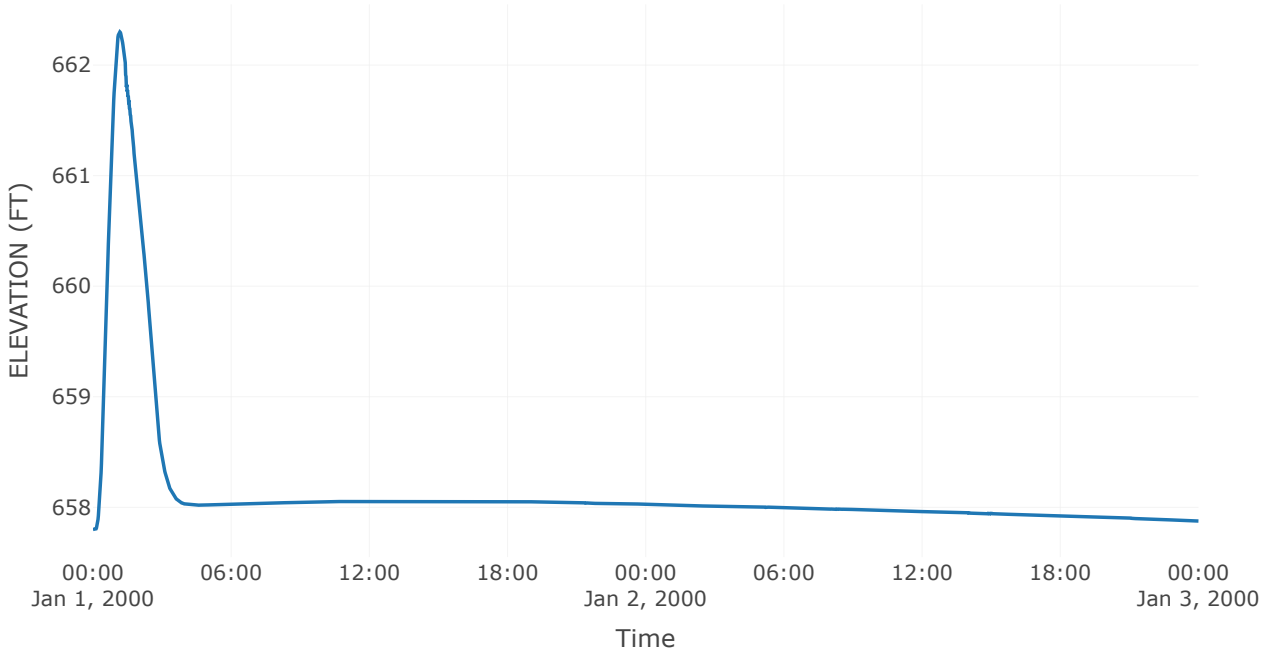

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

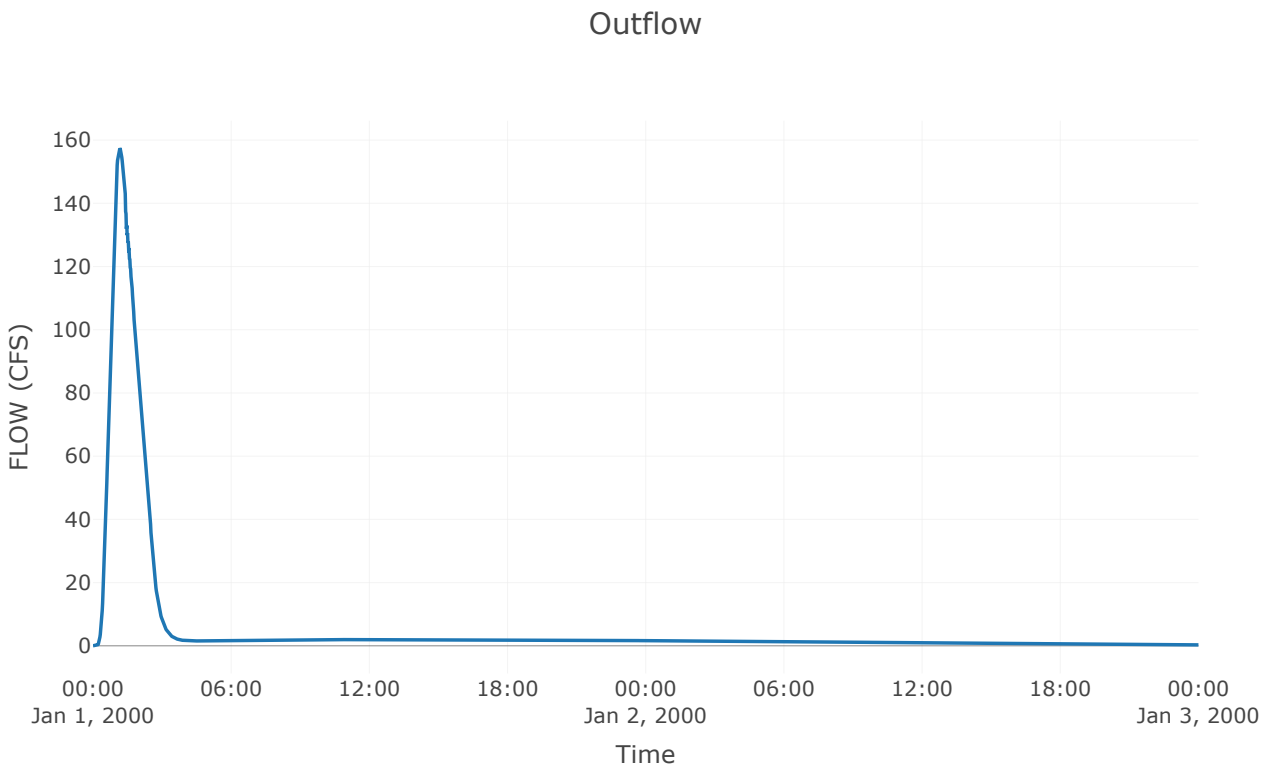

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



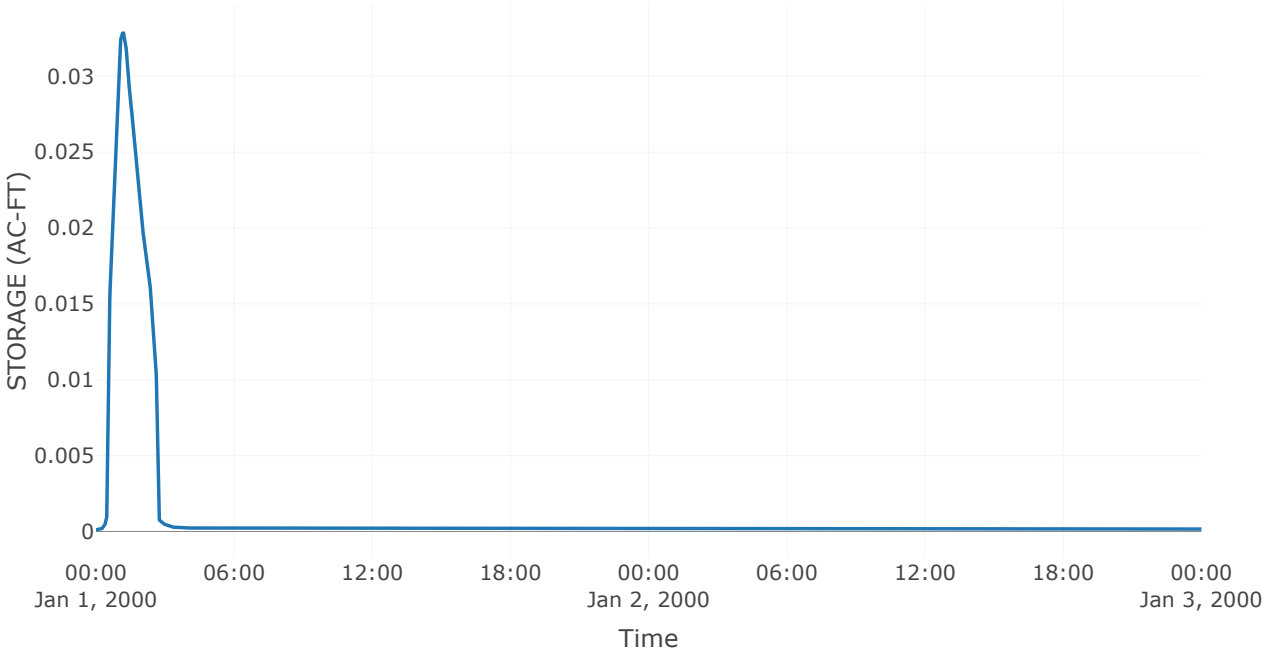

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

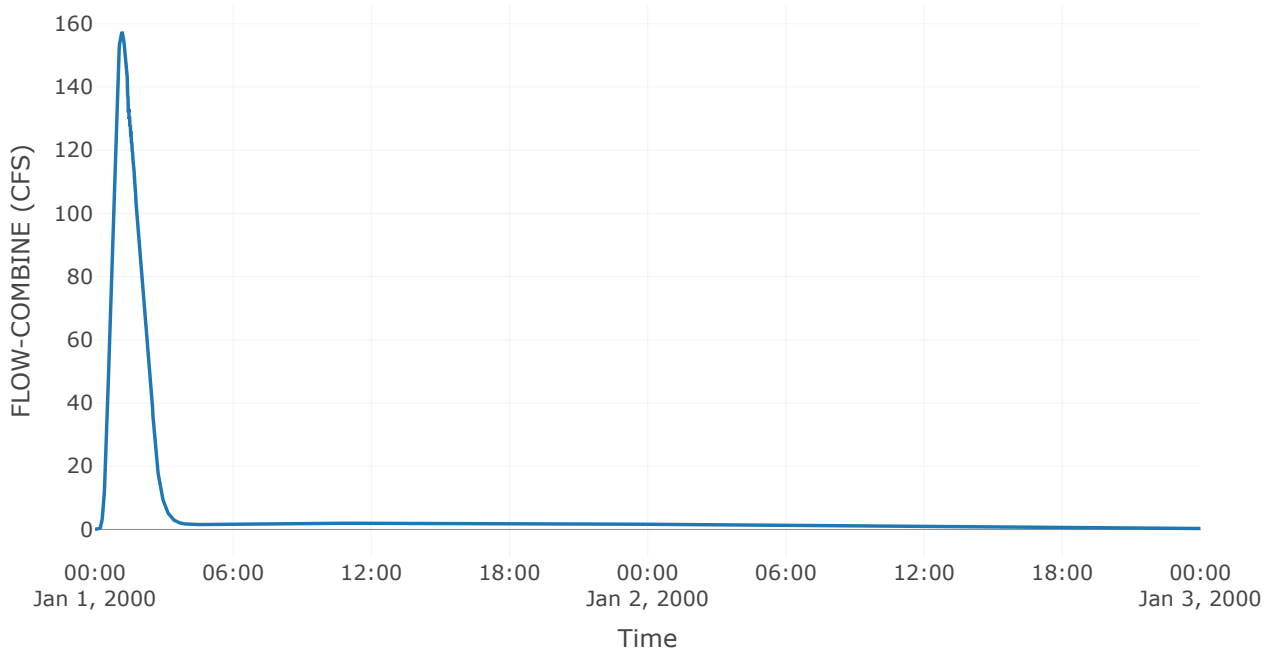
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.6
Peak Inflow (CFS)	157.38
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.03
Peak Elevation (FT)	659.44
Discharge Volume (AC - FT)	23.04

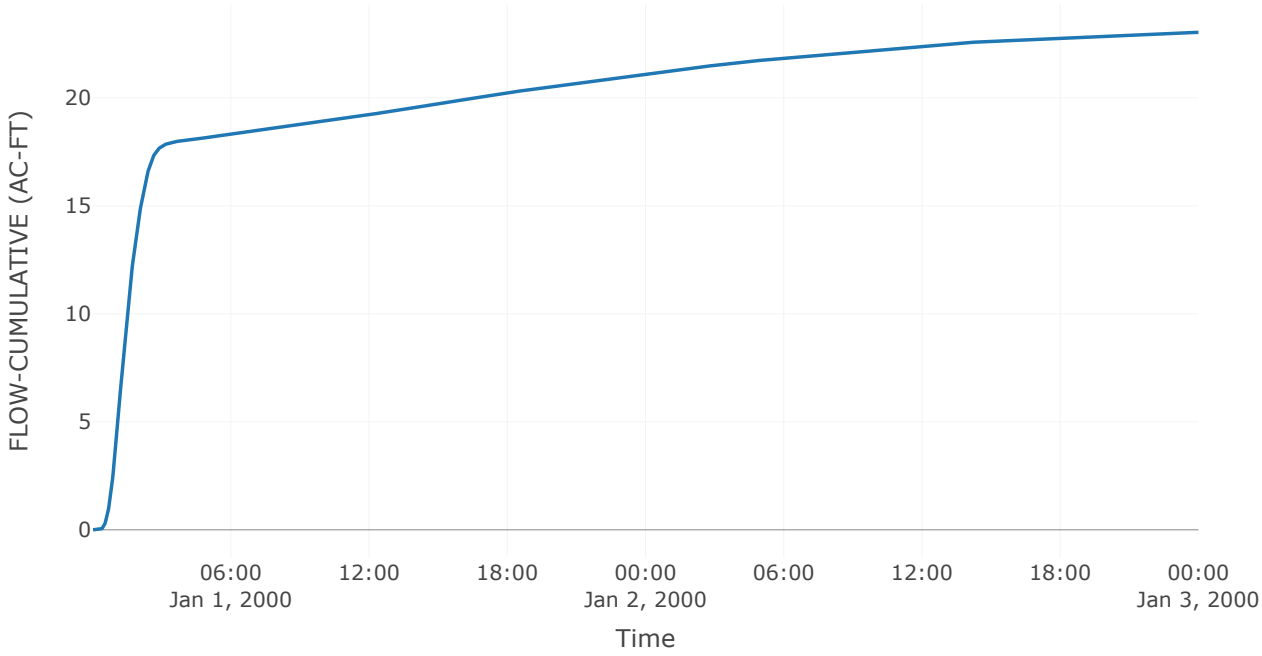
Storage



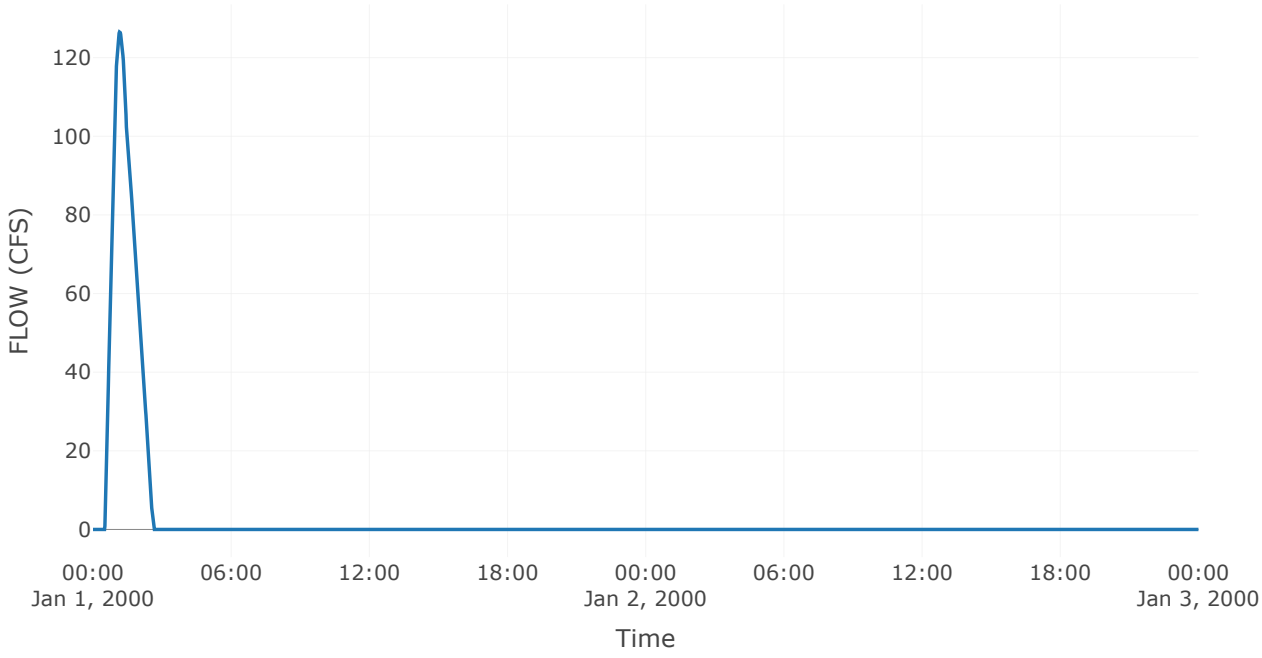
Combined Inflow



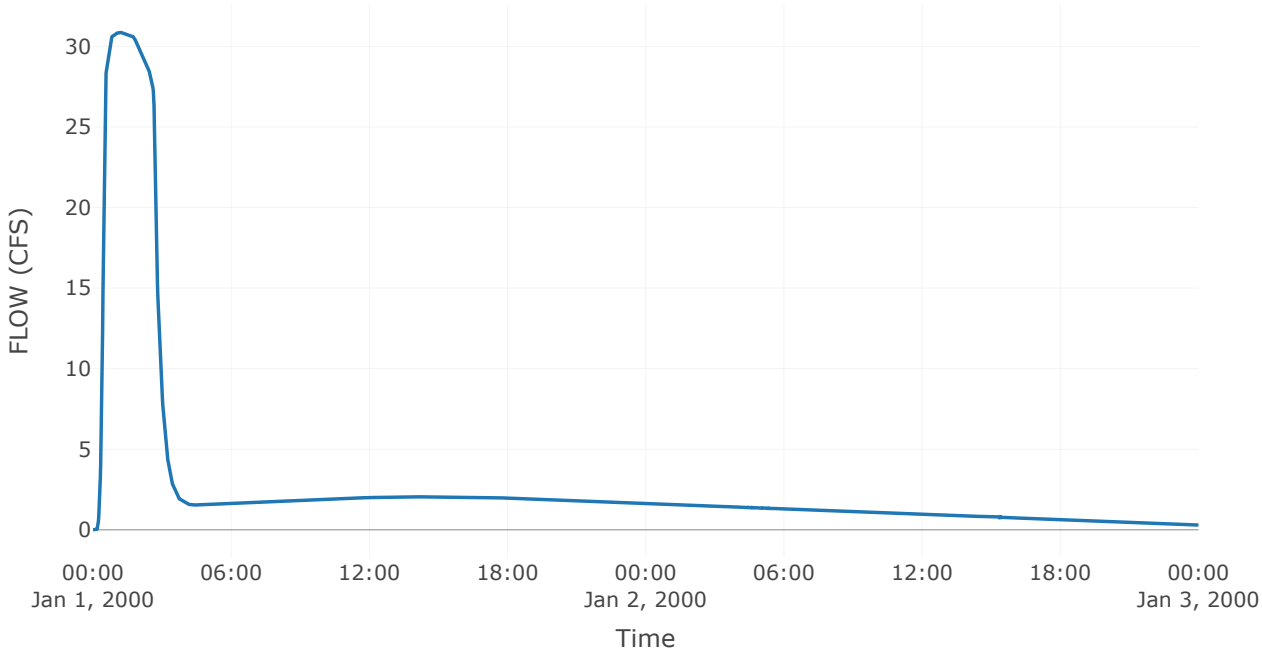
Cumulative Outflow



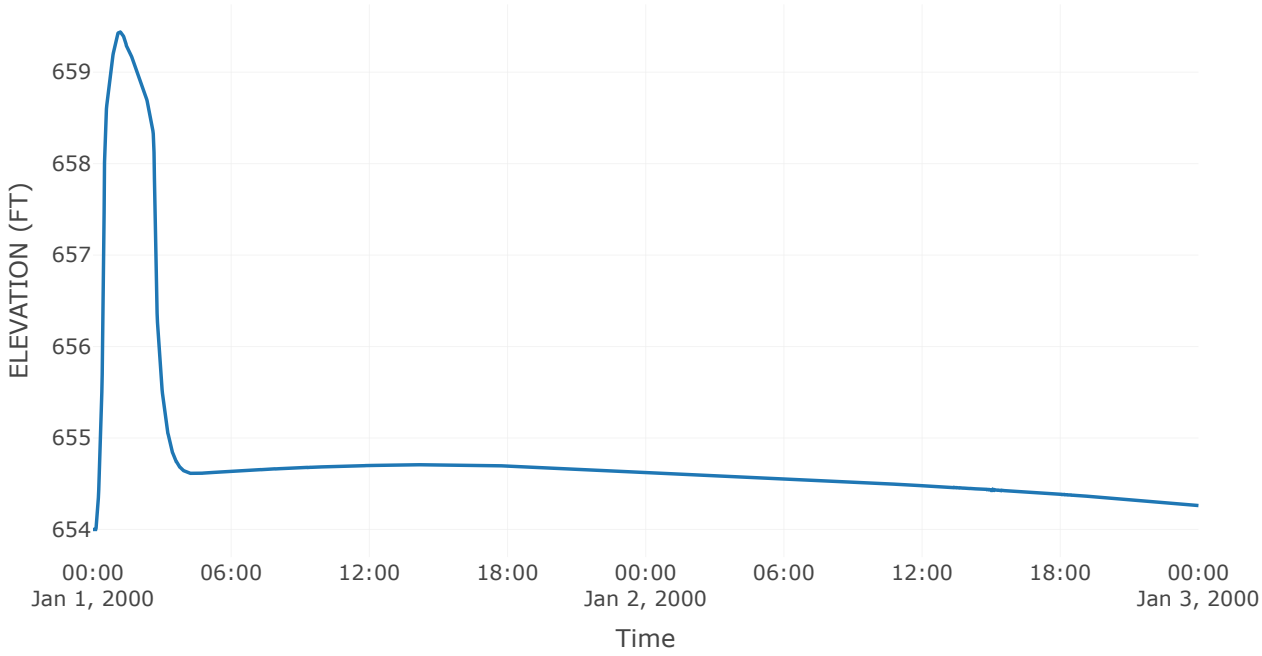
Spillway 1

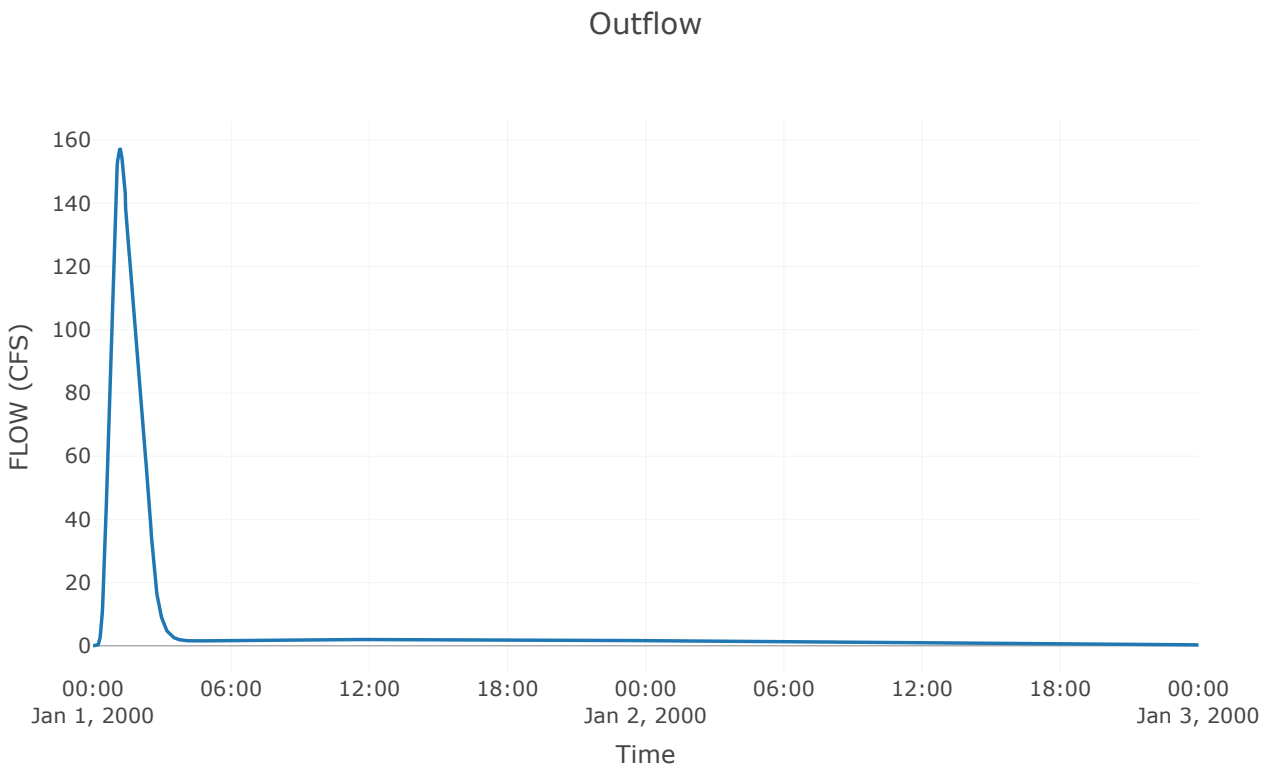


Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

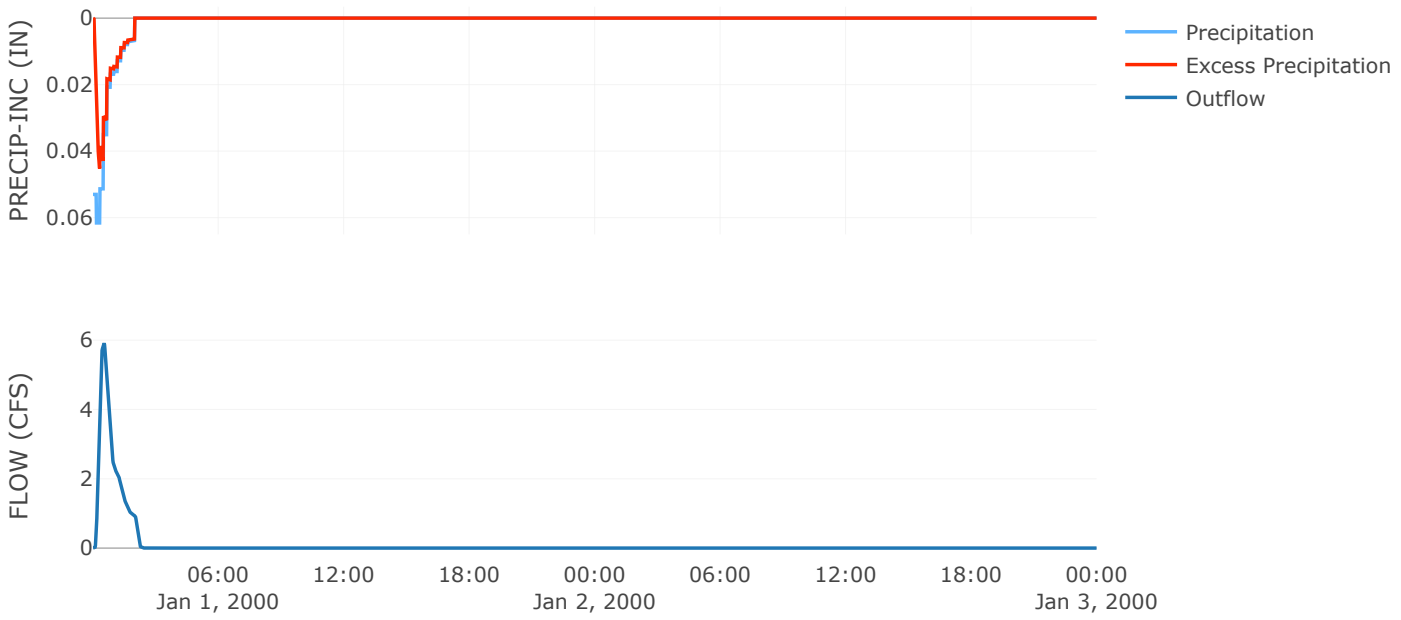
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

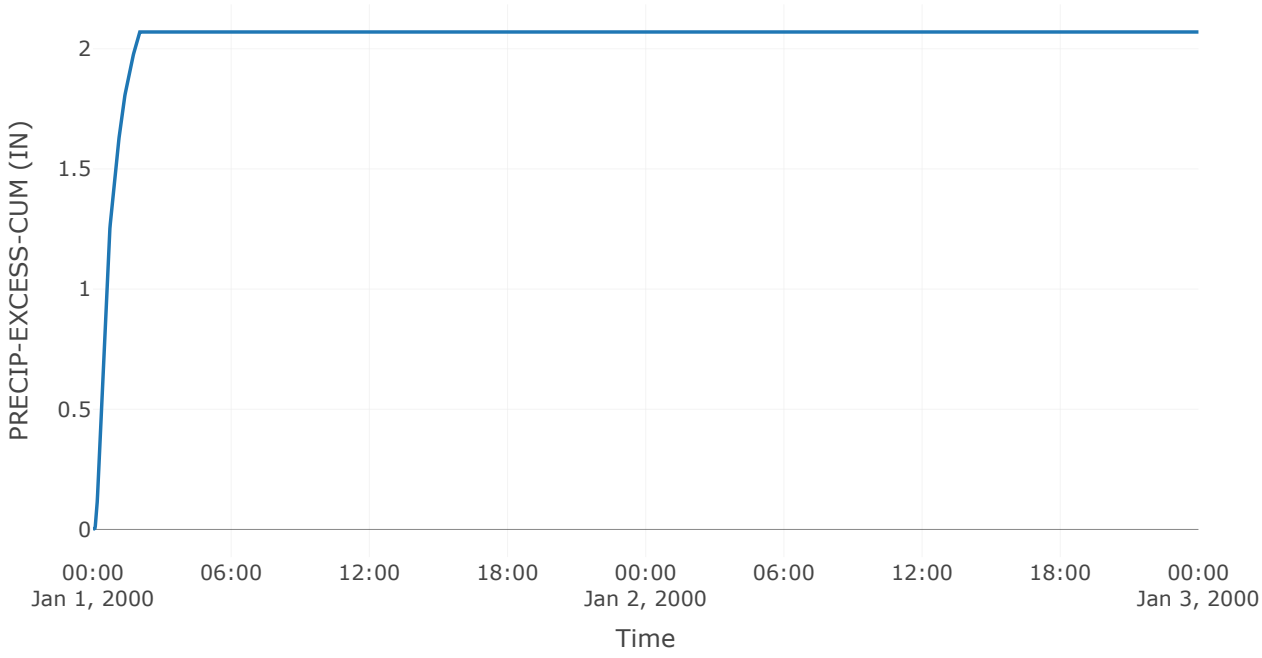
Transform: Scs	
Lag	6
Unitgraph Type	Standard

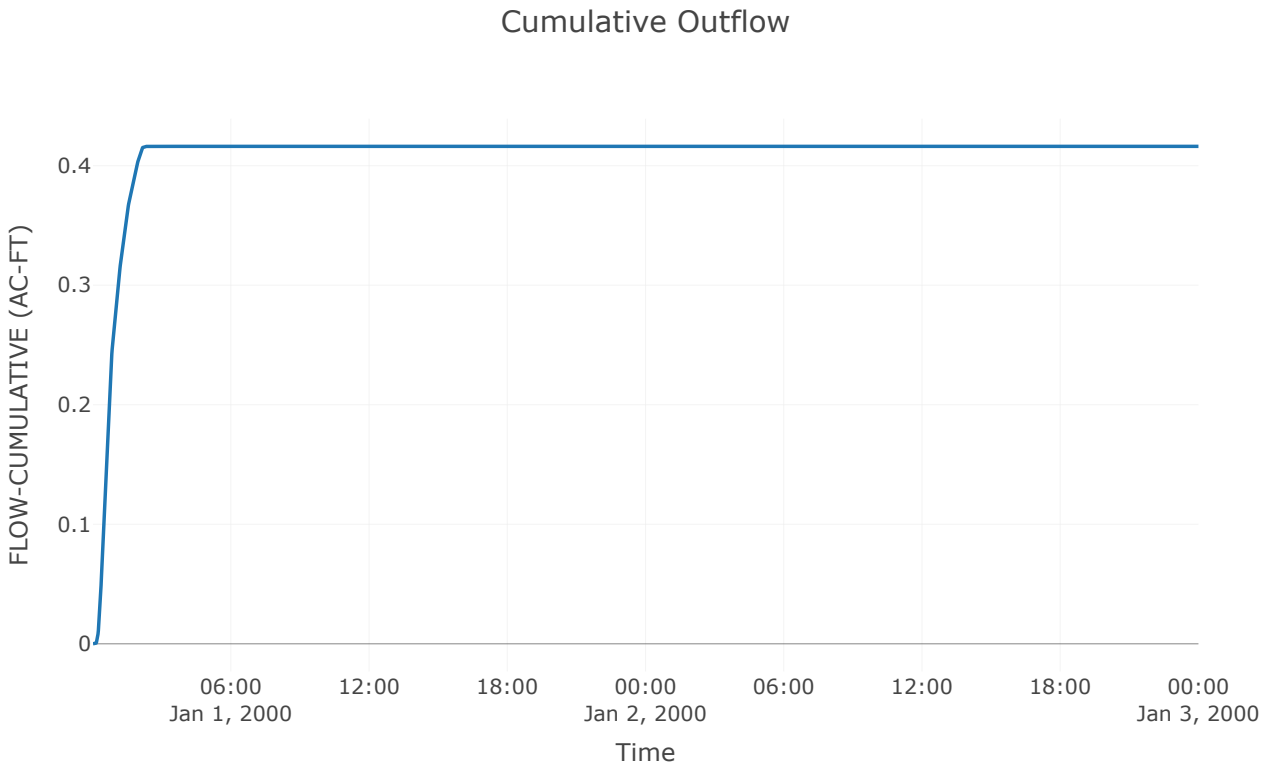
Results: Existing On-Site	
Peak Discharge (CFS)	5.91
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.42
Direct Runoff Volume (AC - FT)	0.42
Baseflow Volume (AC - FT)	0

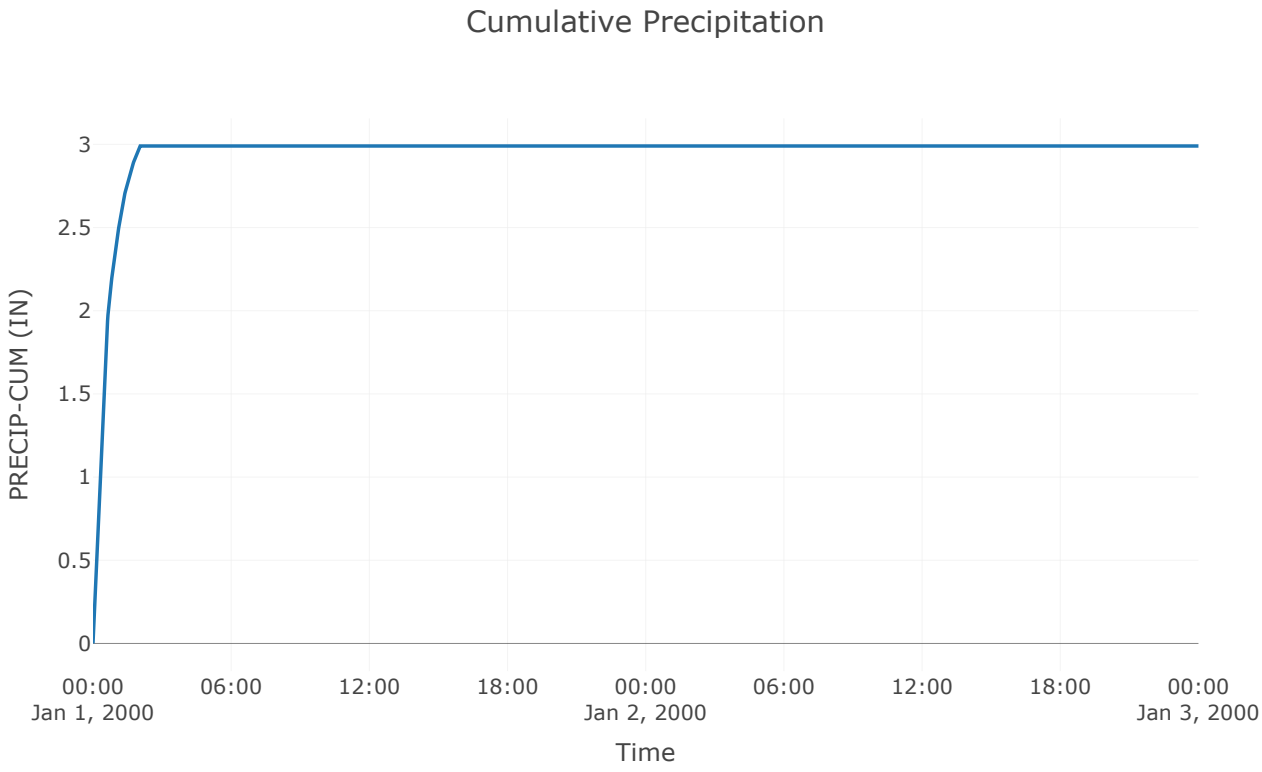
Precipitation and Outflow

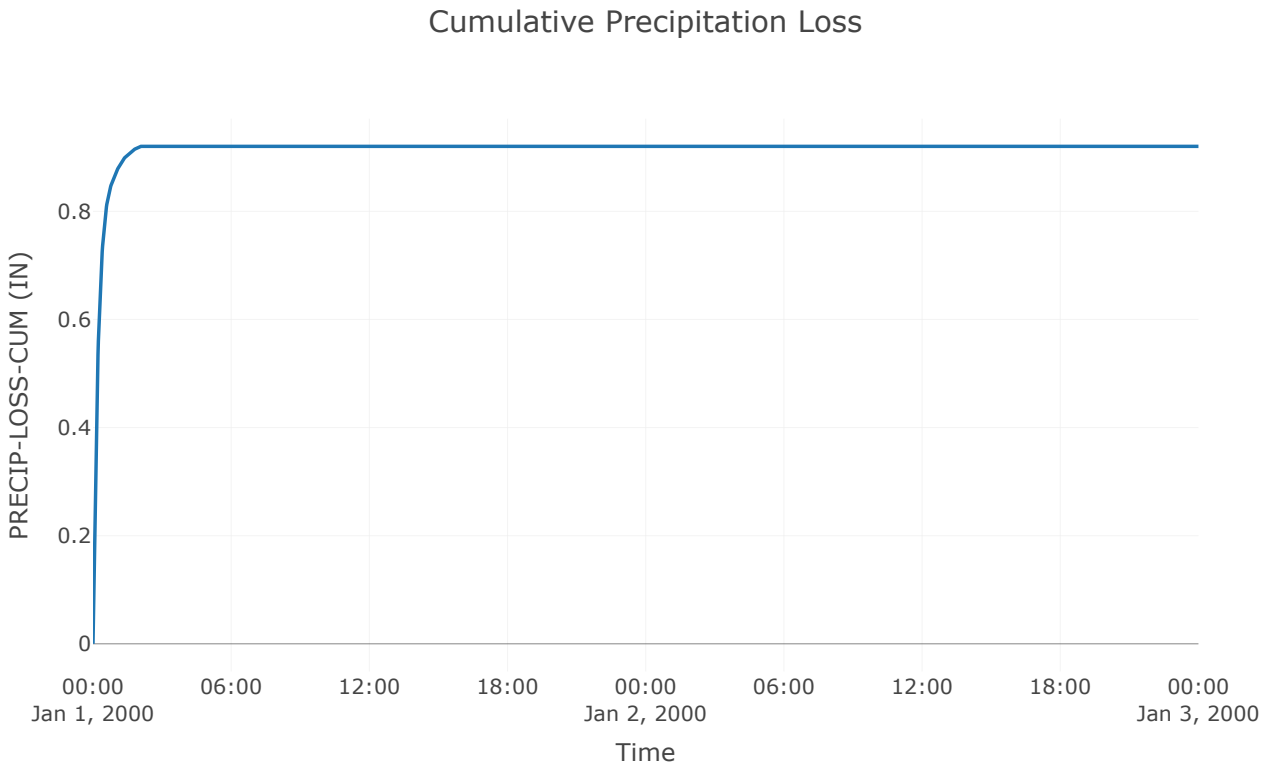


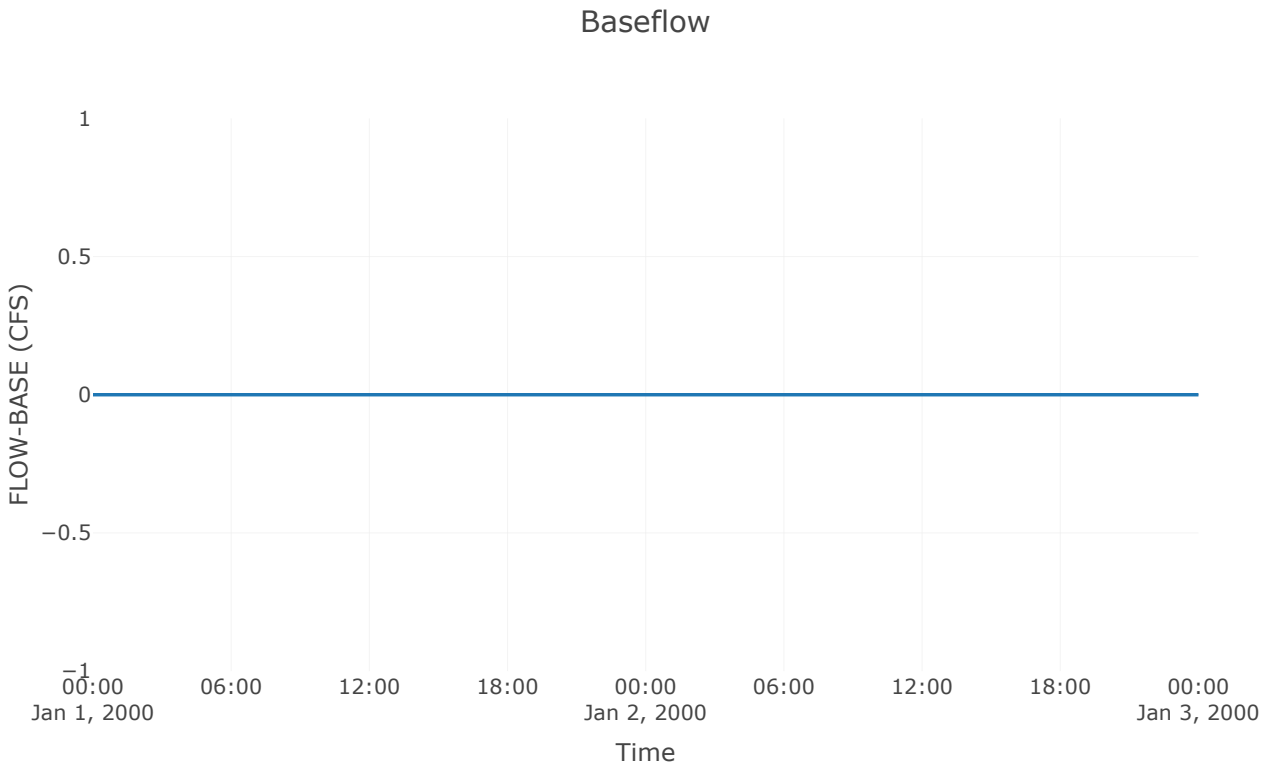
Cumulative Excess Precipitation



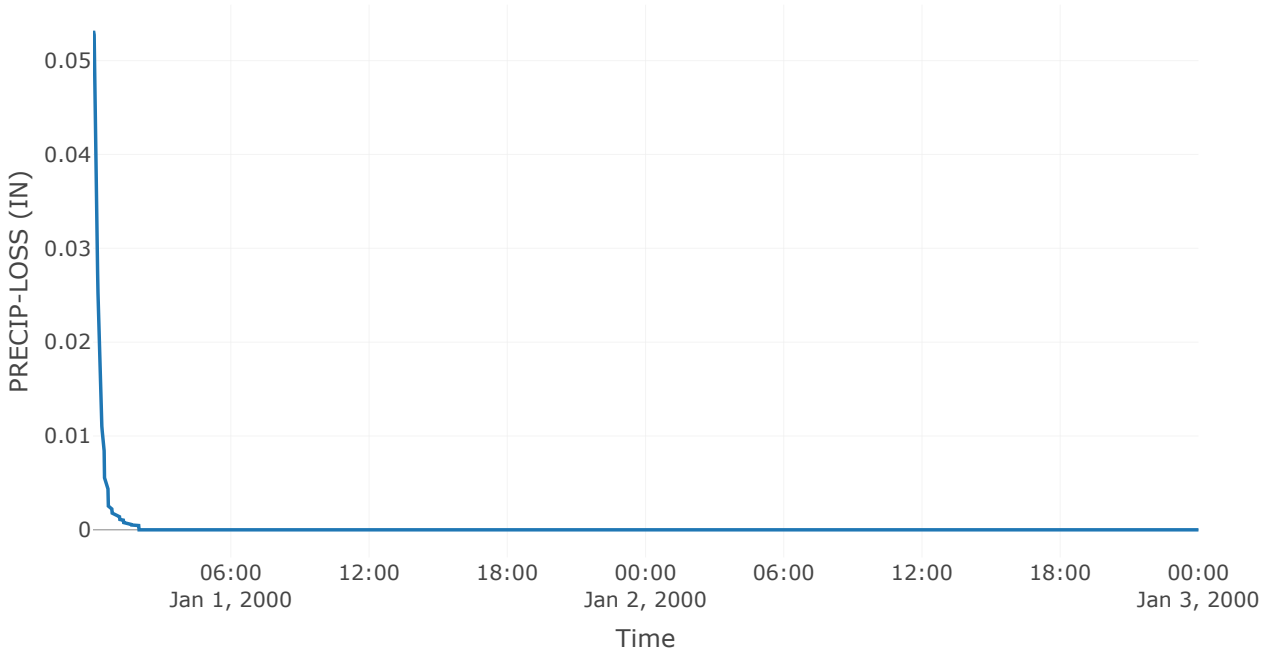

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

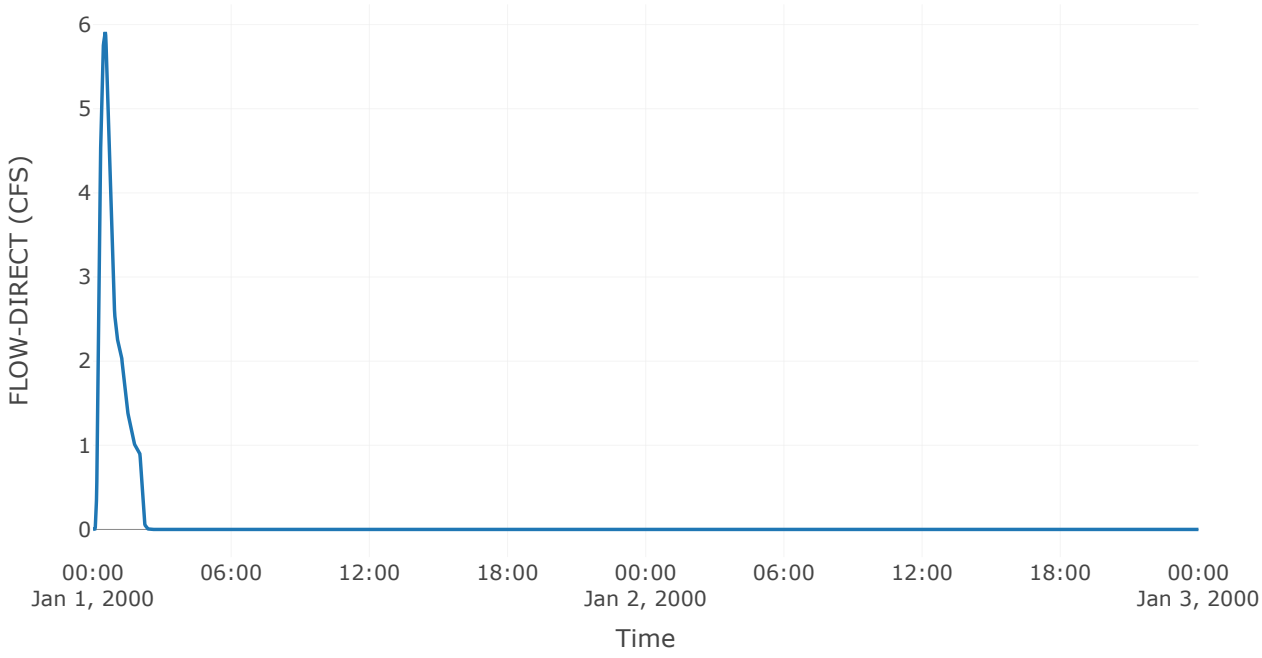

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

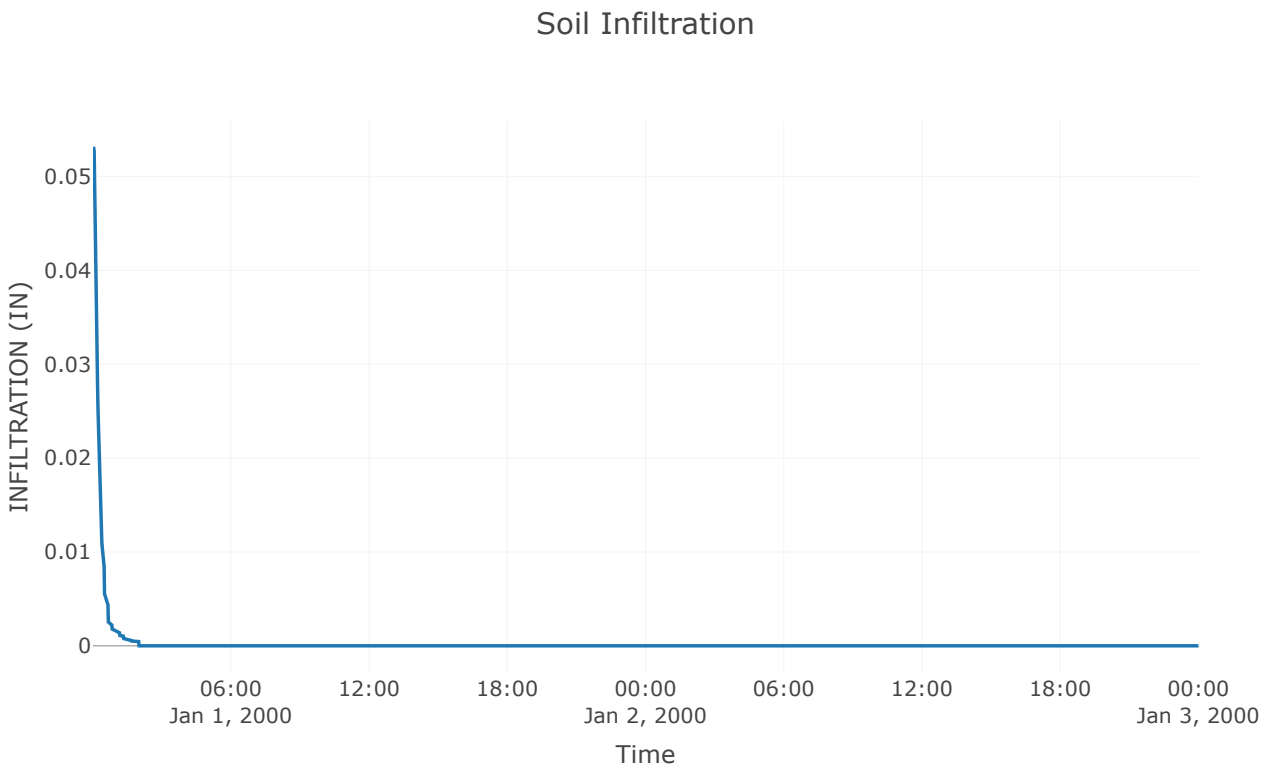

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



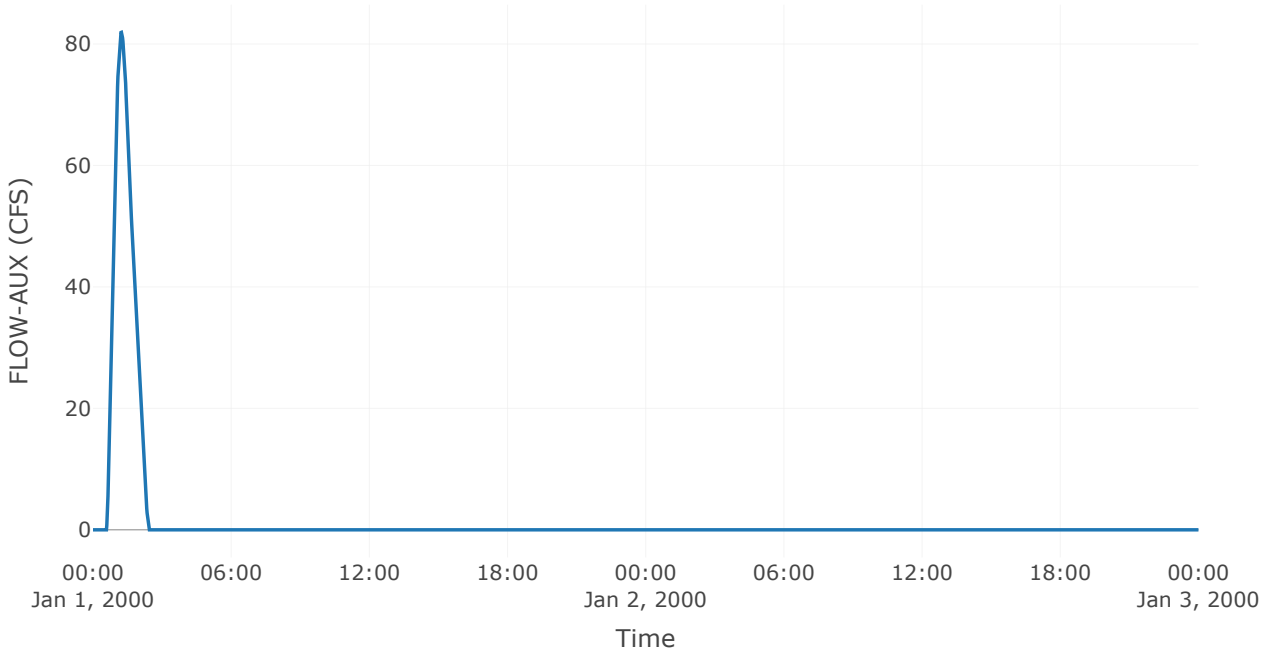

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

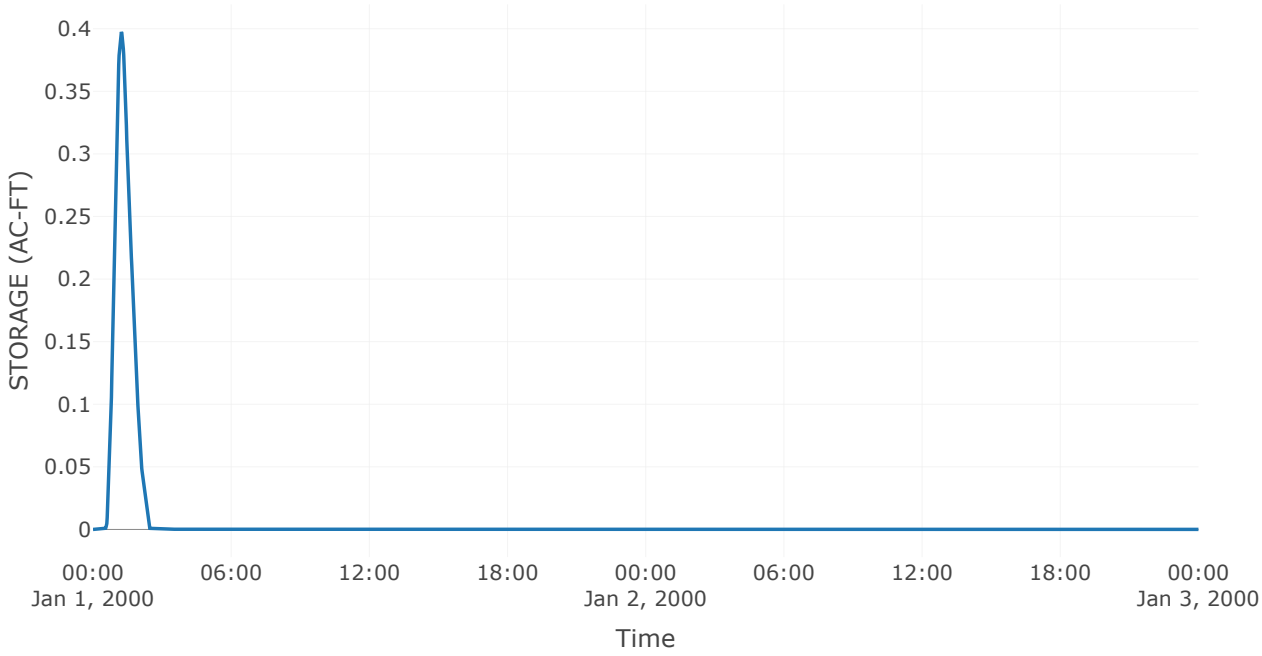
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	75.96
Time of Peak Discharge	01Jan2000, 01:14
Volume (IN)	1.17
Peak Inflow (CFS)	159.55
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.45
Maximum Storage (AC - FT)	0.4
Peak Elevation (FT)	652.49
Discharge Volume (AC - FT)	17.07

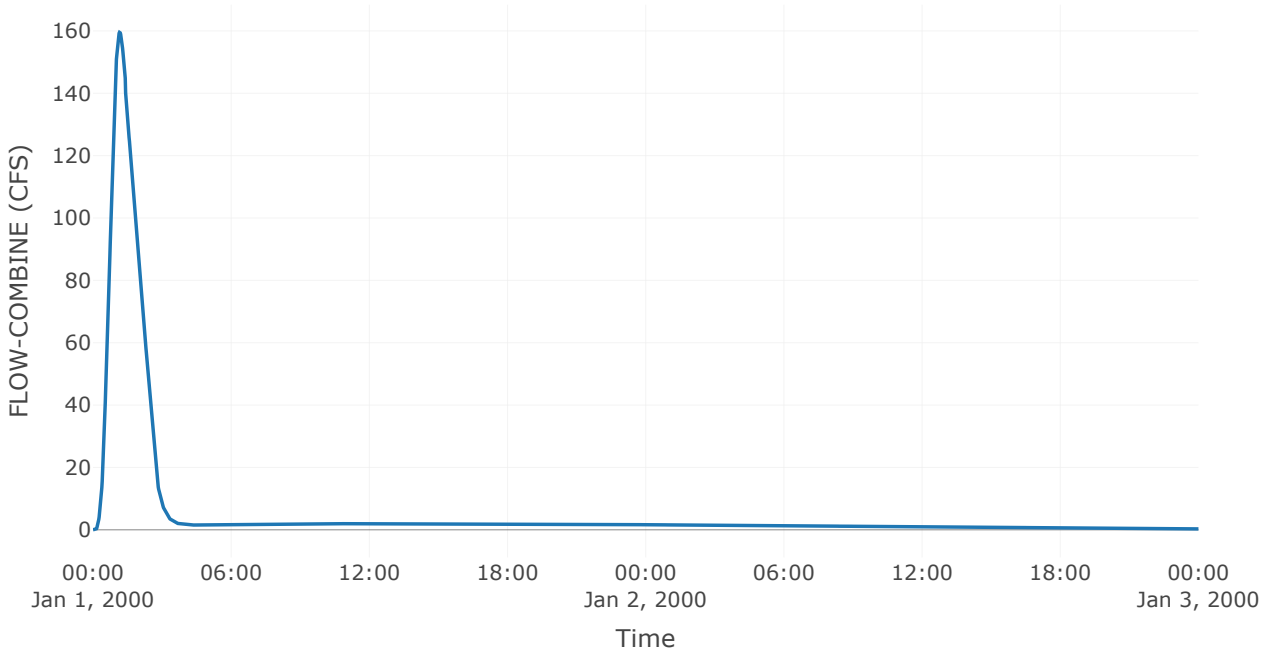
Auxiliary Outflow



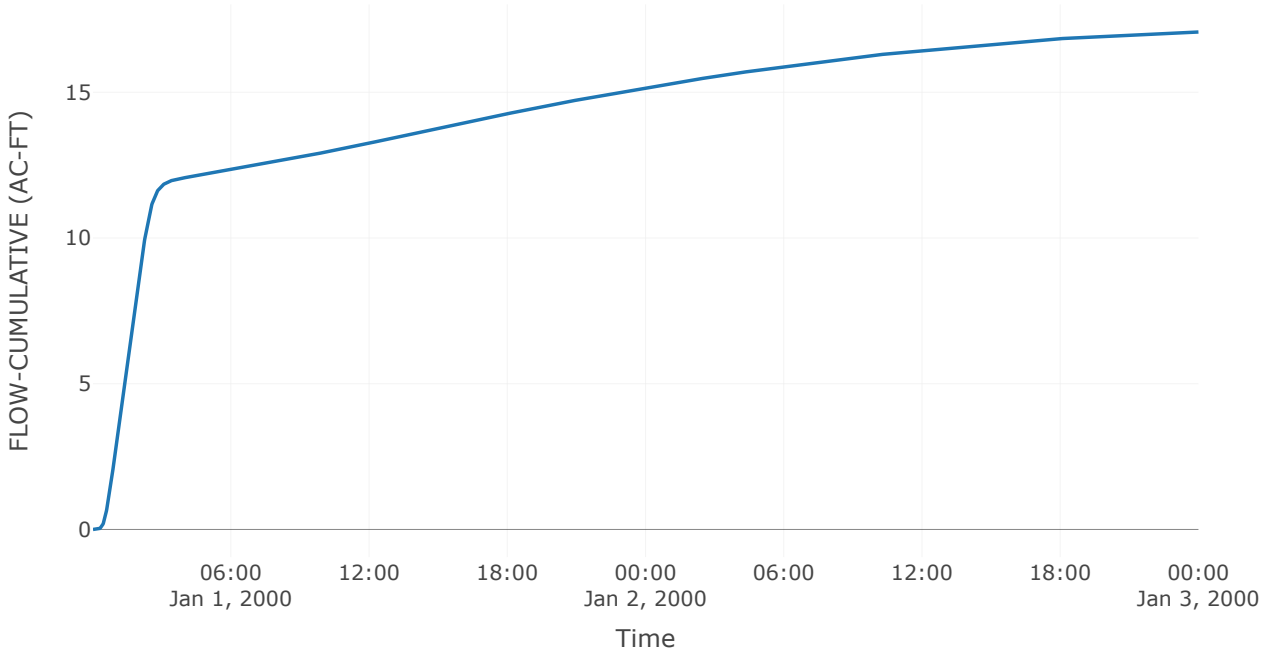
Storage

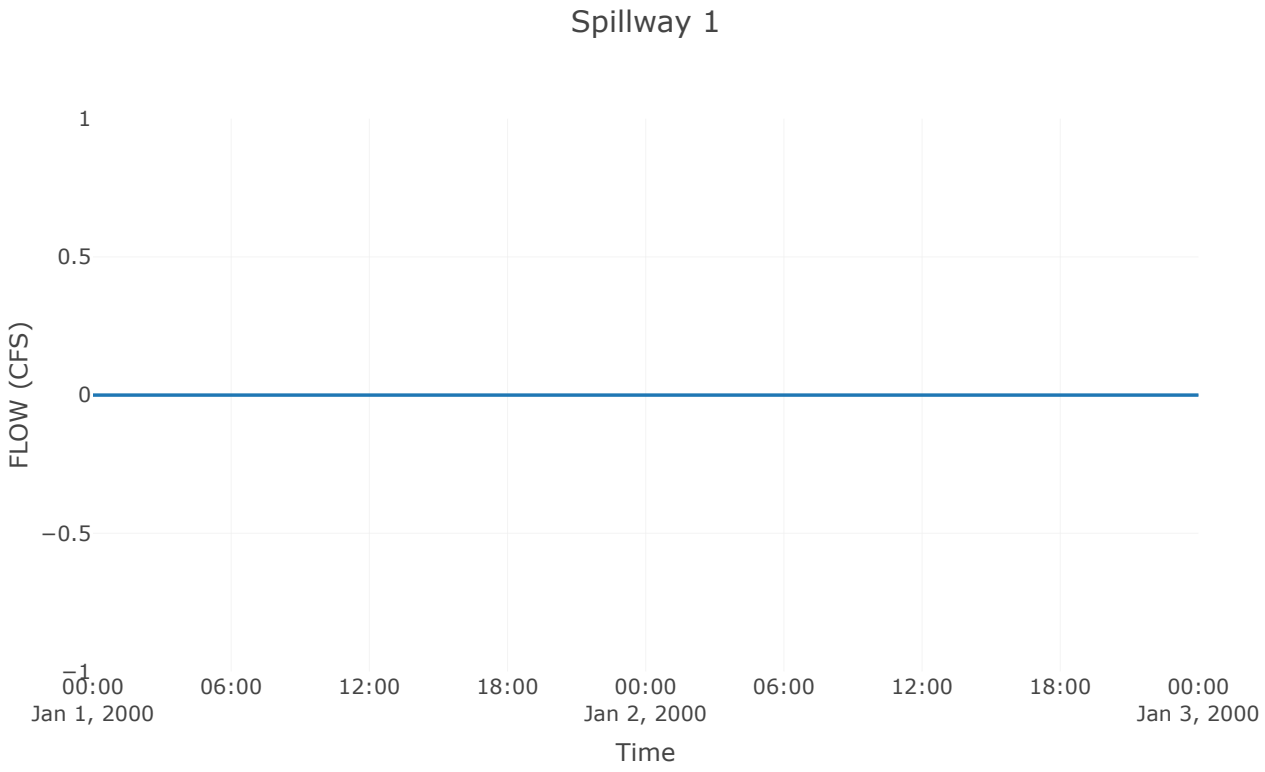


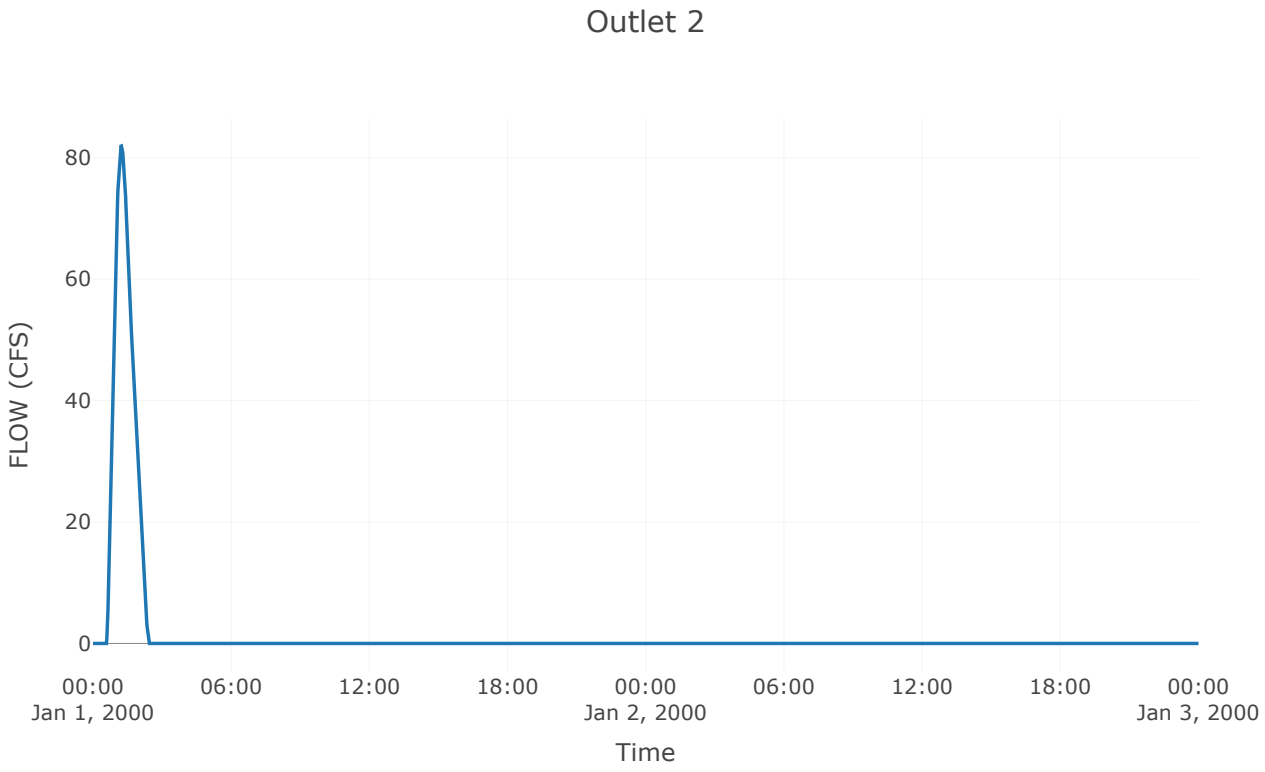
Combined Inflow



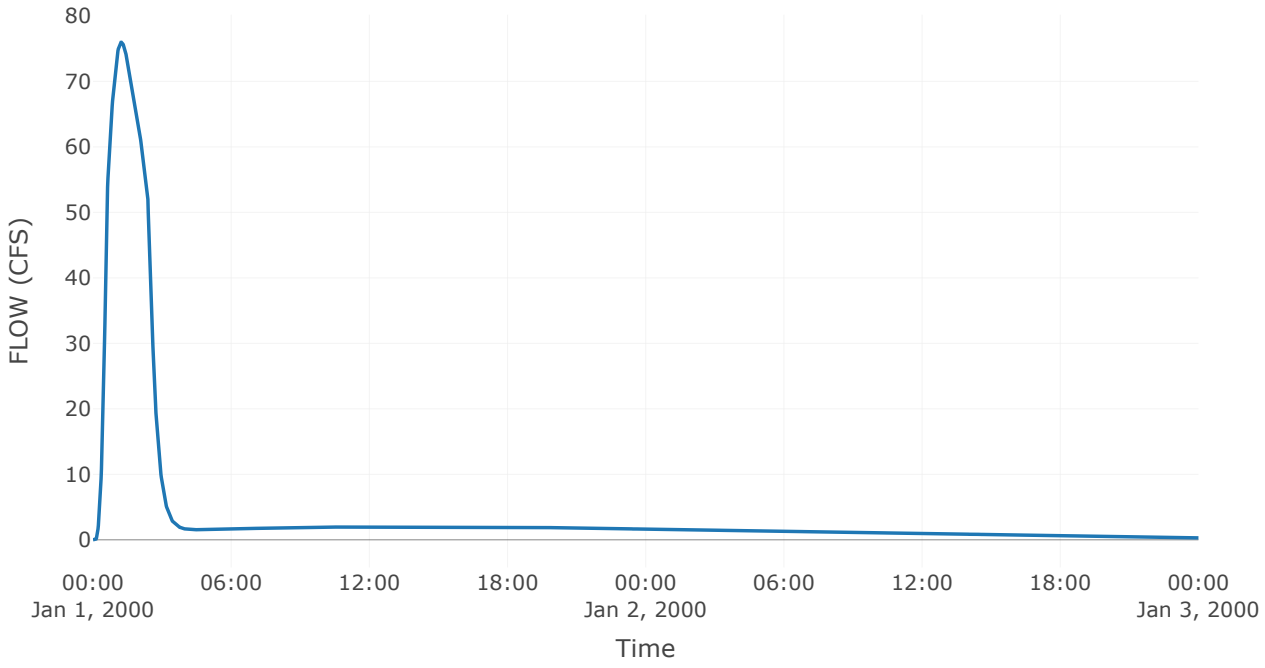
Cumulative Outflow



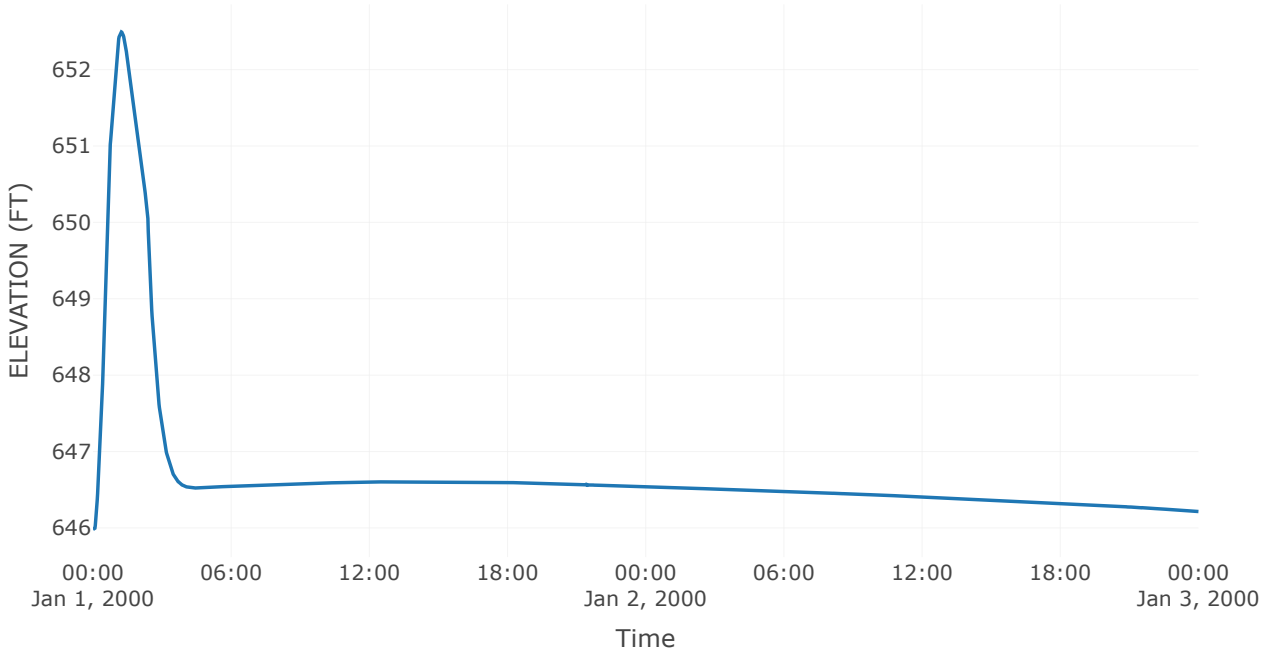

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

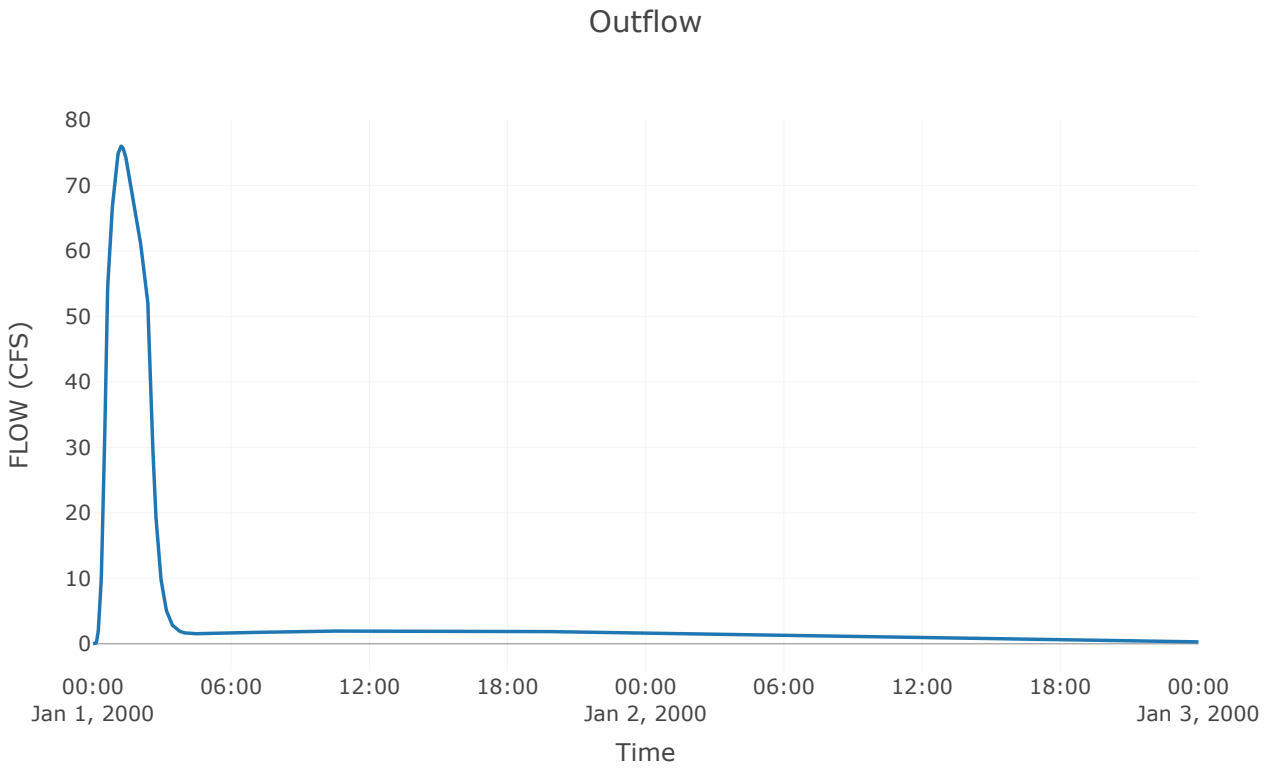

Outlet 2
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

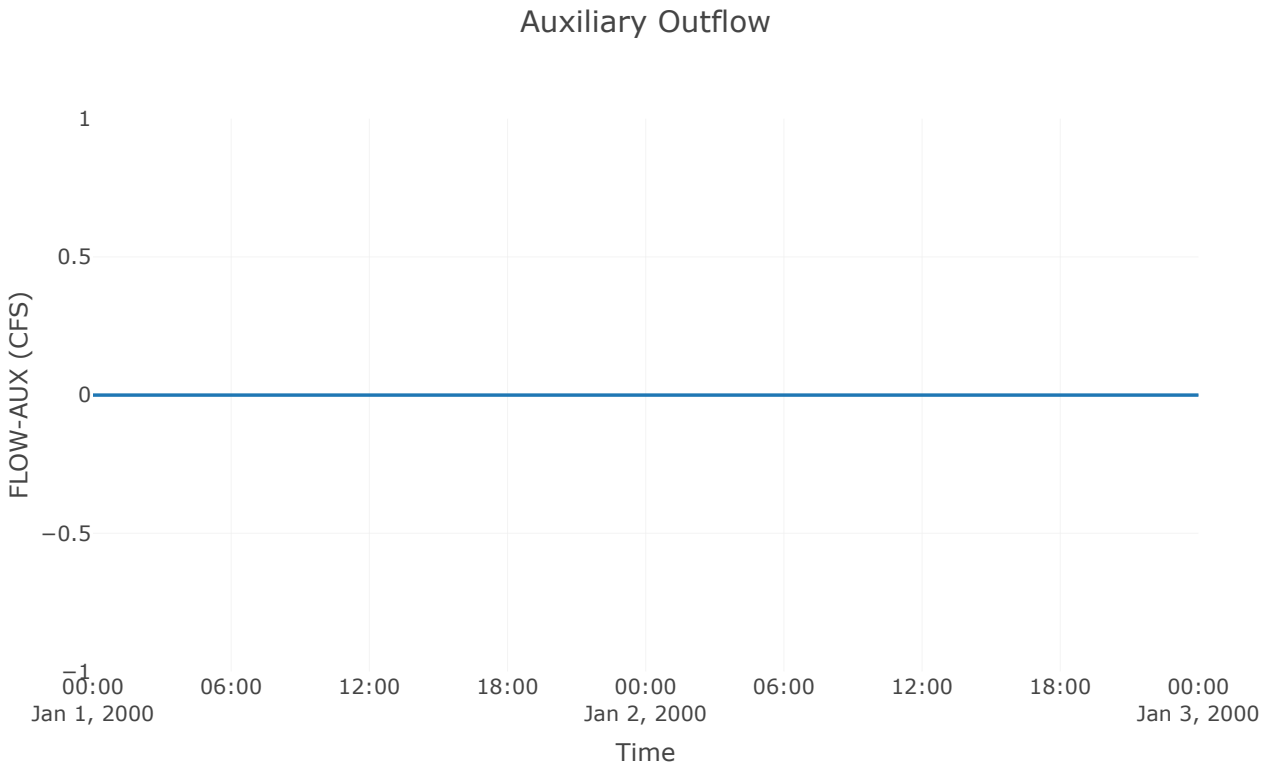


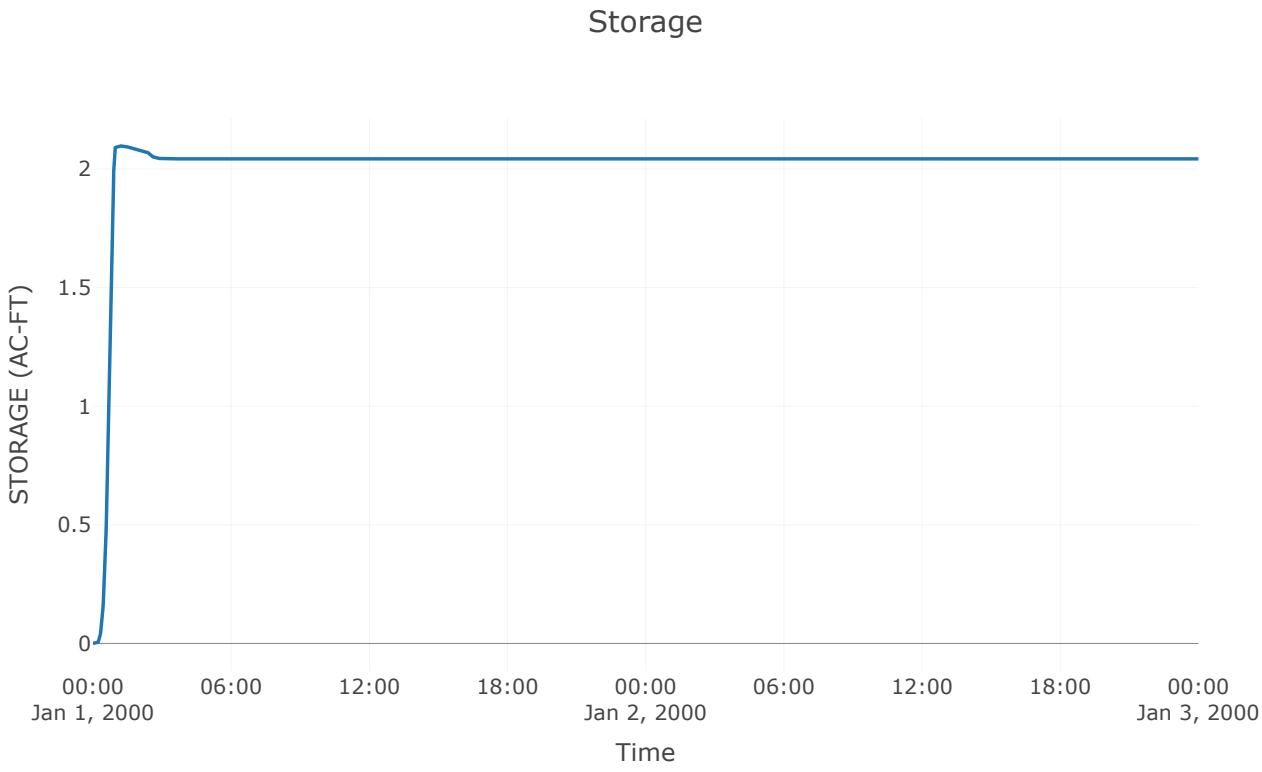

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

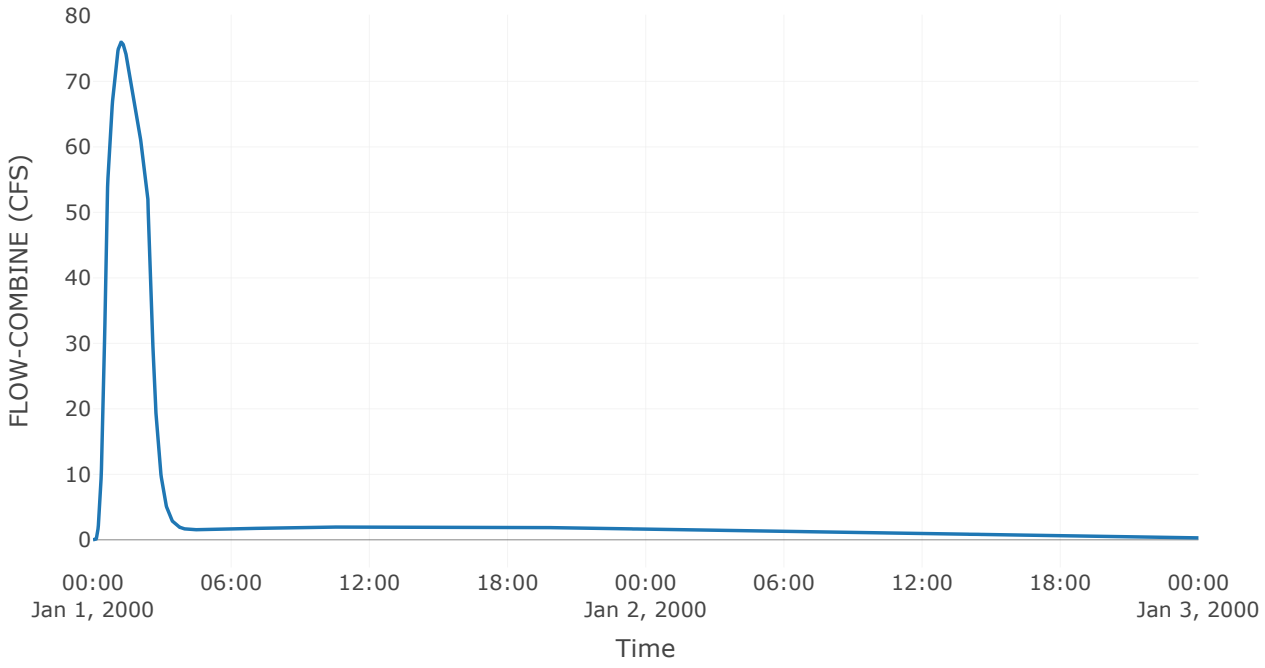
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02
Peak Inflow (CFS)	75.96
Time of Peak Inflow	01Jan2000, 01:14
Inflow Volume (AC - FT)	17.07
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	14.86

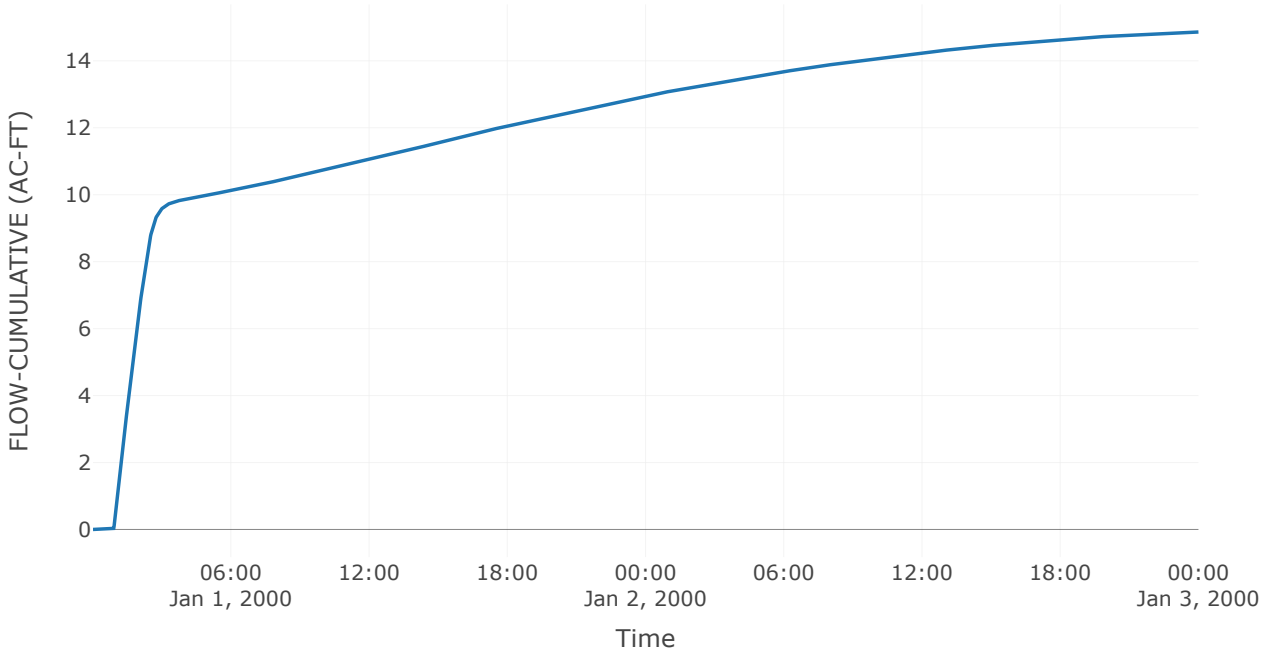

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

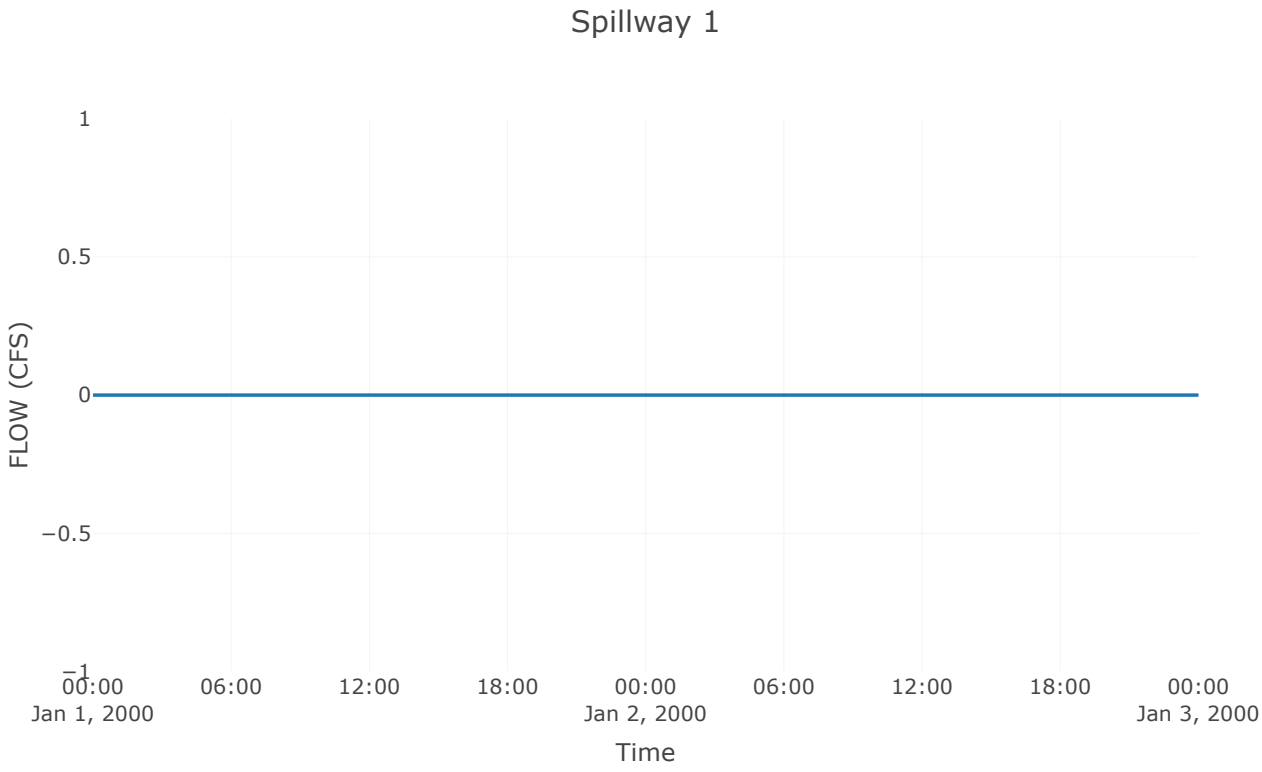

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

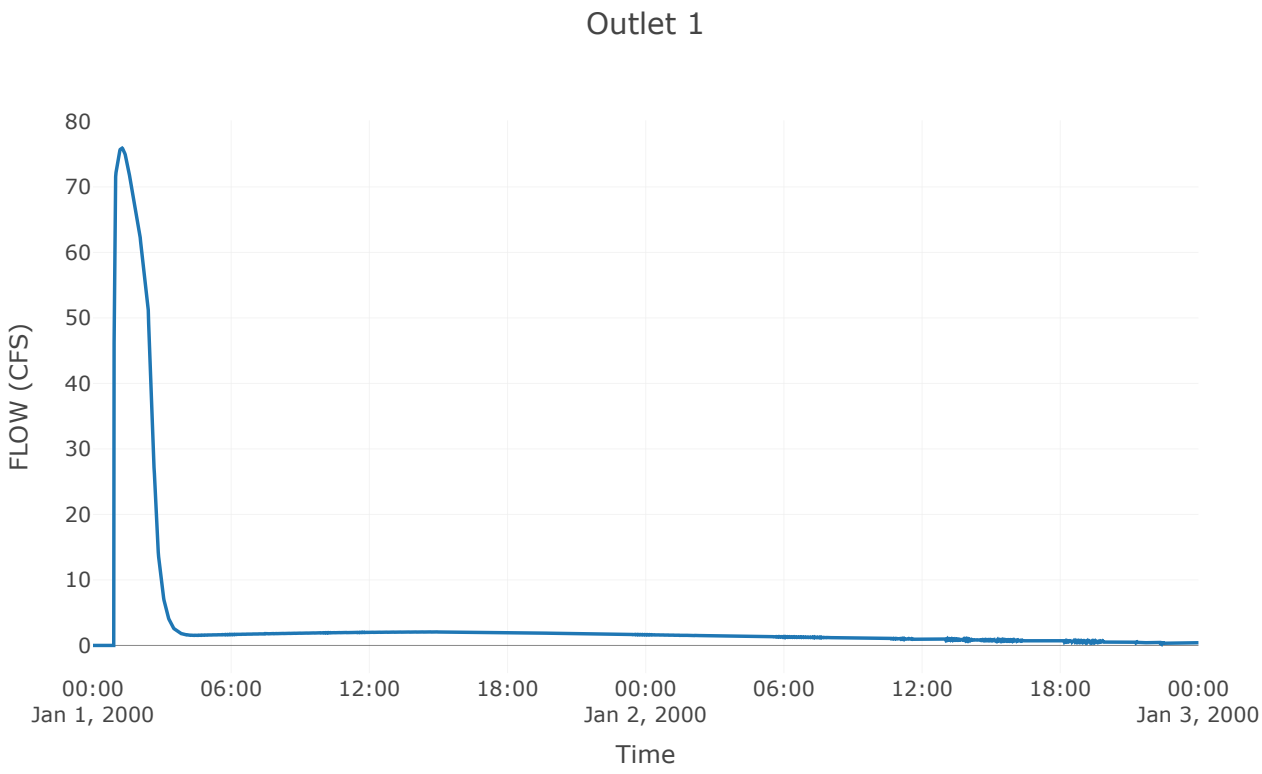
Combined Inflow



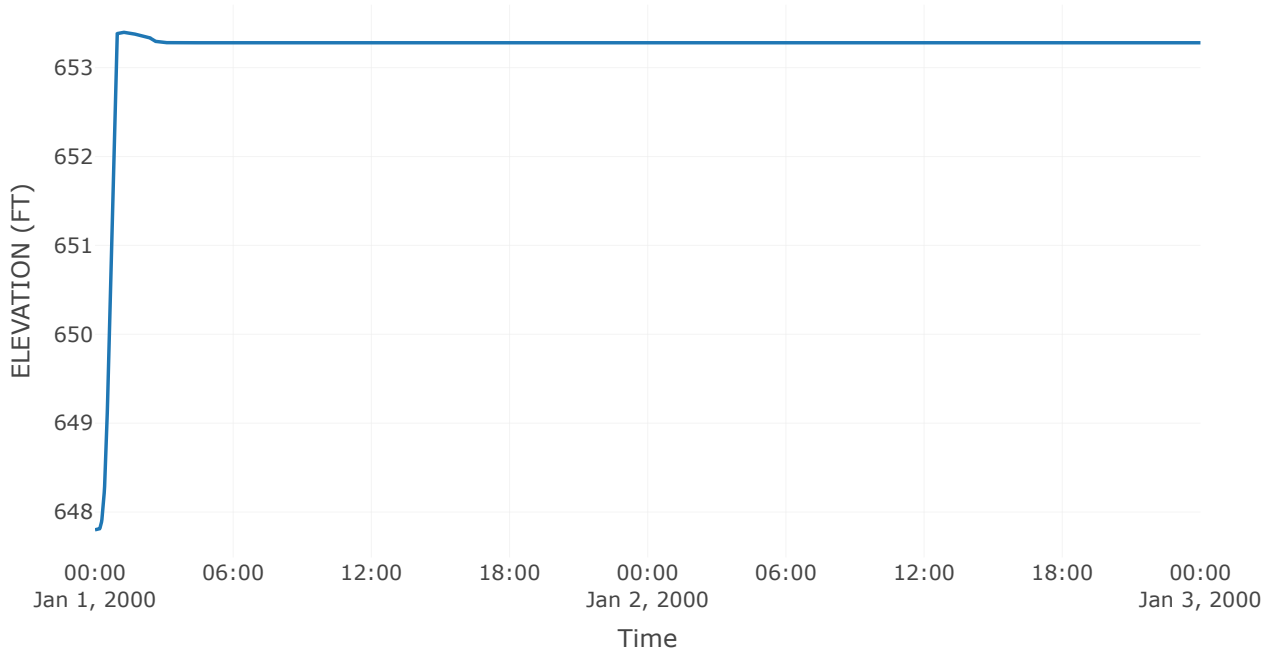
Cumulative Outflow



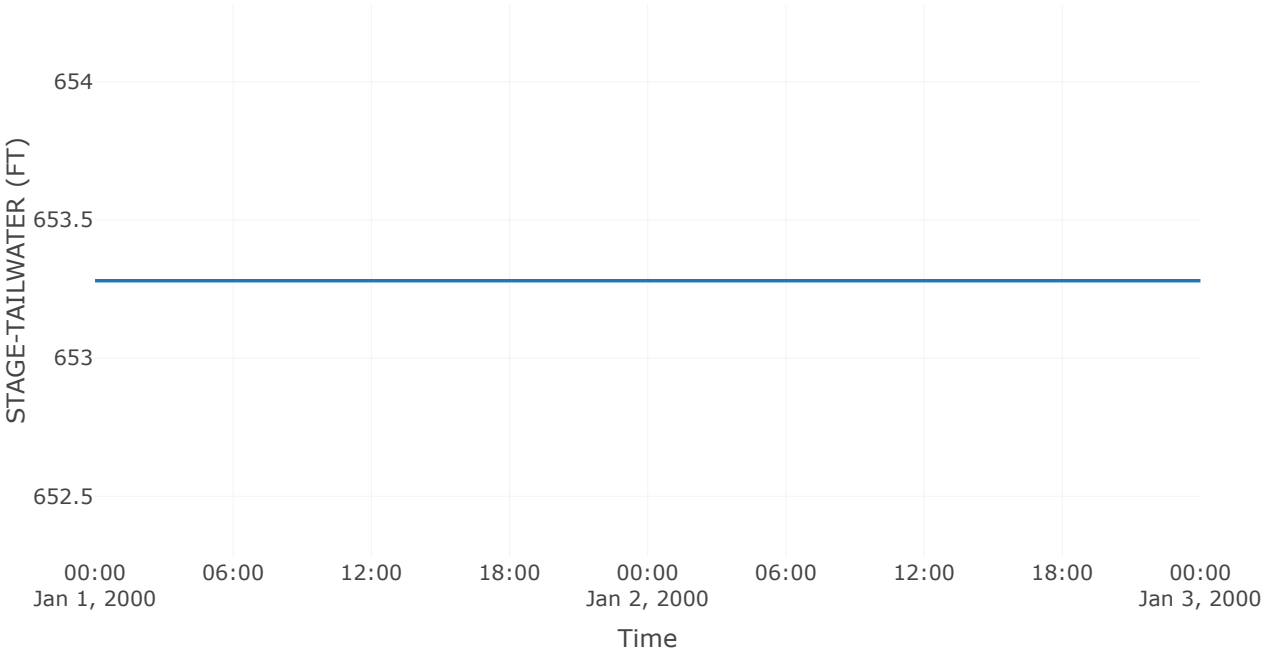

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

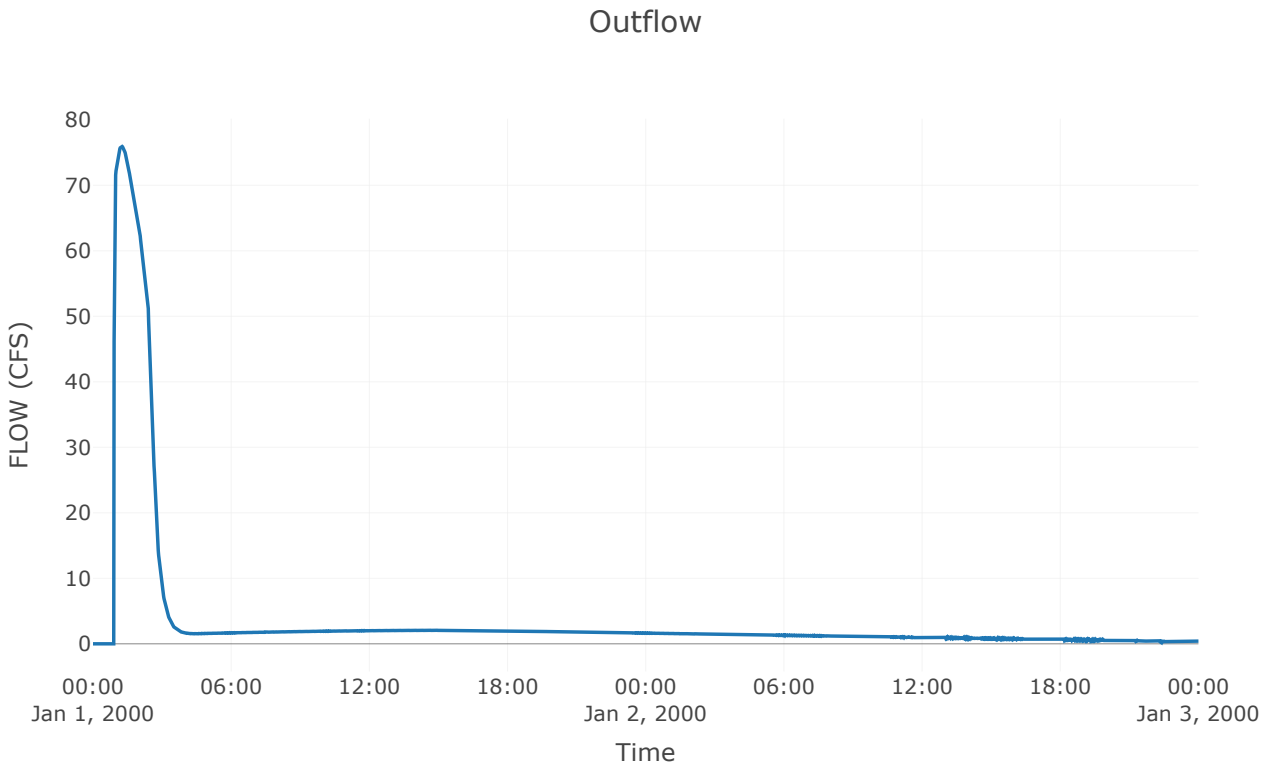

Outlet 1
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

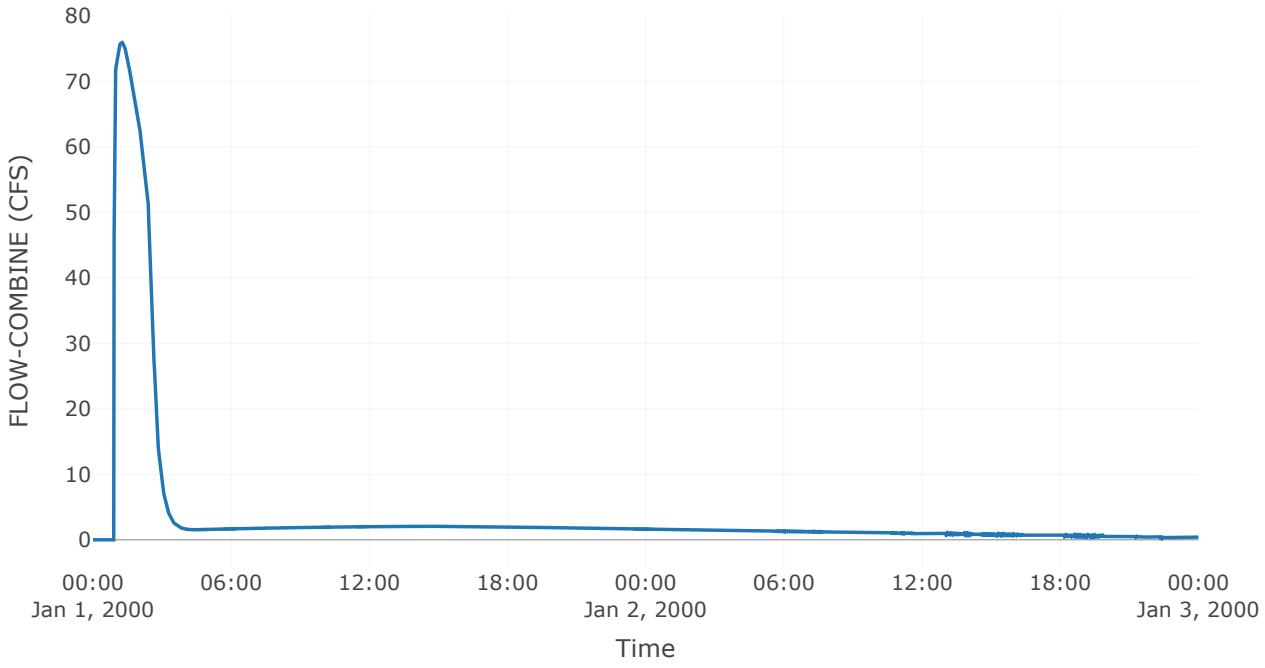



Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

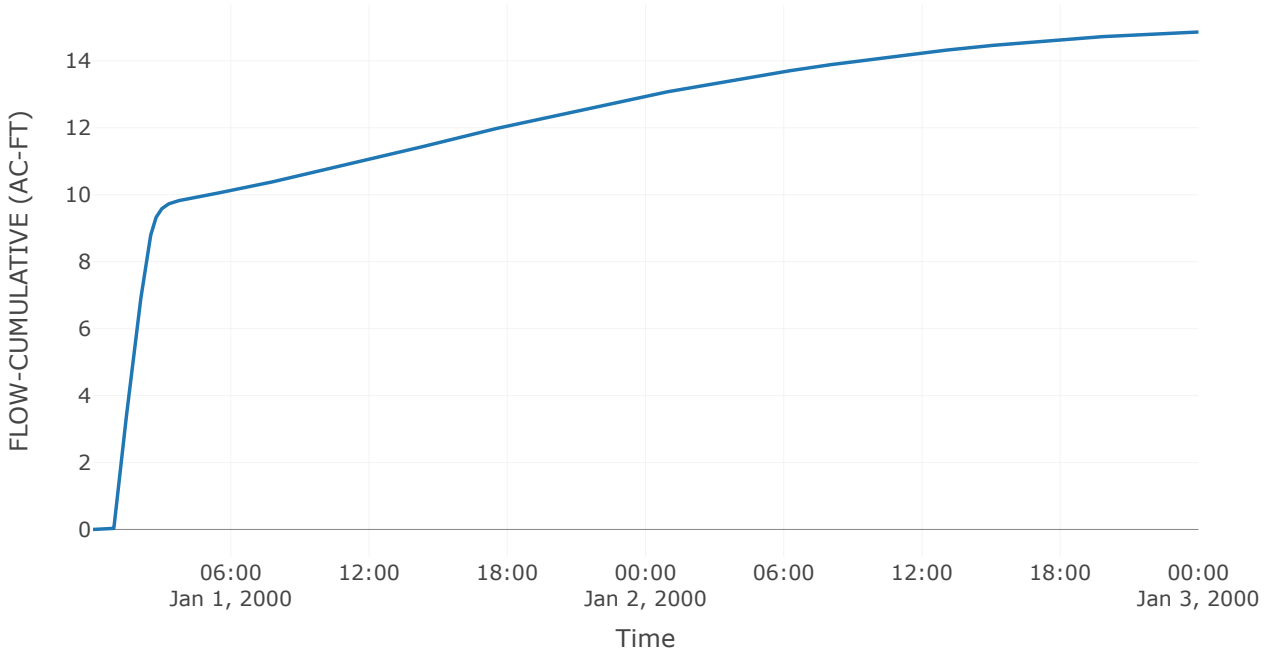
Sink: 55th Street Outlet

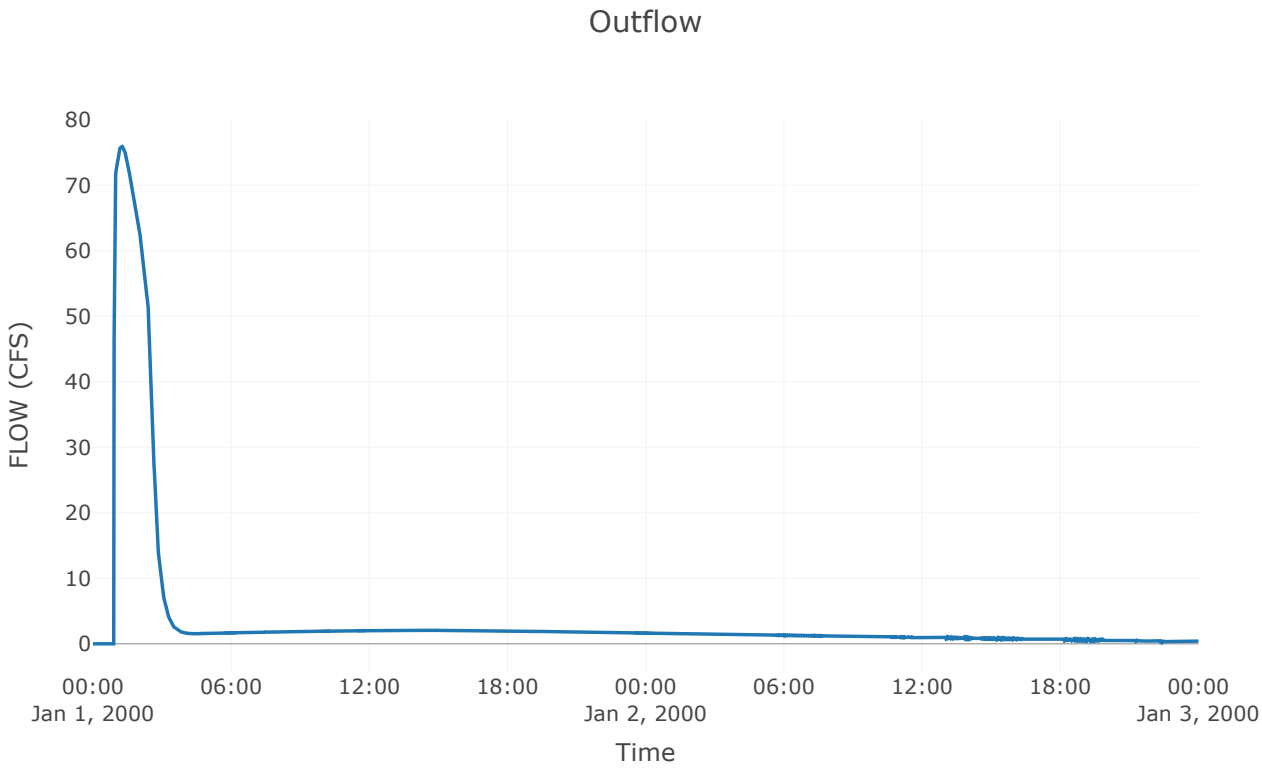
Results: 55th Street Outlet	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02

Combined Inflow



Cumulative Outflow




Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:39

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	331.13	01Jan2000, 01:00	2.48
Storage West of Wolf Road	0.27	331.51	01Jan2000, 01:00	2.48
Existing On - Site	0	15.64	01Jan2000, 00:18	3.06
Existing Basin C	0.27	95.49	01Jan2000, 01:08	1.35
Existing Basin A & B	0.27	95.45	01Jan2000, 01:09	1.2

55th Street Outlet	0.27	95.45	01Jan2000, 01:09	1.2

Subbasin: On-Site Trib 1

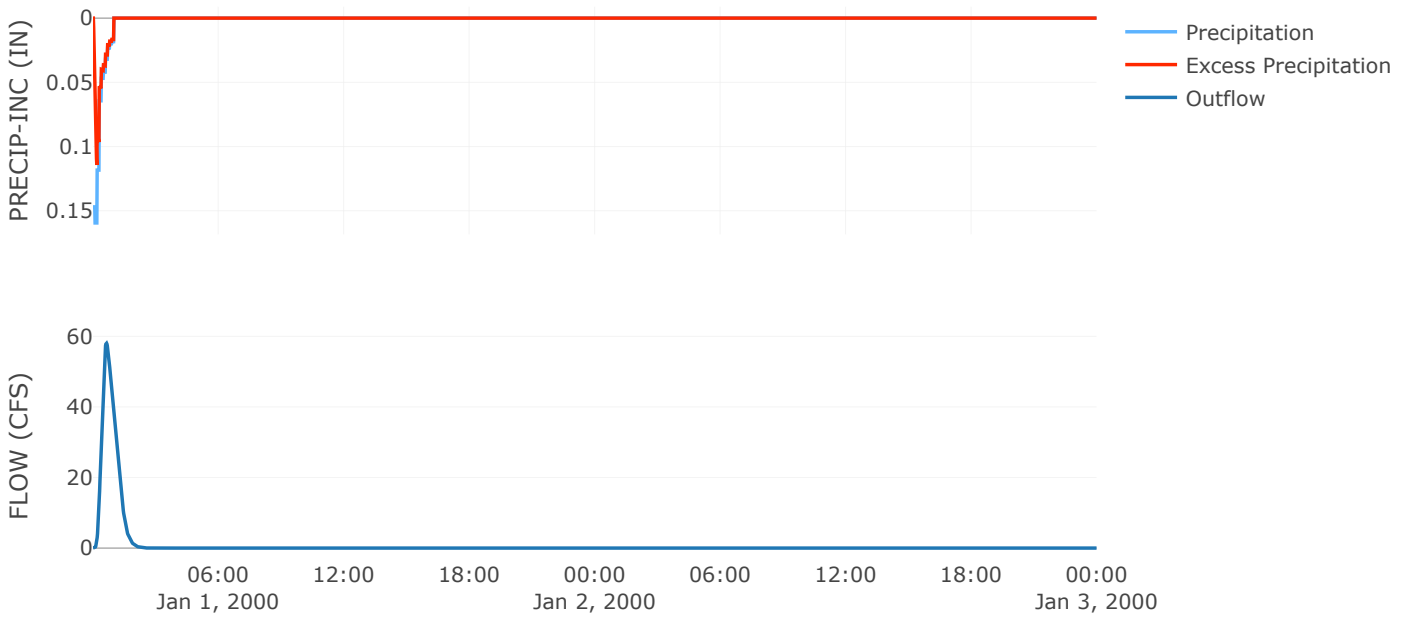
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

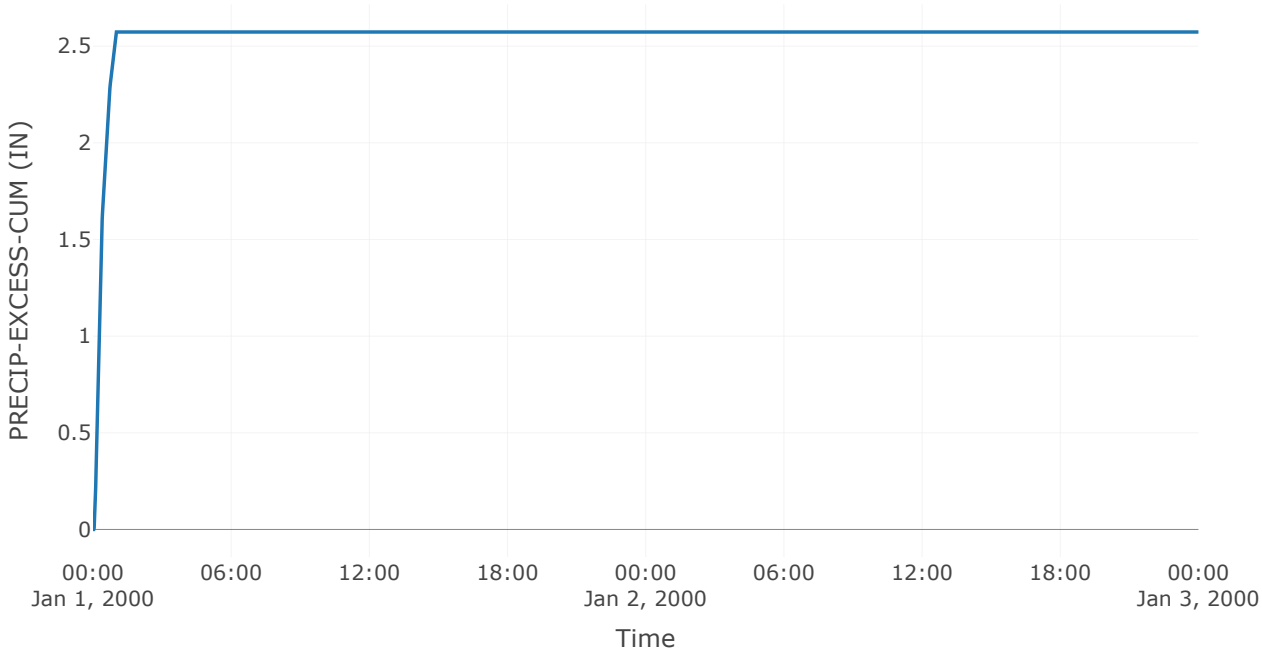
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

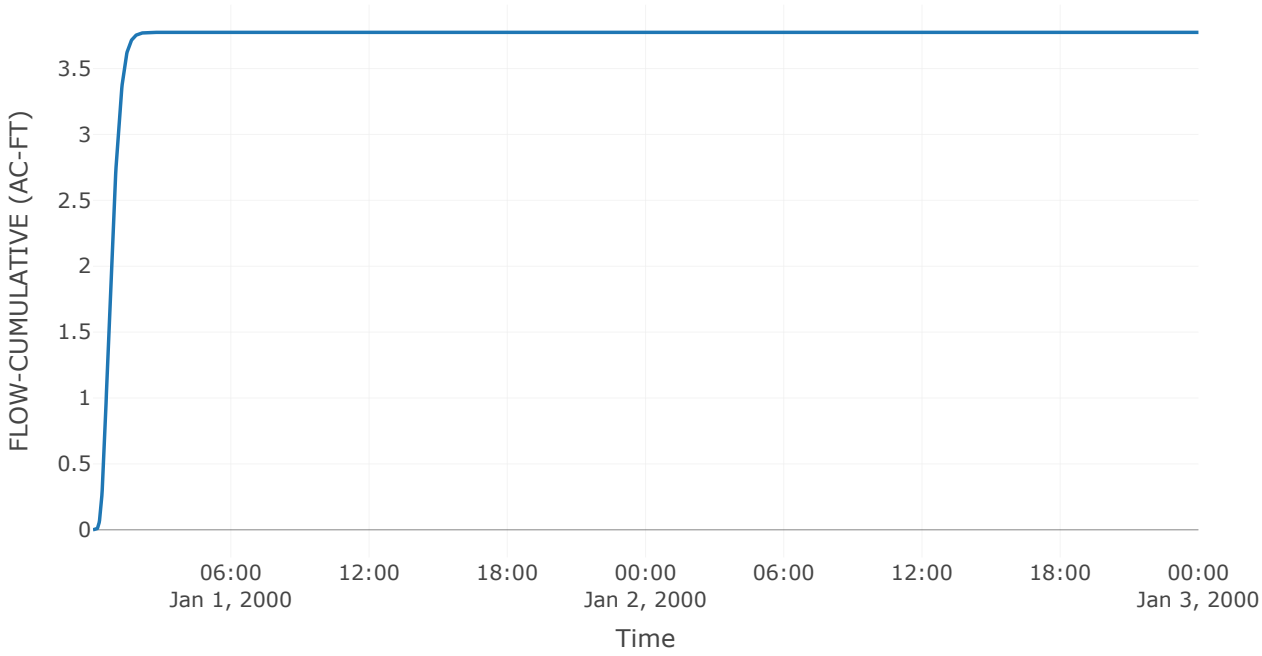
Precipitation and Outflow



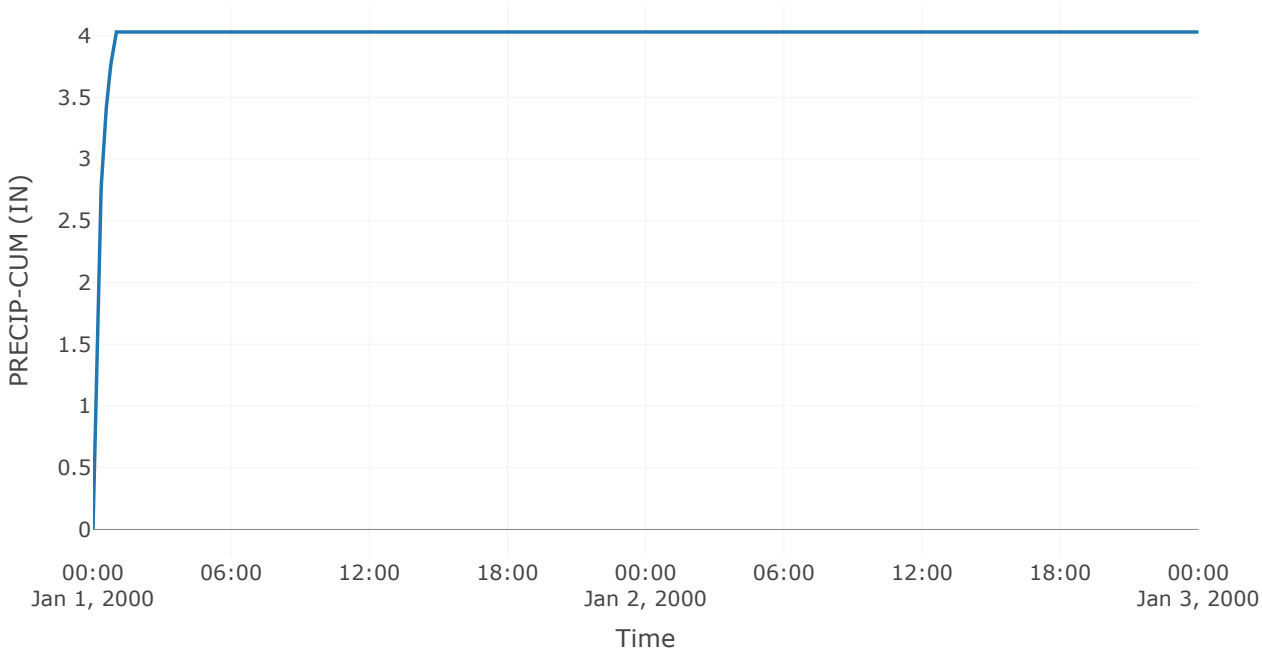
Cumulative Excess Precipitation

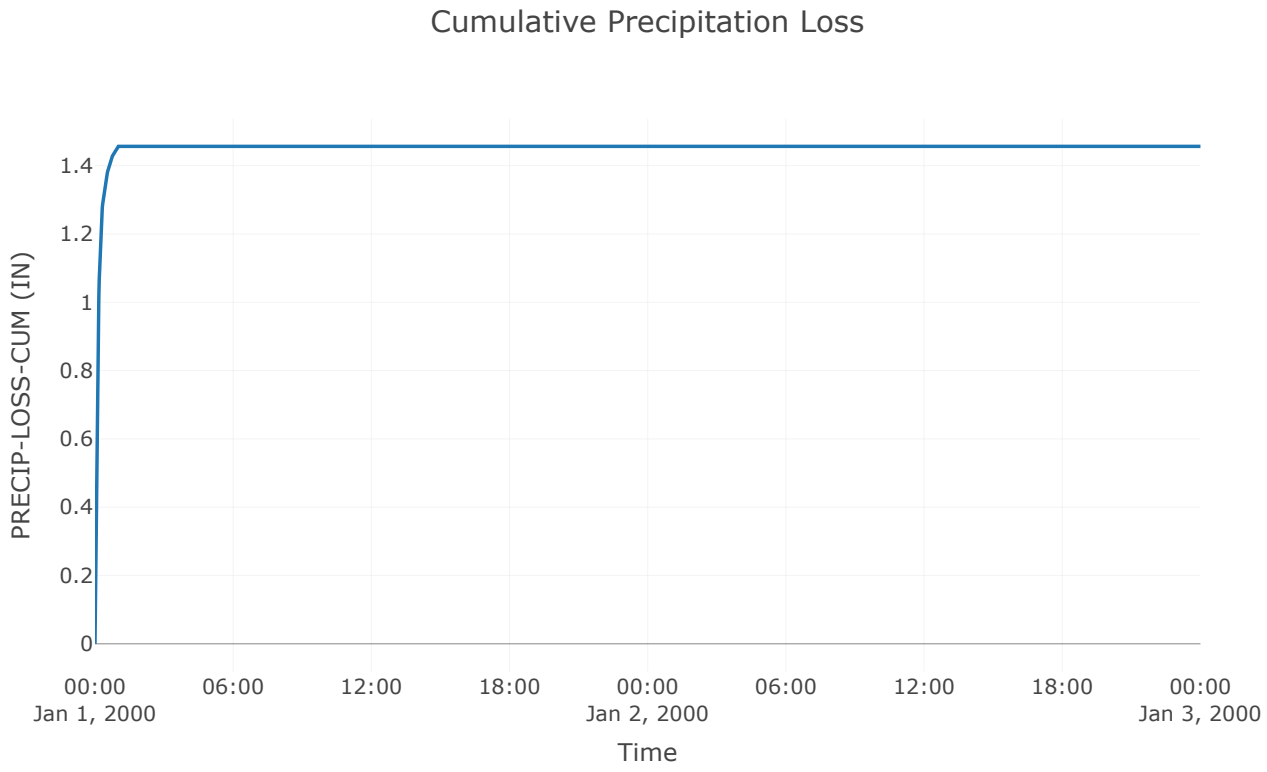


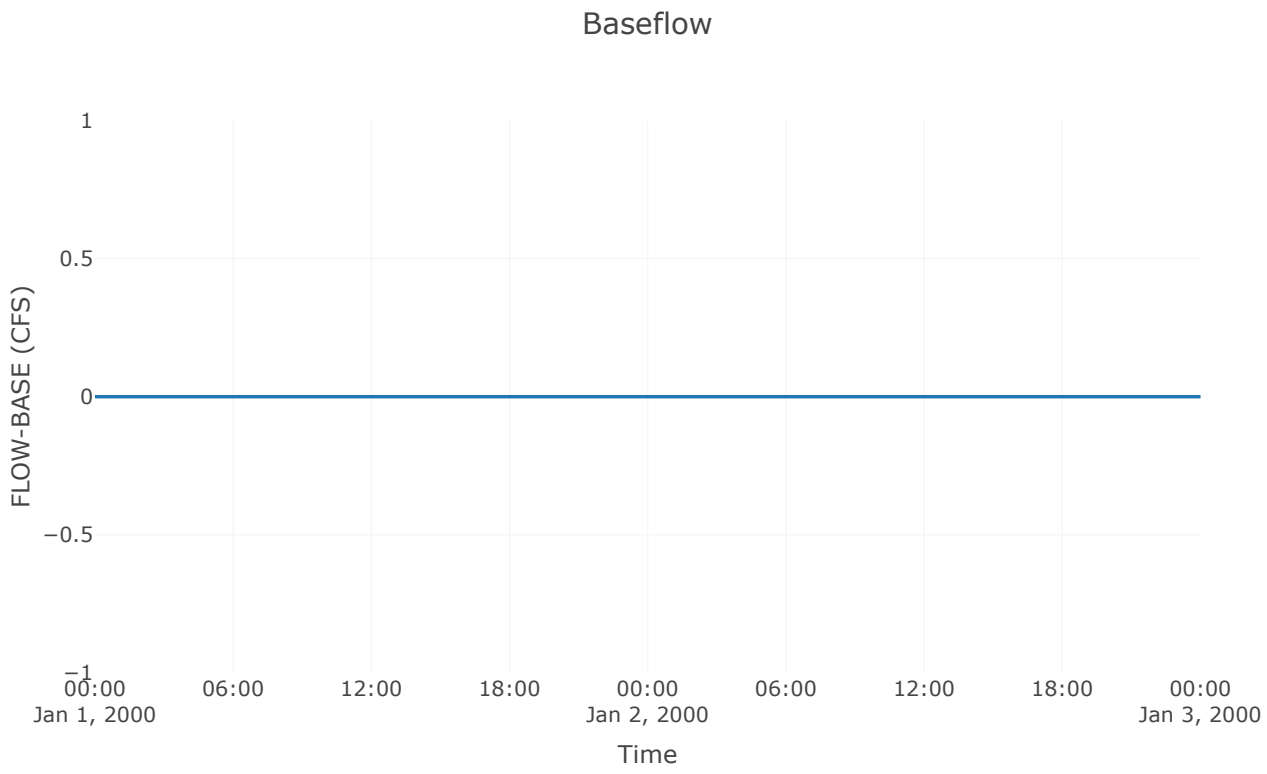
Cumulative Outflow



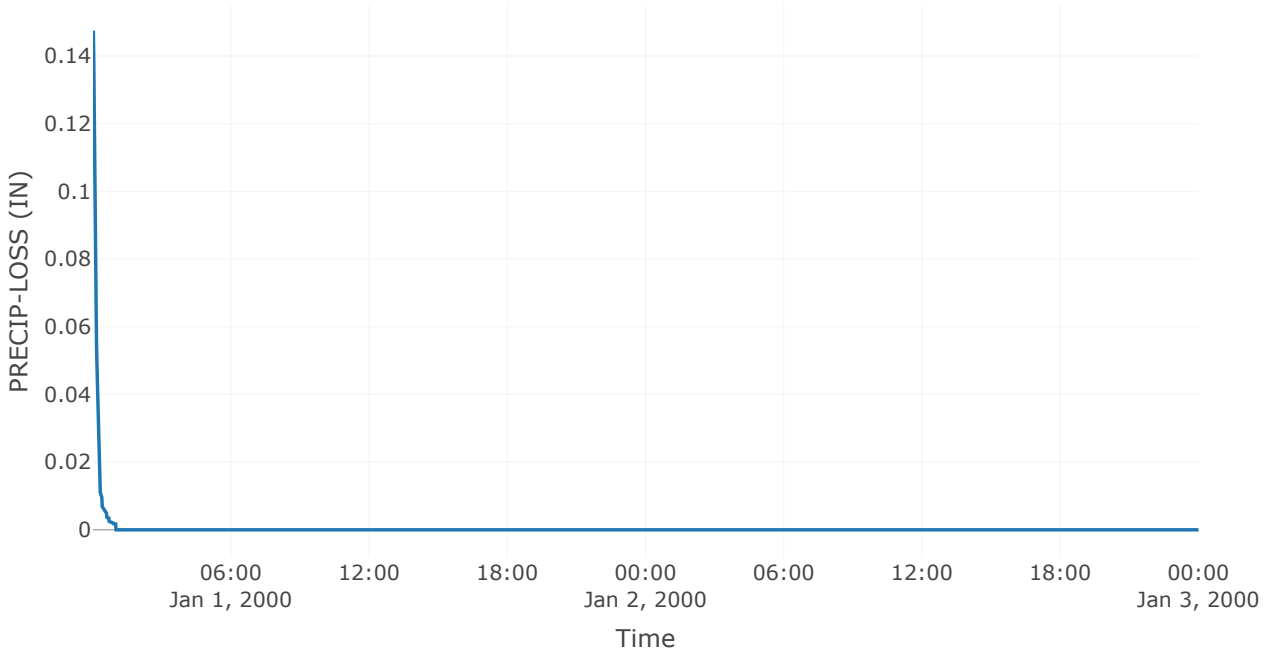
Cumulative Precipitation



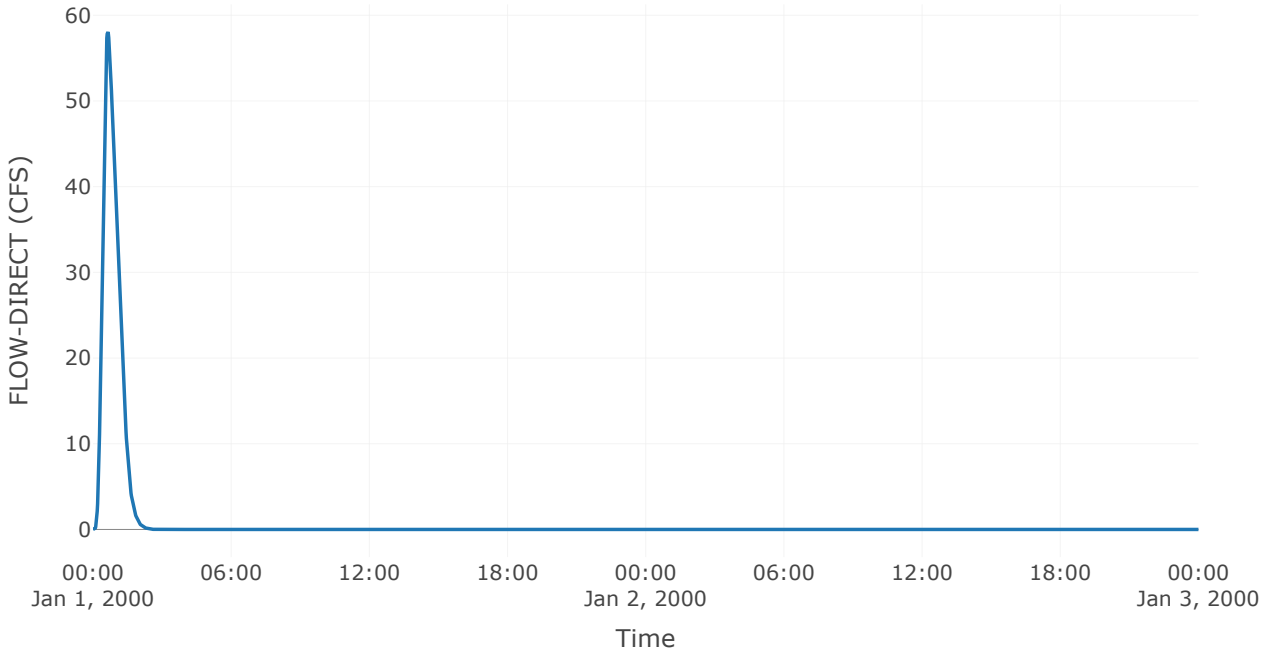

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

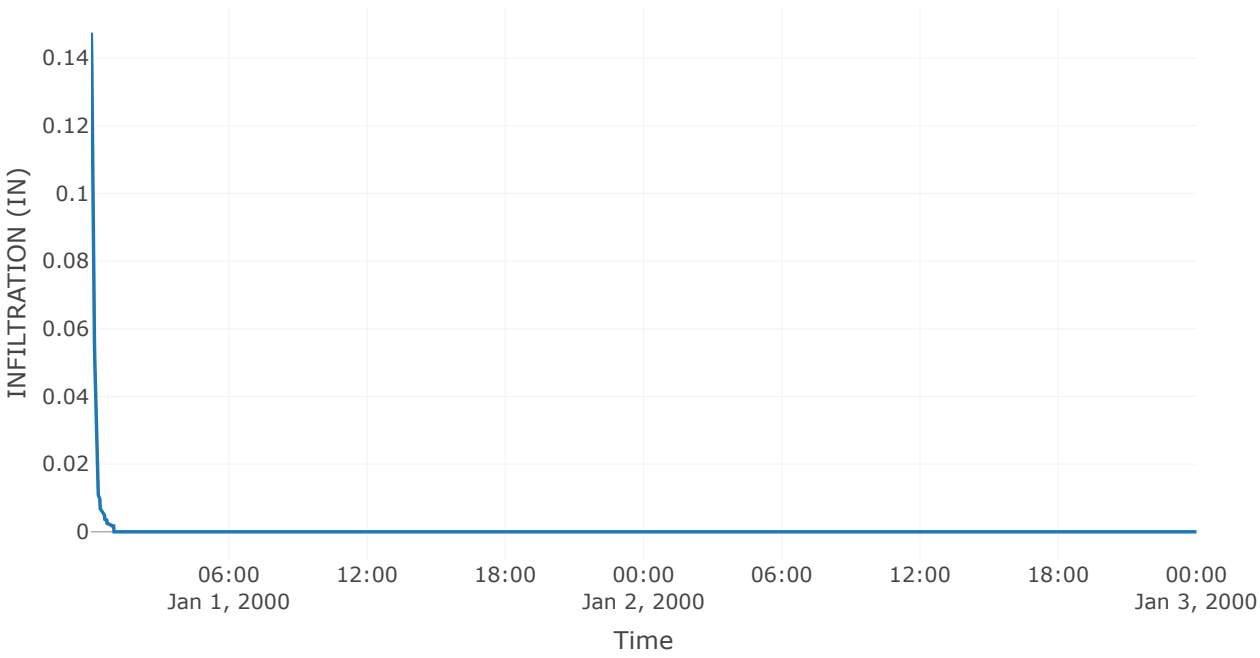

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

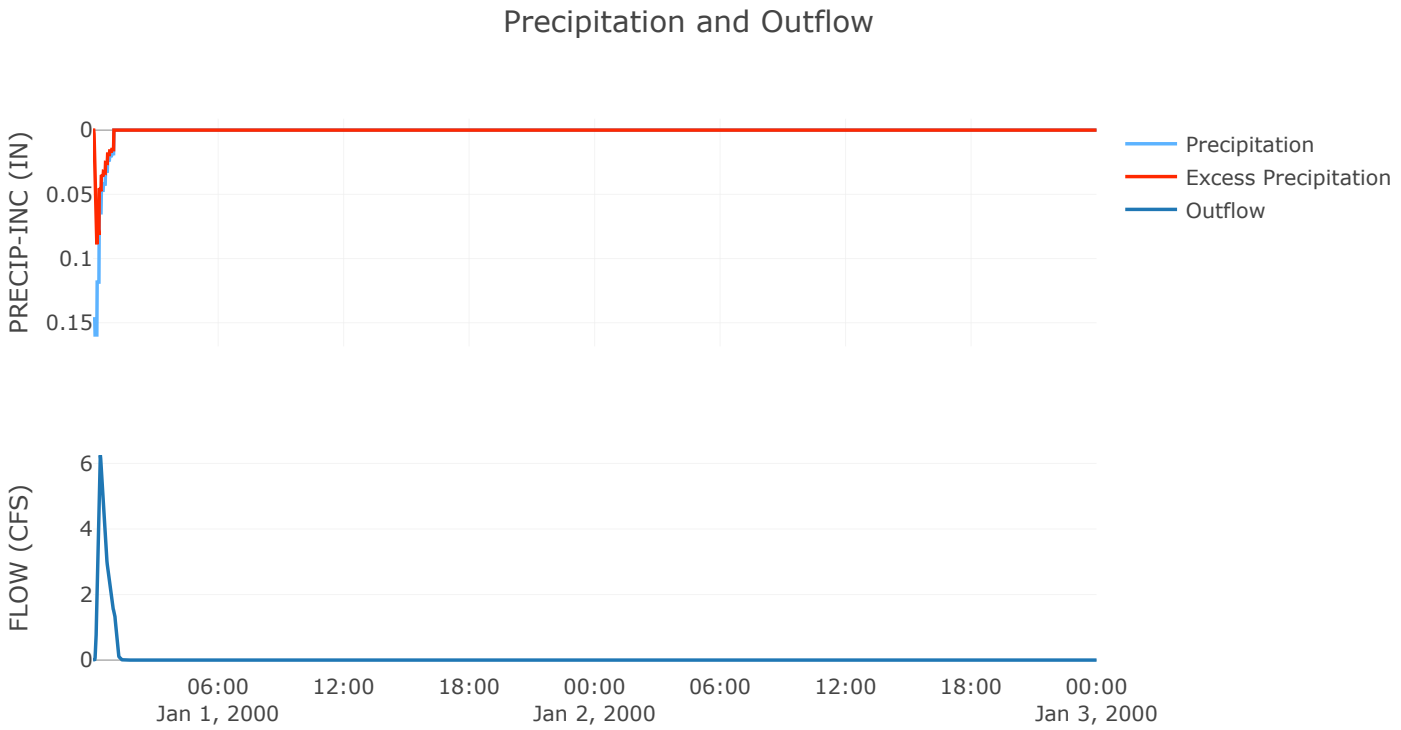
Subbasin: Off-Site Trib 1 South

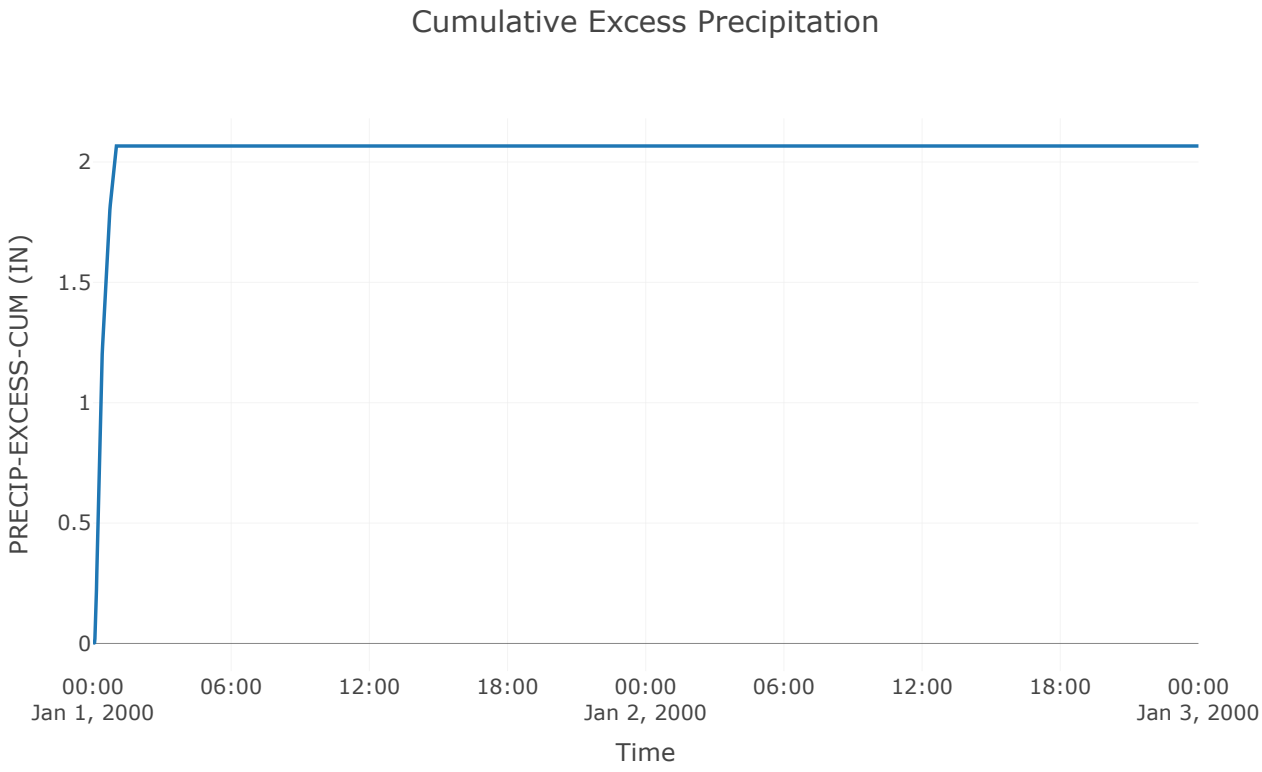
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

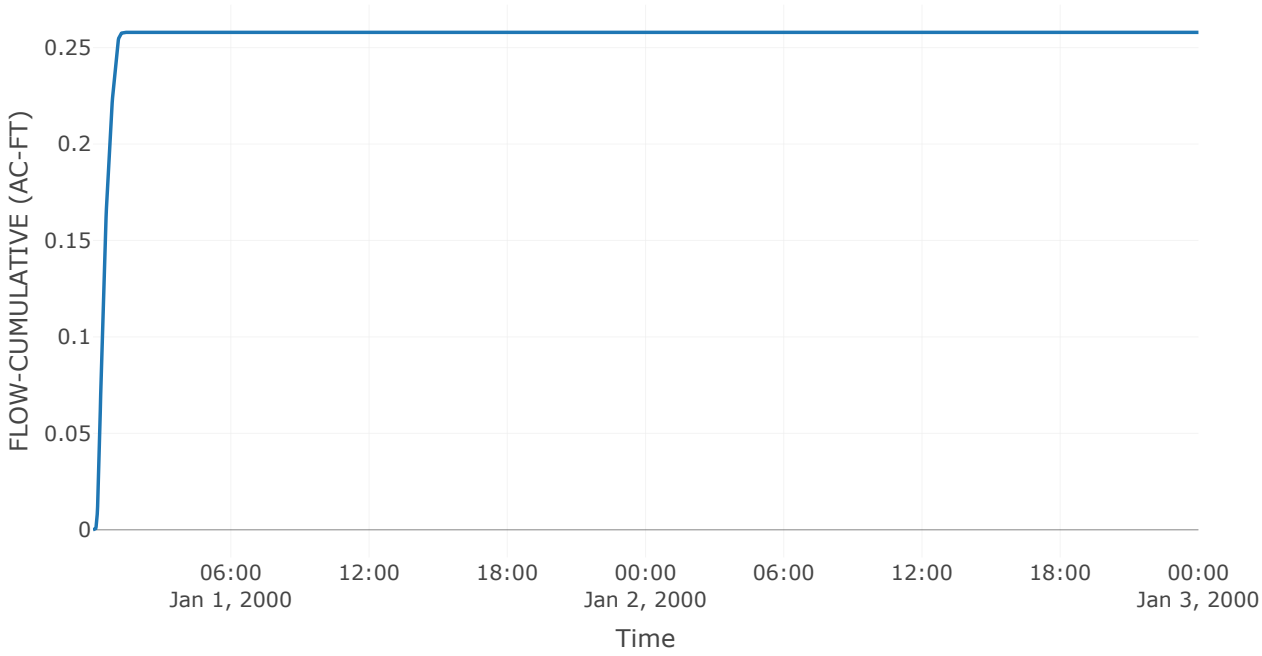
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

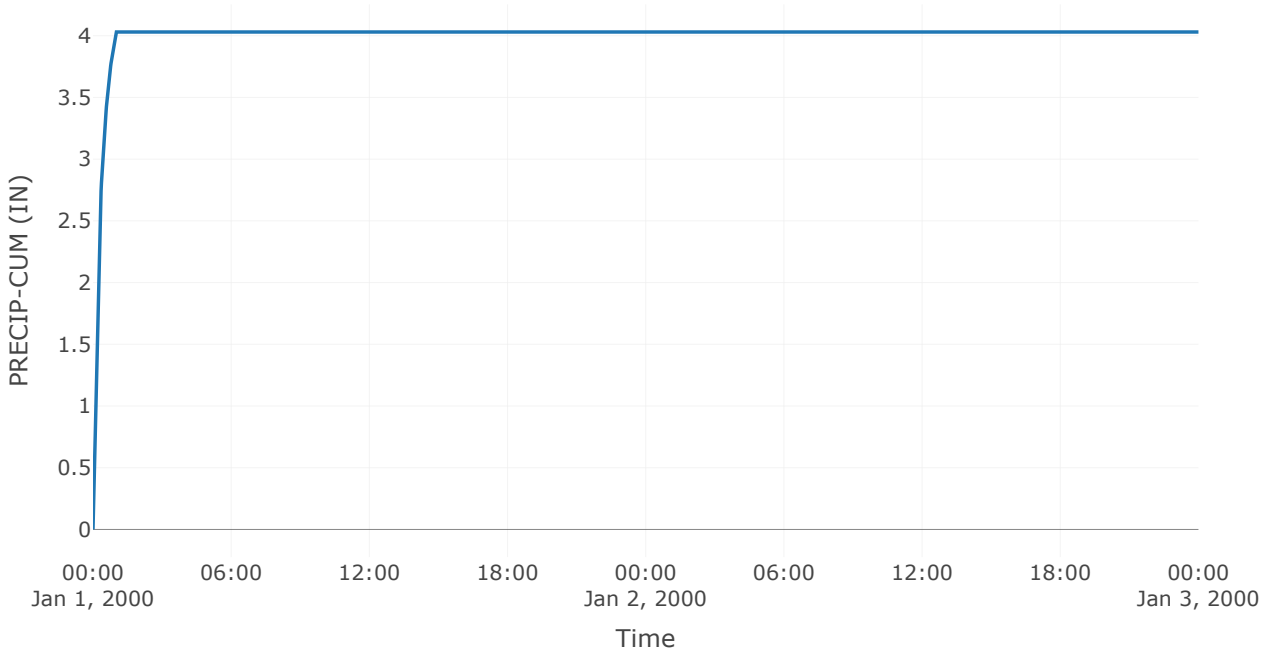

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
6
4
2
0
06:00
12:00
18:00
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
Jan 3, 2000

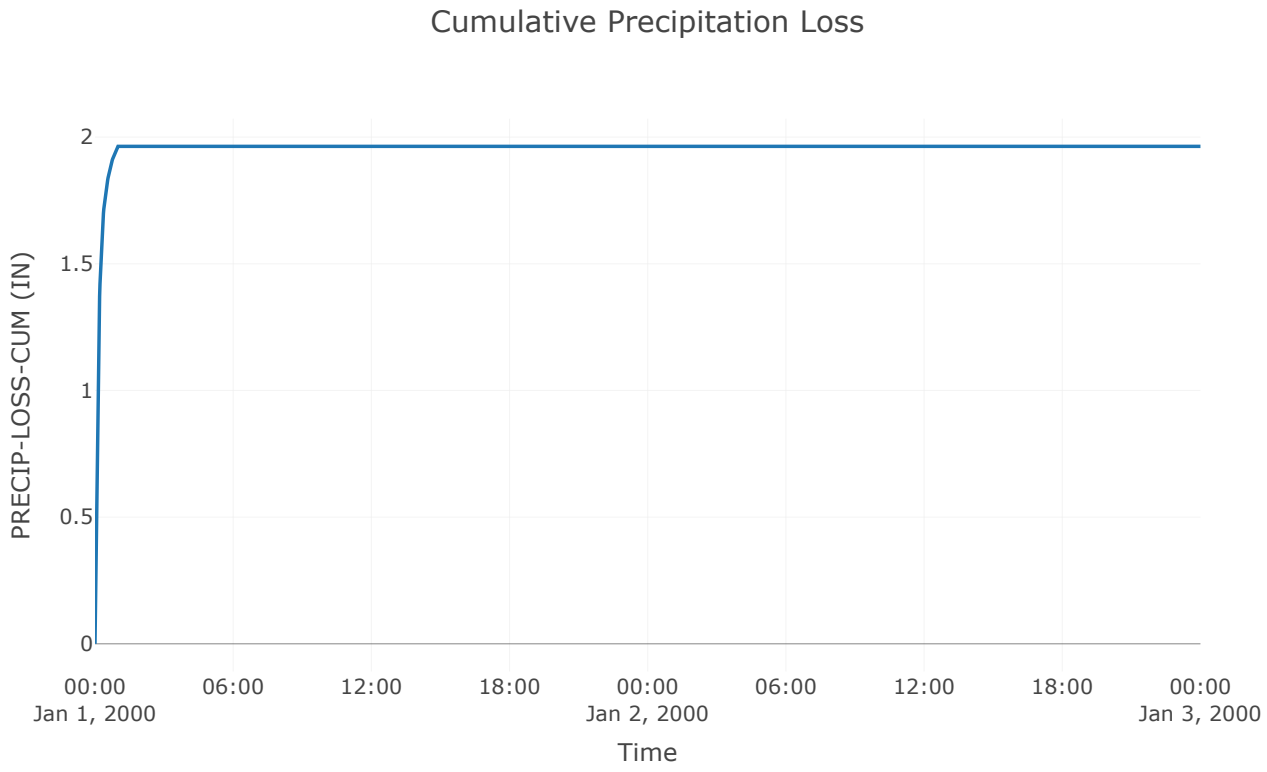

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

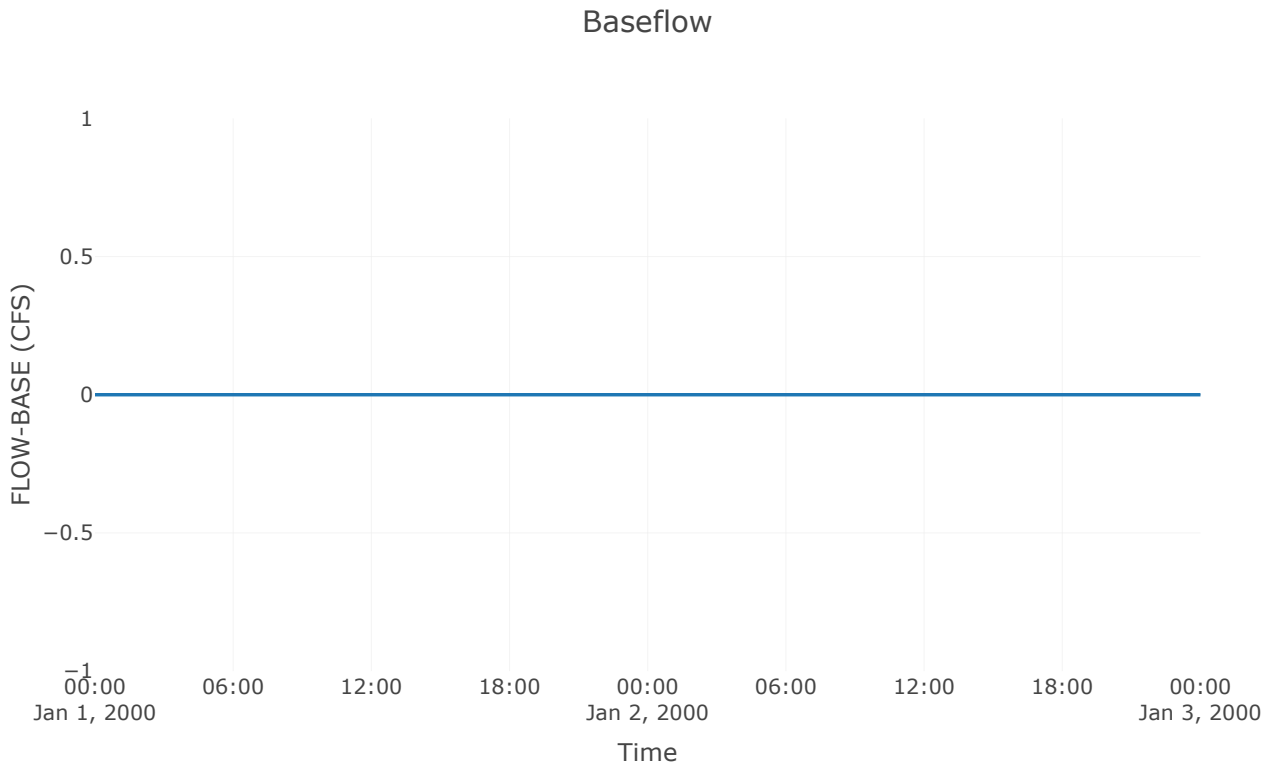
Cumulative Outflow



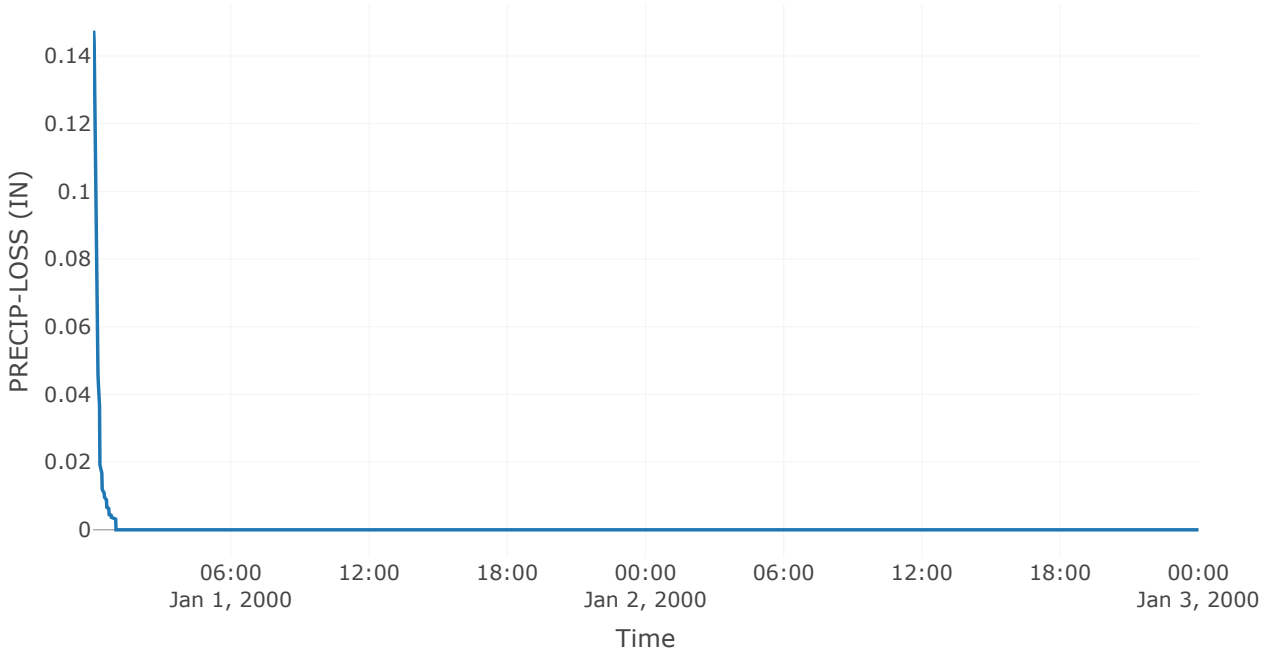
Cumulative Precipitation



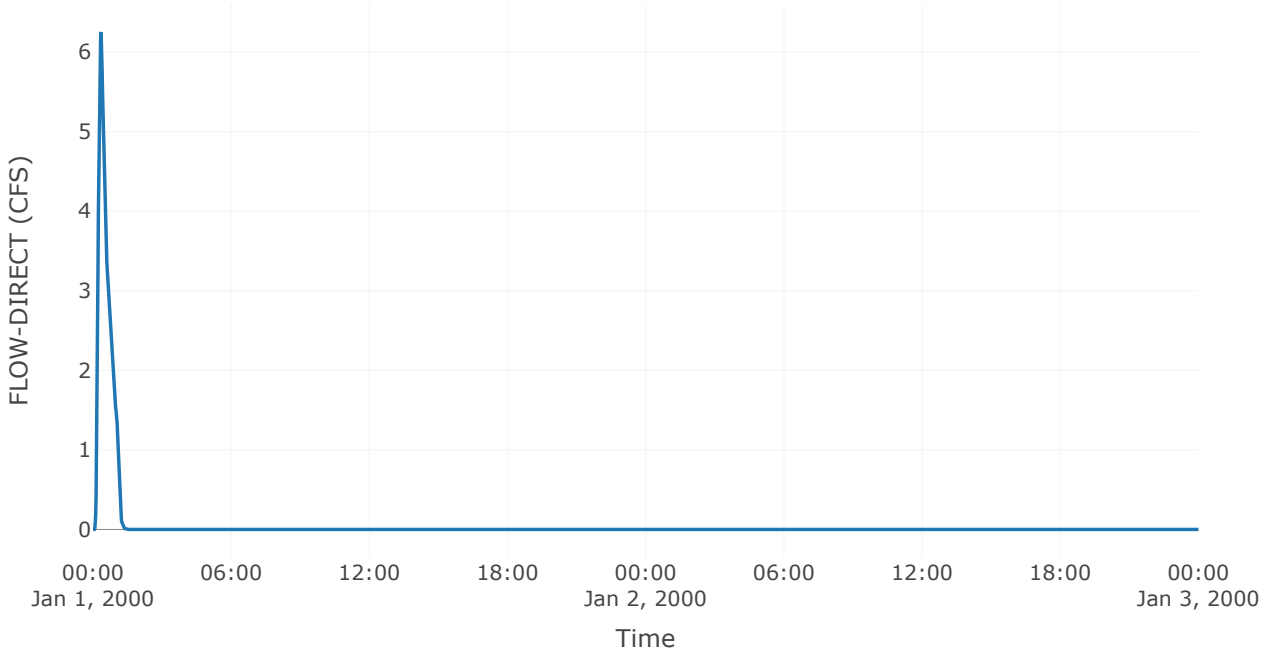

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

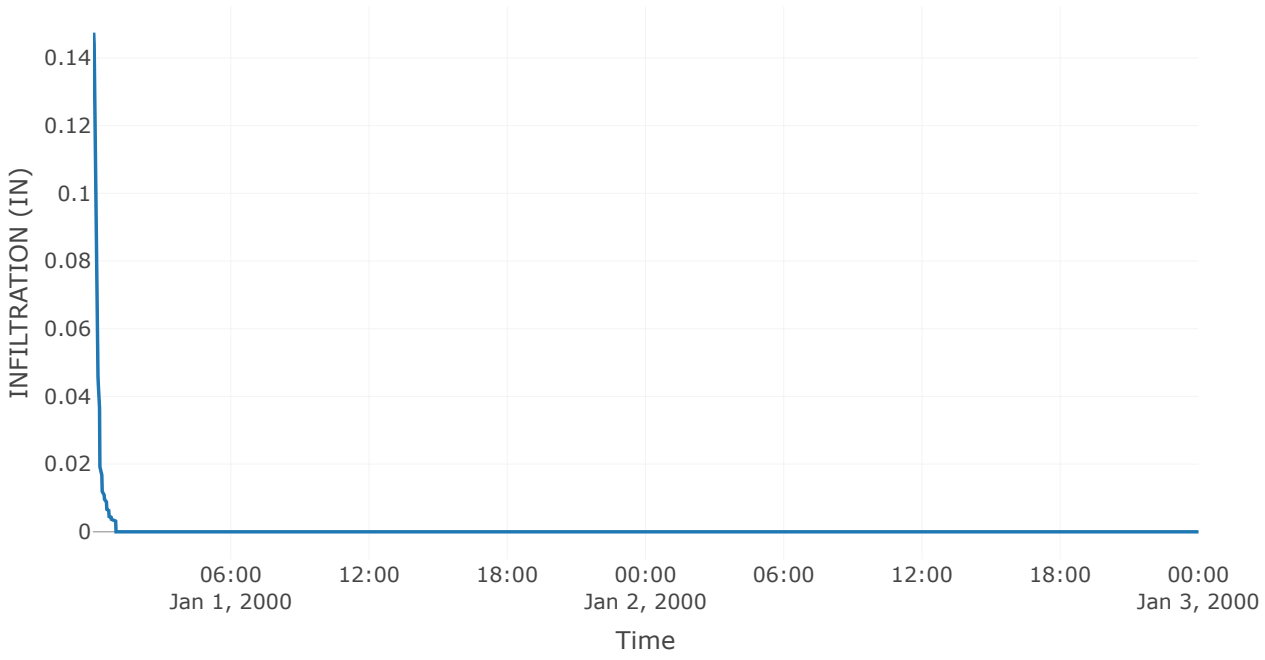

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

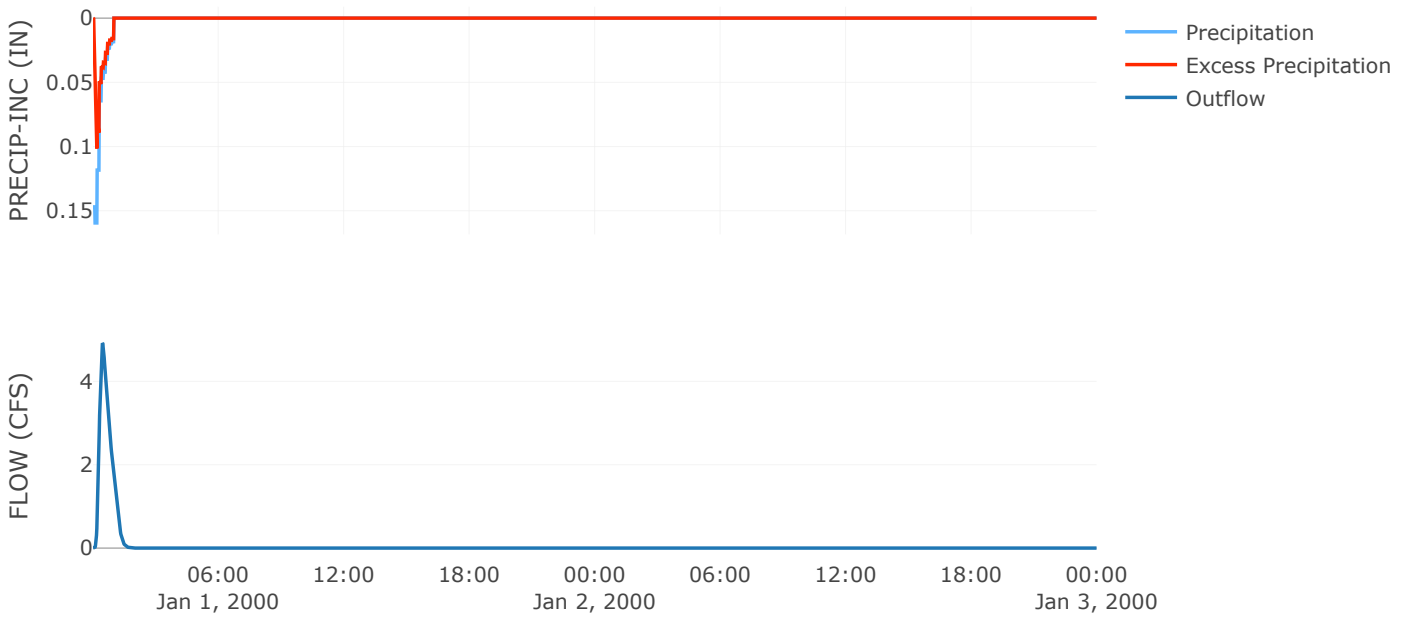
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

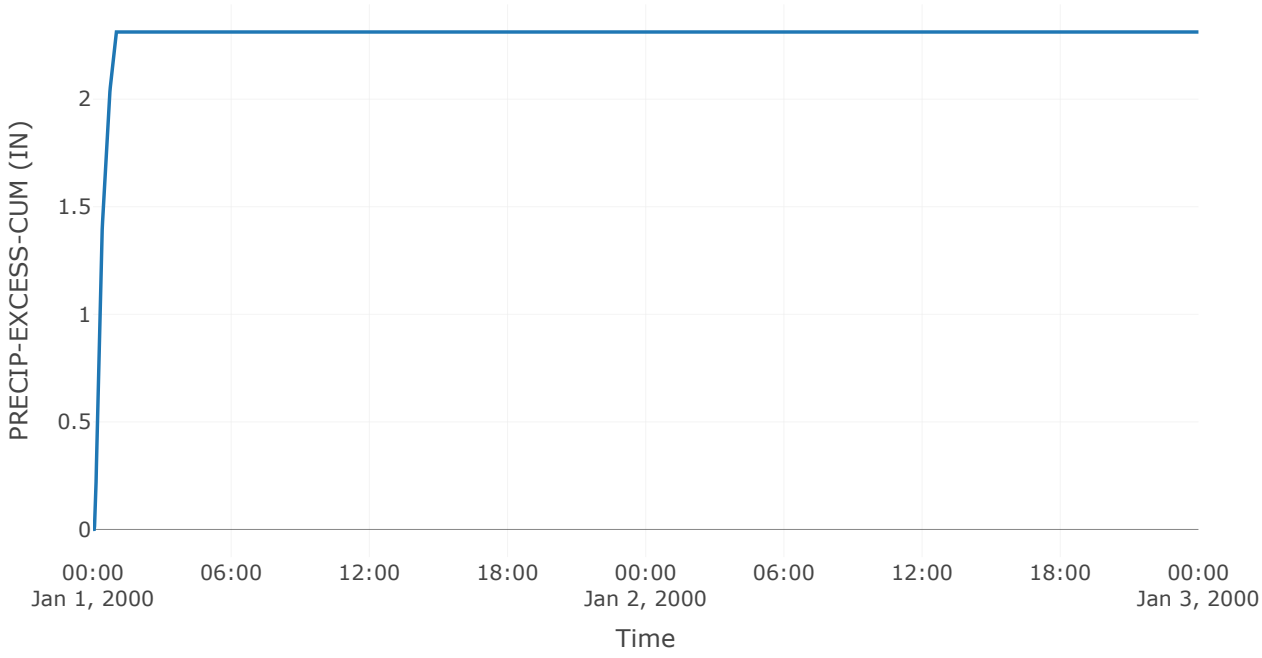
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

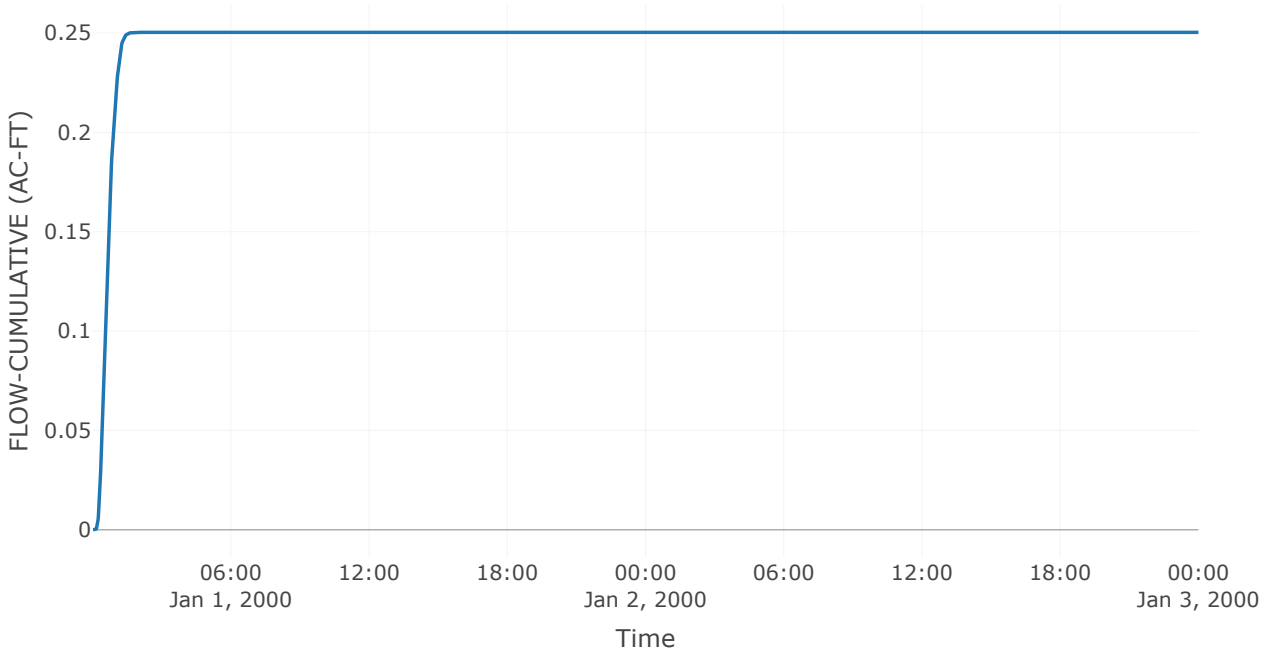
Precipitation and Outflow



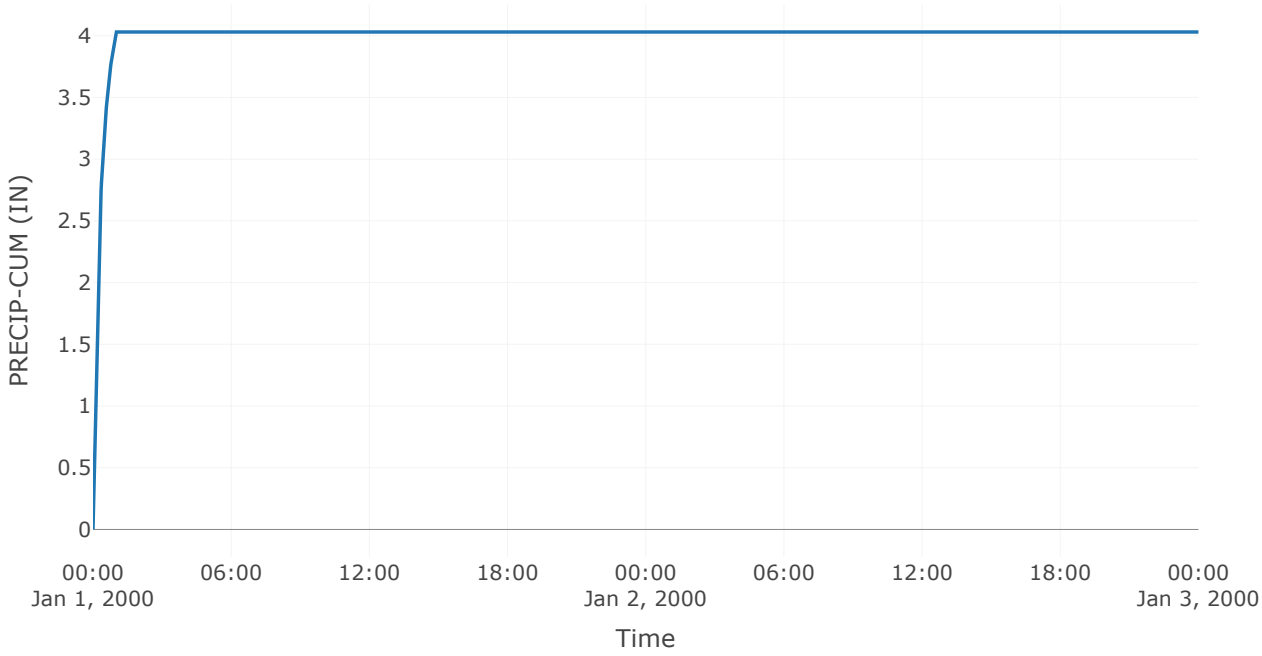
Cumulative Excess Precipitation

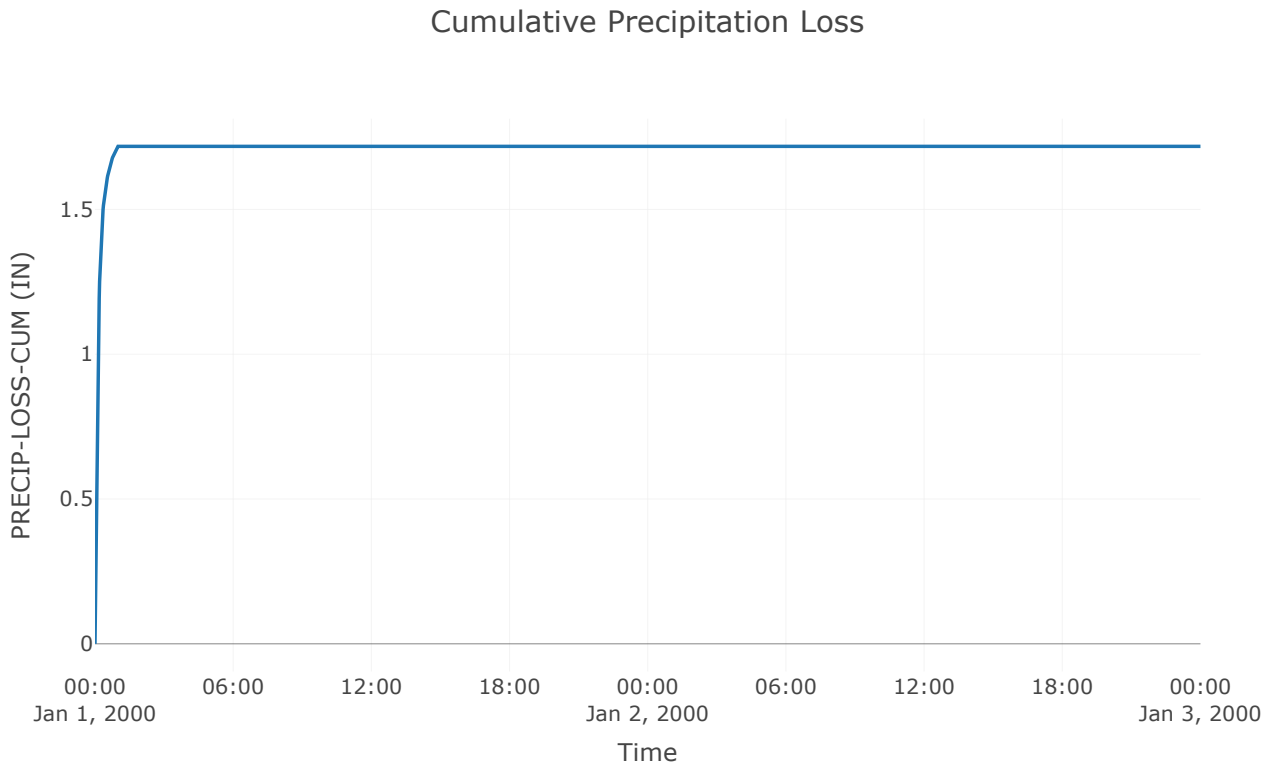


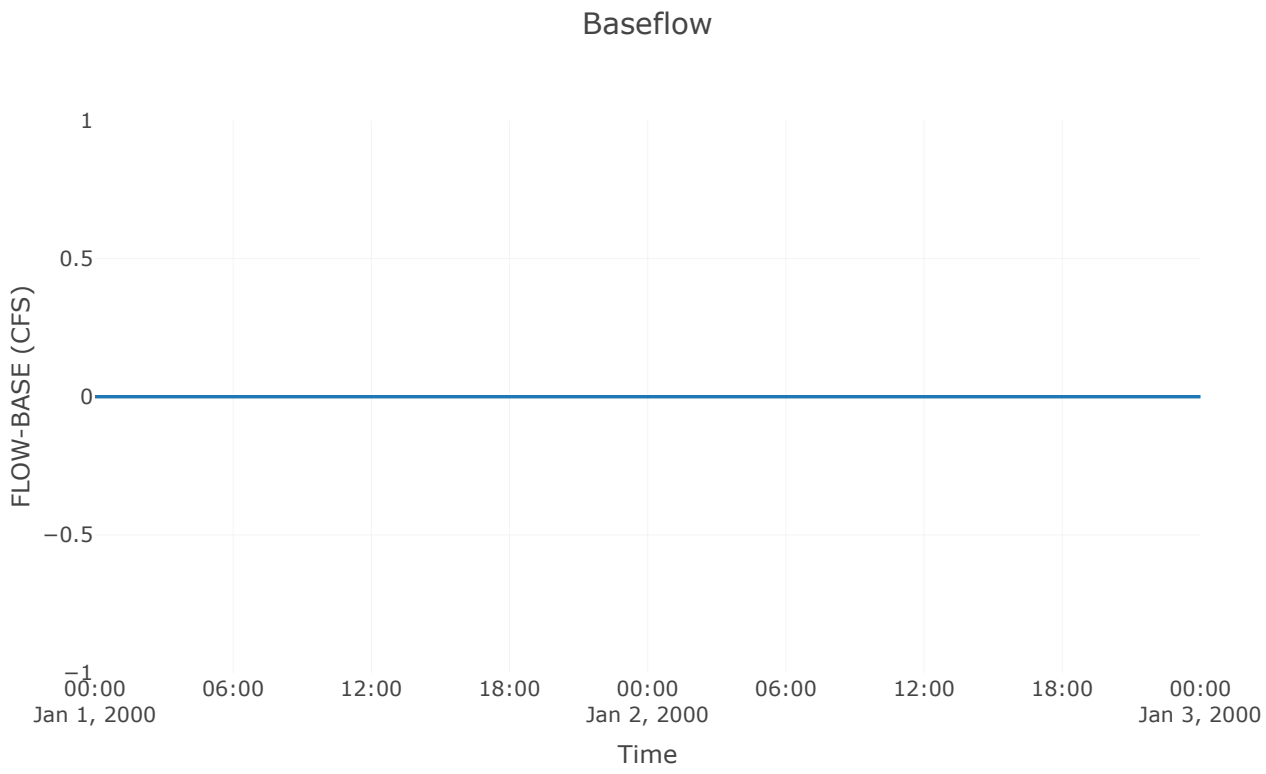
Cumulative Outflow



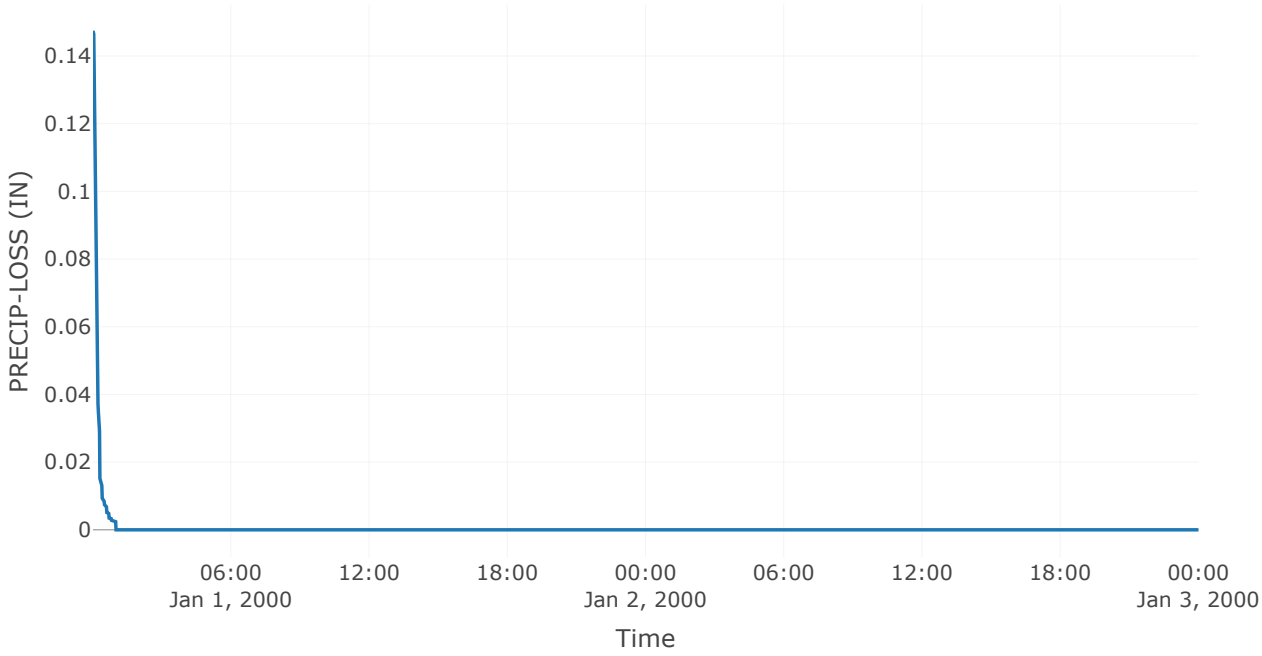
Cumulative Precipitation



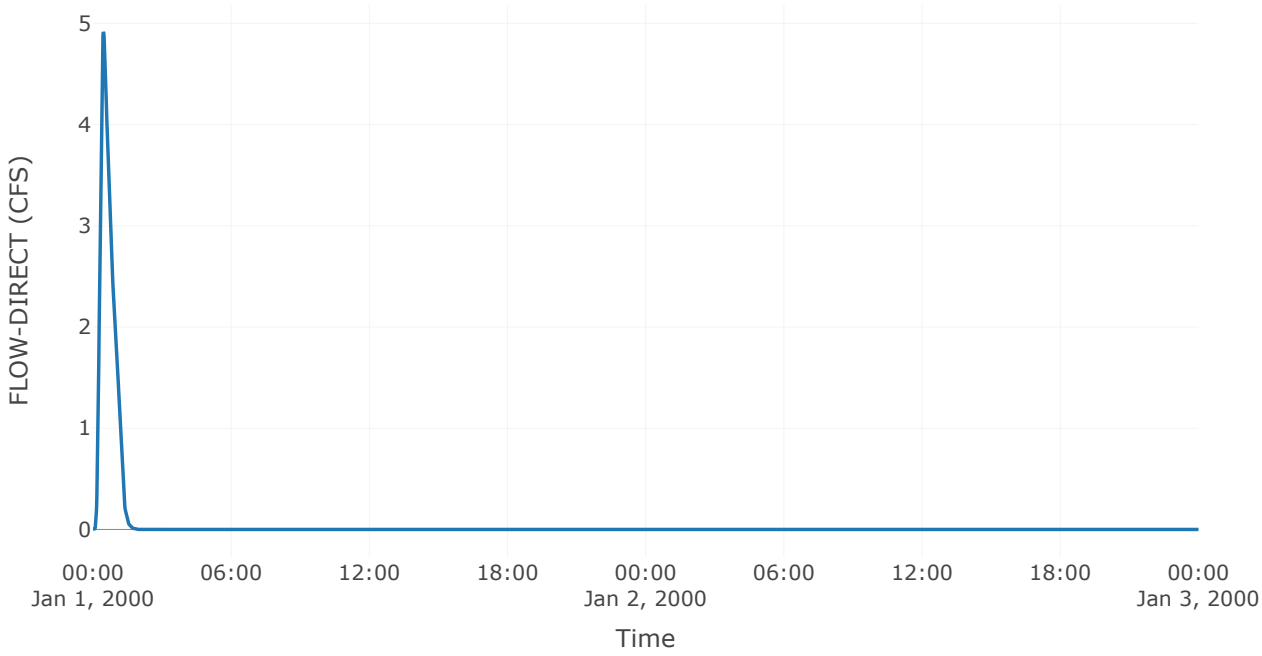

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

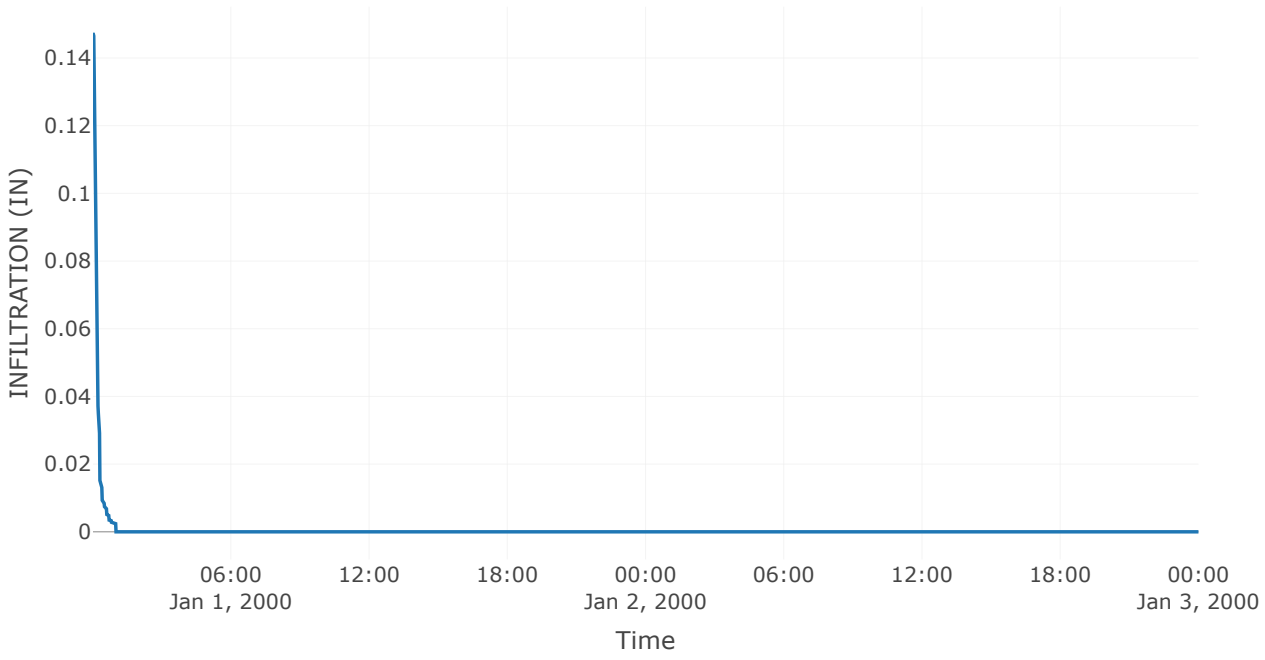

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



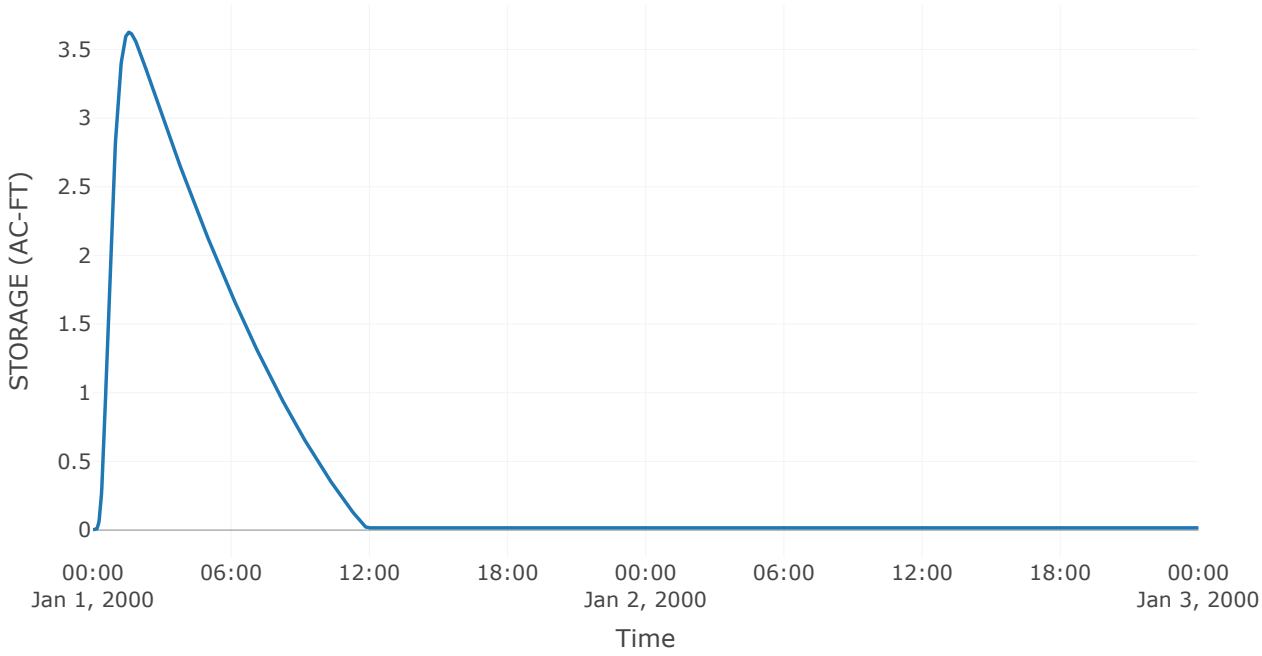

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

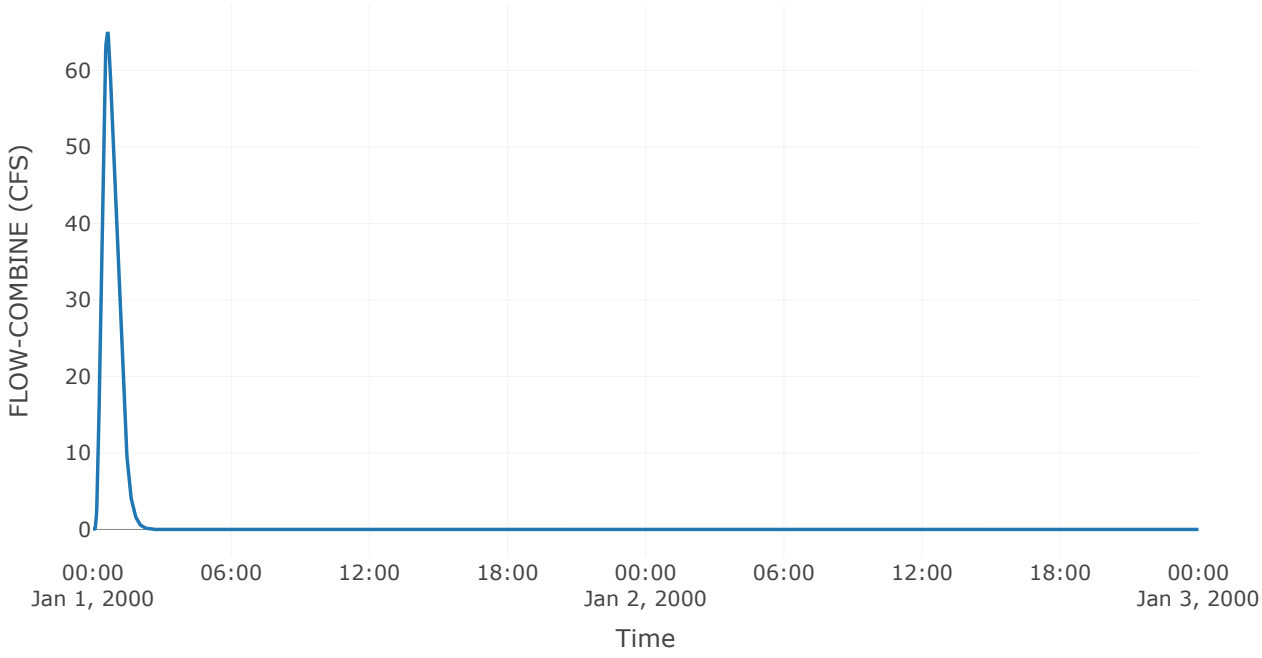
Downstream : Basin 2

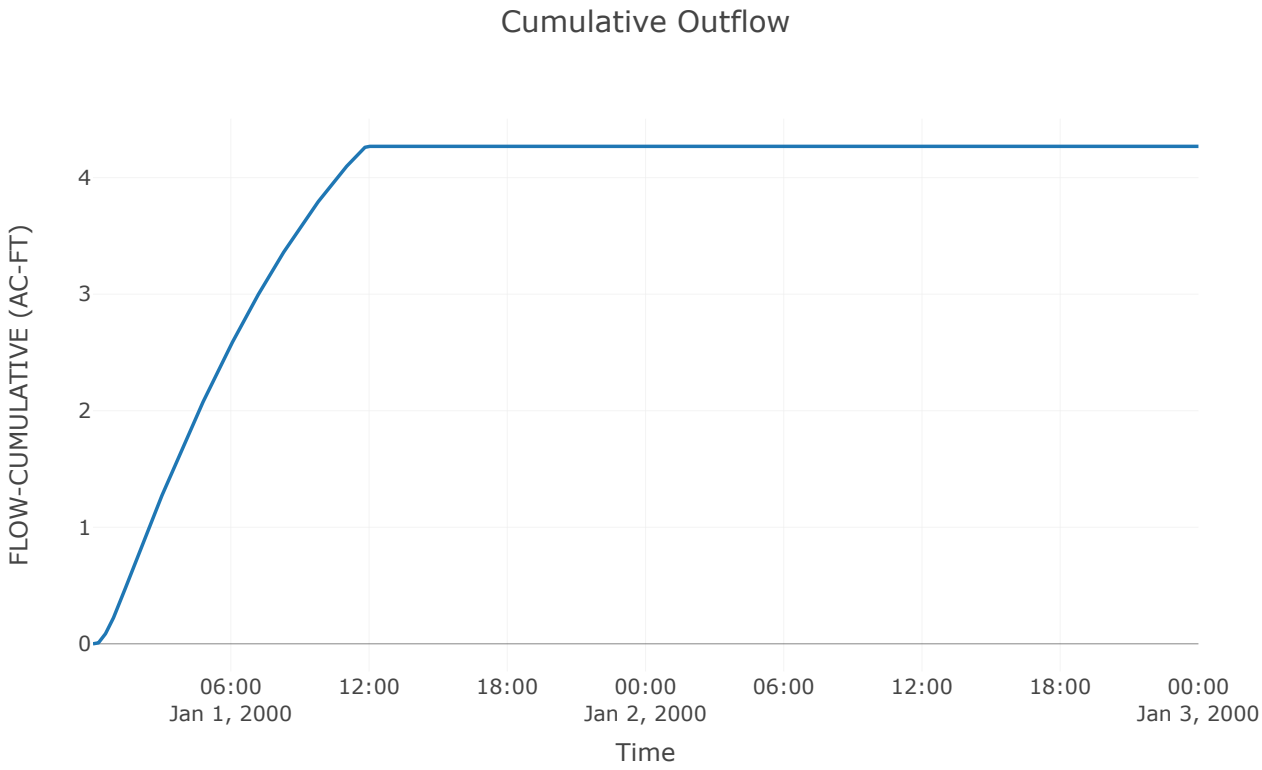
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

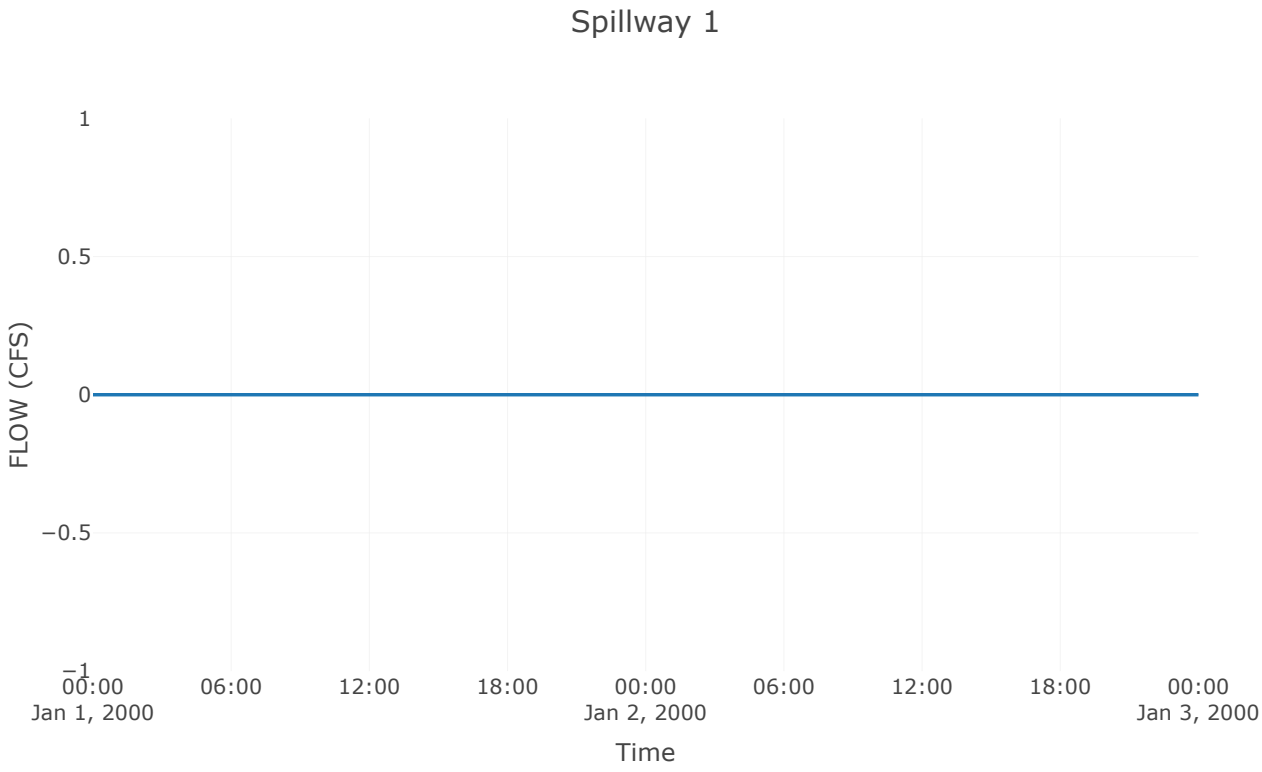
Storage



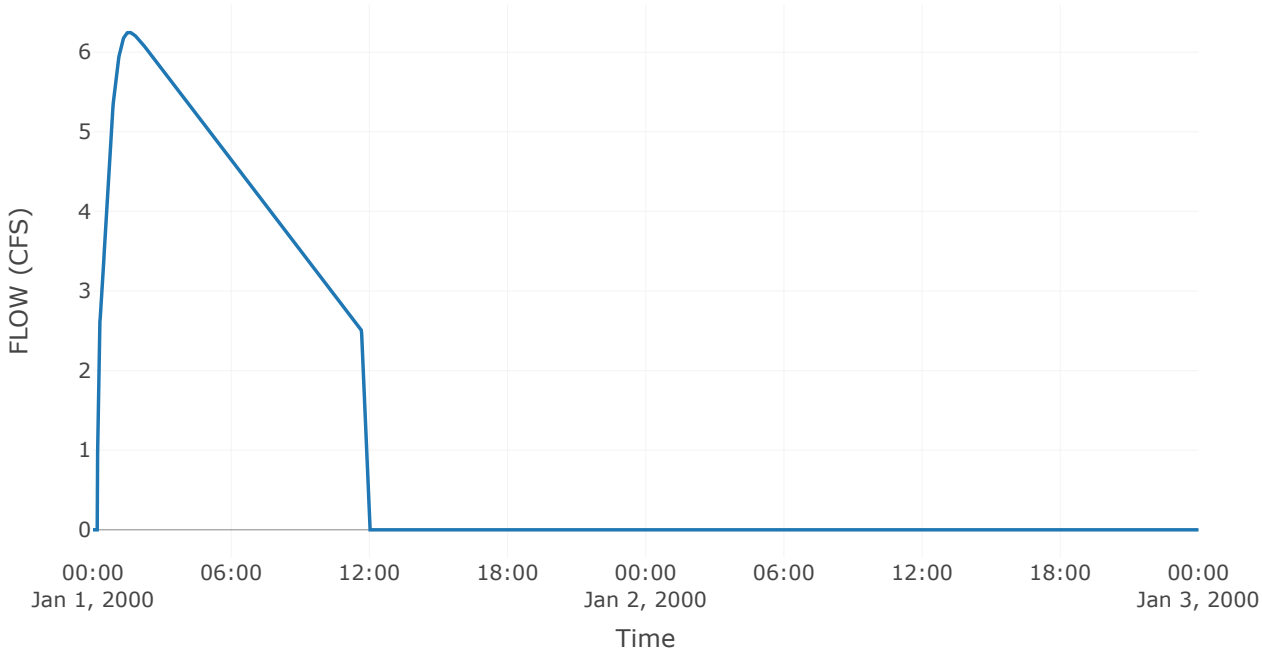
Combined Inflow



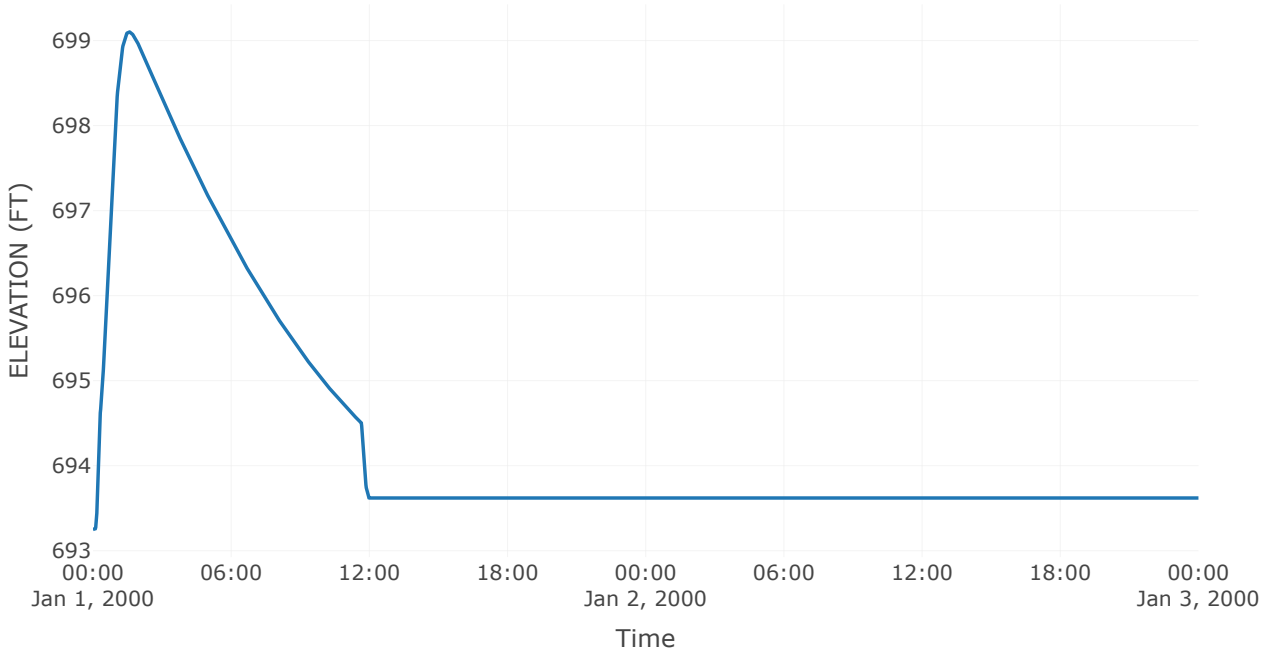

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

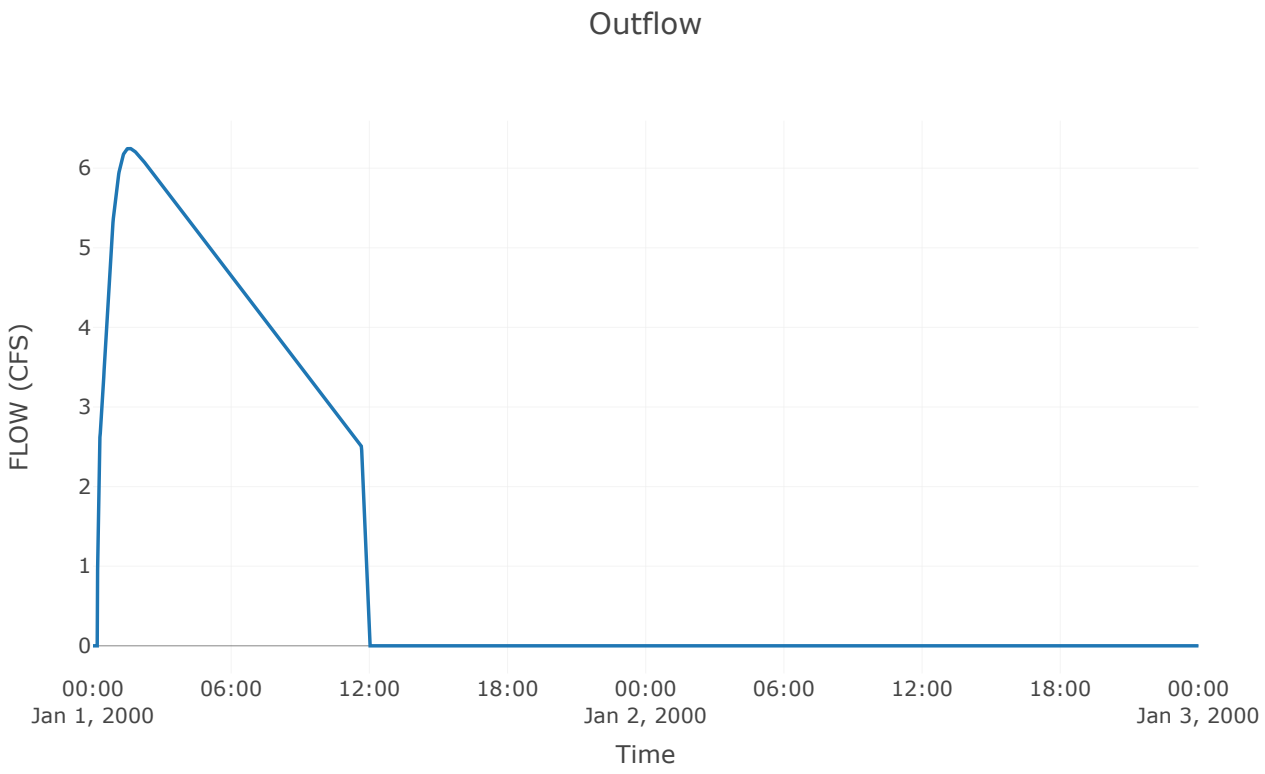

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

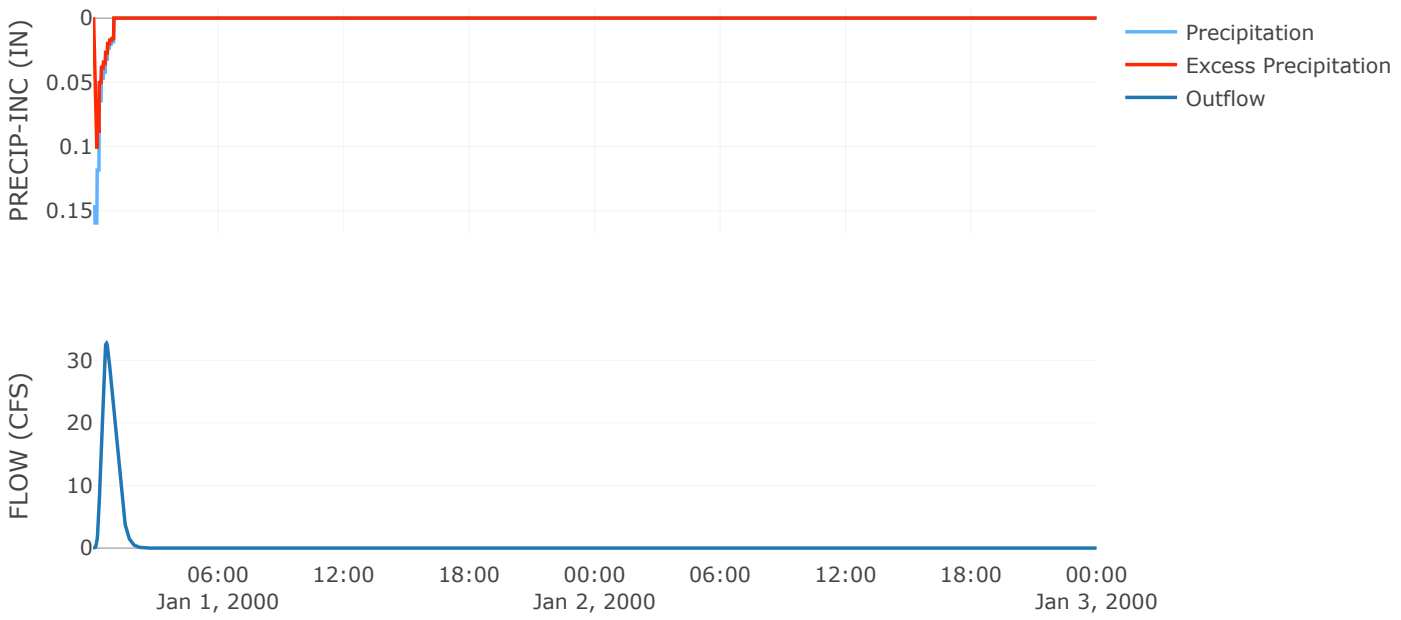
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

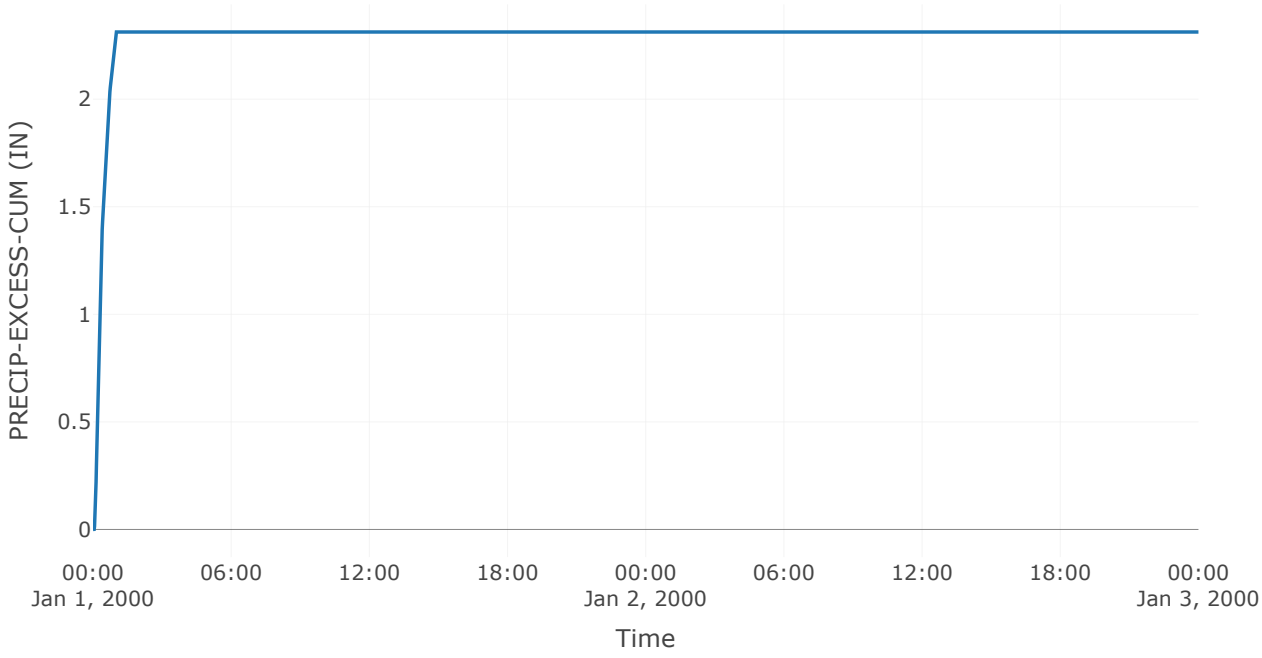
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

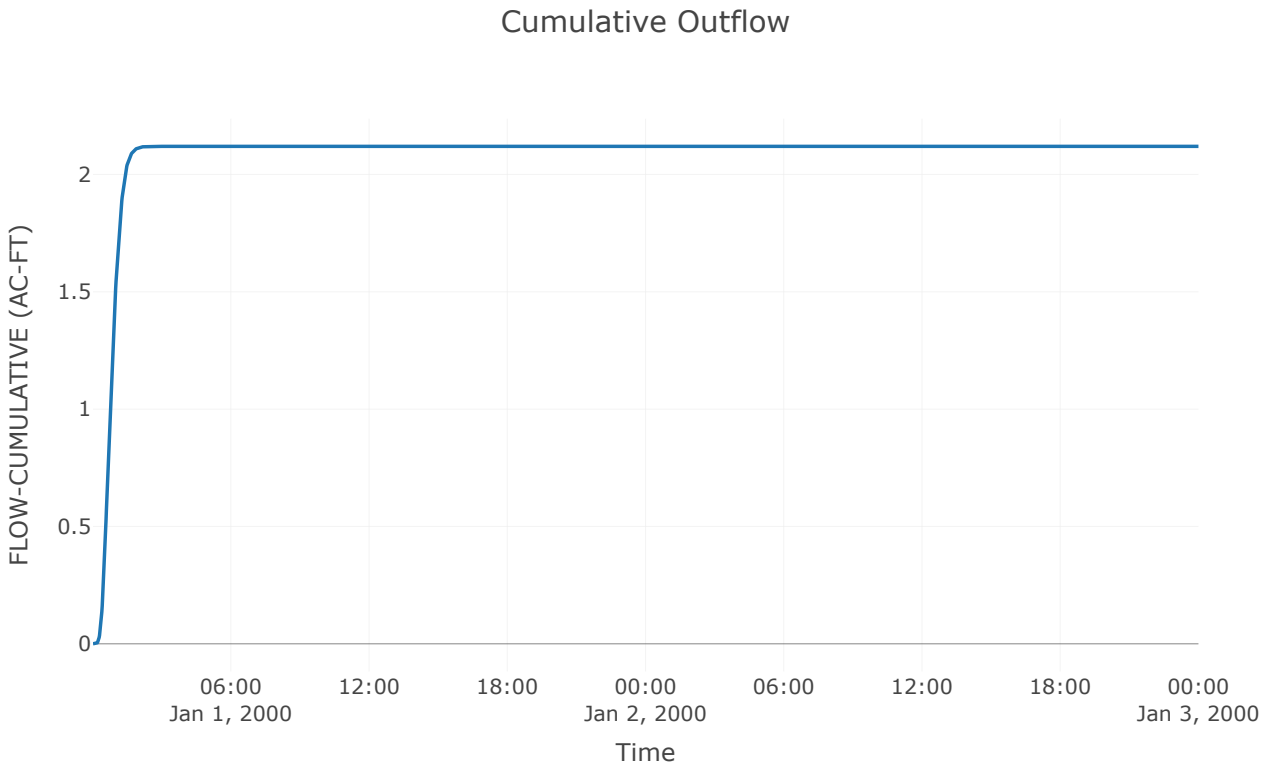
Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

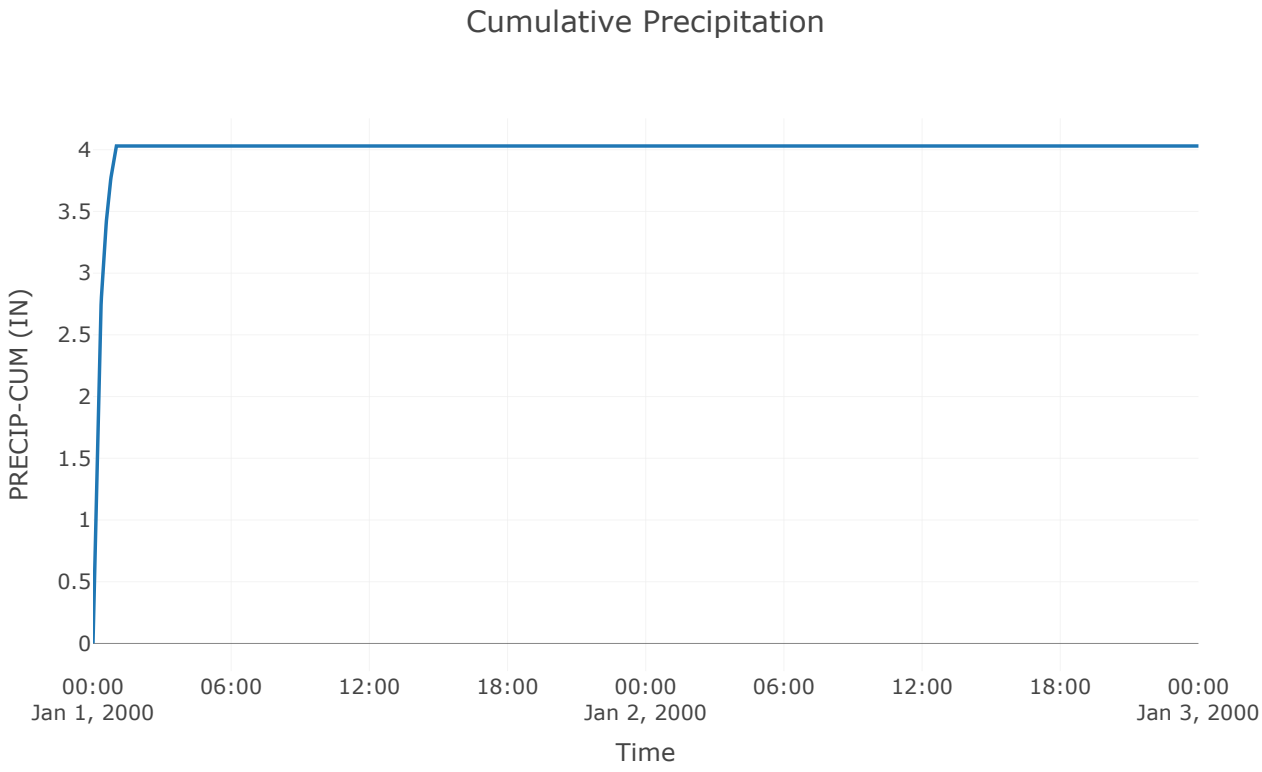
Precipitation and Outflow

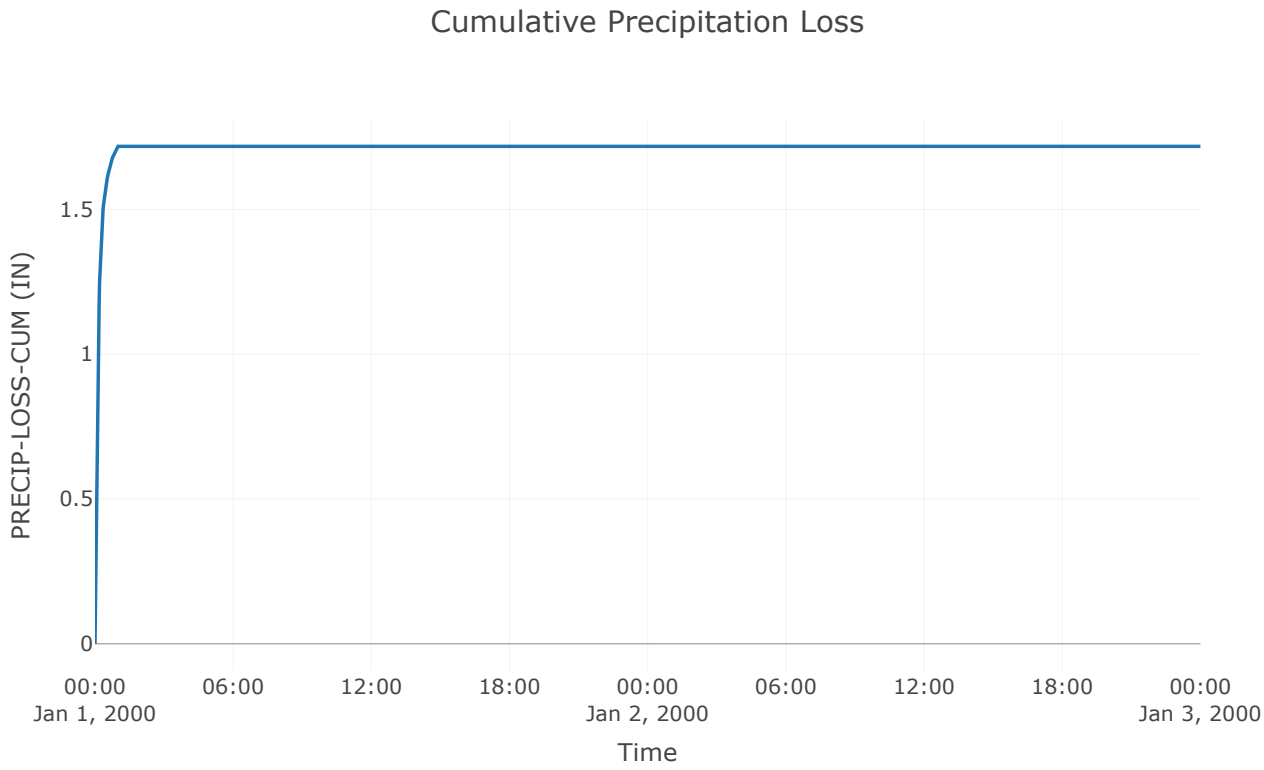


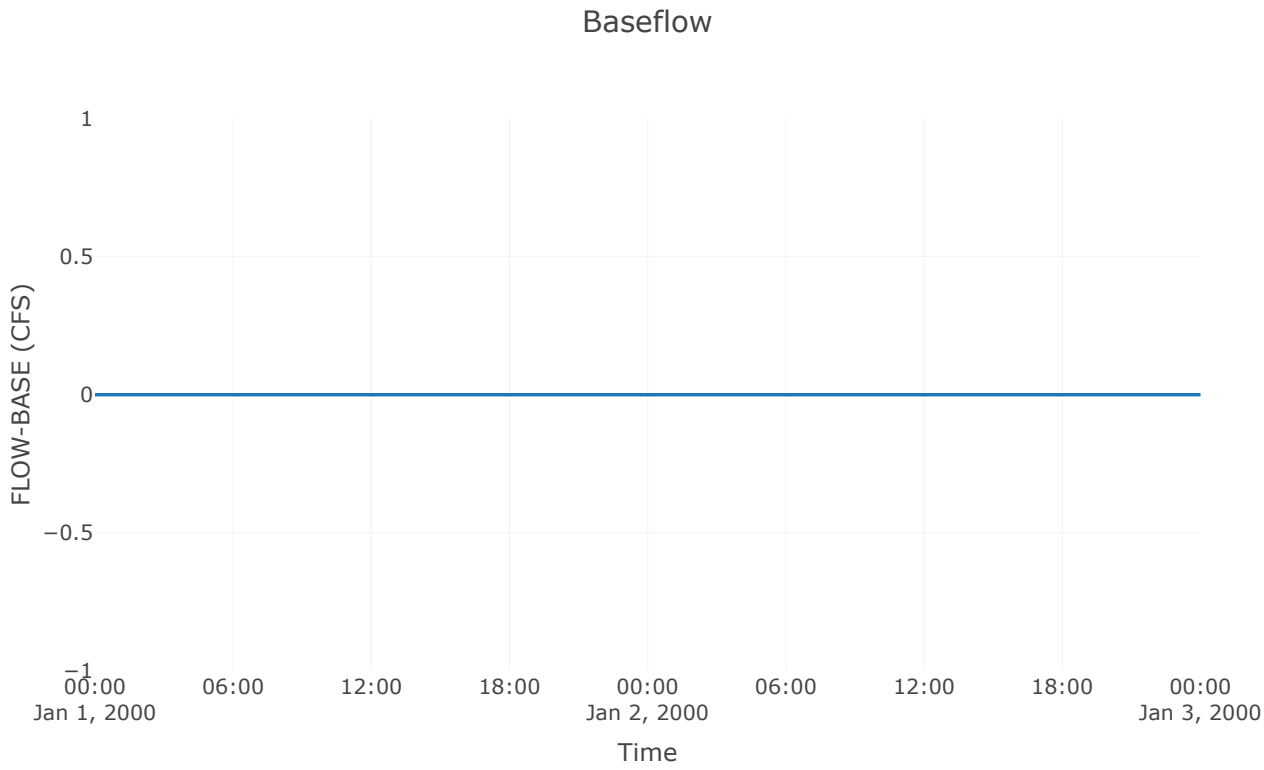
Cumulative Excess Precipitation

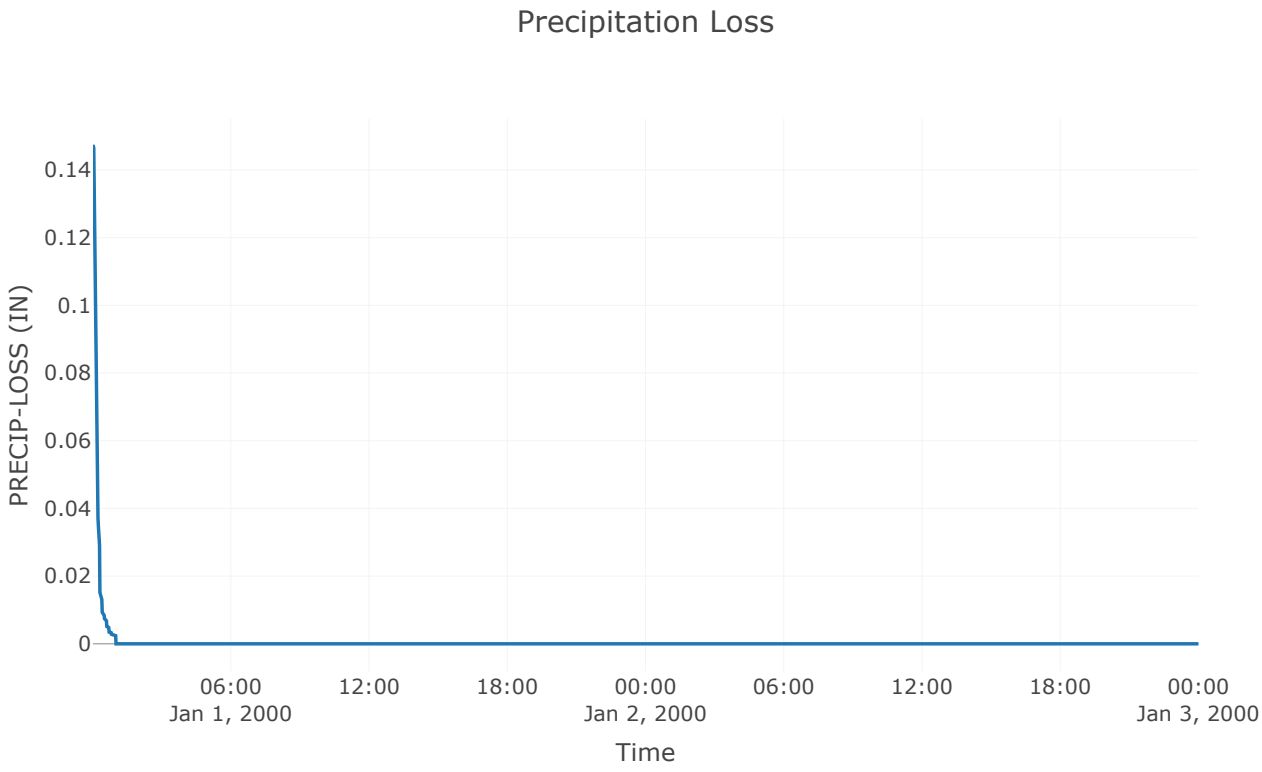


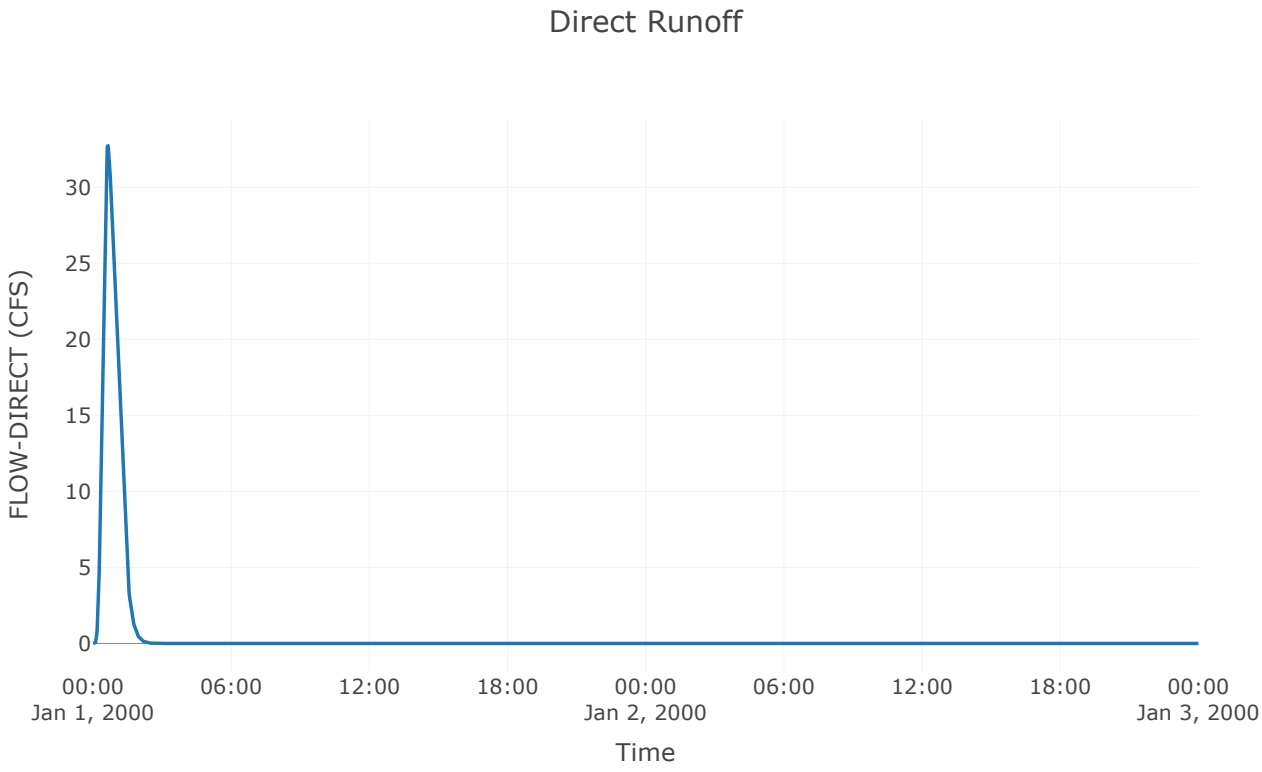

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

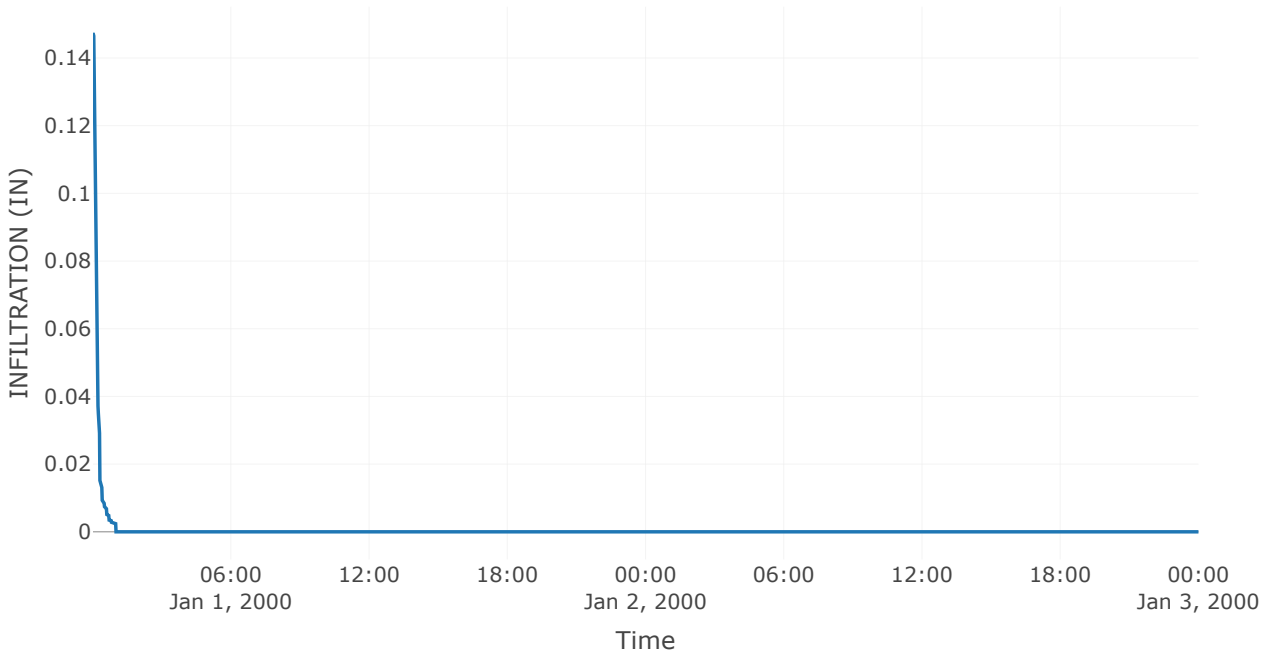

Cumulative Precipitation
PRECIP-CUM (IN)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
30
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

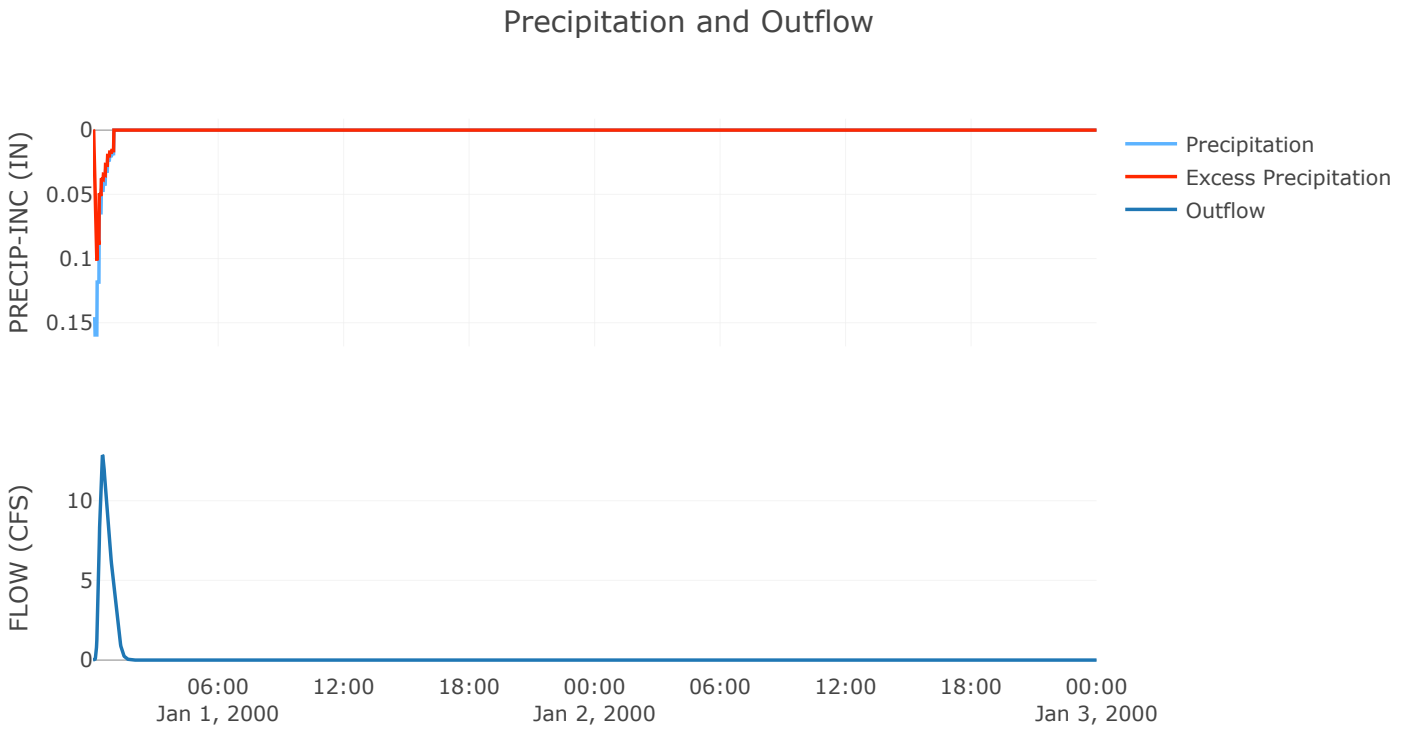
Subbasin: Off-Site Trib2

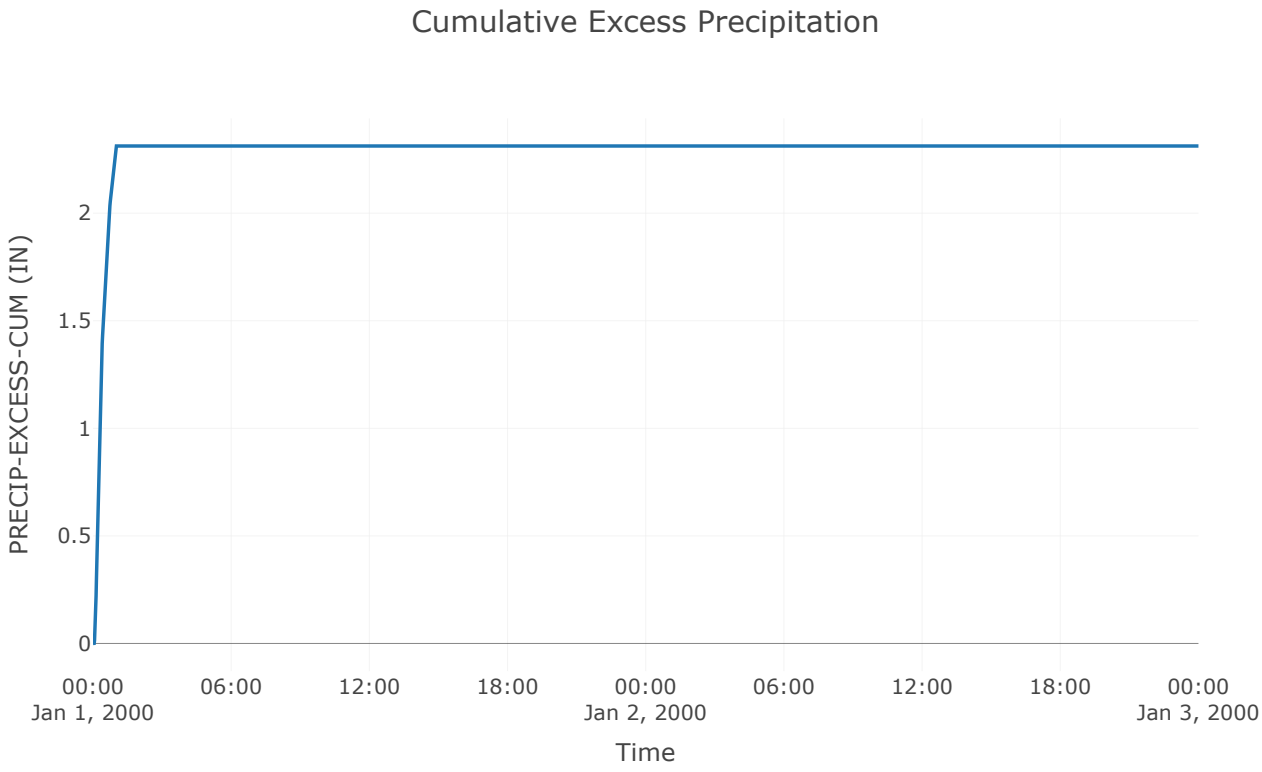
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

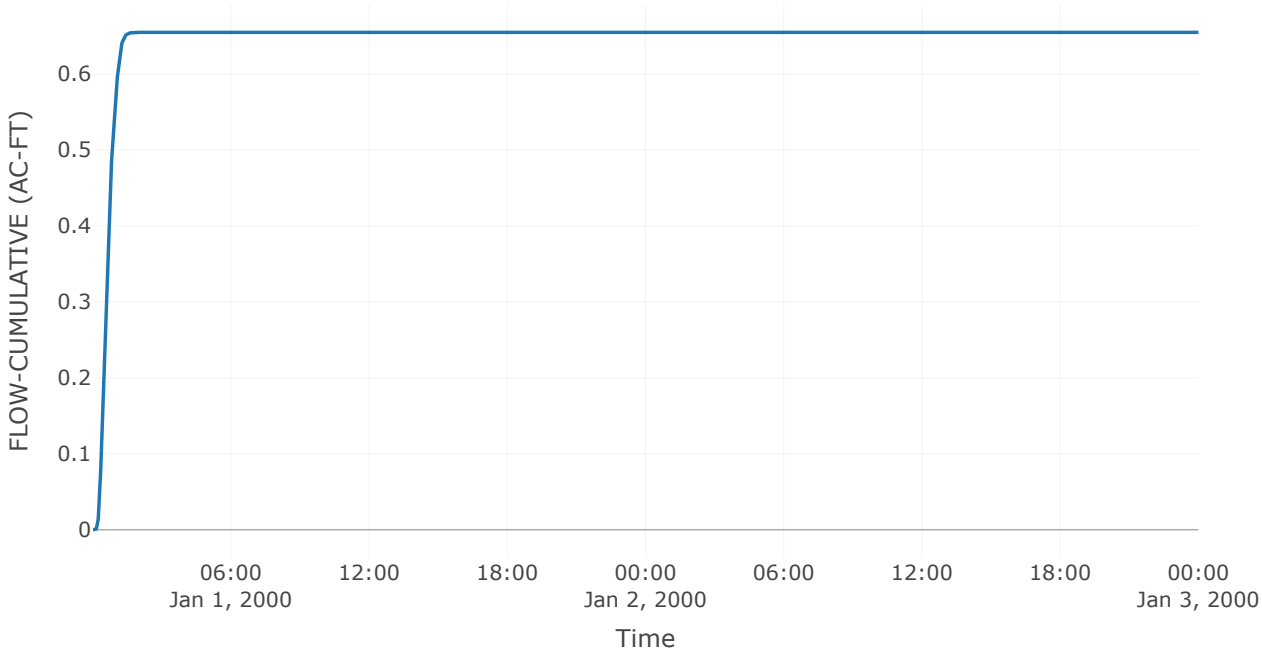
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

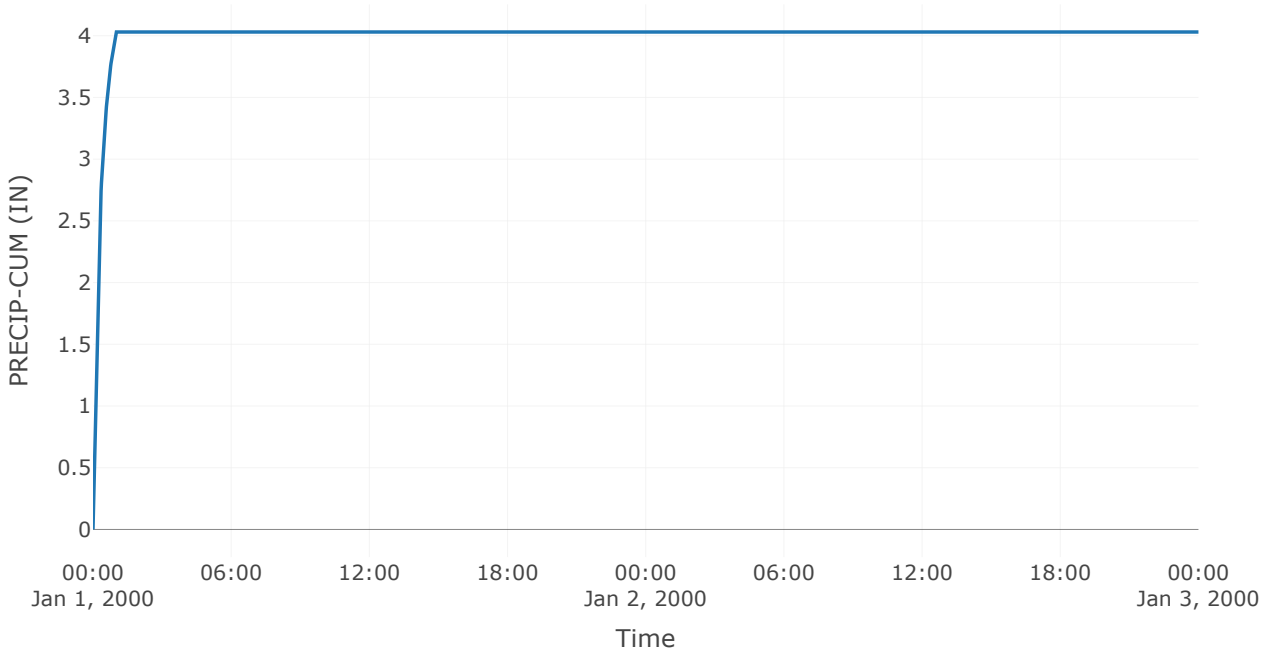

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000

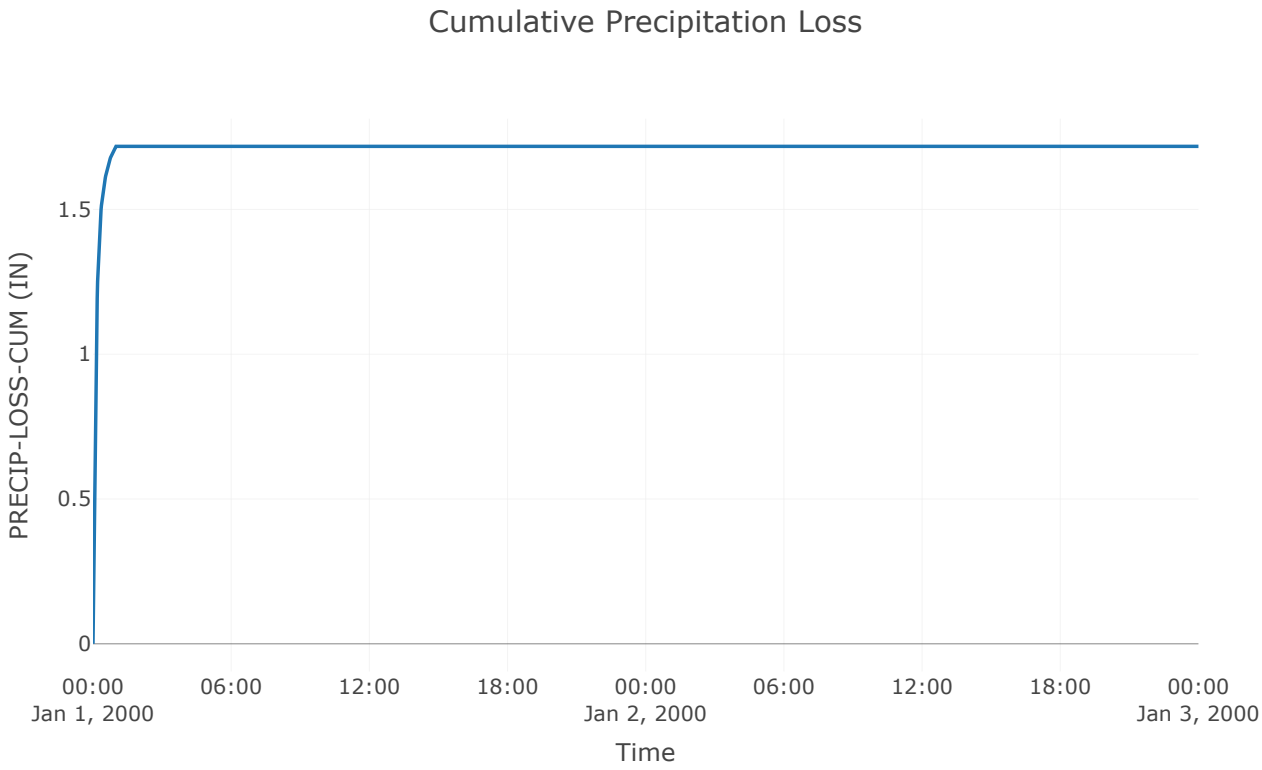

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

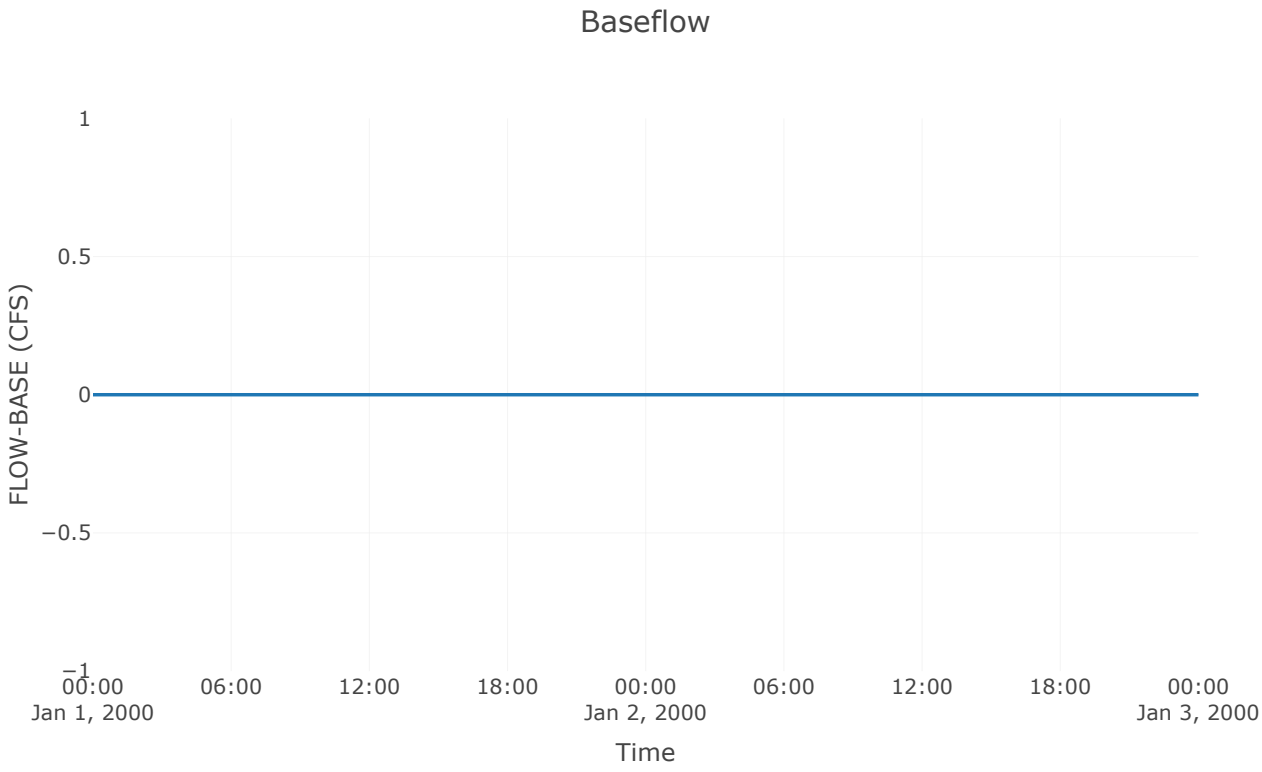
Cumulative Outflow



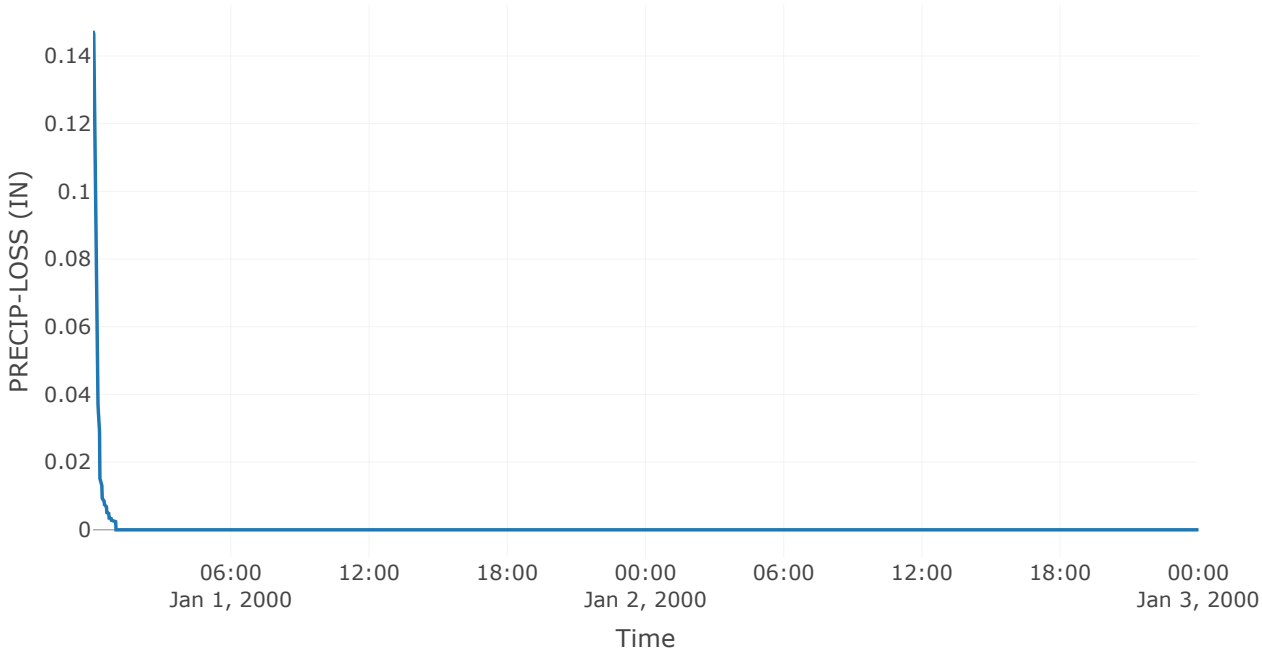
Cumulative Precipitation



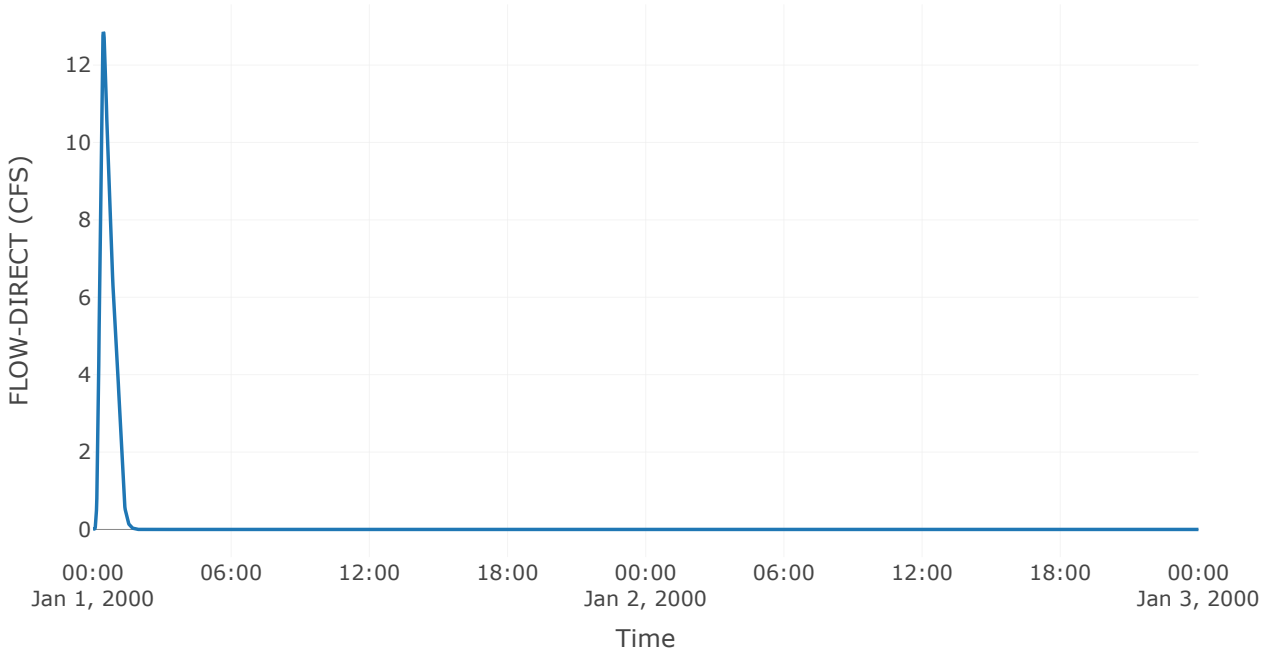

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

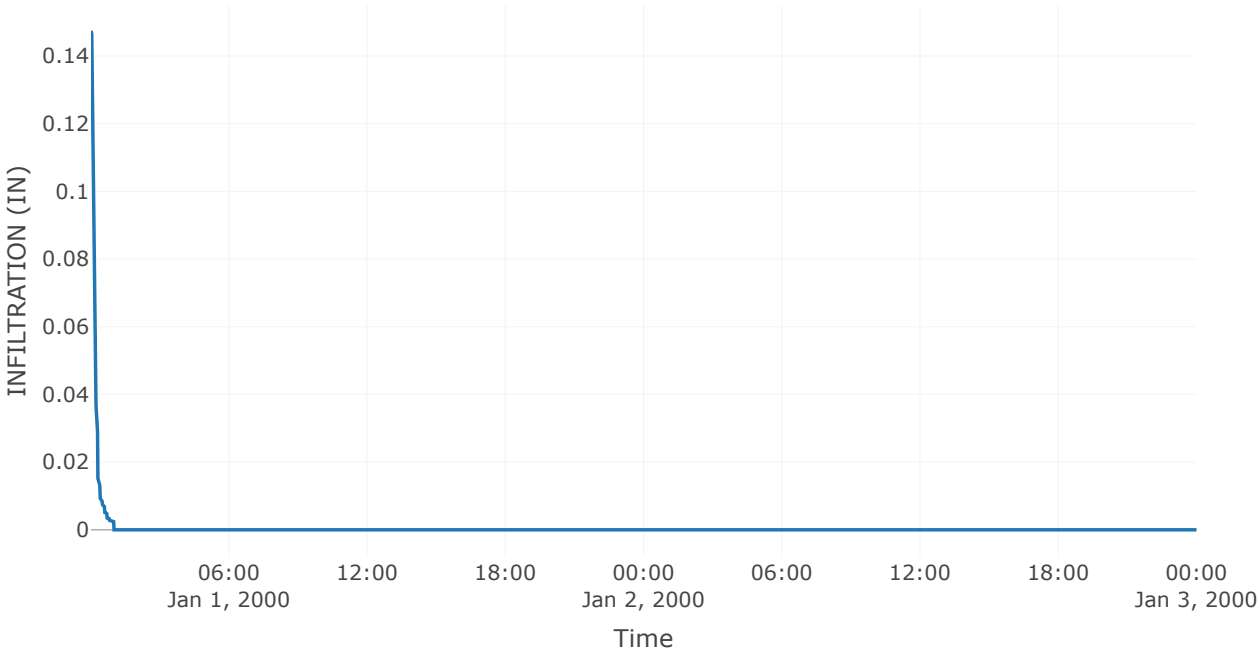

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



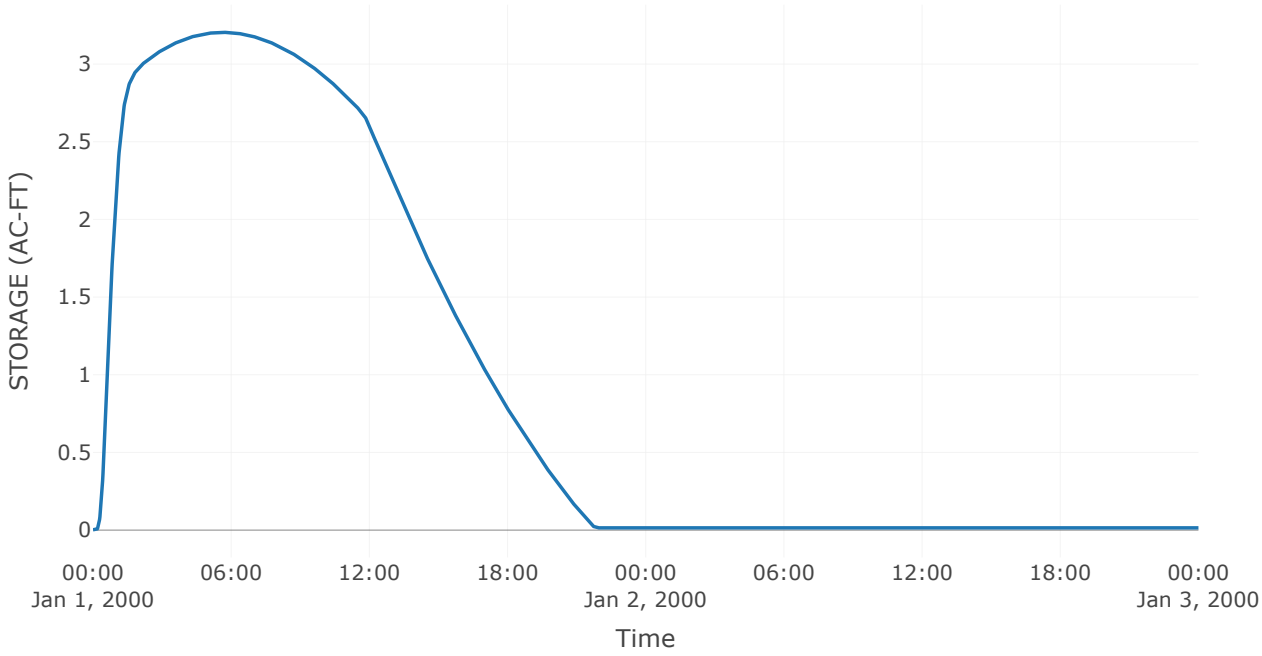

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

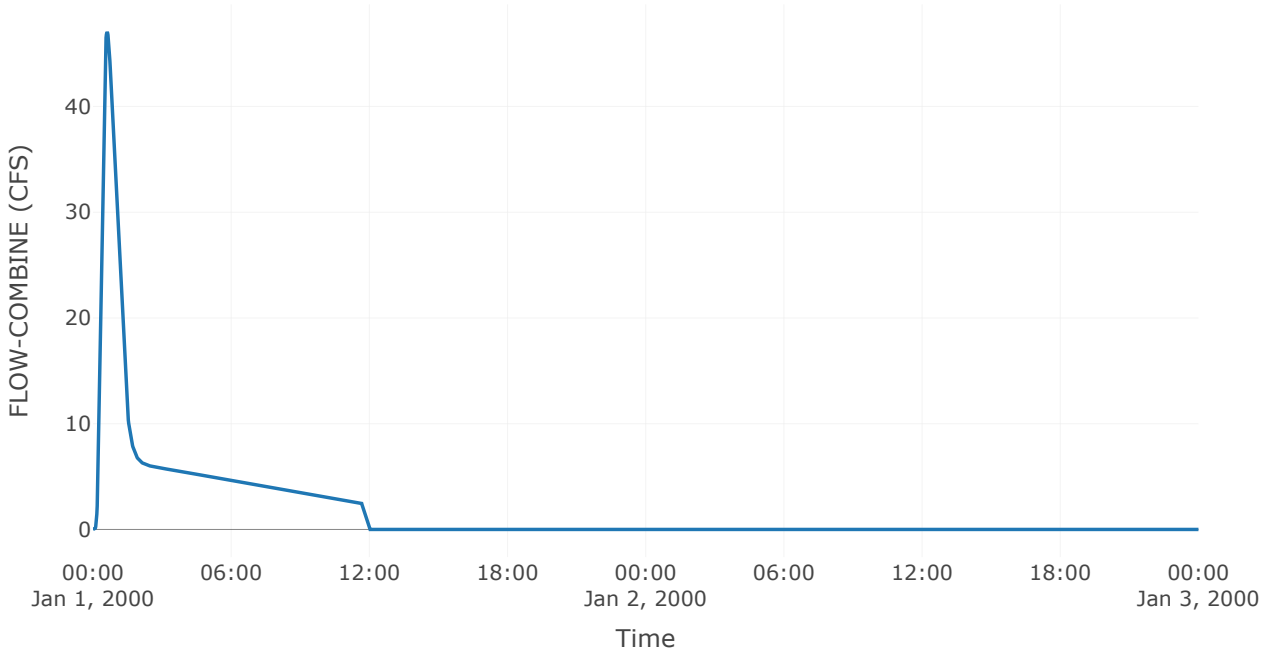
Downstream : Basin 3

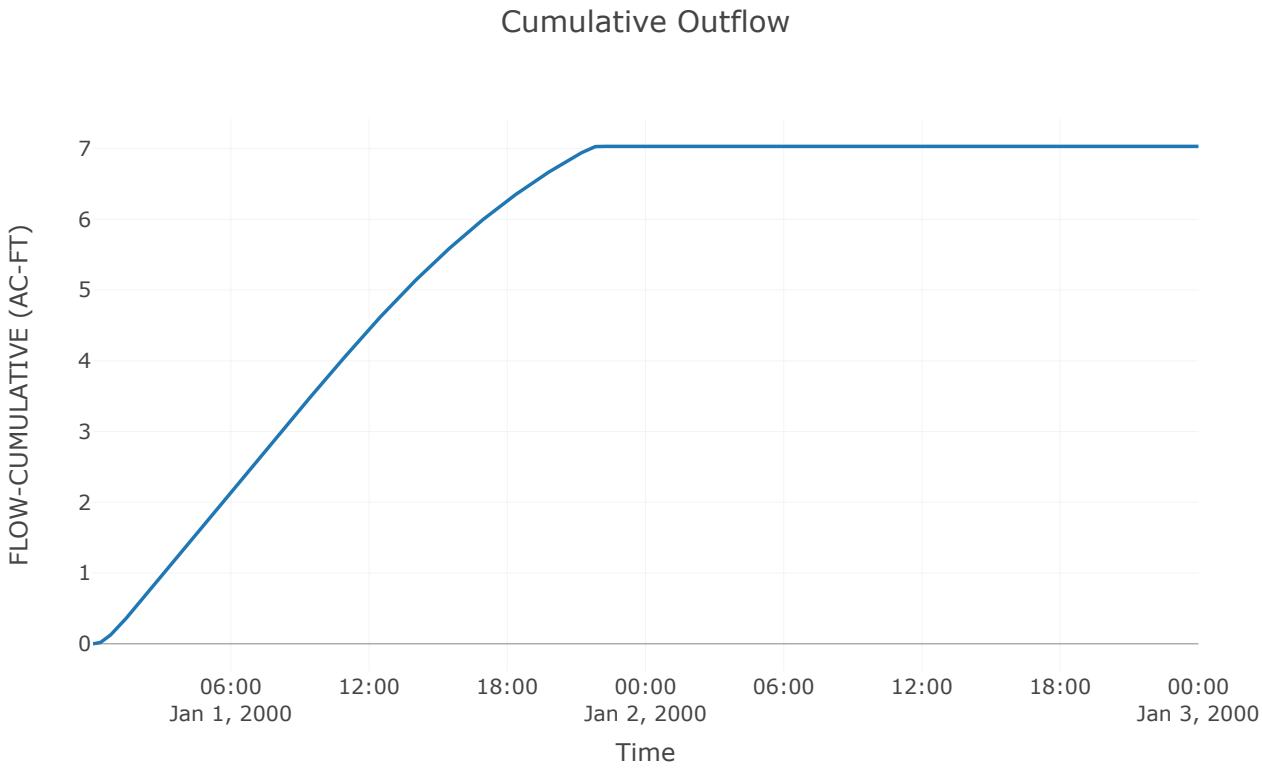
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

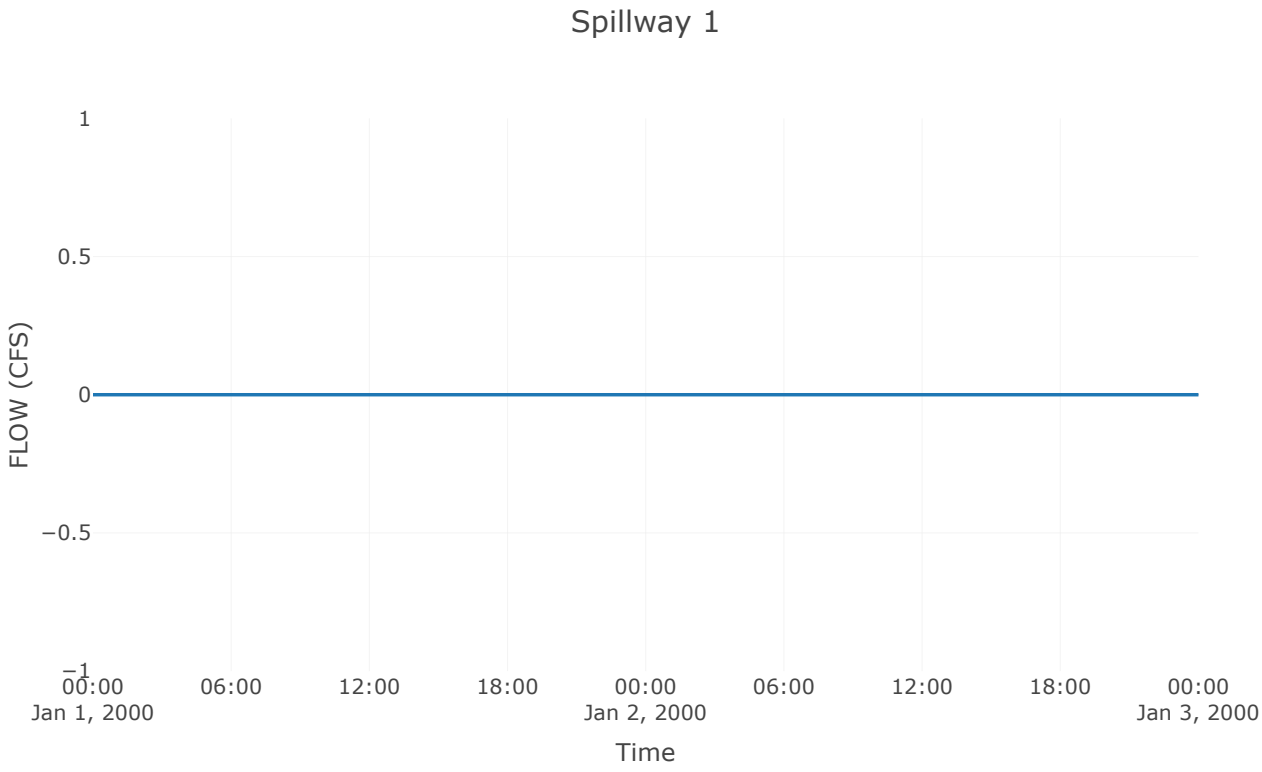
Storage



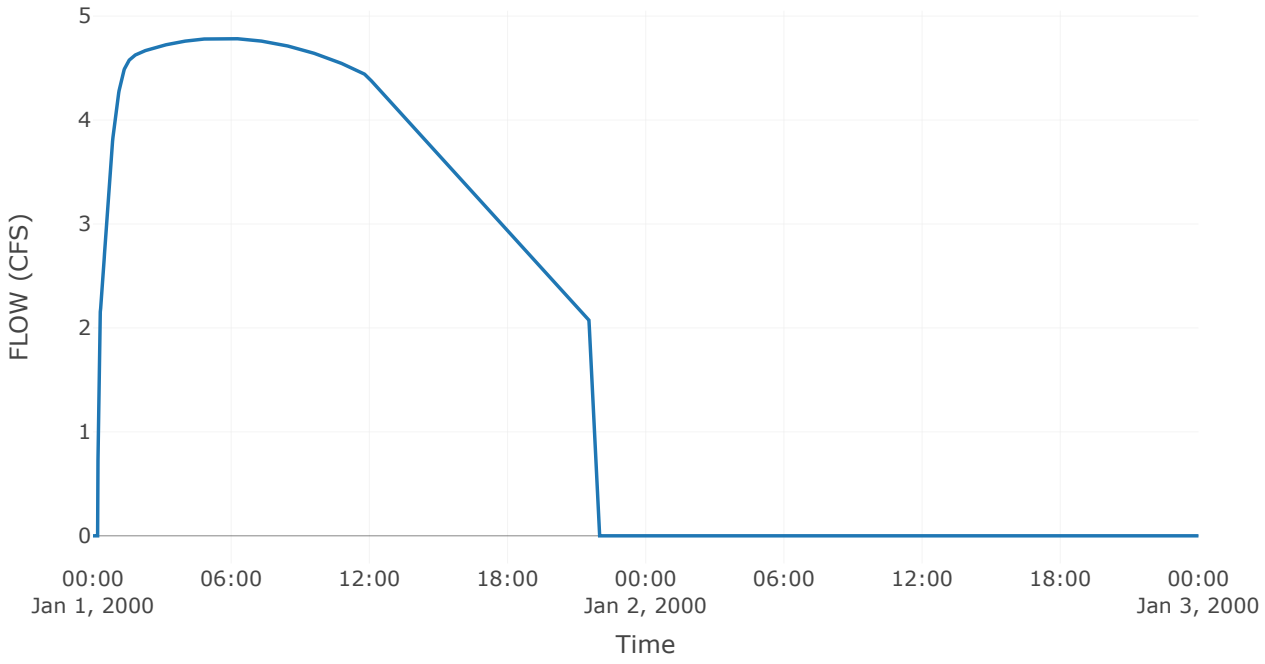
Combined Inflow



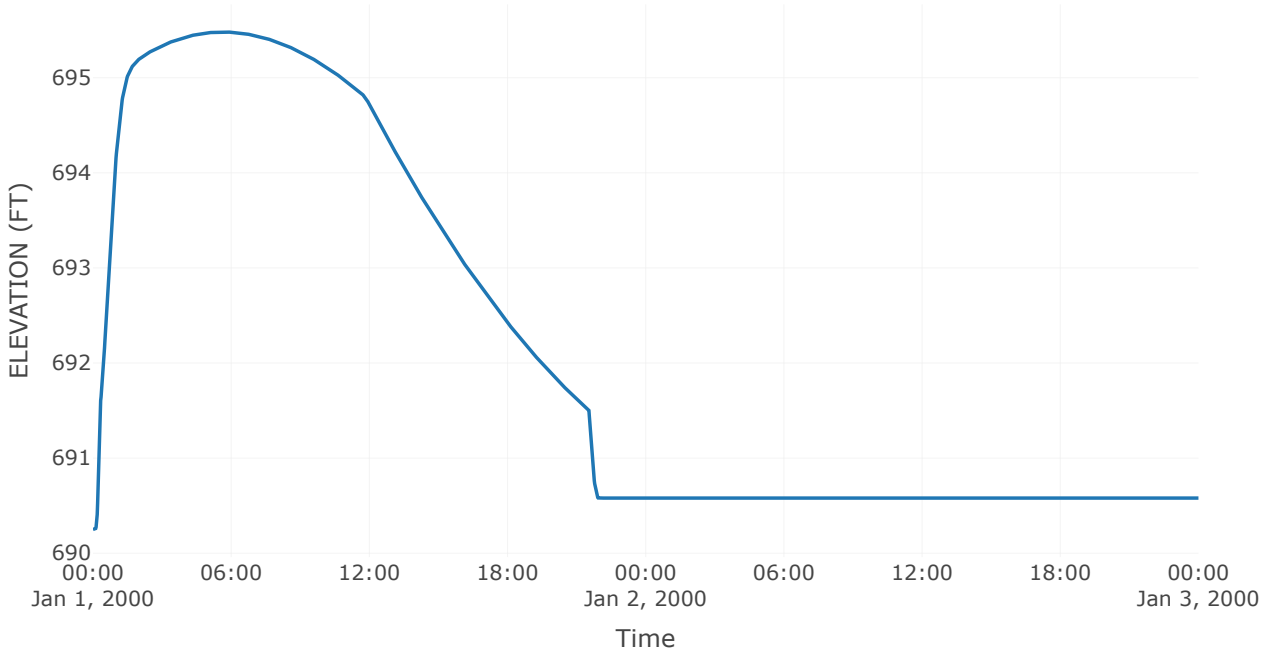

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

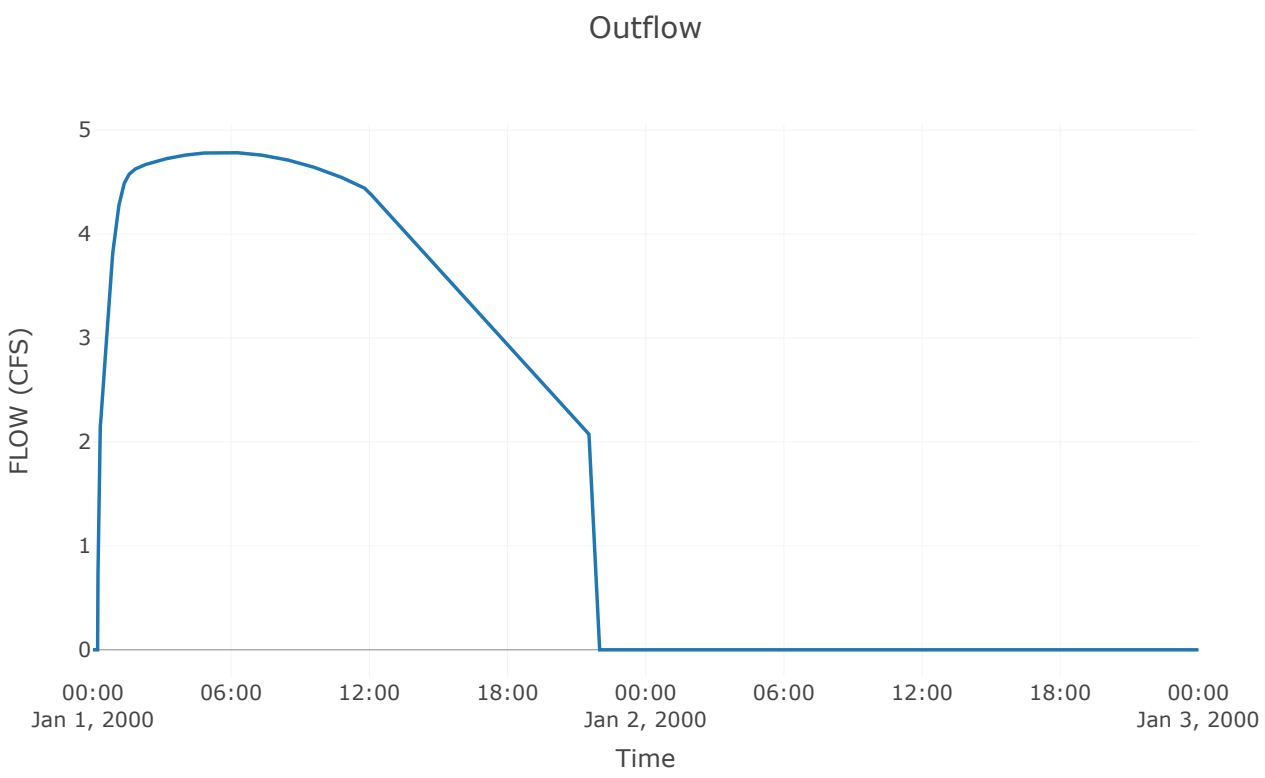

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

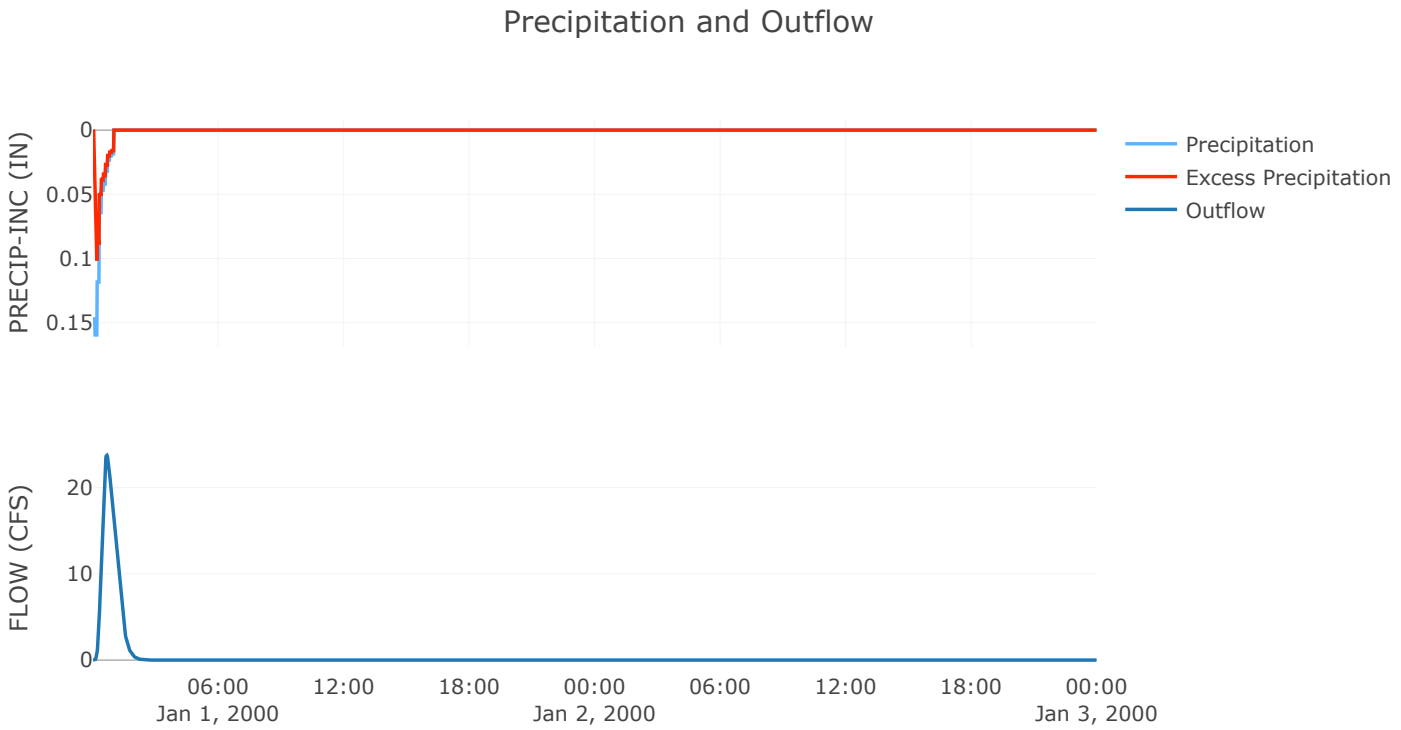
Subbasin: On-Site Trib-Area 3

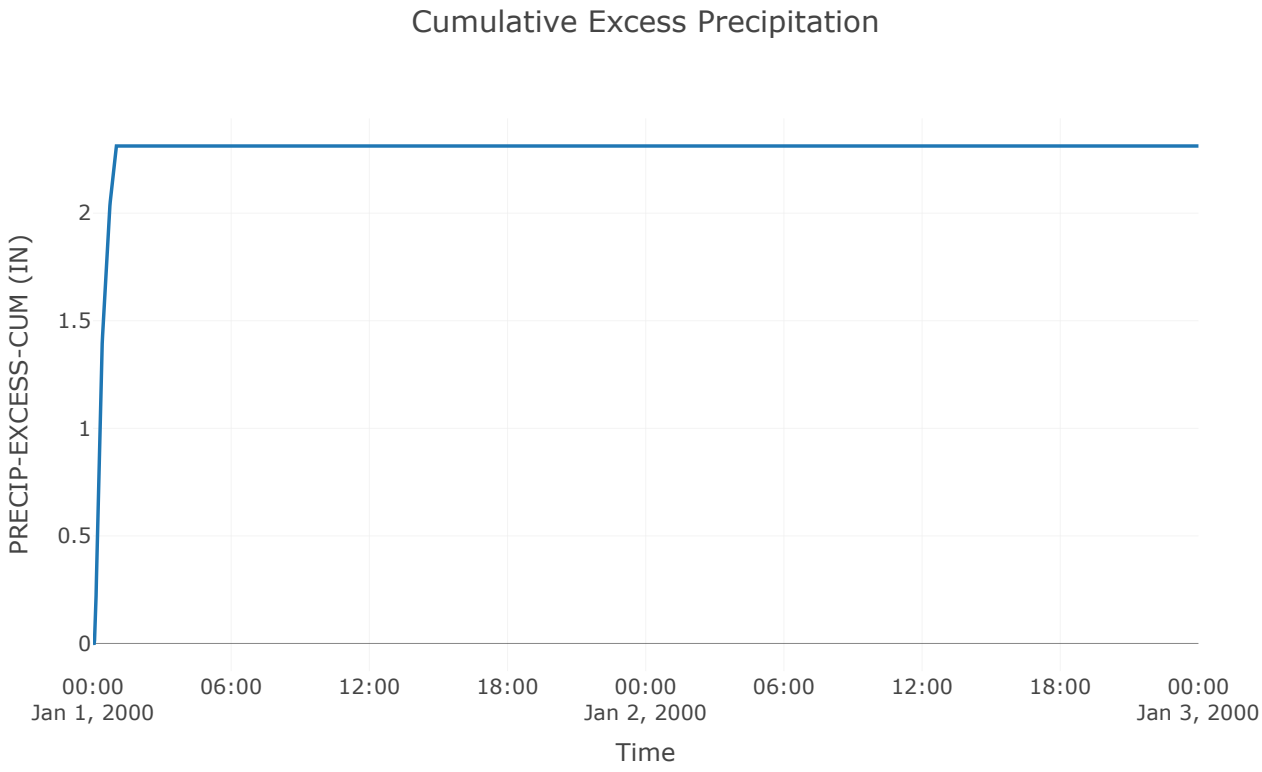
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

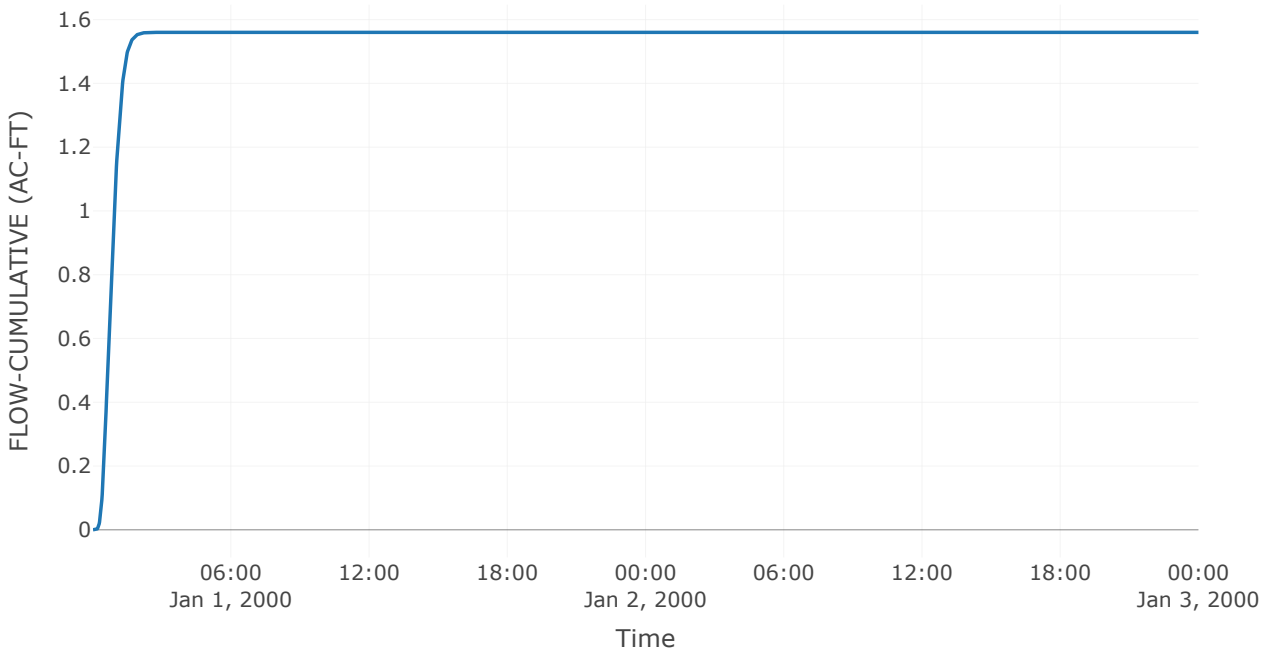
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

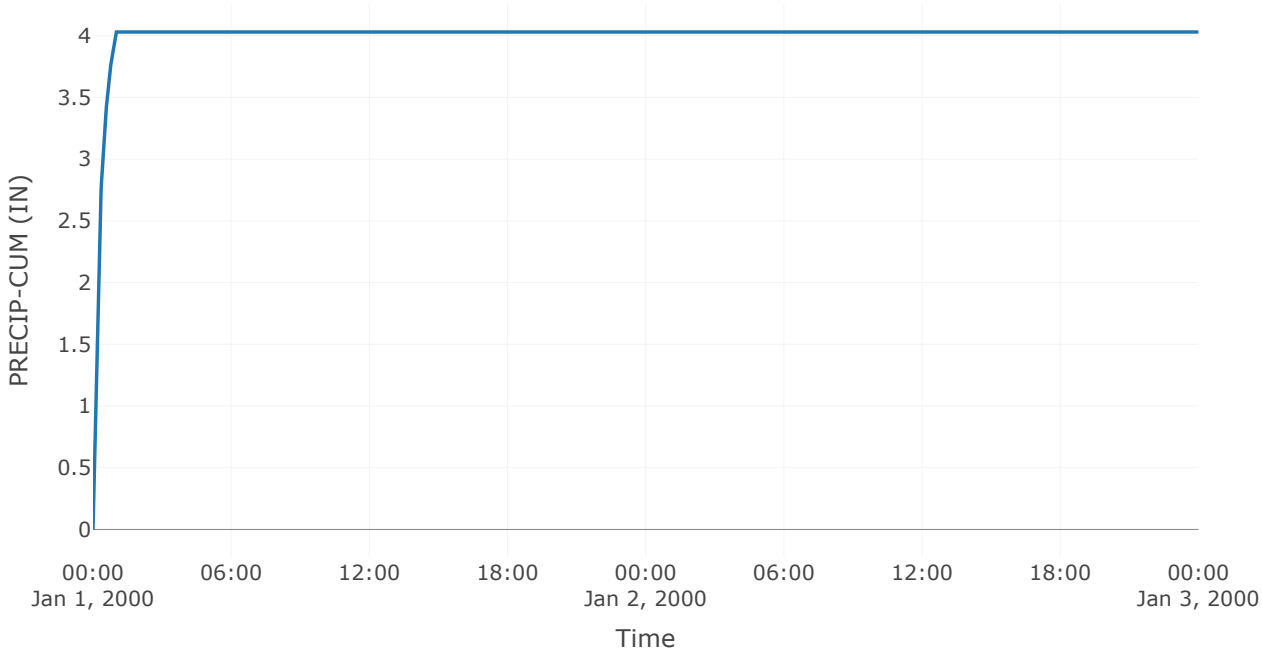

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
20
10
0
06:00
12:00
18:00
00:00
Jan 1, 2000
Jan 2, 2000
Jan 3, 2000

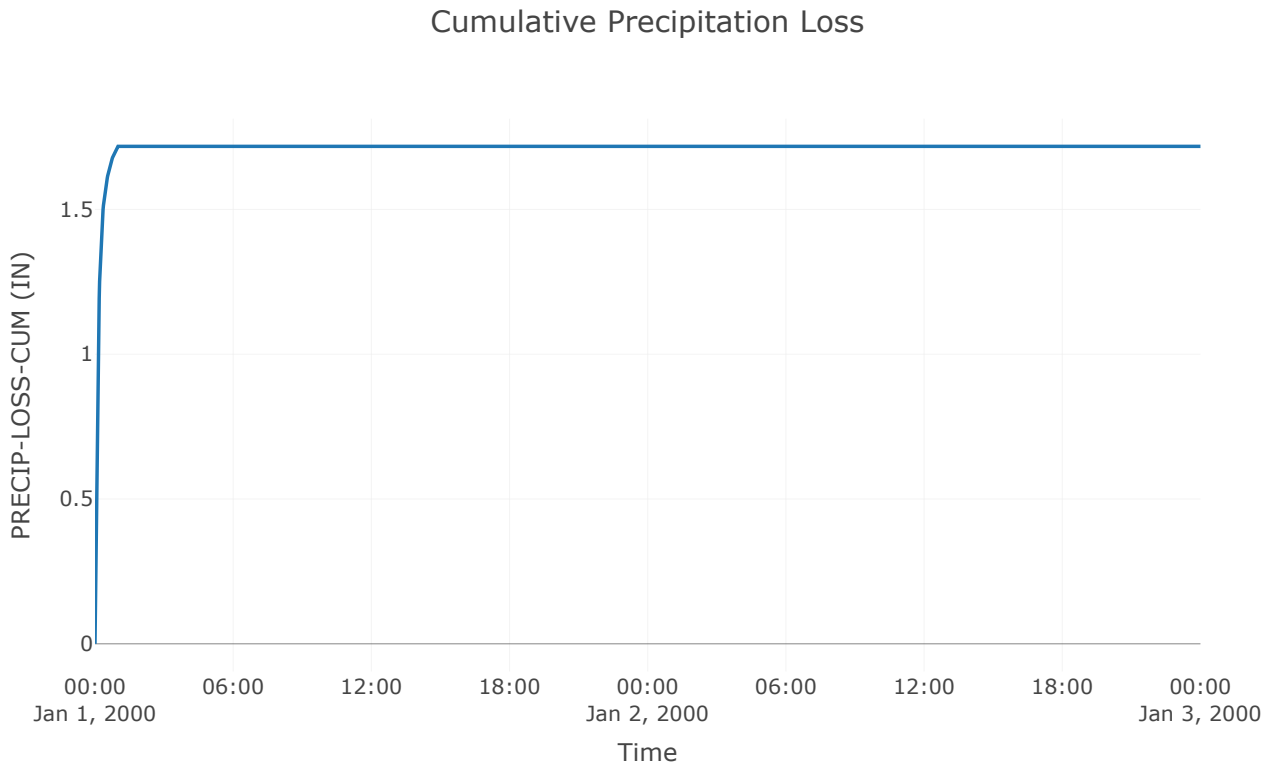

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

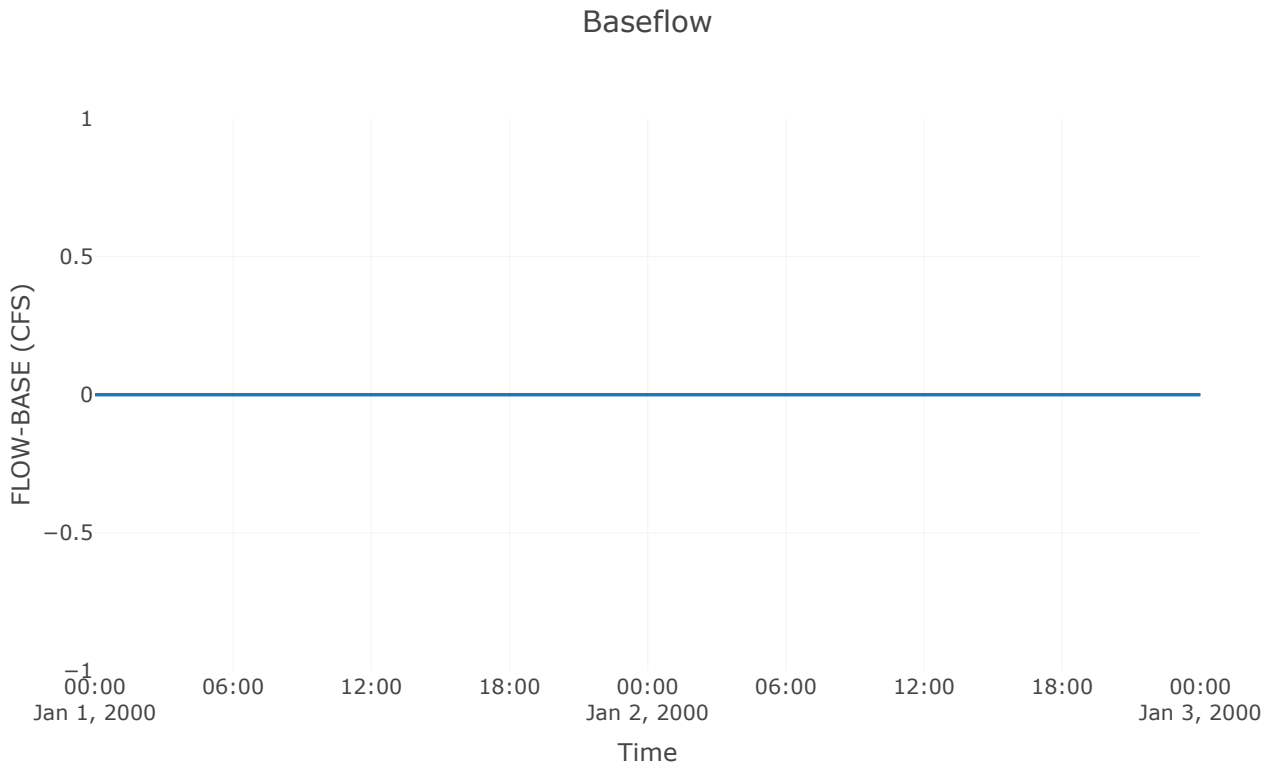
Cumulative Outflow

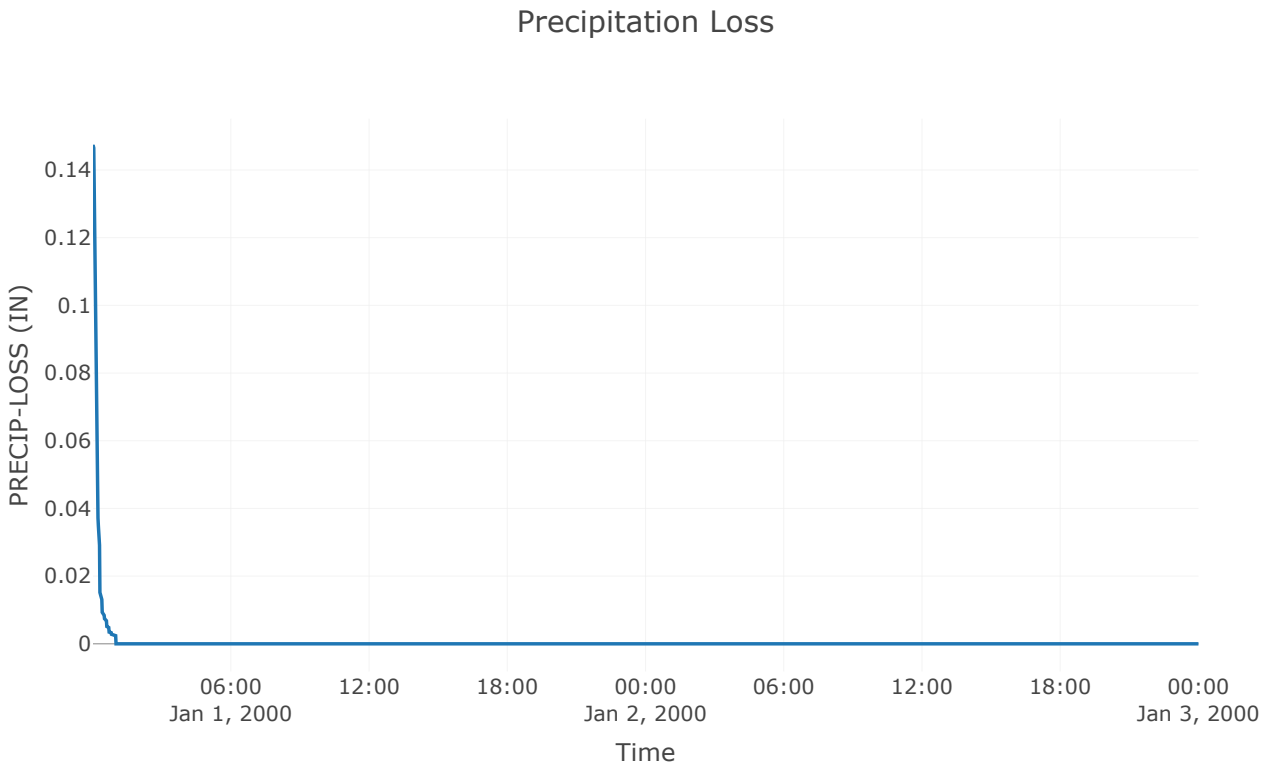


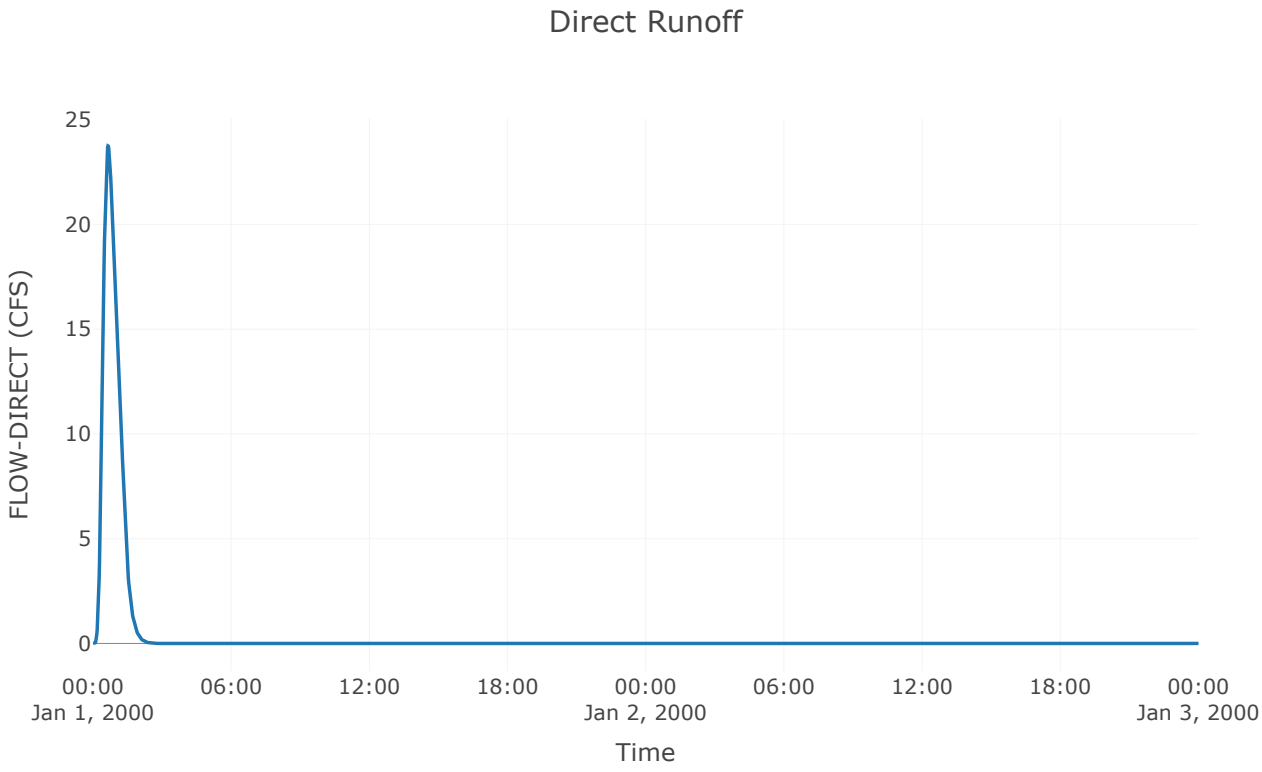
Cumulative Precipitation

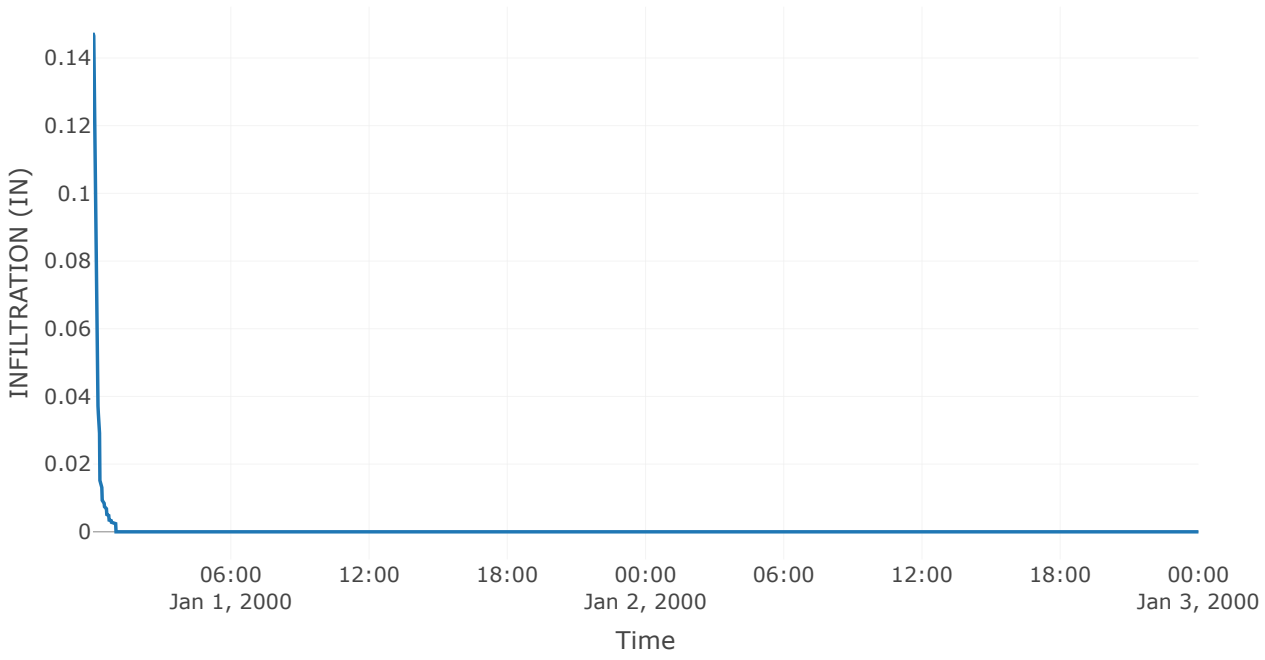



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

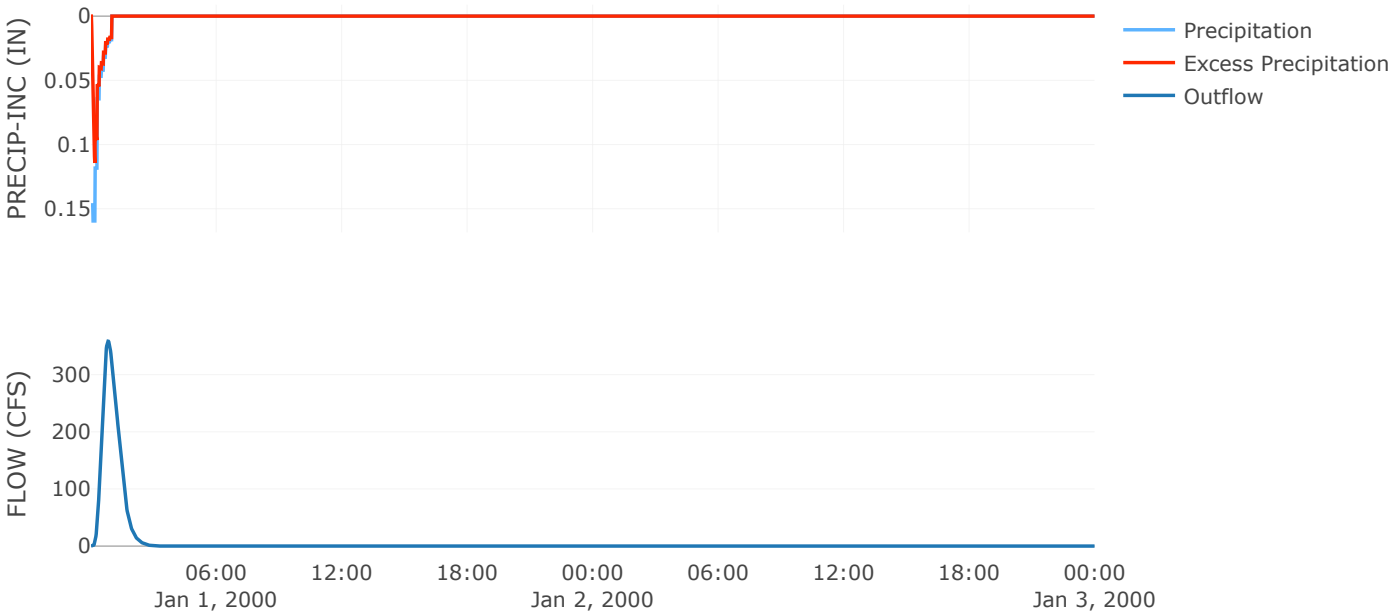
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

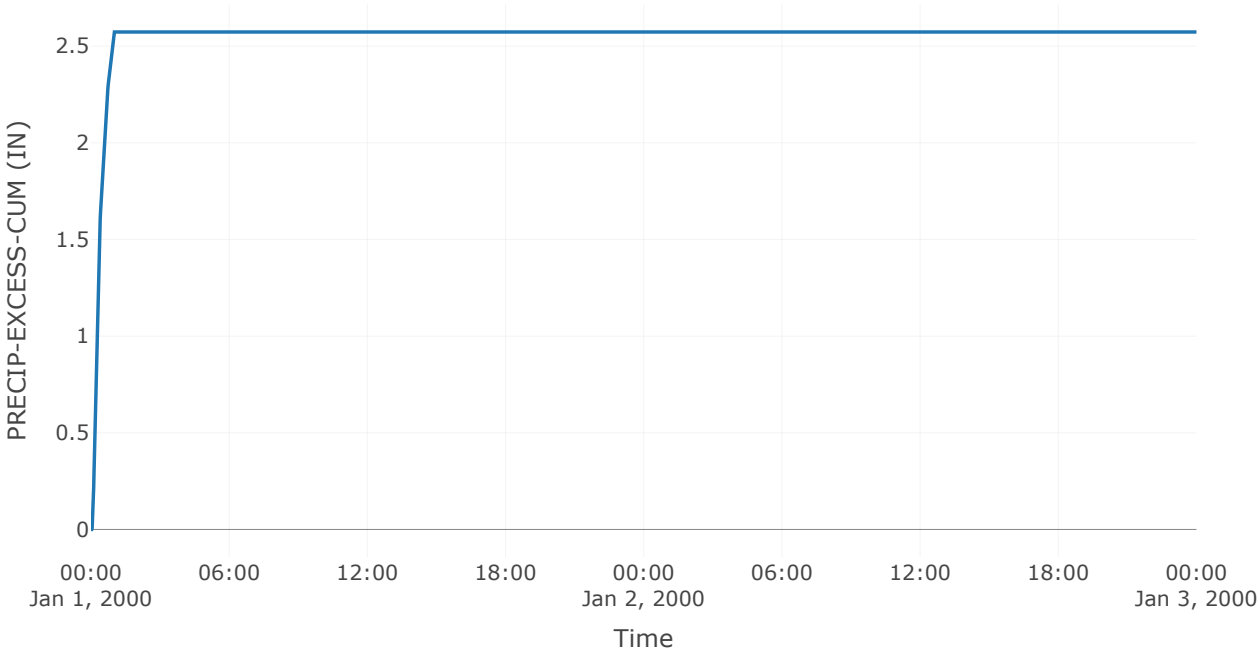
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

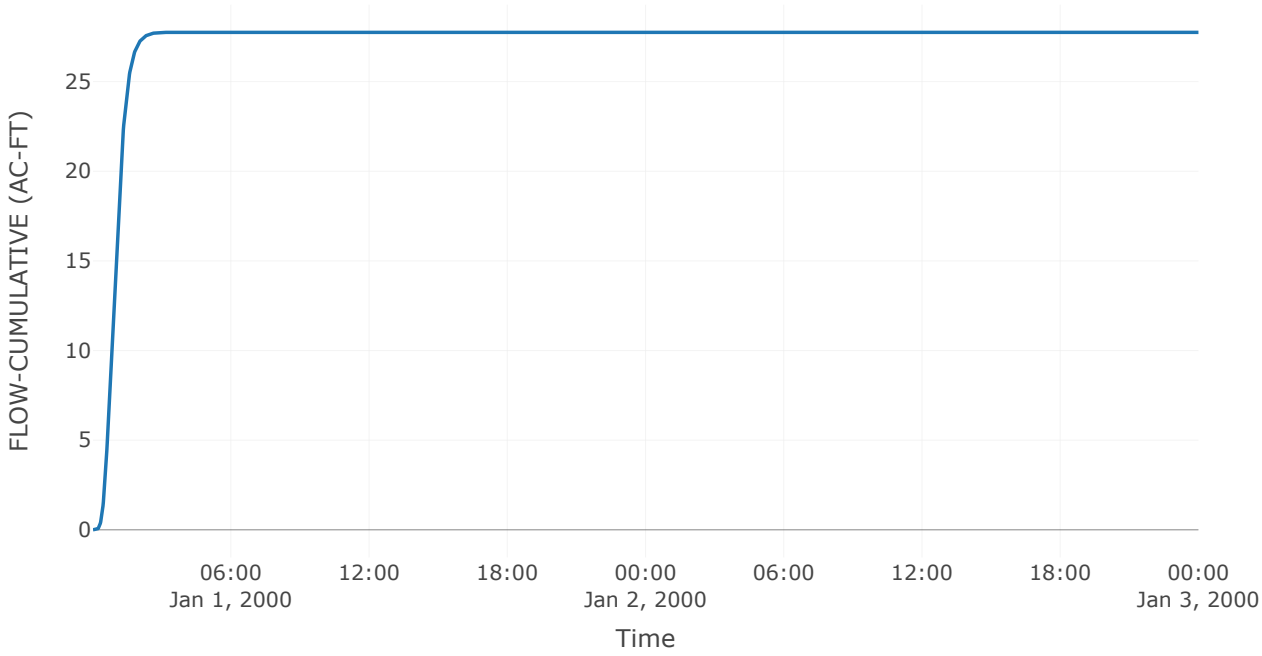
Precipitation and Outflow



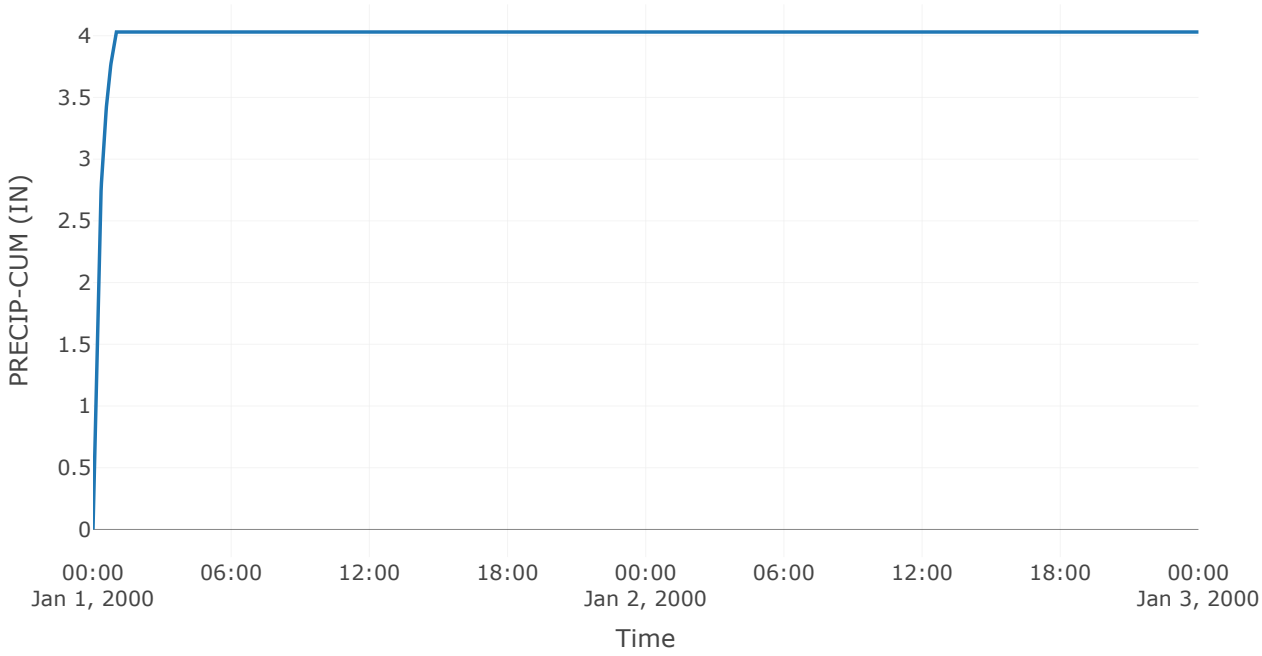
Cumulative Excess Precipitation

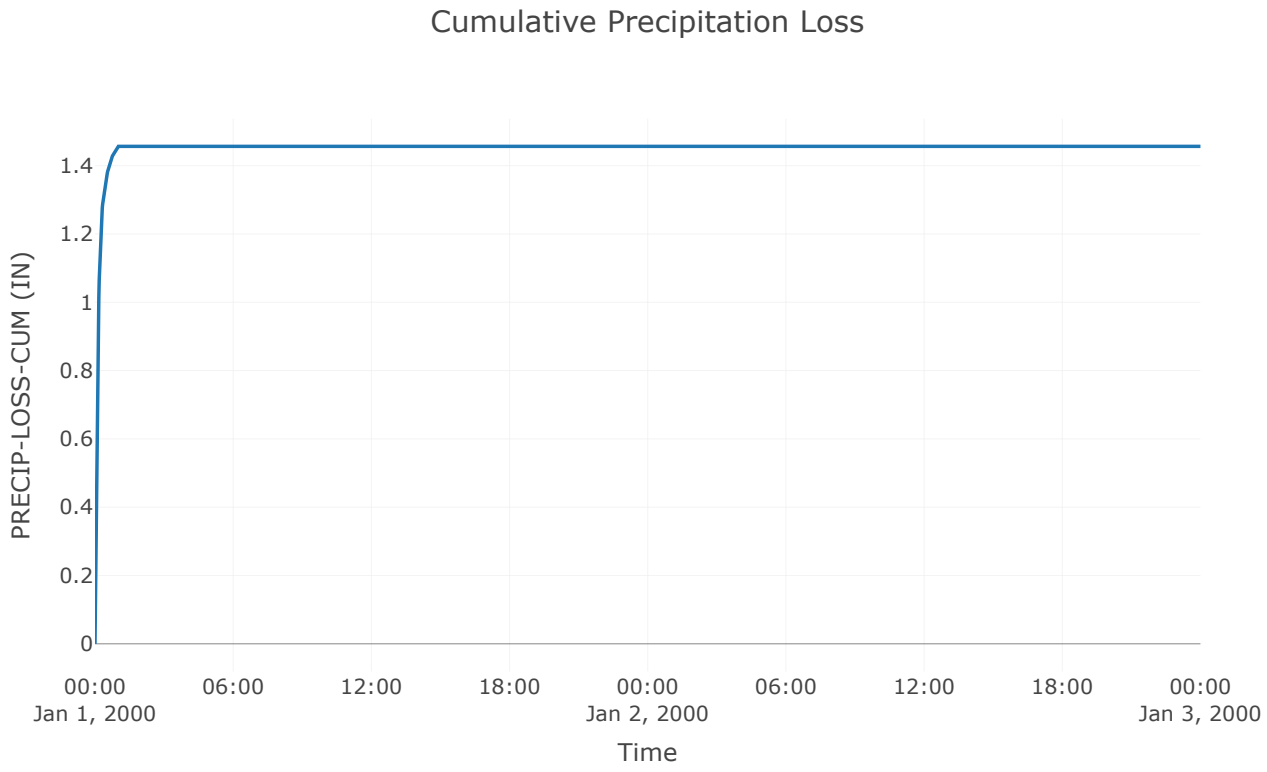


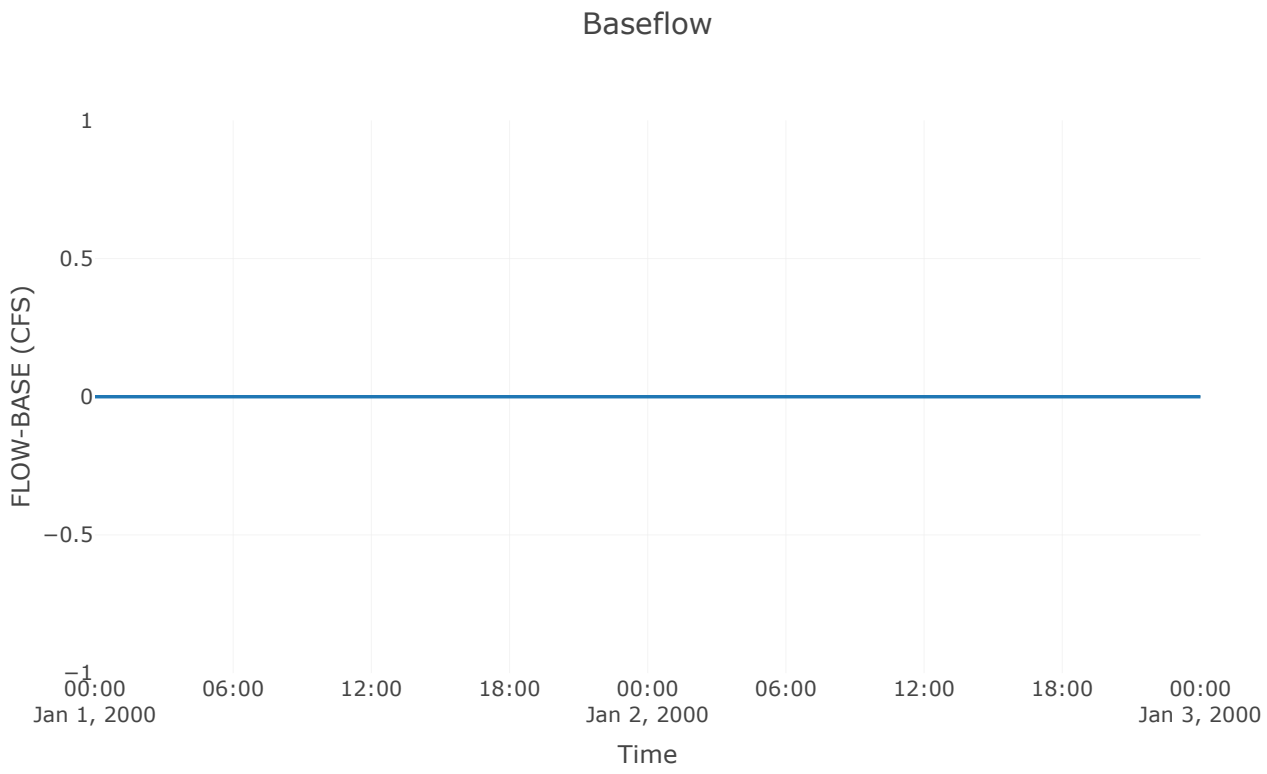
Cumulative Outflow



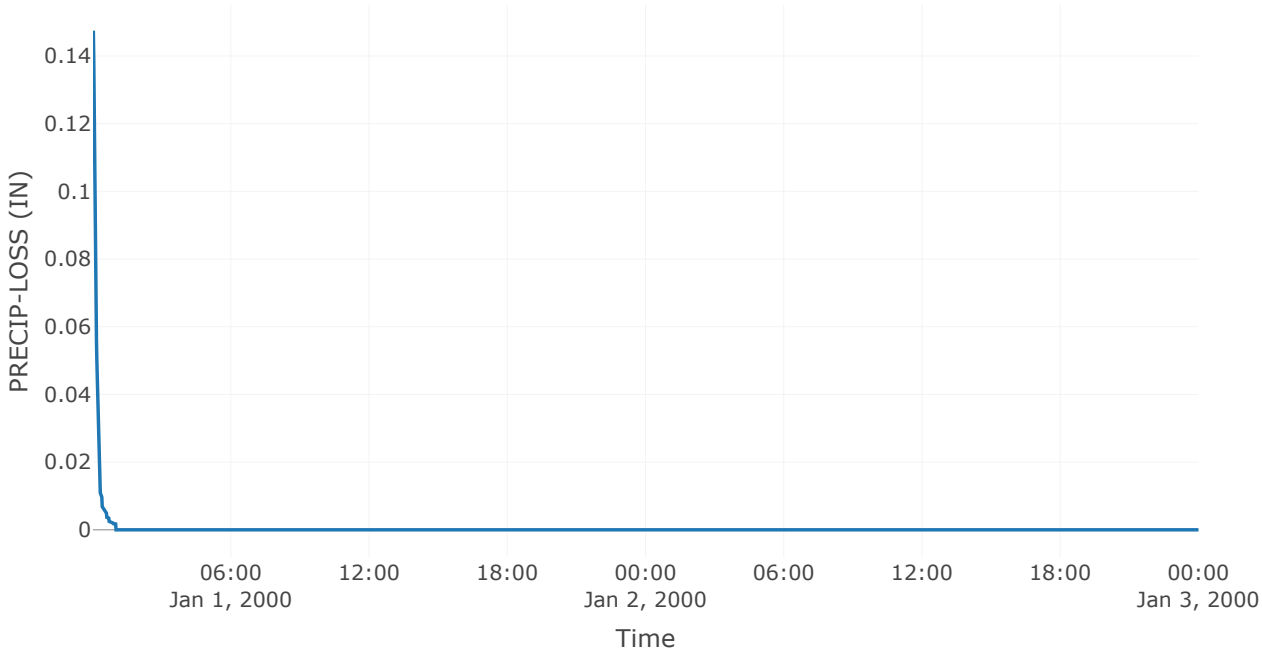
Cumulative Precipitation



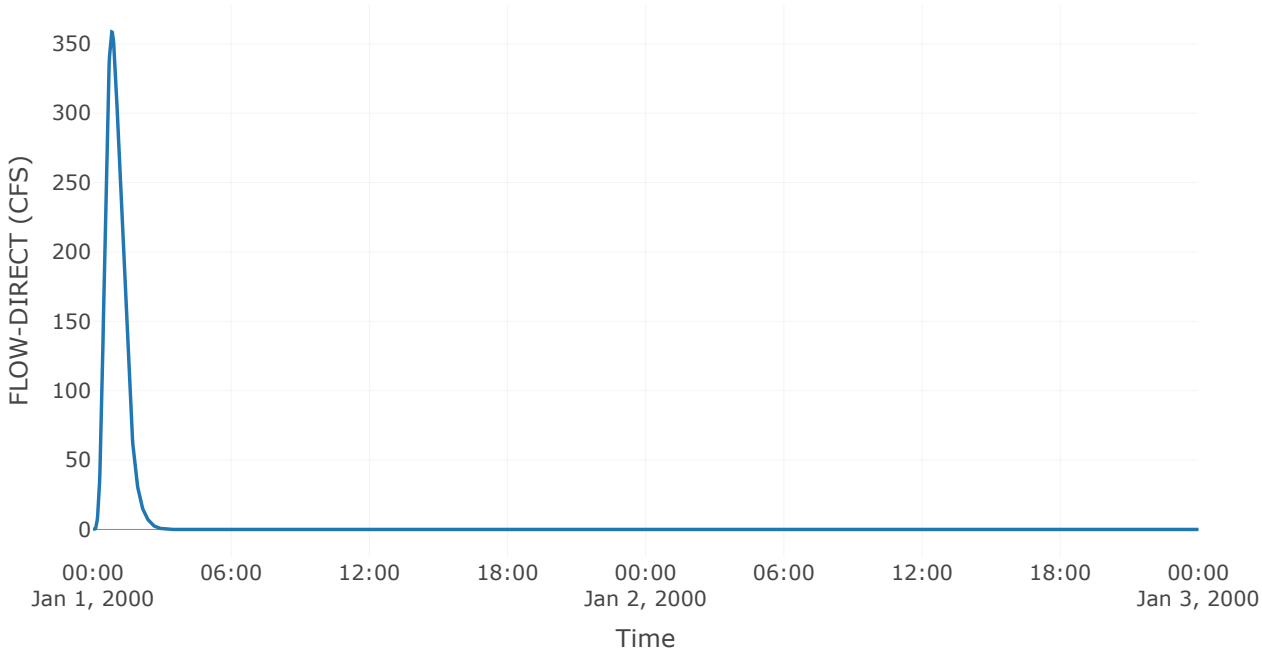

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

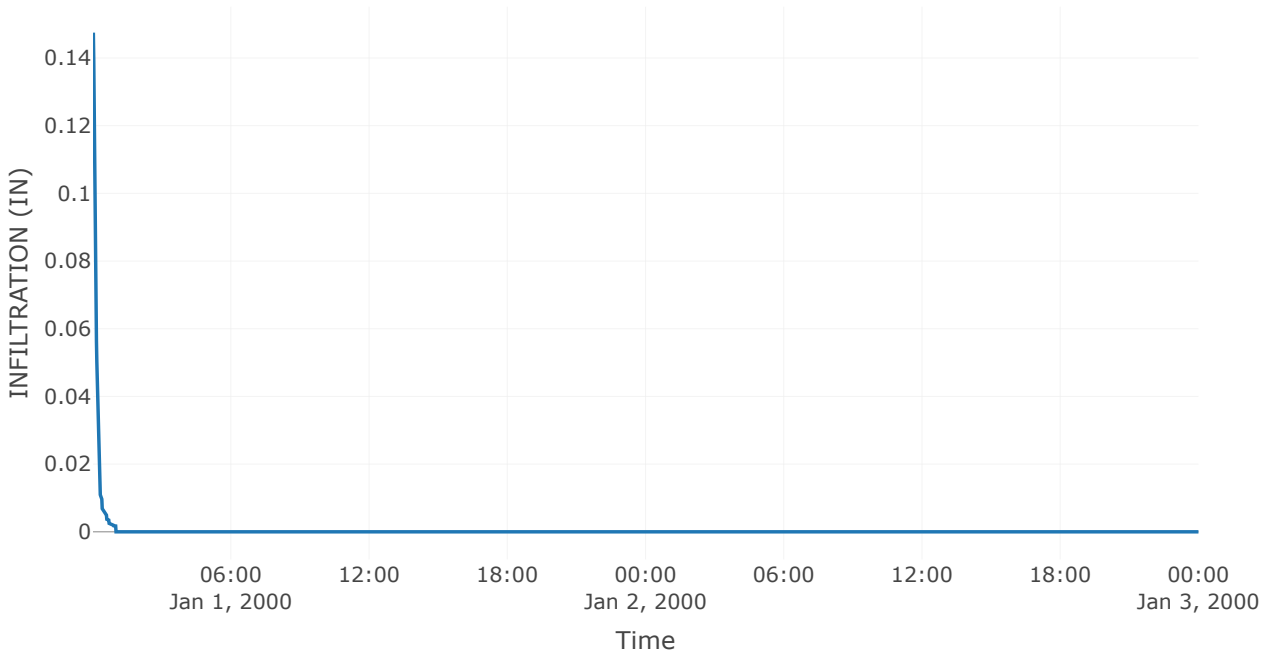

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



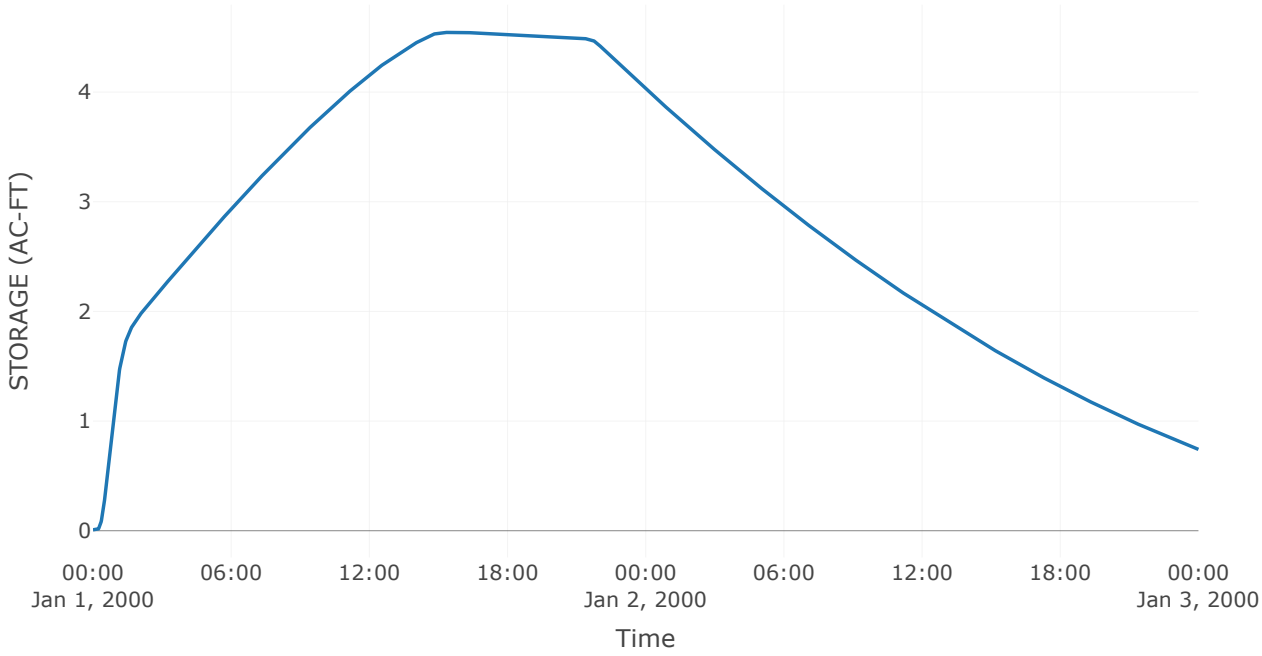

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

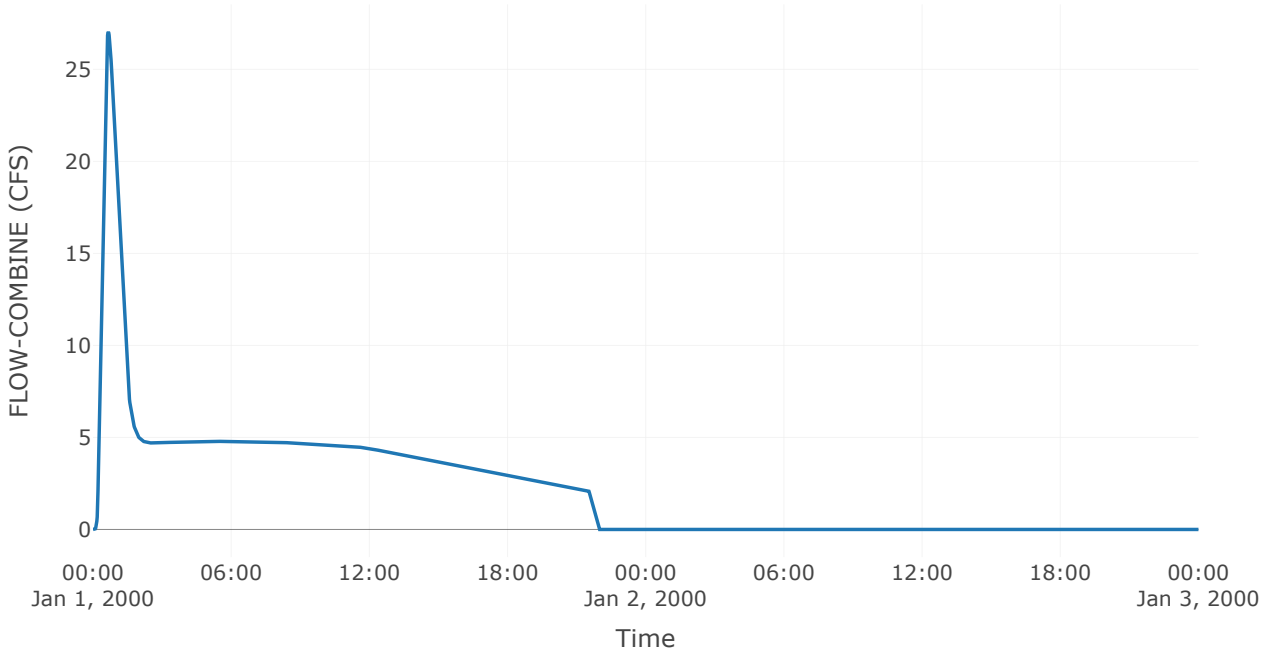
Downstream : Off - Site Tributary Area

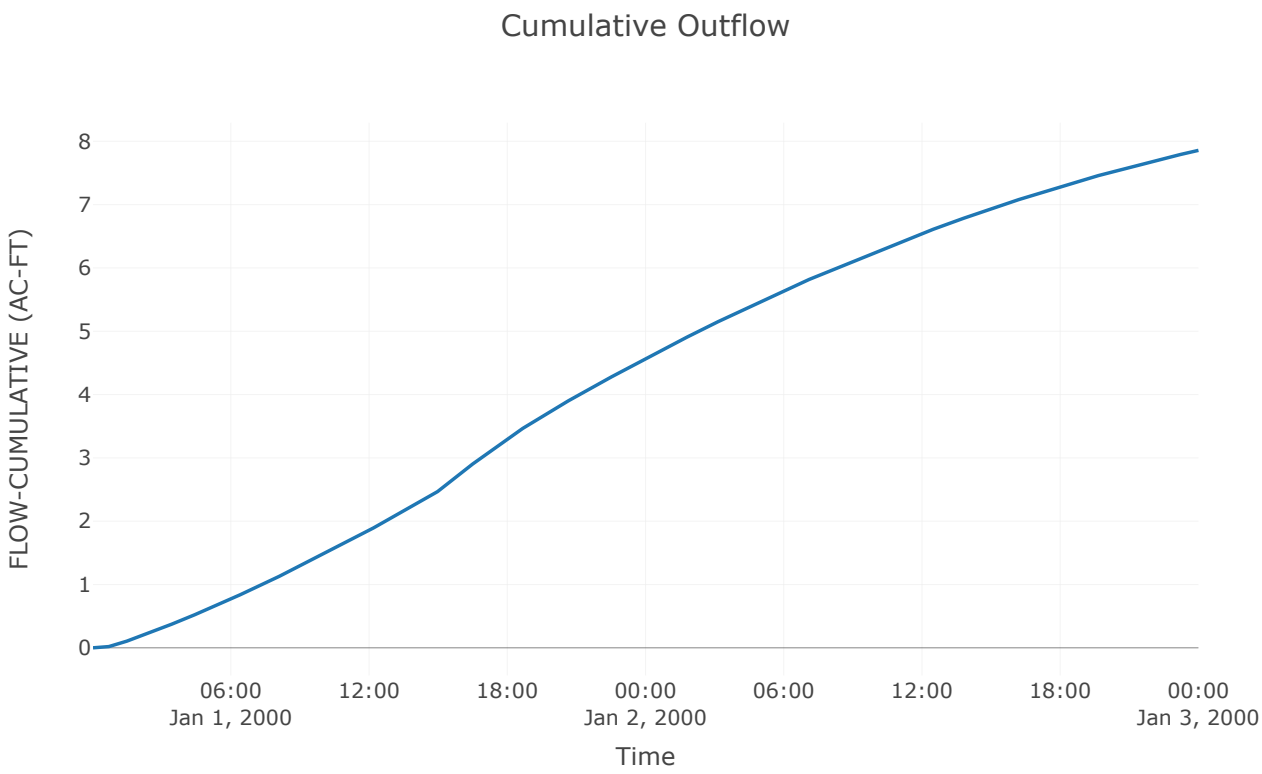
Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

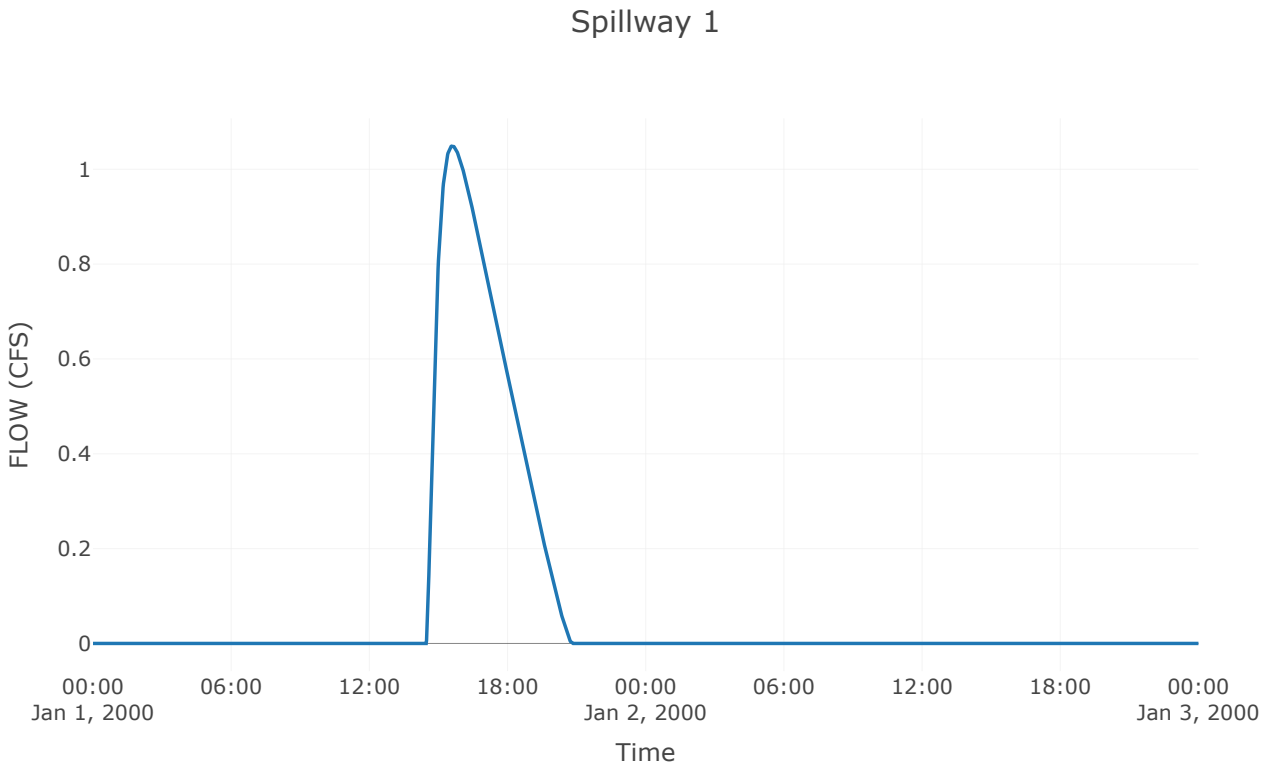
Storage



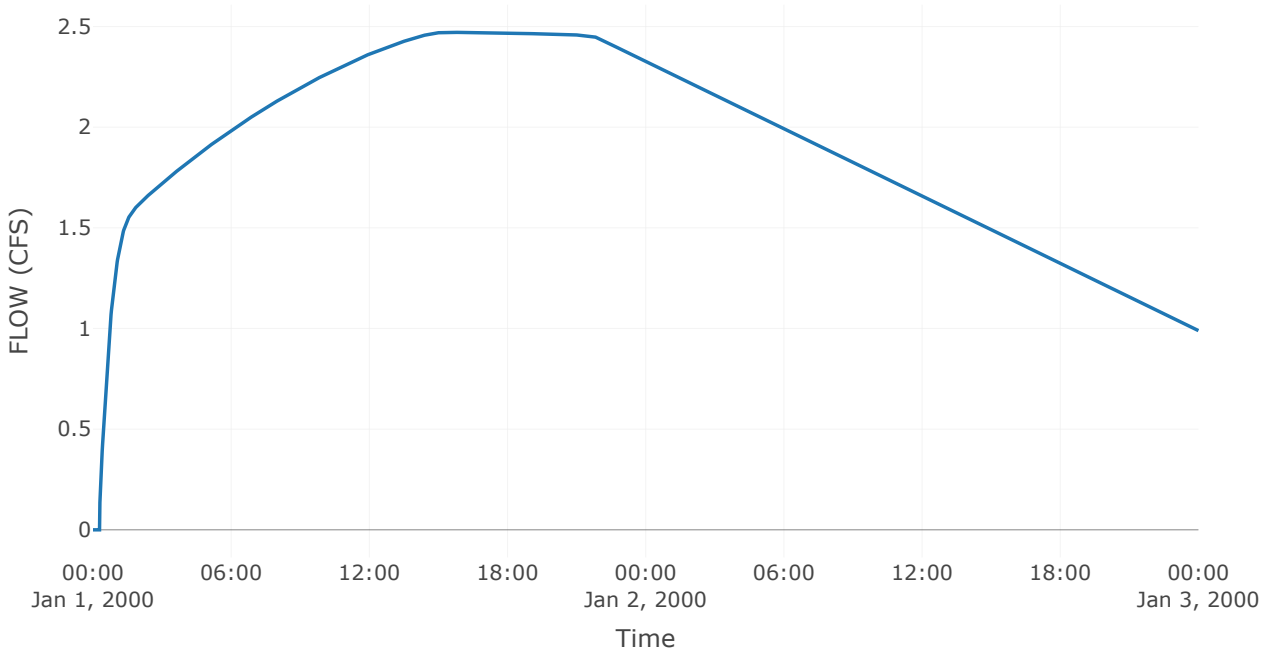
Combined Inflow



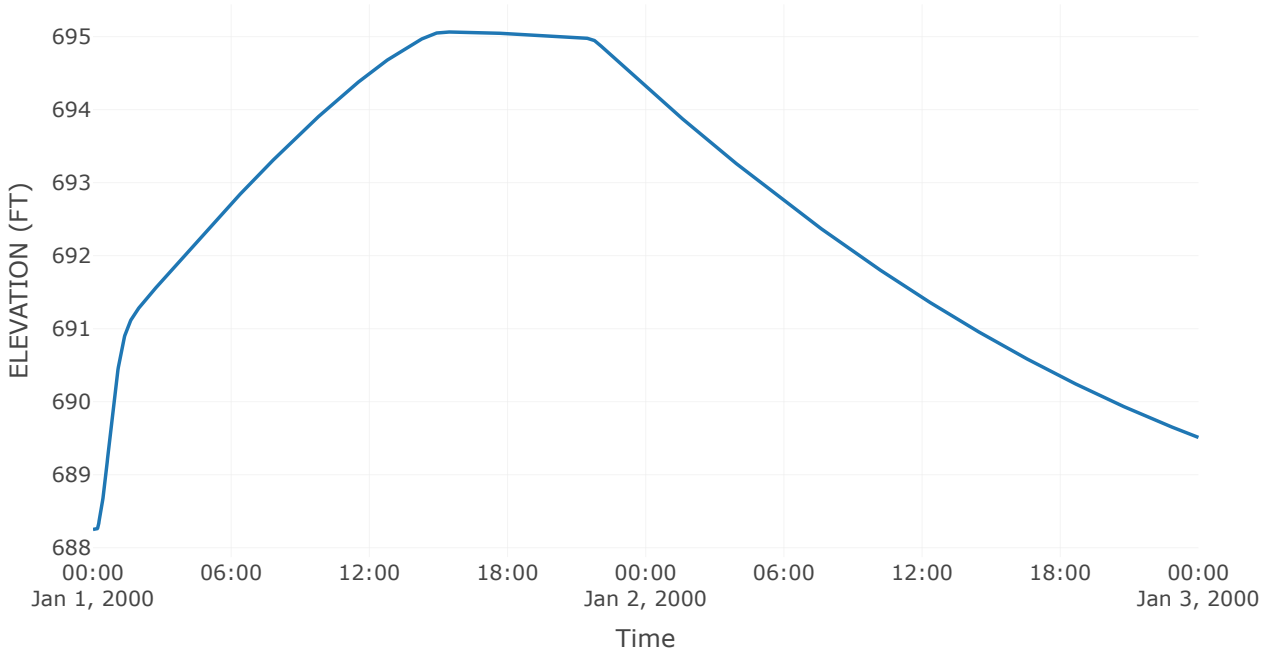

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

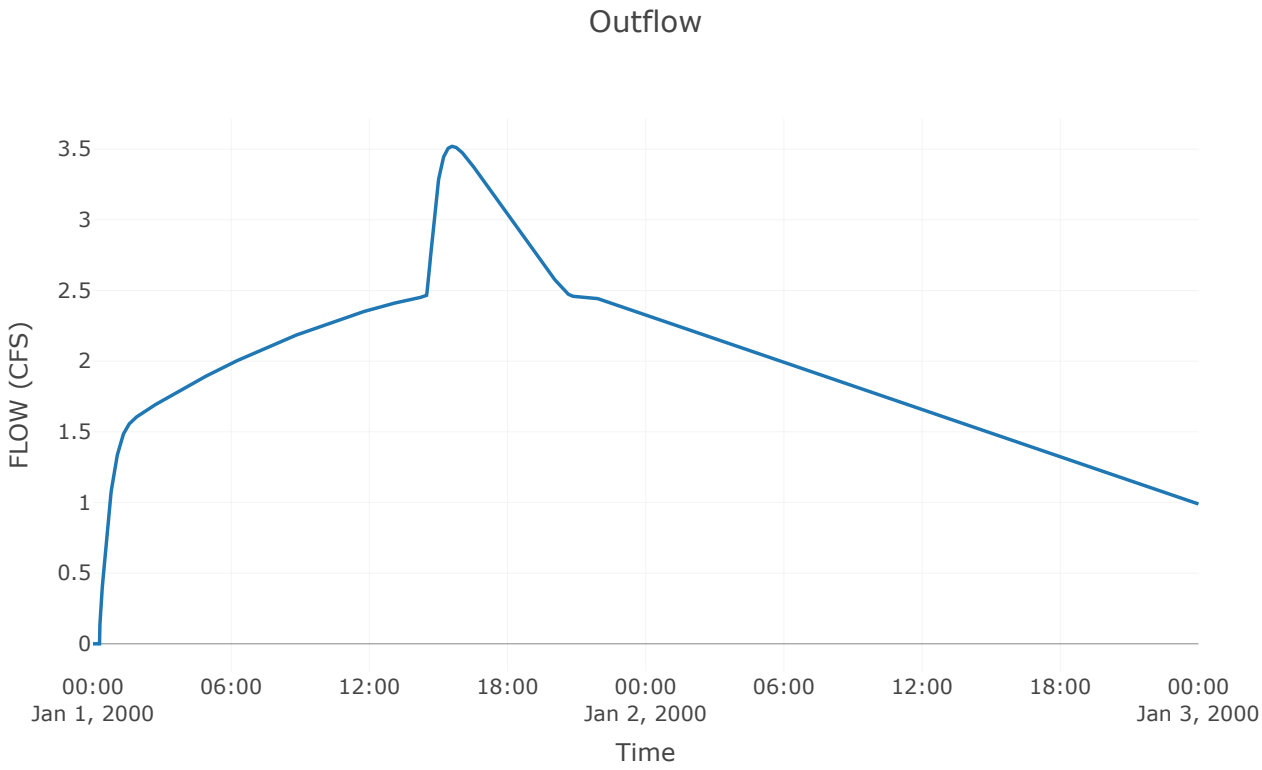

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



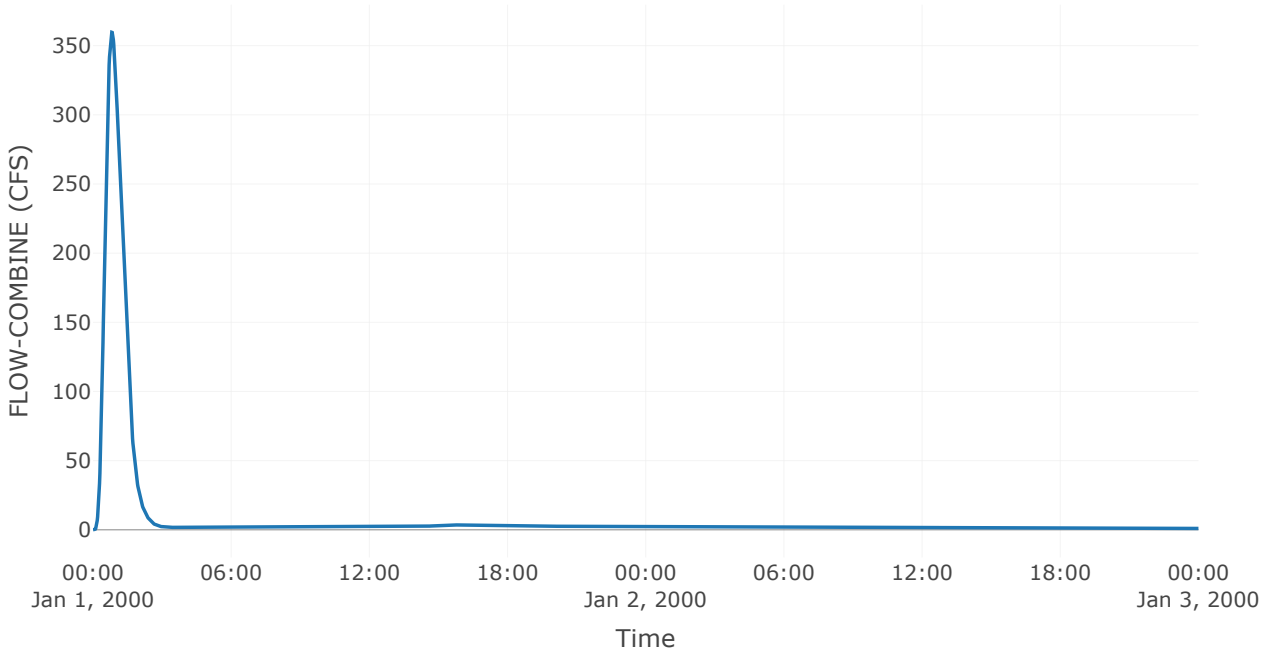

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

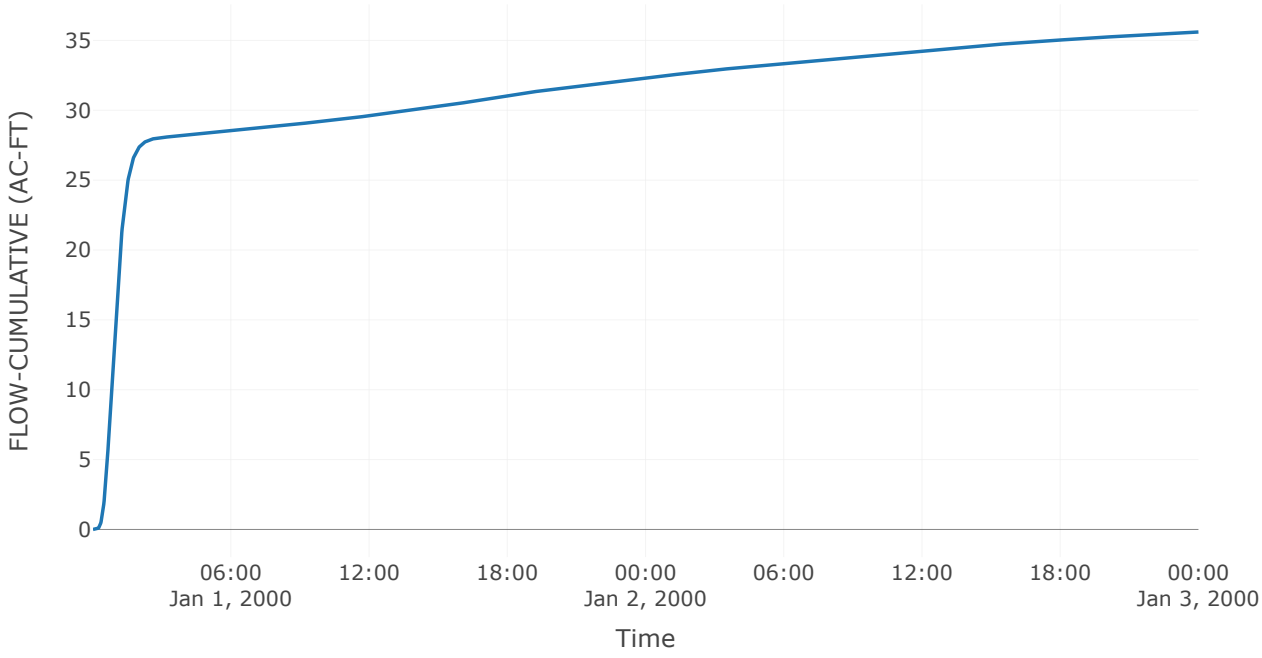
Downstream : Storage East of Wolf Road

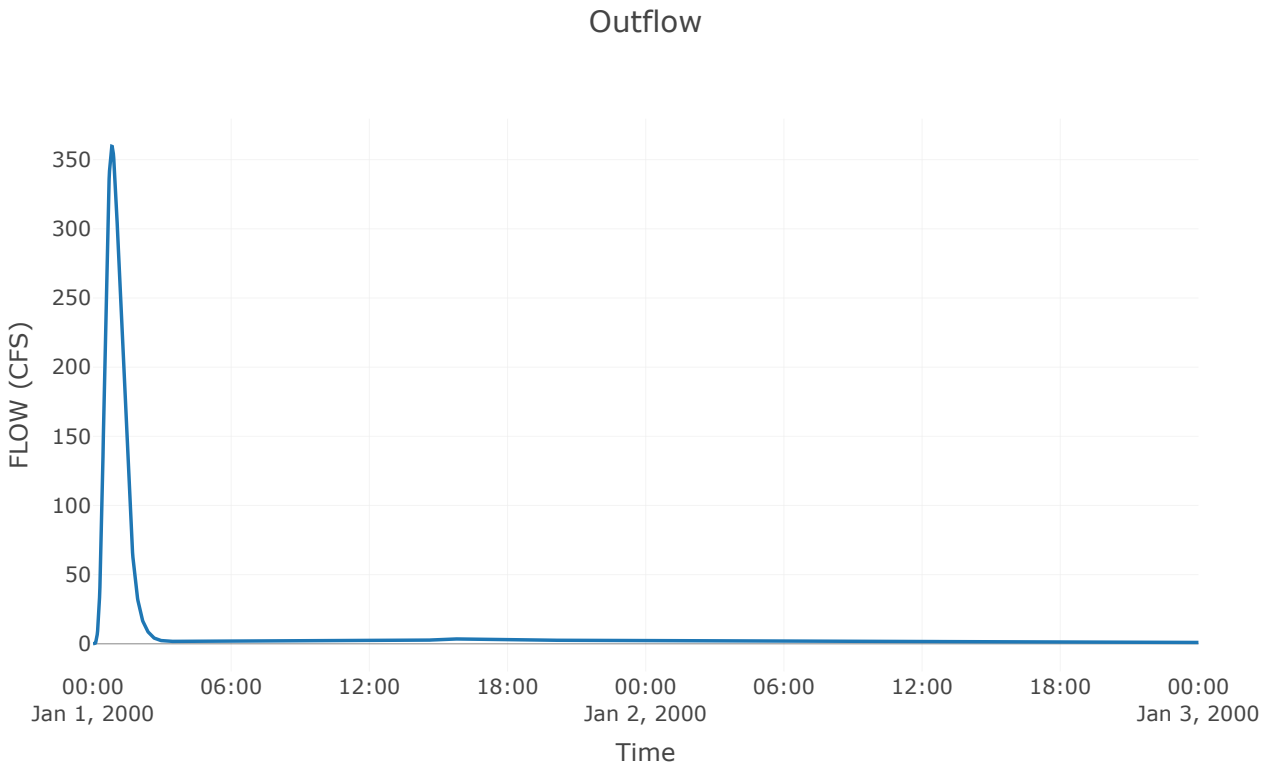
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



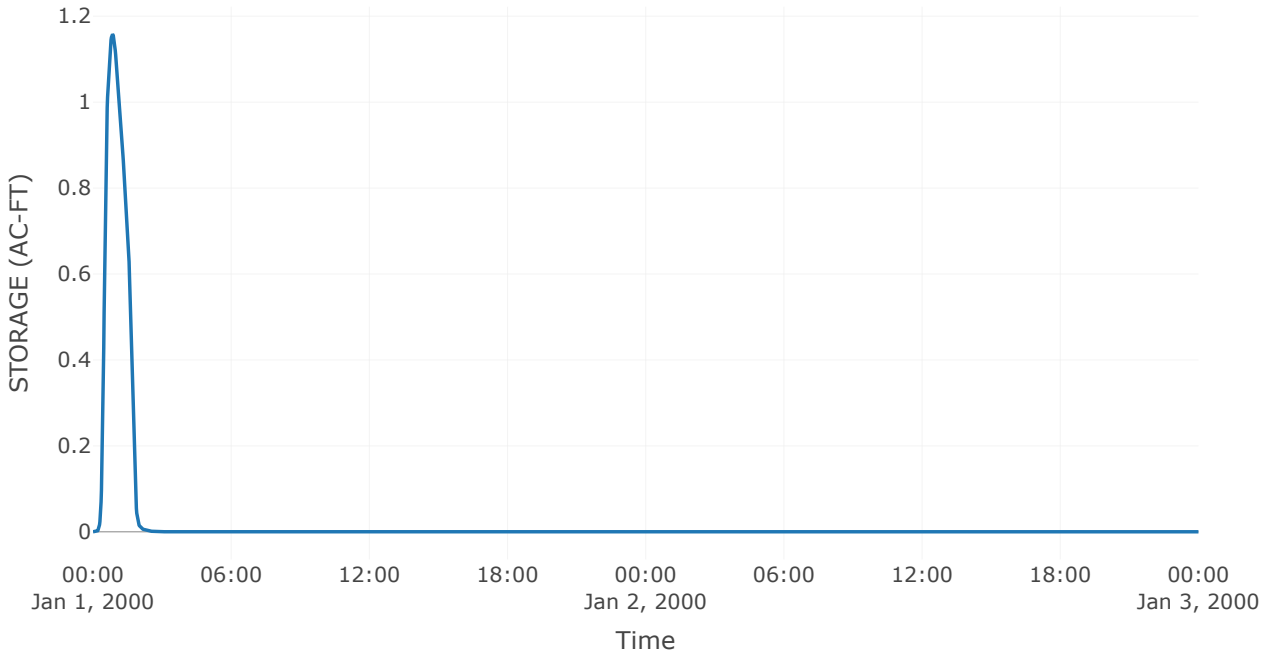

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

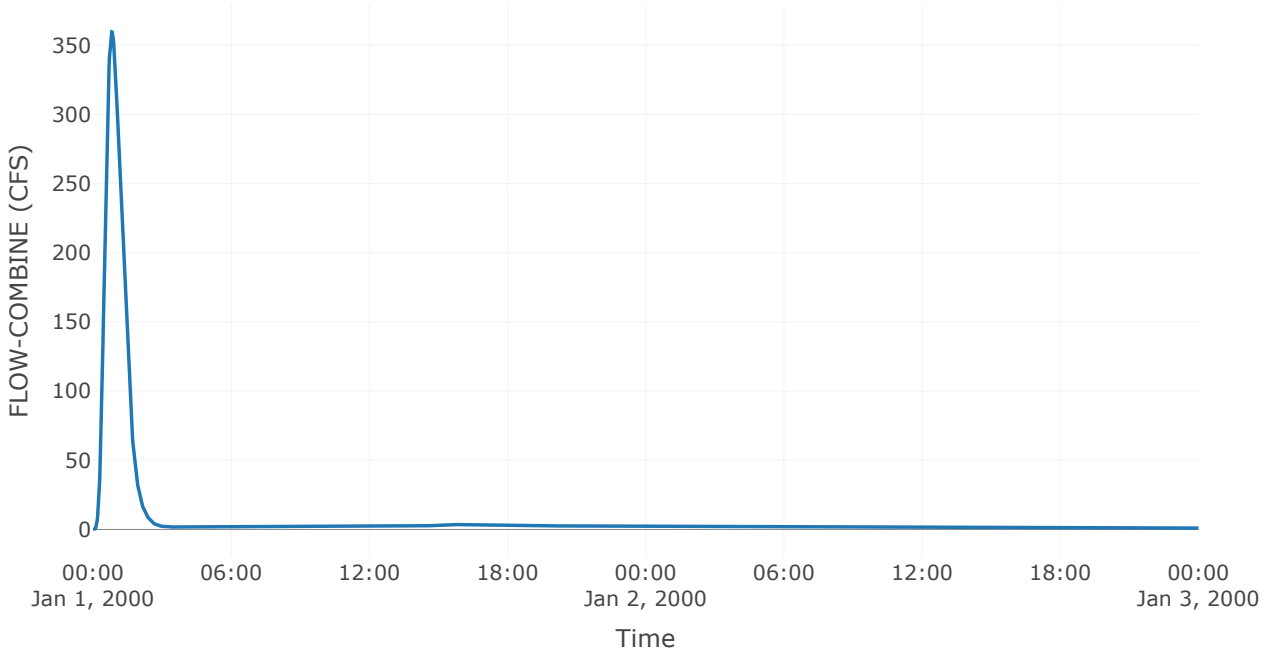
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

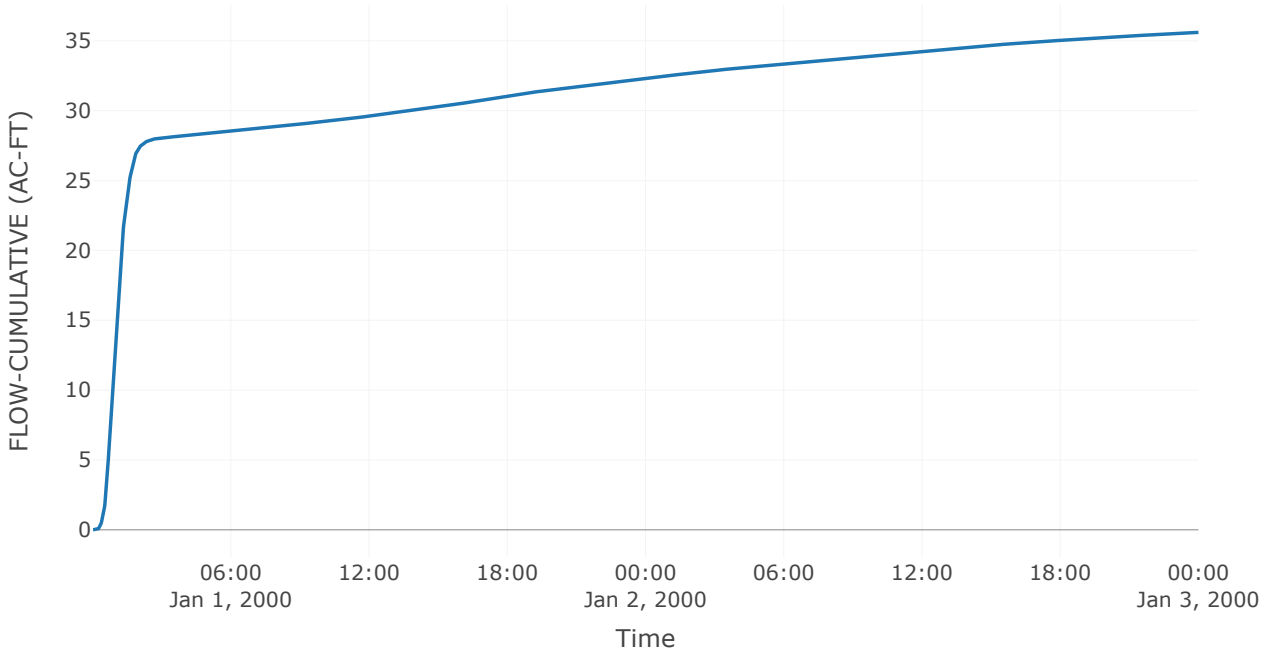
Storage



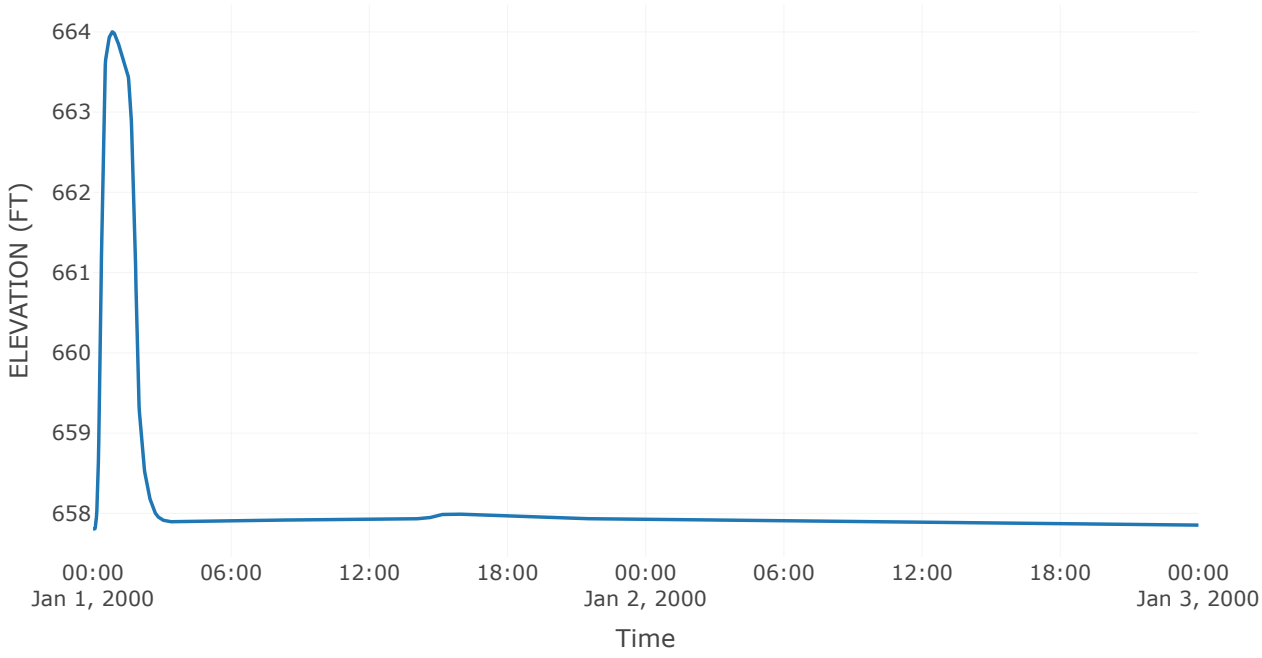
Combined Inflow

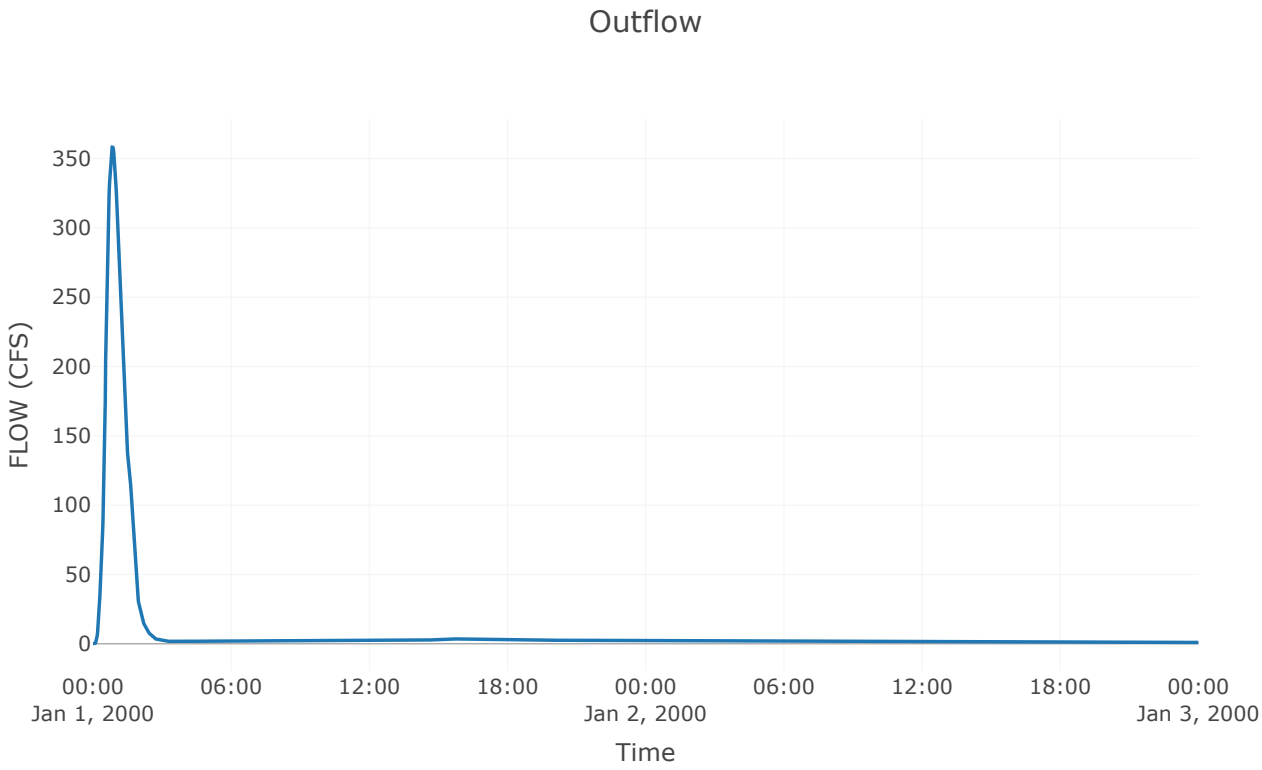


Cumulative Outflow



Pool Elevation



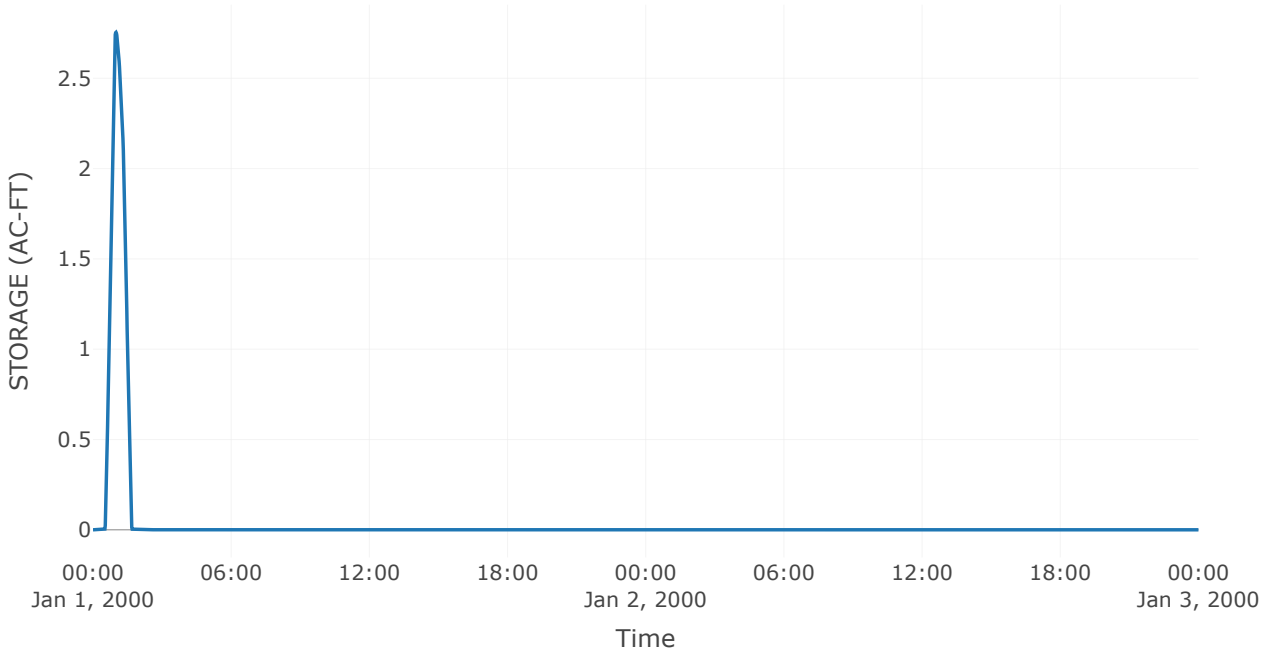

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

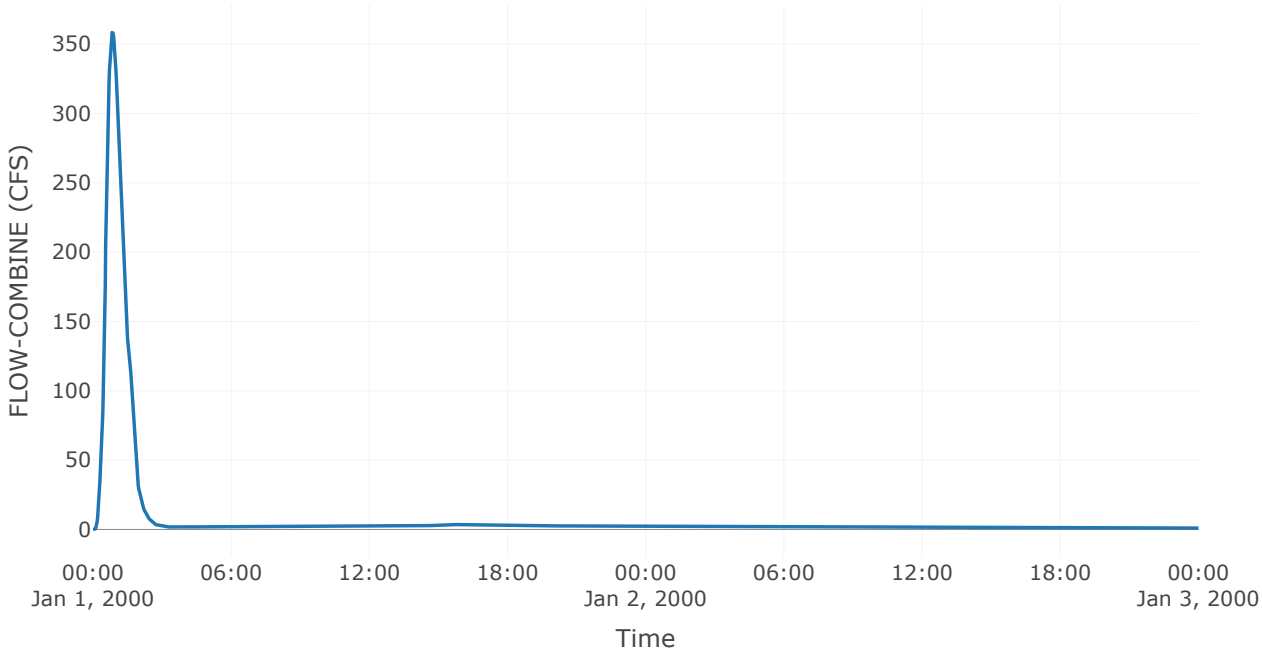
Downstream : Storage West of Wolf Road

Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	331.13
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.75
Peak Elevation (FT)	664.98
Discharge Volume (AC - FT)	35.6

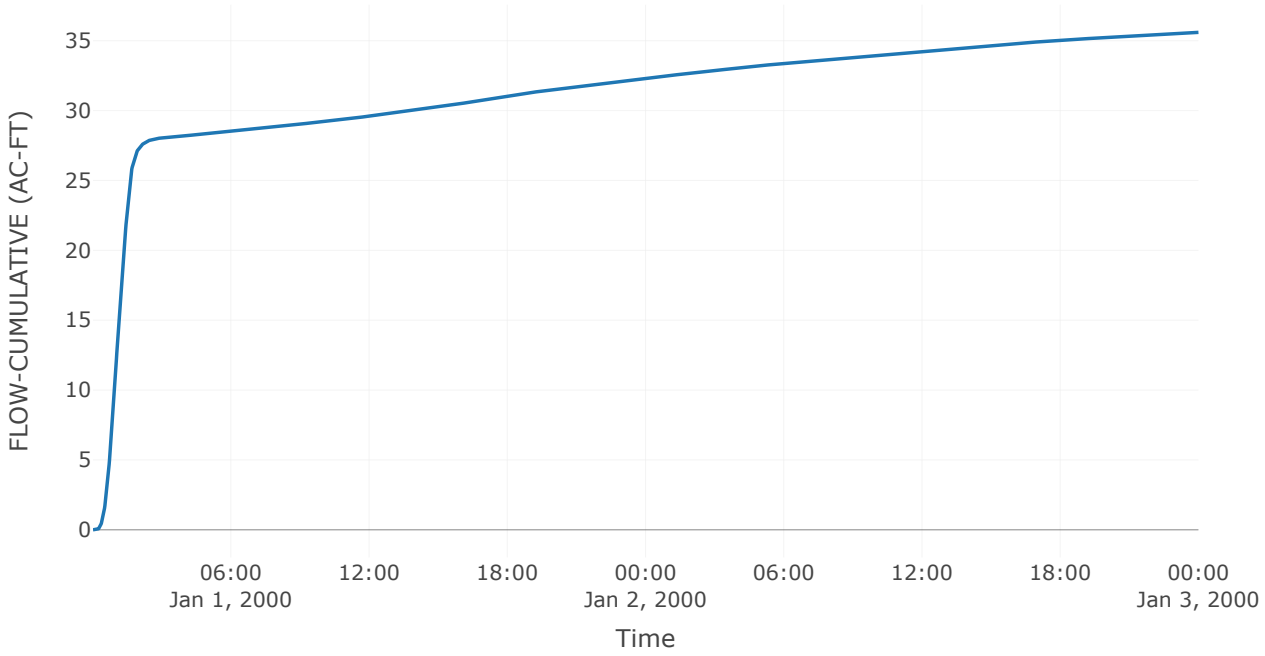
Storage



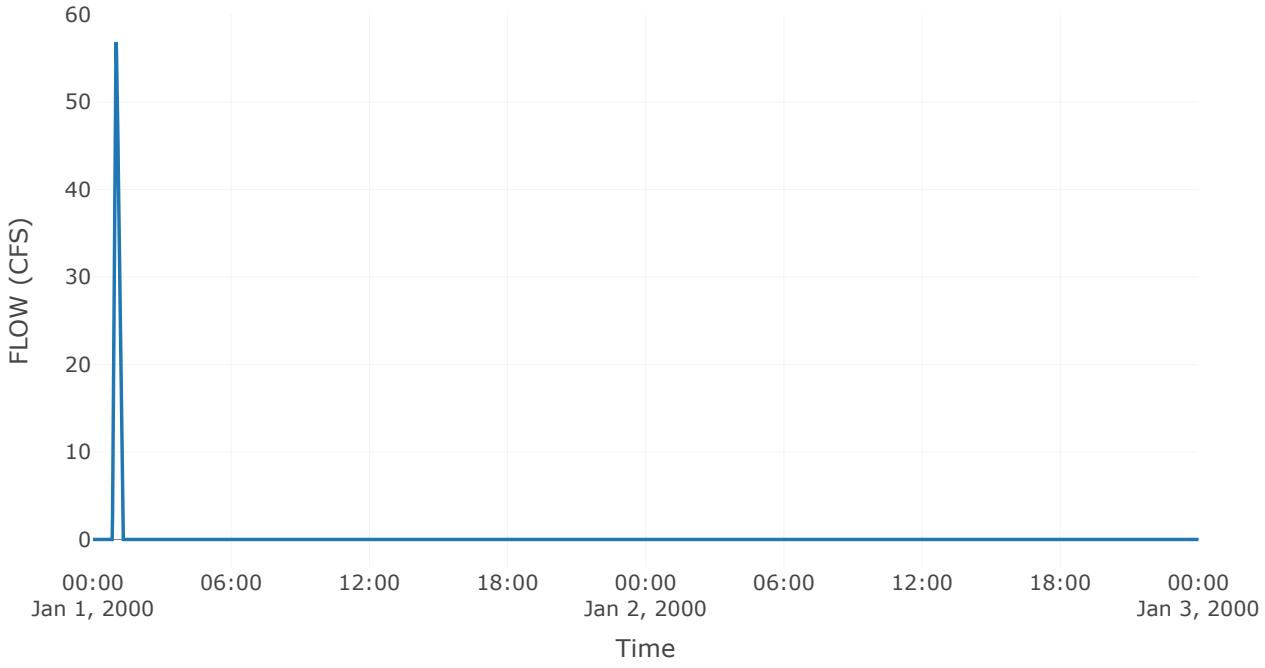
Combined Inflow



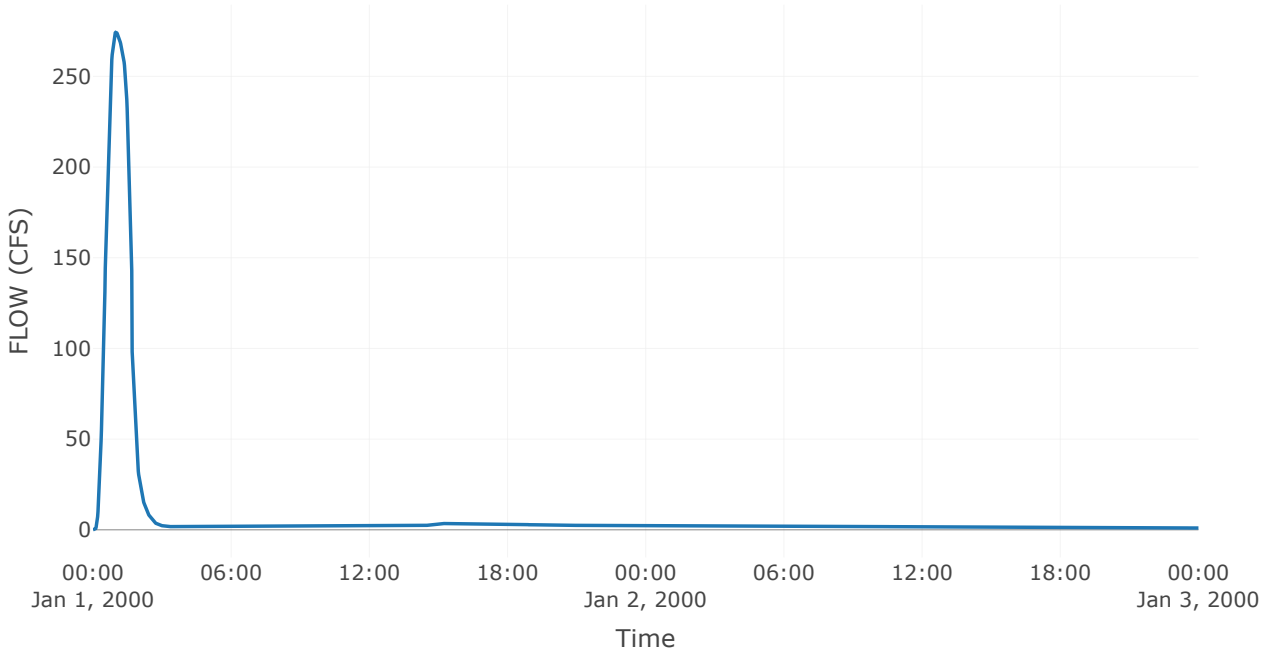
Cumulative Outflow



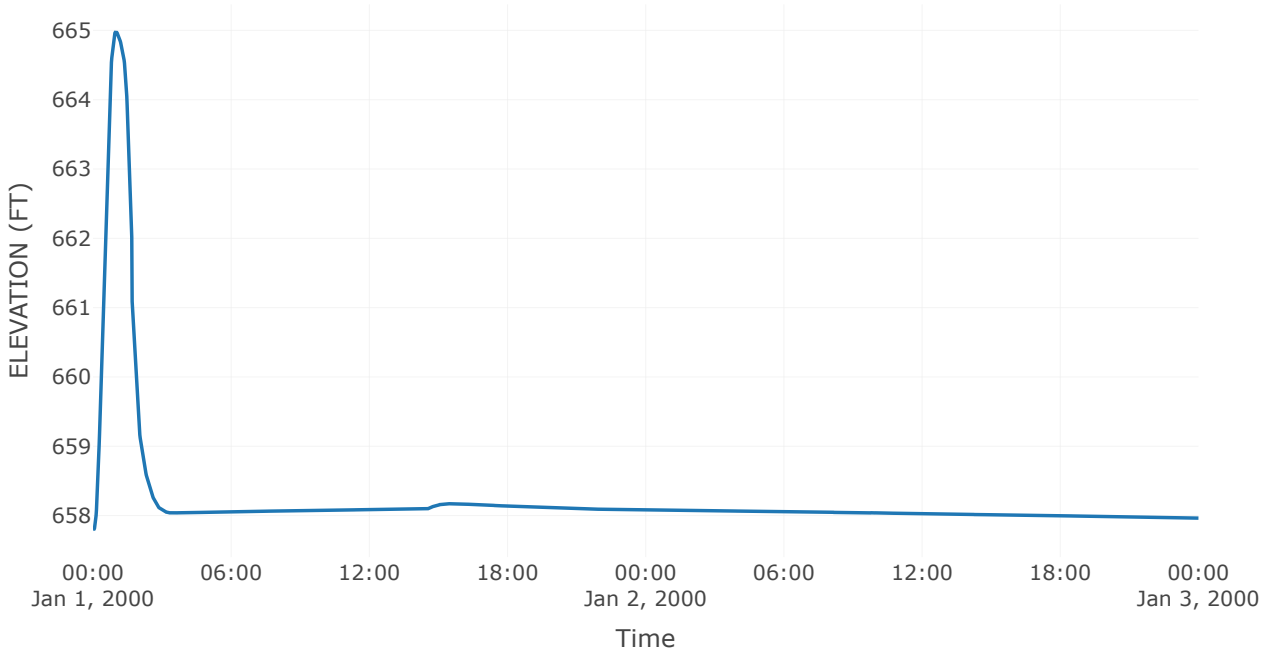
Spillway 1

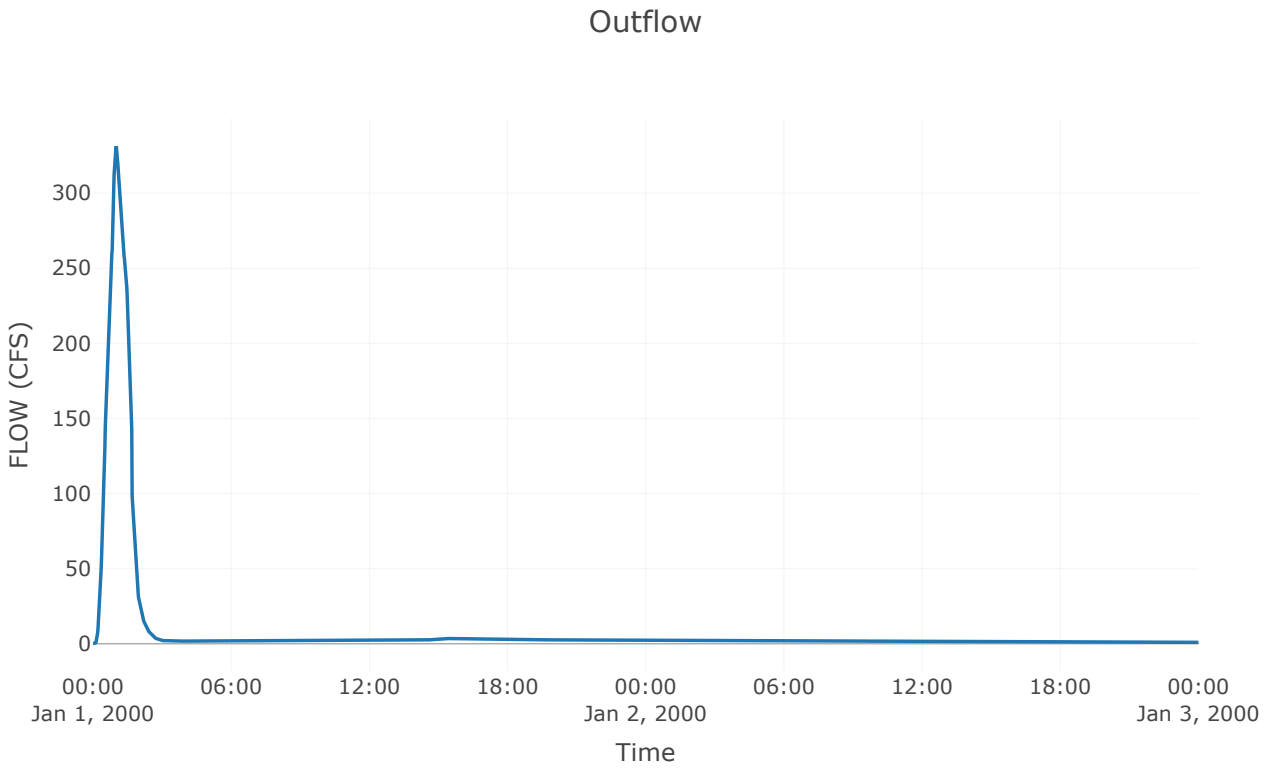


Outlet 1



Pool Elevation



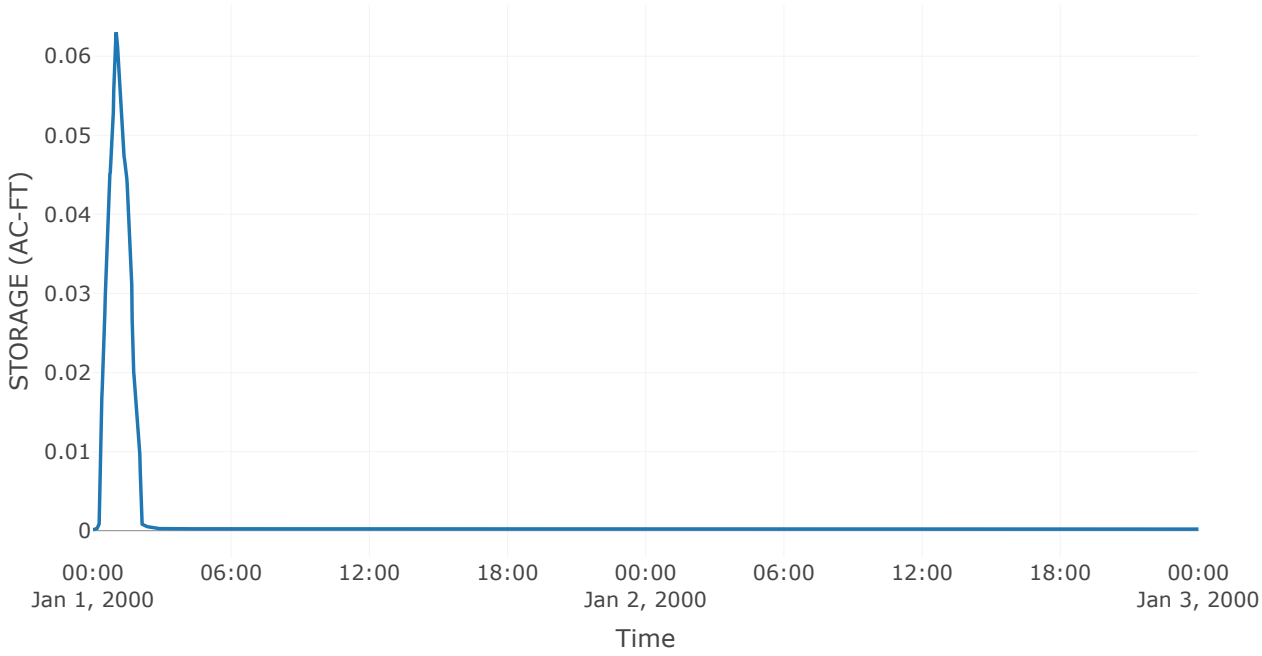

Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

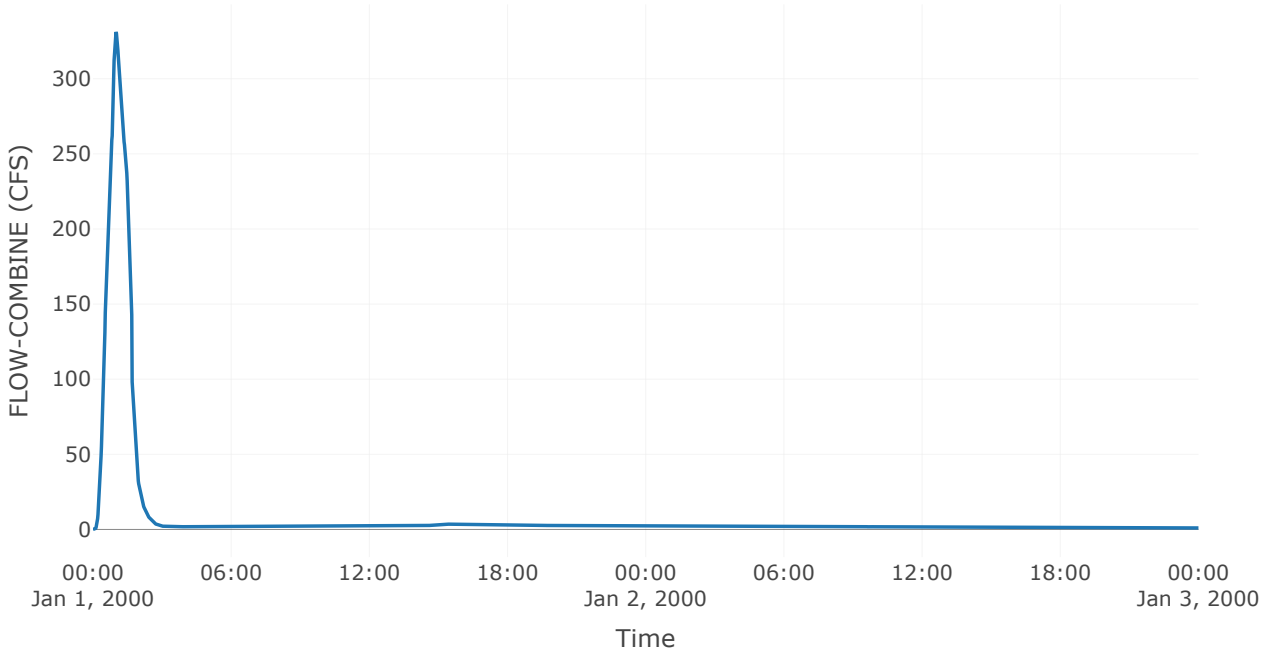
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	331.51
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	331.13
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	0.06
Peak Elevation (FT)	660.32
Discharge Volume (AC - FT)	35.55

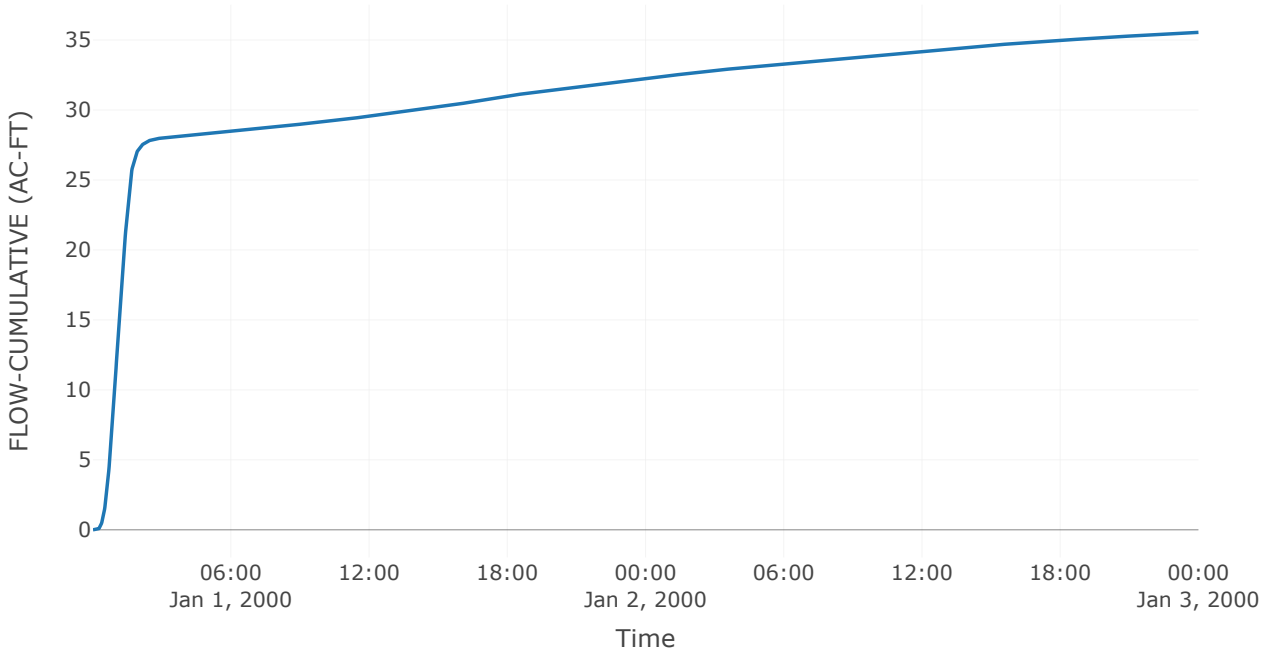
Storage



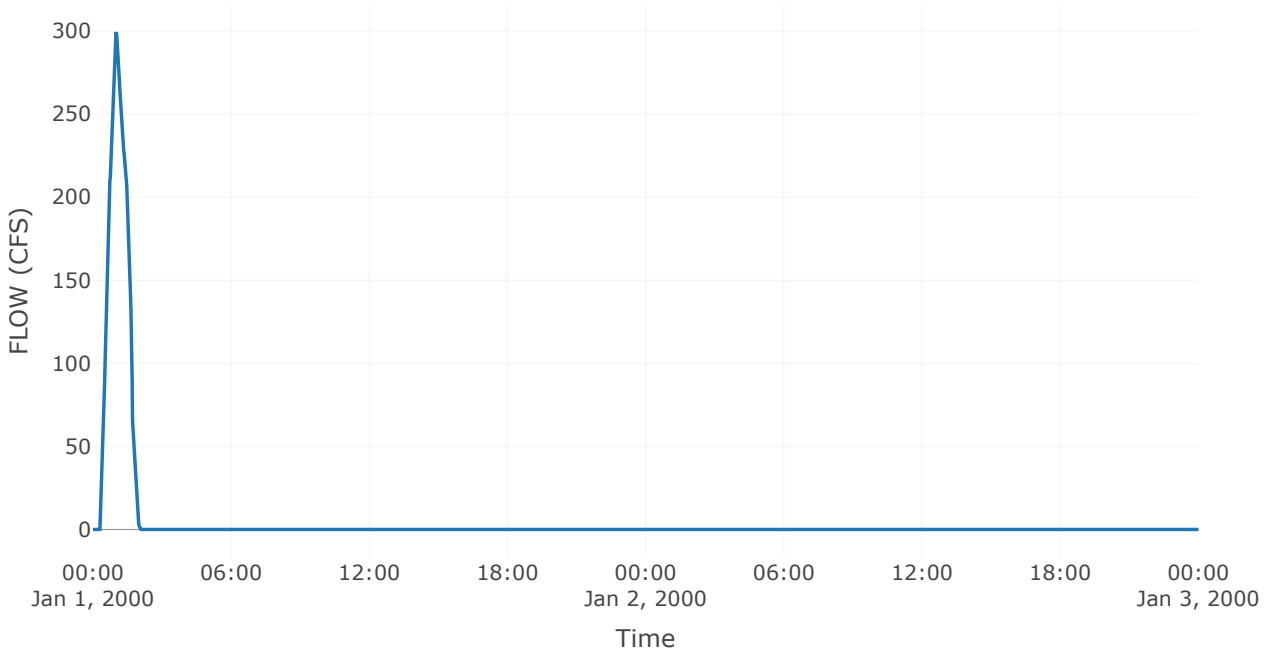
Combined Inflow



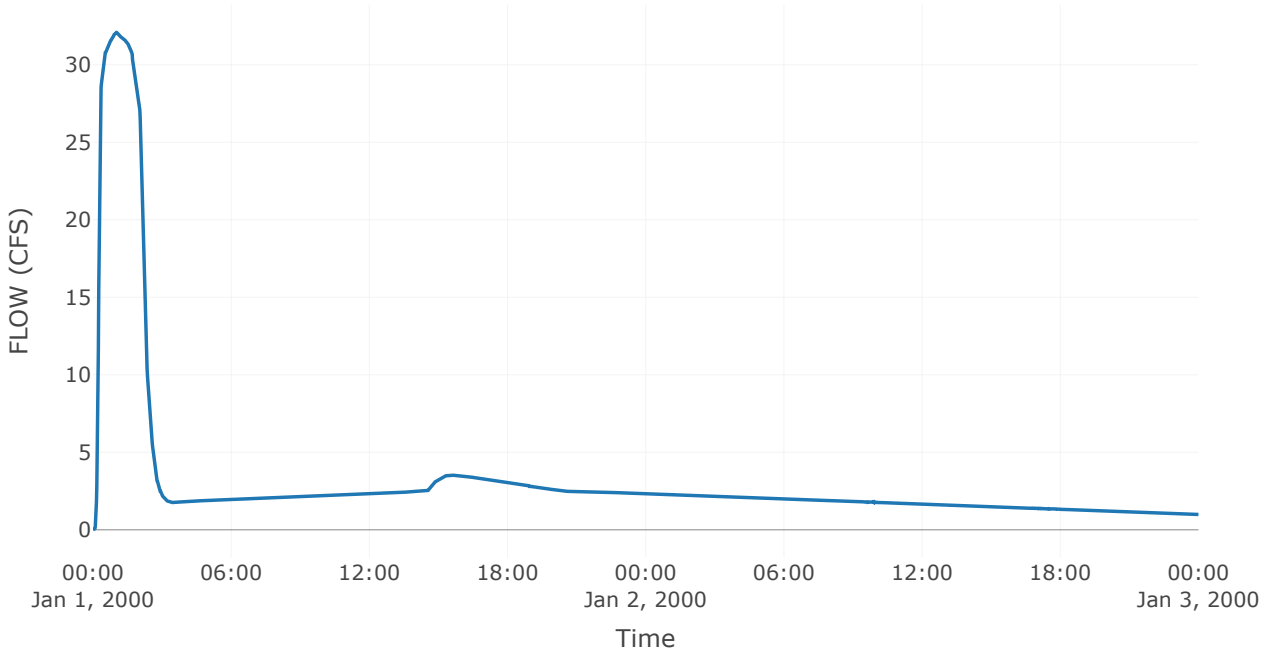
Cumulative Outflow



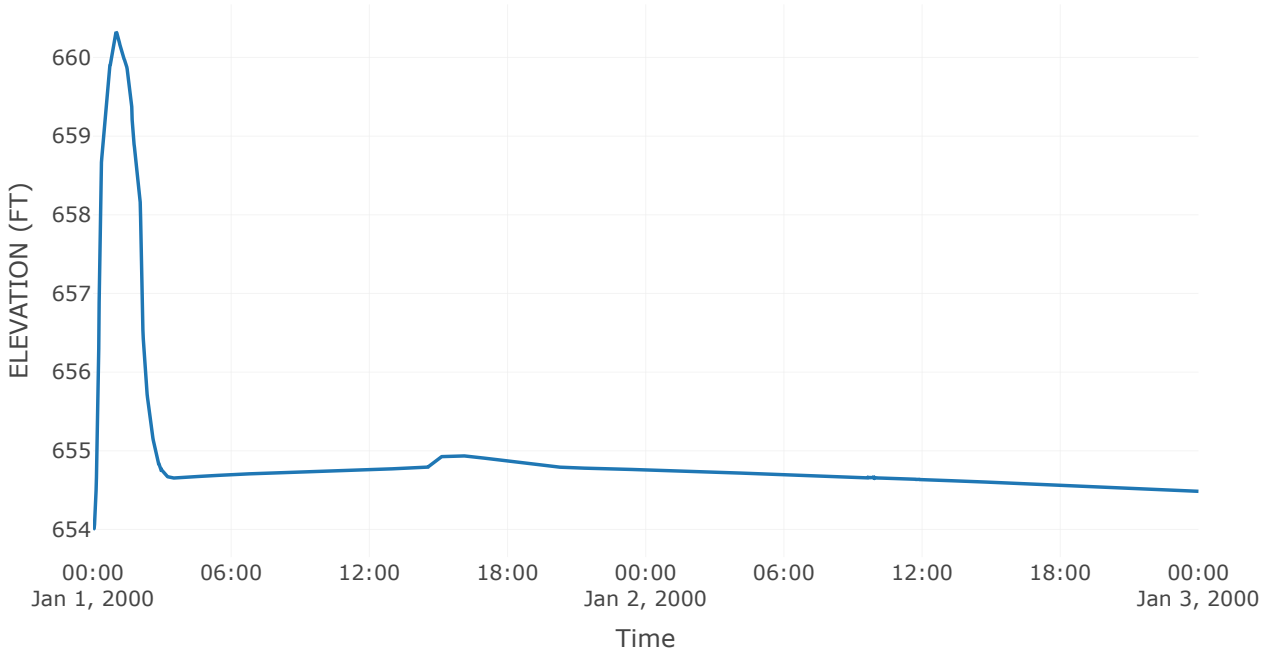
Spillway 1

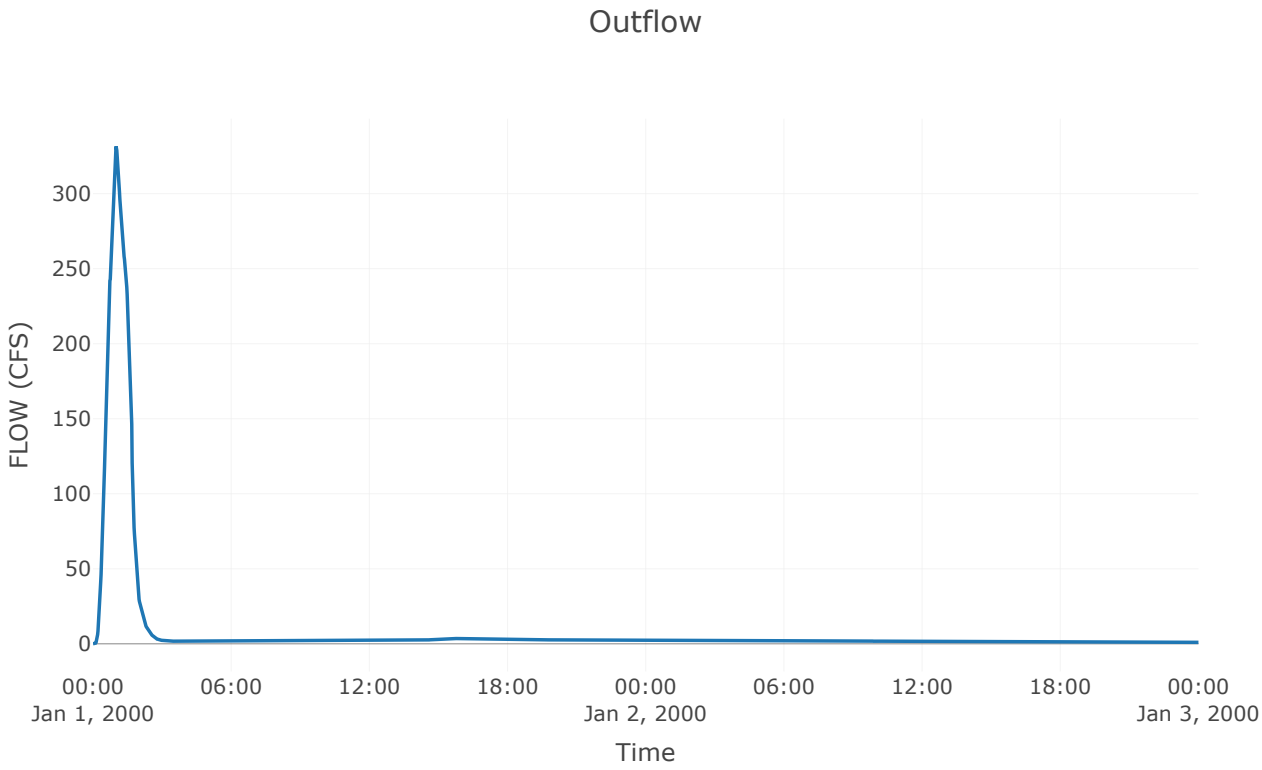


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

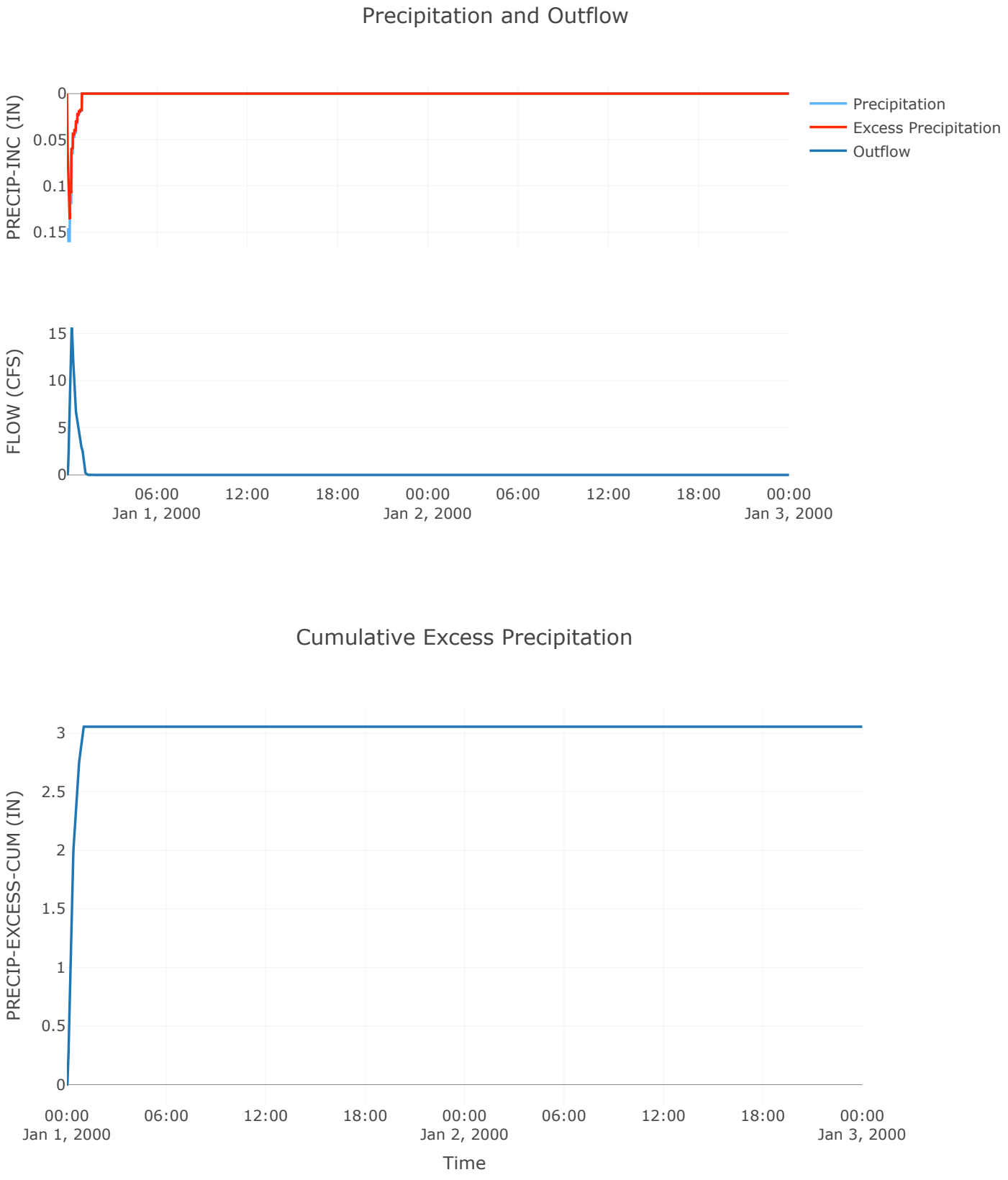
Subbasin: Existing On-Site

Area (MI2) : 0
Downstream : Existing Basin C

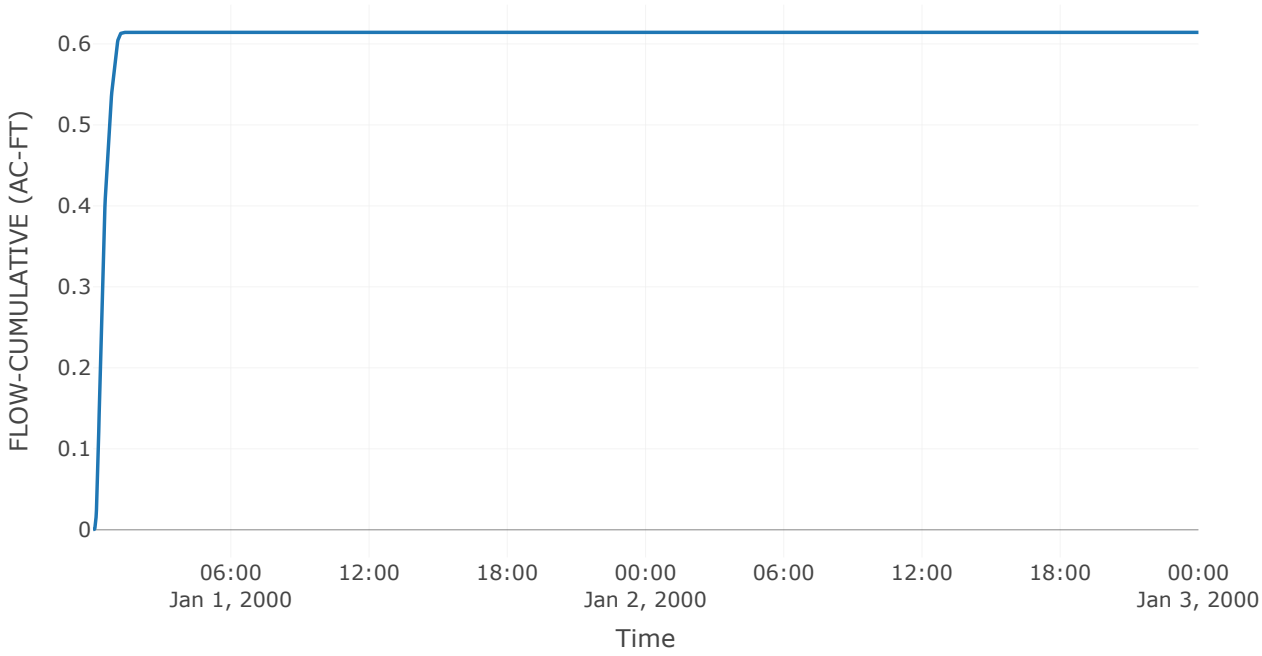
Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

Transform: Scs	
Lag	6
Unitgraph Type	Standard

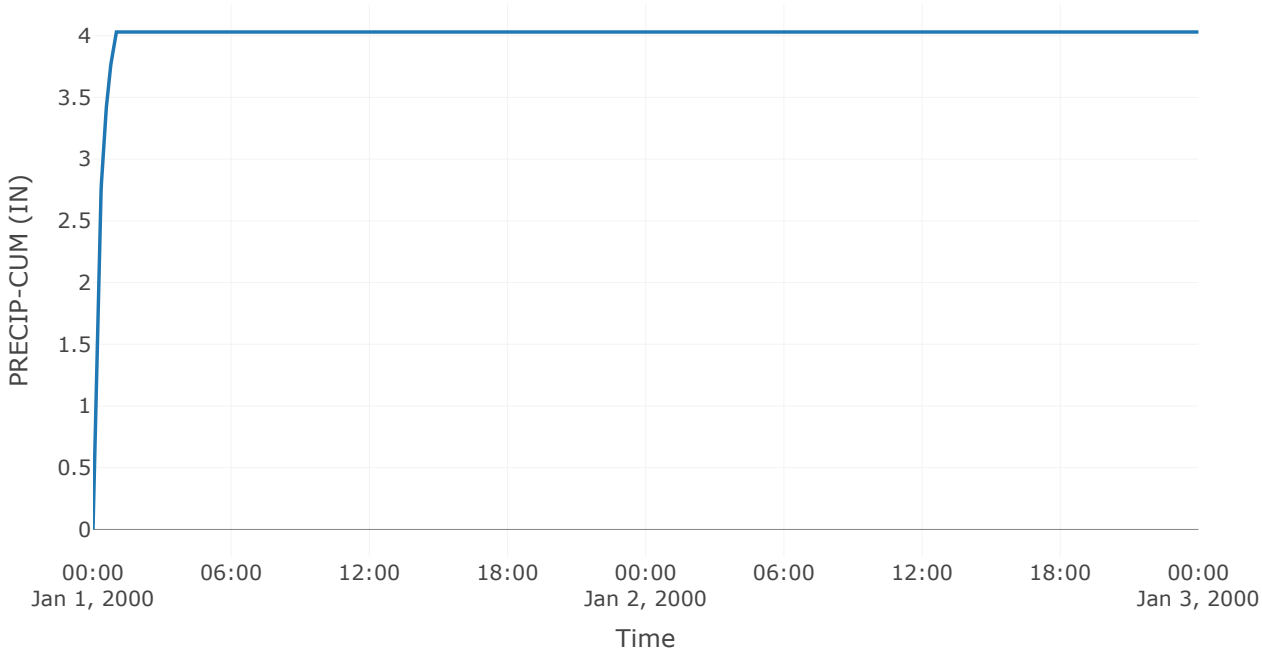
Results: Existing On-Site	
Peak Discharge (CFS)	15.64
Time of Peak Discharge	01Jan2000, 00:18
Volume (IN)	3.06
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.2
Excess Volume (AC - FT)	0.61
Direct Runoff Volume (AC - FT)	0.61
Baseflow Volume (AC - FT)	0

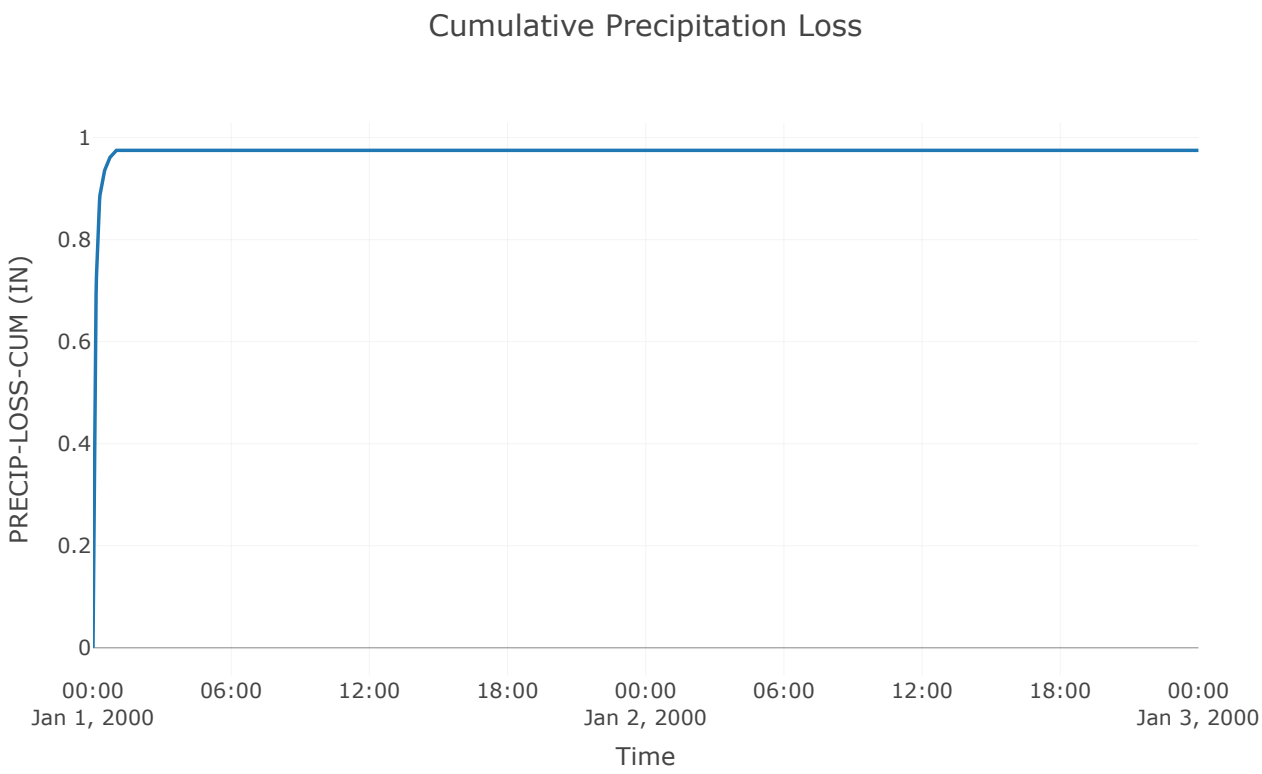

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

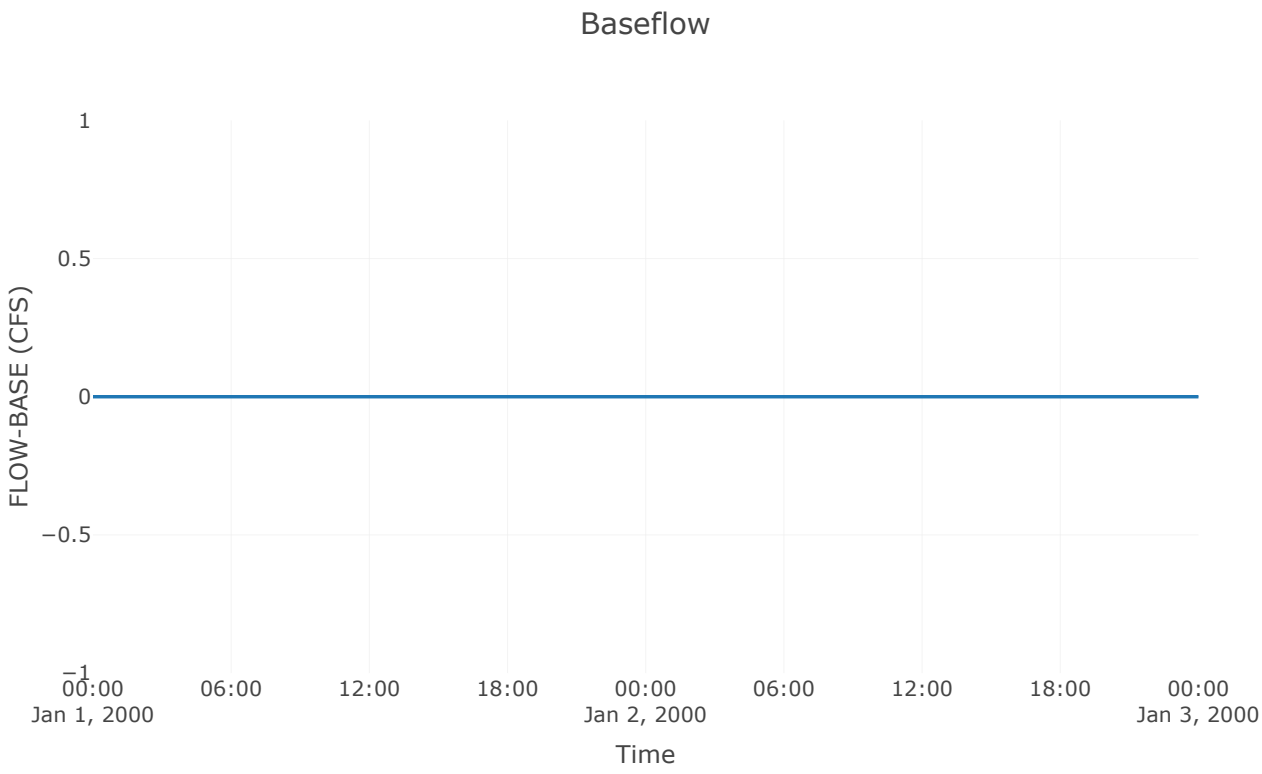
Cumulative Outflow



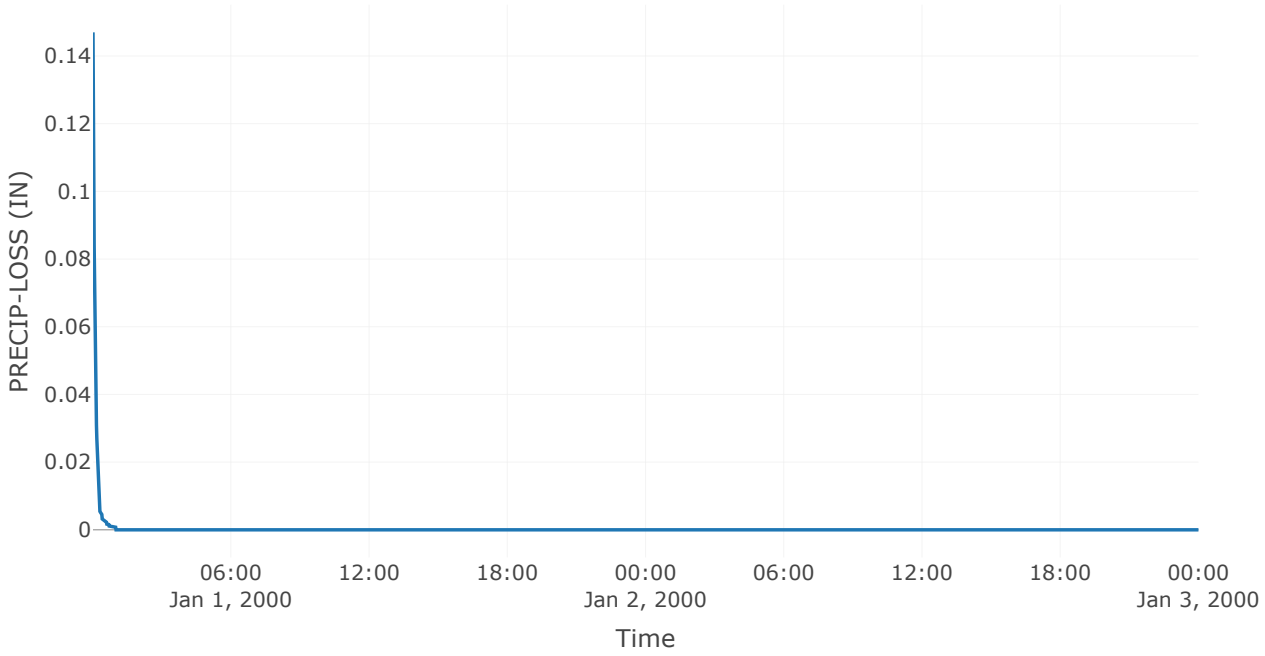
Cumulative Precipitation



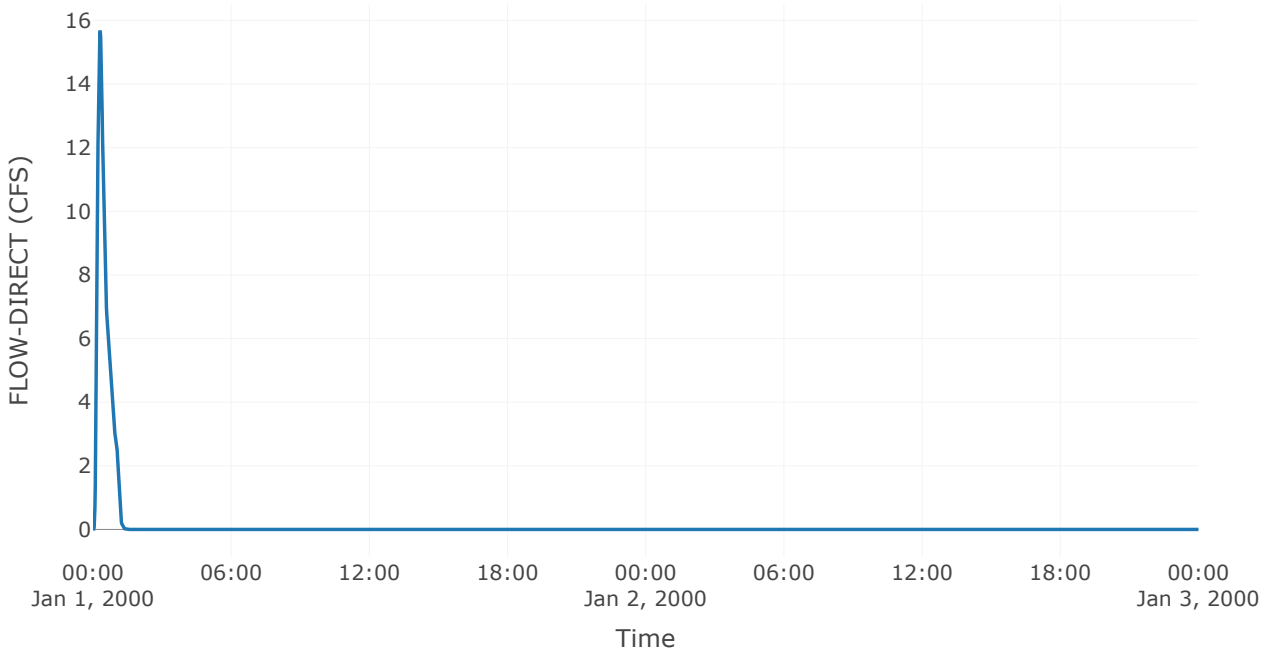

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

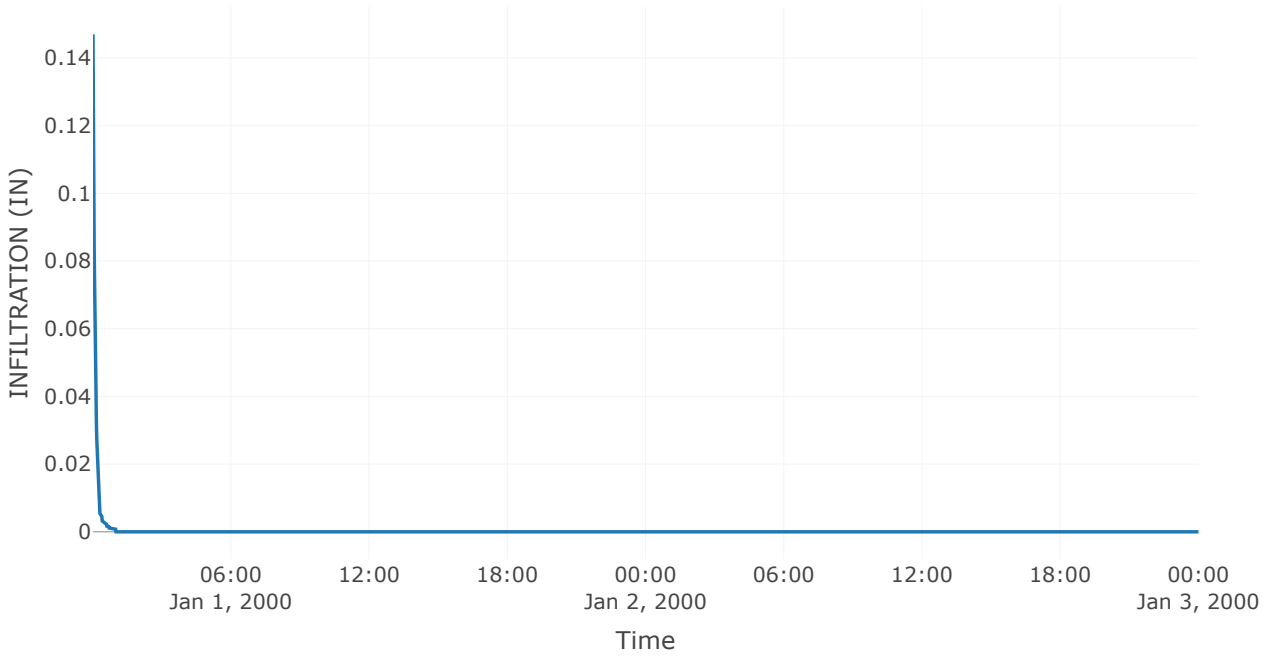

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



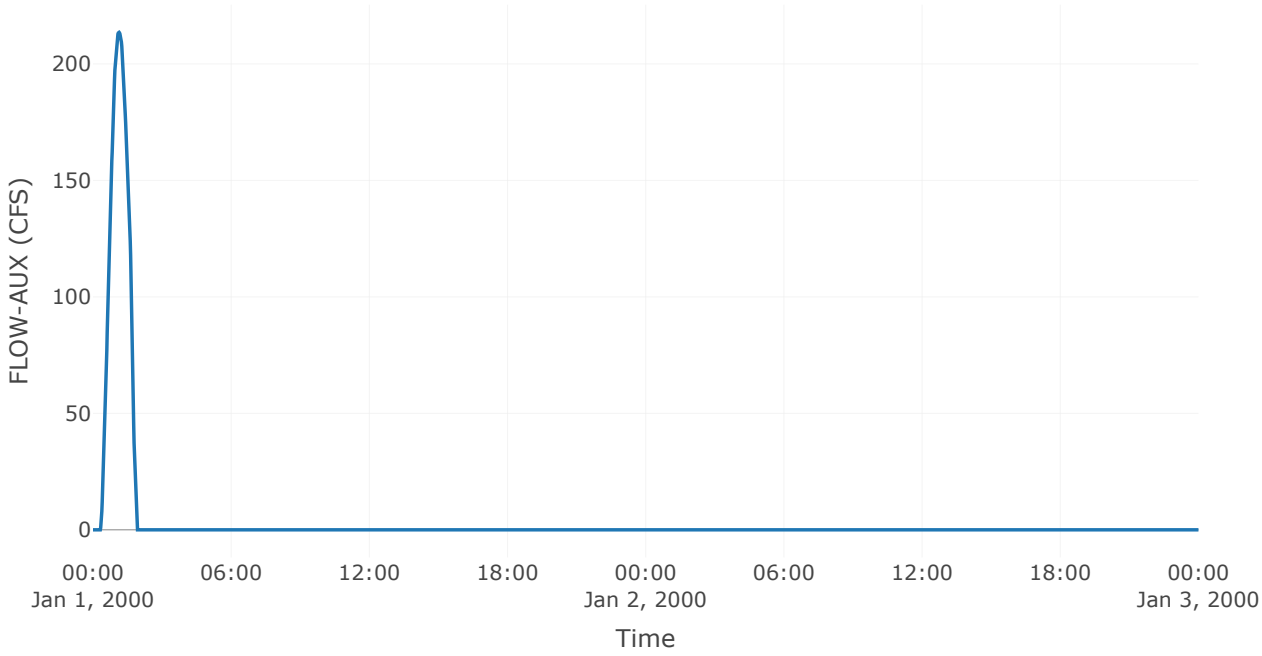

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

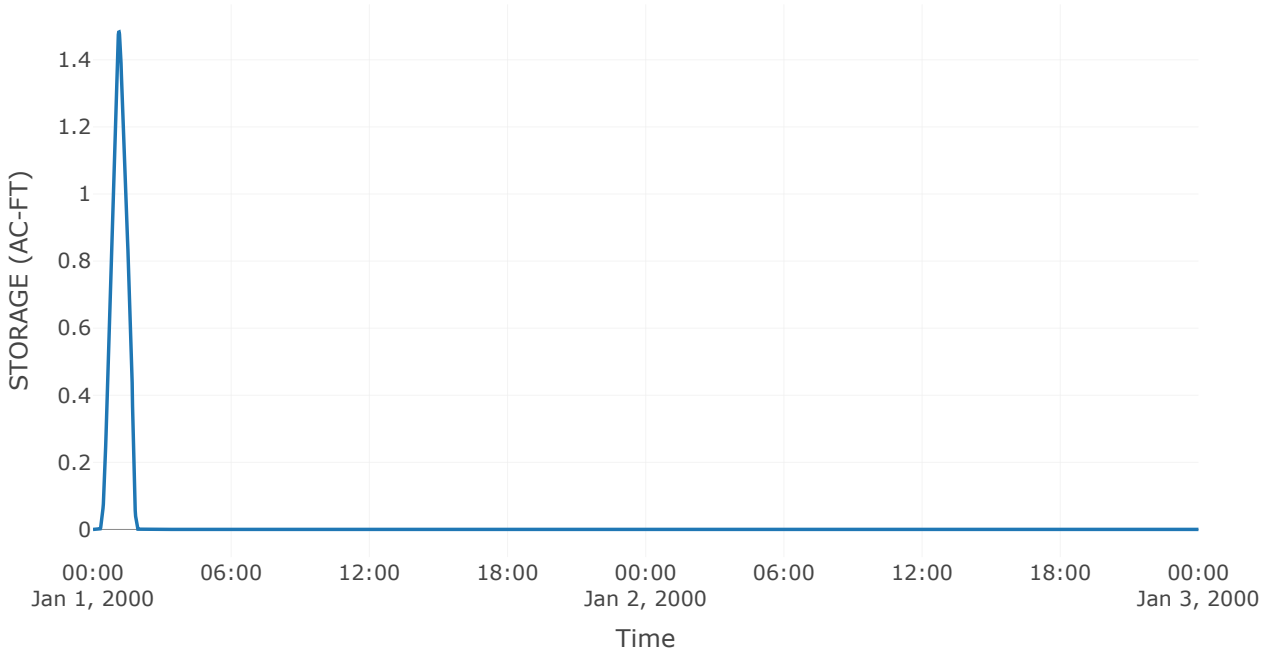
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	95.49
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.35
Peak Inflow (CFS)	334.32
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	36.16
Maximum Storage (AC - FT)	1.48
Peak Elevation (FT)	655.16
Discharge Volume (AC - FT)	19.63

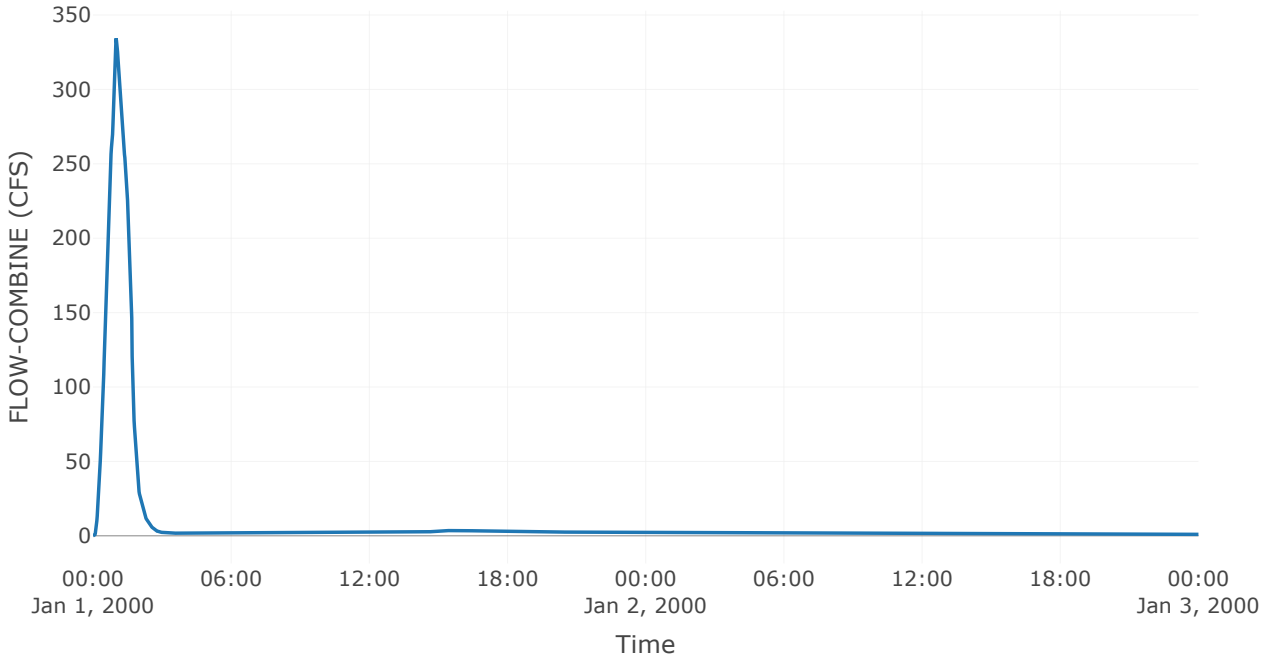
Auxiliary Outflow



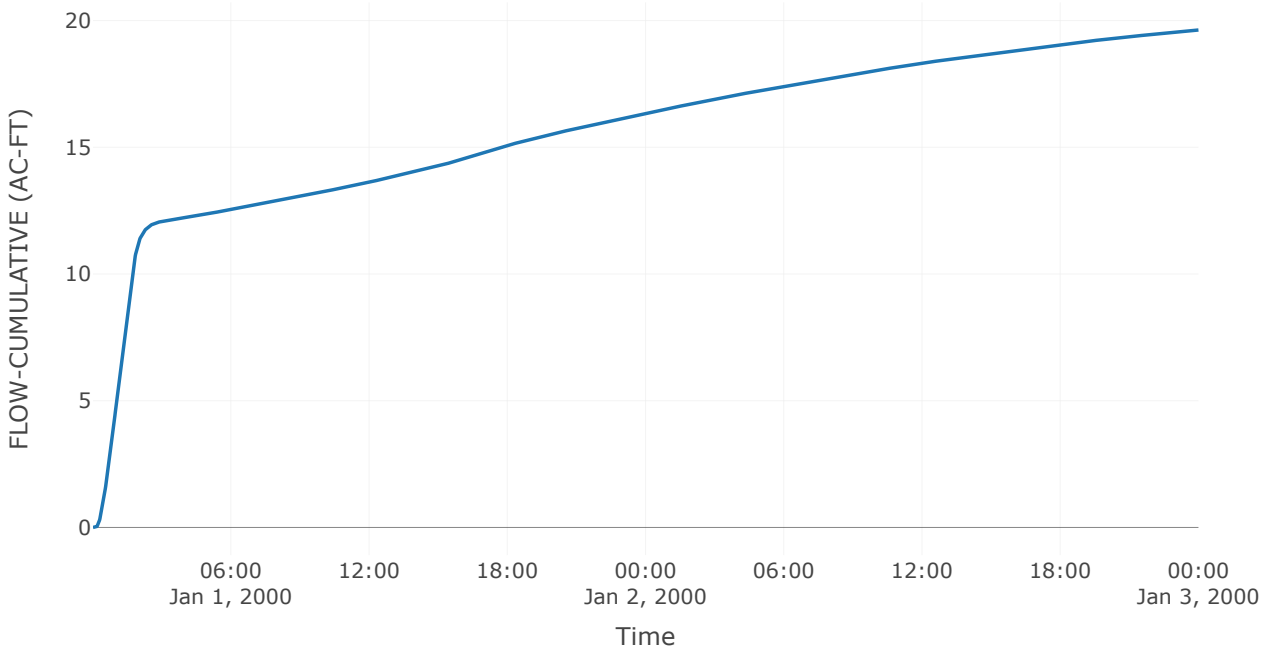
Storage

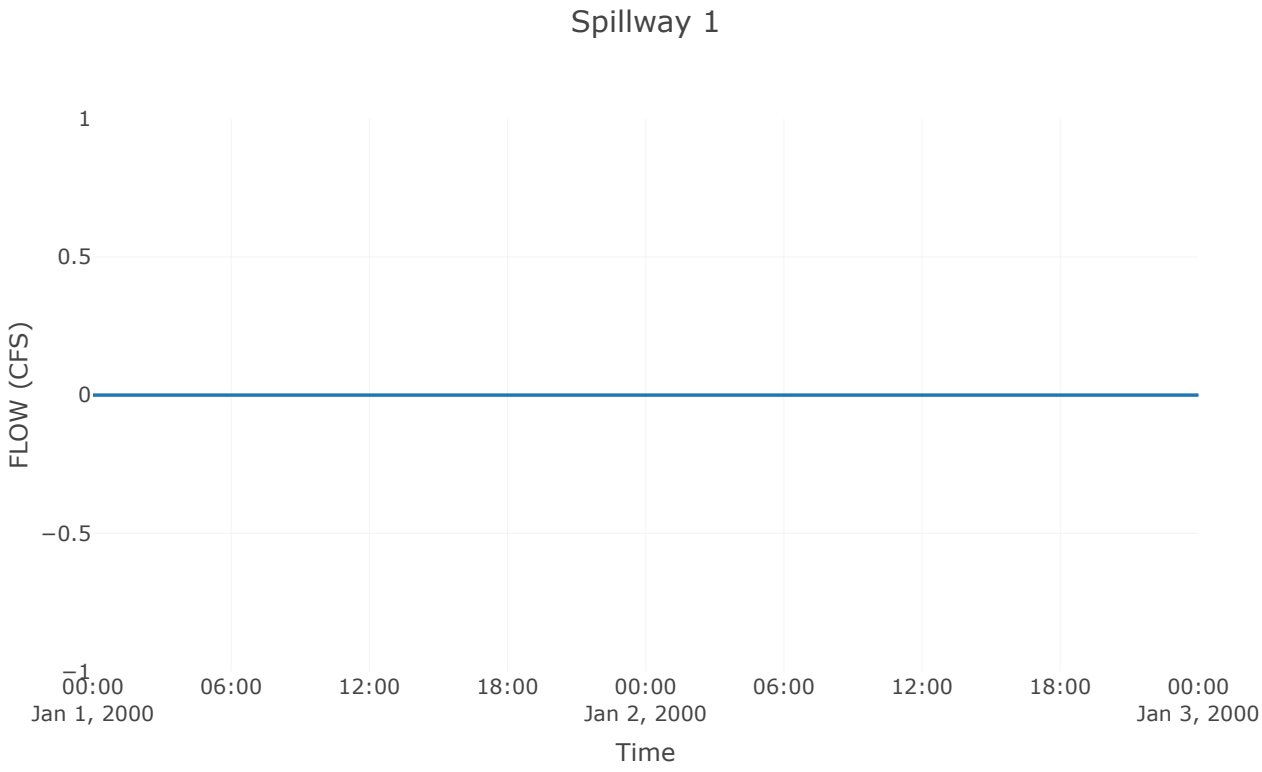


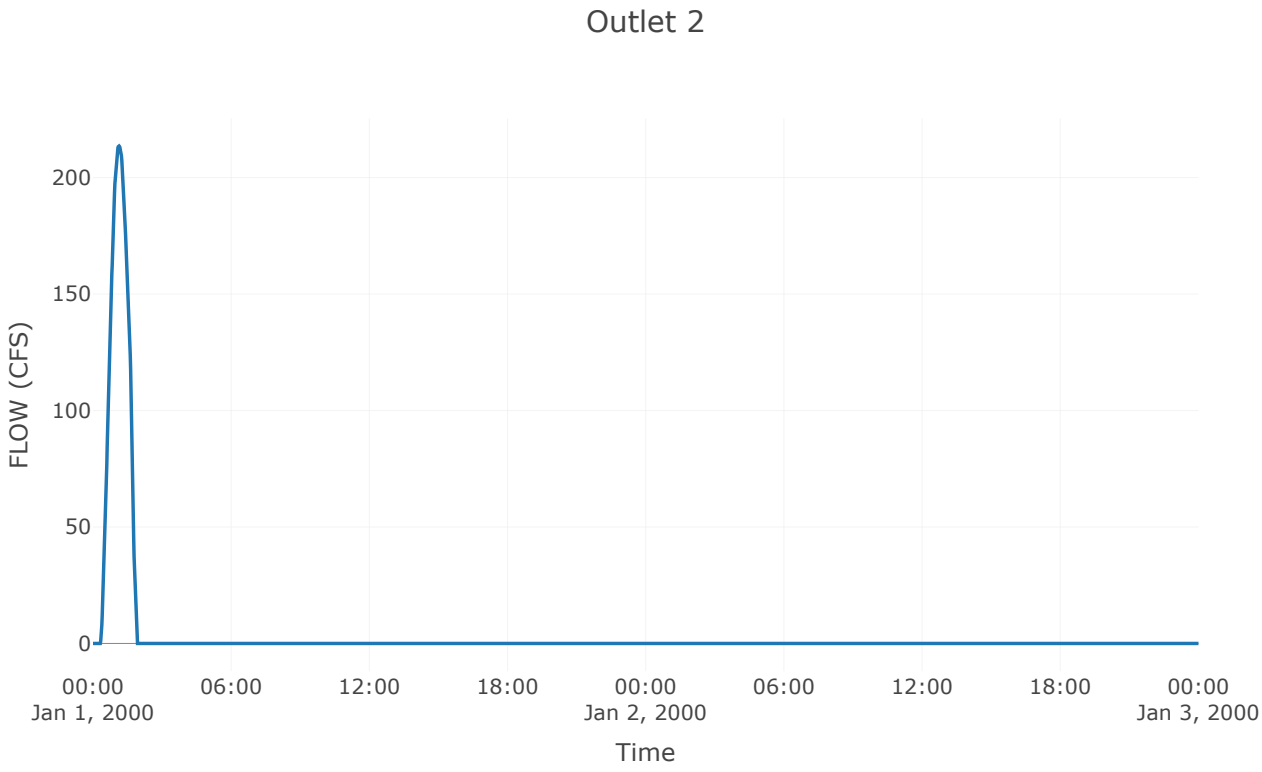
Combined Inflow



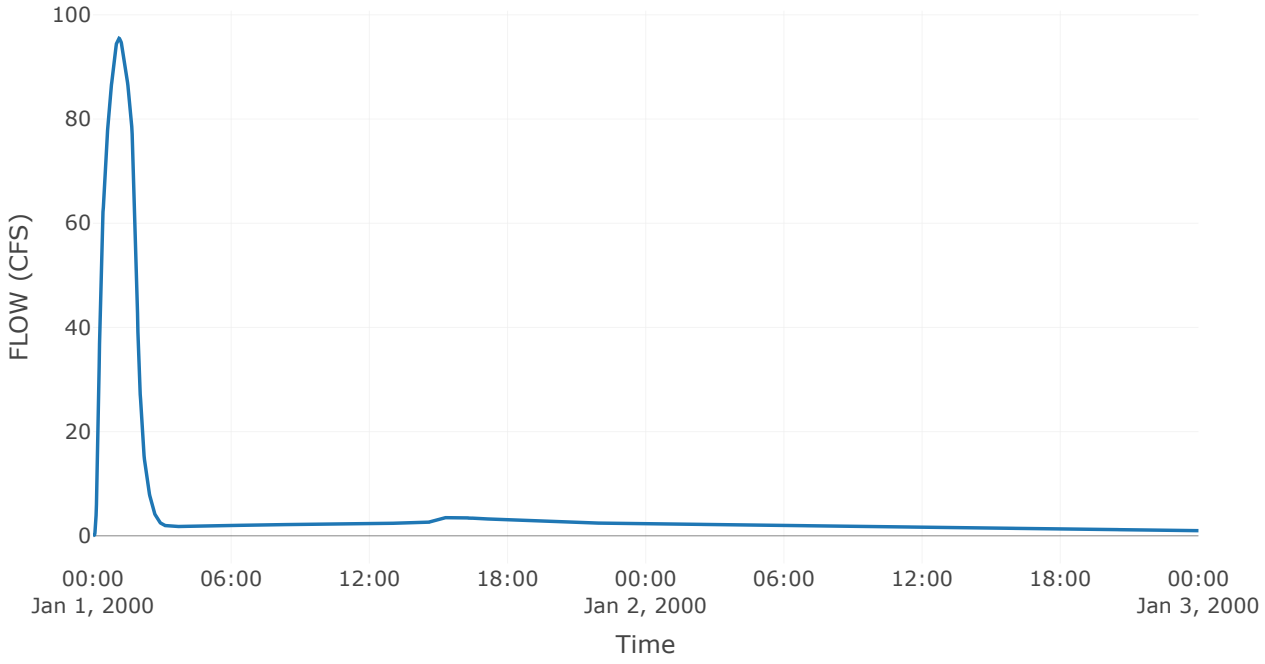
Cumulative Outflow



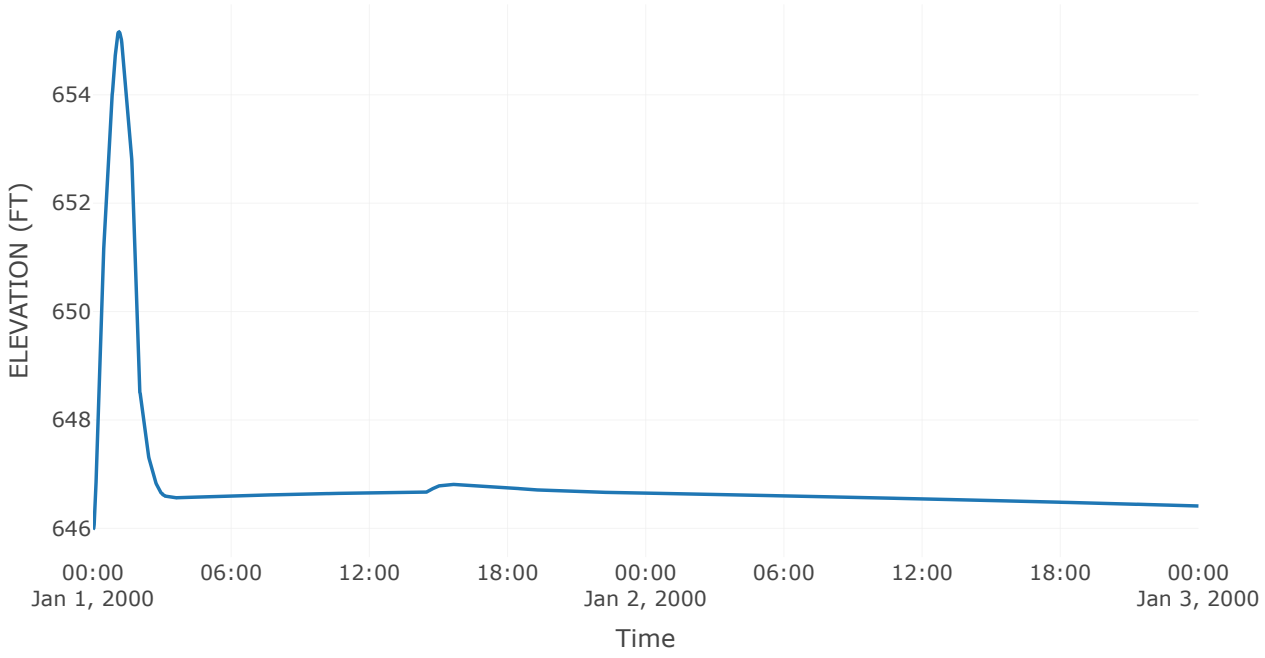

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

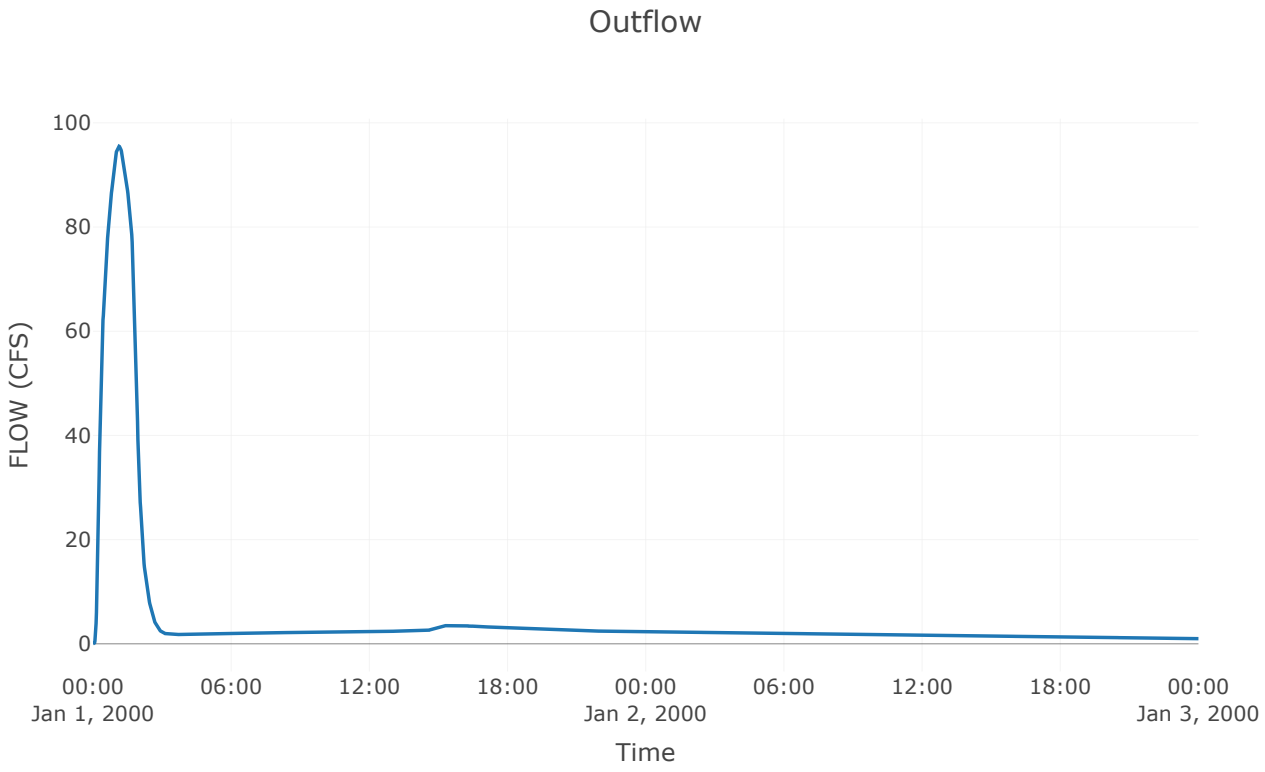

Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

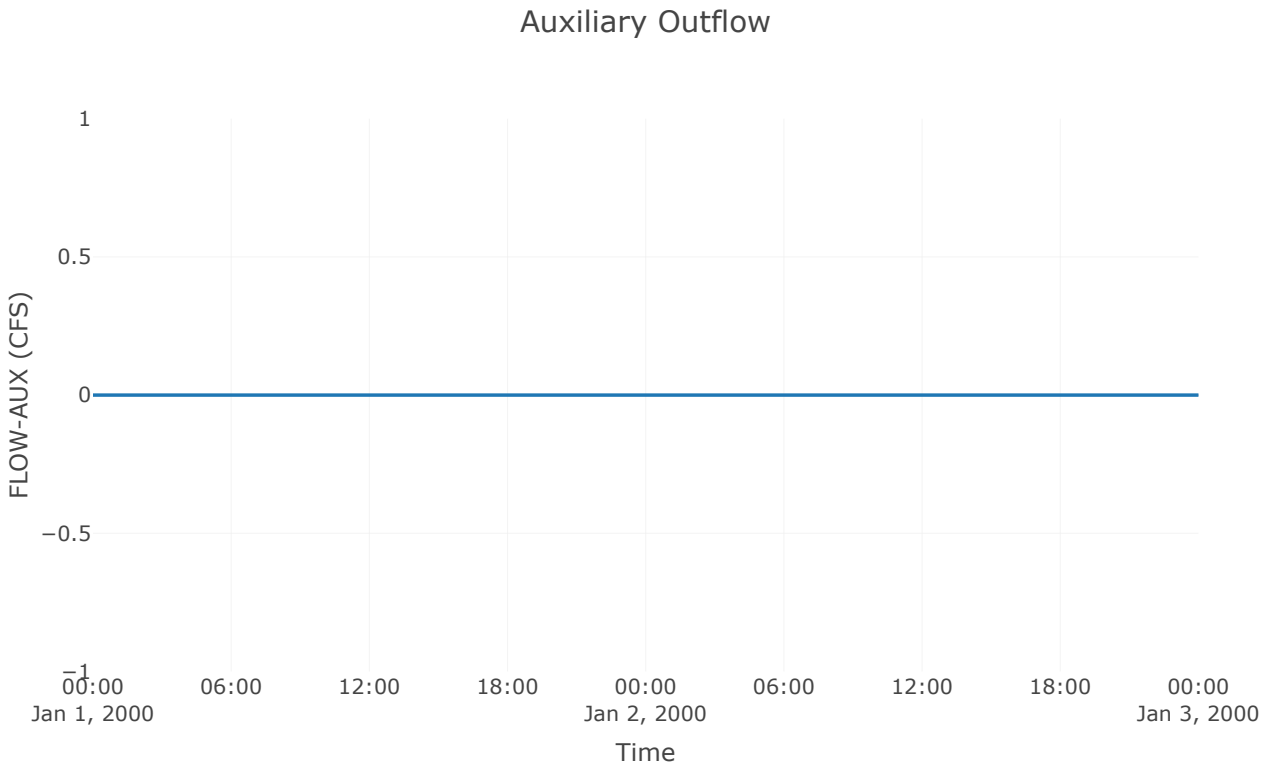


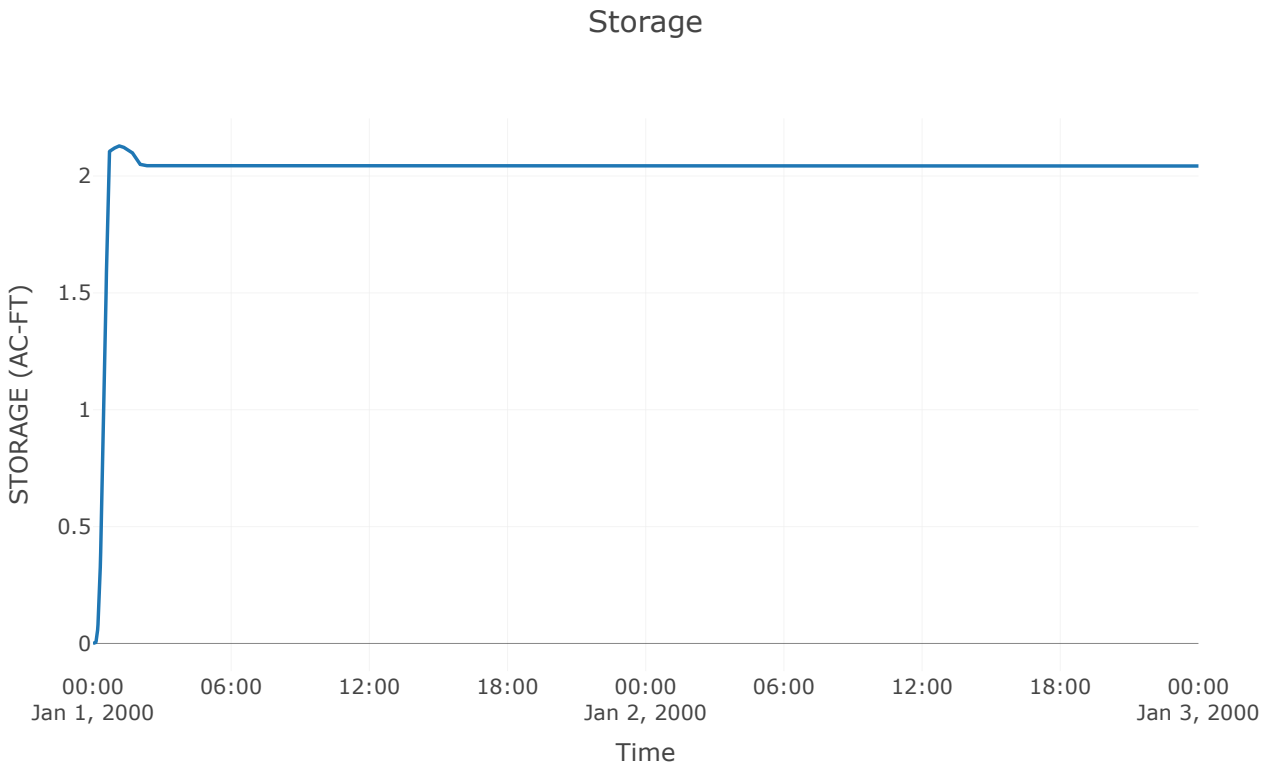

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

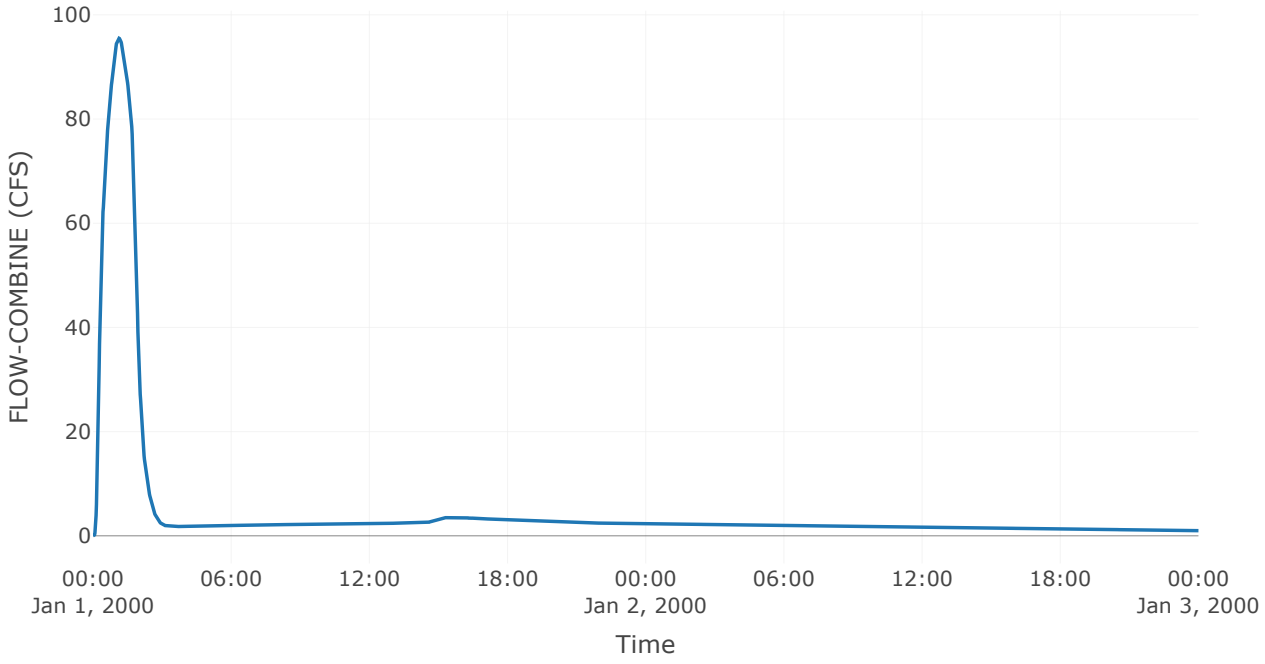
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2
Peak Inflow (CFS)	95.49
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.63
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.42

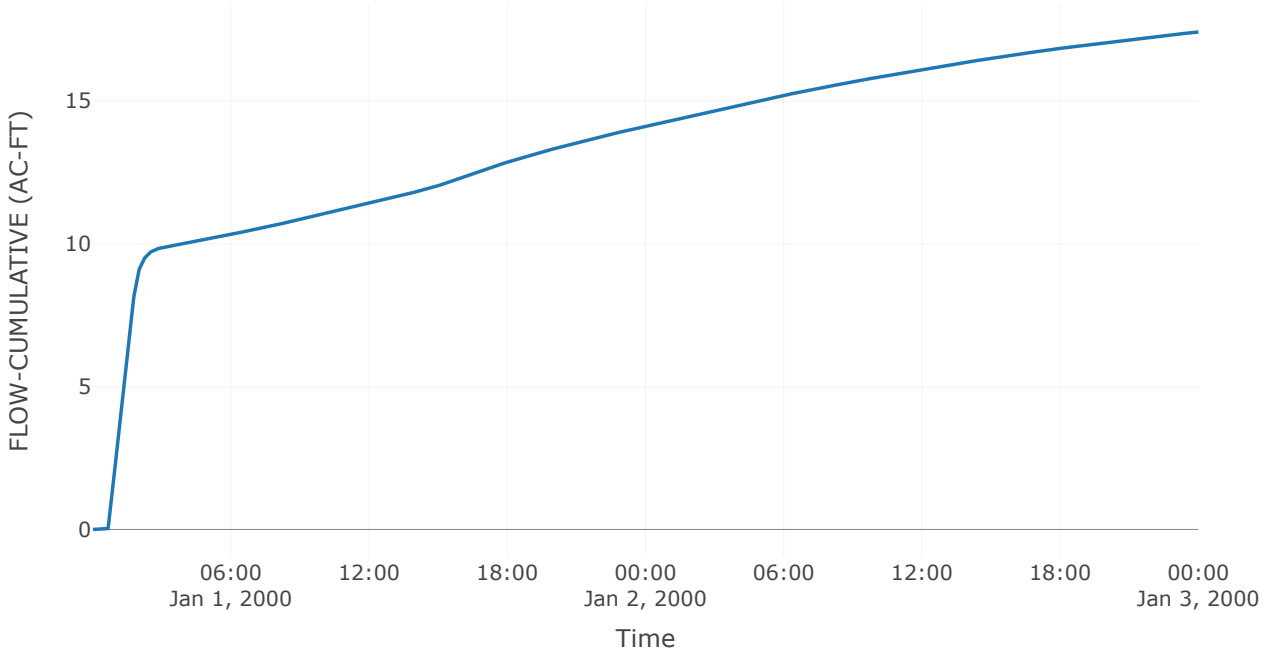

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

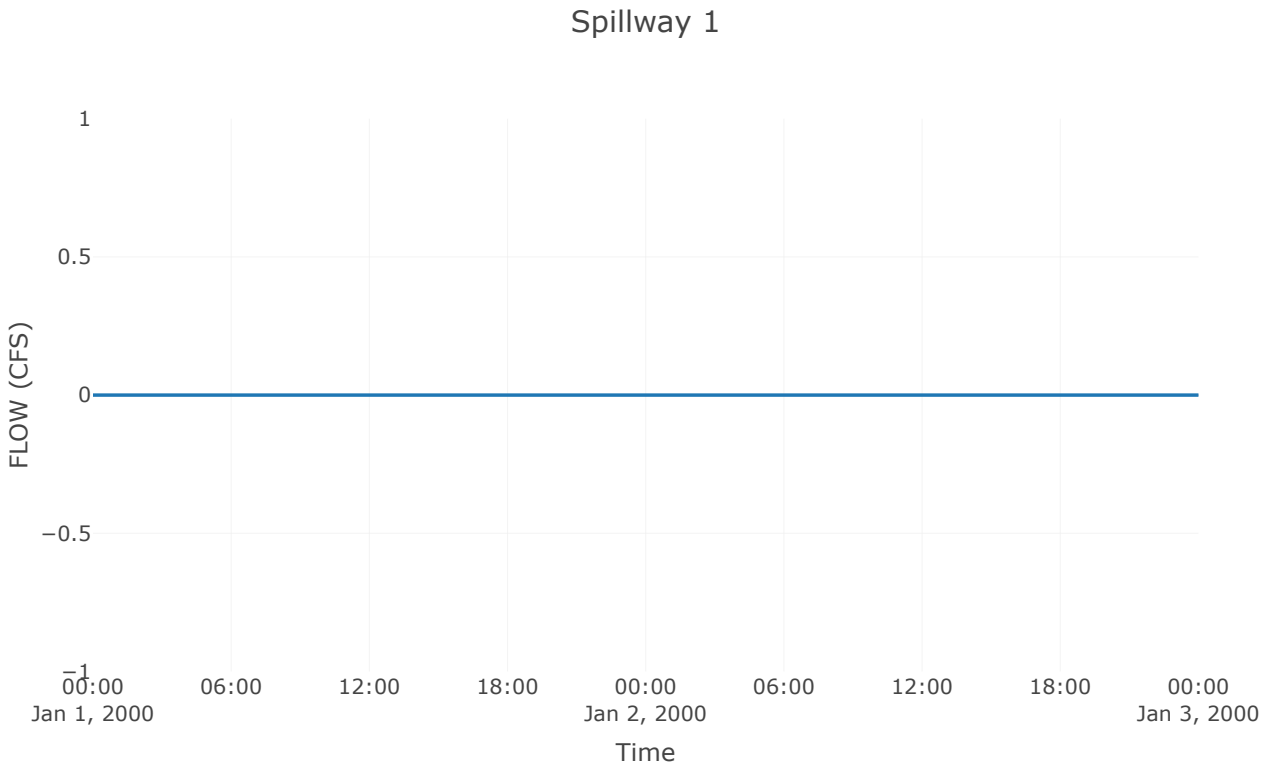

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

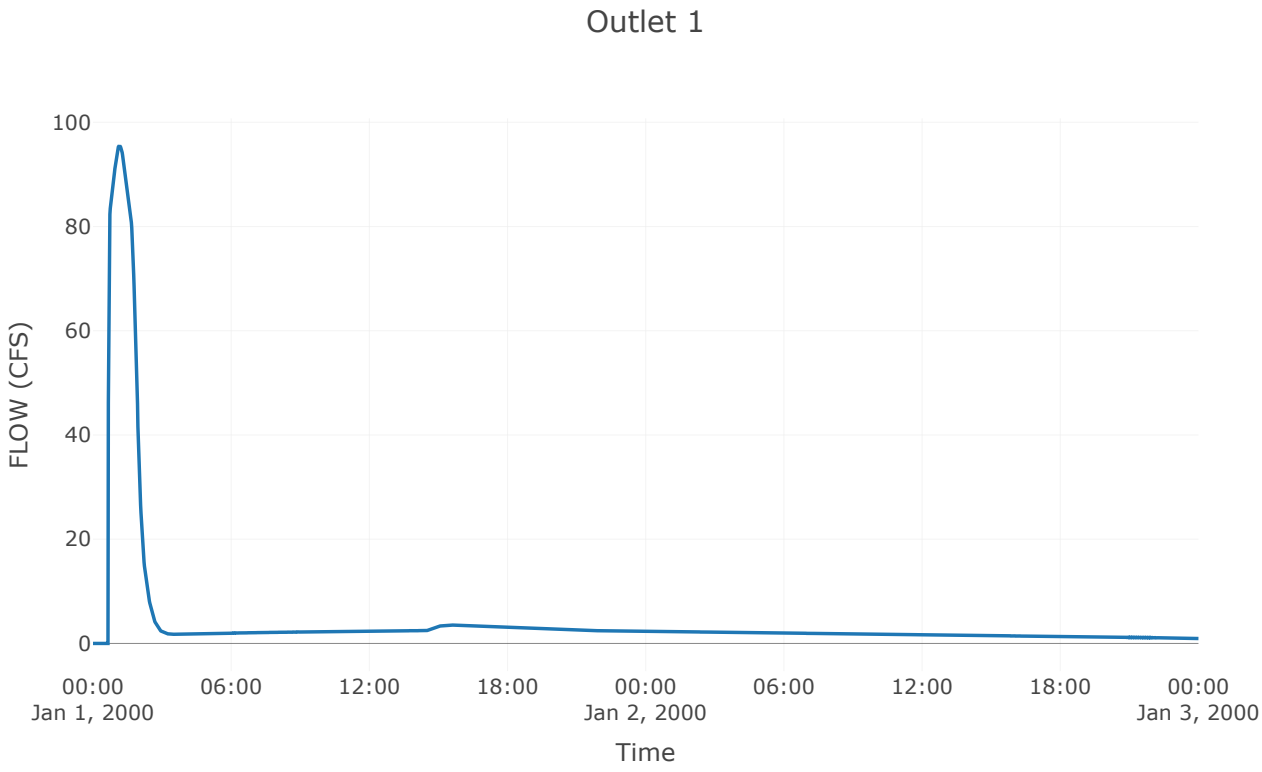
Combined Inflow



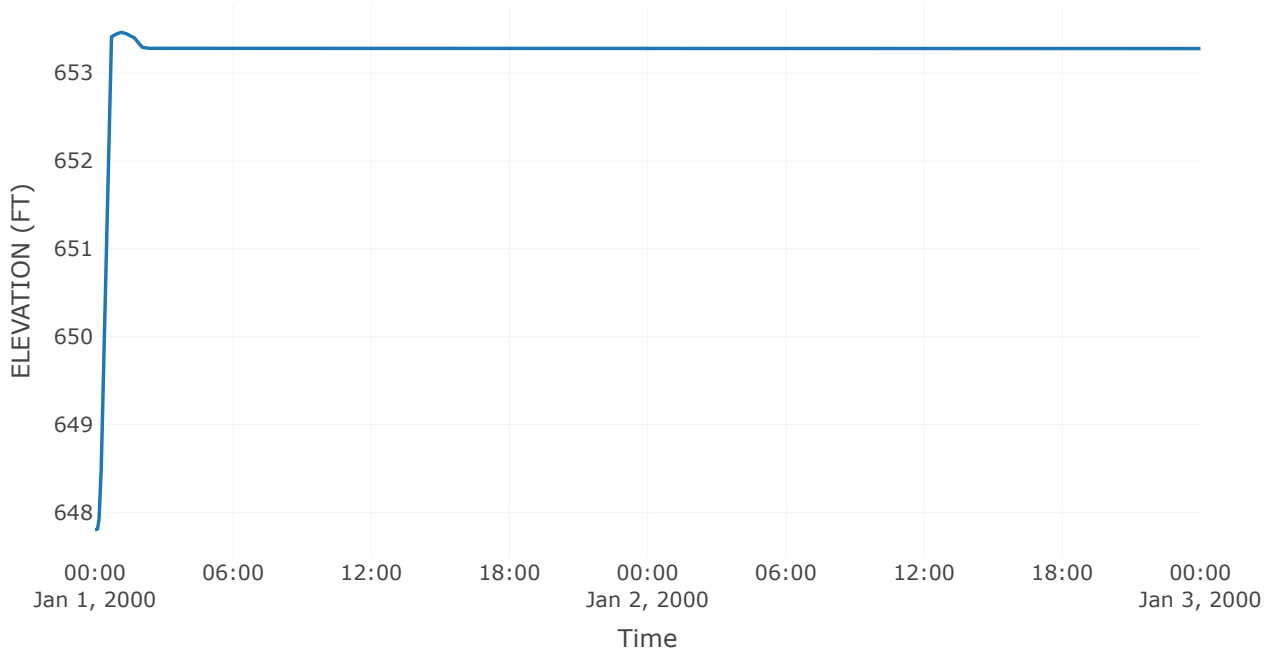
Cumulative Outflow



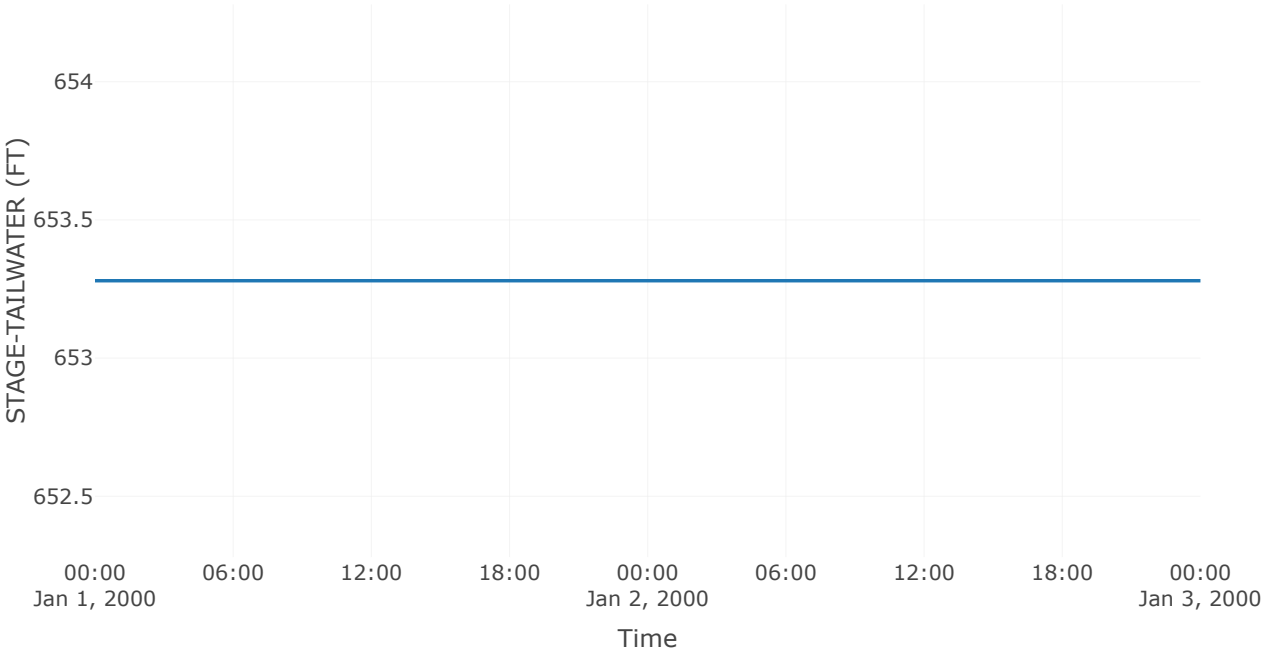

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

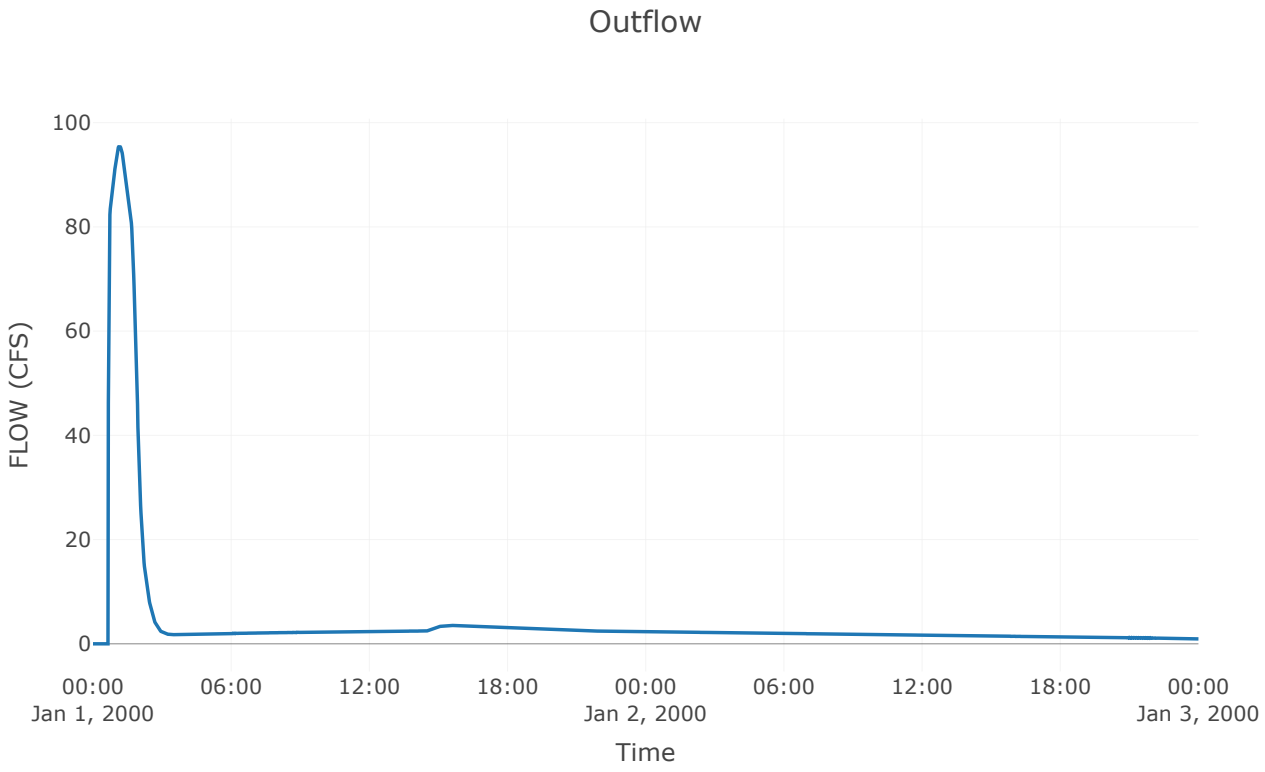

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

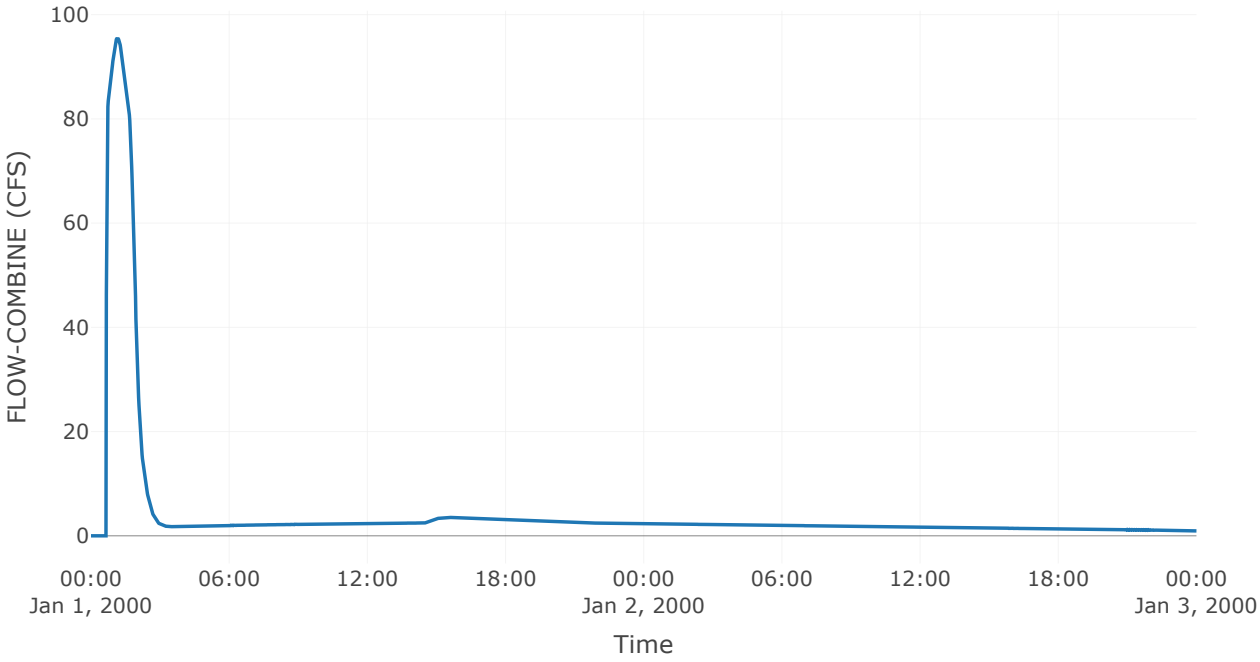



Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

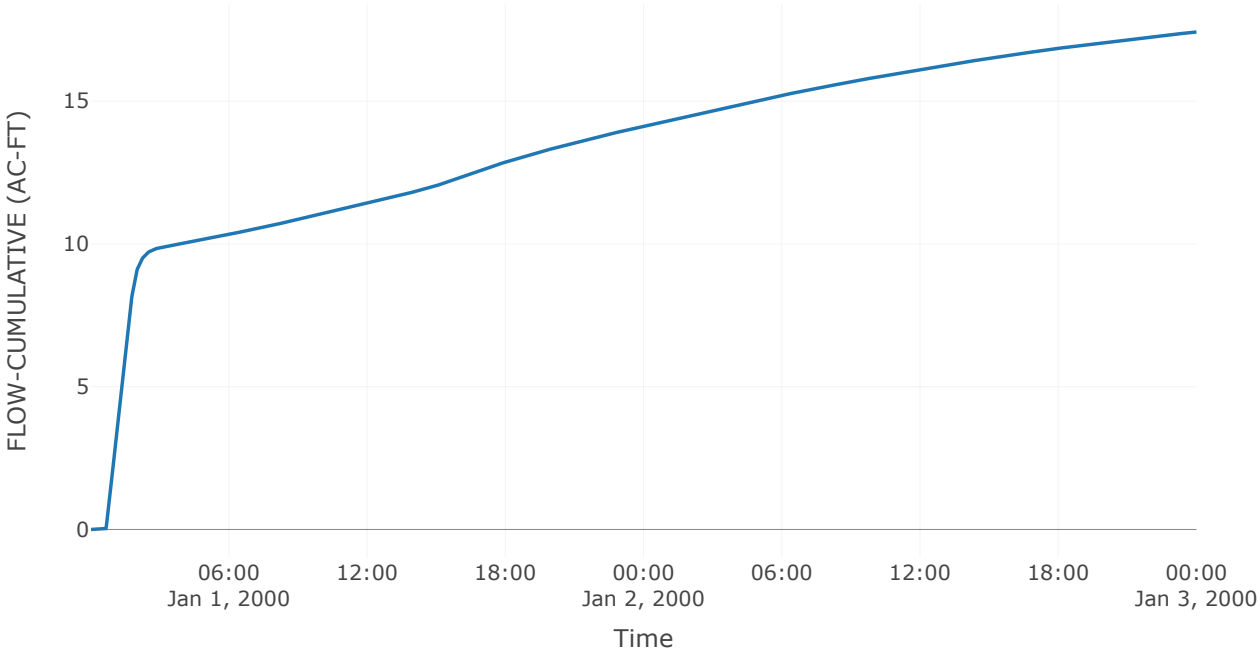
Sink: 55th Street Outlet

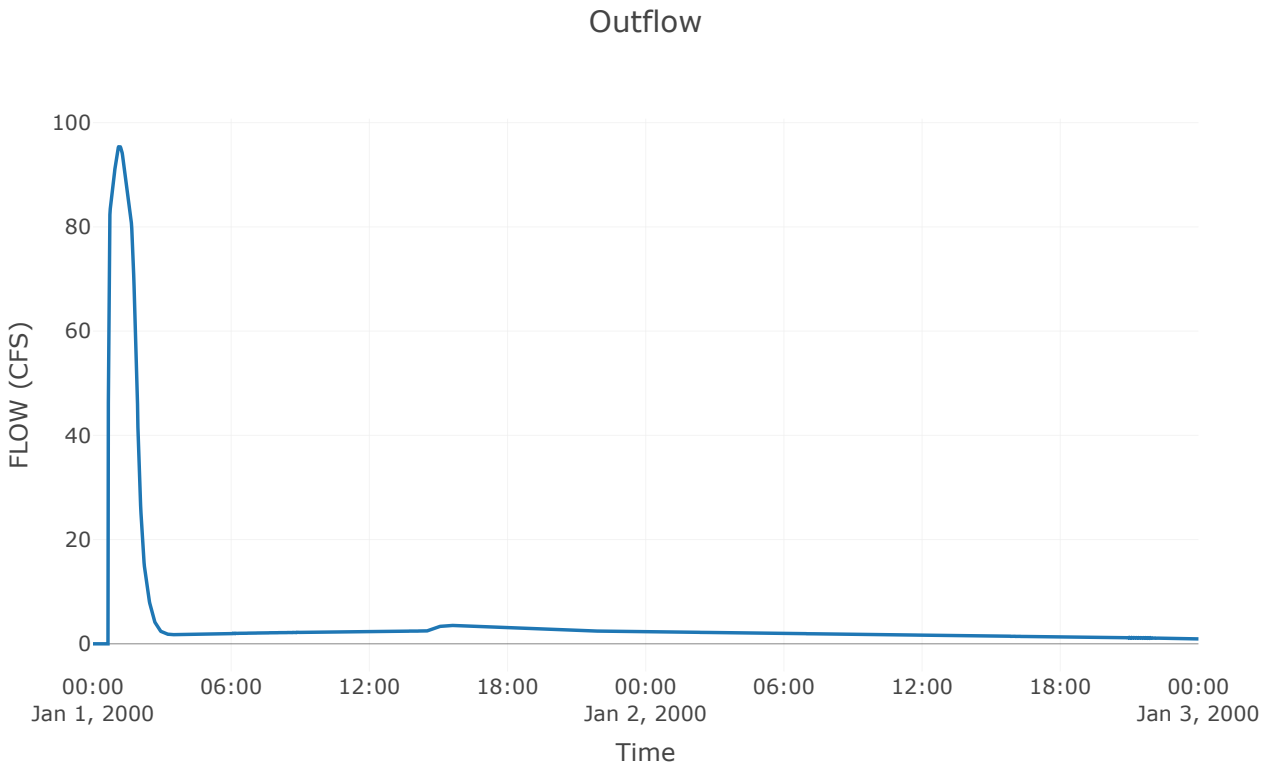
Results: 55th Street Outlet	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2

Combined Inflow



Cumulative Outflow




Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Stormwater Analysis
Proposed Conditions

Curve Number

Project: Heritage Crossing By: AJS Date: 8/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 8/26/2024

Conditions (i.e. Present / Developed): Proposed

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			1.0008	74.06
C	Pavement, Parking, Curb and Gutter	98			0.3374	33.07
C	Carriage Walk	98			0.0644	6.31
C	Driveways	98			0.2829	27.72
C	Stoops & Patios	98			0.0681	6.67
C	Buildings	98			0.6564	64.33
				Totals =	2.4100	212.16

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{212.16}{2.4100} = 88.03$; use CN = **88.03**

Heritage Crossing - Western Springs, IL

10/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

Heritage Crossing - Western Springs, IL

11/4/2024

Proposed Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	654.10	0				0.0000
			0.90	19	0.000	
	655.00	64				0.0004
			1.00	113	0.003	
	656.00	170				0.0030
			1.00	240	0.006	
	657.00	318				0.0085
			1.00	352	0.008	
	658.00	388				0.0166
			1.00	416	0.010	
	659.00	444				0.0262
			0.70	325	0.007	
Overland Weir Flow	659.70	485				0.0336
			0.30	148	0.003	
	660.00	503				0.0370
			1.00	534	0.012	
	661.00	565				0.0493

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

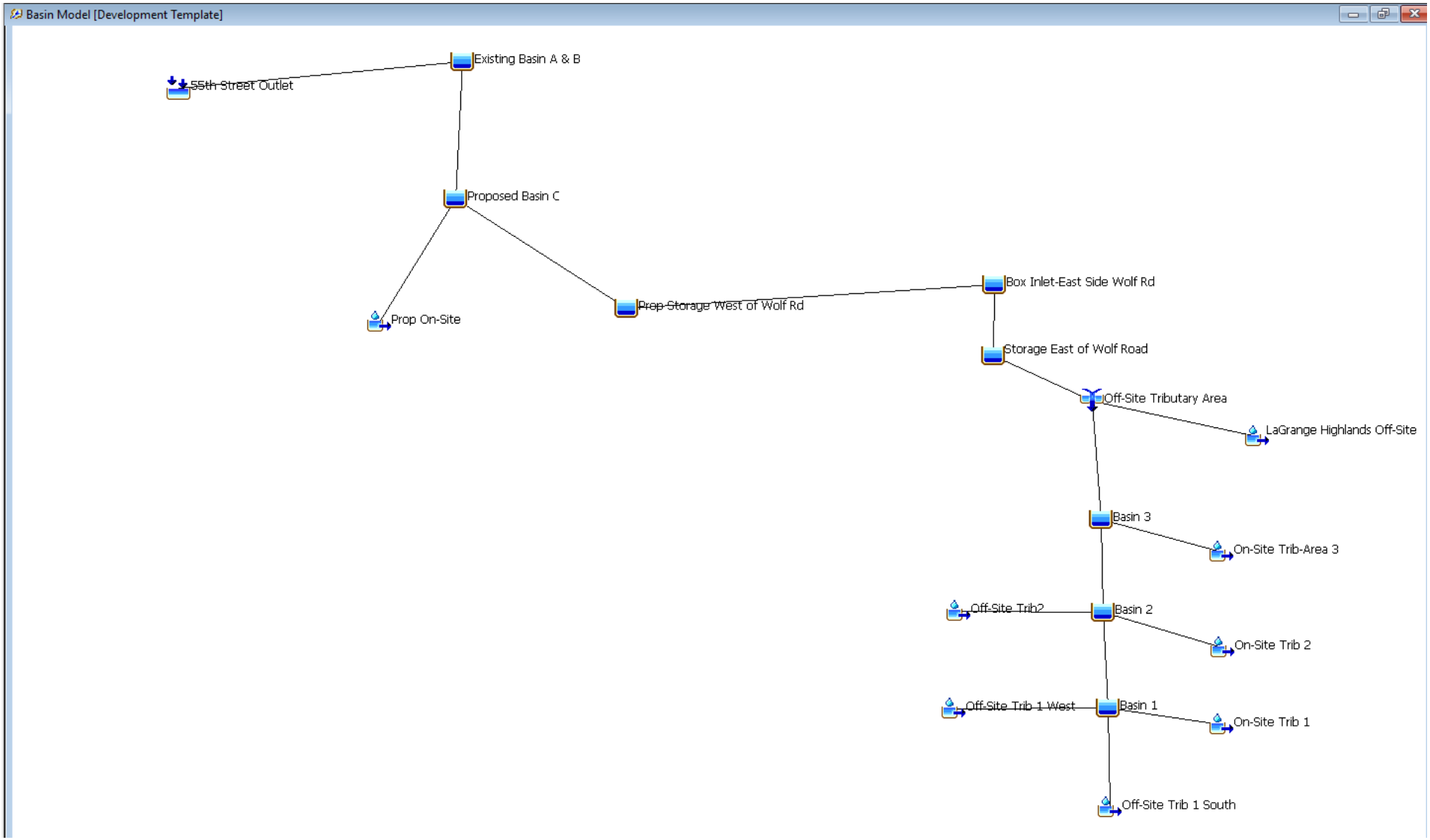
8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081


Basin Model [Development Template]
Existing Basin A & B
55th Street Outlet
Proposed Basin C
Prop On-Site
Prop Storage West of Wolf Rd
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:43

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Prop Storage West of Wolf Rd	0.27	75.06	01Jan2000, 01:10	0.77
Prop On - Site	0	2.53	01Jan2000, 00:33	0.92
Proposed Basin C	0.27	59.4	01Jan2000, 01:18	0.73
Existing Basin A & B	0.27	59.36	01Jan2000, 01:19	0.58

55th Street Outlet	0.27	59.36	01Jan2000, 01:19	0.58

Subbasin: On-Site Trib 1

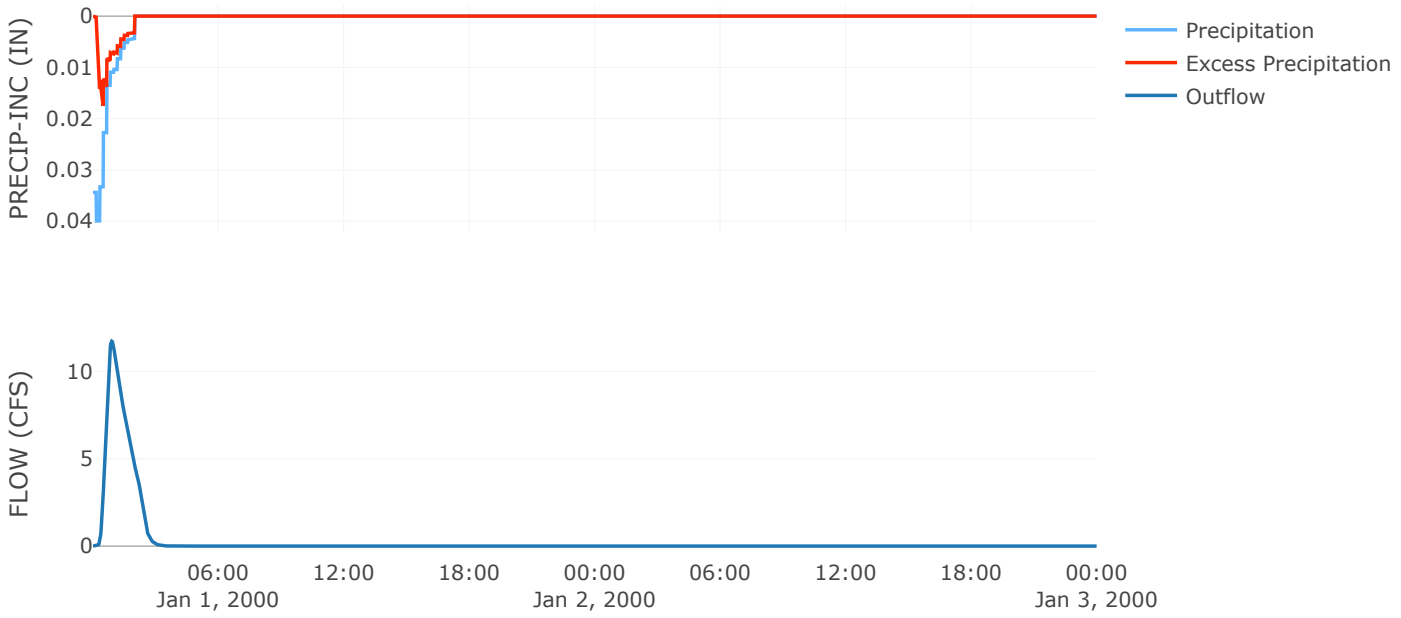
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

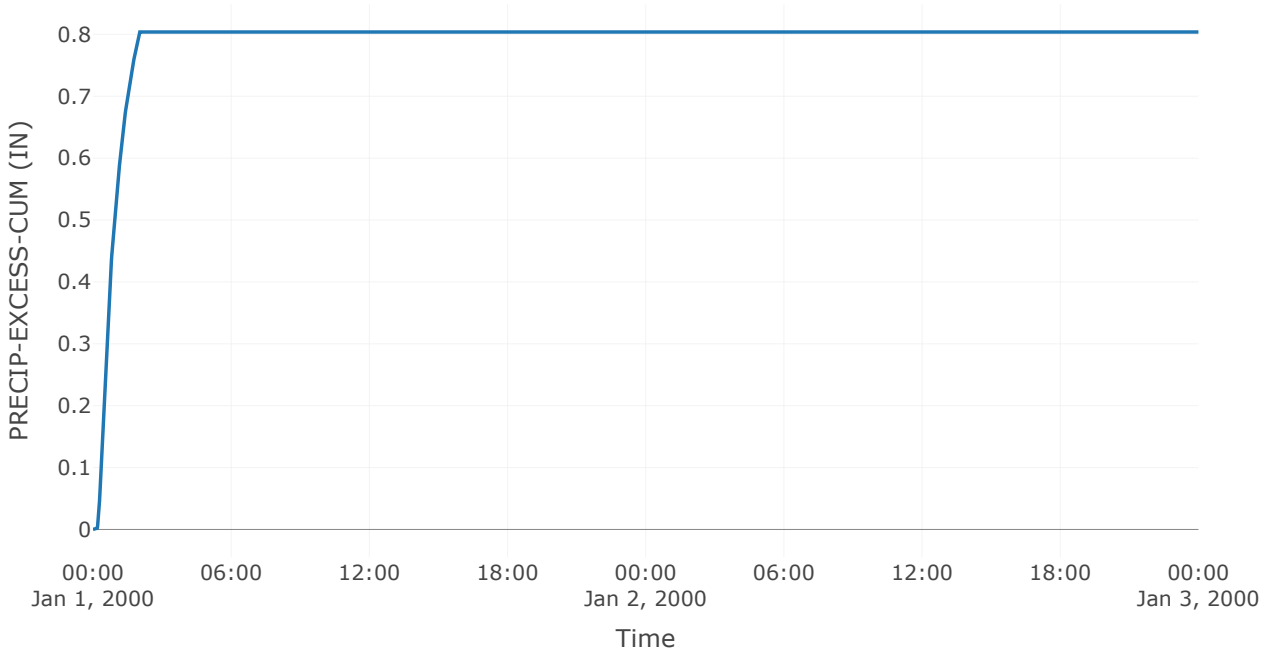
Transform: Scs	
Lag	21
Unitgraph Type	Standard

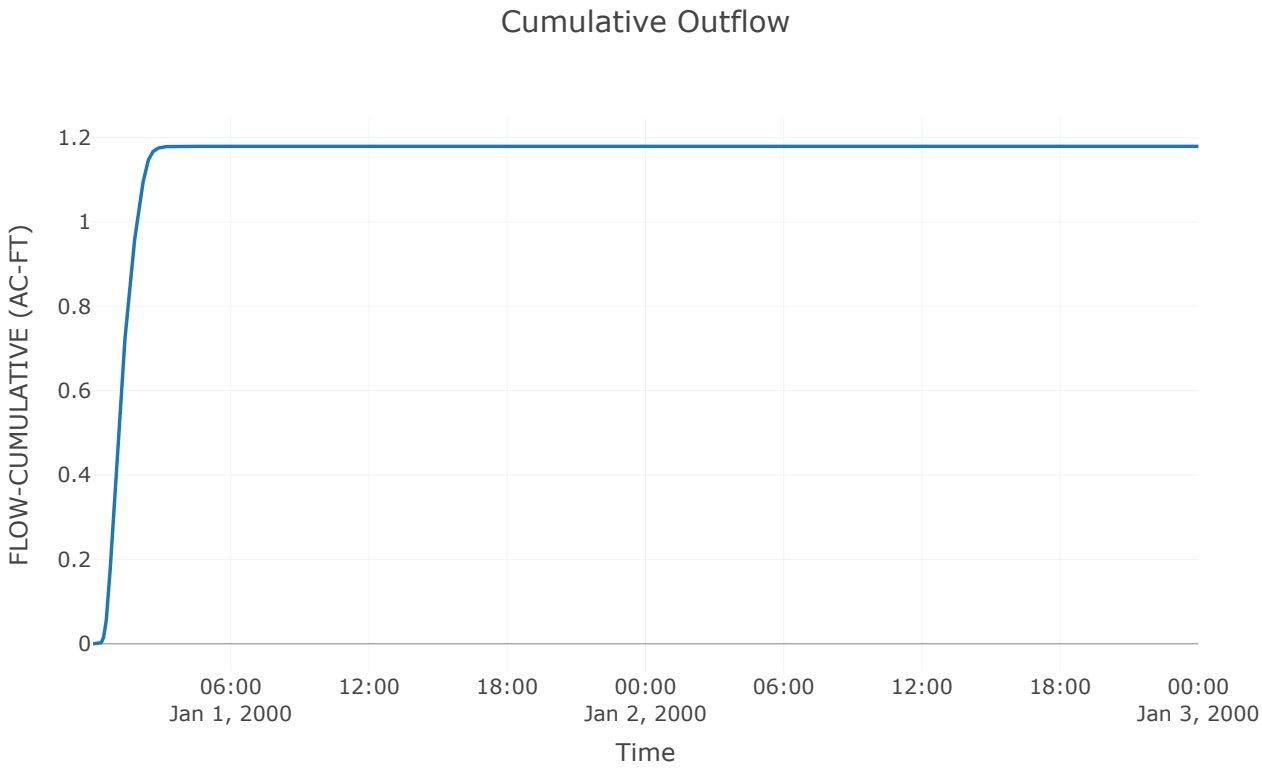
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

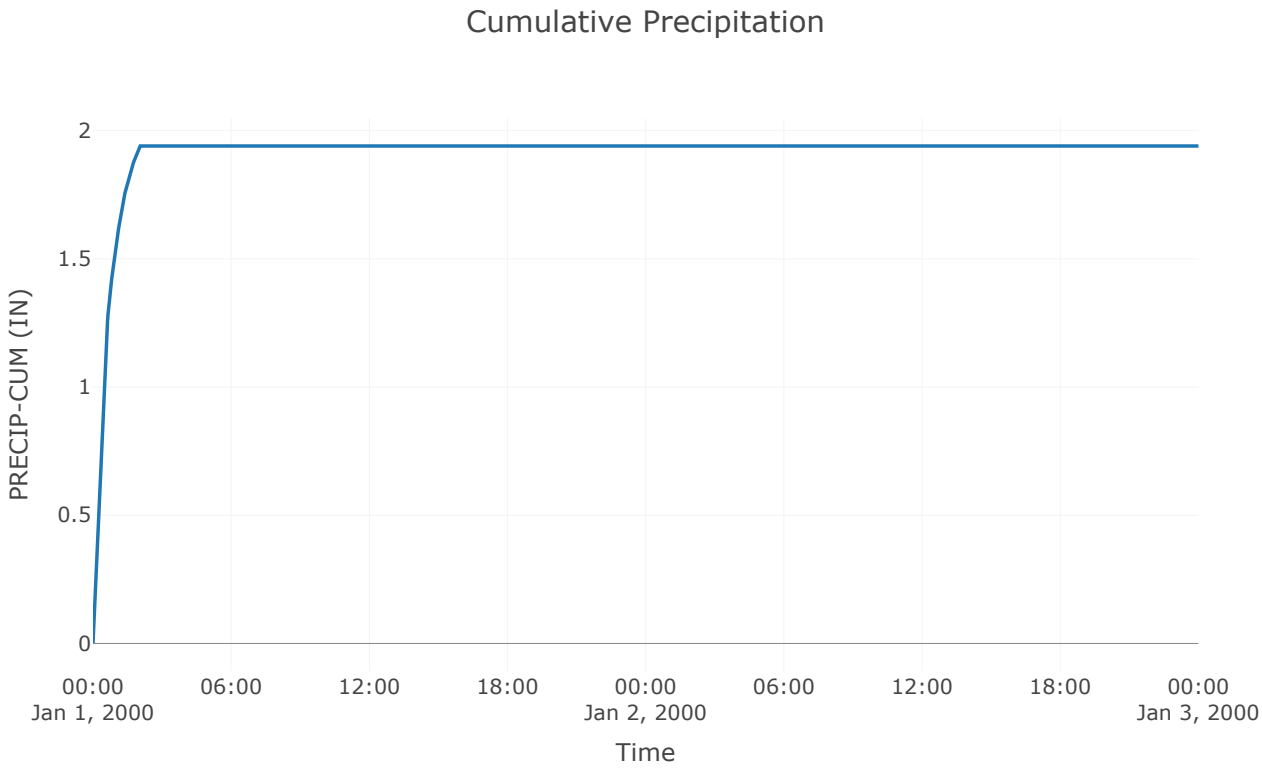
Precipitation and Outflow

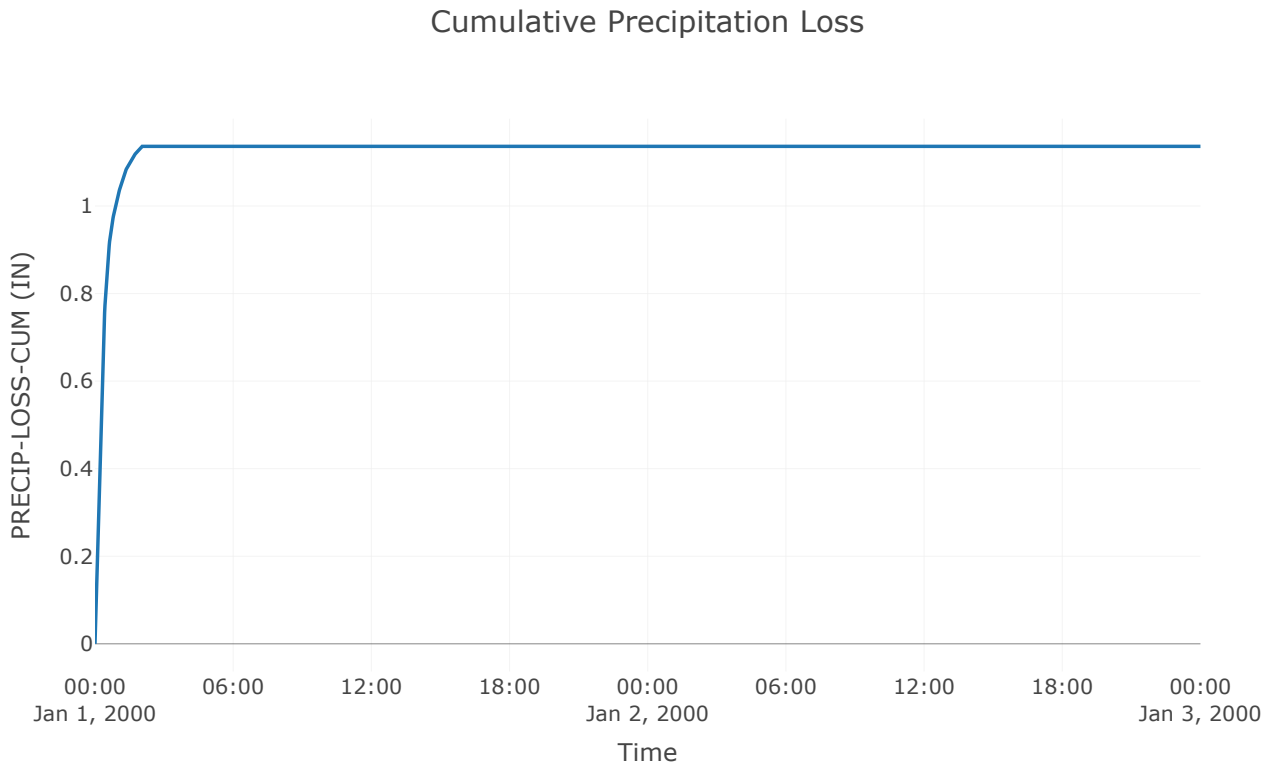


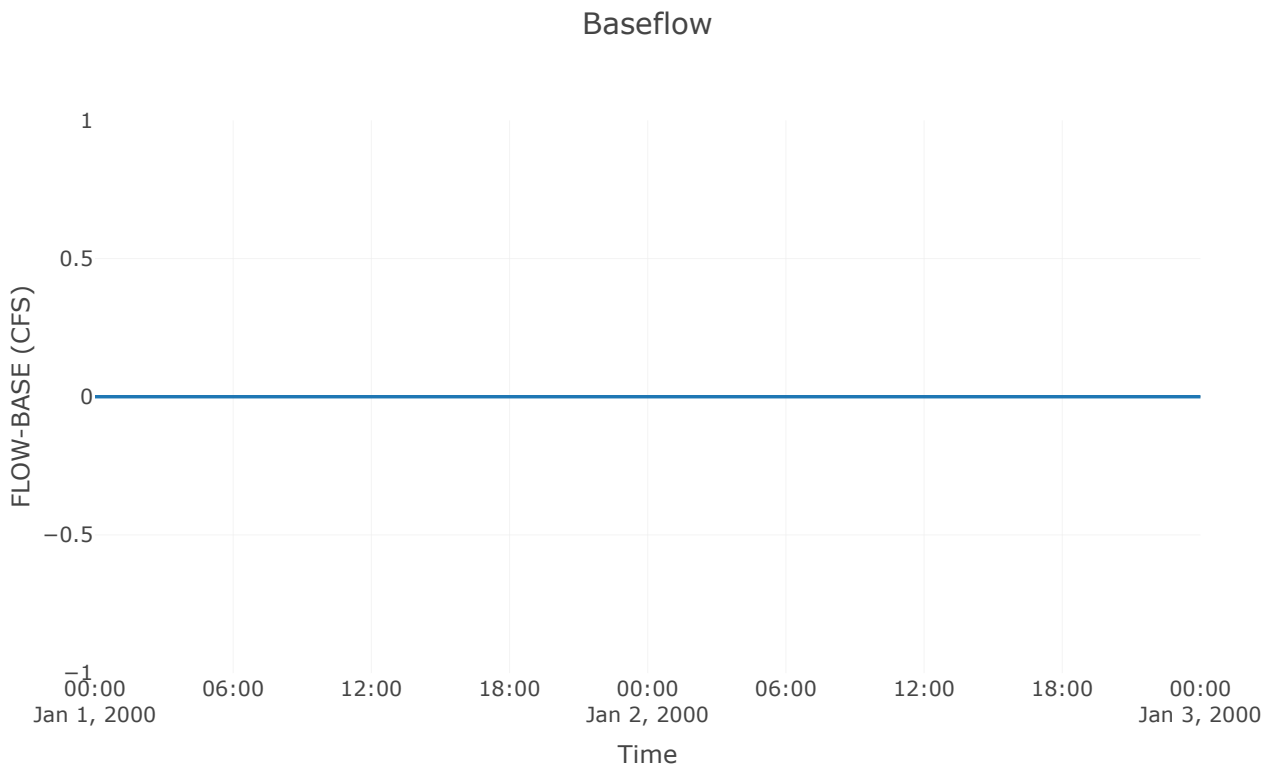
Cumulative Excess Precipitation

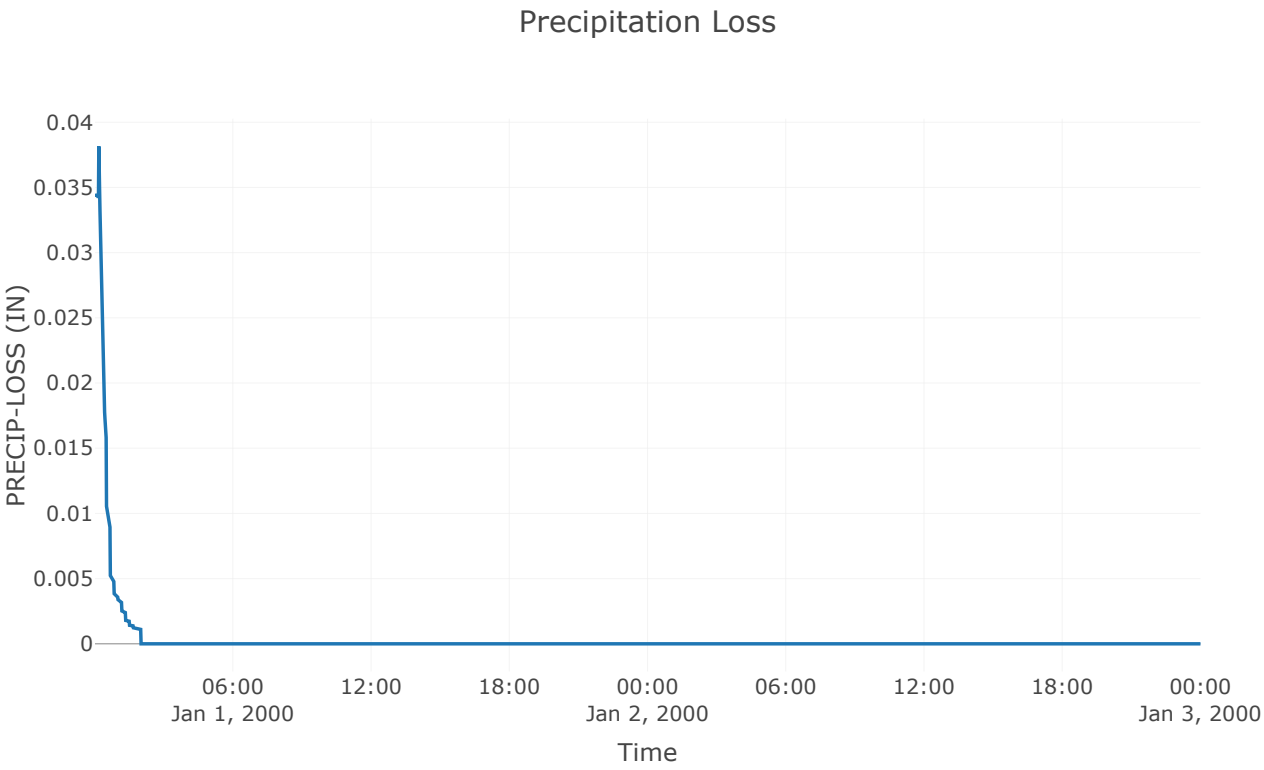


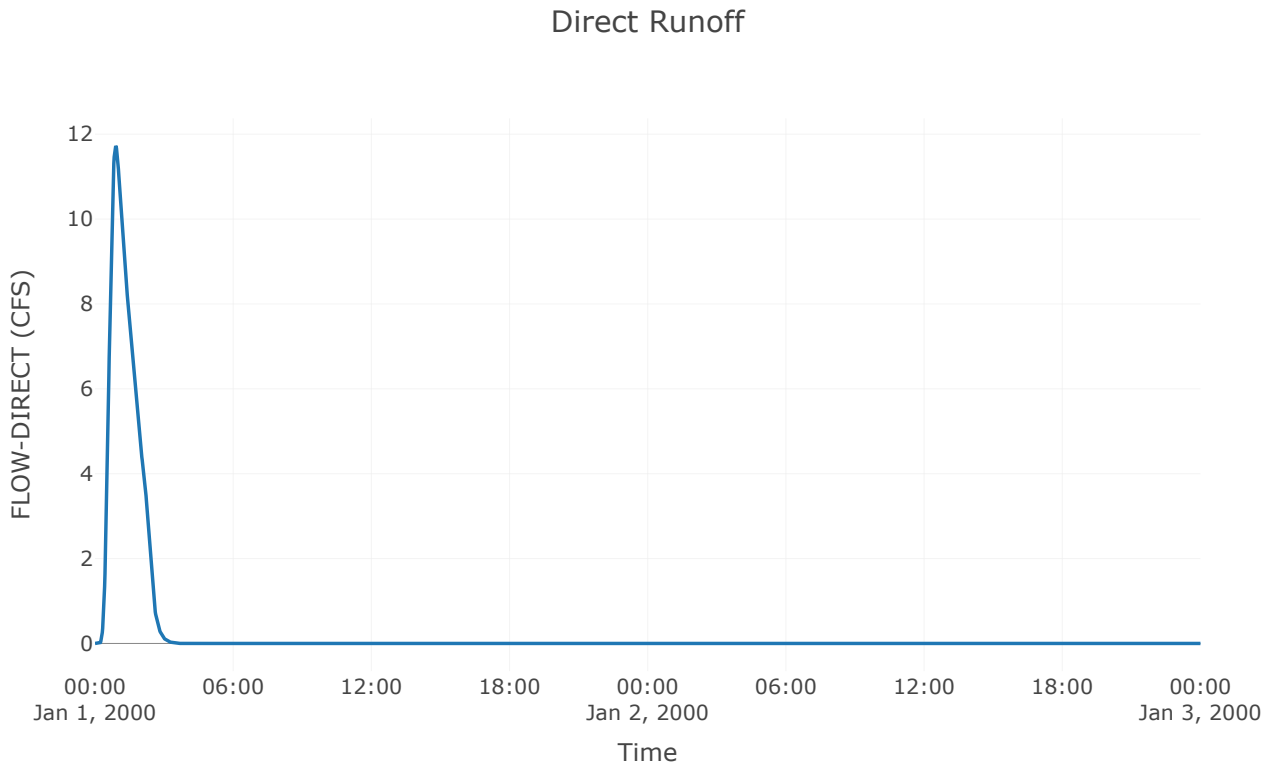

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

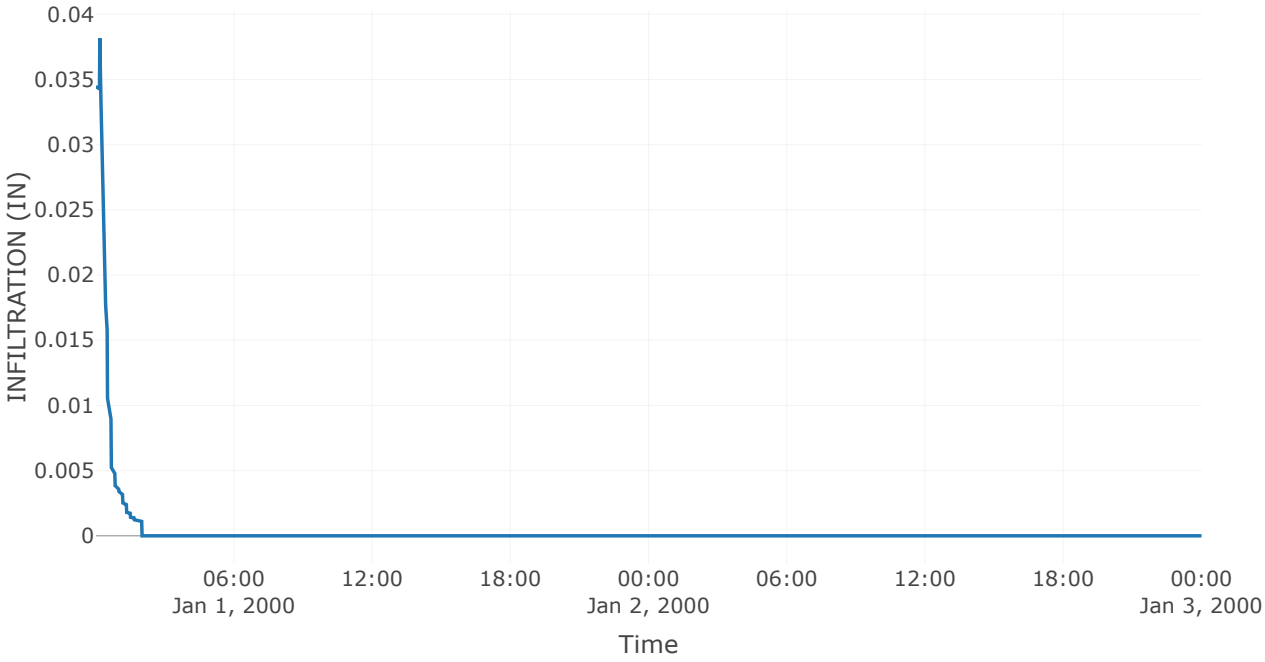

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

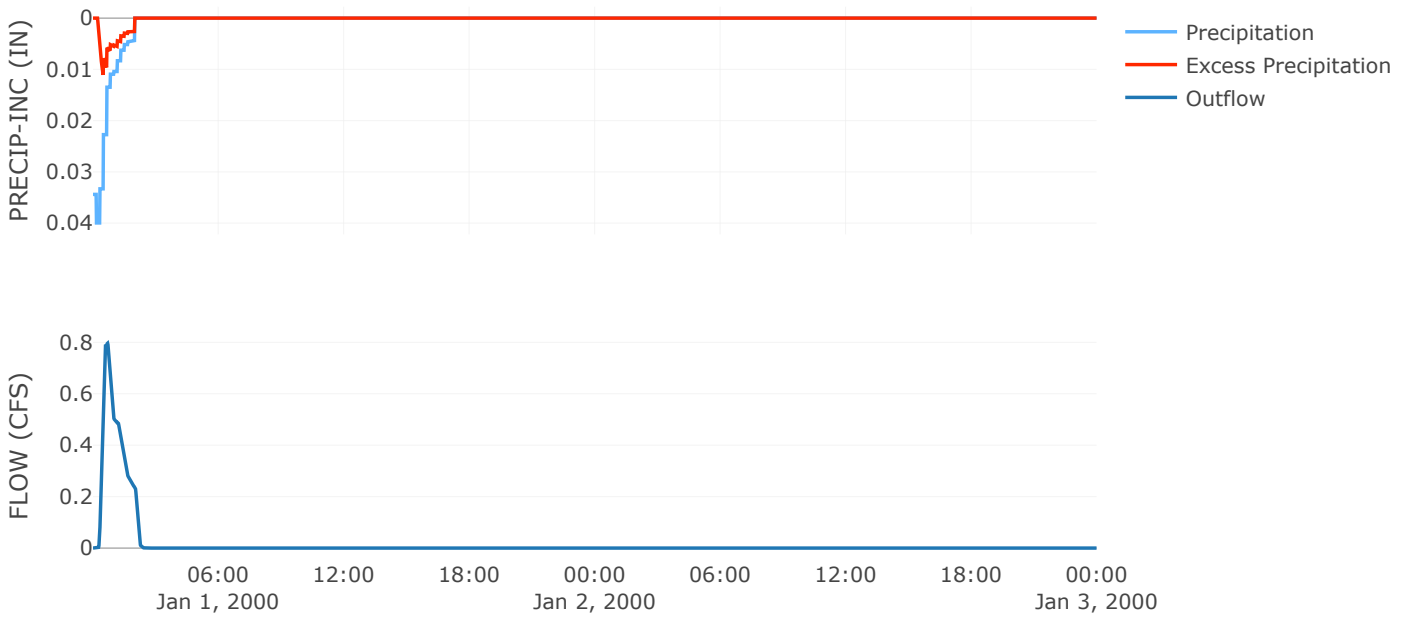
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

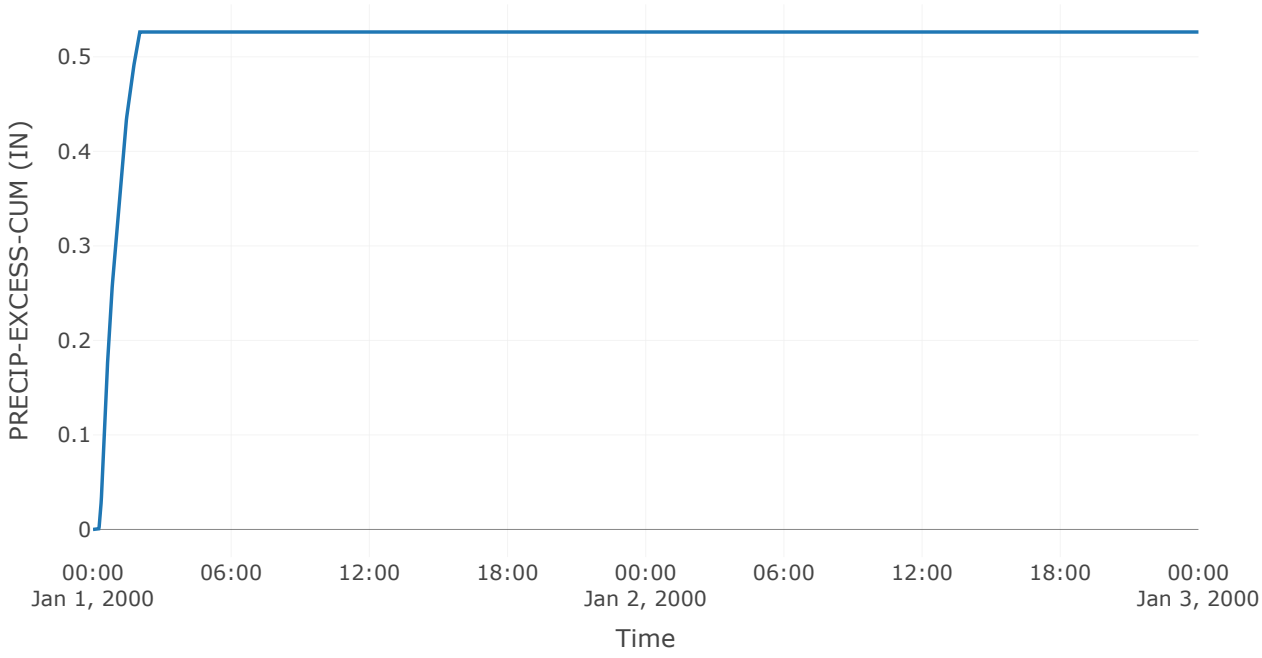
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

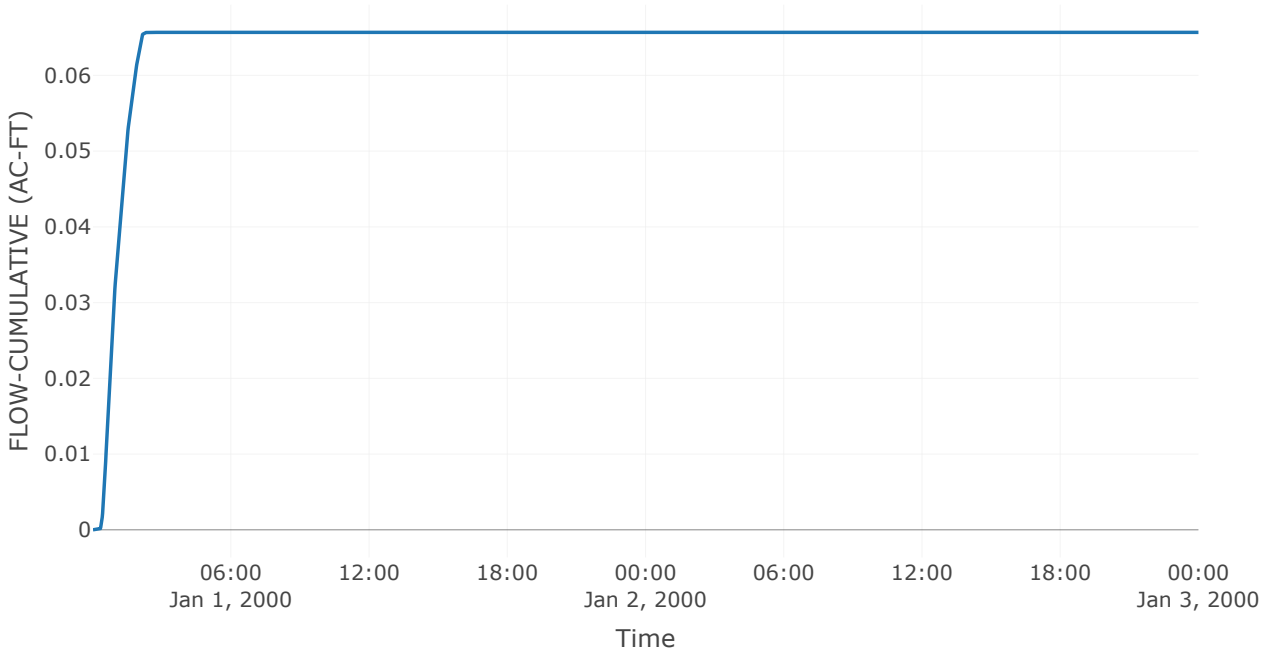
Precipitation and Outflow



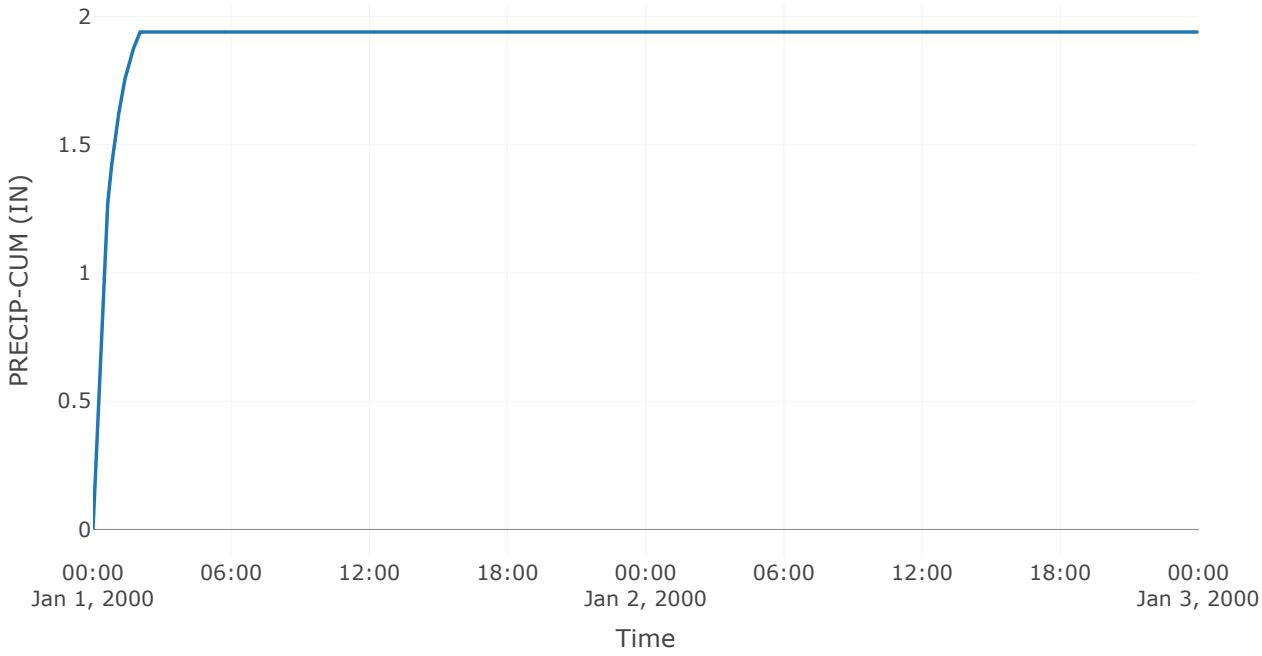
Cumulative Excess Precipitation

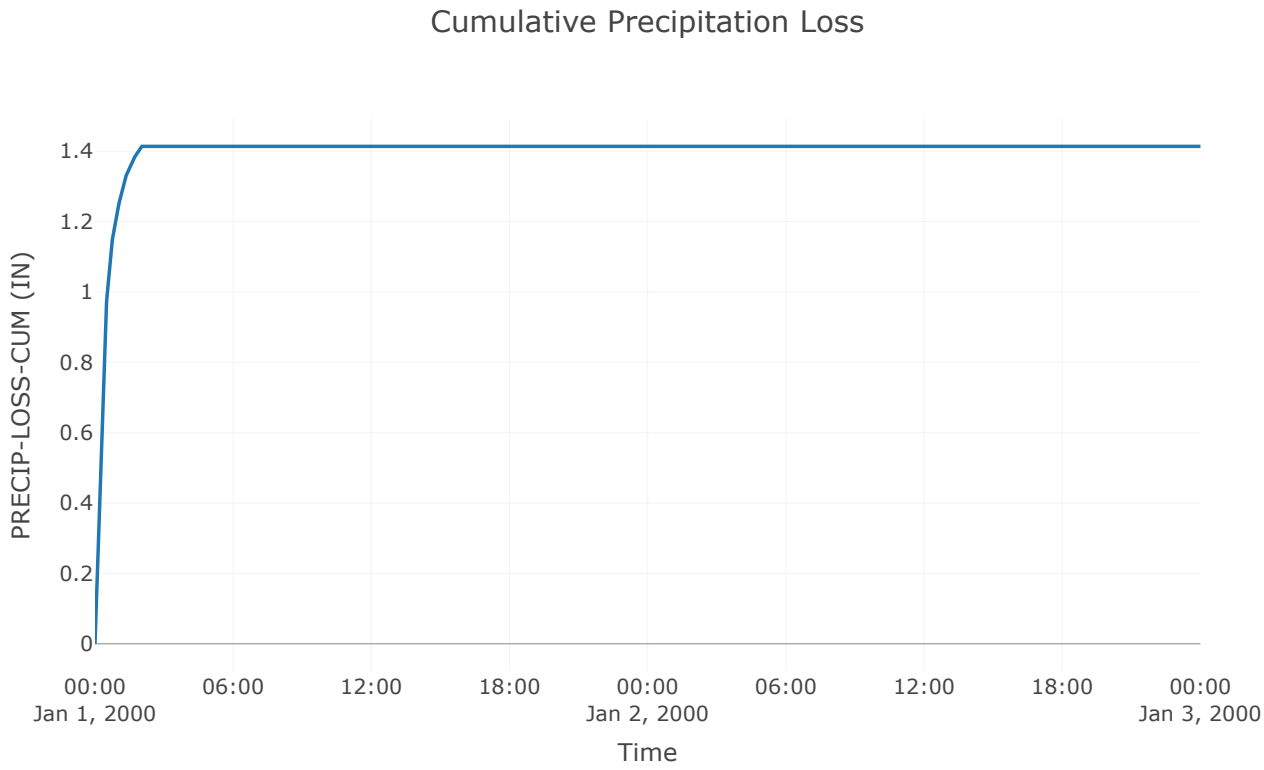


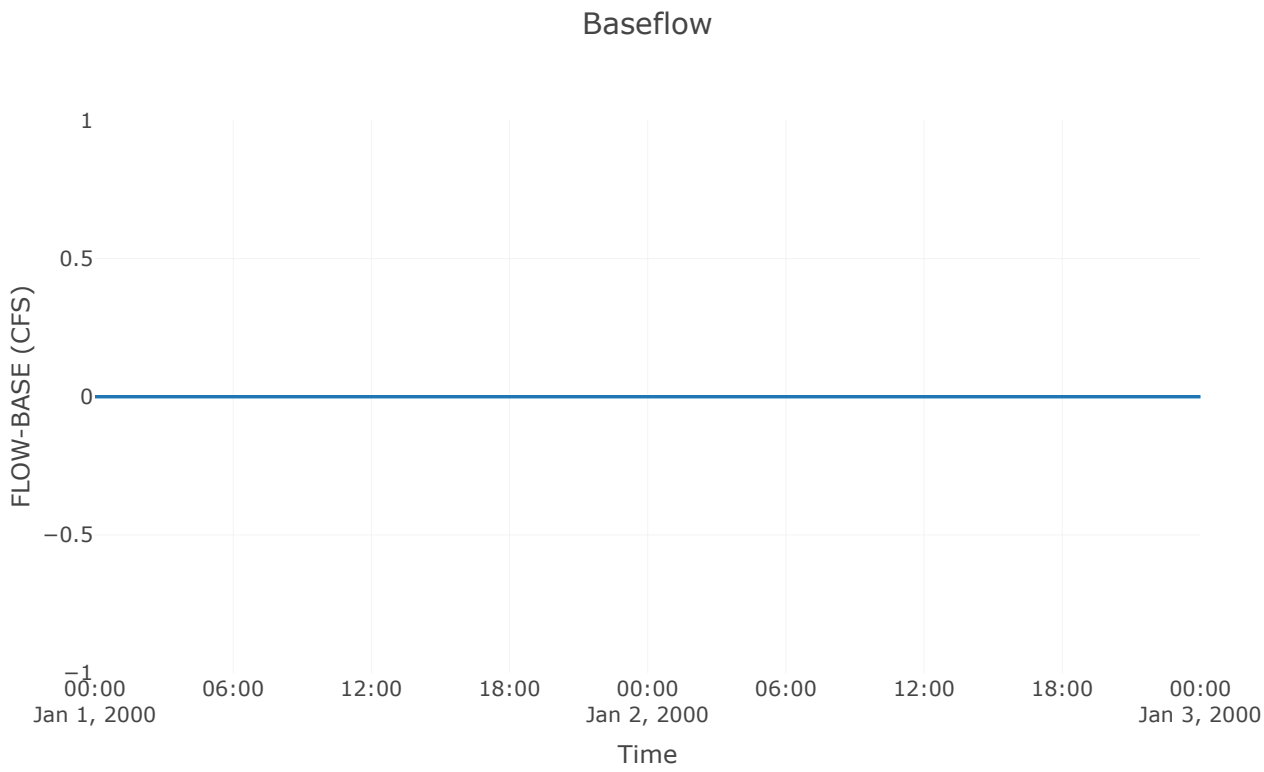
Cumulative Outflow



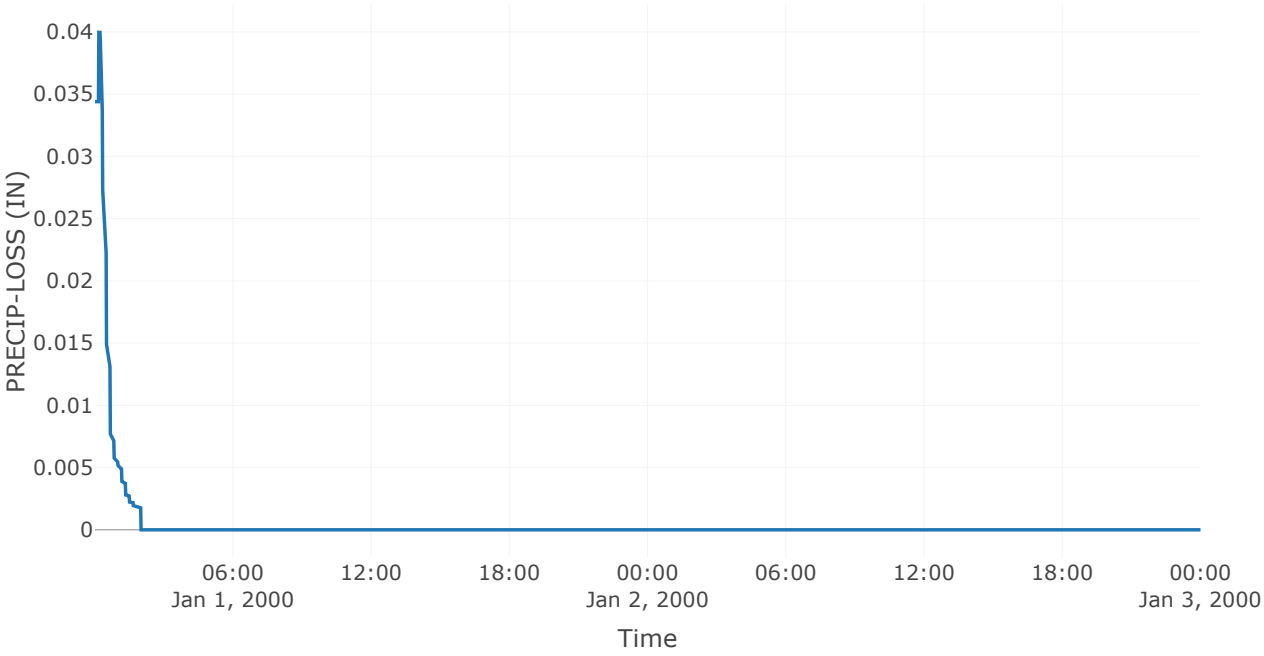
Cumulative Precipitation



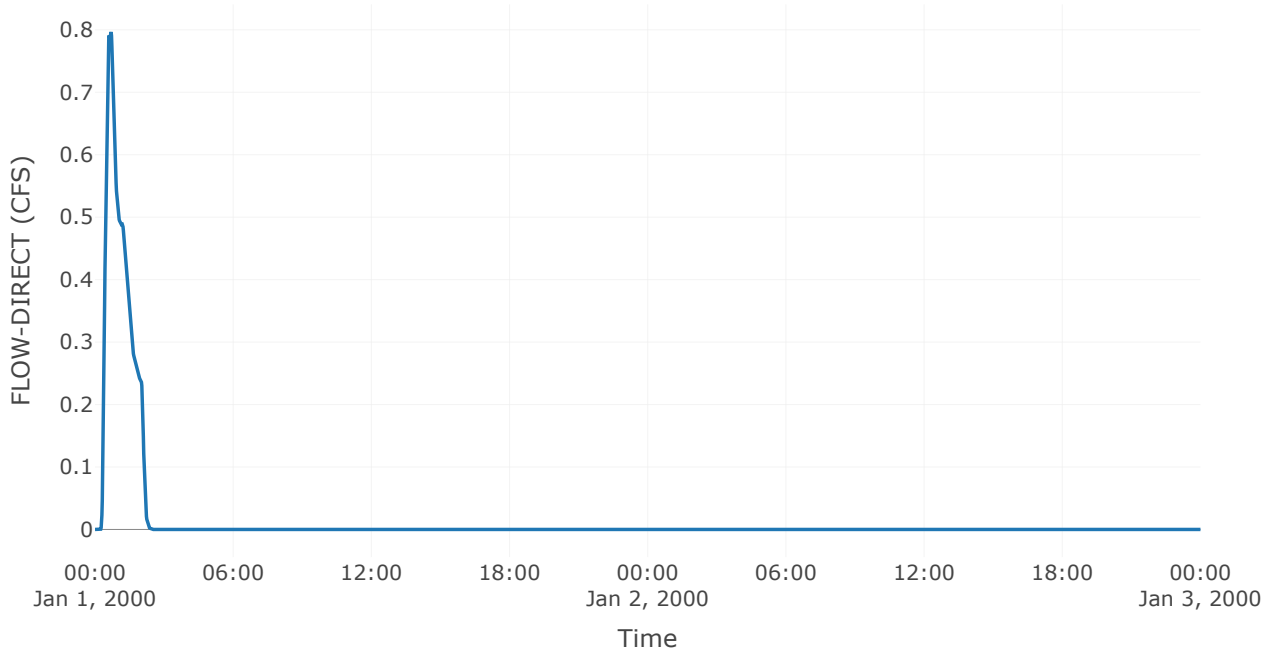

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

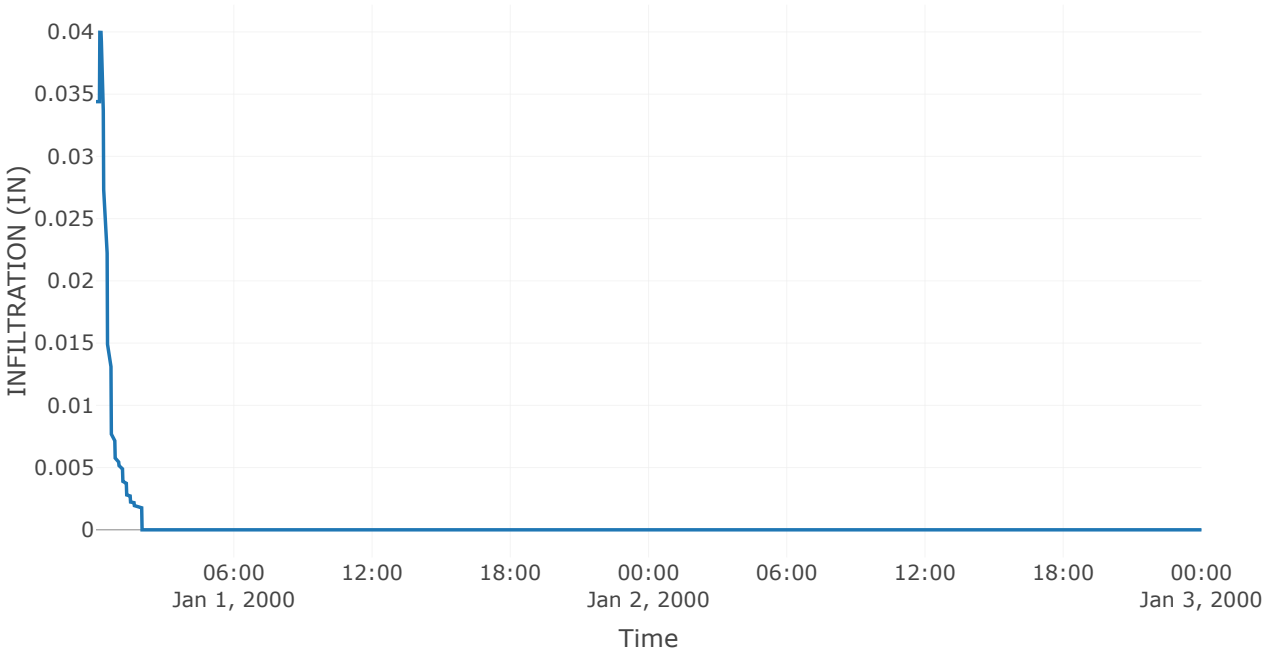

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

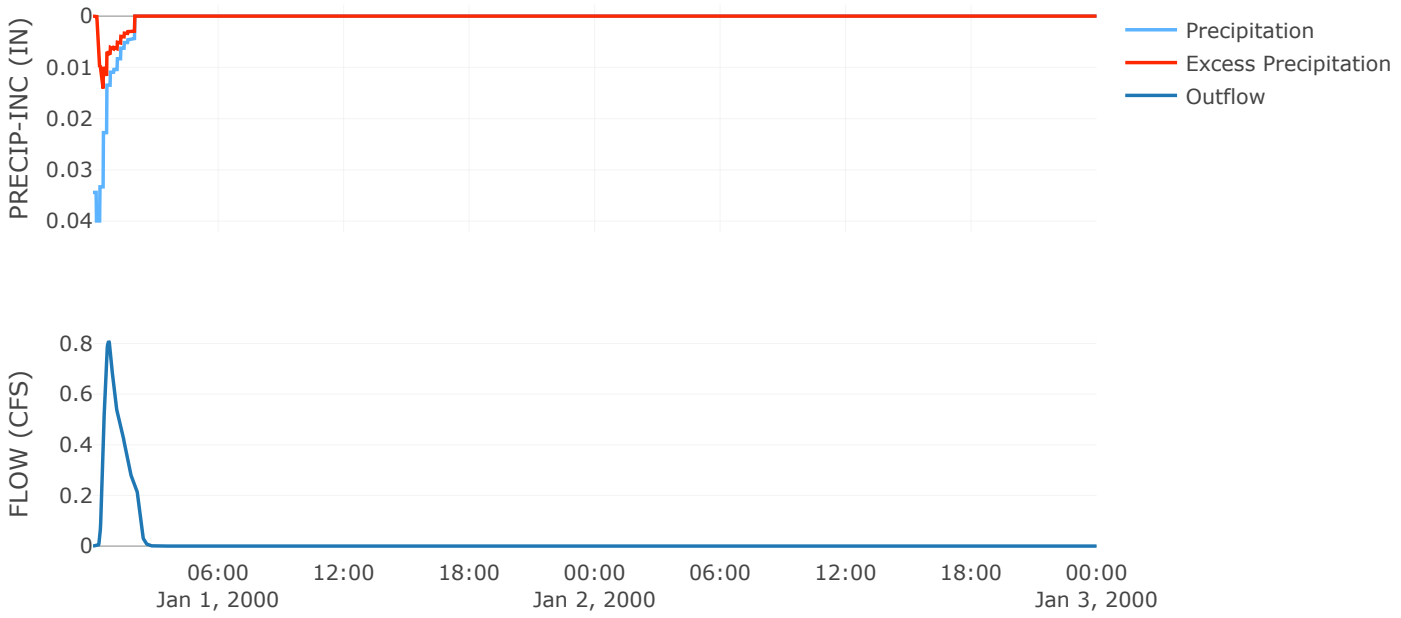
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

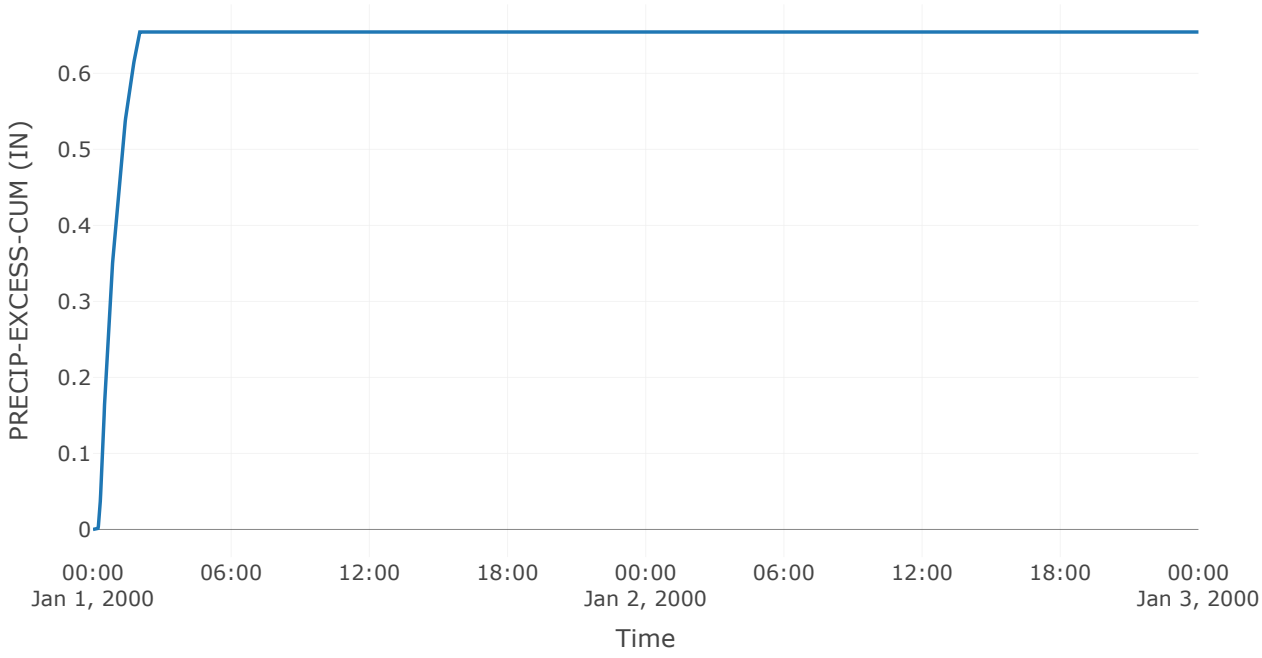
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

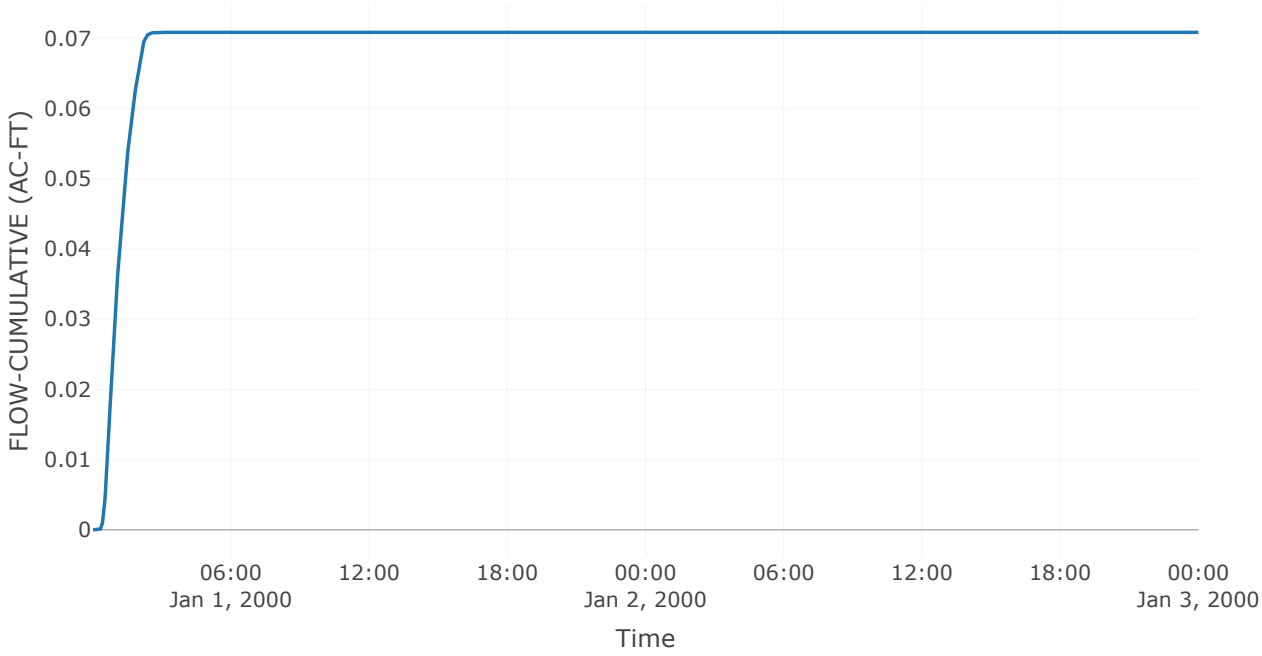
Precipitation and Outflow



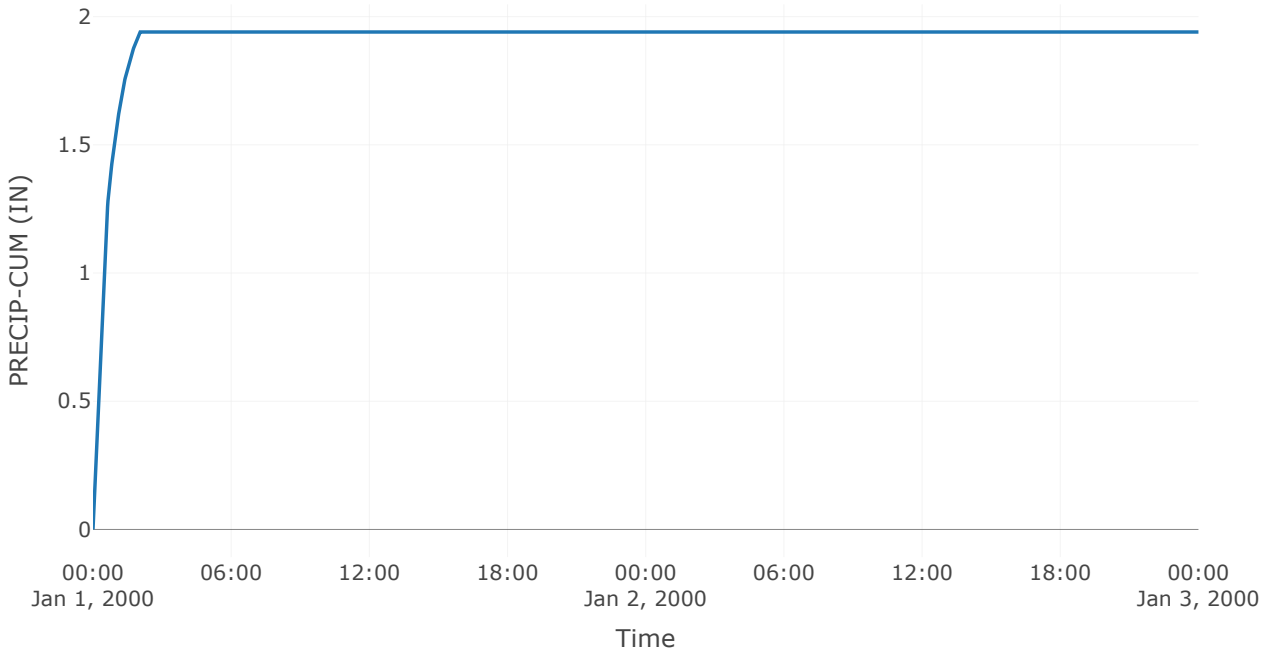
Cumulative Excess Precipitation

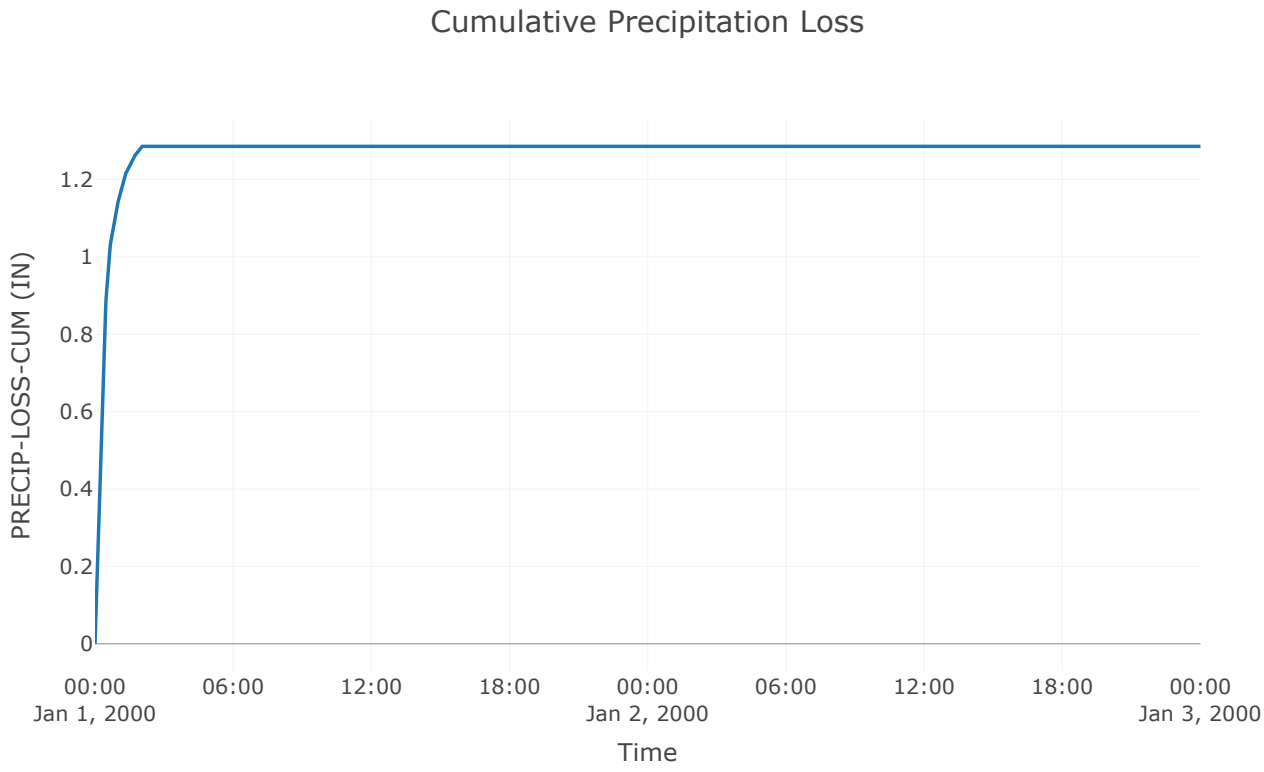


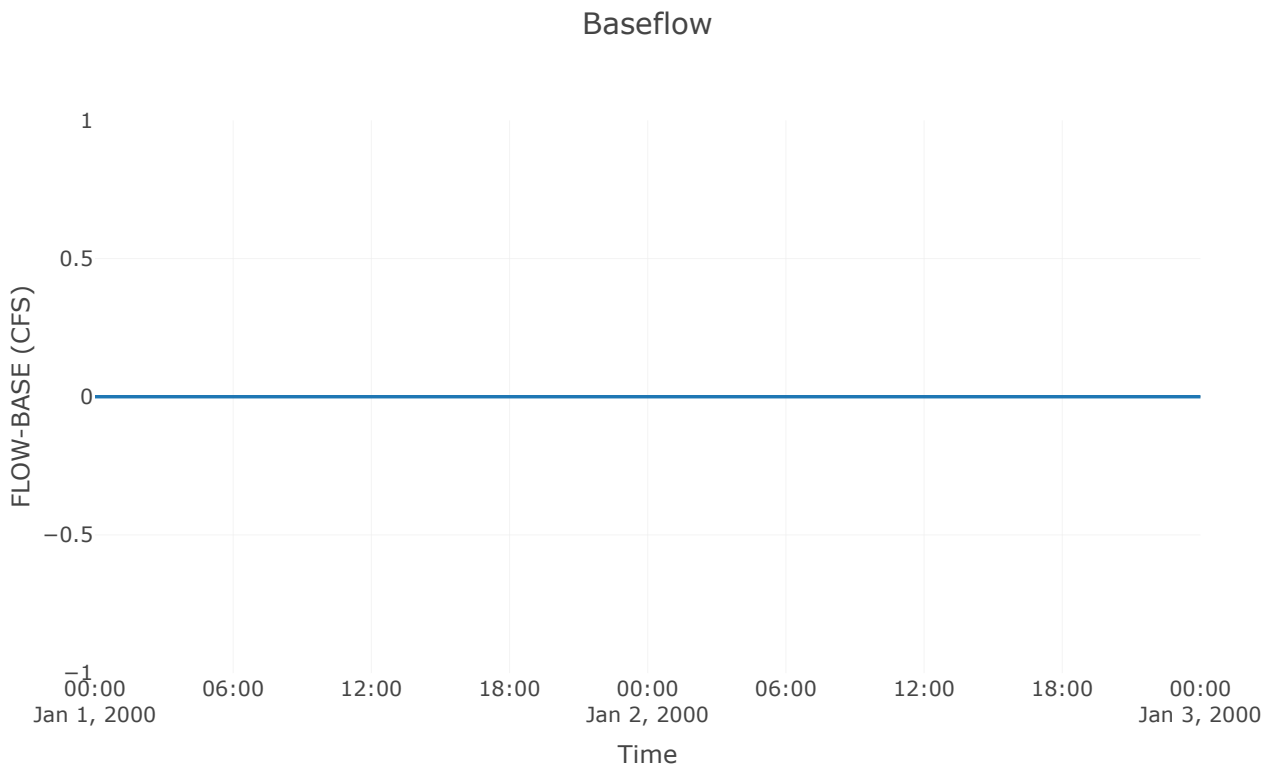
Cumulative Outflow



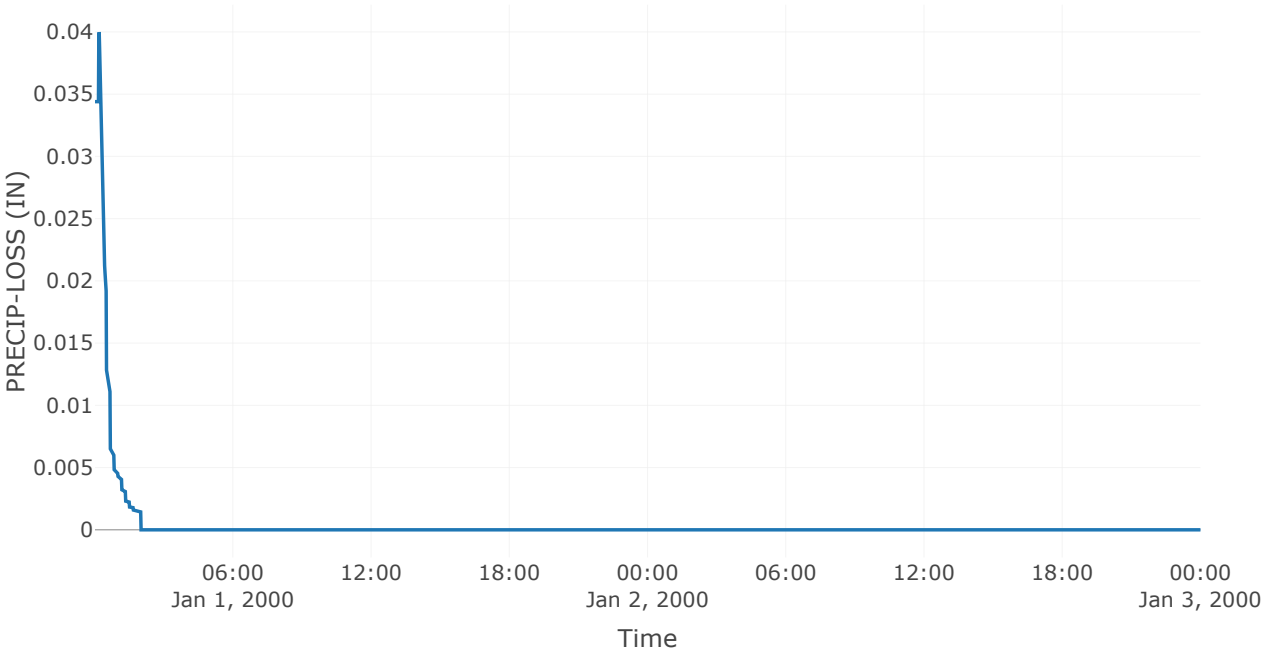
Cumulative Precipitation



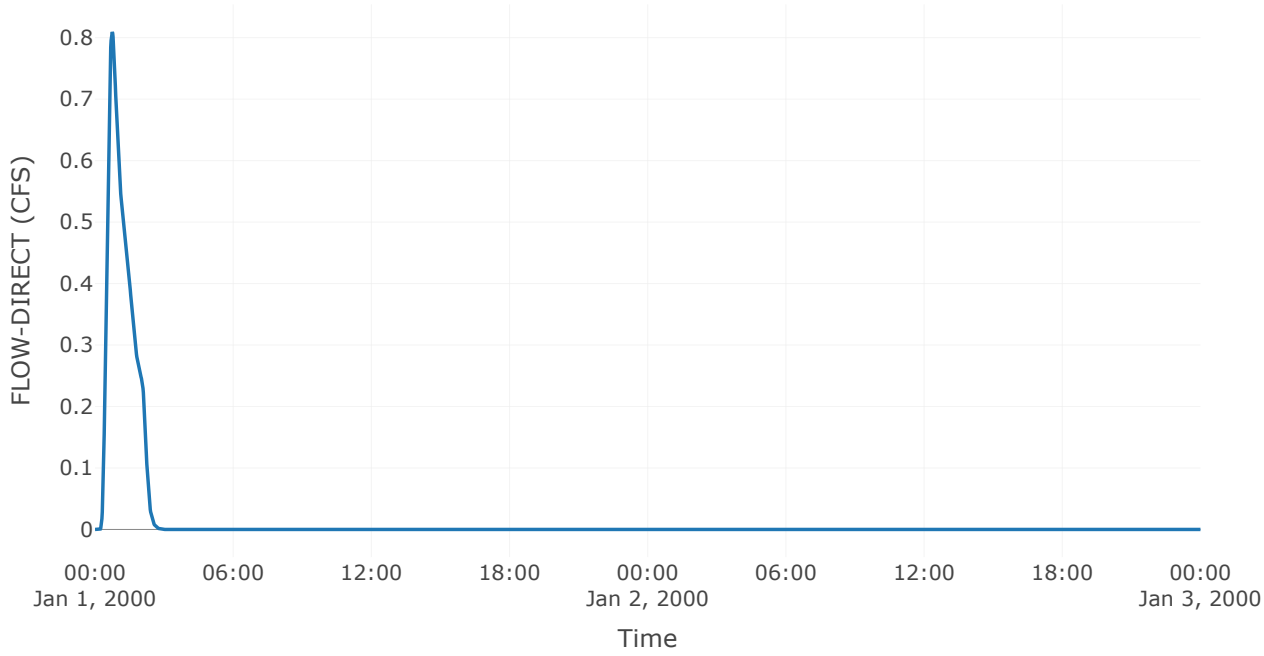

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

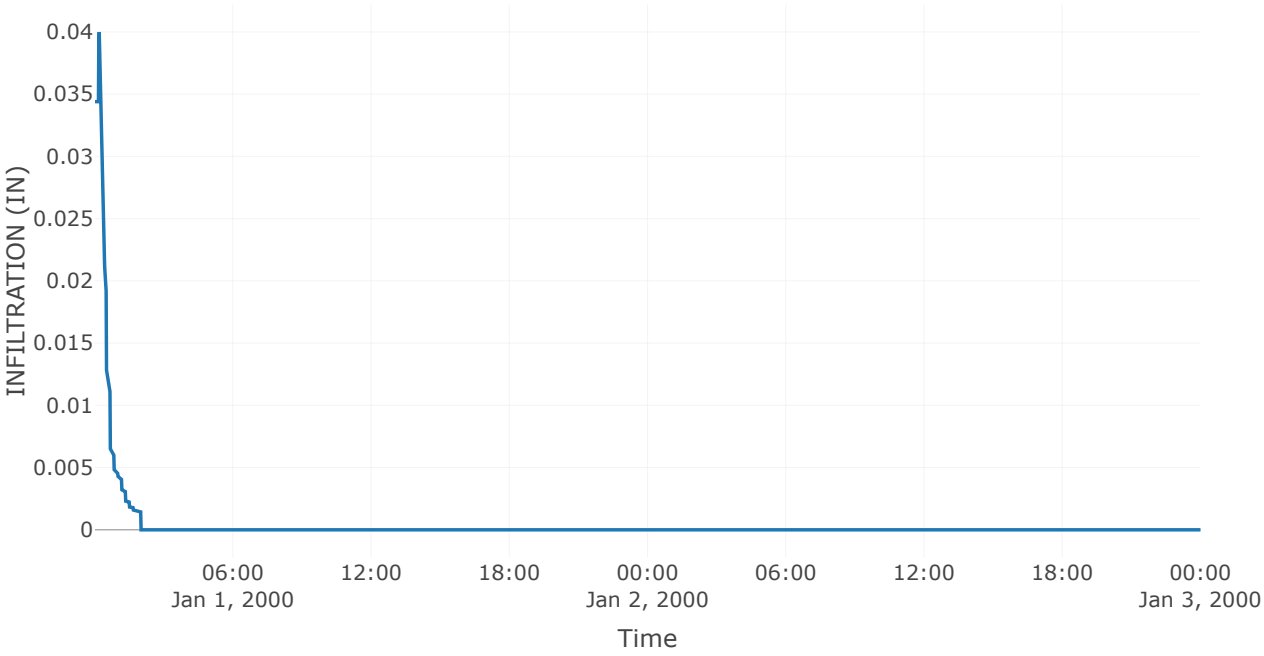

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



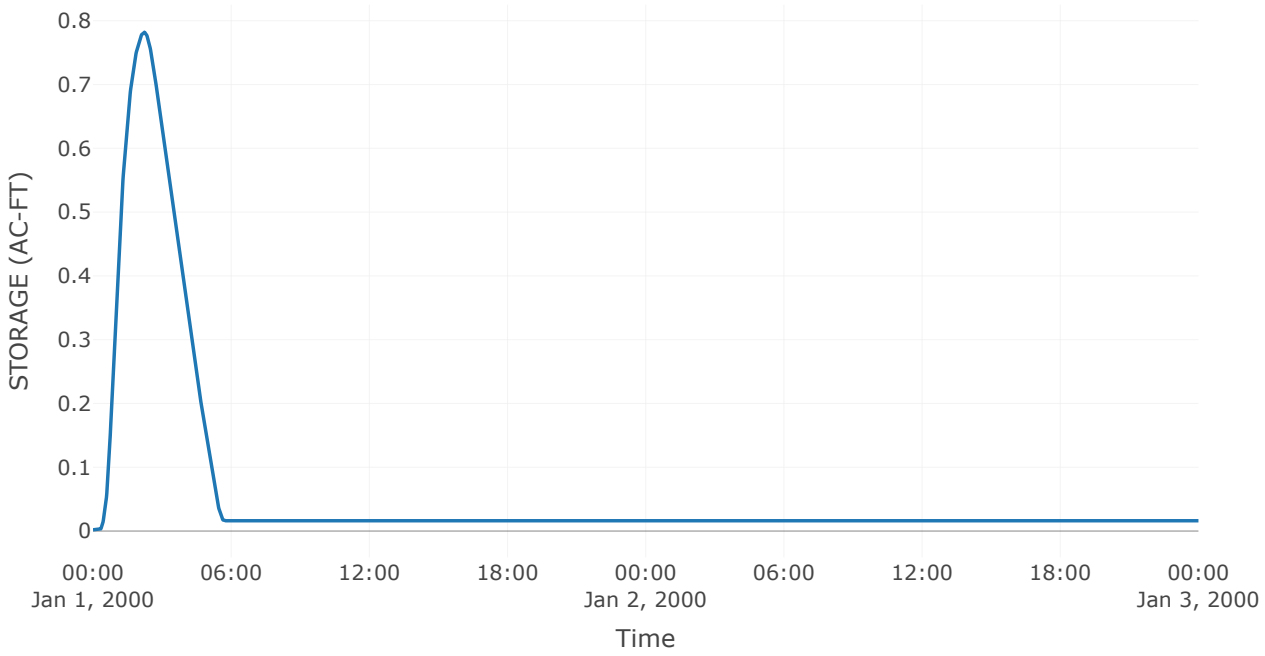

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

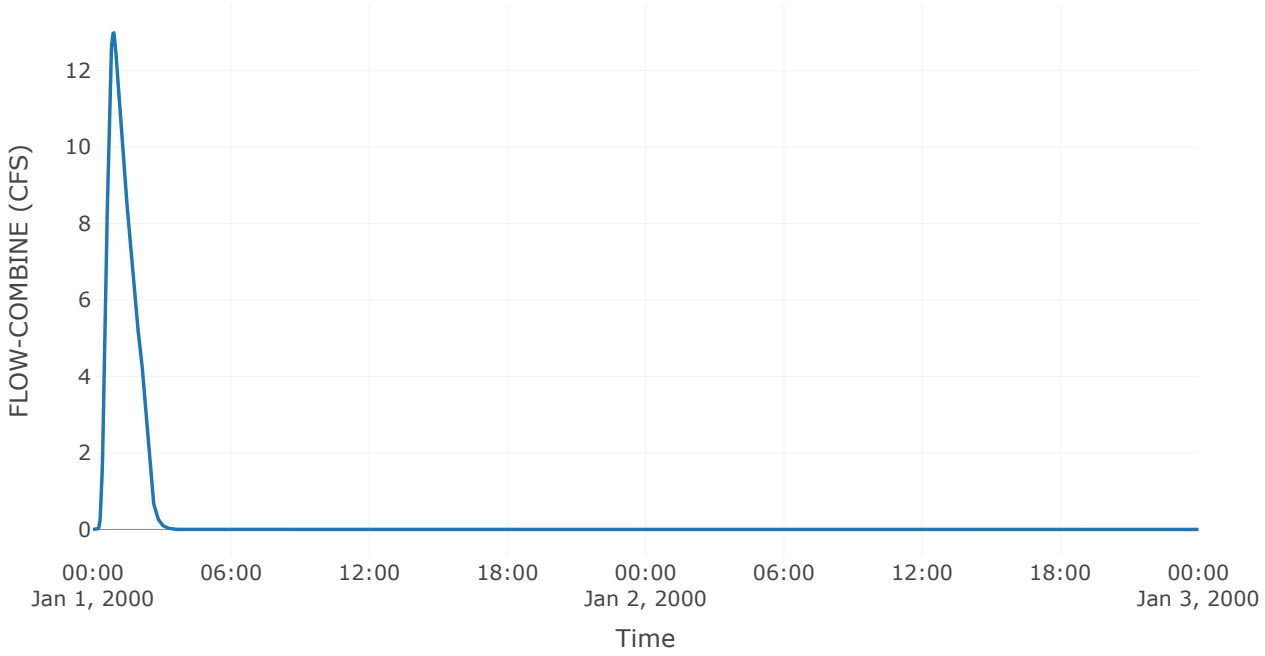
Downstream : Basin 2

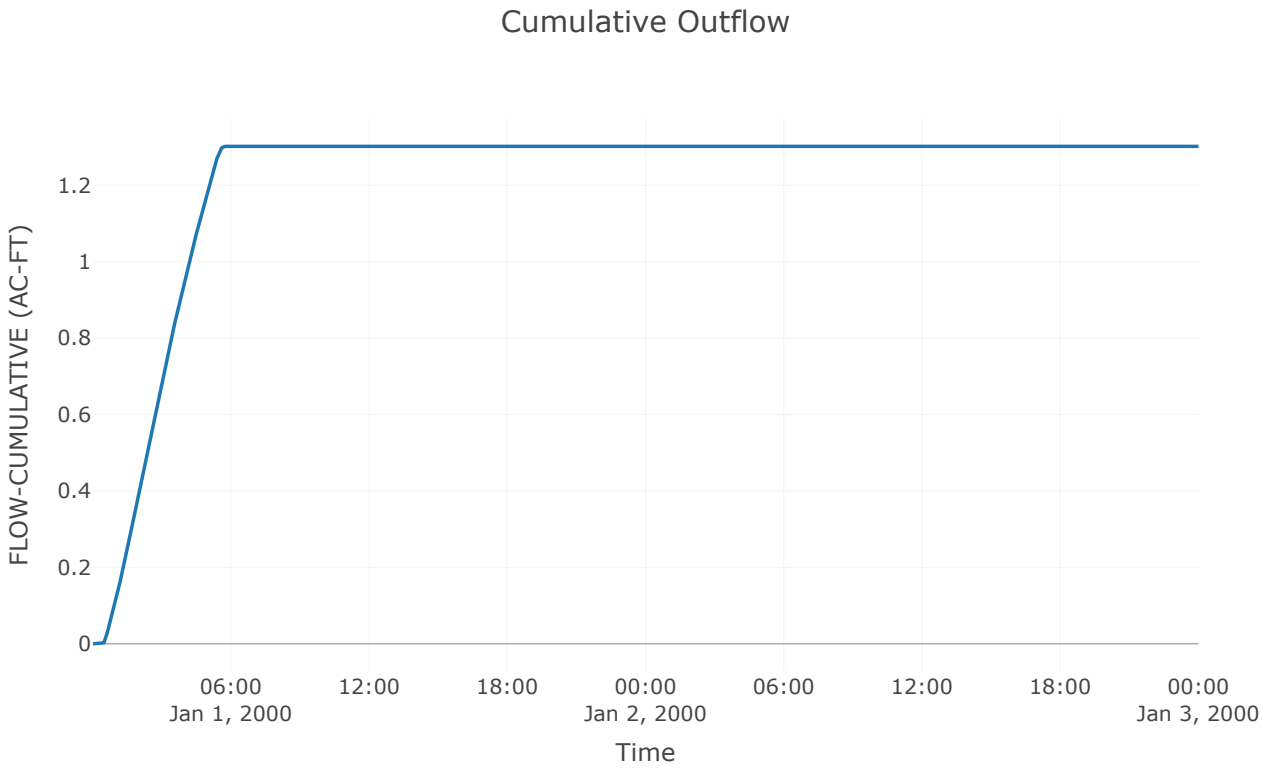
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

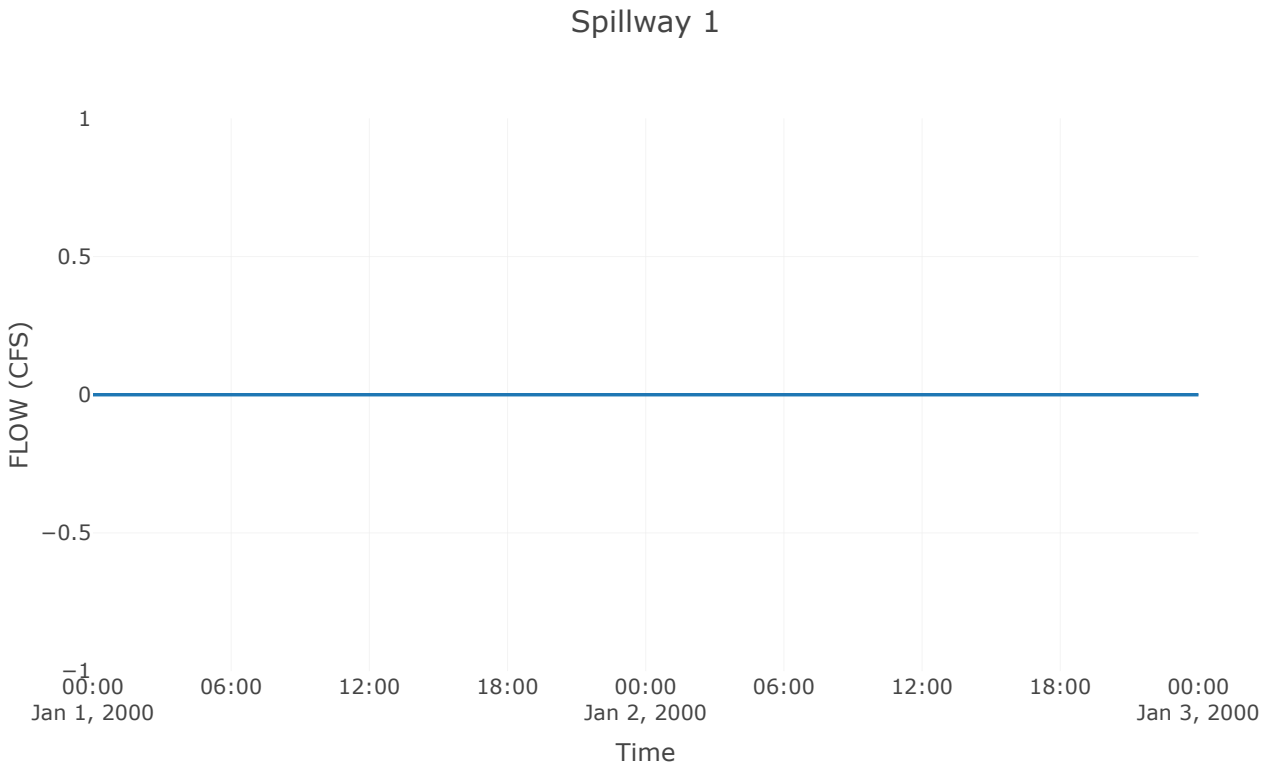
Storage

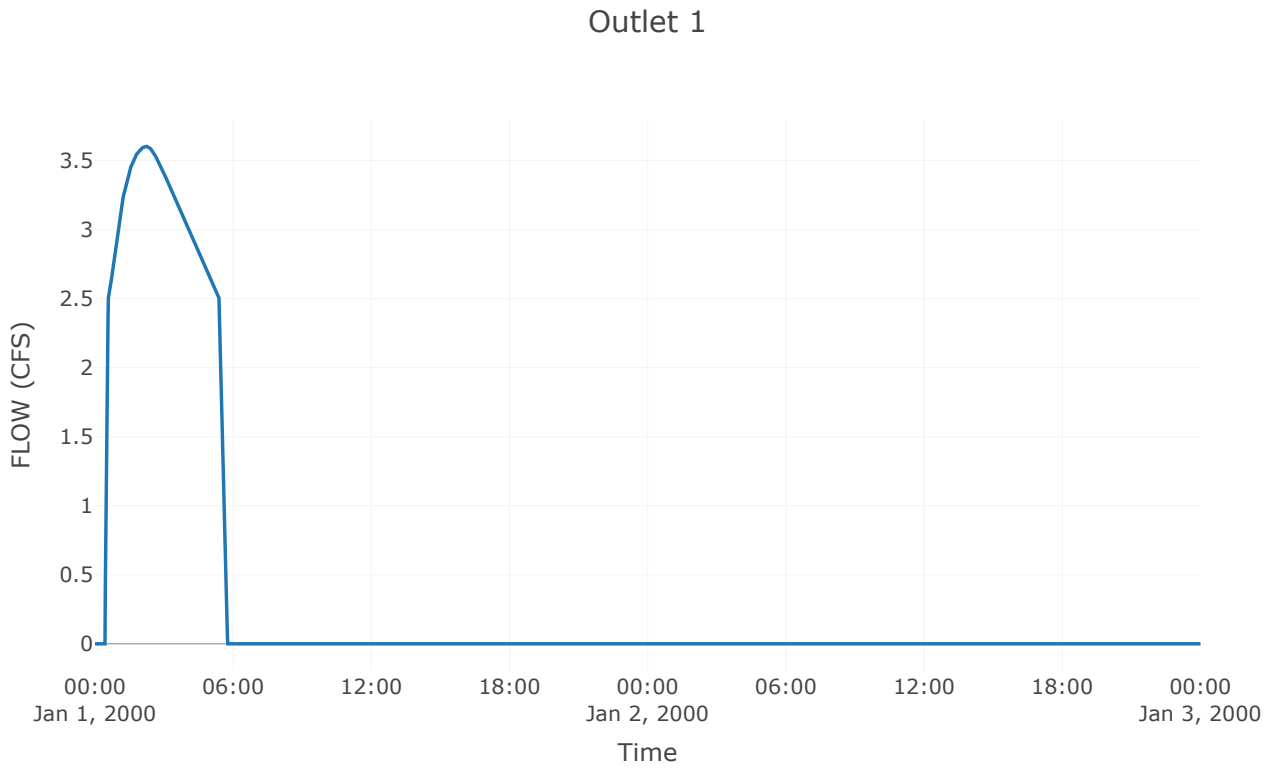


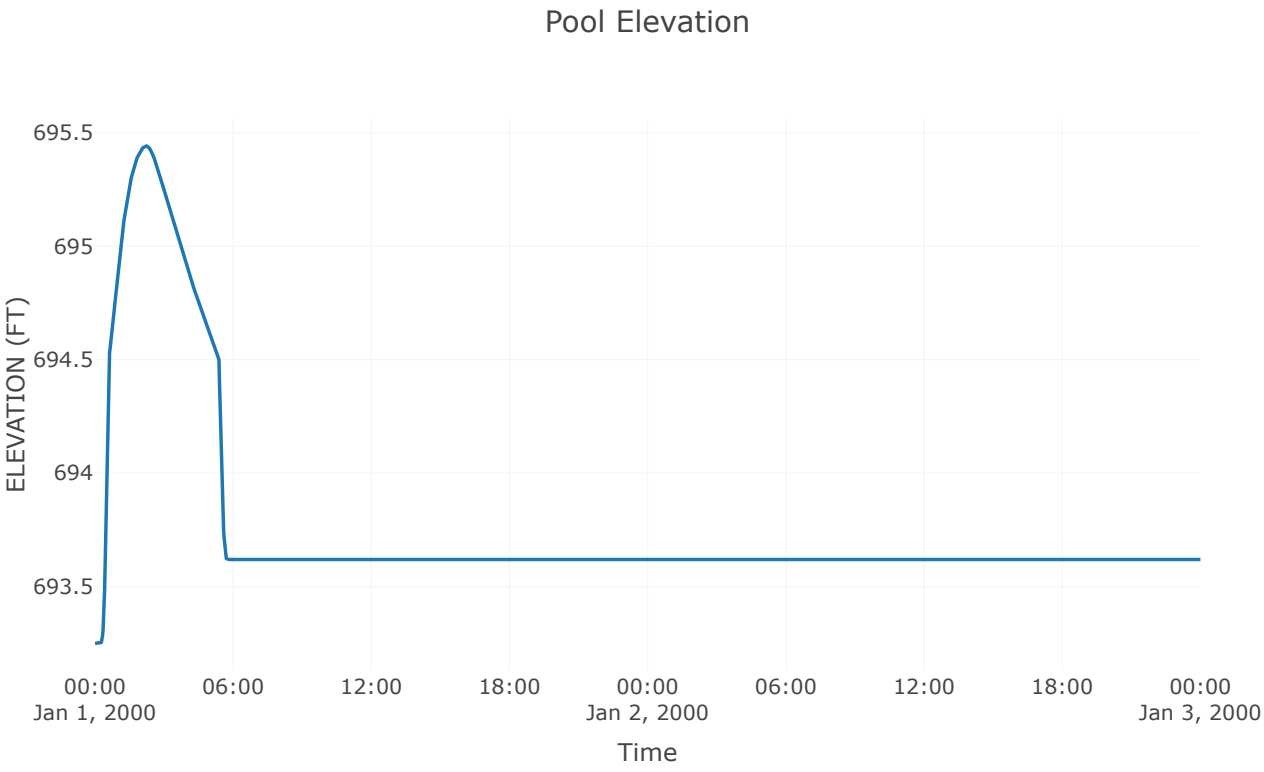
Combined Inflow

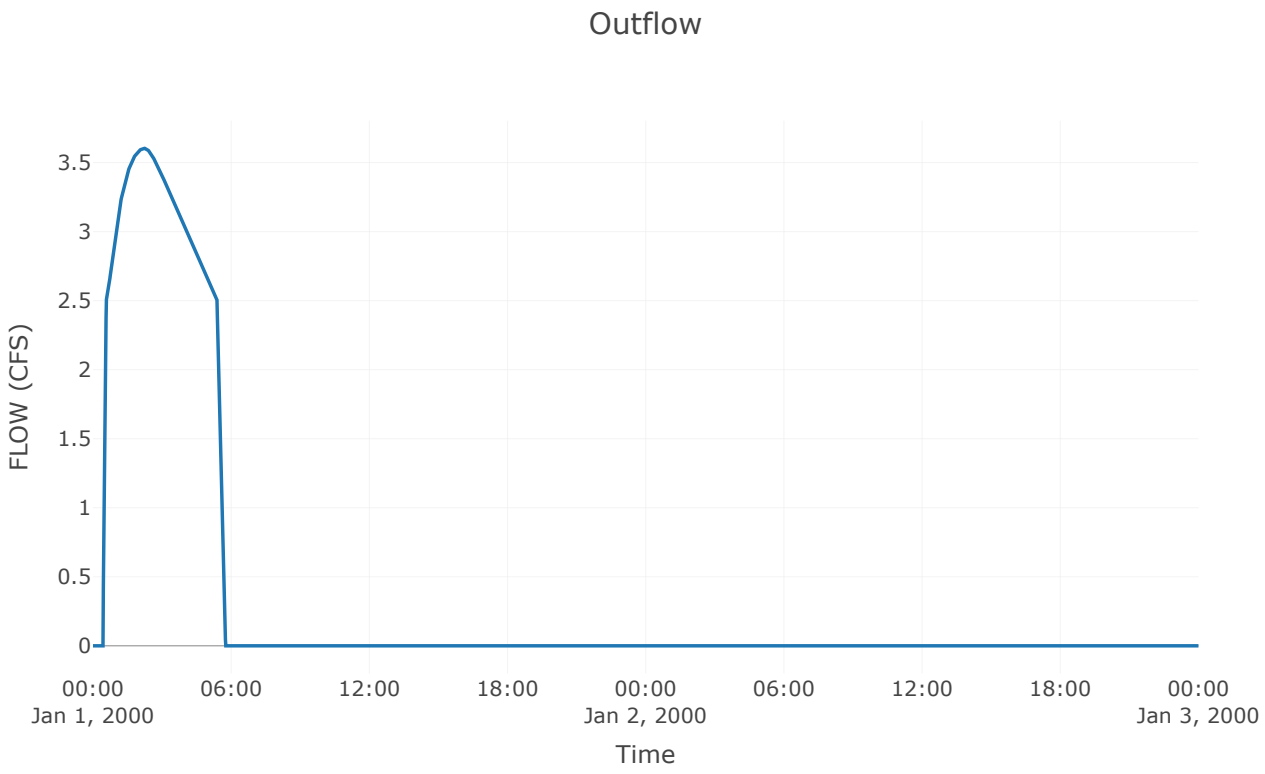



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695.5
695
694.5
694
693.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

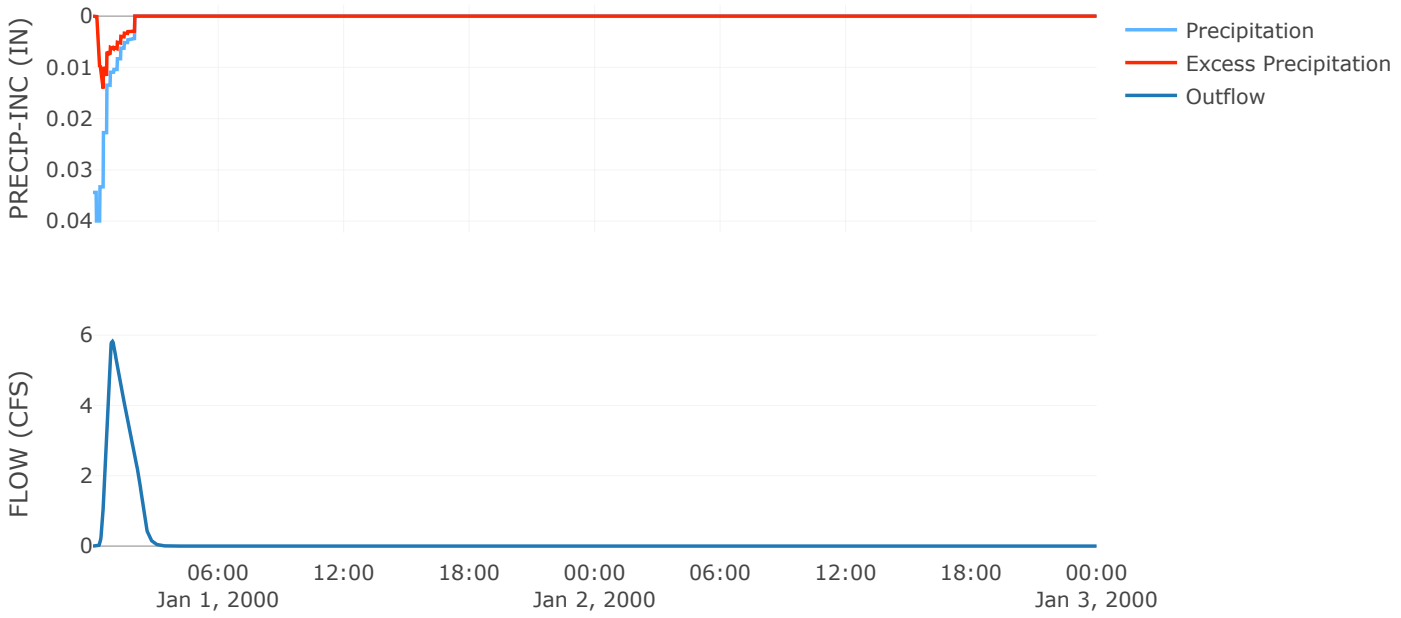
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

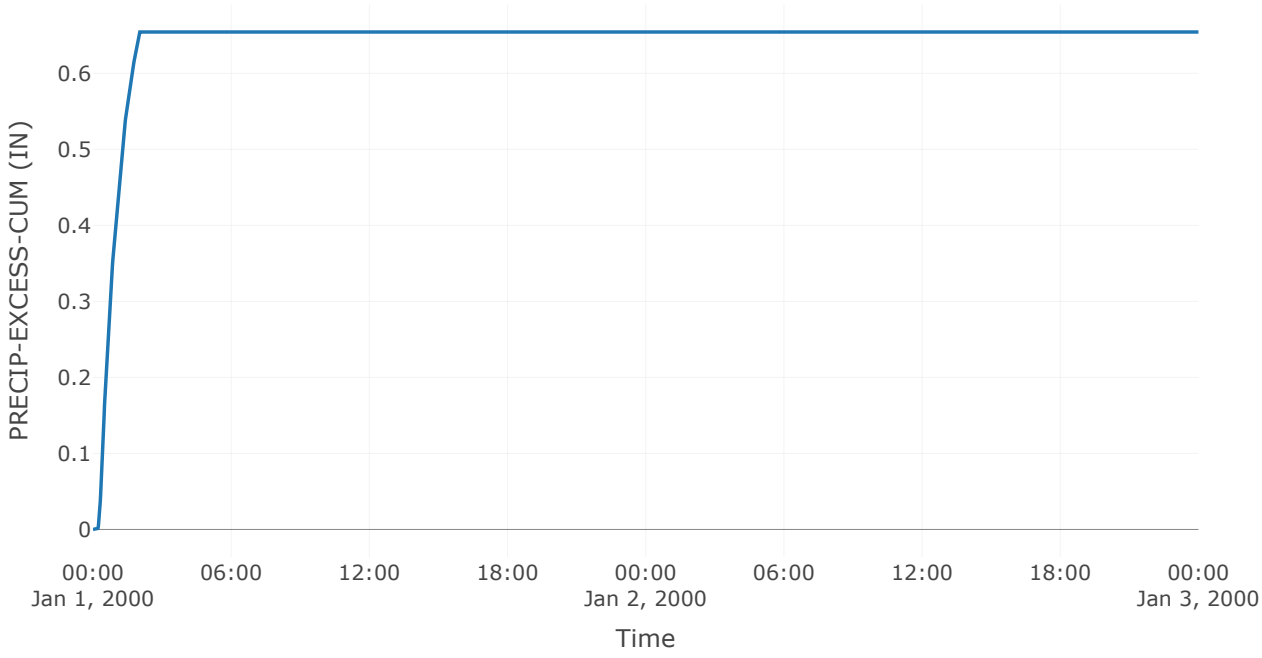
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

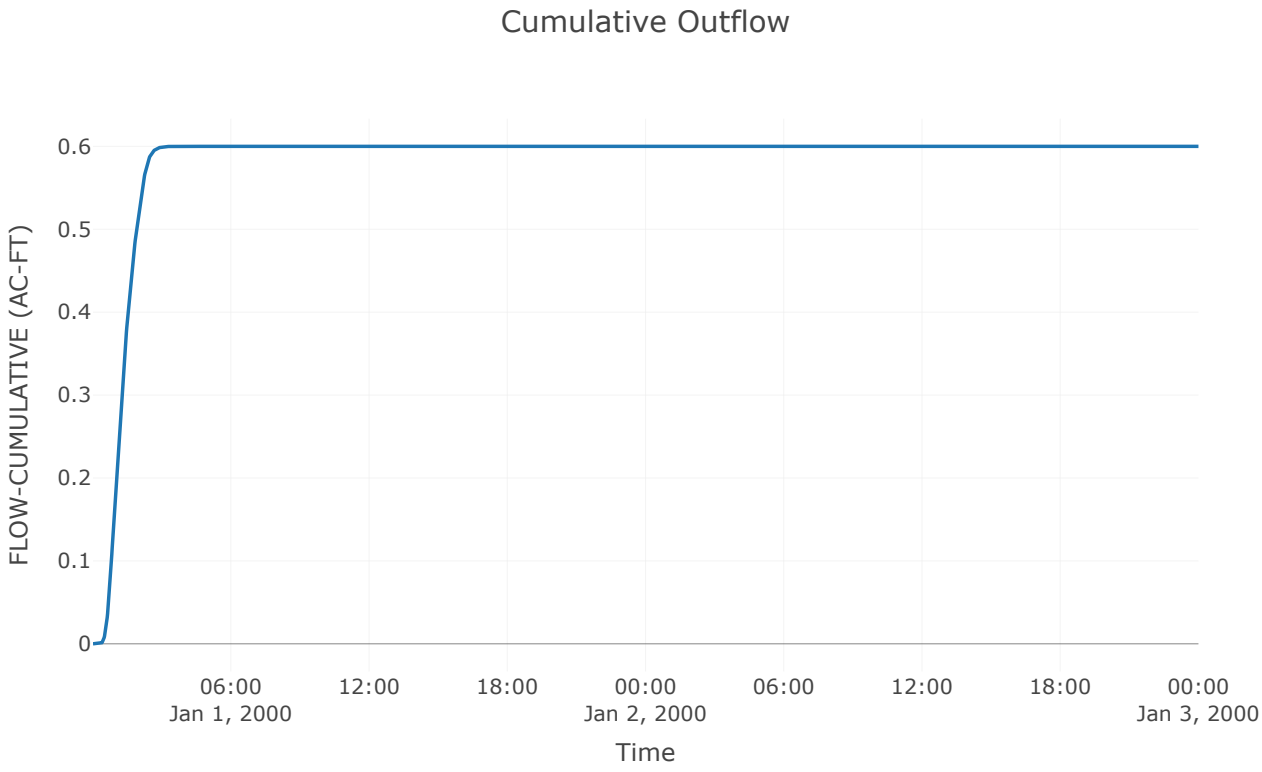
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

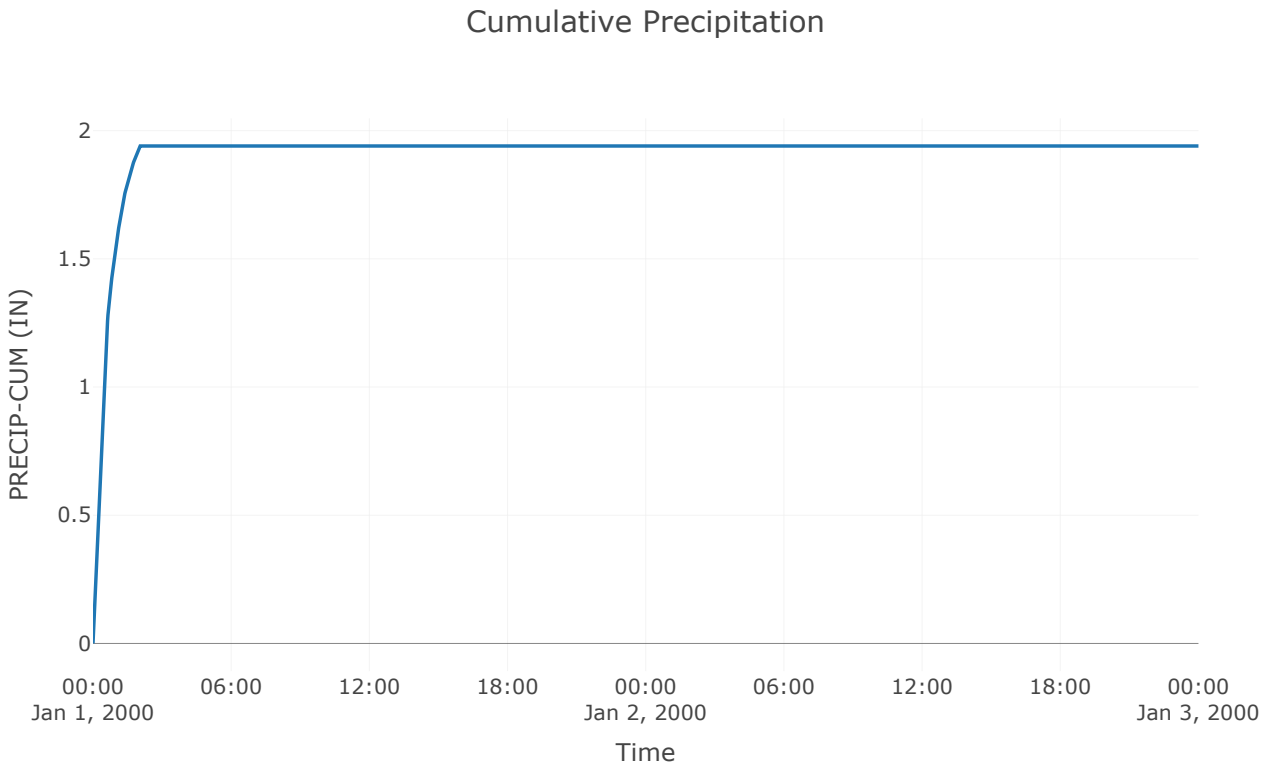
Precipitation and Outflow

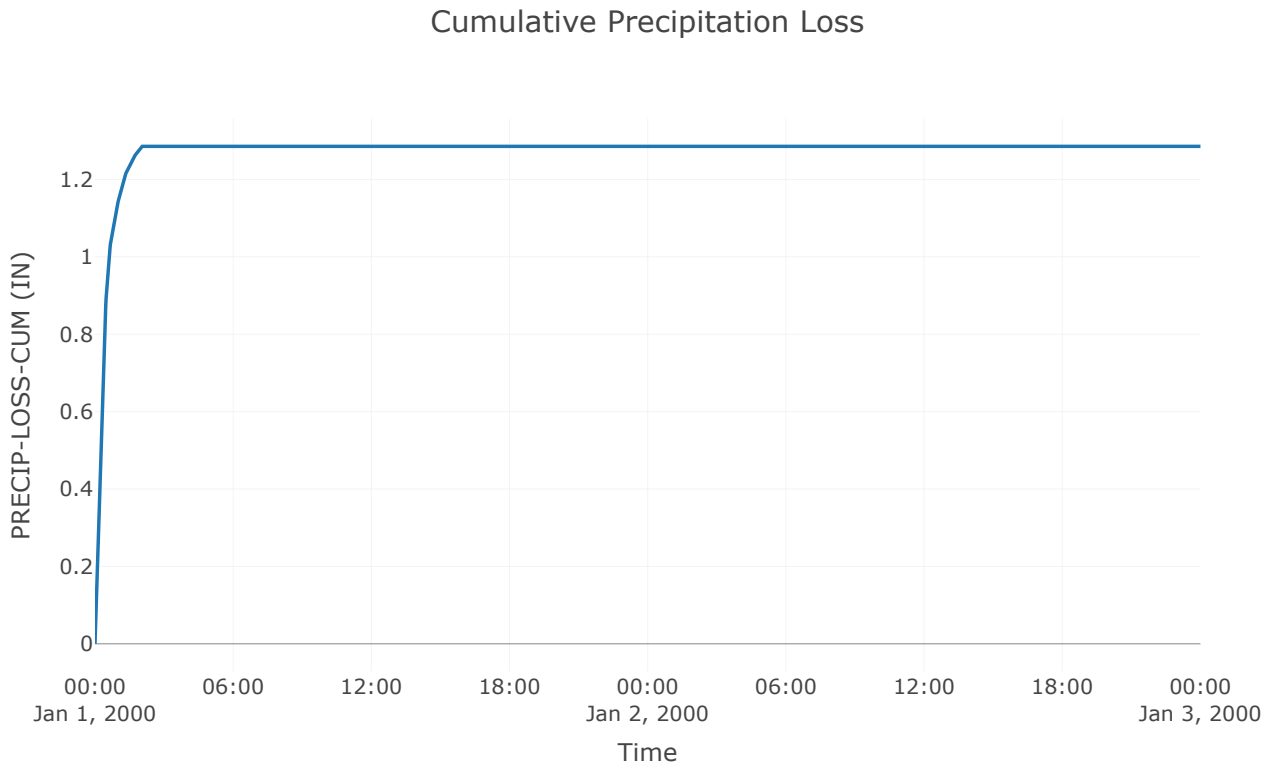


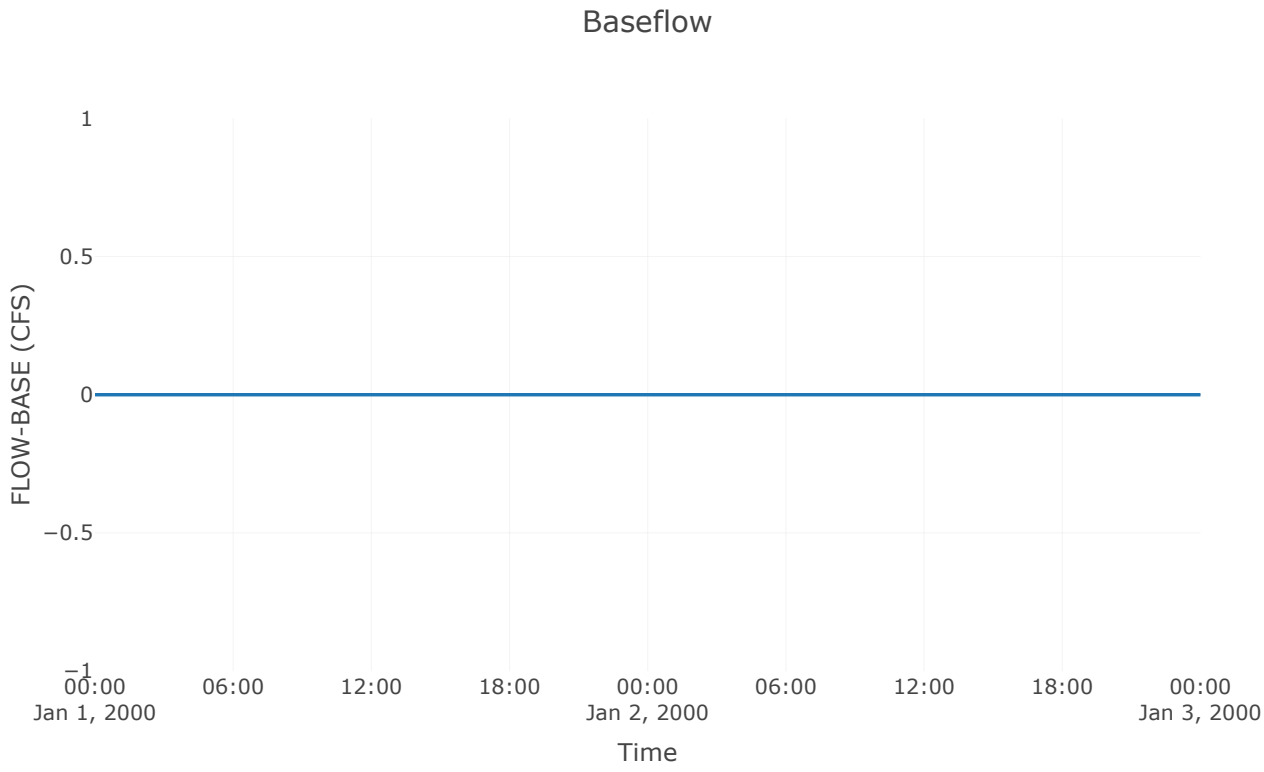
Cumulative Excess Precipitation



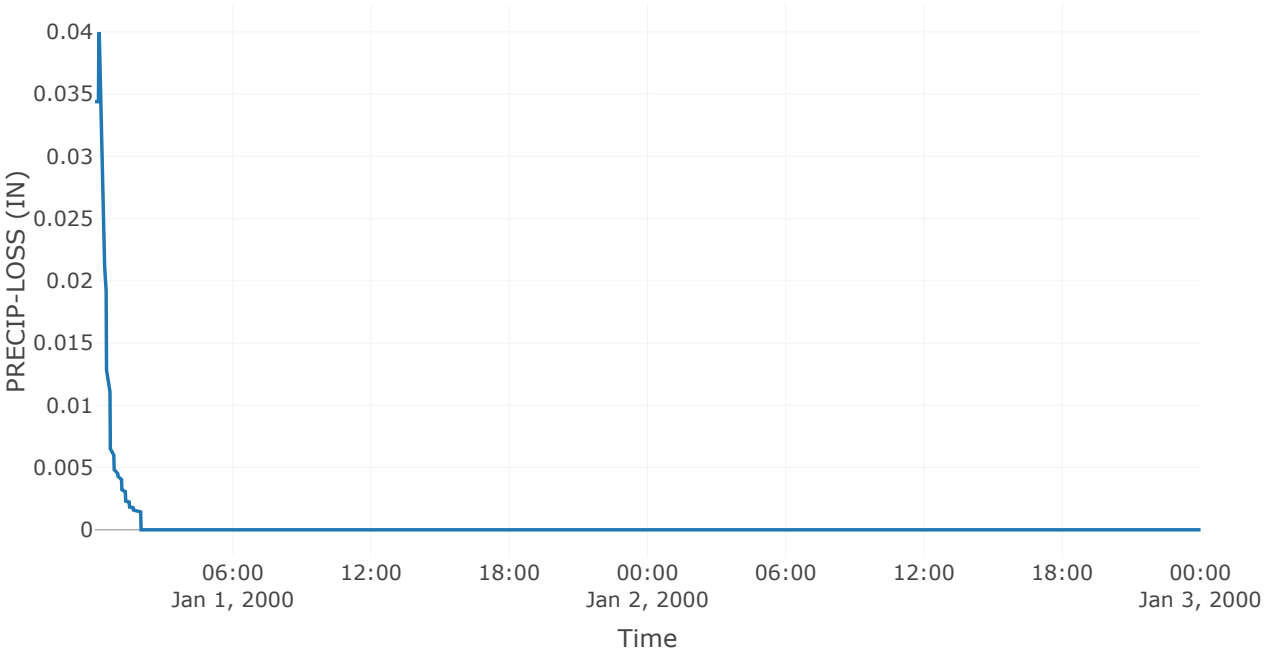

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

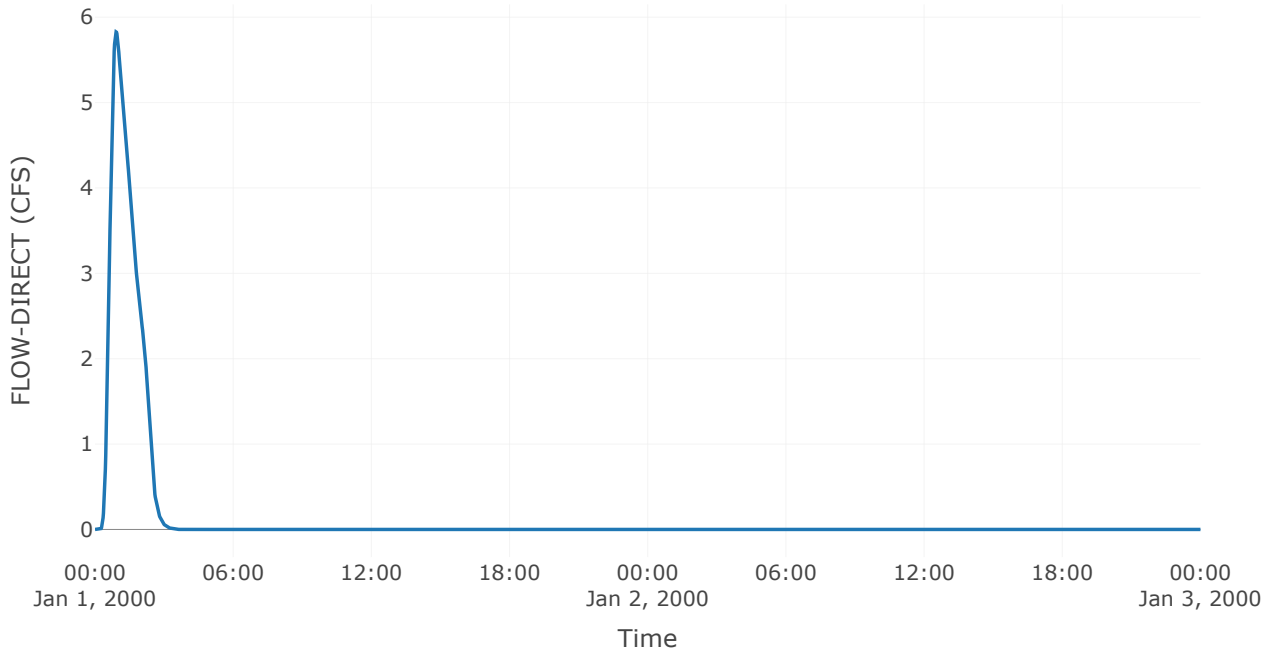

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

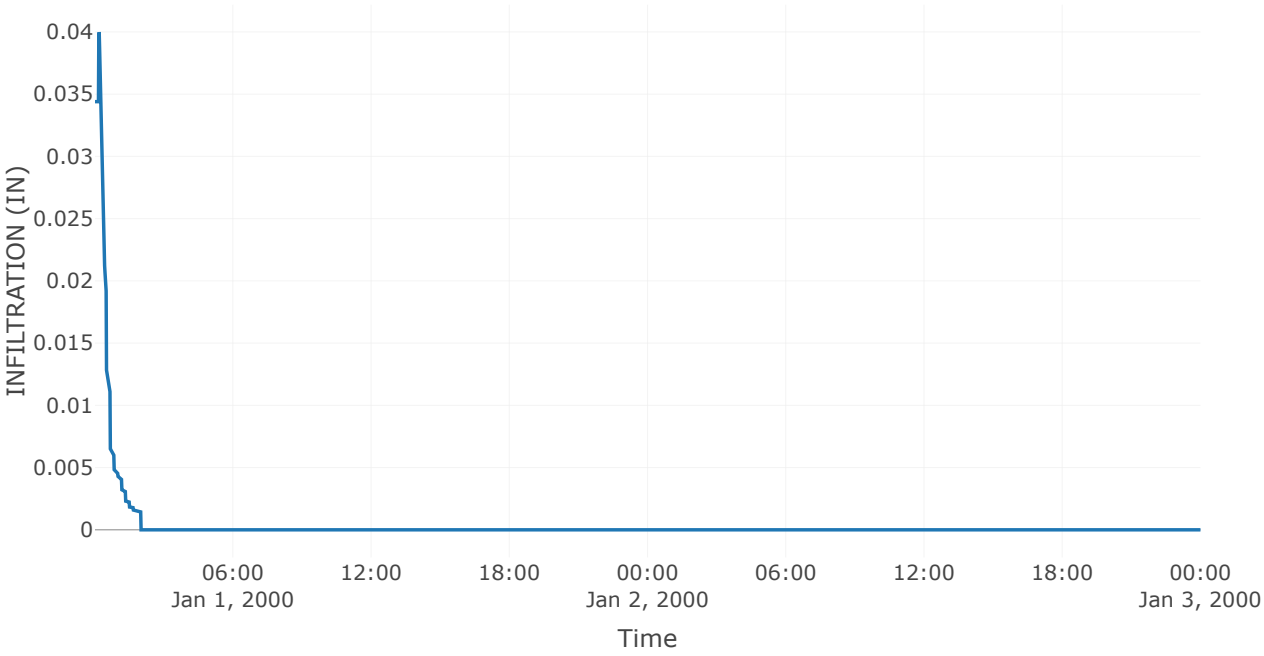

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

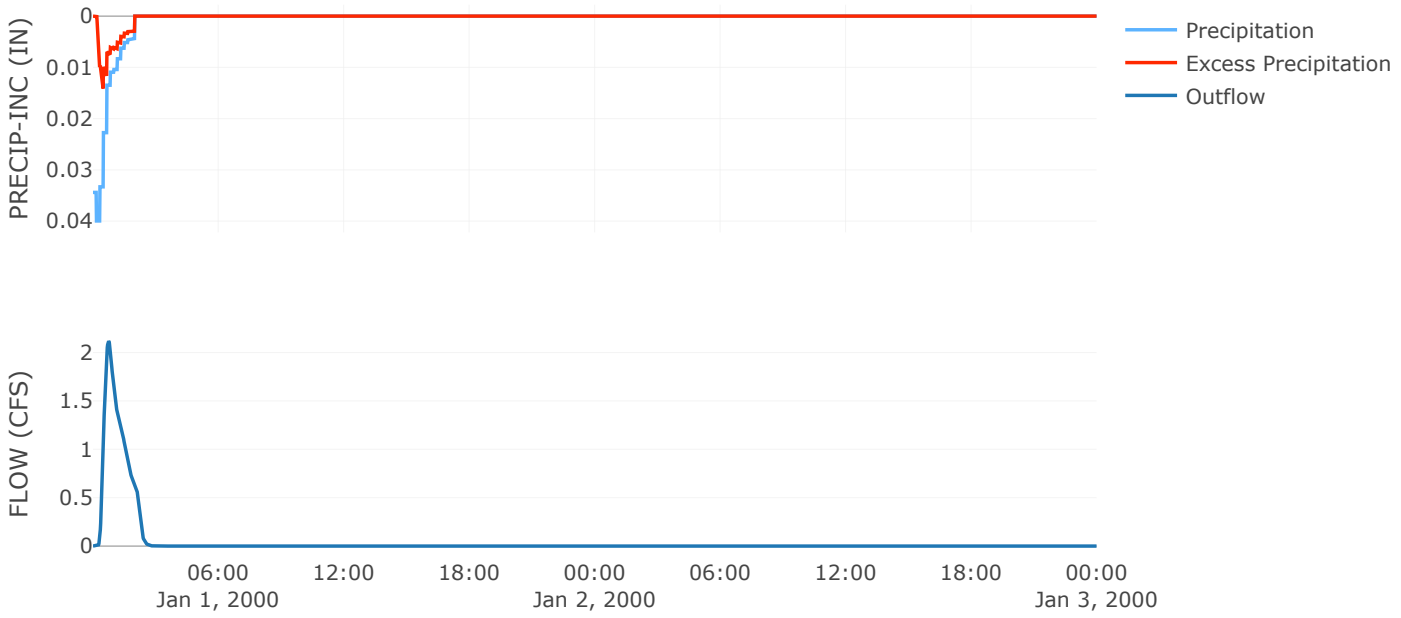
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

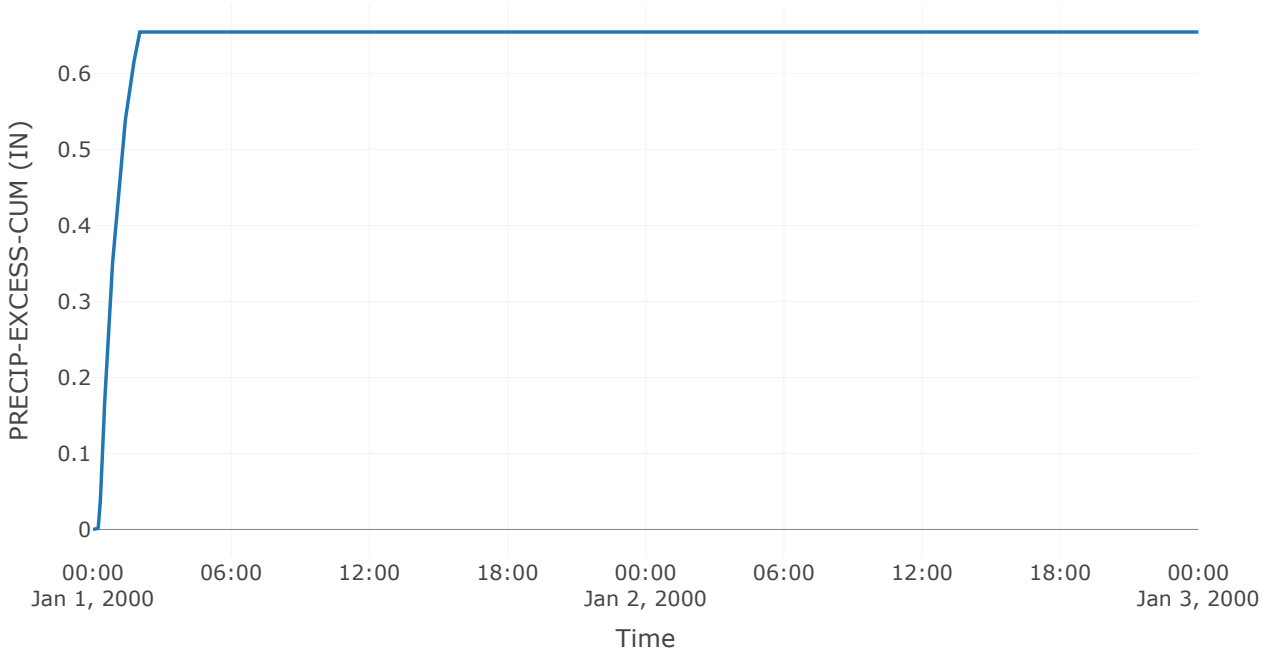
Transform: Scs	
Lag	12
Unitgraph Type	Standard

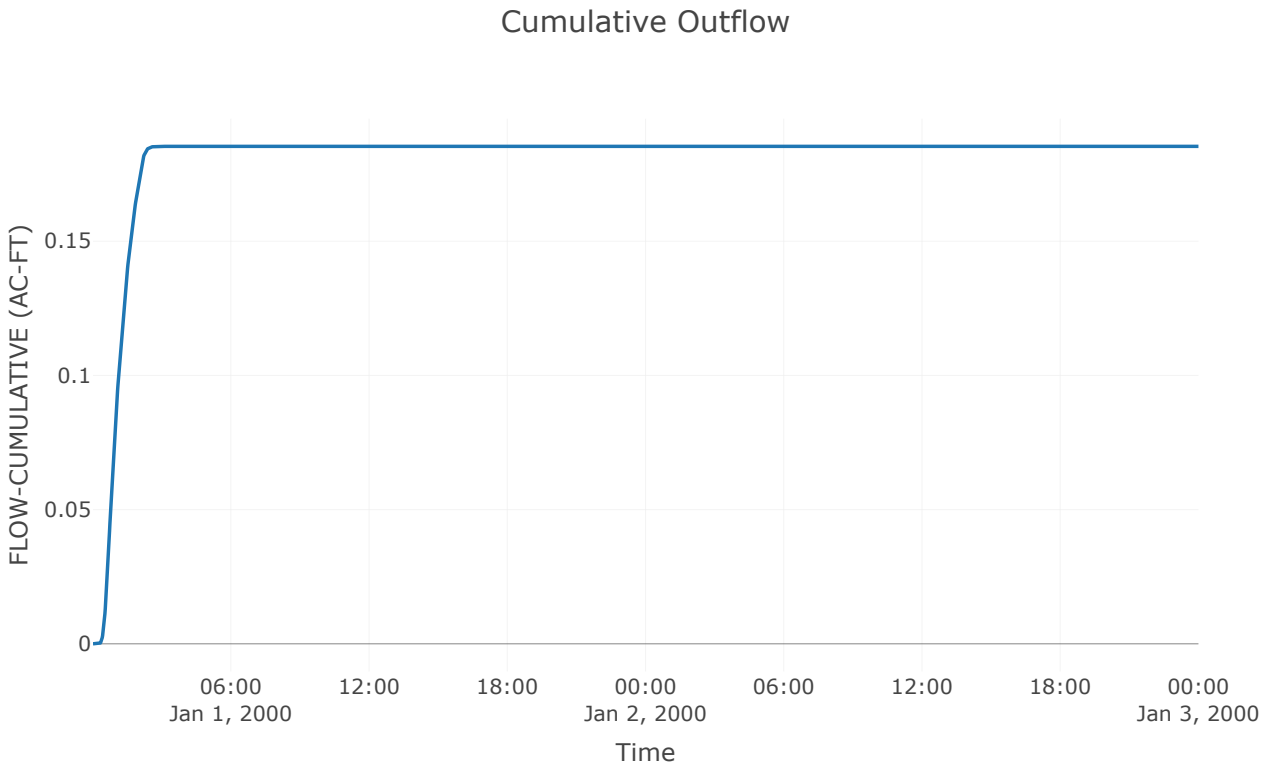
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

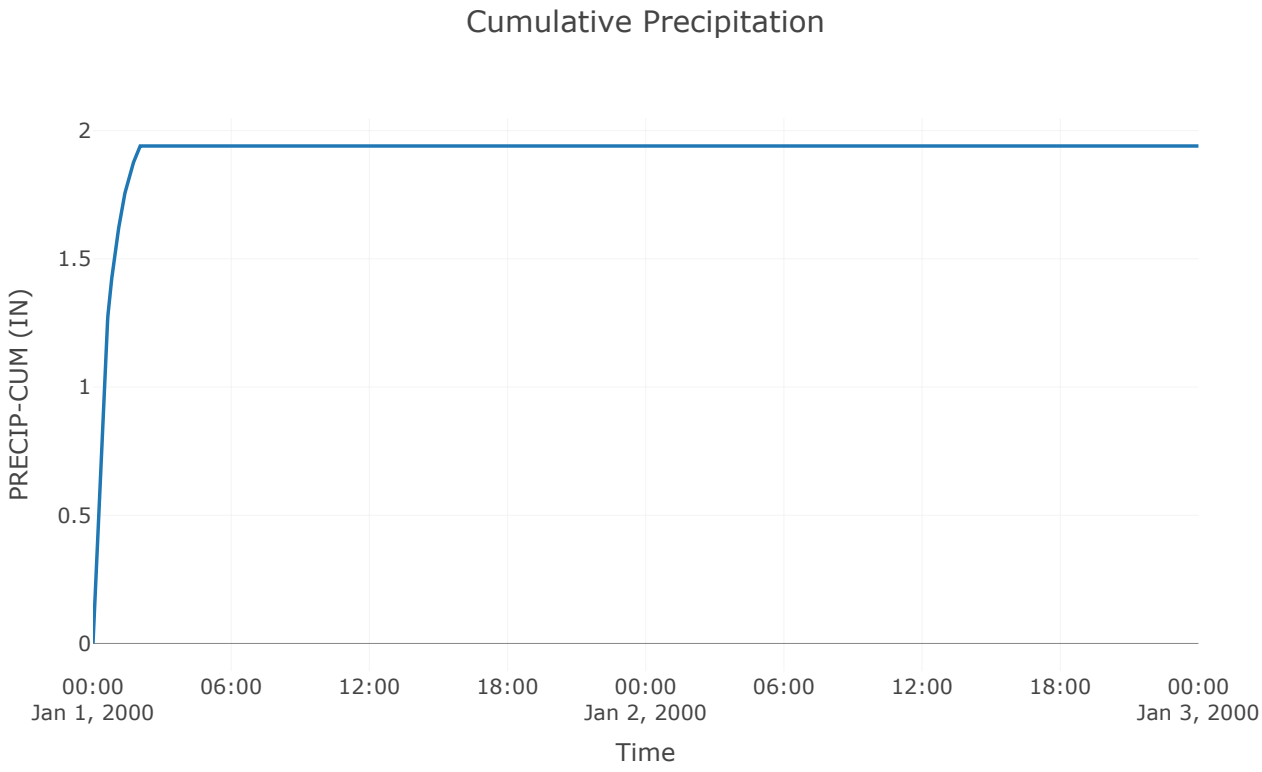
Precipitation and Outflow

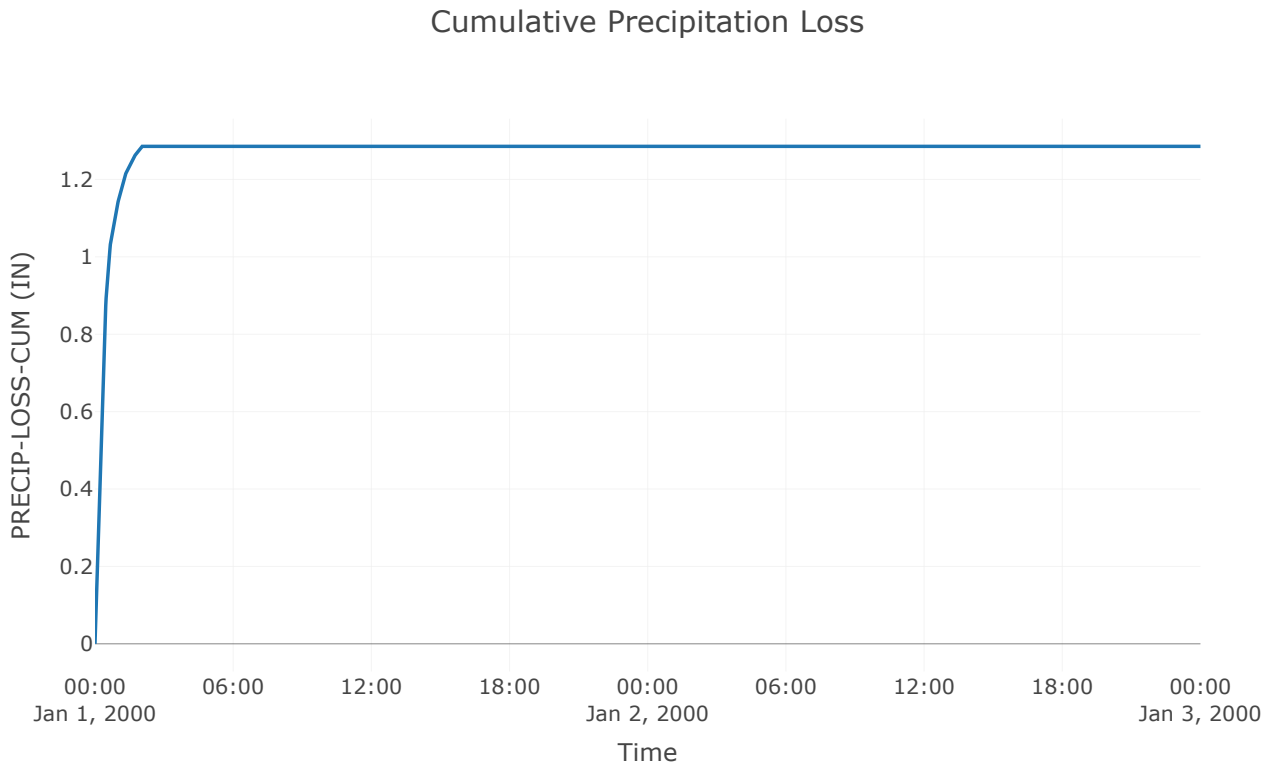


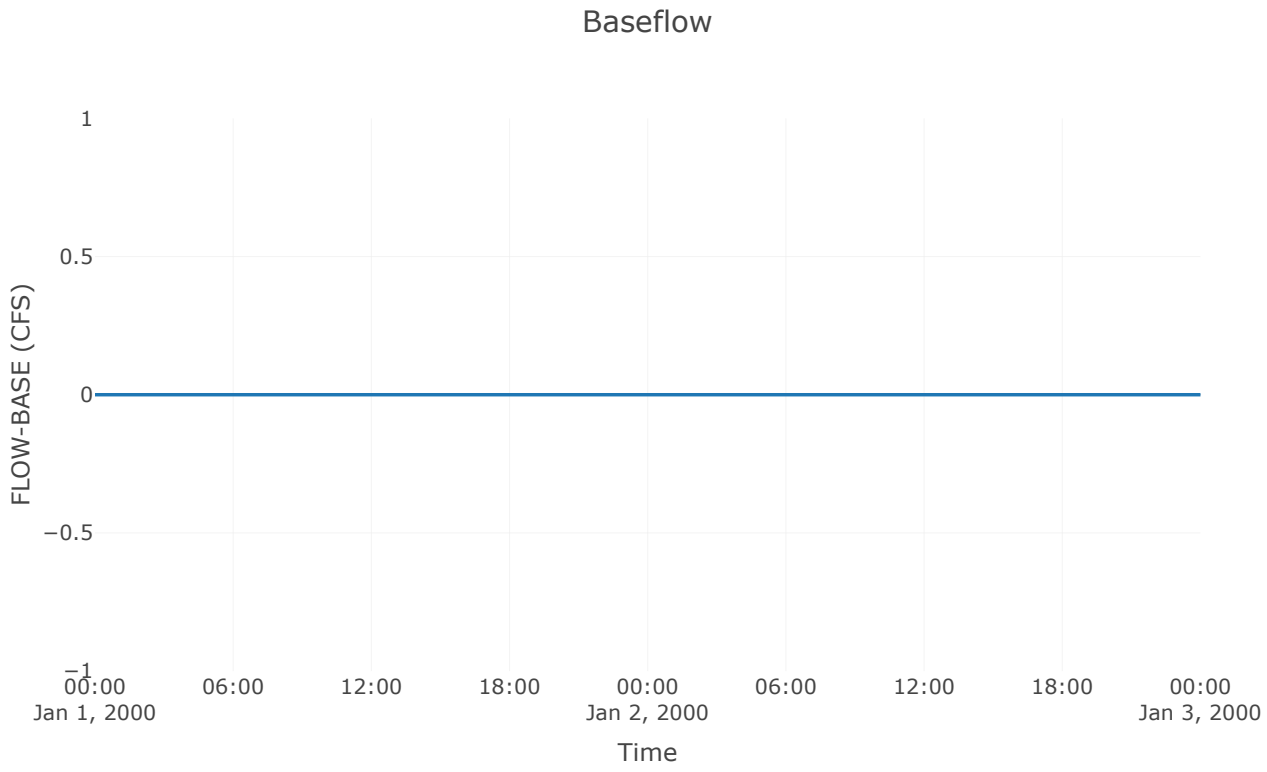
Cumulative Excess Precipitation



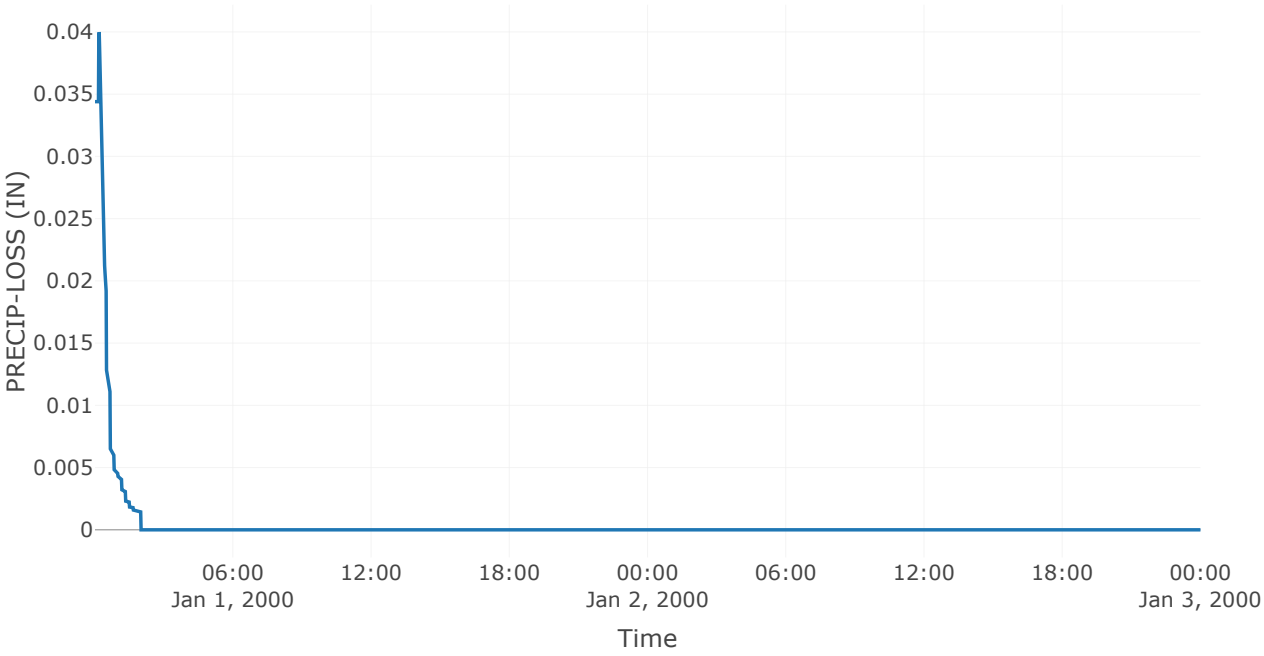

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

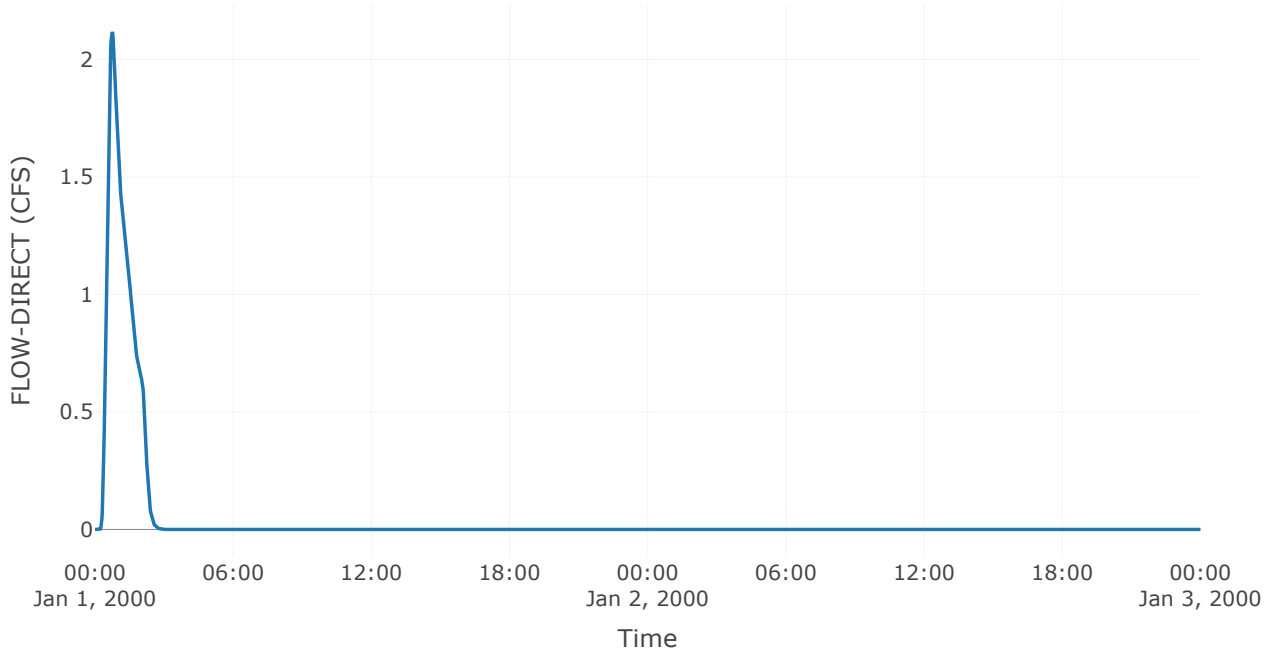

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

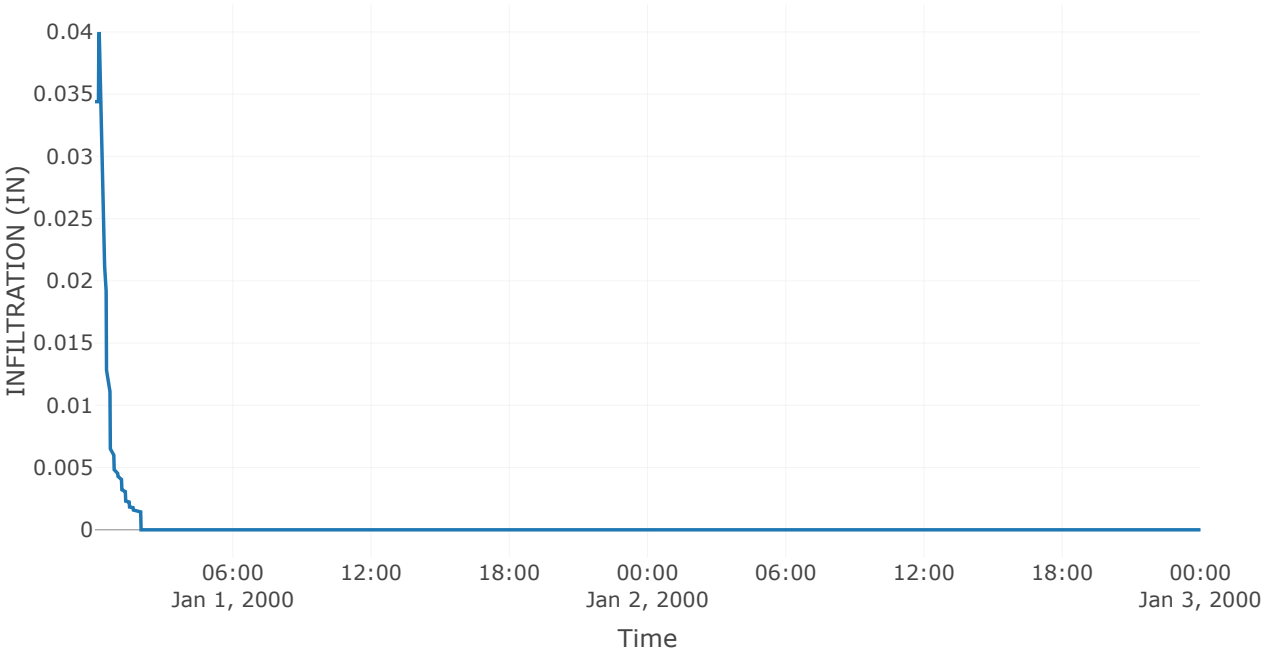

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



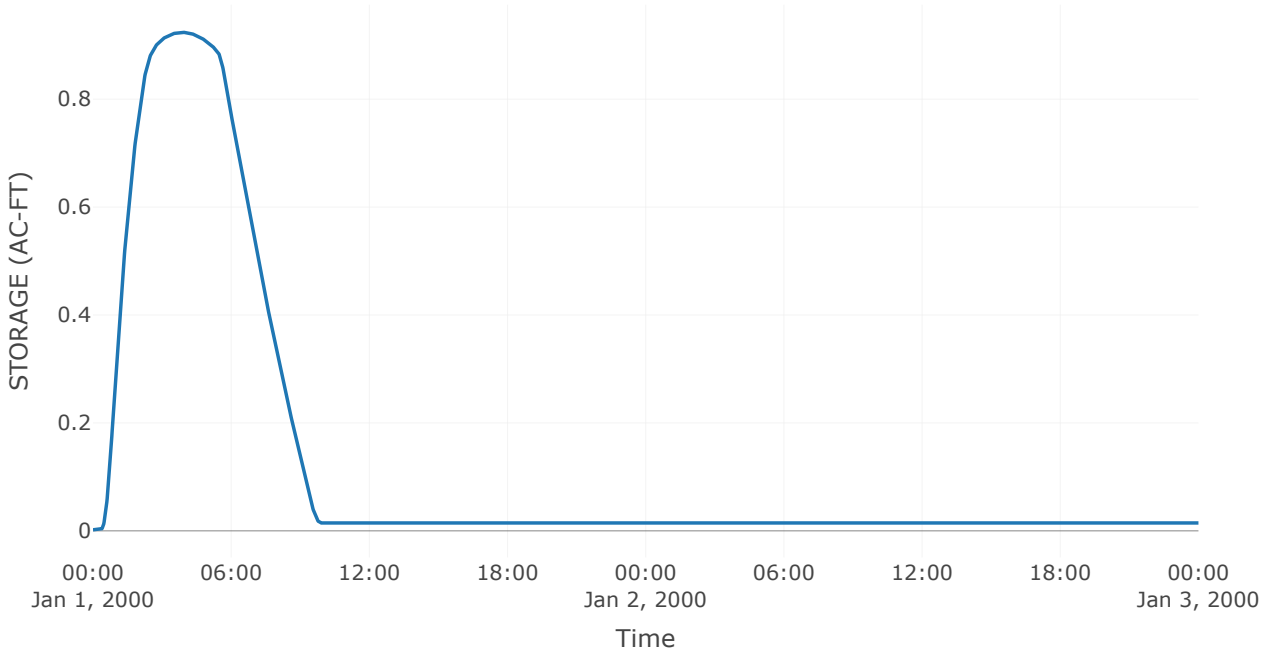

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

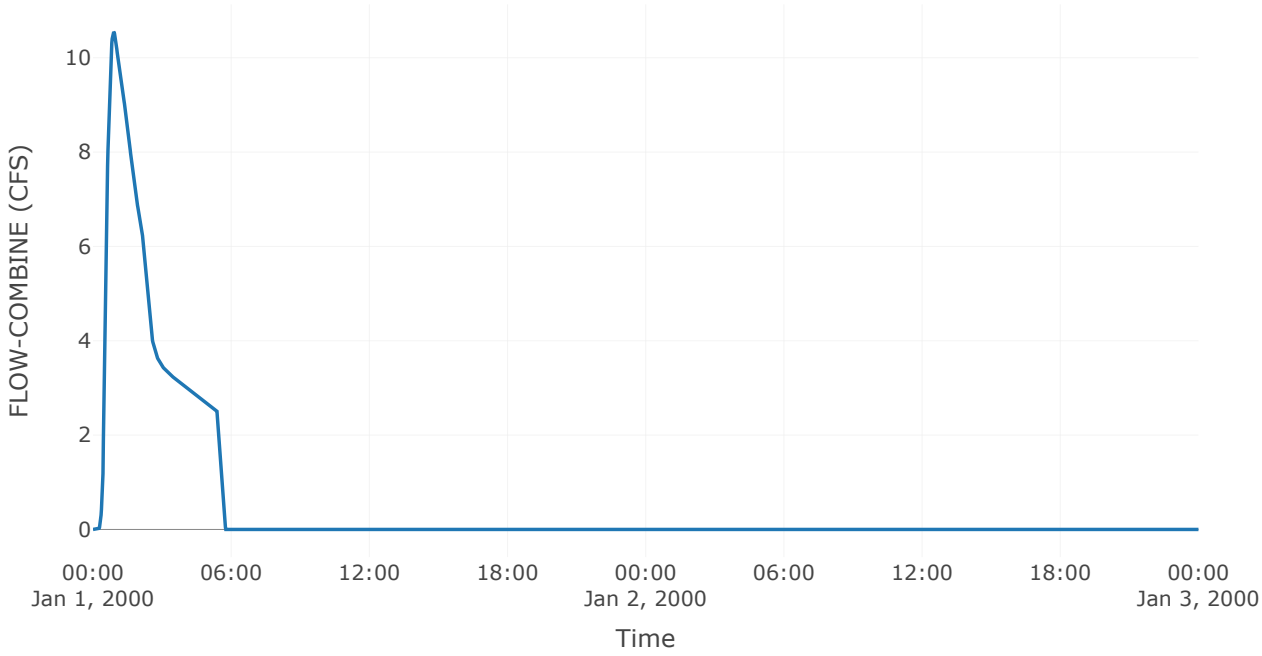
Downstream : Basin 3

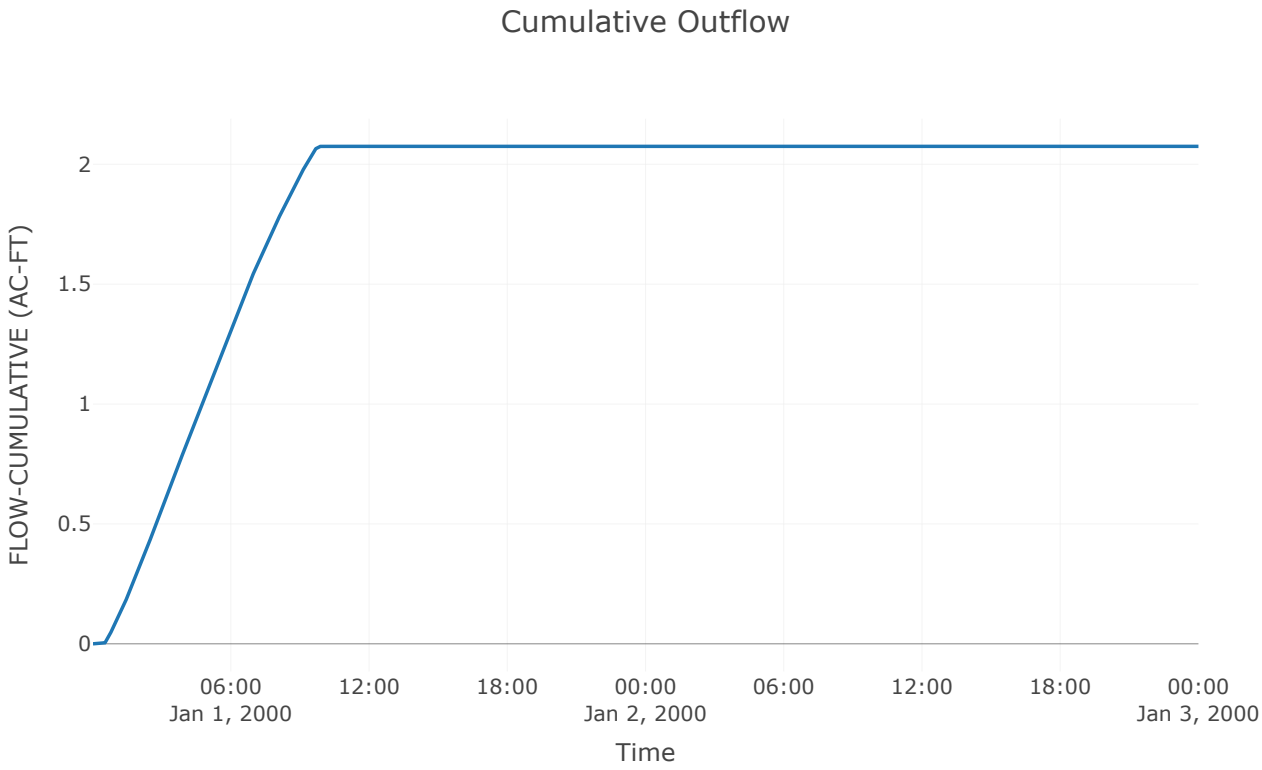
Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

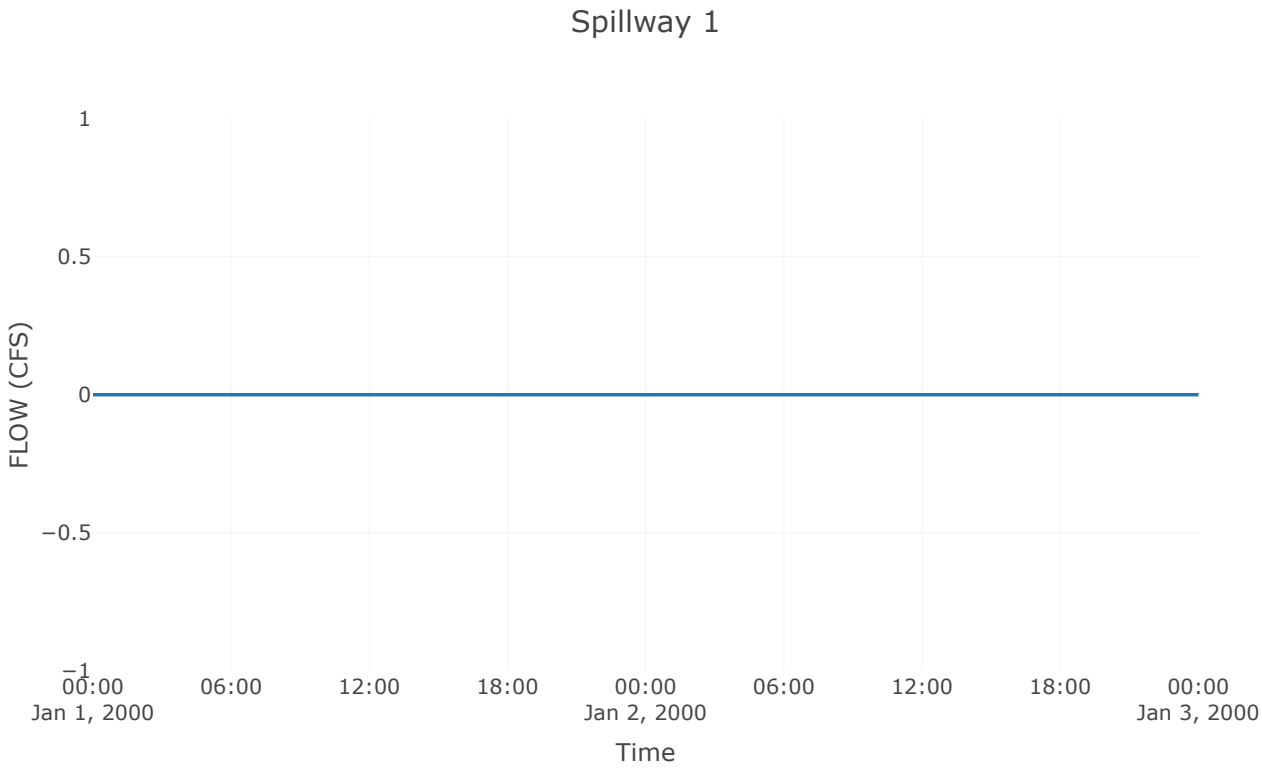
Storage

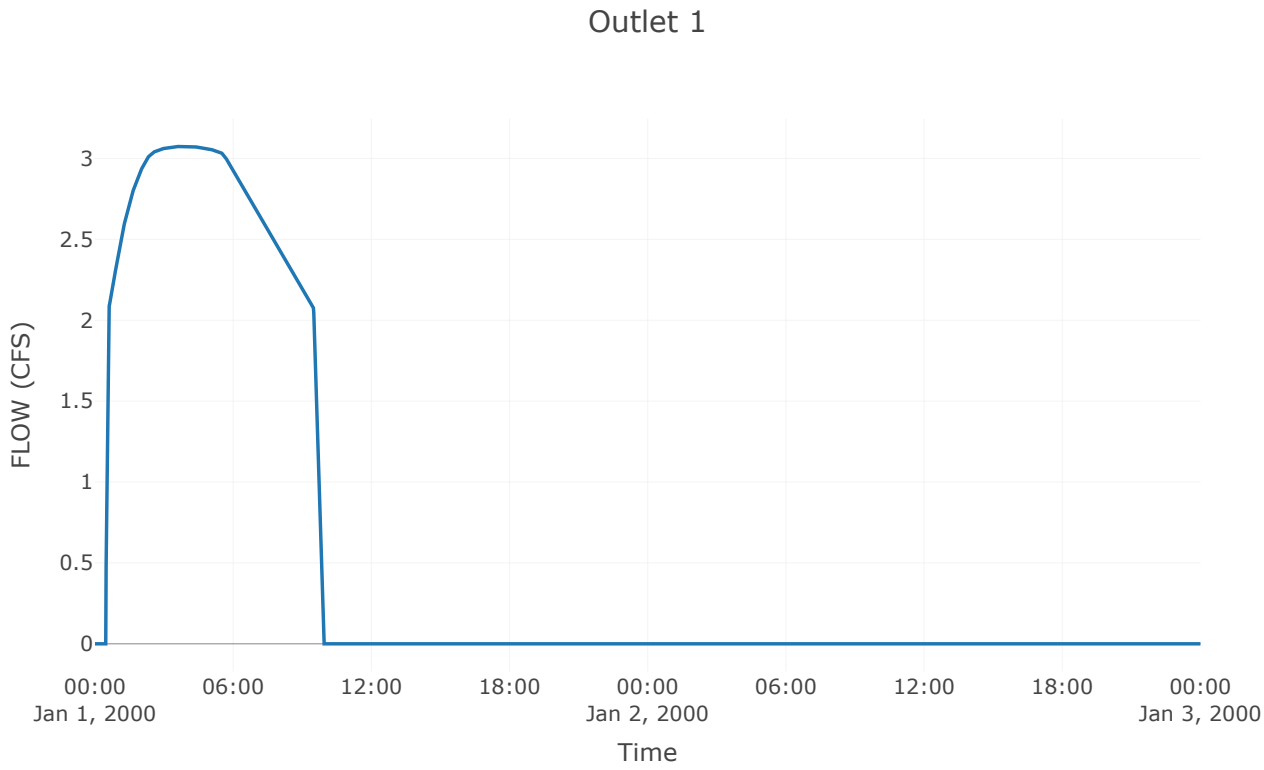


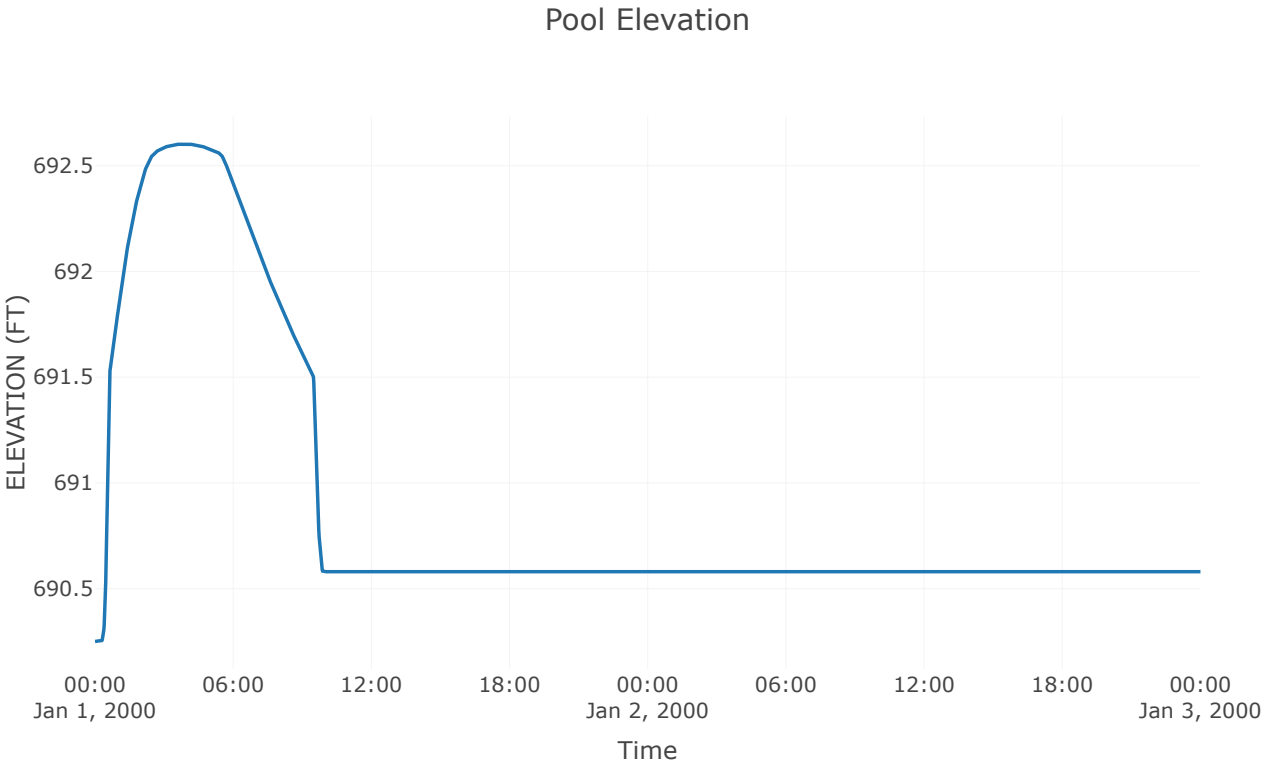
Combined Inflow

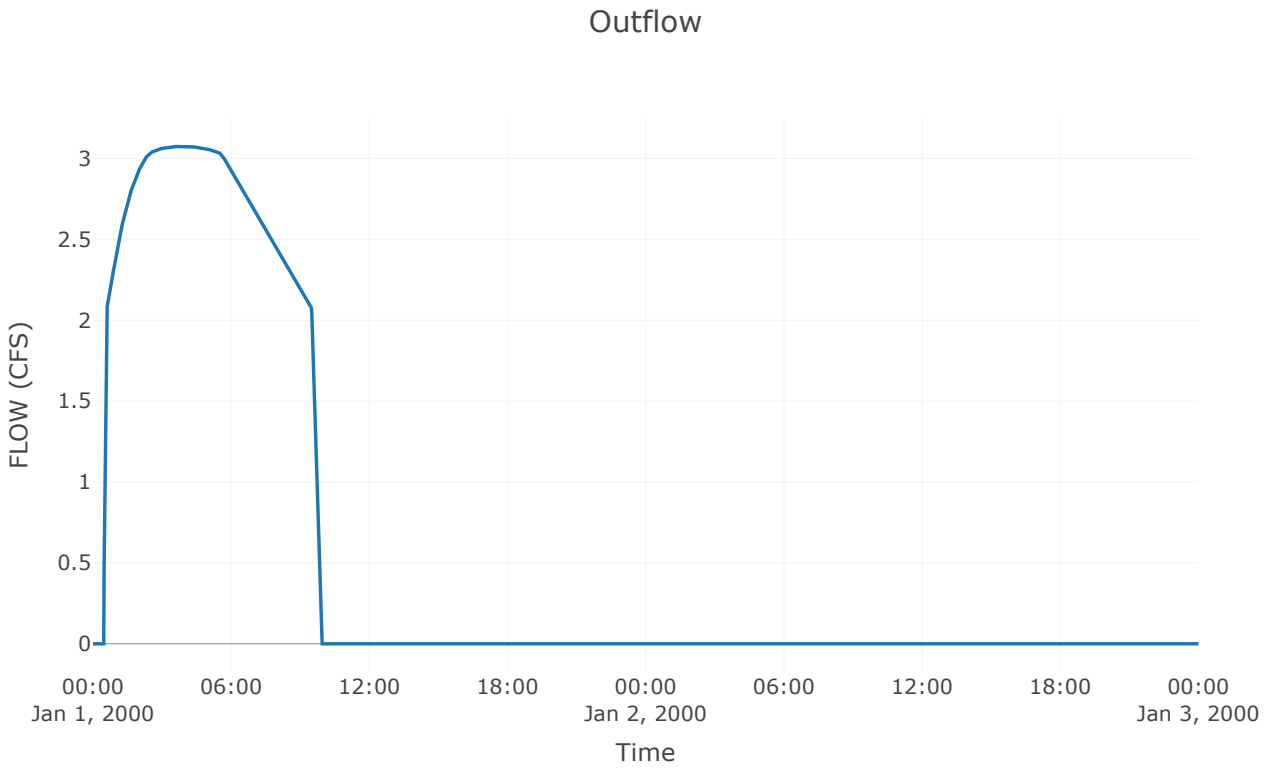



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
692.5
692
691.5
691
690.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

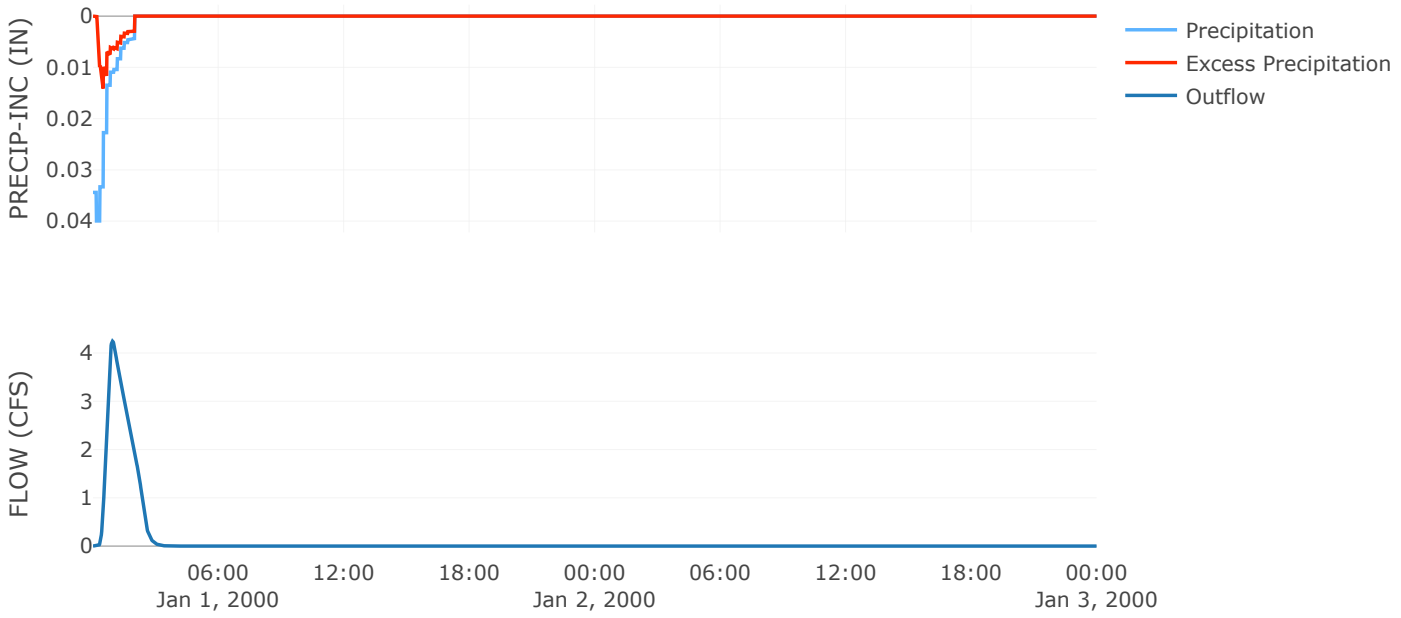
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

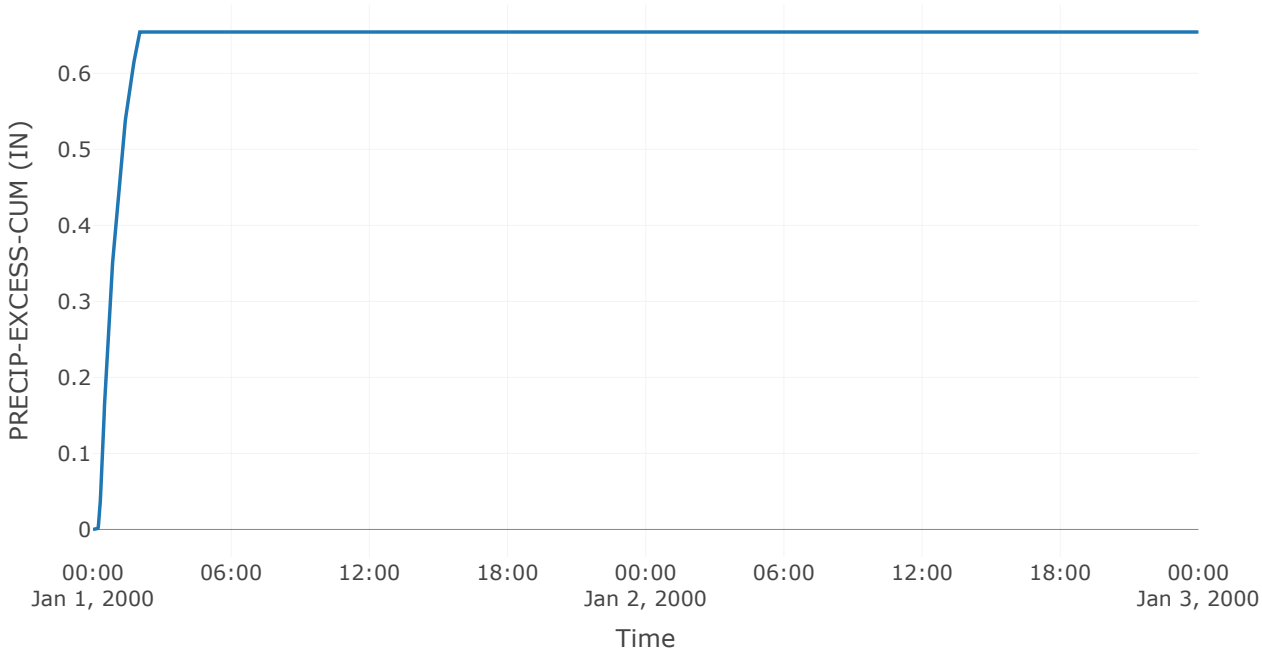
Transform: Scs	
Lag	21
Unitgraph Type	Standard

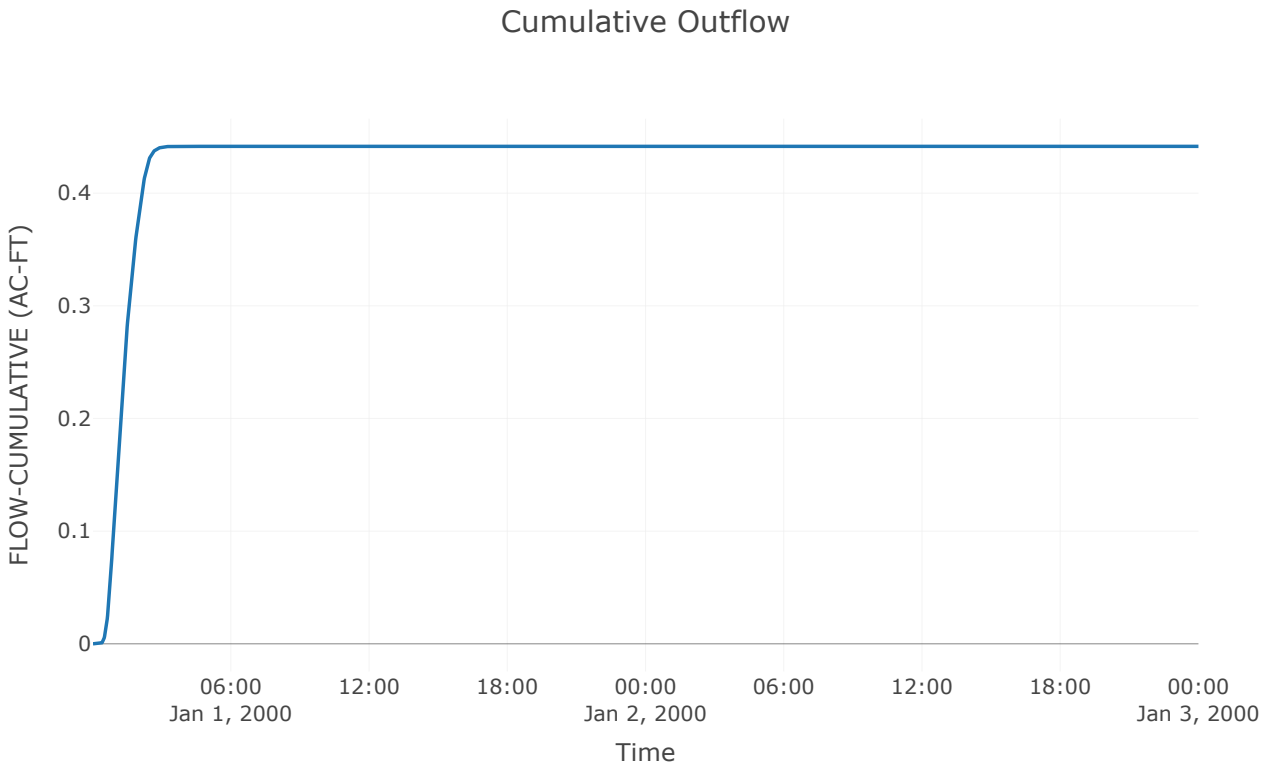
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

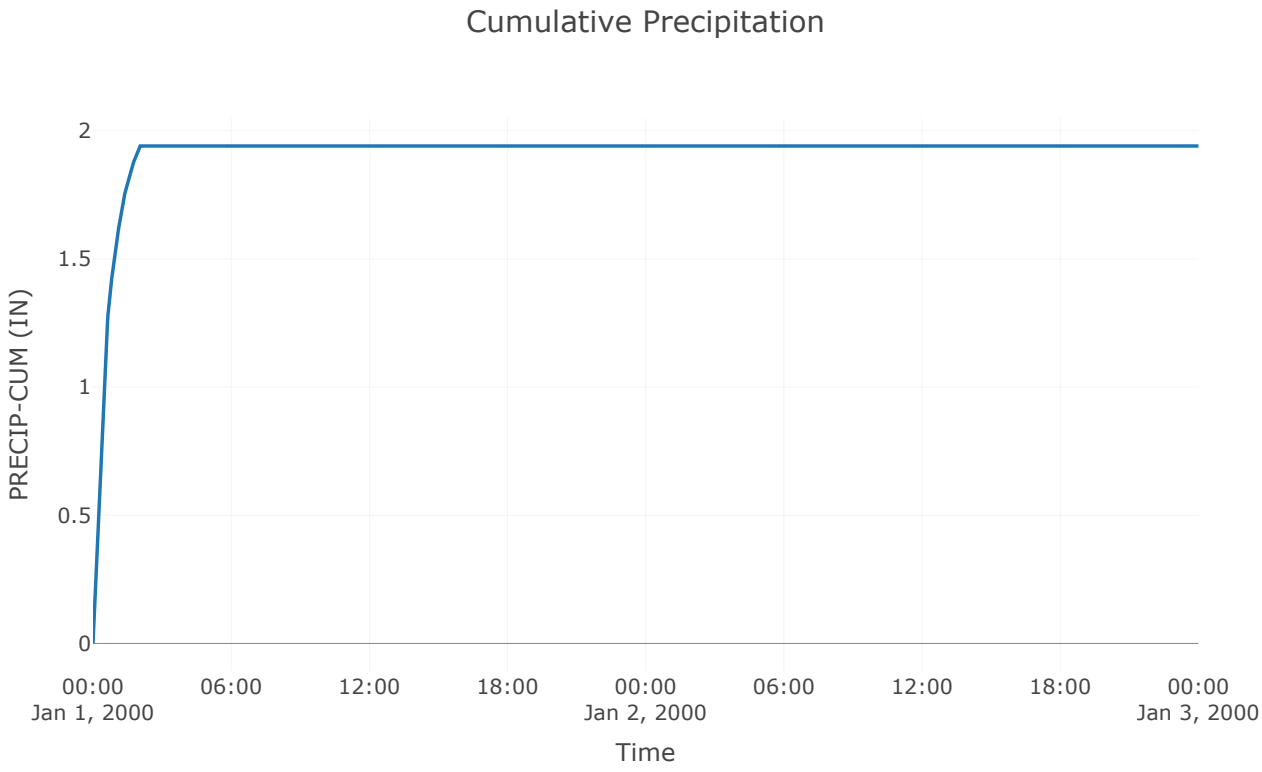
Precipitation and Outflow

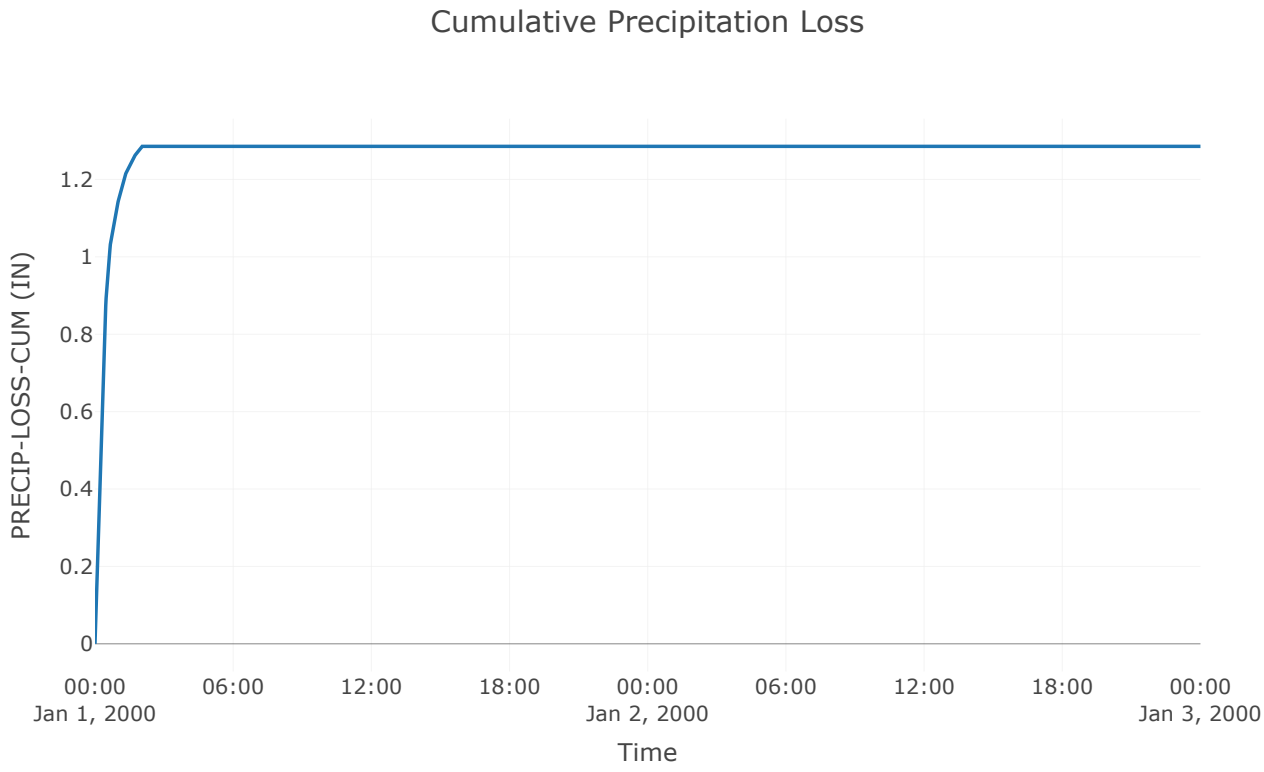


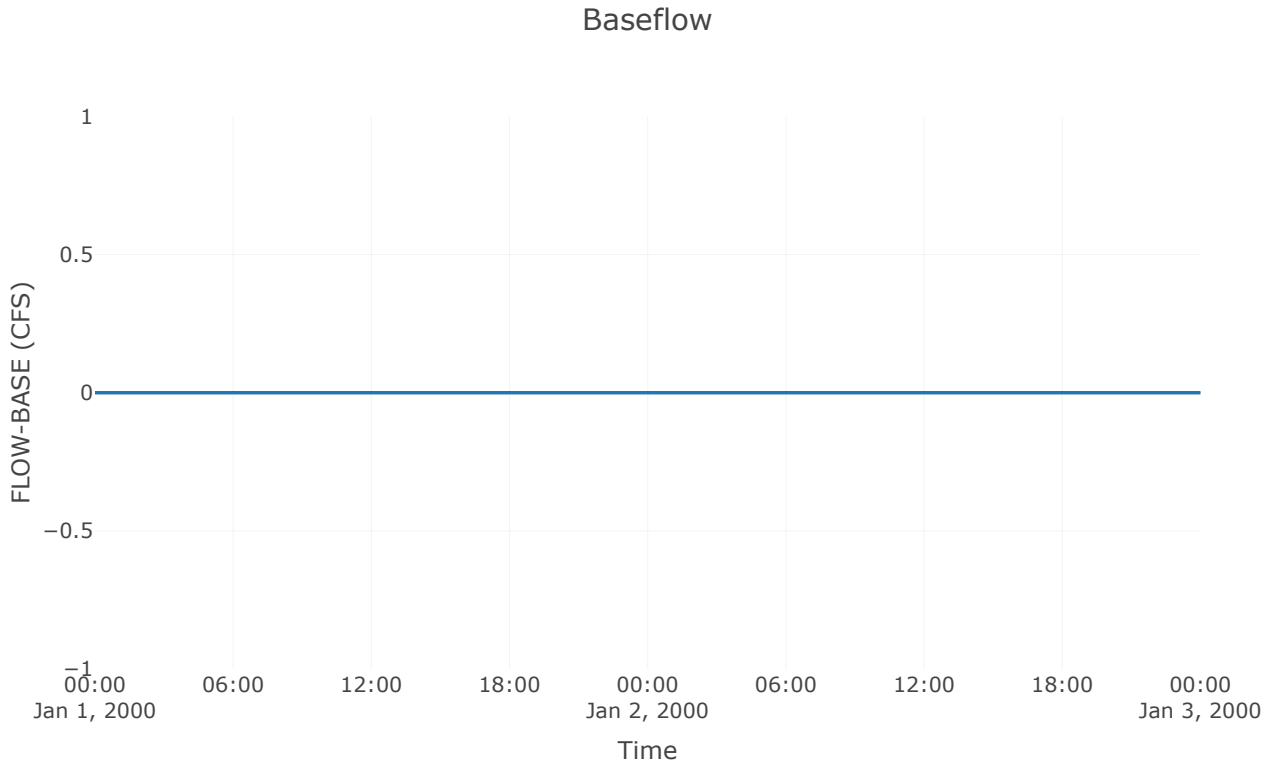
Cumulative Excess Precipitation



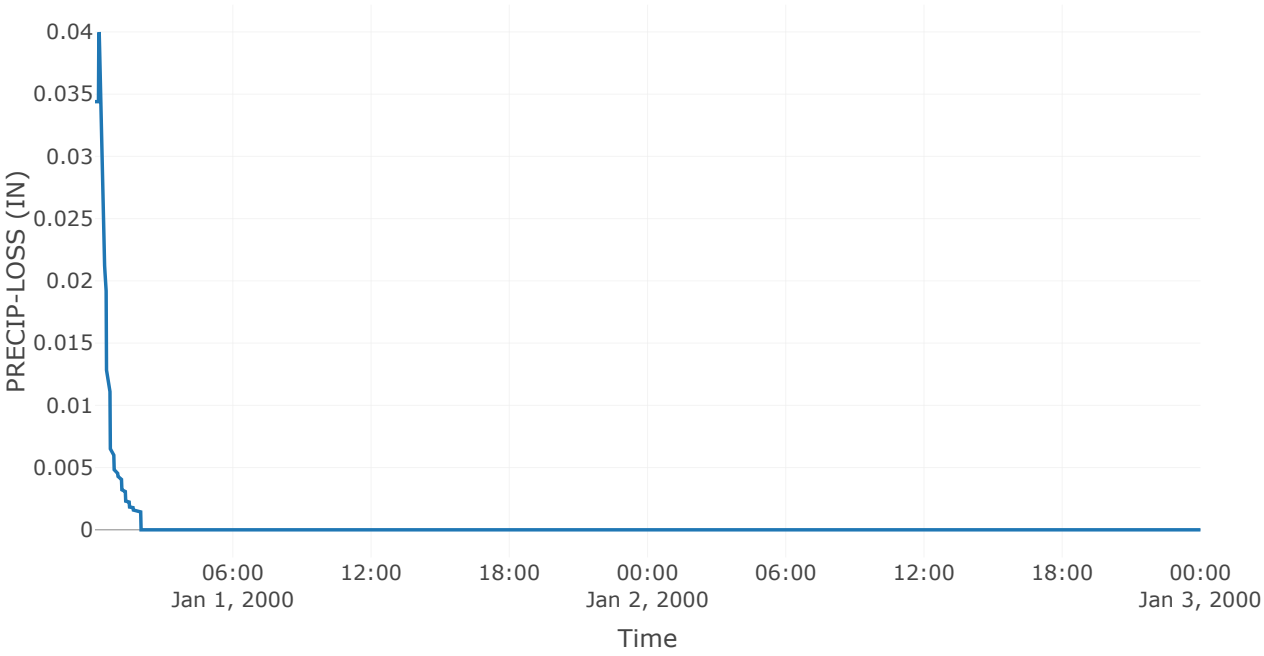

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

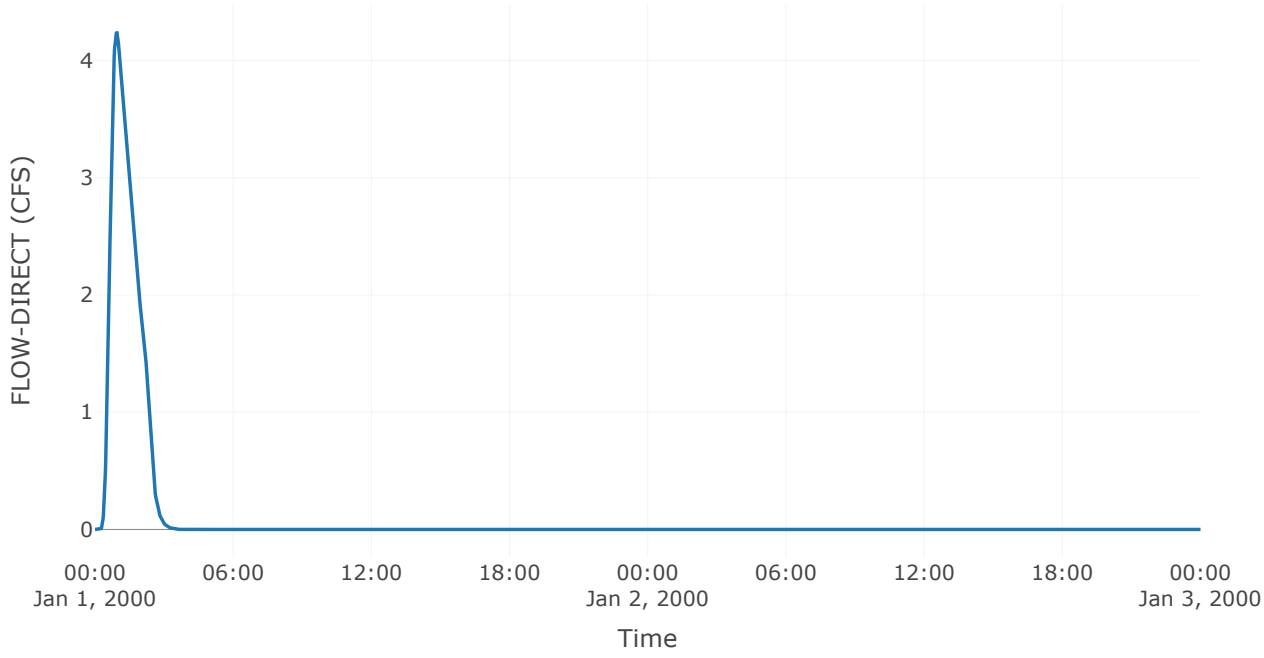

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

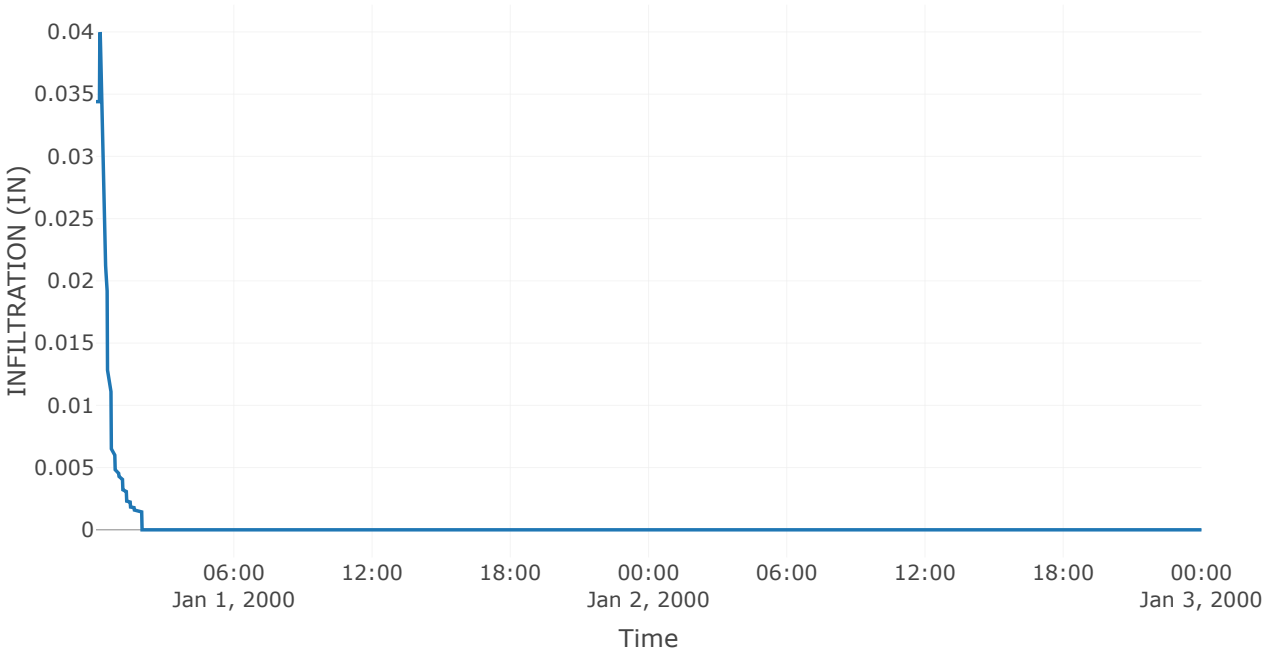

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

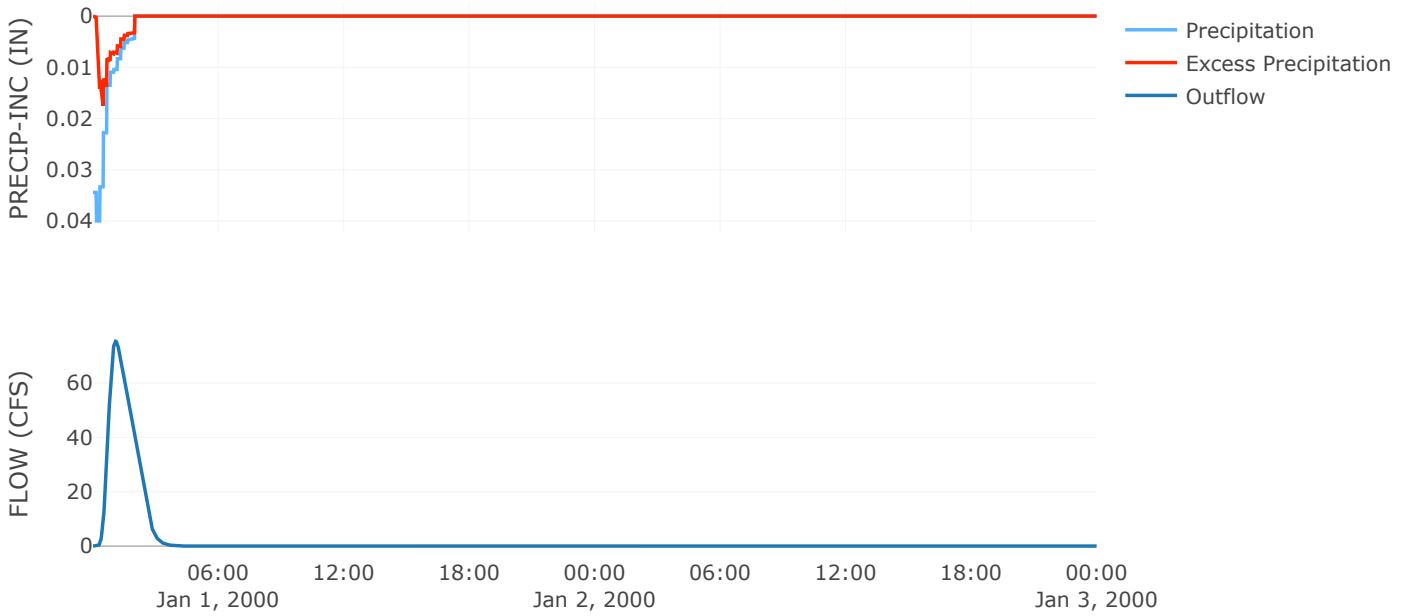
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

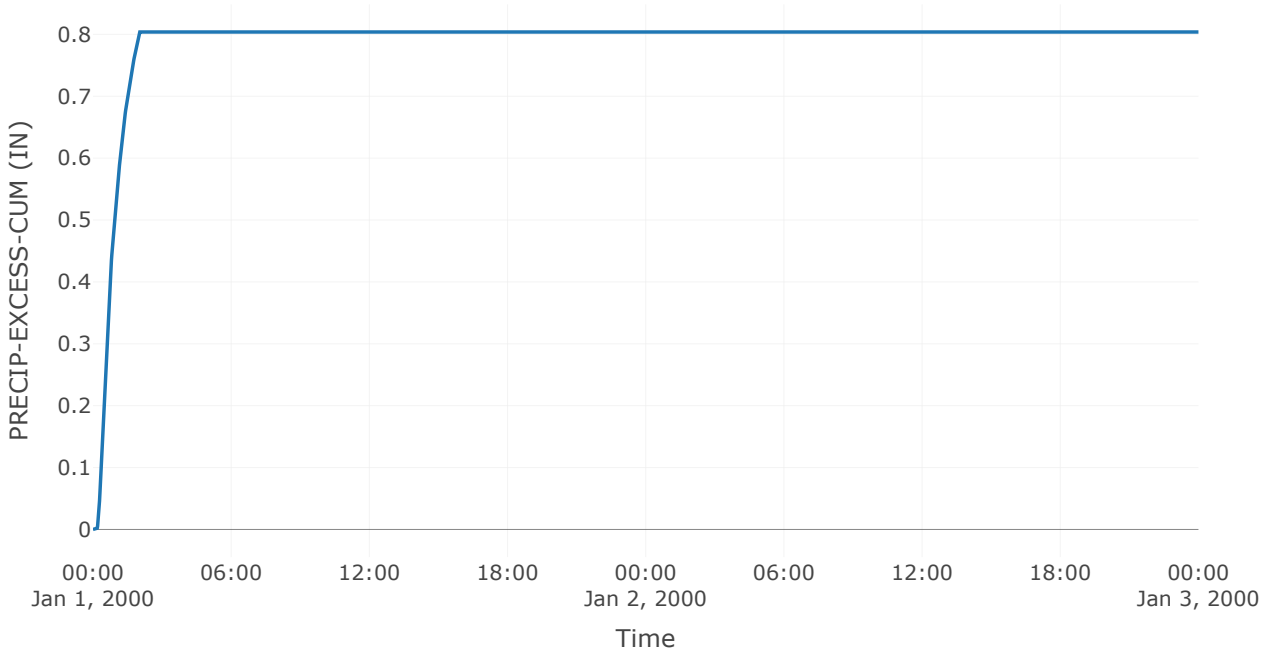
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

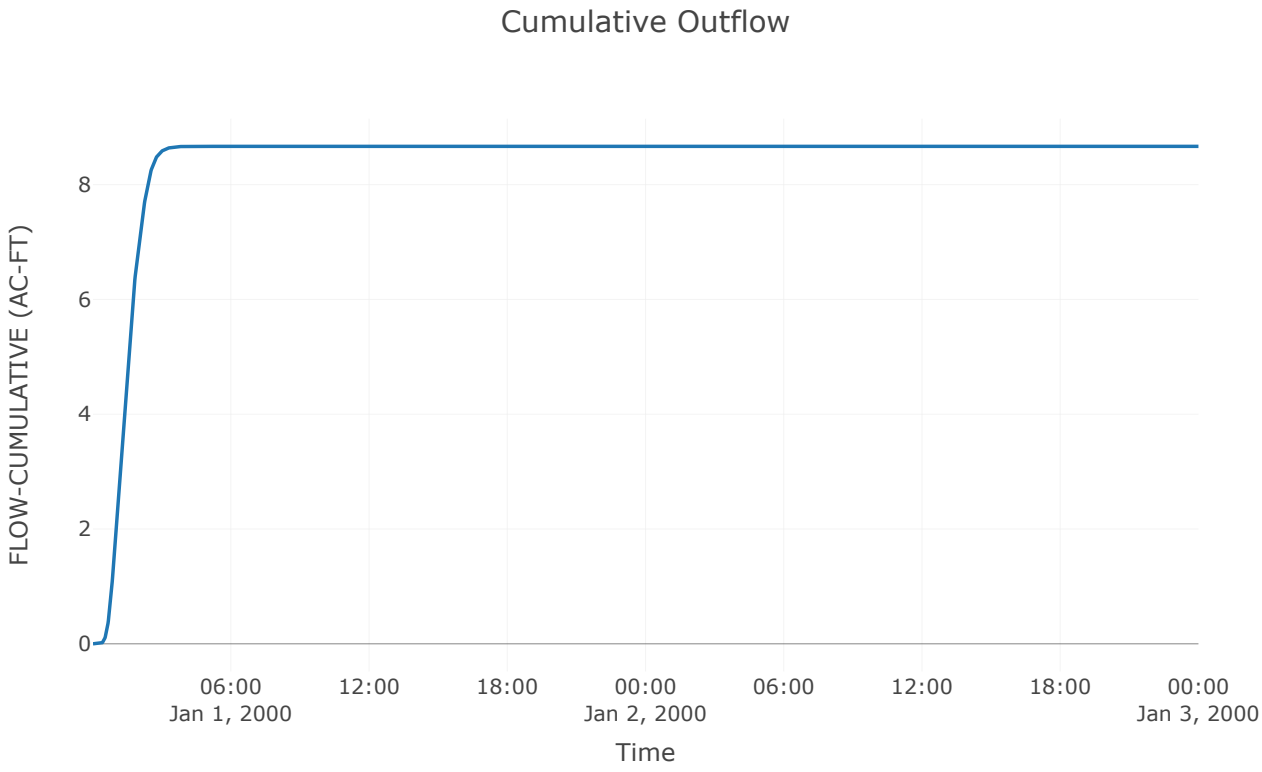
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

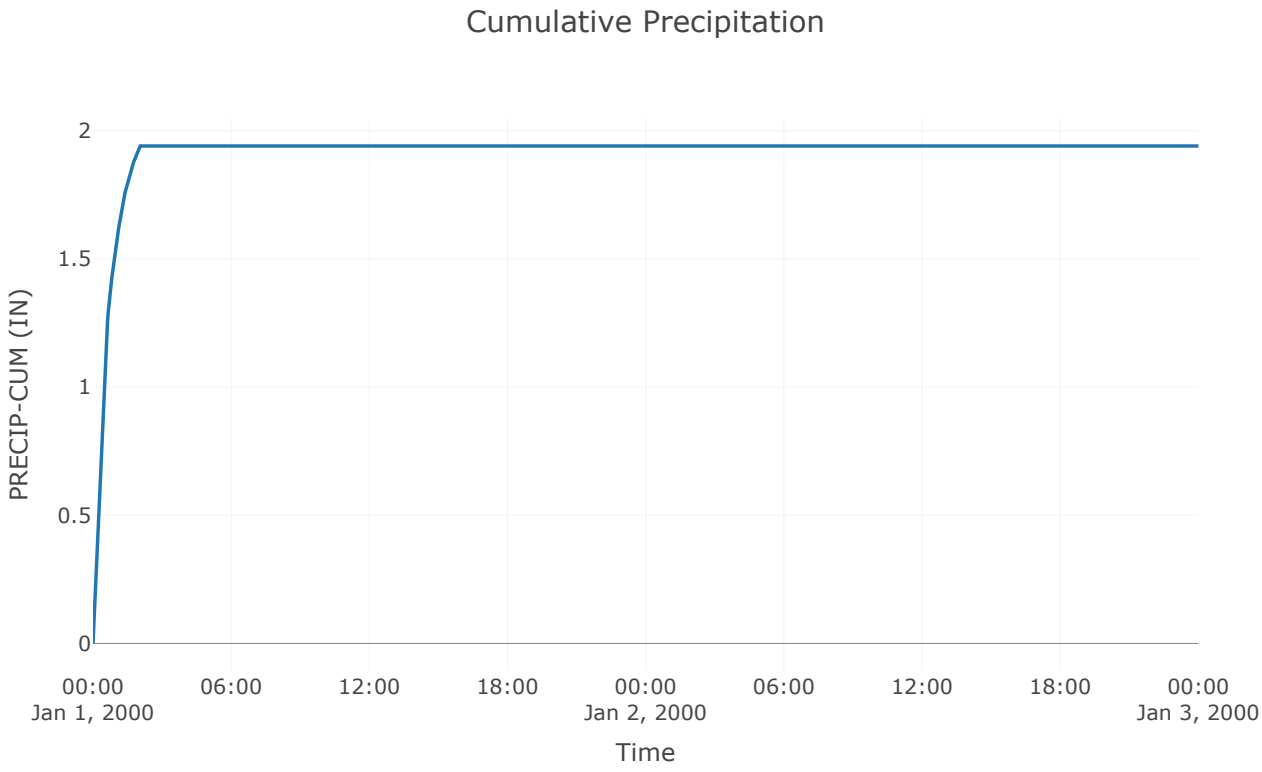
Precipitation and Outflow

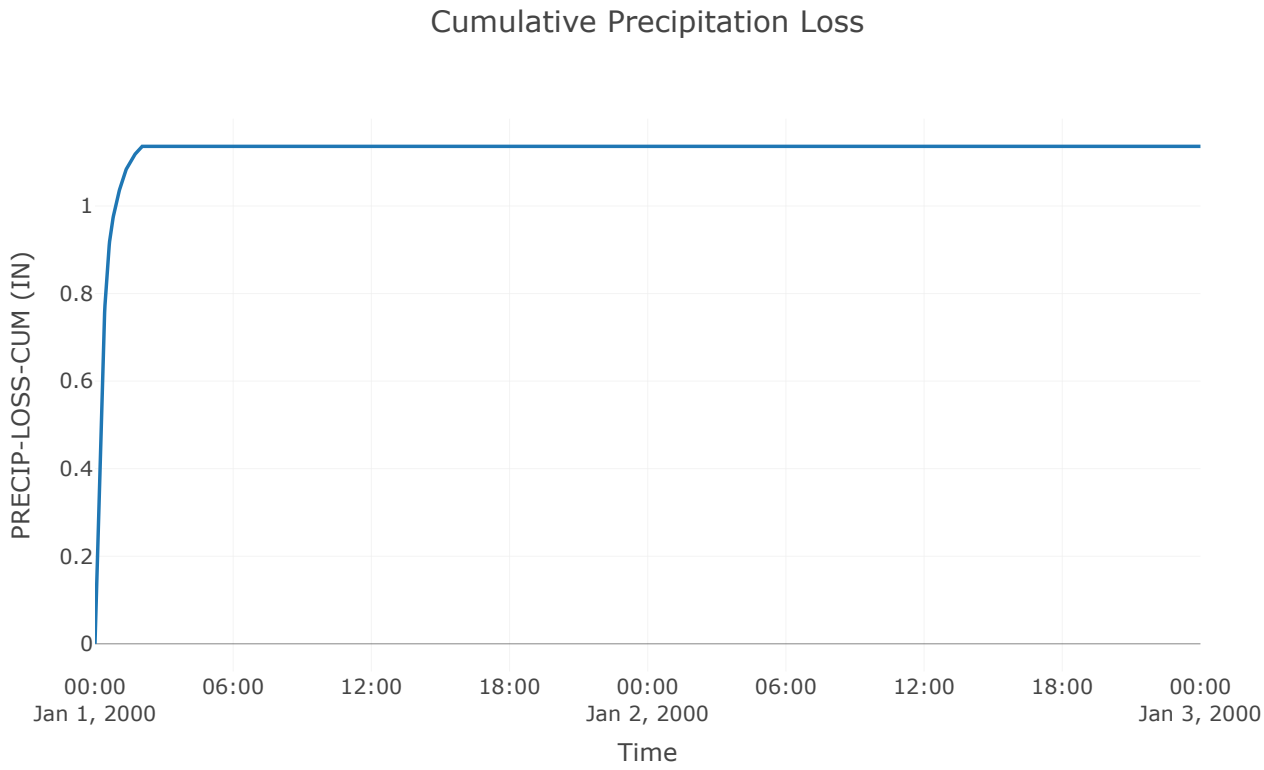


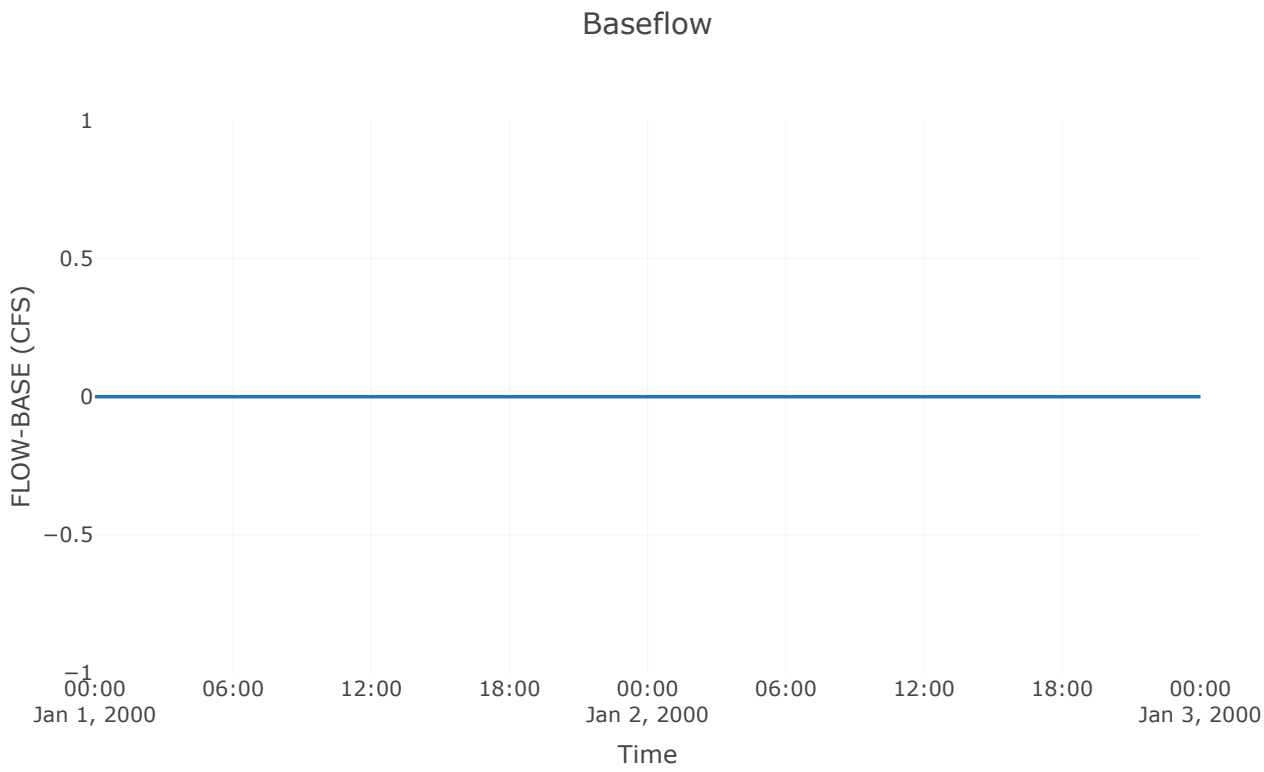
Cumulative Excess Precipitation

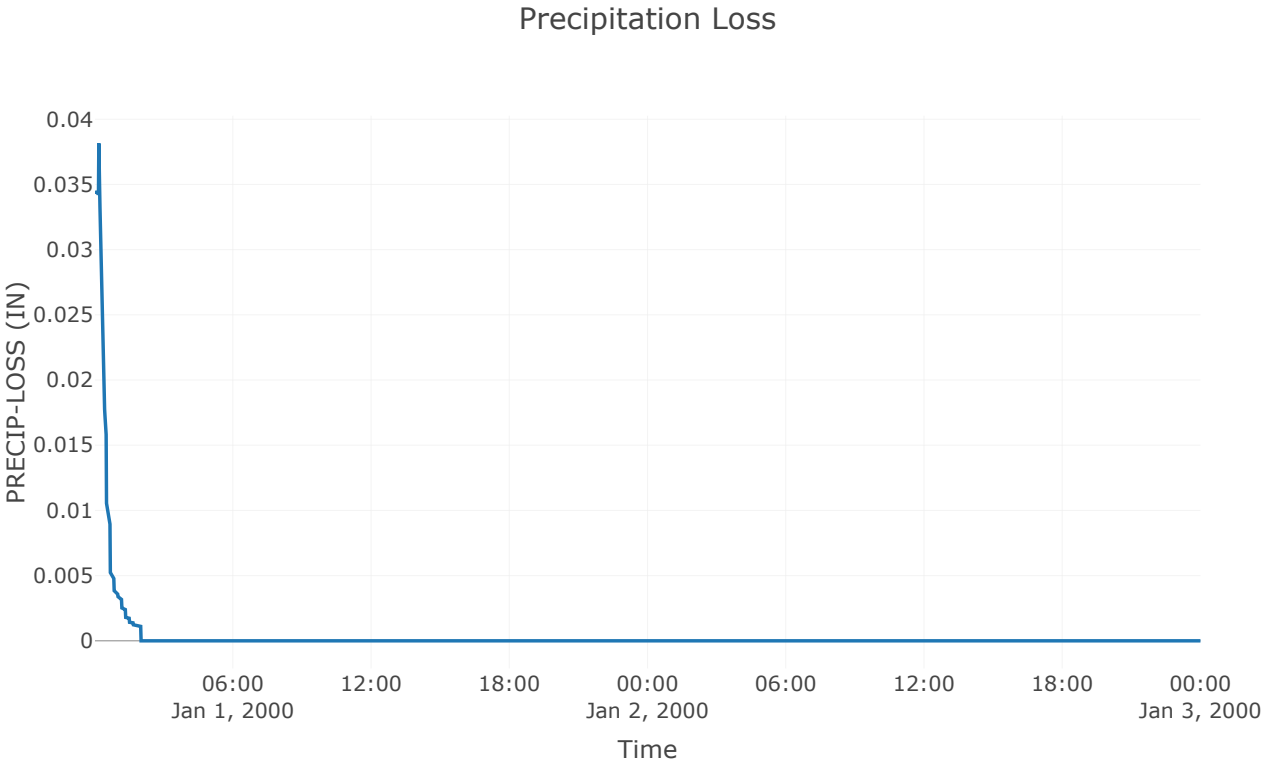


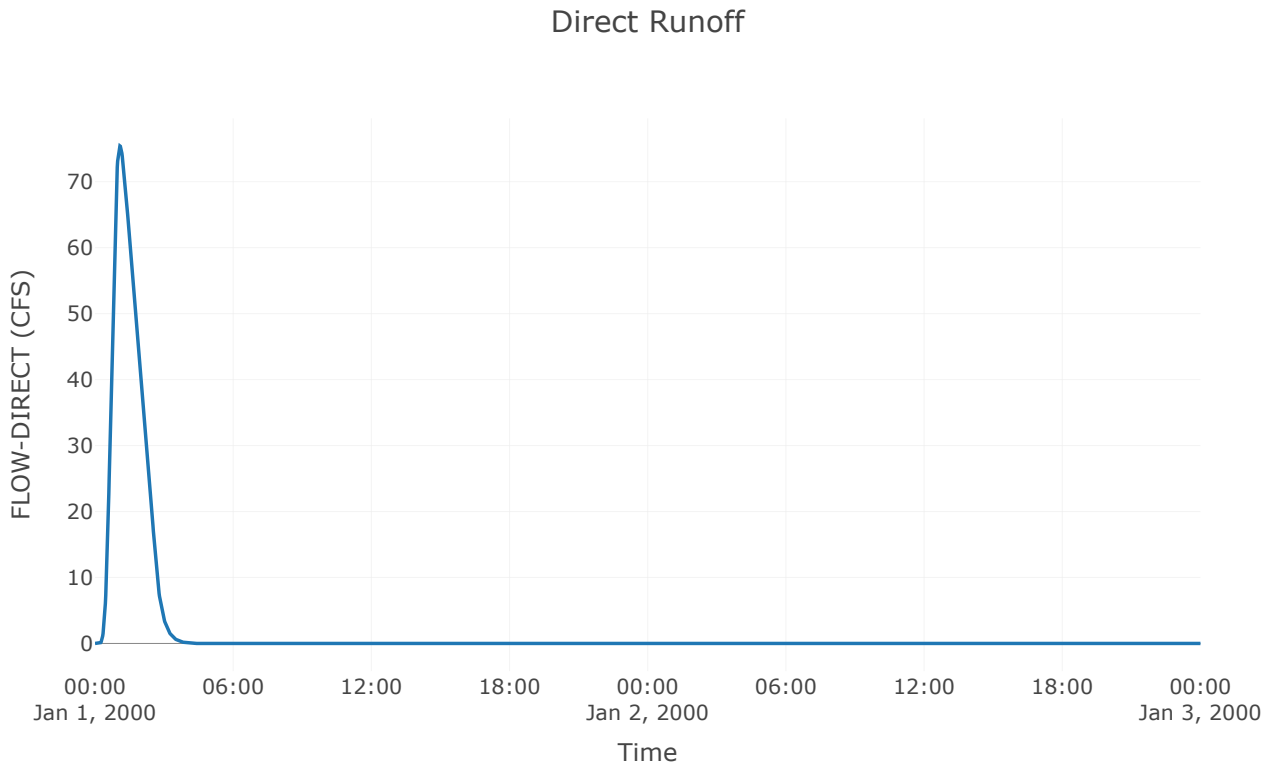

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

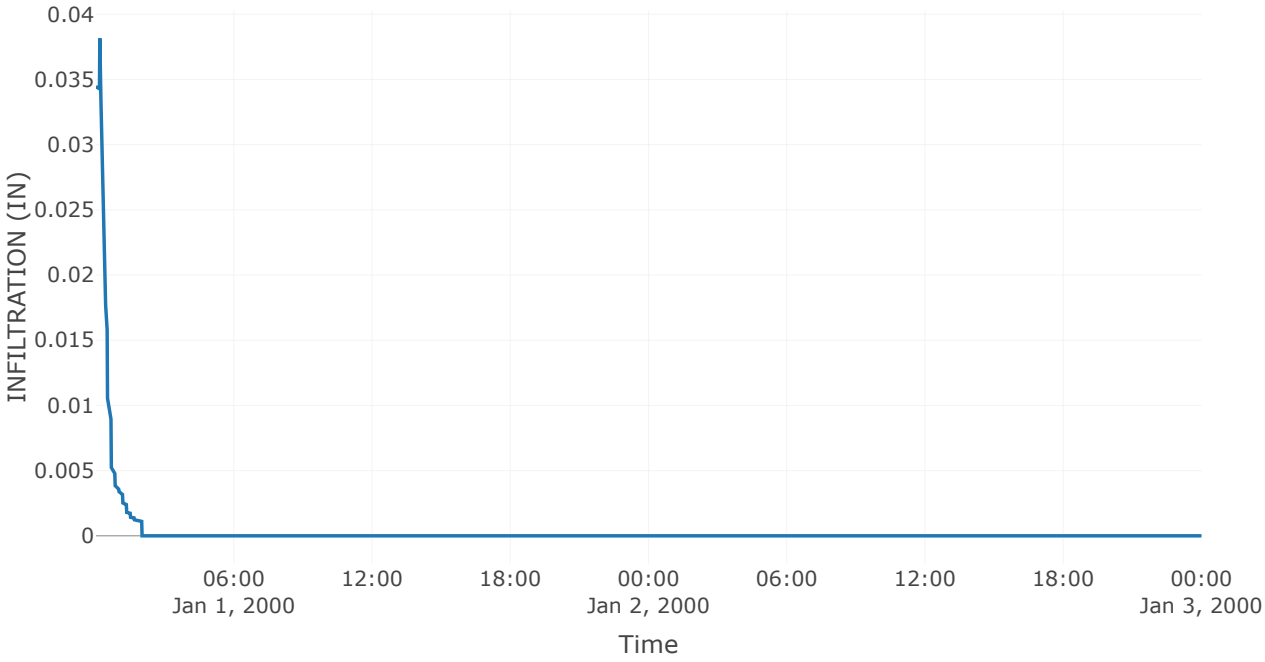

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

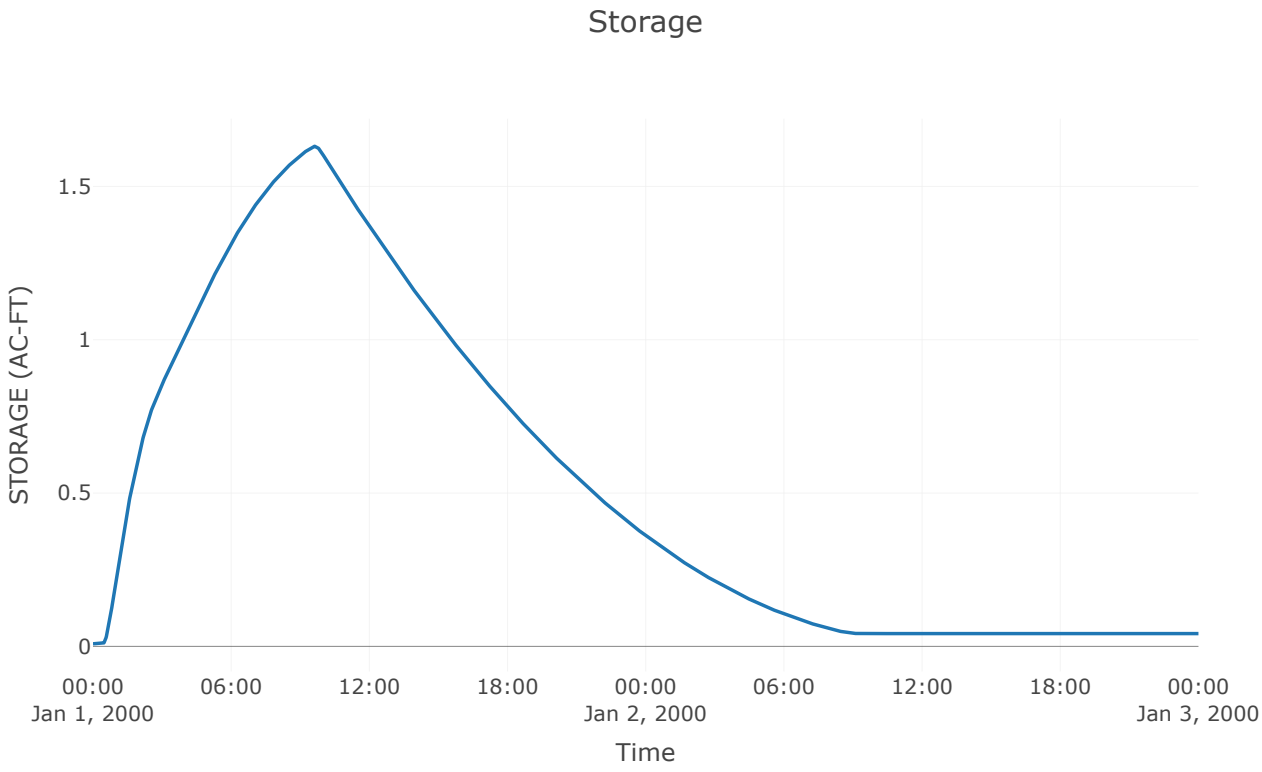

Direct Runoff
FLOW-DIRECT (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

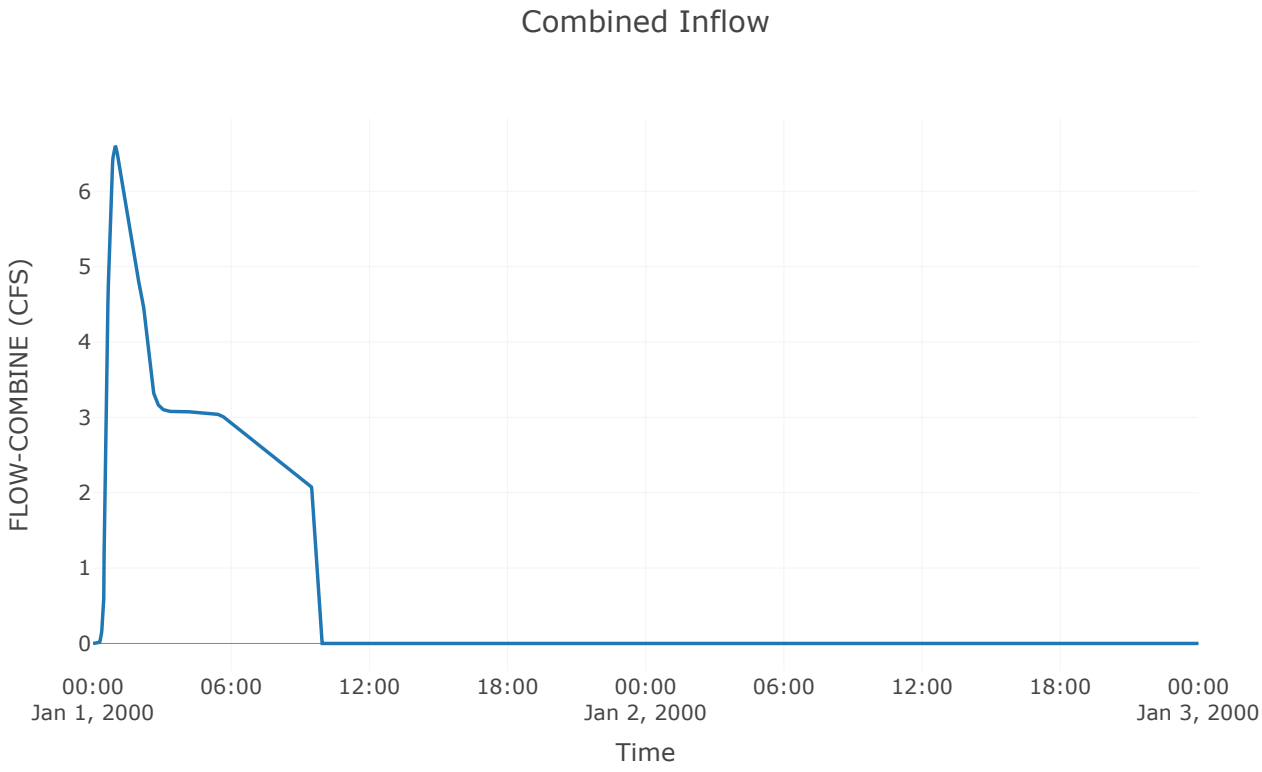

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

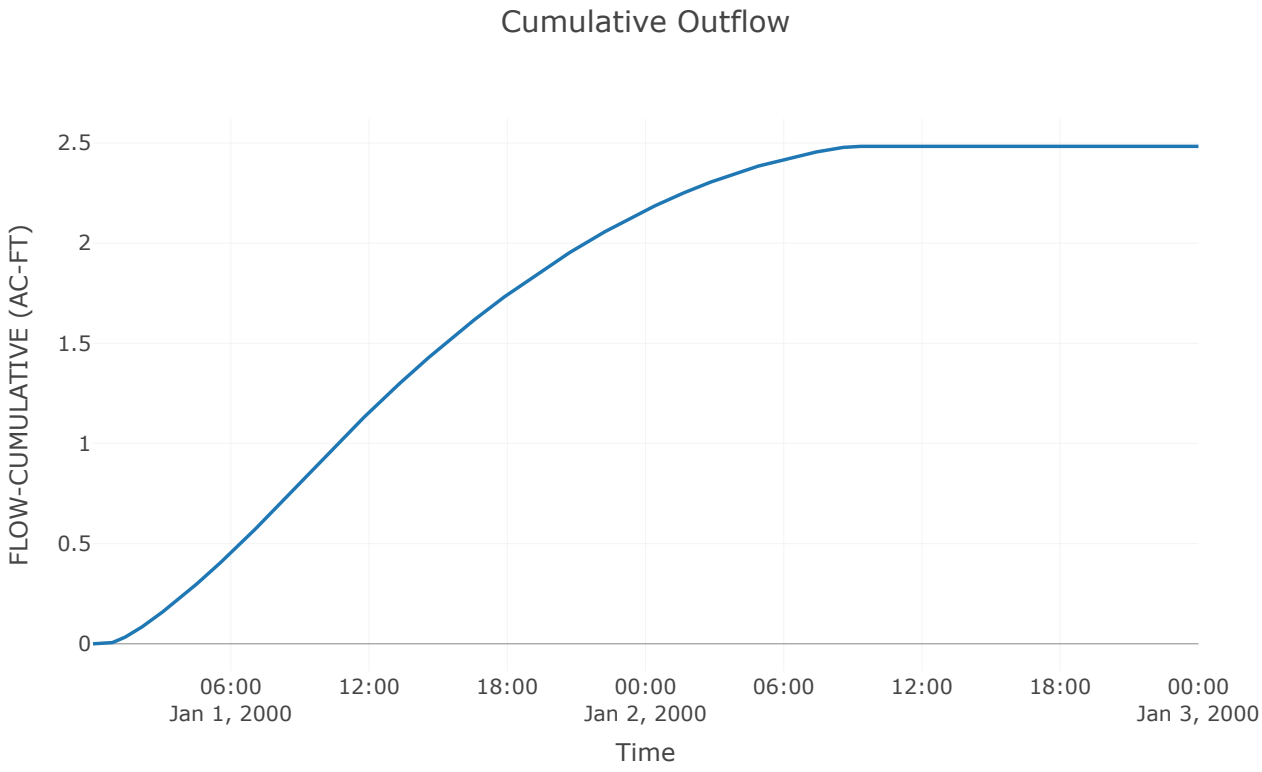
Reservoir: Basin 3

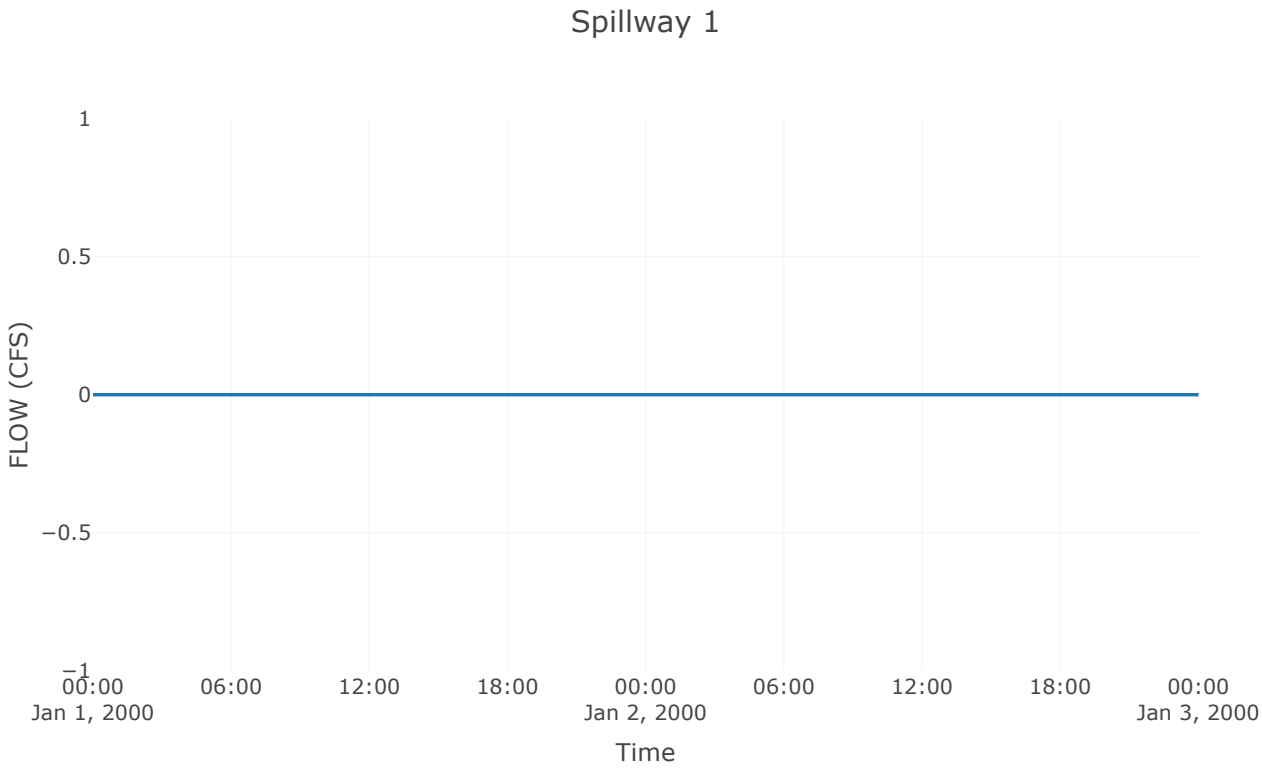
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

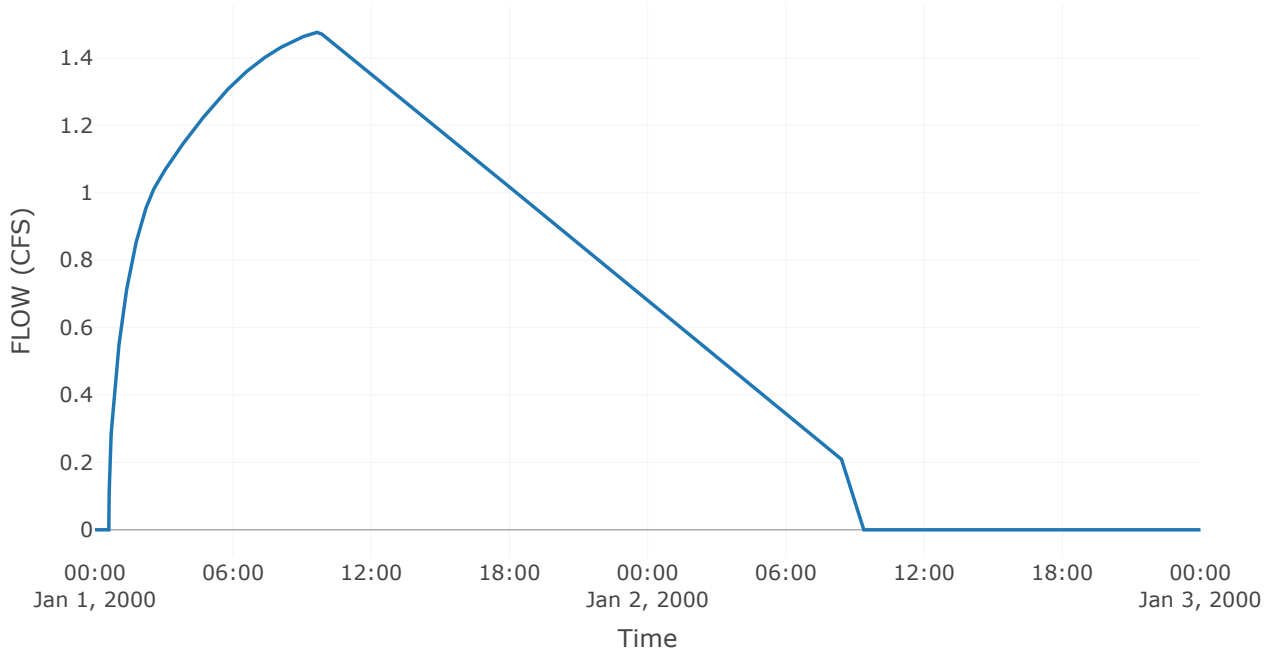

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

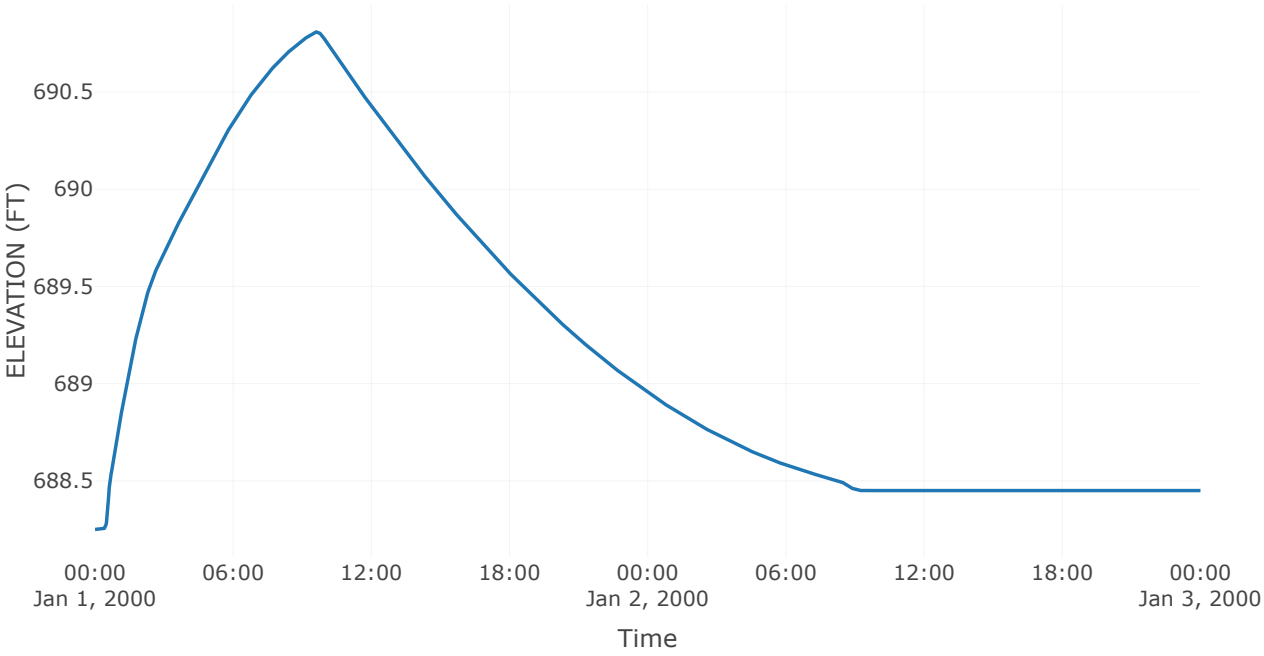

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

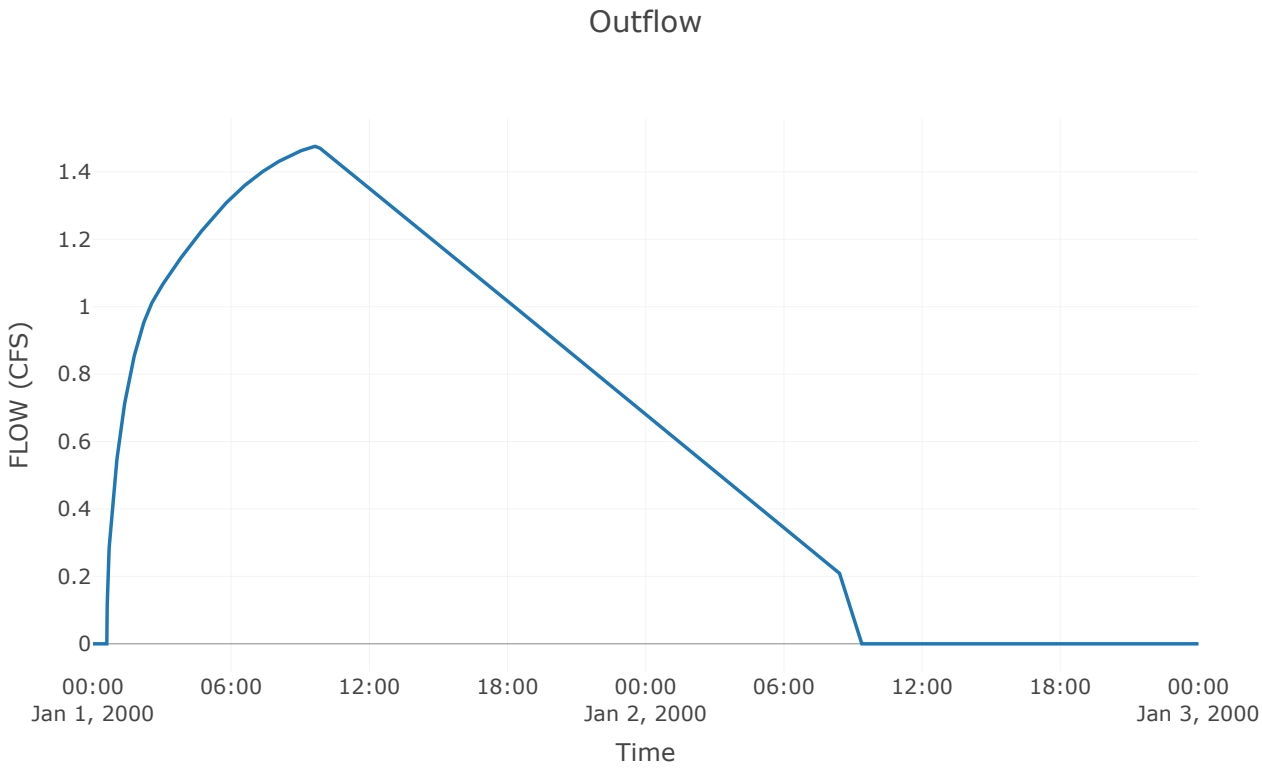

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

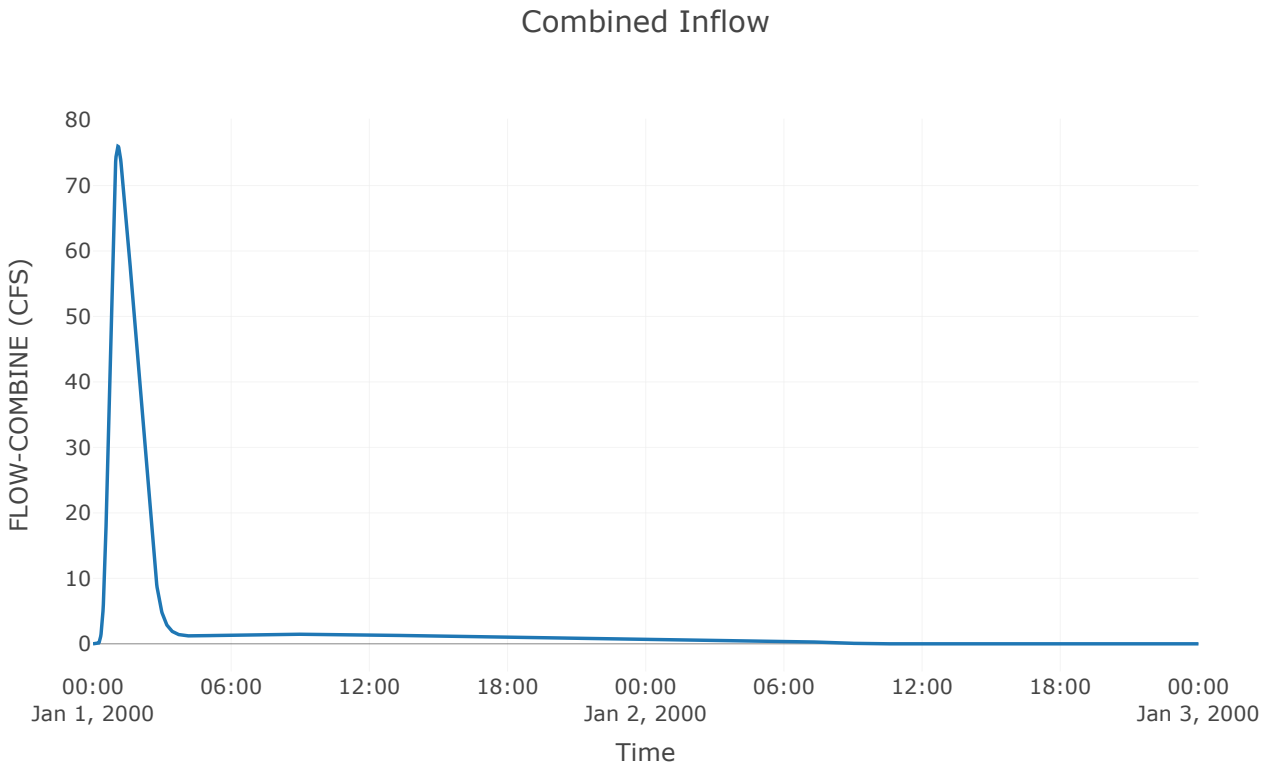


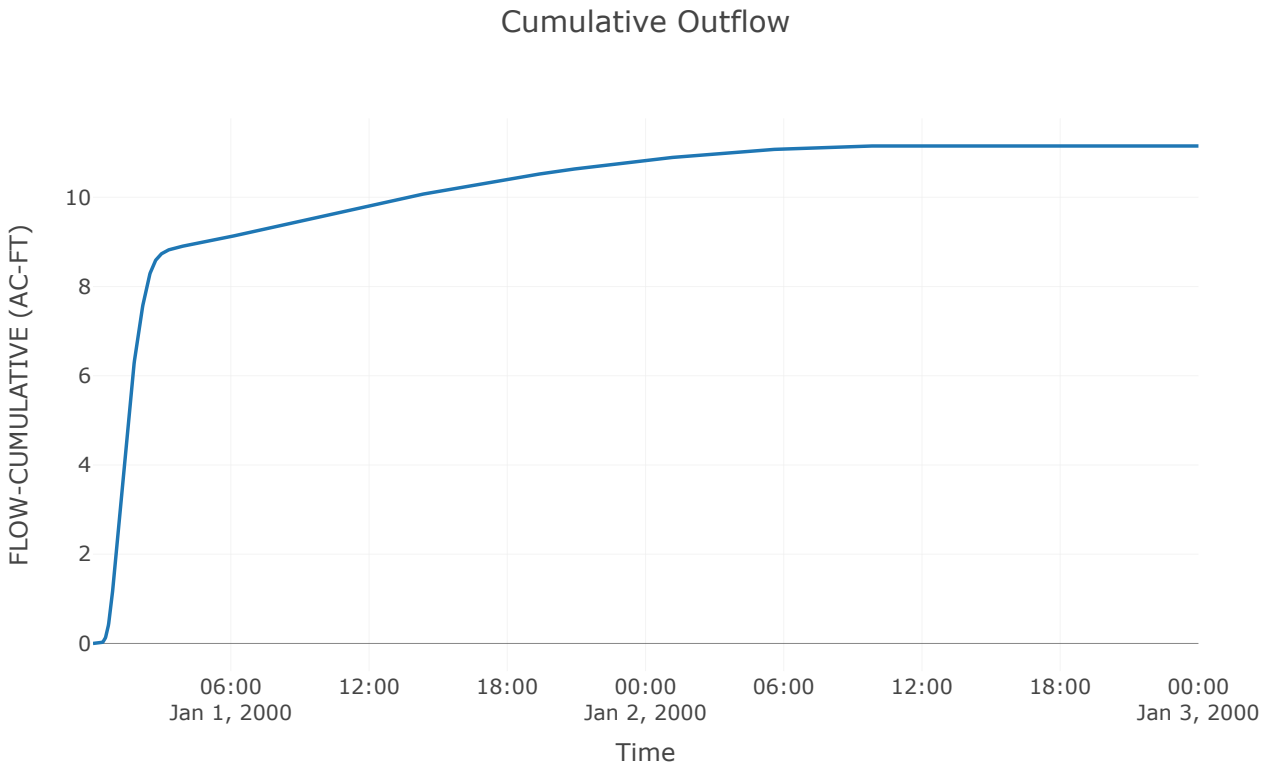

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

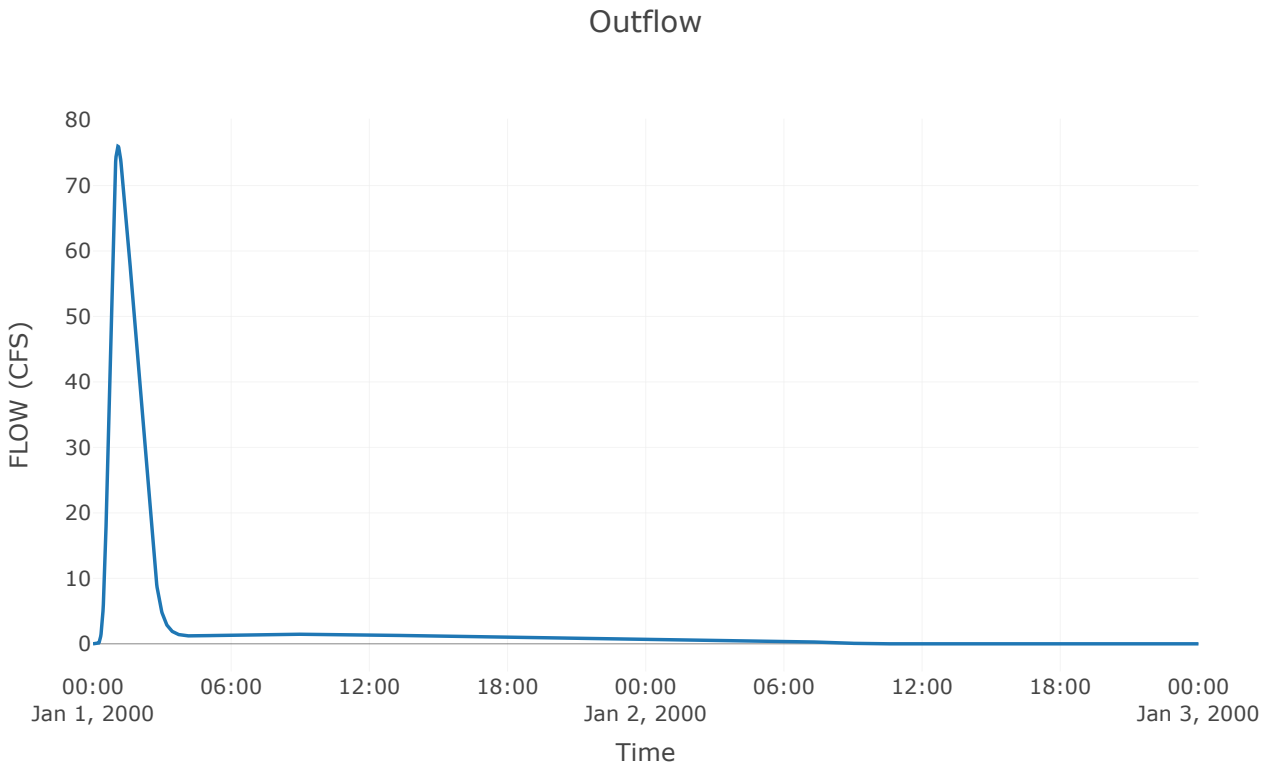
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

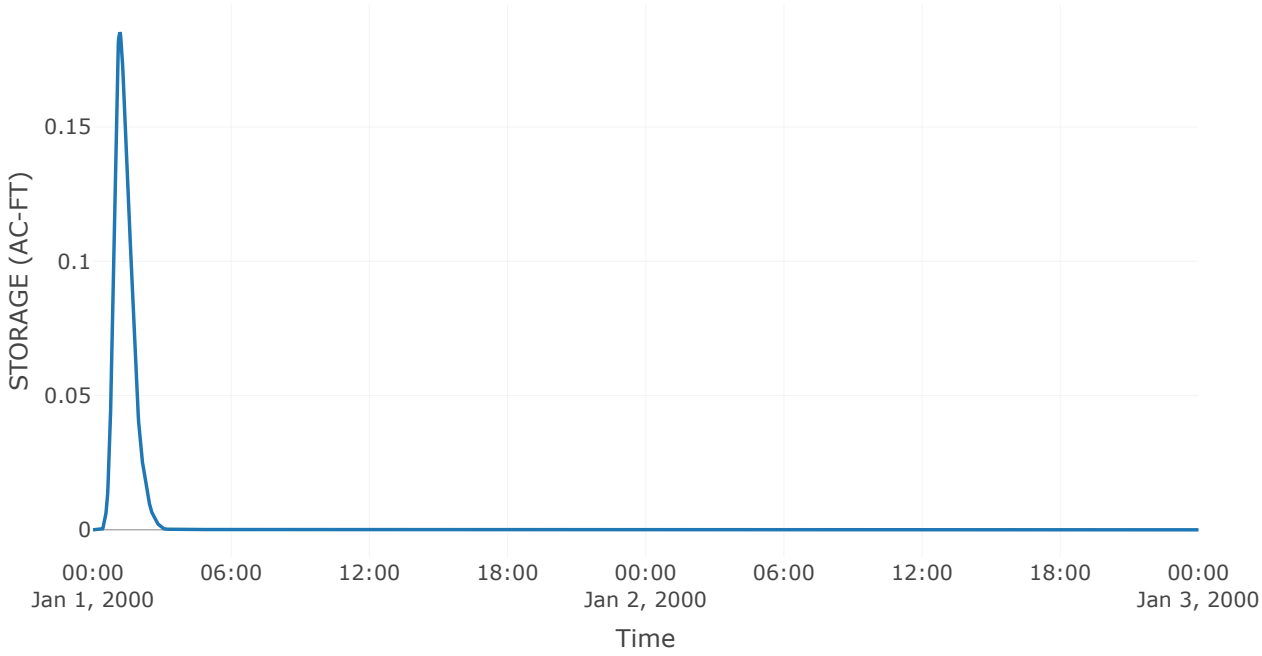

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

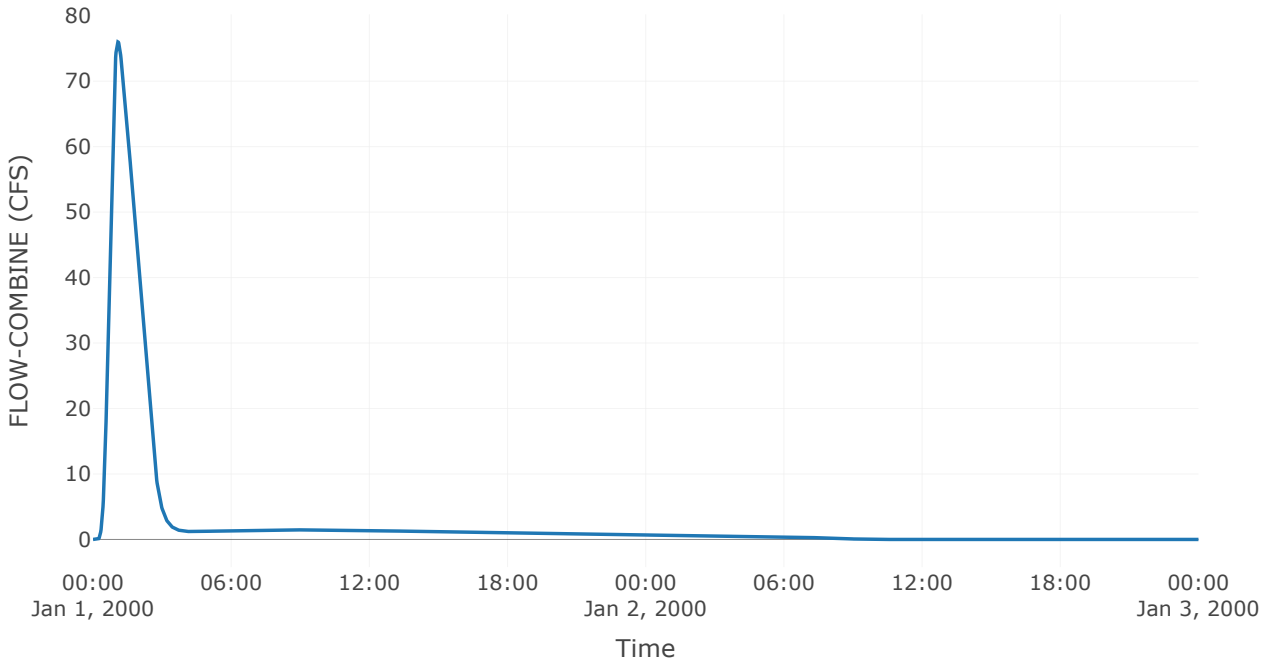
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

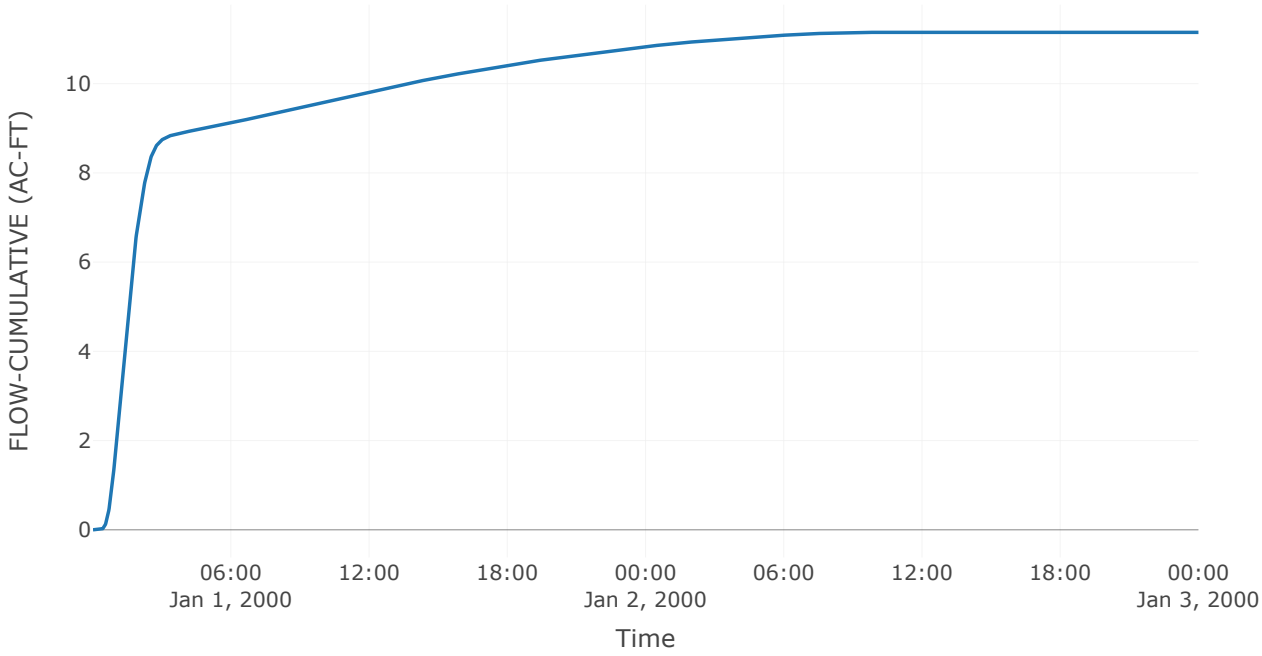
Storage



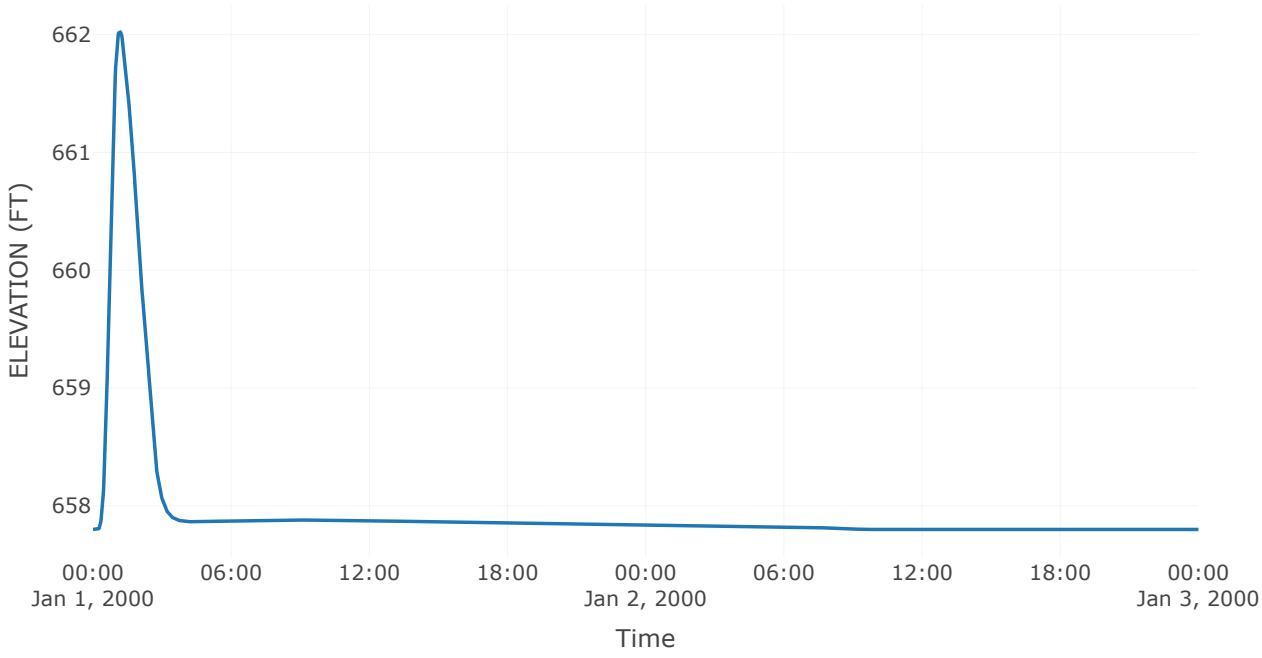
Combined Inflow

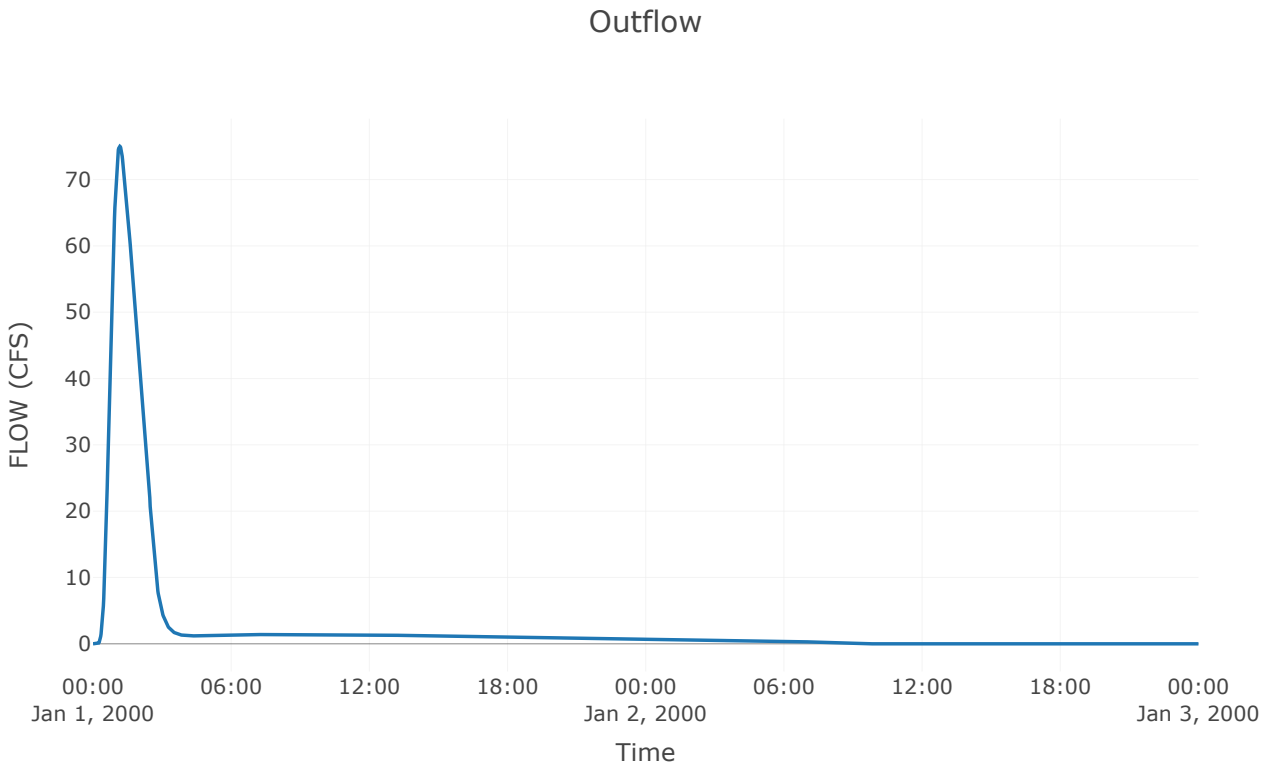


Cumulative Outflow



Pool Elevation



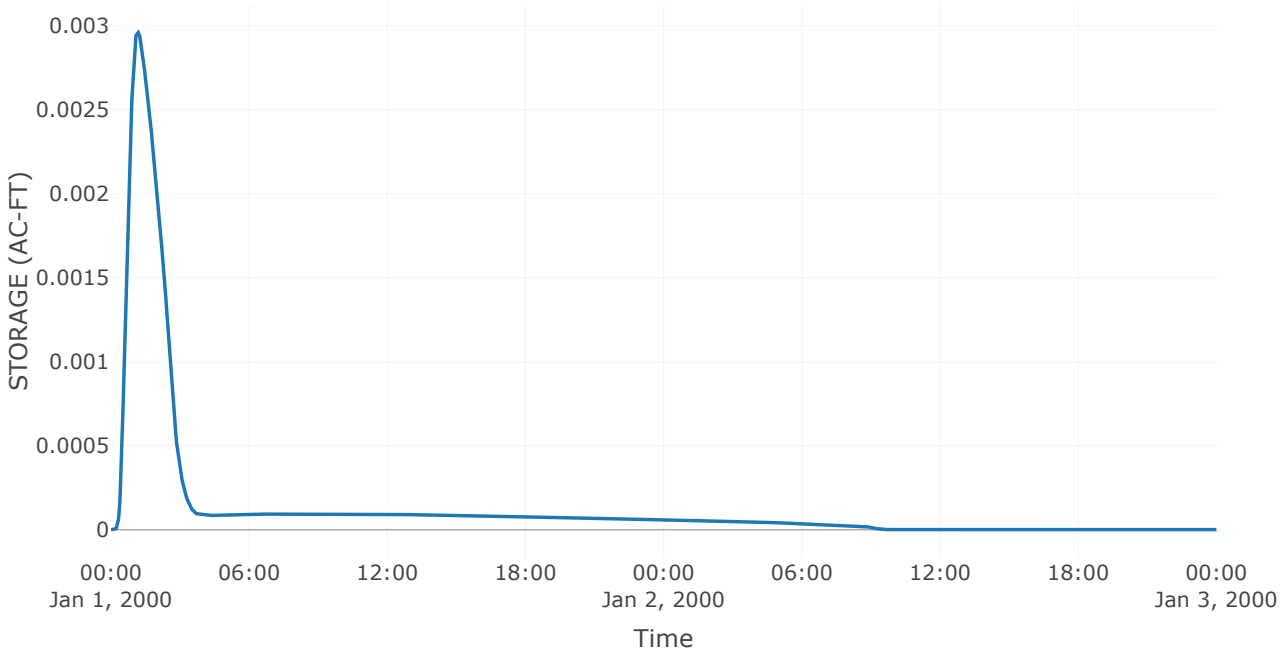

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

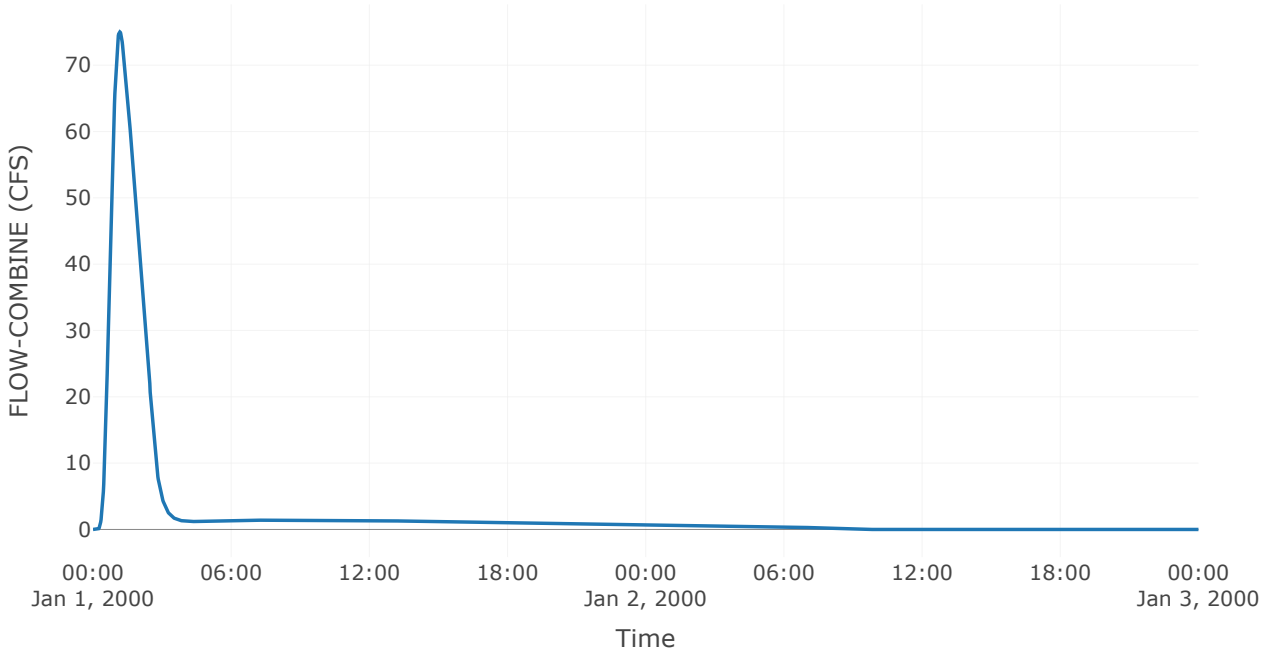
Downstream : Prop Storage West of Wolf Rd

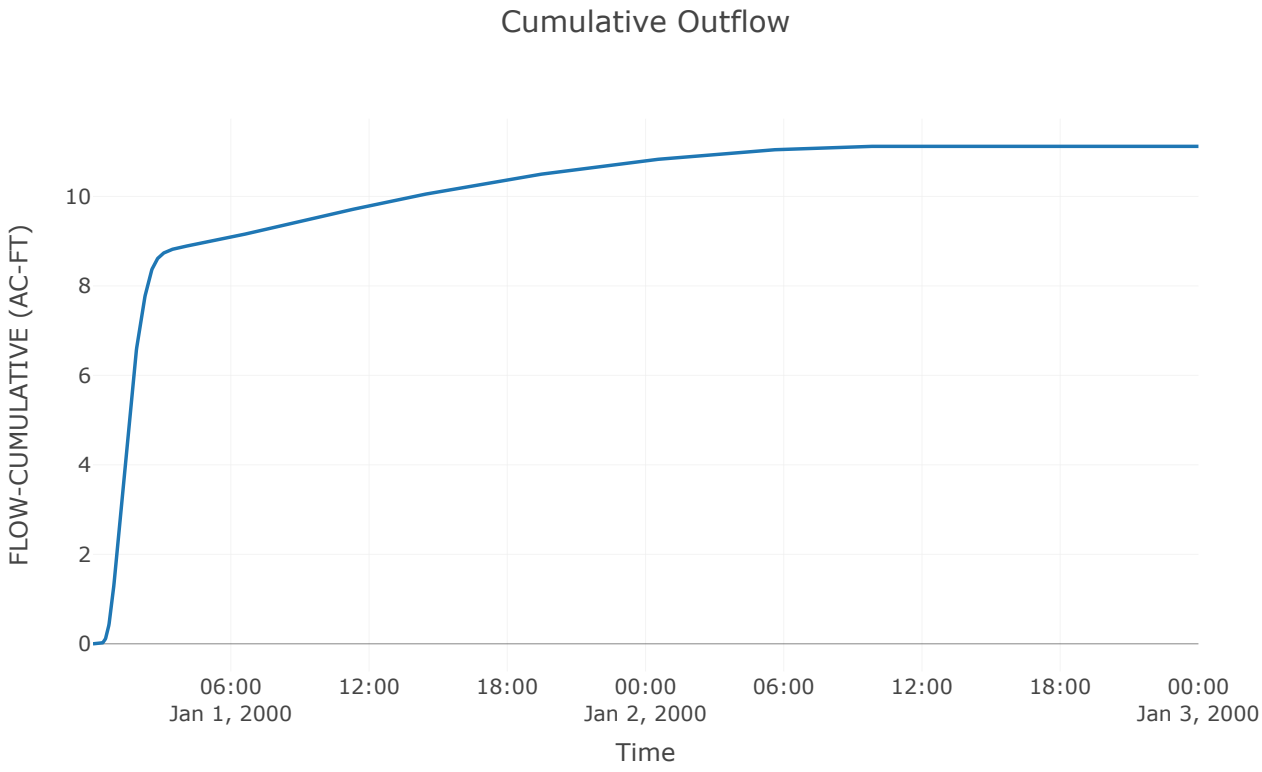
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.51
Discharge Volume (AC - FT)	11.12

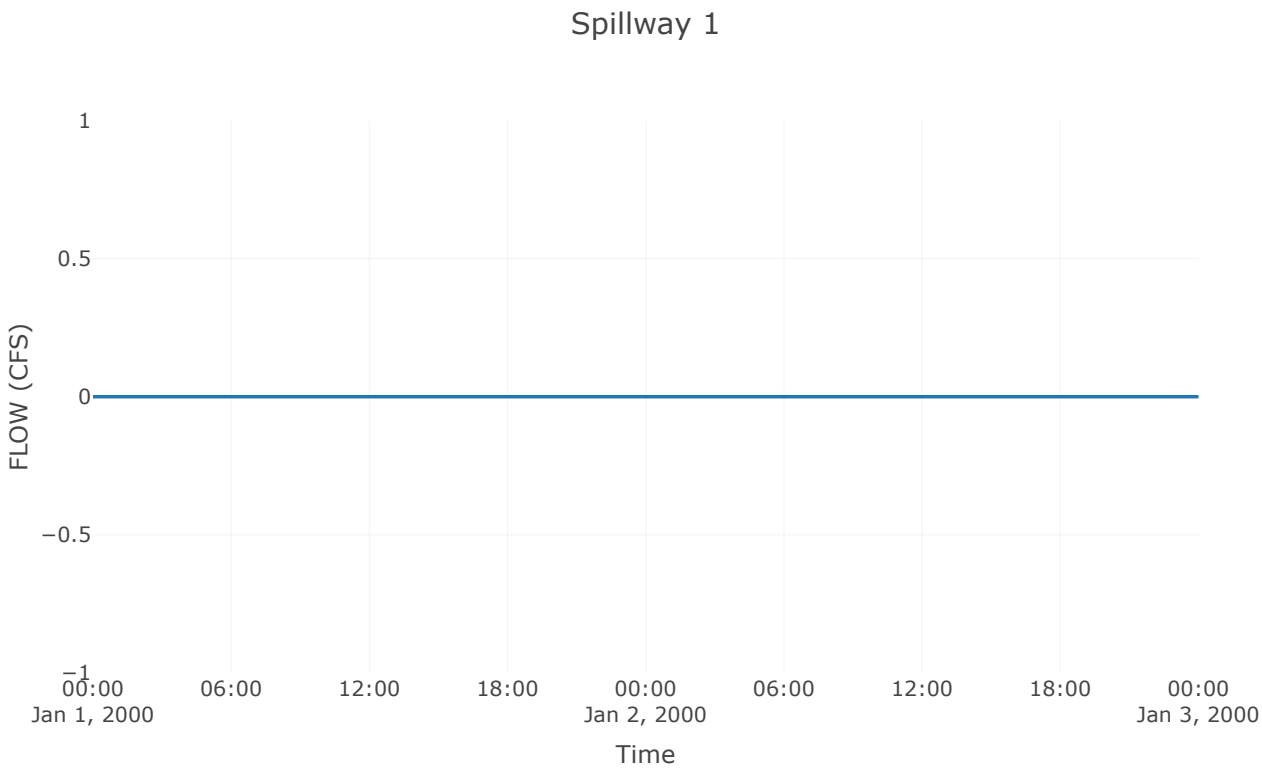
Storage



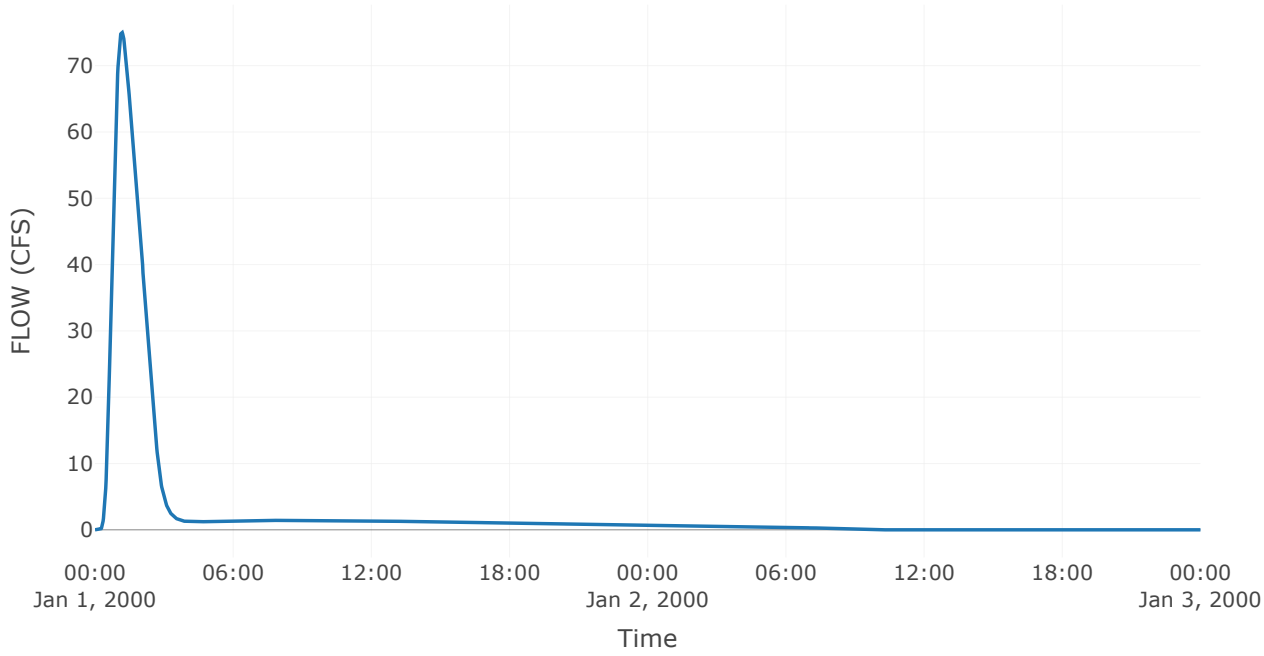
Combined Inflow



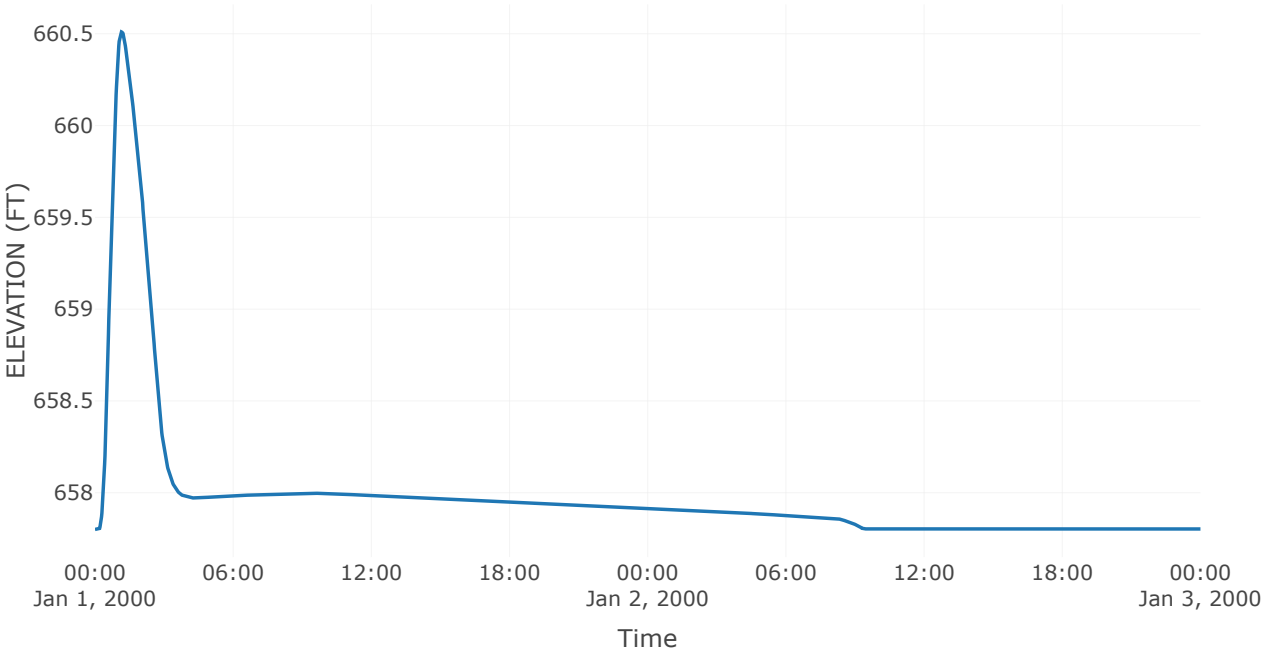

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

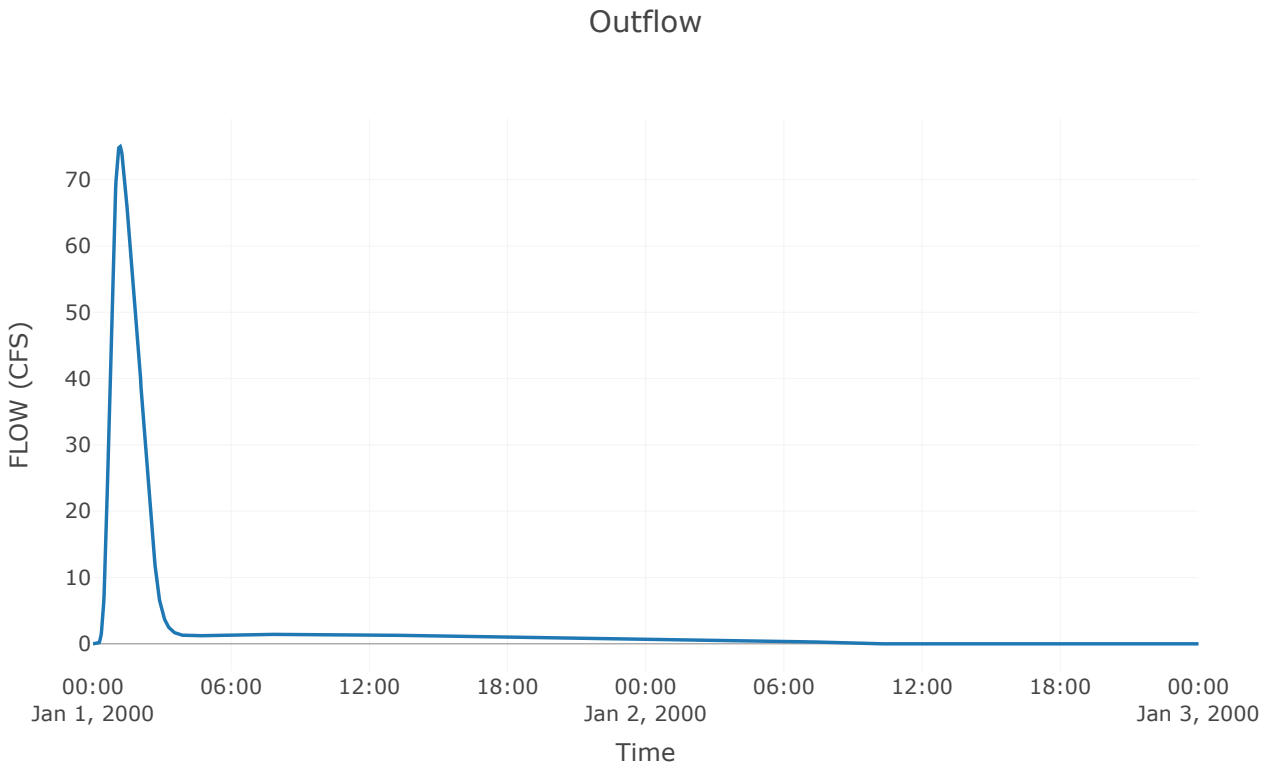

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



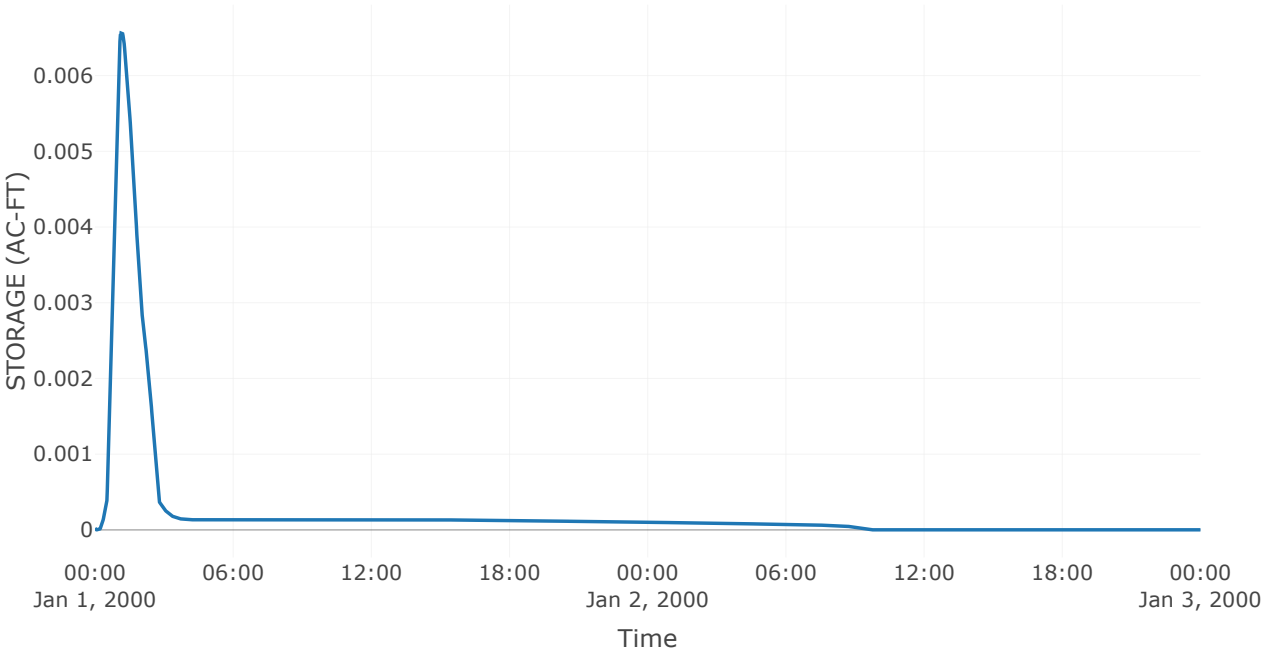

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

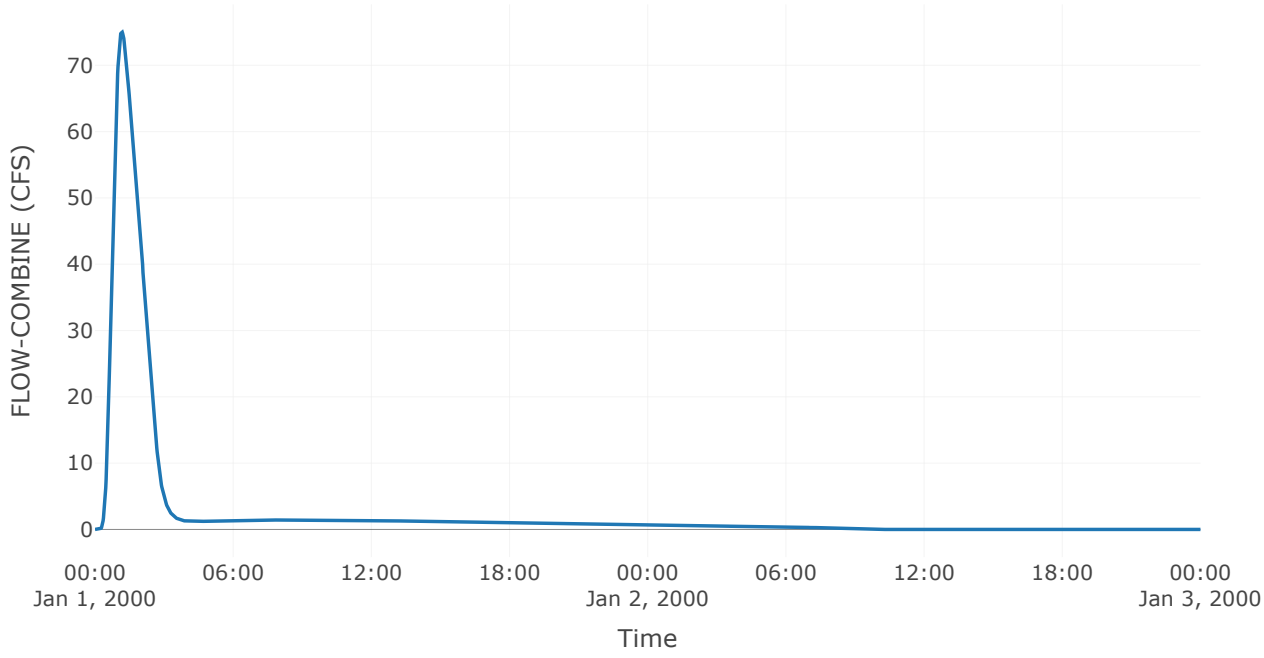
Downstream : Proposed Basin C

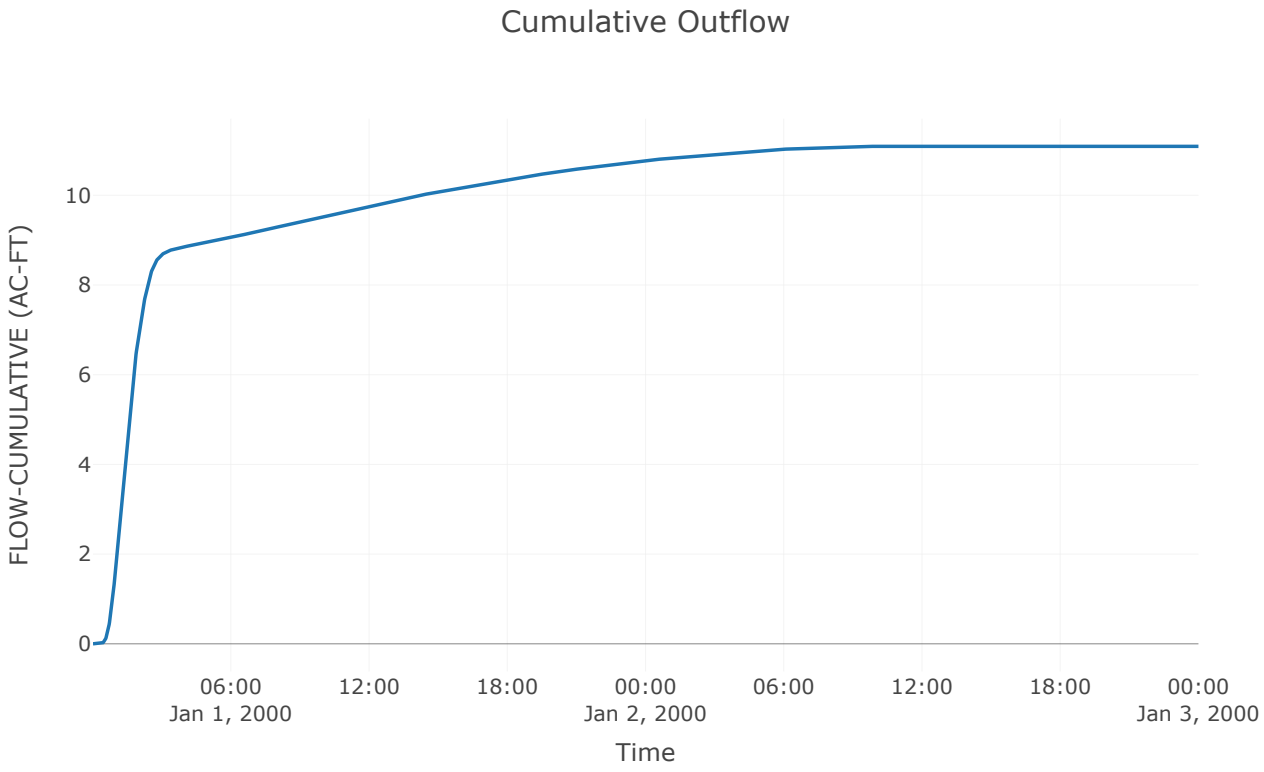
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	75.06
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.01
Peak Elevation (FT)	656.65
Discharge Volume (AC - FT)	11.09

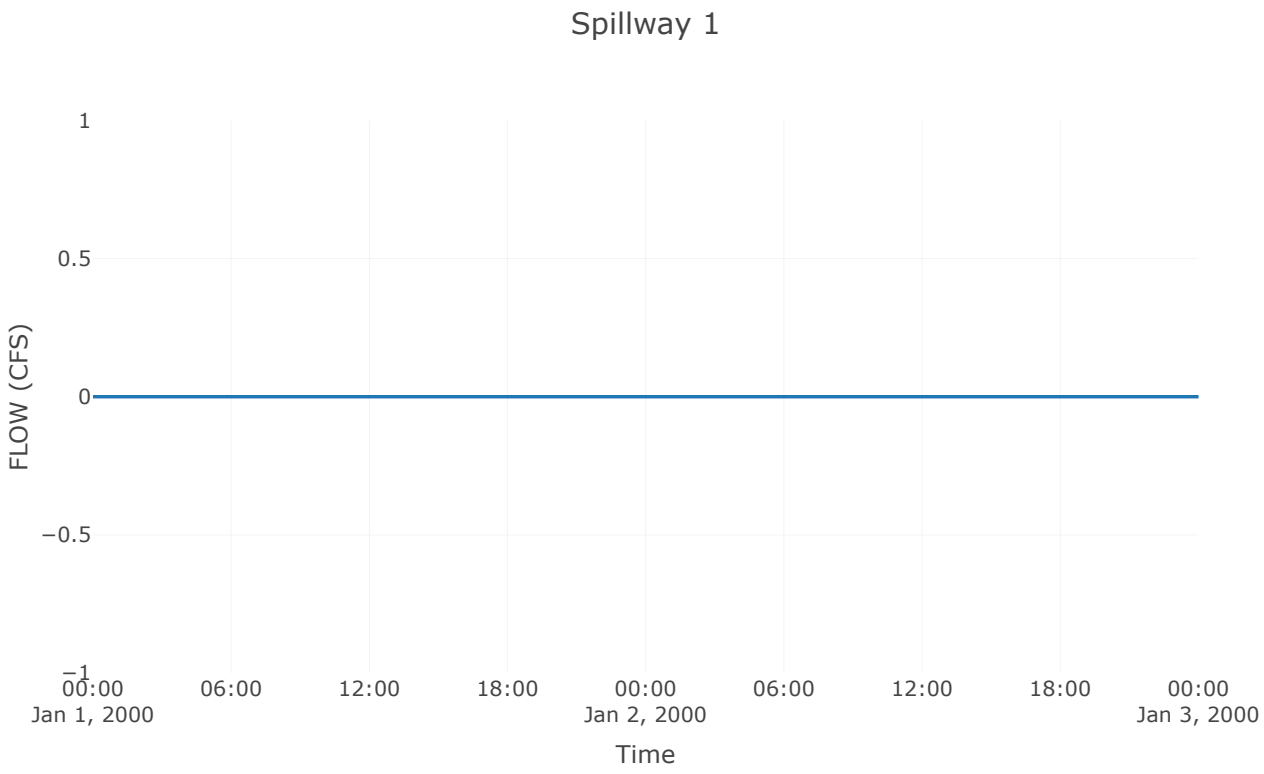
Storage



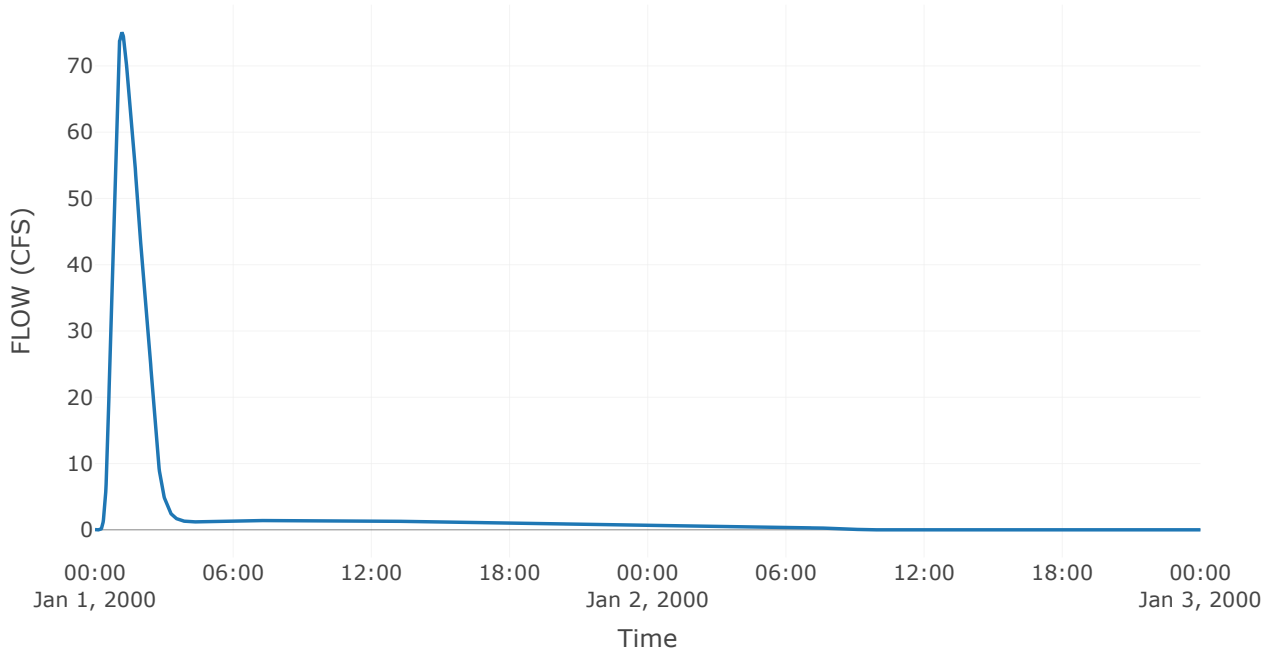
Combined Inflow



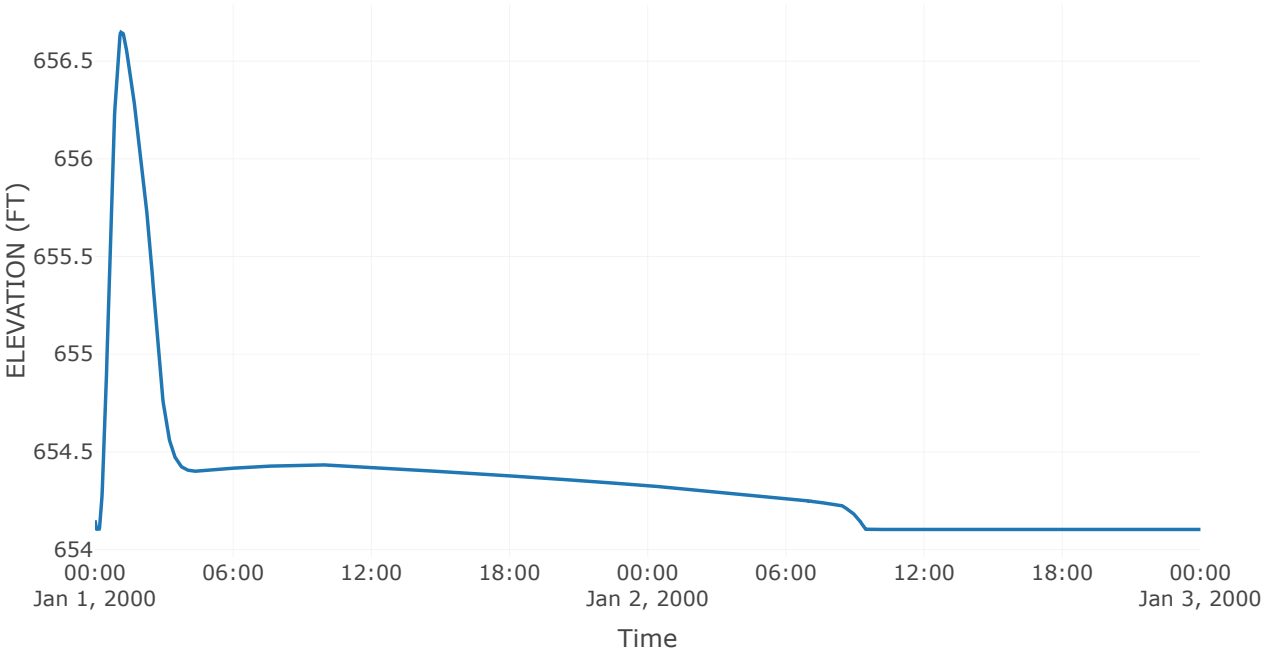

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

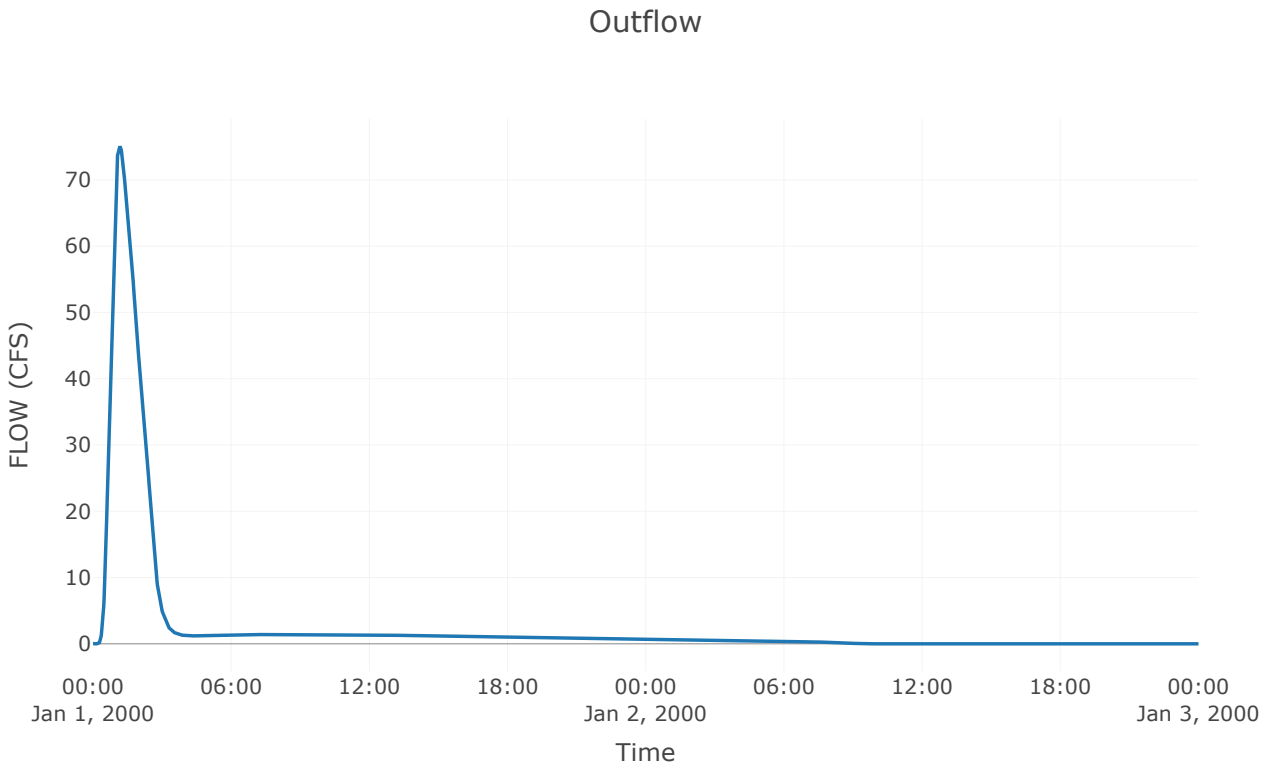

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

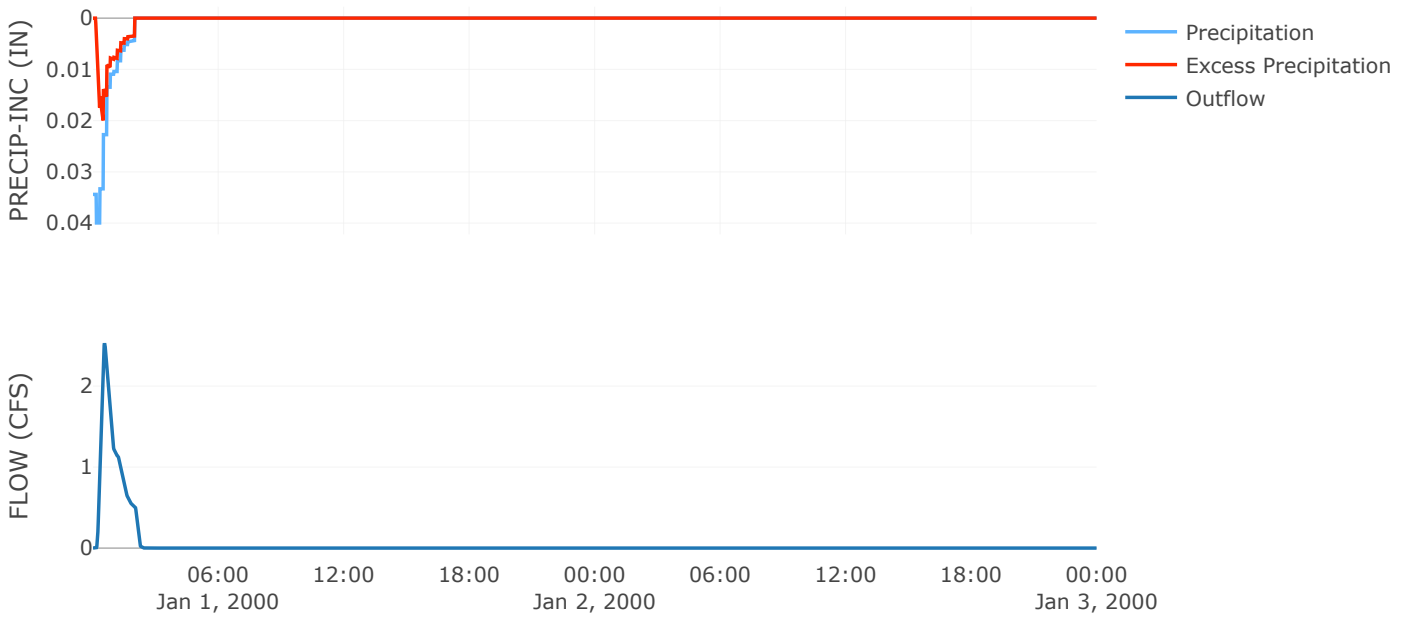
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

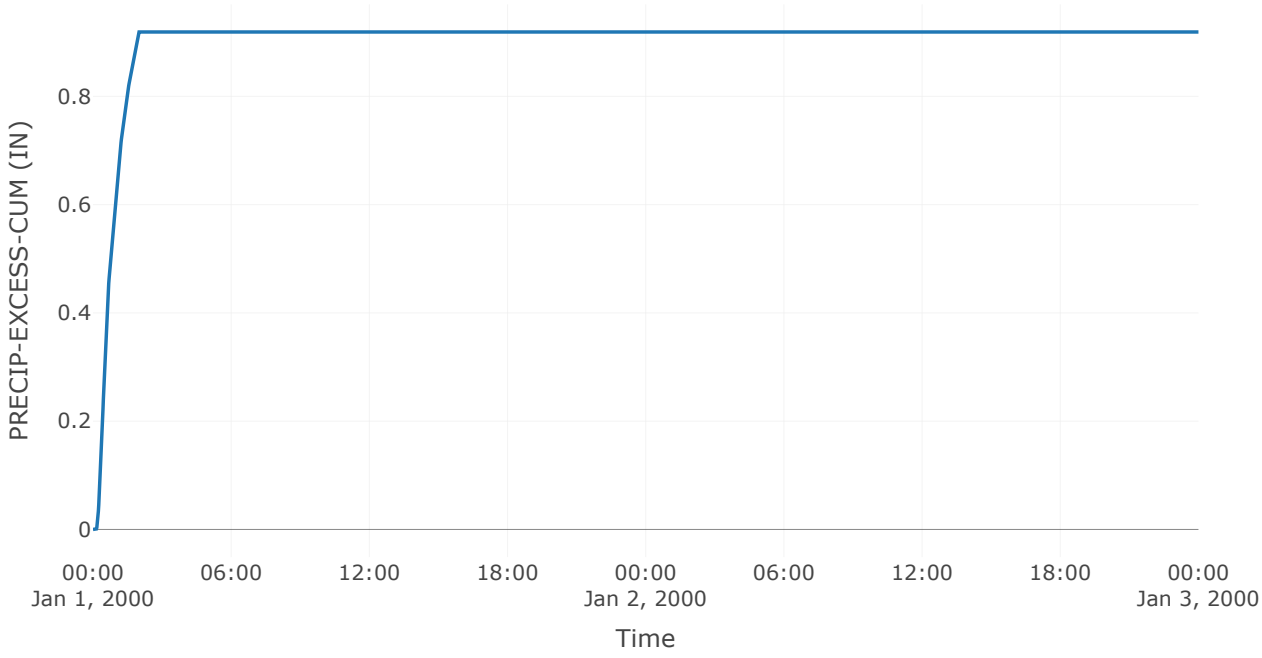
Transform: Scs	
Lag	6
Unitgraph Type	Standard

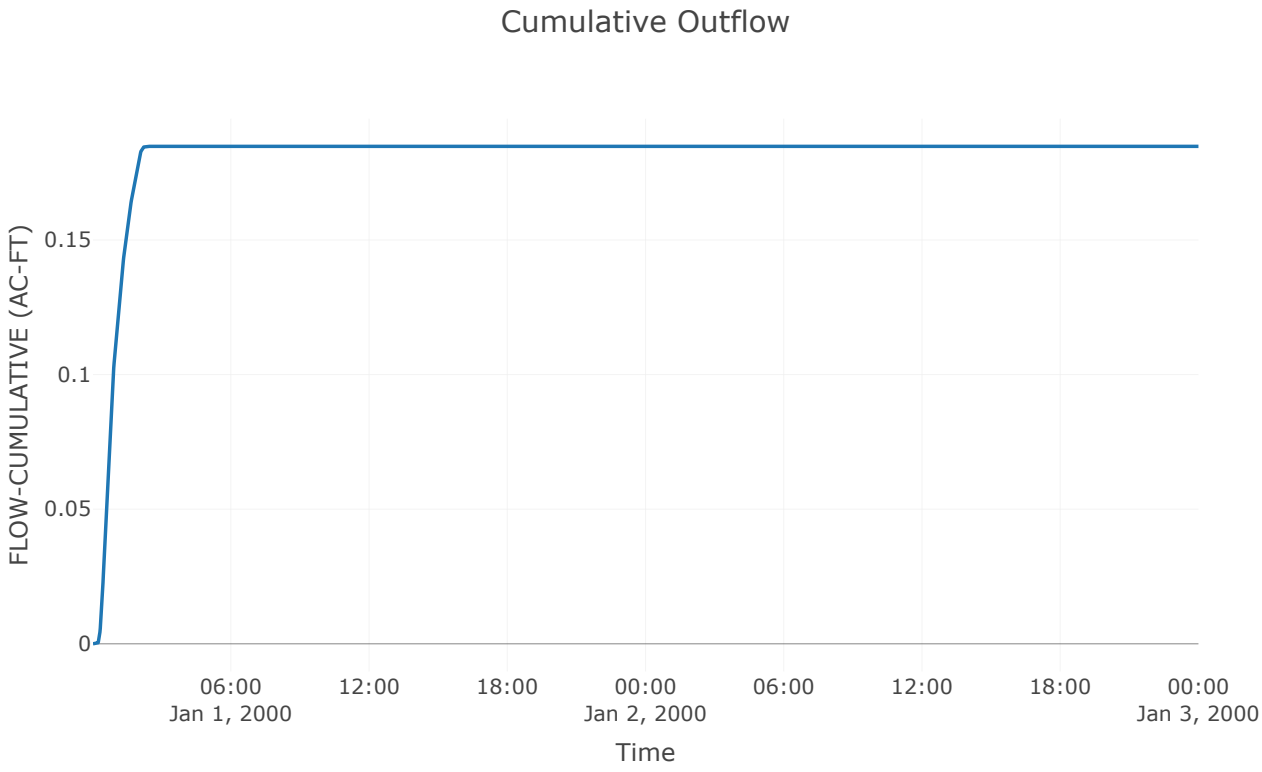
Results: Prop On-Site	
Peak Discharge (CFS)	2.53
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	0.92
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.21
Excess Volume (AC - FT)	0.18
Direct Runoff Volume (AC - FT)	0.18
Baseflow Volume (AC - FT)	0

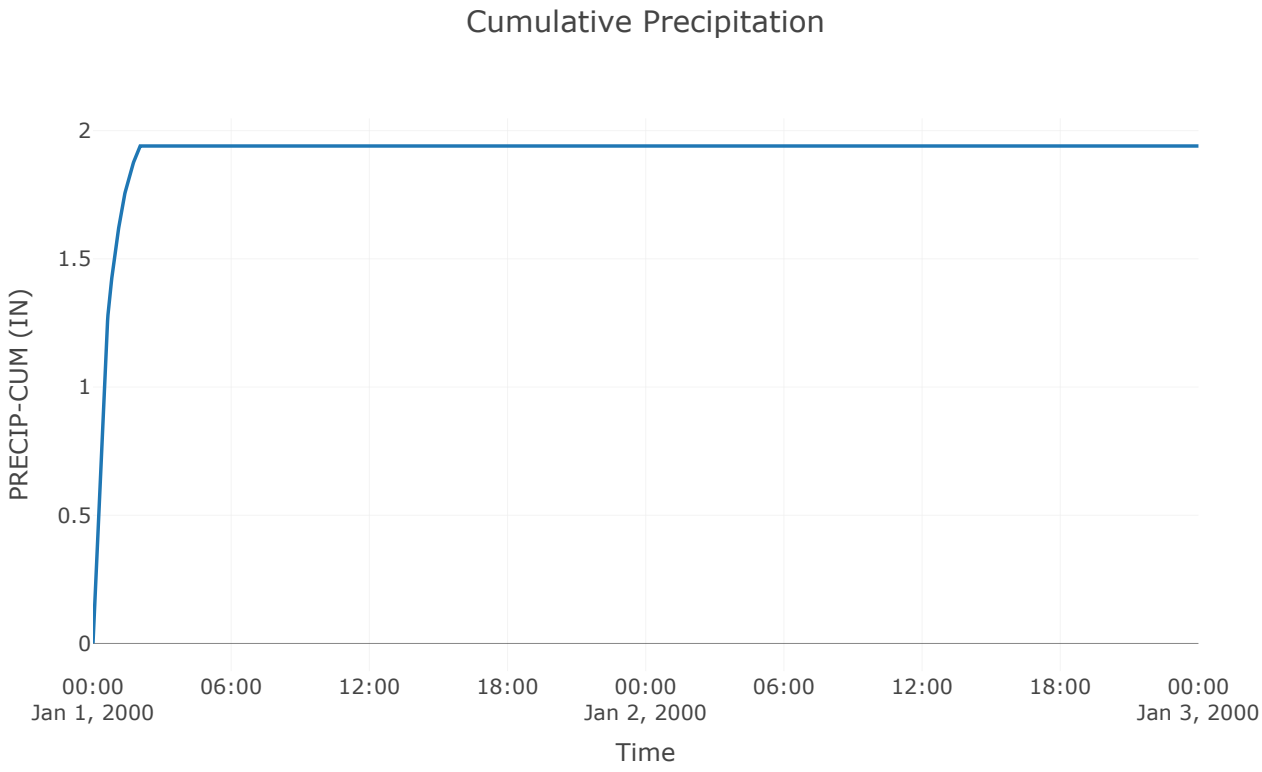
Precipitation and Outflow

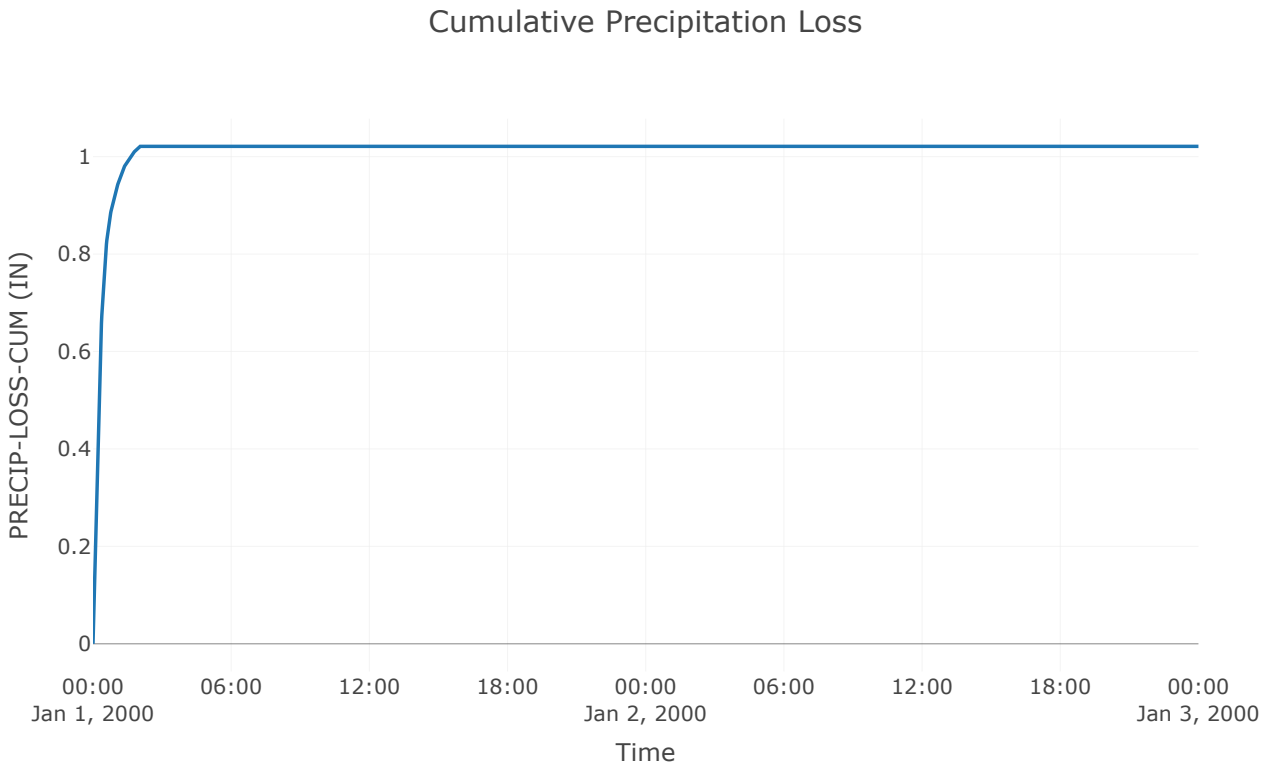


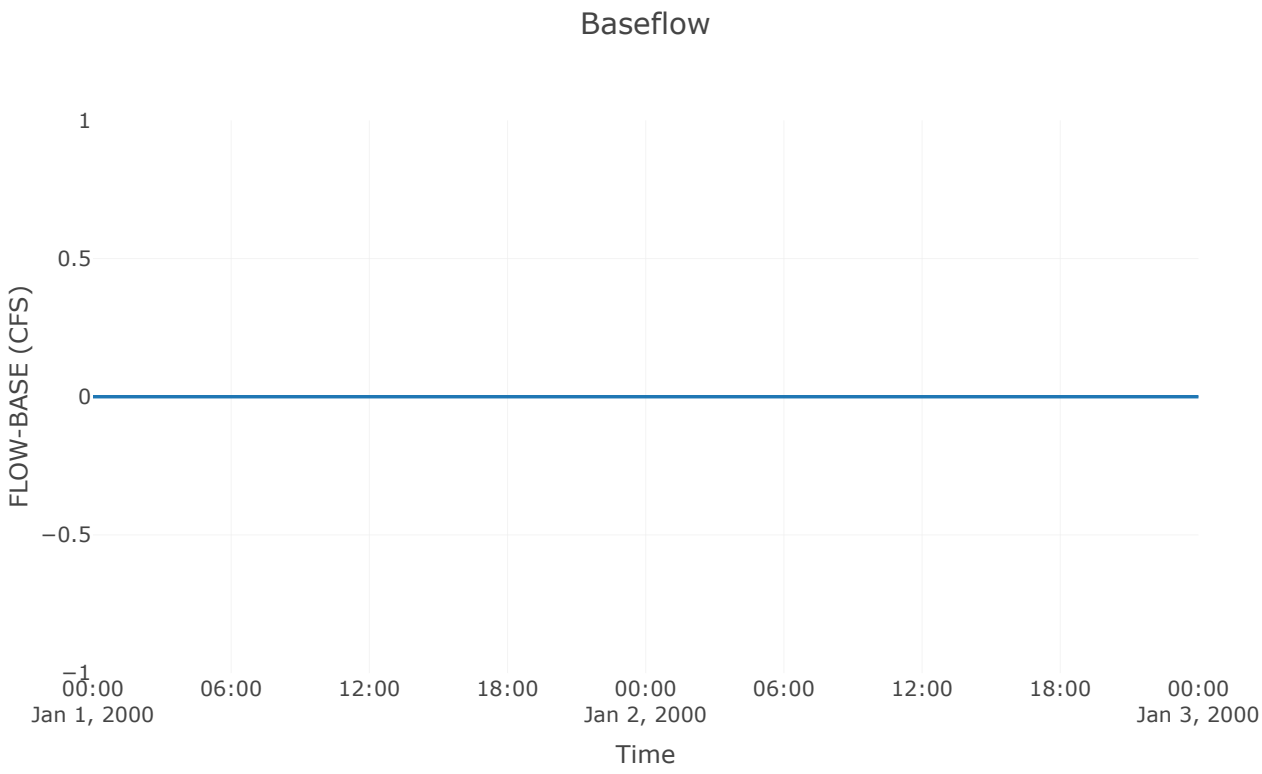
Cumulative Excess Precipitation

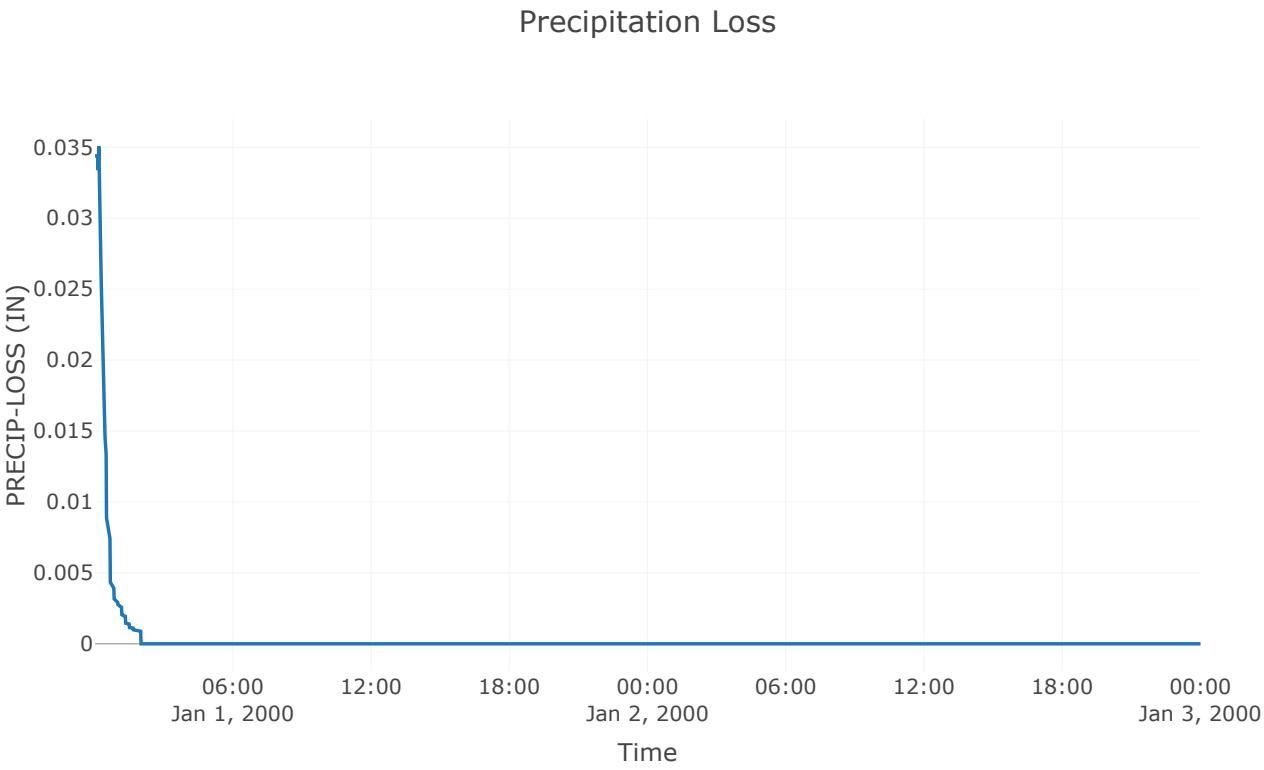


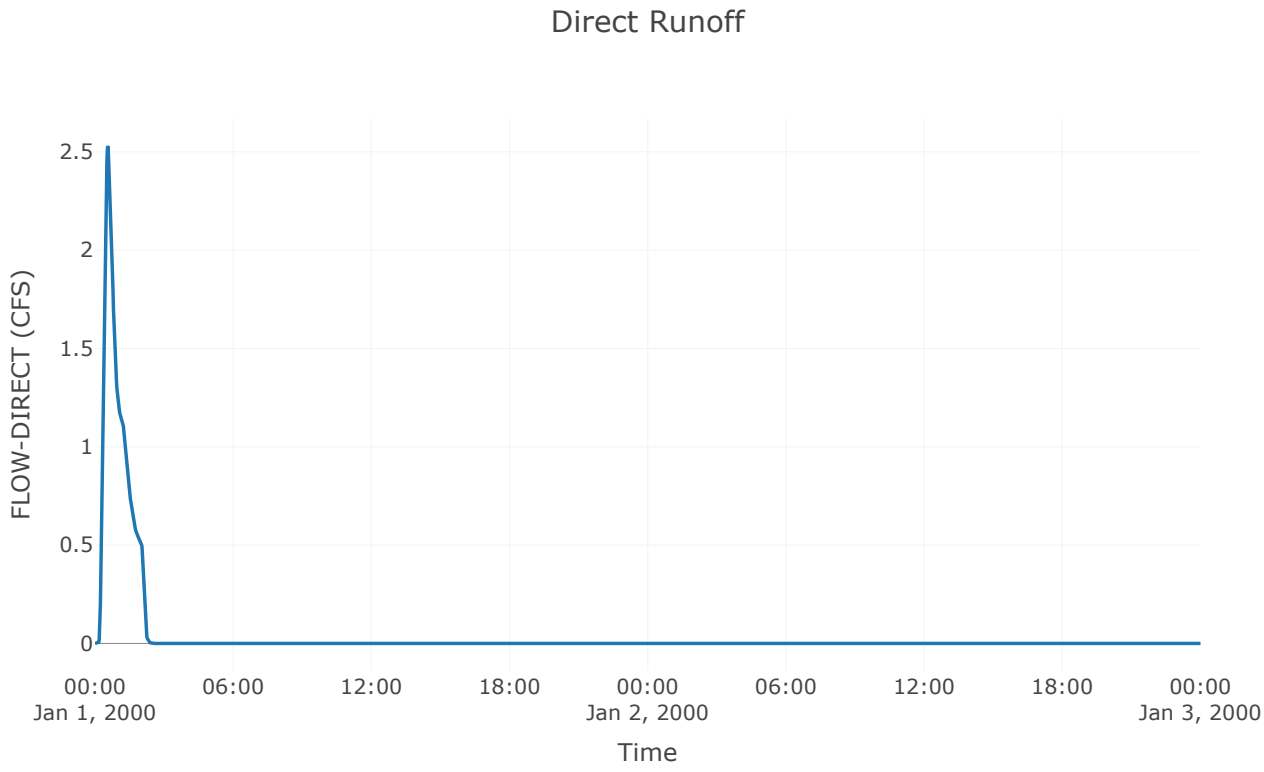

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

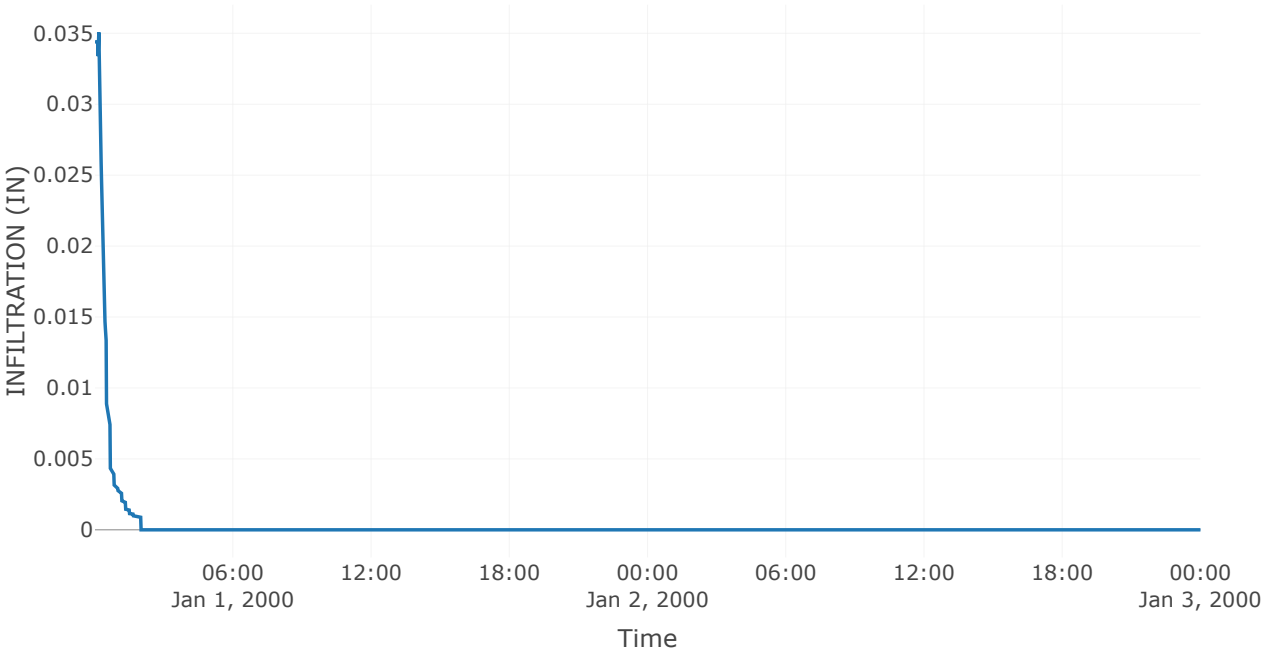

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

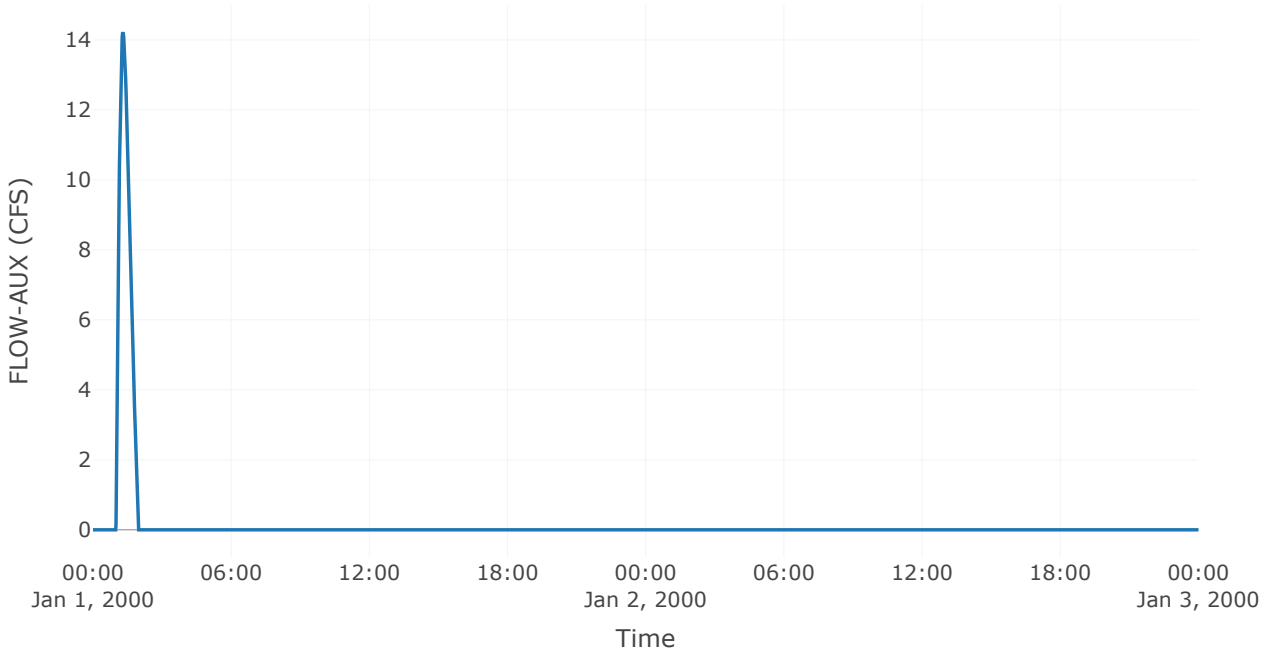

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

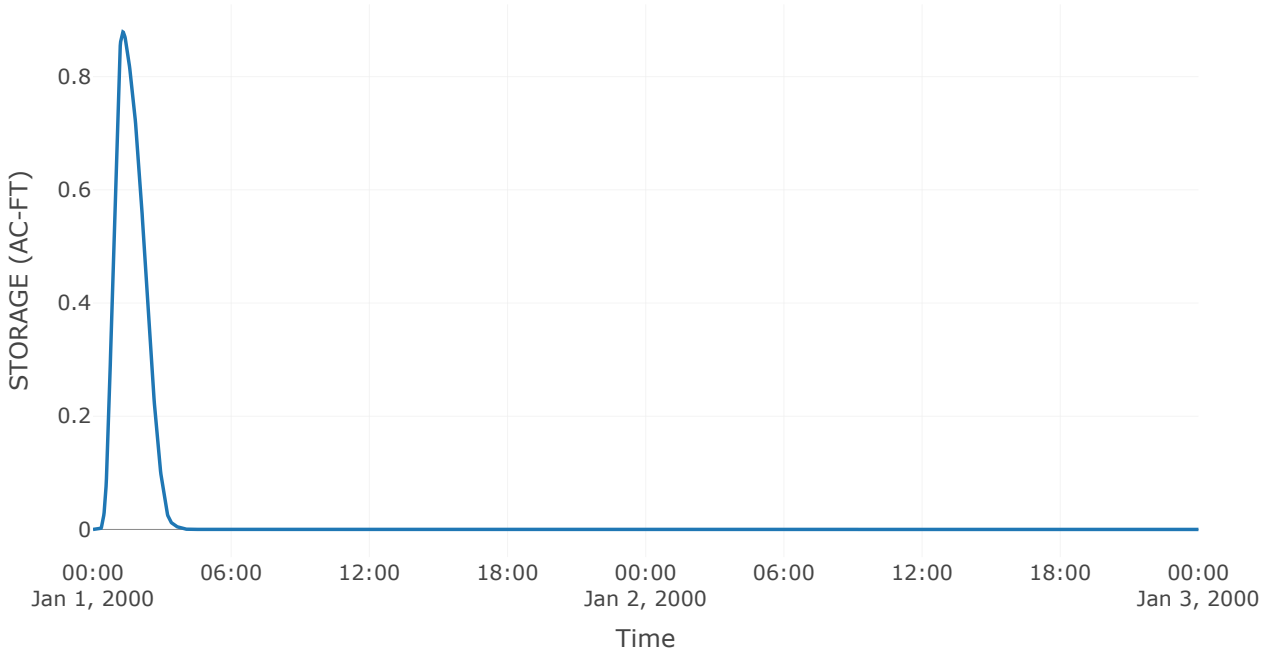
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	59.4
Time of Peak Discharge	01Jan2000, 01:18
Volume (IN)	0.73
Peak Inflow (CFS)	76.2
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.28
Maximum Storage (AC - FT)	0.88
Peak Elevation (FT)	650.71
Discharge Volume (AC - FT)	10.63

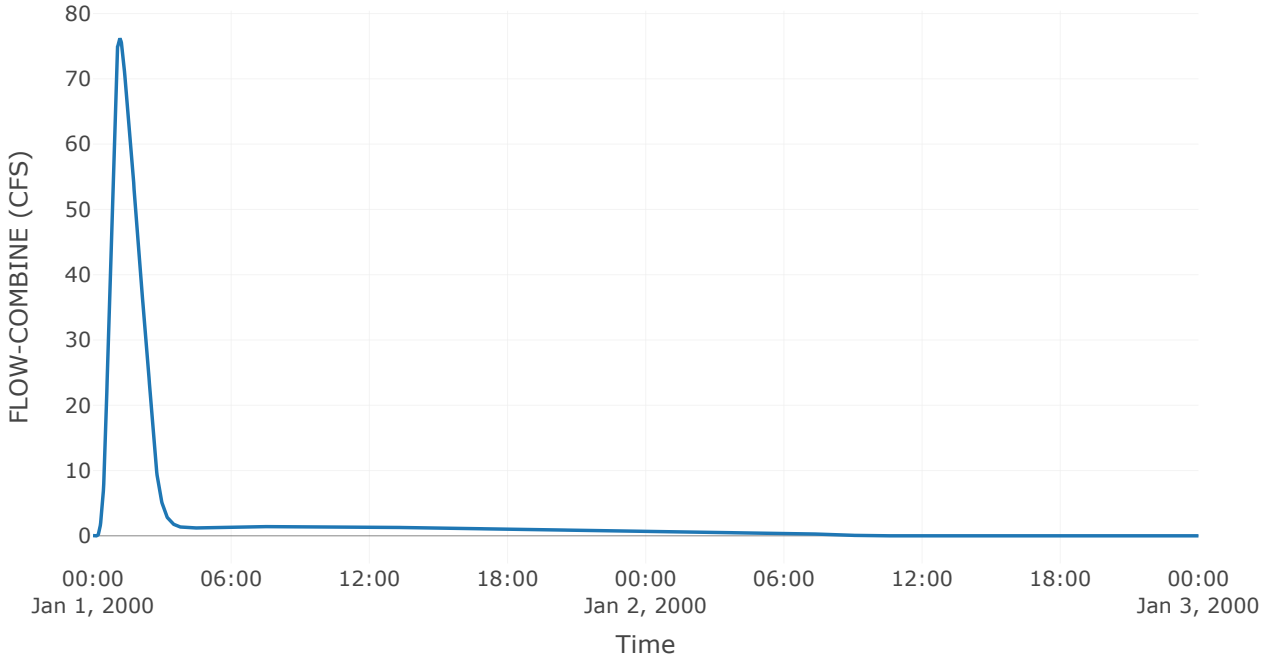
Auxiliary Outflow



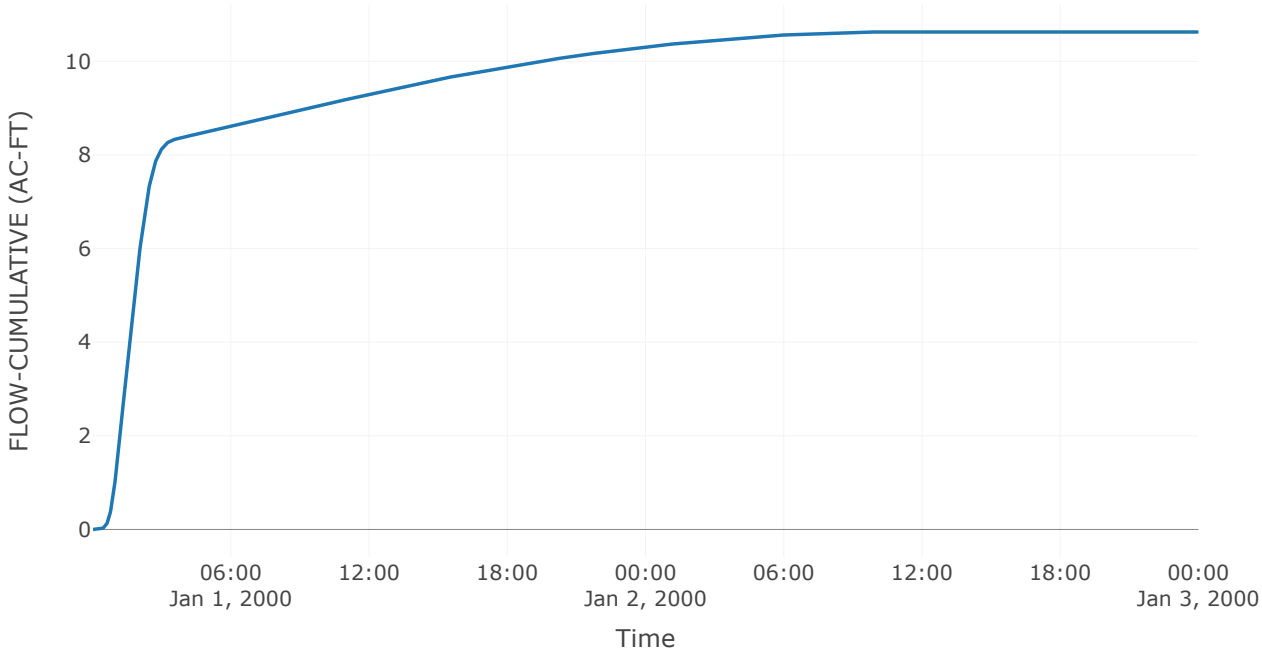
Storage

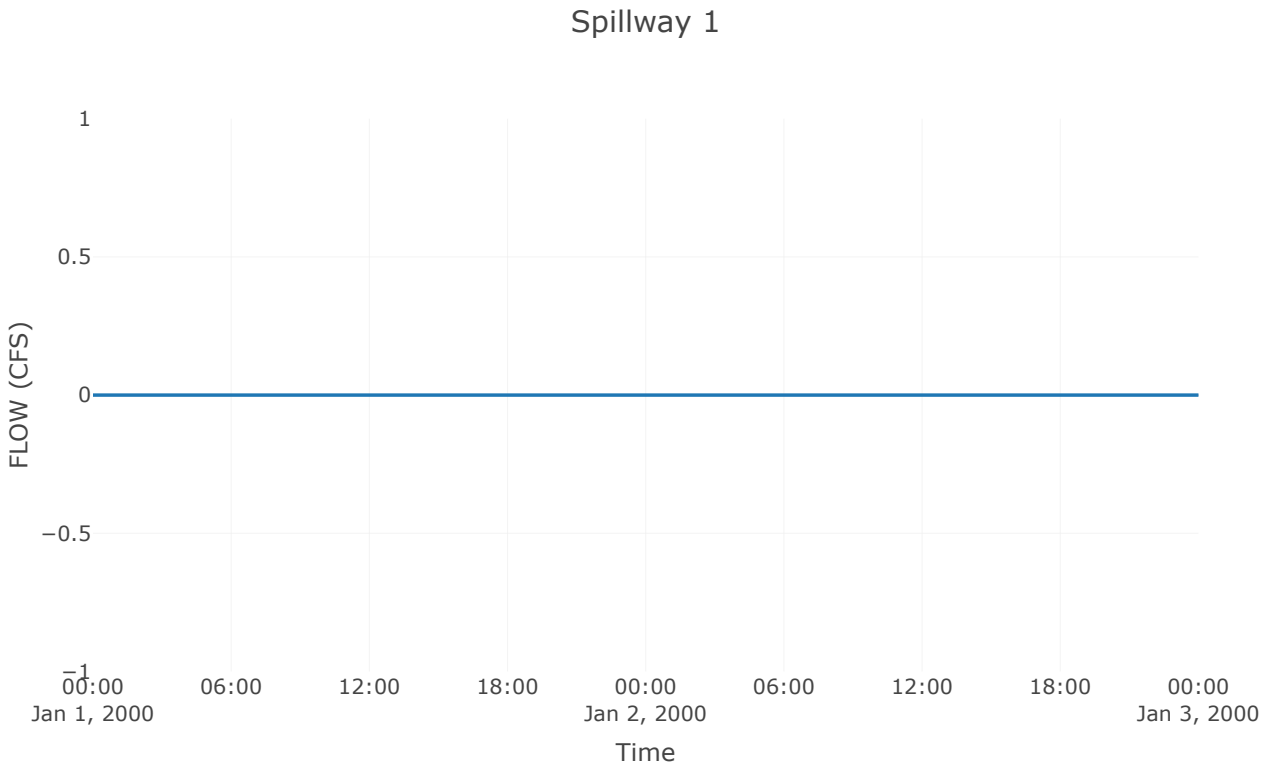


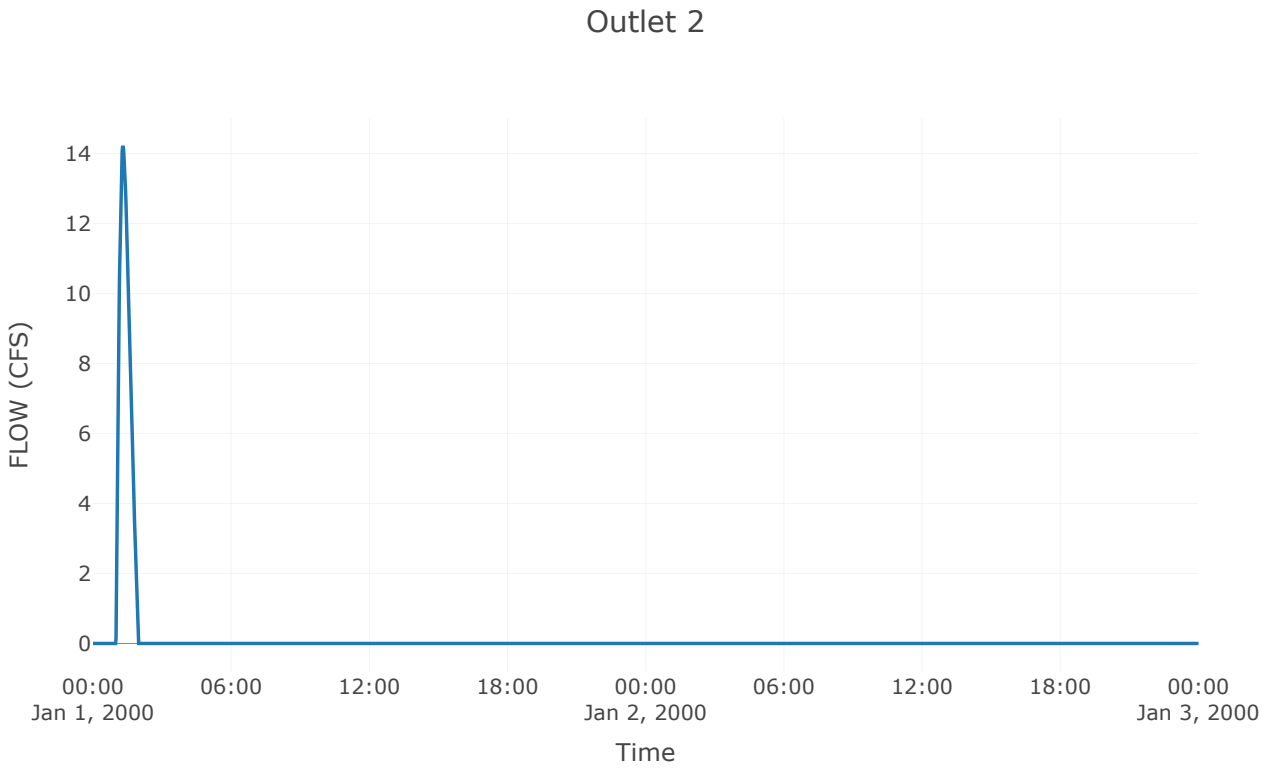
Combined Inflow



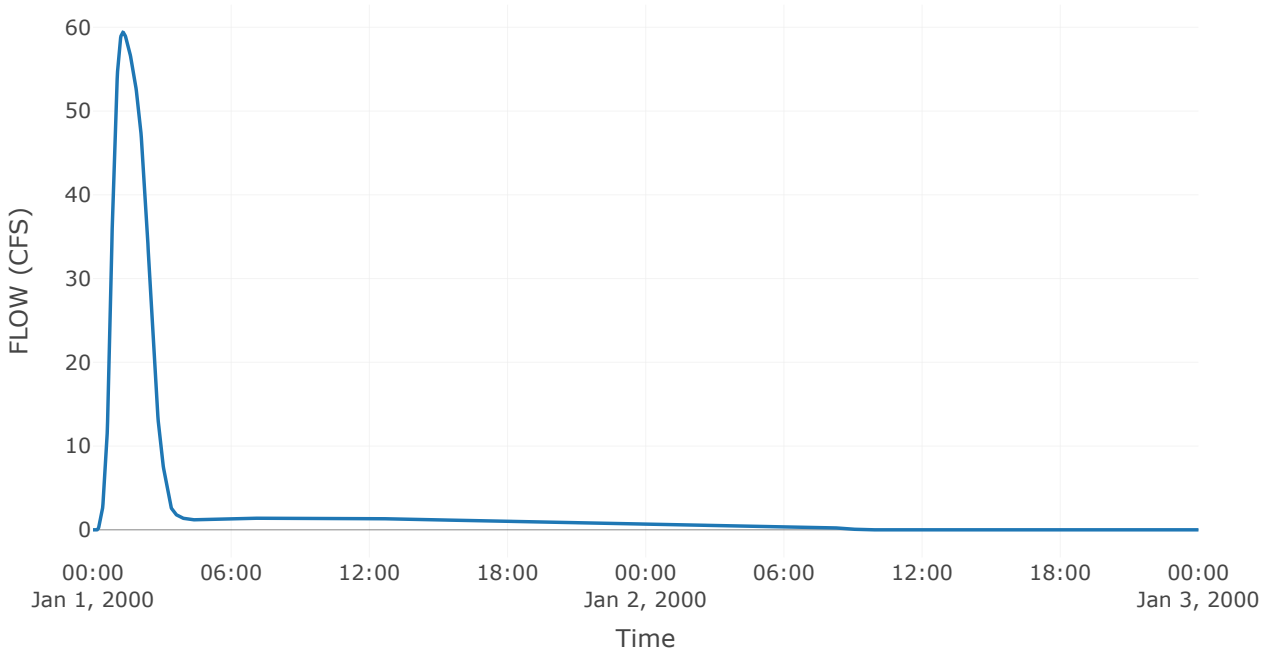
Cumulative Outflow



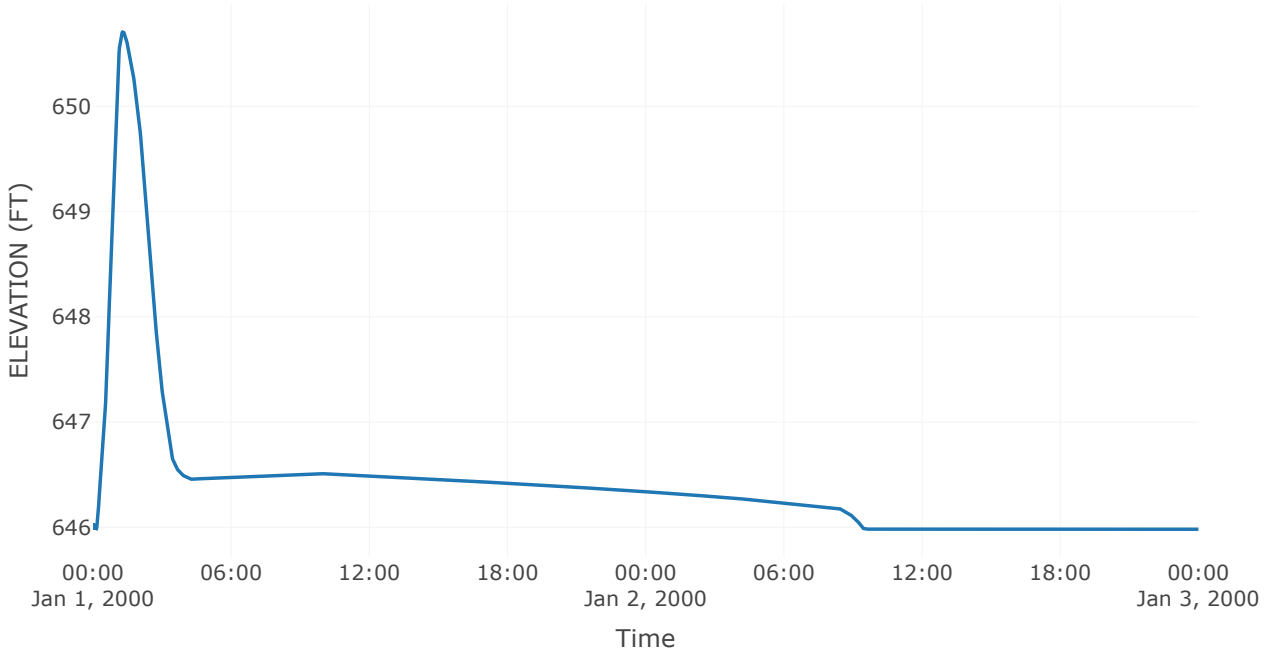

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

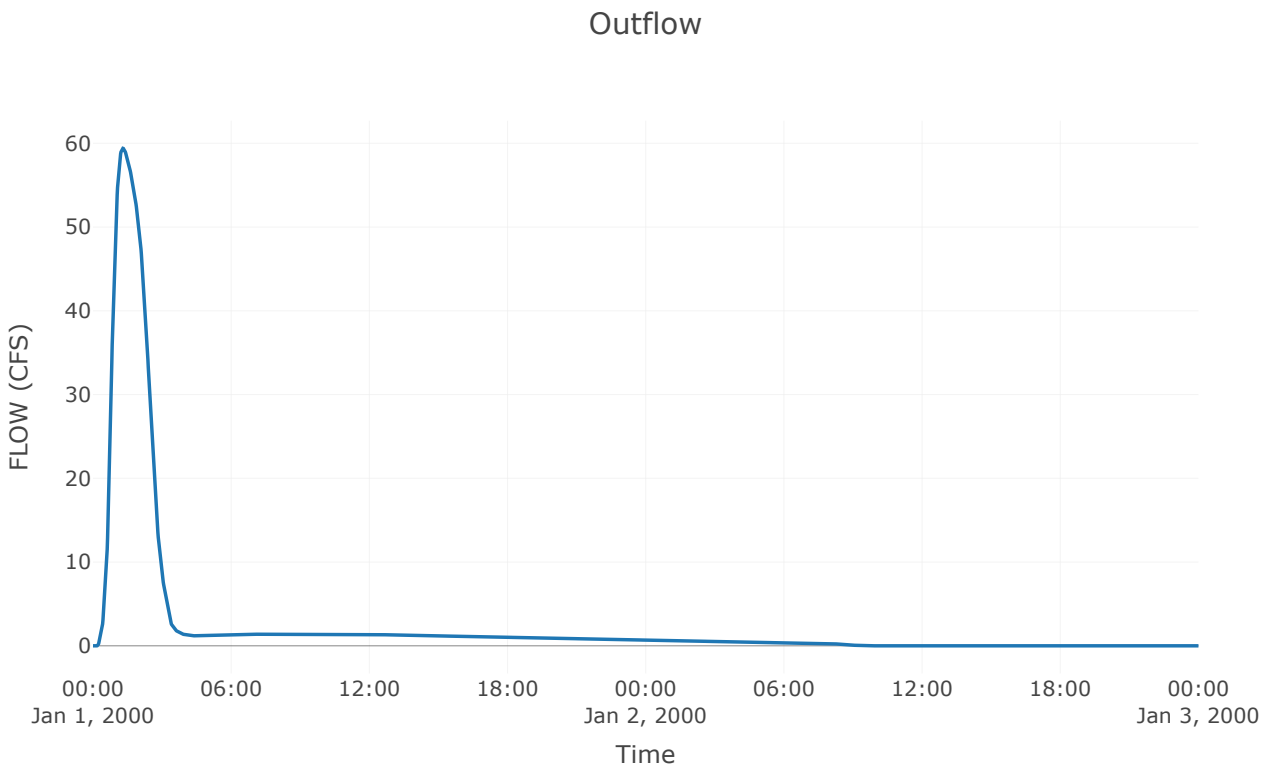

Outlet 2
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

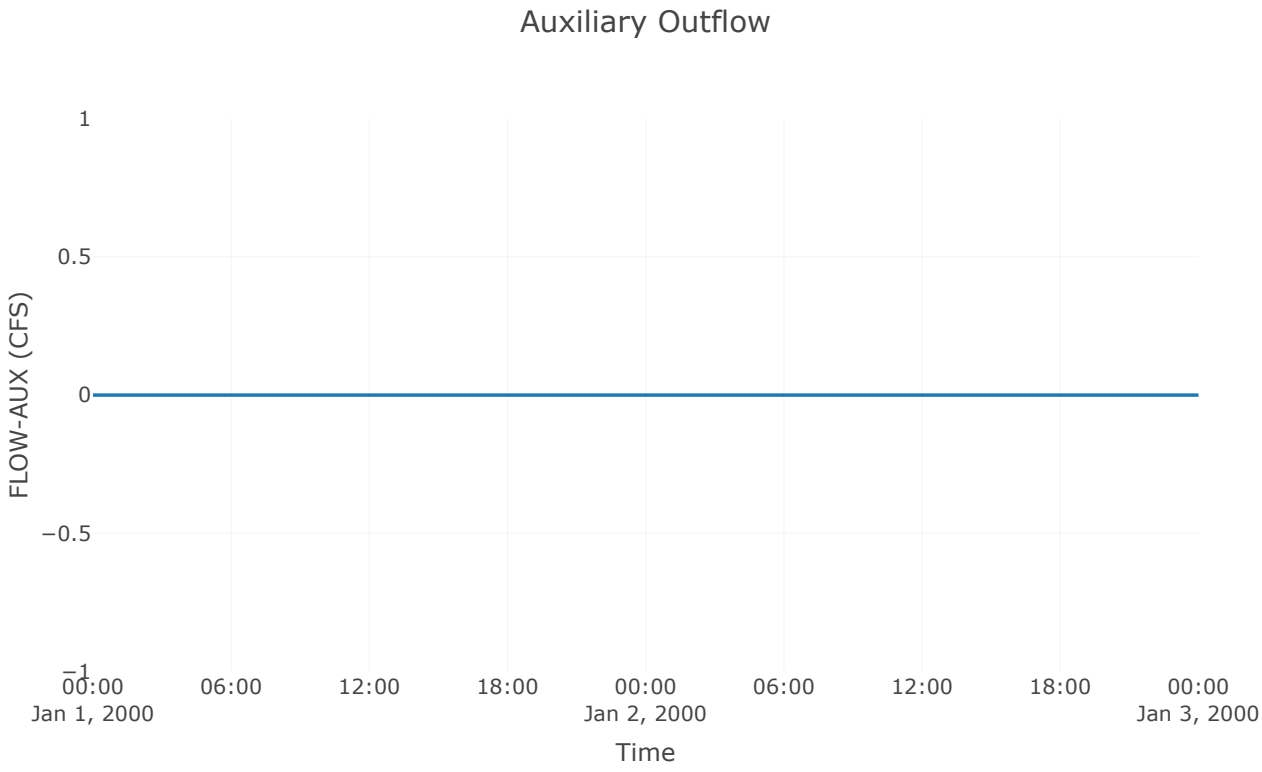


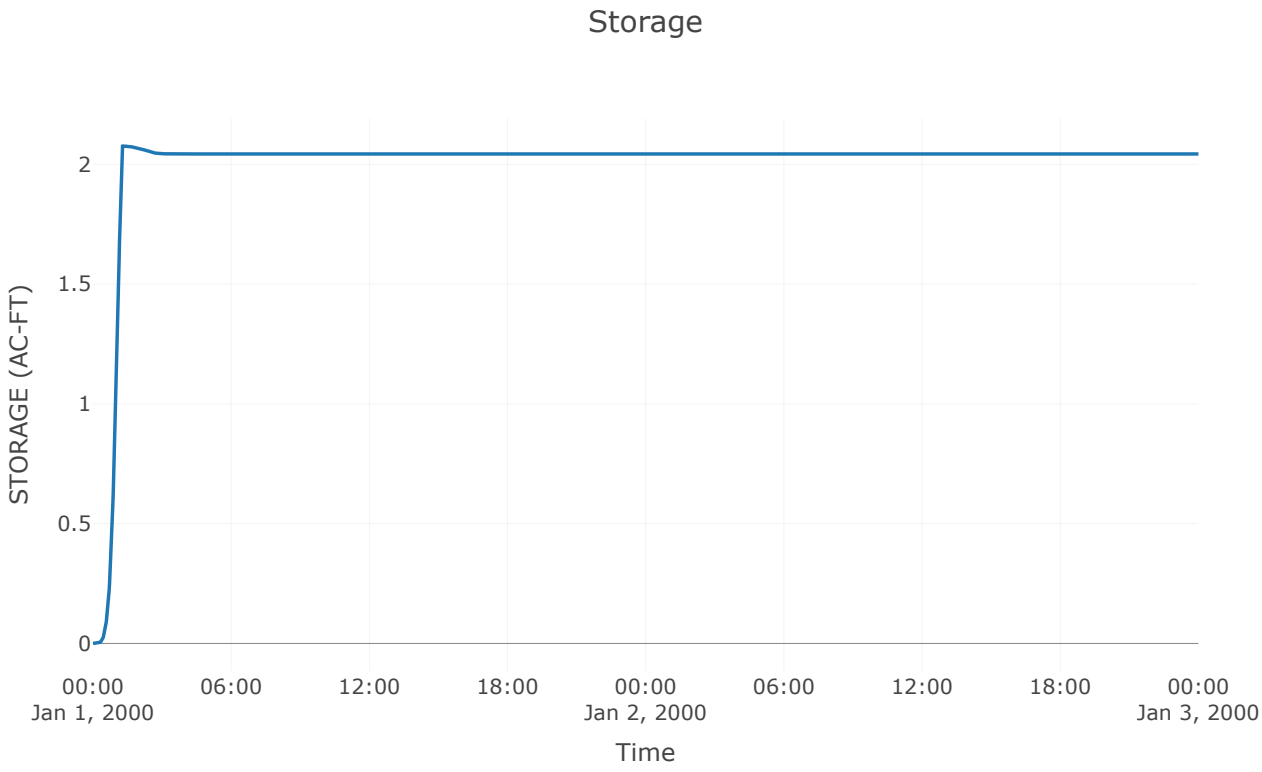

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

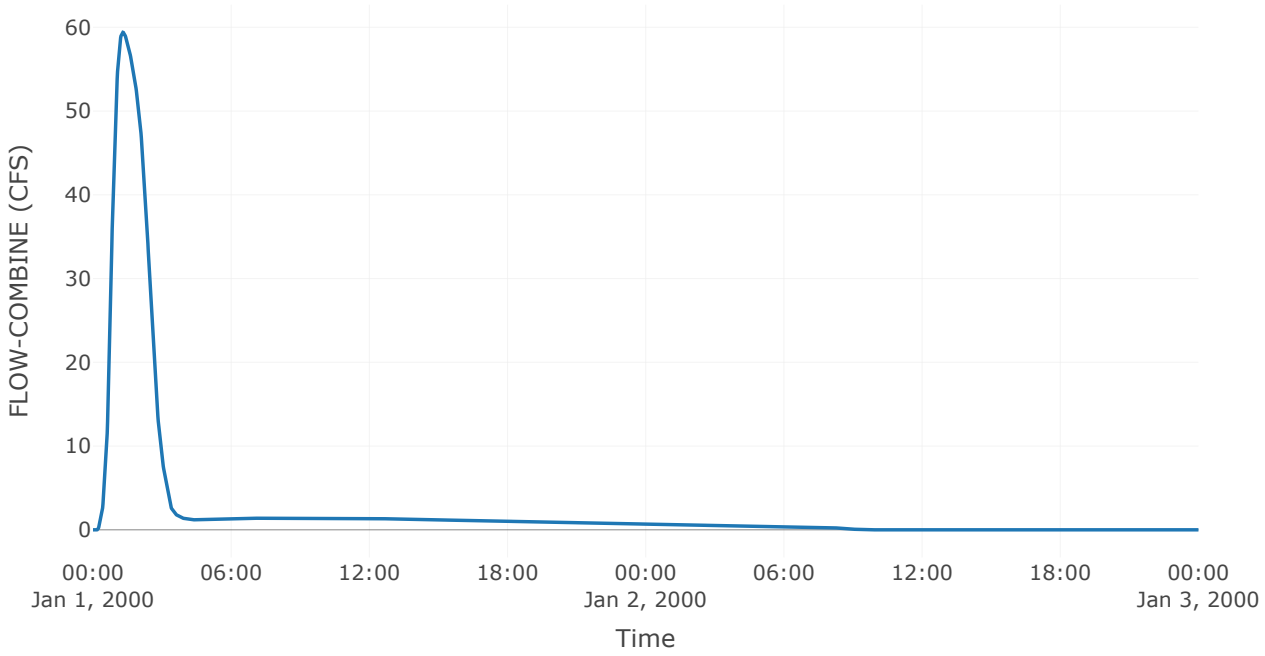
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58
Peak Inflow (CFS)	59.4
Time of Peak Inflow	01Jan2000, 01:18
Inflow Volume (AC - FT)	10.63
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.38

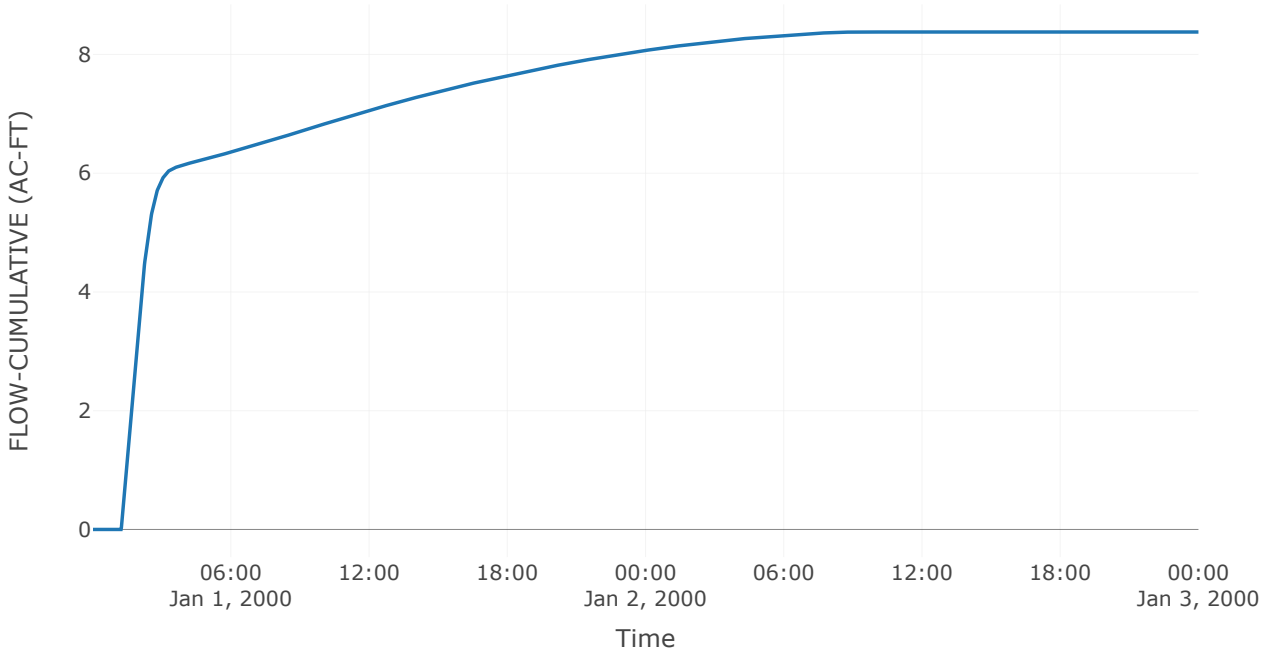

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

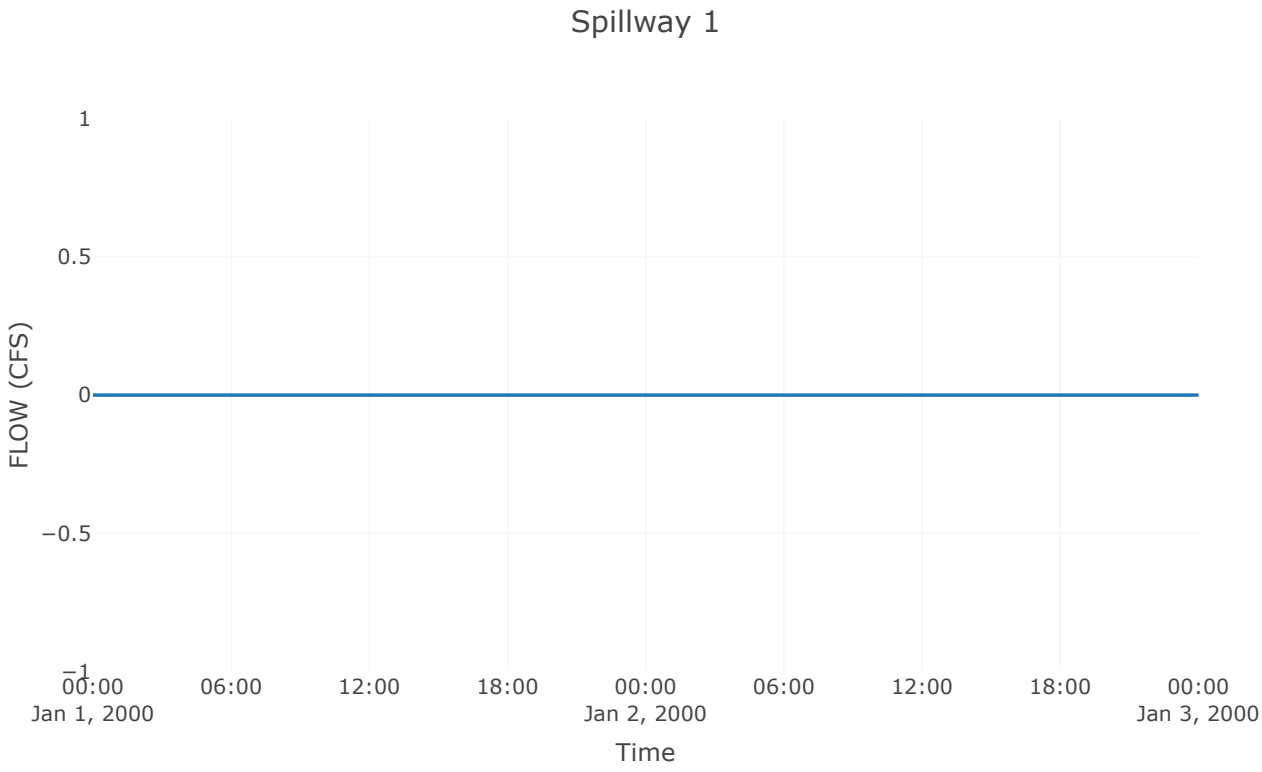

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

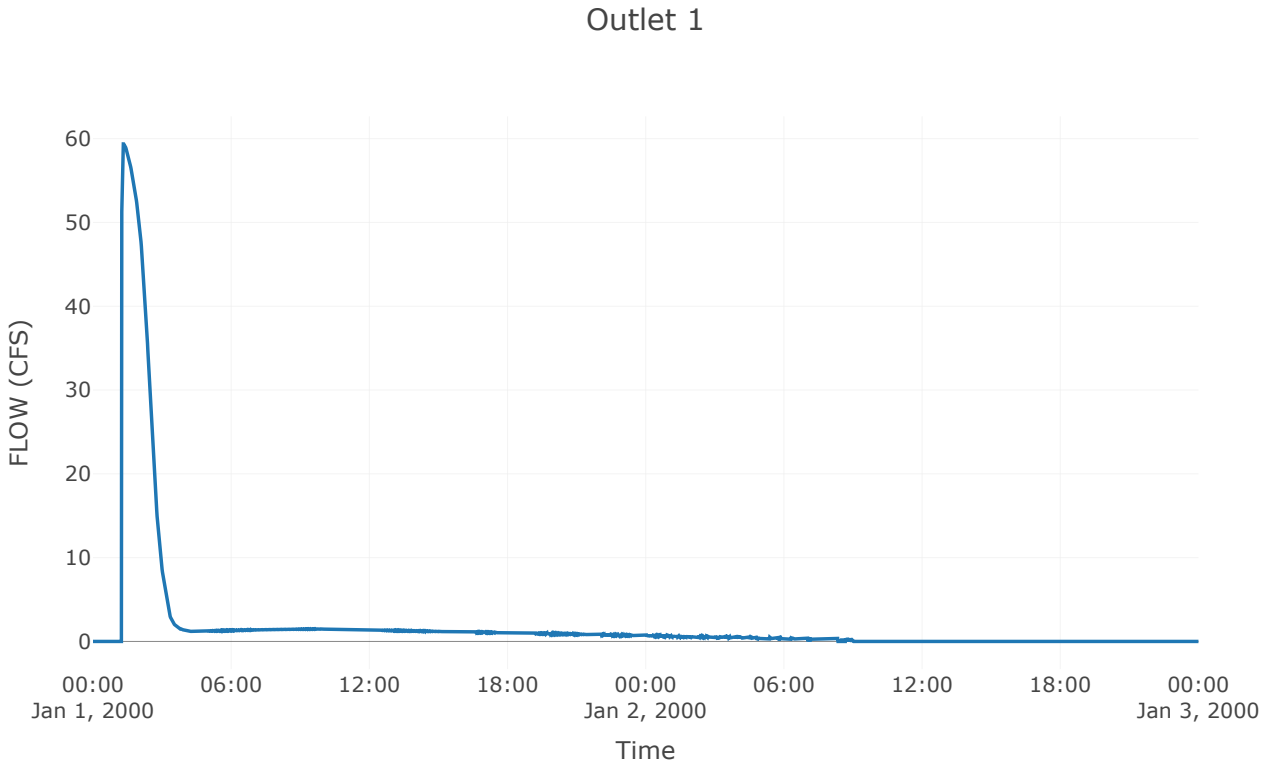
Combined Inflow



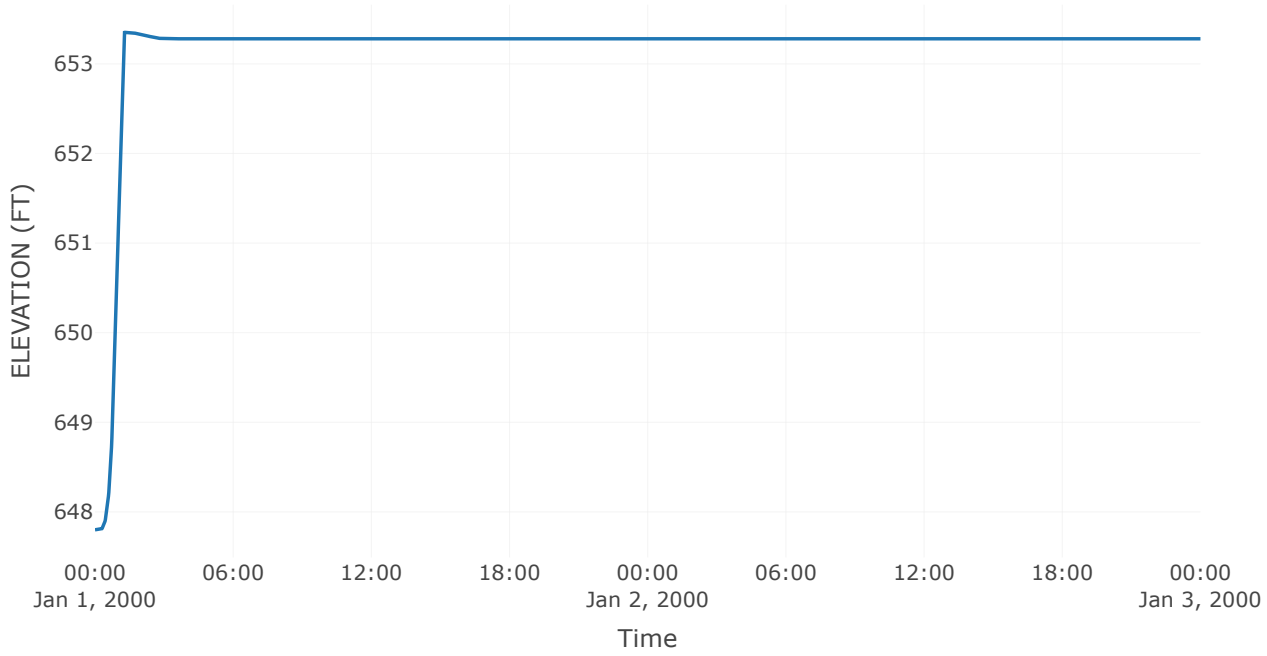
Cumulative Outflow



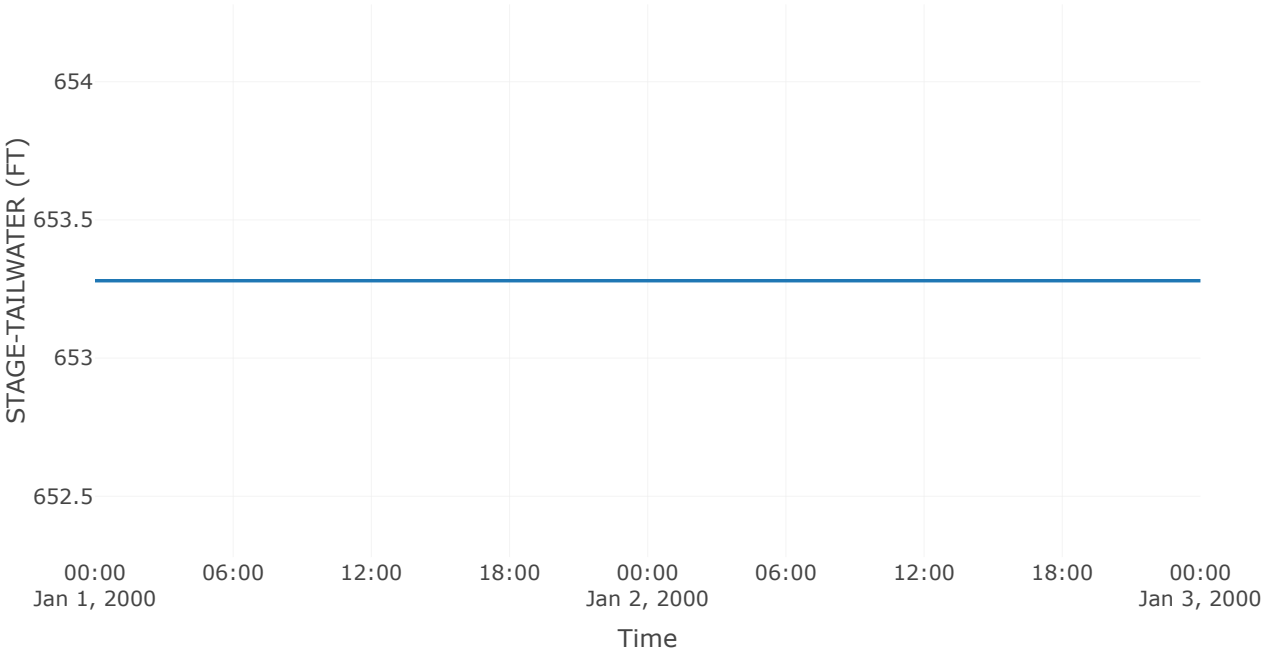

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

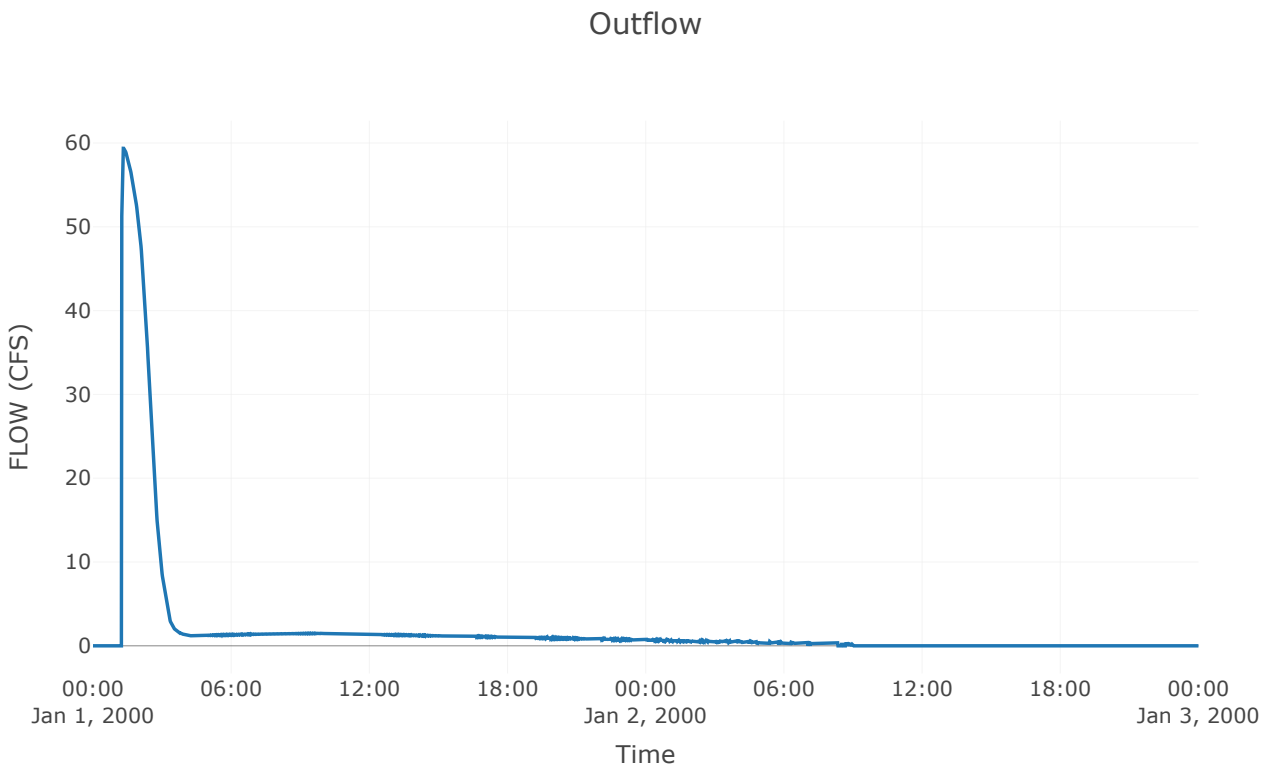

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

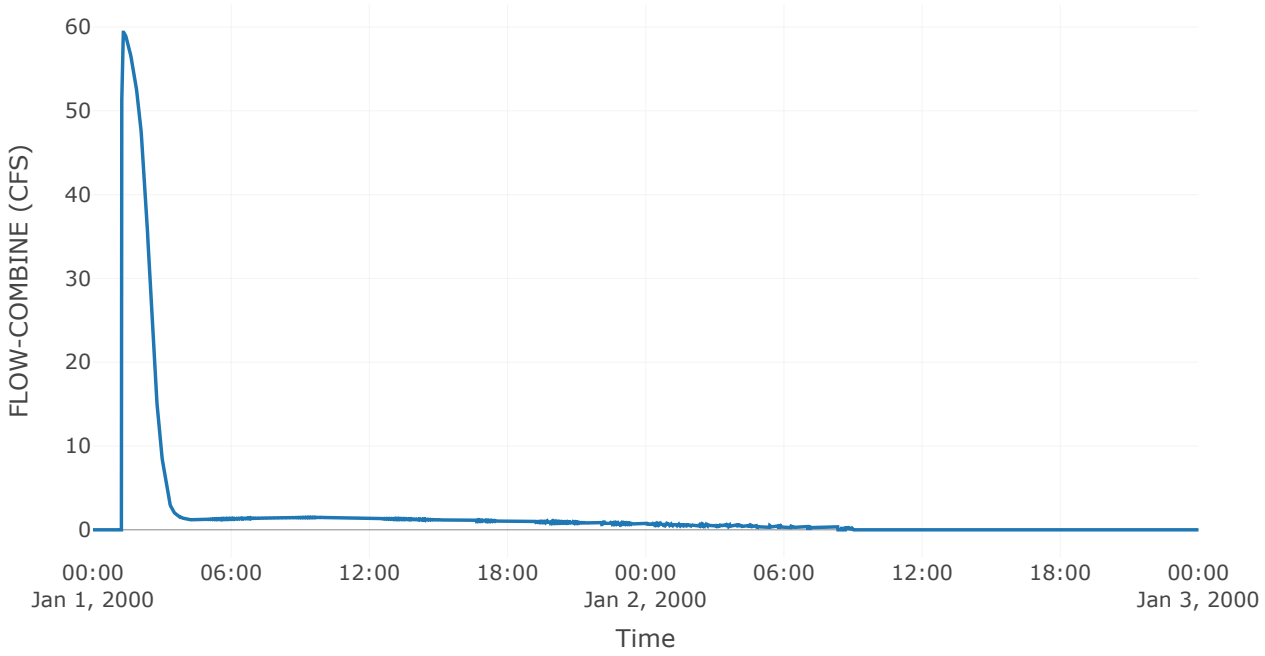



Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

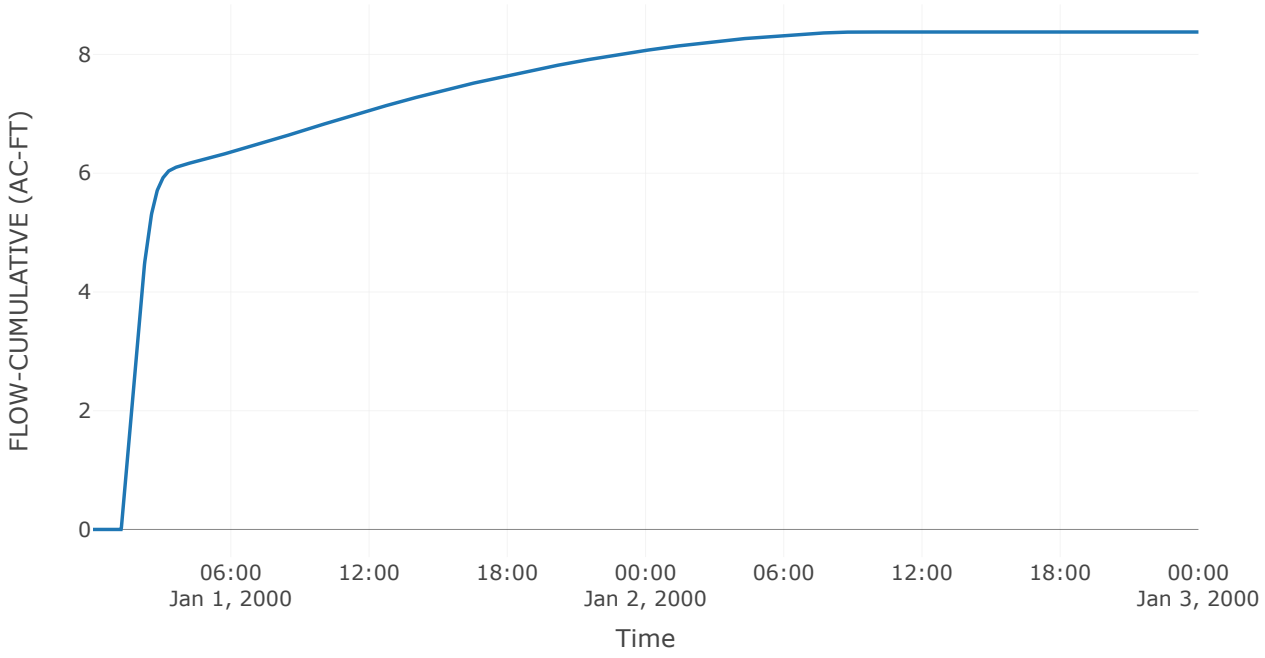
Sink: 55th Street Outlet

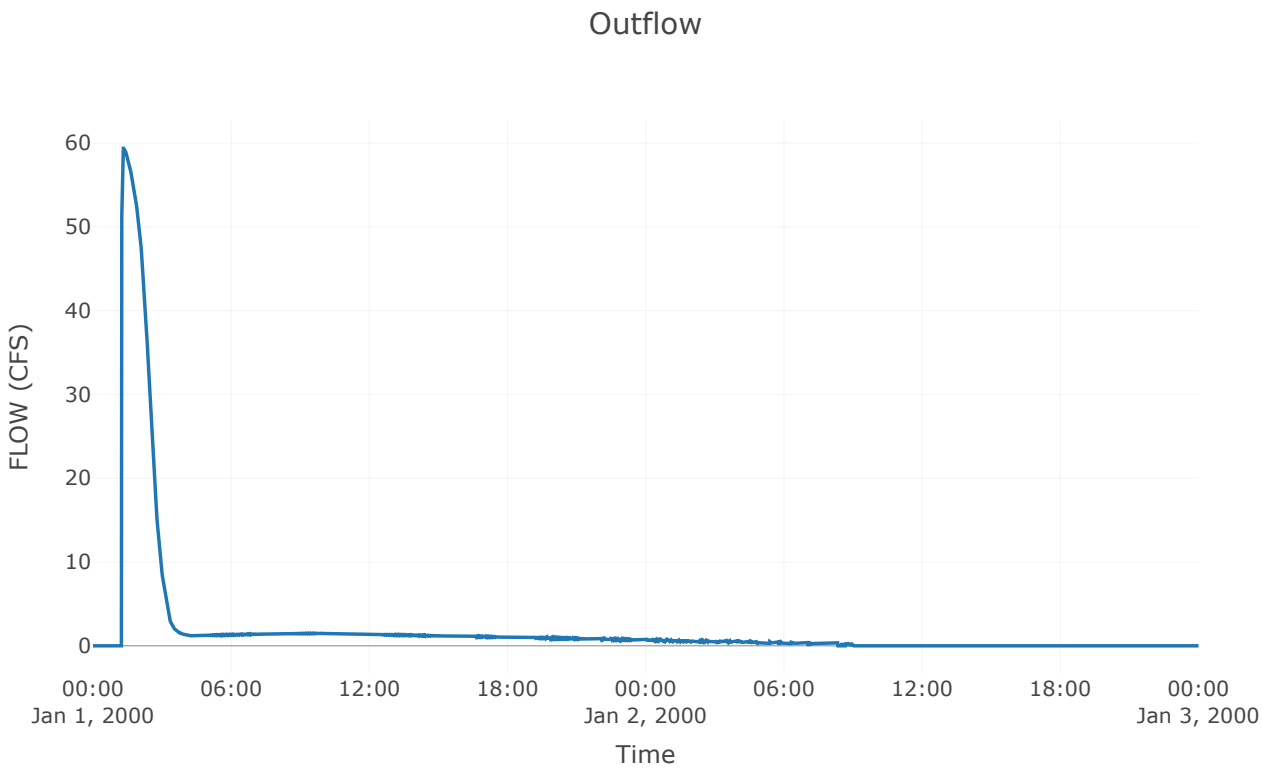
Results: 55th Street Outlet	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58

Combined Inflow



Cumulative Outflow




Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:46

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.79	01Jan2000, 01:09	1.61
Prop Storage West of Wolf Rd	0.27	157.76	01Jan2000, 01:09	1.6
Prop On - Site	0	5.14	01Jan2000, 00:32	1.81
Proposed Basin C	0.27	75.77	01Jan2000, 01:15	1.18
Existing Basin A & B	0.27	75.75	01Jan2000, 01:16	1.03

55th Street Outlet	0.27	75.75	01Jan2000, 01:16	1.03

Subbasin: On-Site Trib 1

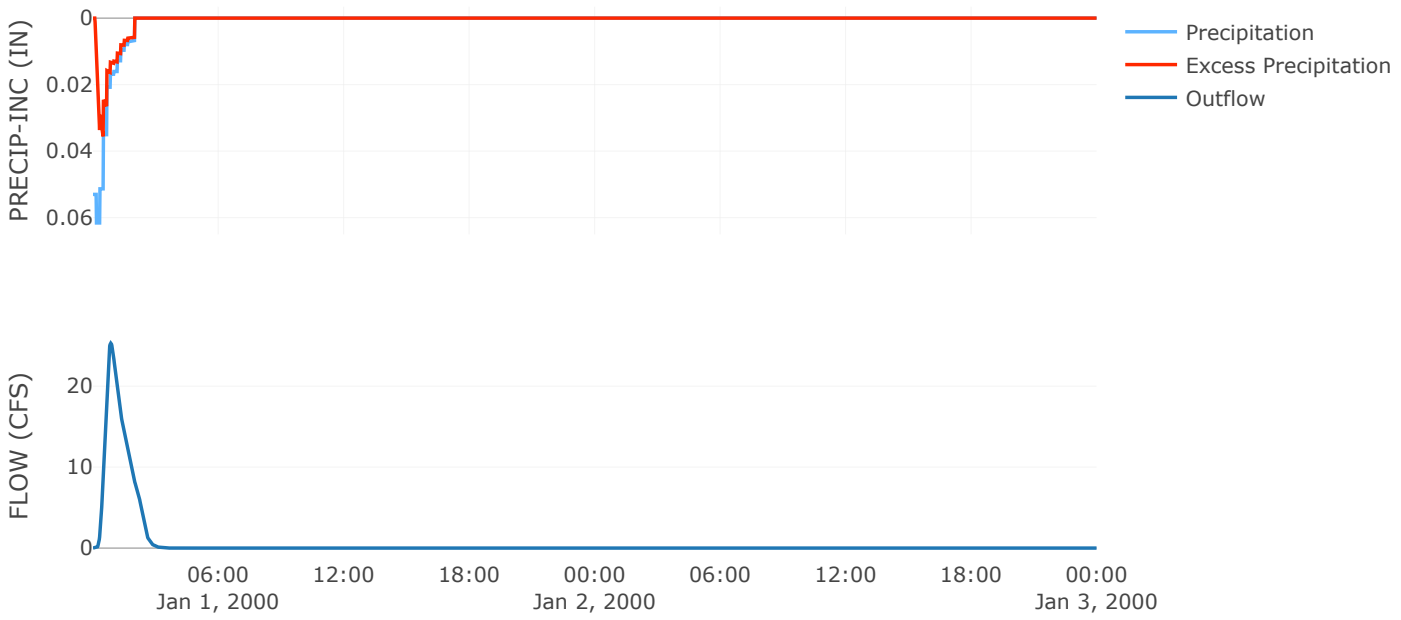
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

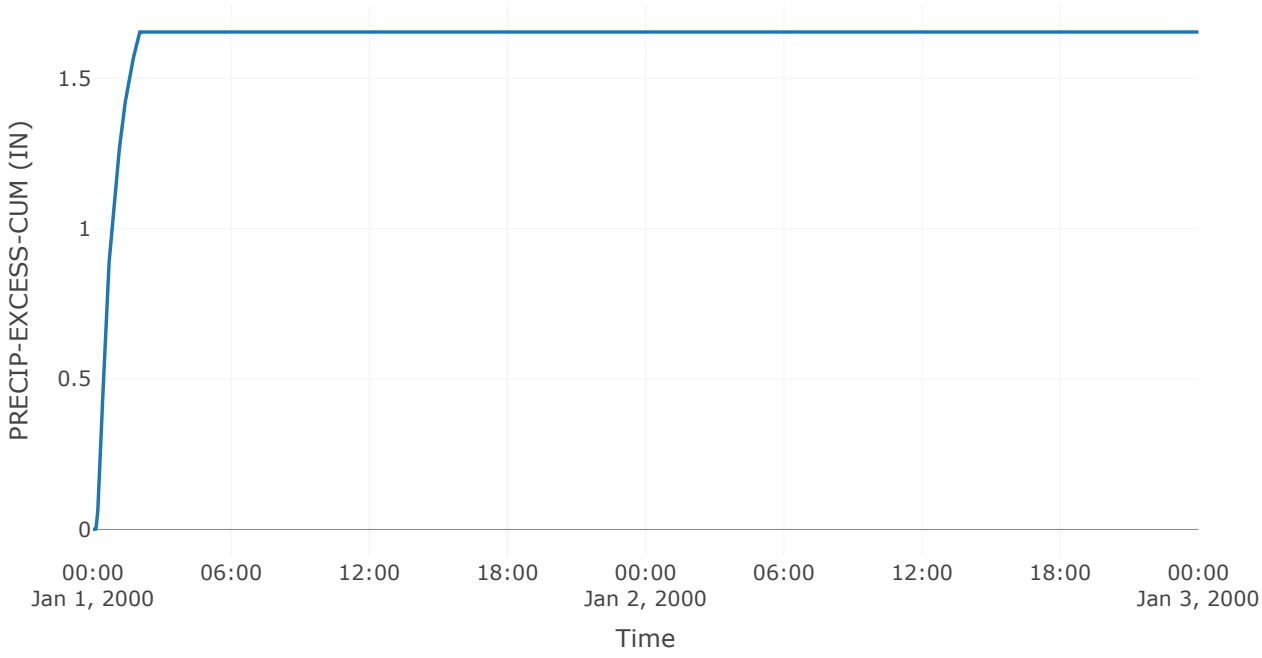
Transform: Scs	
Lag	21
Unitgraph Type	Standard

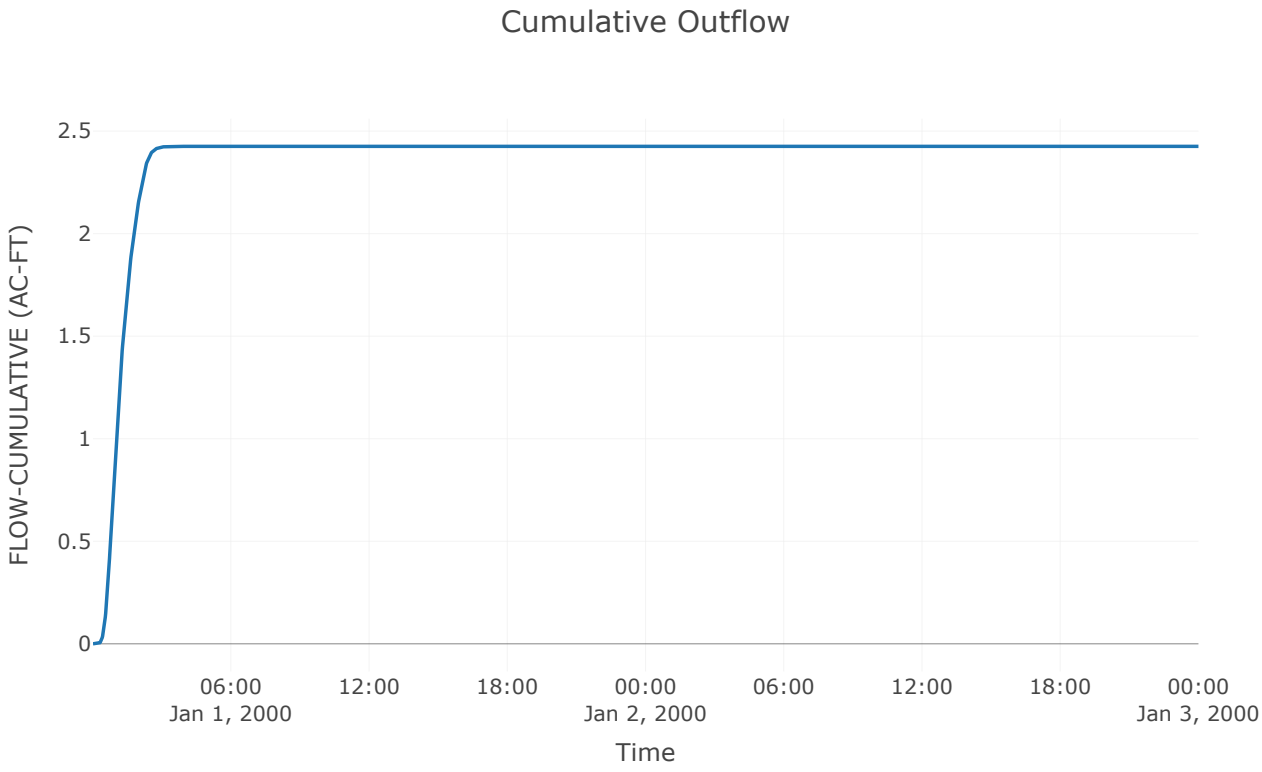
Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

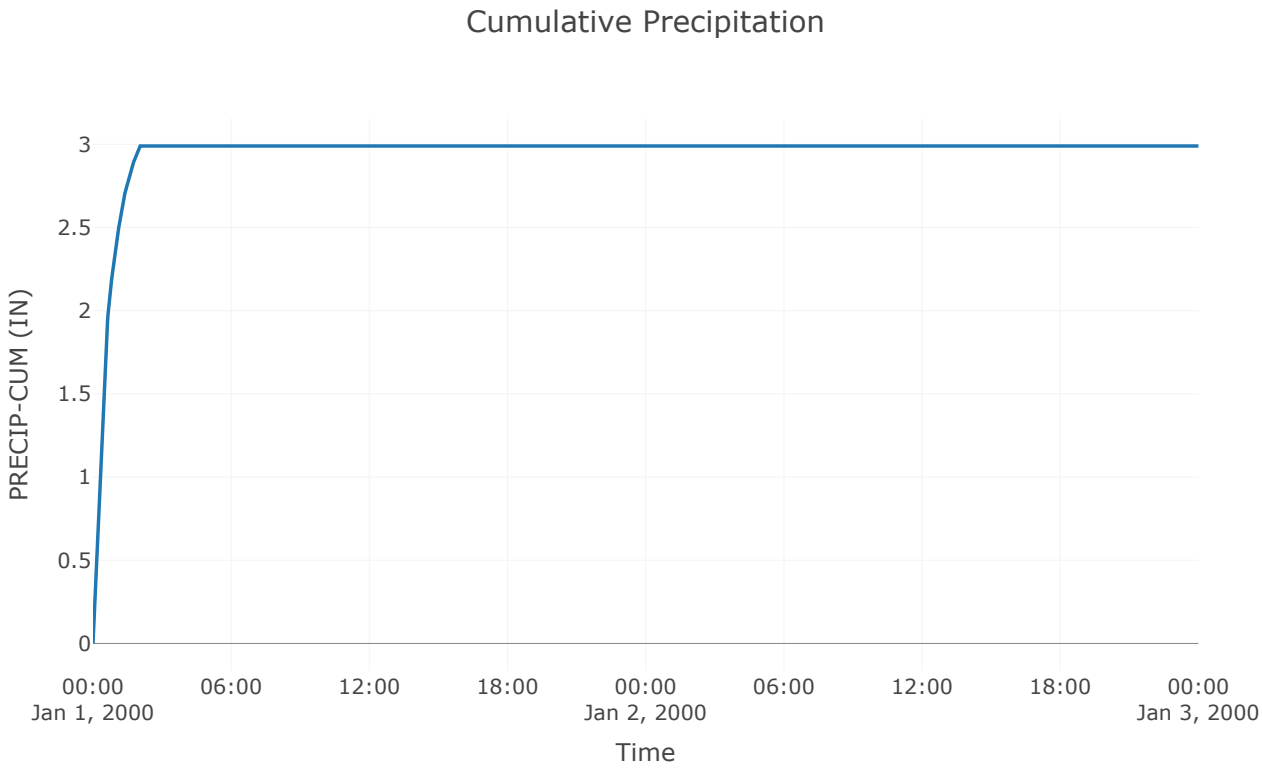
Precipitation and Outflow

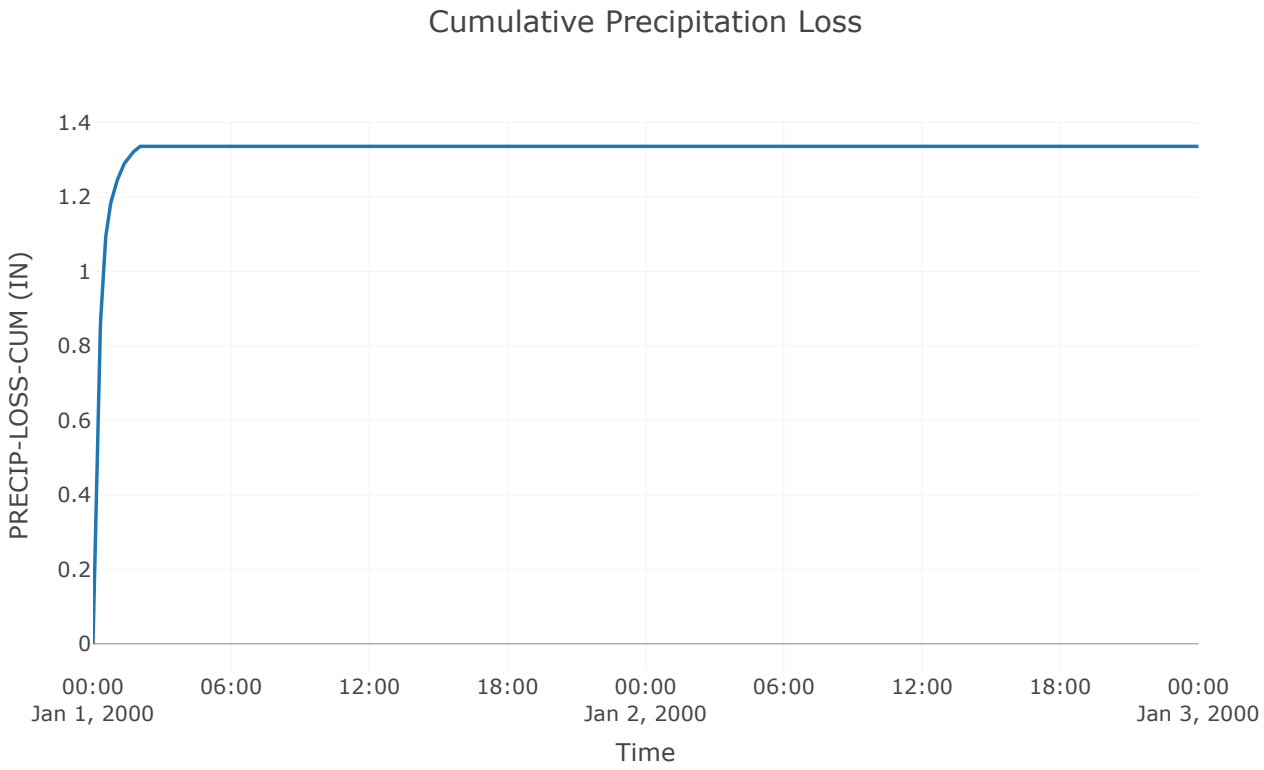


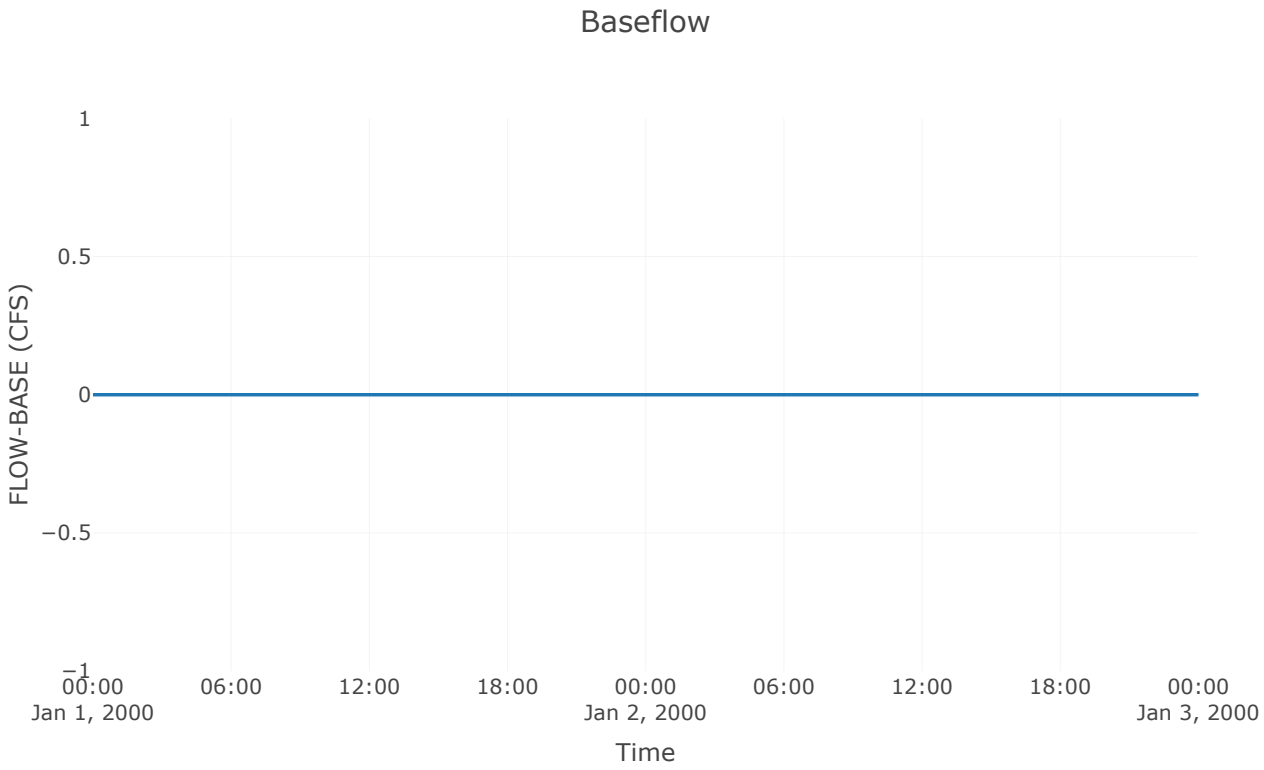
Cumulative Excess Precipitation



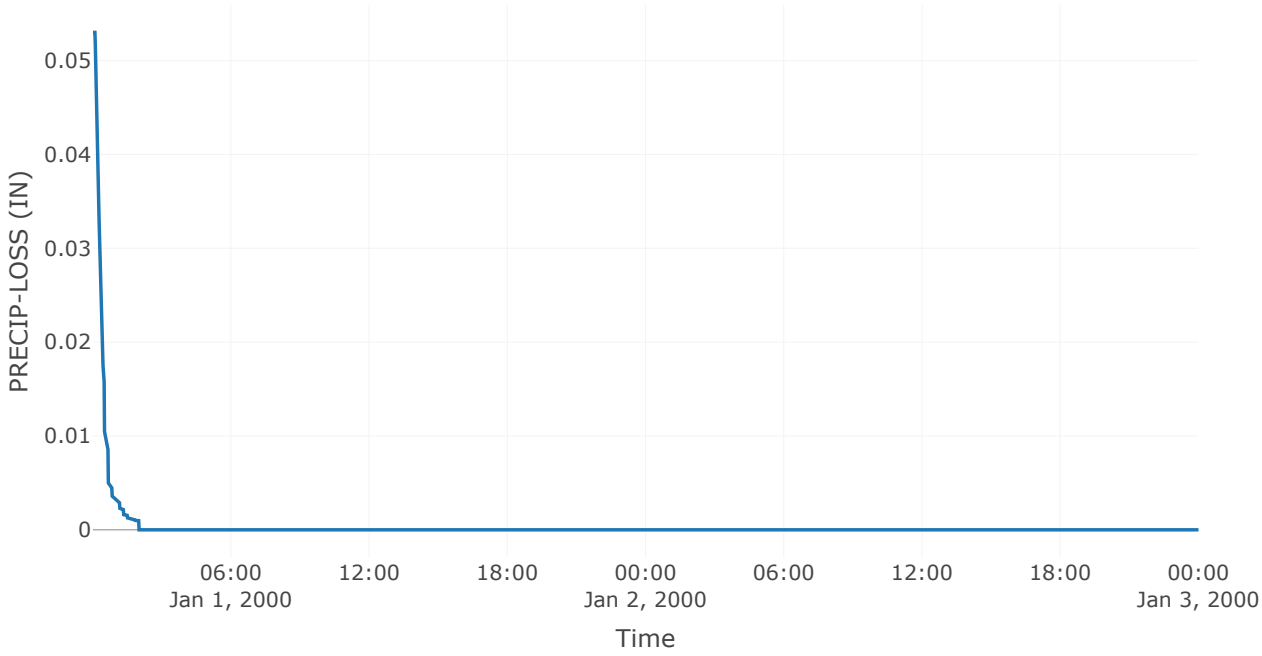

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

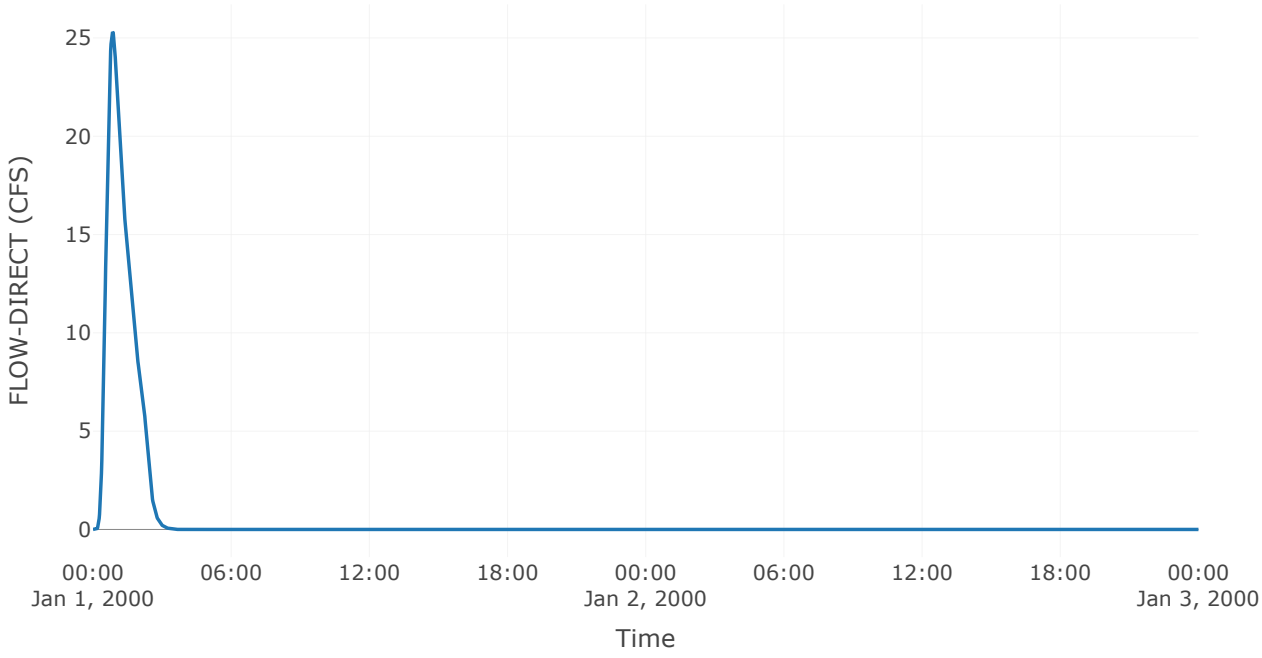

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

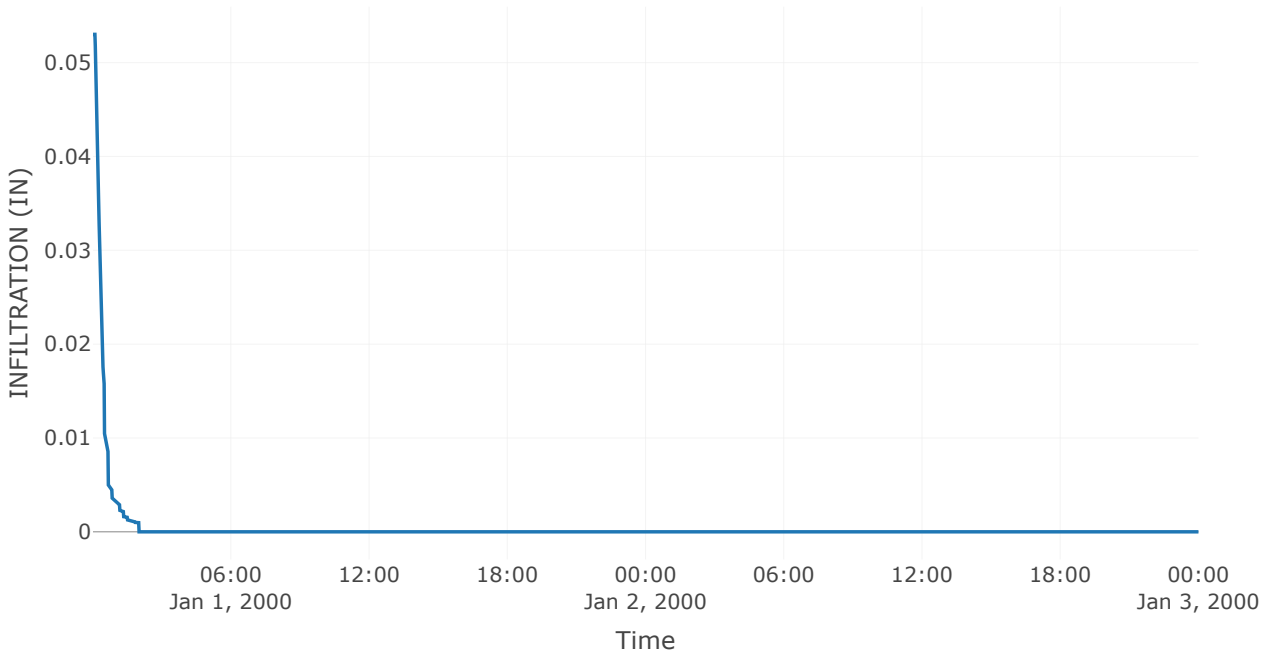

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

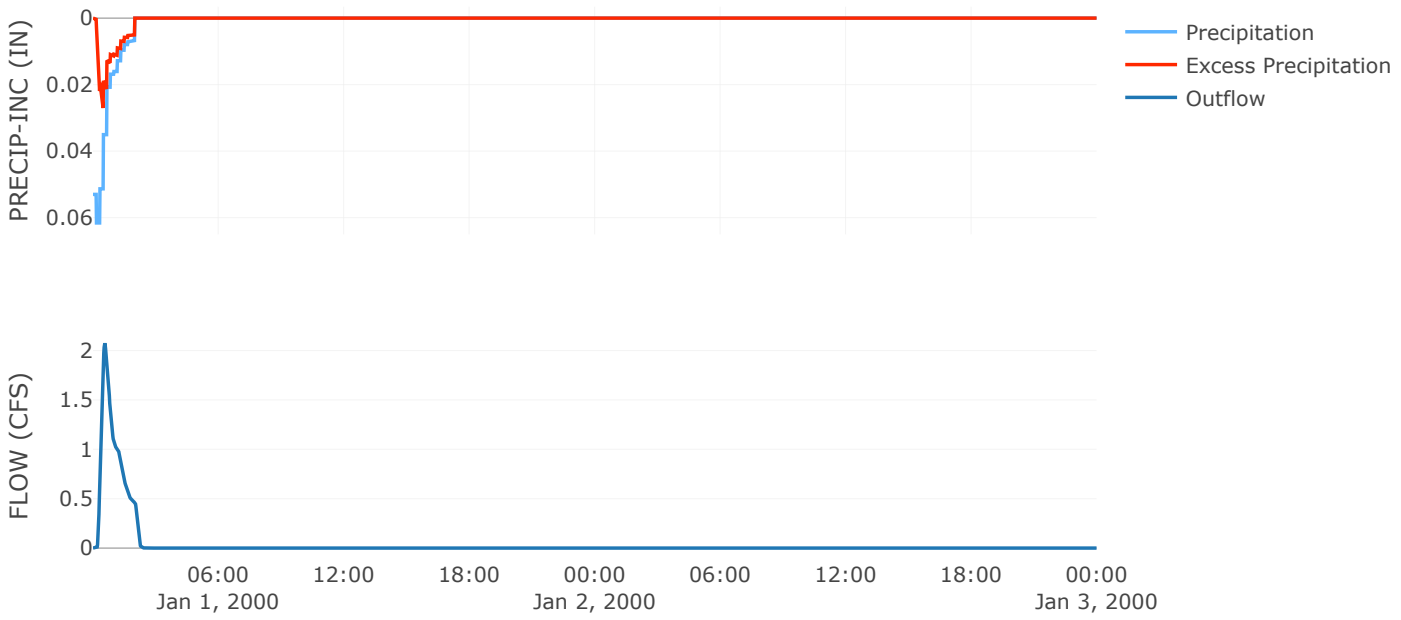
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

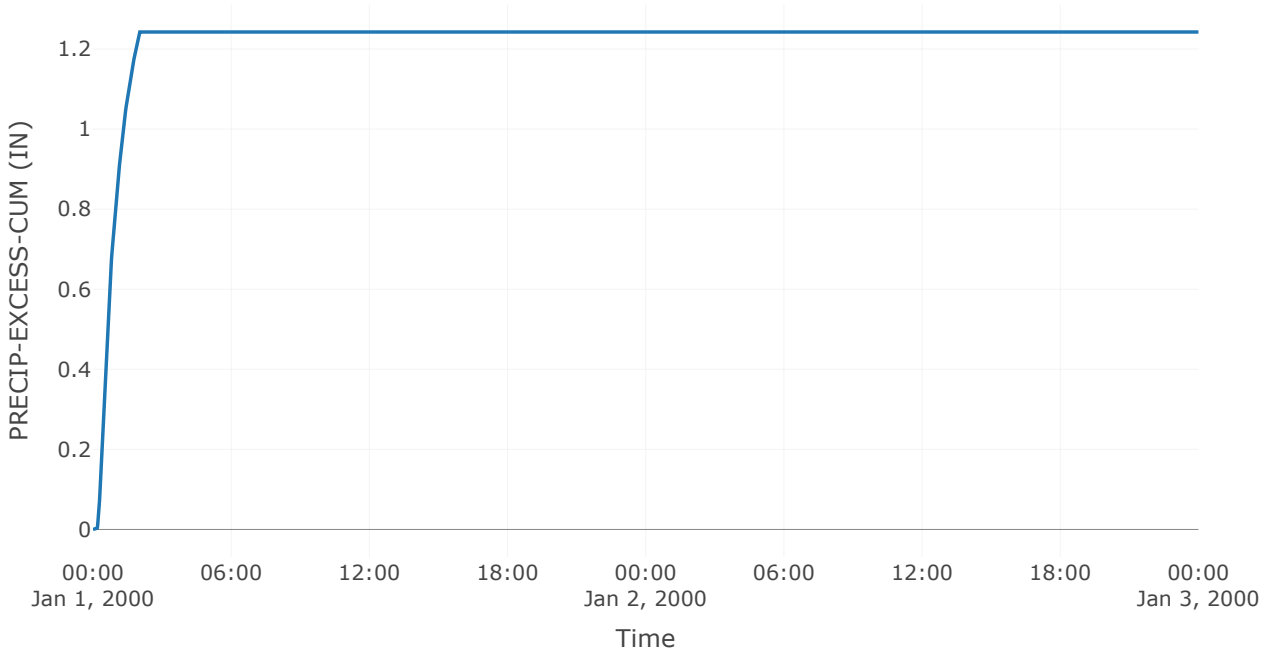
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

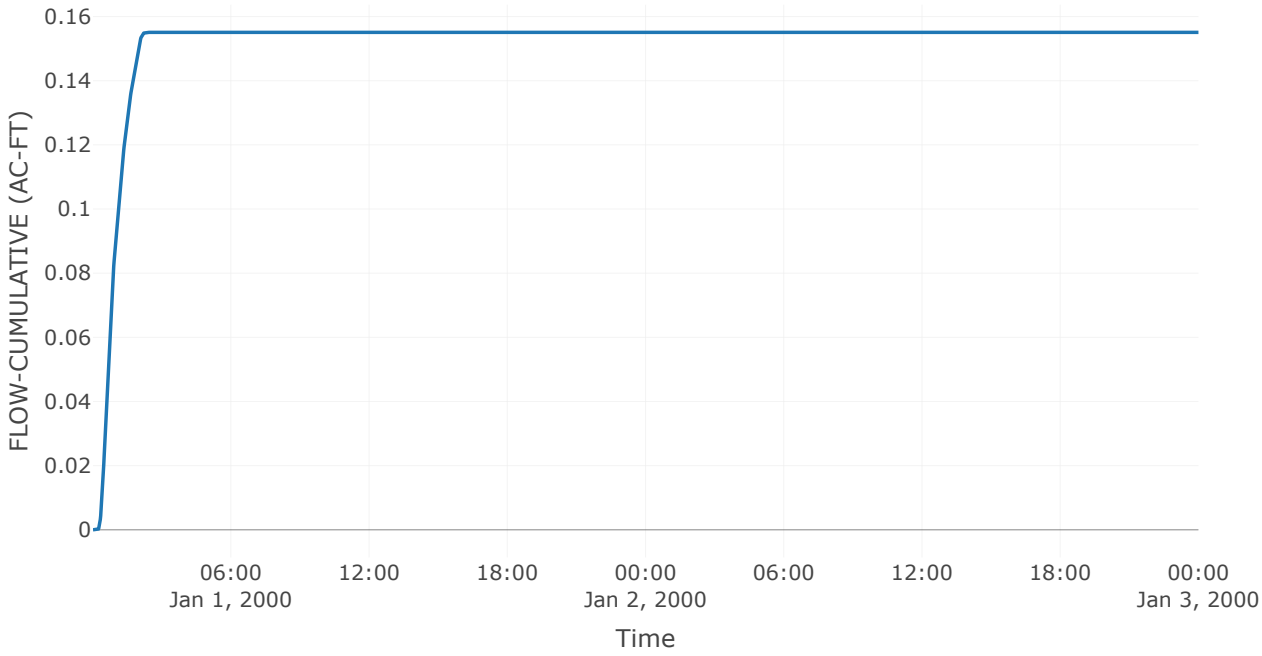
Precipitation and Outflow



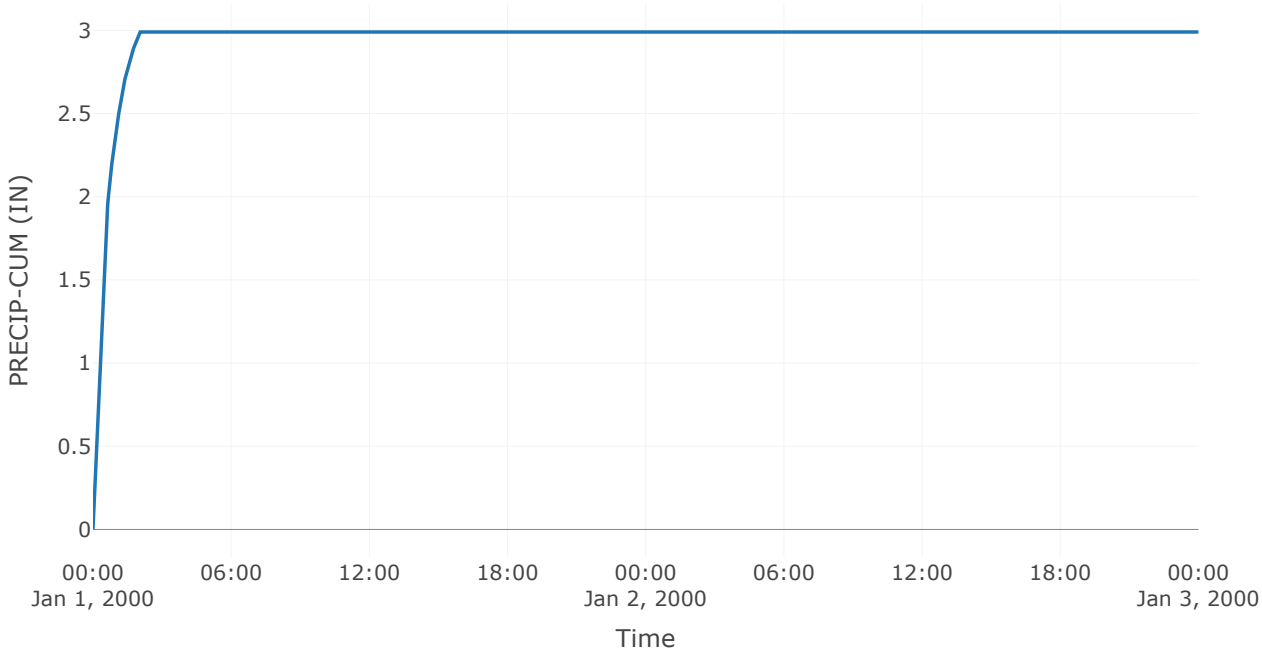
Cumulative Excess Precipitation

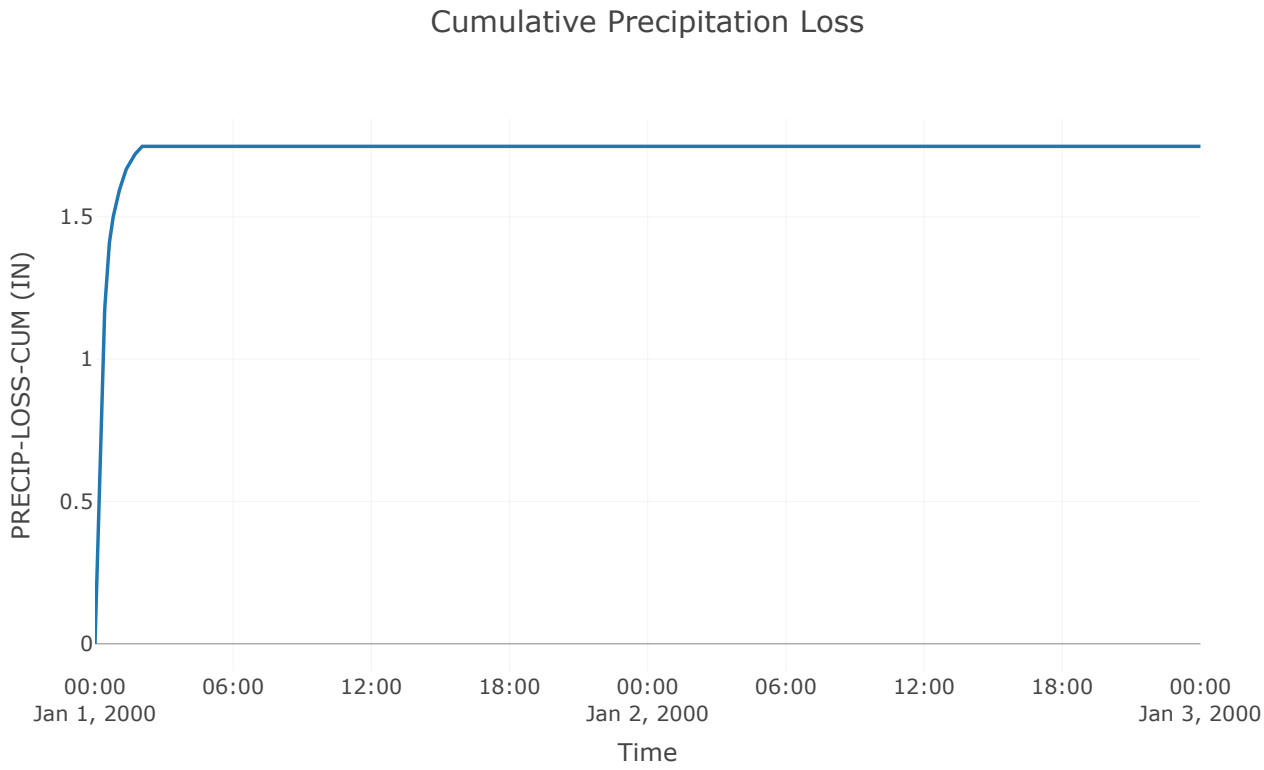


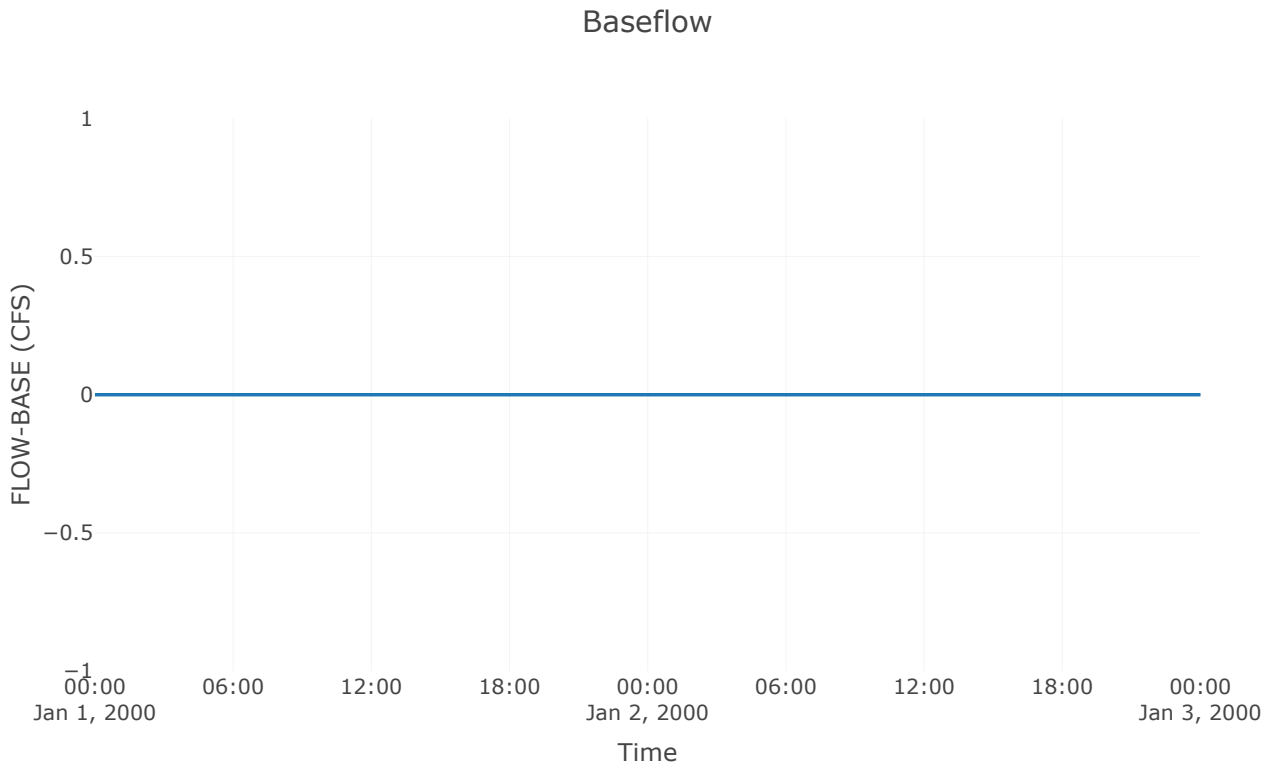
Cumulative Outflow

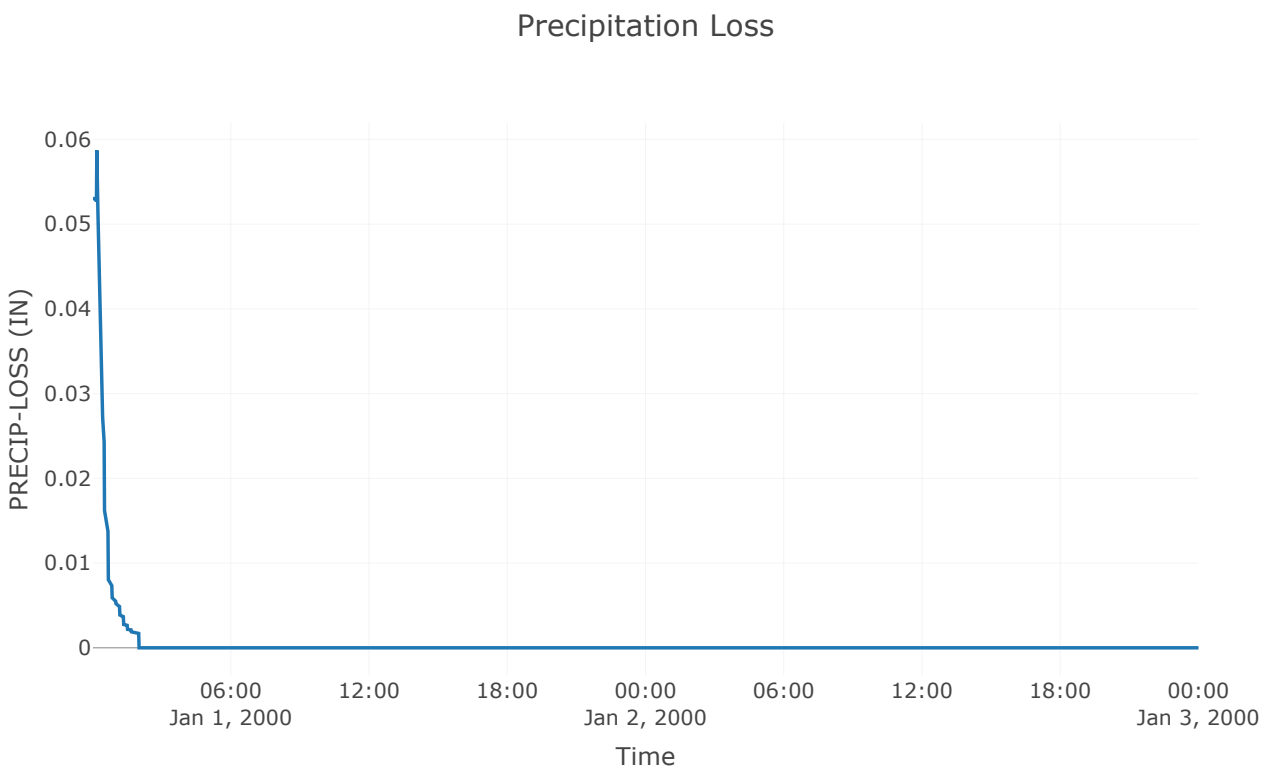


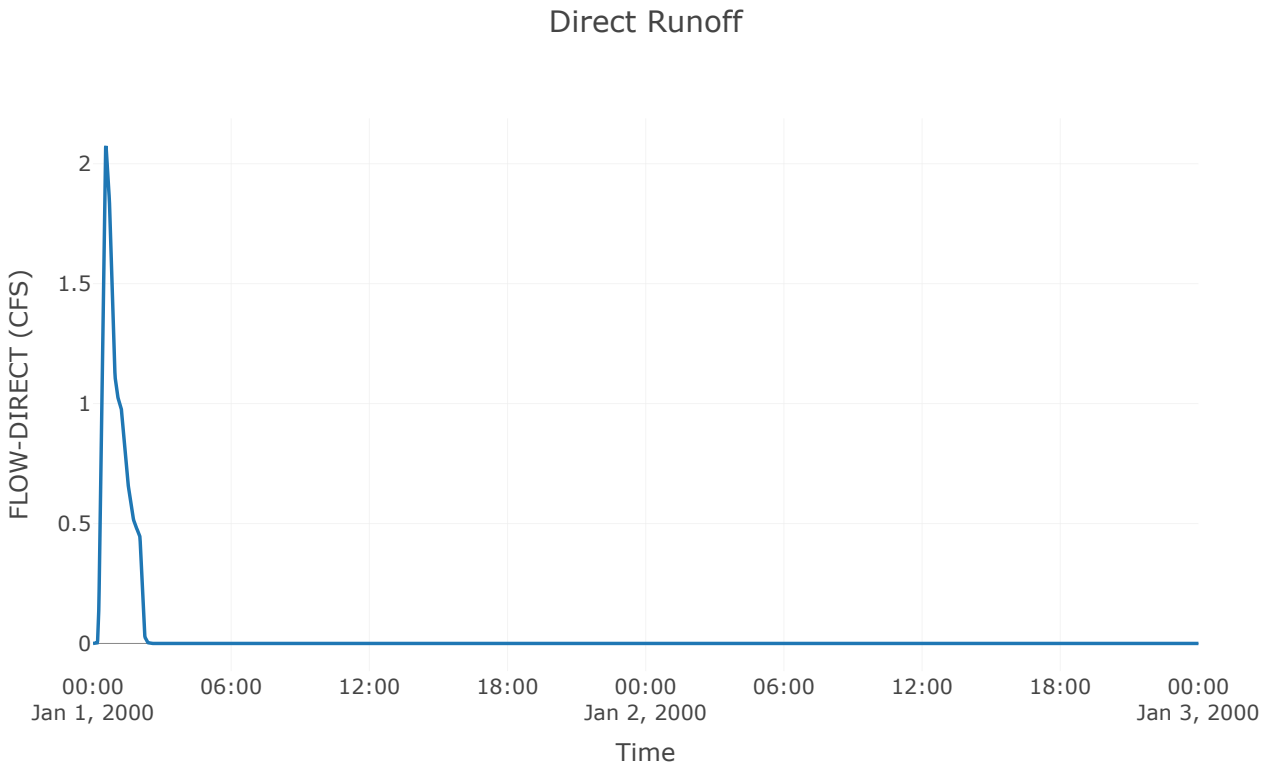
Cumulative Precipitation

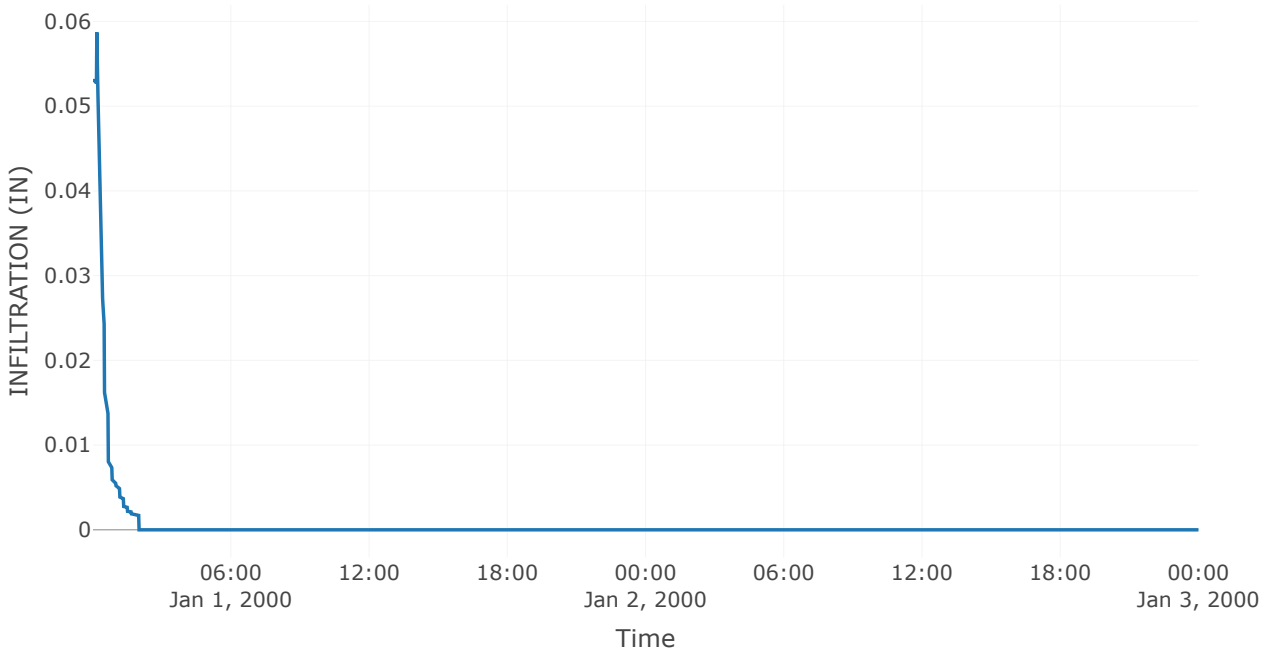



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

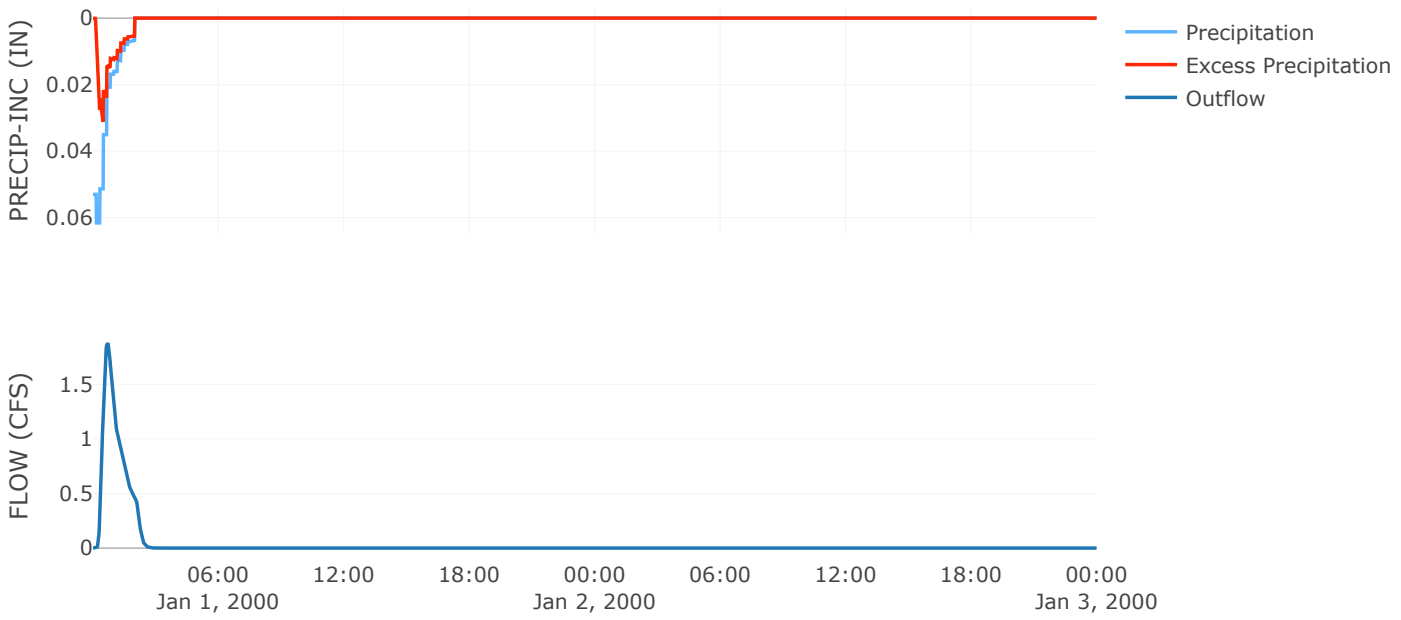
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

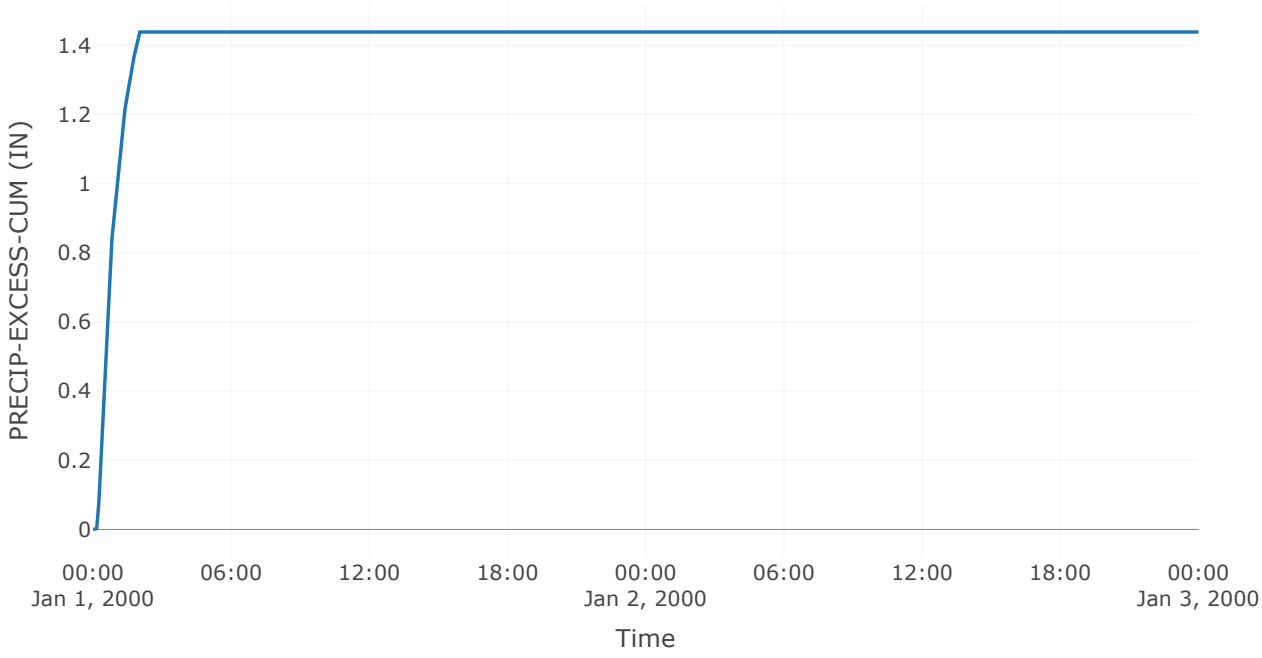
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

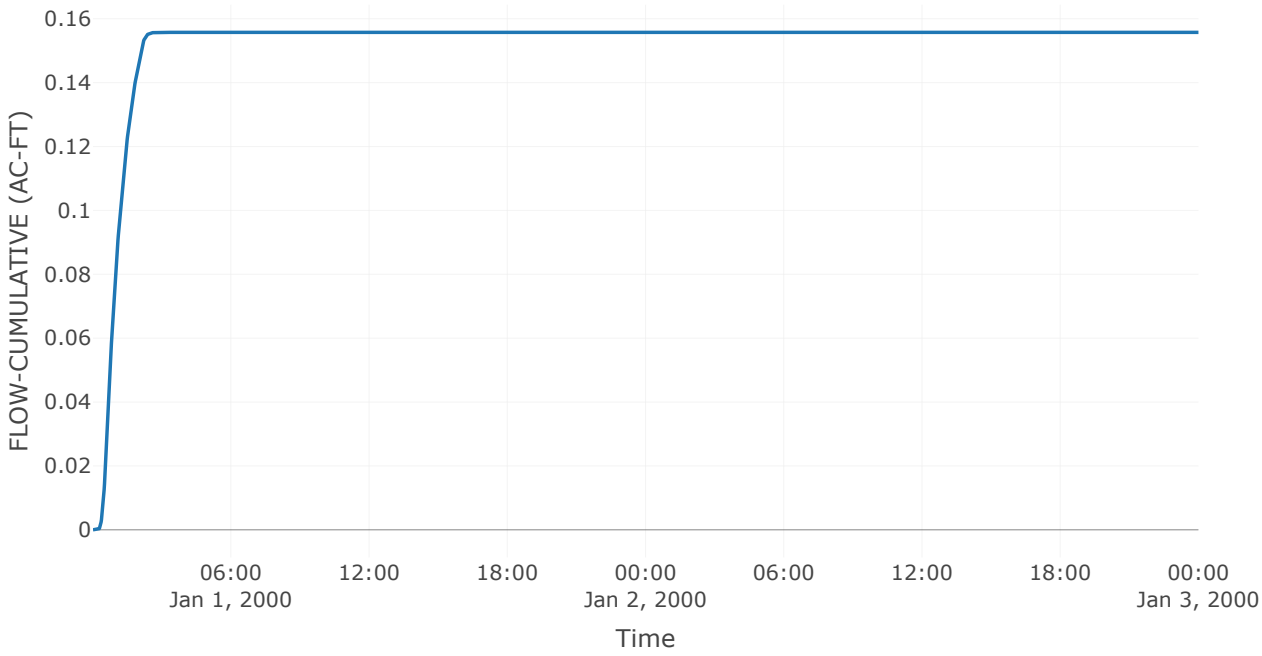
Precipitation and Outflow



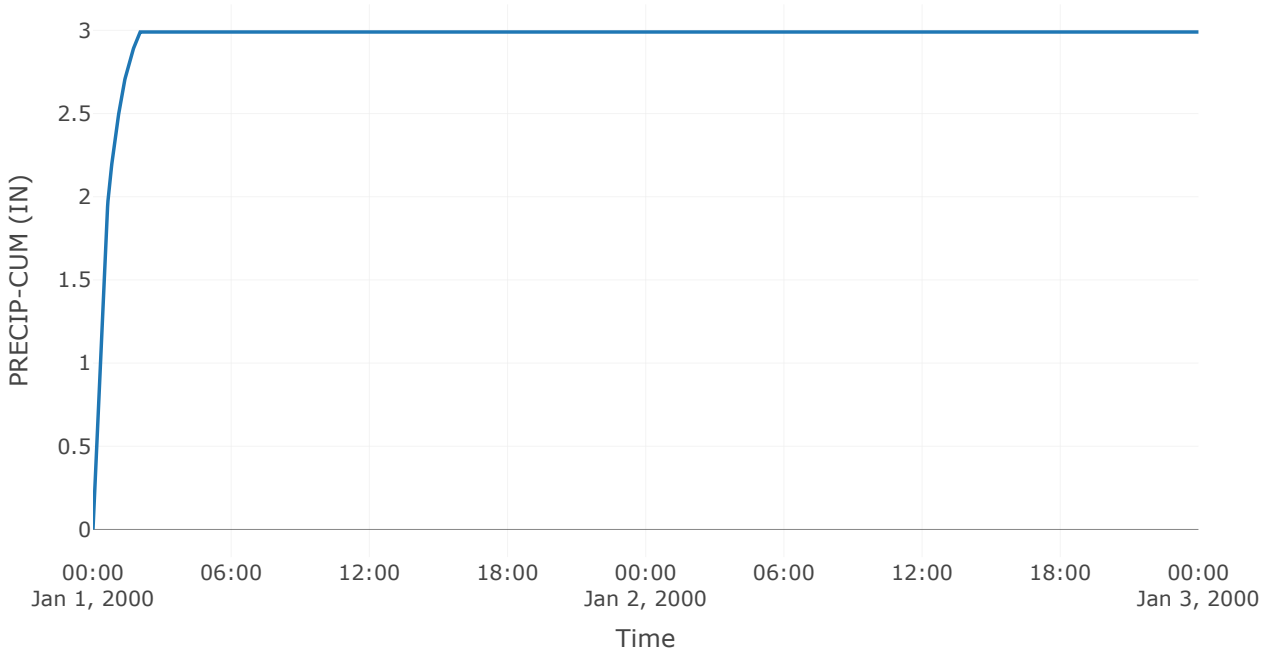
Cumulative Excess Precipitation

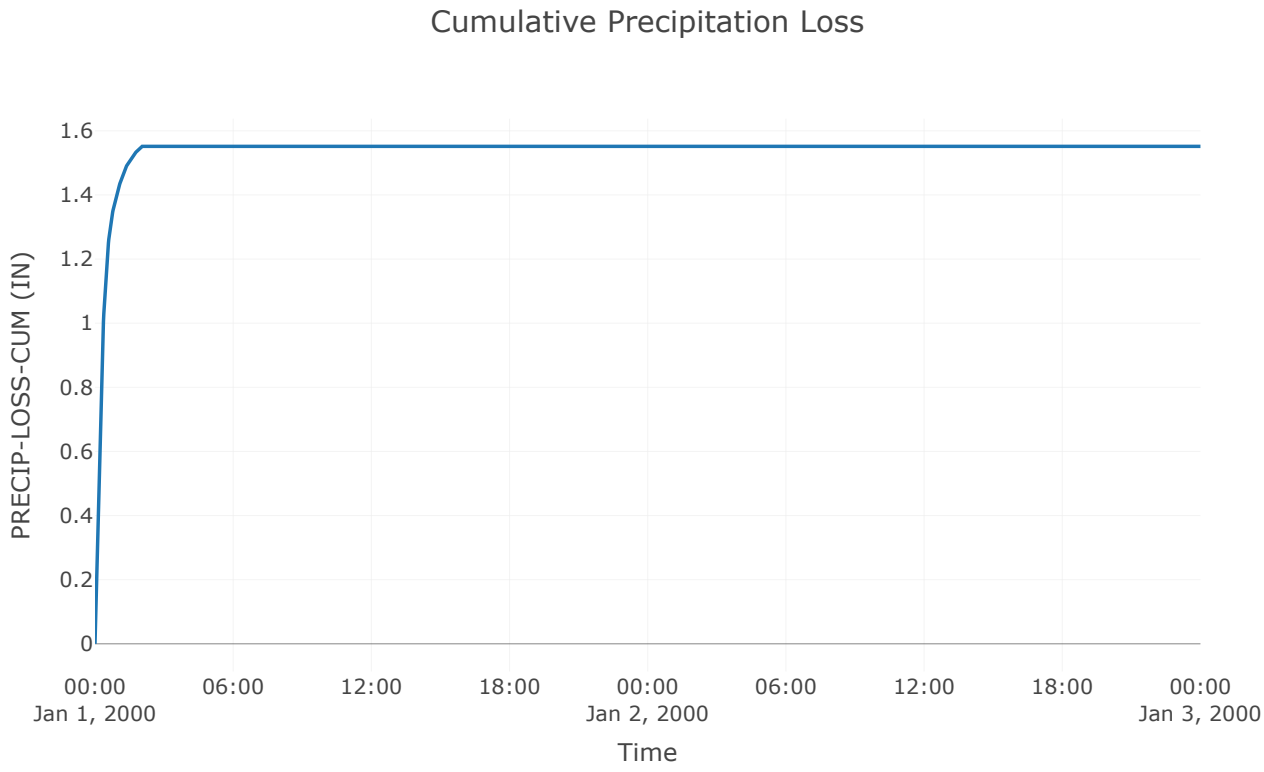


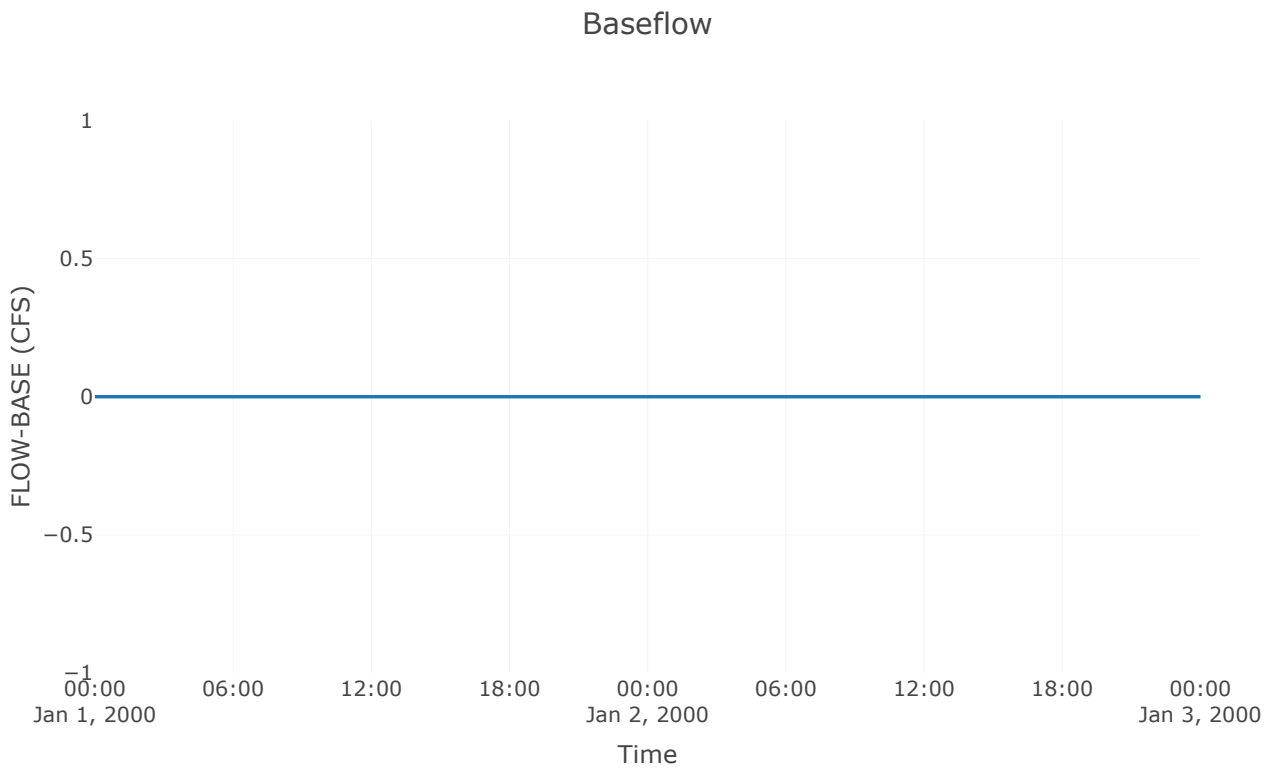
Cumulative Outflow

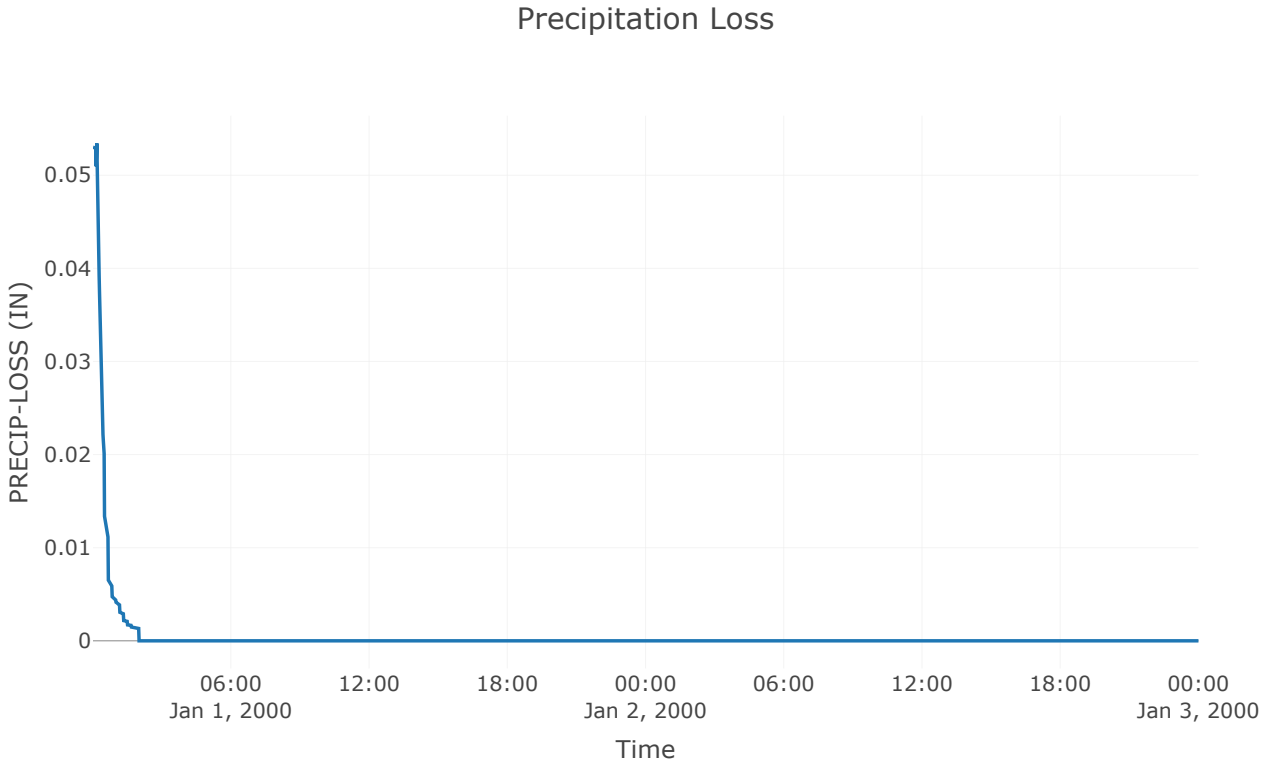


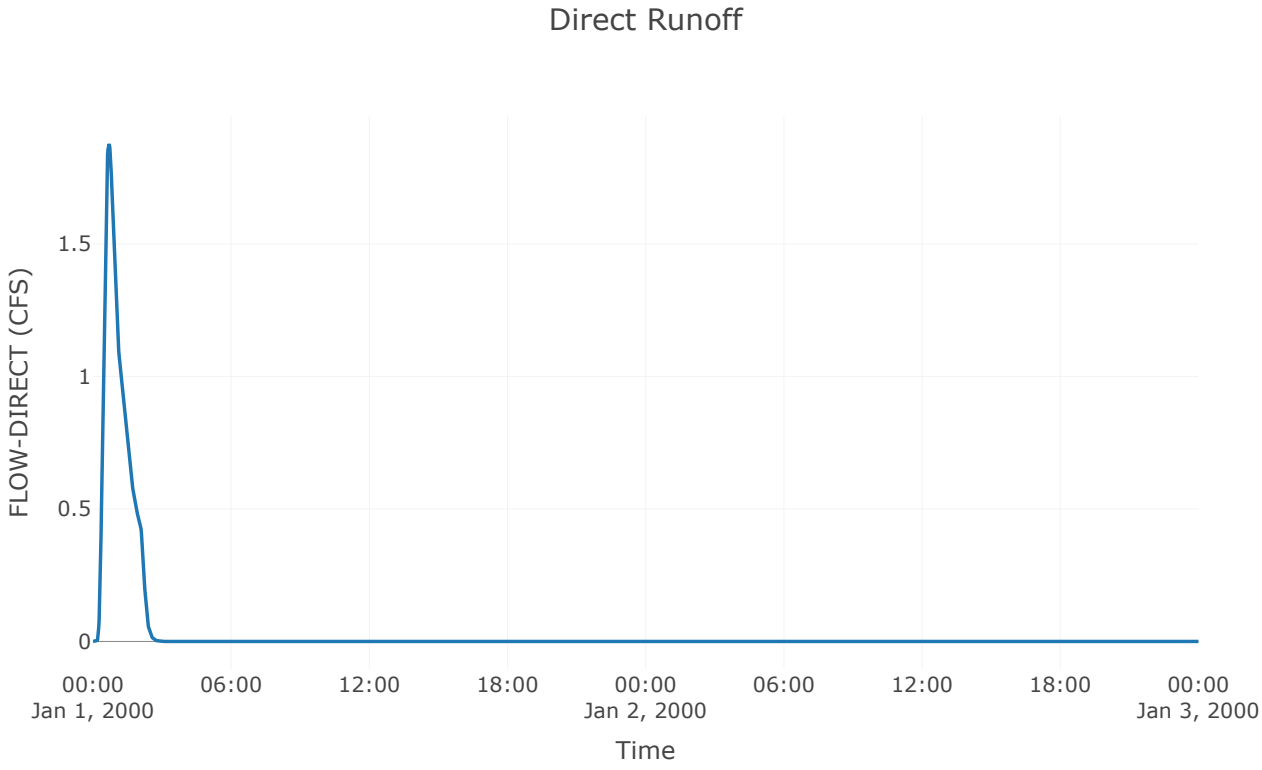
Cumulative Precipitation

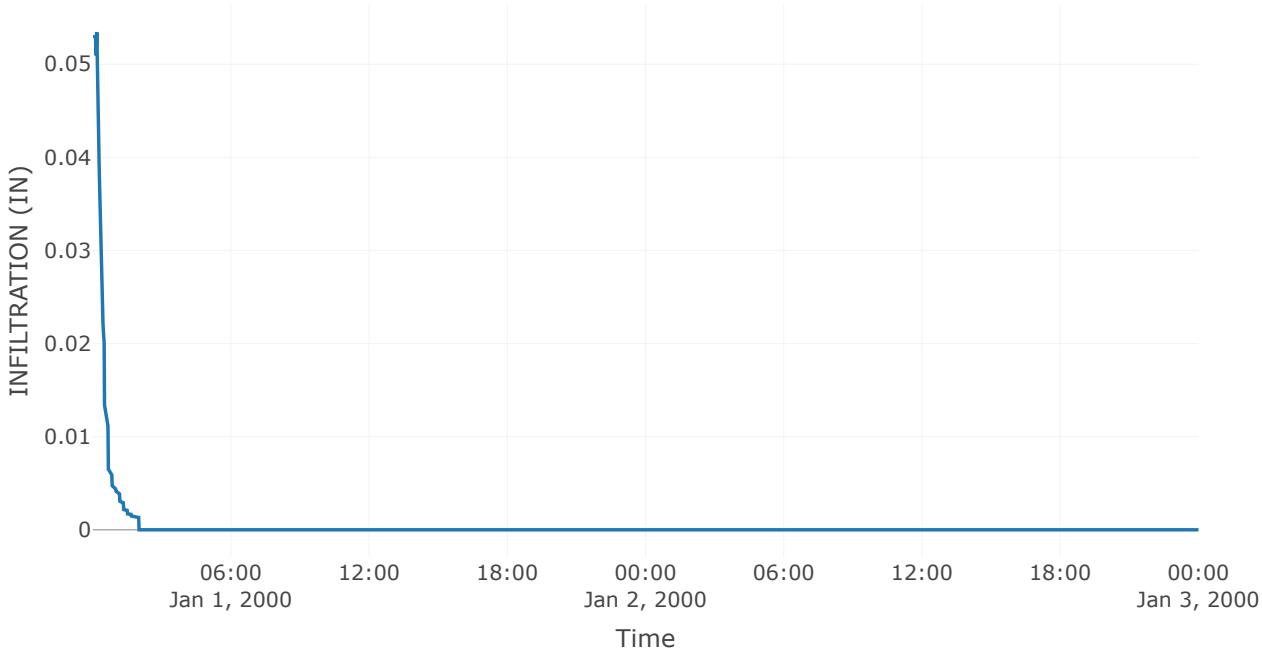



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

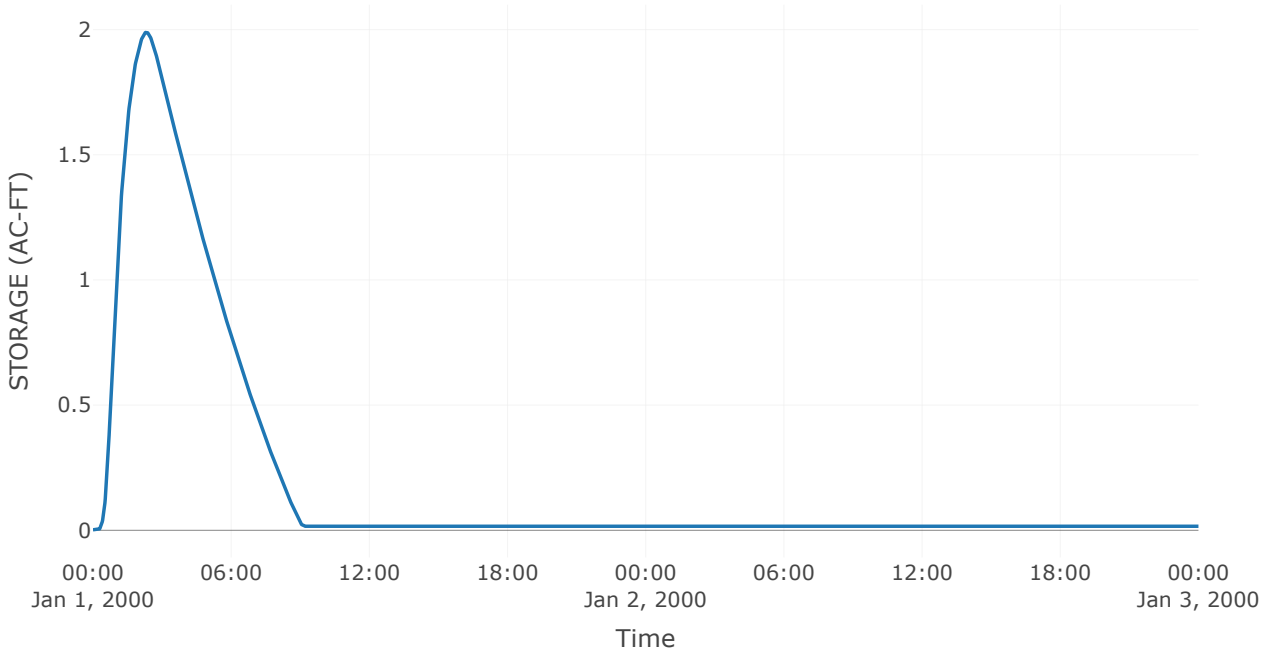

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

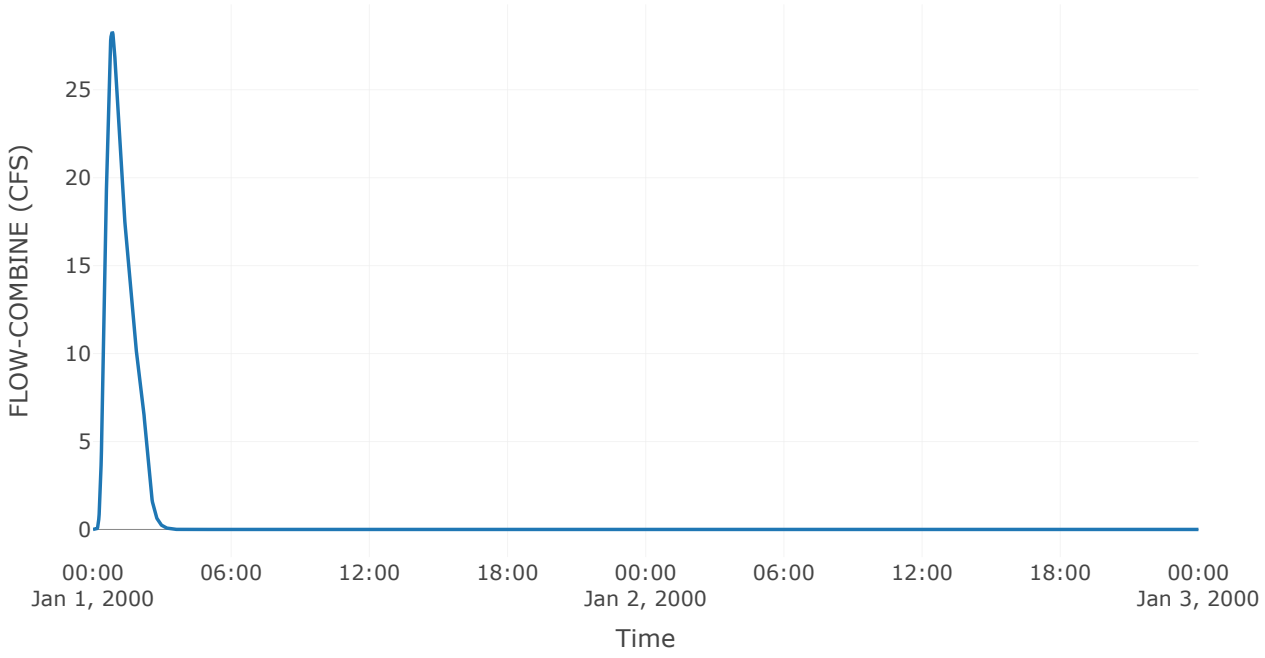
Downstream : Basin 2

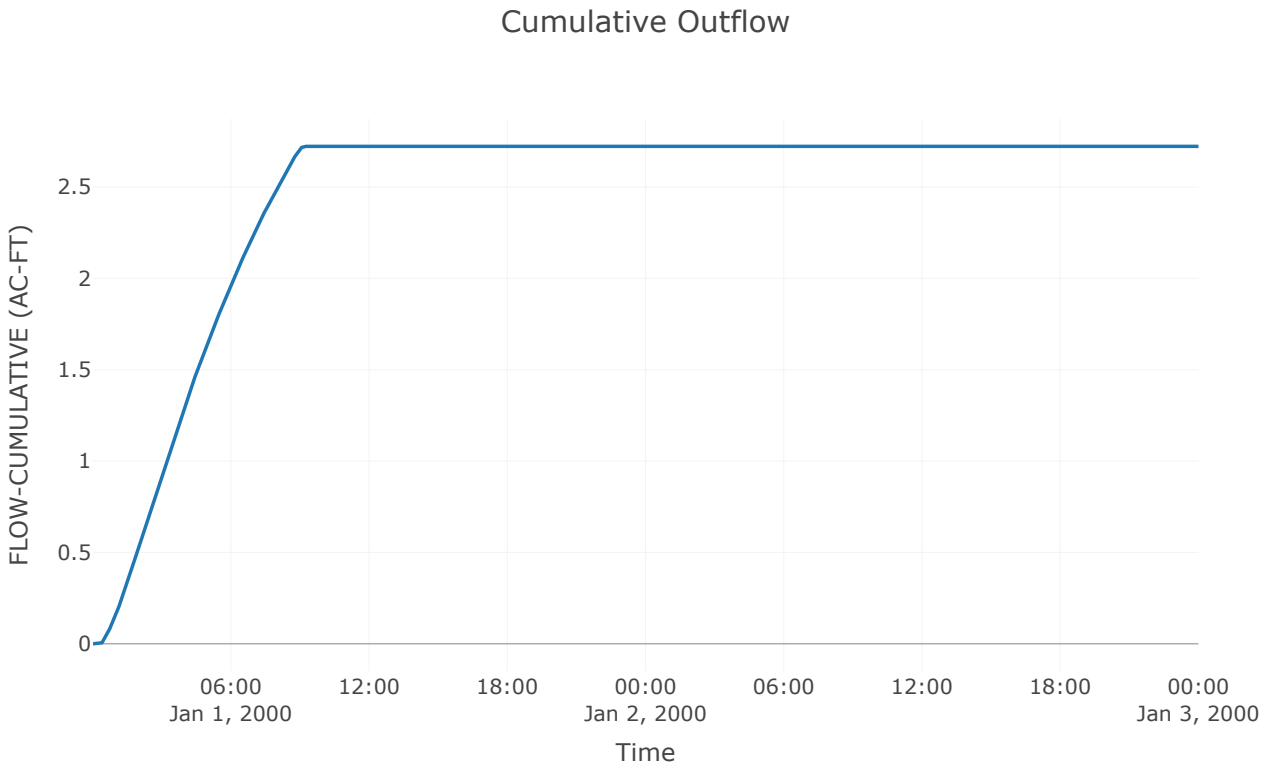
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

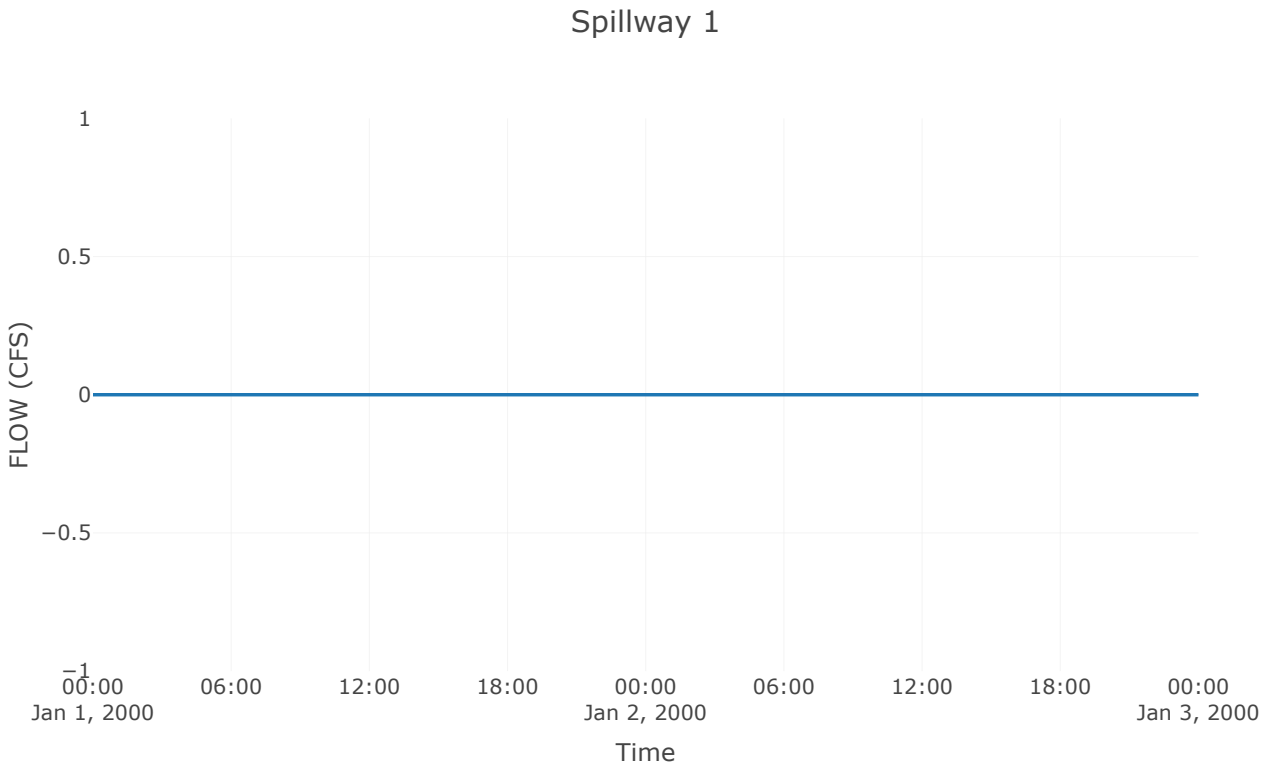
Storage



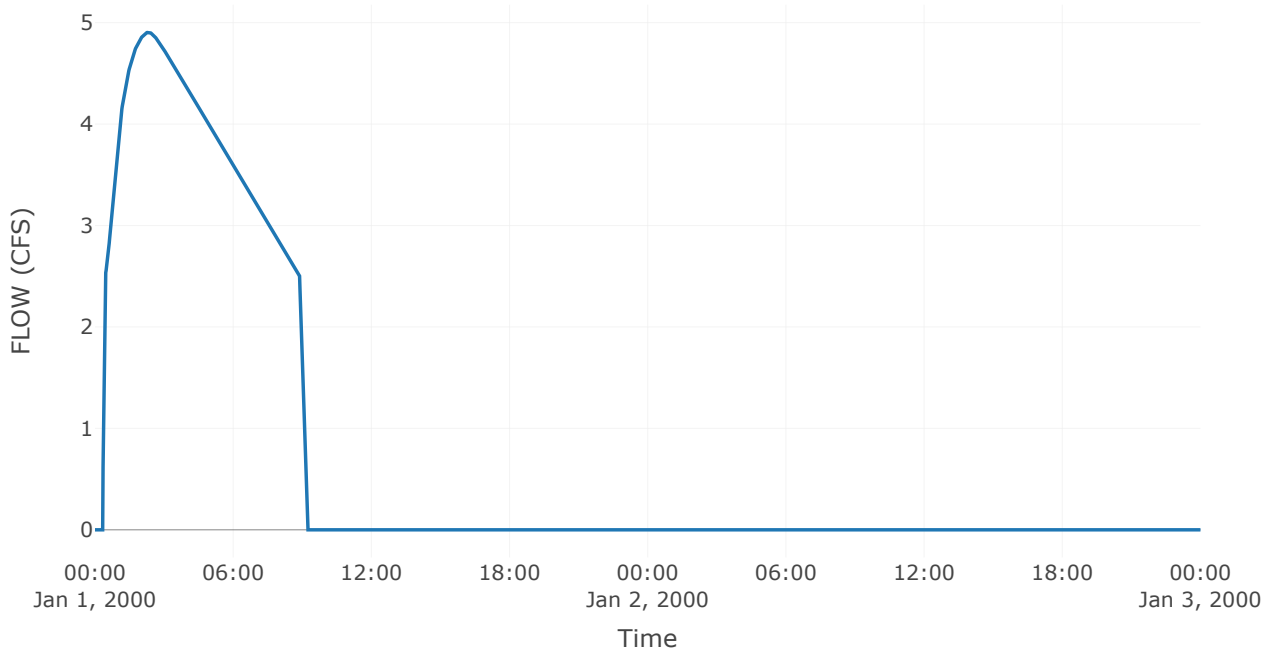
Combined Inflow



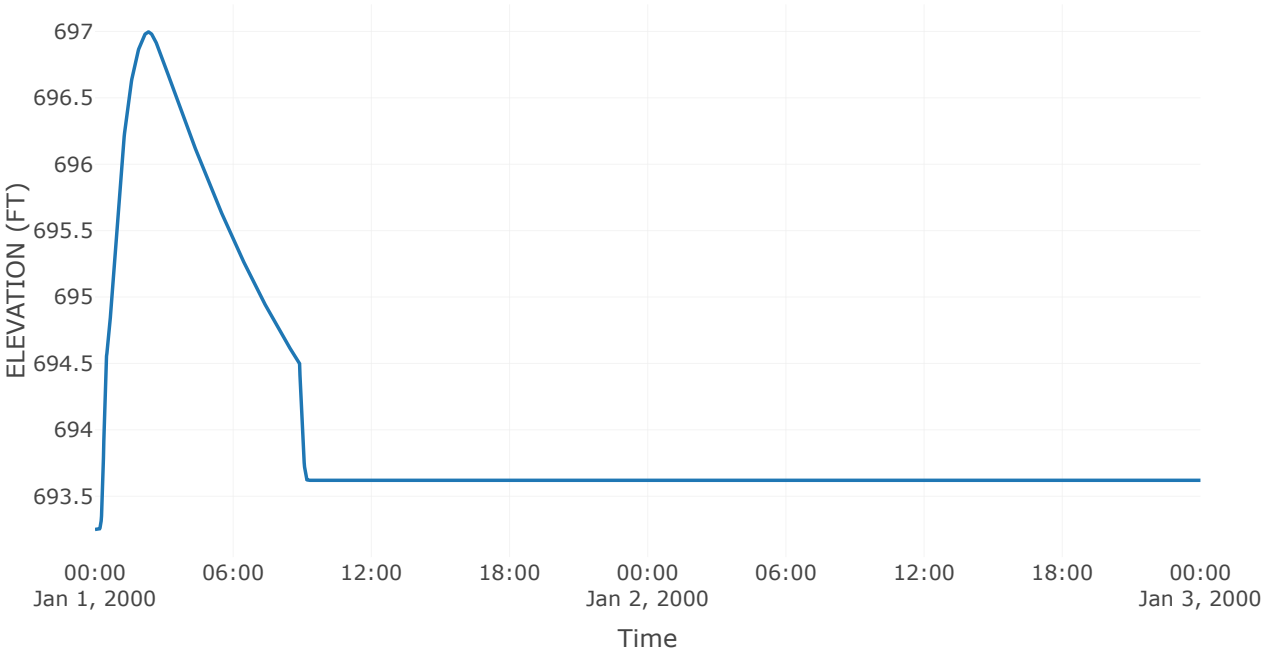

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

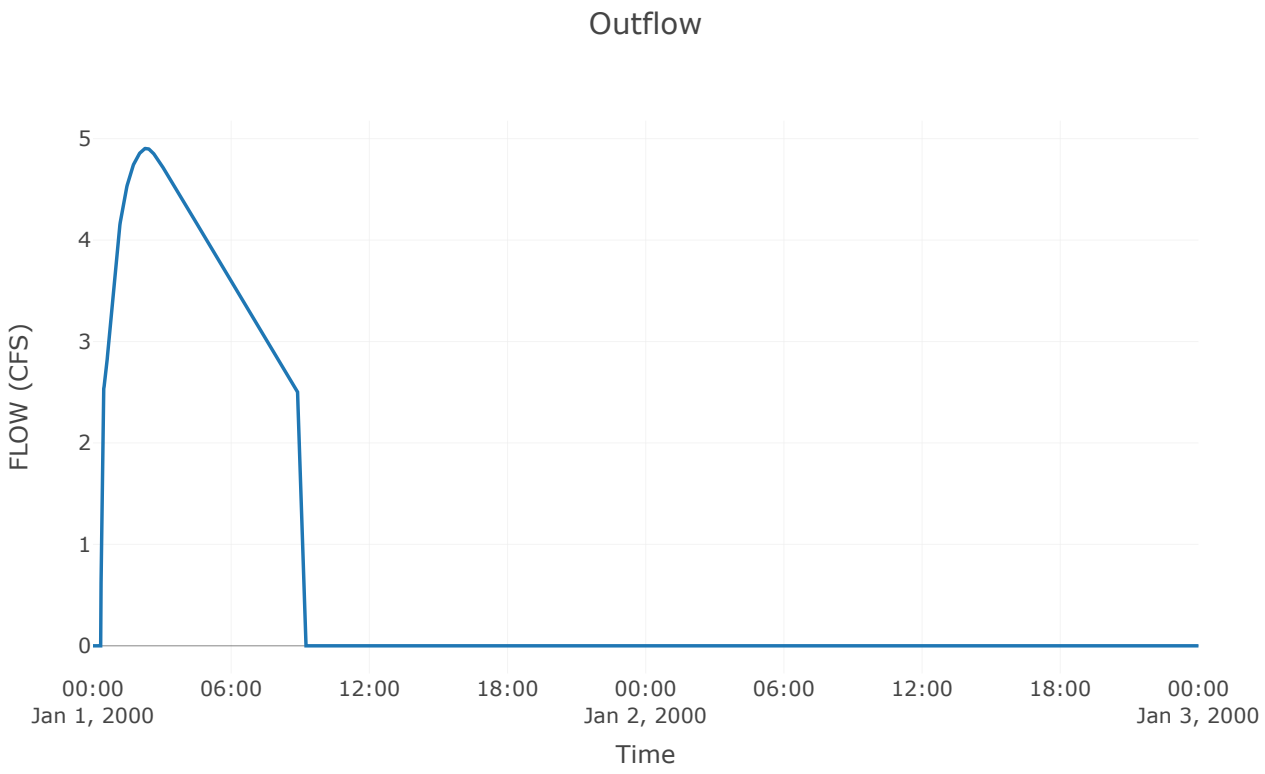

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

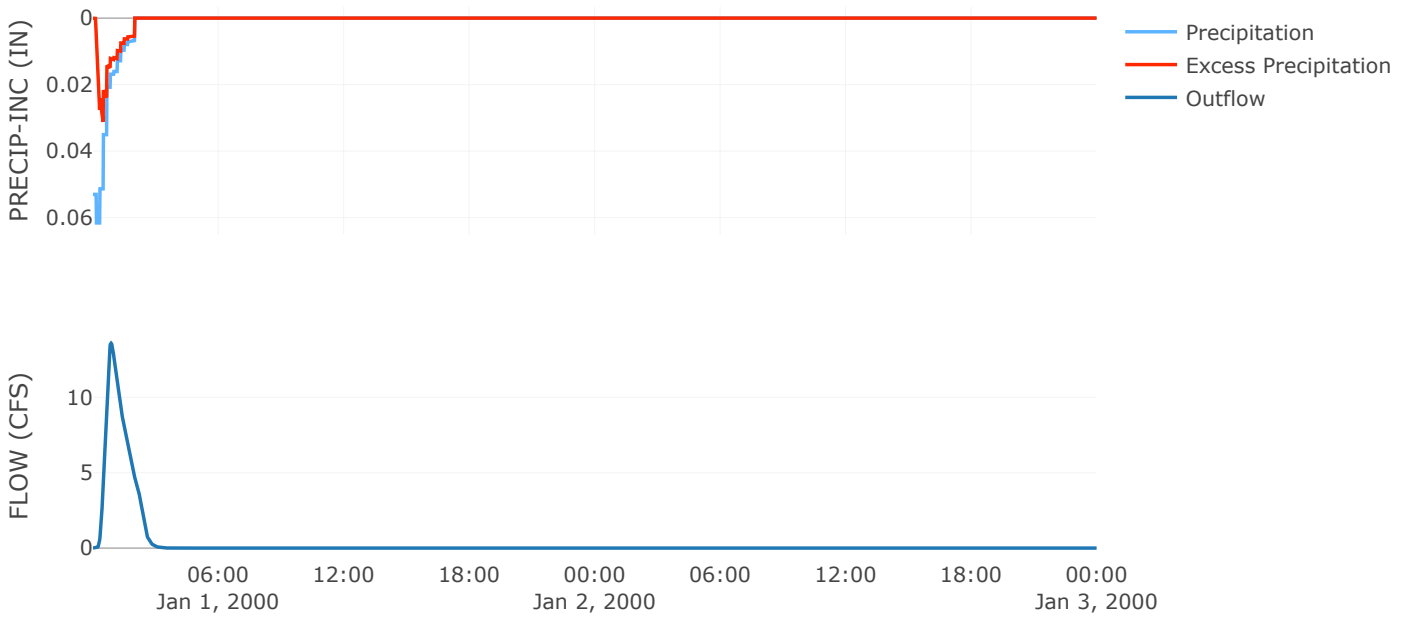
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

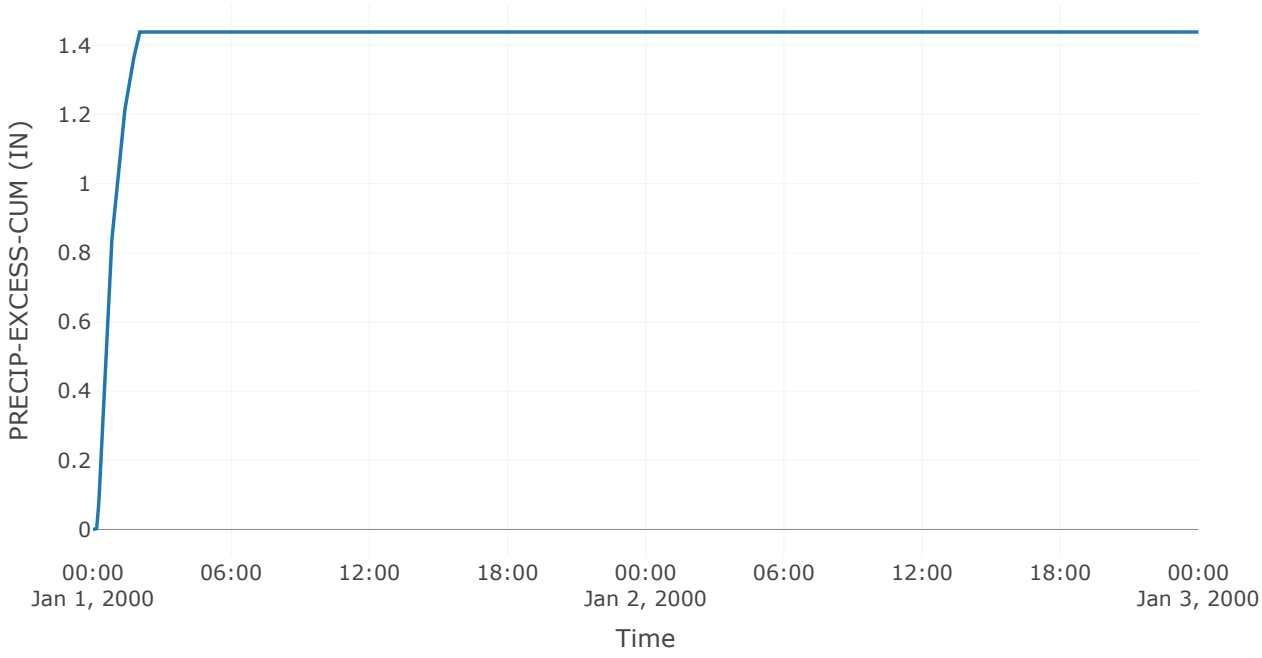
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

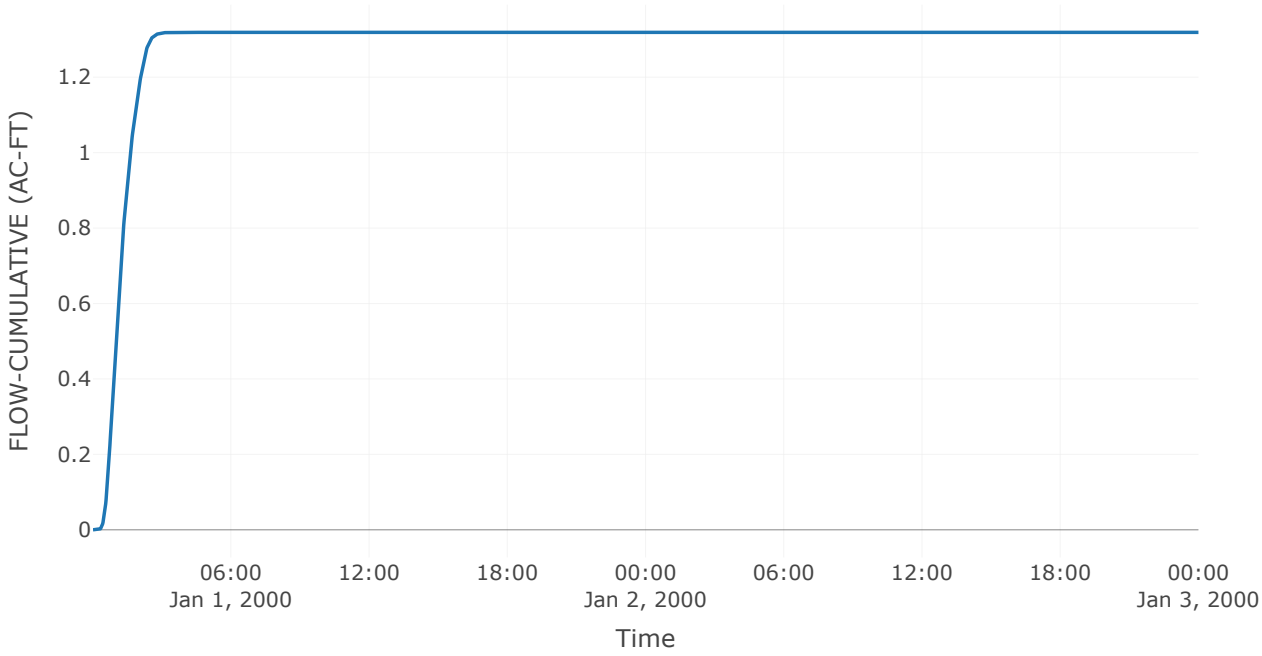
Precipitation and Outflow



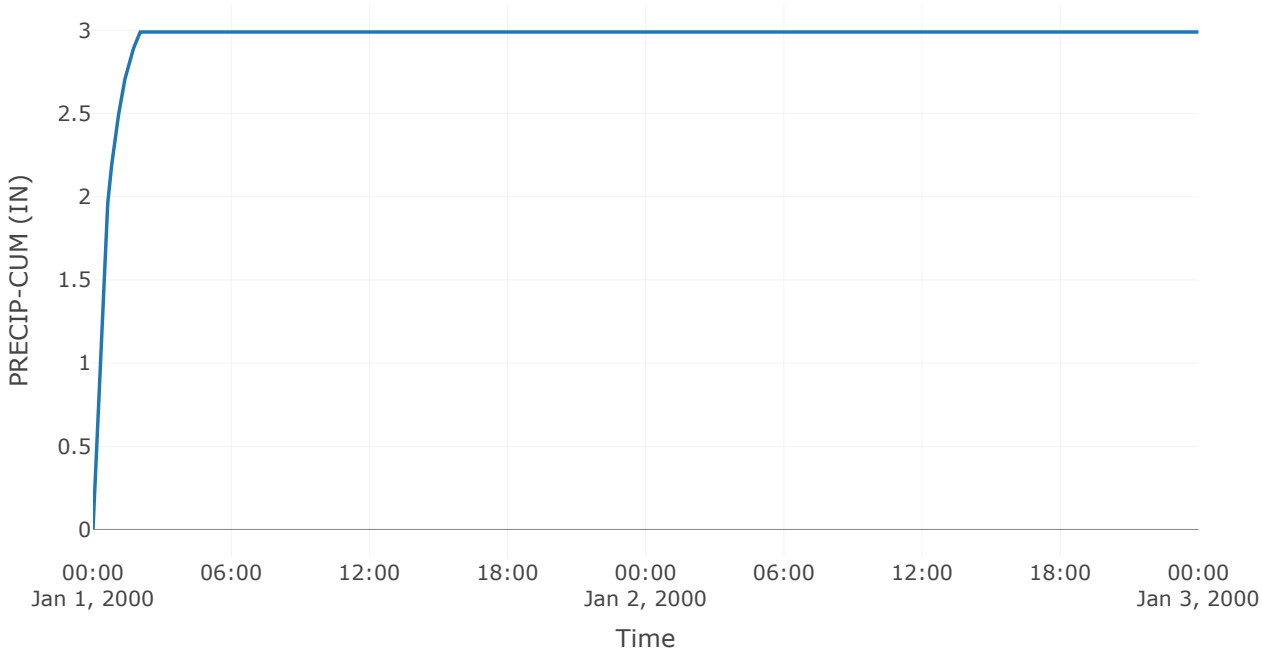
Cumulative Excess Precipitation

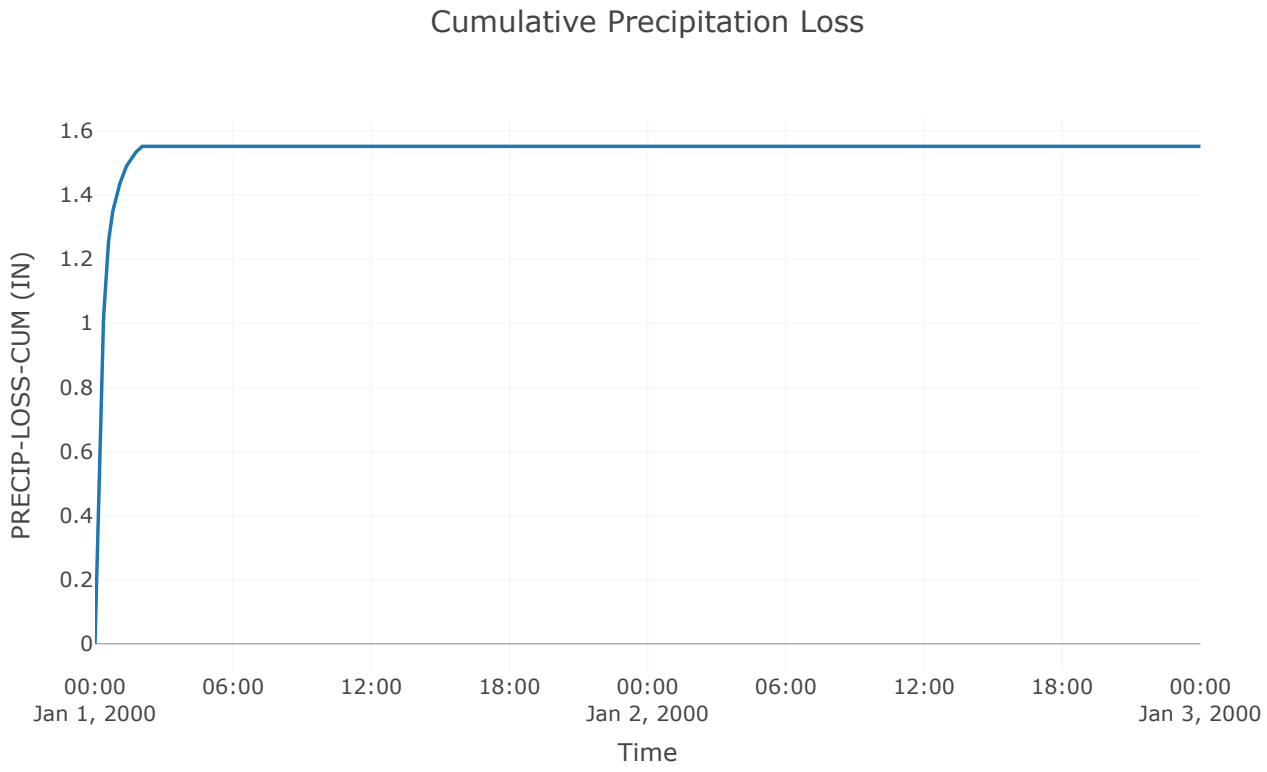


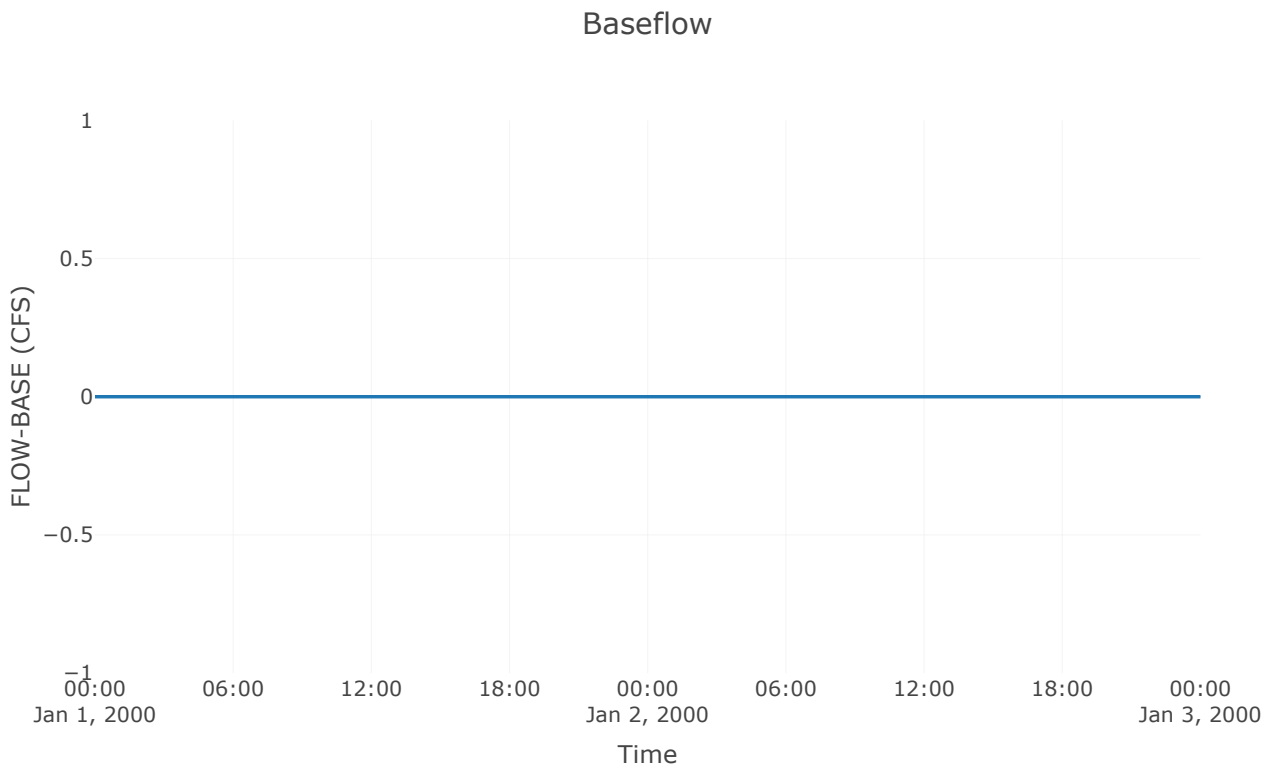
Cumulative Outflow



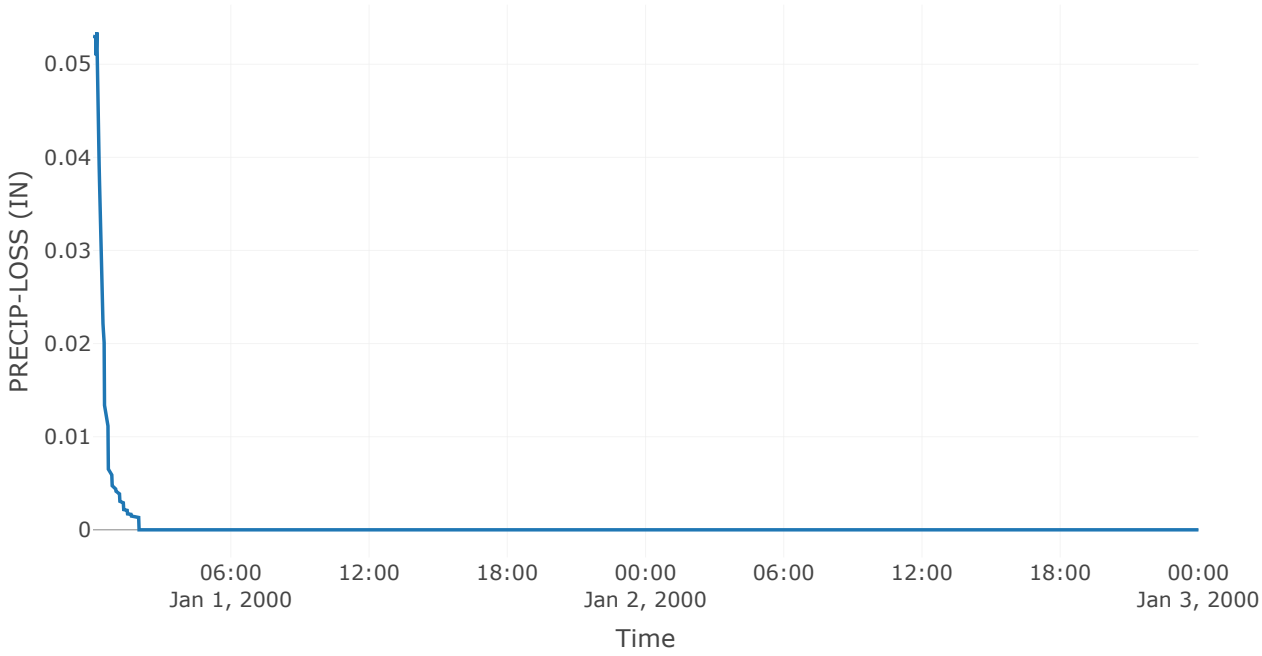
Cumulative Precipitation



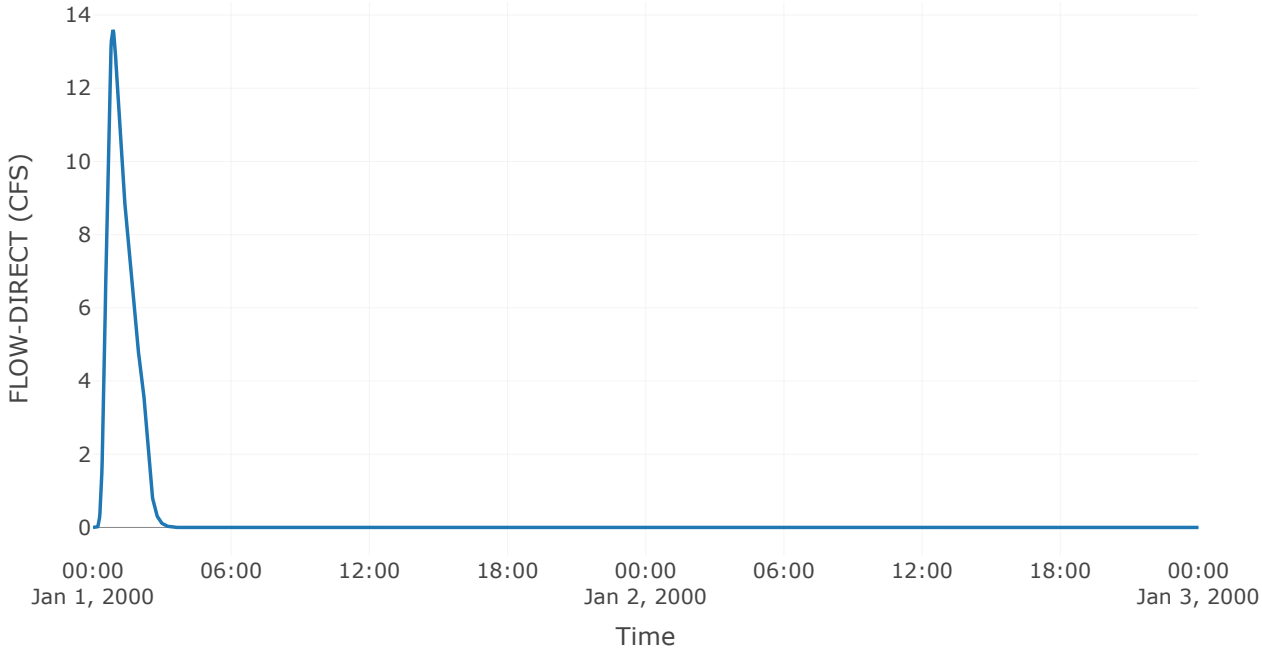

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

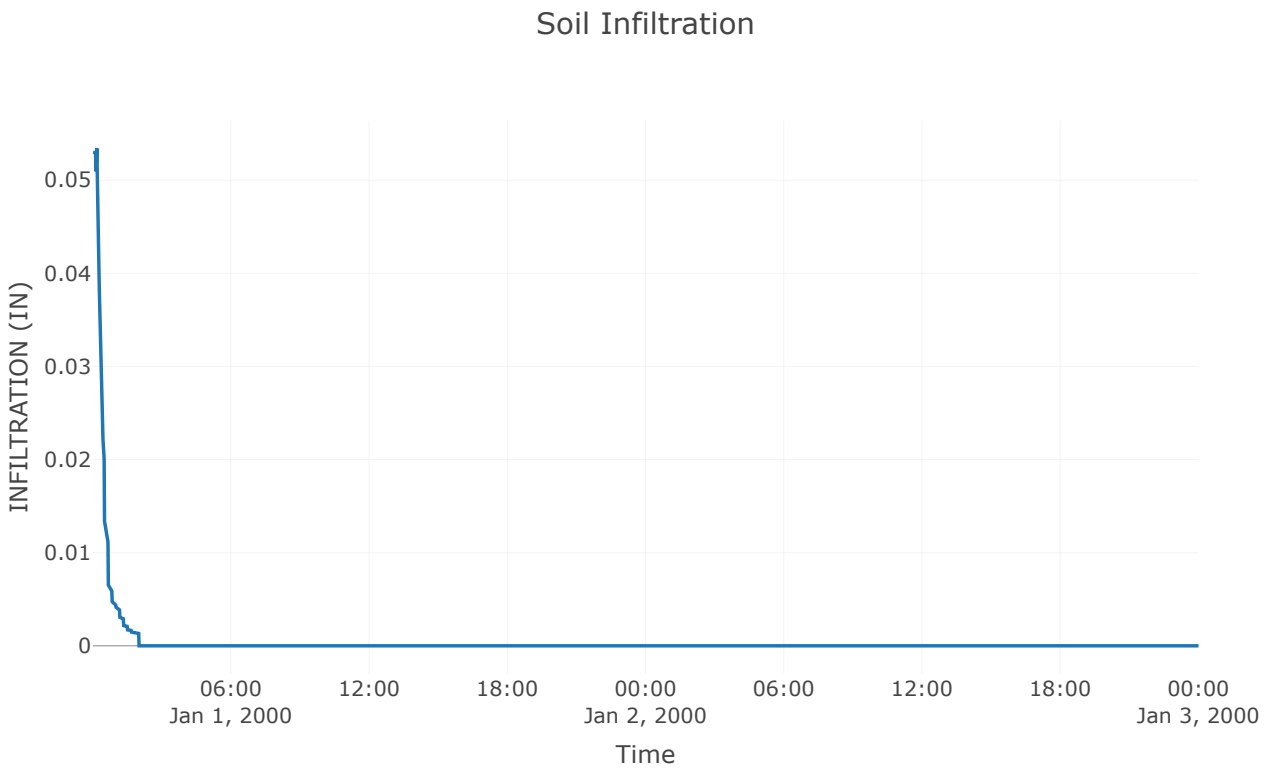

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

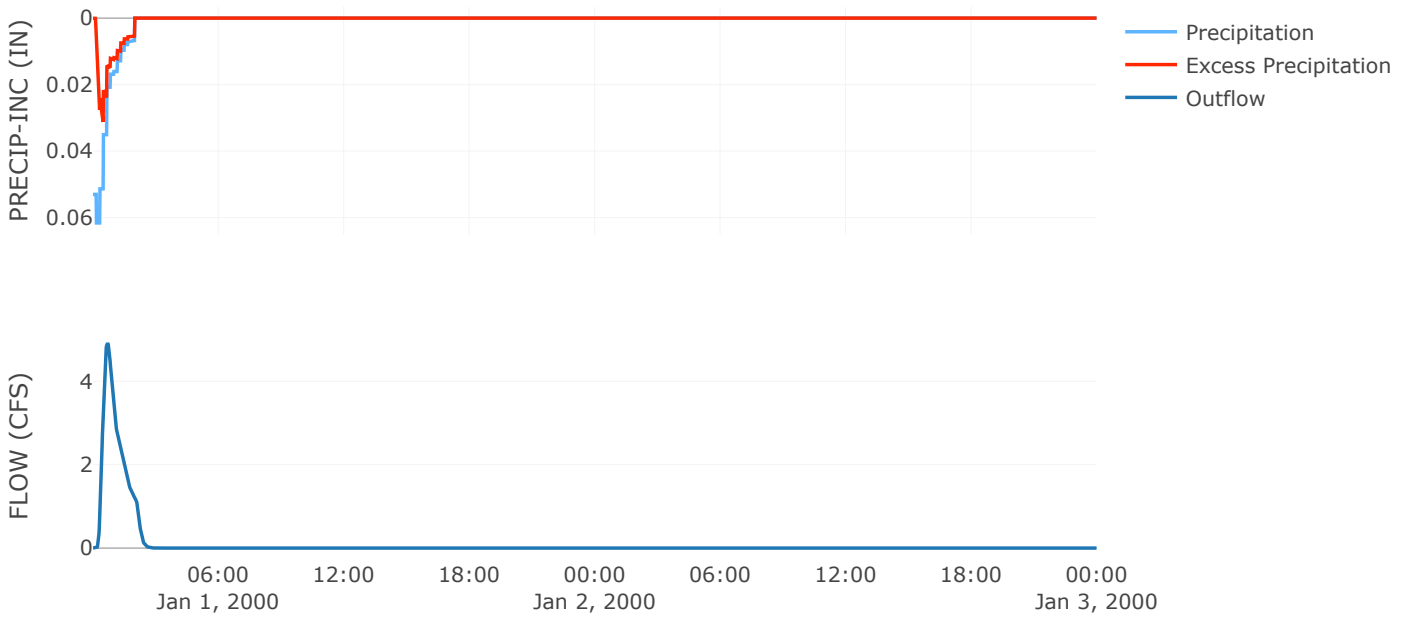
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

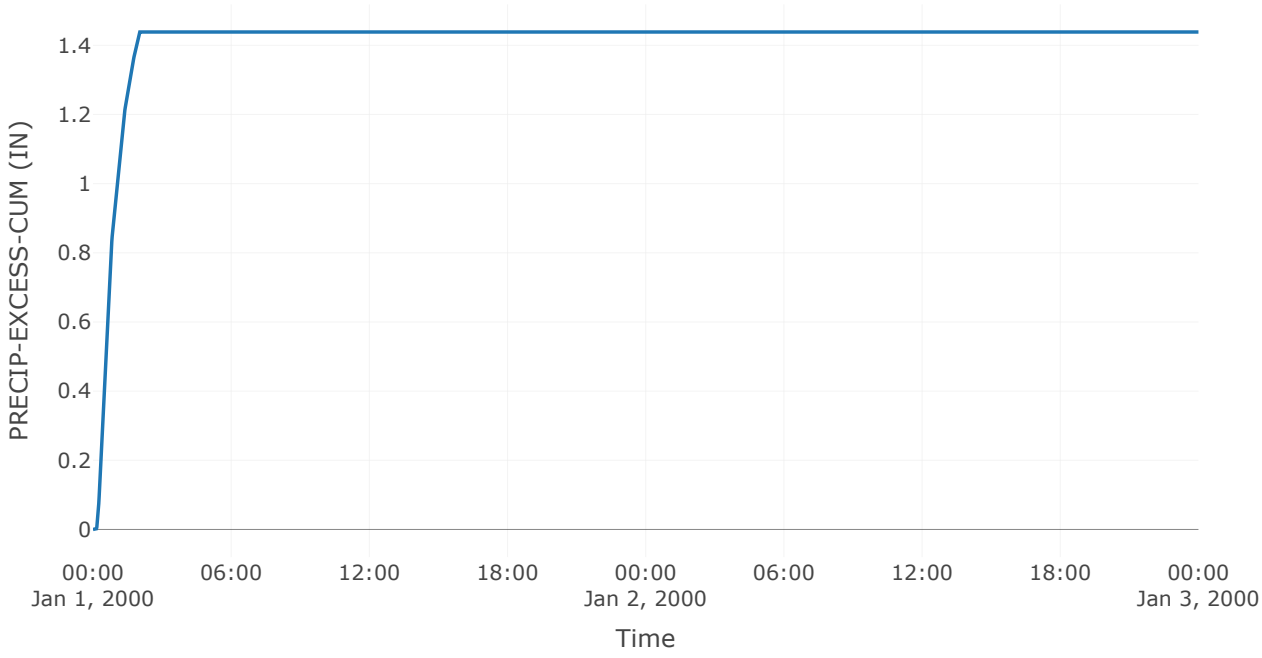
Transform: Scs	
Lag	12
Unitgraph Type	Standard

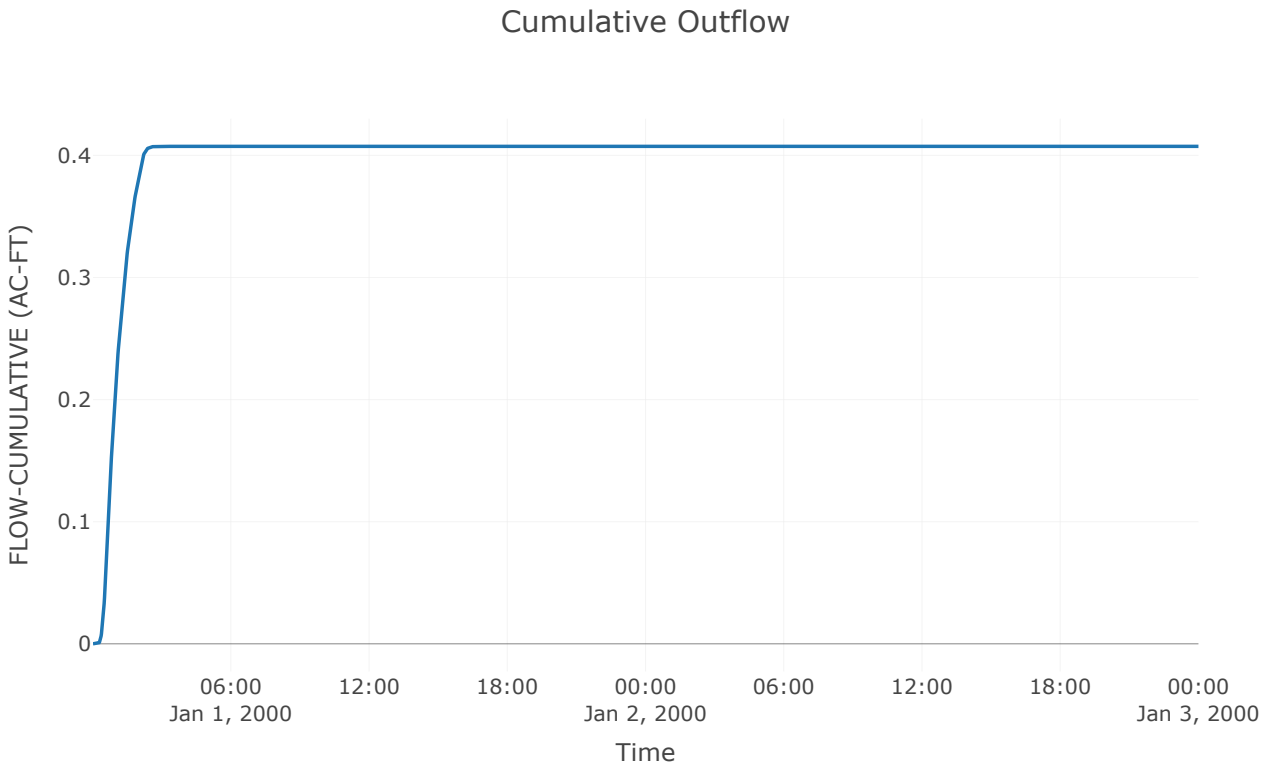
Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

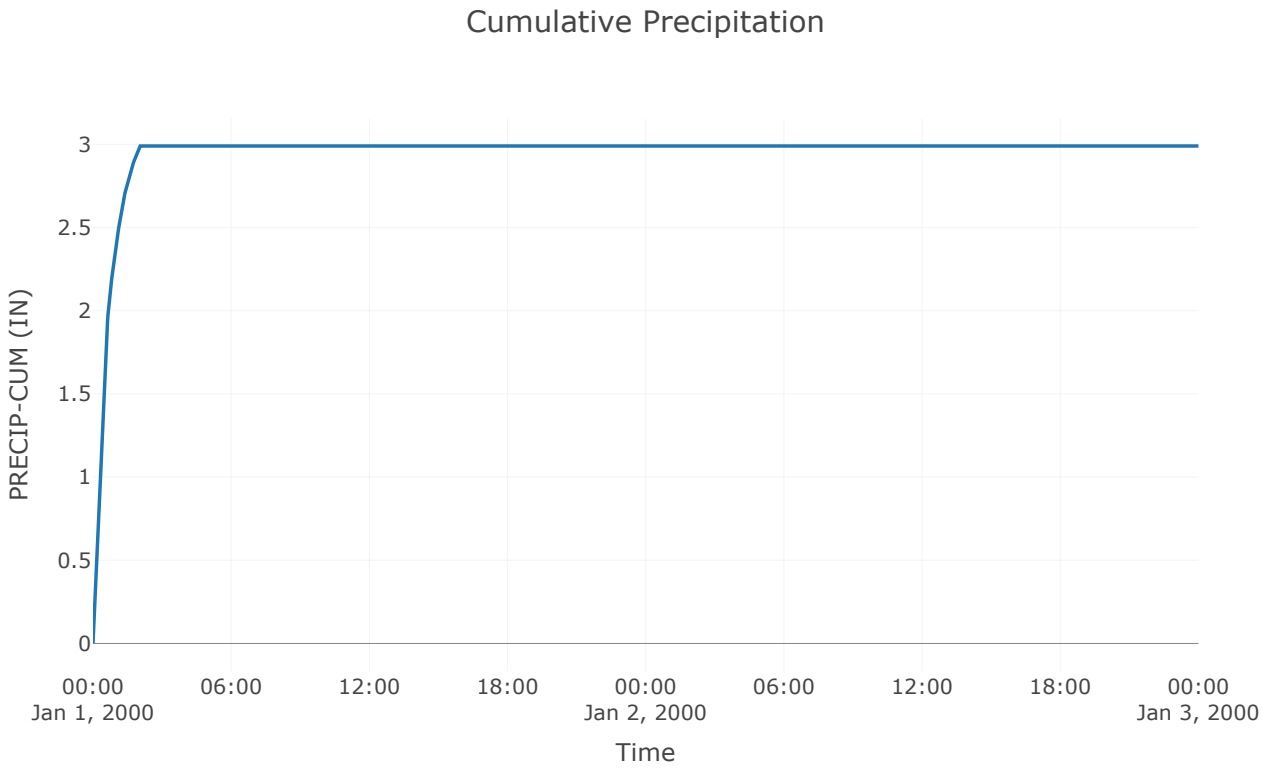
Precipitation and Outflow

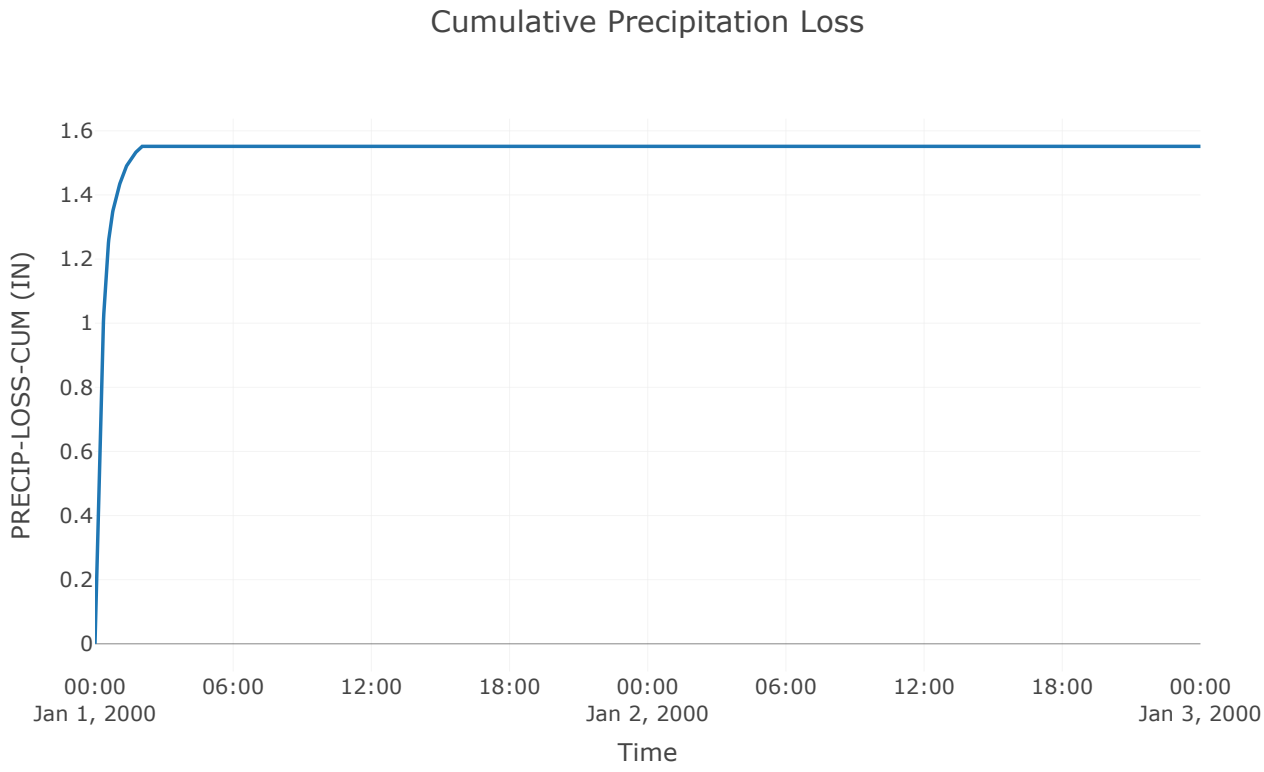


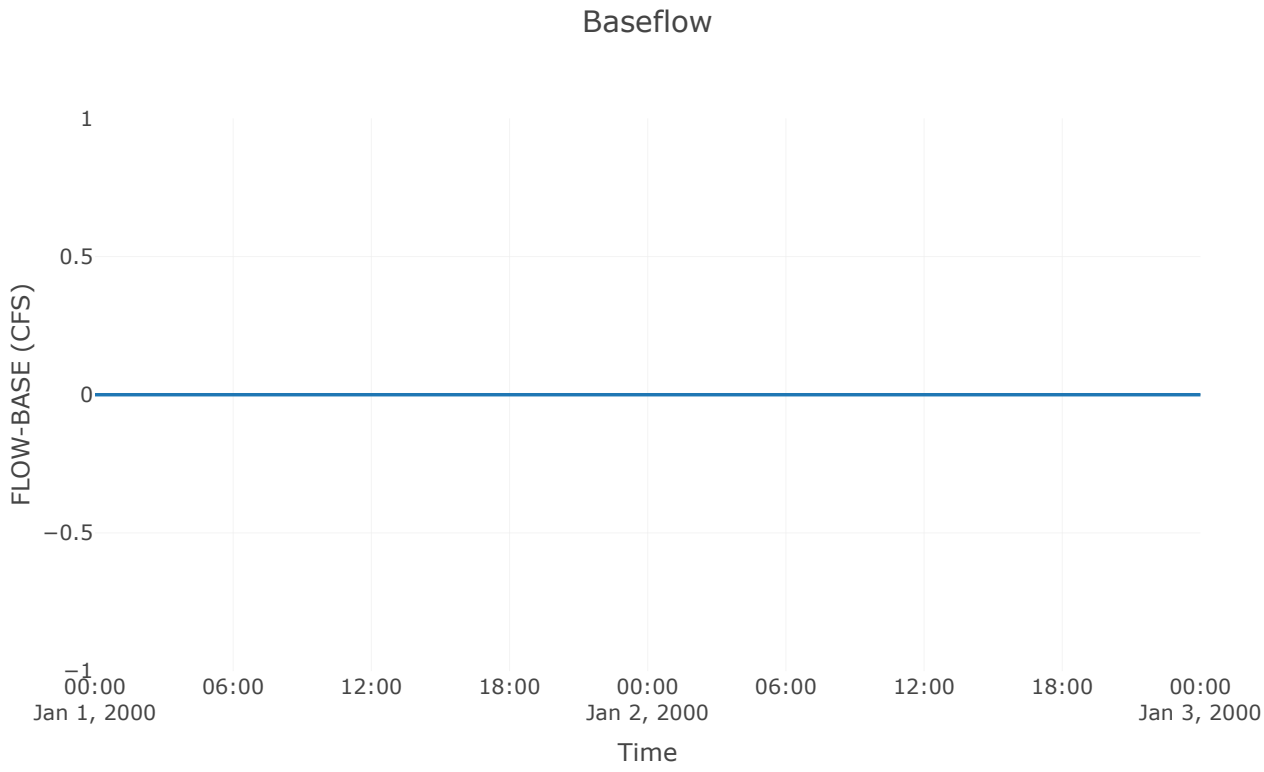
Cumulative Excess Precipitation



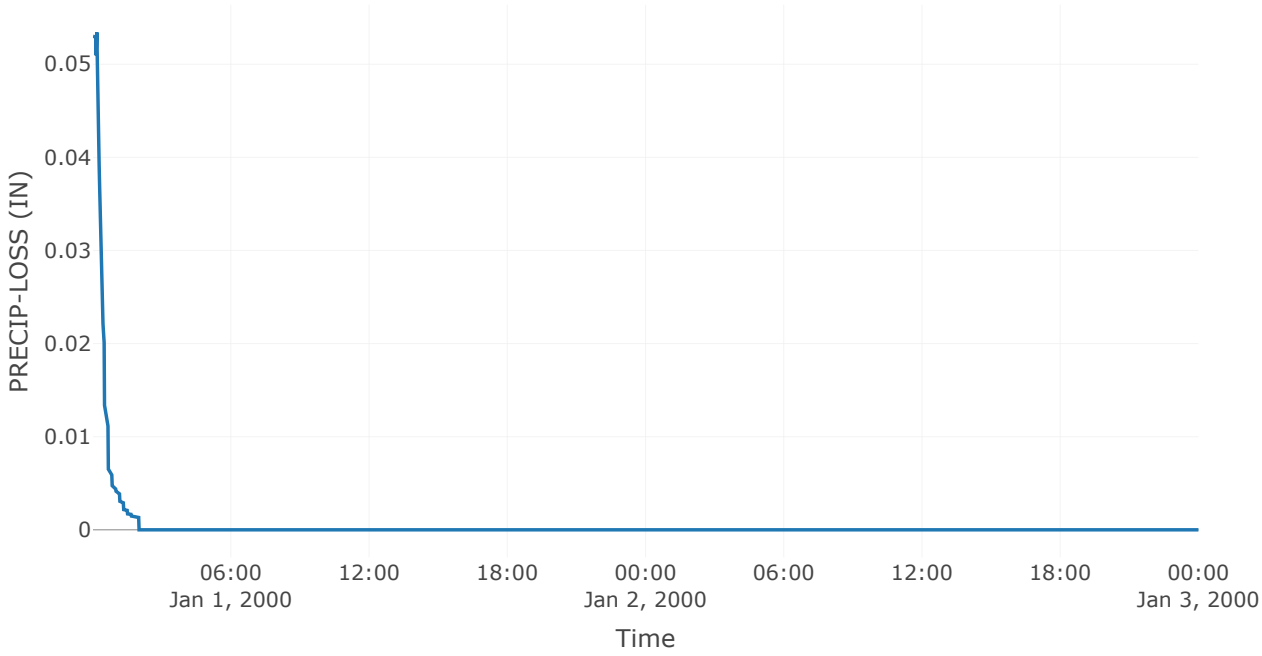

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

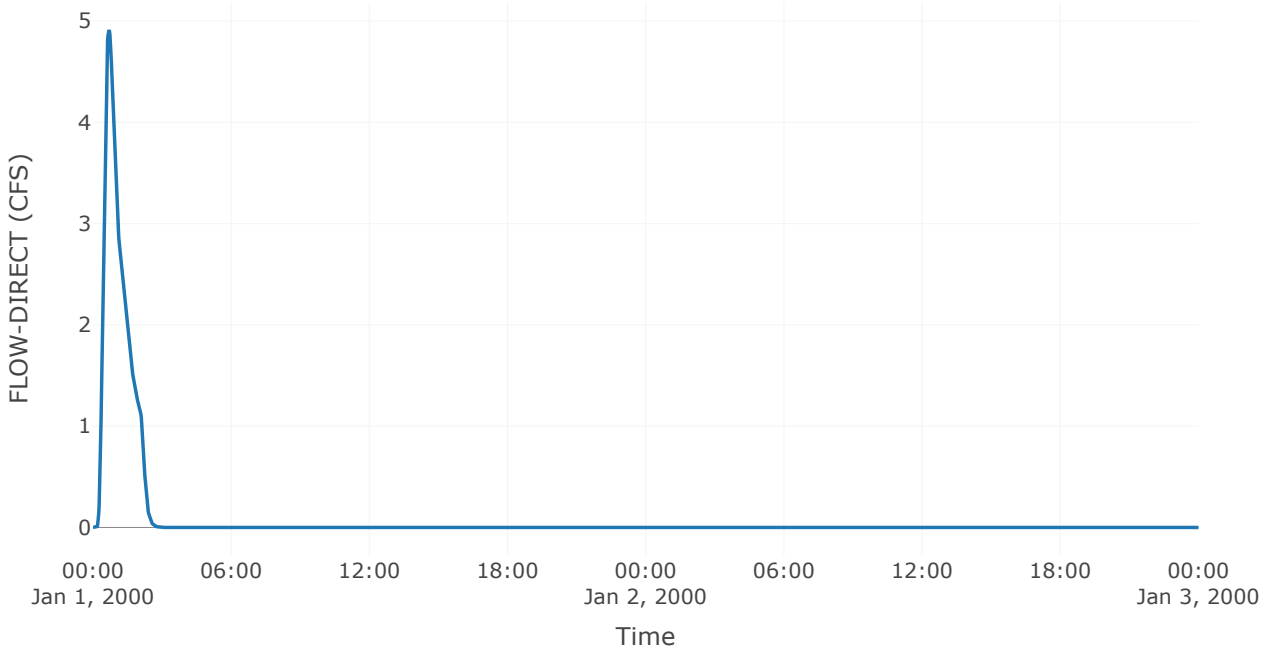

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

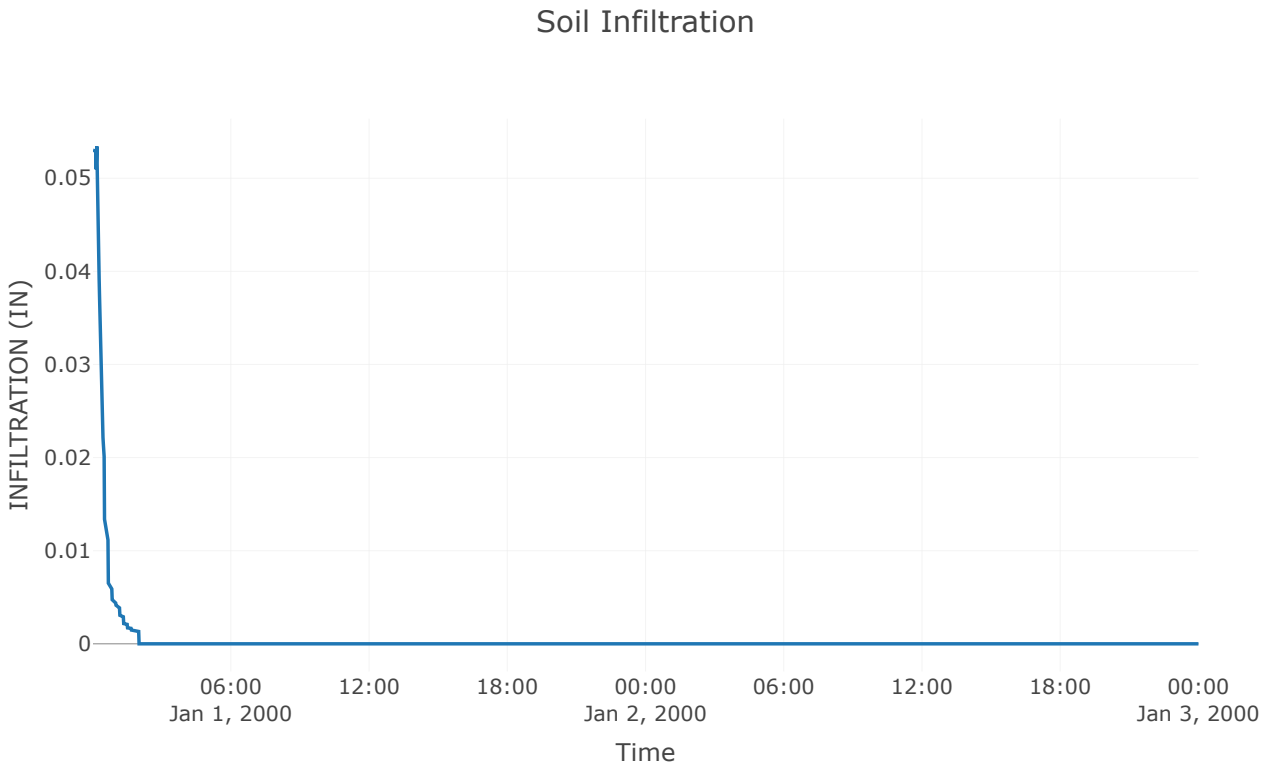

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



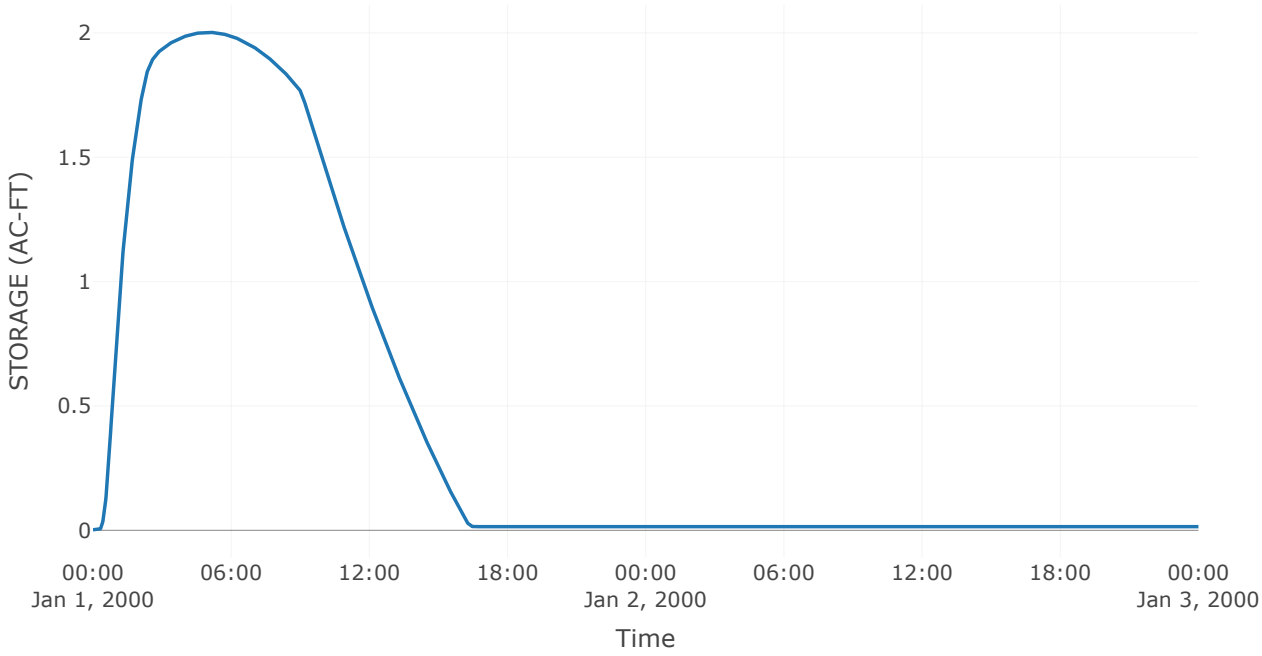

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

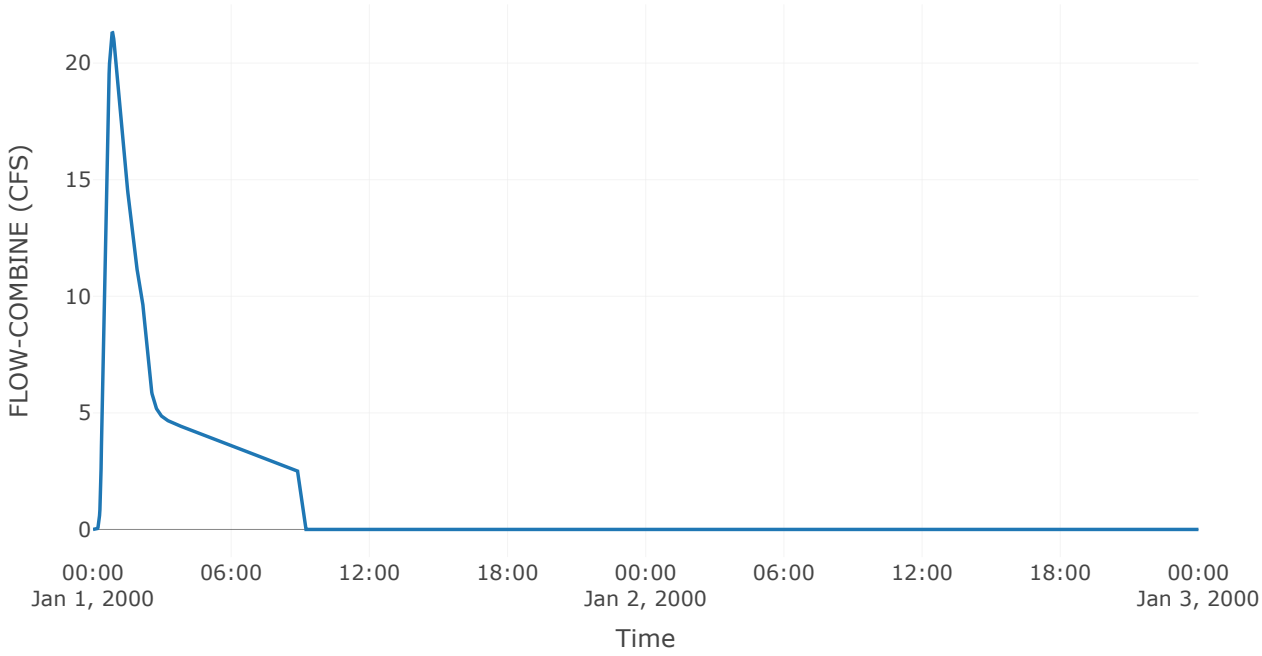
Downstream : Basin 3

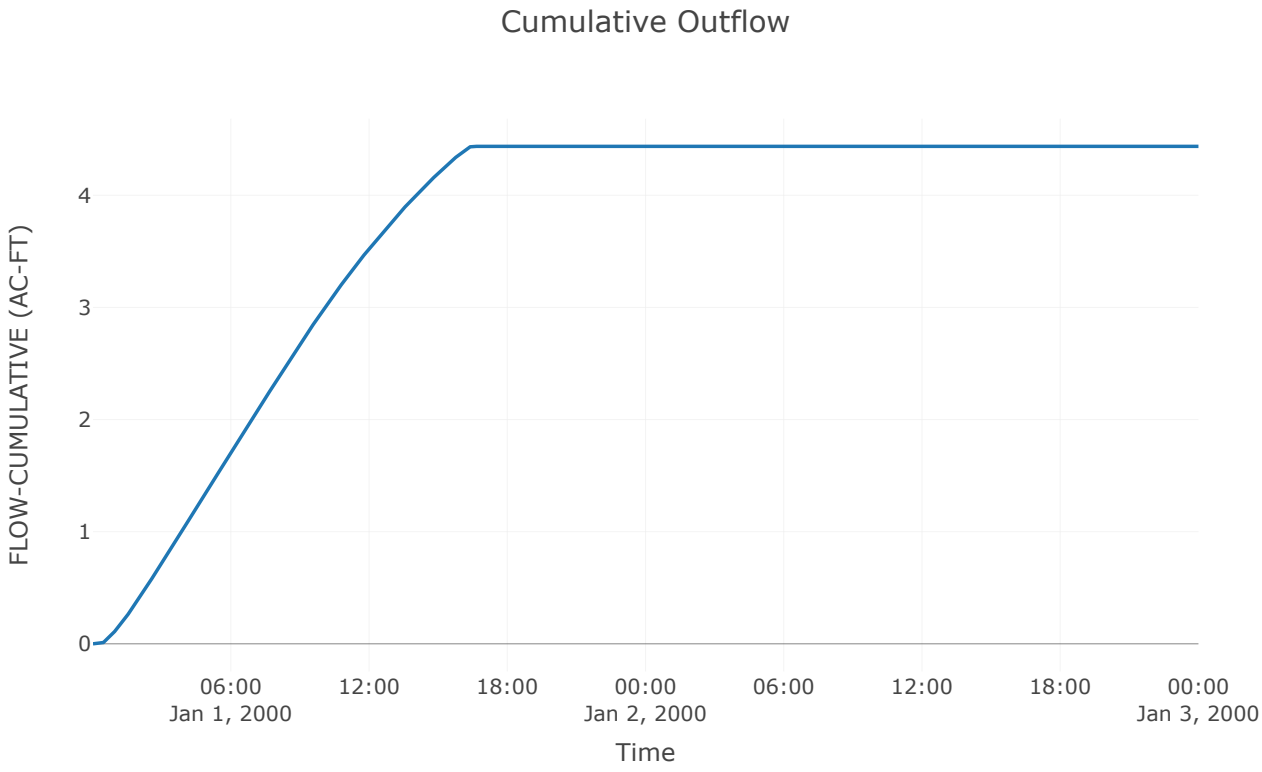
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

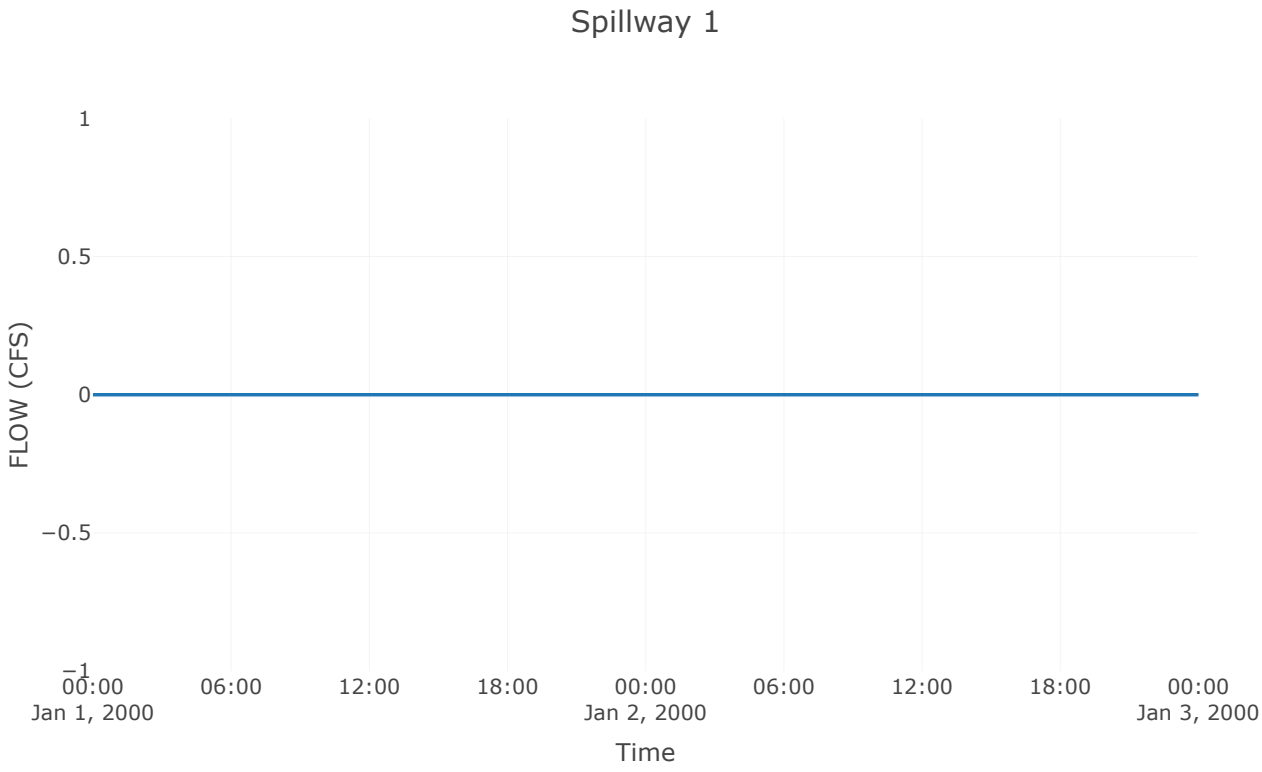
Storage



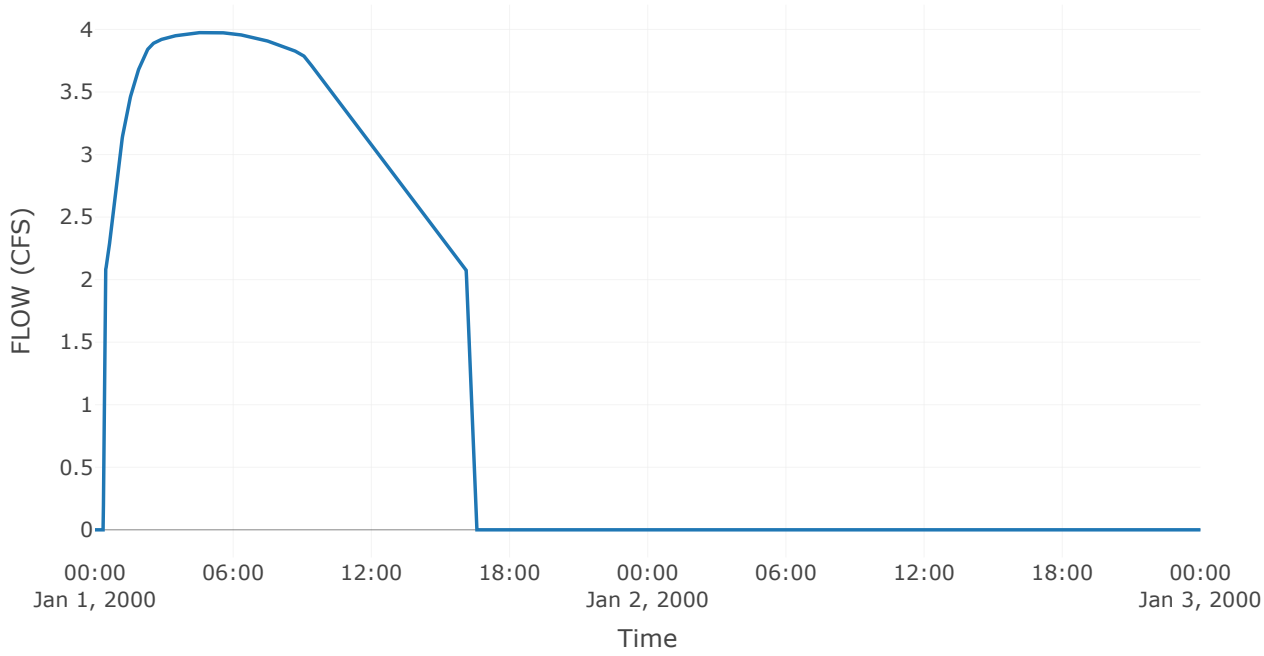
Combined Inflow



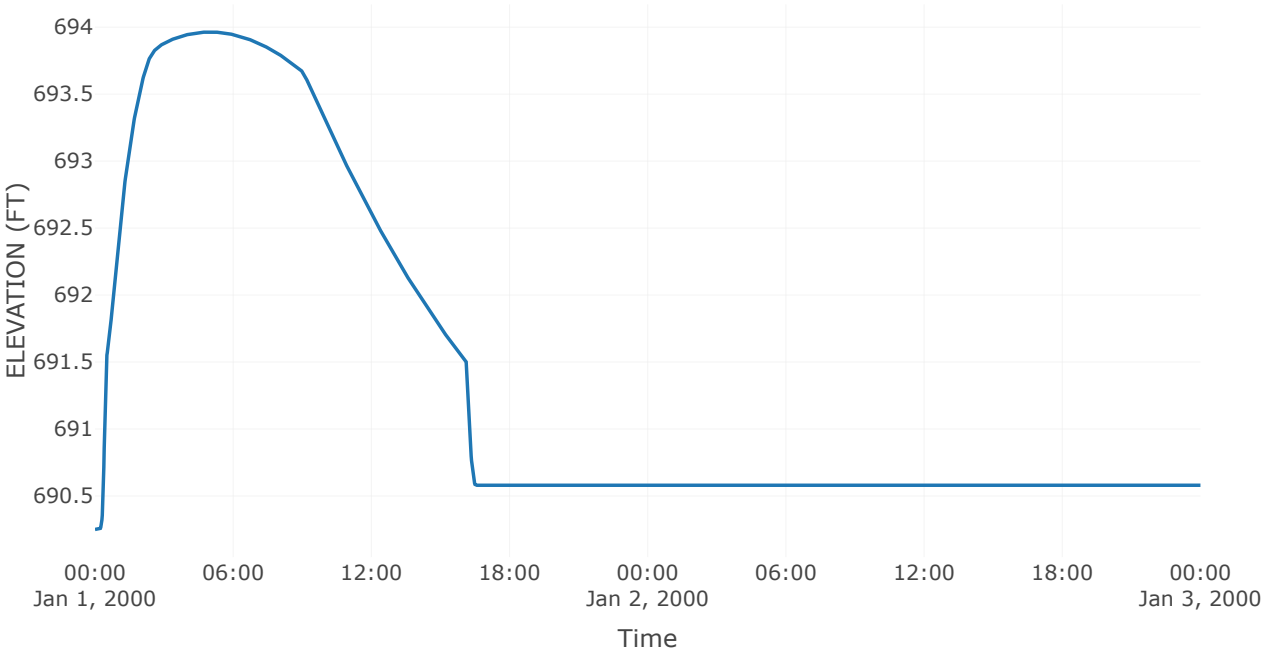

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

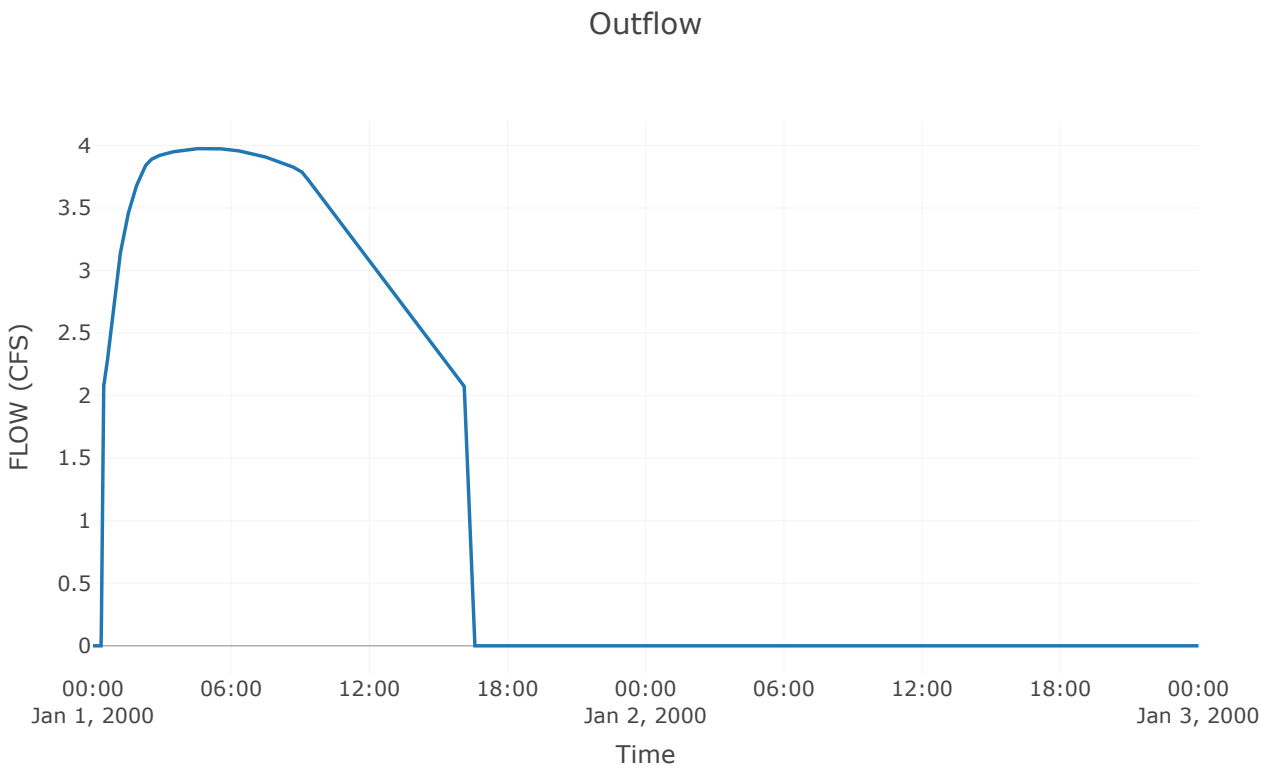

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

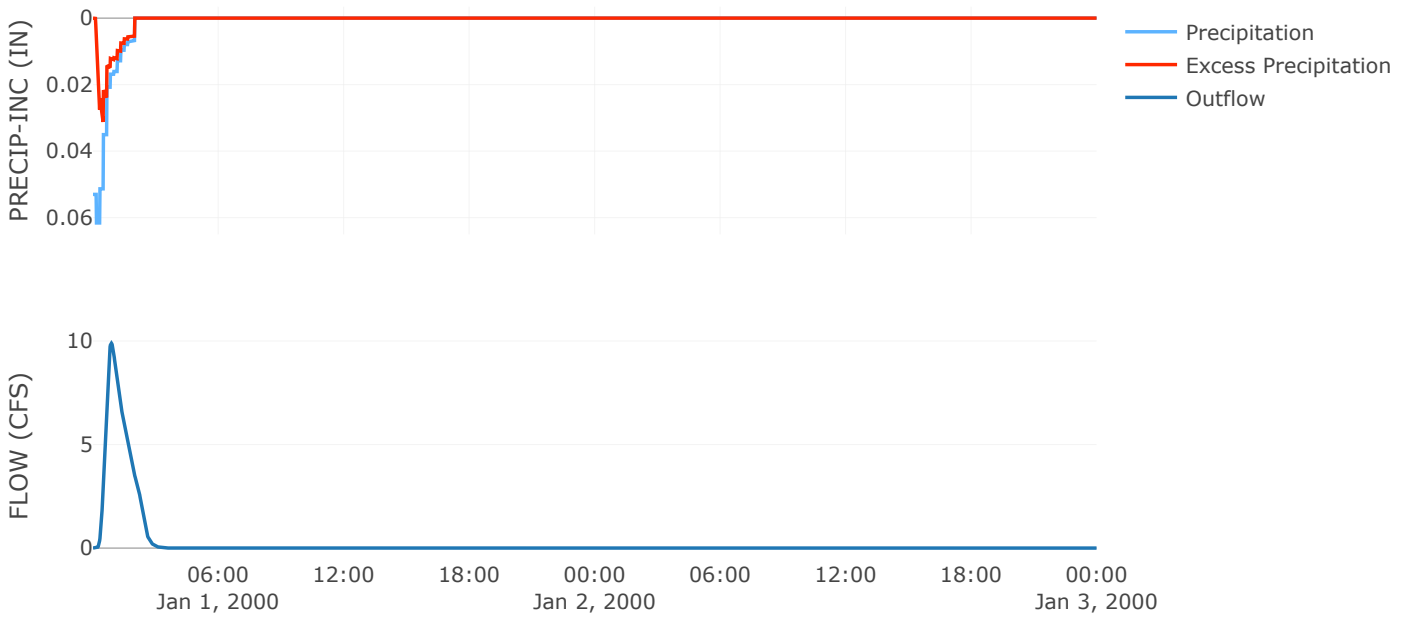
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

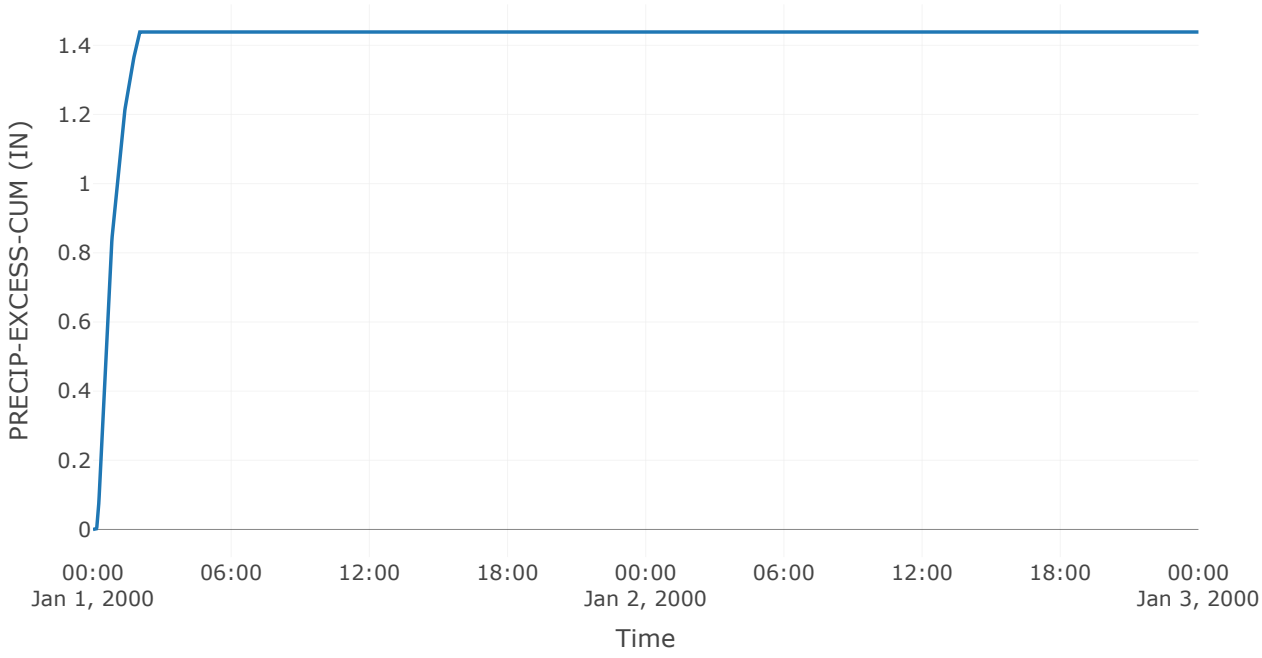
Transform: Scs	
Lag	21
Unitgraph Type	Standard

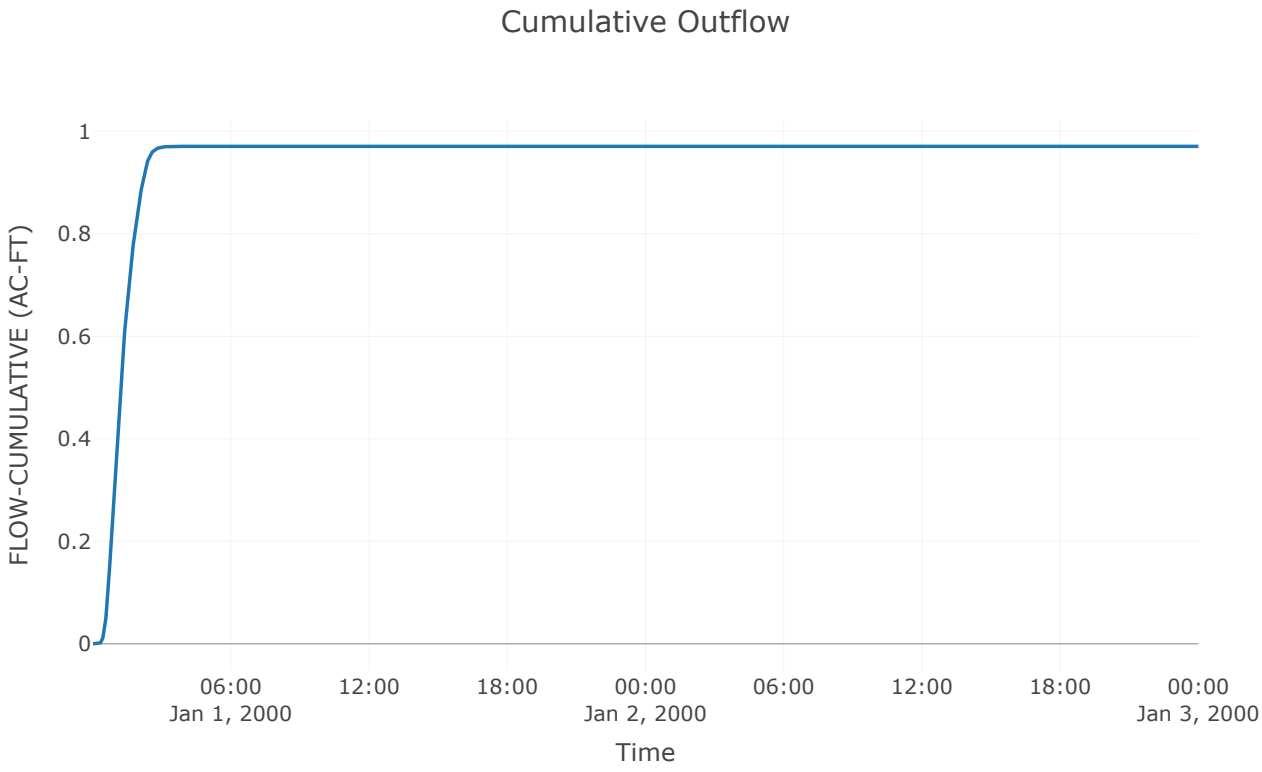
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

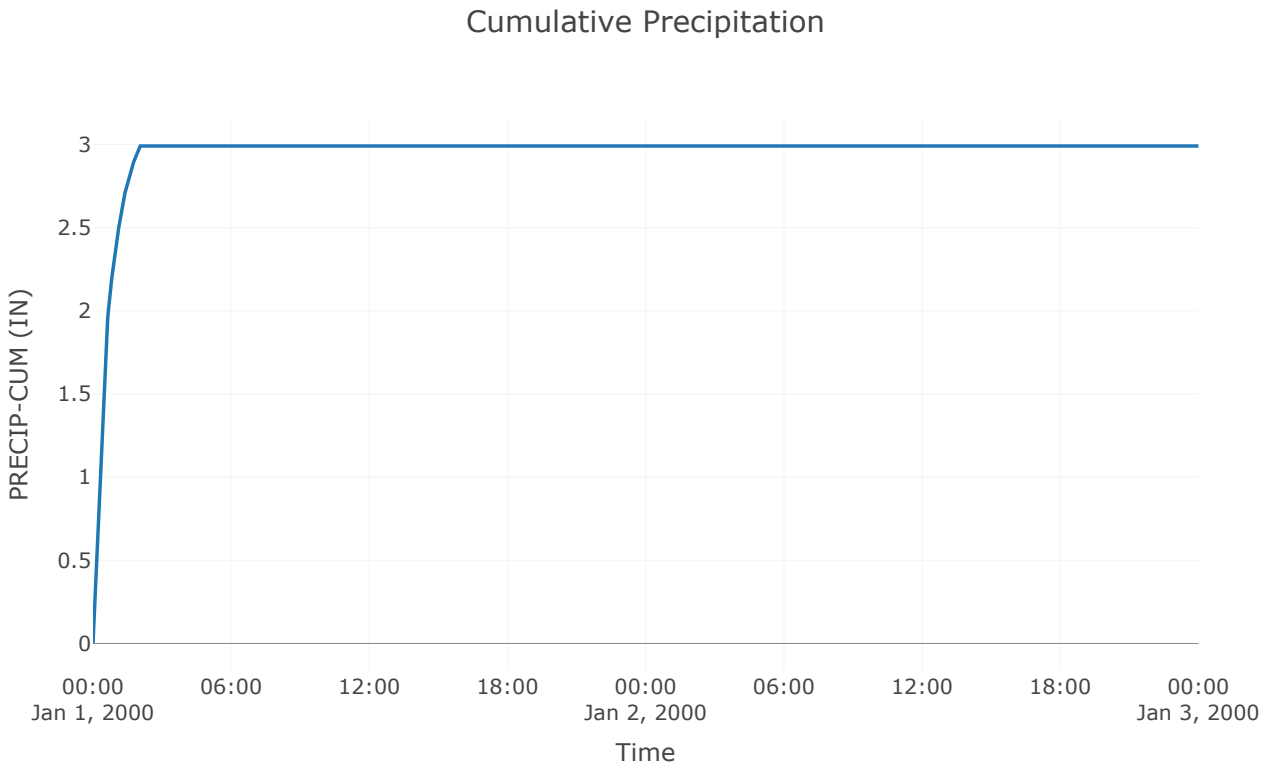
Precipitation and Outflow

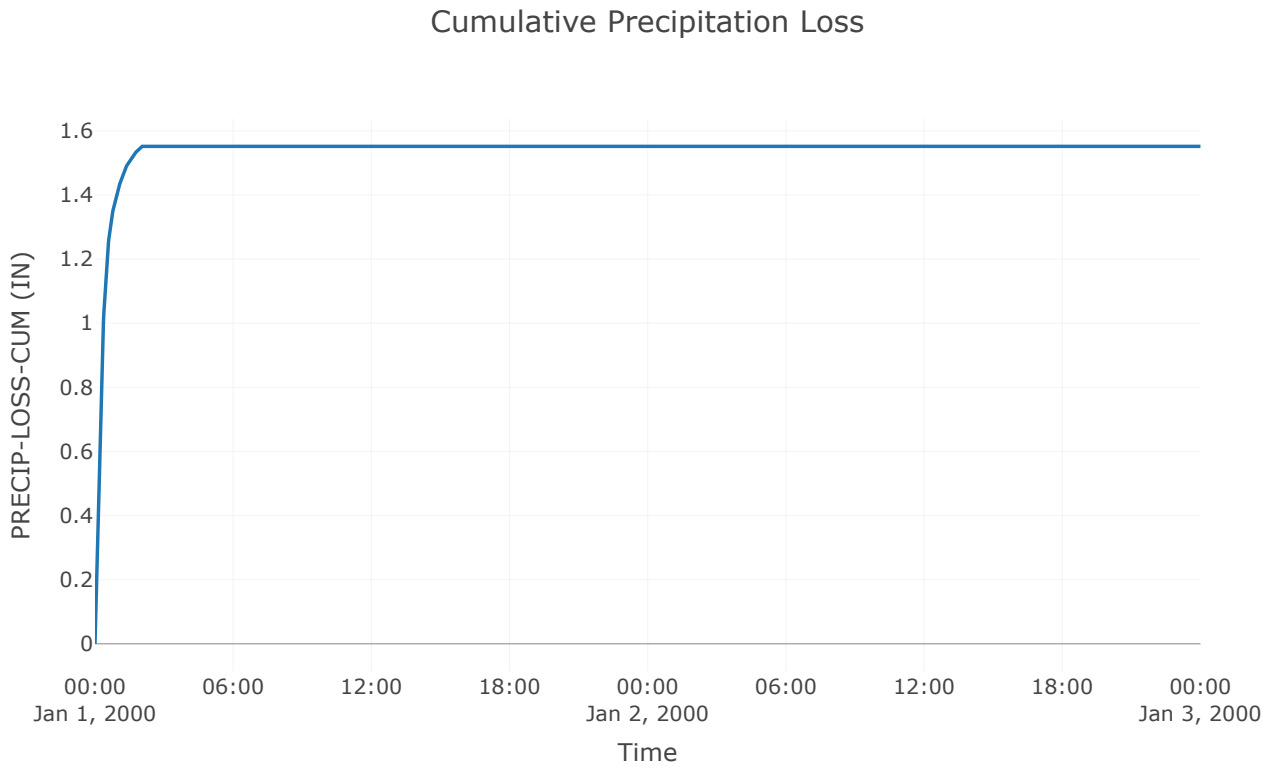


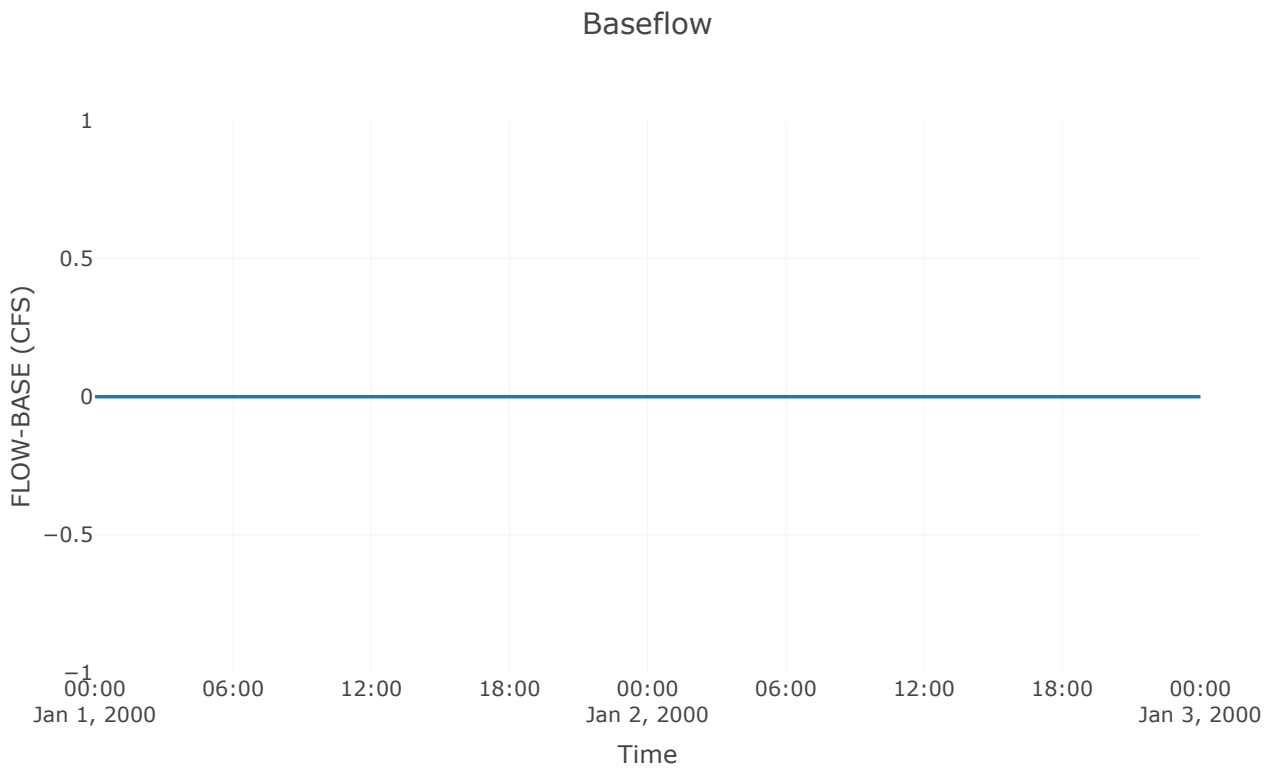
Cumulative Excess Precipitation

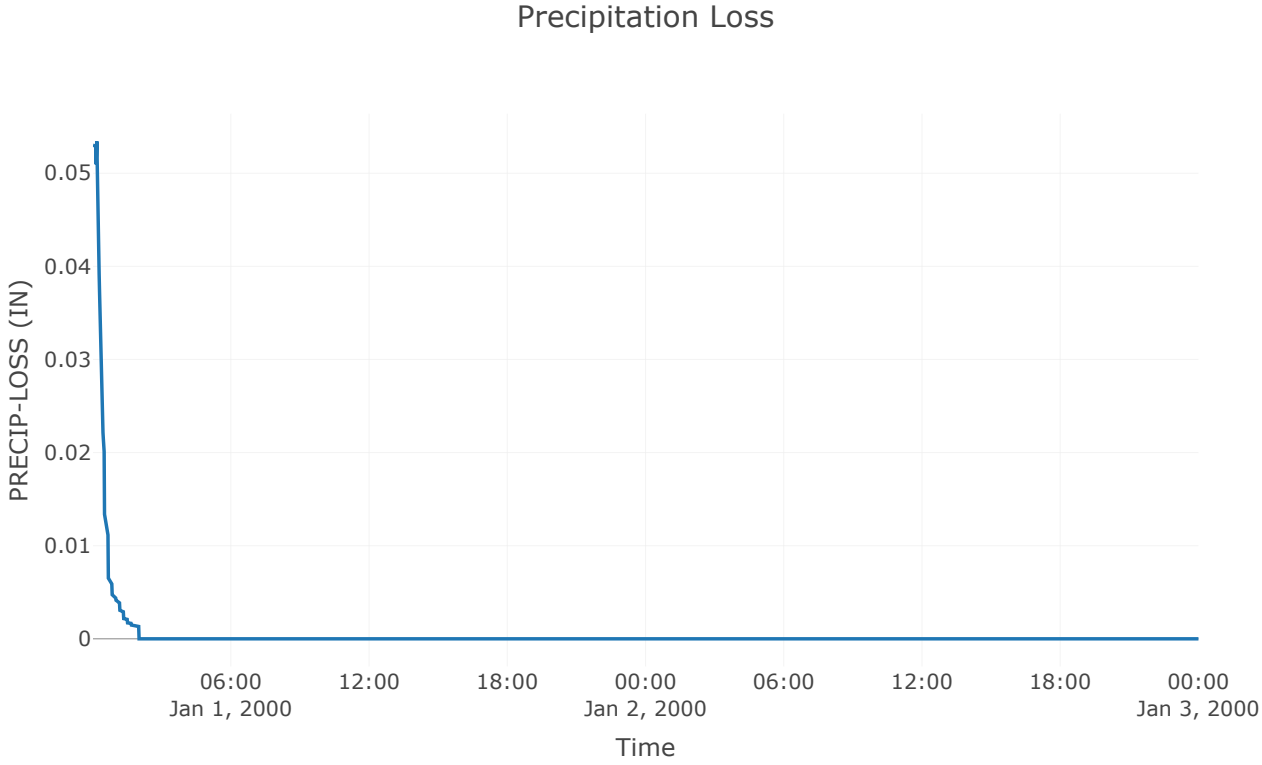


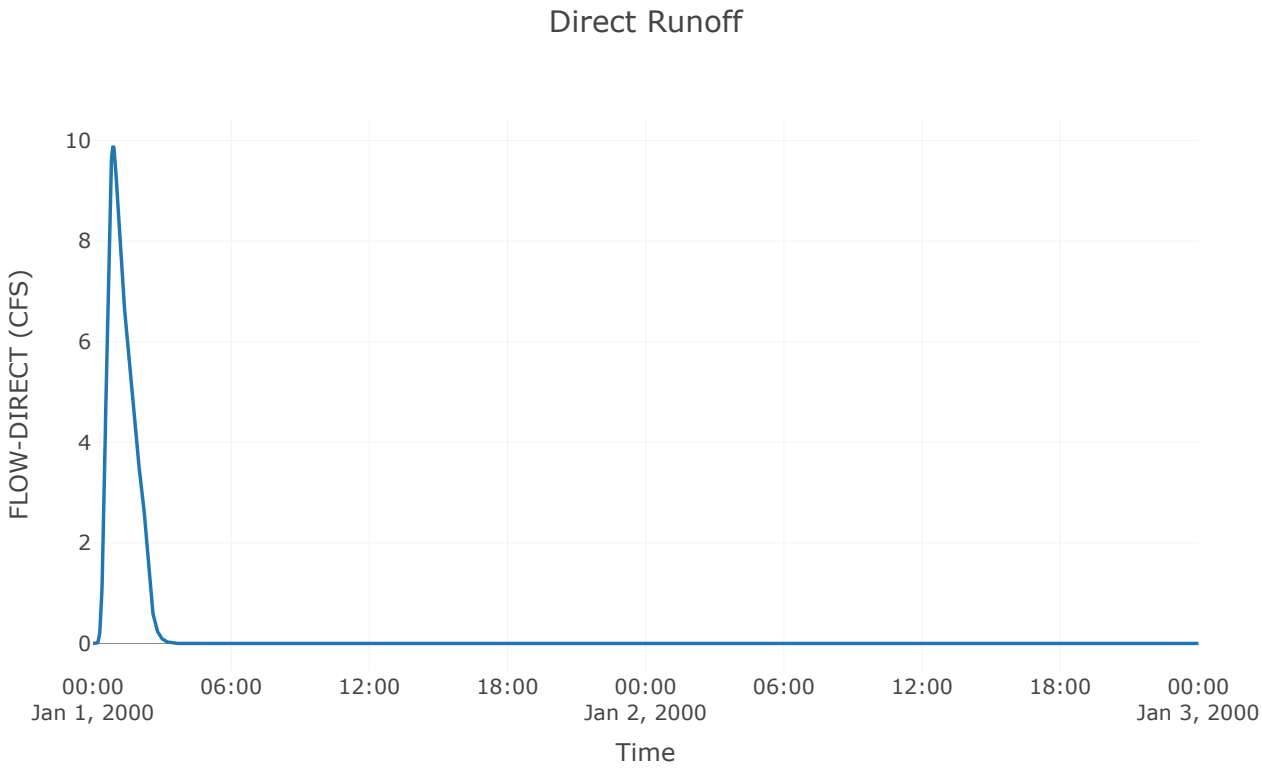

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

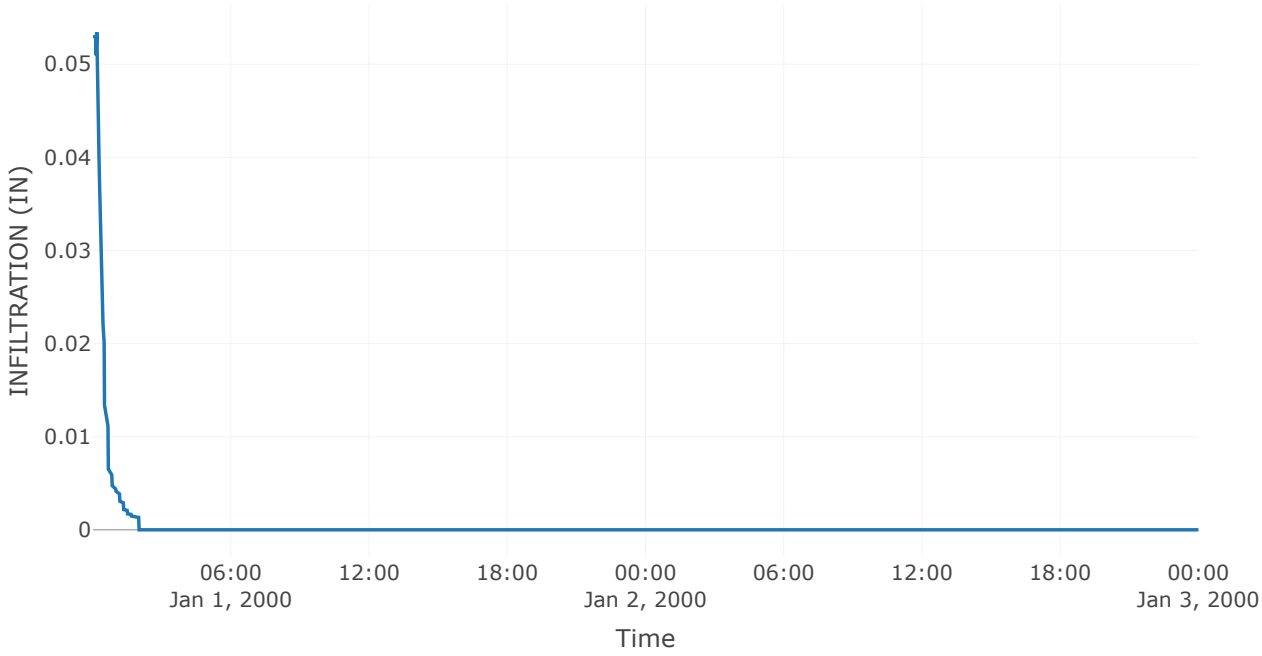

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

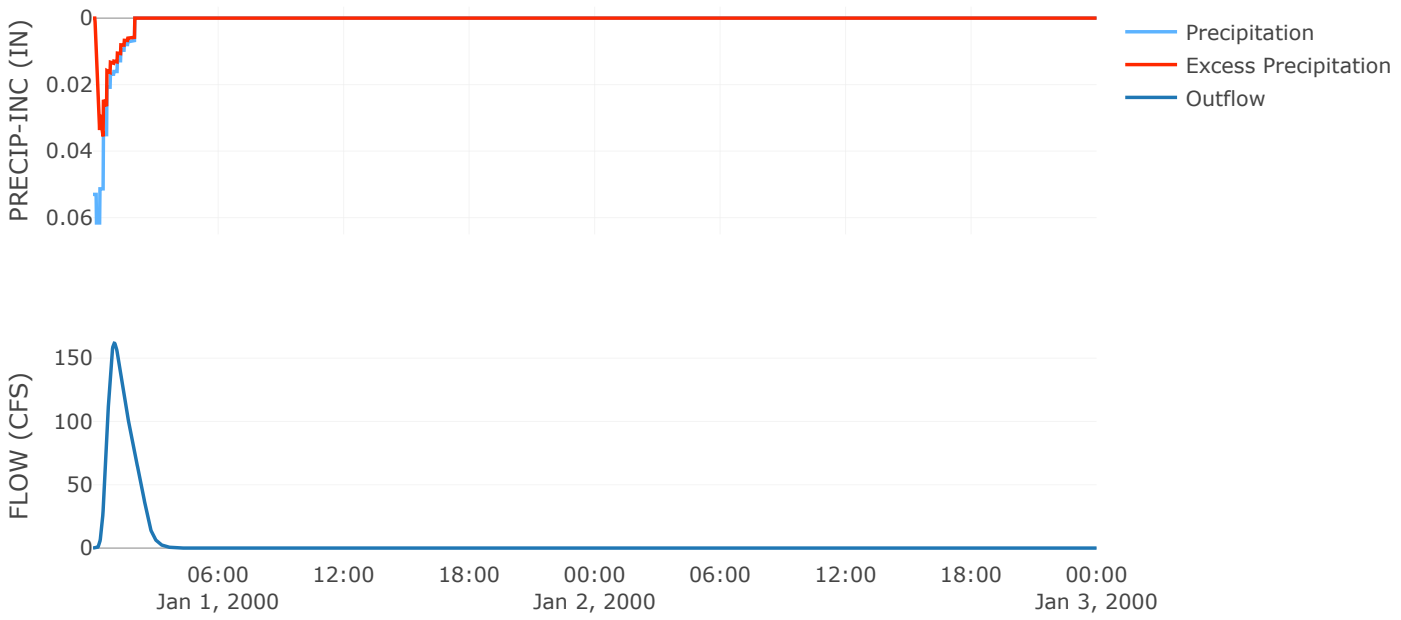
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

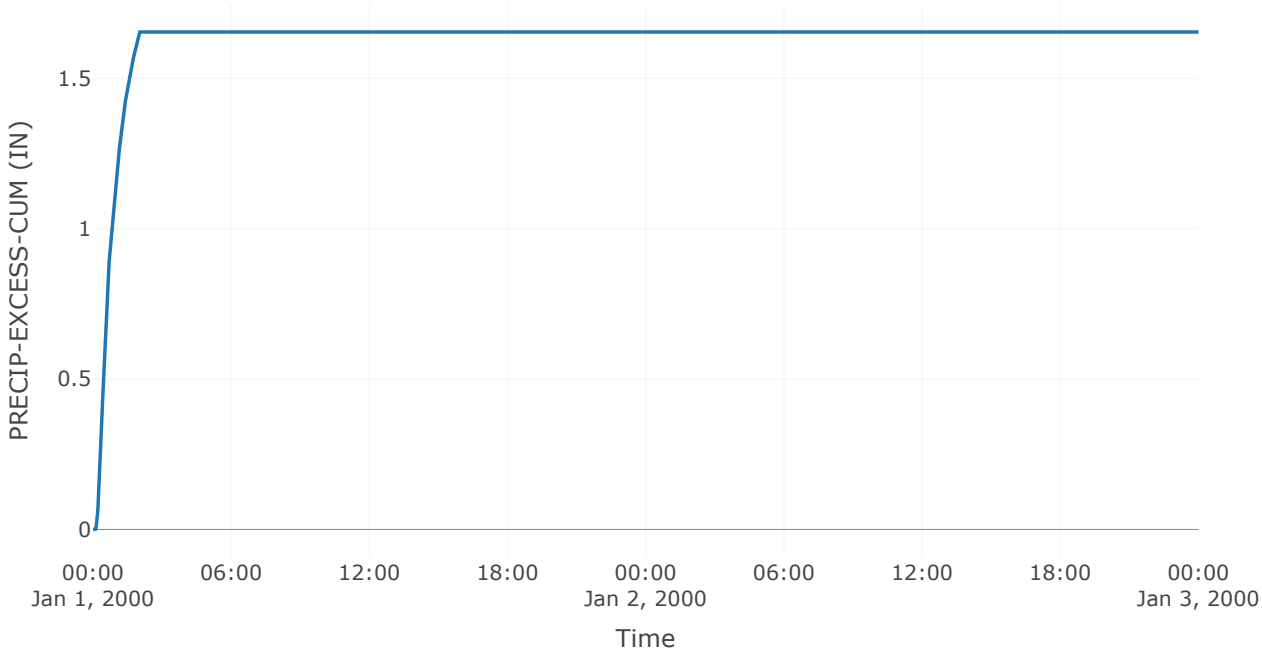
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

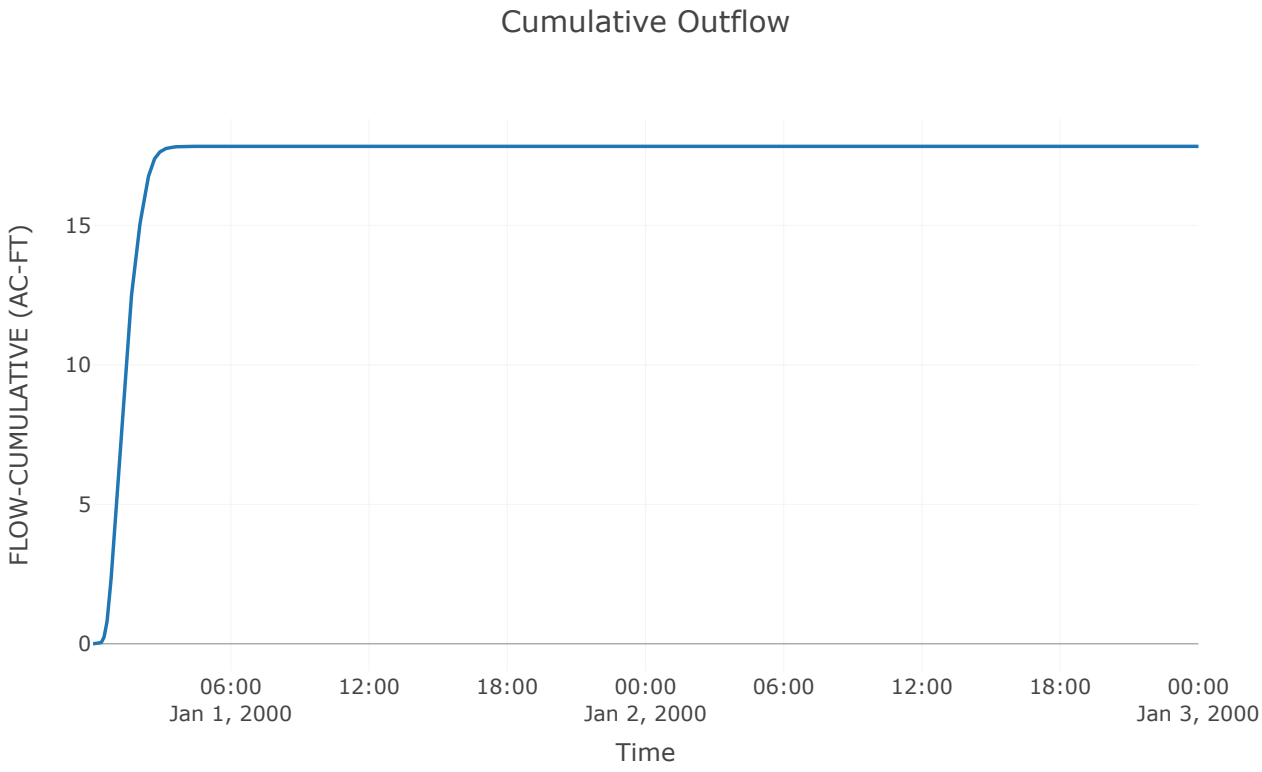
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

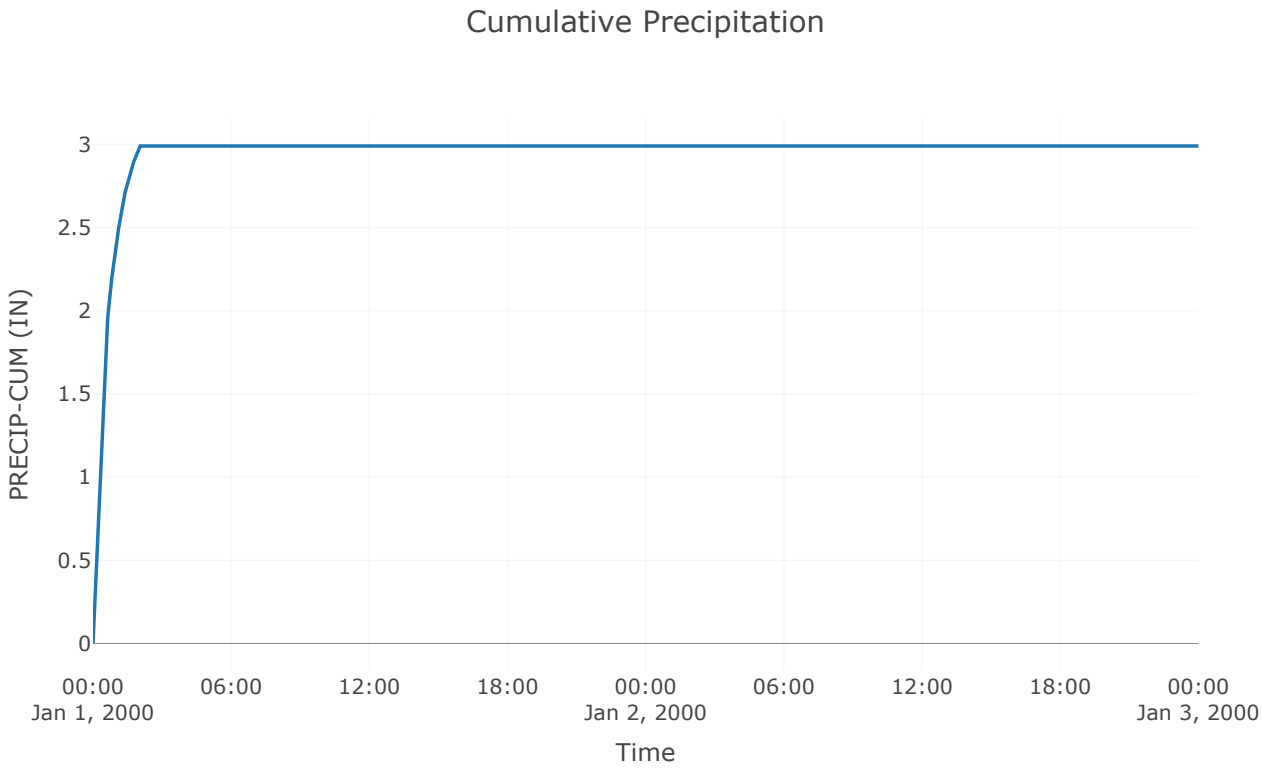
Precipitation and Outflow

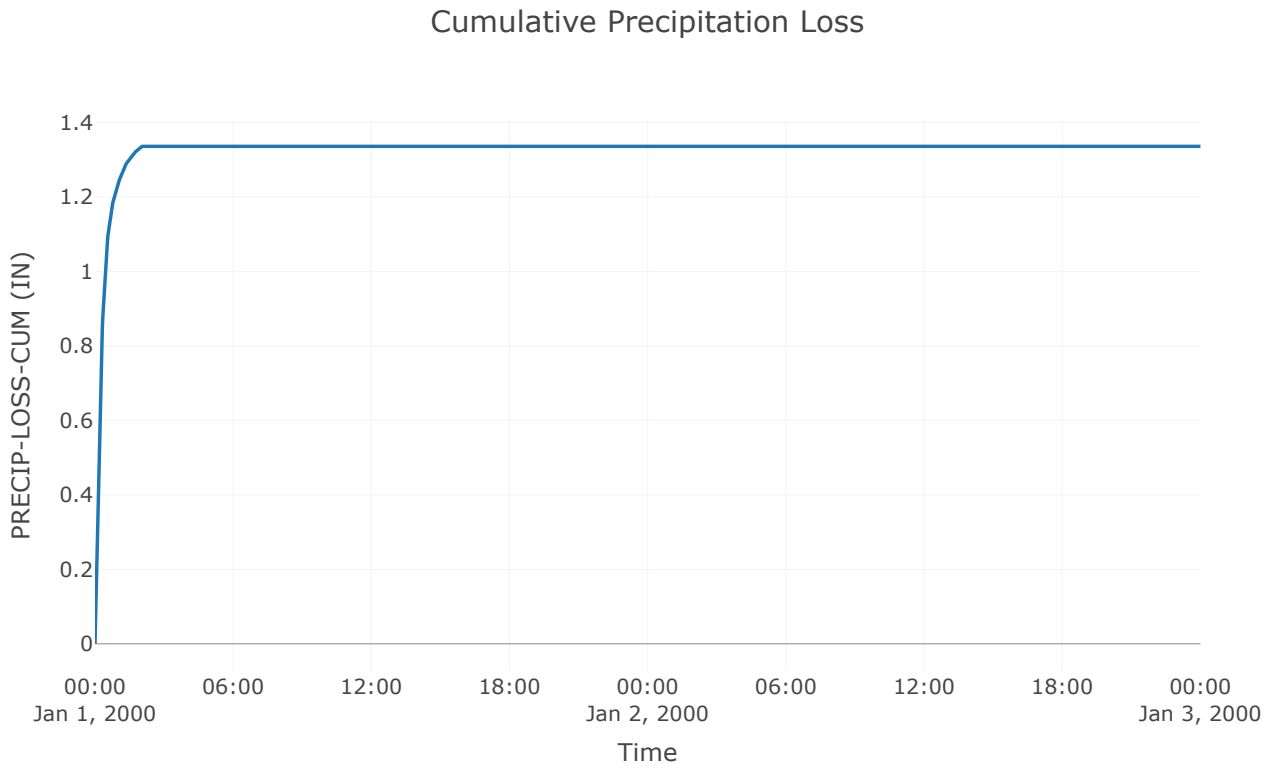


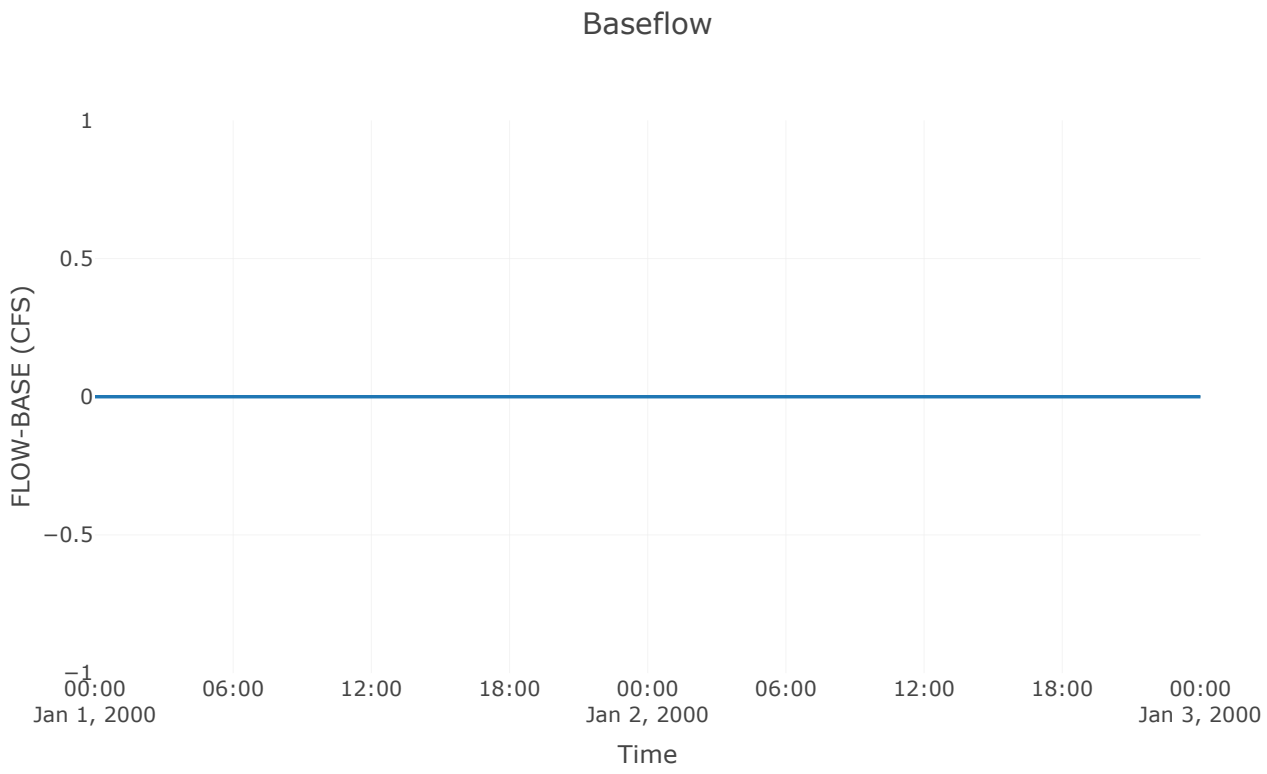
Cumulative Excess Precipitation



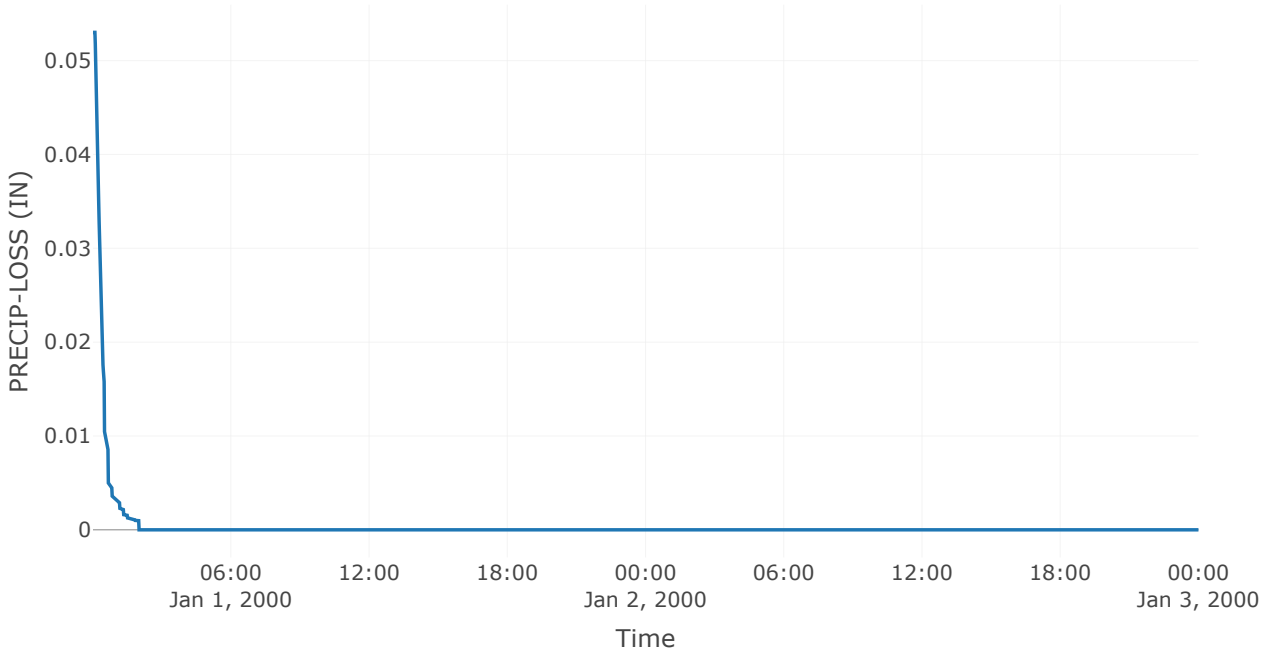

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

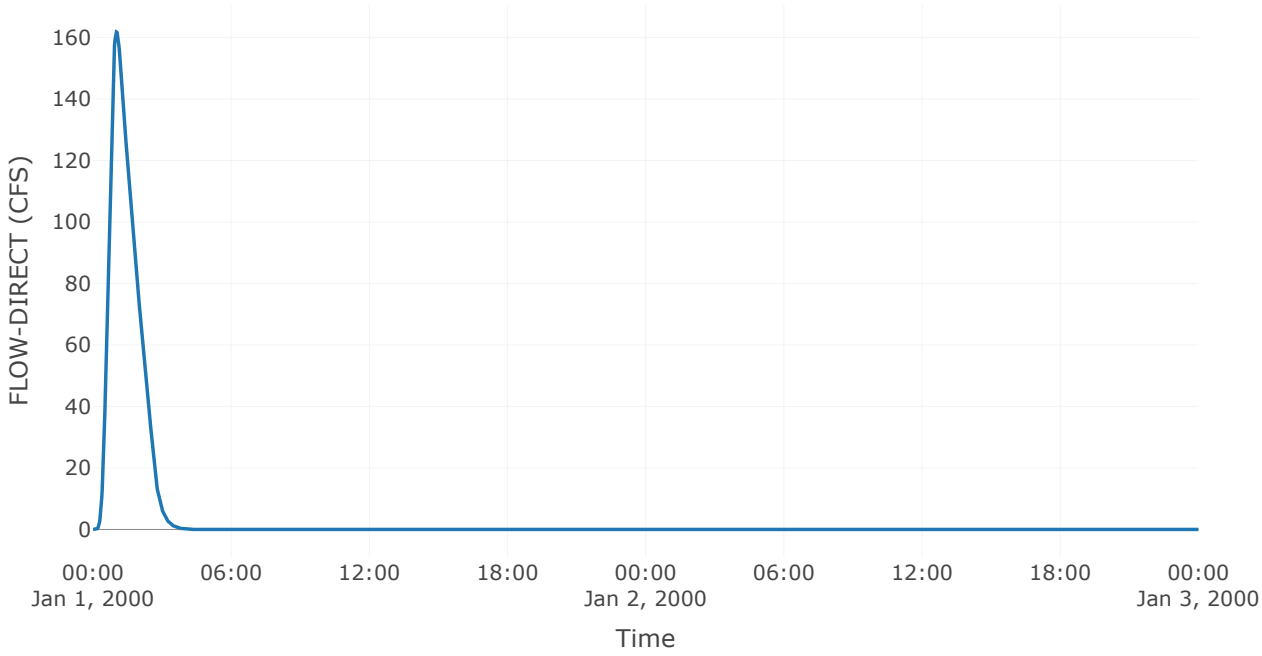

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

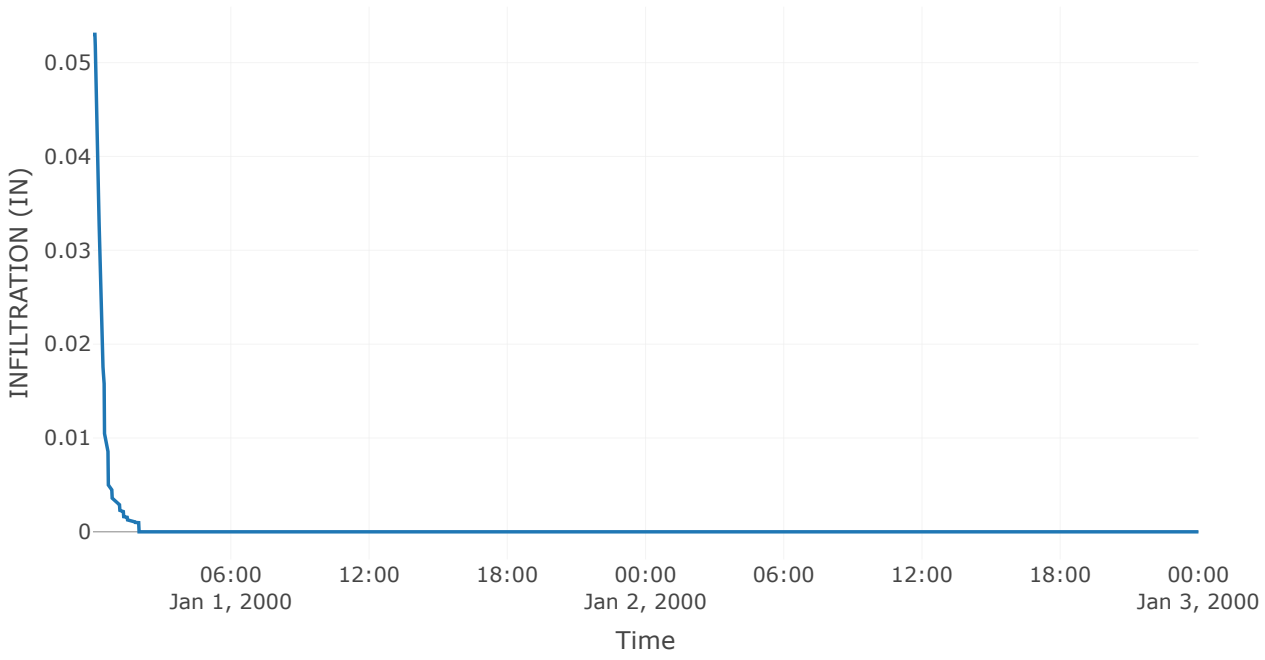

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



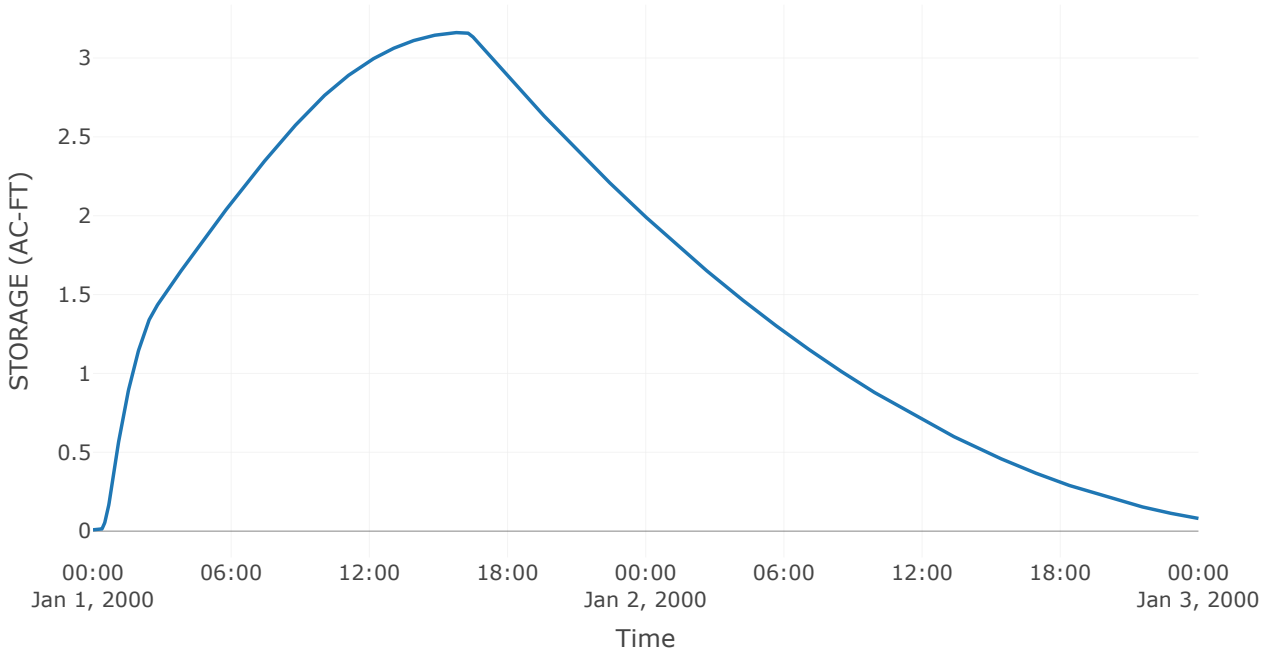

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

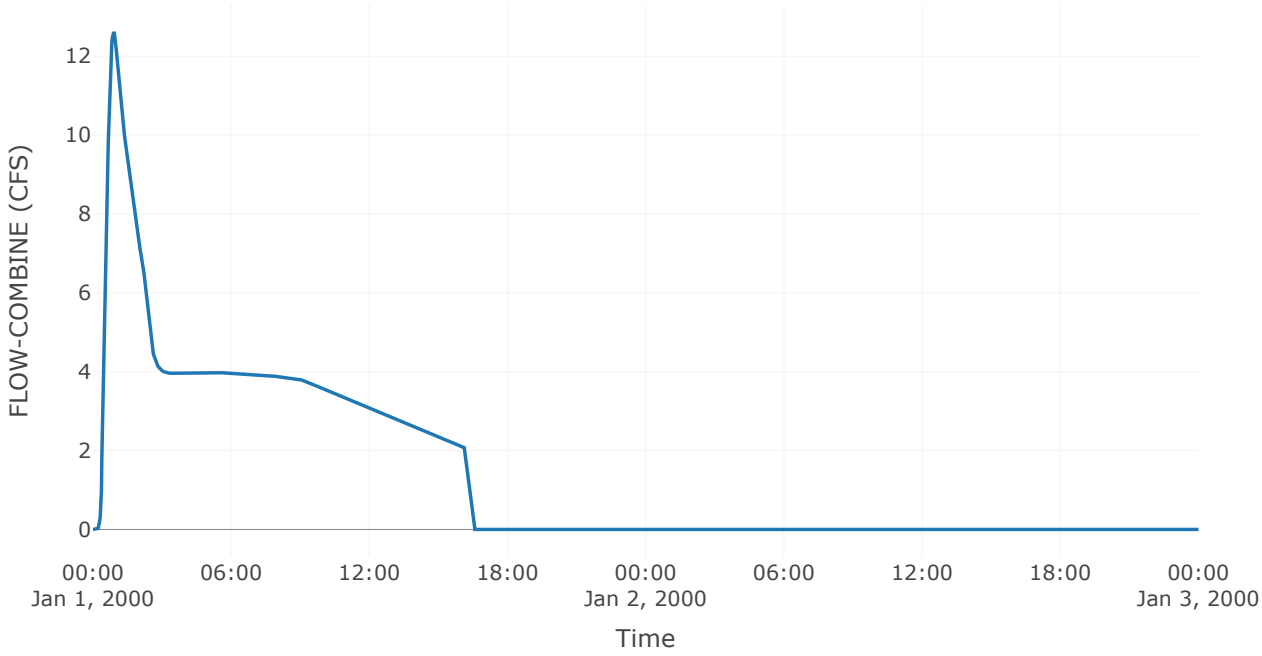
Downstream : Off - Site Tributary Area

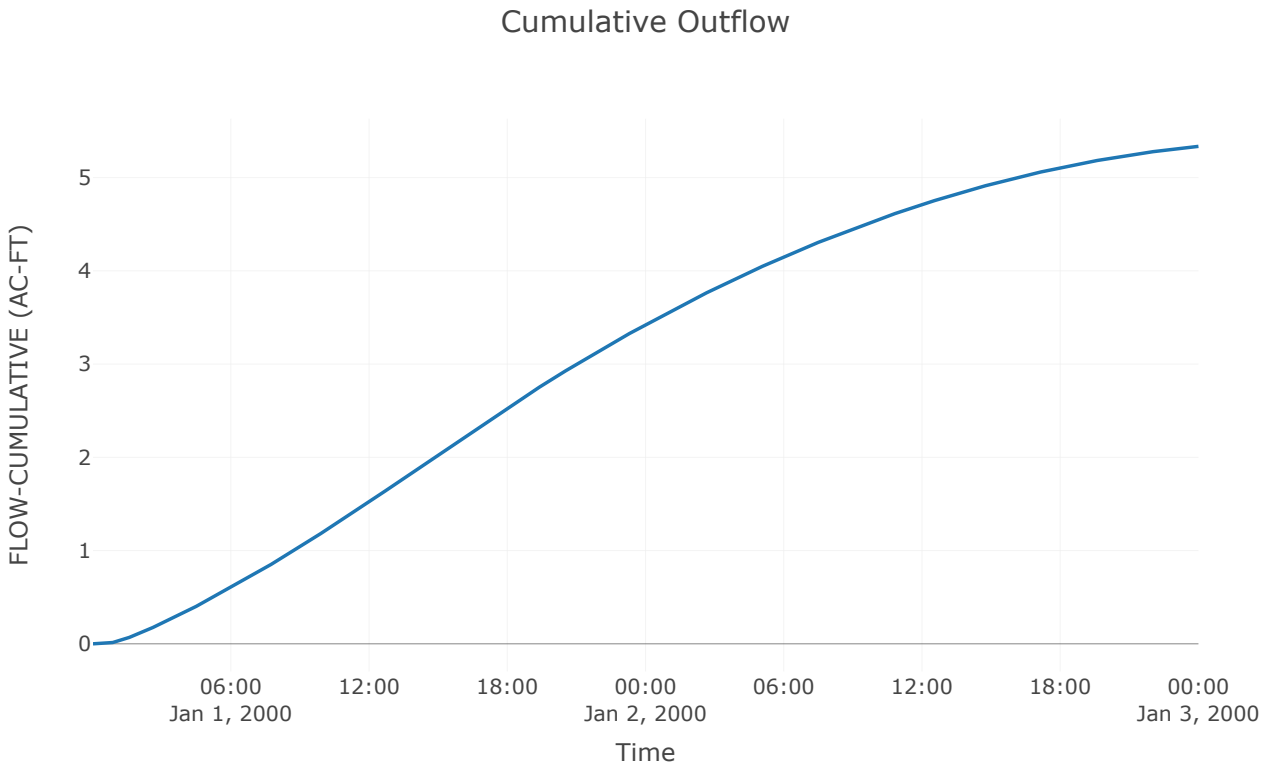
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

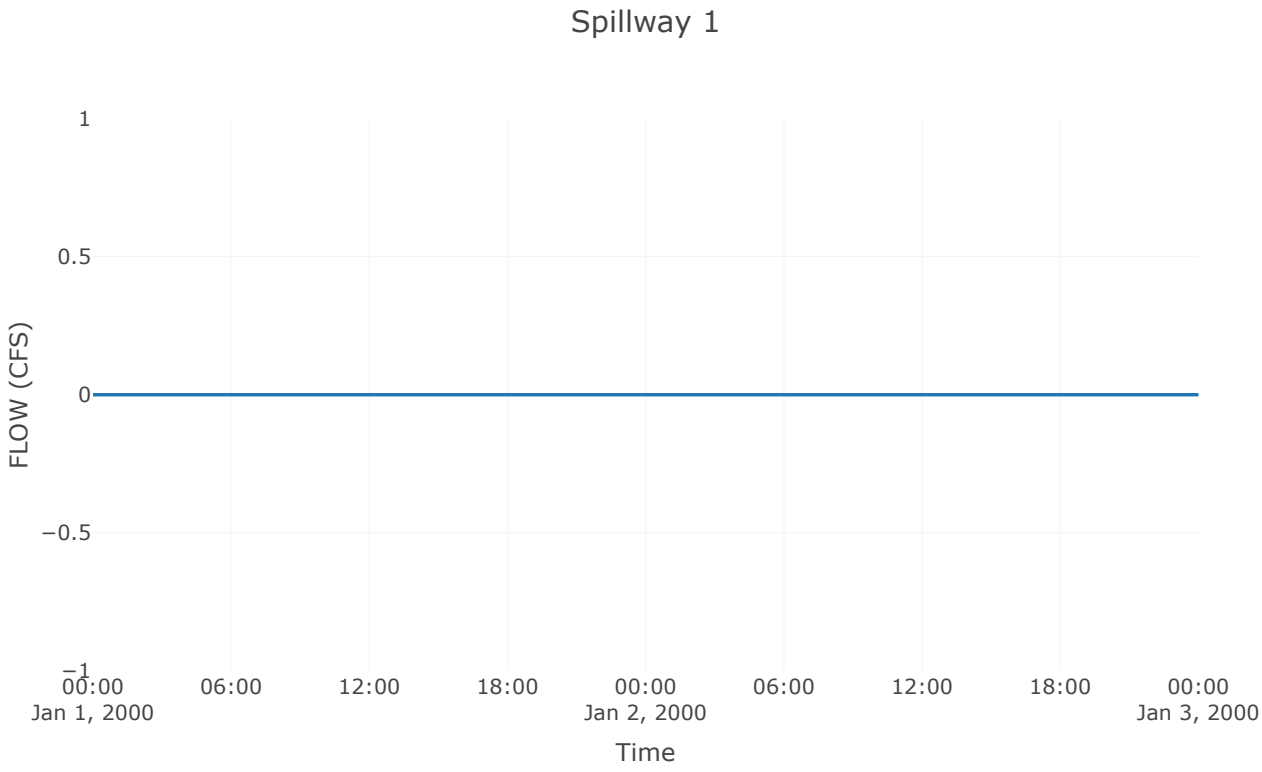
Storage

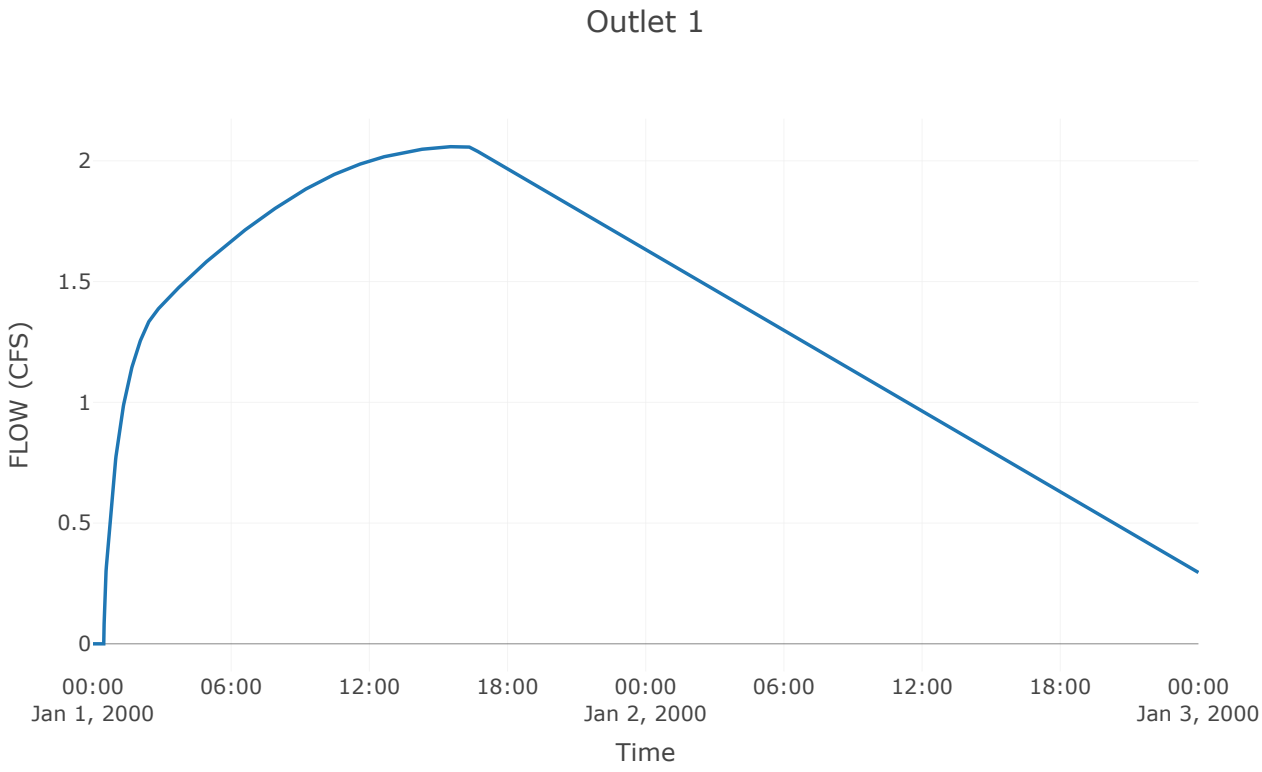


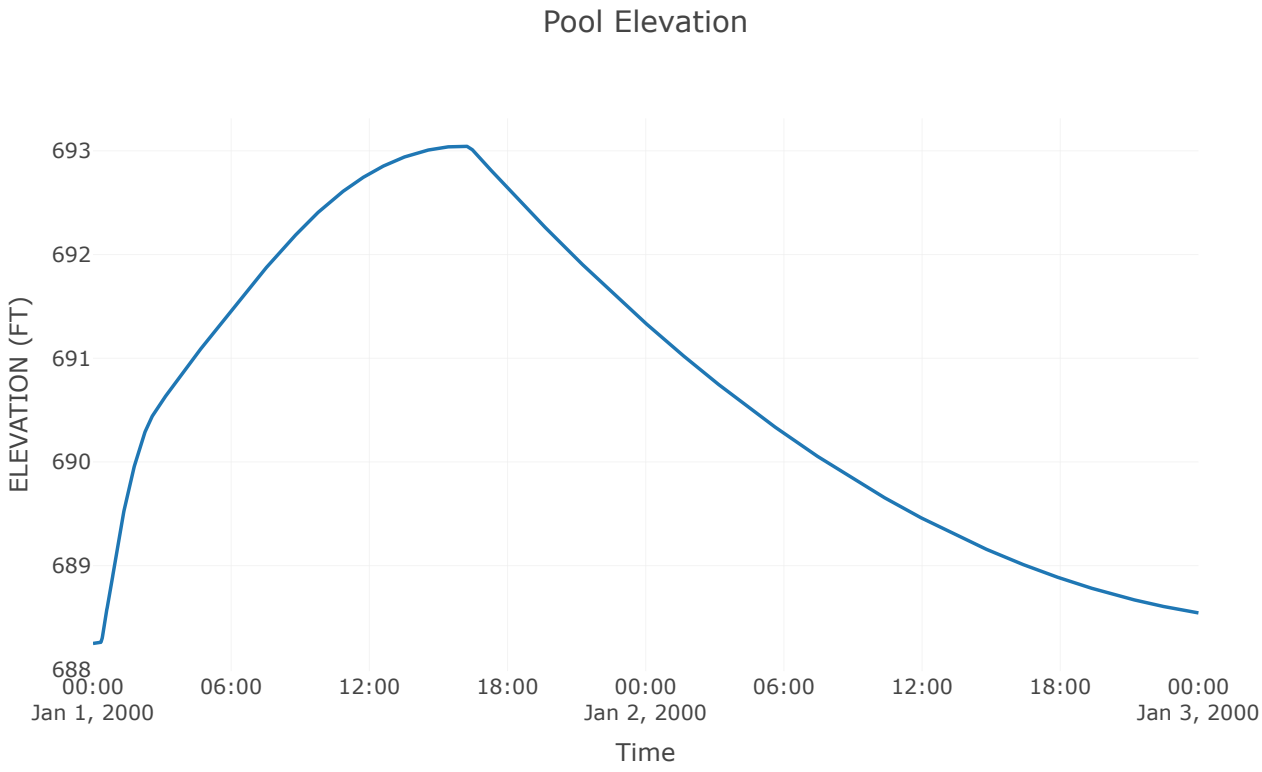
Combined Inflow

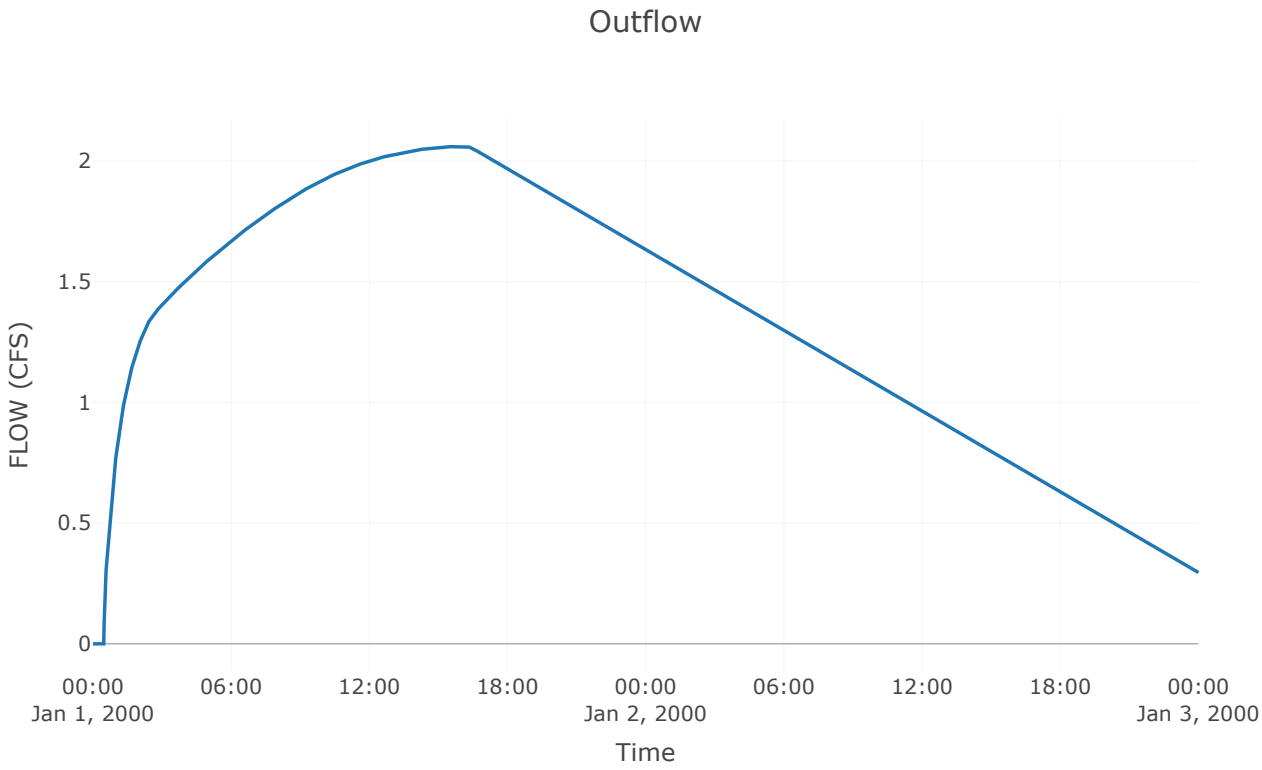



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

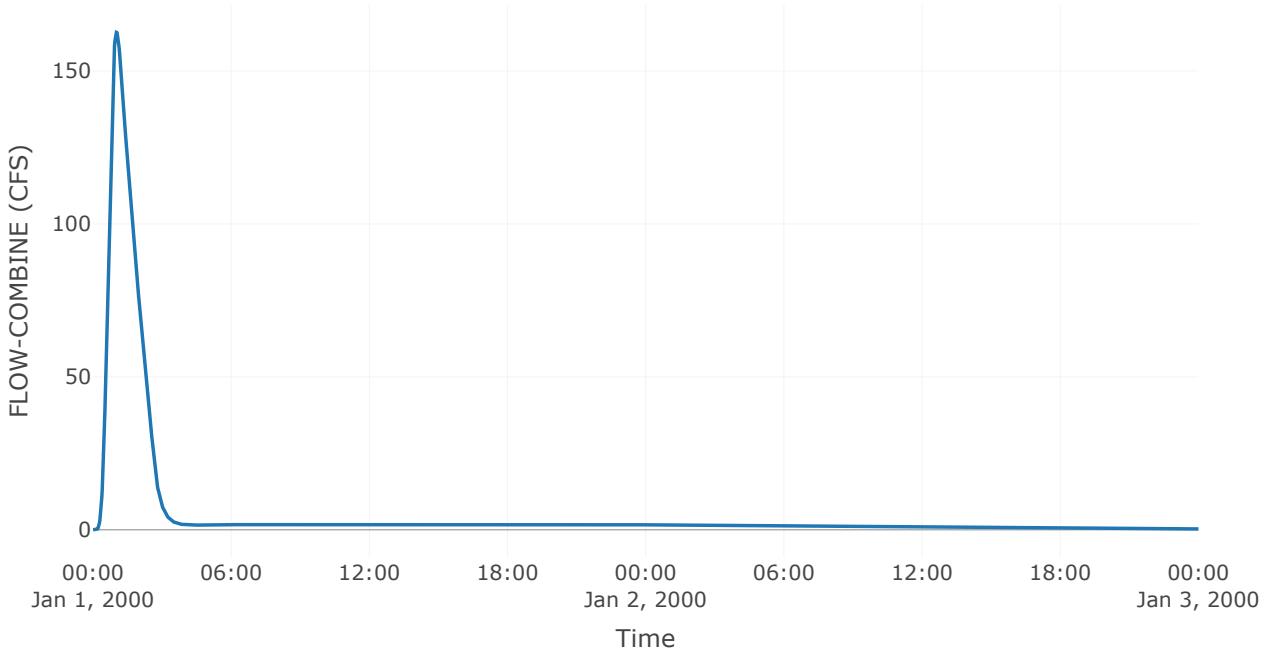

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

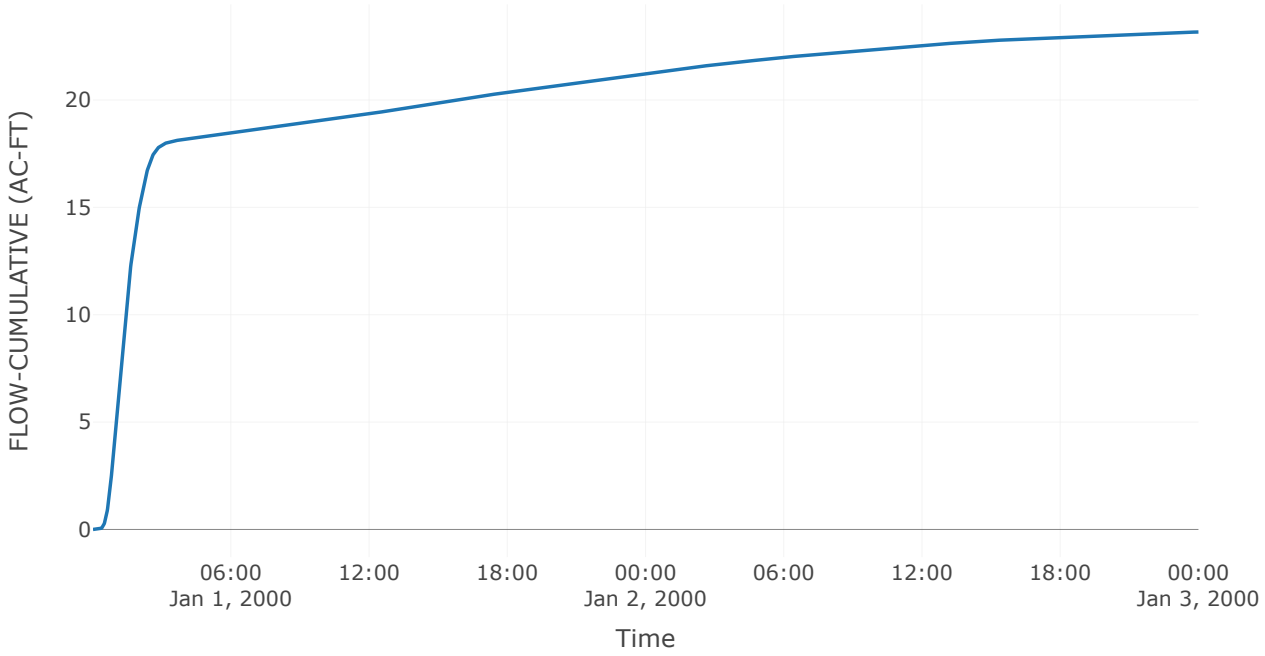
Downstream : Storage East of Wolf Road

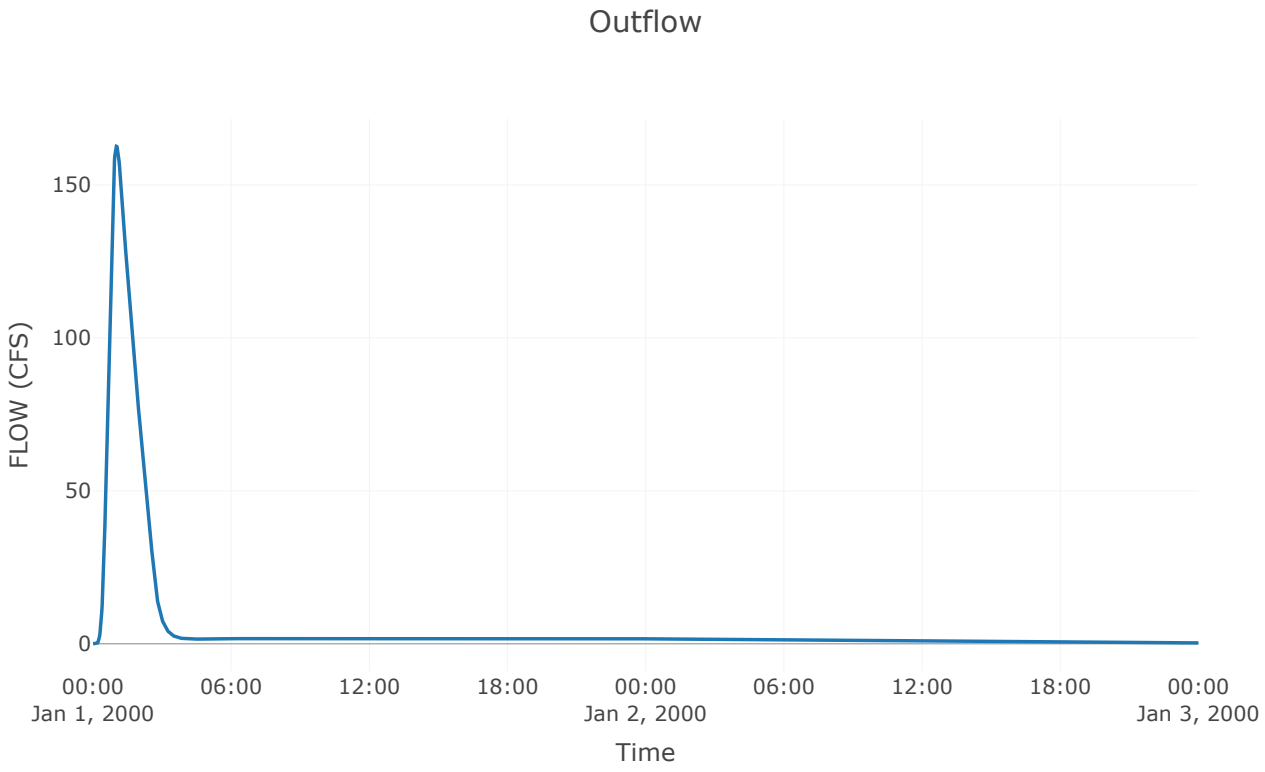
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61

Combined Inflow



Cumulative Outflow



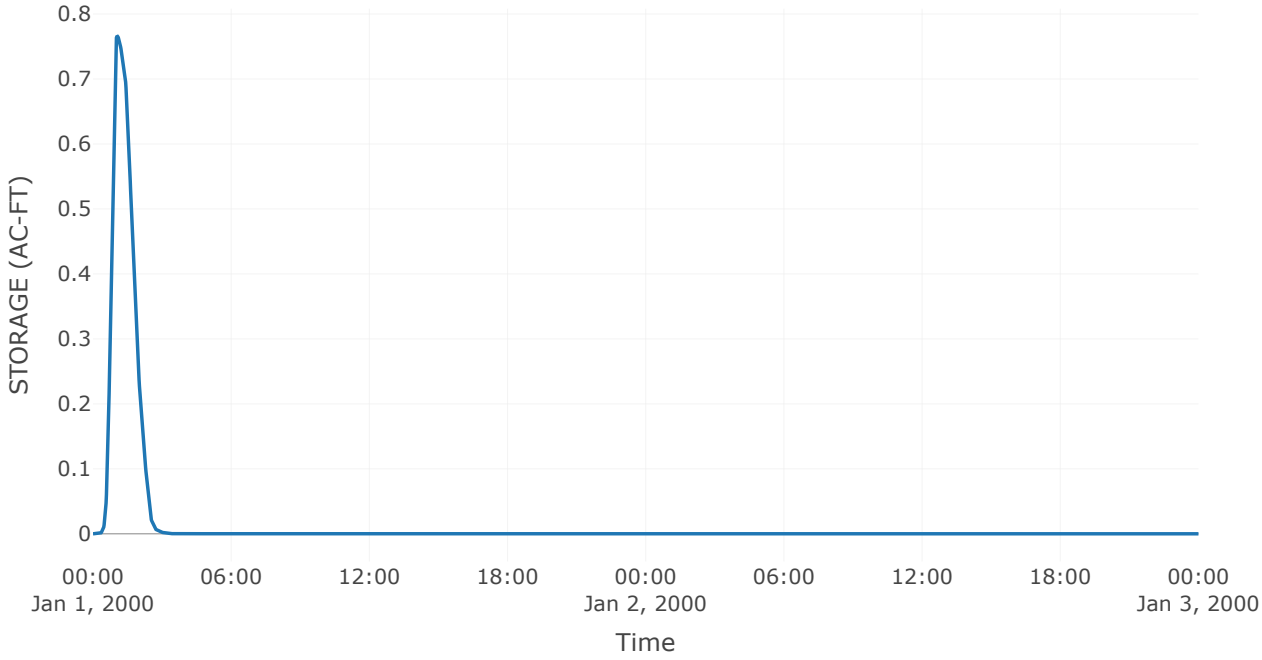

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

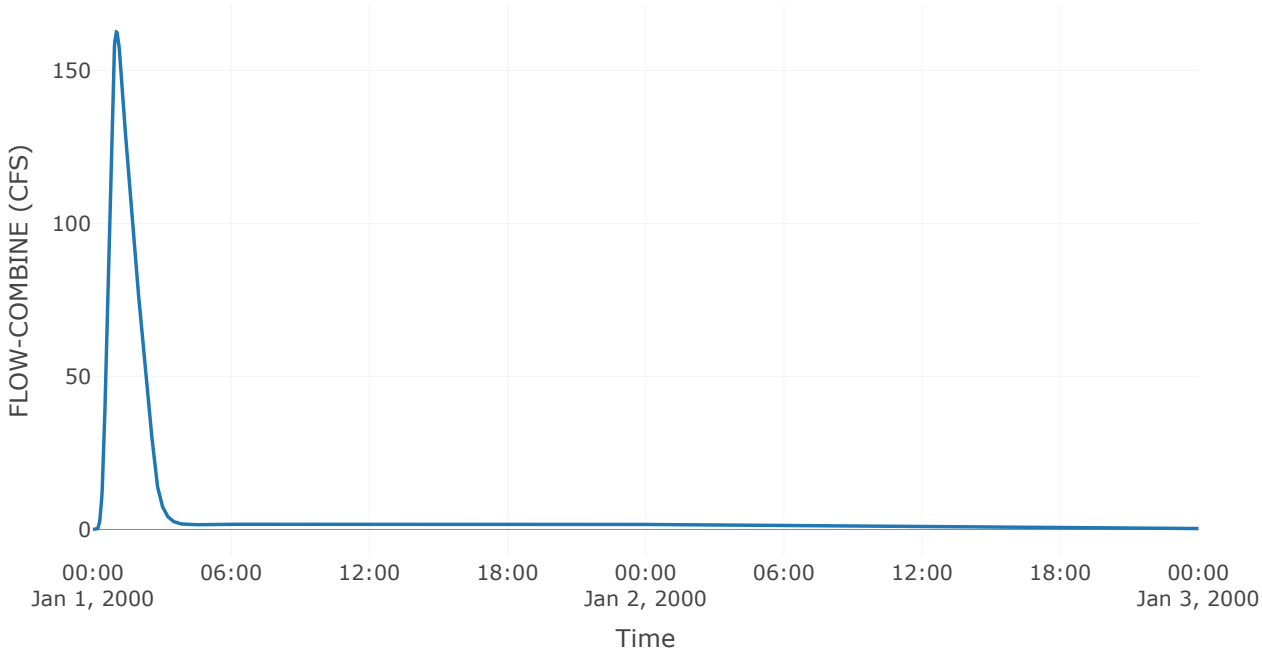
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

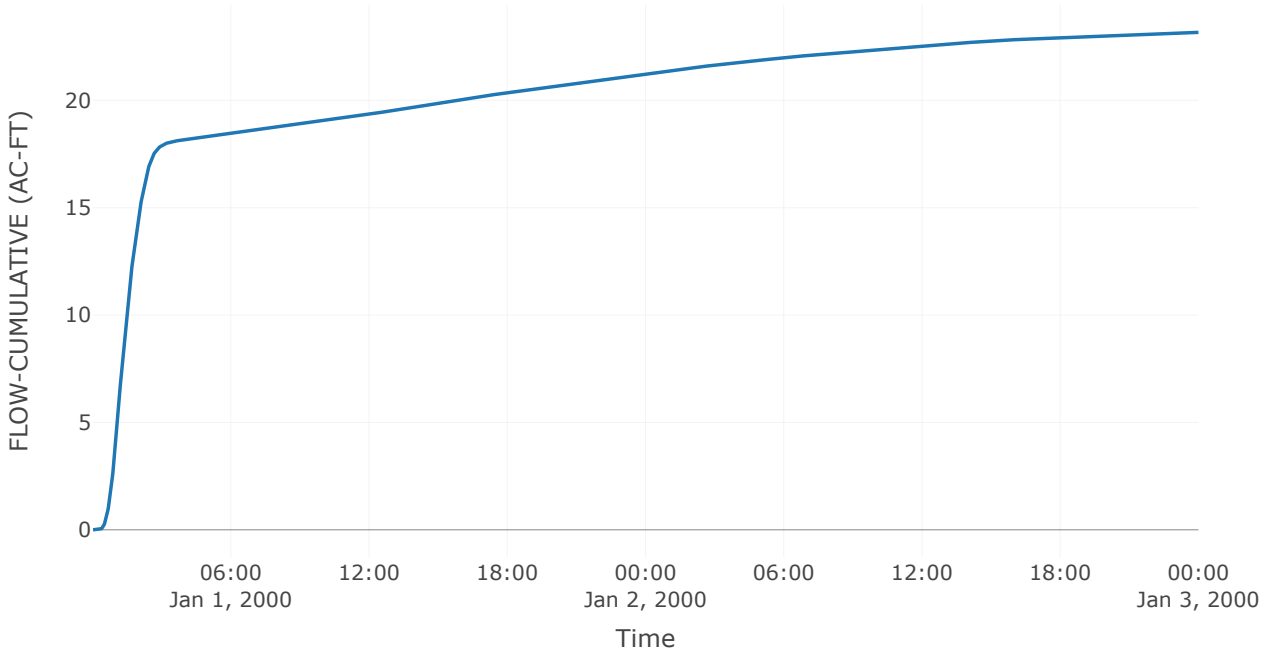
Storage



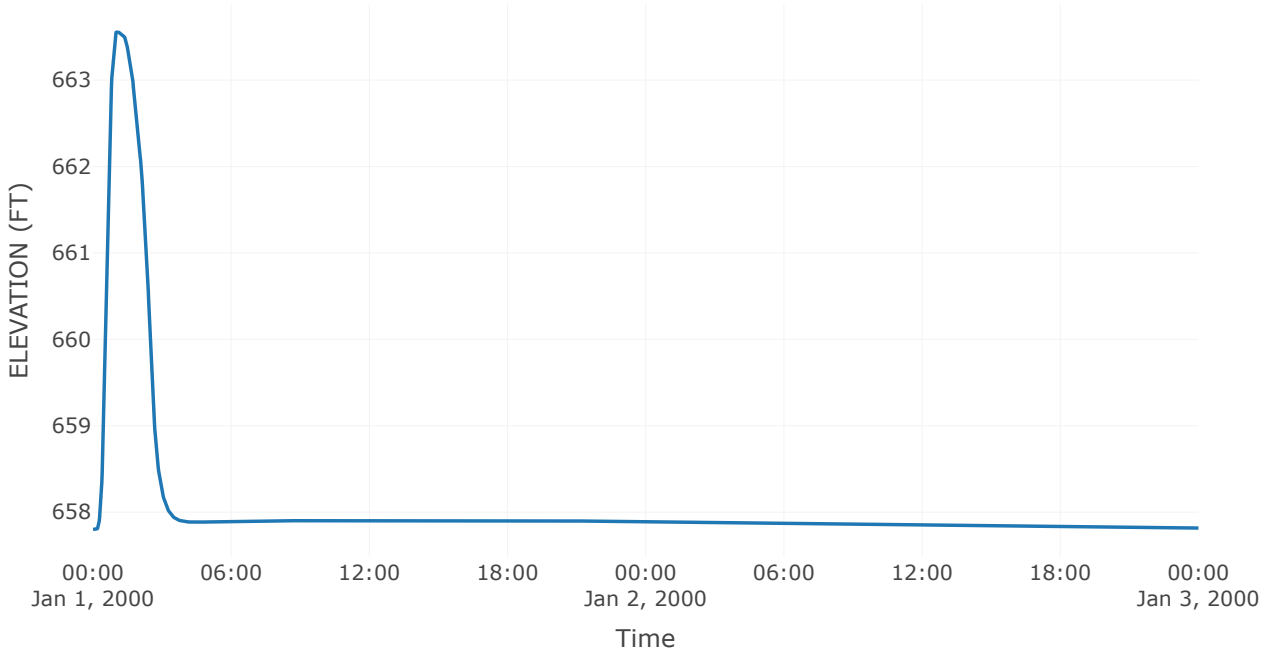
Combined Inflow

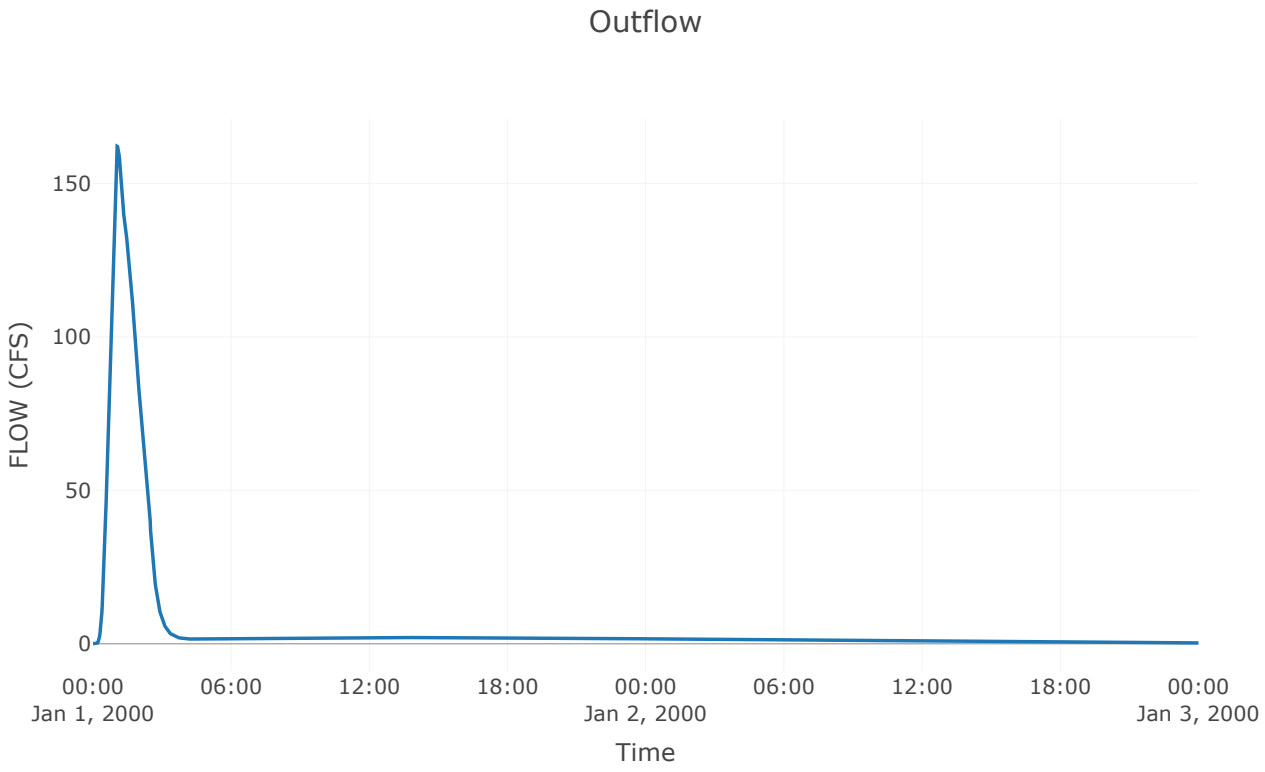


Cumulative Outflow



Pool Elevation



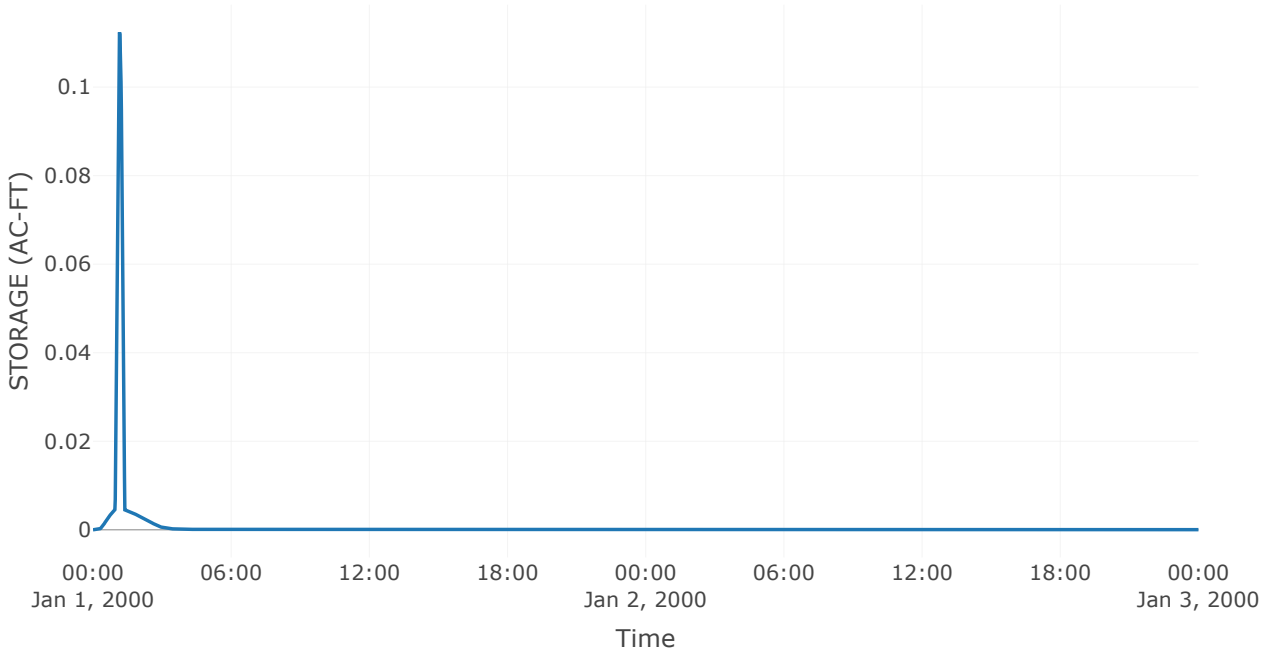

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

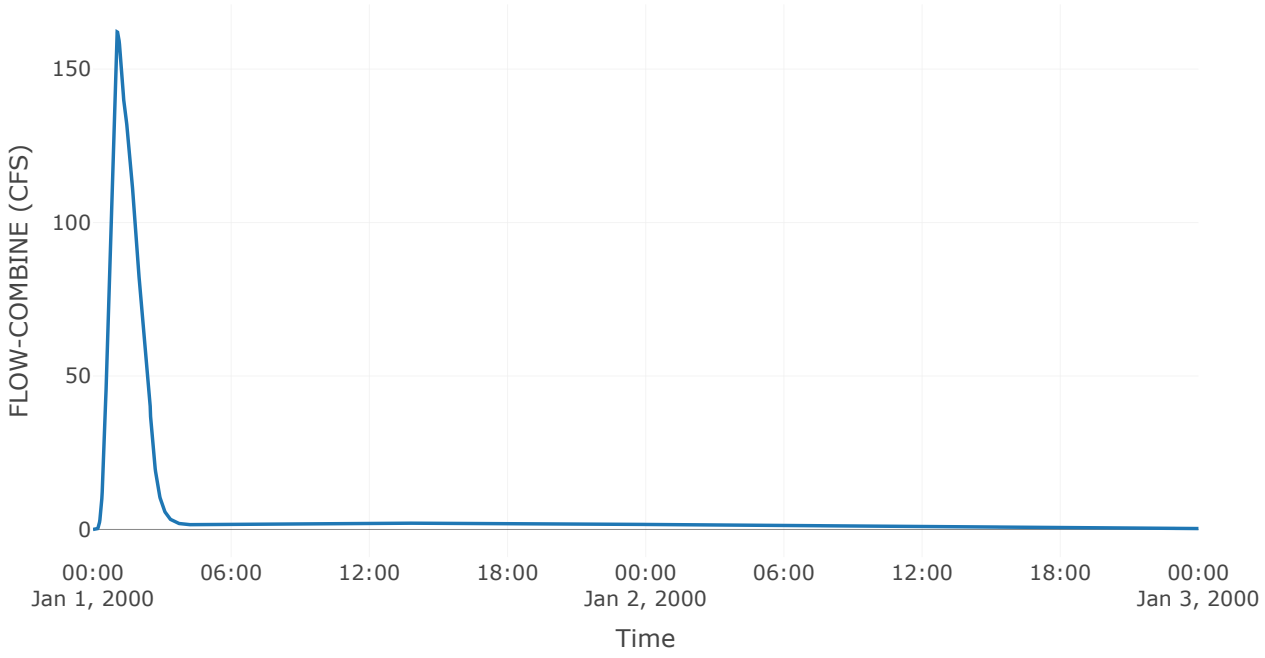
Downstream : Prop Storage West of Wolf Rd

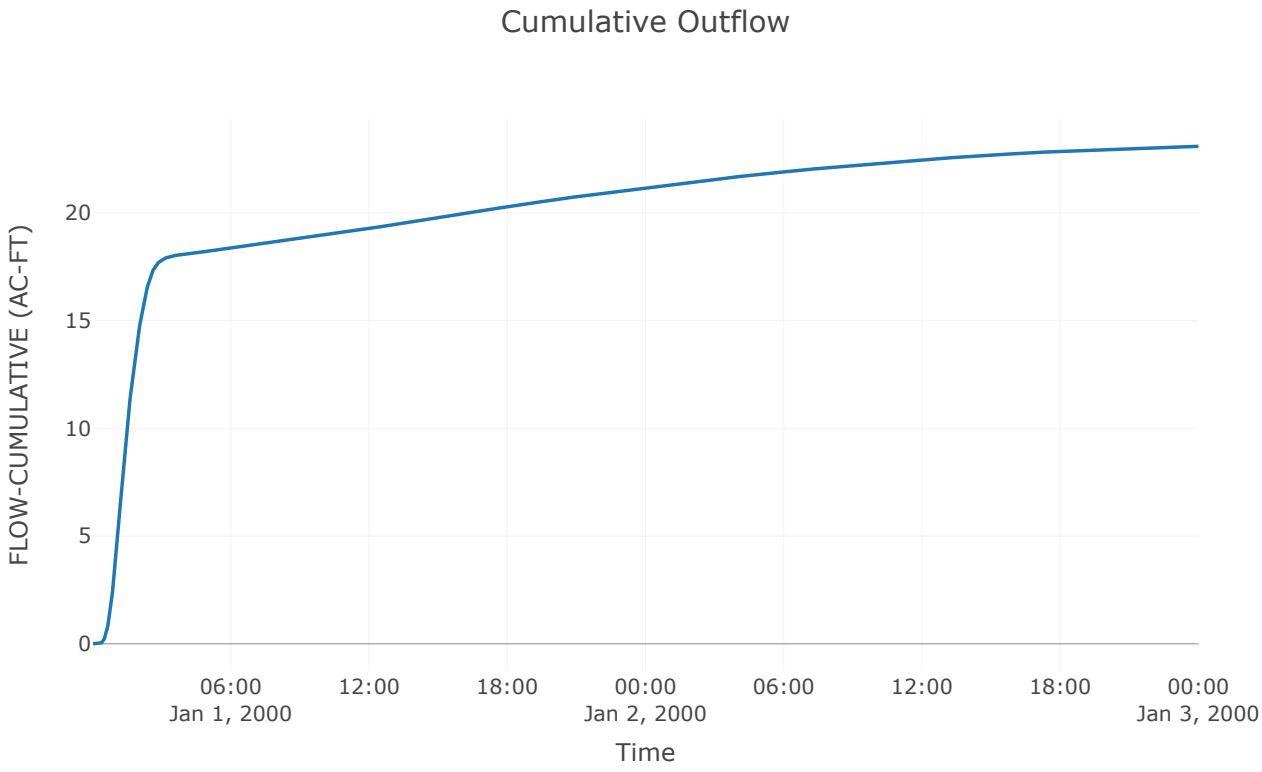
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.79
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.11
Peak Elevation (FT)	662.25
Discharge Volume (AC - FT)	23.09

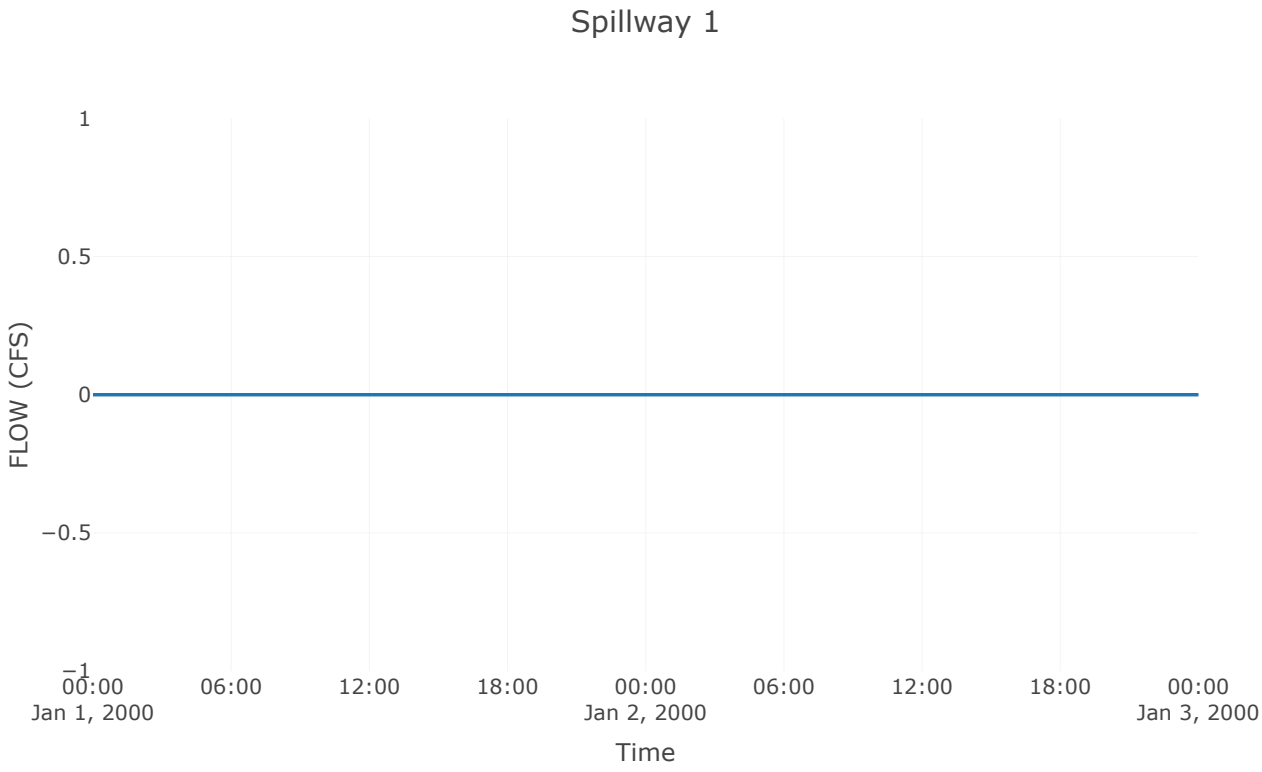
Storage



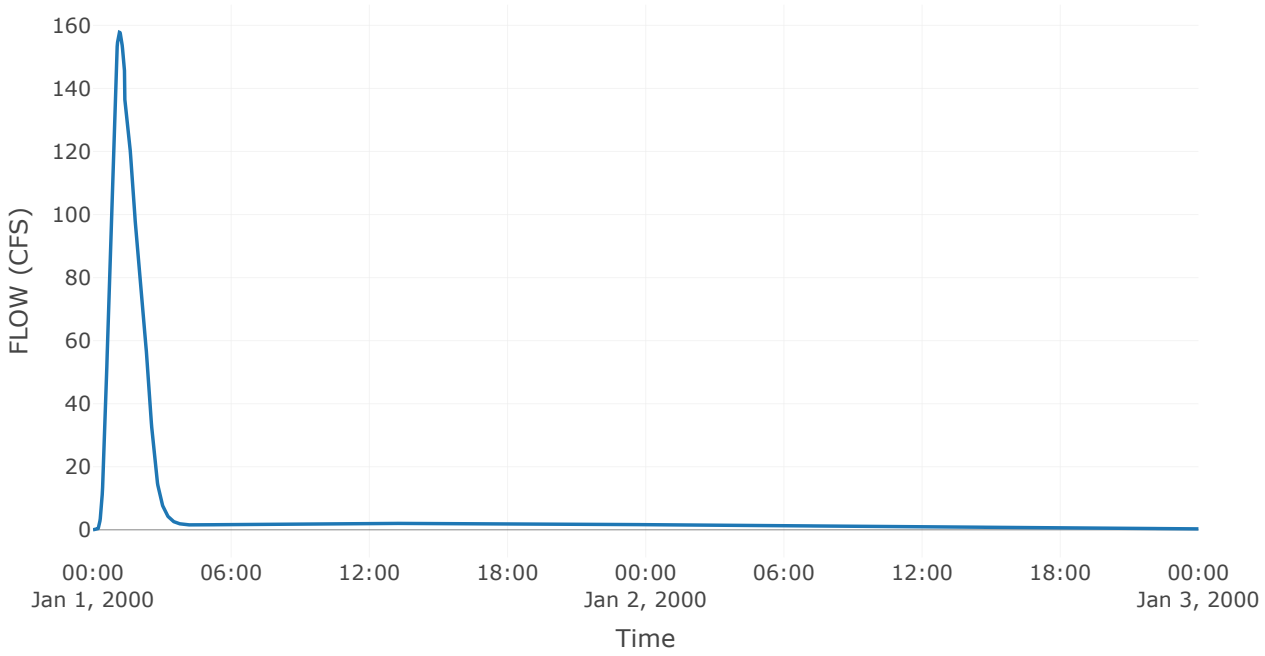
Combined Inflow



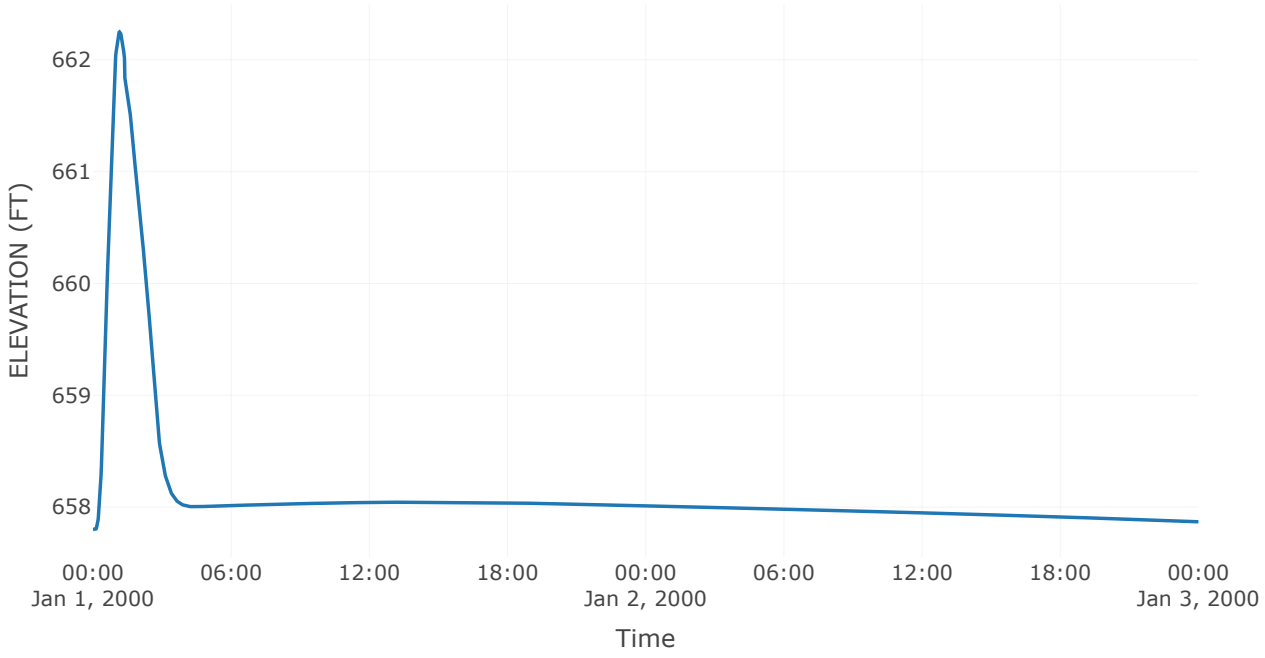

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

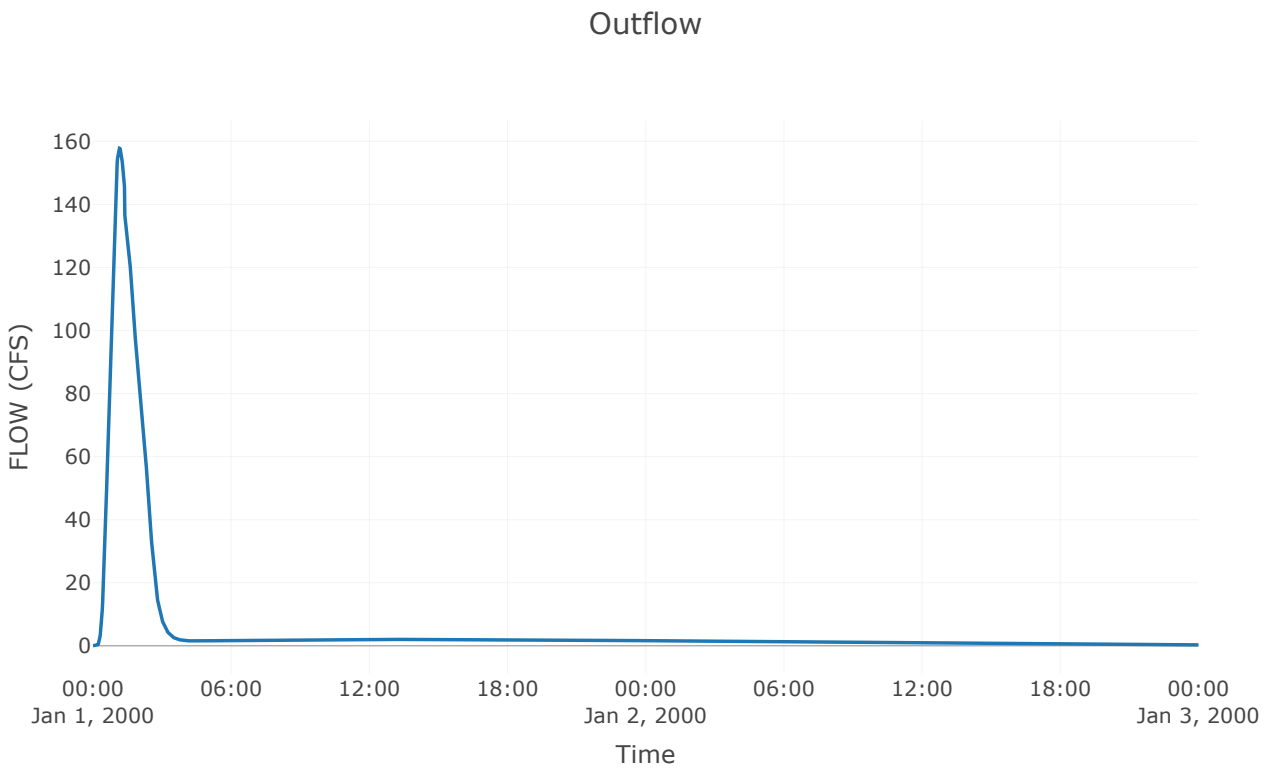

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



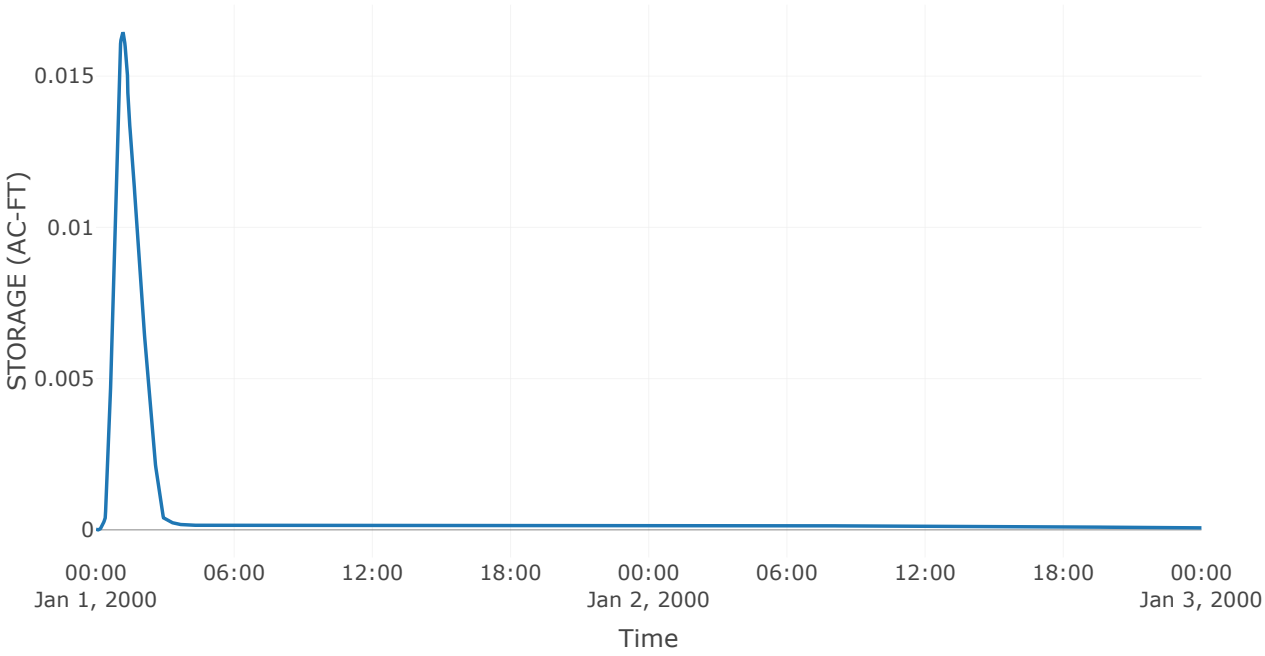

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

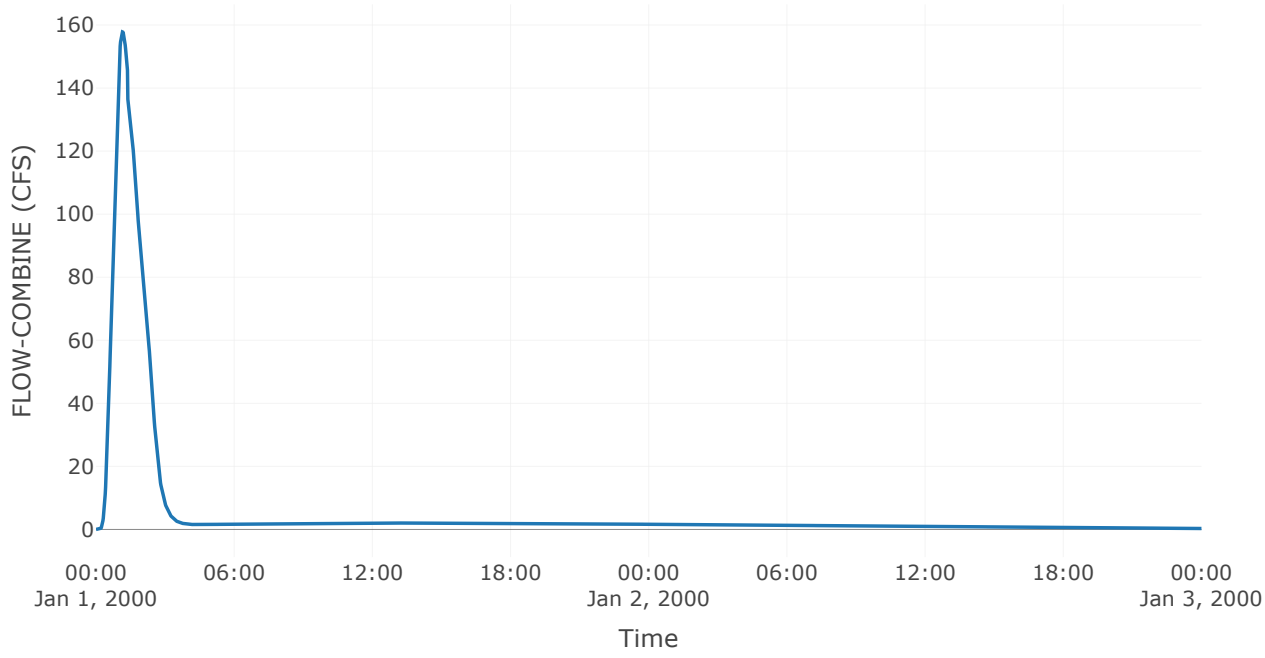
Downstream : Proposed Basin C

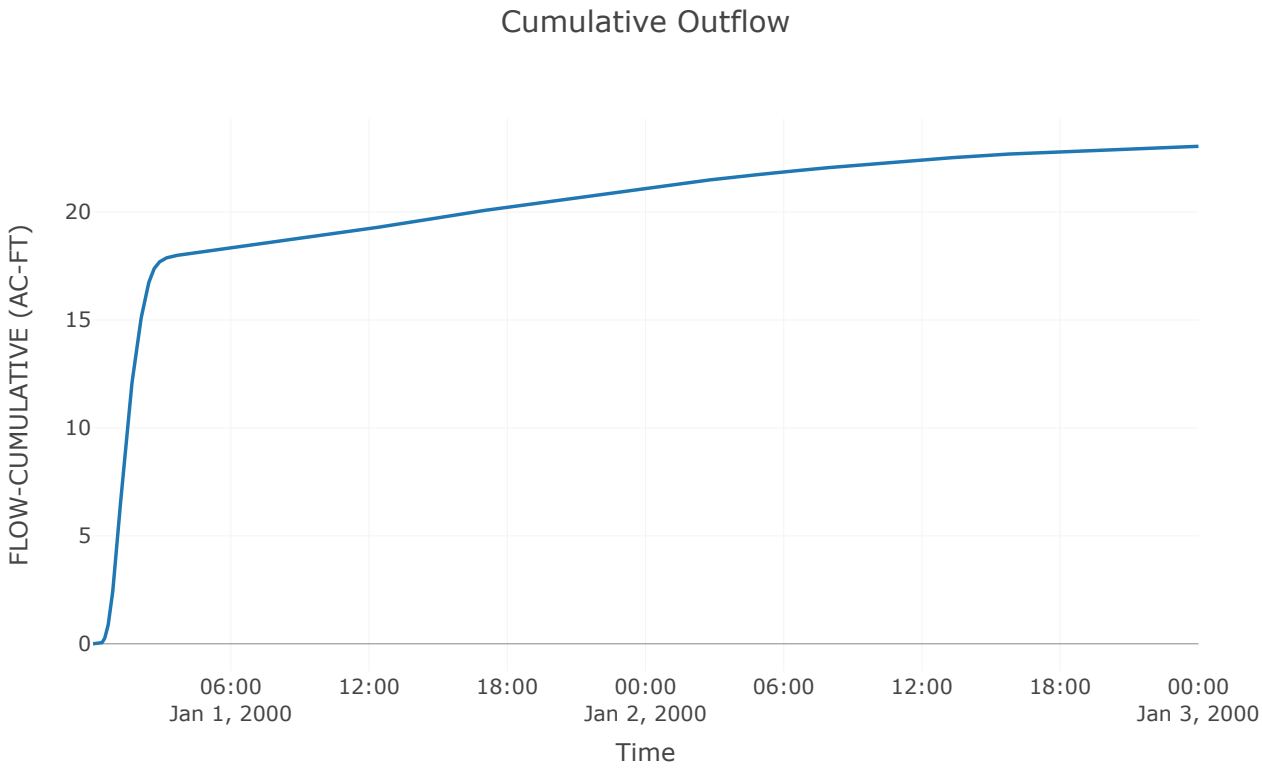
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	157.76
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.6
Peak Inflow (CFS)	157.79
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	657.98
Discharge Volume (AC - FT)	23.04

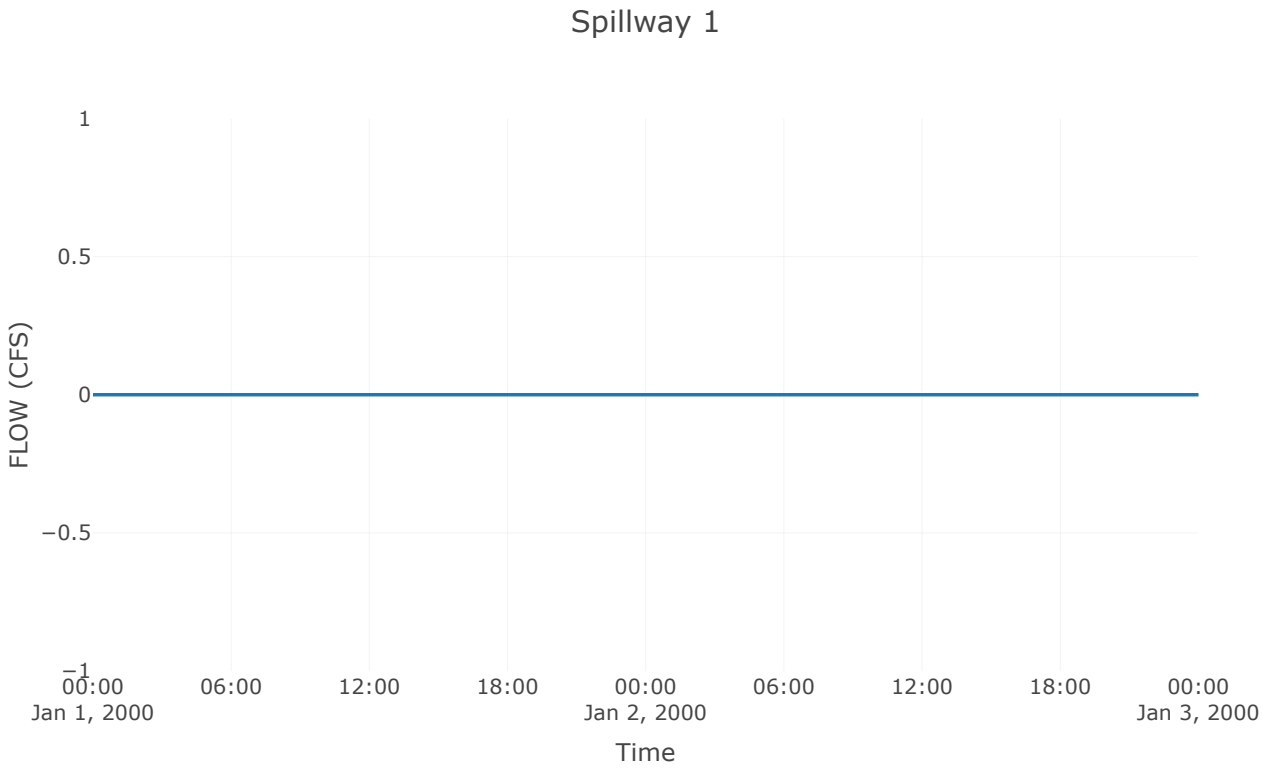
Storage



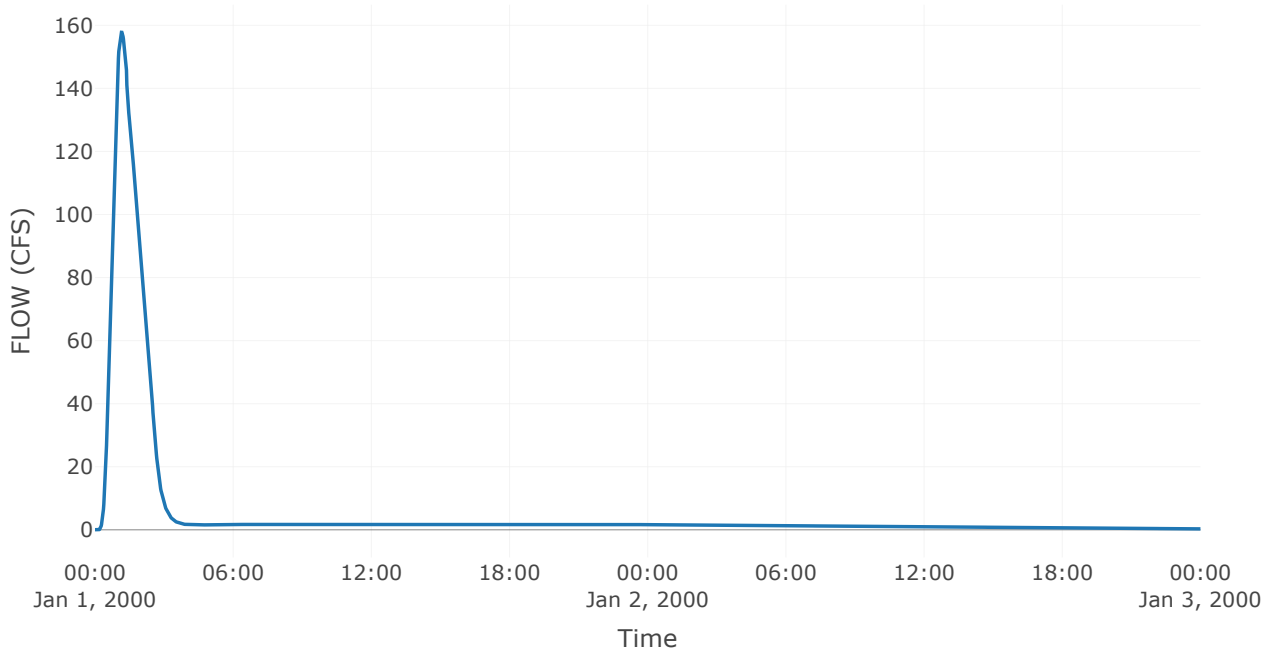
Combined Inflow



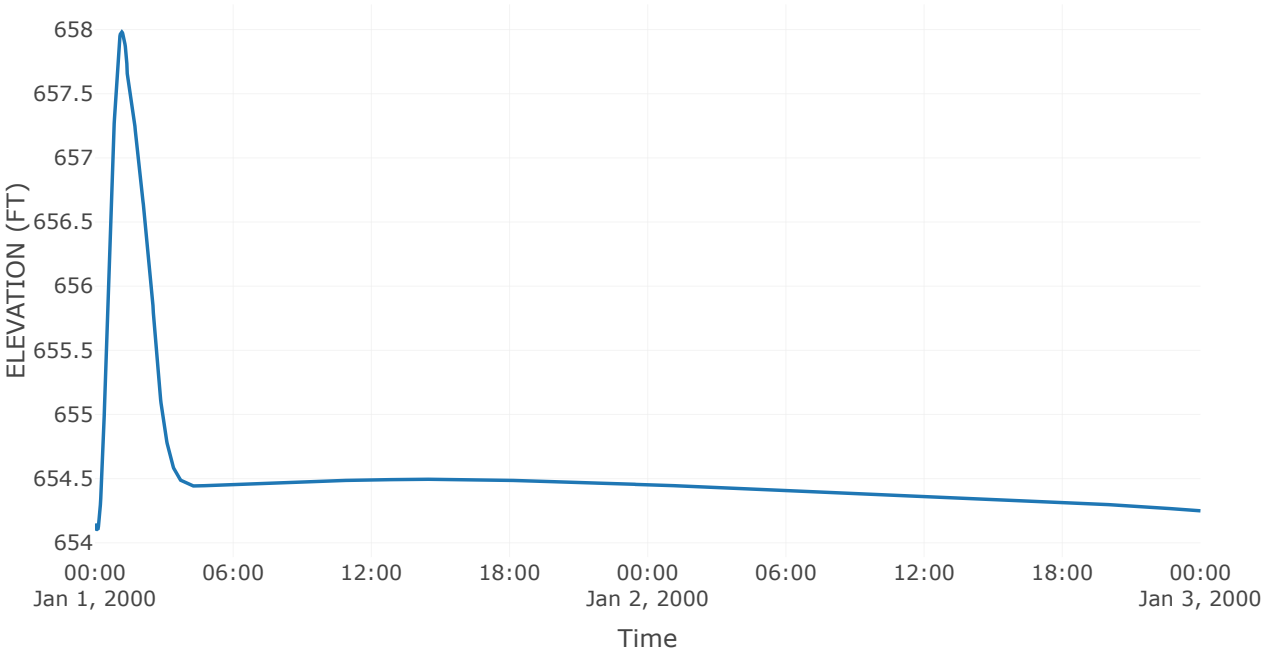

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

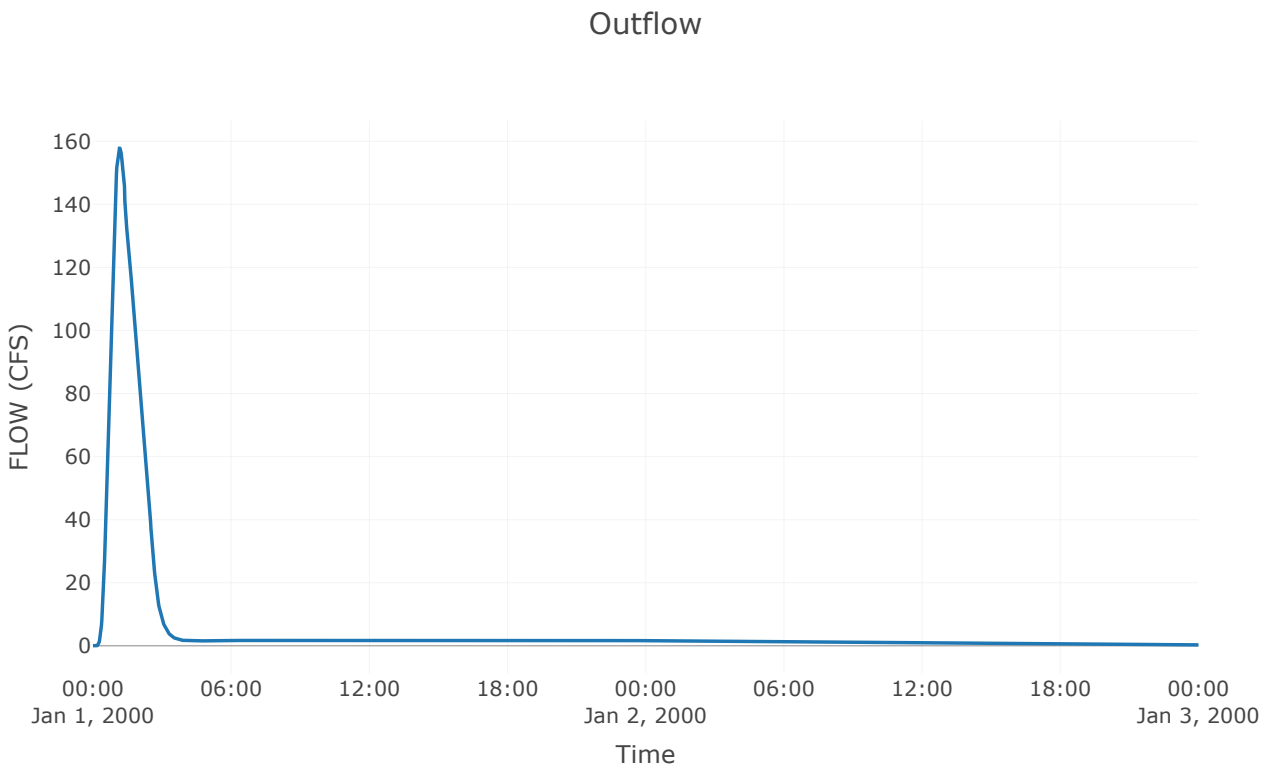

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

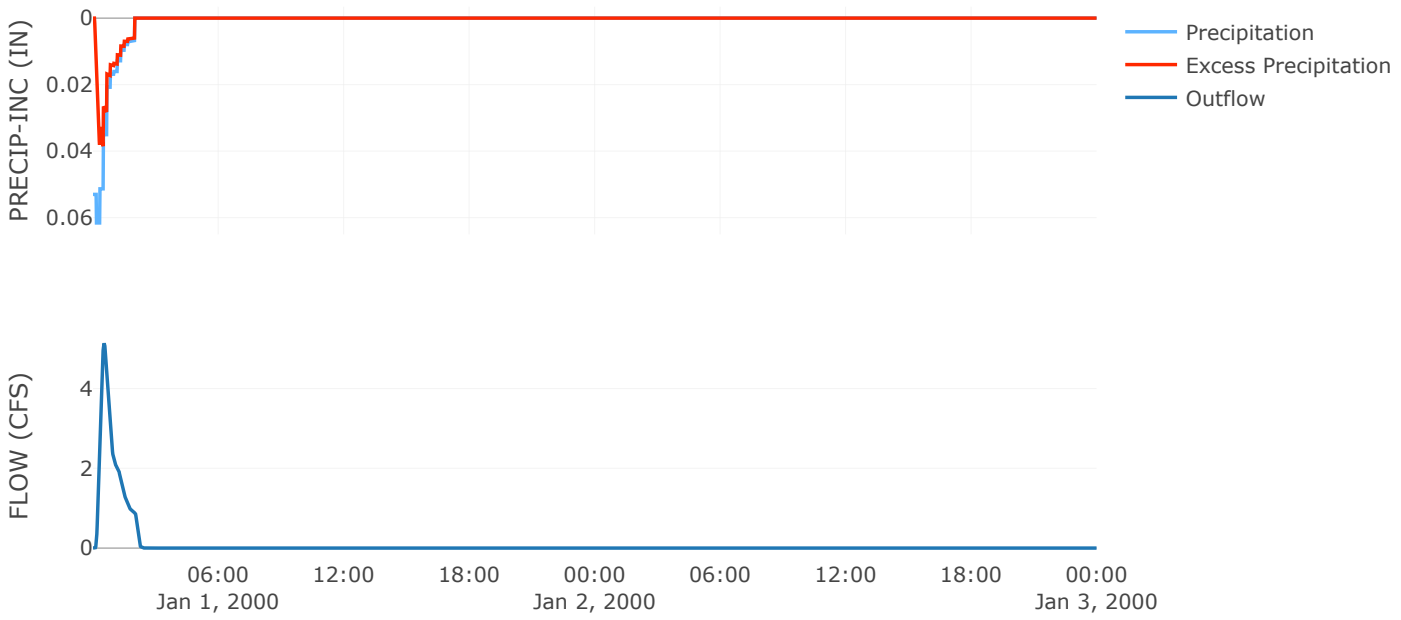
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

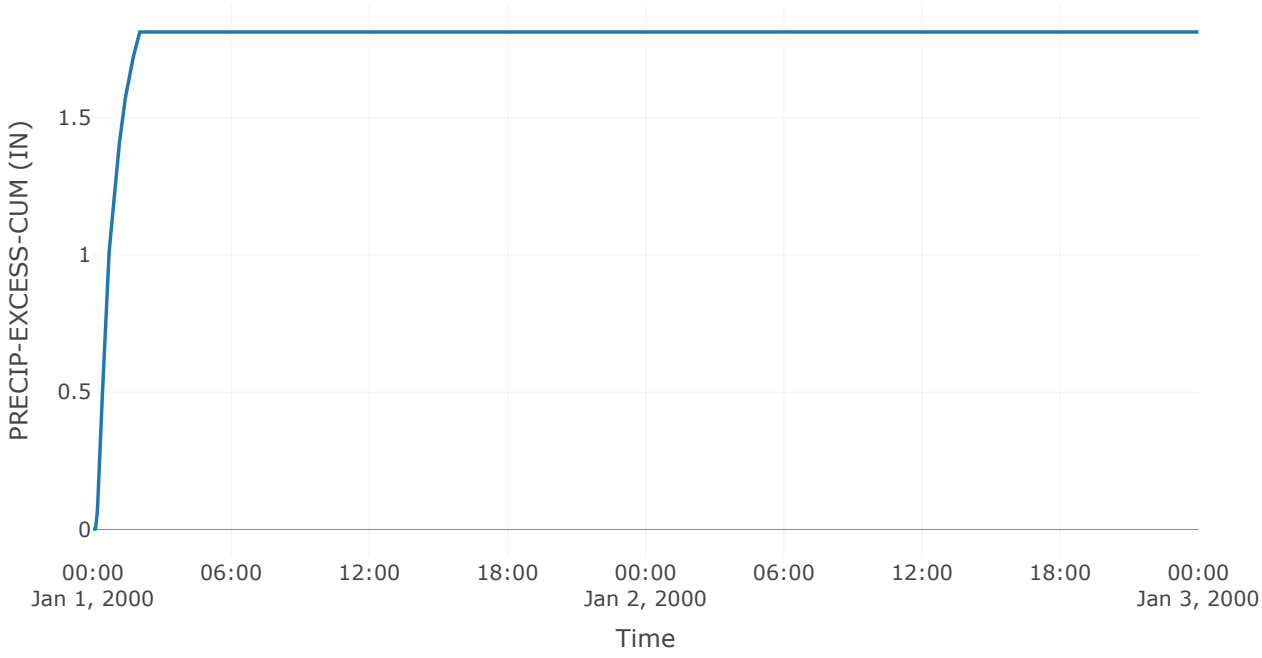
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Prop On-Site	
Peak Discharge (CFS)	5.14
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	1.81
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.24
Excess Volume (AC - FT)	0.36
Direct Runoff Volume (AC - FT)	0.36
Baseflow Volume (AC - FT)	0

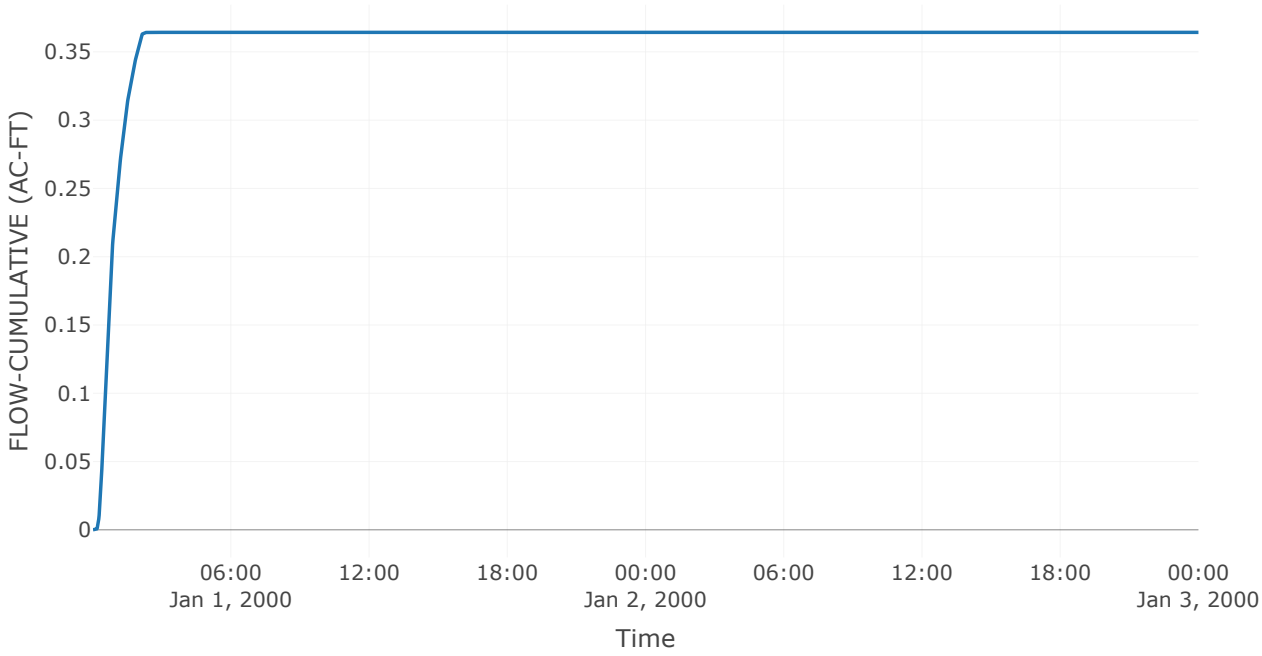
Precipitation and Outflow



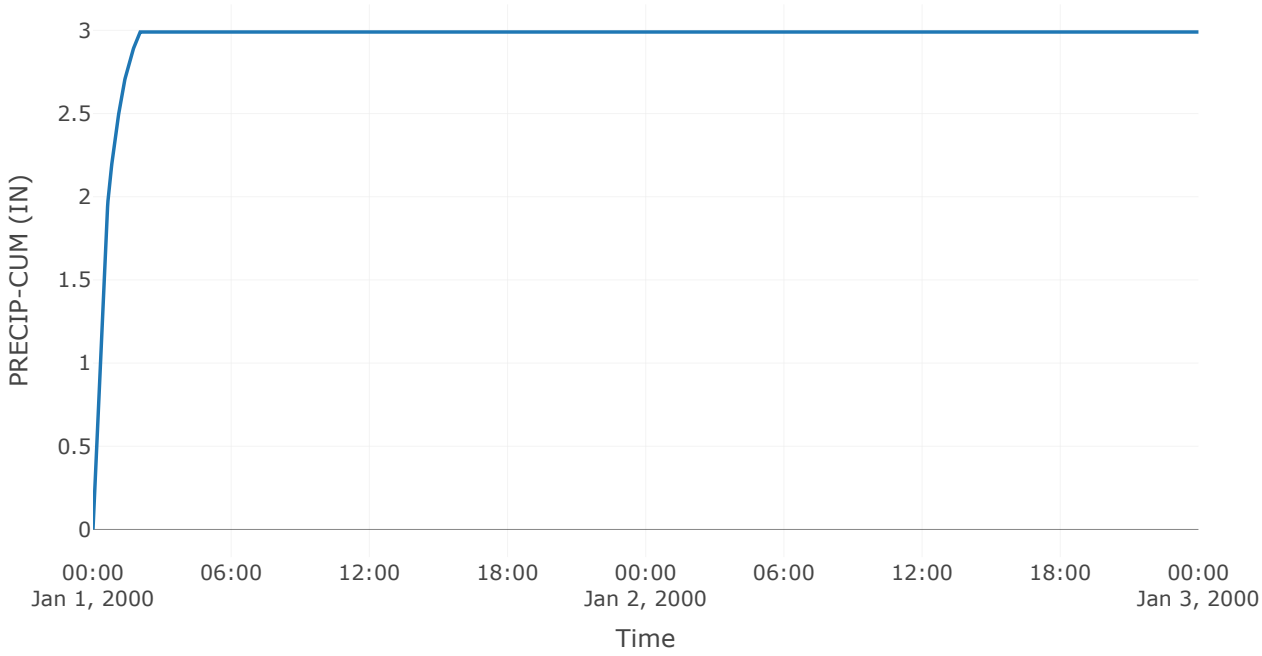
Cumulative Excess Precipitation

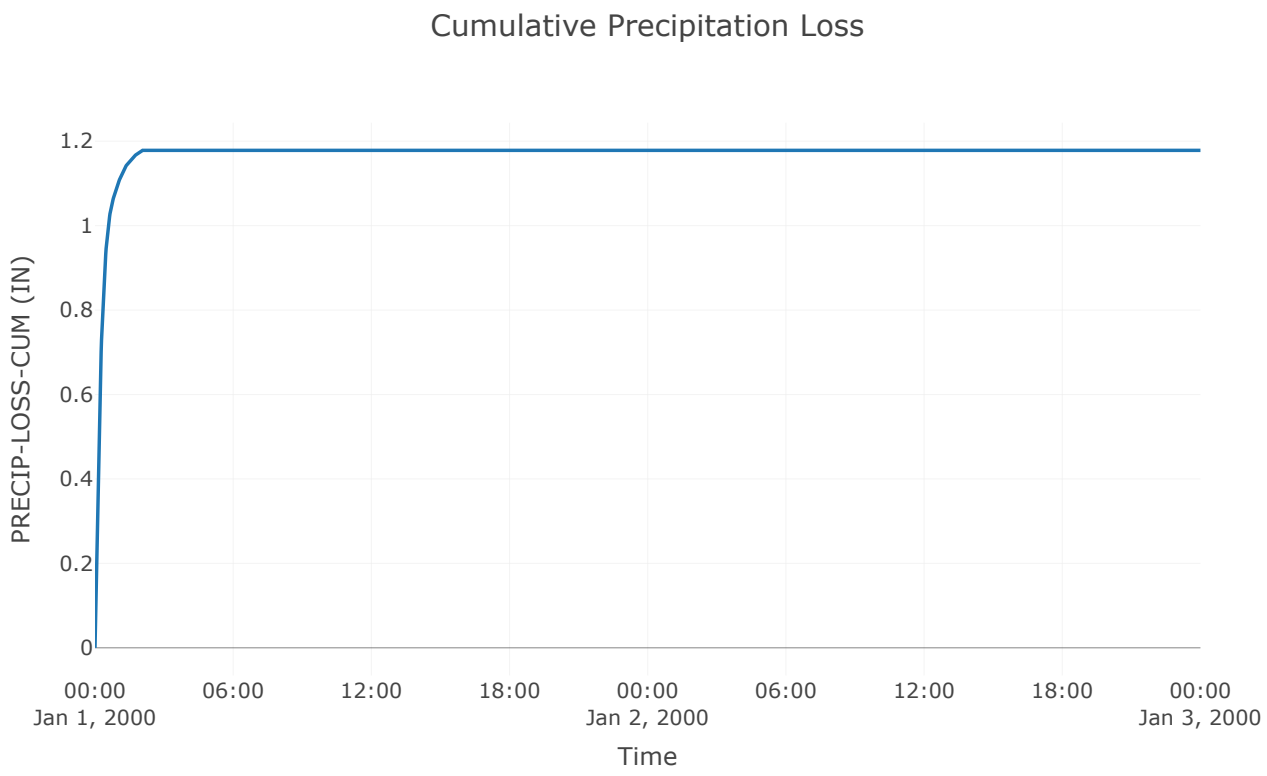


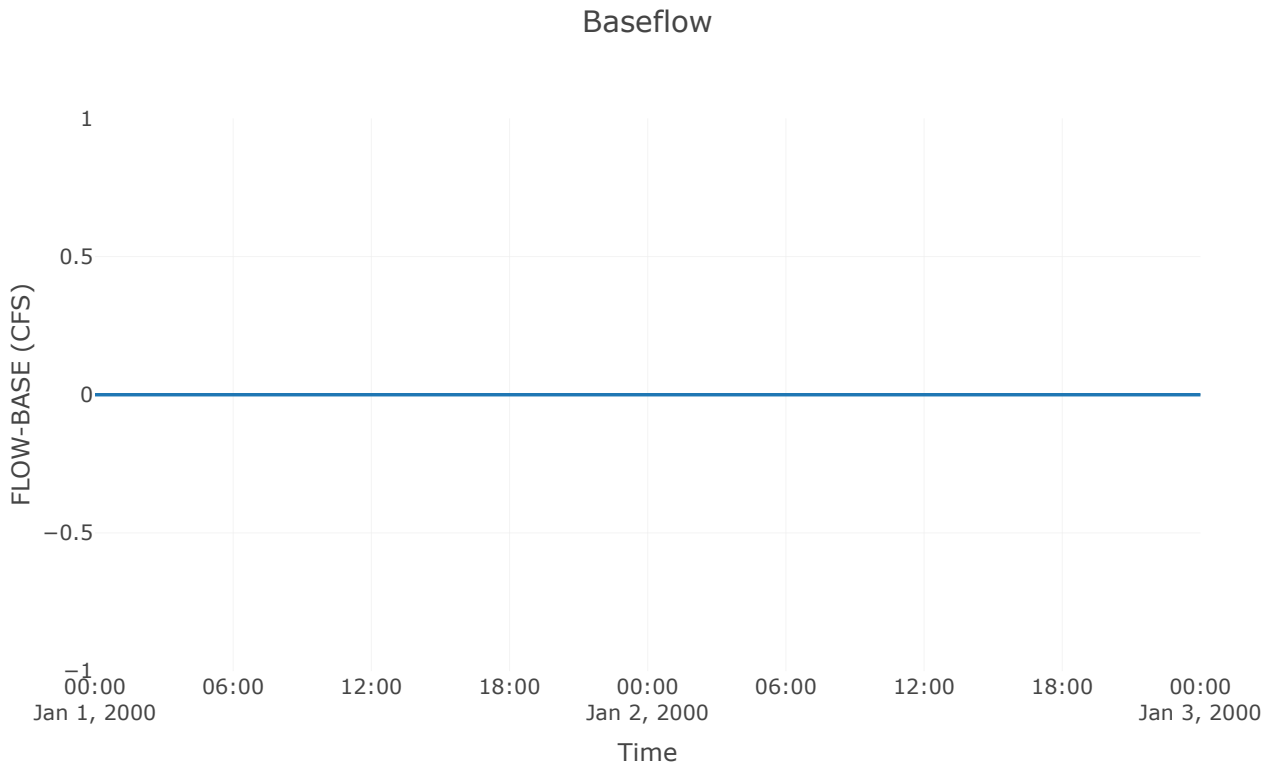
Cumulative Outflow

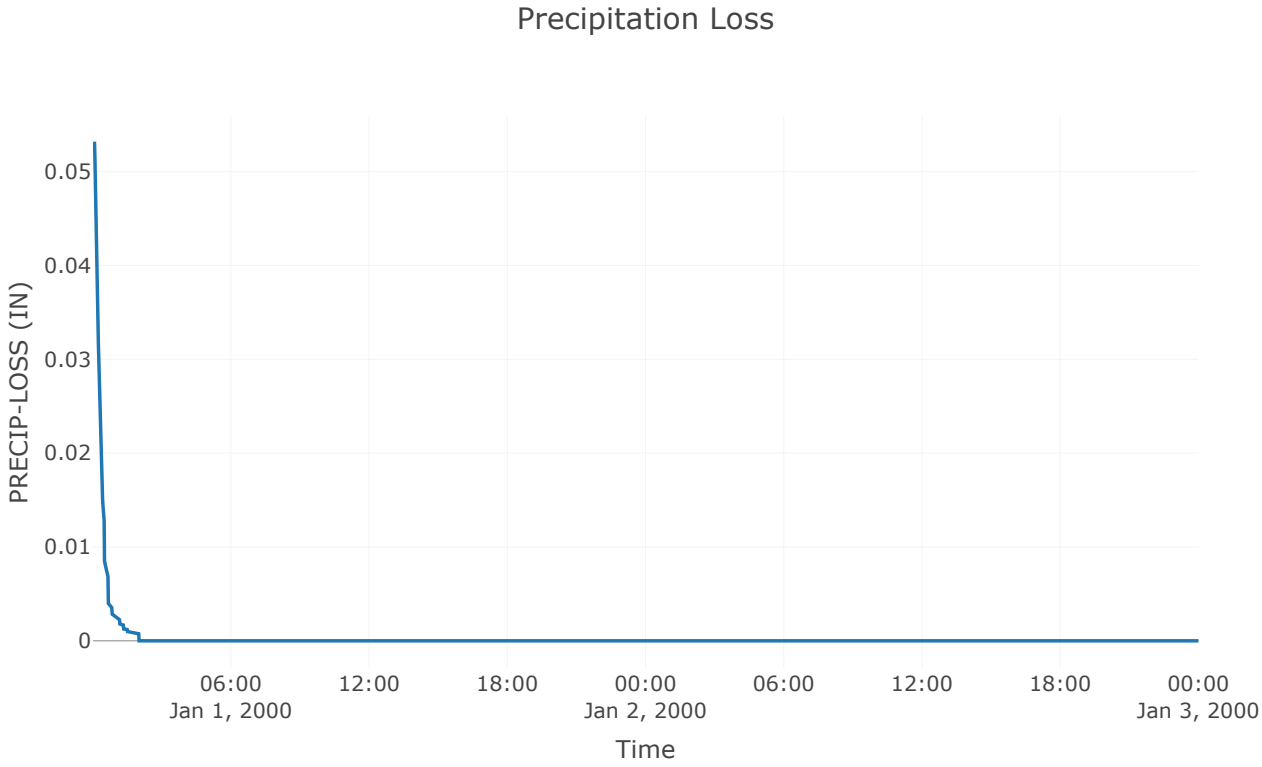


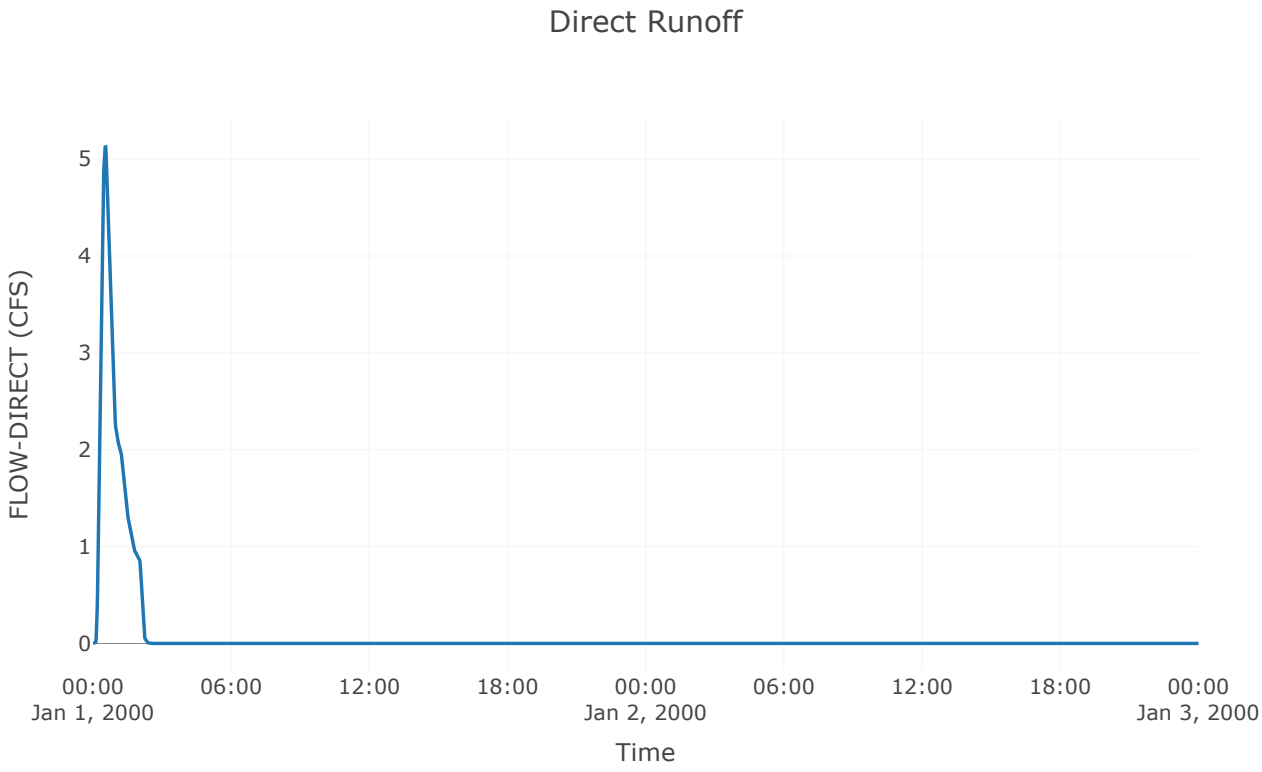
Cumulative Precipitation

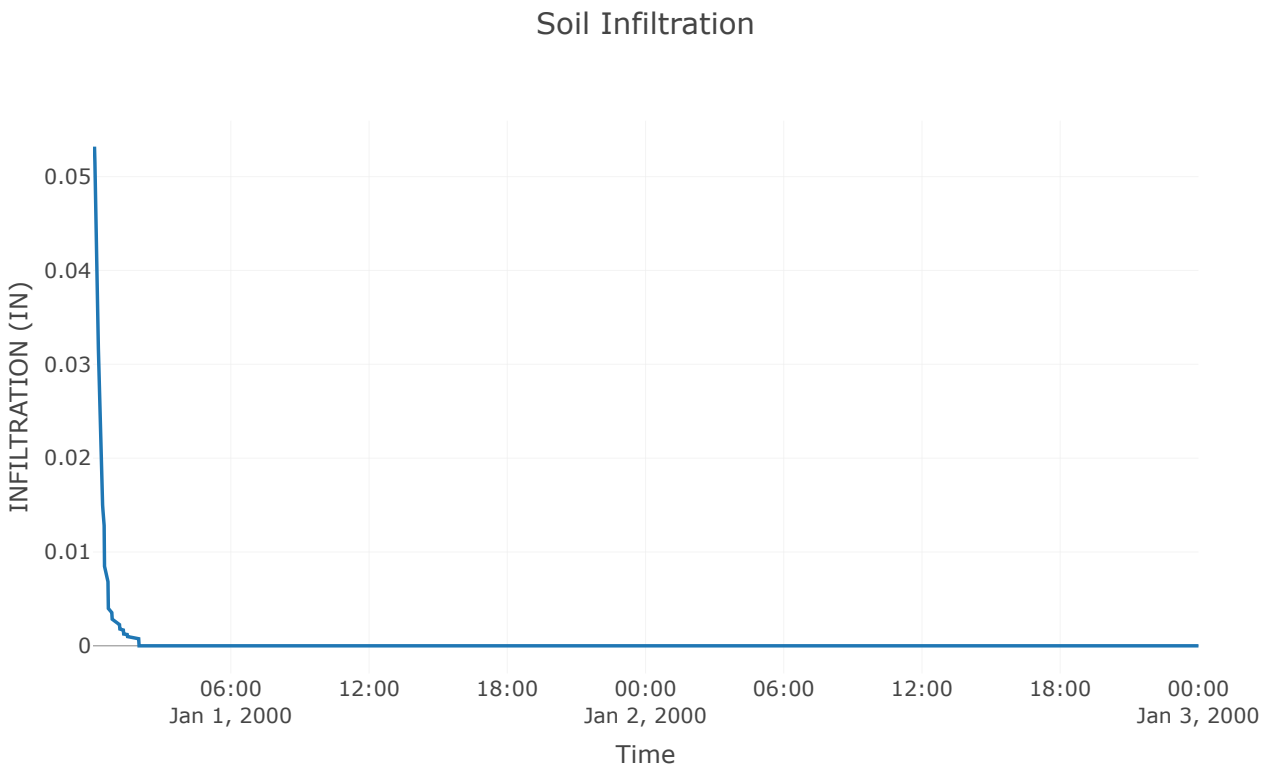



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

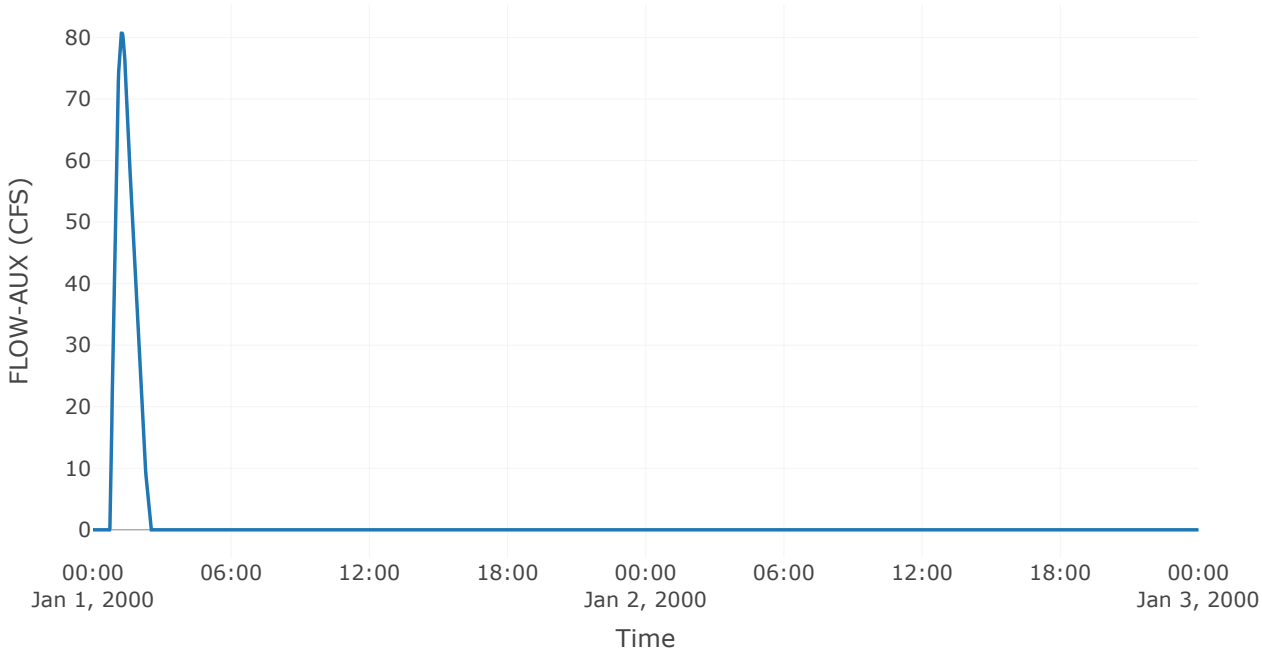

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

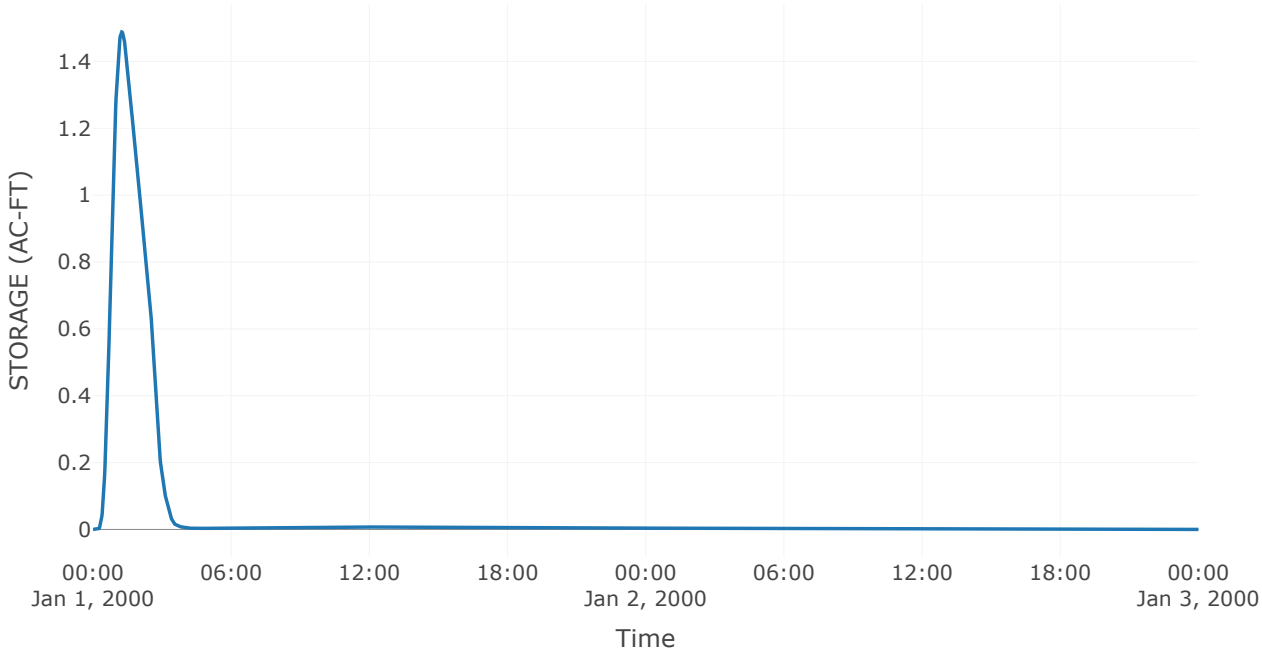
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	75.77
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.18
Peak Inflow (CFS)	159.8
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.4
Maximum Storage (AC - FT)	1.49
Peak Elevation (FT)	652.47
Discharge Volume (AC - FT)	17.24

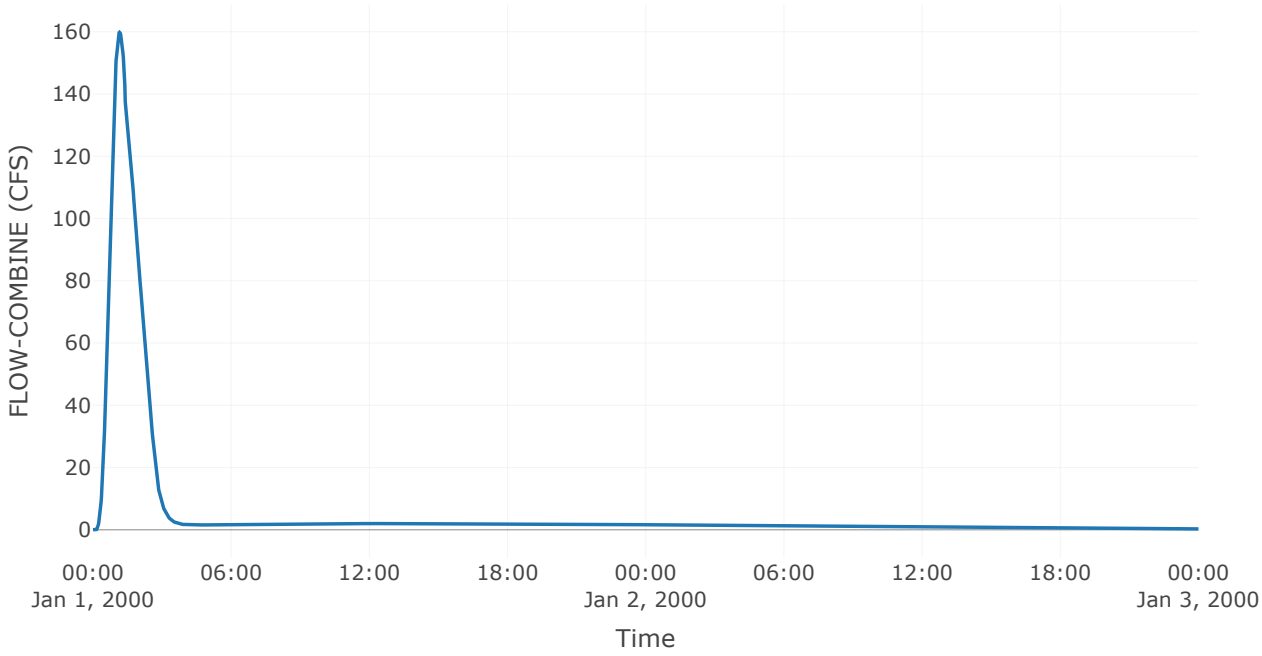
Auxiliary Outflow



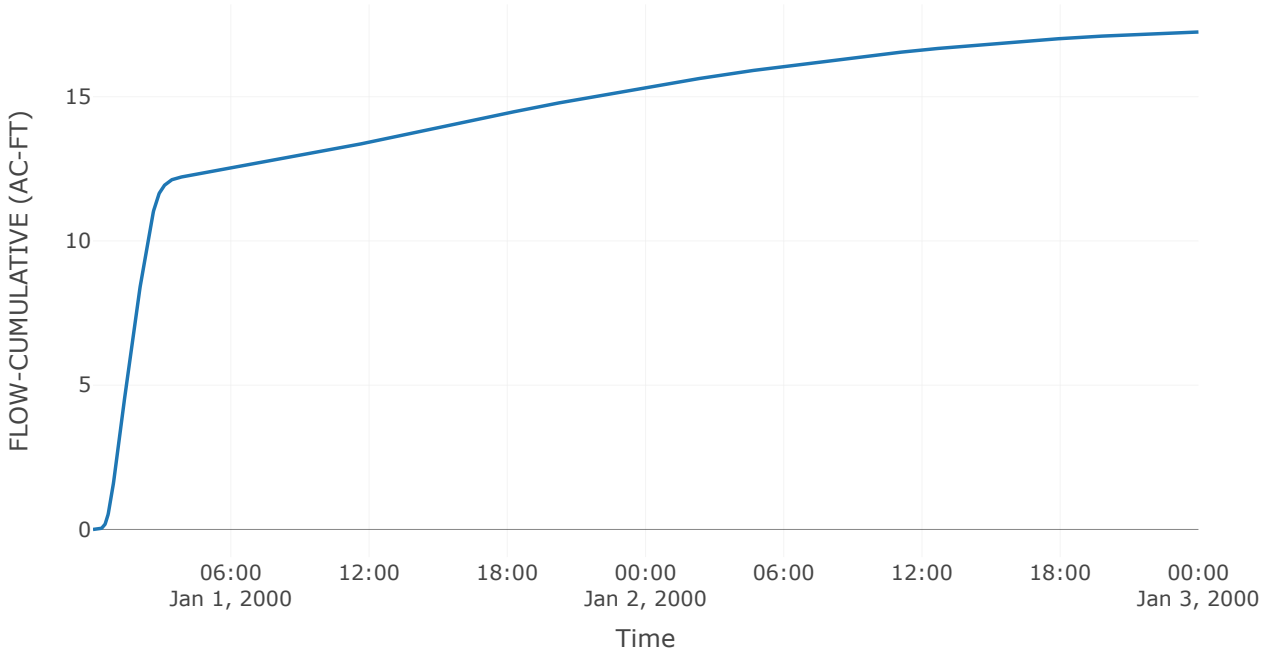
Storage

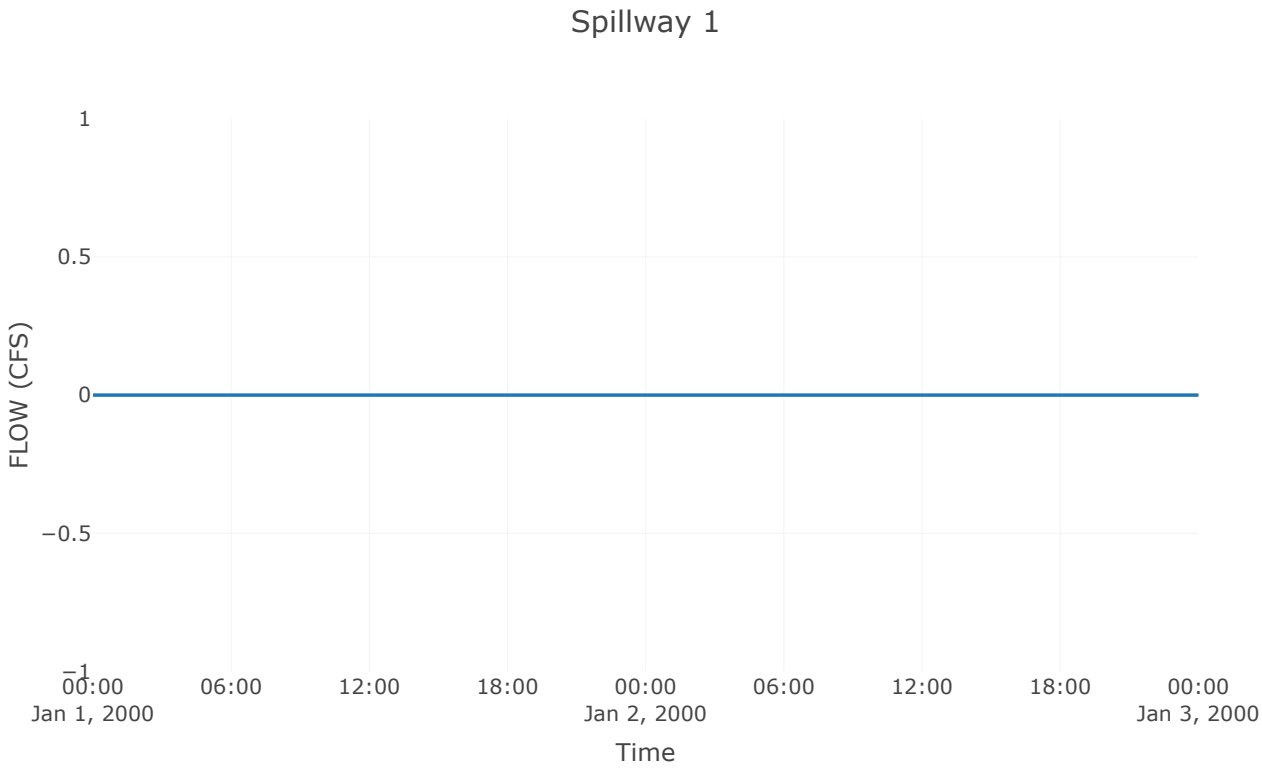


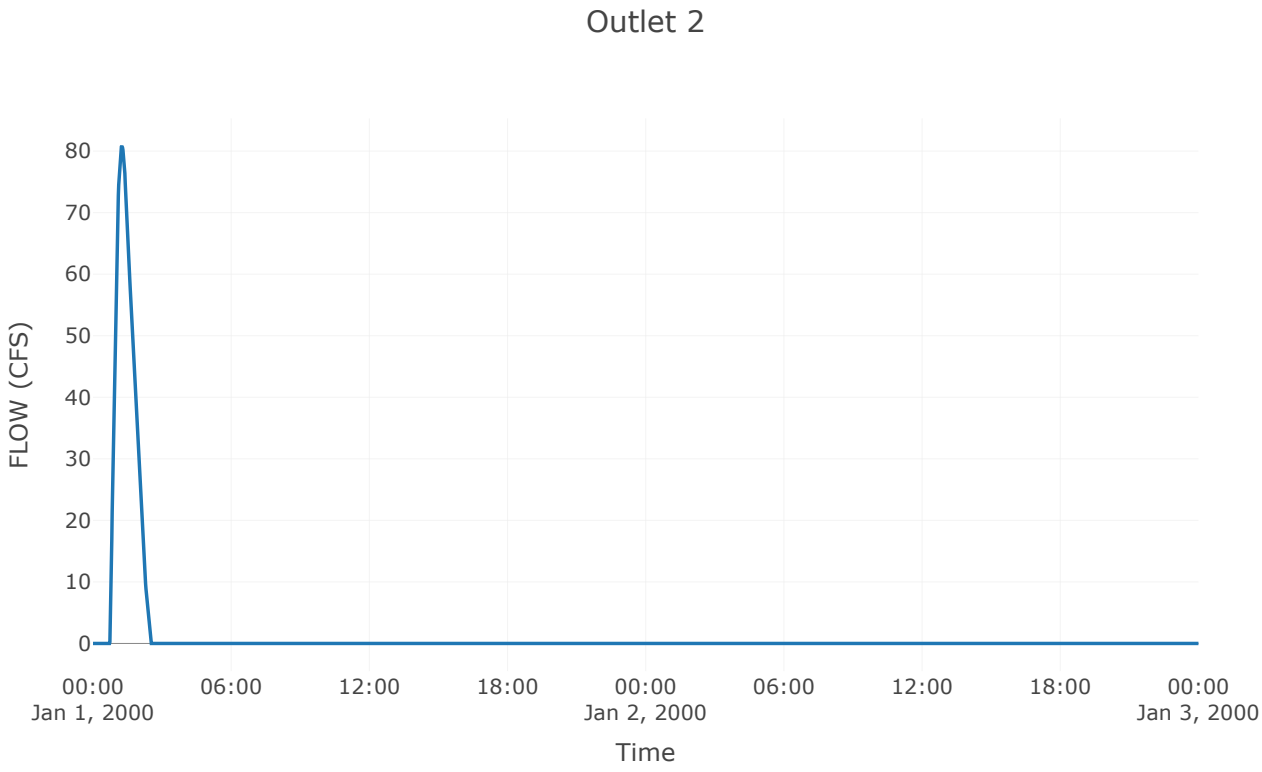
Combined Inflow



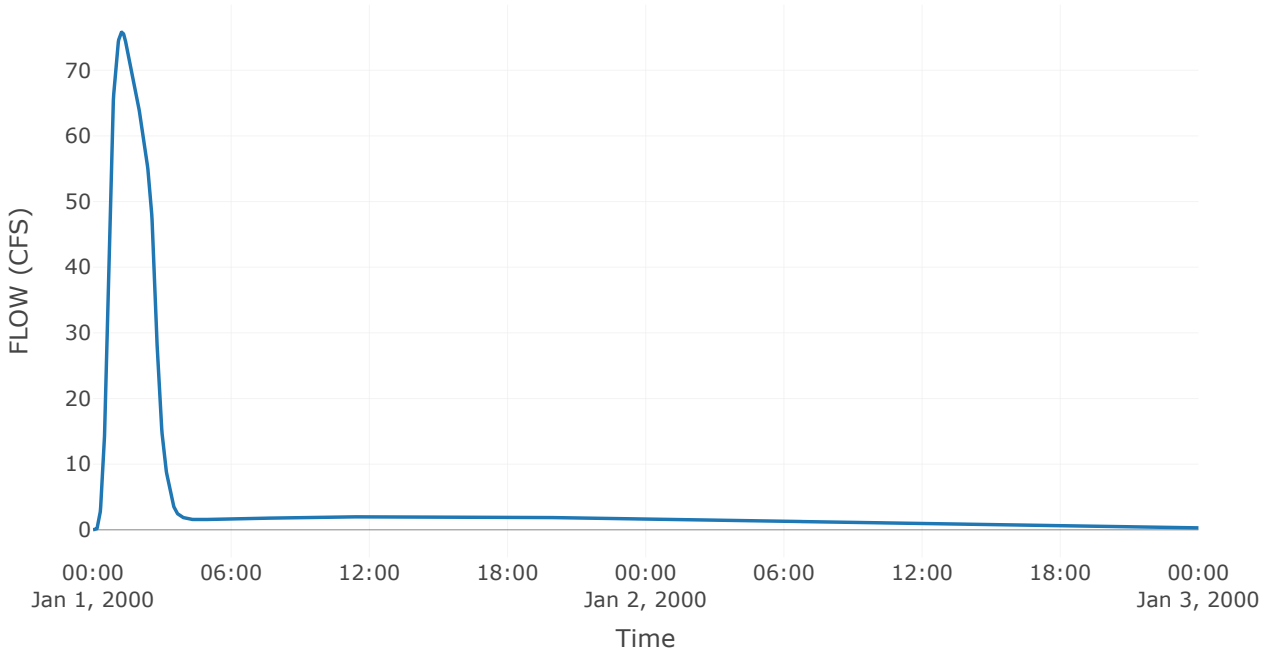
Cumulative Outflow



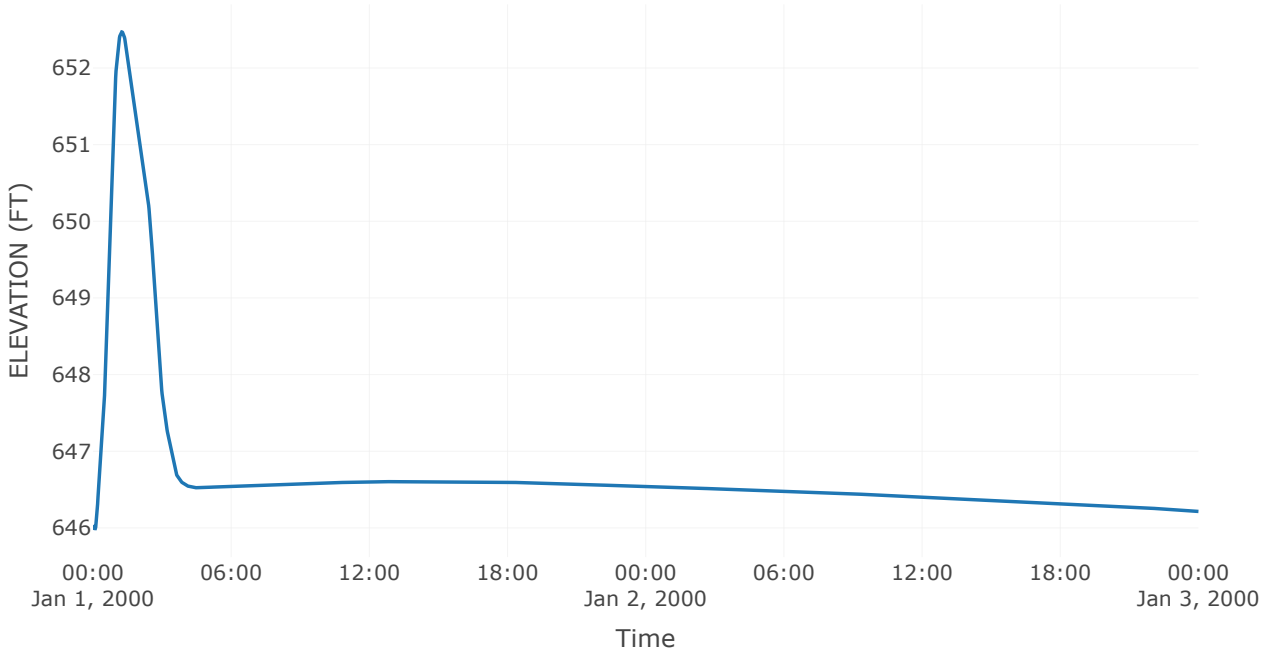

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

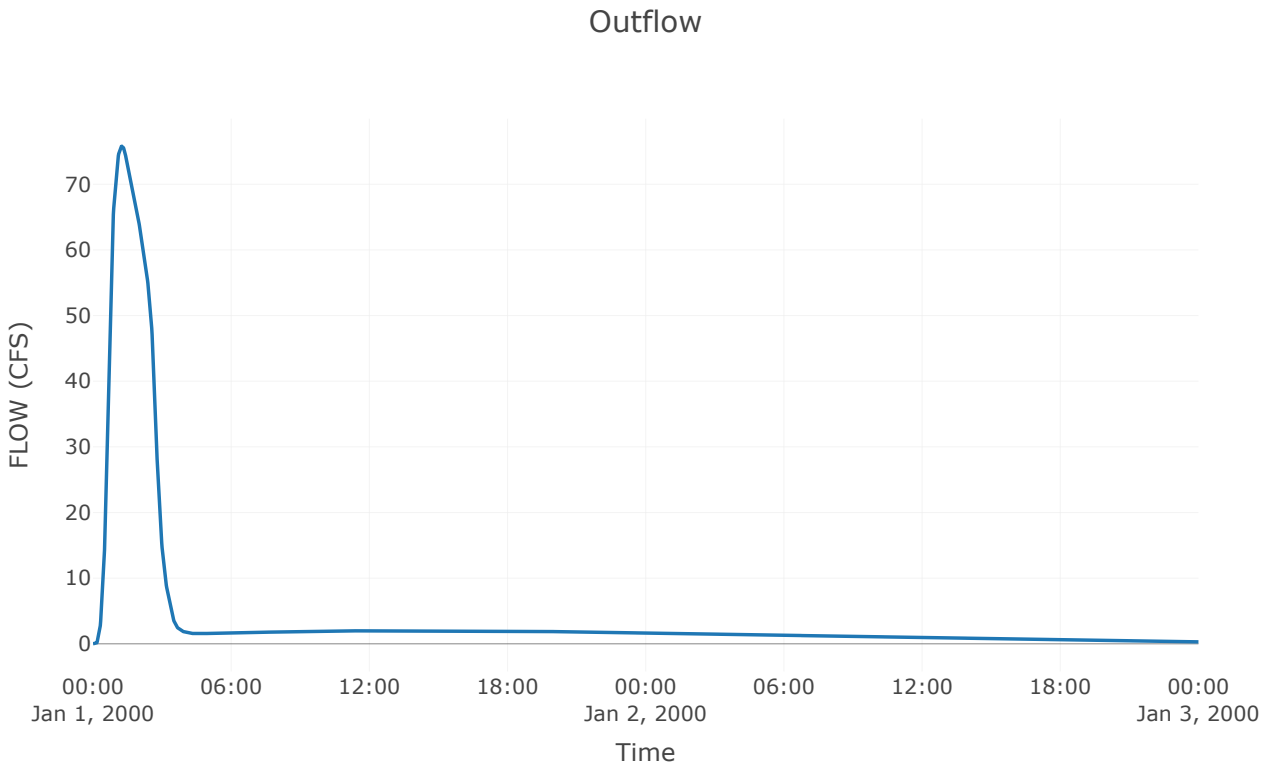

Outlet 2
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

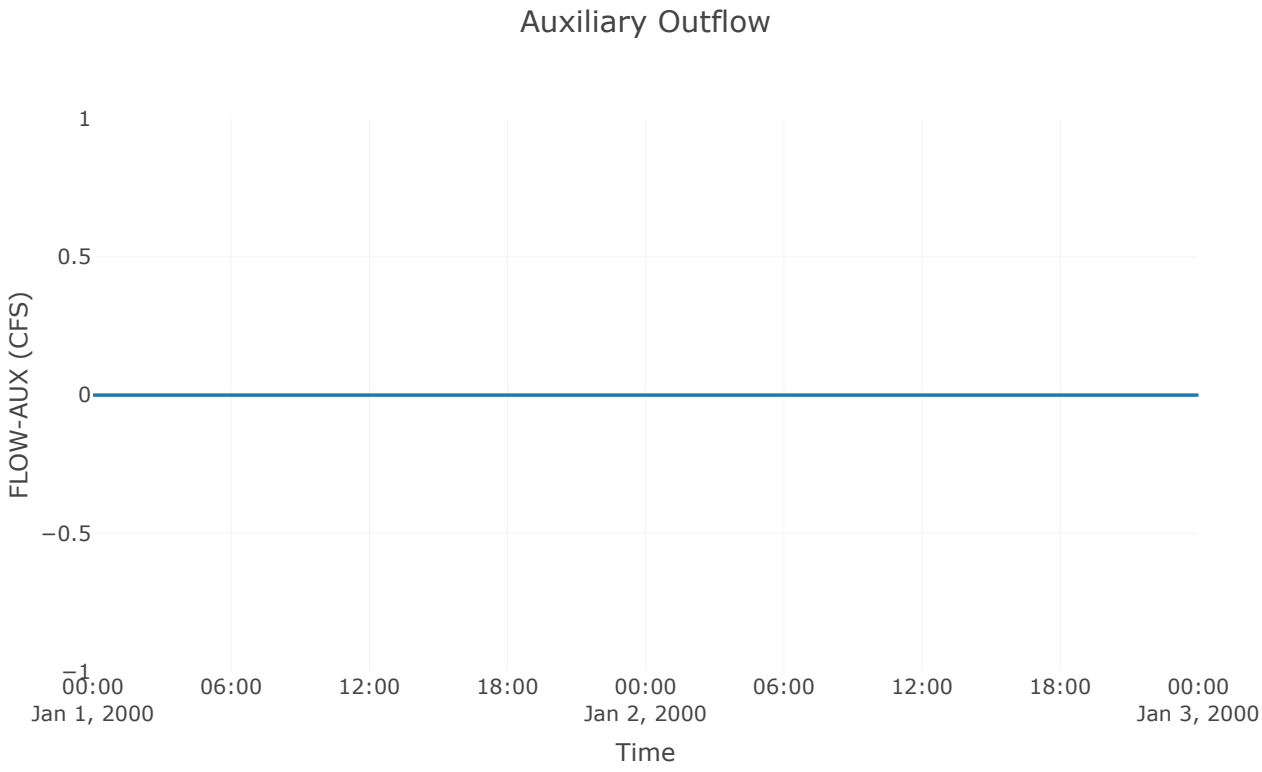


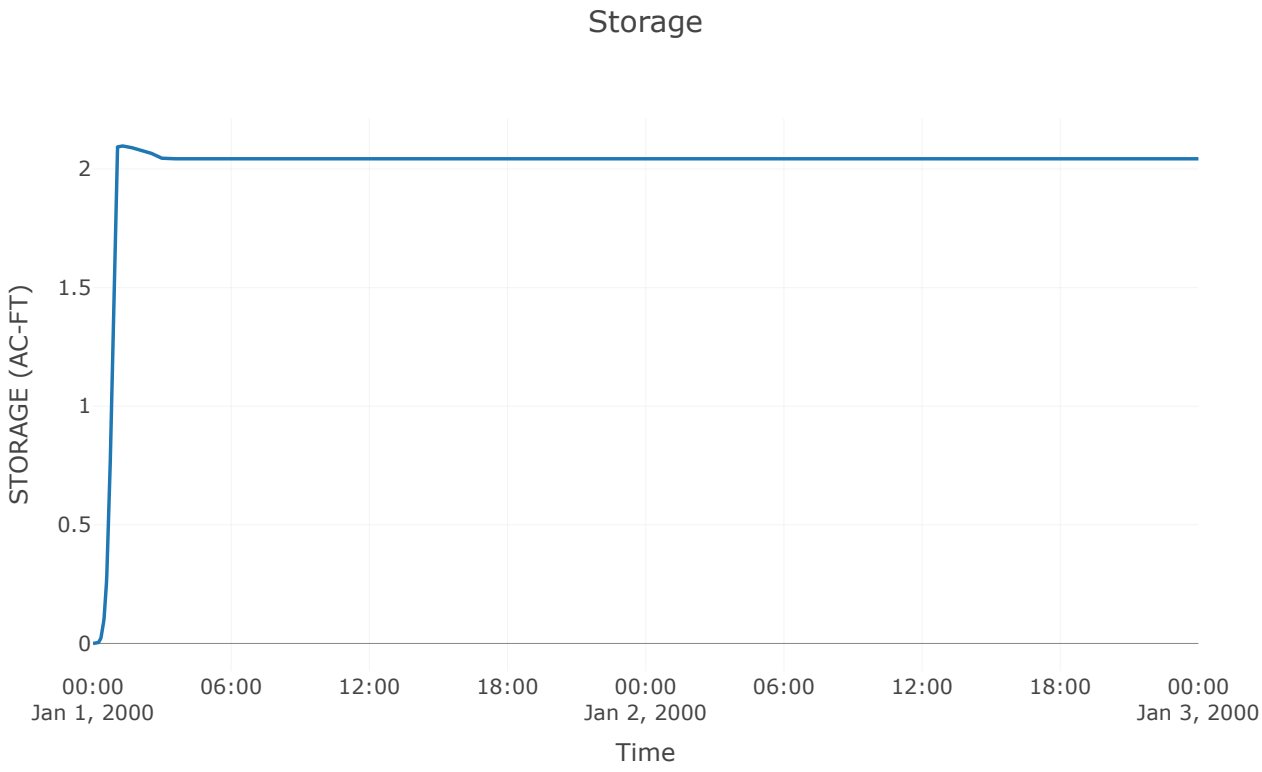

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

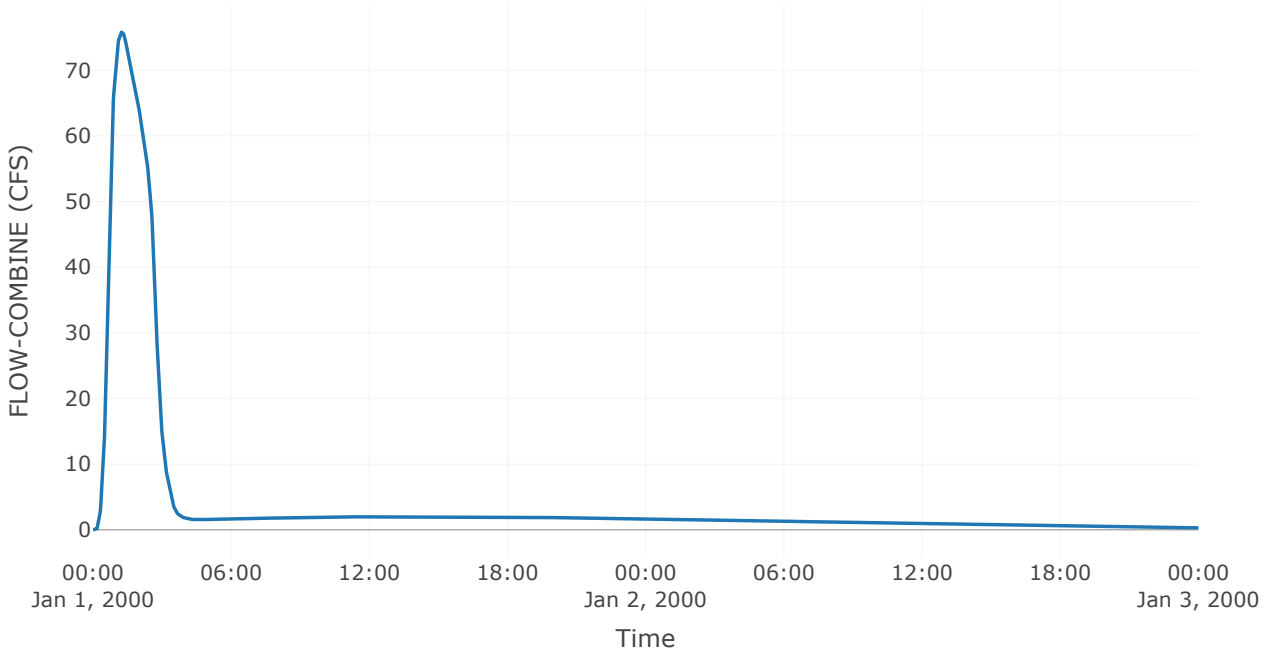
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03
Peak Inflow (CFS)	75.77
Time of Peak Inflow	01Jan2000, 01:15
Inflow Volume (AC - FT)	17.24
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	15.03

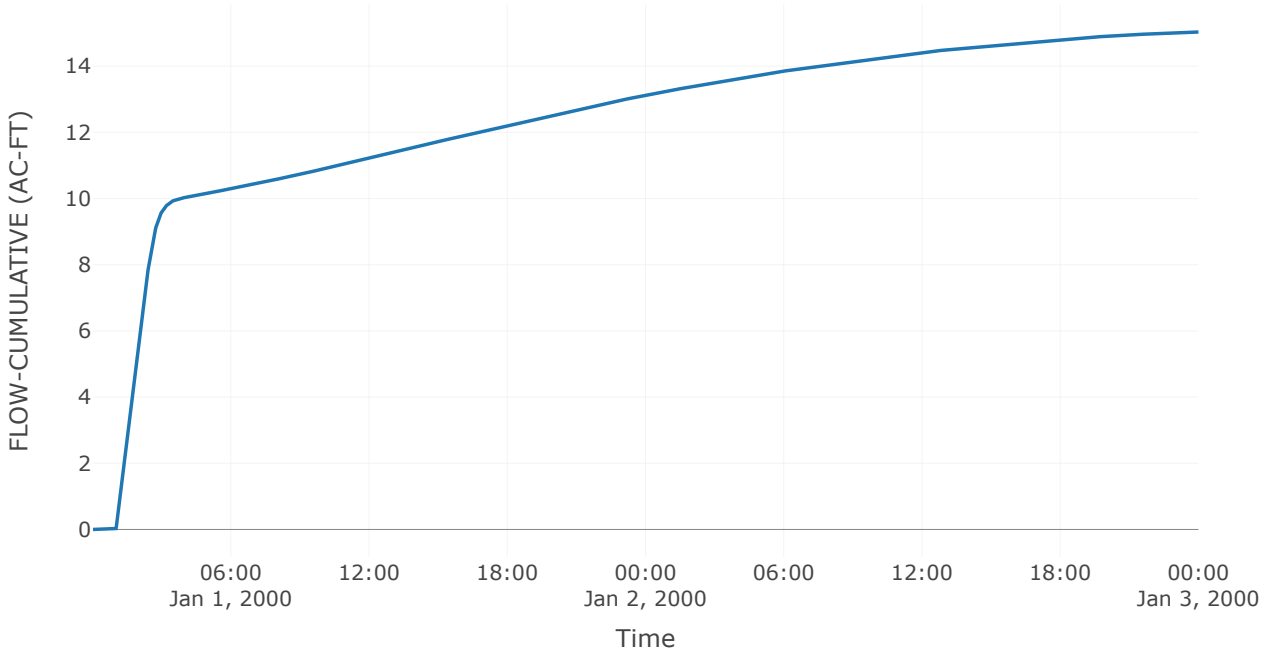

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

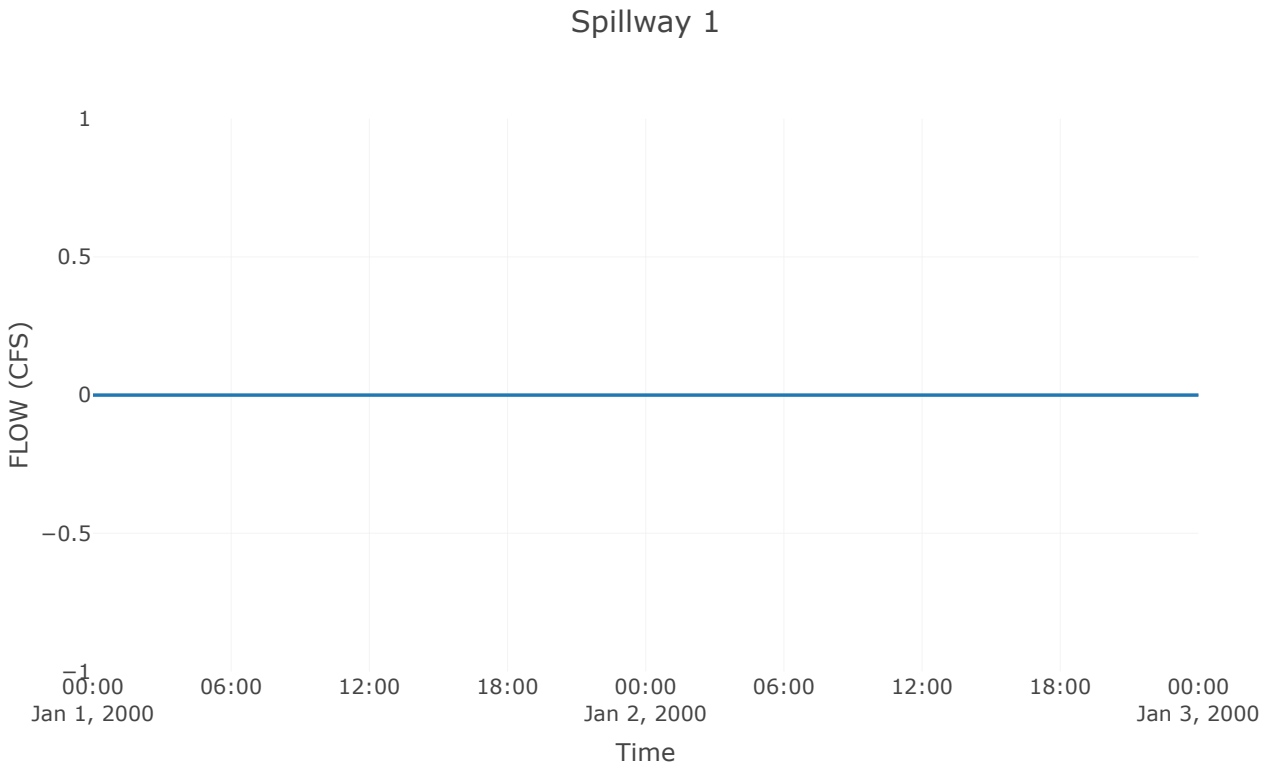

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

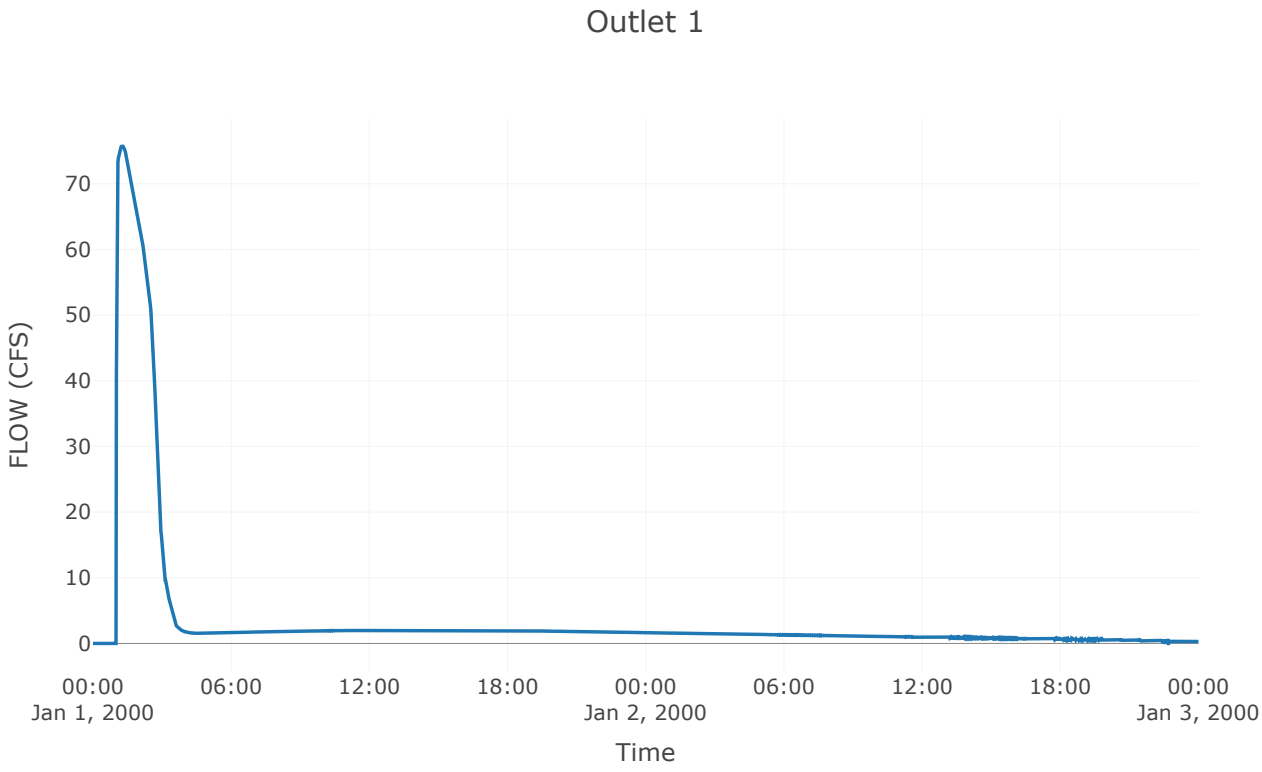
Combined Inflow



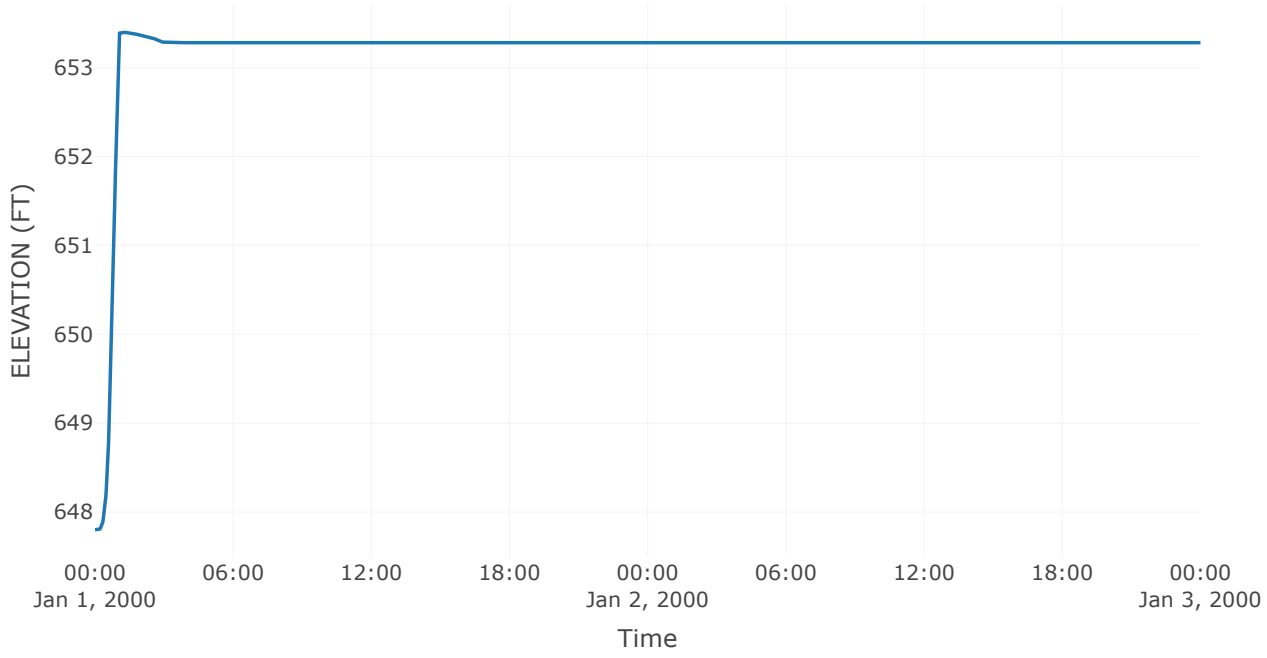
Cumulative Outflow



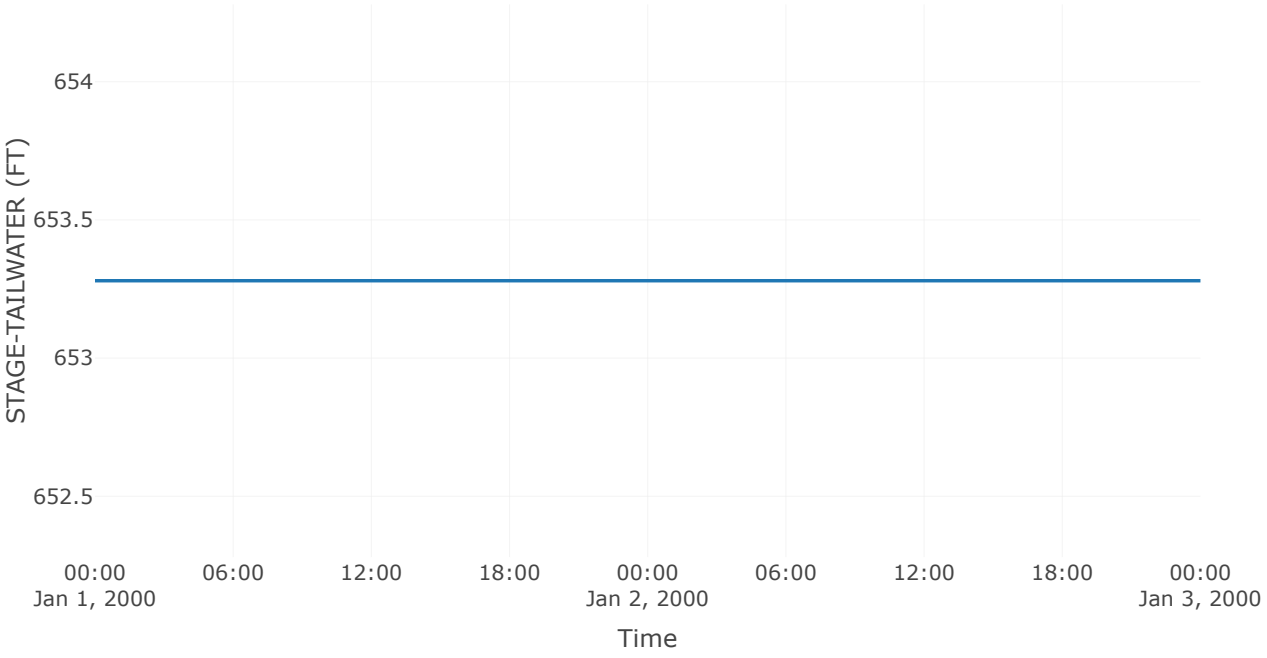

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

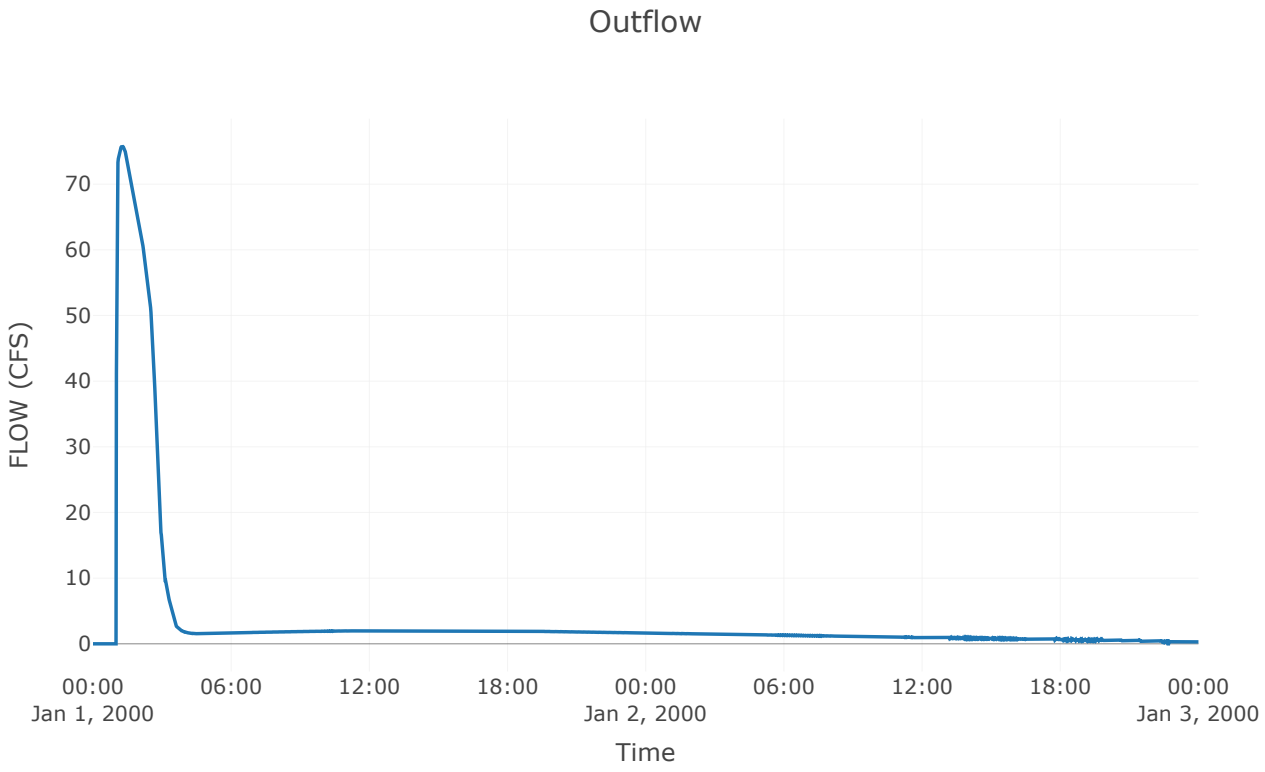

Outlet 1
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

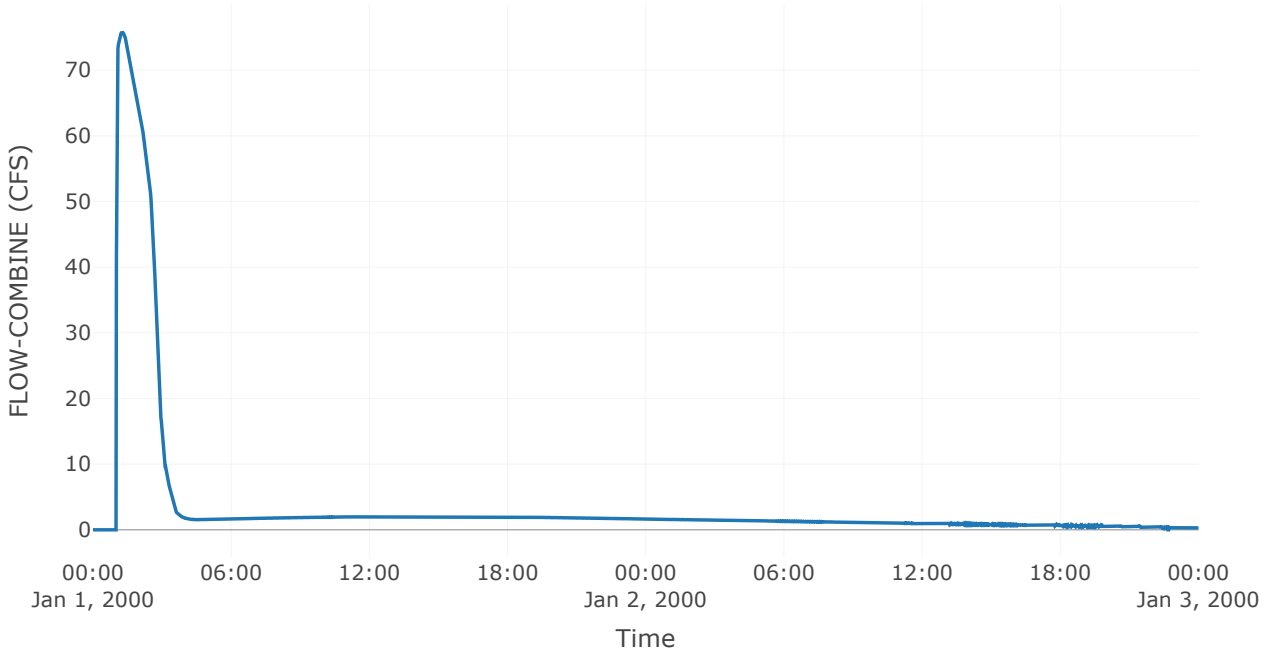



Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

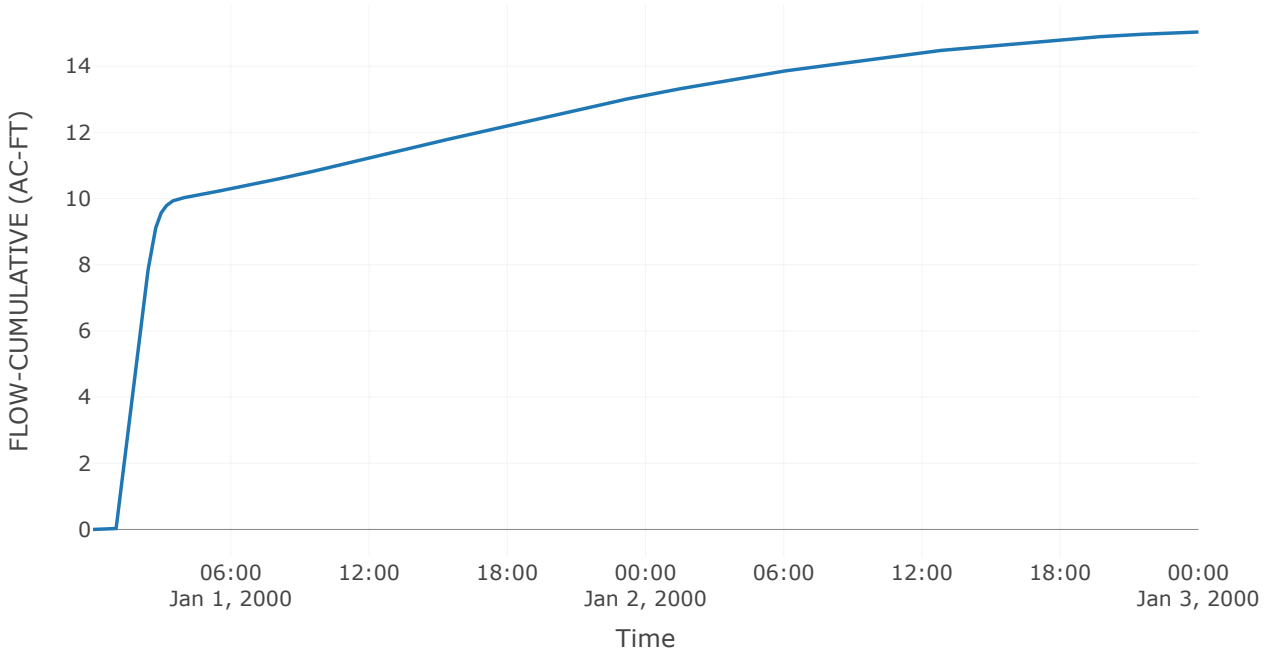
Sink: 55th Street Outlet

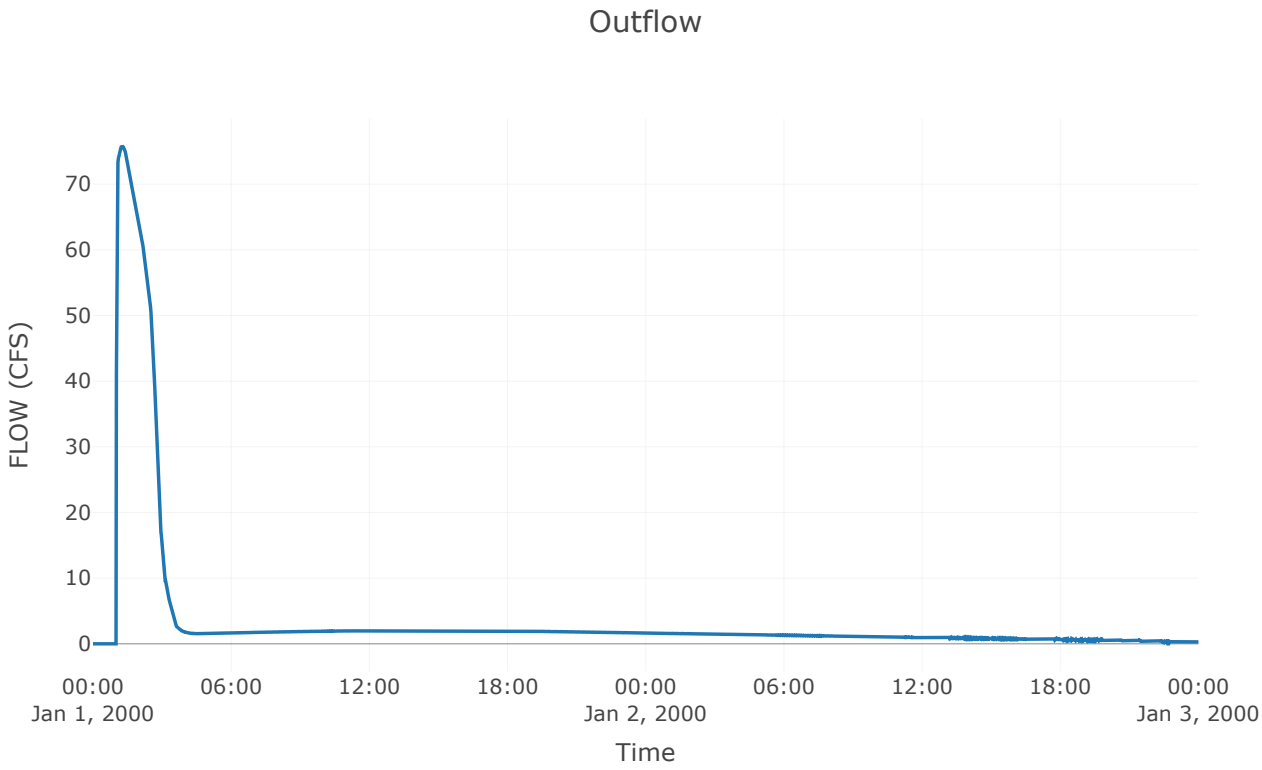
Results: 55th Street Outlet	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03

Combined Inflow



Cumulative Outflow




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:49

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	324.8	01Jan2000, 01:01	2.48
Prop Storage West of Wolf Rd	0.27	324.78	01Jan2000, 01:01	2.48
Prop On - Site	0	13.96	01Jan2000, 00:19	2.76
Proposed Basin C	0.27	95.13	01Jan2000, 01:08	1.37
Existing Basin A & B	0.27	95.08	01Jan2000, 01:09	1.21

55th Street Outlet	0.27	95.08	01Jan2000, 01:09	1.21

Subbasin: On-Site Trib 1

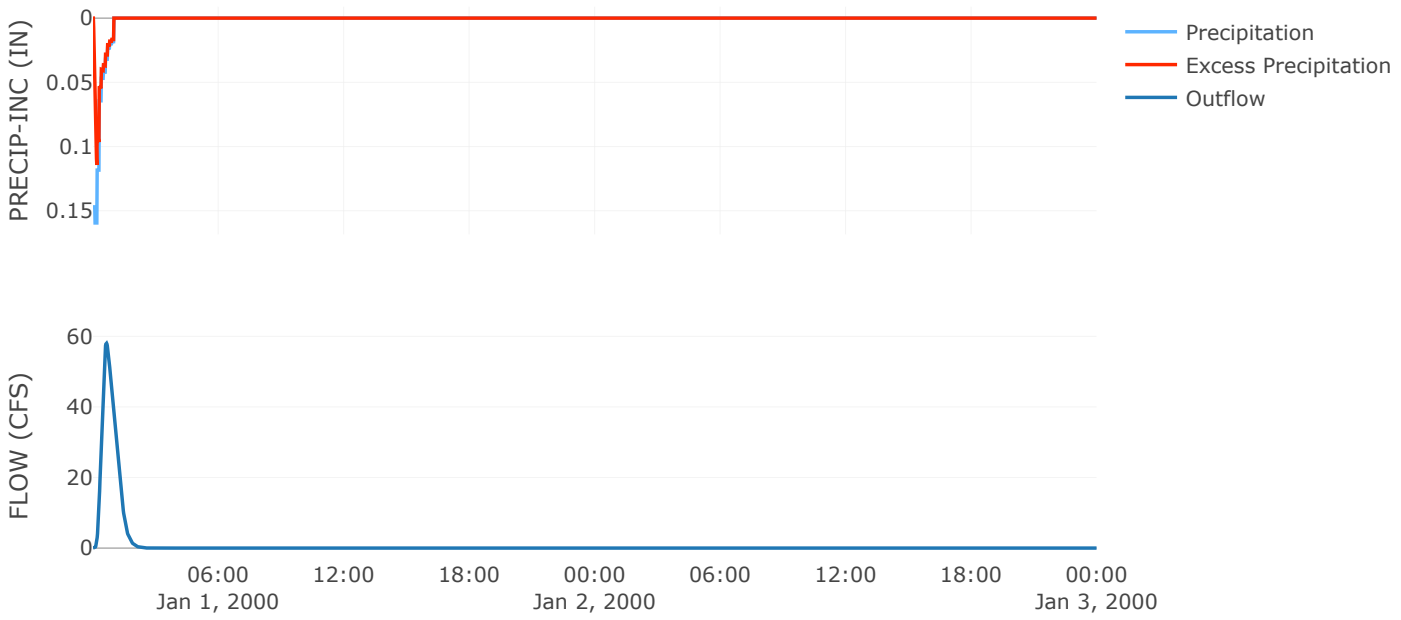
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

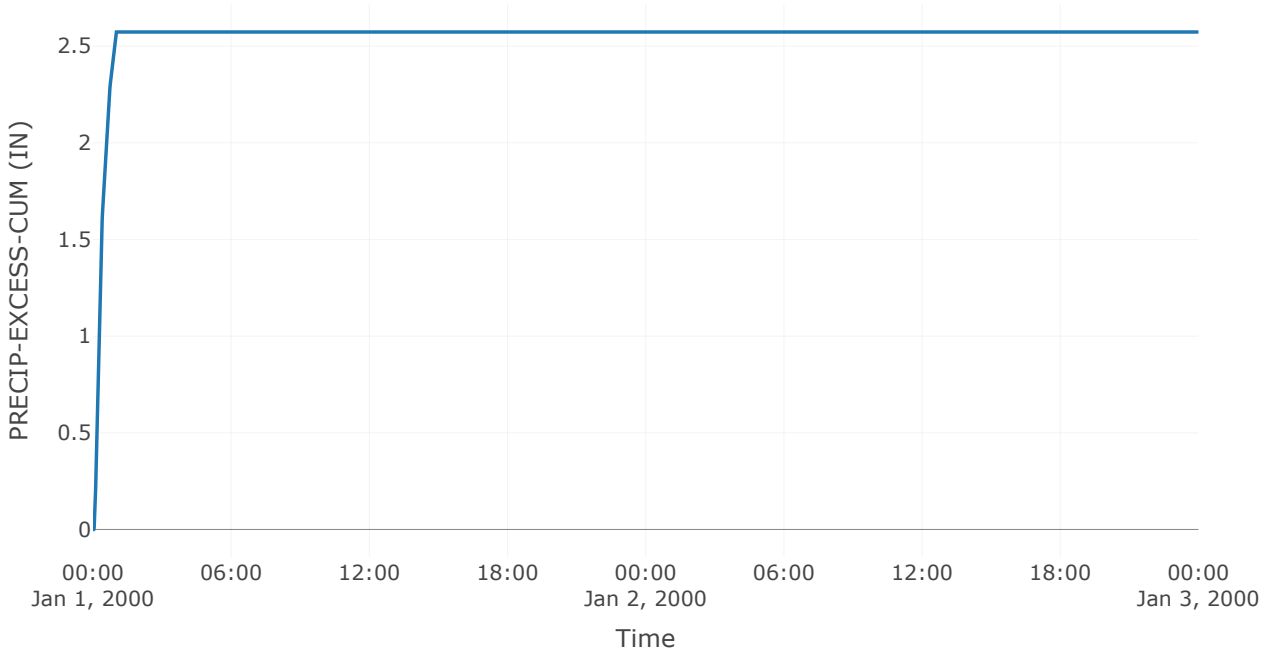
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

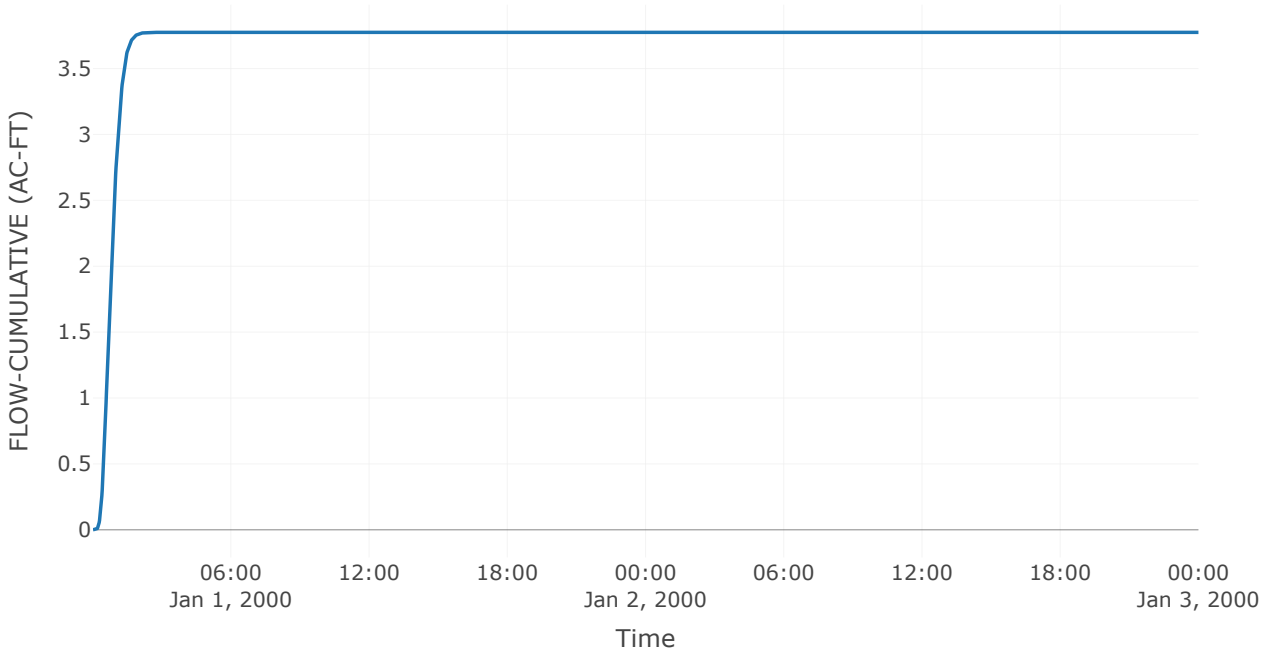
Precipitation and Outflow



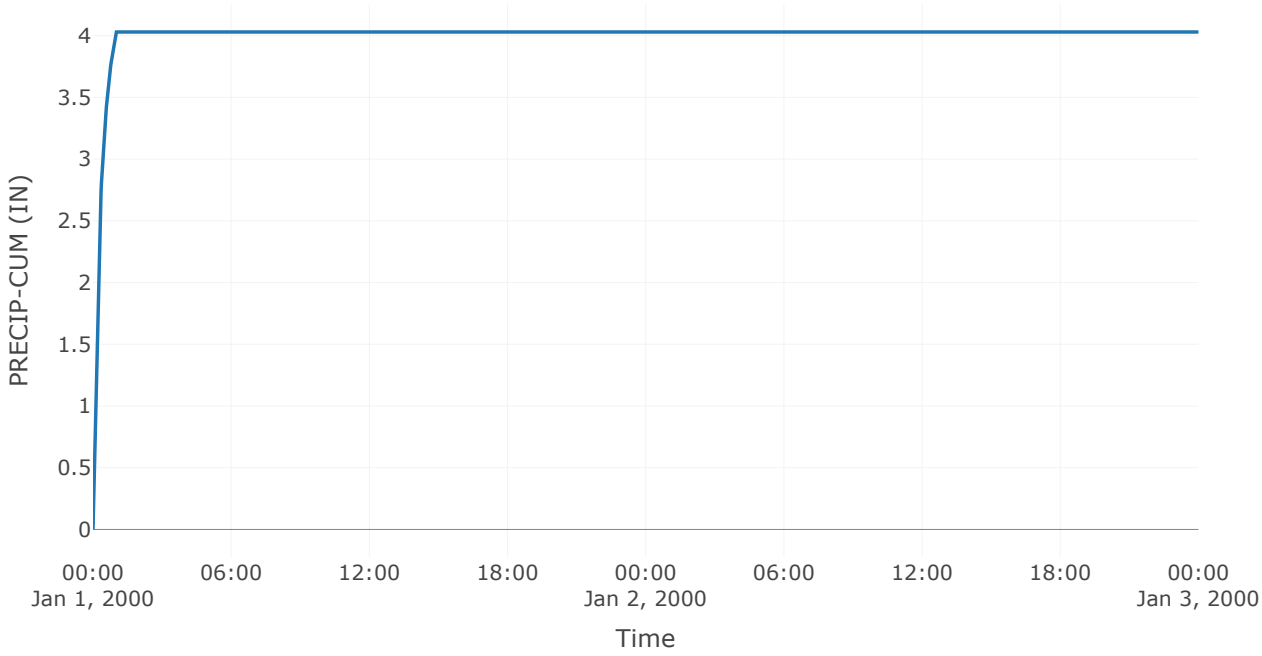
Cumulative Excess Precipitation

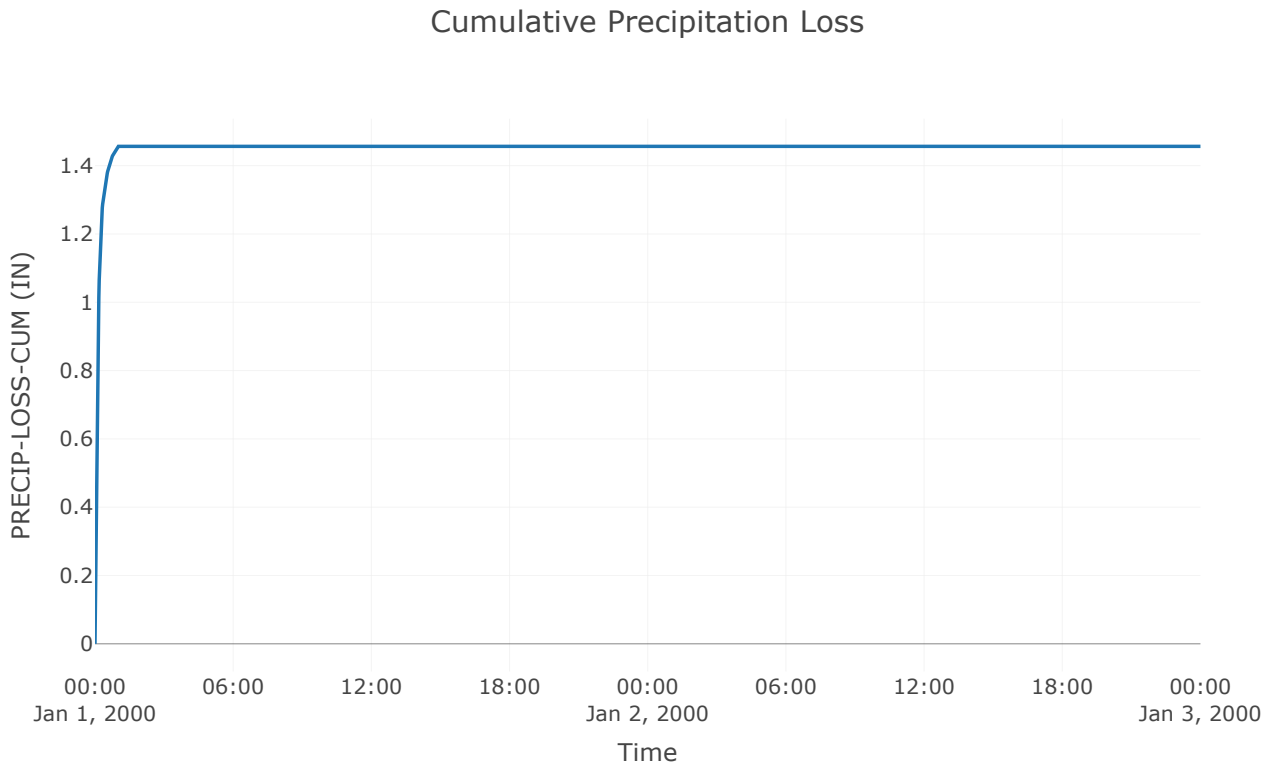


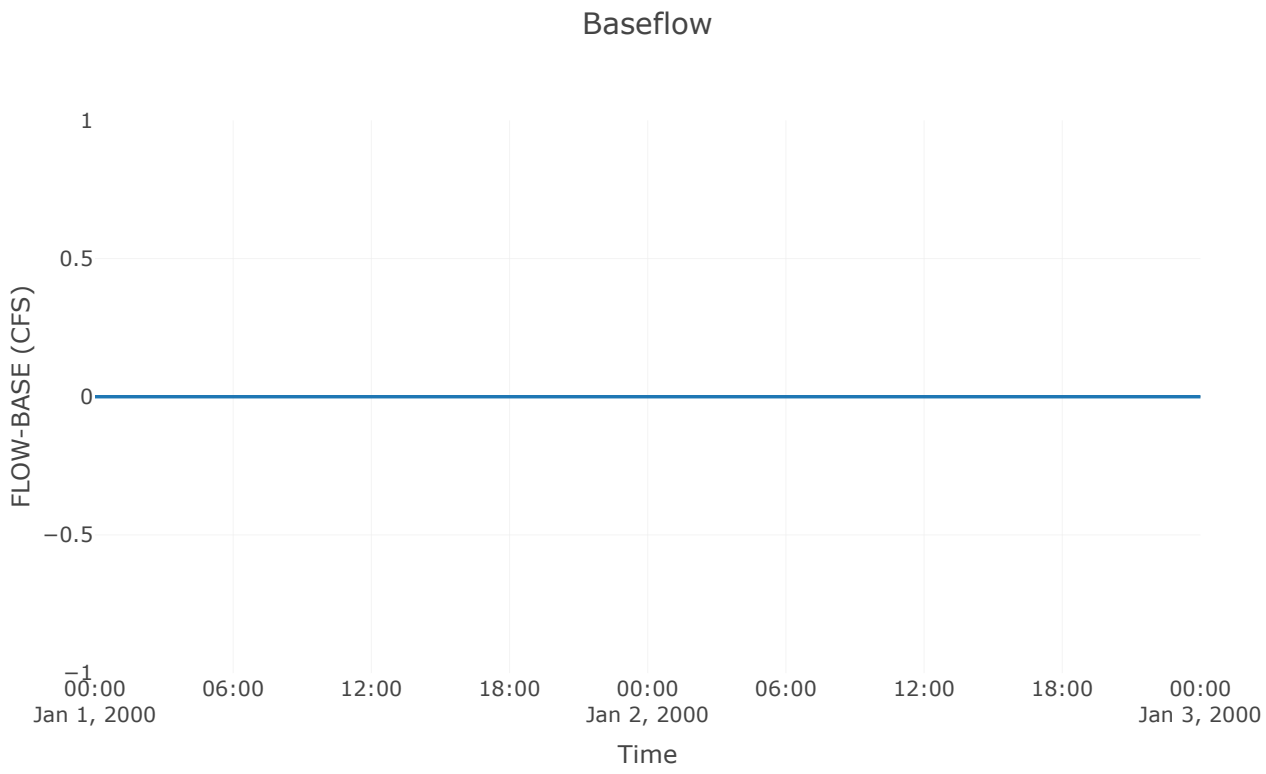
Cumulative Outflow



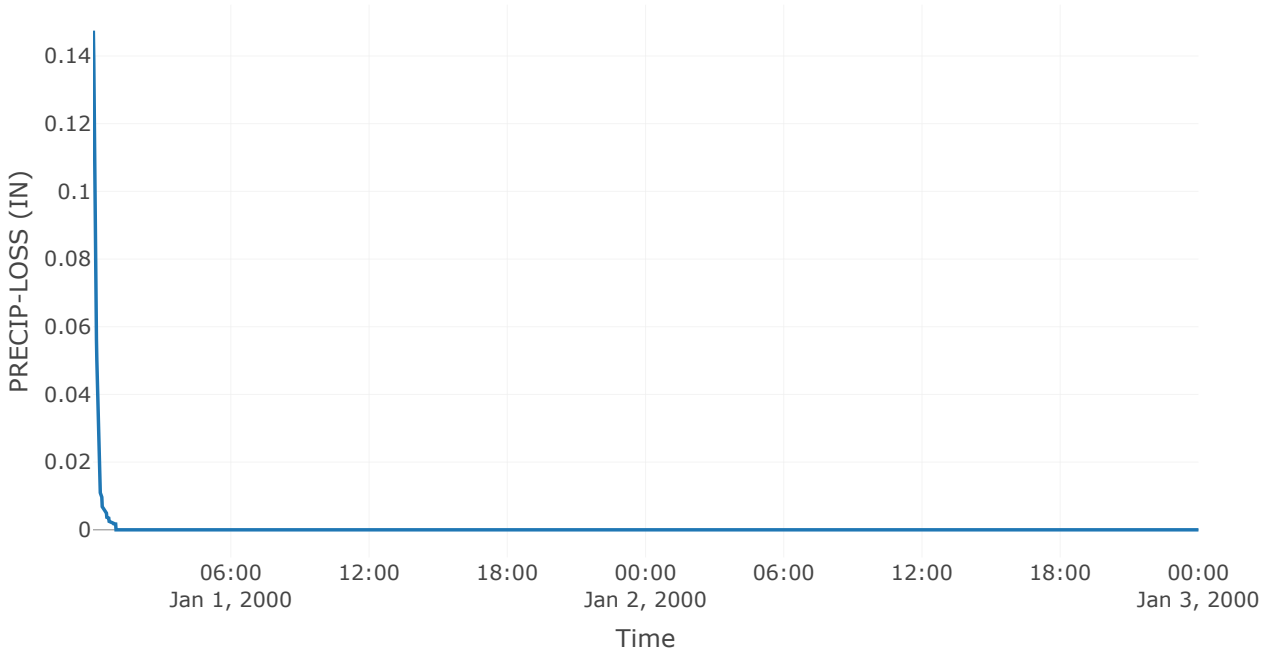
Cumulative Precipitation



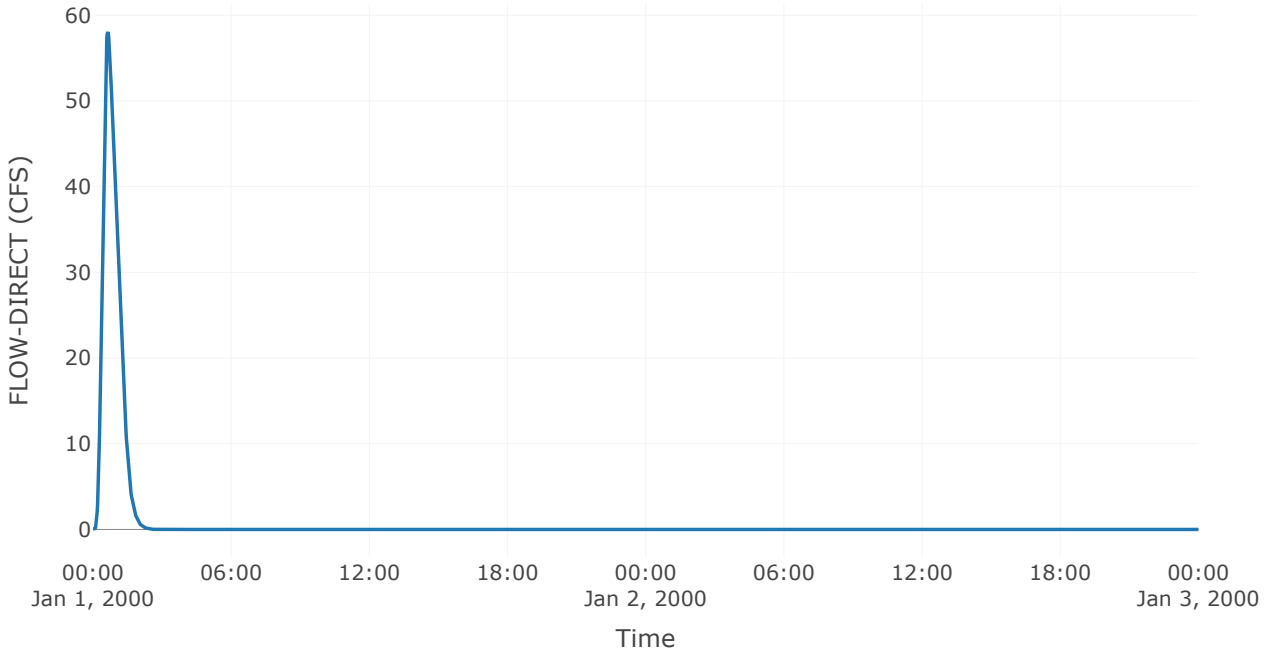

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

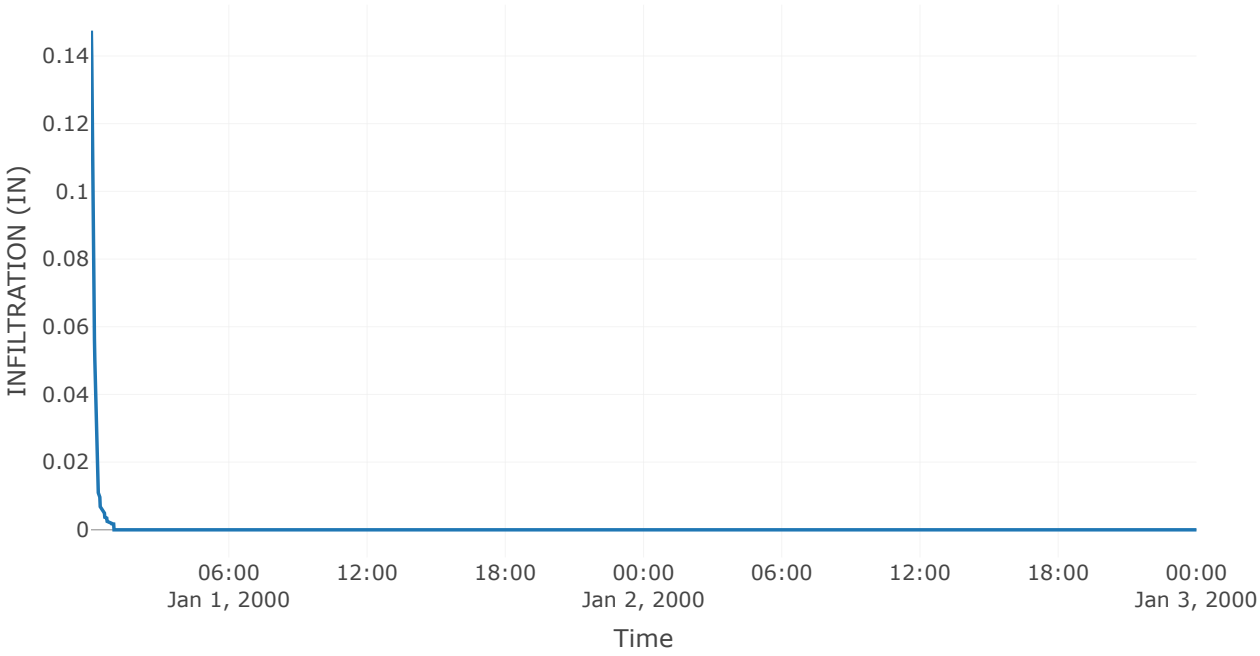

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

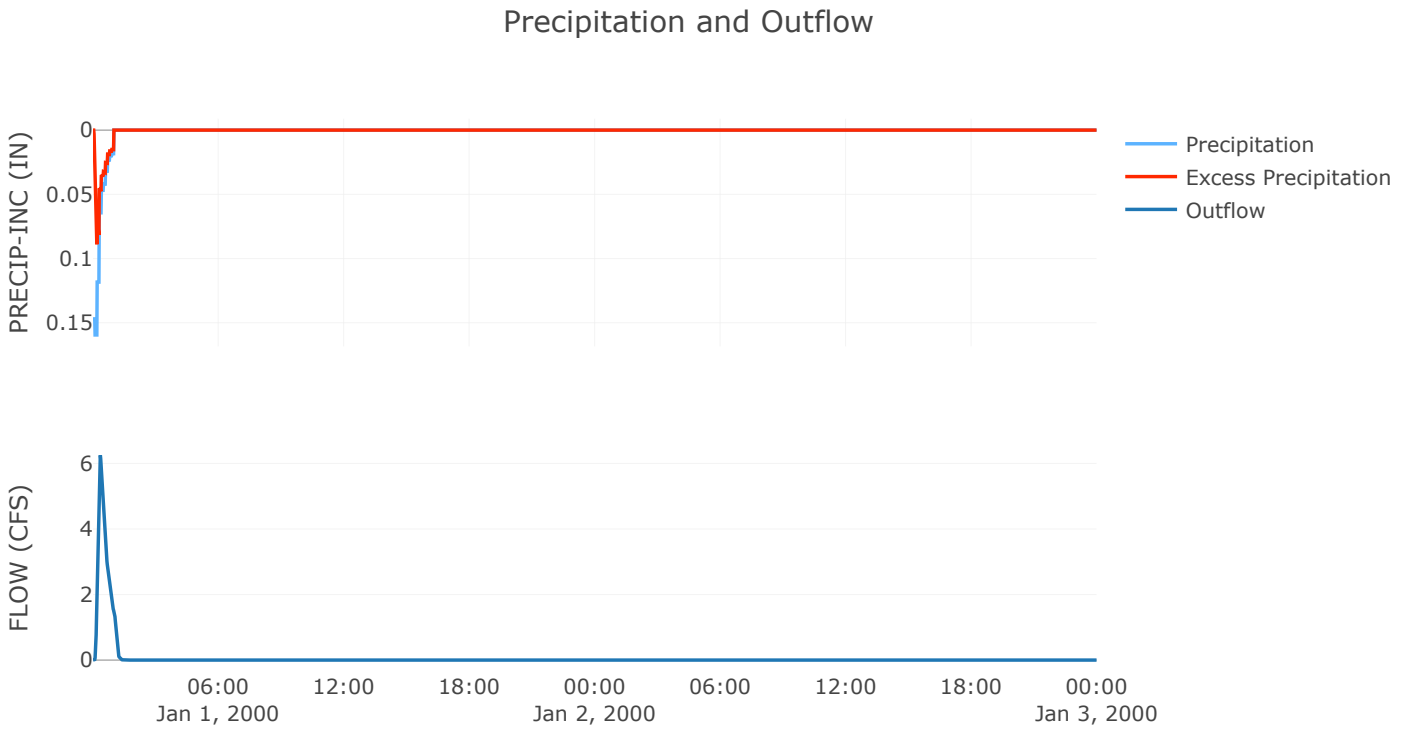
Subbasin: Off-Site Trib 1 South

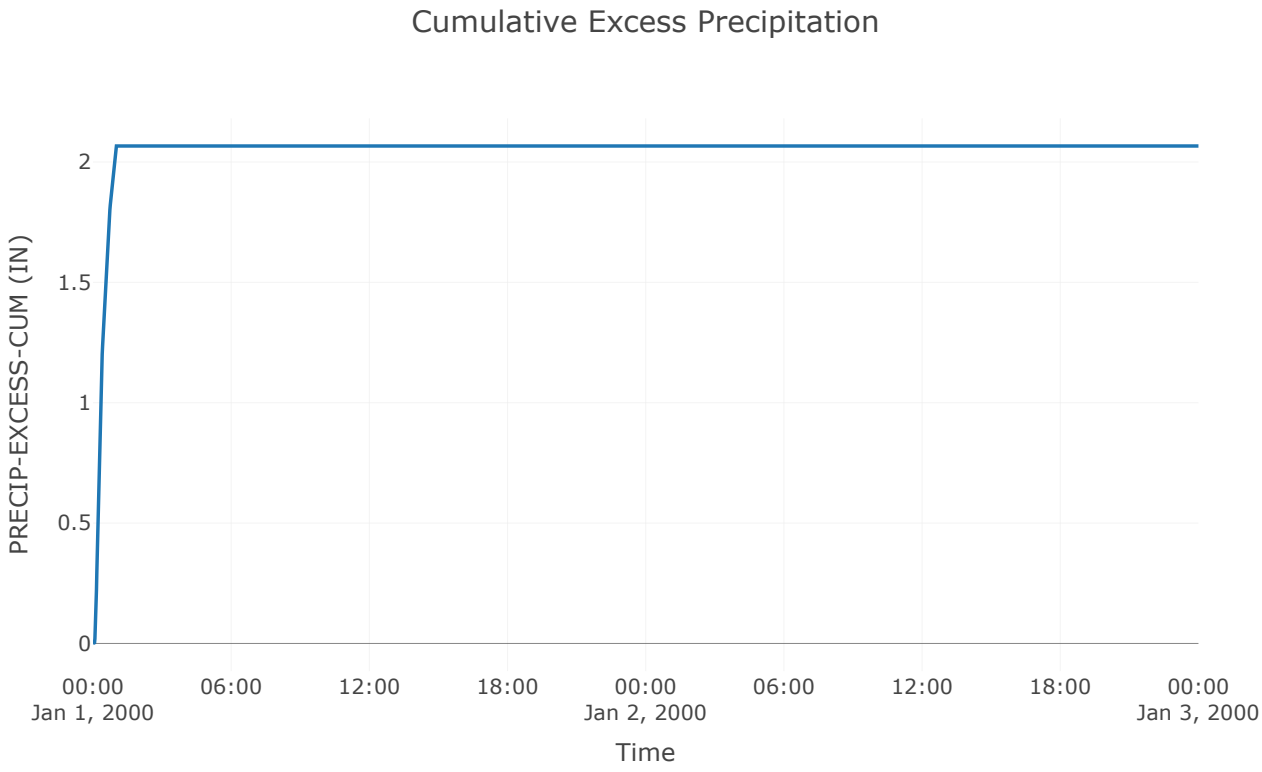
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

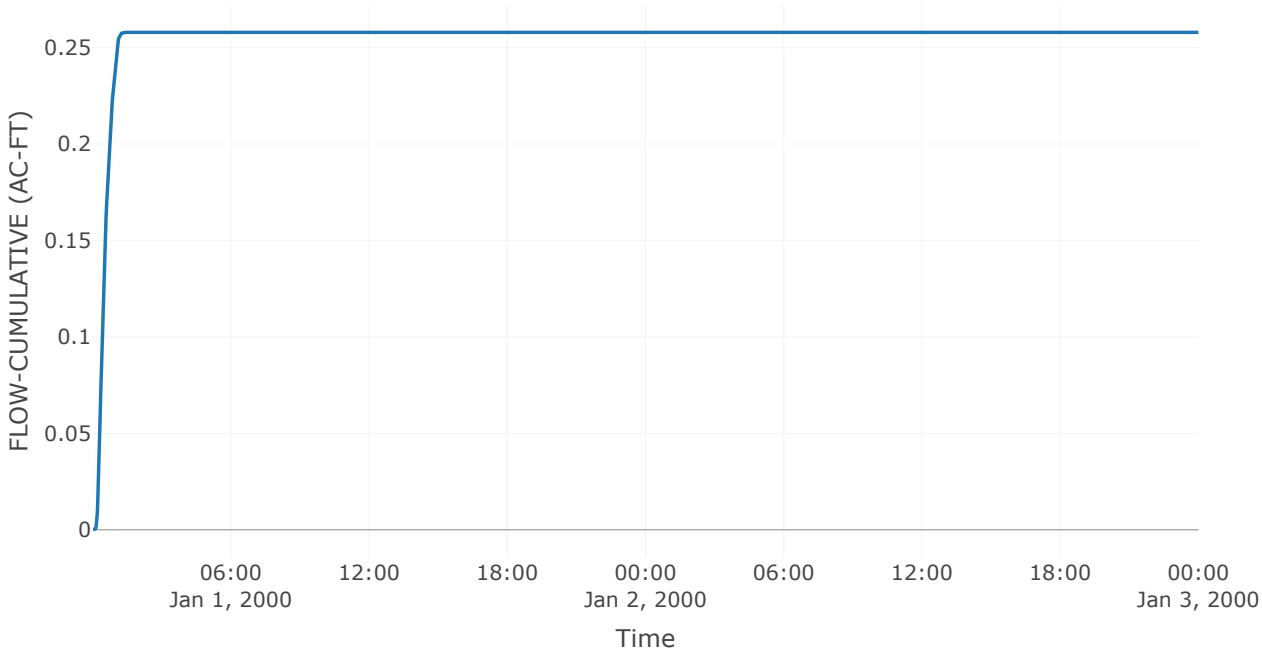
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

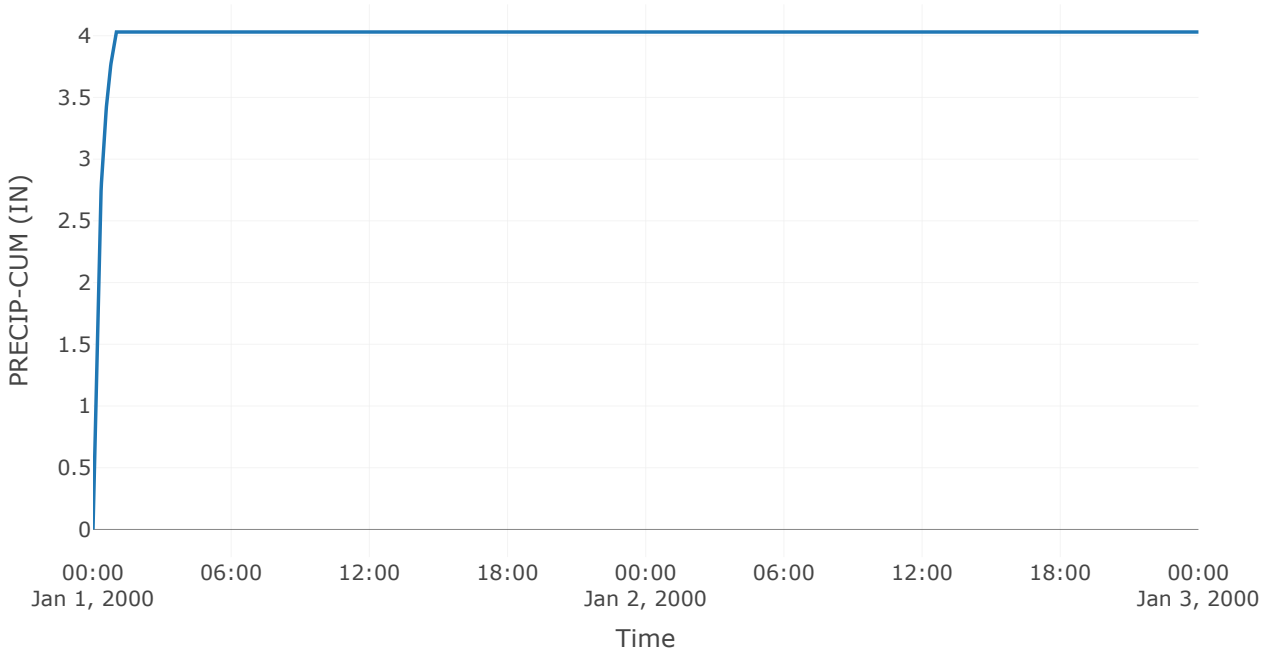

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
6
4
2
0
06:00
12:00
18:00
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
Jan 3, 2000

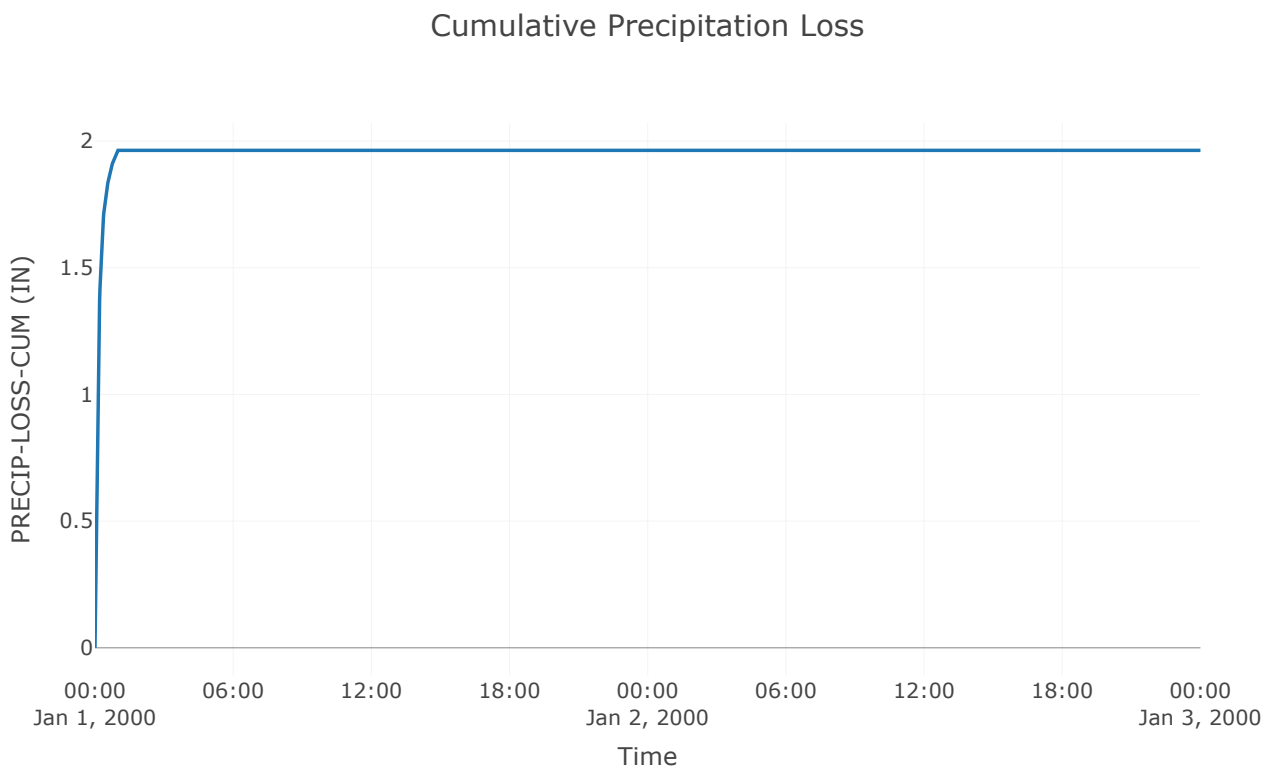

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

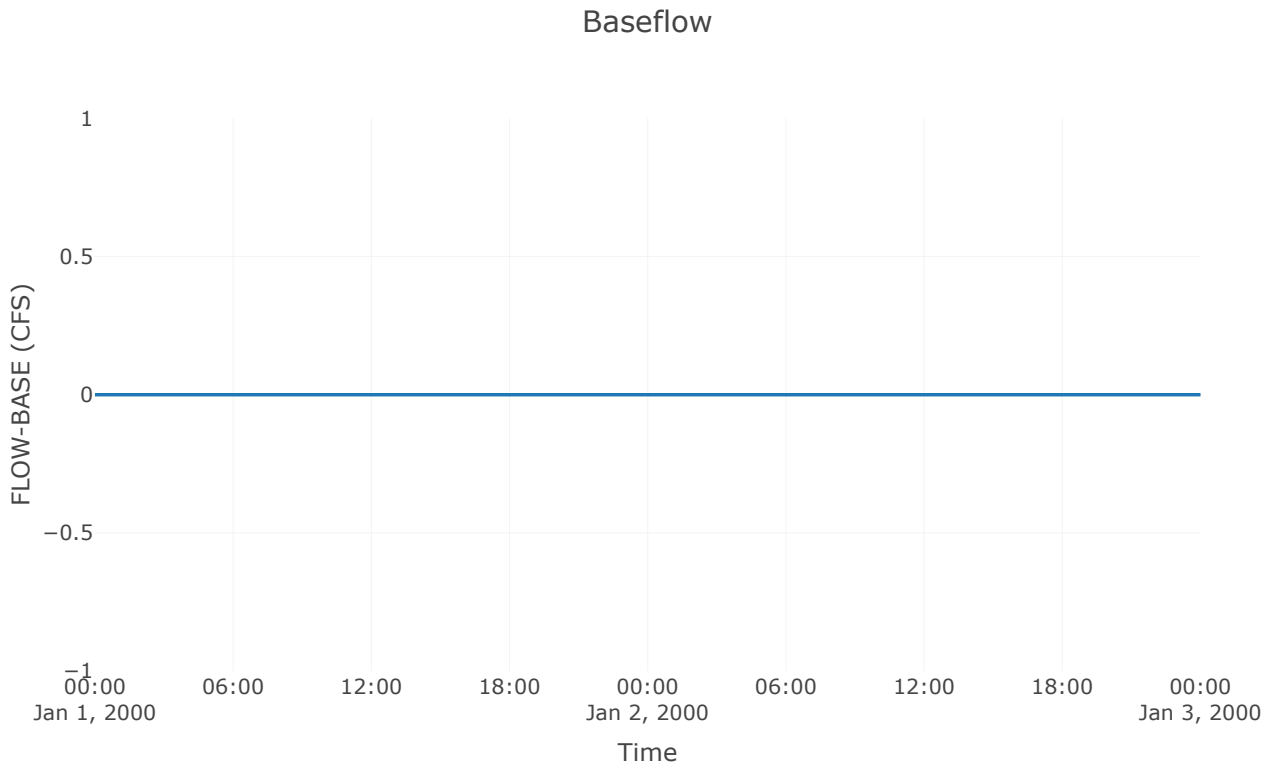
Cumulative Outflow



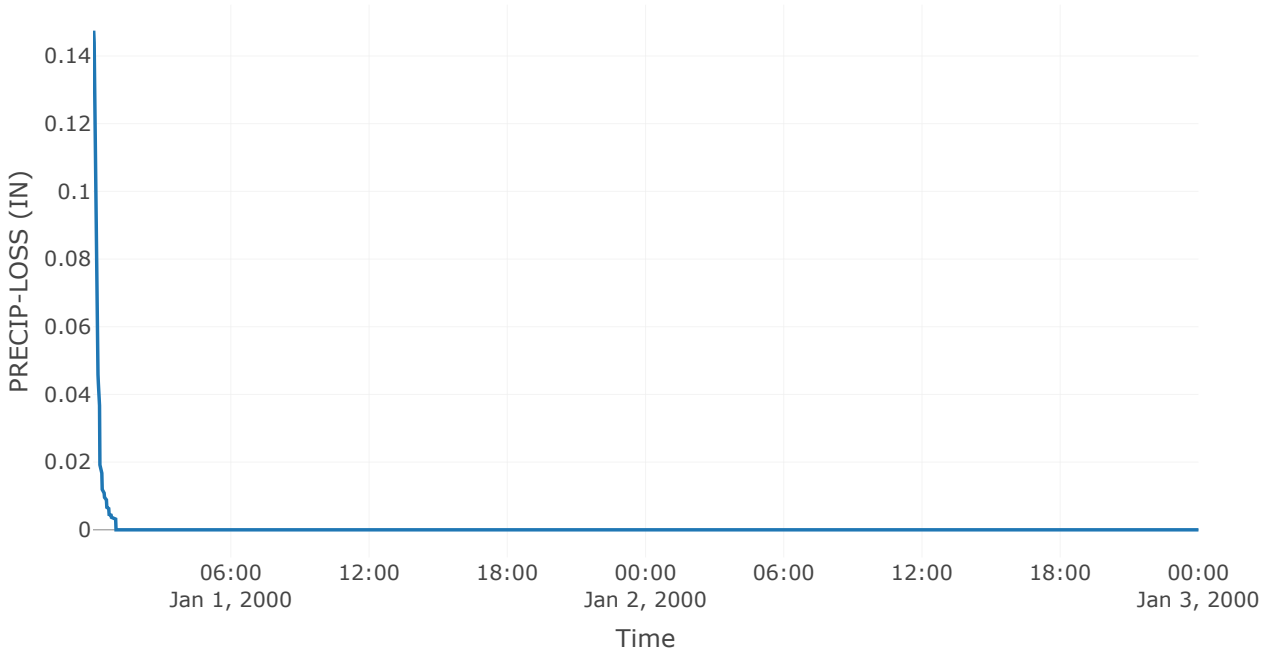
Cumulative Precipitation



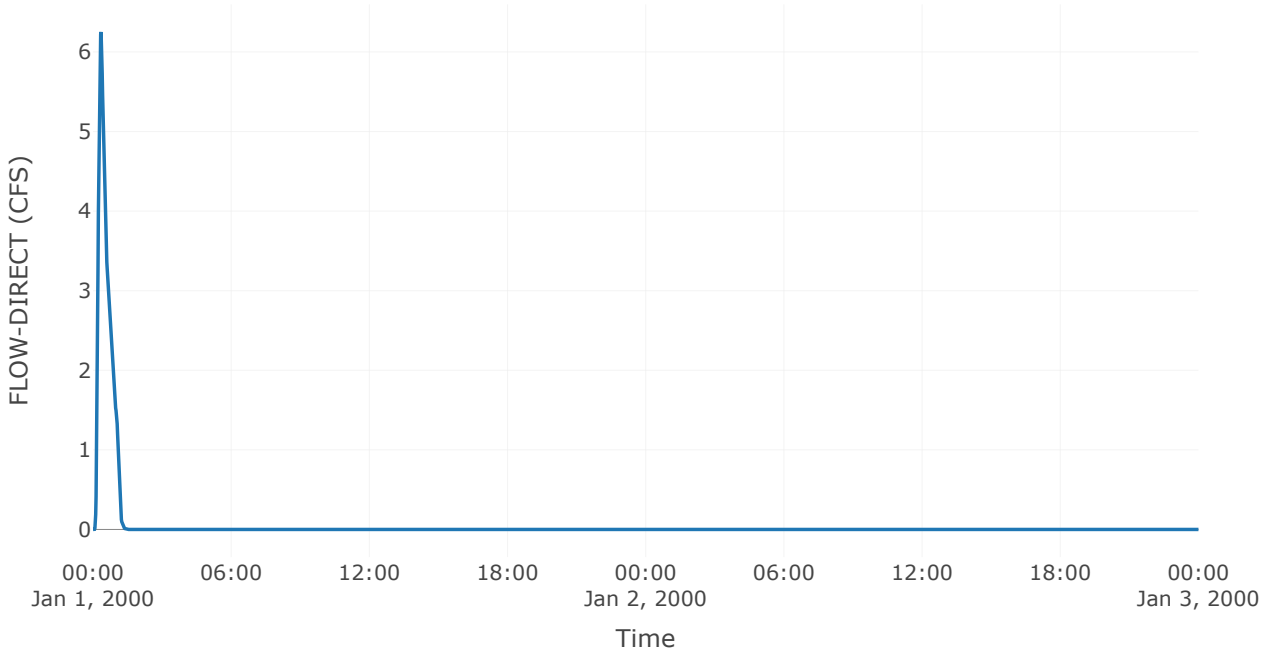

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

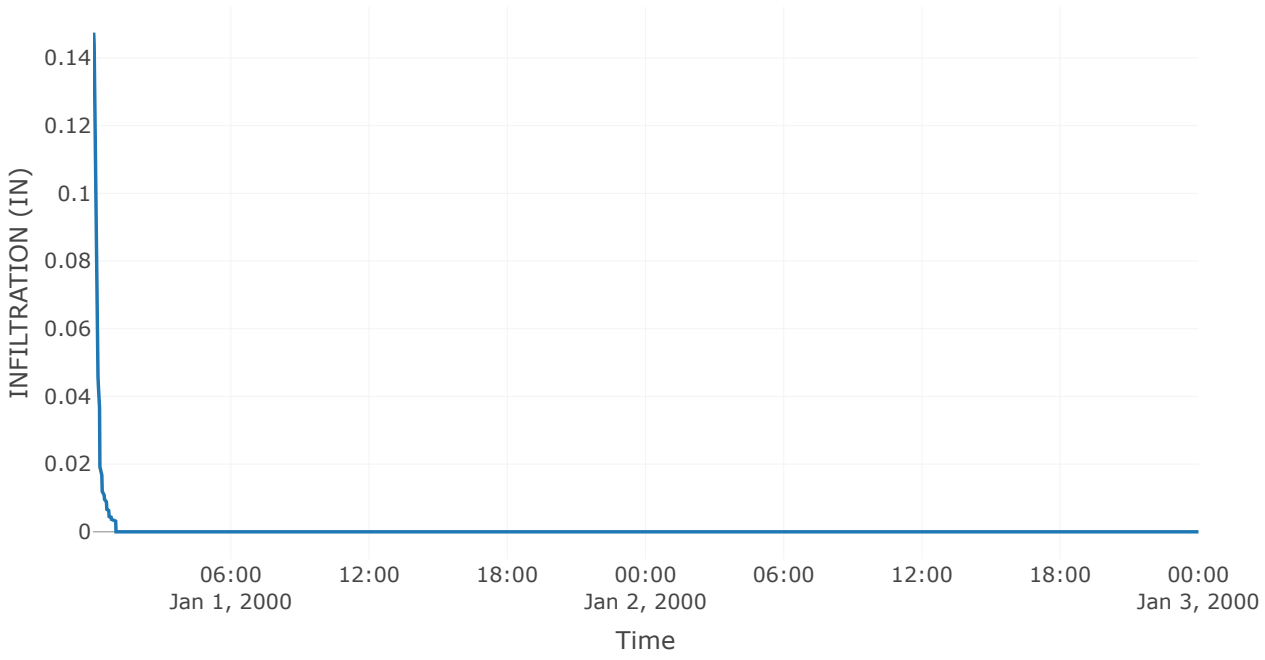

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

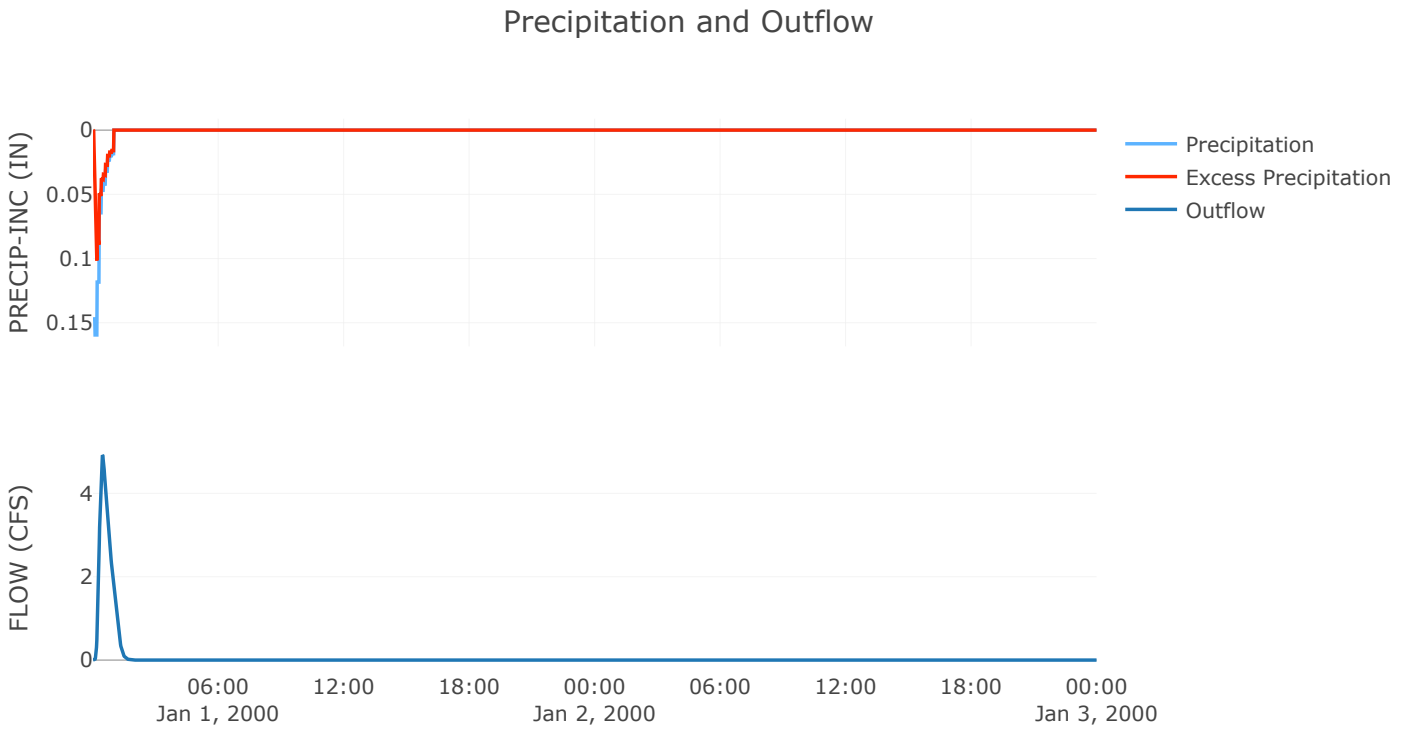
Subbasin: Off-Site Trib 1 West

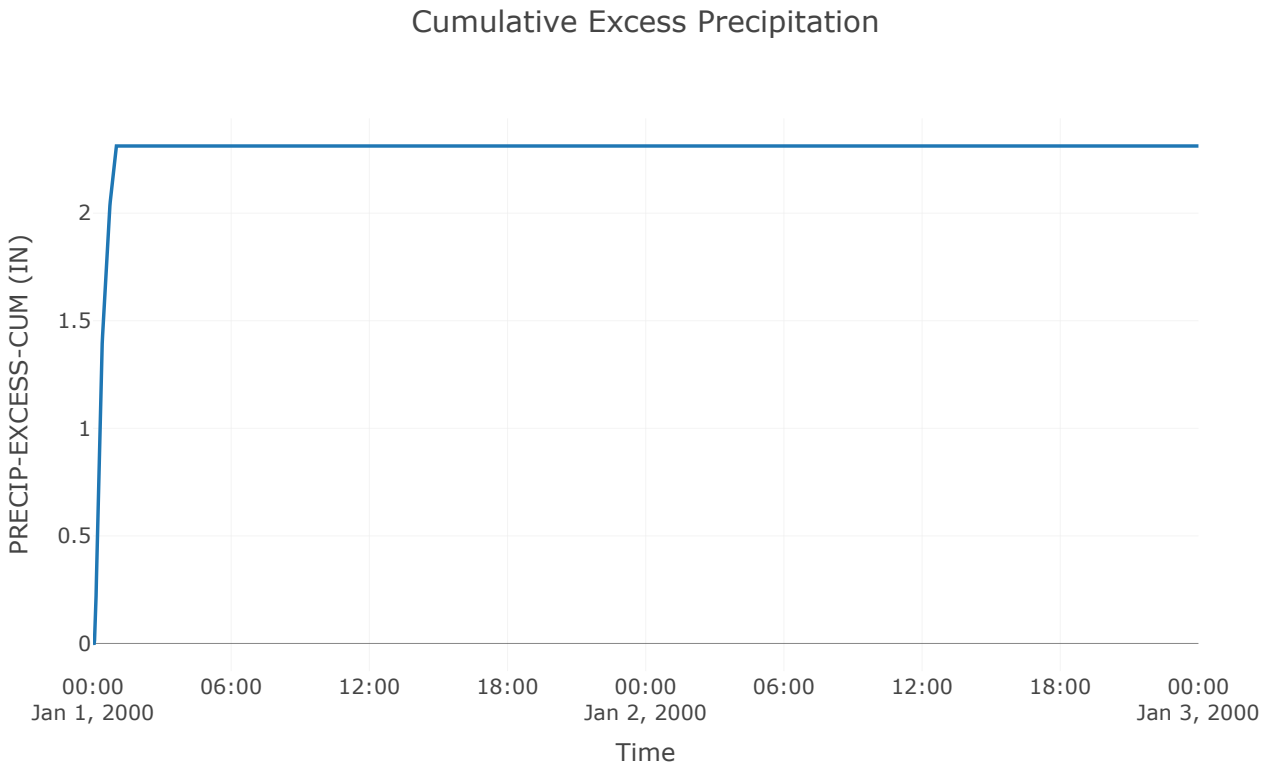
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

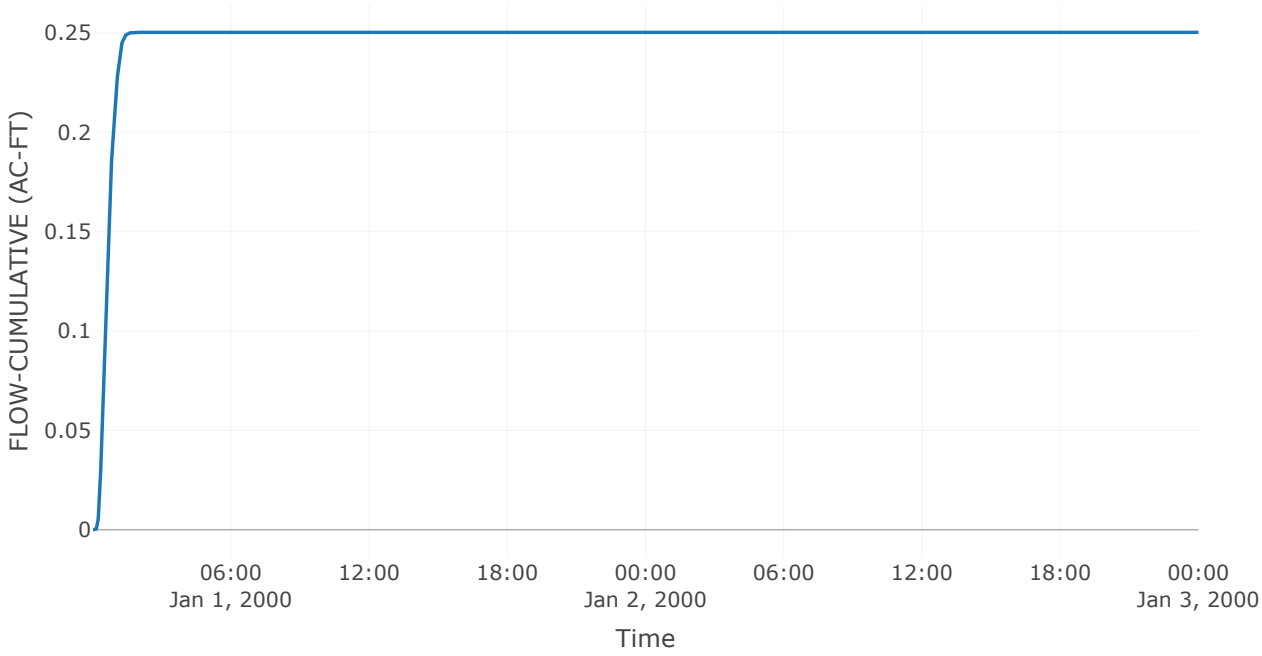
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

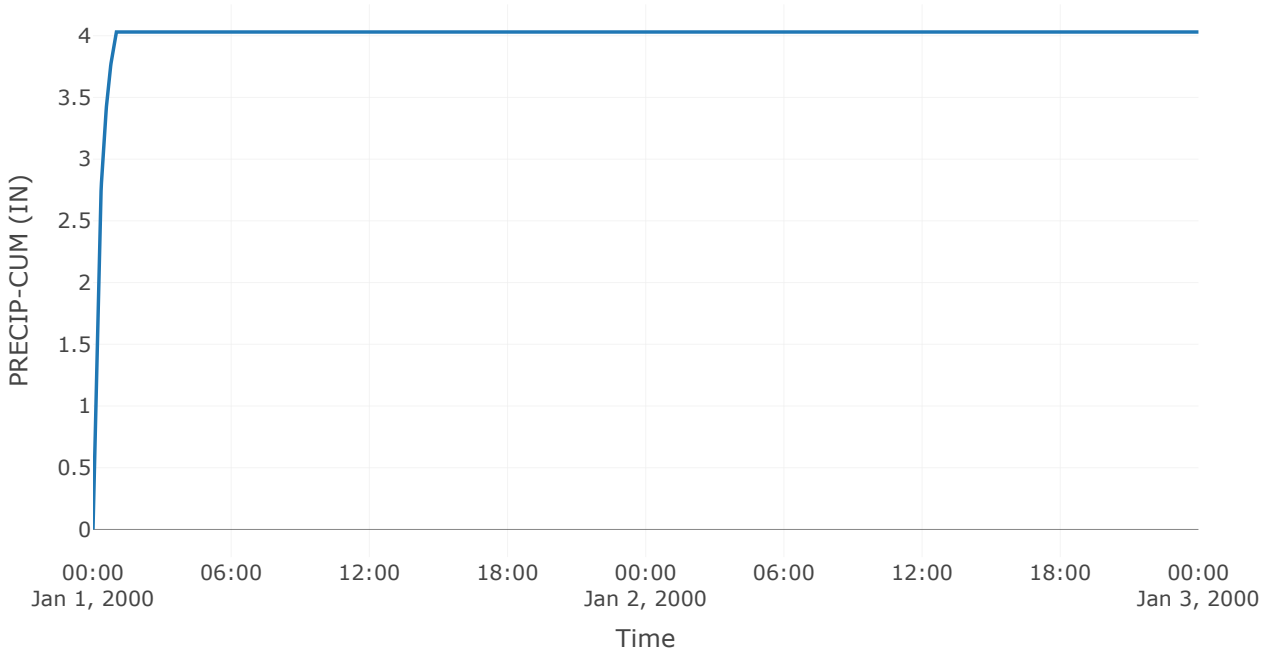

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
4
2
0
06:00
12:00
18:00
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
Jan 3, 2000

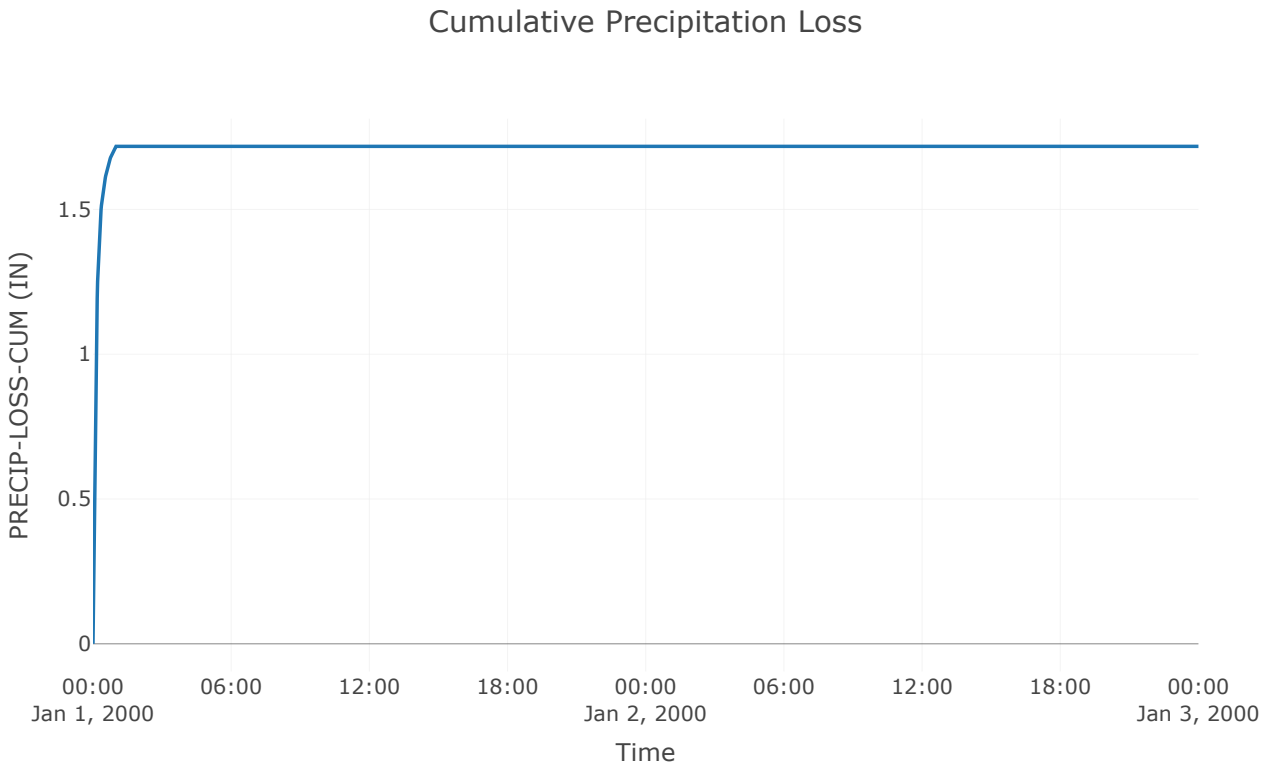

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

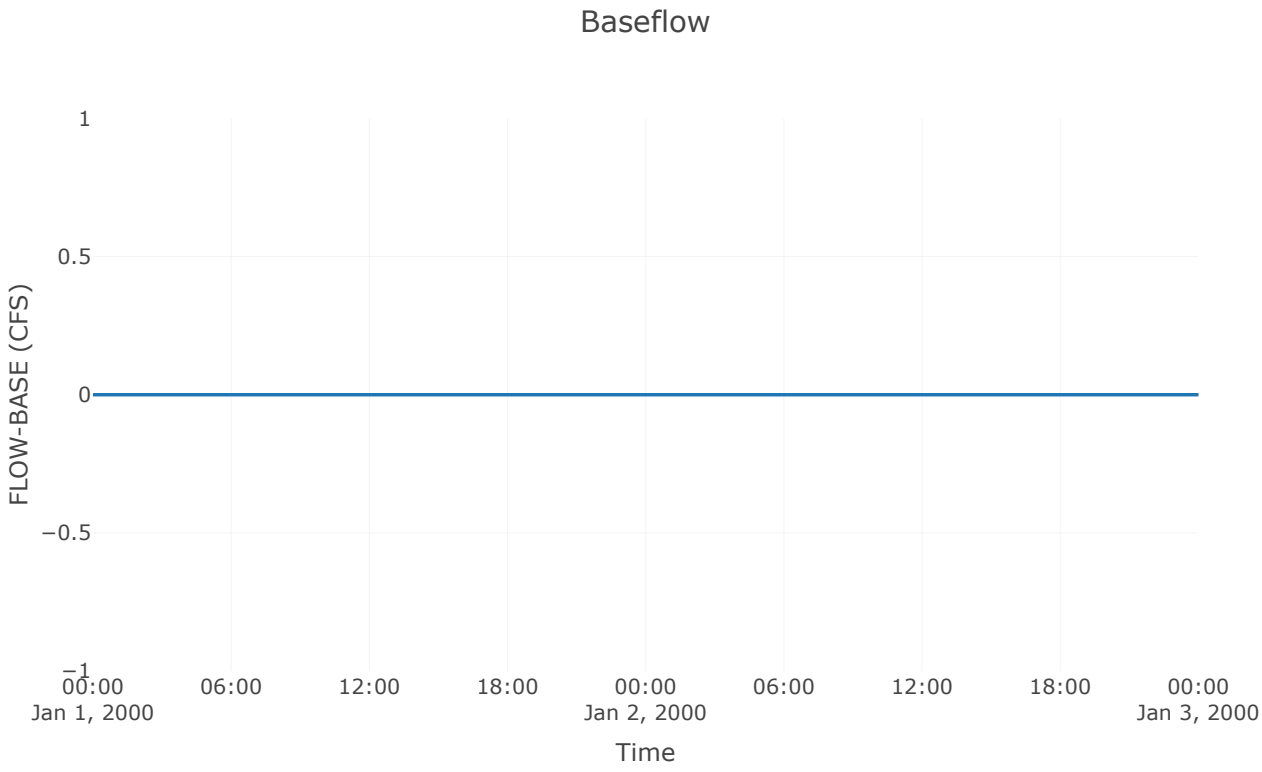
Cumulative Outflow

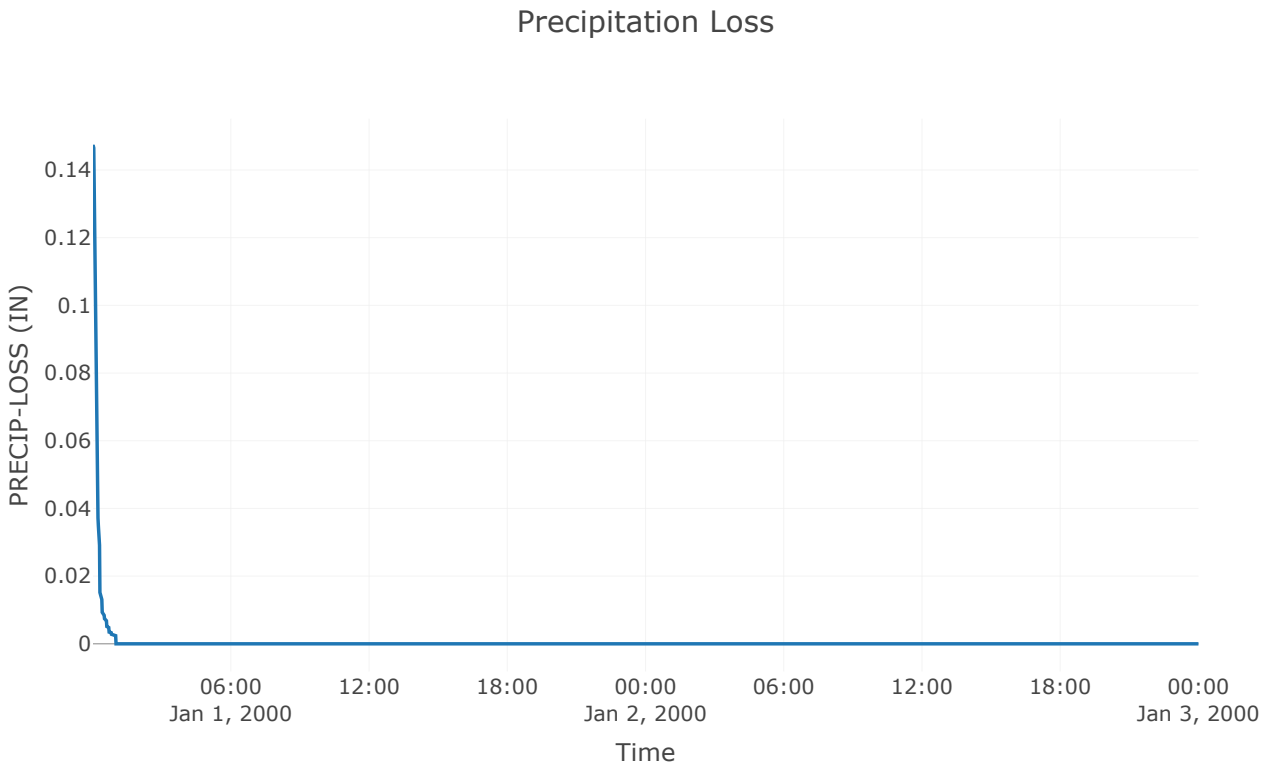


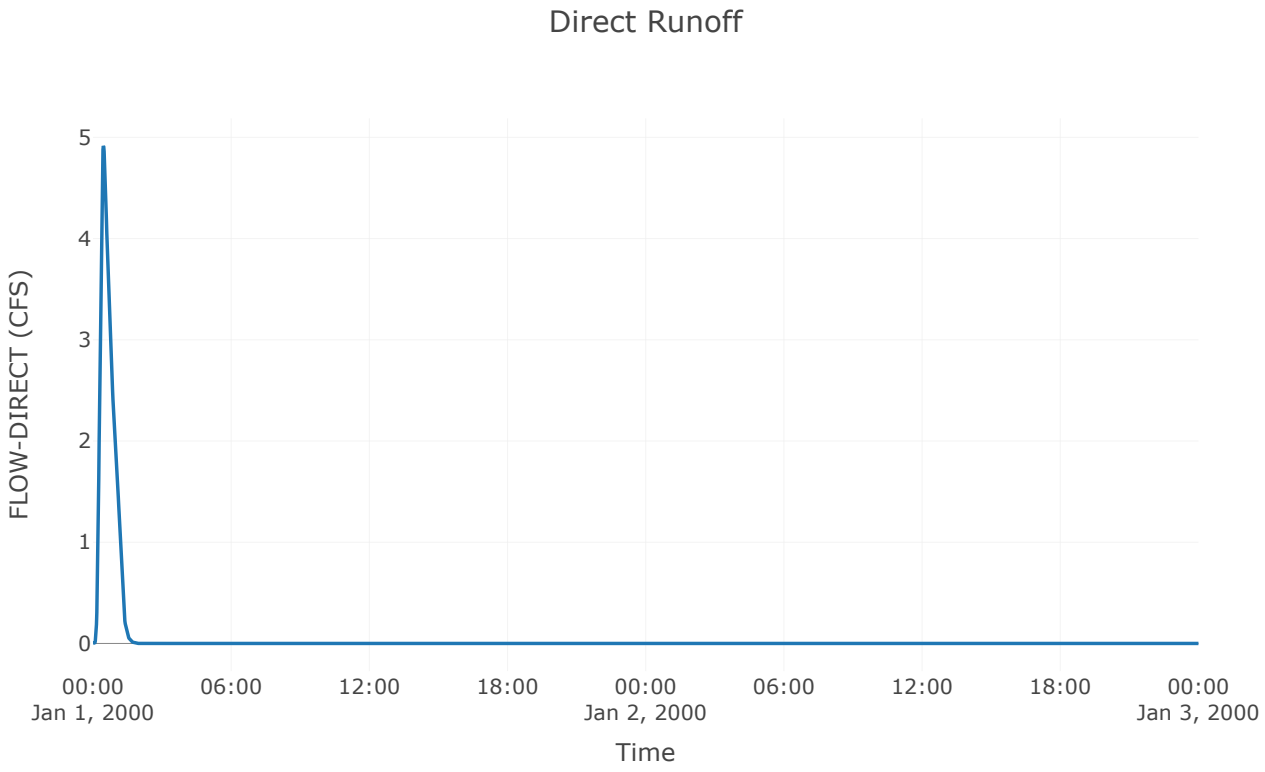
Cumulative Precipitation

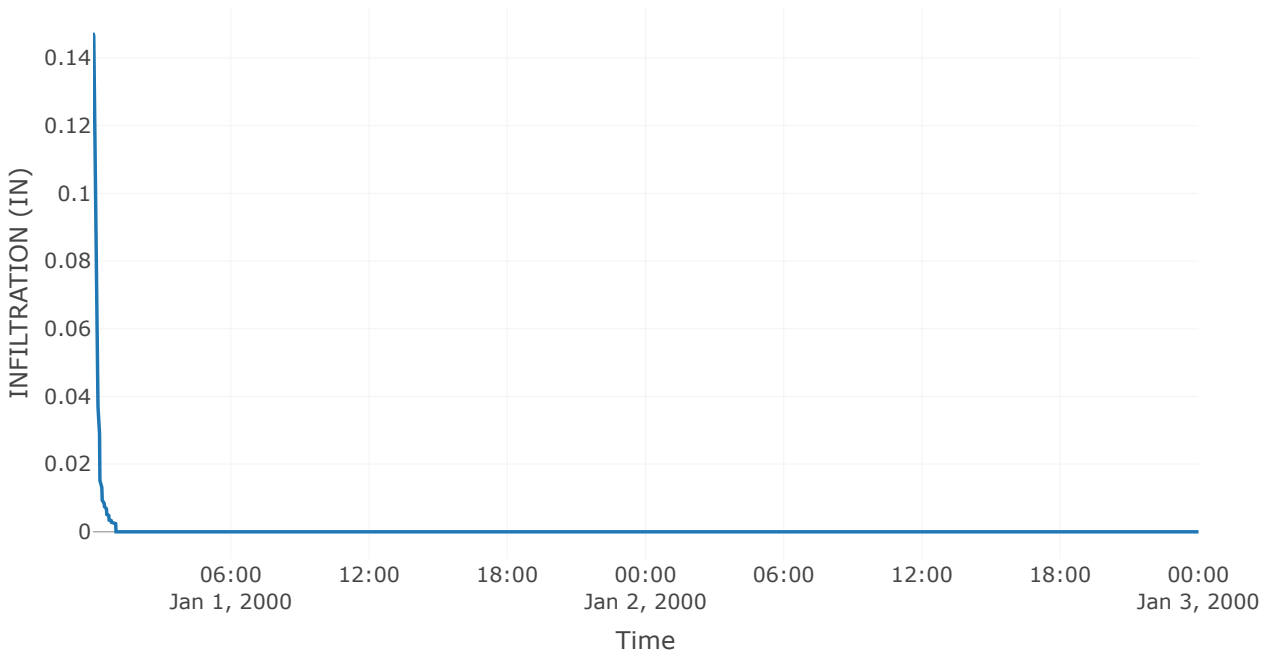



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

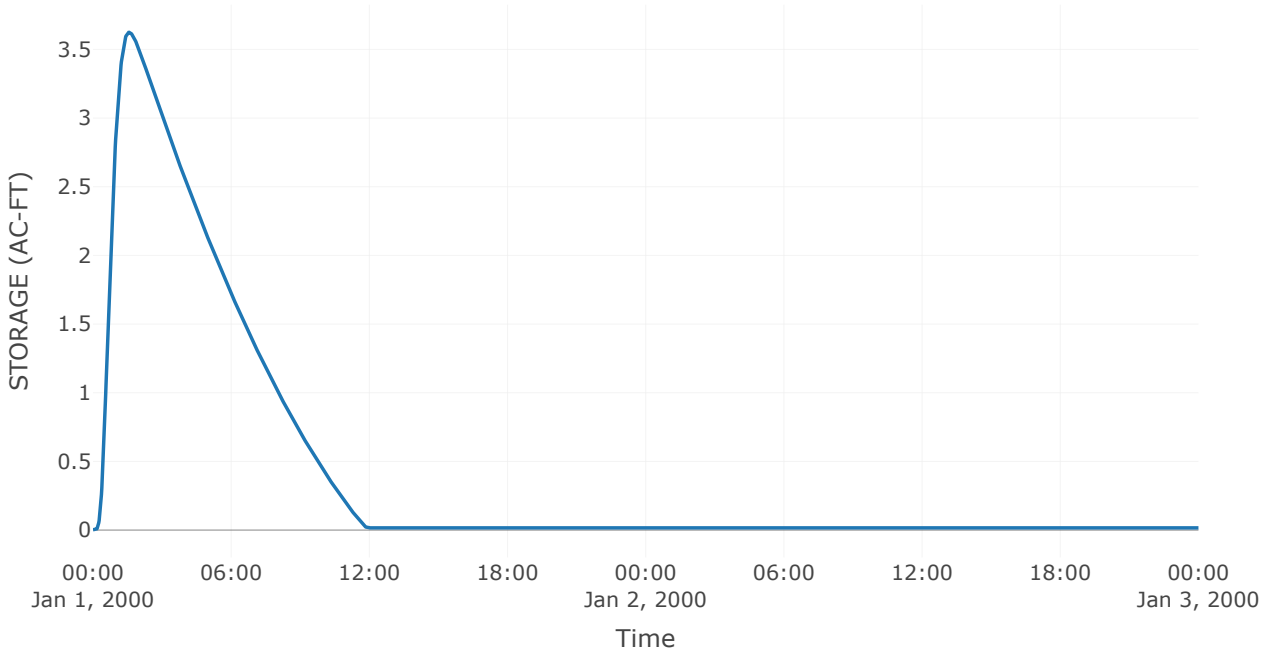

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

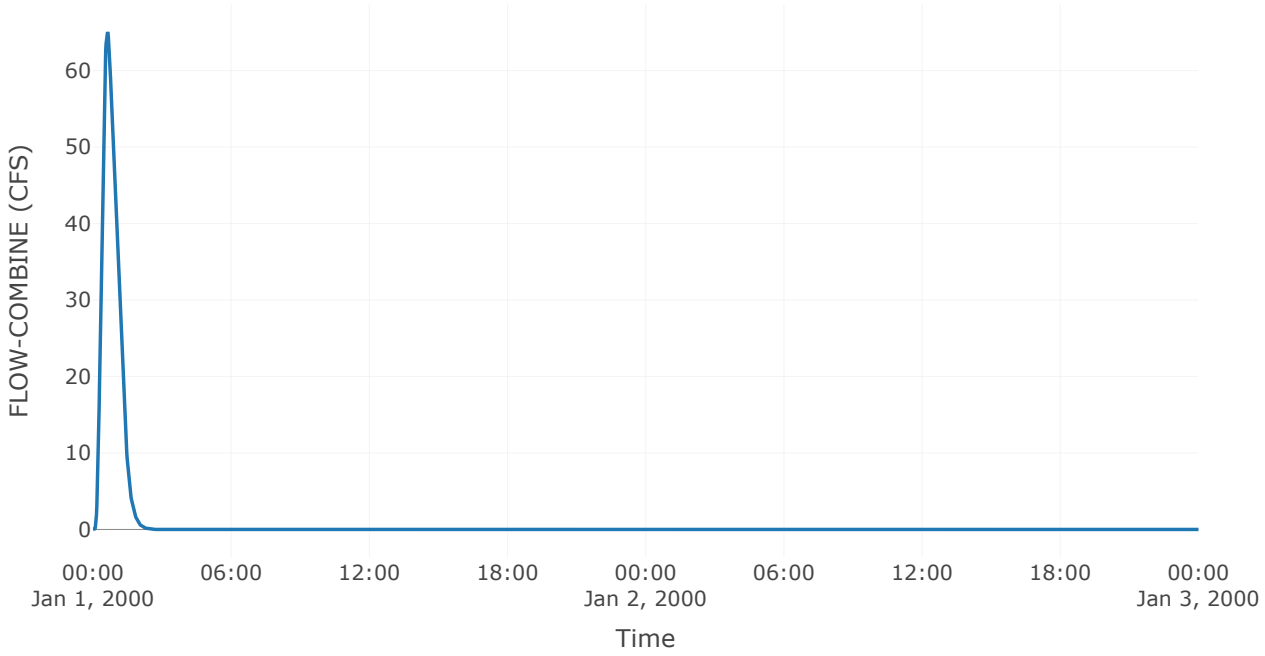
Downstream : Basin 2

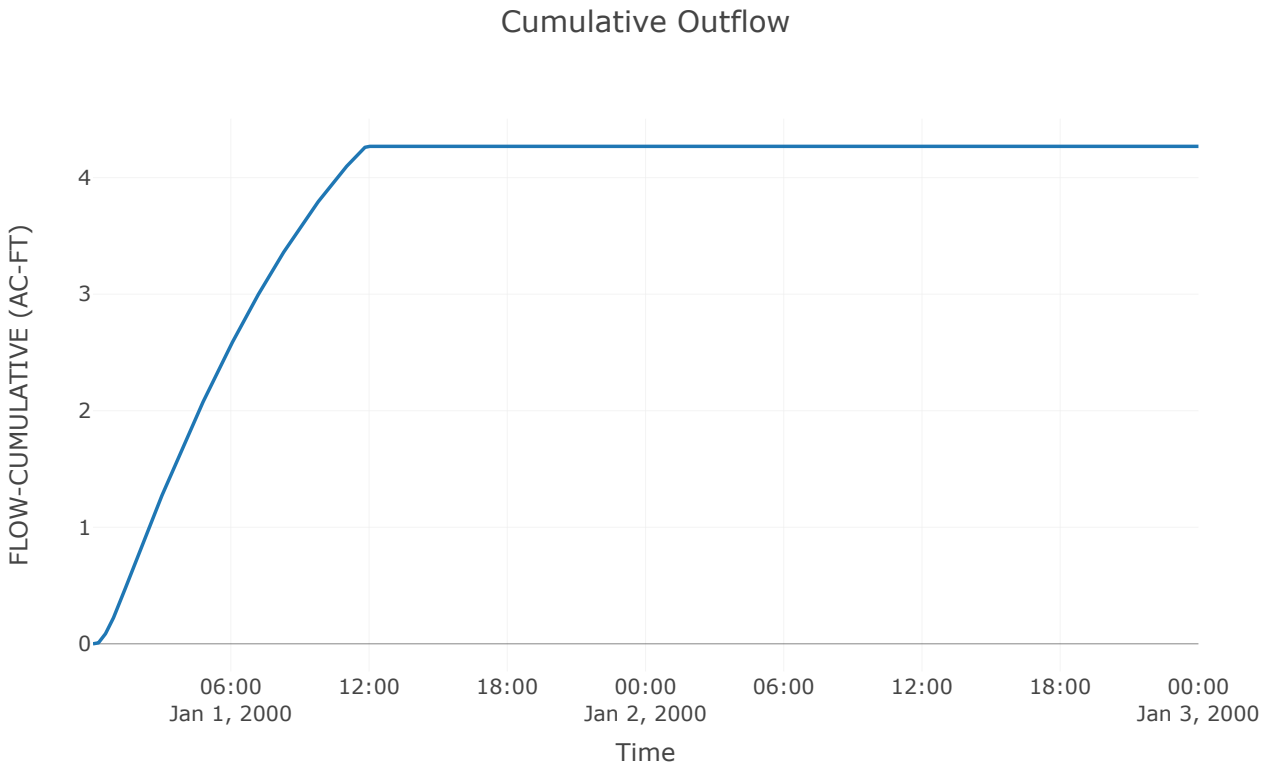
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

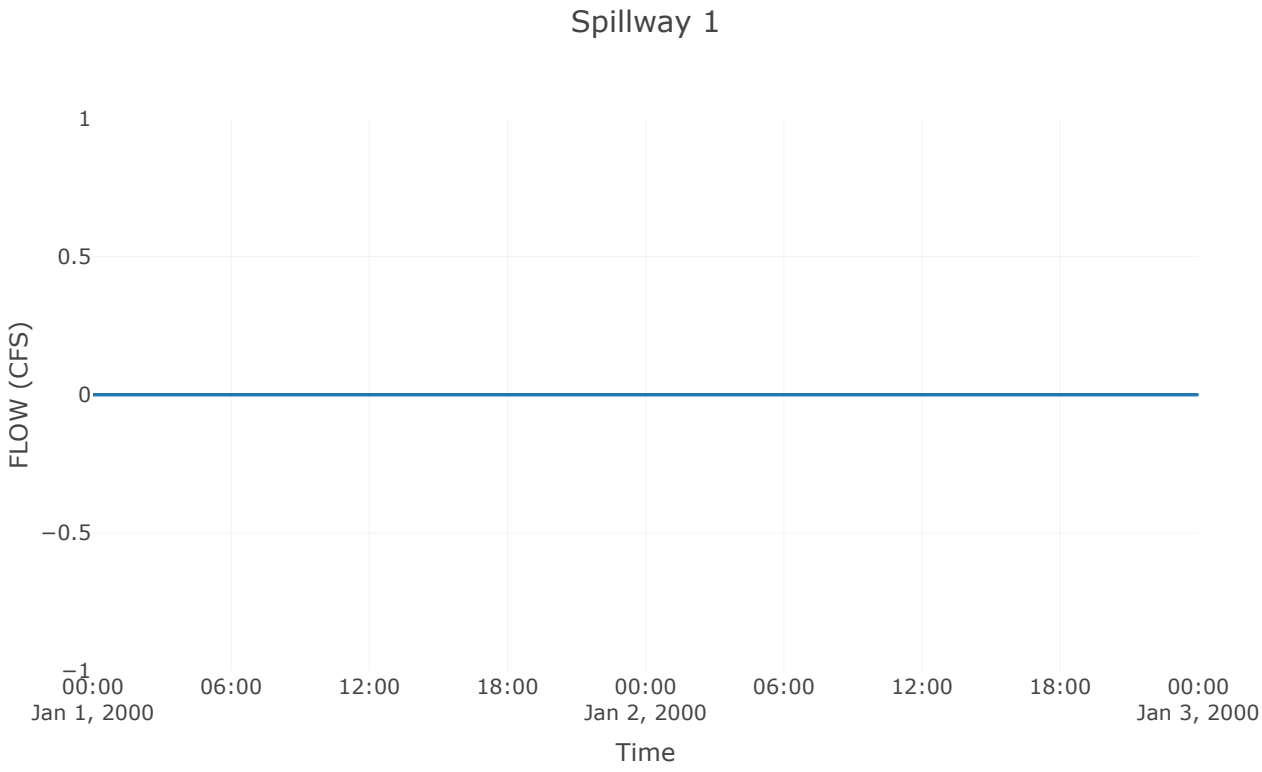
Storage



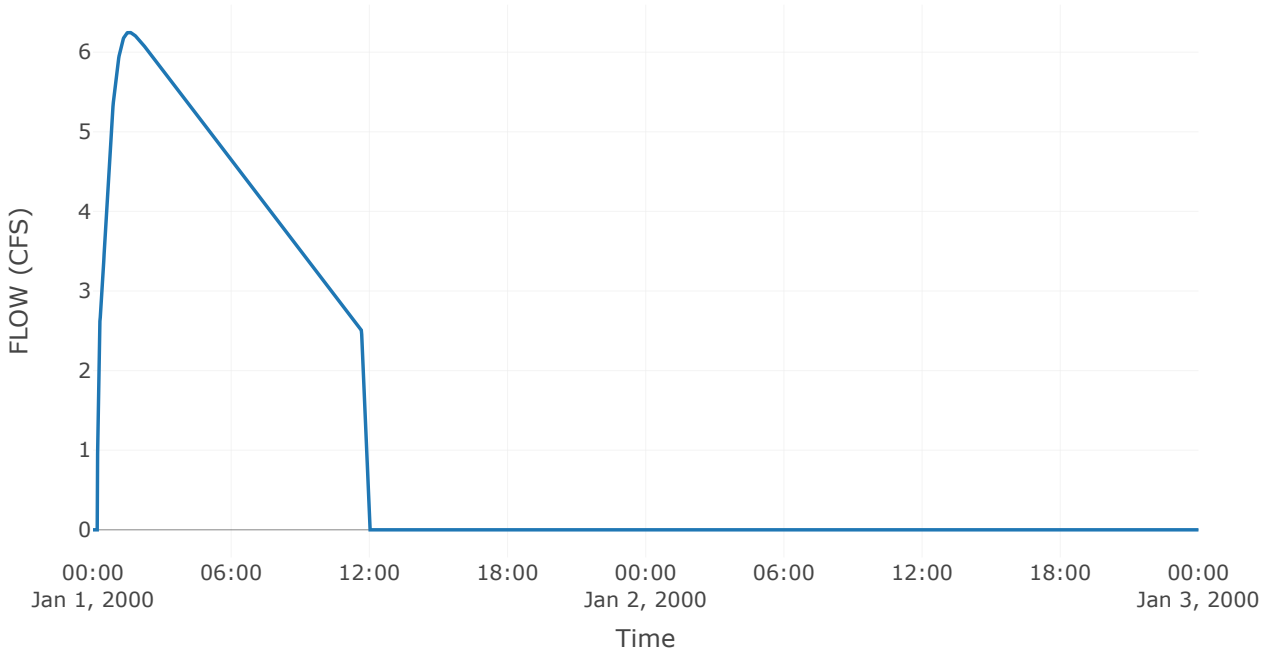
Combined Inflow



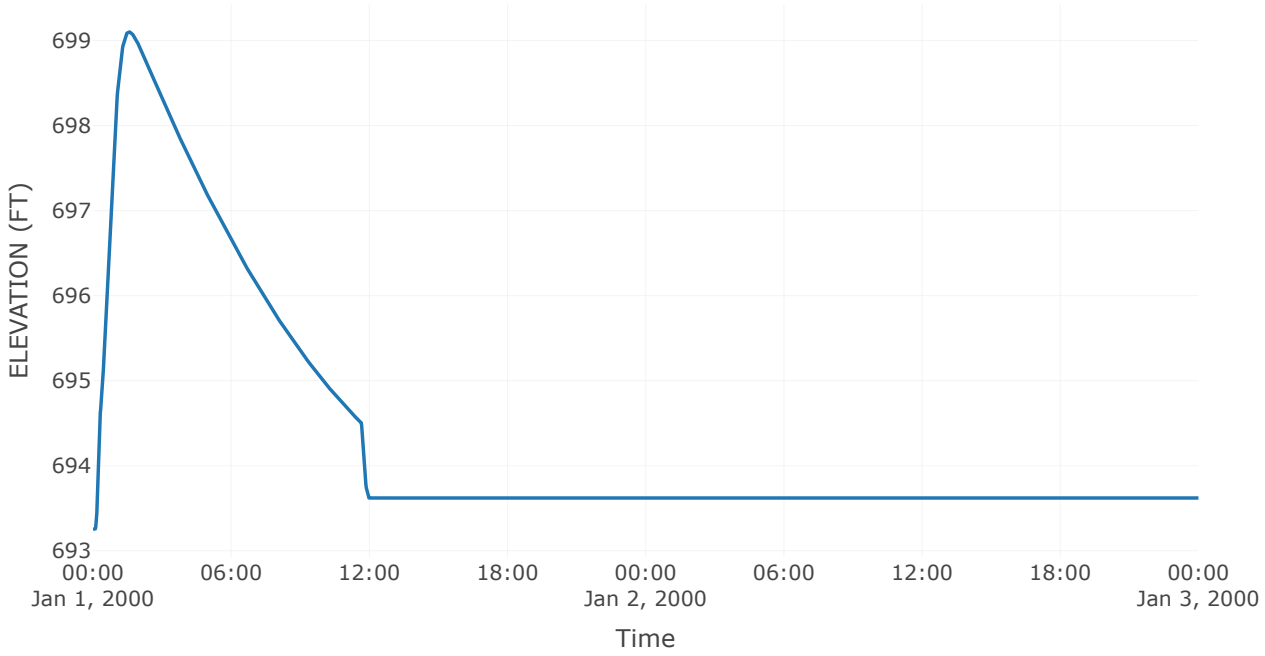

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

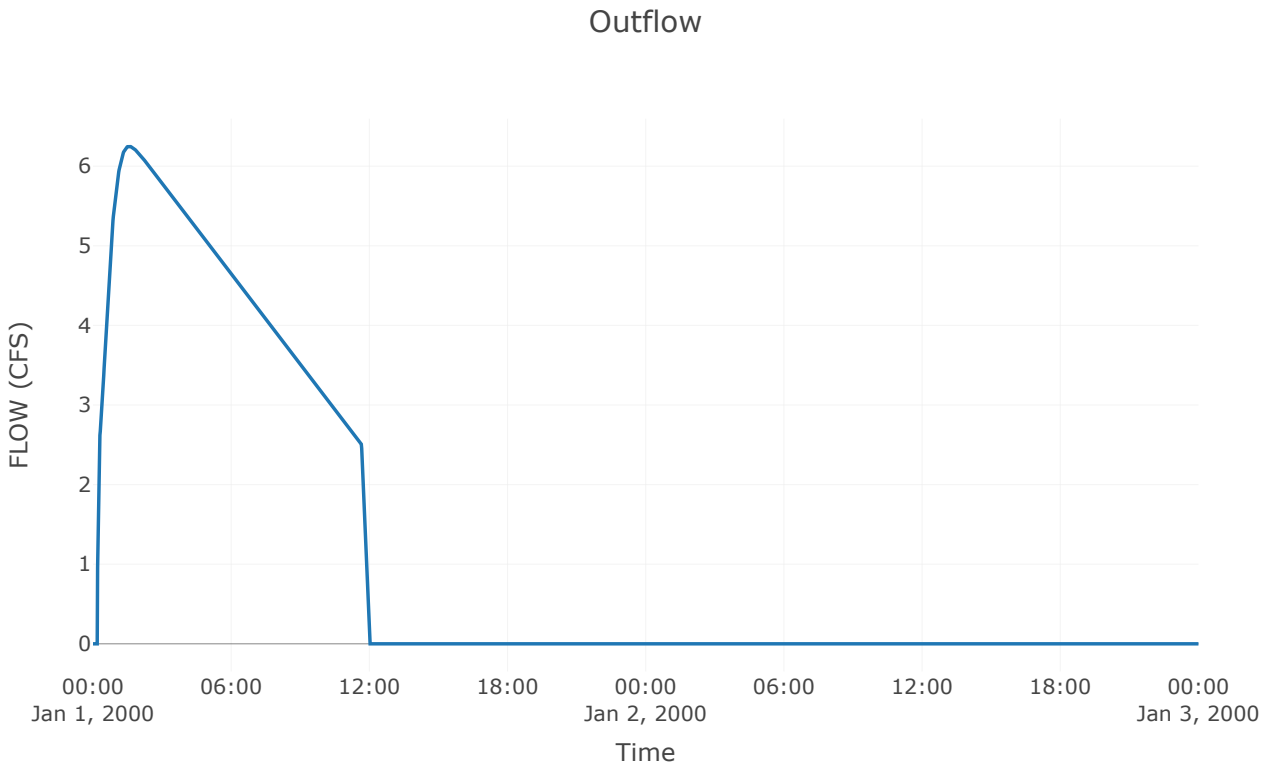

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

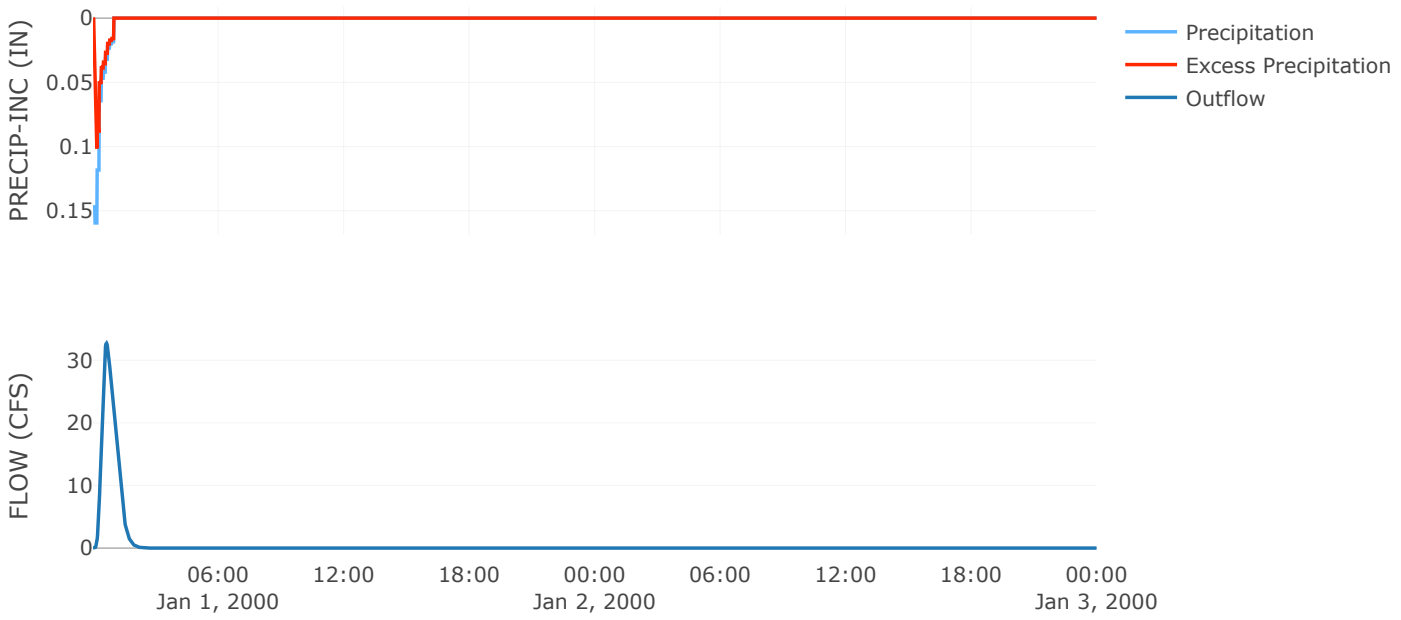
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

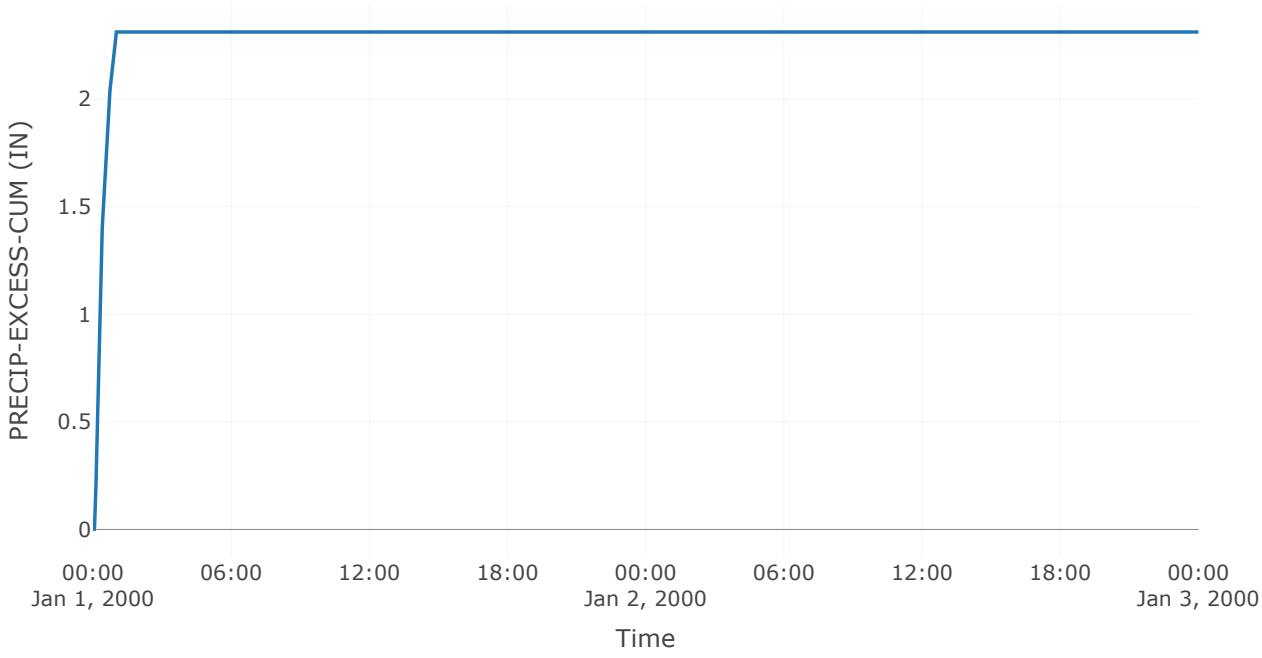
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

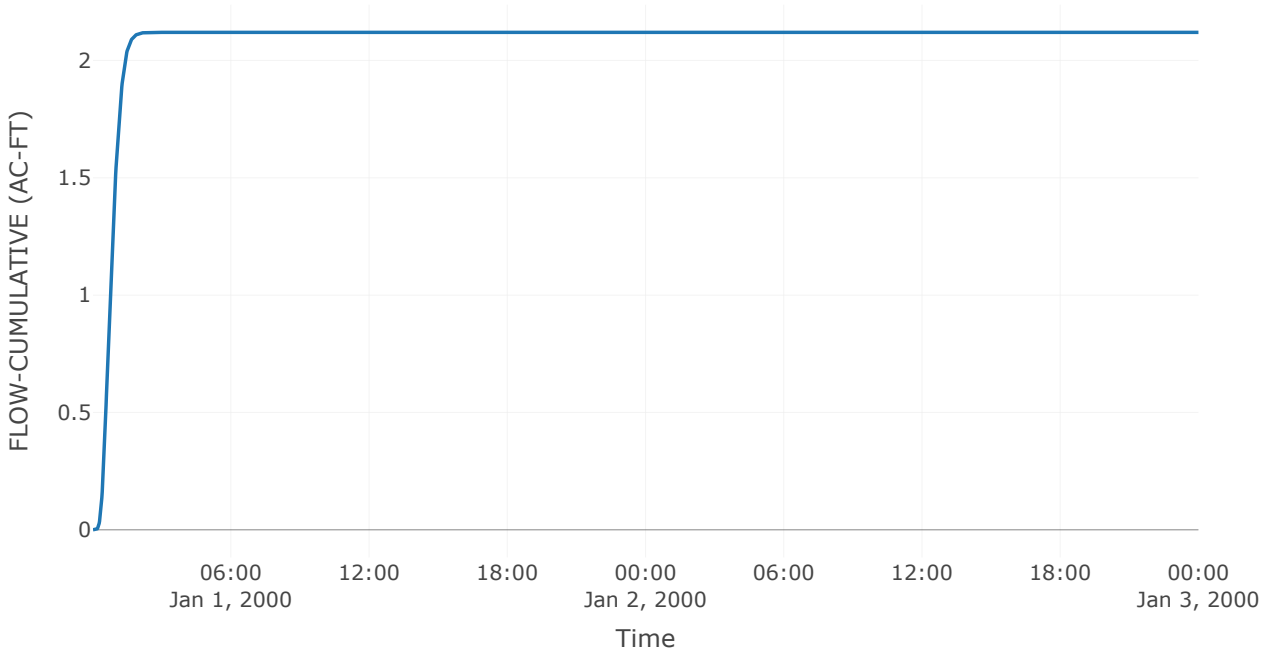
Precipitation and Outflow



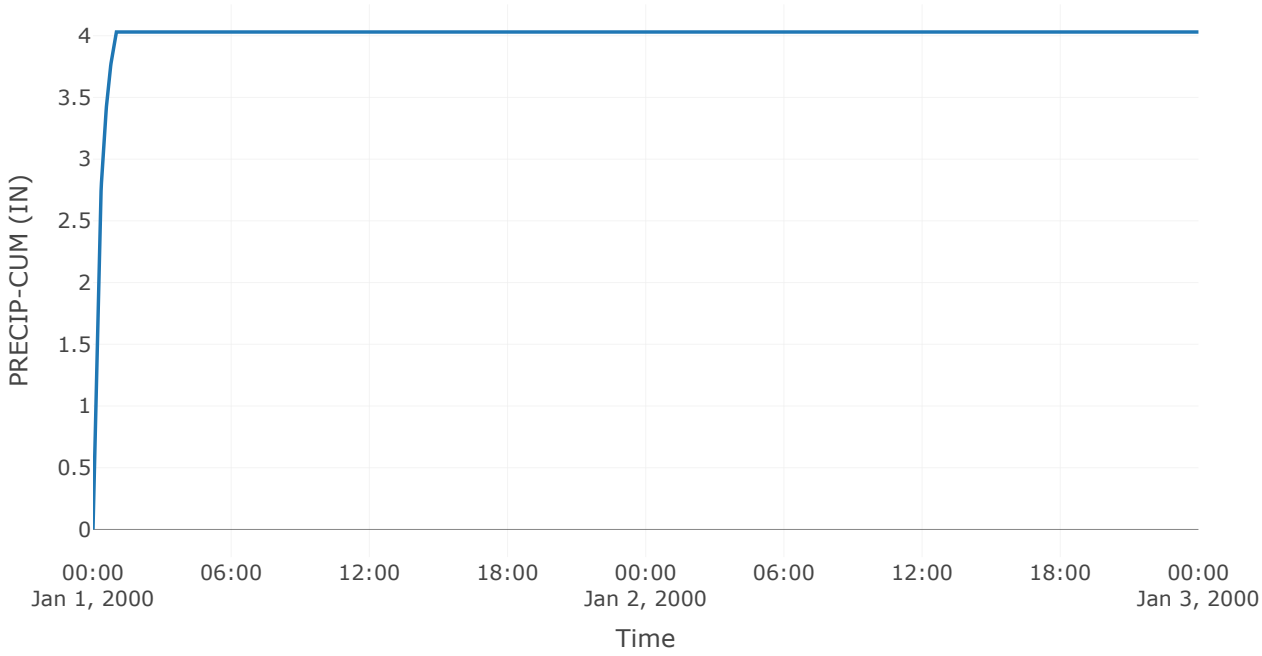
Cumulative Excess Precipitation

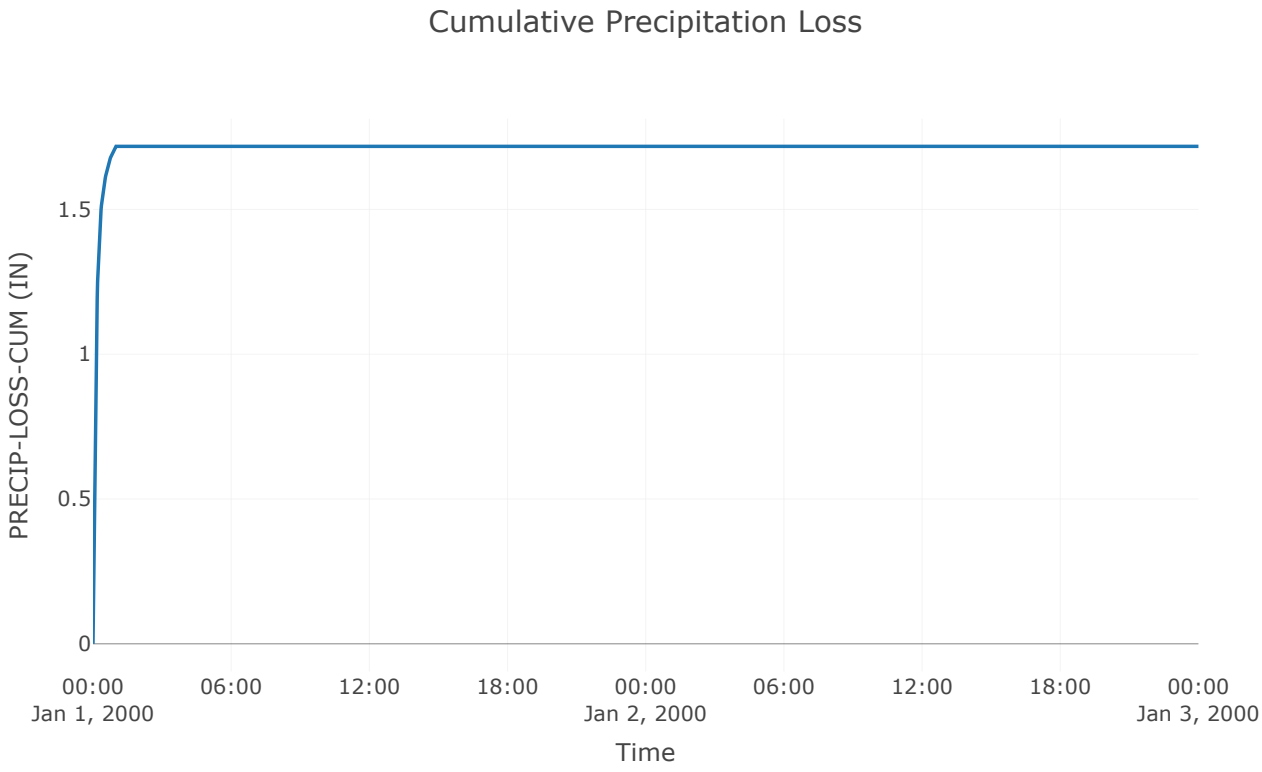


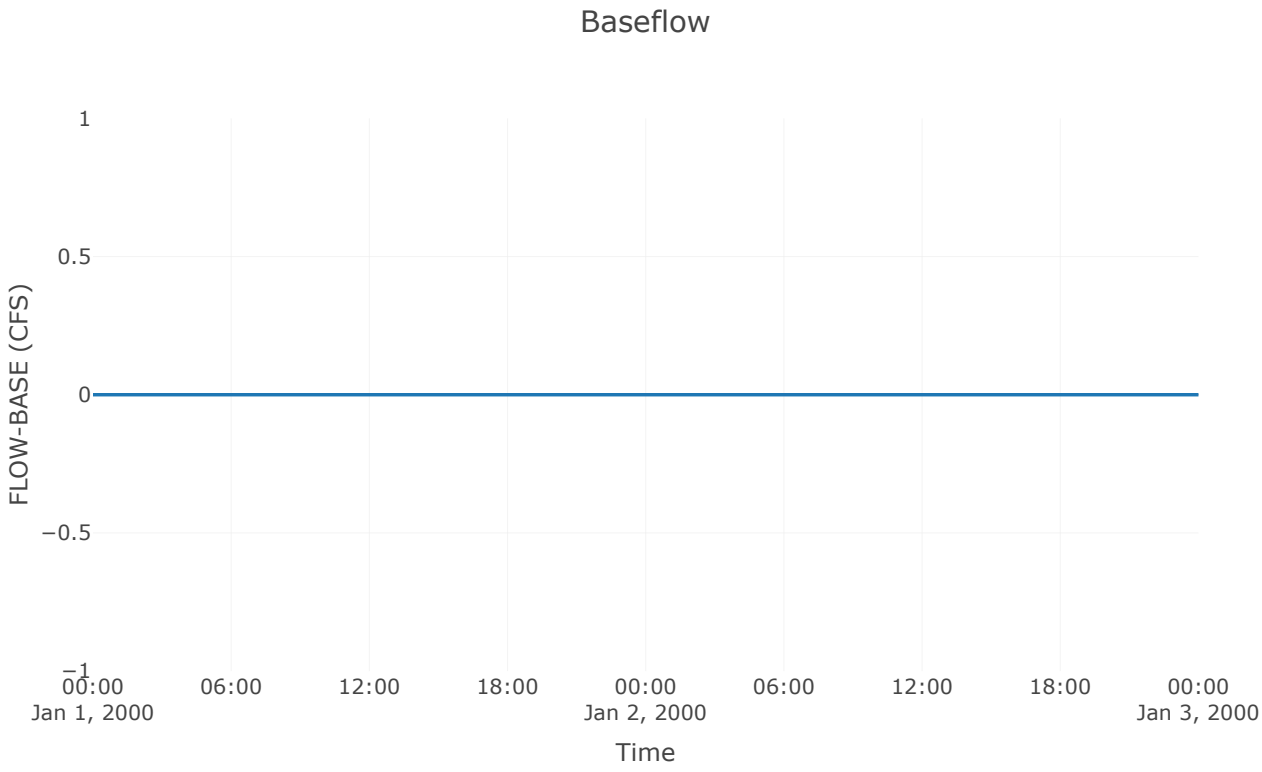
Cumulative Outflow



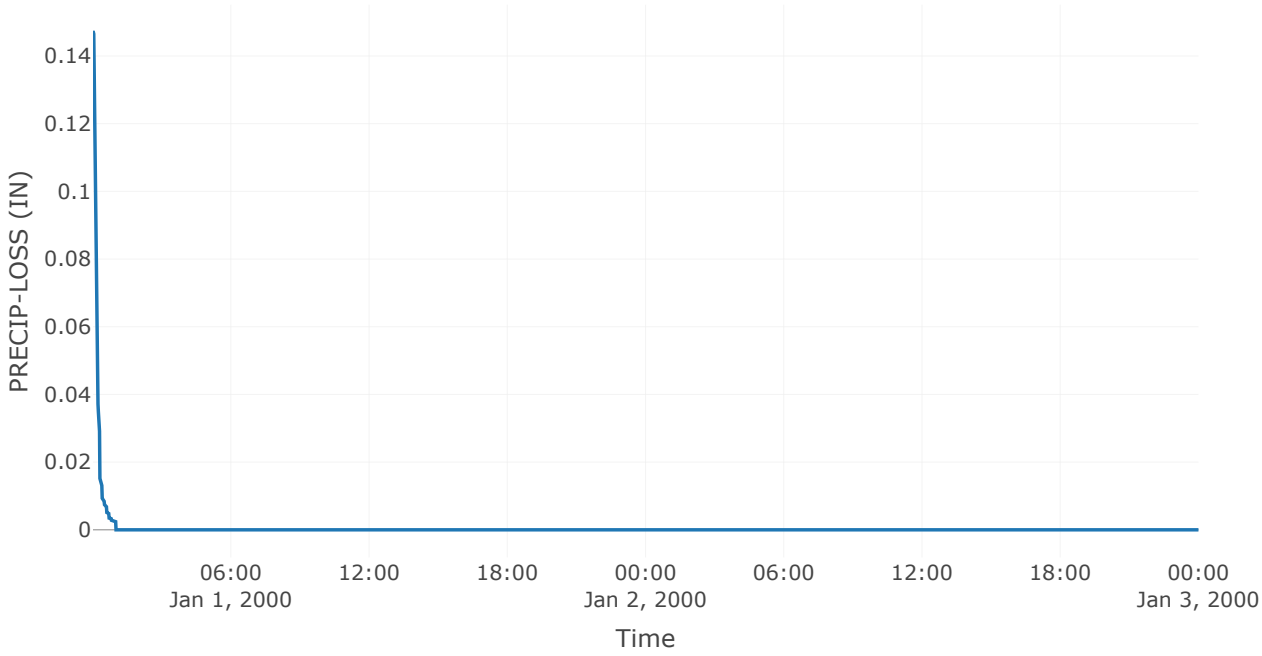
Cumulative Precipitation



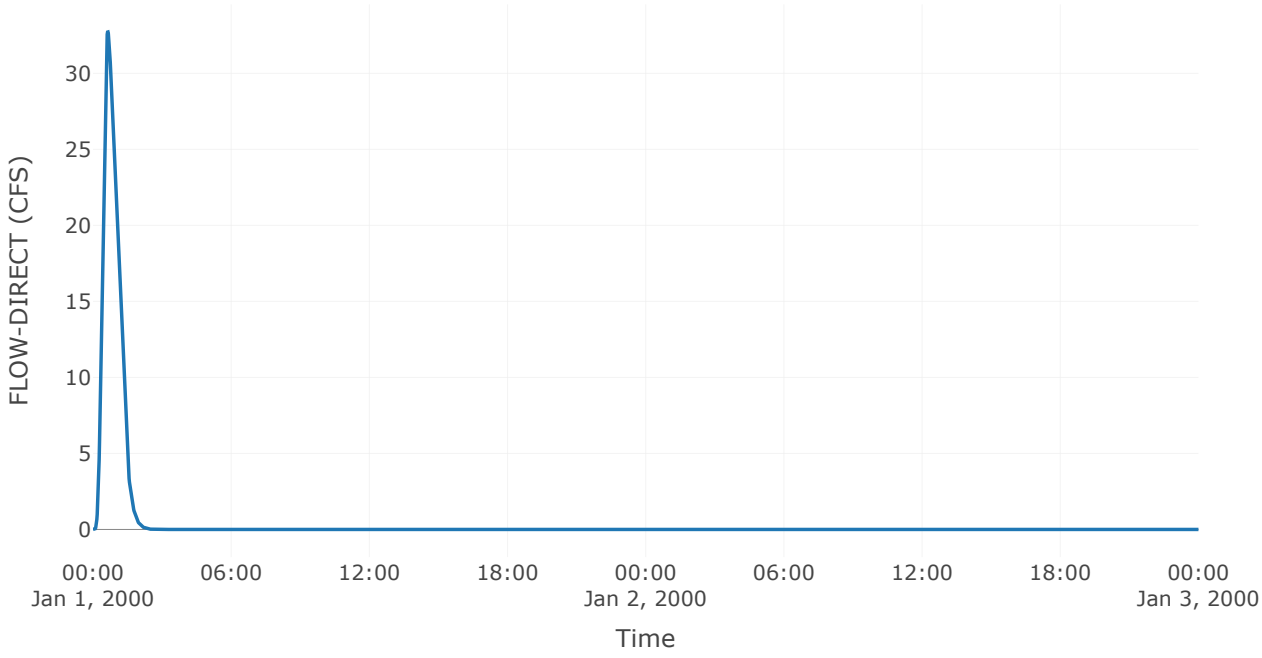

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

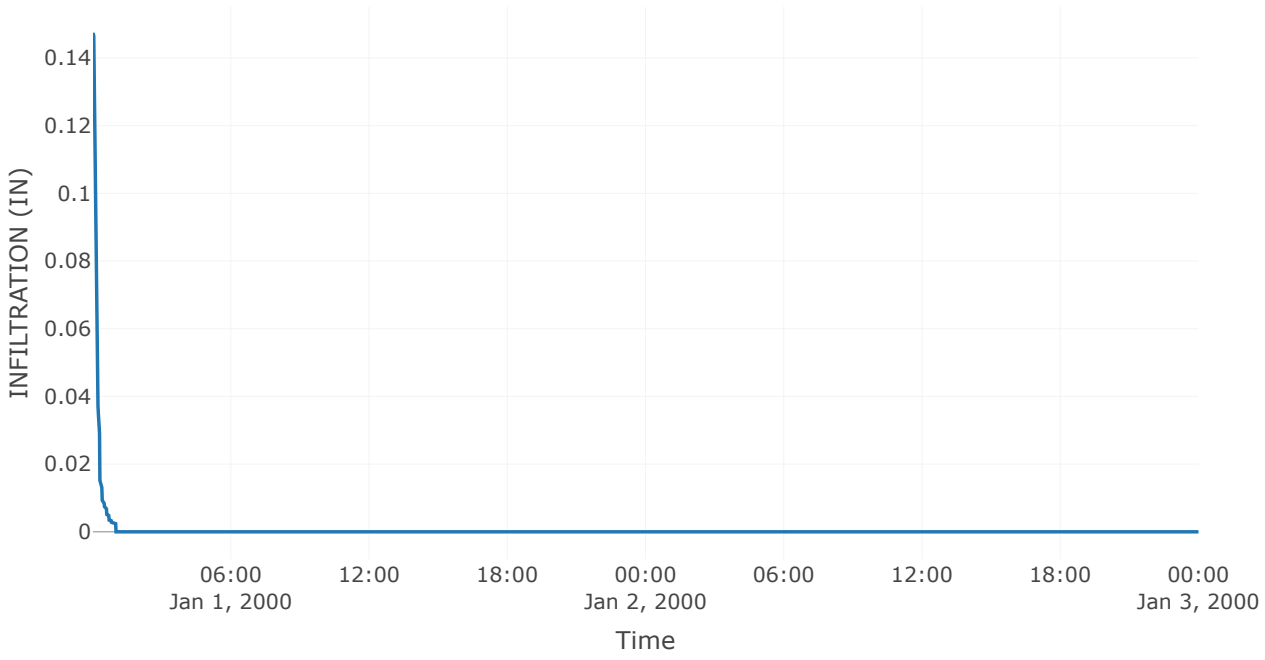

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

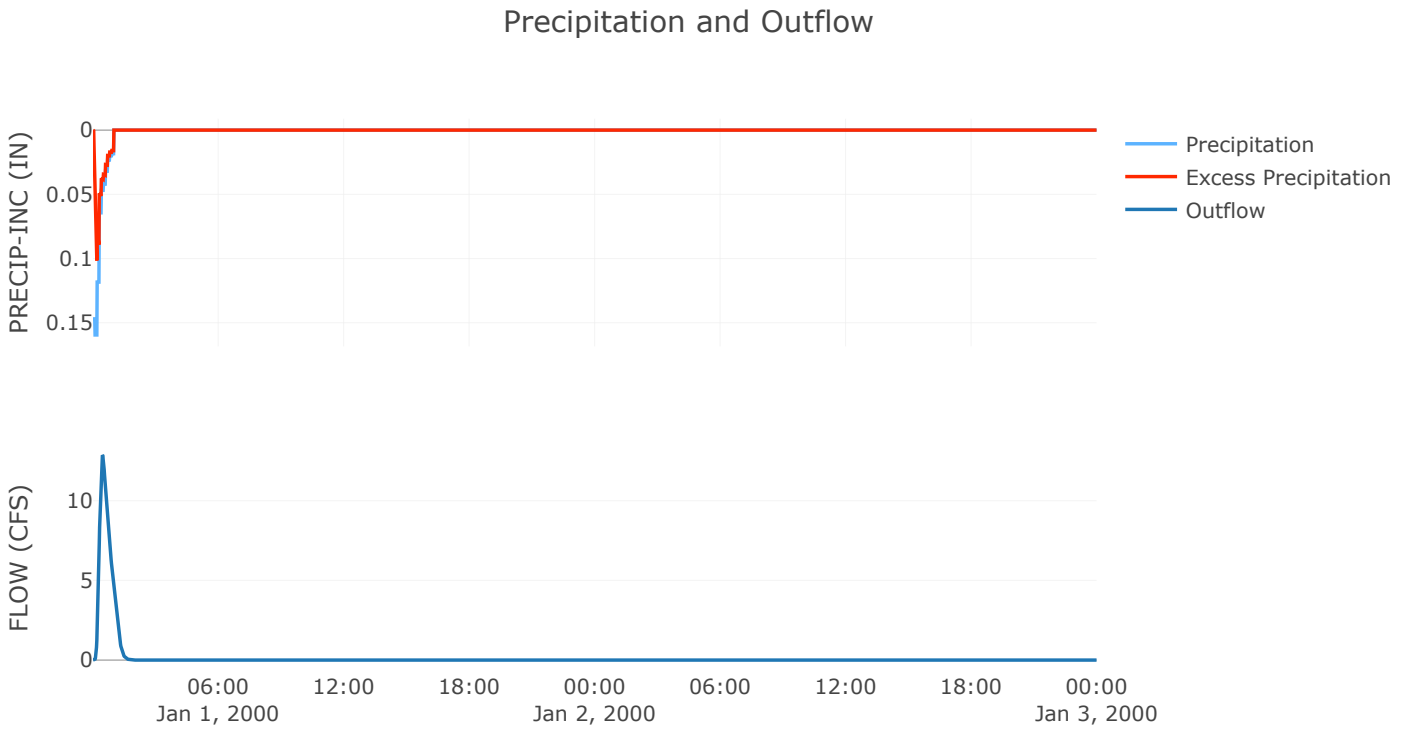
Subbasin: Off-Site Trib2

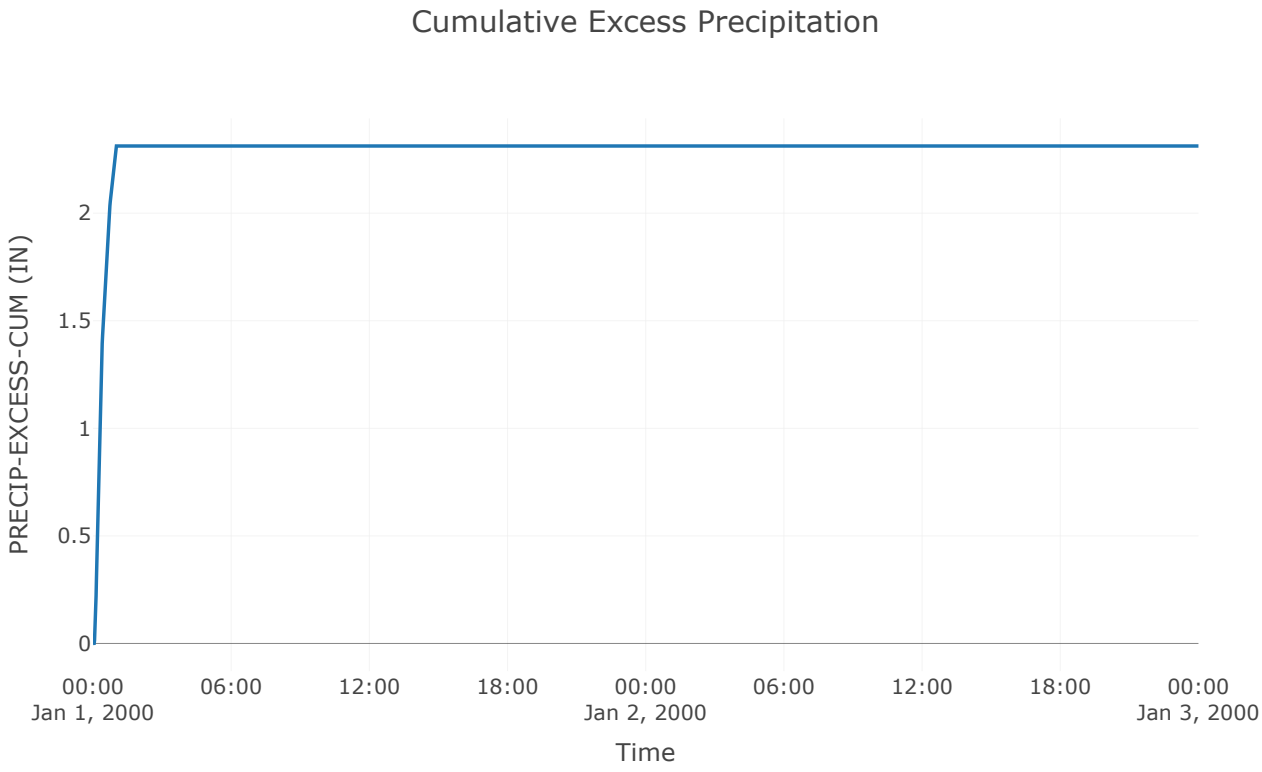
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

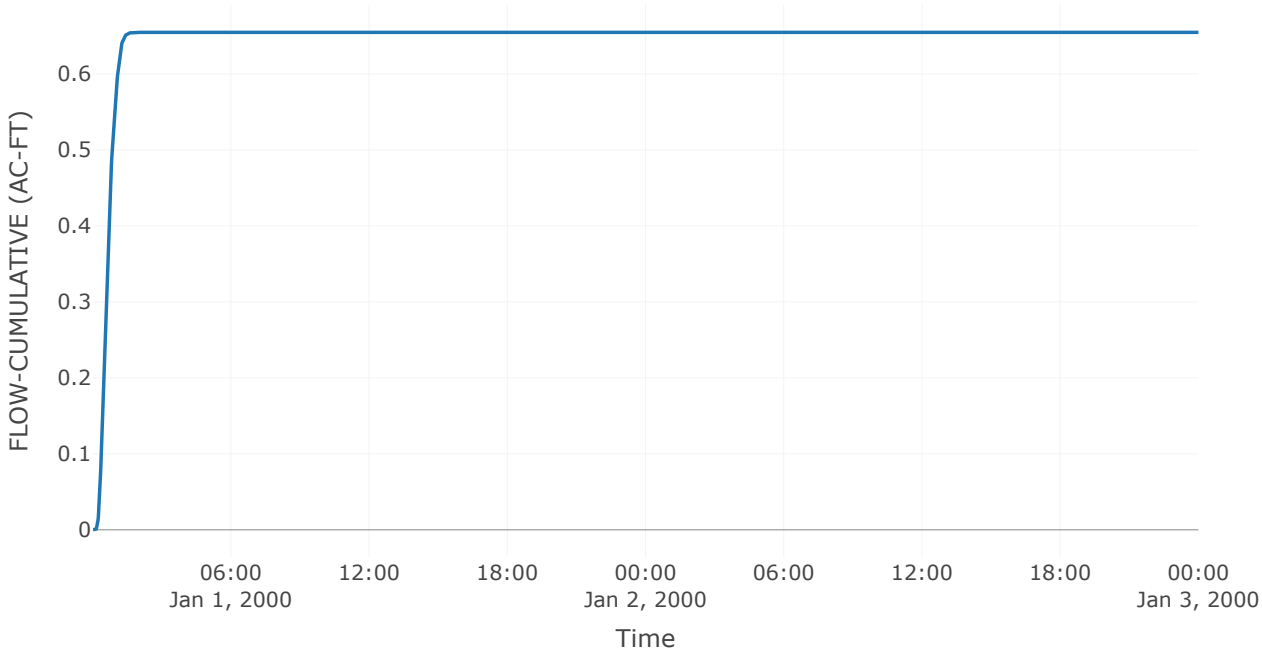
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

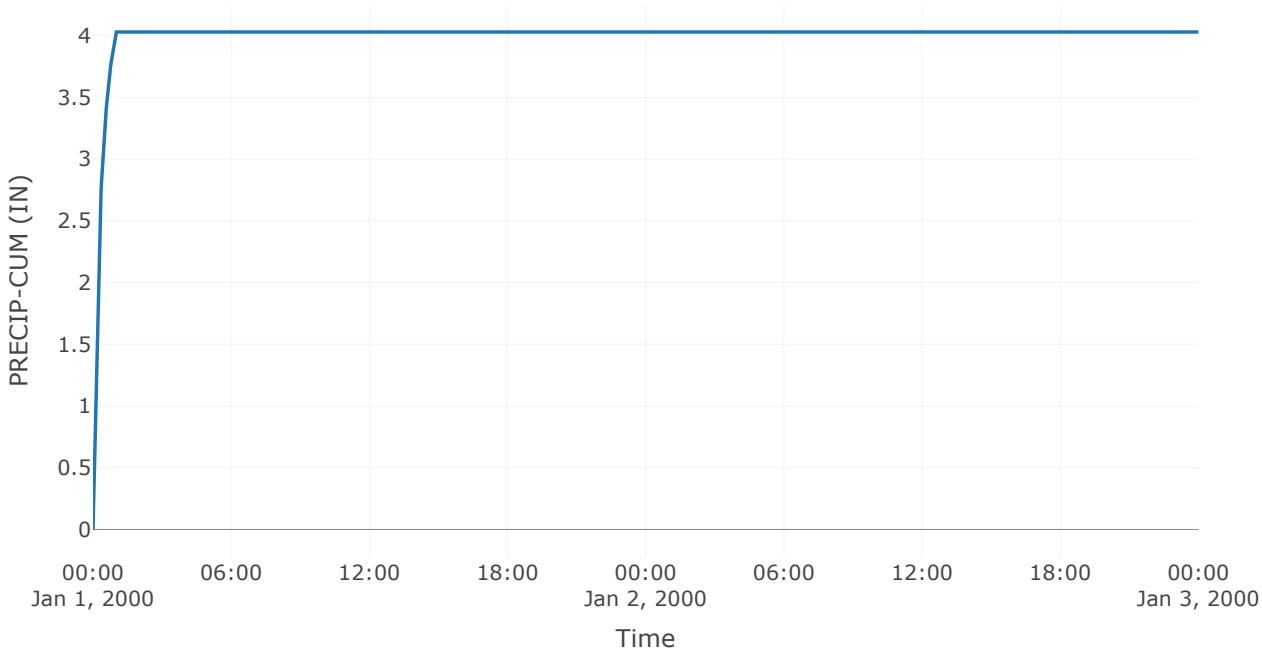

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000

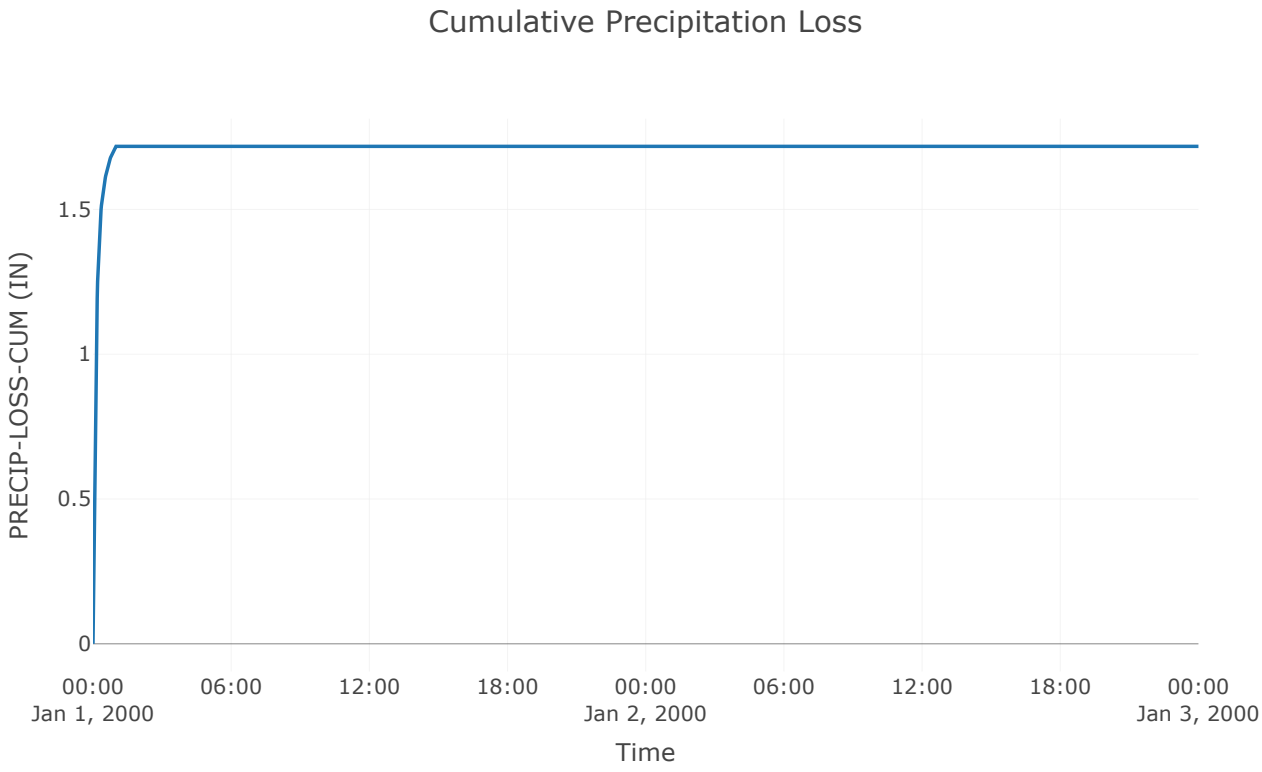

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

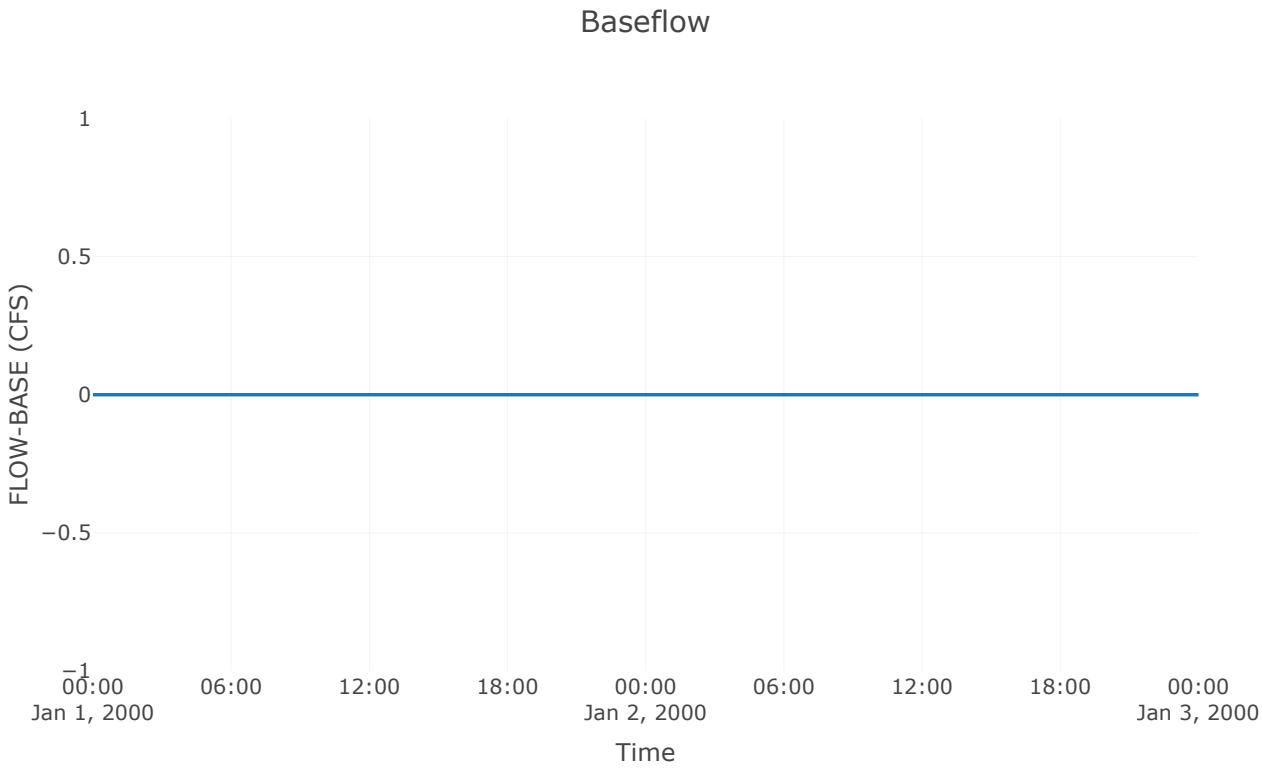
Cumulative Outflow



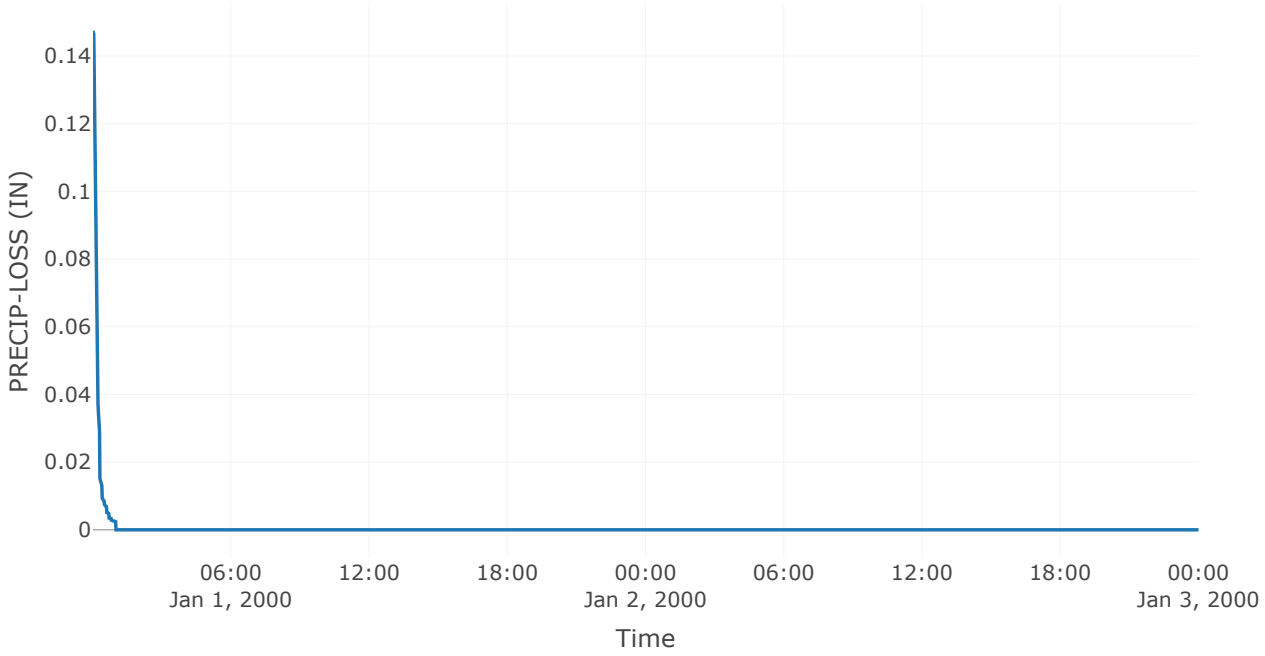
Cumulative Precipitation



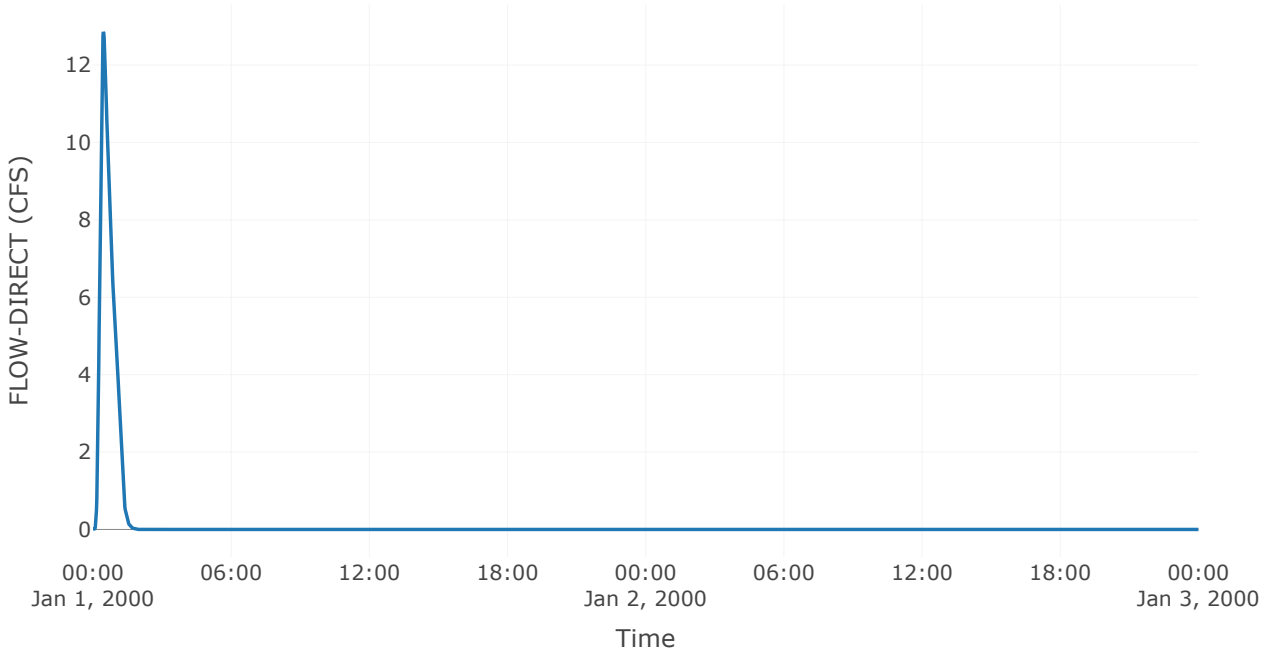

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

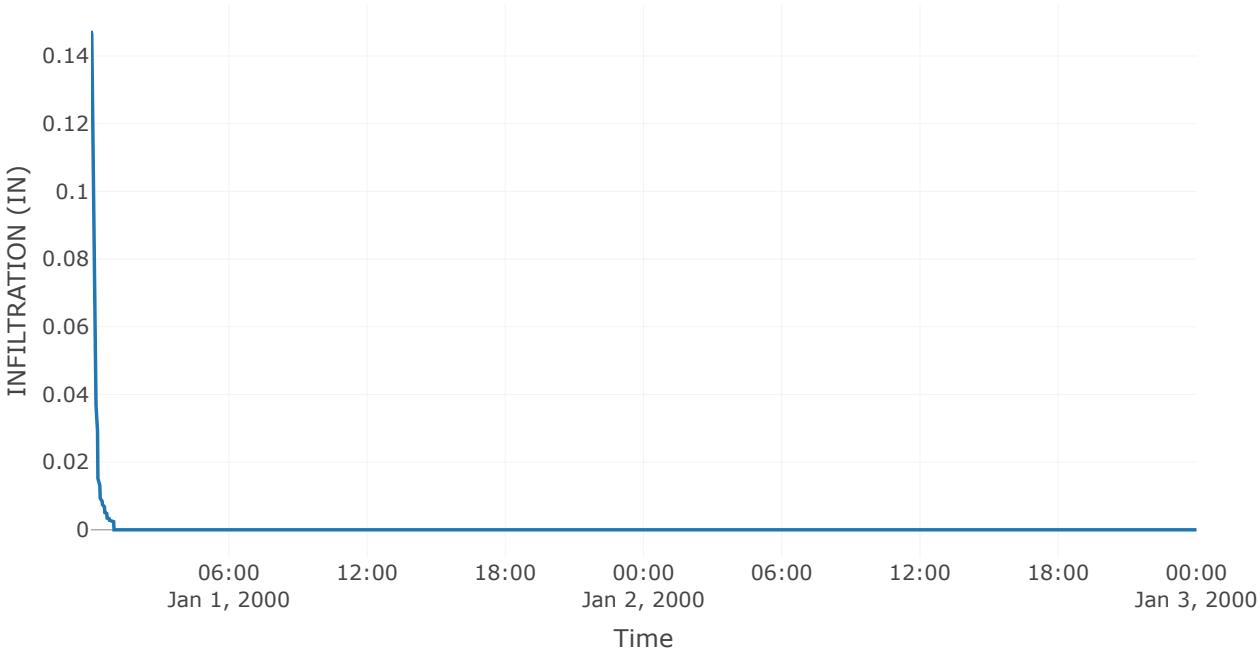

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



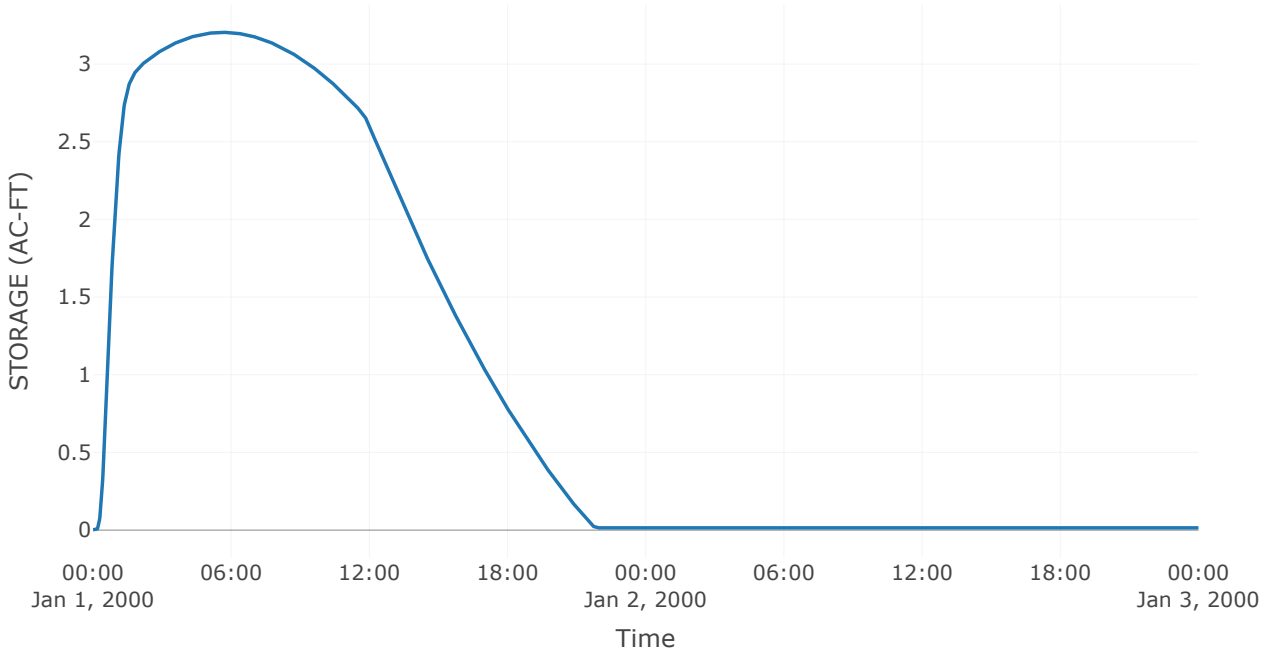

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

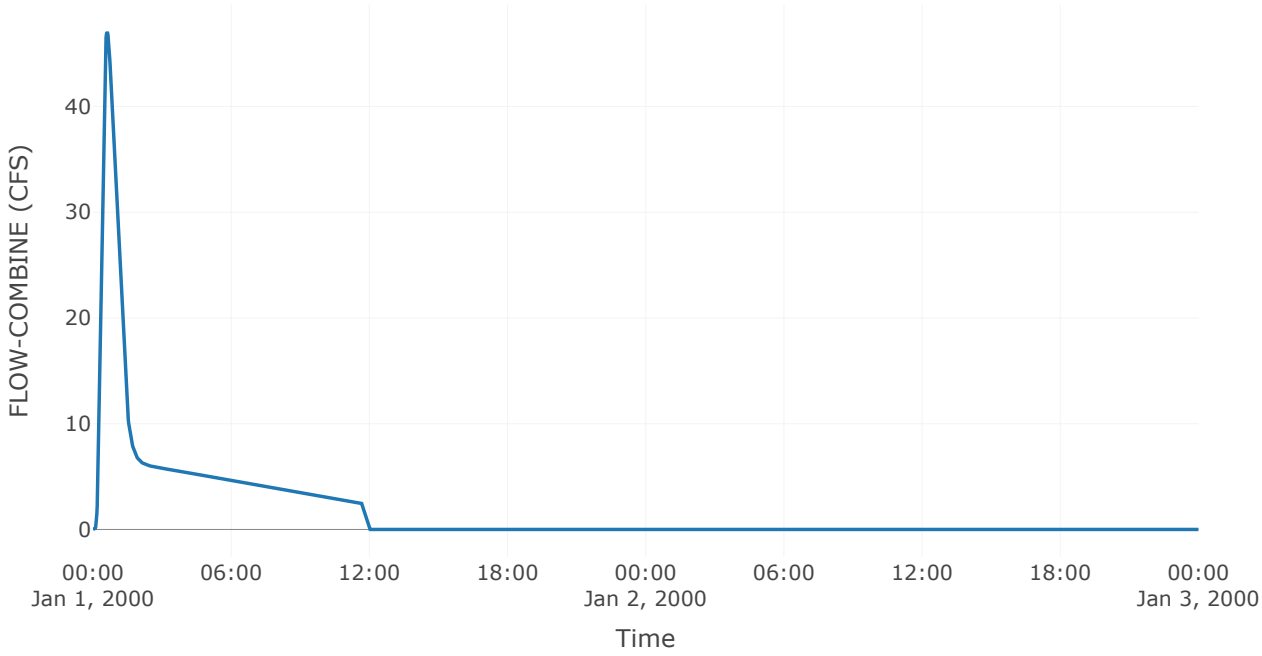
Downstream : Basin 3

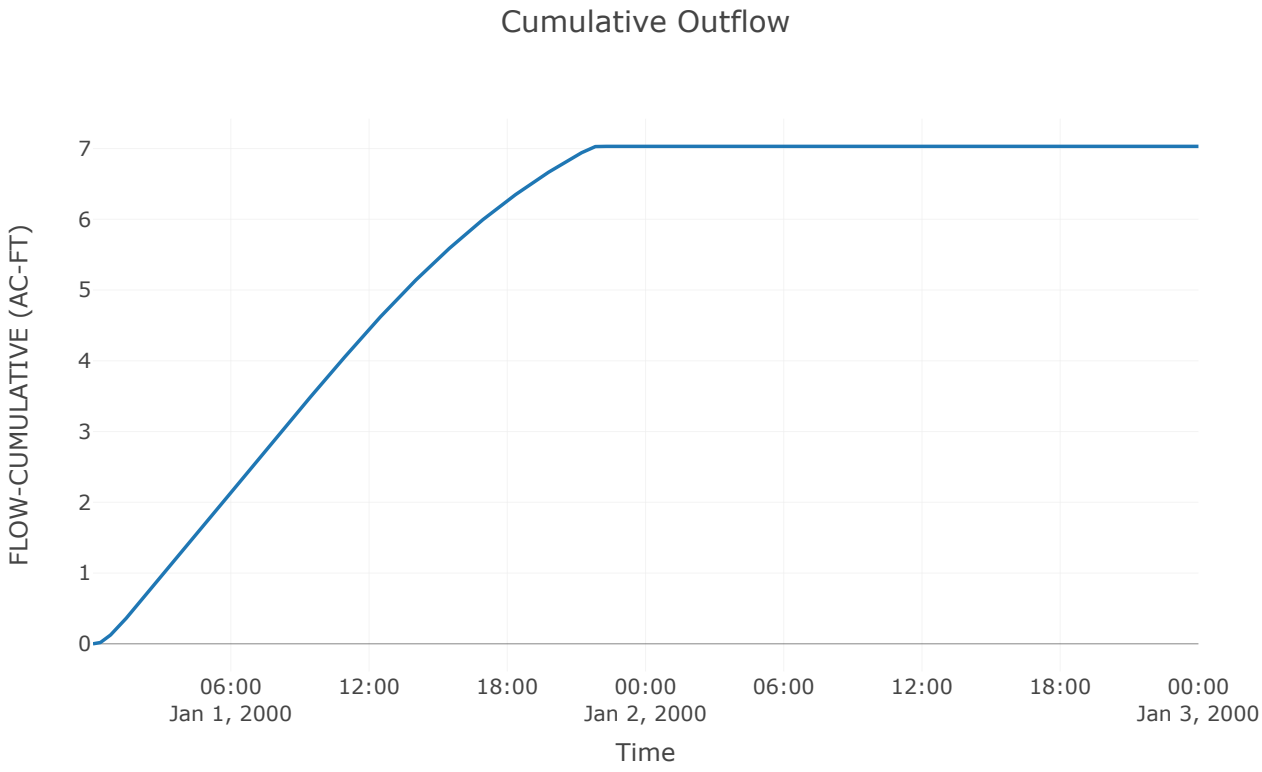
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

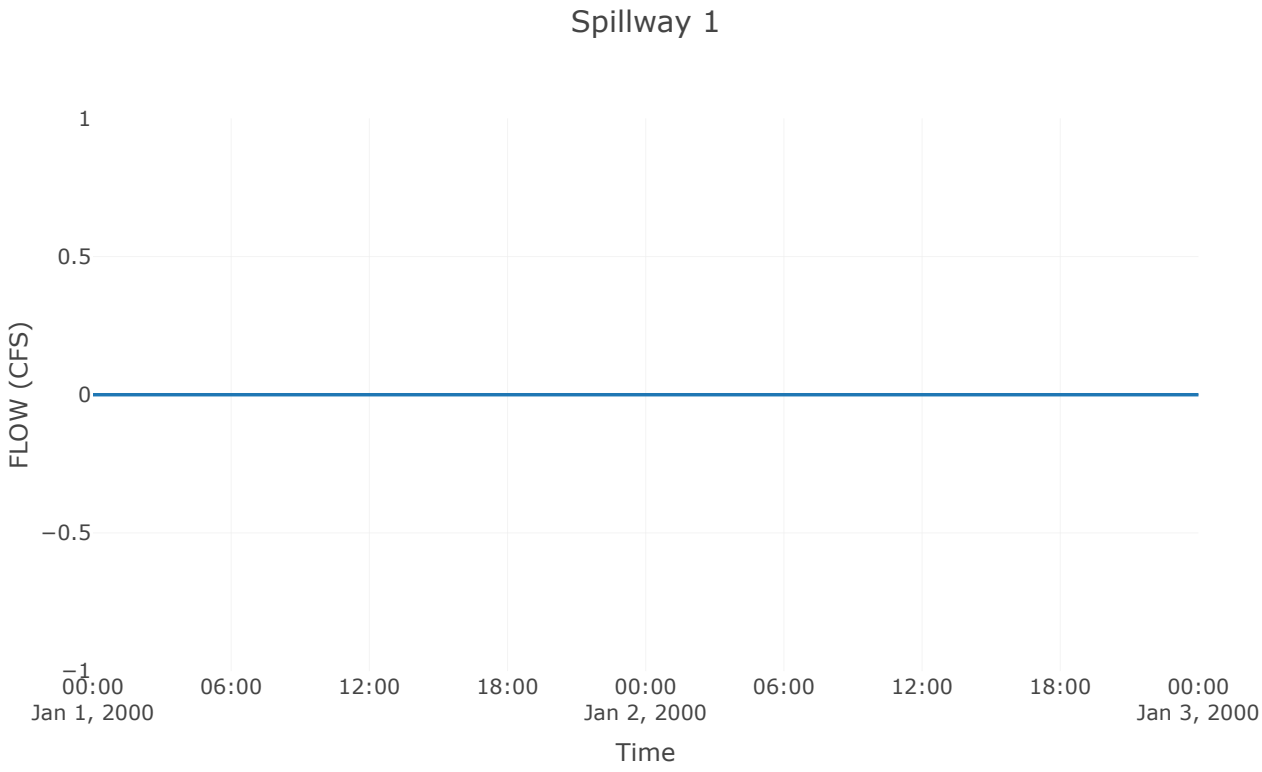
Storage

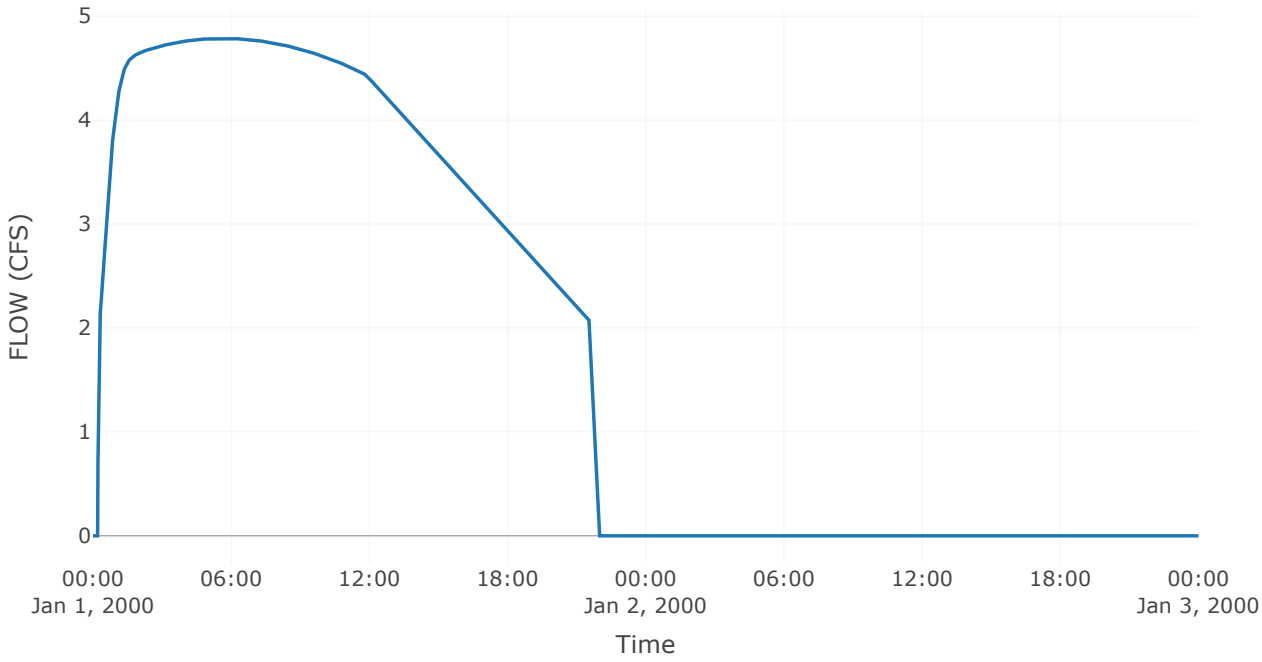


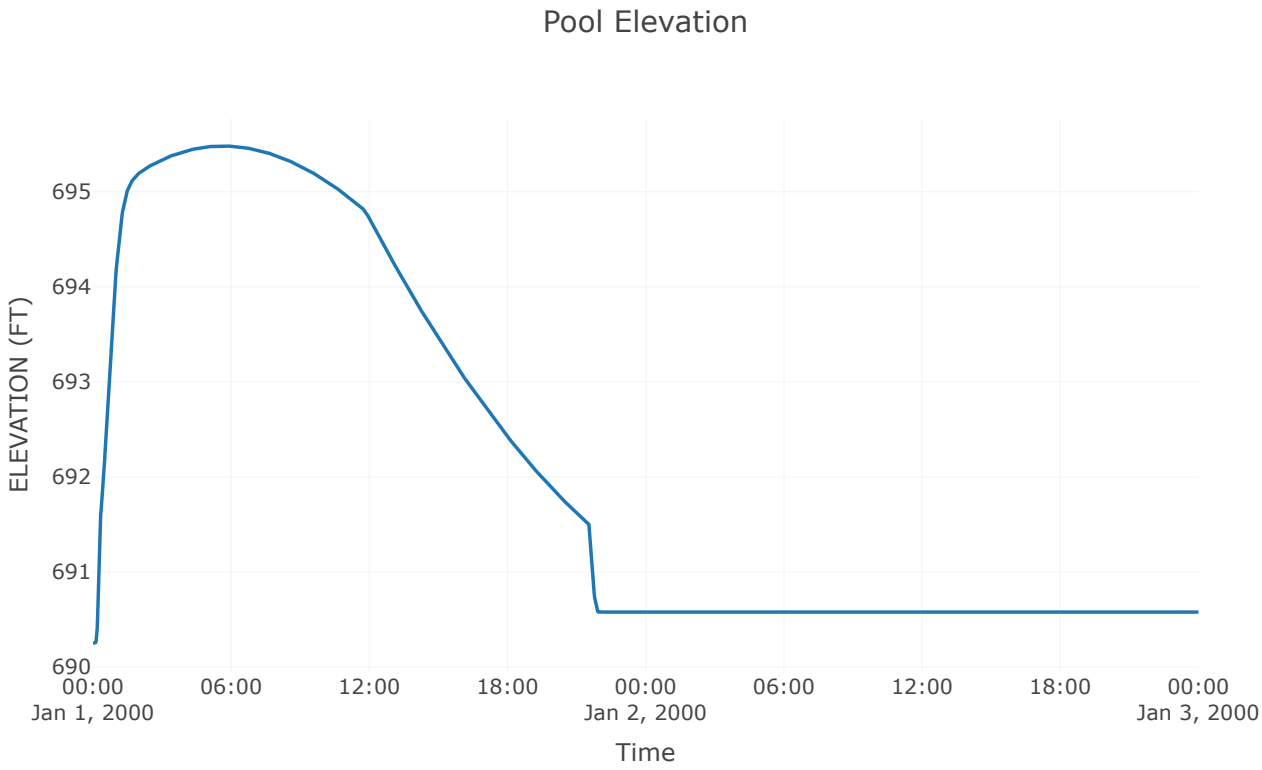
Combined Inflow

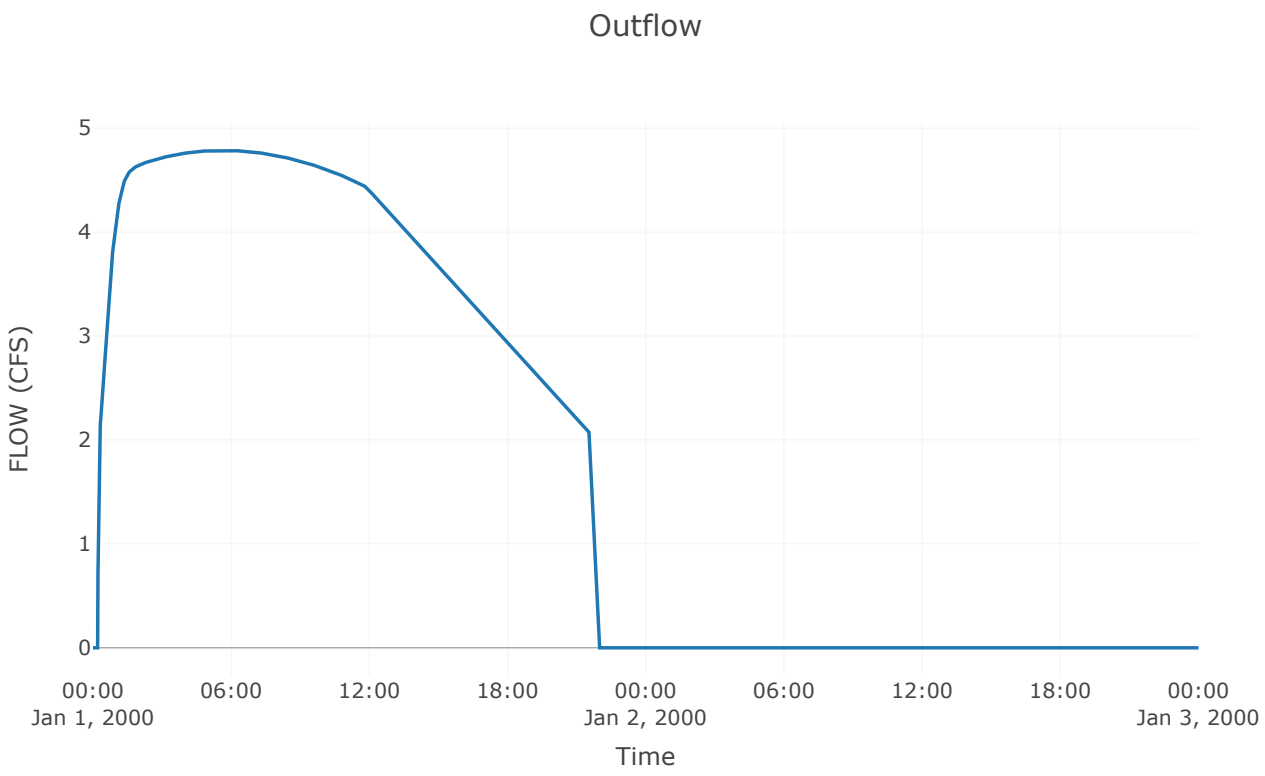



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695
694
693
692
691
690
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

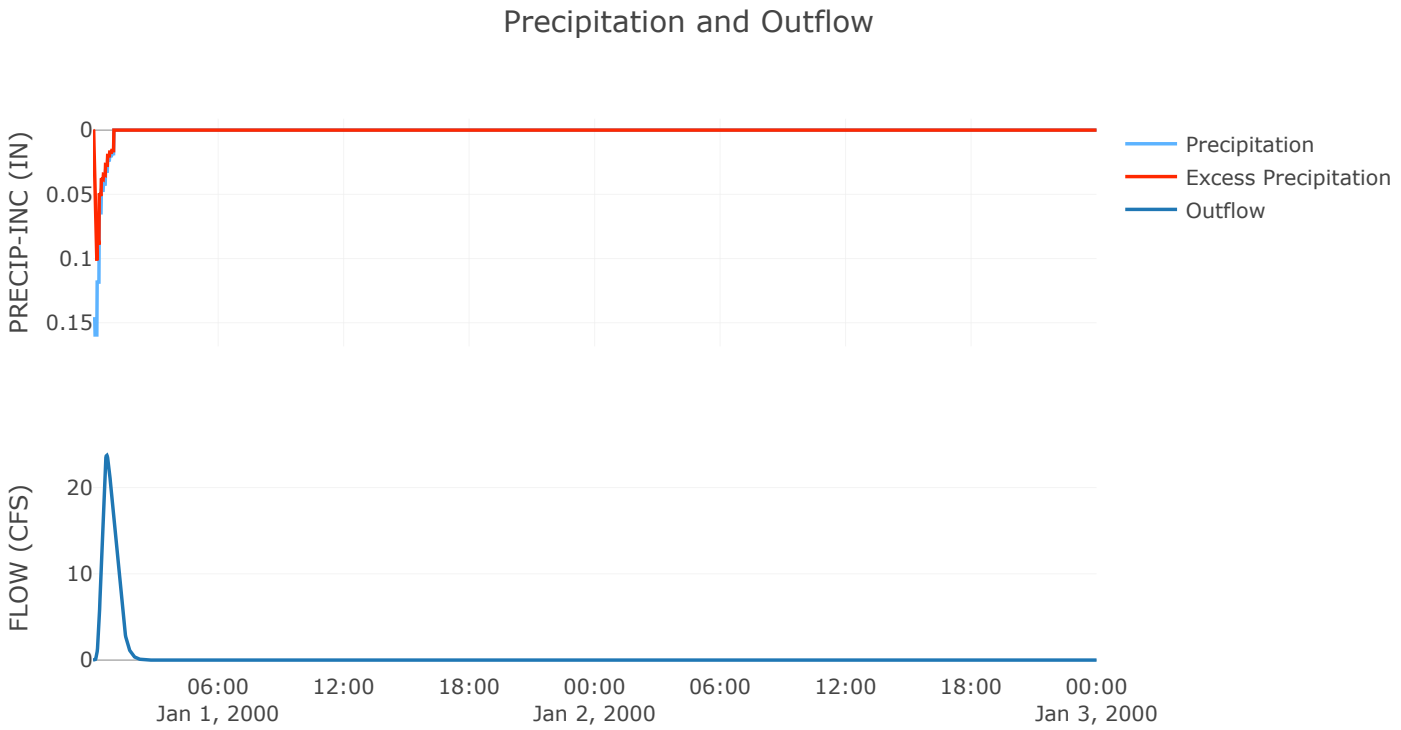
Subbasin: On-Site Trib-Area 3

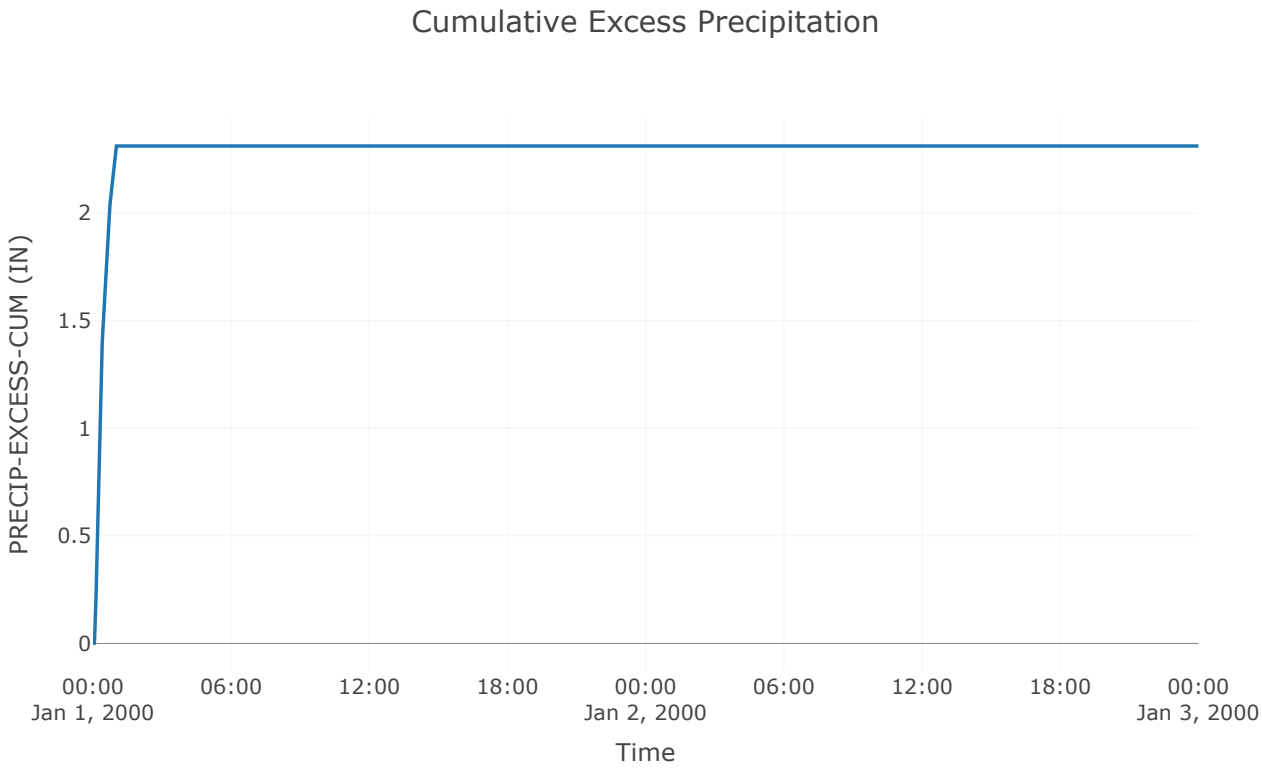
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

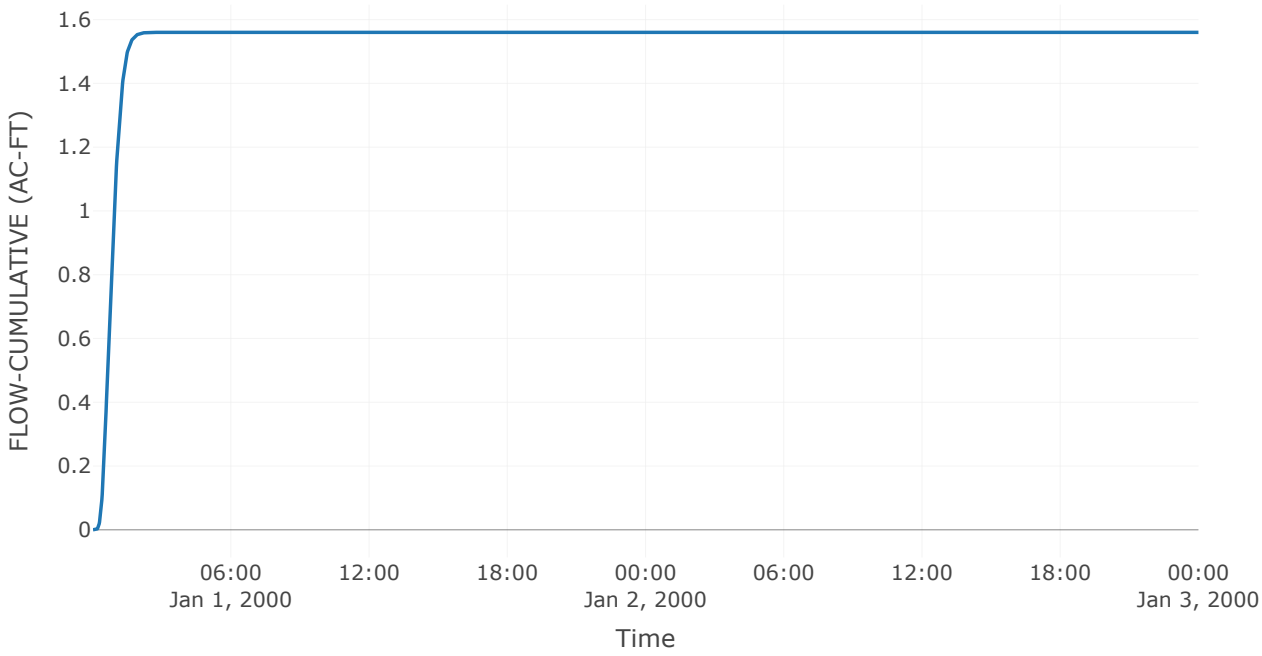
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

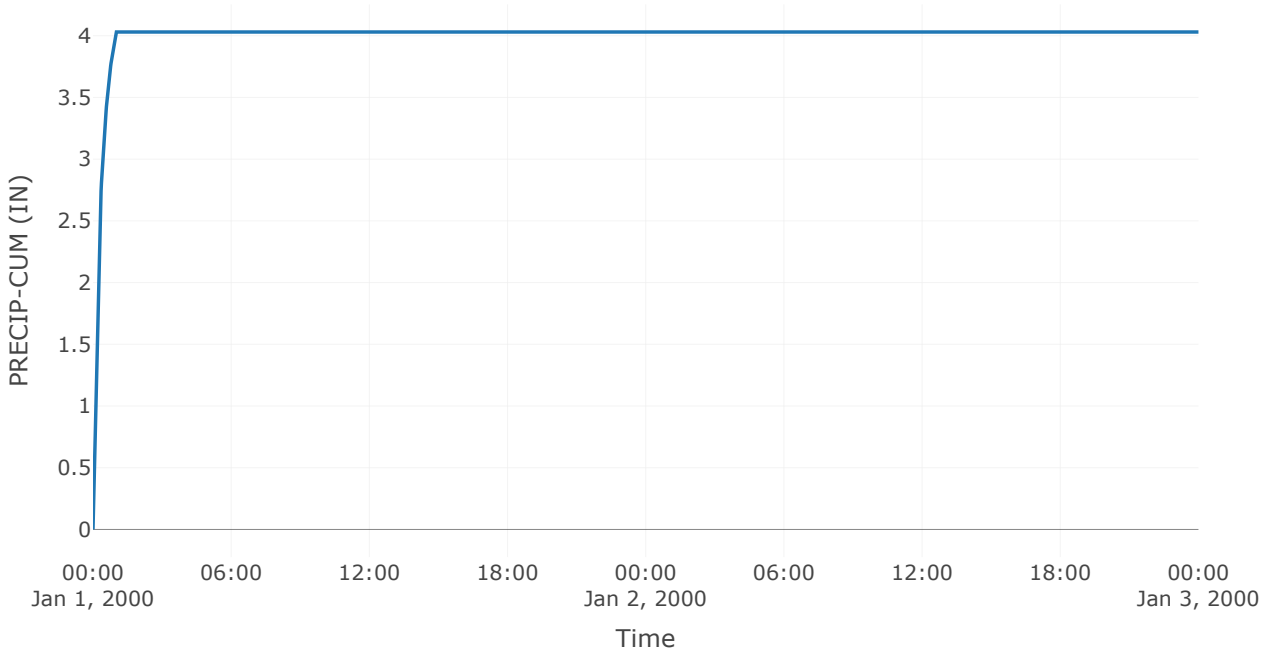

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
20
10
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000

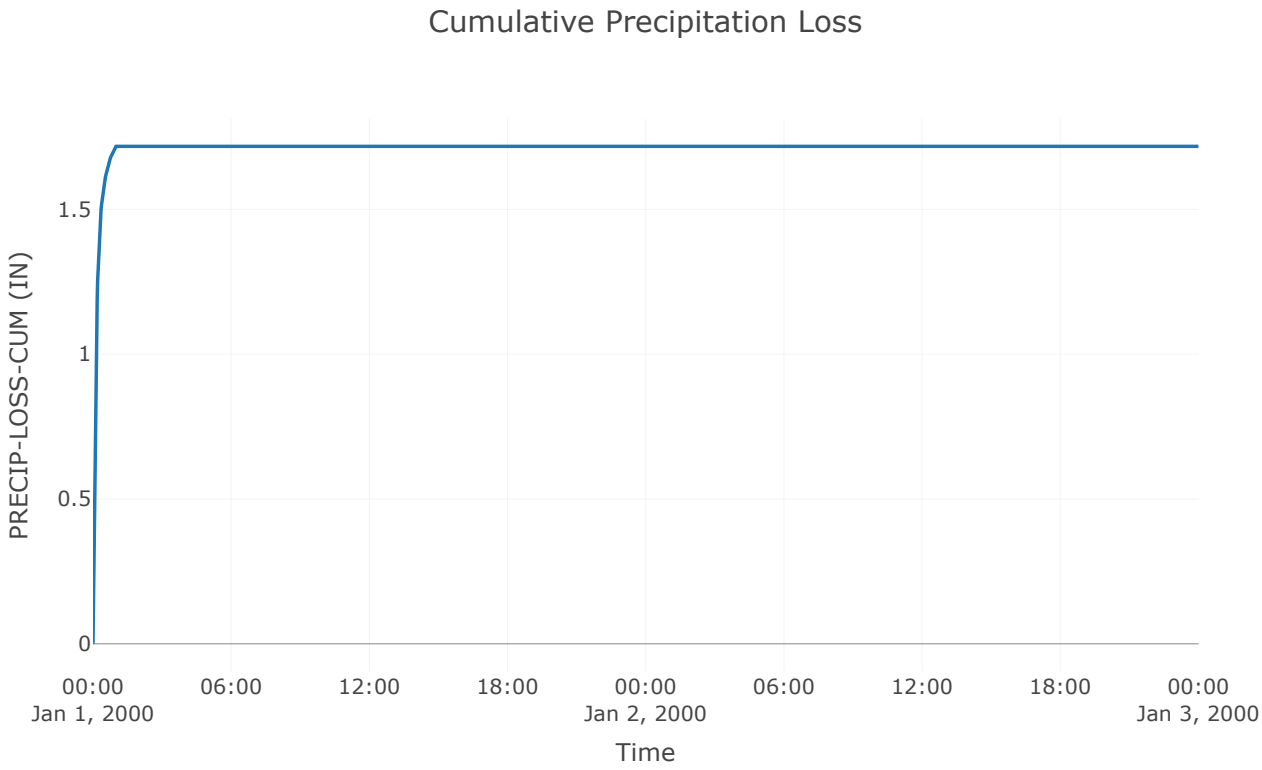

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

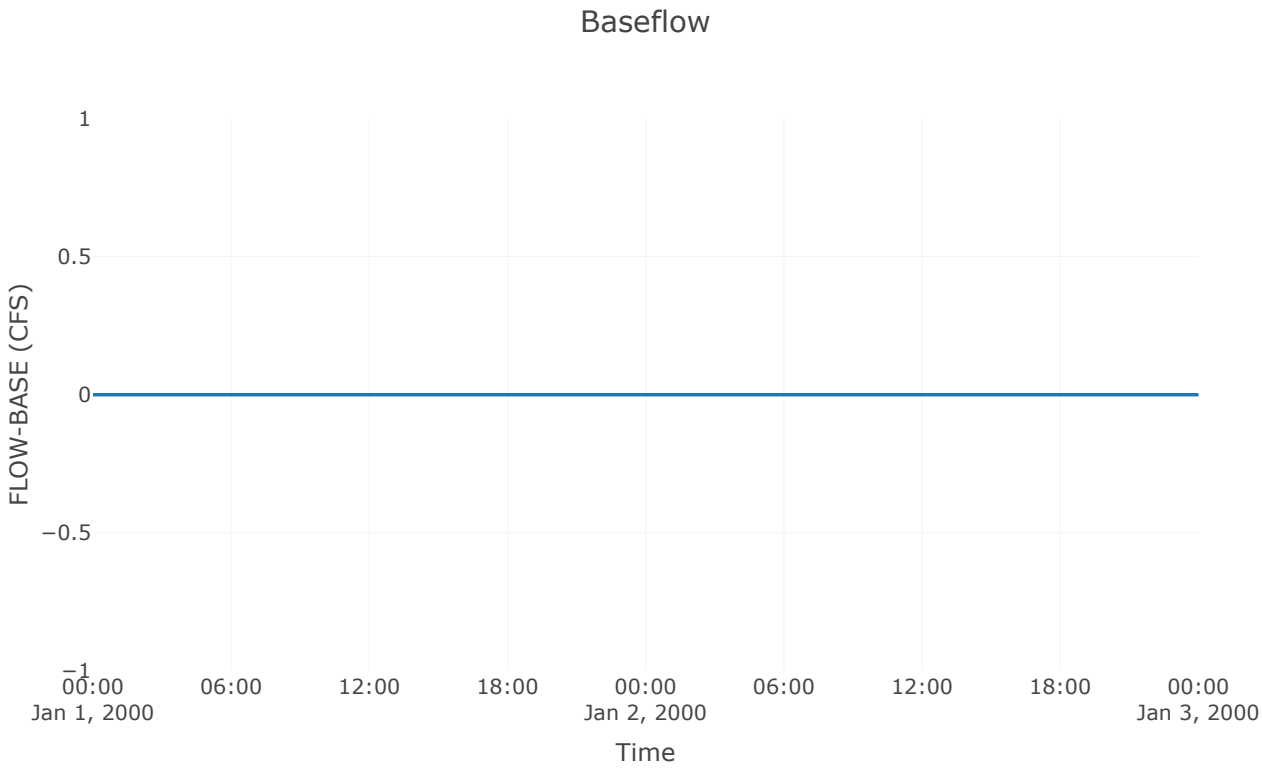
Cumulative Outflow

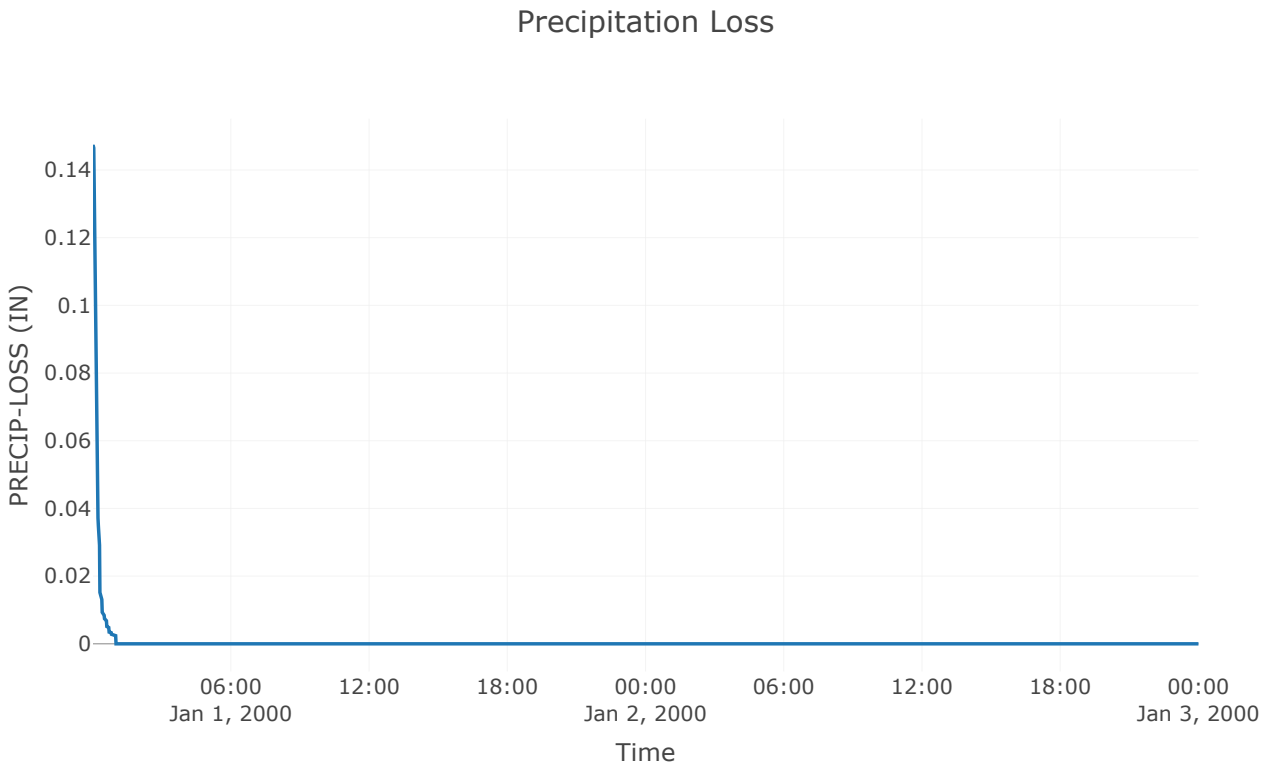


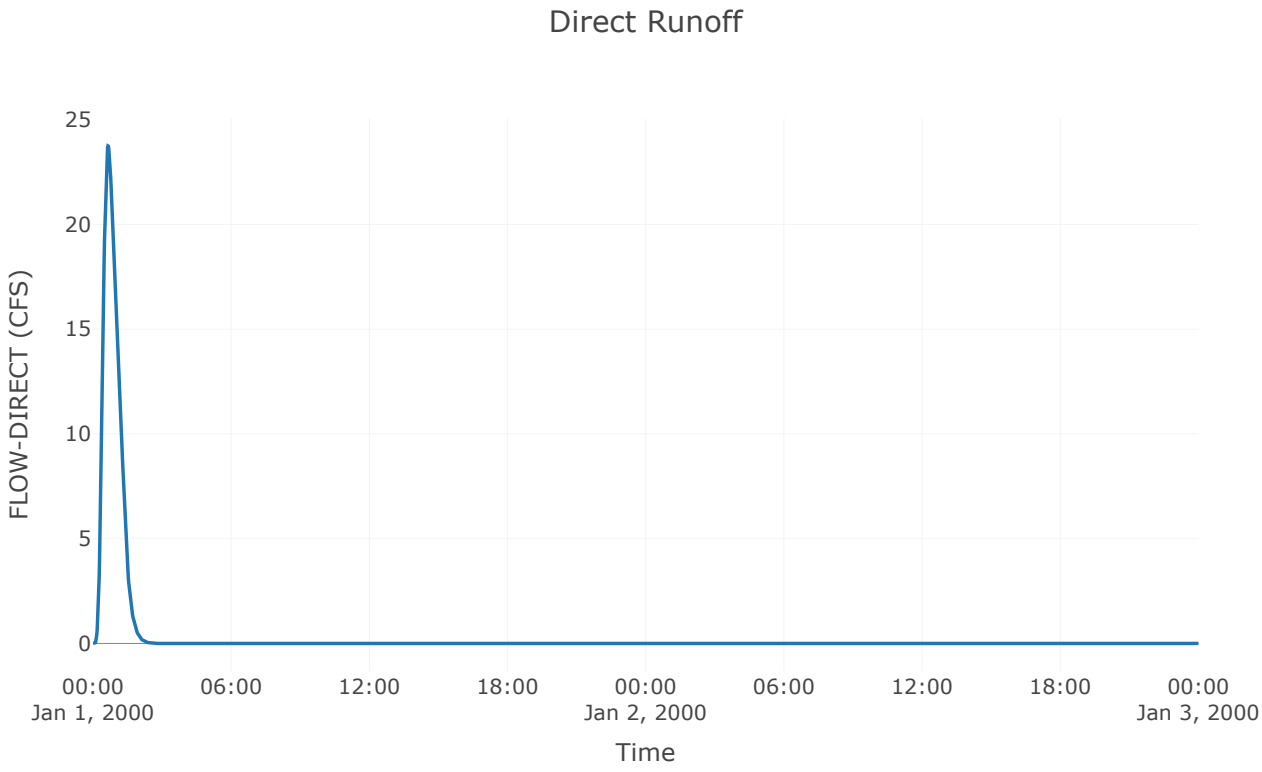
Cumulative Precipitation

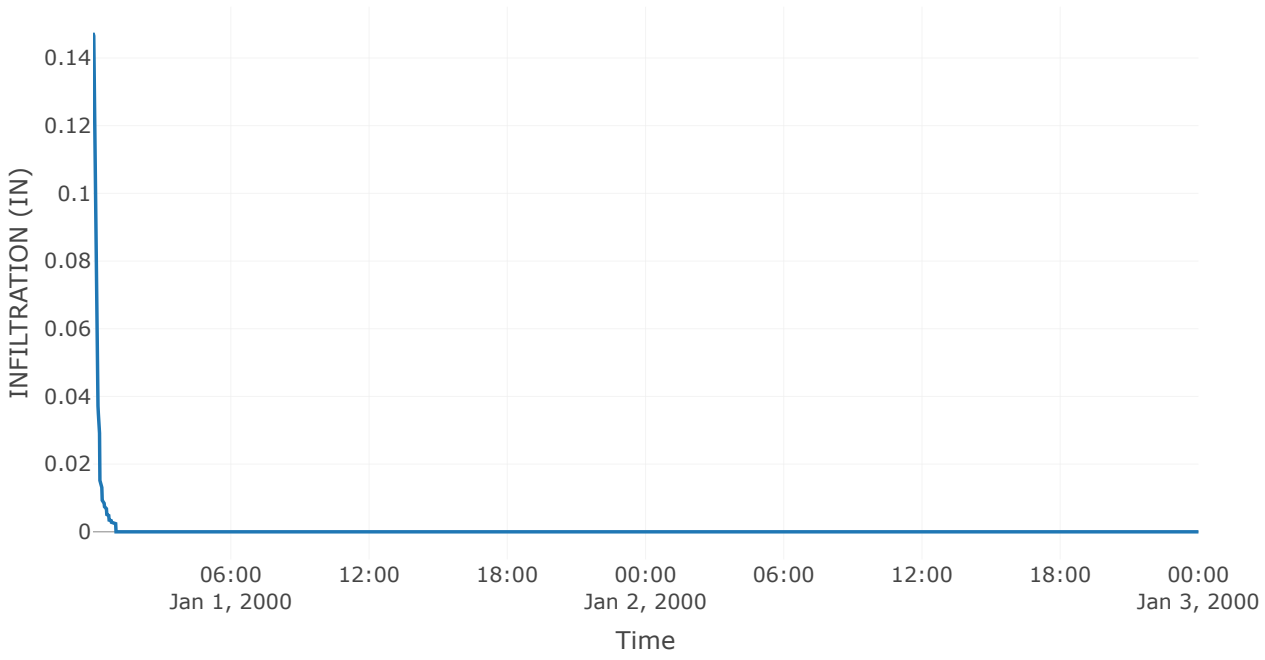



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

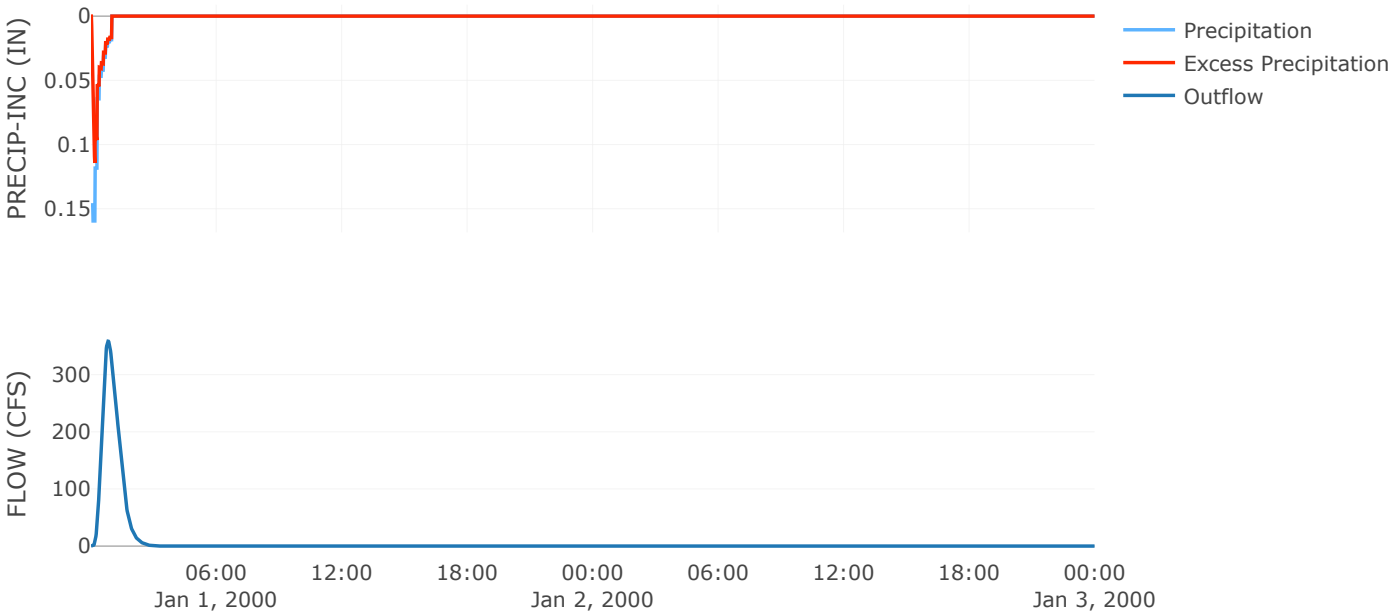
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

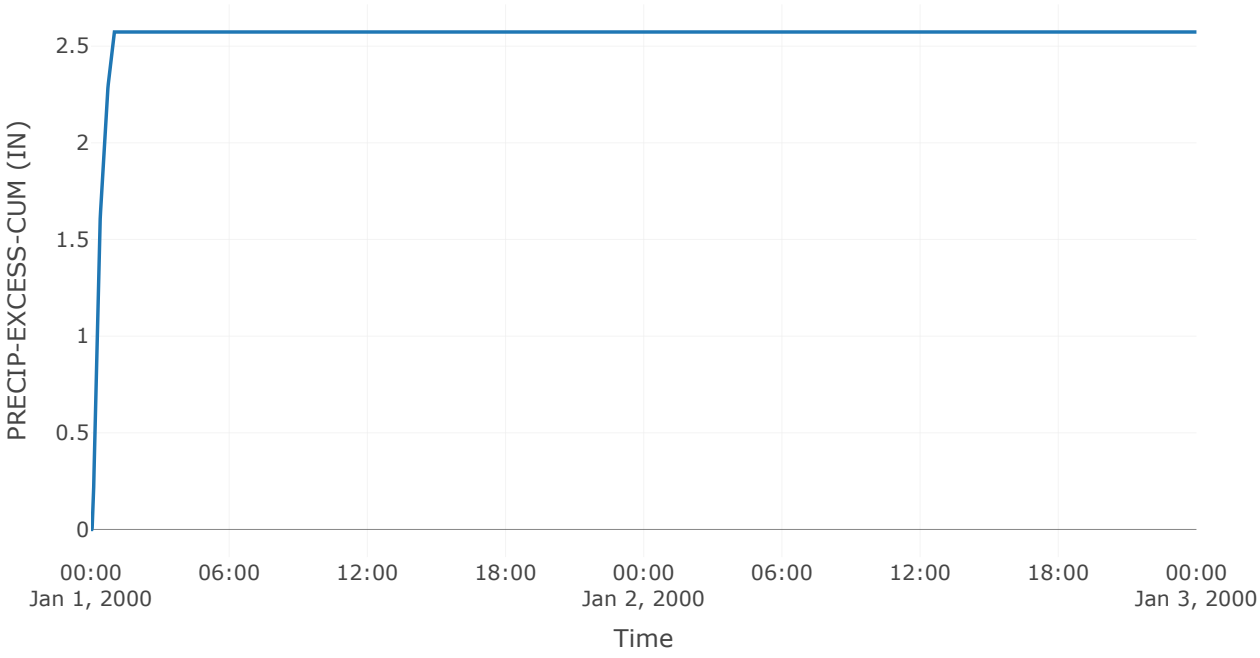
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

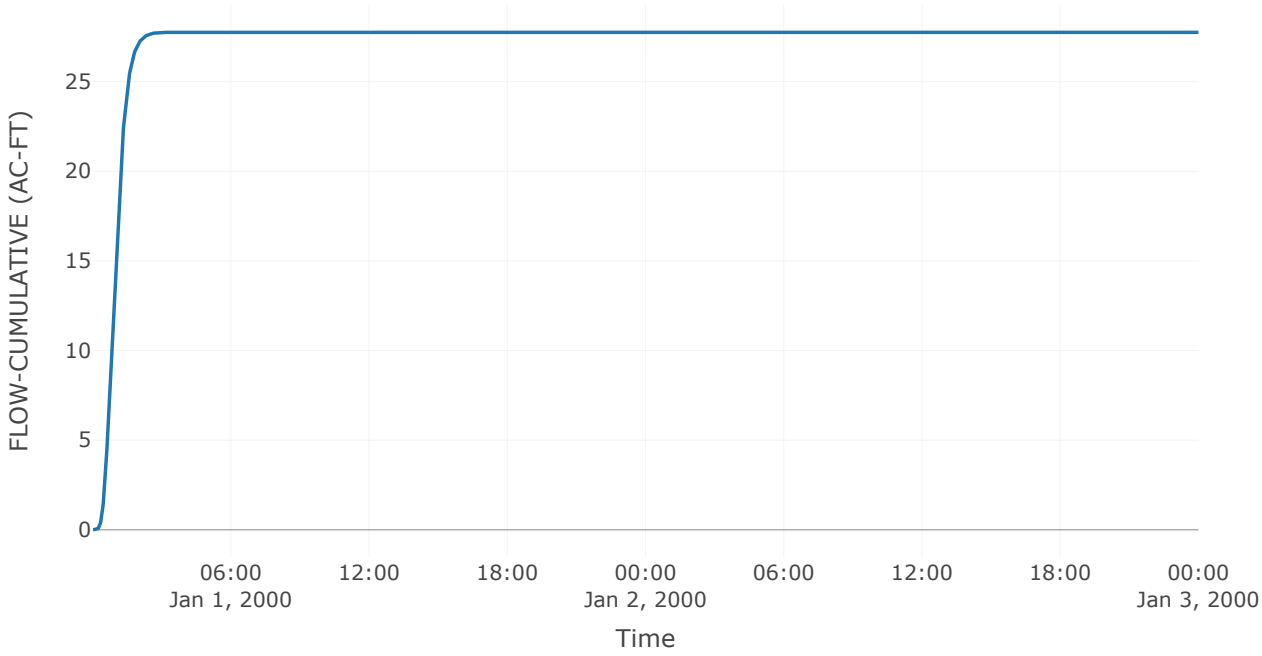
Precipitation and Outflow



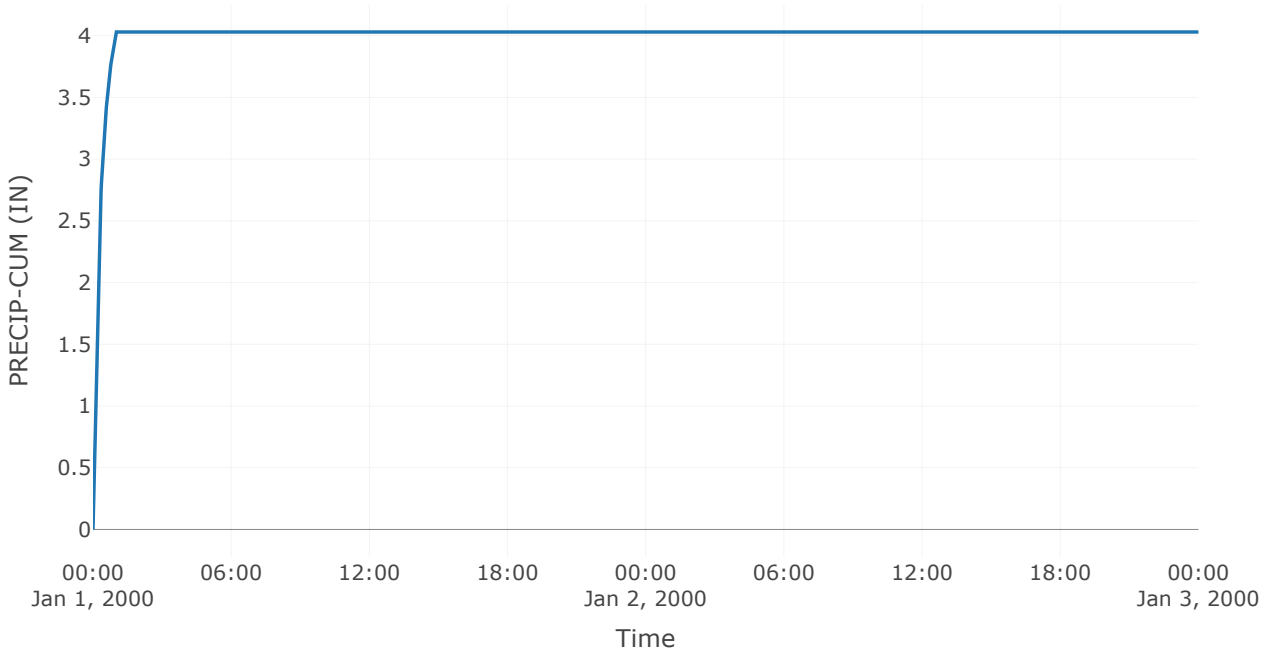
Cumulative Excess Precipitation

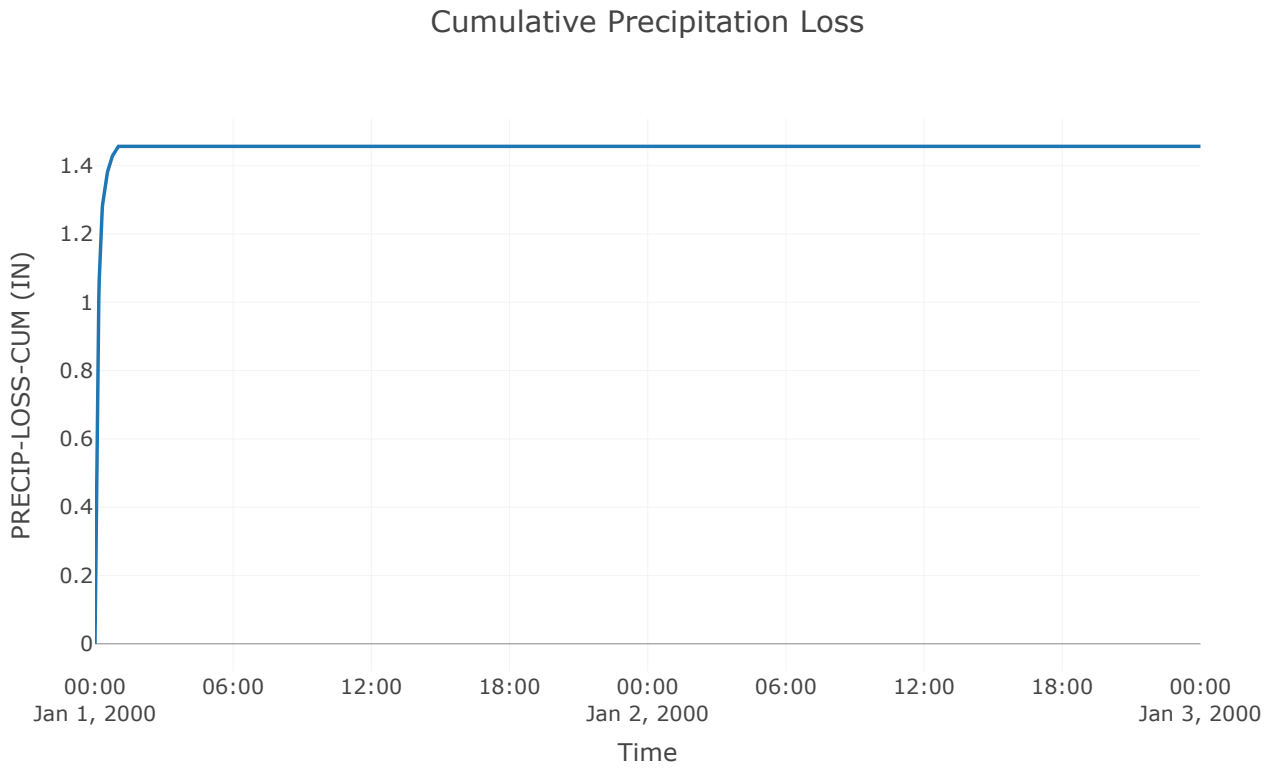


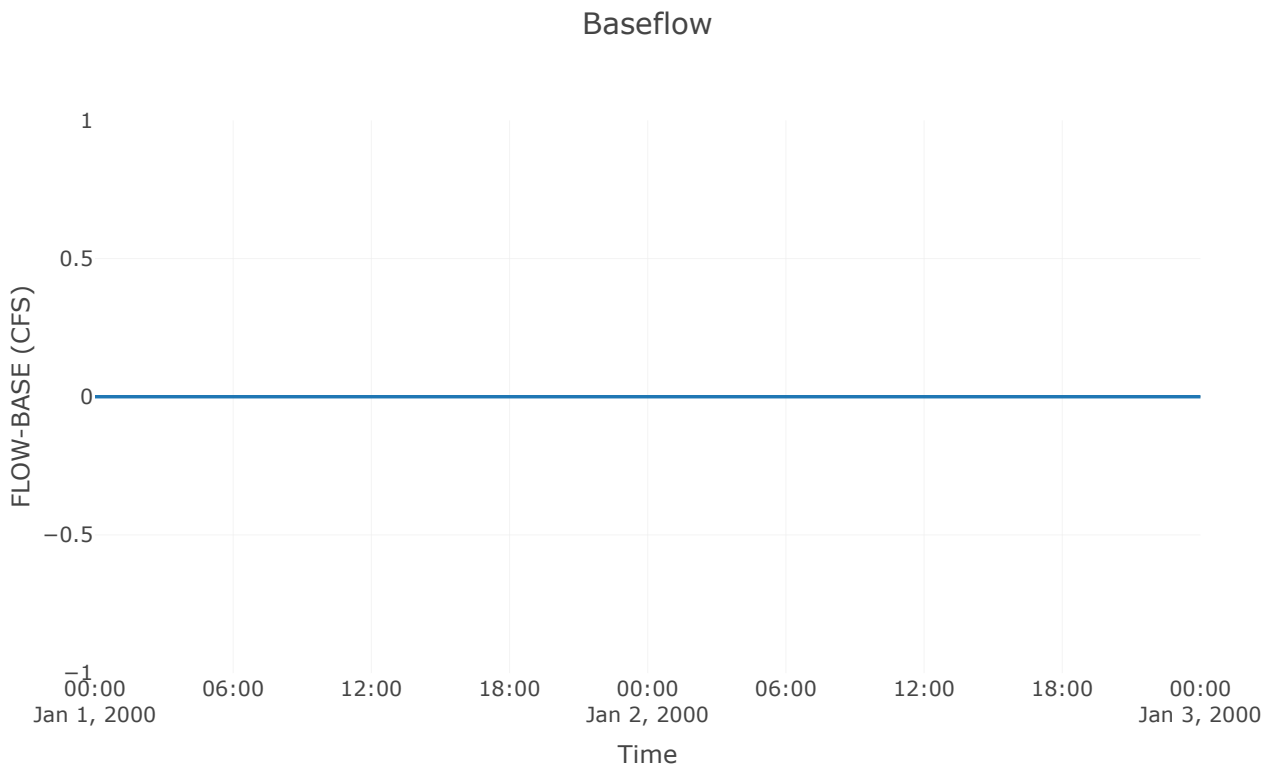
Cumulative Outflow

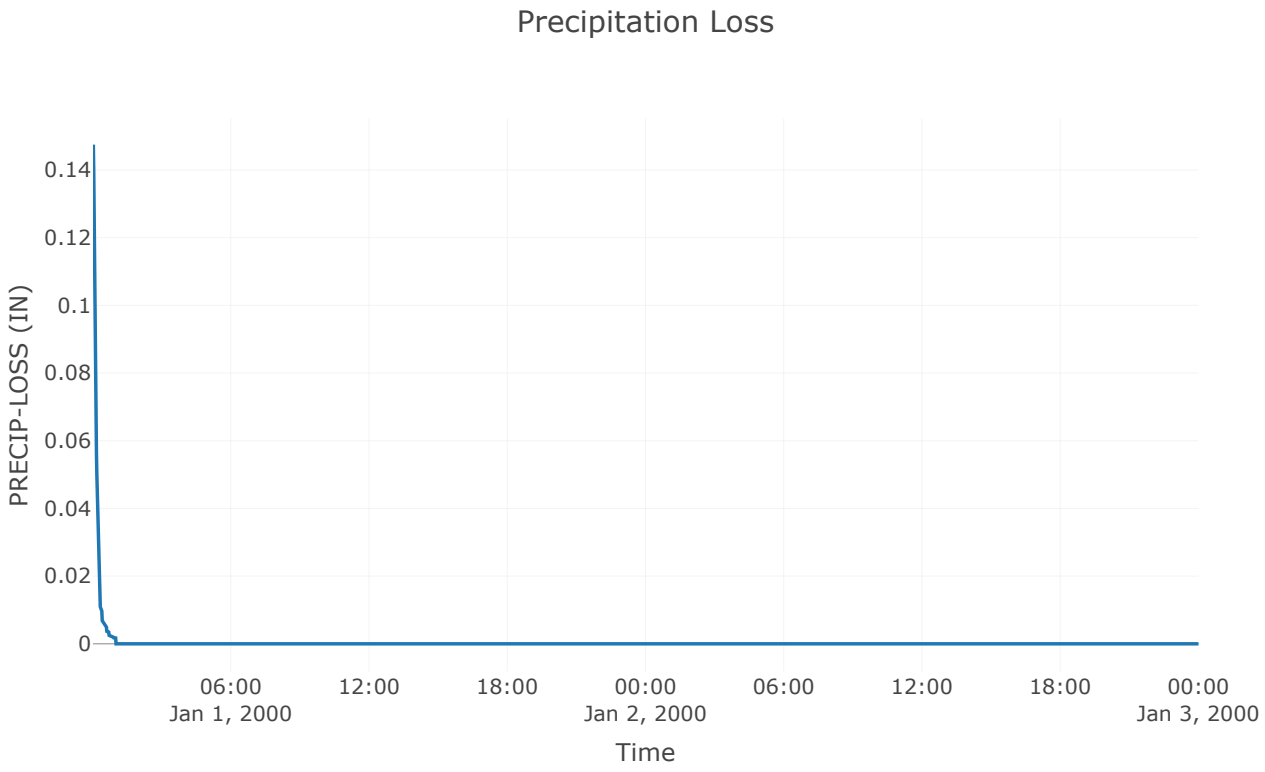


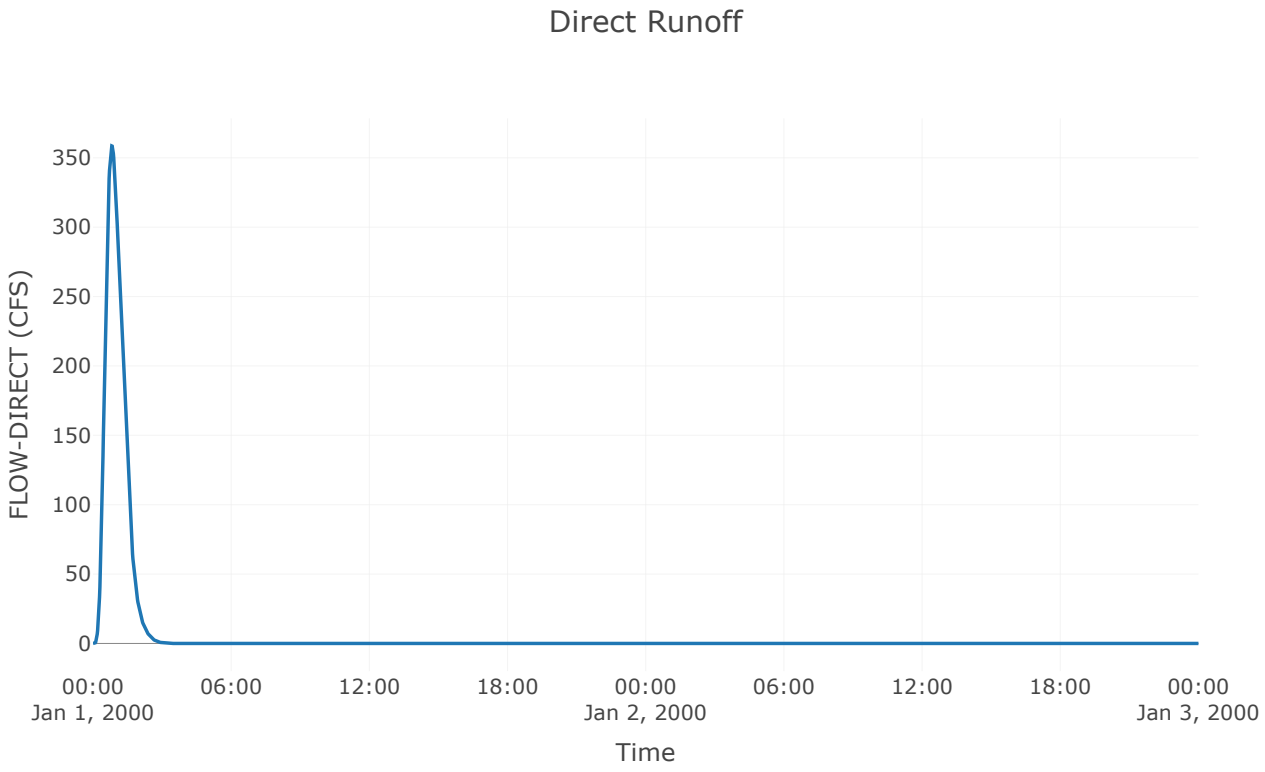
Cumulative Precipitation

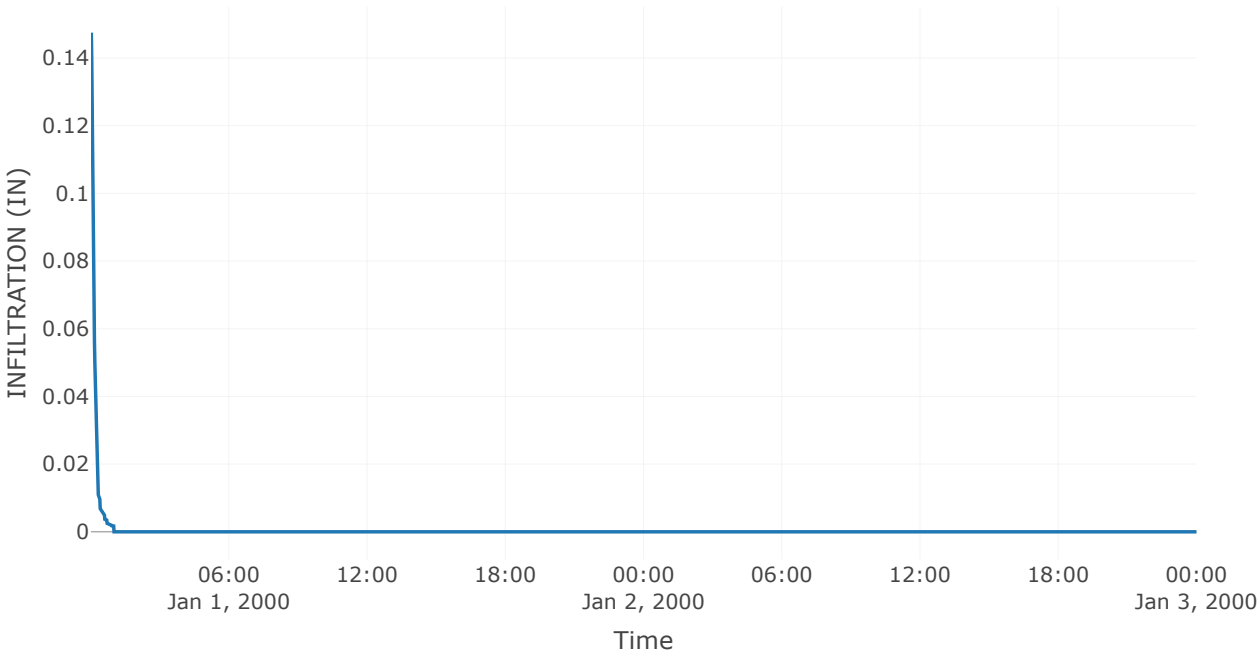



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
350
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

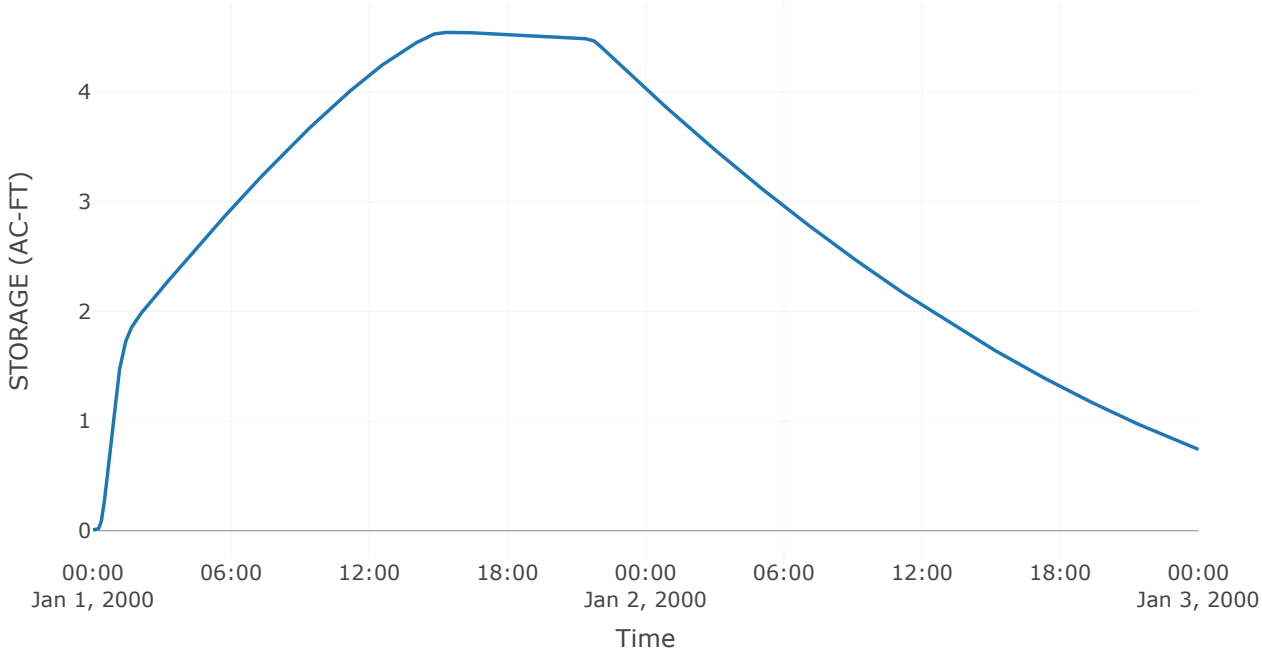

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

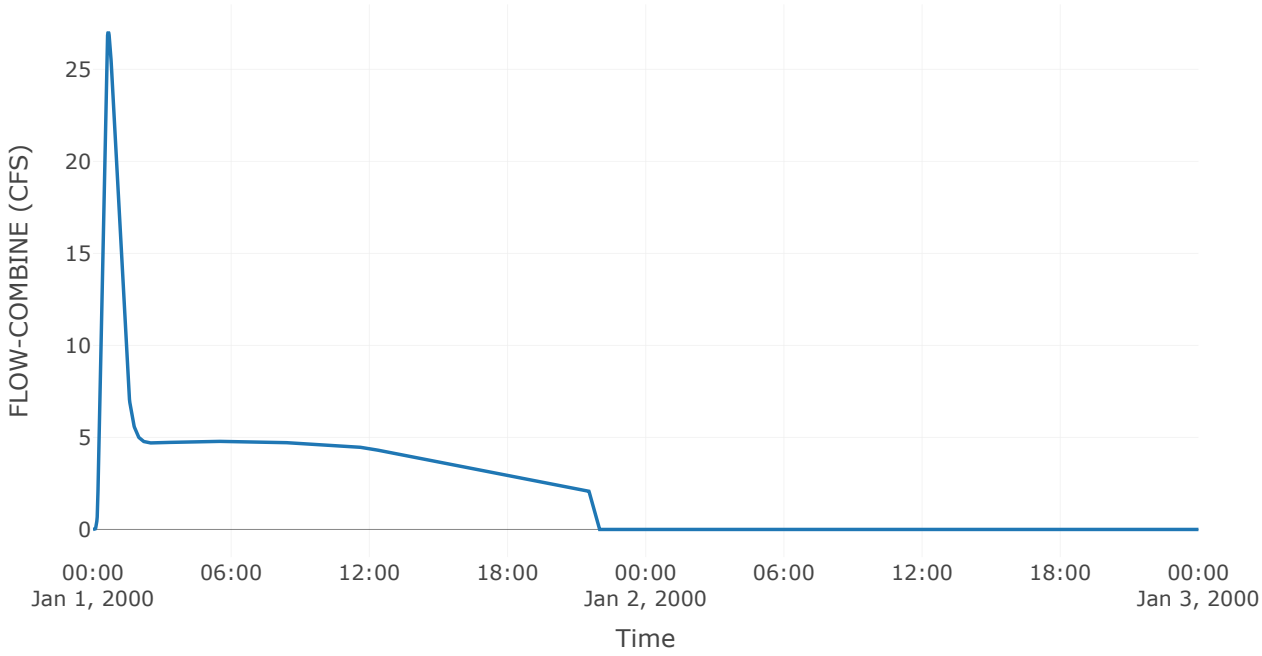
Downstream : Off - Site Tributary Area

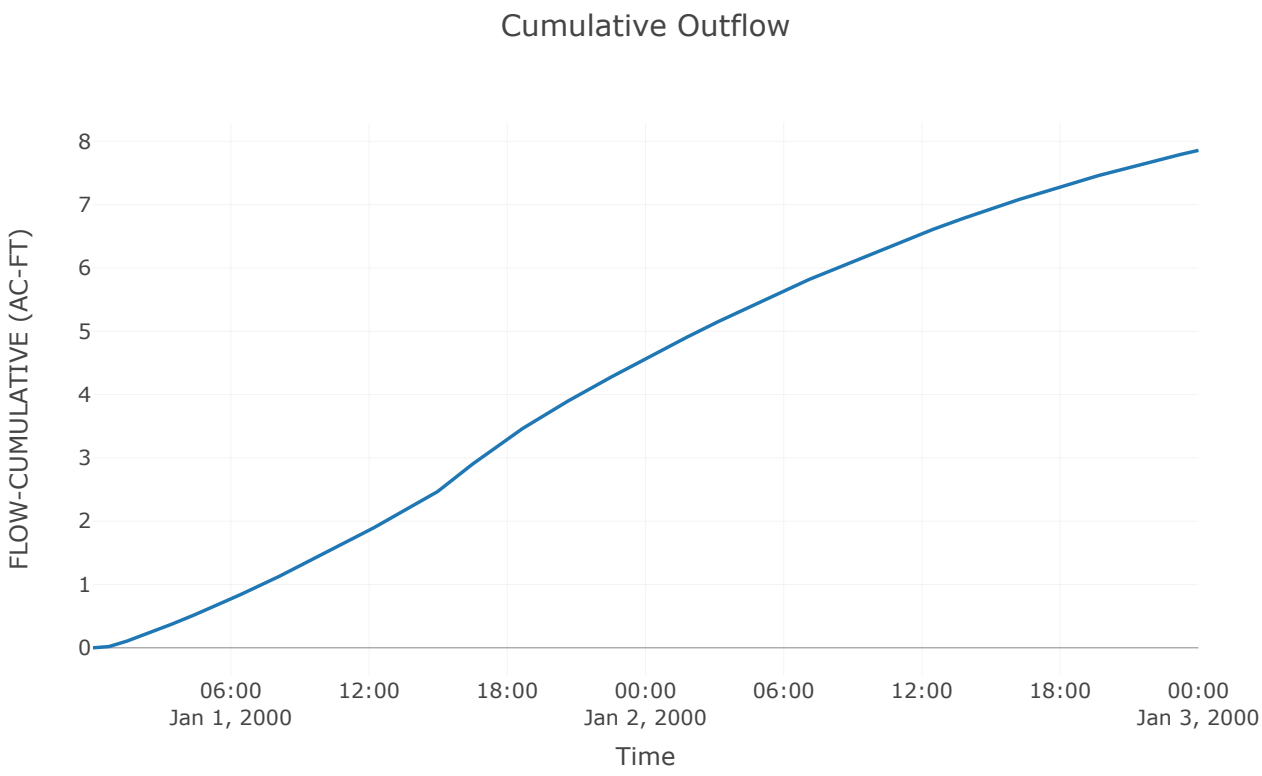
Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

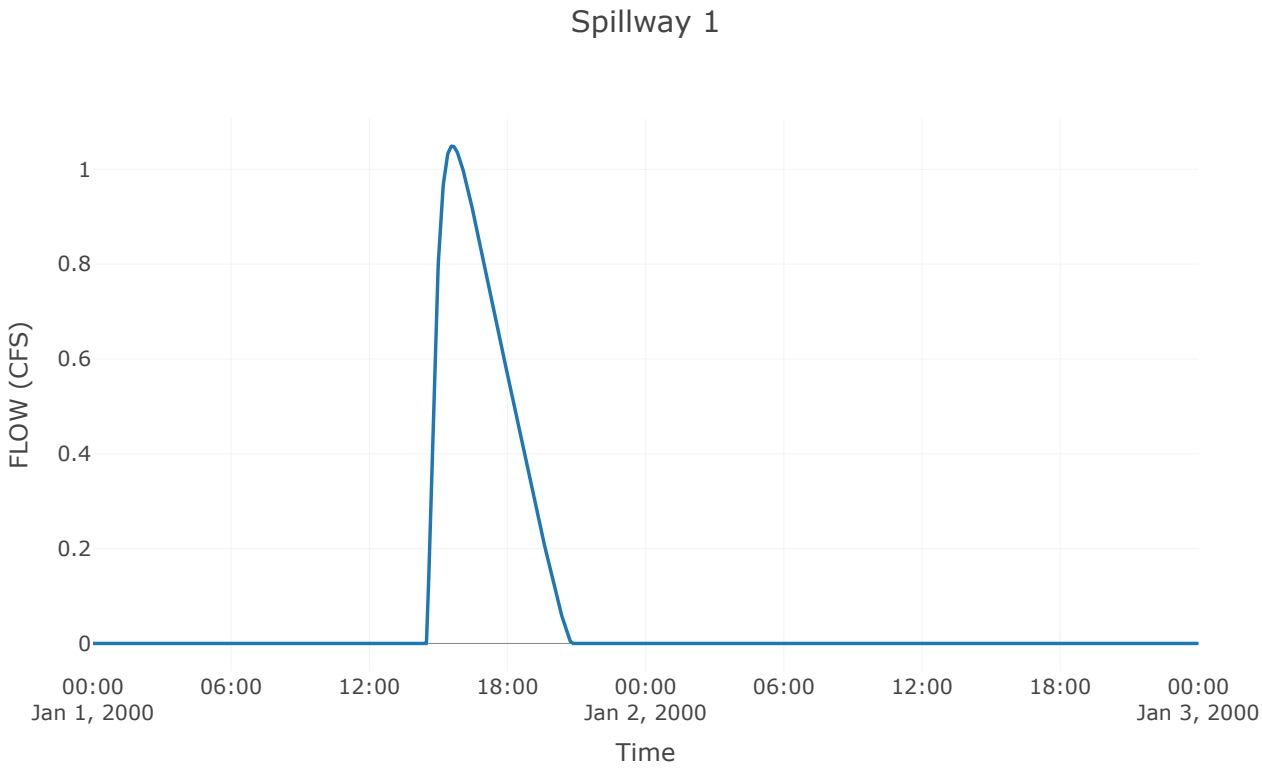
Storage



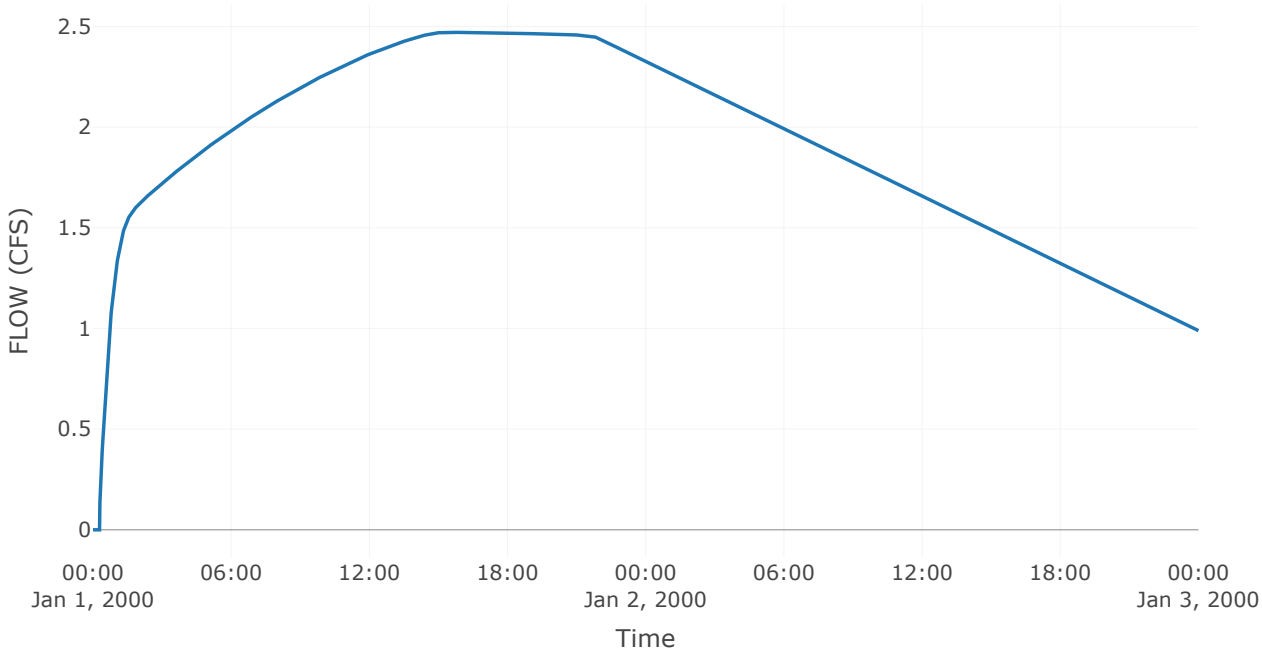
Combined Inflow



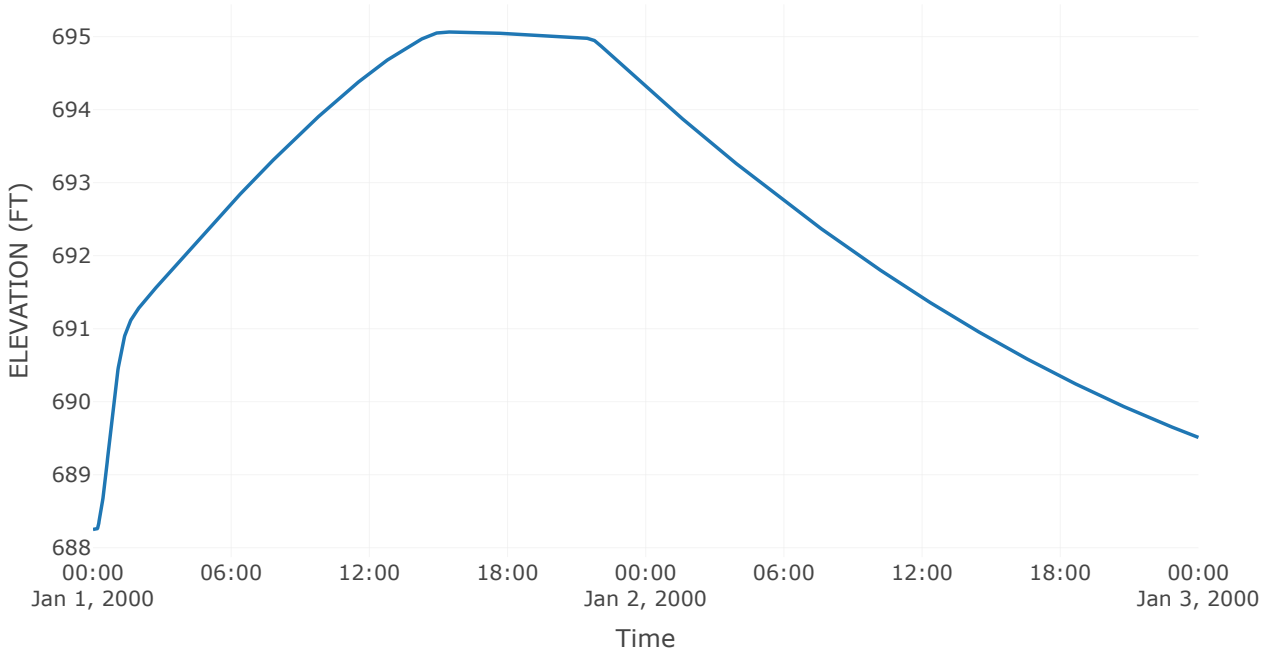

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

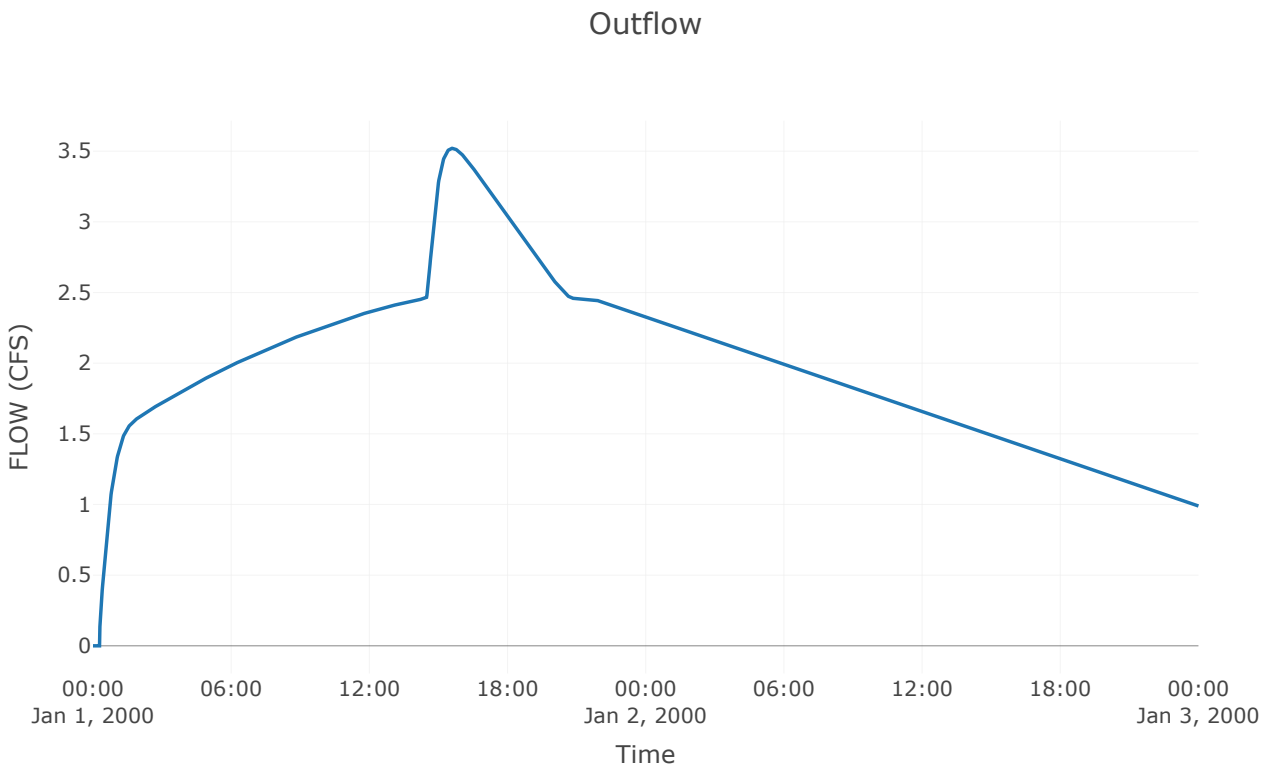

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



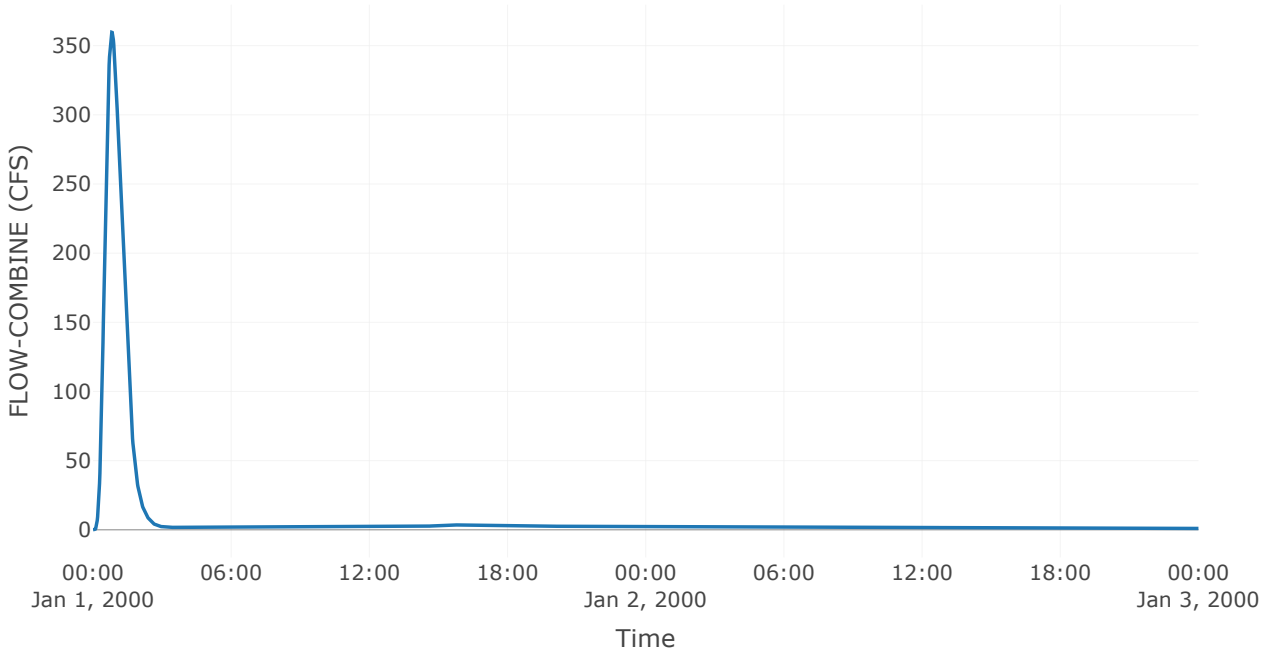

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

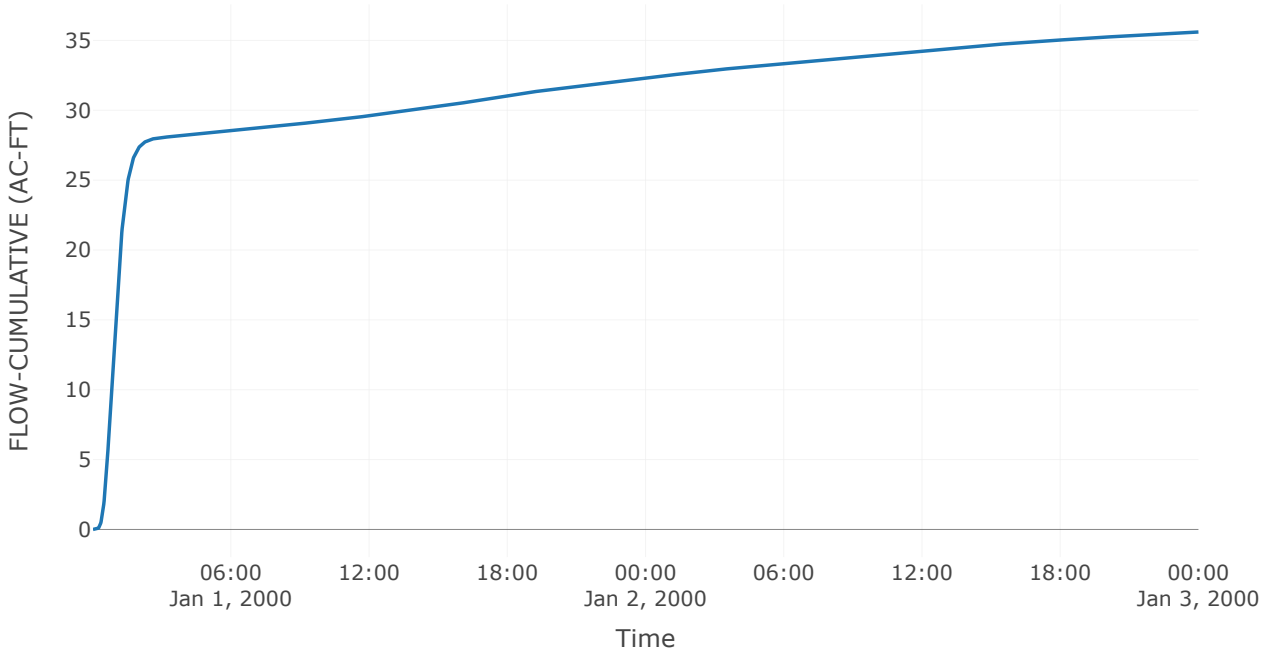
Downstream : Storage East of Wolf Road

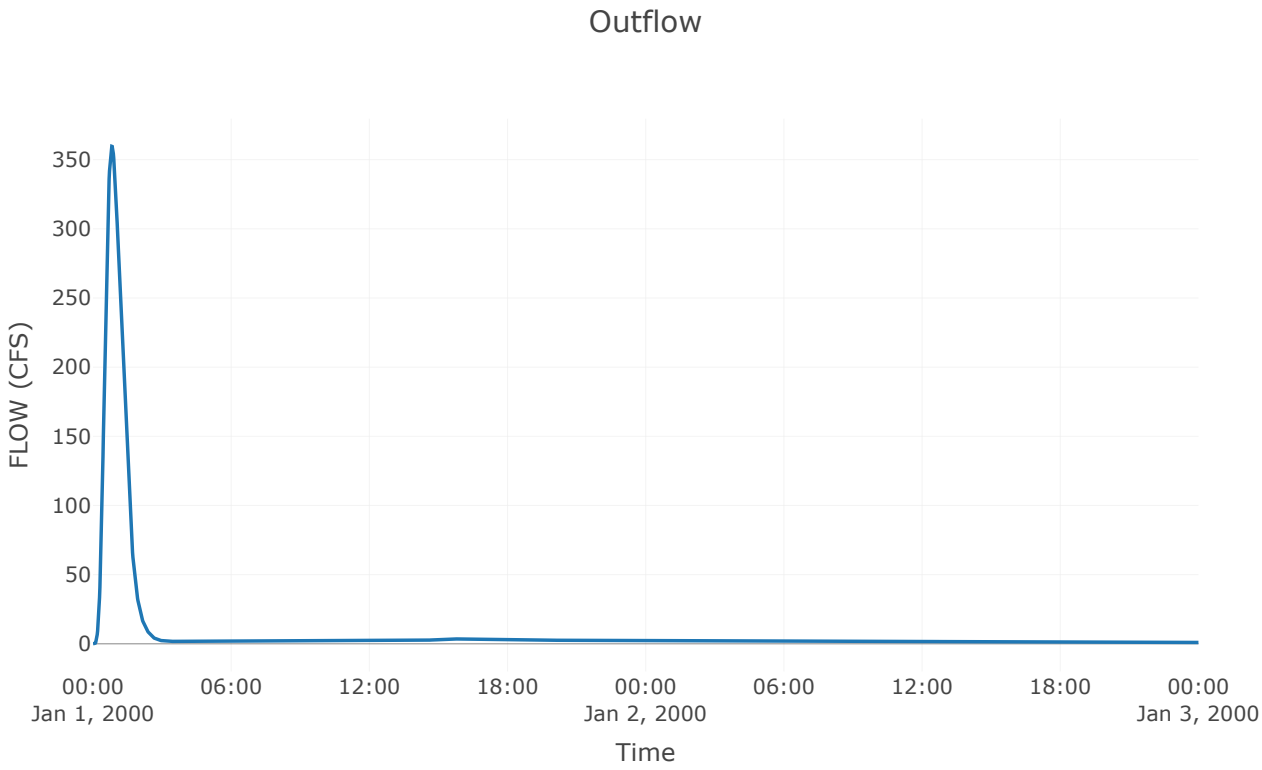
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



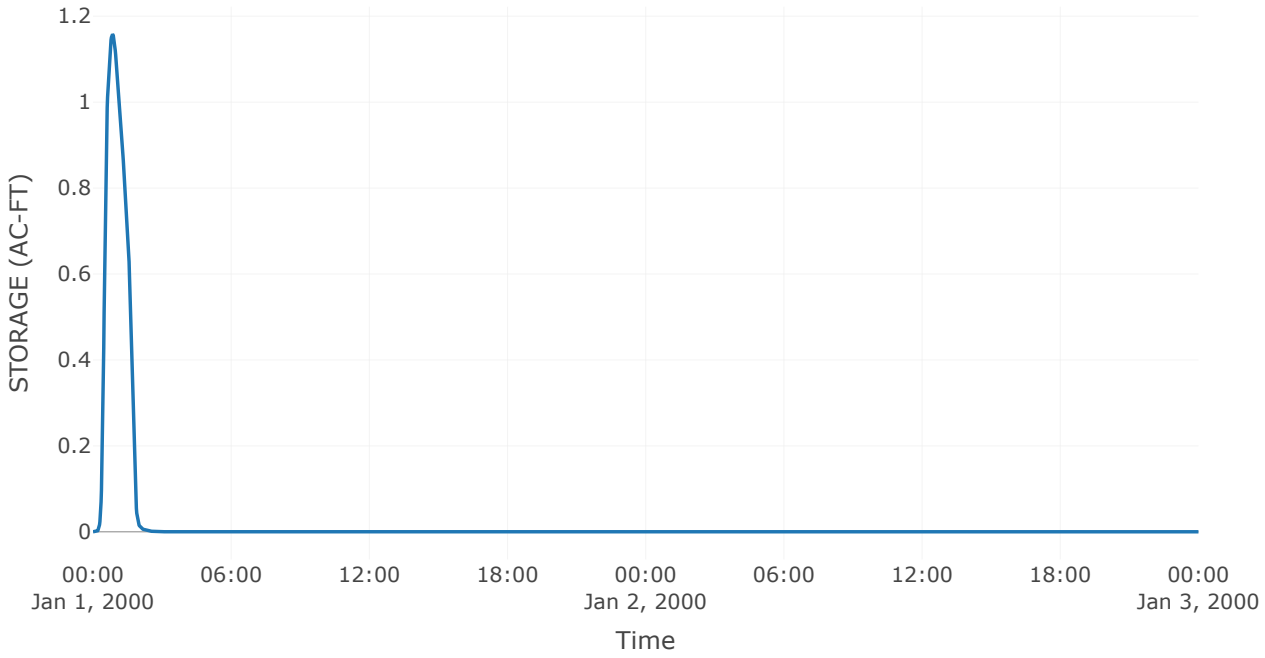

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

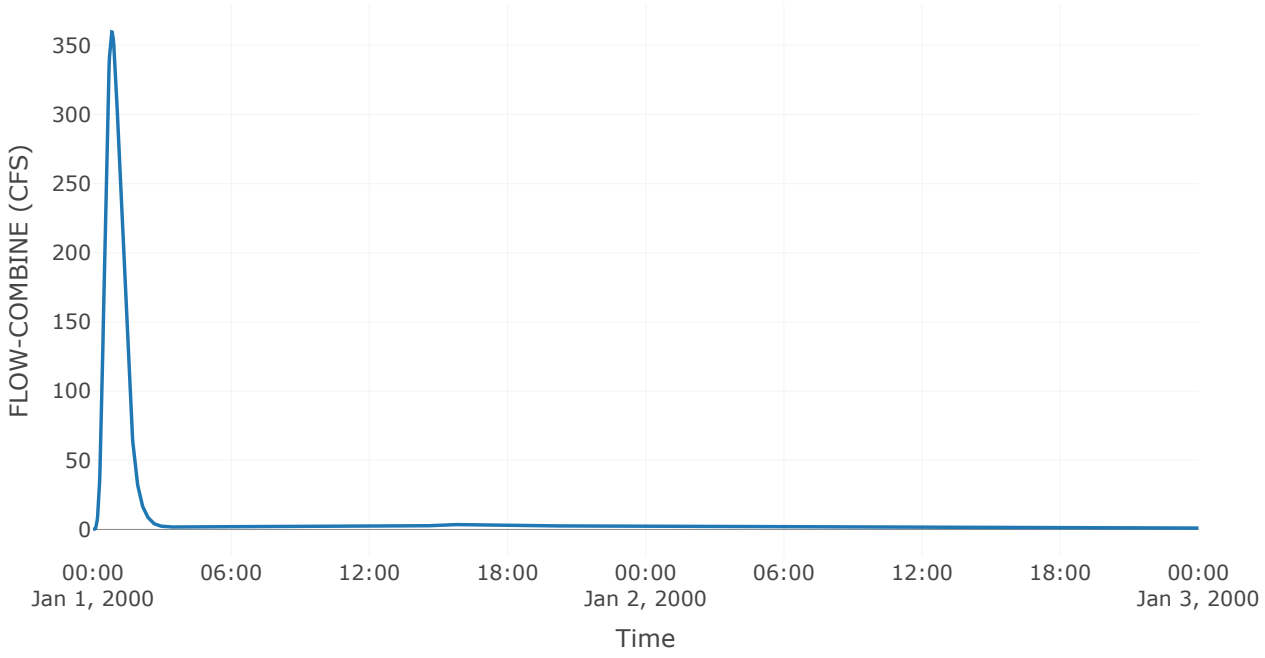
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

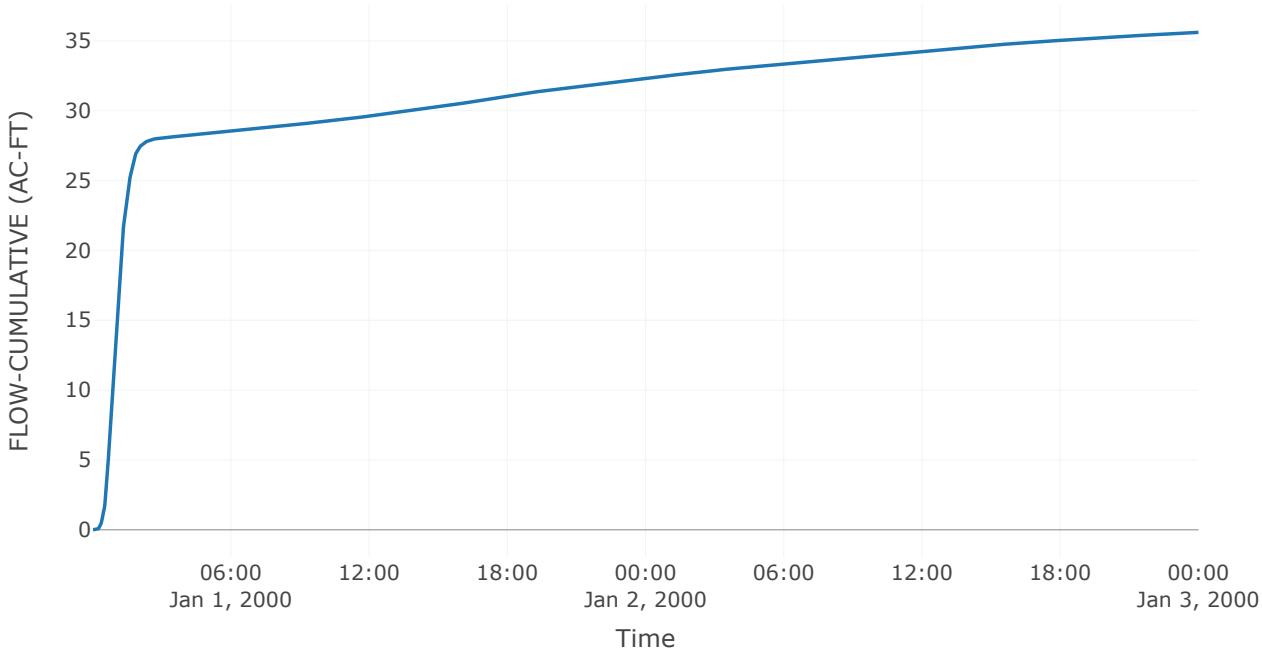
Storage



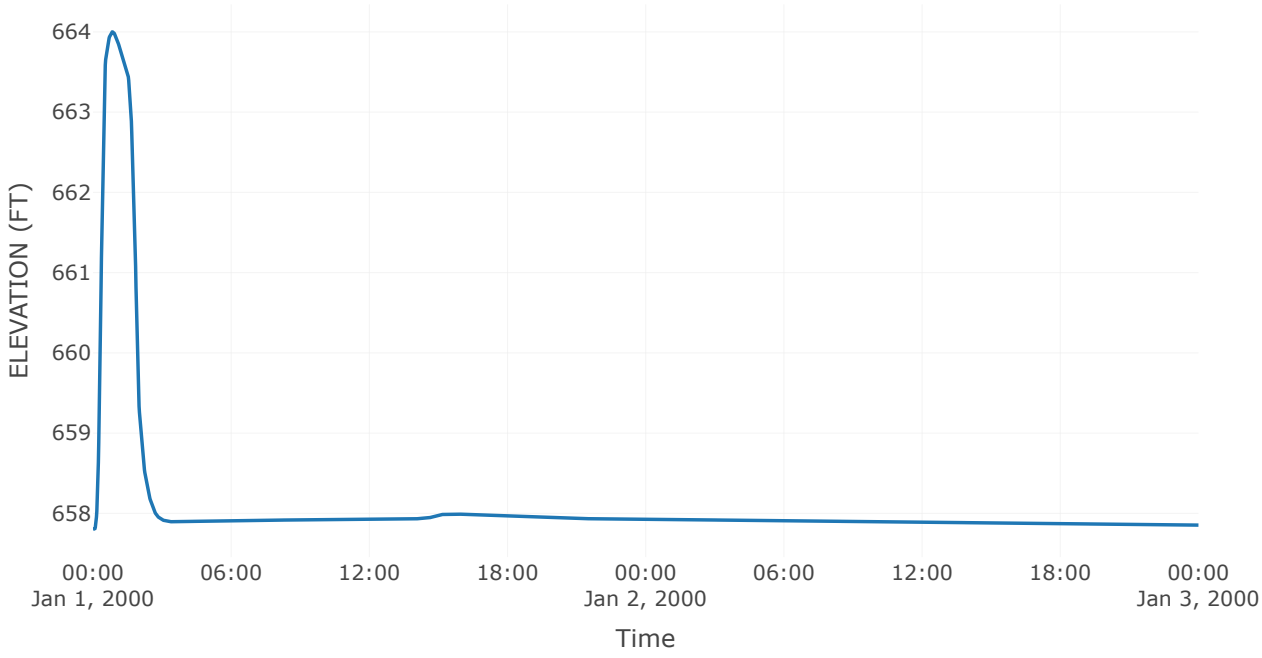
Combined Inflow

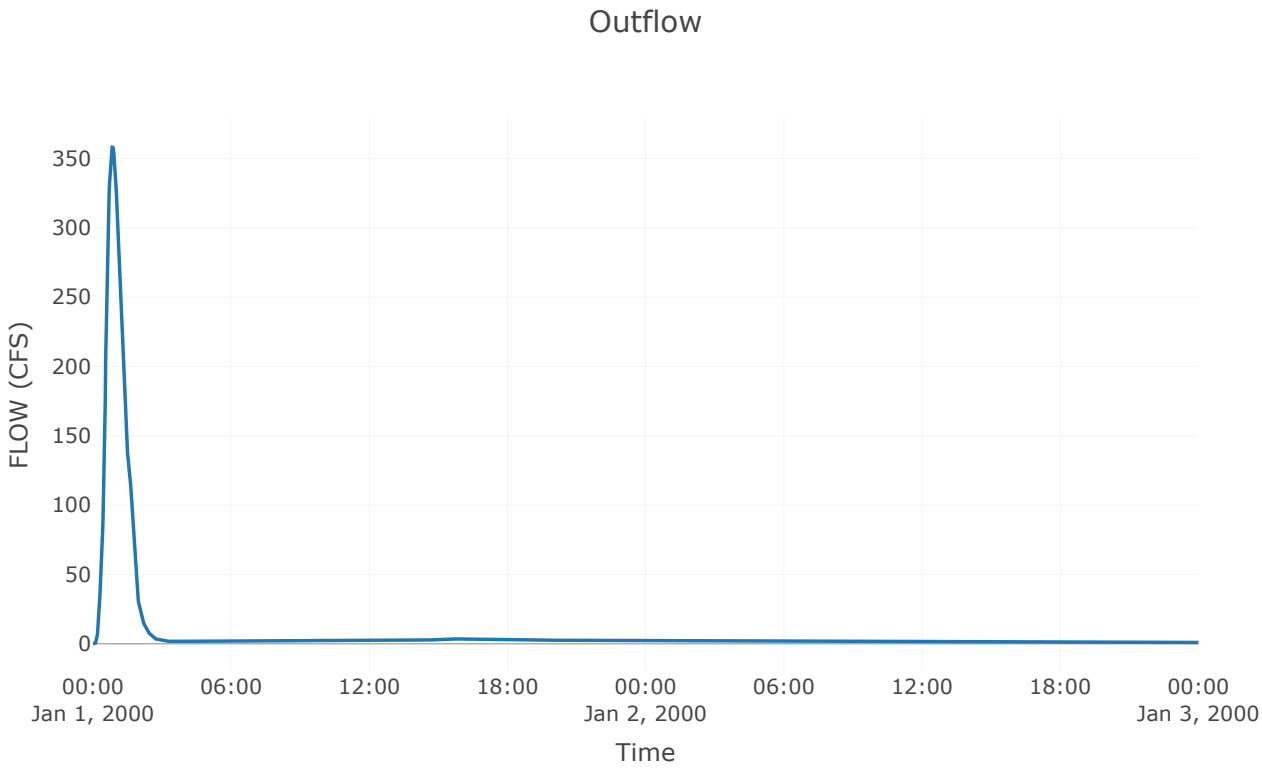


Cumulative Outflow



Pool Elevation



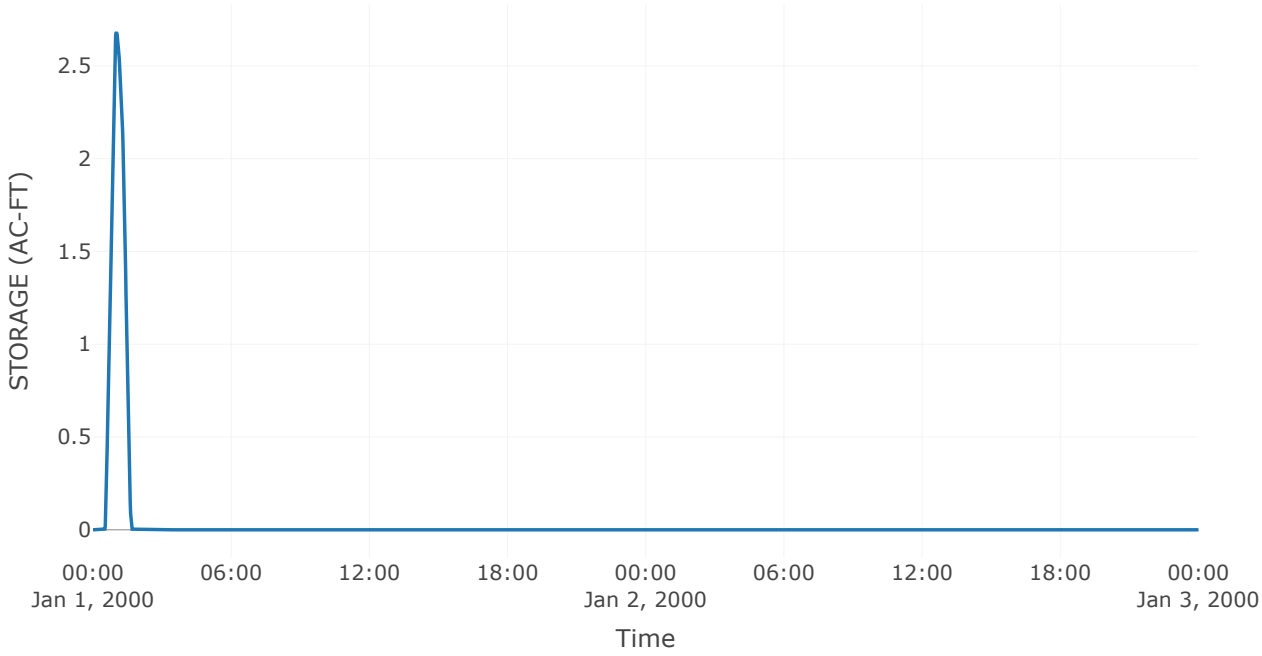

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

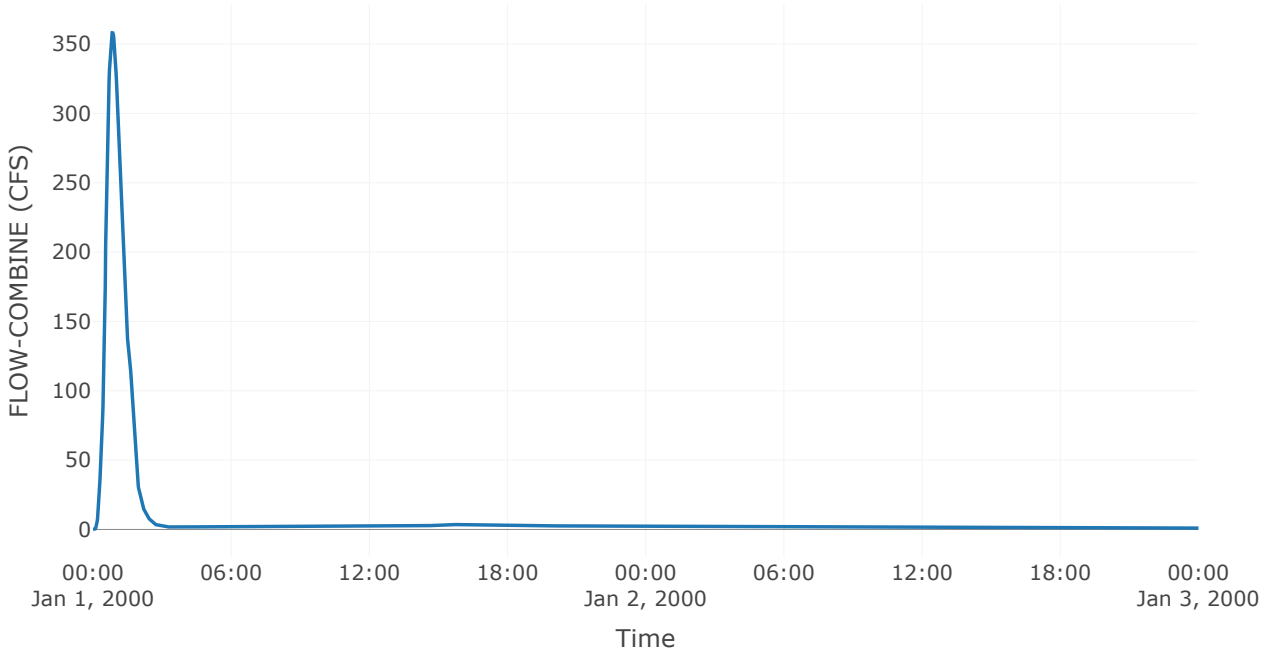
Downstream : Prop Storage West of Wolf Rd

Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	324.8
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.68
Peak Elevation (FT)	664.94
Discharge Volume (AC - FT)	35.58

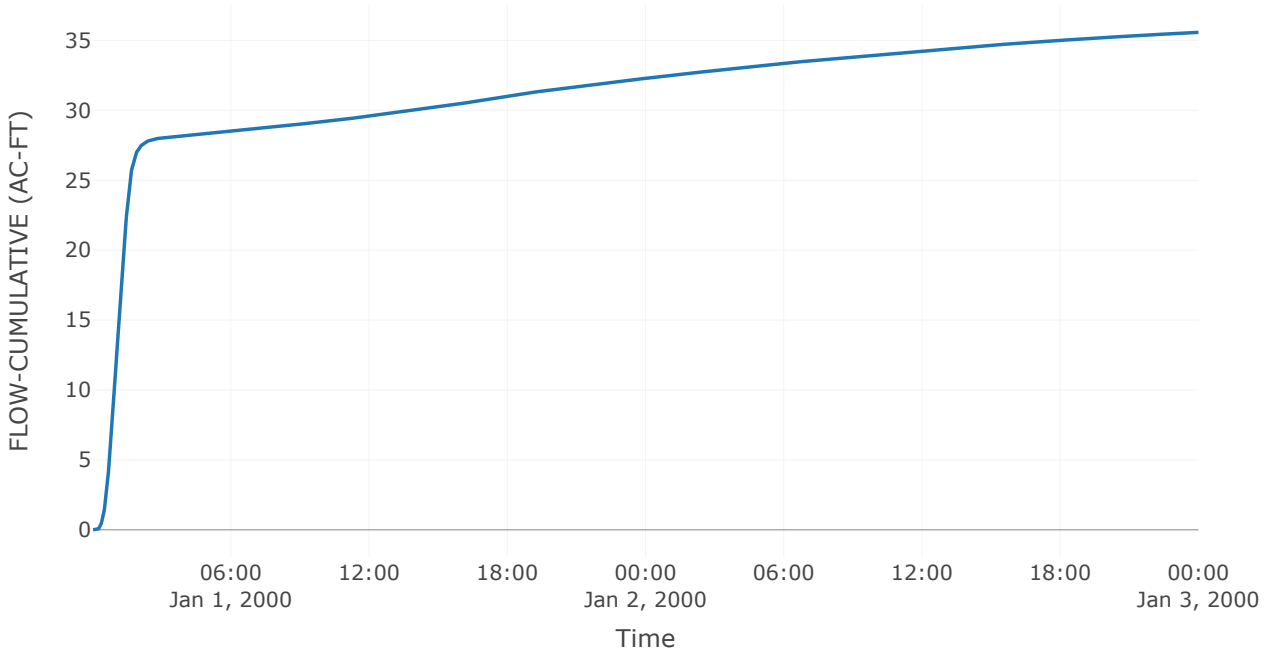
Storage



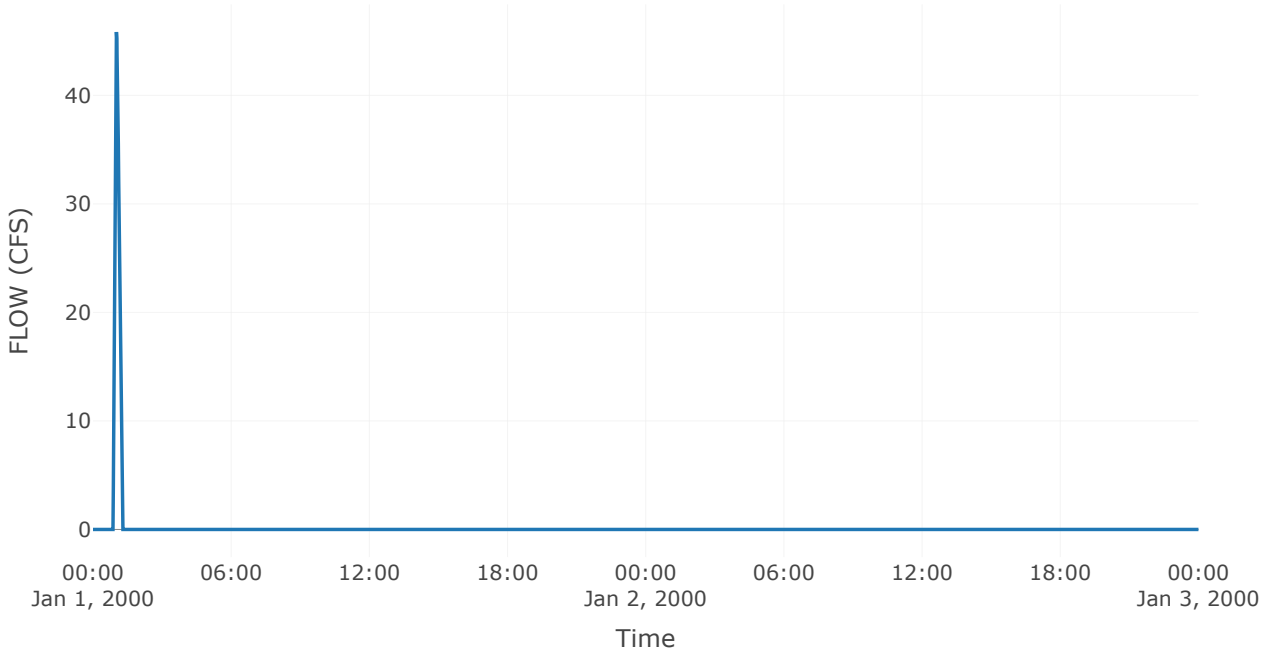
Combined Inflow



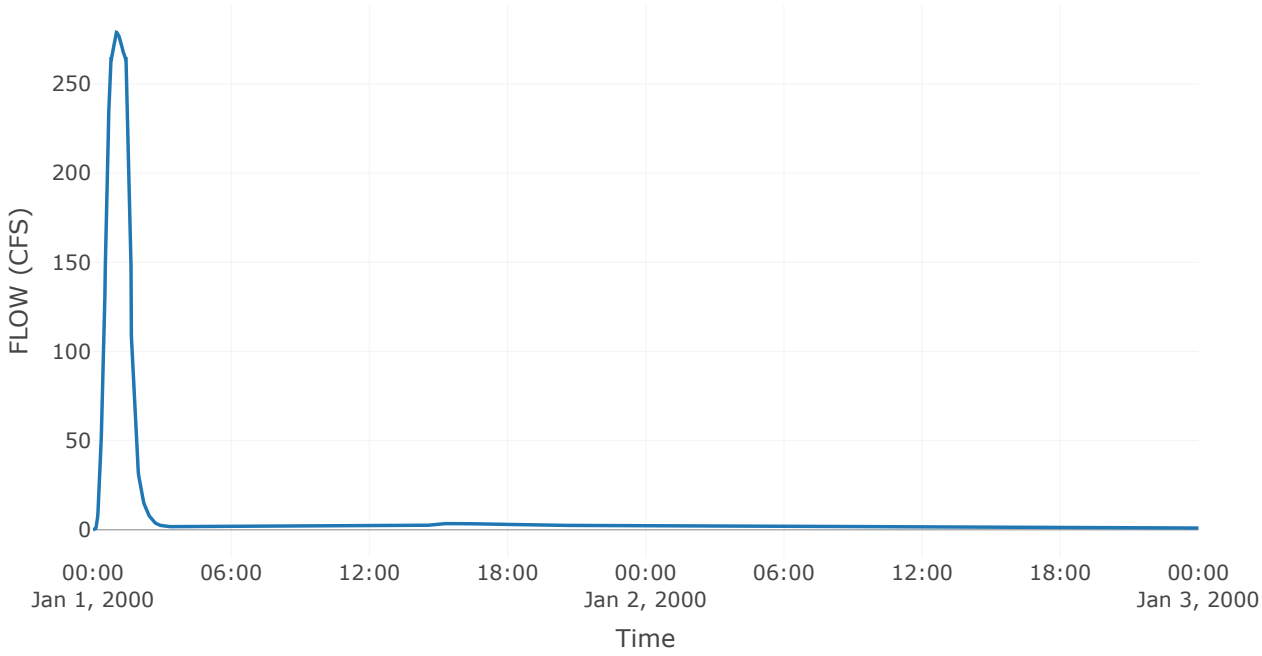
Cumulative Outflow



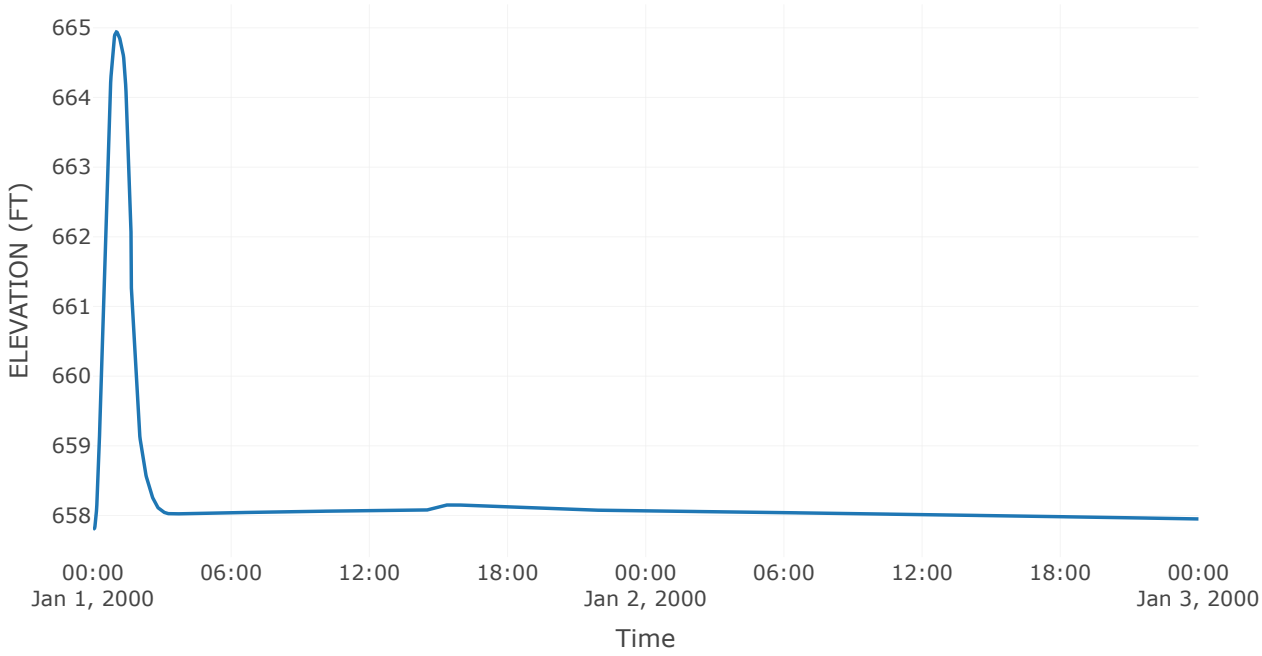
Spillway 1

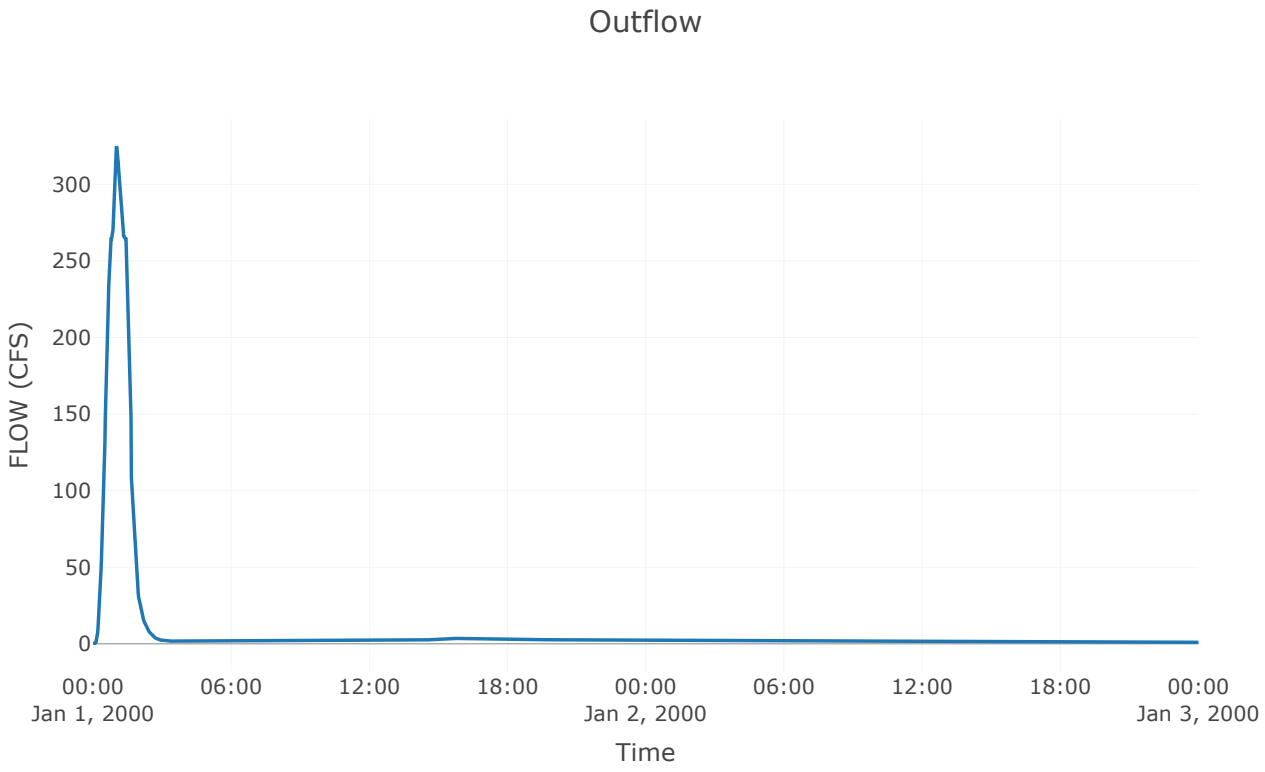


Outlet 1



Pool Elevation



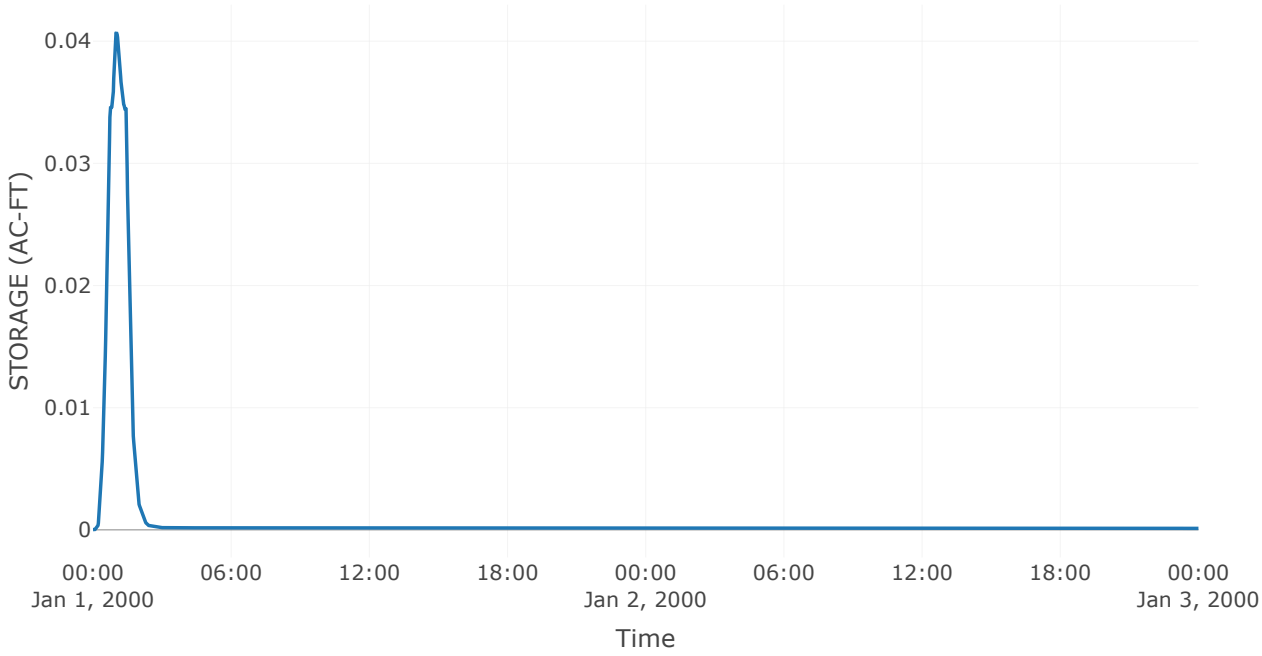

Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

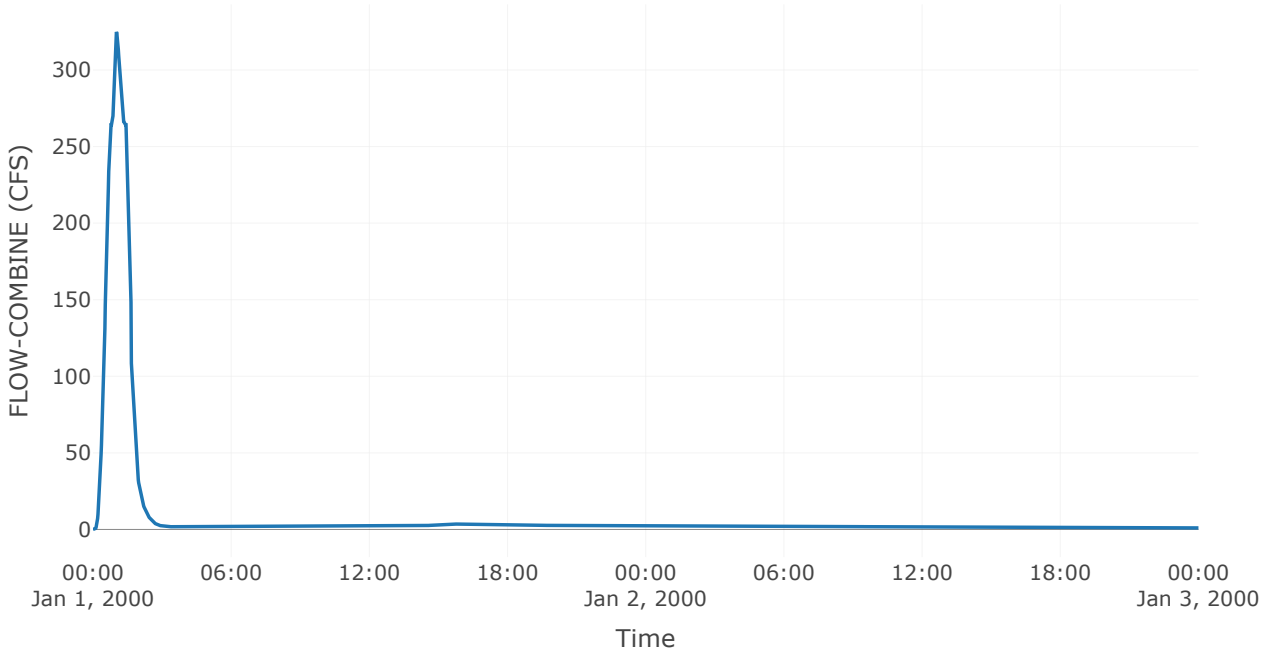
Downstream : Proposed Basin C

Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	324.78
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	324.8
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	35.58
Maximum Storage (AC - FT)	0.04
Peak Elevation (FT)	660.3
Discharge Volume (AC - FT)	35.57

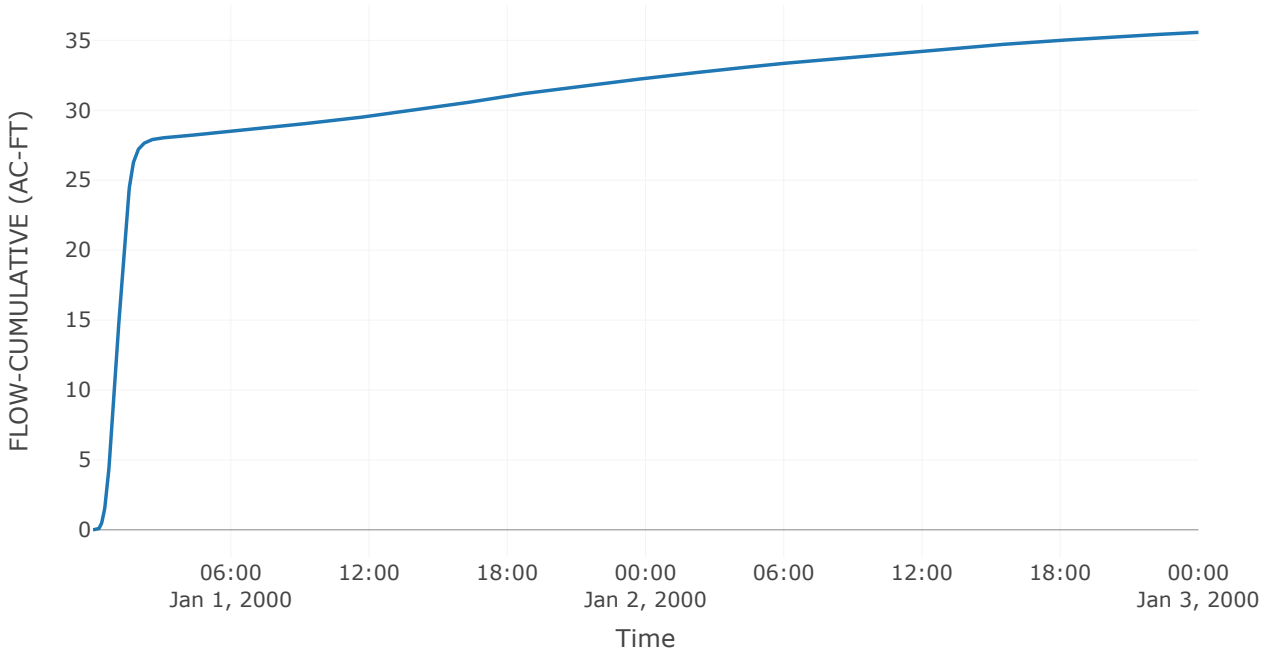
Storage



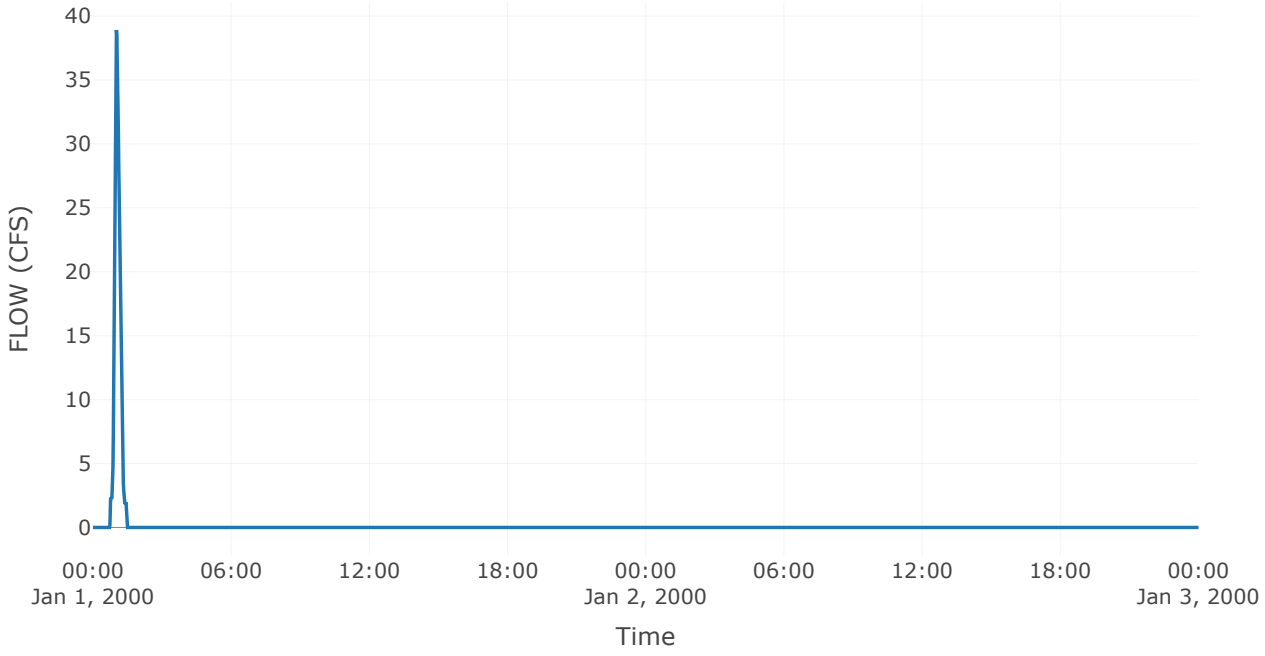
Combined Inflow



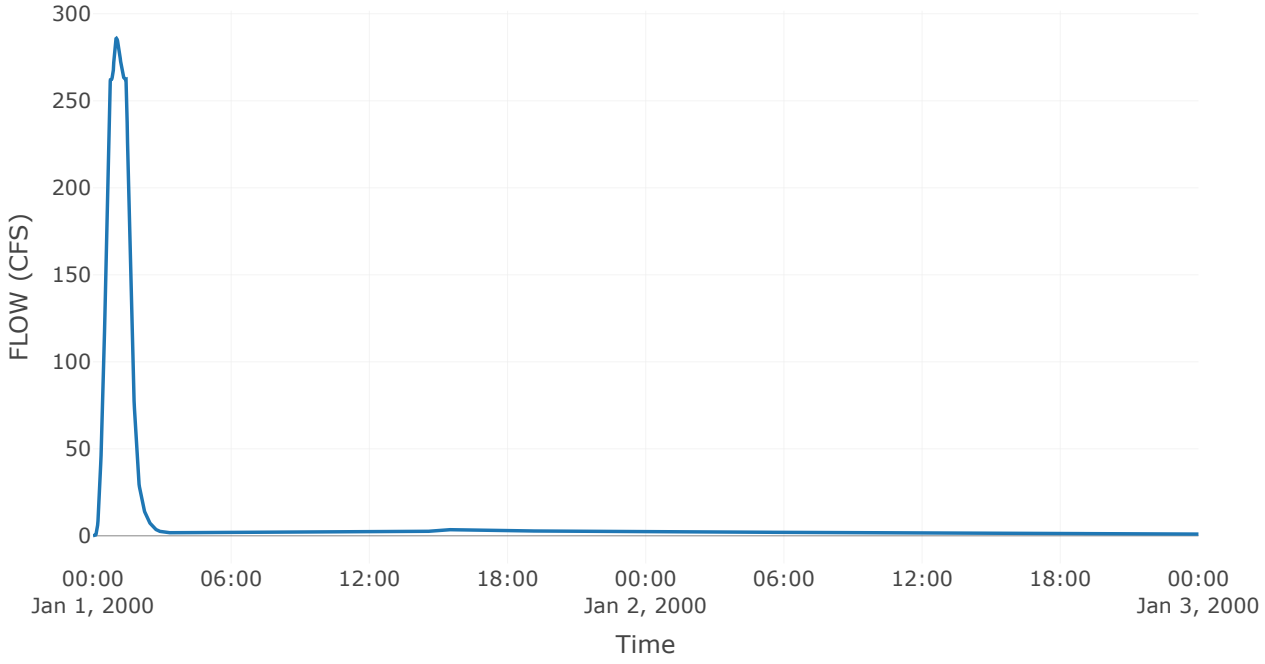
Cumulative Outflow



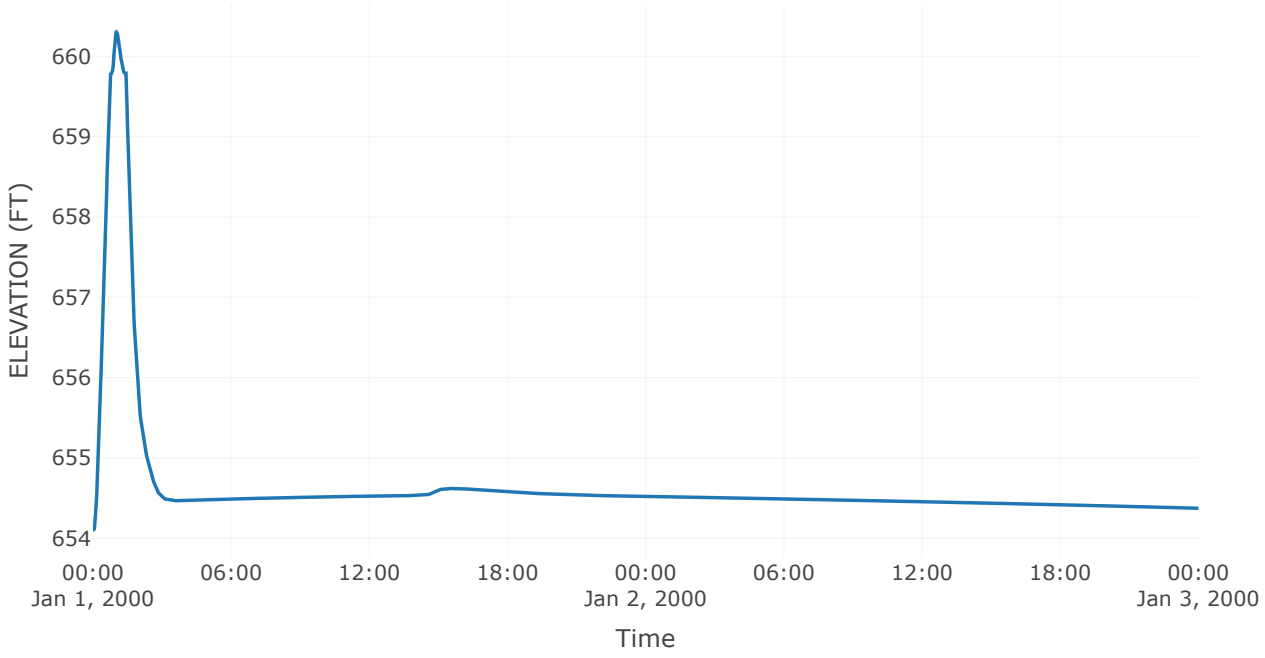
Spillway 1

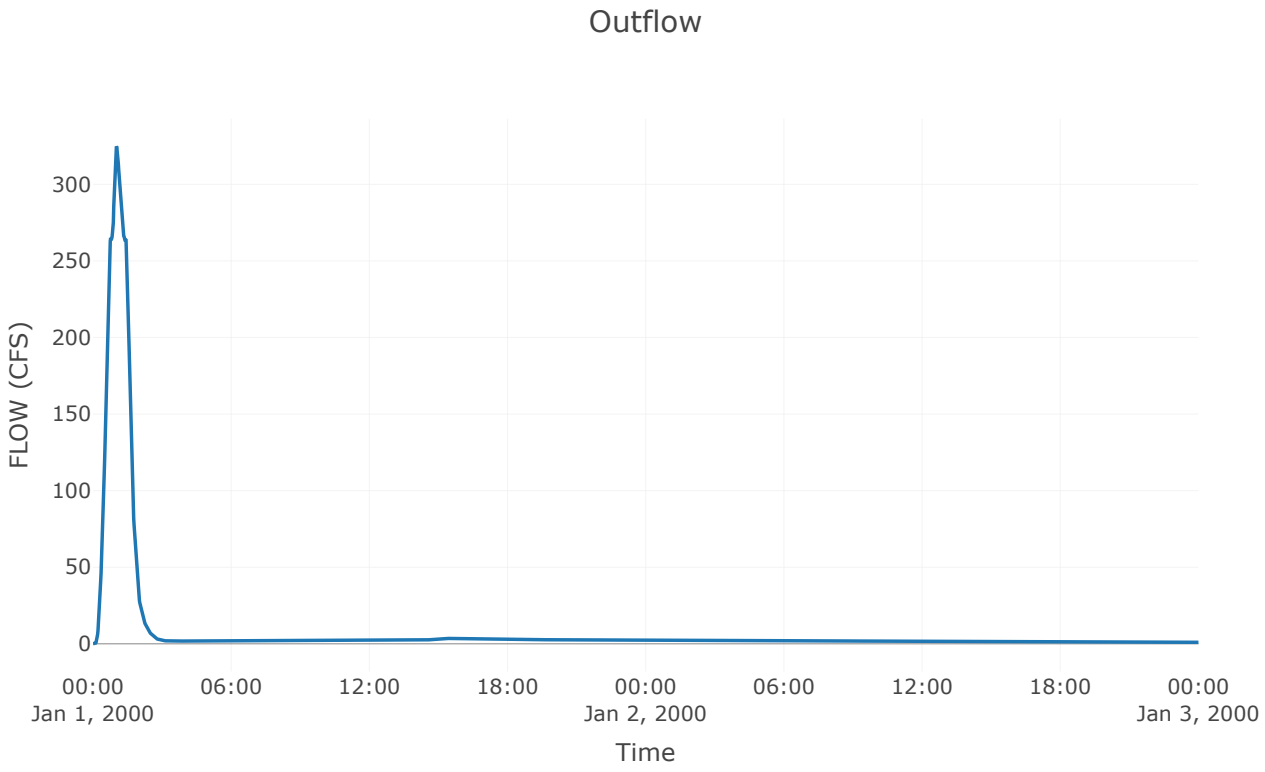


Outlet 1



Pool Elevation




Outflow
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

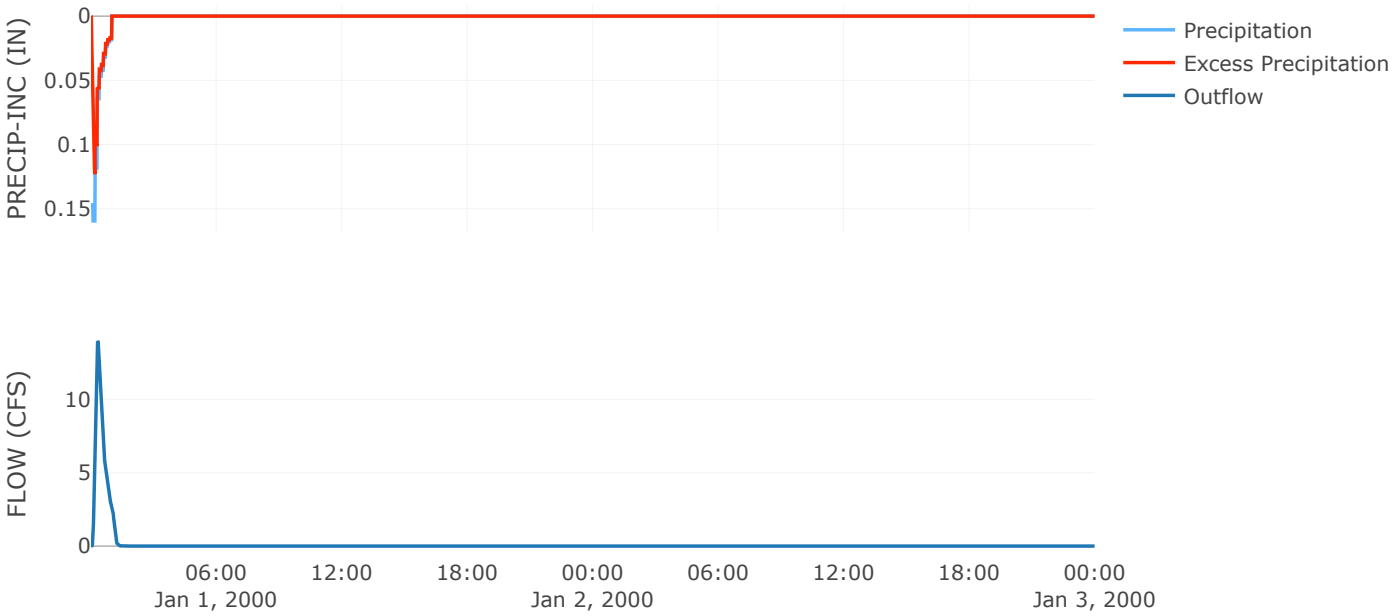
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

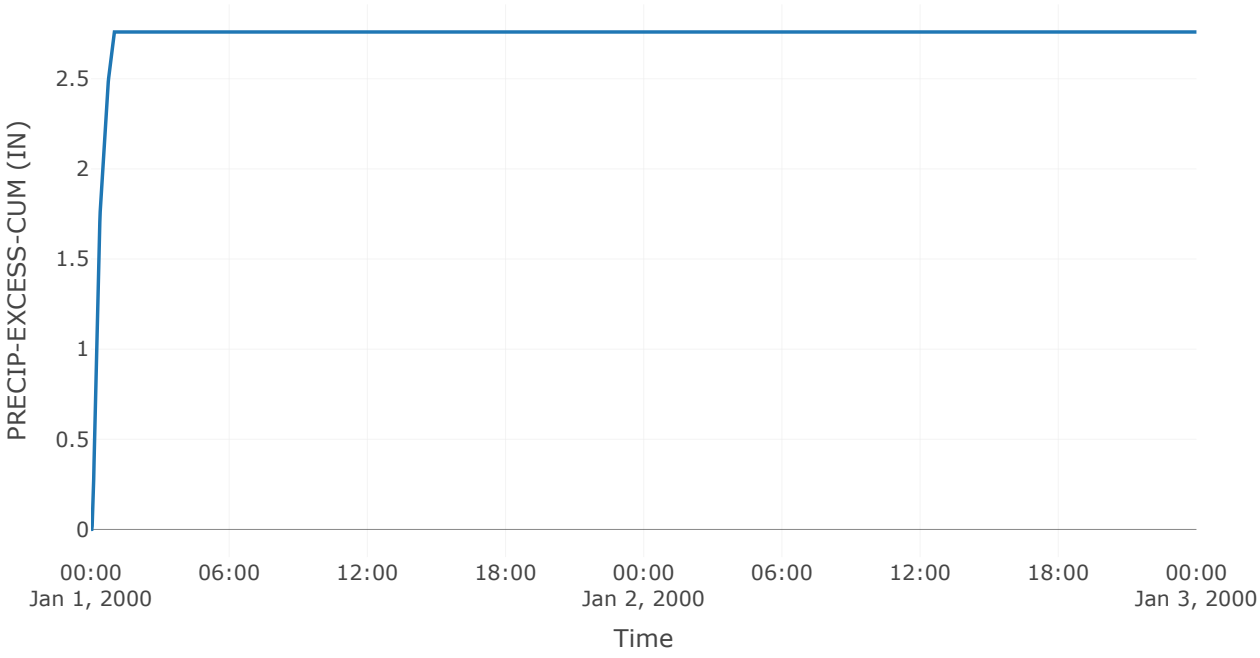
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Prop On-Site	
Peak Discharge (CFS)	13.96
Time of Peak Discharge	01Jan2000, 00:19
Volume (IN)	2.76
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.26
Excess Volume (AC - FT)	0.55
Direct Runoff Volume (AC - FT)	0.55
Baseflow Volume (AC - FT)	0

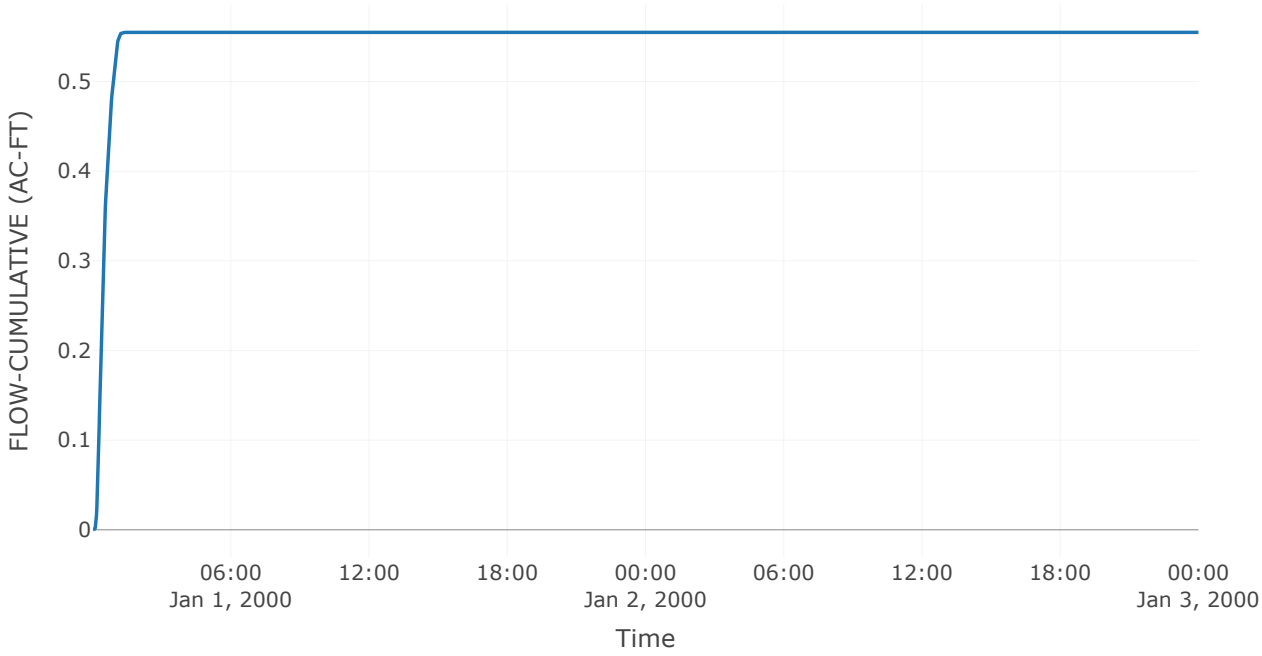
Precipitation and Outflow



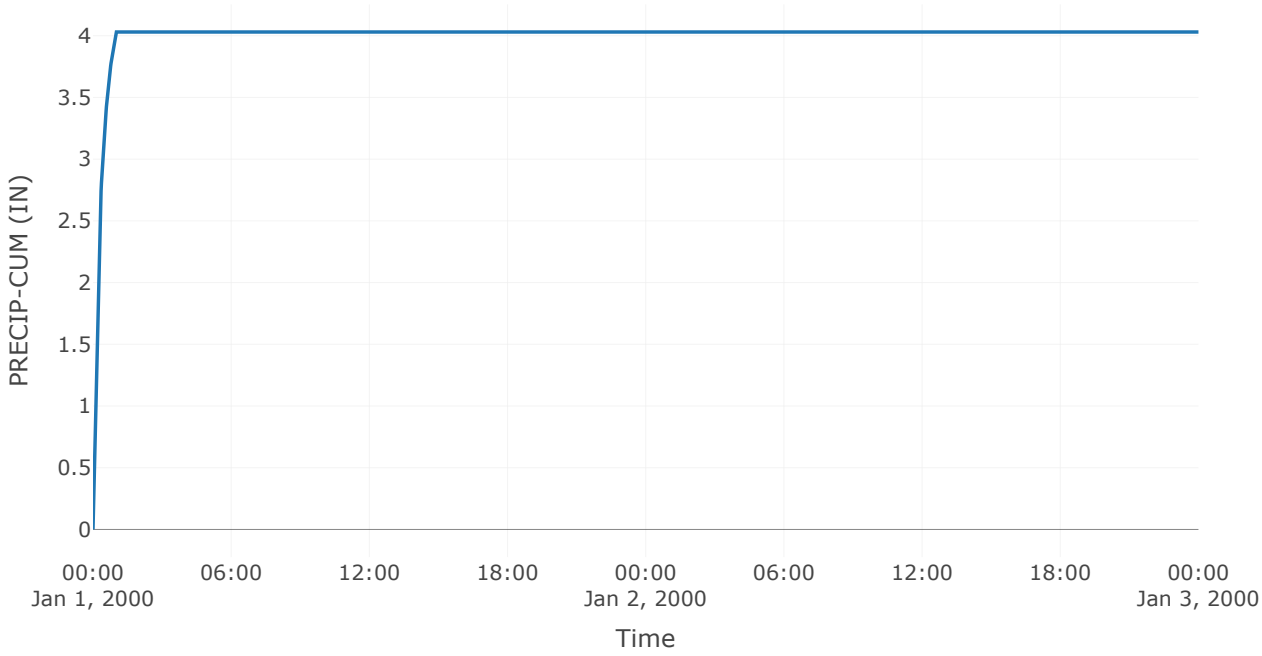
Cumulative Excess Precipitation

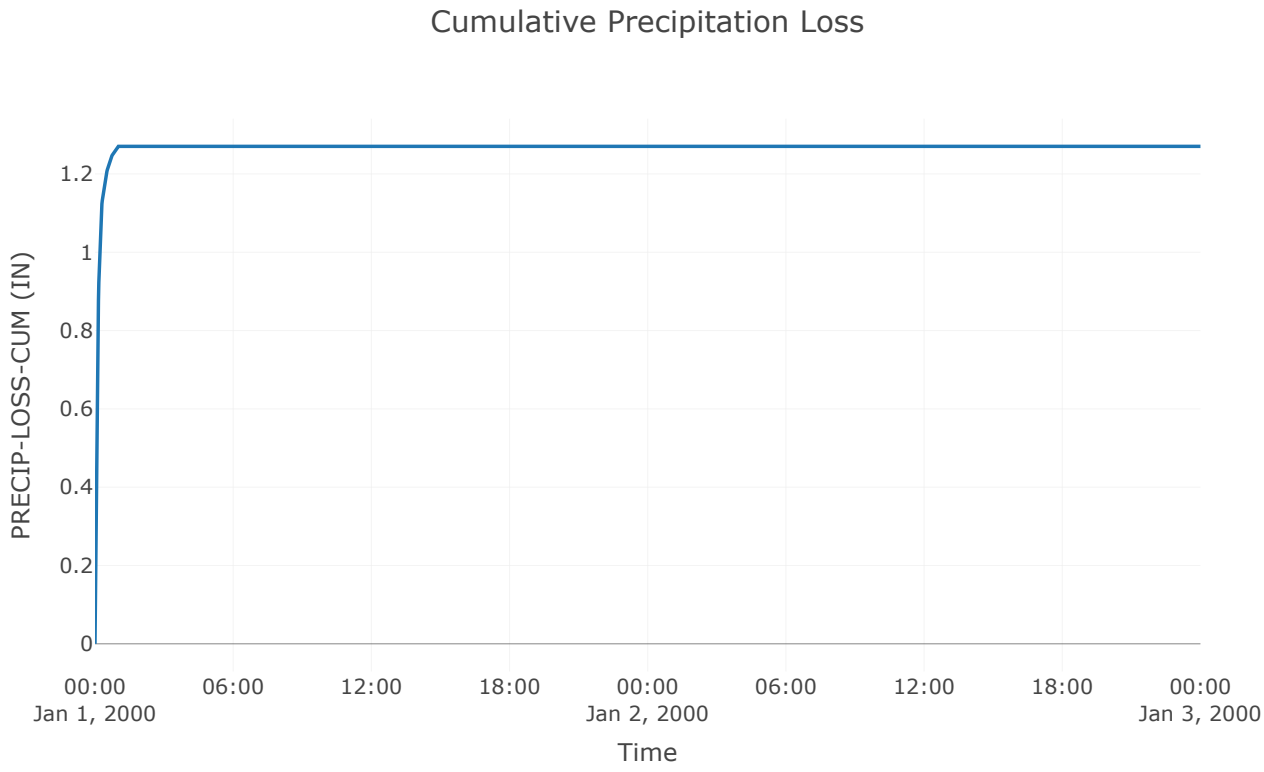


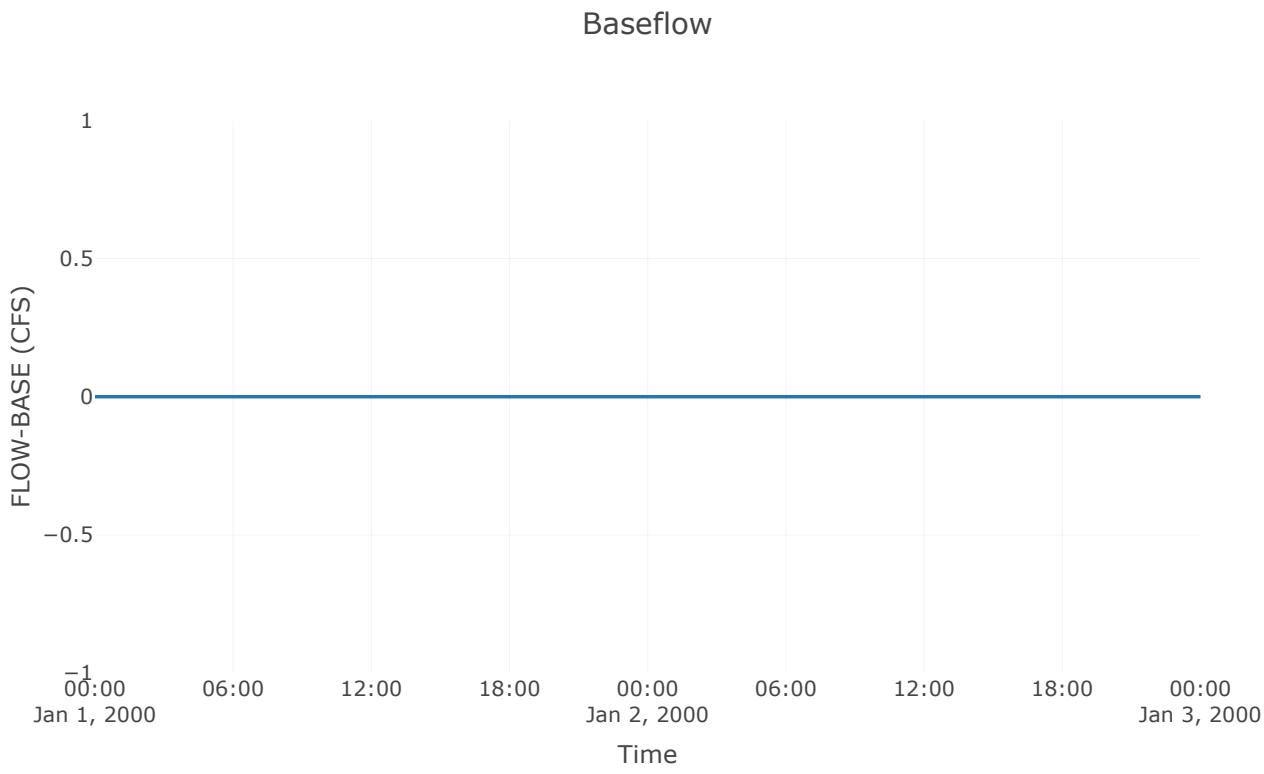
Cumulative Outflow



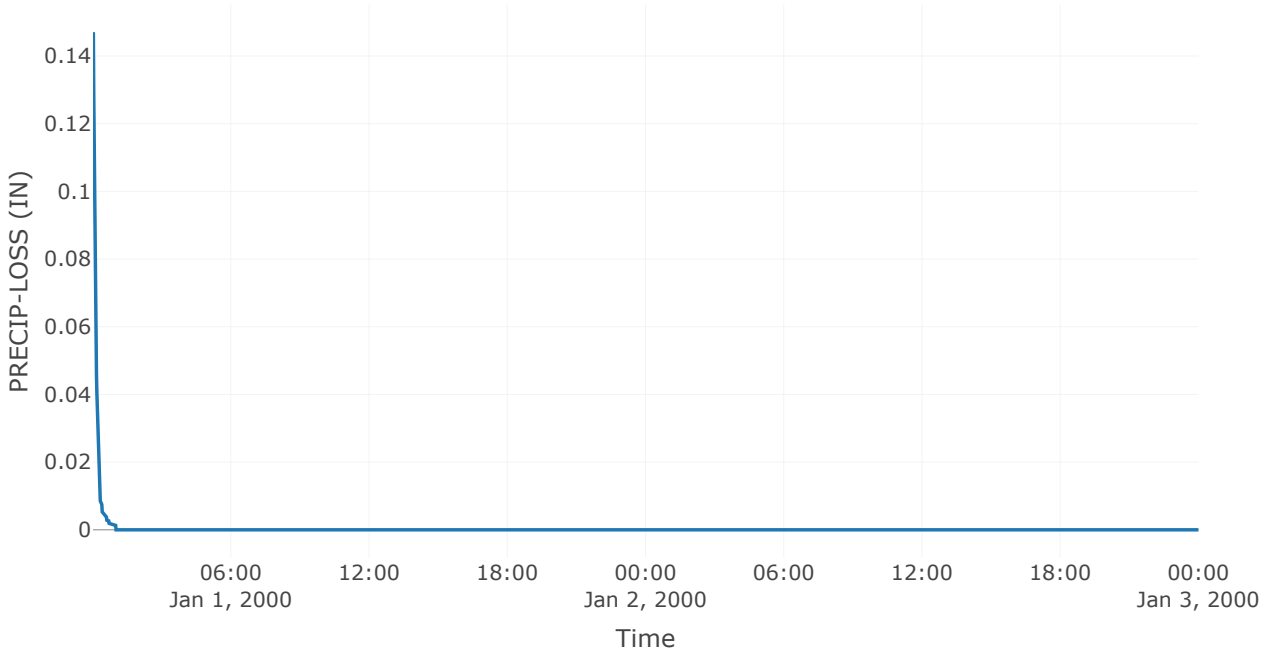
Cumulative Precipitation



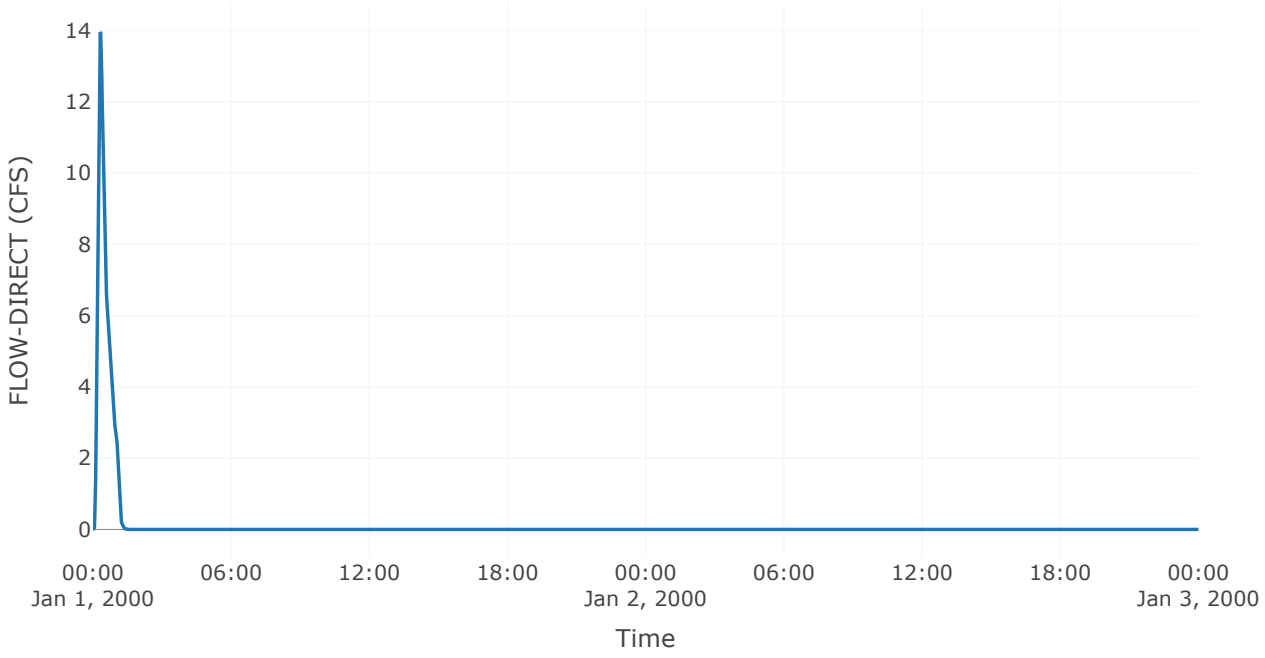

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

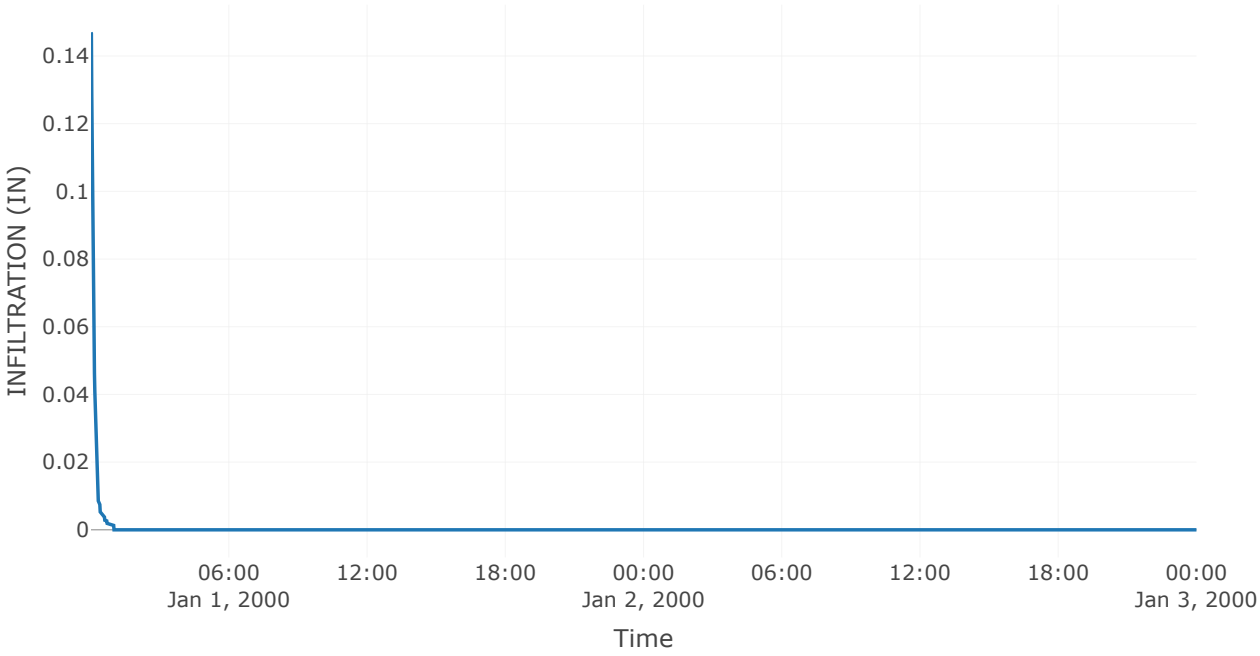

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



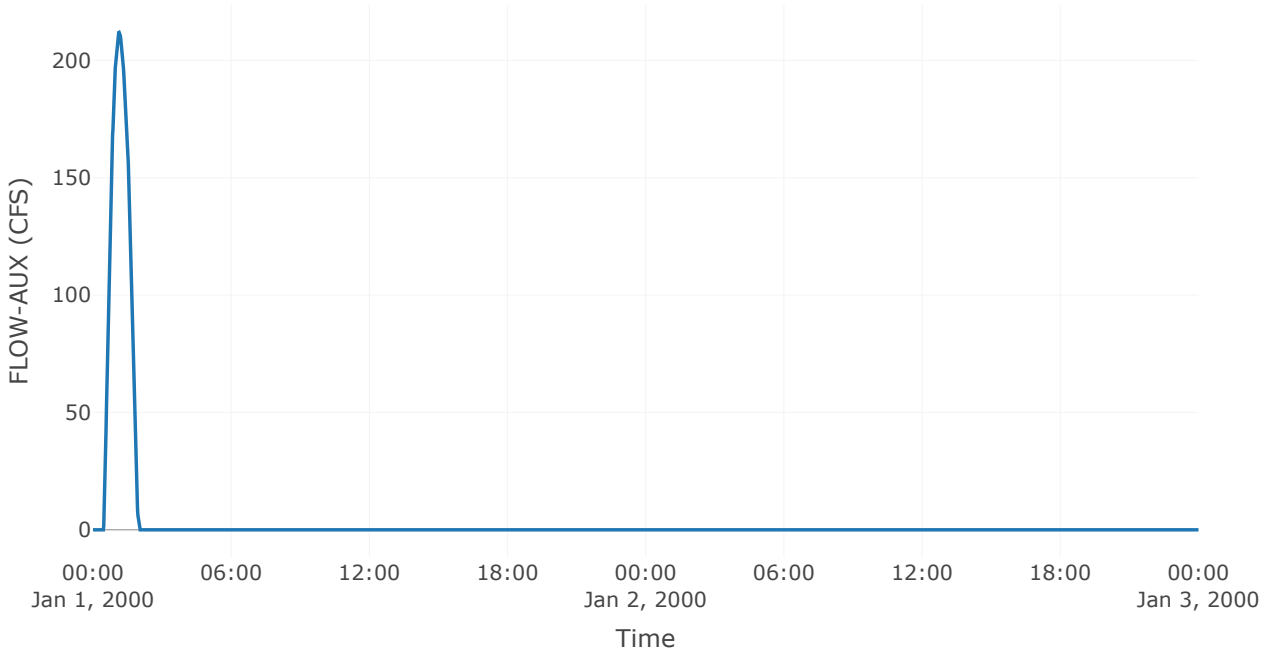

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

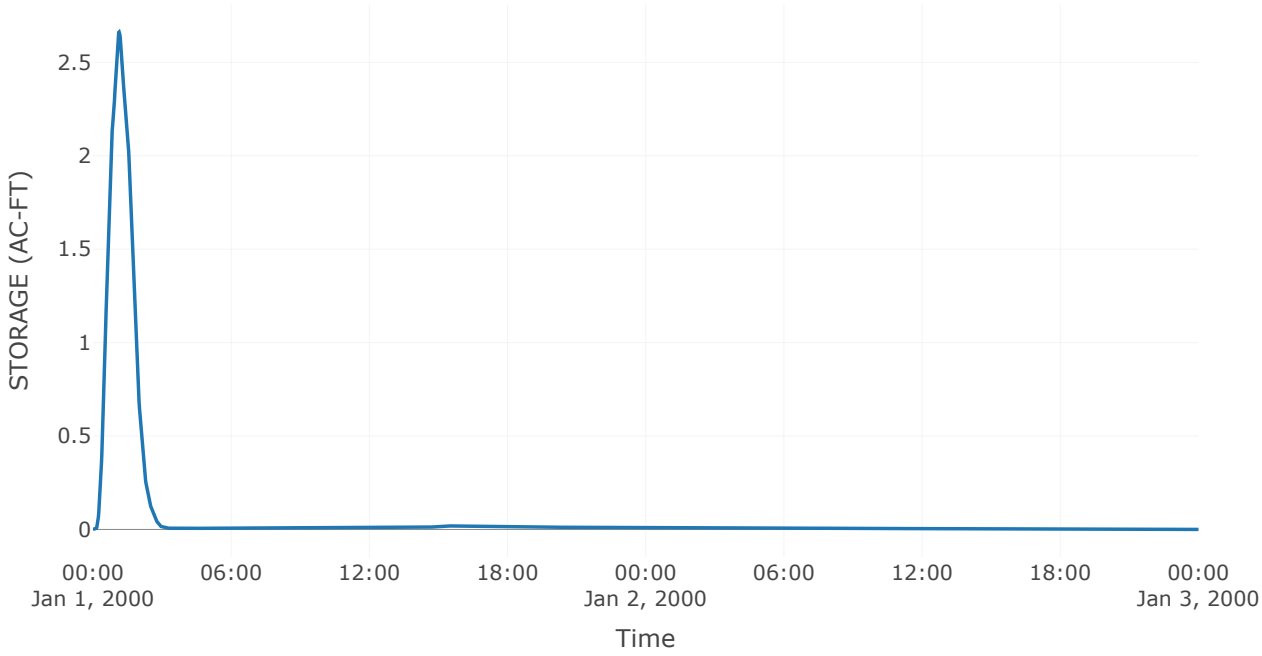
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	95.13
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.37
Peak Inflow (CFS)	327.44
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	36.13
Maximum Storage (AC - FT)	2.66
Peak Elevation (FT)	655.11
Discharge Volume (AC - FT)	19.89

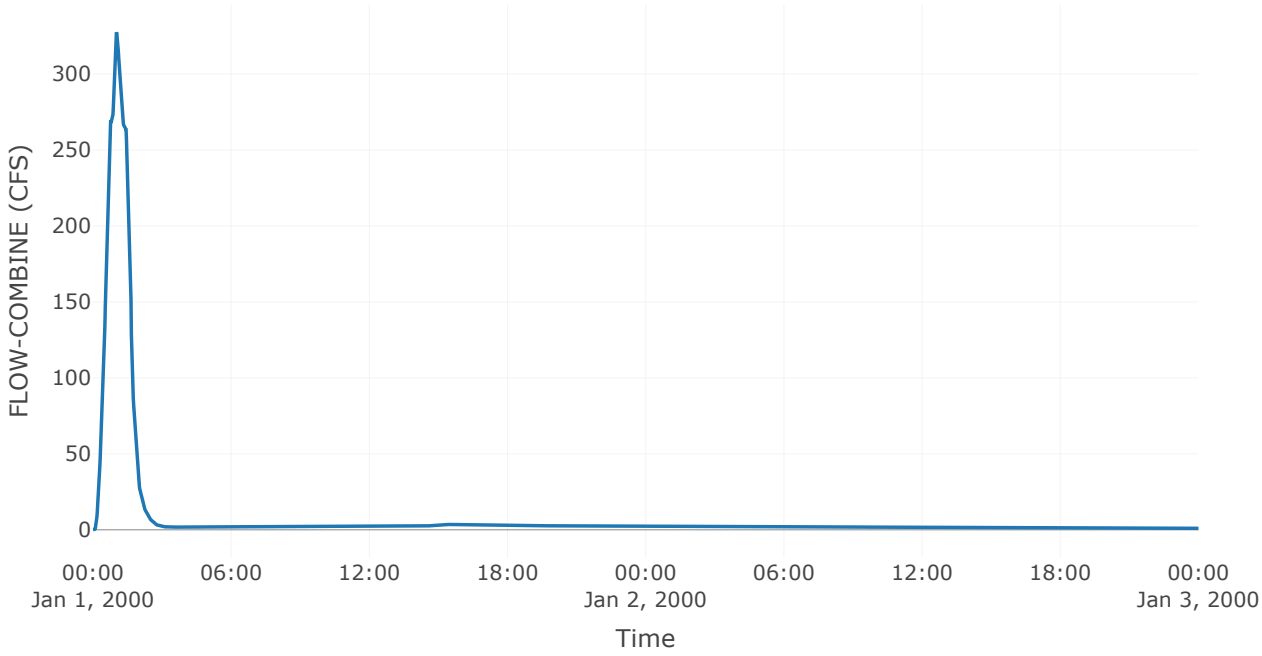
Auxiliary Outflow



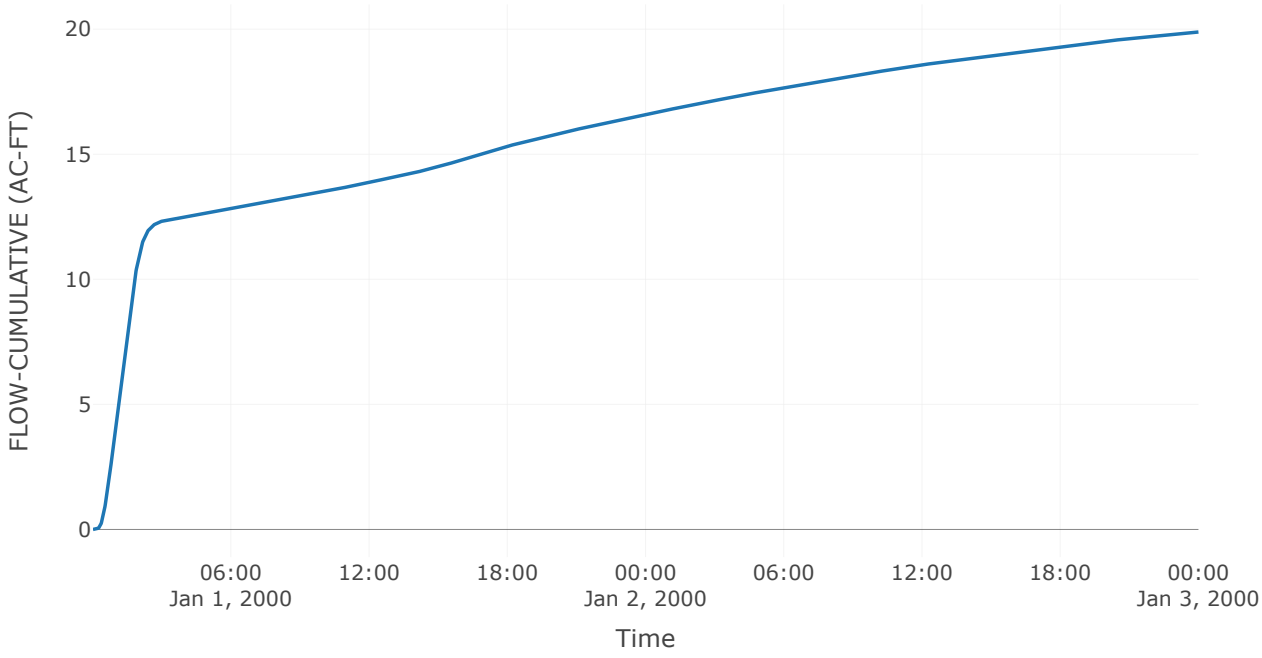
Storage

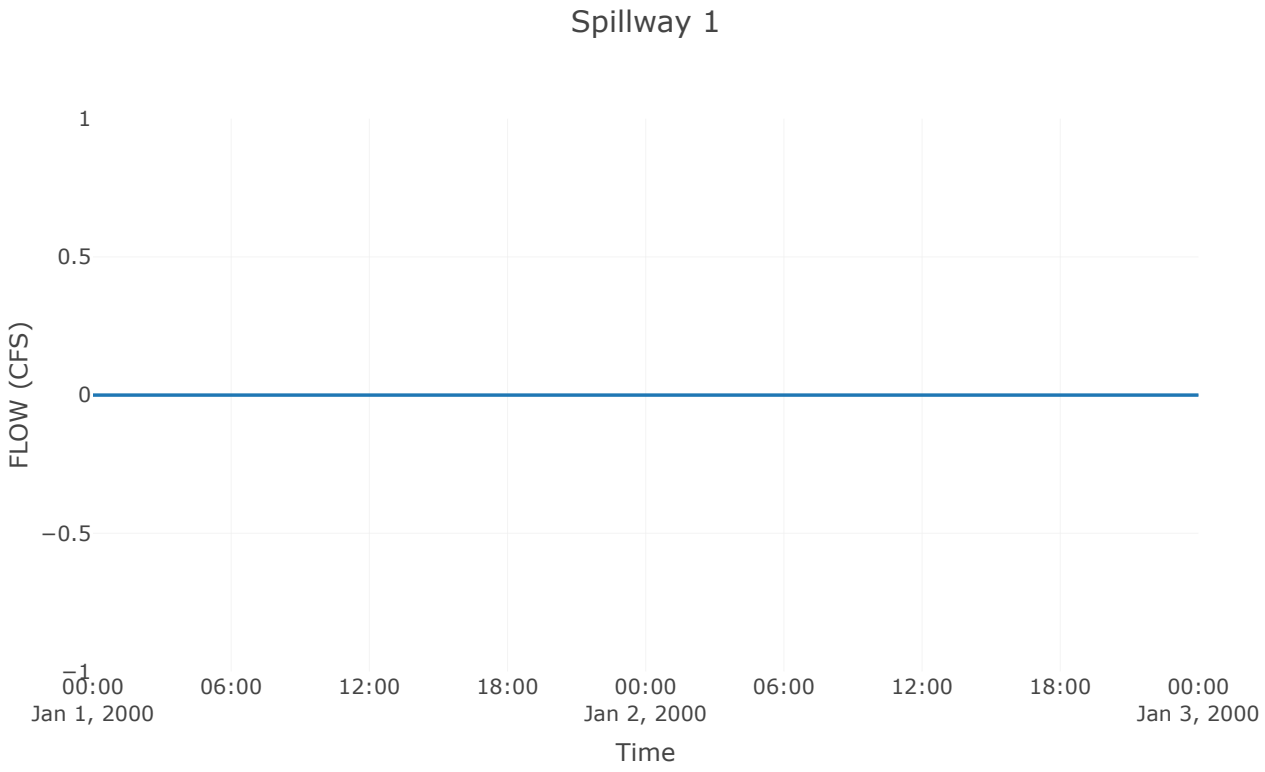


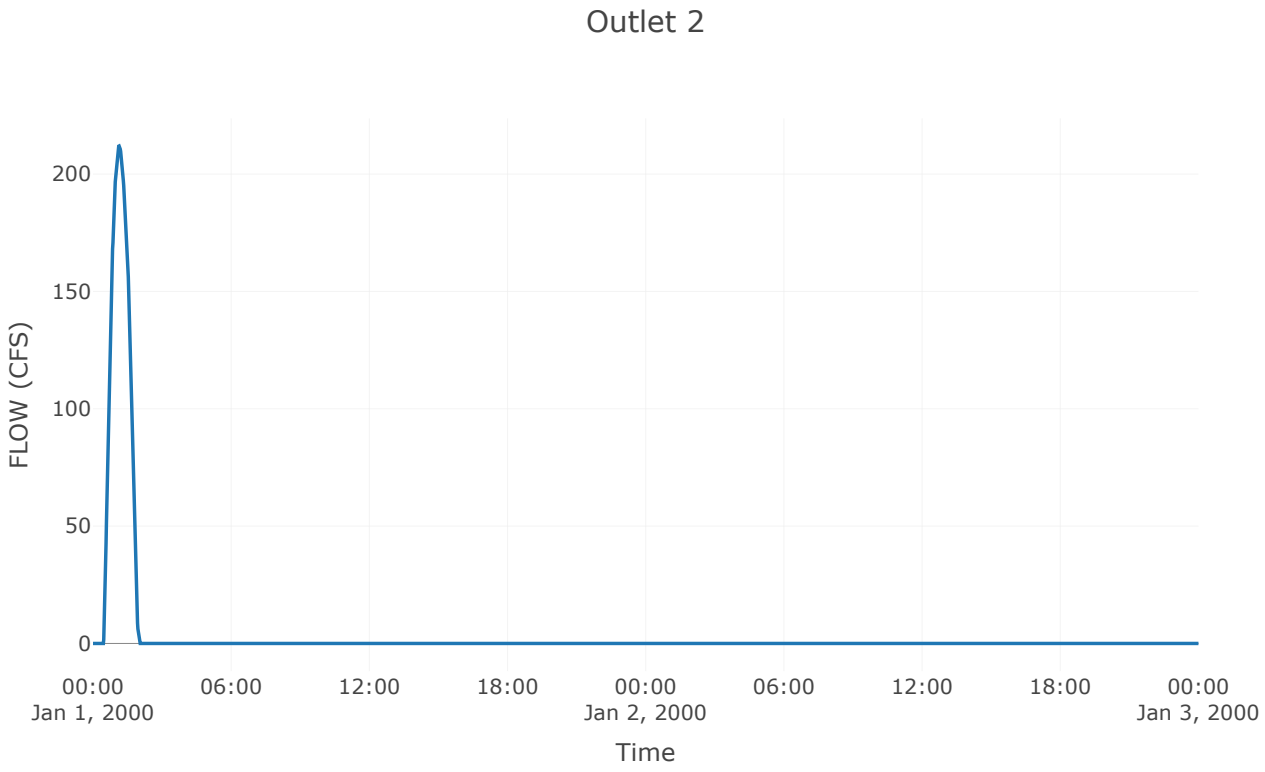
Combined Inflow

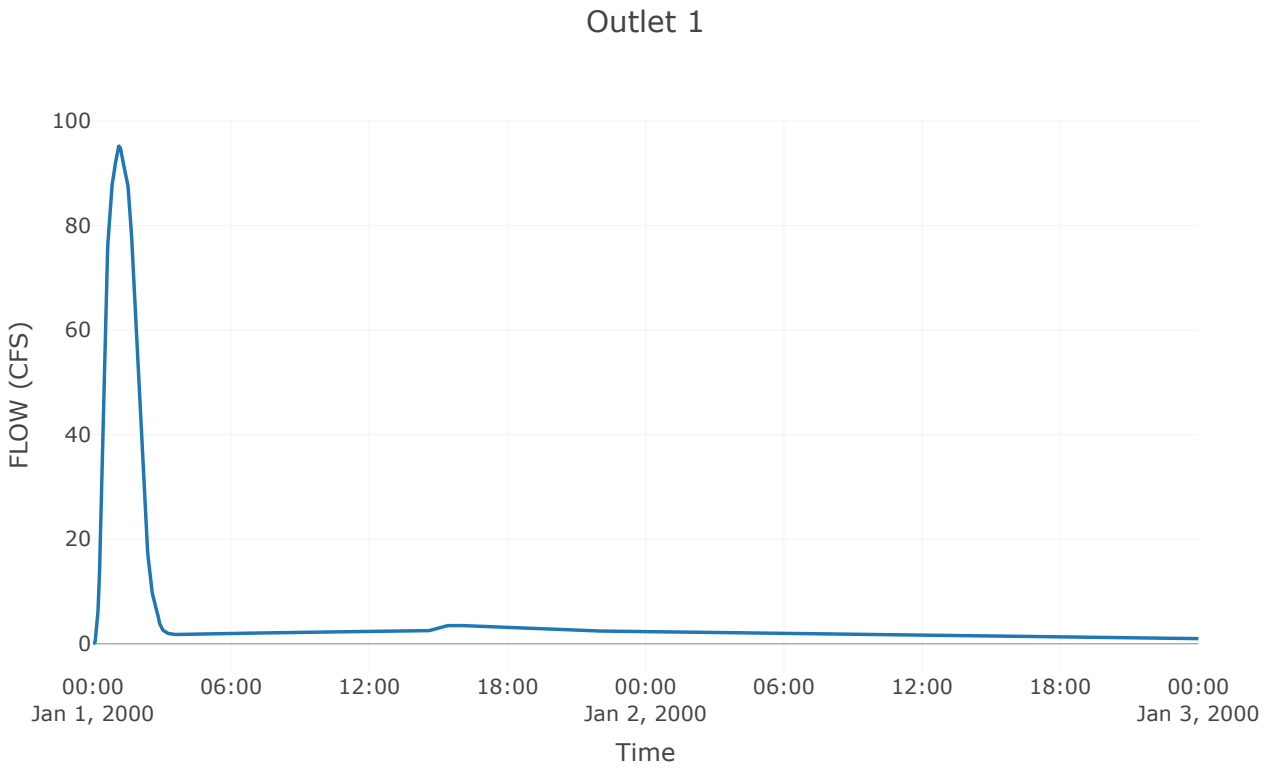


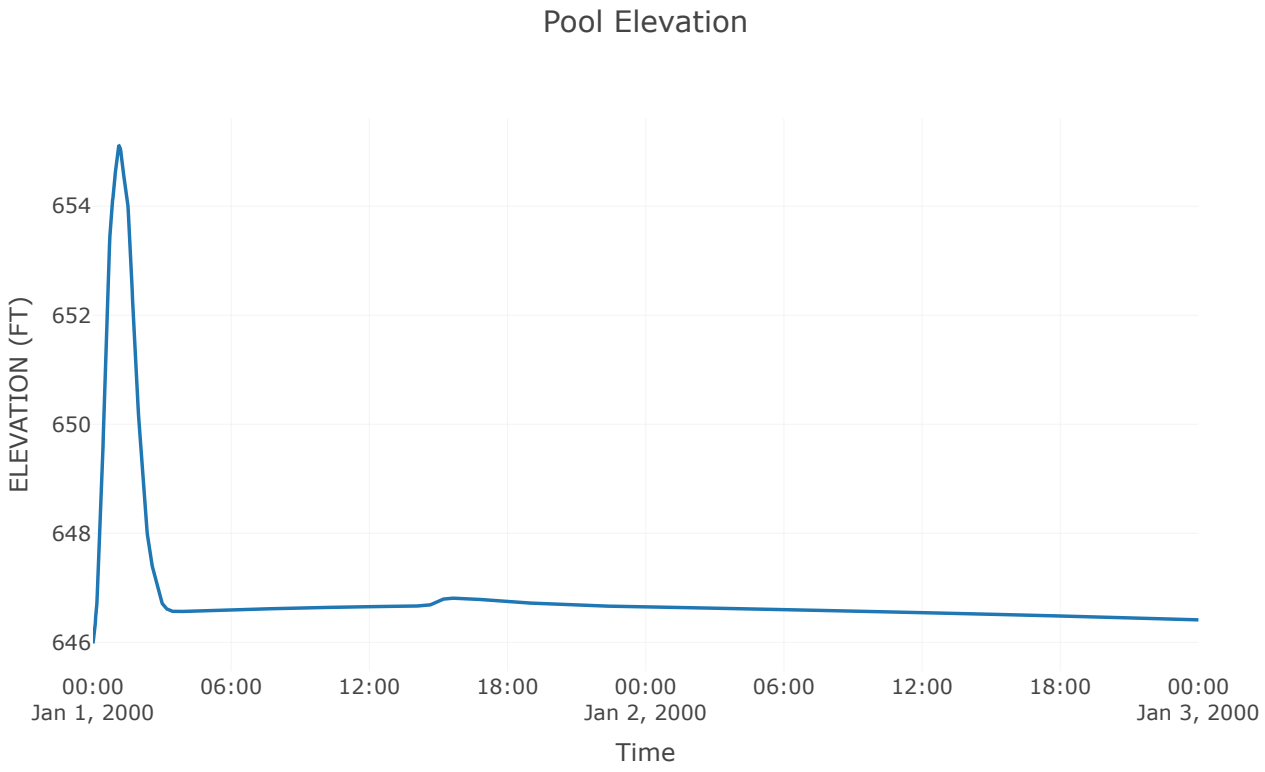
Cumulative Outflow

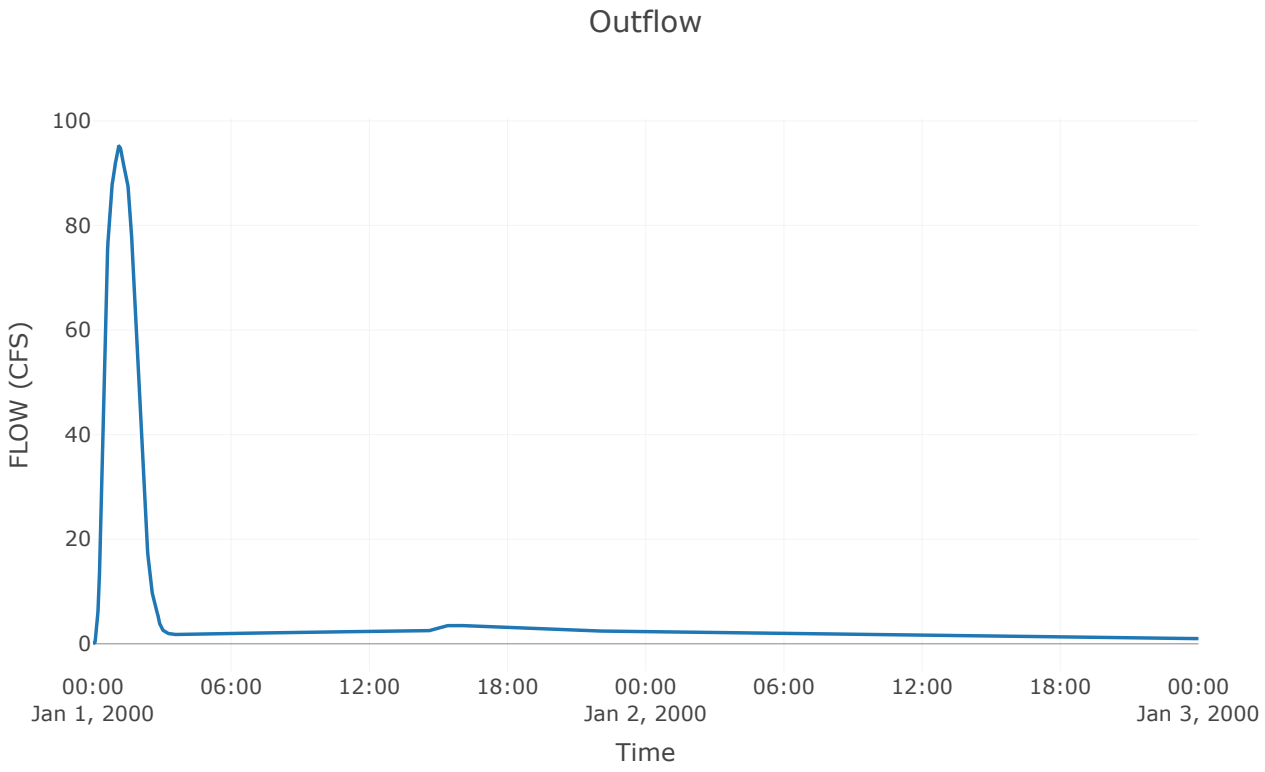



Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

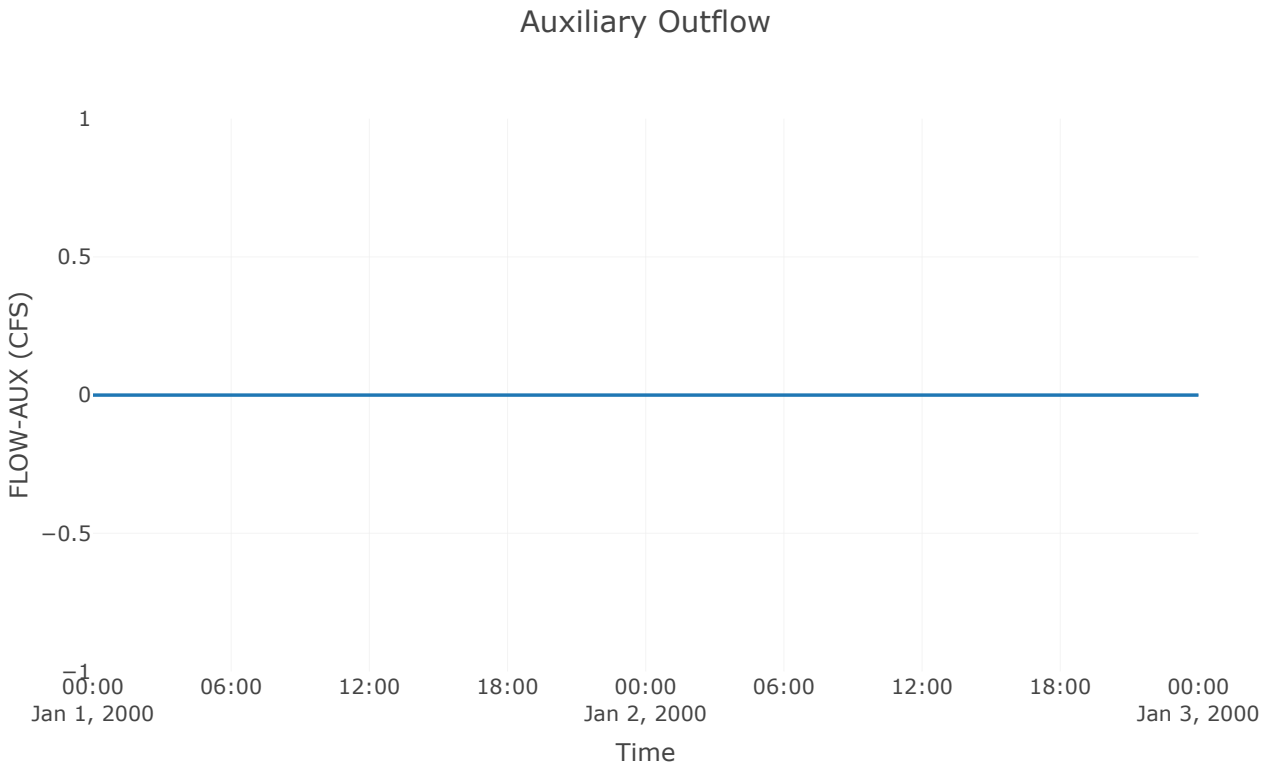

Pool Elevation
654
652
650
648
646
ELEVATION (FT)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

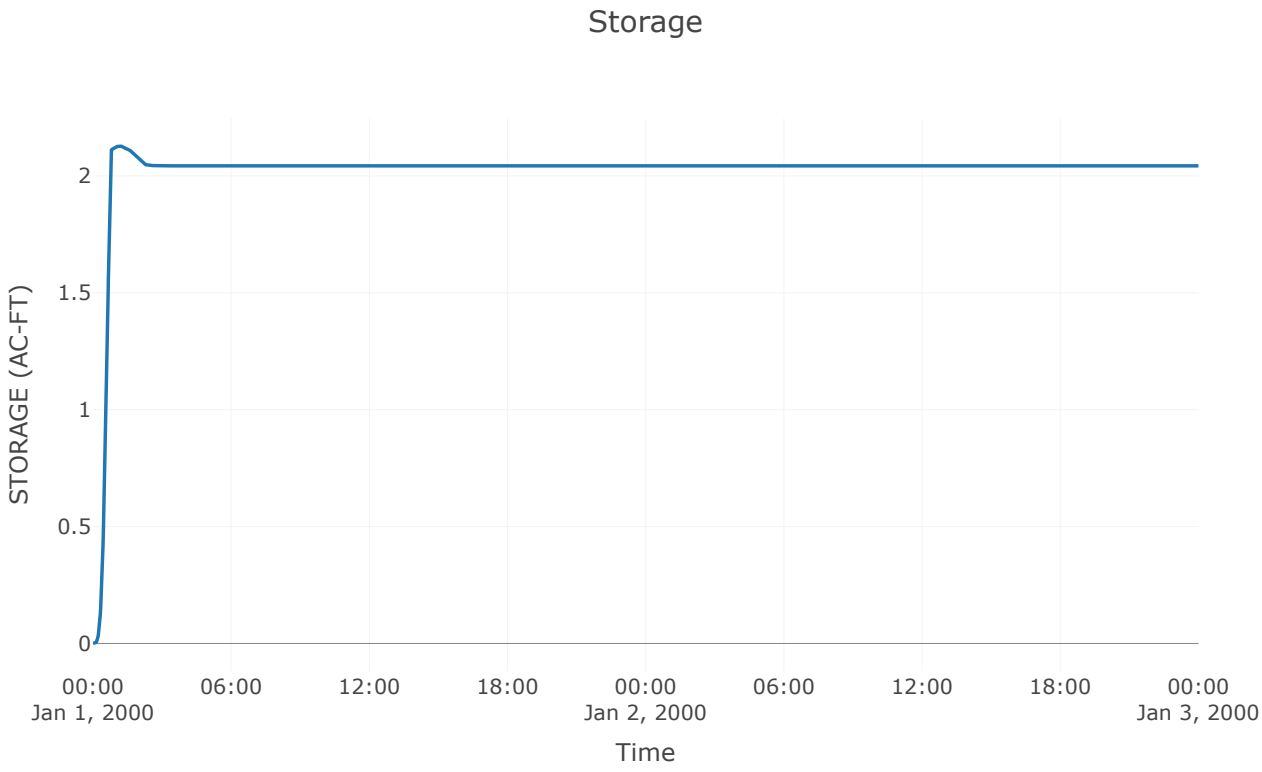

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

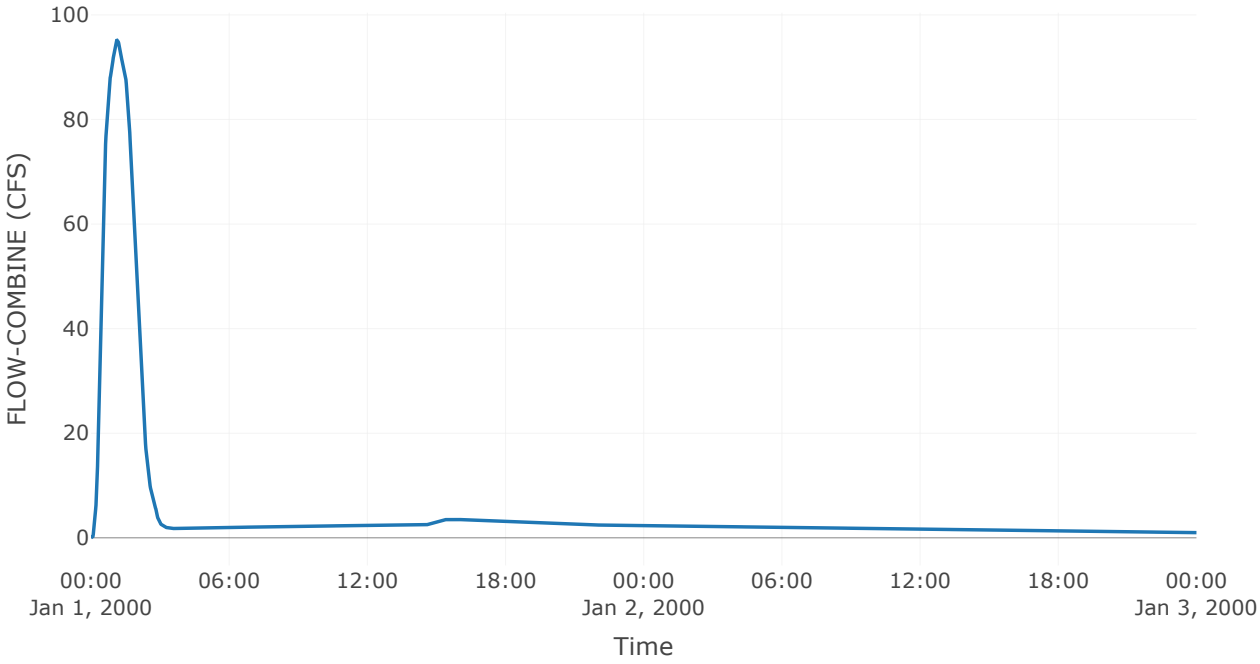
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21
Peak Inflow (CFS)	95.13
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.89
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.68

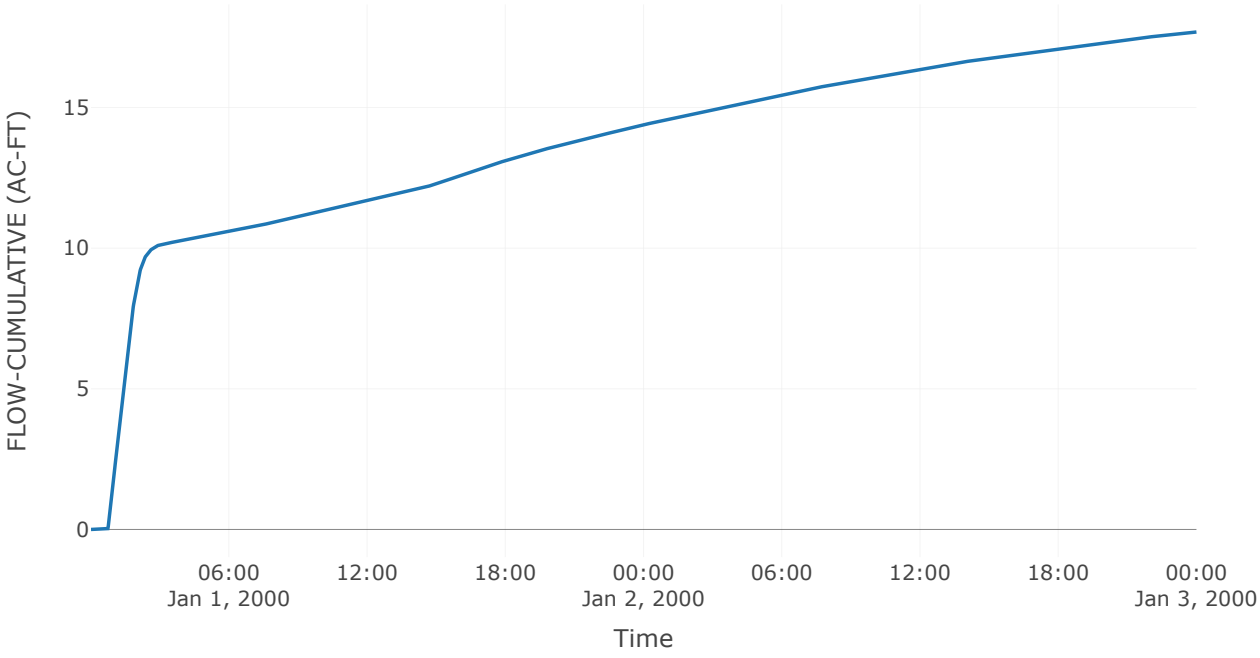

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

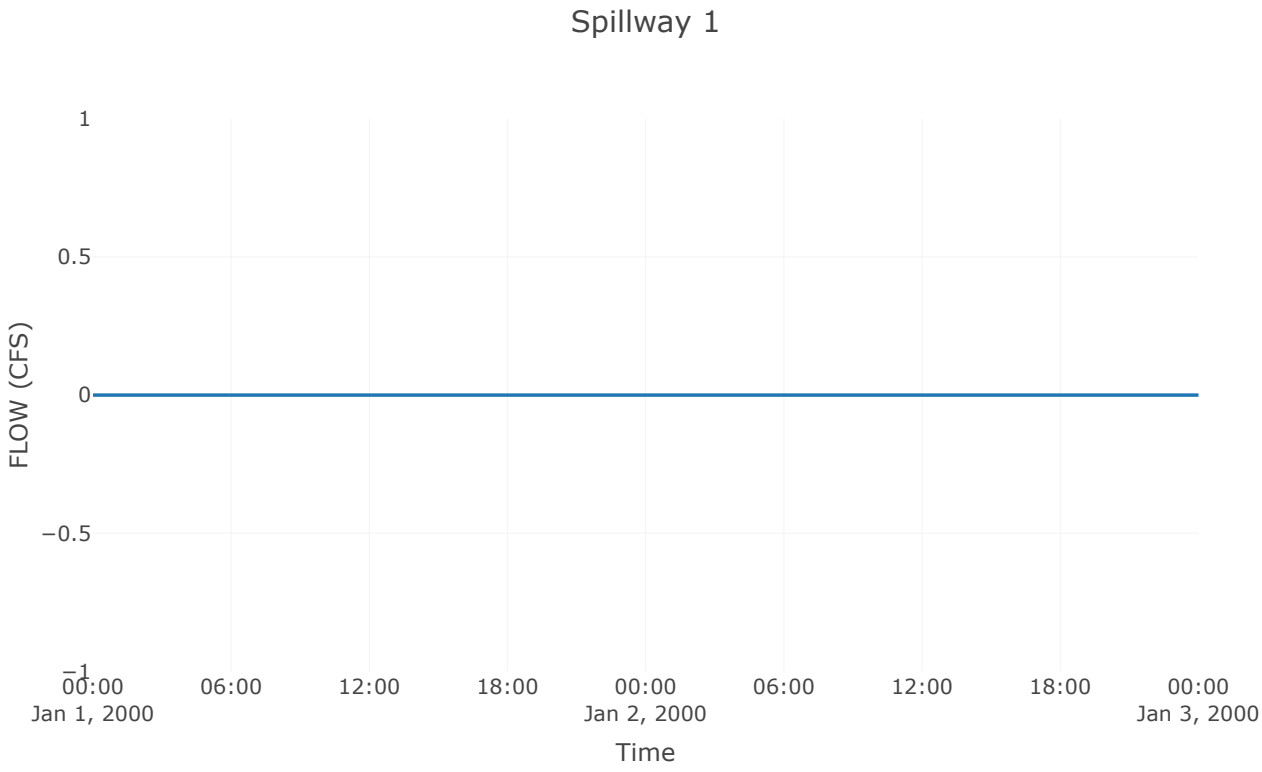

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

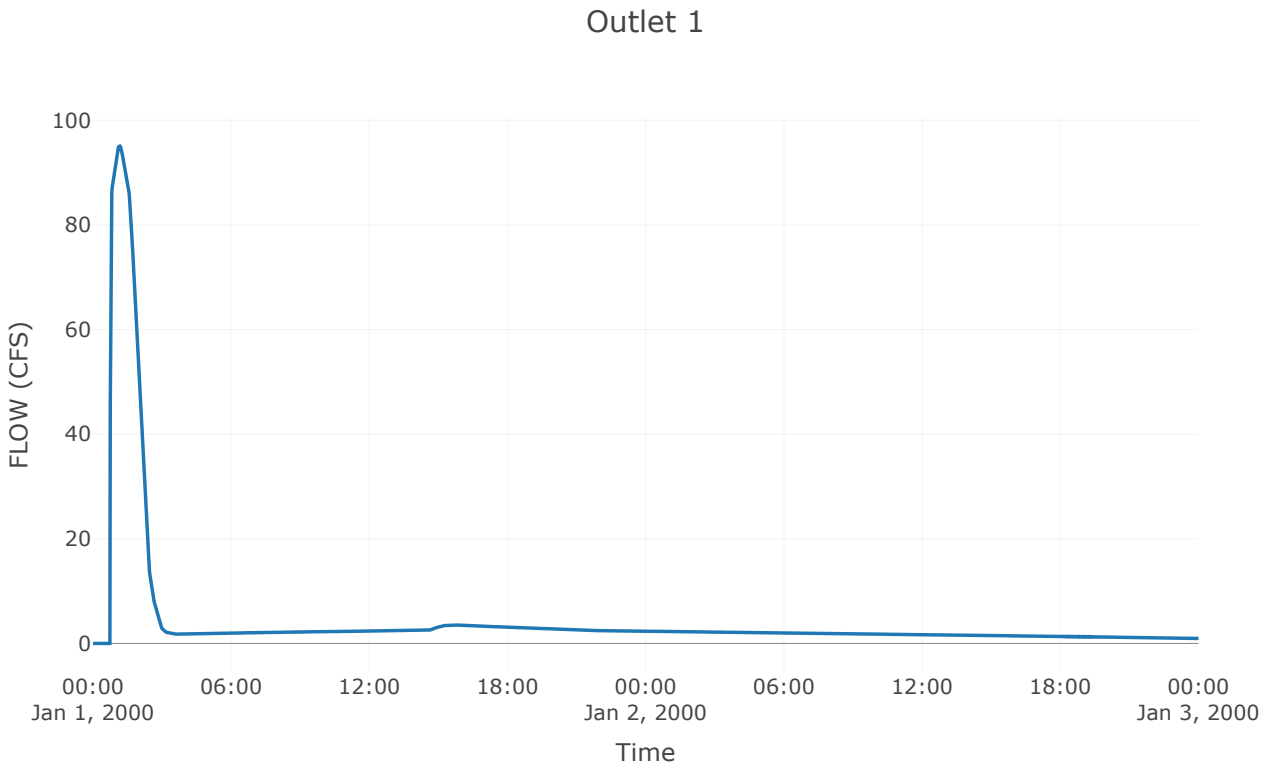
Combined Inflow



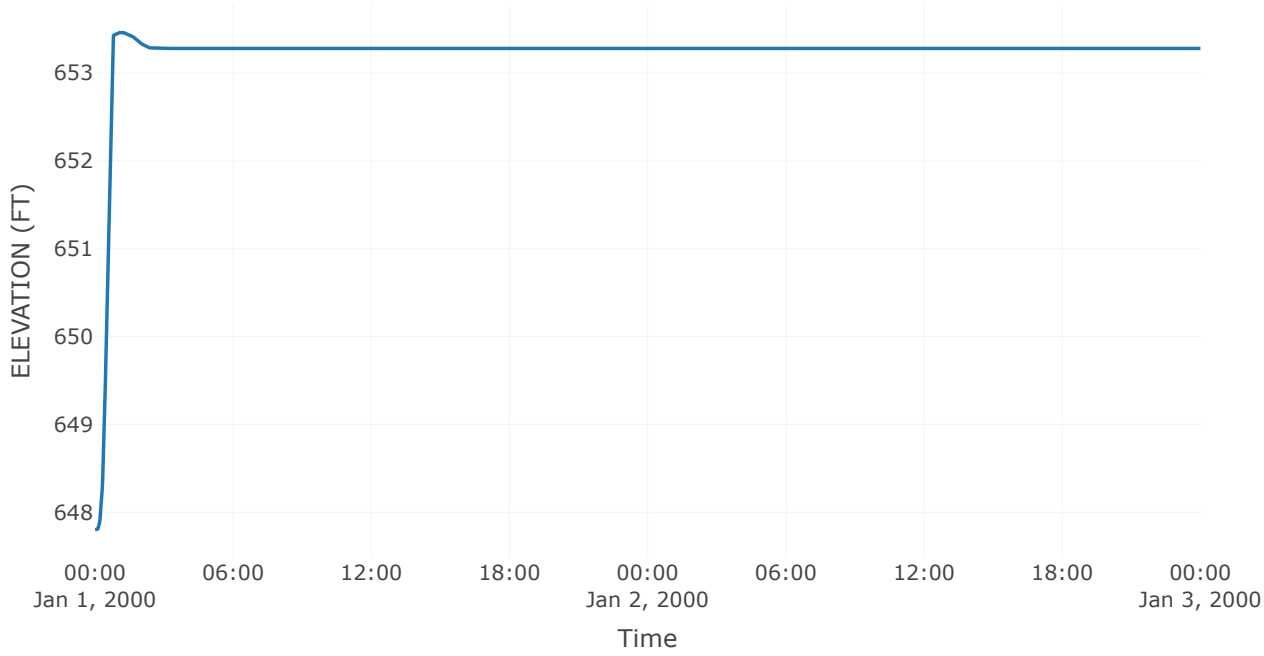
Cumulative Outflow



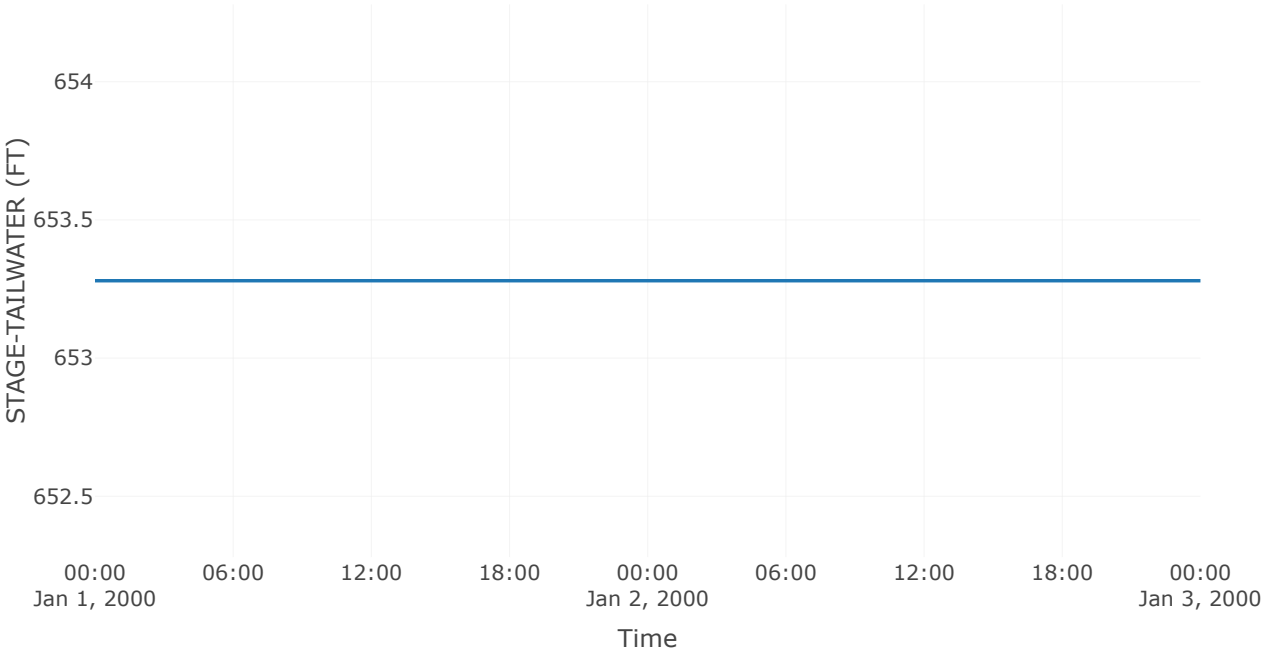

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

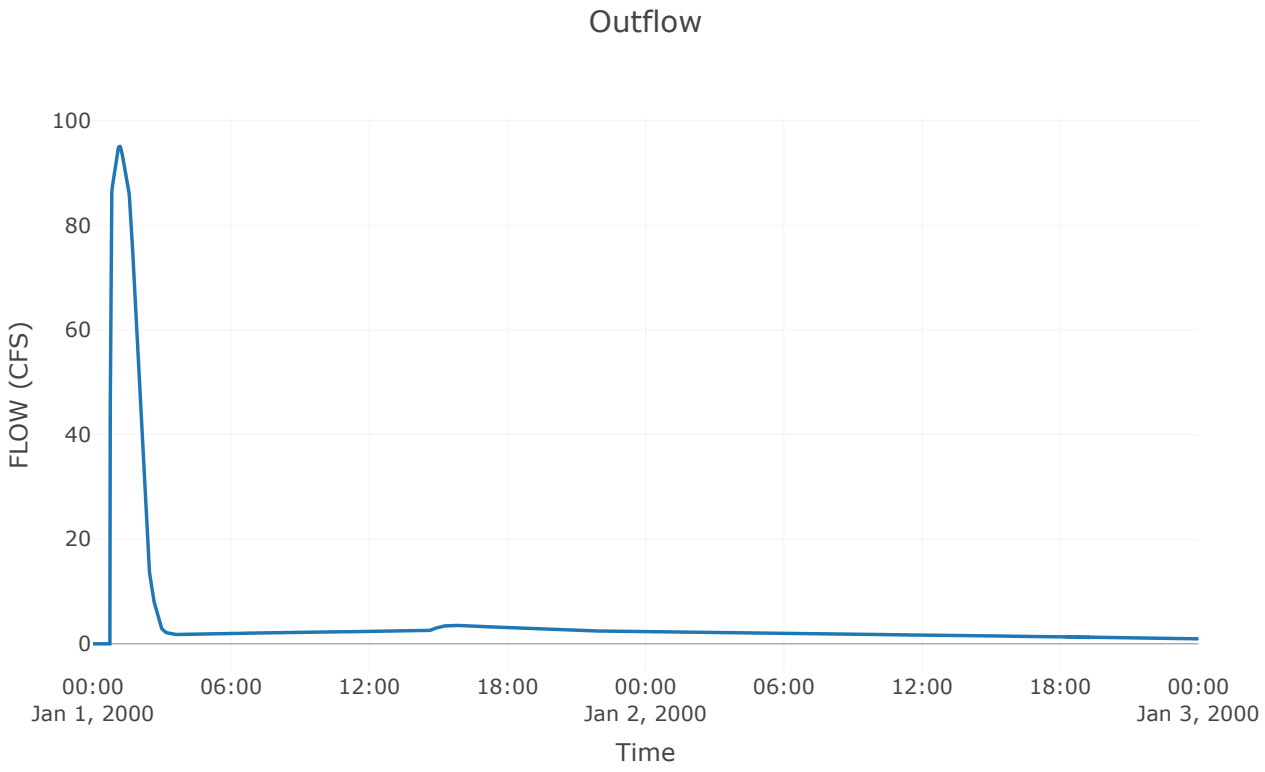

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

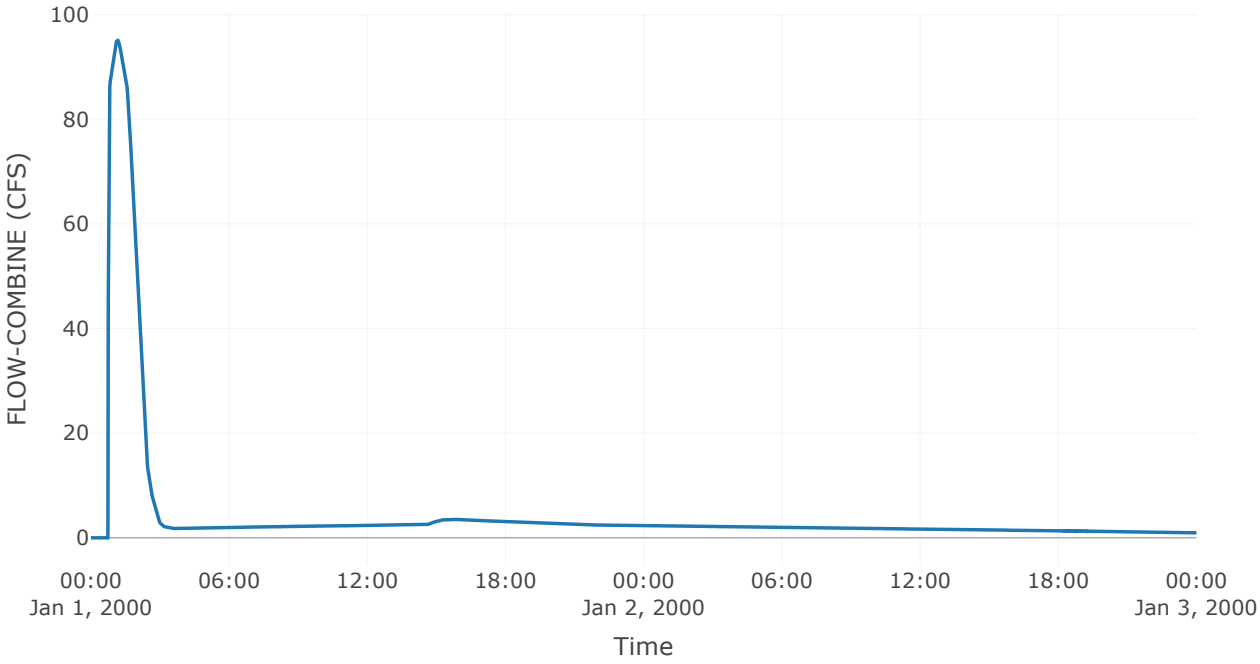



Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

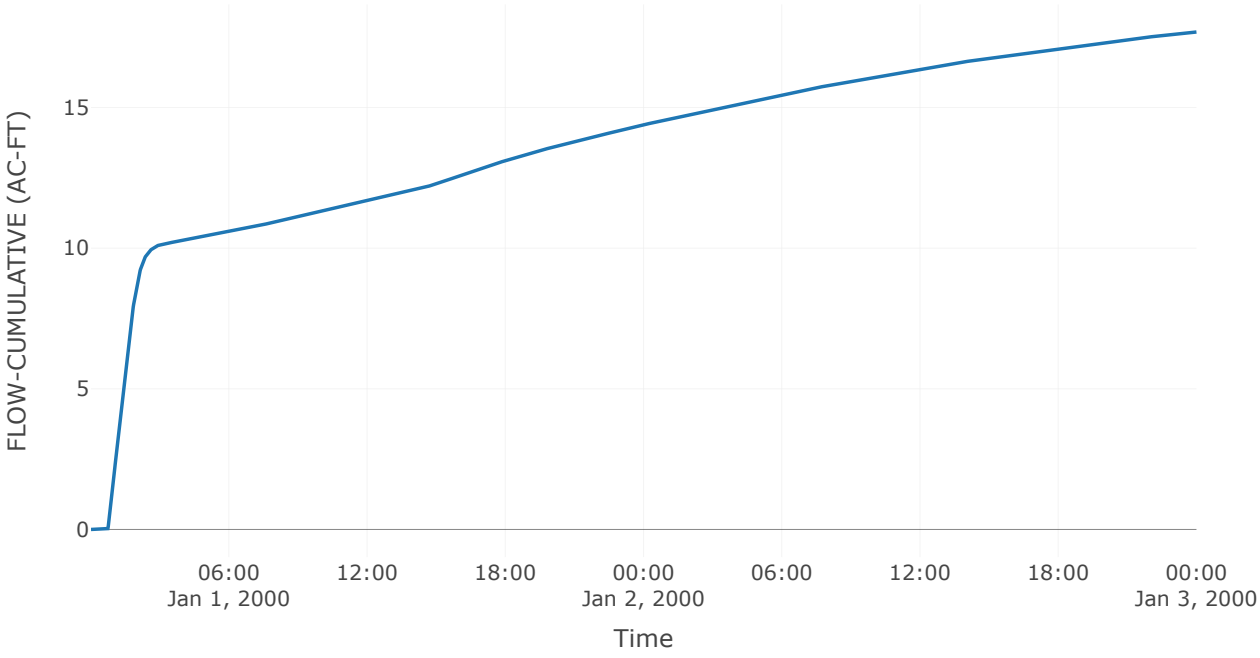
Sink: 55th Street Outlet

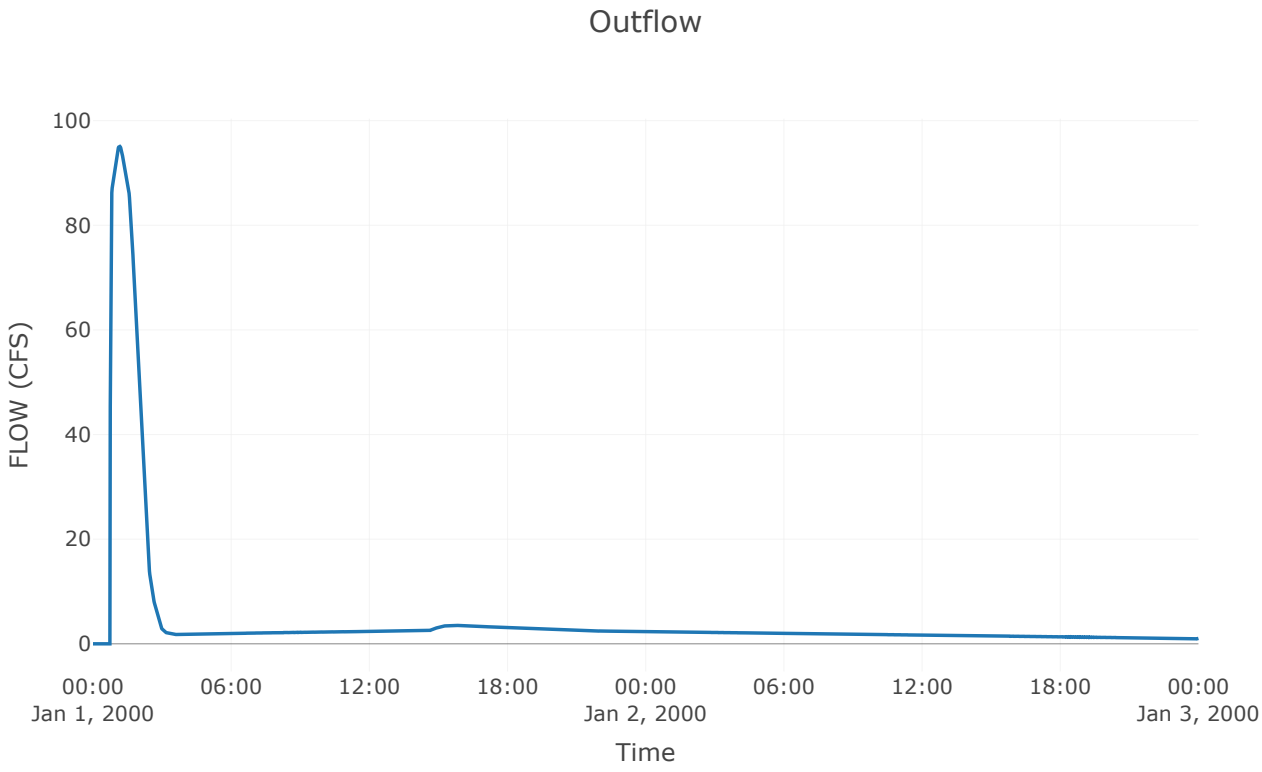
Results: 55th Street Outlet	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21

Combined Inflow



Cumulative Outflow




Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm	Number of lines: 2	Date: 12/17/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	163.13	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.6	0.0	163.1	362.0	12.09	48 x 72 b	1.37	650.50	651.36	652.36	654.20	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	163.1	360.4	9.57	48 x 72 b	1.35	651.36	654.50	654.20	657.34	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

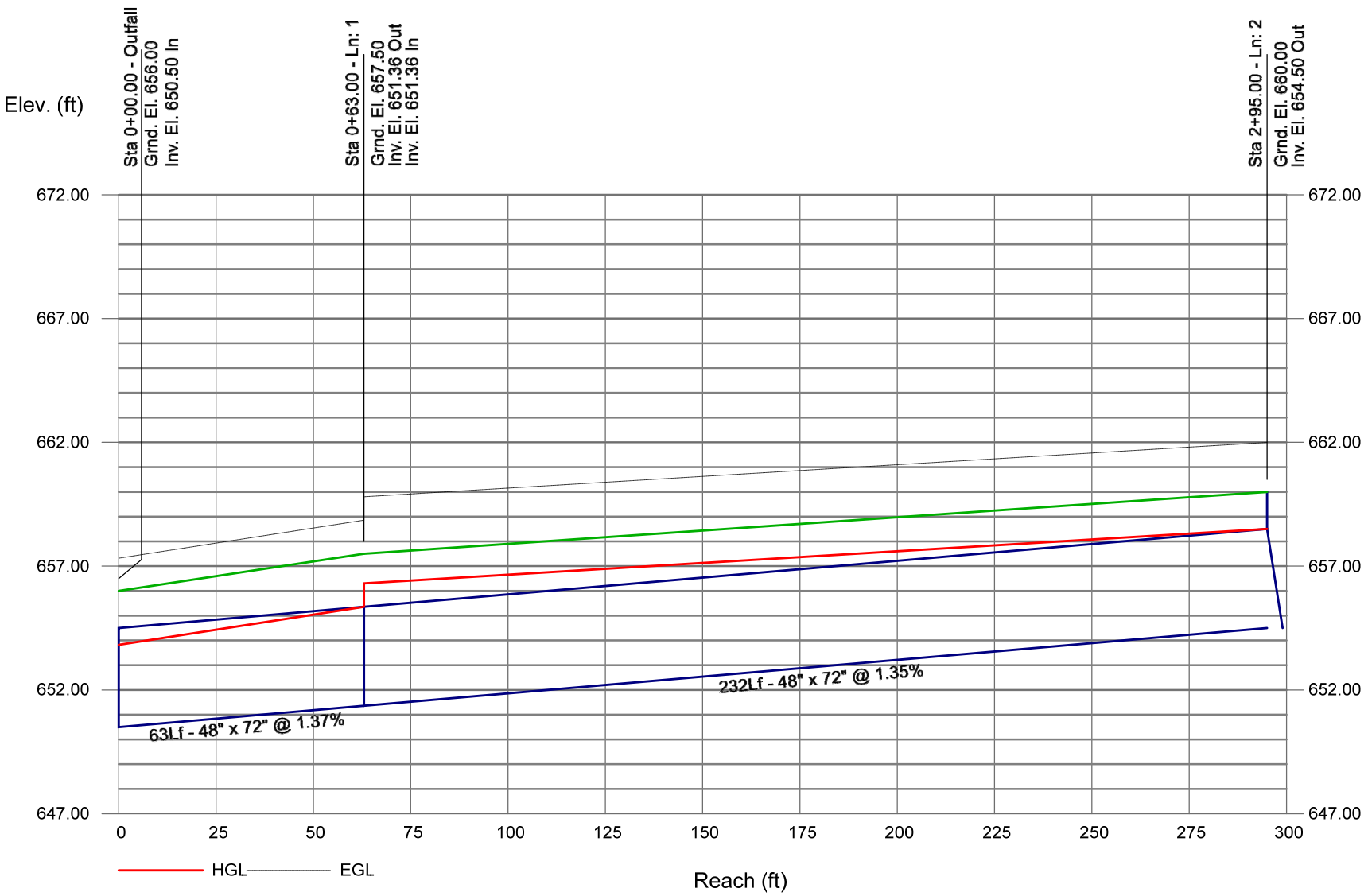
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert.stm



StormCAD v8 [08.11.01.69]

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	360.00	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

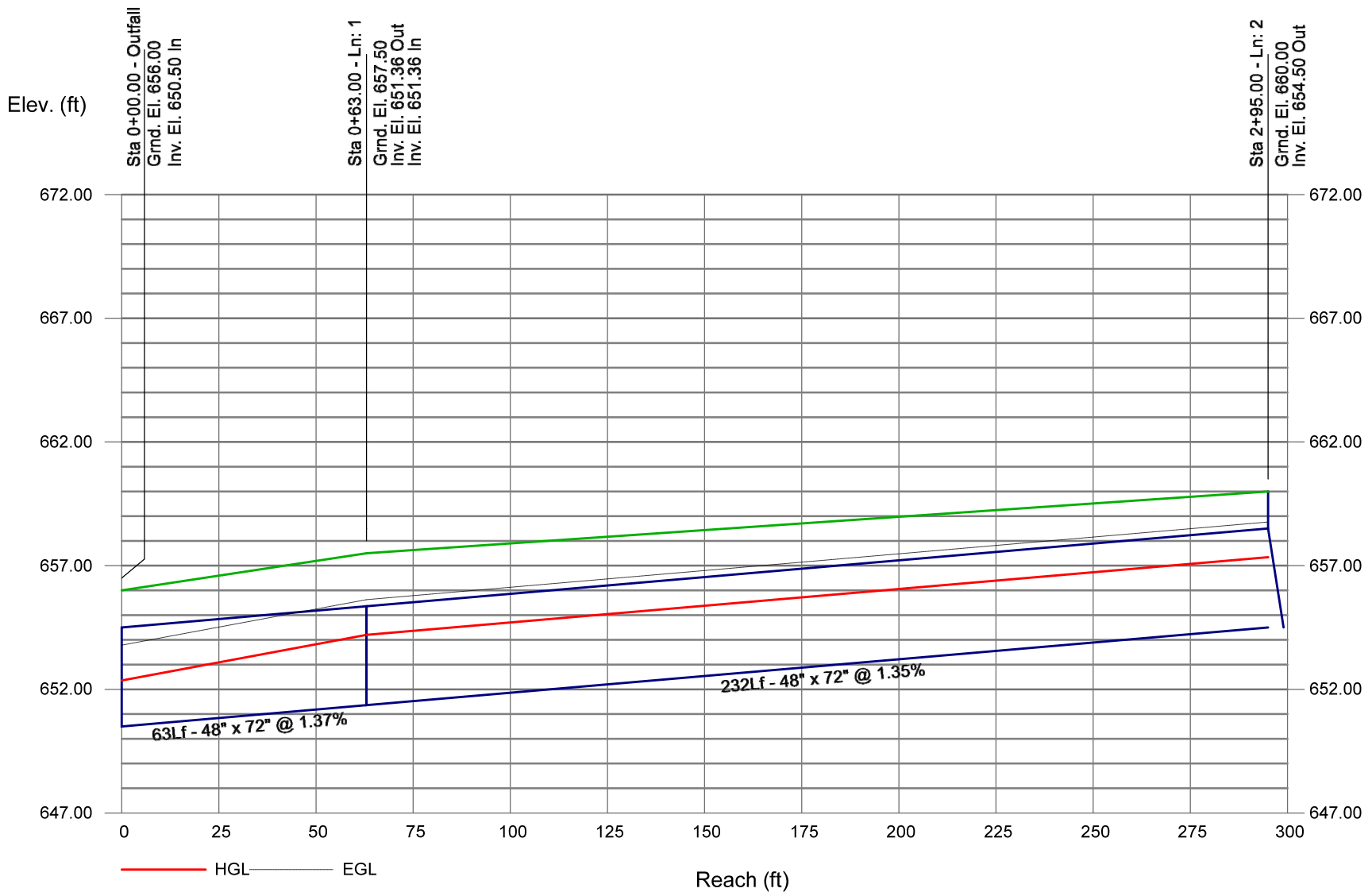
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.3	0.0	360.0	362.0	16.54	48 x 72 b	1.37	650.50	651.36	653.82	655.36	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	360.0	360.4	15.00	48 x 72 b	1.35	651.36	654.50	656.30	658.50	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm | Number of lines: 2 | Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm



Bentley Systems

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	75.98	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	1.2	0.0	75.98	362.0	9.46	48 x 72 b	1.37	650.50	651.36	651.60	653.07	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	75.98	360.4	7.42	48 x 72 b	1.35	651.36	654.50	653.07	656.21	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

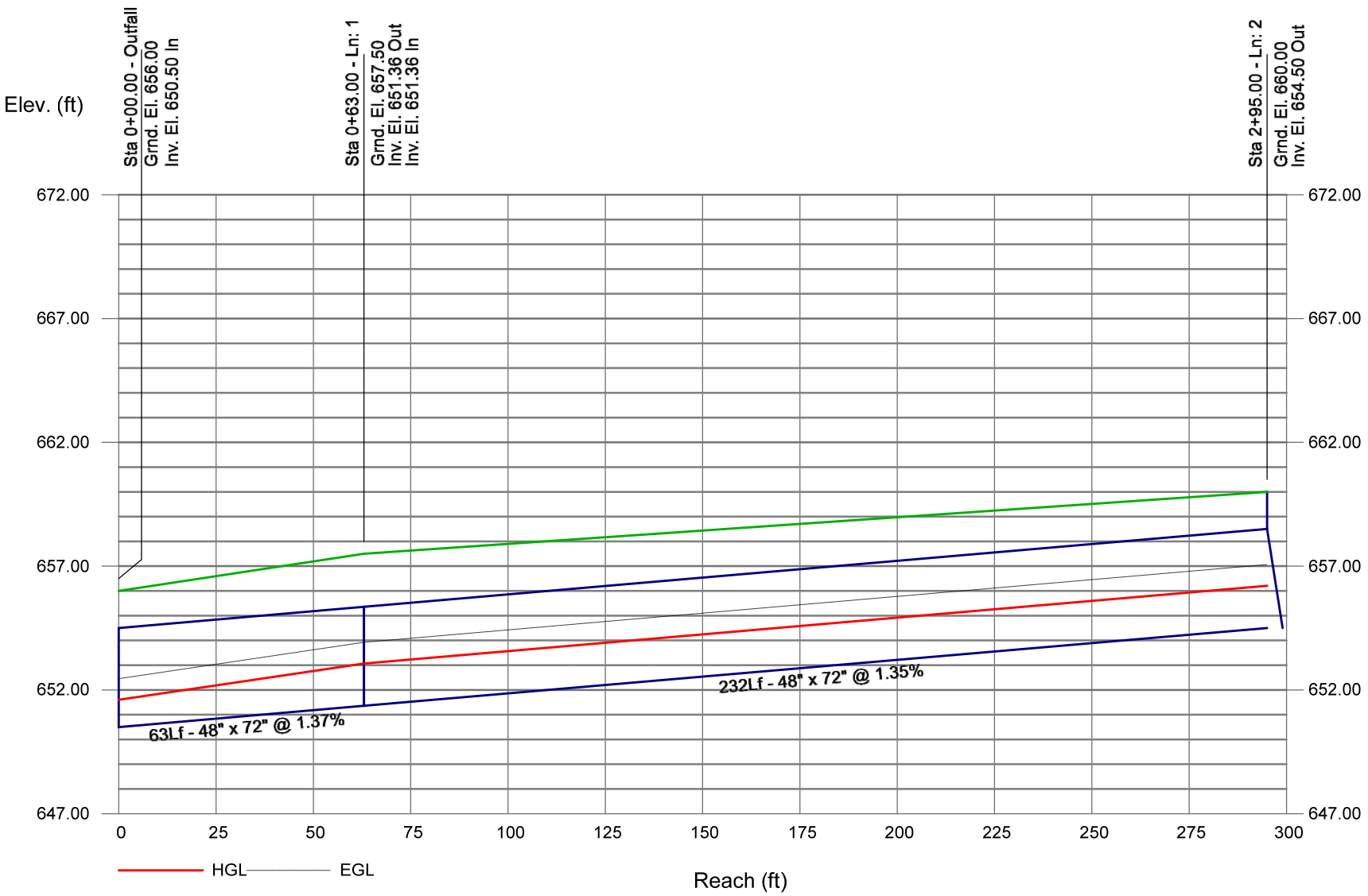
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm



StormTech

Channel Report

HERITAGE CROSSING INTERIM SWALE CAPACITY CALCULATION

Trapezoidal

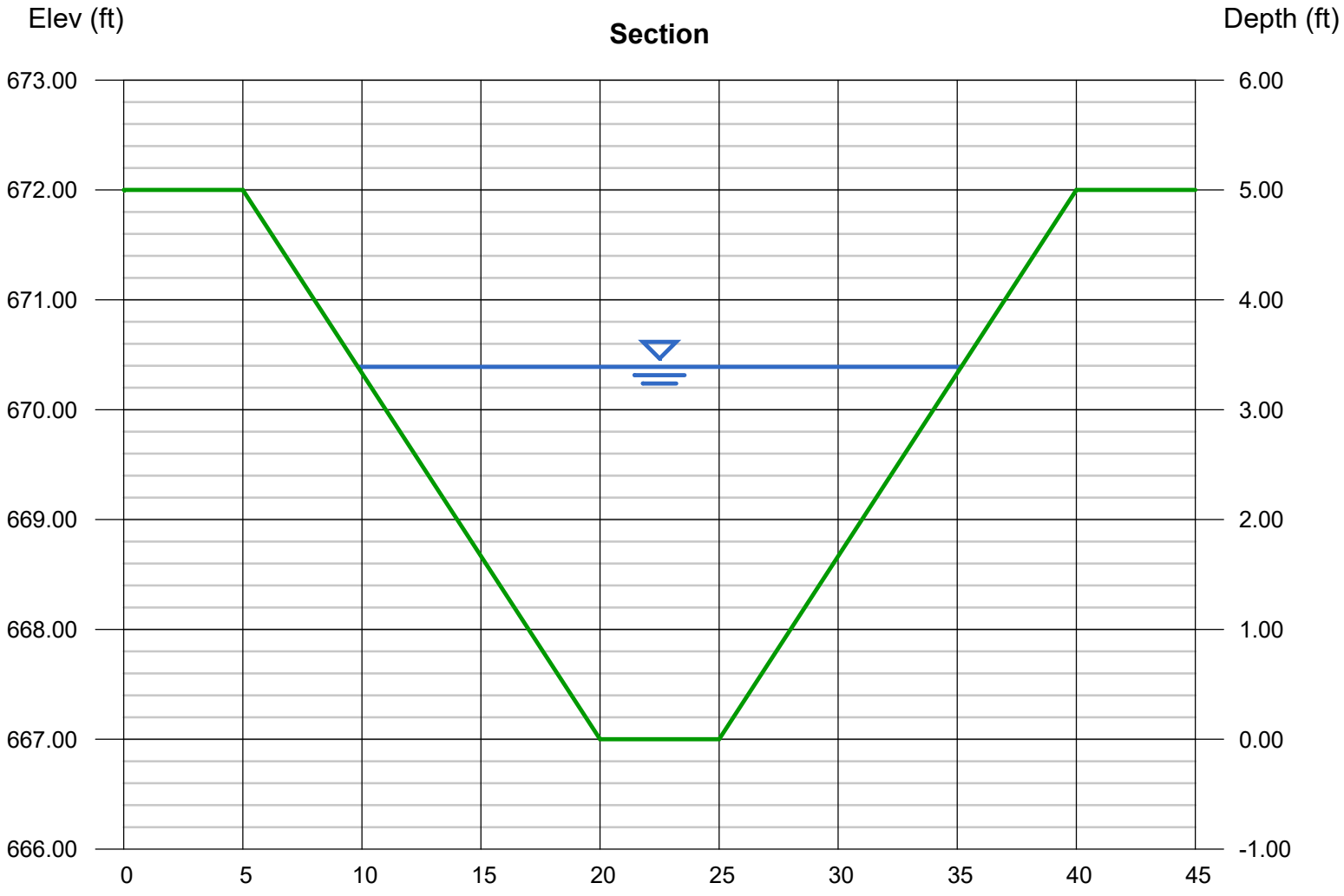
Bottom Width (ft)	= 5.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 5.00
Invert Elev (ft)	= 667.00
Slope (%)	= 1.00
N-Value	= 0.033

Calculations

Compute by:	Known Q
Known Q (cfs)	= 360.00

Highlighted

Depth (ft)	= 3.39
Q (cfs)	= 360.00
Area (sqft)	= 51.43
Velocity (ft/s)	= 7.00
Wetted Perim (ft)	= 26.44
Crit Depth, Yc (ft)	= 3.17
Top Width (ft)	= 25.34
EGL (ft)	= 4.15



Date: 11-25-2024
Calculations by: S.D.D.
Checked by: D.M.V.

County: Cook
LPA: Village of Western Springs
Section:
Route:
Location: Proposed Heritage Court

Limits of Analysis:
From:
To:
Length: _____ Feet _____ Miles

Structural Design Traffic: *(Section 44-1.03(c))*
Number of Lanes: 2
ADT: 210
Class of Road or Street: IV *(Section 44-1.01)*

Percent / Count *(Figure 44-1A as needed)*
PV: 88 % / 185
SU: 9 % / 19
MU: 3 % / 6
HCV: 12

Traffic Factor (Show Calculations): *(Figure 44-4A)*
Since the HCV's per day ≤ 48, use a minimum 5 in. HMA pavement.

Traffic Factor: N/A

Pavement Design:
Subgrade Support Rating (SSR): ☐ Poor ☐ Fair ☒ Granular *(Section 44-4.02(c) and Figure 44-6A)*
Working Platform: *(Figure 44-4B)* 9 in. improved granular base course (CA-6)
Selected Design PG Binder *(Figure 44-4C)*
Surface: PG 64-28
Remaining Lifts: PG 64-22

Design Pavement HMA Temp:	*(Figure 44-4E)*	N/A °F
Design HMA Microstrain:	*(Figure 44-4F or 44-4G)*	N/A
Design HMA Modulus (E_{HMA}):	*(Figure 44-4H)*	N/A ksi
Pavement Thickness:	*(Section 44-4.03) (Minimum of 6.0 in.)*	5.0 in.

Comments: Pavement Structure will be 5.0 in. of HMA over a 9 in. aggregate base course, Type A.

Attachments: Location Map / USDA Soil Map (as needed) / Completed Figures (as needed)

FULL-DEPTH HMA PAVEMENT
DESIGN CALCULATIONS FOR LOCAL PUBLIC AGENCIES
Figure 44-4N

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40. Traffic Factor (TF). The total number of 18-kip equivalent, single-axle load applications anticipated in the design lane during the design period, expressed in millions.

41. Untied Shoulder. Any shoulder that does not provide edge support. The shoulder may consist of earth, aggregate, or bituminous stabilized materials. PCC shoulders that are tied with smaller reinforcing steel than the size indicated in the *Illinois Highway Standards* are considered untied for purposes of determining pavement thickness.

44-1.02 Accessibility Requirements

All pavements constructed shall meet the accessibility requirements in Section 41-6 of this manual.

44-1.03 Basic Mechanistic Design Procedures

Mechanistic pavement design procedures use the actual stresses, strains, and deflections experienced by the pavement to determine its expected fatigue life.

44-1.03(a) Mechanistic Design Factors

Factors that are considered in mechanistic designs include:

- design HMA strain;
- design pavement HMA mixture temperature;
- design HMA mixture modulus (E_{HMA});
- subgrade support rating (SSR);
- design reliability;
- degree of PCC edge support;
- degree of PCC base erosion;
- PCC joint spacing; and
- PCC stresses.

44-1.03(b) Design Period

The level of traffic and type of facility to be constructed affect the selection of the design period. Generally, it is desirable to design highway pavements to carry traffic without necessitating the need for major rehabilitation for a period of 15 to 20 years. However, it may be advantageous to design lesser roadways (e.g., frontage roads, alleys, temporary roads) for shorter periods.

For all pavement types, the minimum design period allowed is 20 years for Class I and II roads and streets. For all pavement types, the minimum design period allowed is 15 years for Class III roads and streets. For Class IV roads and streets with 48 or fewer HCV's, pavement thicknesses provided in each Section 44-2, 44-3, 44-4, and 44-5 should be satisfactory for design periods of 15 years or 20 years.

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44-1.03(c) Structural Design Traffic

The structural design traffic is the estimated ADT for the year representing one-half of the design period. For example, when the design period is 20 years, the structural design traffic will be an estimate of the ADT projected to 10 years after the construction date.

1. Estimate ADT of PV, SU, and MU. Vehicular classification and traffic volume projections for structural design traffic are based on available traffic data (i.e., ADT). ADT and vehicular classification data for various roadway classes may be obtained from published IDOT traffic maps. If traffic data is unavailable or if published data is dated or does not appear to reflect known conditions or field observations (e.g., land uses, directional distributions), traffic volume and classification studies may be needed to establish a representative base of existing conditions. Factors that compound annual growth typically are used in traffic projections. It is important to consider any future land development or land use changes that may affect the volume or composition of traffic that will use the facility. If vehicular classification data is not available for Class III or Class IV facilities, use the percentages in Figure 44-1A to estimate the number of PV, SU, and MU vehicles from ADT. Also, consider the potential impacts of heavily loaded vehicles, especially in areas near mines, grain elevators, factories, and river ports. It may be necessary to specifically design for such vehicles.

2. Assign Traffic to the Design Lane. Although the sum of the PV, SU, and MU vehicular volumes determined in Step 1 represents the total ADT that will be carried by the highway facility in the year of the projection, the structural design of the pavement will be based on the lane which carries the greatest number of SU and MU vehicles (i.e., the design lane). The distribution factors in Figure 44-1B have been applied to TF equations contained in this chapter. Use the total two-way ADT for multilane facilities when calculating the structural design traffic as the distribution factors account for directional traffic and the percentage of vehicles in the design lane.

   Note that the design lane distribution factors in Figure 44-1B are based on previous traffic studies under average conditions. Unusual traffic control or design features may influence lane usage (e.g., lane restrictions of commercial vehicles, directional influence of major commercial generator). Adjustments may be necessary. Contact the CBLRS for additional guidance.

Class of Road or Street	Percentage of Structural Design Traffic		
	PV (%)	SU (%)	MU (%)
III	88	7	5
IV	88	9	3

TRAFFIC PERCENTAGE
(Class III and IV)

Figure 44-1A

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PG Binder Grade Selection [1]			
	Traffic Loading Rate (Adjustment)		
Districts 1 – 4	Standard Traffic [2]	Slow Traffic [3]	Standing Traffic [4]
Surface[5]	PG 58-28 [6][7]	PG 64-28 or SBS PG 64-28	SBS PG 70-28
Remaining Lifts[5]	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22
Districts 5 – 9			
Surface[5]	PG 64-22 [6][7]	PG 70-22 or SBS PG 70-22	SBS PG 76-22
Remaining Lifts[5]	PG 64-22	PG 64-22	PG 64-22

Notes:

1. *The binder grades provided in this table are based on the recommendations given in Illinois-Modified AASHTO* MP-2, Table 1, "Binder Selection on the Basis of Traffic Speed and Traffic Level."
2. *Standard traffic is used where the average traffic speed is greater than 43 mph (70 km/h).*
3. *Slow traffic is used where the average traffic speed ranges from 12 to 43 mph (20 to 70 km/h).*
4. *Standing traffic is used where the average traffic speed is less than 12 mph (20 km/h).*
5. *Consideration should be given to increasing the high temperature grade by one grade equivalent when 10 ≤ T.F. ≤ 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*
6. *Surface includes the top 2 in. (50 mm) of HMA. The remaining lifts of HMA may be the same PG binder grade as surface; however, this may increase or decrease the pavement design thickness. If multiple PG Binder grades are used in a HMA design, the predominant PG Binder grade should be used for determining HMA Modulus on Figure 44-4H.*
7. *The high temperature grade should be increased by one grade equivalent when T.F. > 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*

PG BINDER GRADE SELECTION FOR FULL-DEPTH HMA PAVEMENTS

Figure 44-4C

44-4.02(e) PG Binder Selection

The PG binder grade may affect the performance of a HMA mixture. The full-depth HMA pavement design procedure assumes that HMA rutting and thermal cracking are adequately considered in the material selection and mixture design process. Selection of the appropriate binder grade can impact the ability of the mix to resist rutting at higher temperatures and thermal cracking at lower temperatures. Both high and low temperature levels need to be considered when selecting the appropriate binder grade for full-depth HMA pavements.

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44-4.03 Thickness Design

The following processes are used to determine the design thickness:

1. Class I, II and III Roads and Streets. The design procedure is as follows:
   - Calculate the TF from the appropriate equation found in Figure 44-4A.
   - Use Figure 44-6A in conjunction with the subgrade soil grain-size analysis to determine the subgrade support rating.
   - Use Figure 44-4C in conjunction with traffic speed and location to determine the PG binder grade.
   - Use Figure 44-4E to determine the HMA pavement mixture temperature. The design mixture temperature should be interpolated to the nearest 0.5°F.

     Note: The design HMA mixture temperatures for conventional flexible and full-depth HMA pavements are not the same. For the same location, the conventional flexible HMA design mixture temperature is lower than the full-depth HMA design mixture temperature, because conventional flexible design time dates occur earlier in the spring.
   - Use Figure 44-4F (TF < 0.5) or Figure 44-4G (TF ≥ 0.5) to determine the design HMA strain.
   - Use Figure 44-4H to determine the design pavement HMA modulus (E_{HMA}).
   - Use Figures 44-4I, 44-4J, or 44-4K, depending on the subgrade support rating, to determine the design HMA thickness. Round the final design thickness to the next highest 0.25 in.
   - The minimum full-depth HMA design thickness is 6 in.
   - A 12 in. improved subgrade is required for Class I and II pavements and is optional for Class III pavements. Class III pavement subgrades must satisfy the requirements of Section 44-7 during construction.
2. Class IV Roads and Streets. The following procedure applies:
   - If HCV's per day ≤ 48, use a minimum 5 in. HMA pavement. A 12 in. improved subgrade layer is optional. Class IV pavement subgrades must satisfy the requirements of Section 44-7 during construction.
   - If HCV's per day > 48, use a Class III TF equation and design procedure.

44-4.04 Typical Sections

Figures 44-4L and 44-4M illustrate typical LPA full-depth HMA pavement designs.

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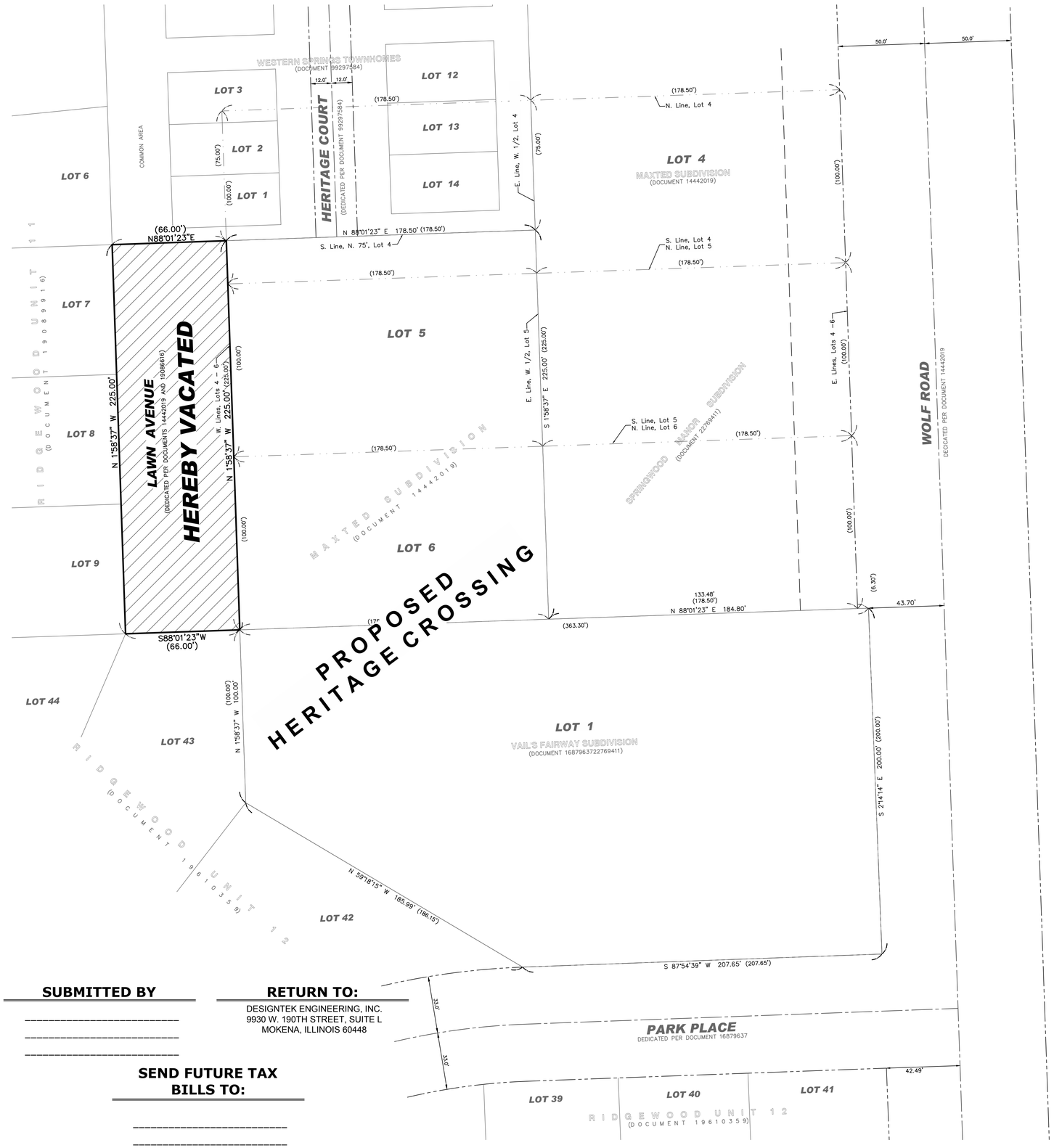
PLAT OF VACATION

OF

PUBLIC RIGHT OF WAY

FOR THE PURPOSE OF VACATING A HERETOFORE DEDICATED RIGHT OF WAY IN THE NORTHEAST FRACTIONAL 1/4 OF SECTION 18, IN TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.



BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

SITE DATA

AREA = 14,850 SQ. FT. OR 0.34 ACRES

PARCEL IDENTIFICATION NUMBER

UNKNOWN

GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

- N NORTH
- S SOUTH
- E EAST
- W WEST
- (###') RECORD/DEED
- ###' MEASURED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED ARE THE OWNERS OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND THAT AS SUCH OWNERS, THEY HAVE CAUSED THE SAME TO BE PLATTED AND VACATED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, THEY DO HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF VACATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 10TH DAY OF JULY, A.D., 20 24.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

SEND FUTURE TAX BILLS TO:

_____
_____
_____

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF VACATION
FOR
LAWN AVENUE
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

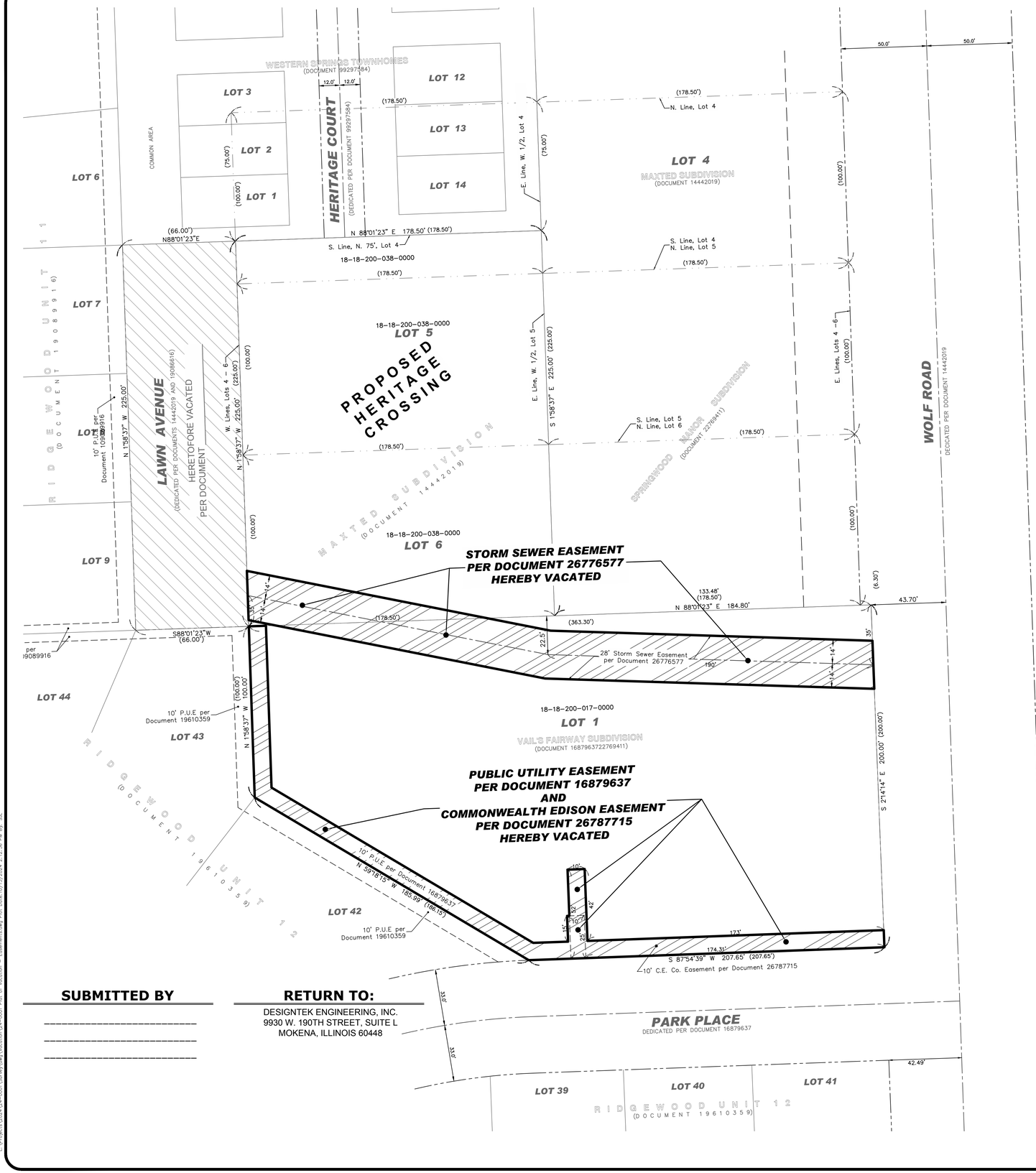
R/W VACATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Lawn Avenue.dwg Plot Date:10/15/2024 2:08:47 PM By: SJL

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER
18-18-200-038-0000
18-18-200-017-0000

ADDRESSES
1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES
- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS
- N NORTH
- S SOUTH
- E EAST
- W WEST
- (####) RECORD/DEED
- #### MEASURED
- P.U.E. PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

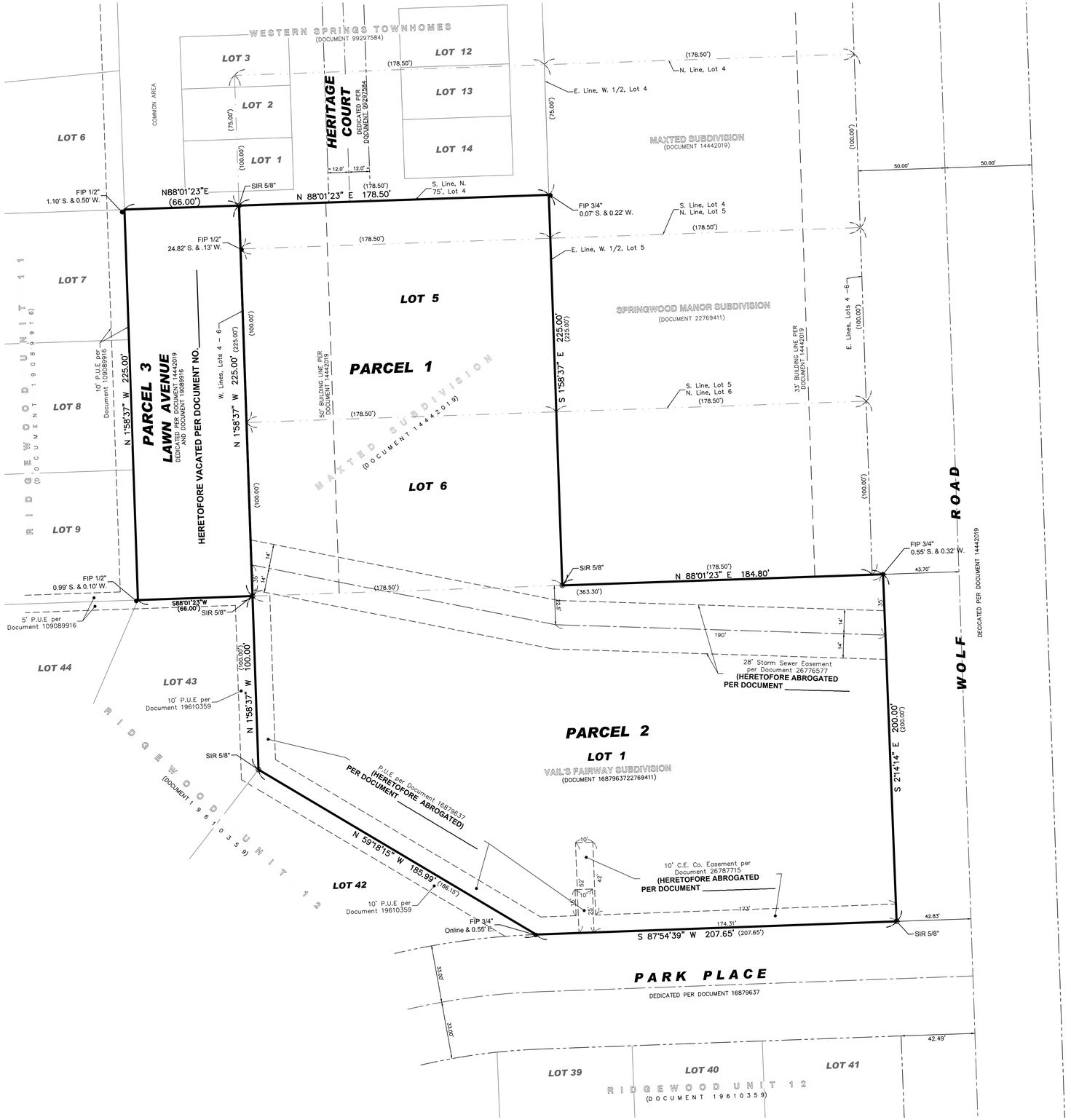
1 OF 1

EASEMENT ABROGATION

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FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE:	18-18-200-038-0000
PARCEL TWO:	18-18-200-017-0000
PARCEL THREE:	UNKNOWN

ADDRESSES

PARCEL 1:	1023 W. 55TH STREET WESTERN SPRINGS, IL 60558
PARCEL 2:	5600 WOLF ROAD WESTERN SPRINGS, IL 60558

EXISTING SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
AREA (PARCEL 3) =	14,850 SQ. FT. OR 0.34 ACRES
GROSS AREA =	120,009 SQ. FT. OR 2.75 ACRES

LEGEND

● FIP	FOUND IRON PIPE
○ SIR	SET 5/8" IRON ROD
———	BOUNDARY LINE
———	LOT LINE
——— · ———	RIGHT-OF-WAY LINE
——— · ———	CENTERLINE
- - - - -	EXISTING EASEMENT LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

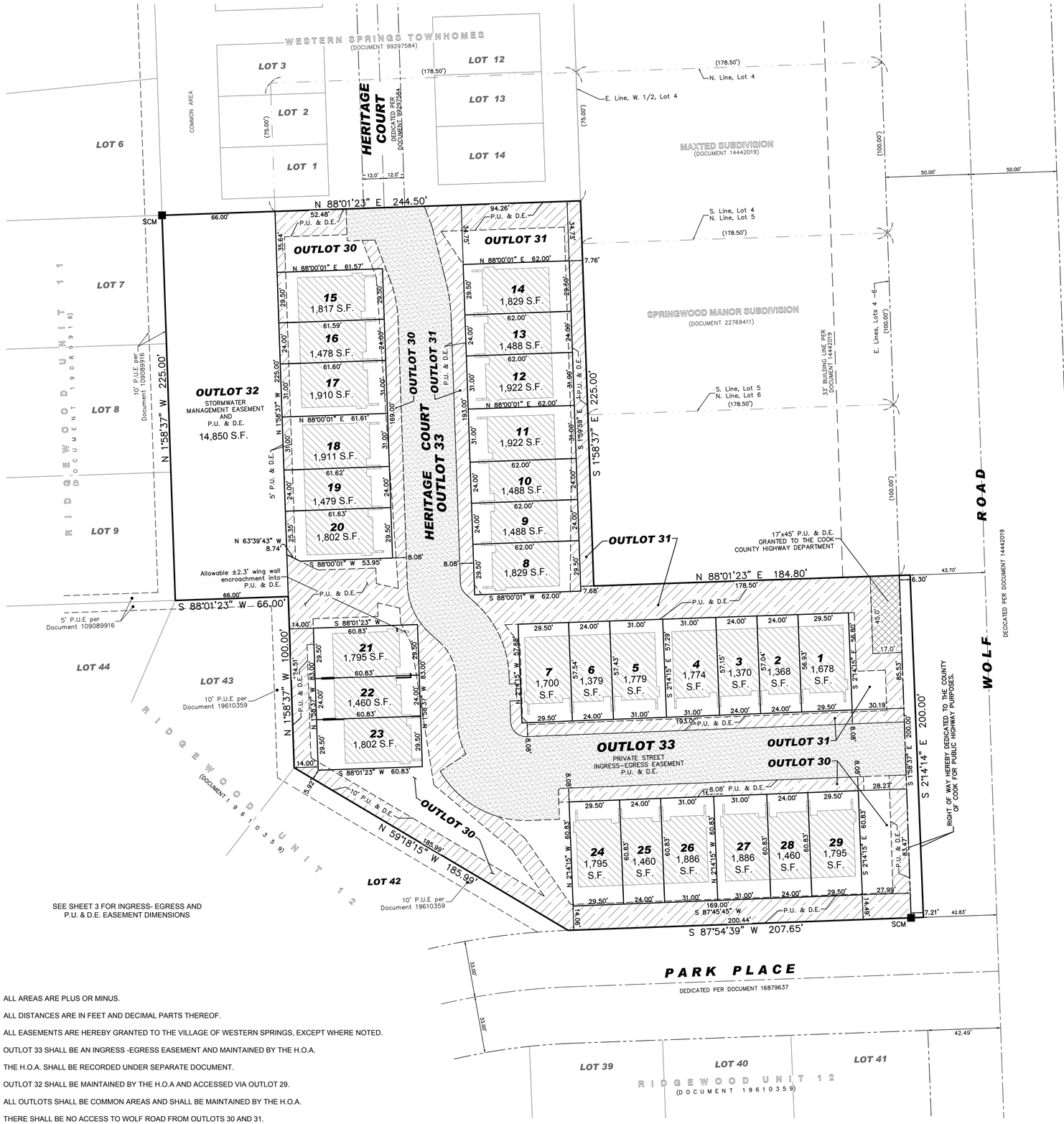
1 OF 4

EXISTING GEOMETRY

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FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



SEE SHEET 3 FOR INGRESS- EGRESS AND P.U. & D.E. EASEMENT DIMENSIONS

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
3. ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
4. OUTLOT 33 SHALL BE AN INGRESS -EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
5. THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
6. OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A AND ACCESSED VIA OUTLOT 29.
7. ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
8. THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER
PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

AREA SUMMARY
GROSS AREA:	120,009 SQ. FT. OR 2.75 AC.
BUILDABLE LOTS 1-29:	48,839 SQ. FT OR 1.18 AC.
OUTLOT 30	20,733 SQ. FT. OR 0.40 AC.
OUTLOT 31	14,952 SQ. FT. OR 0.43 AC.
OUTLOT 32	14,850 SQ. FT. OR 0.29 AC
OUTLOT 33:	19,393 SQ. FT. OR 0.34 AC.
WOLF RD. DEDICATION:	1,351 SQ. FT. OR 0.03 AC.

LEGEND
FIP	FOUND IRON PIPE
SIP	SET 1" x 24" IRON PIPE
SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

ABBREVIATIONS
FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
E.T.B.E.	EXCEPTION TO BLANKET EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		
L	ARC DIMENSION		
R	RADIUS DIMENSION		
CH	CHORD BEARING/DISTANCE		

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT RECONFIGURATION	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. No.: 184-003740

DEI

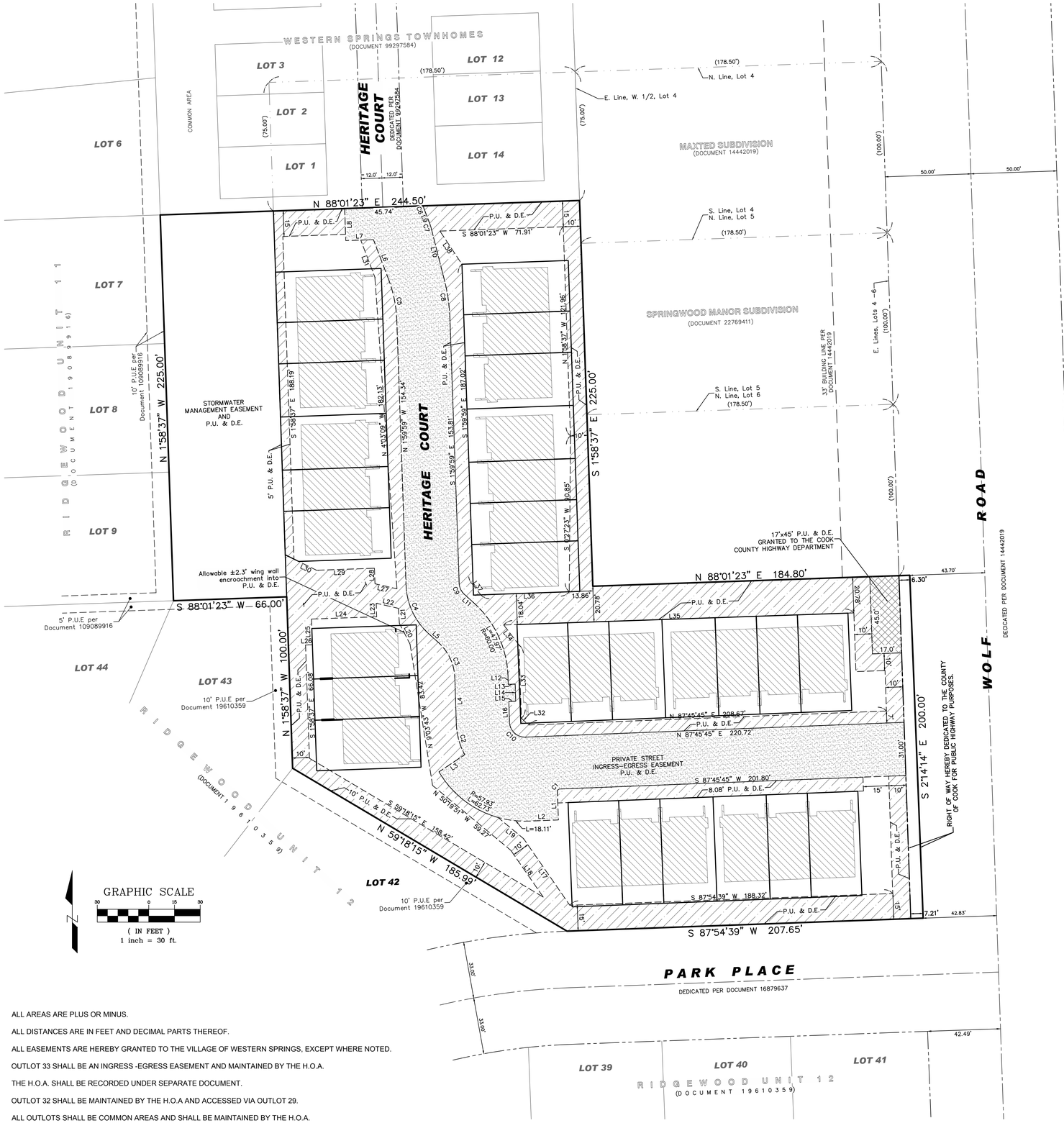
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

2 OF 4

PROPOSED GEOMETRY

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
3. ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
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8. THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

LEGEND

● FIP	FOUND IRON PIPE
○ SIP	SET 1" x 24" IRON PIPE
■ SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

Parcel Line Table		
Line #	Length	Direction
L1	16.50	S02° 14' 15"E
L3	18.04	N56° 16' 49"E
L4	26.84	N01° 51' 56"W
L5	8.03	N47° 40' 37"W
L6	24.41	N20° 51' 06"W
L7	16.15	S88° 10' 48"W
L8	18.67	N01° 58' 35"W
L9	7.26	S20° 53' 37"E
L10	27.84	S14° 13' 17"E
L11	8.03	S47° 40' 37"E
L12	4.76	S01° 51' 56"E
L13	4.02	N87° 58' 53"E
L14	10.00	S01° 44' 56"E
L15	4.00	S87° 58' 53"W
L16	12.07	S01° 51' 56"E
L17	47.24	N34° 43' 32"W
L18	33.09	N34° 43' 32"W
L19	19.34	N50° 19' 51"W
L20	13.60	N27° 06' 22"W
L21	8.81	N04° 03' 09"W

Parcel Line Table		
Line #	Length	Direction
L22	13.22	S77° 07' 24"E
L23	7.91	N01° 58' 37"W
L24	38.00	N88° 01' 23"E
L25	15.00	S01° 58' 37"E
L26	4.00	N88° 01' 23"E
L27	13.14	N77° 07' 19"W
L28	9.06	N01° 58' 37"W
L29	33.80	S88° 01' 22"W
L30	14.63	S63° 39' 43"E
L31	23.08	S20° 51' 06"E
L32	5.78	S47° 02' 19"E
L33	42.73	S01° 52' 29"E
L34	14.62	S37° 20' 25"E
L35	204.14	N88° 01' 23"E
L36	51.58	N88° 00' 01"E
L37	7.33	N37° 20' 25"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	2.36	1.50	90.00	S42° 45' 45"W	2.12
C2	18.74	40.00	26.85	N15° 17' 25"W	18.57
C3	23.19	29.00	45.81	N24° 46' 16"W	22.57
C4	31.89	40.00	45.68	N24° 50' 18"W	31.05
C5	24.79	75.50	18.81	N11° 22' 59"W	24.68
C6	3.64	54.81	3.80	S20° 01' 02"E	3.64
C7	3.03	26.00	6.67	S17° 33' 27"E	3.03
C8	26.01	106.50	13.99	S08° 59' 46"E	25.94
C9	7.74	9.10	48.74	S23° 11' 03"E	7.51
C10	14.19	9.04	89.92	S47° 02' 25"E	12.77

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

3 OF 4

EASEMENT DETAIL

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.

RESERVED FOR: COOK COUNTY RECORDER

COOK COUNTY CLERK STAMP

OWNER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS SHOWN ON THIS PLAT OF SUBDIVISION, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED:

THE UNDERSIGNED FURTHER CERTIFIES THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS SUBDIVISION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE SUBDIVISION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THE SUBDIVISION PLAT.

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HEREBY CERTIFIES THAT THE SUBJECT PROPERTY IS LOCATED WITH THE FOLLOWING SCHOOL DISTRICTS:

ELEMENTARY: 106 (LA GRANGE HIGHLAND) HIGH SCHOOL: 204 (LYONS TOWNSHIP HIGH SCHOOL)

BY: McNAUGHTON DEVELOPMENT LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

BY: _____
MANAGER

ADDRESS: 11S220 JACKSON STREET, SUITE #101, BURR RIDGE, ILLINOIS 60527

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF MCNAUGHTON DEVELOPMENT, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THIS SUBDIVISION PLAT AS OWNER, AS SUCH MANAGER OF McNAUGHTON DEVELOPMENT LLC, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED THIS SUBDIVISION PLAT AS HIS FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY OR OTHER ENTITIY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, A.D. 20___.

_____
NOTARY PUBLIC

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, CHAIRMAN OF THE VILLAGE OF WESTERN SPRINGS PLAN COMMISSION, SO CERTIFY THAT

ON THIS _____ DAY OF _____, A.D., 20_____, THIS PLAT OF SUBDIVISION WAS DULY APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF WESTERN SPRINGS.

BY: _____ ATTEST: _____
CHAIRMAN SECRETARY

VILLAGE TREASURER CERTIFICATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, COLLECTOR FOR THE VILLAGE OF WESTERN SPRINGS, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THERE ARE NO DELINQUENT OR UNPAID CURRENT FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF, THAT HAVE BEEN APPORTIONED AGAINST THE TRACT LAND LAND INCLUDED IN THIS PLAT.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D., 20_____.

_____
VILLAGE TREASURER

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE PRESIDENT AND THE VILLAGE BOARD OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, IN ACCORDANCE WITH SUBDIVISION REGULATIONS AT A MEETING HELD THIS _____ DAY OF _____, A.D. 20_____

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

IMPROVEMENTS CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE CLERK OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, HEREBY CERTIFY THAT THIS PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF SAID VILLAGE AT ITS MEETING HELD ON THE _____ DAY OF _____, A.D. 20_____, AND THAT REQUIRED BOND OR OTHER GUARANTEES HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

BY: _____
VILLAGE CLERK

LAGRANGE HIGHLANDS SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, SUPERVISOR OF THE LAGRANGE HIGHLANDS SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS, OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE PROPOSED SUBDIVISION AND DULY APPROVED BY THE COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED AT _____, COOK COUNTY, ILLINOIS, THIS ___ DAY OF _____, A.D., 20_____.

_____
SUPERVISOR

SURFACE WATER STATEMENT

To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, if such surface water drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains which the owner has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the adjoining property because of the construction of this subdivision.

_____ _____
Owner Professional Engineer

_____ _____
Printed Name Printed Name

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE ENGINEER OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
VILLAGE ENGINEER

REGISTRATION NUMBER _____

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT, CONFORMING TO THE STANDARDS OF THE COOK COUNTY HIGHWAY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS.

DATED THIS _____ DAY OF _____, A.D. 20_____.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

RESPONSIBILITY OF H.O.A., VILLAGE OF WESTERN SPRINGS AND LAGRANGE HIGHLANDS SANITARY DISTRICT

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all landscaping areas within all Lots and Outlots within the subdivision, together with all improvements within the ingress-egress easement, and all storm sewers and structures. The individual homeowners shall be responsible for all sanitary and water services from the public sanitary service connections and B-Boxes to the constructed buildings. The Village of Western Springs shall be responsible for all watermain and structures attached thereto. The LaGrange Highlands Sanitary District shall maintain the sanitary sewer and all structures attached thereto. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

PRIVATE INGRESS - EGRESS PROVISIONS

An easement for ingress and egress over and across the Property for the benefit of the Owner(s) of Subdivision and/or Lots, their heirs, successors, assigns, guests and invitees, as more particularly bounded and described on the Plat. This easement shall be perpetual and shall run with the land.

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all improvements within said ingress and egress areas within the subdivision. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the City shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

STORMWATER MANAGEMENT EASEMENT

Declarant hereby reserves and grants to the Village of Western Springs (Village) easements in, over, under, through, and upon those areas designated on the Plat as 'Stormwater Management Easement,'including but not limited to all outlots (Outlot 30-33 inclusive), and all areas detailed in the Declaration of Covenants Conditions and Restrictions for the Heritage Crossing Townhome Association of Western Springs pertaining to maintenance, repair, and replacement of stormwater management facilities, for purposes of providing adequate stormwater drainage control together with reasonable access thereto. [Continue with the same language currently on the plat in this first paragraph, I don't want to rewrite it all].

In the event the Village shall perform, or have performed on its behalf, removal of any obstruction or alteration to or upon the stormwater facilities drainage easement, as set forth in this easement, The Village shall establish a Special Service Area, pursuant to 35 ILCS 200/27-5 et seq., that includes the entire Premises after the approval of the Planned Development by the Village but prior to the sale and conveyance of title to any Lot to any person by the Developer, which shall govern the Premises for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the SSA Maintained Improvements. The Special Service Area shall be an encumbrance on title to the Premises, including each Lot, Dwelling Unit and Common Areas. The Developer agrees to cooperate with the Village in creating the Special Service Area and agrees not to object to the formation of the Special Service Area, provided the terms of the Special Service Area are consistent with the Development Agreement and this Declaration. In the event the owner of any portion of the Premises (the Developer, the Declarant, the Association, a Dwelling Unit Owner or Owner), at any time, shall fail to maintain, repair or replace the SSA Maintained Improvements, as and when appropriate, and, after receipt of Village notice of such failure and opportunity to cure, the Village shall have the right to levy a special service tax on the parcel(s) where the owner(s) has failed to perform its maintenance, repair or replacement obligations on the Premises, perform such work and receive reimbursement of the costs and expenses it has incurred, including any legal fees and related expenses, engineering fees and related expenses, other consultant fees and related expenses and a reasonable allocation of Village staff and overhead costs. The Village shall not levy a tax in accordance with the Special Service Area unless the applicable owner(s) fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village, as contained in this Agreement and the Declaration. The tax levy by the Village may extend to one owner or a limited number of owners, and not the entire Premises, if such limited tax levy is appropriate. In the event the failure or refusal to fulfill maintenance, repair and replacement obligations or the reimbursement obligation to the Village relates to one or more components of the SSA Maintained Improvements that support or serve the entire Premises or the Development, then the levy shall extend to the Association and each of the property owners of the Development. The maximum tax established for the Special Service Area shall be based on the actual incurred expenses or, if the improvements have not been made yet, the Village Engineer's reasonable, estimated expense for maintenance, repair or replacement of such Improvements. If the Association or a property owner(s) shall fail to pay the Special Service Area Tax, the Village shall be authorized to: (1) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations and shall be entitled to recover its actual incurred legal fees and related expenses from the owner(s) who fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village; and (2) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations of the Developer hereunder, including such lien foreclosure action authorized by 65 ILCS 5/11-31-1, as amended, or provided for in 65 ILCS 5-11-31-2, as amended, or similar applicable laws to foreclose on the lien and may collect its reasonable attorney's fees and litigation expenses incurred in the enforcement of the obligations.

COMED COMPANY AND AT & T CORPORATION

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to COMED COMPANY and AT & T CORPORATION, their respective licensees, successors, and assigns, jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked Public Utility & Drainage Easement, or P.U. & D.E." designation), the property designated in the Declaration of Condominium and/or on this plat as 'Common Elements'; and the property designated on the plat as 'common area or areas'; and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked 'Easement', 'Utility Easement', 'Public Utility Easement', 'P.U.E' (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term 'Common Elements' shall have the meaning set forth for such term in the 'Condominium Property Act', Chapter 765 ILCS 605/2, as amended from time to time.

The term 'common area or areas' is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as 'outlots', 'common elements', 'open space', 'open area', 'common ground', 'parking' and 'common area'. The term 'common area or areas', and 'Common Elements' include real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool, retention pond or mechanical equipment. Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

NICOR CORPORATION / NICOR GAS COMPANY PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY OF ILLINOIS, its successors and assigns, in all platted 'easement' areas, streets, alleys, other public ways and places shown on this plat, said easement to be for the installation, maintenance, relocation, renewal and removal of gas mains and appurtenances for the purpose of serving all areas shown on this plat as well as other property, whether or not contiguous thereto. No buildings or other structures shall be constructed or erected in any such 'easement' areas, streets, alleys, or other public ways or places nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

A non-exclusive perpetual easement is hereby reserved and granted to the Village of Western Springs (Village), LaGrange Highlands Sanitary District and their successors and assigns over all areas designated "Public Utility and Drainage Easement" and those areas designated "P.U. & D.E." on the plat, to construct, reconstruct, repair, inspect, maintain and operate various transmissions, distribution, and collection systems, including but not limited to water lines, sanitary sewers and storm sewers, together with any and all necessary valve vaults fire hydrants, manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said Village, over, upon, along, under and through the surface of the property shown on the plat, together with the right of access for necessary labor, materials and equipment to do any of the above work.

The right is also granted to cut down, trim or remove, without obligation to restore or replace any obstruction, including but not limited to trees, shrubs, other plants, structures or improvements on the easement that interfere with the operation of such lines and sewers. No permanent buildings or structures shall be placed on said easement, but same may be used for gardens, landscape areas, and other purposes that do not then or later interfere with the aforesaid uses or rights. Where an easement is used for both sewer and other utilities, the other utility installation shall be subject to the ordinance of the Village of Western Springs and to Village approval as to design and location.

Perpetual easements are hereby reserved for and granted to the Village of Western Springs and other governmental authorities having jurisdiction of the land, over the entire easement area for ingress, egress, and the performance of municipal and other governmental services including water, storm and sanitary sewer service and maintenance and emergency and routine police, fire, and other public safety related services.

COMCAST COMMUNICATIONS PROVISIONS

An easement is hereby reserved and granted to COMCAST COMMUNICATIONS CORPORATION, operating within the Village of Western Springs, it's successors and assigns, jointly and severally, for the installation, maintenance, relocation, renewal and removal of communication and broadcast signal systems in, under, across, along and upon the surface of the property shown on the plat and designated as "Public Utility and Drainage Easement" or "P.U. & D.E." and the property designated on the plat for streets and alleys as required to provide the planned unit development and other property, whether or not contiguous thereto, with communication and broadcast TV services, together with the right to install required service connections for each lot. No buildings or other obstructions shall be constructed or erected in any such "Public Utility and Drainage Easement" or "P.U. & D.E." areas, without the prior written consent of grantees. Nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 035-003160, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19810036, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, WHICH HAS ADOPTED A MUNICIPAL PLAN AND IS EXERCISING SPECIAL POWERS AUTHORIZED BY ARTICLE 11, DIVISION 12 OF THE ILLINOIS MUNICIPAL CODE, AS NOW AND HEREAFTER AMENDED AND THAT ALL REGULATIONS ENACTED BY THE VILLAGE OF WESTERN SPRINGS RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT IRON PIPE 1" X 24" WILL BE SET AT ALL LOT CORNERS, BLOCK CORNERS, POINTS OF CURVE, EXCEPT WHERE CONCRETE MONUMENTS ARE INDICATED, AND THAT THE PLAT HEREON DRAWN CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, MAP NUMBER 17031C0467J, EFFECTIVE DATE ON AUGUST 19, 2008.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

ALL CURVE LENGTHS SHOWN ARE ARC DIMENSIONS.

GIVEN UNDER MY HAND AND SEAL AT MOKENA, ILLINOIS, THIS 10th DAY OF JULY A.D., 2024.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. #035-003160
LICENSE EXPIRES ON NOVEMBER 30, 2026

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

Send all future tax bills to:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Submitted by:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Return the original Mylar to:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	CJL
2	11/26/24	LOT ECOMMENTS	CJL
3	12/30/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: N/A
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

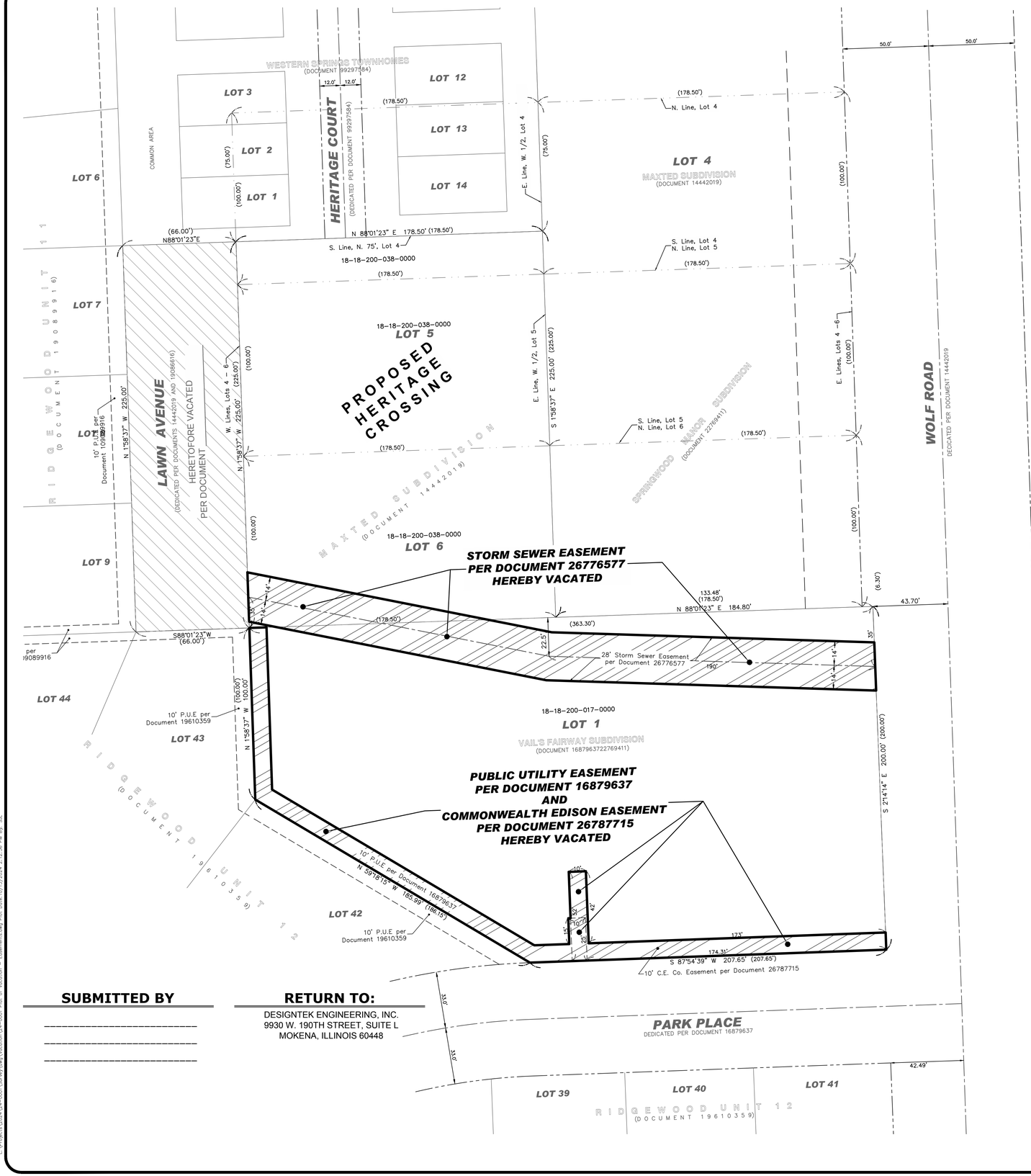
4 OF 4

CERTIFICATIONS

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

18-18-200-038-0000
18-18-200-017-0000

ADDRESSES

1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES

- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

N	NORTH
S	SOUTH
E	EAST
W	WEST
(####)	RECORD/DEED
####	MEASURED
P.U.E.	PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION
		BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

Traffic Impact Study
Proposed Residential Development
Western Springs, Illinois



Prepared For:

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

July 9, 2024 – Revised November 25, 2024

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Western Springs, Illinois. The site, which currently contains a medical office building, is located in the northwest corner of the intersection of Wolf Road (Cook County Highway W22) with Park Place. As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a full-movement access drive off Wolf Road at approximately the same location of the existing access drive serving the medical office building. A gated access will be provided on Heritage Court, only allowing cross-access between the proposed development and the existing Heritage Court townhomes.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

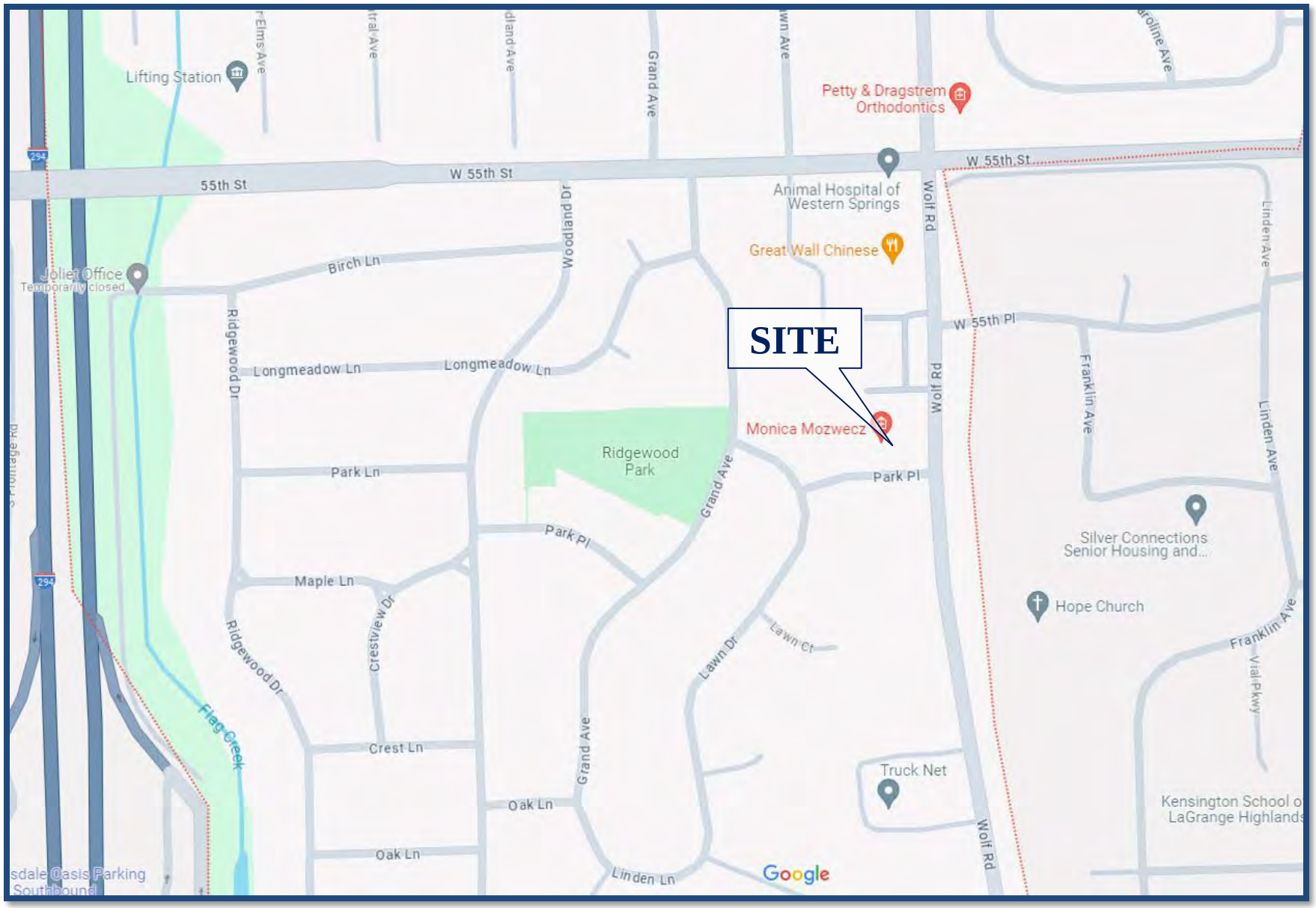
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday afternoon/evening peak hours for the following conditions:

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2030 no-build volumes and the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Proposed Residential Development
Western Springs, Illinois

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.



Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which currently contains a medical office building, is generally bounded by Springwood Manor condominiums and the Western Springs Heritage Townhomes to the north and single-family homes (Ridgewood of Western Springs) to the west and south. Wolf Road borders the site to the east. Land uses in the vicinity of the site are primarily residential in all directions.

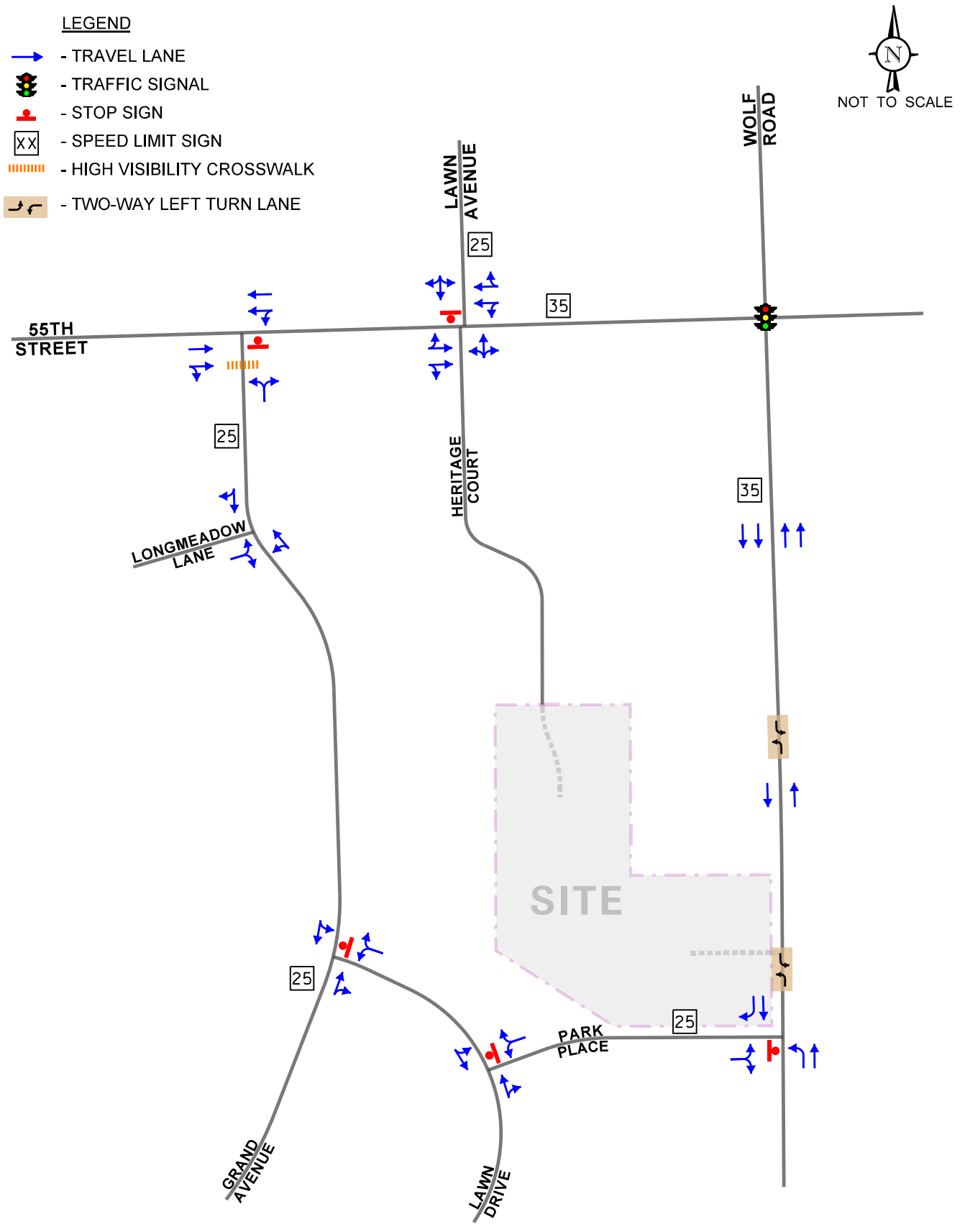
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Wolf Road (Cook County Highway W22) is a north-south minor arterial roadway that provides one lane in each direction divided by a striped median. At its unsignalized intersection with Park Place, Wolf Road provides an exclusive left-turn lane and a through lane on the northbound approach. The southbound approach provides a through lane and an exclusive right-turn lane. Wolf Road is under the jurisdiction of the Cook County Division of Transportation and Highways (CCDOTH), is not designated as a Strategic Regional Arterial (SRA), and has a posted speed limit of 35 miles per hour. According to the Illinois Department of Transportation (IDOT), Wolf Road carries an annual average daily traffic (AADT) volume of 9,150 vehicles (IDOT - 2022).

Park Place is an east-west local roadway that provides one lane in each direction. At its unsignalized intersection with Wolf Road, Park Place is under stop sign control and provides a shared left-turn/right-turn lane on the eastbound approach. At its unsignalized intersection with Lawn Drive, Park Place is under stop sign control and provides a shared left/right-turn lane on the westbound approach. Park Place is under the jurisdiction of the Village of Western Springs and has a posted speed limit of 25 miles per hour.

55th Street is an east-west minor arterial that provides two lanes in each direction divided by a painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Heritage Court/Lawn Avenue. However, it is important to note that eastbound and westbound left-turn movements are accommodated by the painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Grand Avenue. 55th Street has a posted speed limit of 35mph, carries an AADT volume of 16,600 vehicles (IDOT – 2022), and is under IDOT's jurisdiction.



Heritage Crossings
Western Springs, Illinois

Existing Roadway Characteristics

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Heritage Court is a north-south two-lane private road that serves the Western Springs Heritage townhomes and is aligned opposite Lawn Avenue. At its unsignalized intersection with 55th Street, Heritage Court provides a shared left/right-turn lane under stop sign control.

Grand Avenue is a local north-south two-lane roadway serving the Ridgewood of Western Springs subdivision. At its unsignalized intersection with 55th Street, Grand Avenue provides a shared left/right-turn lane under stop sign control. No exclusive turn lanes are provided at its unsignalized intersection with Lawn Drive. Grand Avenue has a posted speed limit of 25 mph and is under the jurisdiction of the Village of Western Springs.

Longmeadow Lane is an east-west two-lane local roadway. No traffic control is provided at its unsignalized intersection with Grand Avenue. Longmeadow Lane is under the jurisdiction of the Village of Western Springs.

Pedestrian Facilities

Based on our field visits, no sidewalks are provided along Park Place or any of the roads within the Ridgewood of Western Springs subdivision. However, a sidewalk is provided along the west side of Wolf Road. A north-south standard style crosswalk is provided on Park Place at its intersection with Wolf Road. Furthermore, a midblock east-west pedestrian high visibility crosswalk is provided on Wolf Road at its intersection with 59th Street. This mid-block pedestrian also provides rapid flashing beacons with proper signage. Additionally, push buttons are provided at each side of the roadway and advance signage is provided to vehicles to be aware of the upcoming crossing.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

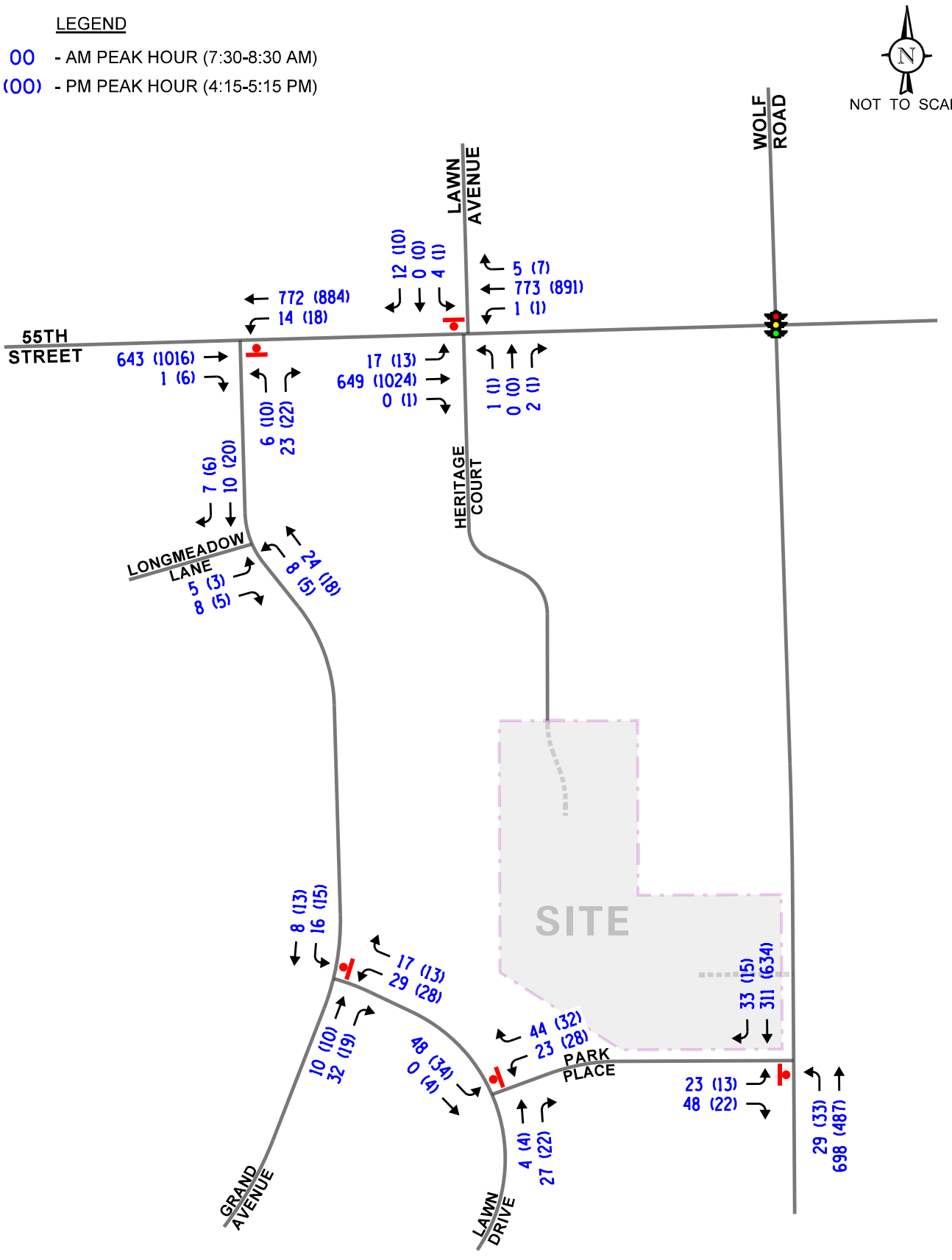
- Wolf Road with Park Place
- Park Place with Lawn Drive
- 55th Street with Heritage Court
- 55th Street with Grand Avenue
- Grand Avenue with Longmeadow Lane
- Grand Avenue with Lawn Drive

The traffic counts were conducted on Thursday, March 21, 2024 and on Tuesday, April 2, 2024, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday afternoon/evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:30 A.M. and 8:30 A.M. during the weekday morning peak period and between 4:15 P.M. and 5:15 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. The existing traffic volumes are illustrated in **Figure 4A**. **Figure 4B** shows the existing pedestrian and bicycle traffic volumes.

It is important to note that LaGrange Highlands Elementary School is located approximately 0.4 miles southeast of the intersection of Wolf Road with Park Place. Based on a review of the District 106 student calendar, all schools were in session when the traffic counts were conducted. Furthermore, the LaGrange Highlands Elementary School arrival is between 8:10 A.M. and 8:20 A.M. with class starting at 8:25 A.M. Upon further review of their website, the school's regular dismissal time is at 3:15 P.M. In order to determine the peak traffic and pedestrian volumes during the dismissal time, an additional traffic count was conducted at the intersection of Wolf Road with Park Place during the 3:00 P.M. to 4:00 P.M. hour.

Furthermore, in September 2024, the Village of Western Springs conducted an additional pedestrian count (walking, bicycle, scooter, etc.) for the west leg of the intersection of Wolf Road with Park Place. These volumes, which yielded a higher pedestrian volume than the March 2024 counts conducted by KLOA, Inc. were utilized for the purposes of this evaluation.

Figure 5A shows the existing school peak traffic volumes while **Figure 5B** shows the existing school peak pedestrian and bicycle traffic volumes.

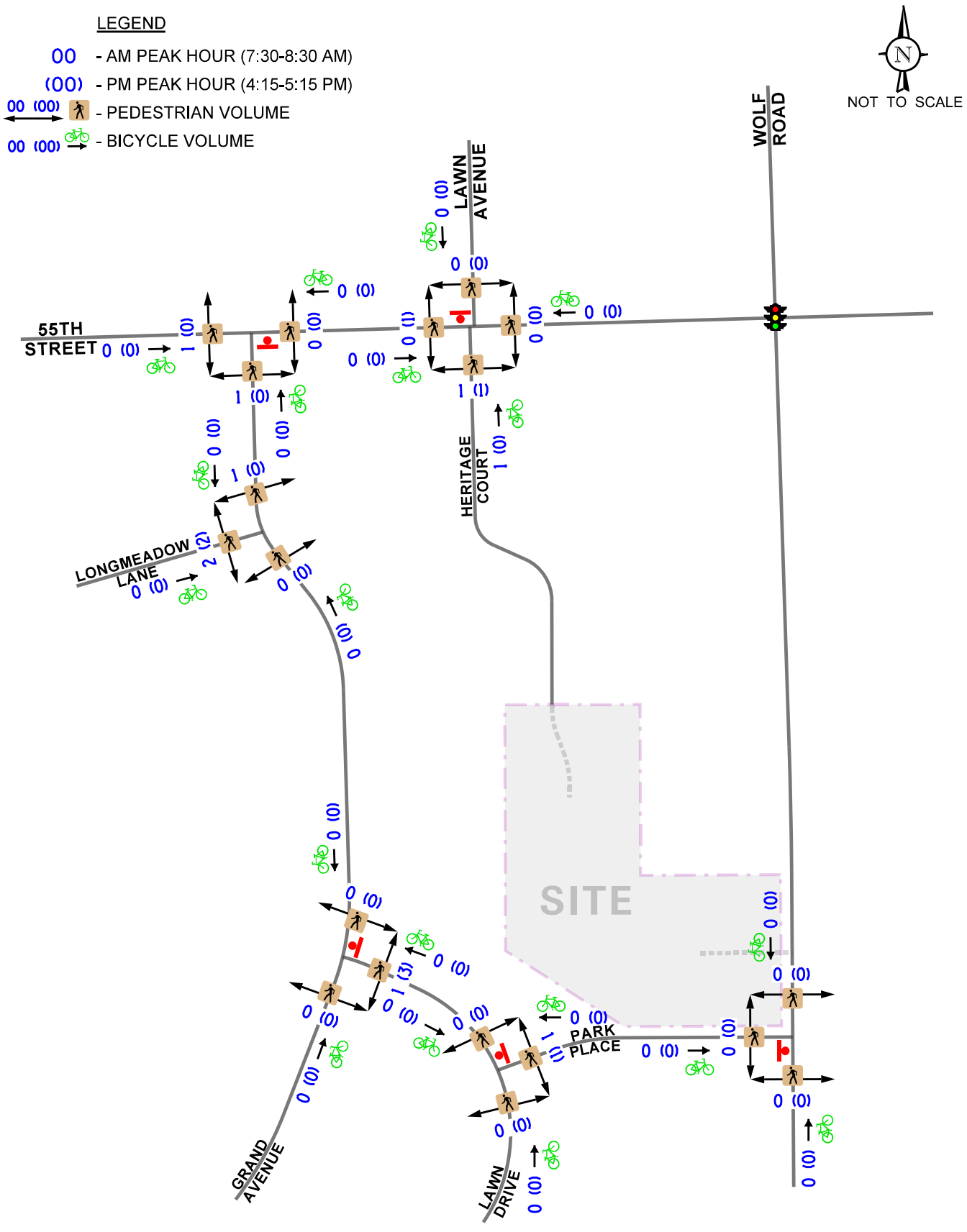


Heritage Crossings
Western Springs, Illinois

Existing Traffic Volumes

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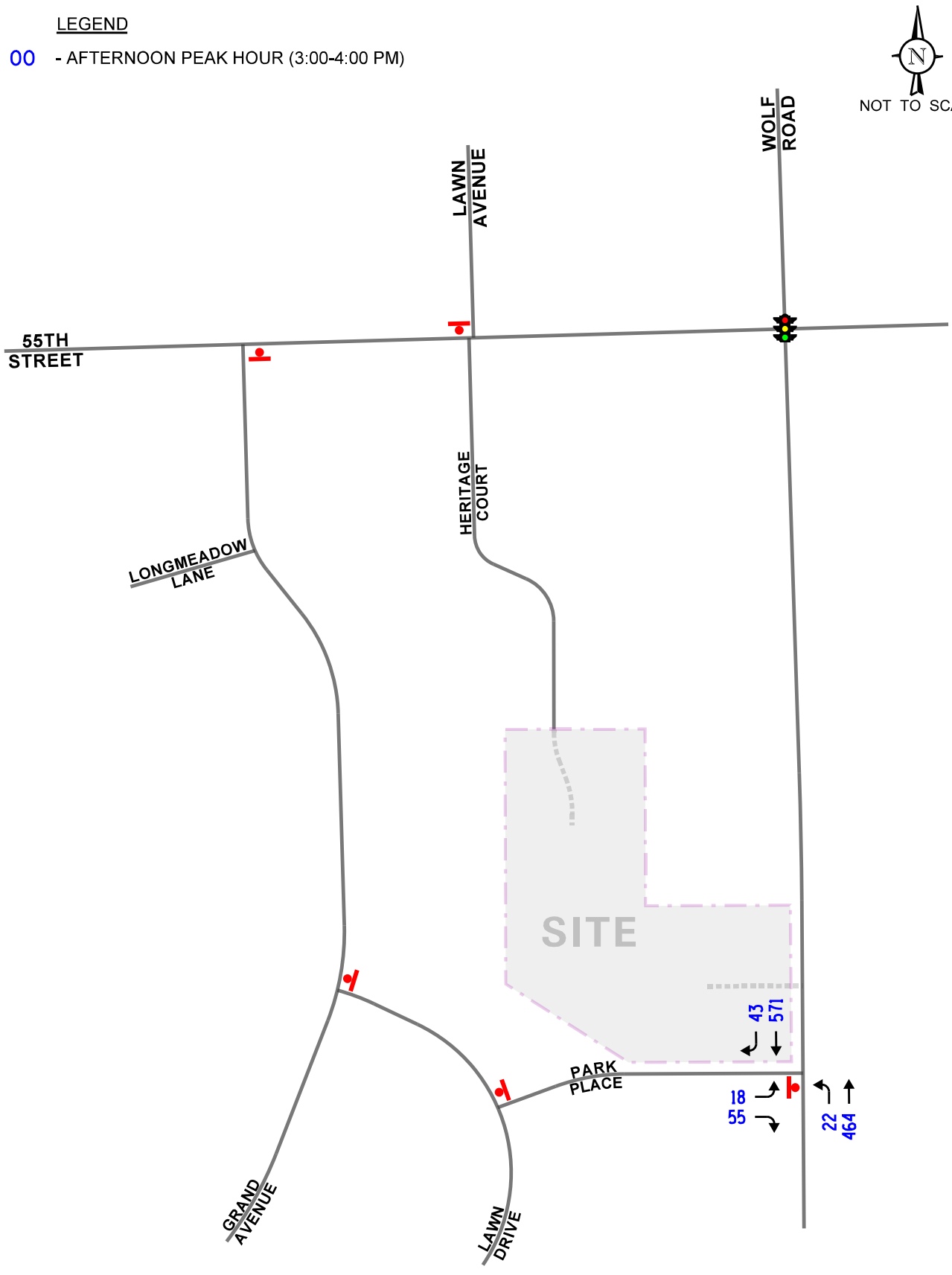


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Existing Pedestrian and Bicycle Traffic Volumes

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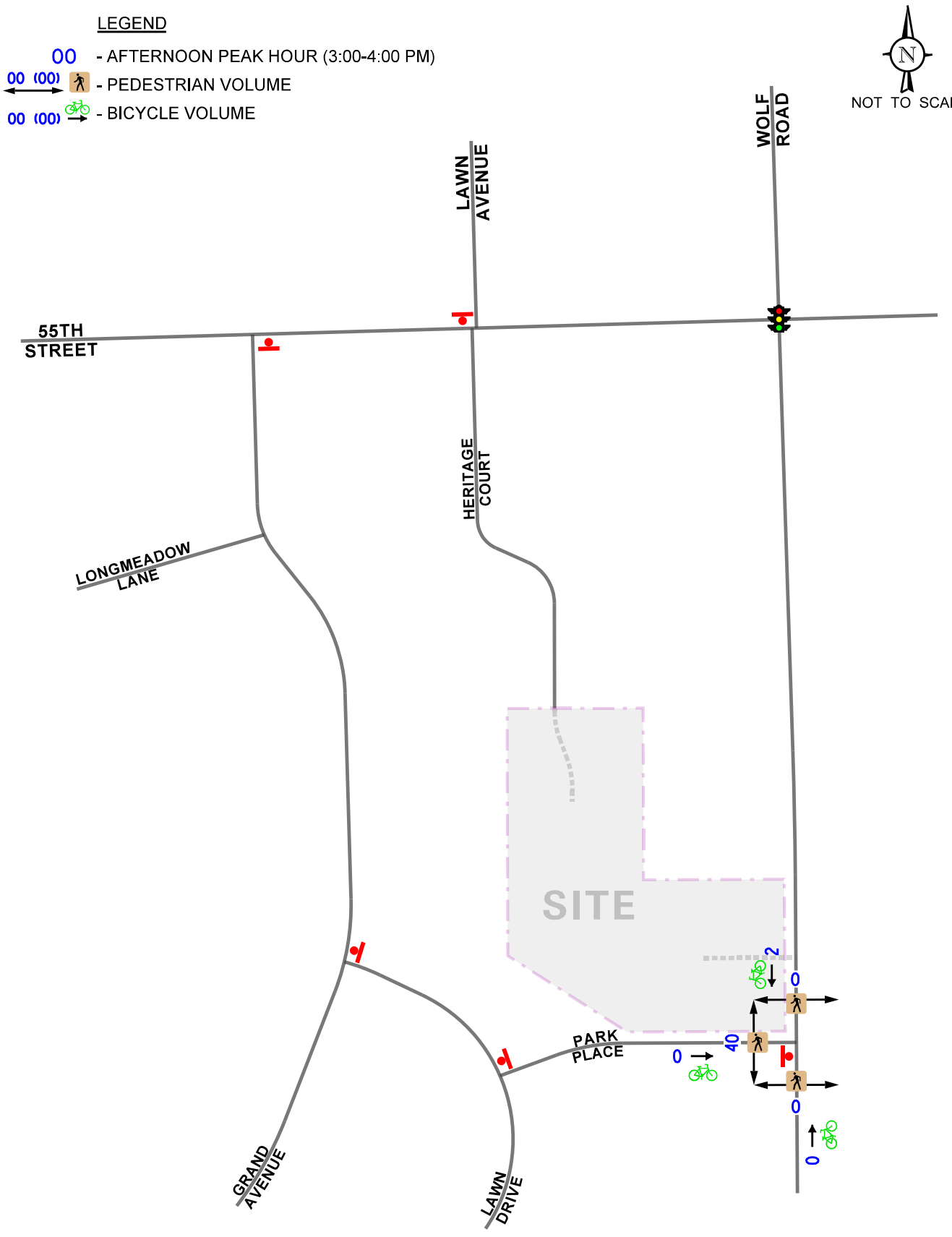


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Existing Traffic Volumes
(Afternoon Peak Hour)

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Heritage Crossings
Western Springs, Illinois

Existing Pedestrian and Bicycle
Traffic Volumes - (Afternoon Peak Hour)

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Job No: 24-068 Figure: 5B

Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2018 to 2022) for the study area intersections. A summary of the crash data at the intersections of Wolf Road with Park Place and 55th Street with Grand Avenue is shown in **Tables 1** and **2**. No fatalities were reported at any of the studied intersections during the review period.

Table 1
WOLF ROAD WITH PARK PLACE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	0	0	1	0	1
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Average	**0**	**0**	**0**	**0**	**0**	**<1.0**	**0**	**<1.0**

Table 2
55th STREET WITH GRAND AVENUE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	2	1	0	0	3
2019	0	0	0	1	0	0	0	1
2020	0	0	0	0	0	1	0	1
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**4**	**1**	**1**	**0**	**6**
Average	**0**	**0**	**0**	**<1.0**	**<1.0**	**<1.0**	**0**	**1.2**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

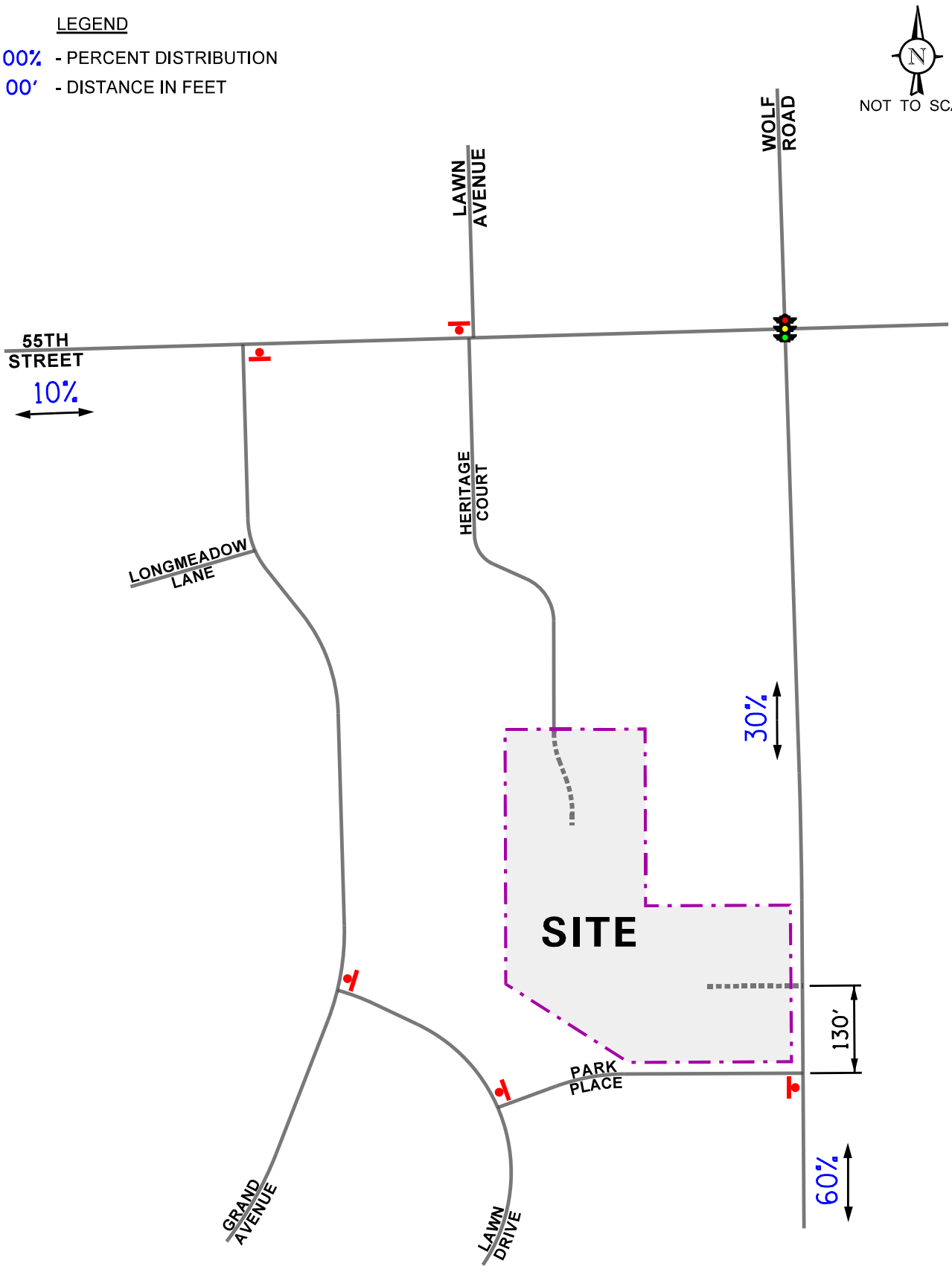
As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a proposed full-movement access drive on Wolf Road to be located at approximately the same location of the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. The existing access drive on Wolf Road will be eliminated. A gated access to the north with Heritage Court will also be provided. This access will only provide accessibility to the proposed development and to the existing Heritage townhomes and will be controlled via a clicker that will be provided to residents of both developments. A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic. Figure 6 also shows the distance, in feet, between the existing and proposed access intersections.

Peak Hour Traffic Volumes

The number of peak hour trips (vehicles, bicycles and pedestrians) estimated to be generated by the proposed residential development was based on trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Attached Housing" (Land-Use Code 215) rates were used to determine the traffic to be generated by the development. **Table 3** shows the weekday morning, weekday afternoon and weekday evening peak hour traffic, pedestrian, and bicycle trips to be generated by the proposed residential development as well as the daily total traffic volumes. It is important to note that the weekday afternoon peak hour volumes were estimated based on the time-of-day distribution Excel data provided within the *Trip Generation Manual* Appendices. Copies of the trip generation graphs and the hourly distribution Excel sheet are included in the Appendix.



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Directional Distribution

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Table 3
PROJECTED DEVELOPMENT-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
215	Townhomes (29 Units)	3	11	14	9	5	14	10	7	17	105	105	210
	Pedestrians [1]	1	2	3	3	3	6	3	3	6	N/A	N/A	N/A
	Bikes [1]	--	--	--	--	1	1	--	1	1	N/A	N/A	N/A

1 – Pedestrian and bicycle trip generation was assumed to be the same as during the evening peak hour

Trip Generation Comparison

As previously mentioned, the site currently contains a medical office building. The existing medical office building is approximately 21,536 square feet in size of which only 1,200 square feet are currently being utilized.

Given that the current zoning allows for both medical office and professional office uses, the volume of traffic that was generated by the full occupancy of the building assuming half of it as medical office and the other half as professional office and that of the proposed development during the weekday morning, afternoon, evening peak hours and on a daily basis was estimated based on the following trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition:

- Medical-Dental Office Building (Land-Use Code 720)
- General Office Building (Land-Use Code 710)
- Single-Family Attached Housing (Land-Use Code 215)

Table 4 shows a comparison of what the full occupancy of the medical office building was generating and what the proposed rowhomes would generate.

As can be seen, the proposed development will generate substantially less traffic than what the full occupancy of the previous land use was generating. Therefore, the proposed development will have a lower traffic impact than the previous land use.

Table 4
TRIP GENERATION COMPARISON

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
720	Medical Office Building (10,768 s.f.)	26	6	32	16	18	34	12	29	41	177	178	355
710	General Office Building (10,768 s.f.)	22	3	25	6	7	13	4	22	26	83	84	167
215	Townhomes (29 units)	3	11	14	9	5	14	10	7	17	105	105	210
Difference		**-45**	**+2**	**-43**	**-13**	**-20**	**-33**	**-6**	**-44**	**-50**	**-155**	**-157**	**-312**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). The traffic assignment for the development is illustrated in **Figure 7.** The re-assignment of the Heritage Court townhomes to take into account the proposed connection between the proposed development and the existing townhomes is illustrated in **Figure A** in the Appendix.

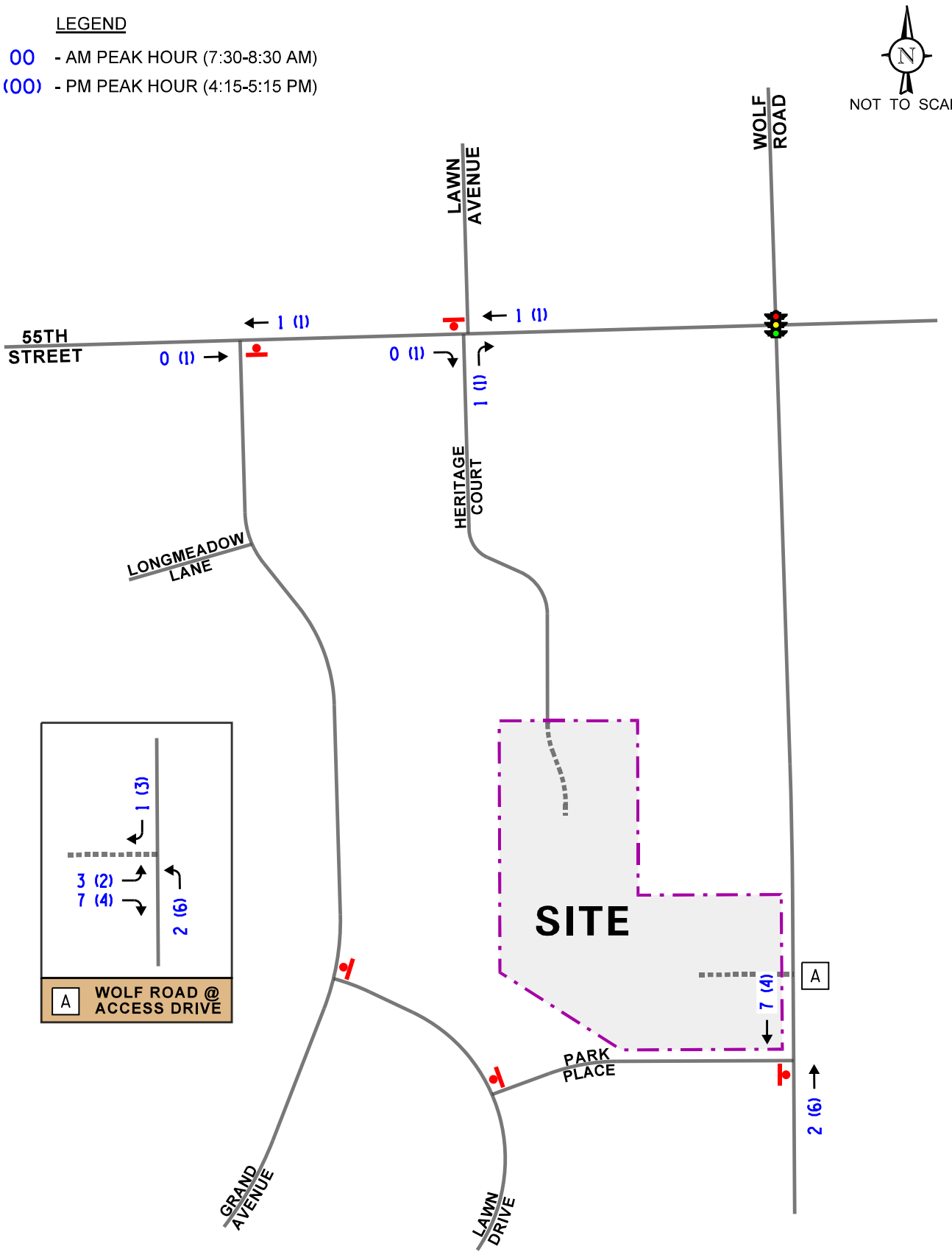
Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.4 percent per year for six years (buildout year plus five years) for a total of approximately 2.5 percent to project Year 2030 background conditions. **Figure 8** illustrates the Year 2030 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2030 no-build traffic volumes (Figure 7) to determine the Year 2030 total projected traffic volumes, shown in **Figure 9.** The Year 2030 total projected traffic volumes for the weekday afternoon peak hour is illustrated in **Figure B** in the Appendix.

The total projected traffic volumes also include the existing turning movements to and from the medical office building and in order to provide a conservative analysis, these vehicles were not removed from the area roadway system or the traffic volumes at other study area intersections.

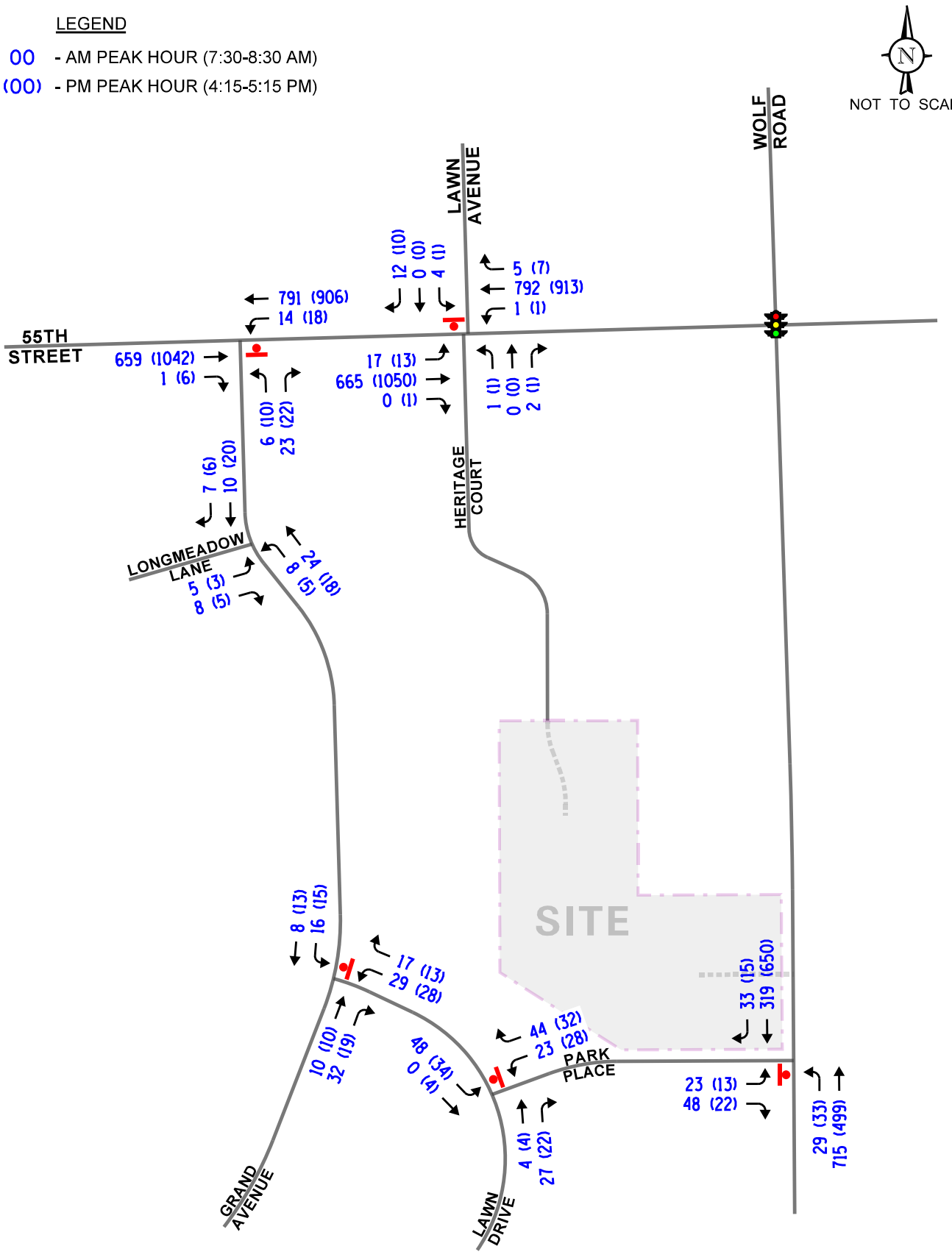


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Site-Generated Traffic Volumes

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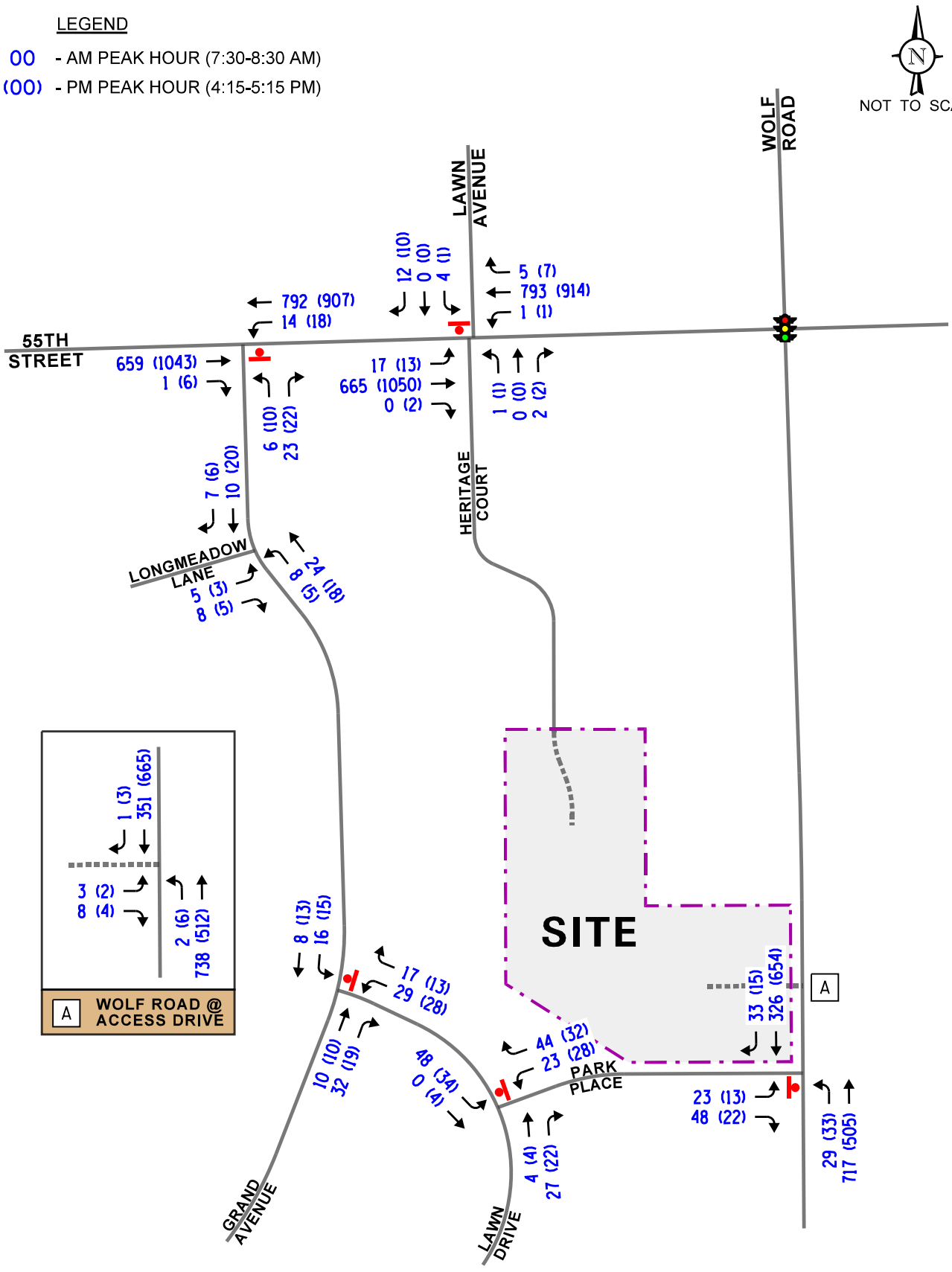


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Year 2030 No-Build Traffic Volumes

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Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes

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Job No: 24-068 Figure: 9

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 7th Edition and analyzed using Synchro/SimTraffic 12 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 5** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	16.7	C	20.6
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.3	B	10.8
• Northbound Approach	B	14.1	D	25.5
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.5	A	8.8
• Westbound Left Turn	A	8.9	B	10.5
• Northbound Approach	B	13.0	B	13.0
• Southbound Approach	B	12.0	B	11.5
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 5A
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	18.8
• Northbound Left Turn	A	9.3

LOS = Level of Service
Delay is Measured in Seconds

Table 6
CAPACITY ANALYSIS RESULTS – 2030 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.1	C	21.3
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	B	13.3
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 7
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.3	C	21.5
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	C	21.6
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Wolf Road with Access Drive				
• Eastbound Approach	B	13.5	C	17.0
• Northbound Left Turn	A	8.0	A	9.0

LOS = Level of Service
Delay is Measured in Seconds

Table 7A
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	19.8
• Northbound Left Turn	A	9.4
Wolf Road with Access Drive		
• Eastbound Approach	C	16.8
• Northbound Left Turn	A	8.9

LOS = Level of Service
Delay is Measured in Seconds

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Wolf Road with Park Place

The results of the capacity analyses indicate that the eastbound approach operates at Level of Service (LOS) C during the weekday morning, afternoon and weekday evening peak hours while the northbound left-turn movement operates at LOS A during all three peak hours. Based on the peak hour turning movement counts, Park Place is estimated to carry 1,250 – 1,300 daily trips. As stated in the publication titled *Residential Streets*, 3rd Edition published by the Urban Land Institute (ULI), the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE) and ITE, the average daily traffic volumes for a residential collector are typically greater than 1,500 vehicles. As such the road is operating below its typical design threshold.

Under Year 2030 no-build and total projected conditions, the eastbound approach and the northbound left-turn movement are projected to operate at the same existing levels of service during all three peak hours with increases in delay of less than two seconds. The 95th percentile queue for the eastbound approach is projected to be approximately one to two vehicles and will not extend back to the location of the proposed access drive. The 95th percentile queue for the northbound left-turn movement is projected to be approximately one vehicle and can be accommodated by the existing left-turn lane. As such, Park Place and its intersection with Wolf Road have sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Grand Avenue

The results of the capacity analyses indicate that the westbound left-turn/through movement operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. The northbound approach operates at LOS B during the weekday morning peak hour and LOS D during the weekday evening peak hour.

Under Year 2030 no-build and total projected conditions, all the approaches and their critical movements are projected to operate at the same existing levels of service during both peak hours with increases in delay of less than three seconds. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Heritage Court/Lawn Avenue

The results of the capacity analyses indicate that the northbound and southbound approaches currently operate at LOS B during the weekday morning and weekday evening peak hours. The eastbound and westbound left-turn movements operate at LOS B or better during both peak hours.

Under Year 2030 no-build and total projected conditions, the northbound and southbound approaches will operate at LOS B during the weekday morning and weekday evening peak hours except for the northbound approach that is projected to operate at LOS C during the weekday evening peak hour under projected conditions. The eastbound and westbound left-turn movements are projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than one second. It should be noted that based on the peak hour turning movement counts at this intersection, Heritage Court is estimated to carry approximately 40 to 50 daily trips and is anticipated to carry the same amount of daily traffic given the proposed connection to the south with the proposed development. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Longmeadow Lane

The results of the capacity analyses indicate that the eastbound approach and the northbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Lawn Drive

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lawn Drive with Park Place

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Wolf Road with Proposed Access Drive

As proposed, a full-movement access drive will be provided on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It is important to note that Wolf Road provides a two-way left-turn lane at the location of this access drive. As such, the analysis assumed a short (40-foot) exclusive left-turn lane.

Under Year 2030 total projected conditions, outbound movements from the access drive are projected to operate at LOS B and C during the weekday morning and weekday evening peak hours, respectively. The northbound left-turn movement will operate at LOS A. Furthermore, the 95th percentile queue for the northbound left turn is projected to be one vehicle, which will not interrupt the traffic flow on Wolf Road. As such, the proposed access drive will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

Sight Distance Evaluation

In order to determine if sufficient sight distance is provided along Wolf Road for a vehicle stopped at the access drive, a sight distance study was performed for the intersection of Wolf Road with the existing access drive. While intersection sight distance is desirable, *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements.

As previously indicated, Wolf Road has a posted speed limit of 35 mph. It is important to note that per the Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual design procedures, the intersection sight distance is obtained by providing clear sight triangles. Furthermore and as stated in the Manual, "The length of leg along the minor road is based on two parts. The first is the location of the driver's eye on the minor road. The distance is not wholly based on the location of the stop bar, but instead through research on how far away from through traffic the stopping motorist feels comfortable, even potentially after a two-stop process (stop at stop bar, then pull up and stop at a safe spot closer to the edge of pavement that maximizes sight lines). This distance is typically assumed to be 14.4 feet from the edge of the major road traveled way, but can be increased due to site specific issues".

The minimum stopping sight distance required along Wolf Road for a posted 35 mph speed limit (design speed of 40 mph) based on IDOT's BDE Manual and the *Bureau of Design and Environment (BDE*) Manual and the *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) is 305 feet.

As part of the proposed plans, the culvert will be reworked and the existing chain link fence will be moved further back west (For additional details, please refer to Design Tek Engineering, Inc. engineering plans). Based on Exhibit A (see Appendix), the location of the access drive meets the minimum stopping sight distance requirements for the posted speed limit. While the access drive is within the influence of the southbound right-turn lane taper, it is important to note that this is an existing access drive that was approved in the past and has been operating for many years with higher traffic volumes than what the proposed development will generate.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units.

- Access to the development will be provided via a full-movement access drive on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.

- The existing chain-link fence will be relocated further west and adequate sight distance will be provided at the full access drive's intersection with Wolf Road.

- A gated connection to the north with Heritage Court will be provided. This connection will only provide accessibility to the proposed development and the existing Heritage Townhomes and will be controlled via a clicker that will be provided to residents of both developments.

- The area roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development and no additional roadway improvements or traffic control modifications are required.

- The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development and will ensure efficient and flexible access will be provided.

- As part of the proposed plans, the existing chain link fence around the culvert will be moved further back west and as such, the location of the access drive will meet the minimum stopping sight distance requirements for the posted speed limit.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Graphs
Figure A
CMAP Projections Letter
Figure B
Level of Service Table
Capacity Analysis Summary Sheets
Exhibit A – Available Sight Distance

Traffic Count Summary Sheets

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

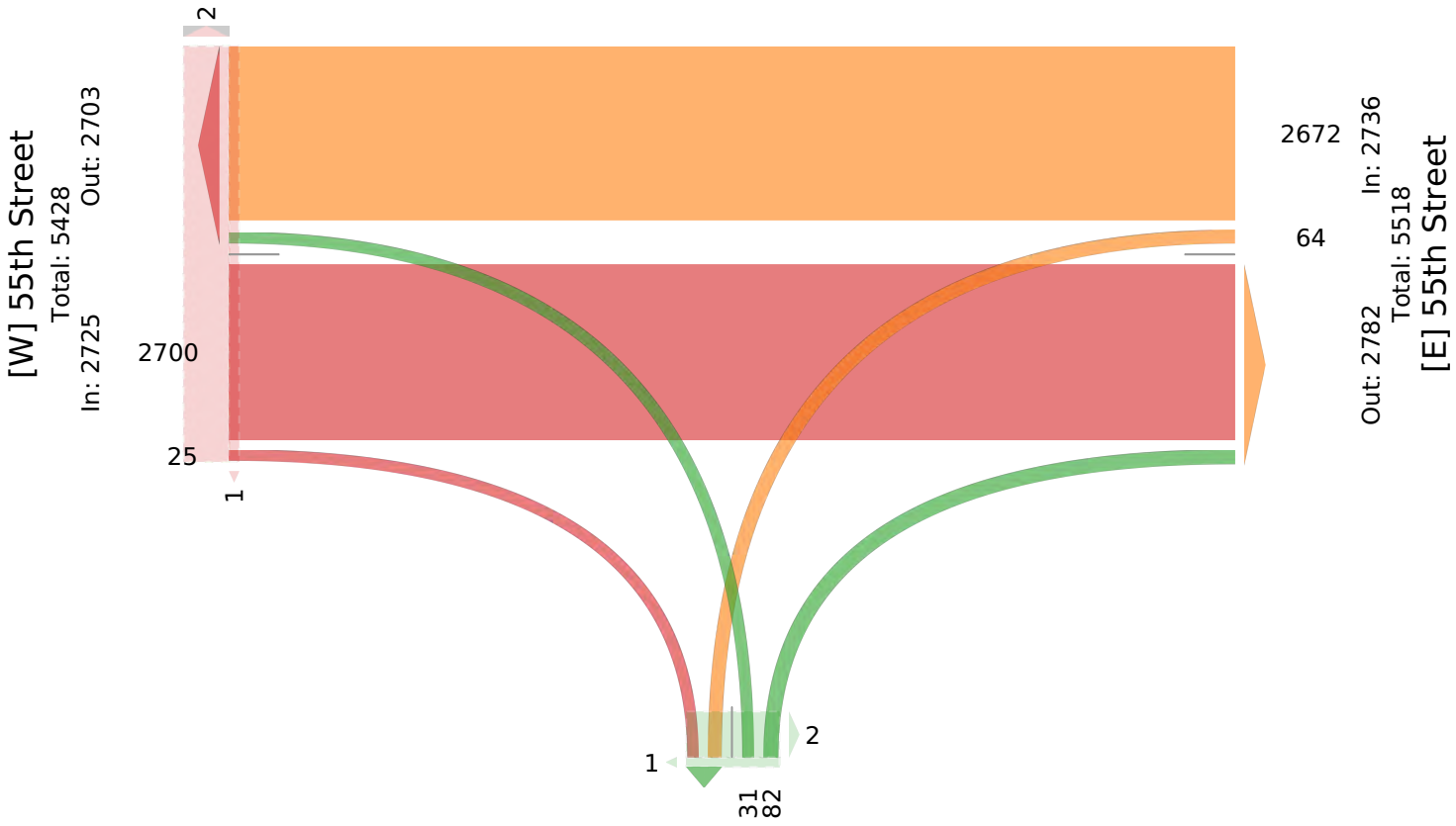
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Hourly Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
8:00AM	122	1	0	**123**	0	3	1	0	**4**	0	2	119	0	**121**	0	**248**
8:15AM	126	3	0	**129**	0	5	2	0	**7**	0	2	117	0	**119**	0	**255**
8:30AM	102	7	0	**109**	0	4	2	0	**6**	0	1	120	0	**121**	0	**236**
8:45AM	121	0	0	**121**	0	7	1	0	**8**	0	0	104	0	**104**	0	**233**
Hourly Total	471	11	0	**482**	0	19	6	0	**25**	0	5	460	0	**465**	0	**972**
4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Hourly Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
5:00PM	171	6	0	**177**	0	1	1	0	**2**	2	1	174	0	**175**	2	**354**
5:15PM	149	7	0	**156**	0	9	3	0	**12**	0	8	154	0	**162**	0	**330**
5:30PM	134	6	0	**140**	0	4	3	0	**7**	0	1	165	0	**166**	0	**313**
5:45PM	124	2	0	**126**	0	4	2	0	**6**	0	3	143	0	**146**	0	**278**
Hourly Total	578	21	0	**599**	0	18	9	0	**27**	2	13	636	0	**649**	2	**1275**
Total	2672	64	0	**2736**	0	82	31	0	**113**	3	25	2700	0	**2725**	3	**5574**
% Approach	97.7%	2.3%	0%	**-**	-	72.6%	27.4%	0%	**-**	-	0.9%	99.1%	0%	**-**	-	-
% Total	47.9%	1.1%	0%	**49.1%**	-	1.5%	0.6%	0%	**2.0%**	-	0.4%	48.4%	0%	**48.9%**	-	-
Lights	2617	63	0	**2680**	-	80	30	0	**110**	-	25	2643	0	**2668**	-	5458
% Lights	97.9%	98.4%	0%	**98.0%**	-	97.6%	96.8%	0%	**97.3%**	-	100%	97.9%	0%	**97.9%**	-	97.9%
Single-Unit Trucks	33	1	0	**34**	-	2	0	0	**2**	-	0	37	0	**37**	-	73
% Single-Unit Trucks	1.2%	1.6%	0%	**1.2%**	-	2.4%	0%	0%	**1.8%**	-	0%	1.4%	0%	**1.4%**	-	1.3%
Articulated Trucks	19	0	0	**19**	-	0	0	0	**0**	-	0	16	0	**16**	-	35
% Articulated Trucks	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	**0%**	-	0%	0.6%	0%	**0.6%**	-	0.6%
Buses	3	0	0	**3**	-	0	0	0	**0**	-	0	4	0	**4**	-	7
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	3.2%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

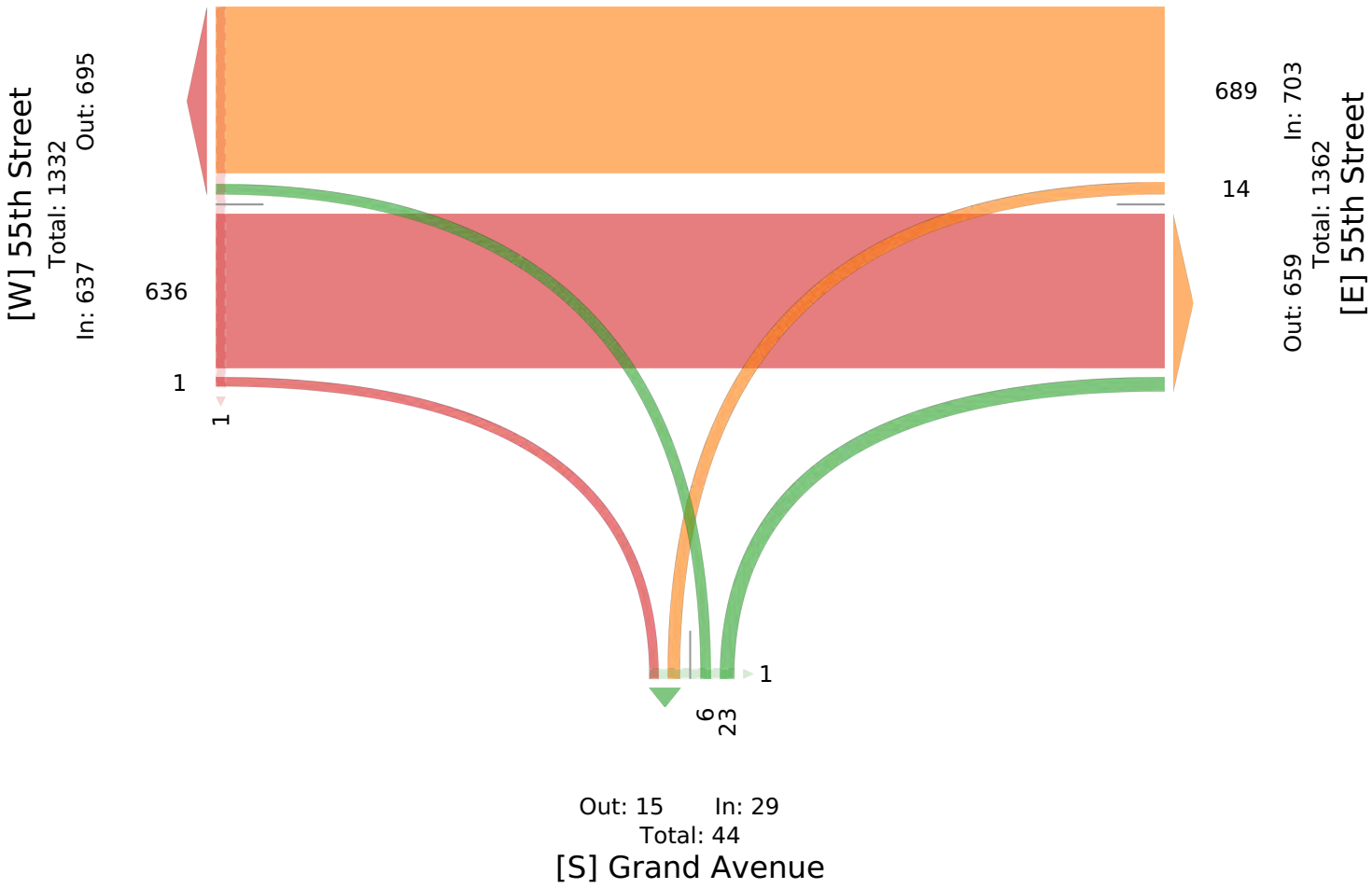
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
% Approach	98.0%	2.0%	0%	**-**	-	79.3%	20.7%	0%	**-**	-	0.2%	99.8%	0%	**-**	-	-
% Total	50.3%	1.0%	0%	**51.4%**	-	1.7%	0.4%	0%	**2.1%**	-	0.1%	46.5%	0%	**46.5%**	-	-
PHF	0.916	0.583	-	**0.920**	-	0.821	0.500	-	**0.806**	-	0.250	0.883	-	**0.885**	-	0.910
Lights	659	13	0	**672**	-	23	6	0	**29**	-	1	618	0	**619**	-	1320
% Lights	95.6%	92.9%	0%	**95.6%**	-	100%	100%	0%	**100%**	-	100%	97.2%	0%	**97.2%**	-	96.4%
Single-Unit Trucks	16	1	0	**17**	-	0	0	0	**0**	-	0	11	0	**11**	-	28
% Single-Unit Trucks	2.3%	7.1%	0%	**2.4%**	-	0%	0%	0%	**0%**	-	0%	1.7%	0%	**1.7%**	-	2.0%
Articulated Trucks	13	0	0	**13**	-	0	0	0	**0**	-	0	5	0	**5**	-	18
% Articulated Trucks	1.9%	0%	0%	**1.8%**	-	0%	0%	0%	**0%**	-	0%	0.8%	0%	**0.8%**	-	1.3%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.3%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

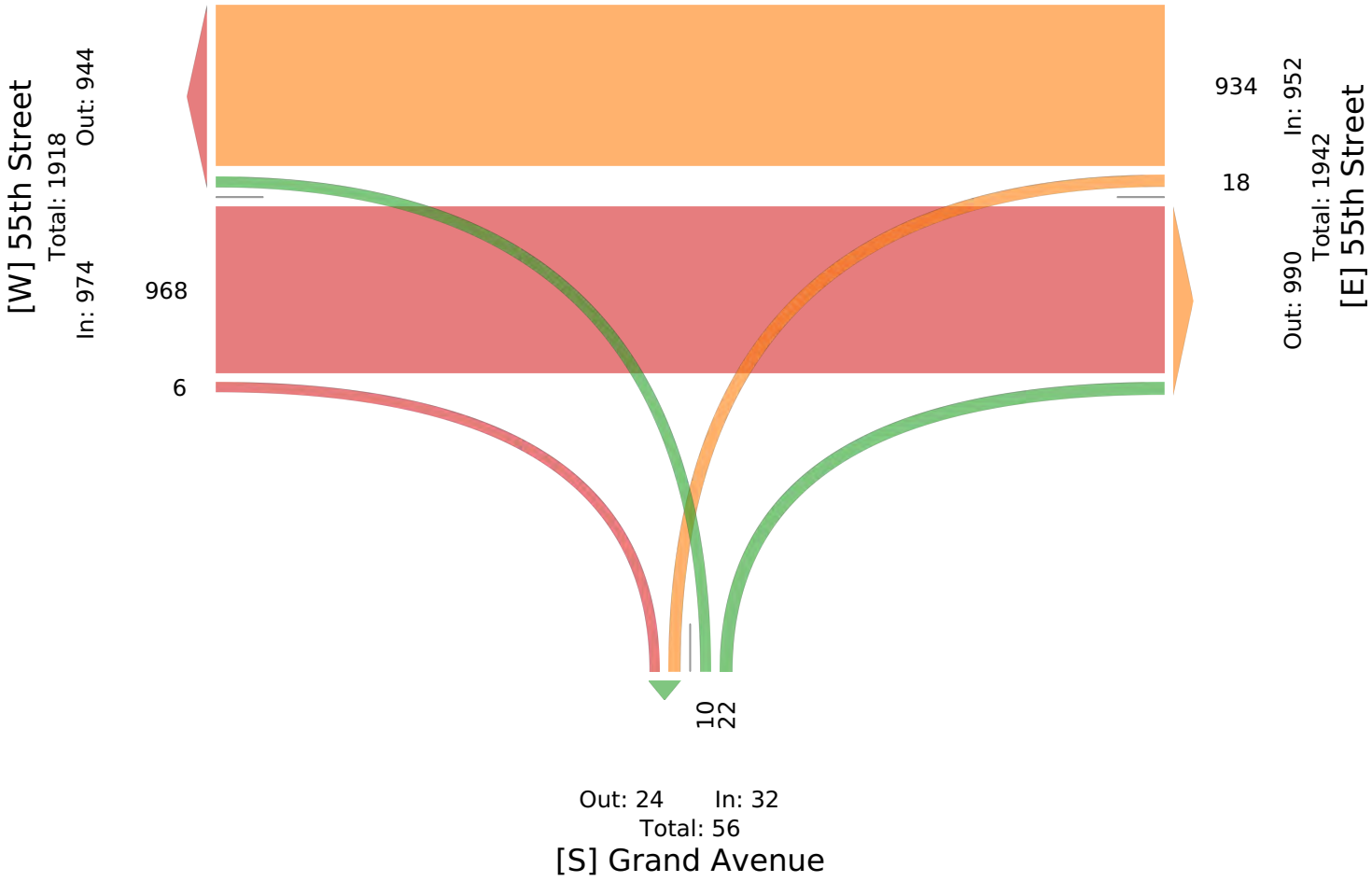
Leg Direction	55th Street Westbound					Grand Avenue Northbound					55th Street Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
% Approach	98.1%	1.9%	0%	**-**	-	68.8%	31.3%	0%	**-**	-	0.6%	99.4%	0%	**-**	-	-
% Total	47.7%	0.9%	0%	**48.6%**	-	1.1%	0.5%	0%	**1.6%**	-	0.3%	49.4%	0%	**49.7%**	-	-
PHF	0.888	0.750	-	**0.888**	-	0.688	0.833	-	**0.727**	-	0.500	0.874	-	**0.873**	-	0.932
Lights	927	18	0	**945**	-	21	10	0	**31**	-	6	950	0	**956**	-	1932
% Lights	99.3%	100%	0%	**99.3%**	-	95.5%	100%	0%	**96.9%**	-	100%	98.1%	0%	**98.2%**	-	98.7%
Single-Unit Trucks	6	0	0	**6**	-	1	0	0	**1**	-	0	6	0	**6**	-	13
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	4.5%	0%	0%	**3.1%**	-	0%	0.6%	0%	**0.6%**	-	0.7%
Articulated Trucks	1	0	0	**1**	-	0	0	0	**0**	-	0	10	0	**10**	-	11
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	1.0%	0%	**1.0%**	-	0.6%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	2	0	**2**	-	2
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

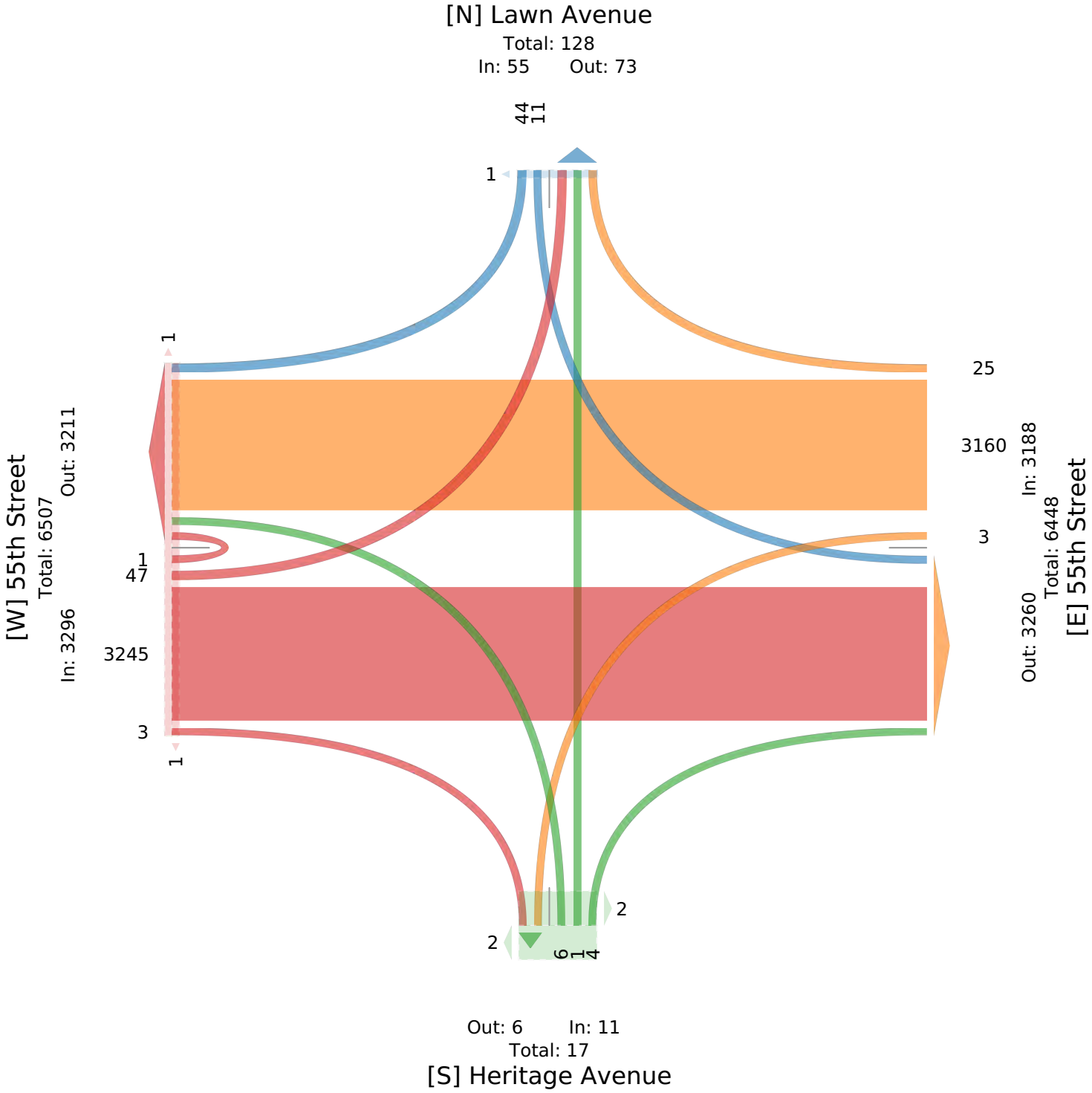
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Lawn Avenue						55th Street						Heritage Avenue						55th Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-03-21 7:00AM	1	0	0	0	**1**	0	2	132	0	0	**134**	0	1	0	1	0	**2**	0	0	125	1	0	**126**	0	**263**
7:15AM	6	0	1	0	**7**	0	3	154	0	0	**157**	0	0	0	1	0	**1**	0	0	187	2	0	**189**	0	**354**
7:30AM	4	0	0	0	**4**	0	0	174	0	0	**174**	0	0	0	2	0	**2**	0	1	185	2	0	**188**	0	**368**
7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
Hourly Total	12	0	2	0	**14**	0	7	685	0	0	**692**	0	3	0	4	0	**7**	0	1	644	8	0	**653**	0	**1366**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
8:45AM	1	0	1	0	**2**	0	2	163	0	0	**165**	0	0	0	0	0	**0**	0	0	139	2	0	**141**	0	**308**
Hourly Total	12	0	4	0	**16**	0	5	711	1	0	**717**	0	0	0	1	0	**1**	1	0	641	16	0	**657**	0	**1391**
4:00PM	5	0	4	0	**9**	0	2	210	1	0	**213**	0	0	0	0	0	**0**	0	1	252	3	0	**256**	0	**478**
4:15PM	1	0	0	0	**1**	0	1	190	0	0	**191**	0	0	1	0	0	**1**	0	0	246	6	0	**252**	1	**445**
4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
Hourly Total	13	0	5	0	**18**	0	6	865	2	0	**873**	0	1	1	0	0	**2**	0	1	976	13	0	**990**	1	**1883**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
5:30PM	2	0	0	0	**2**	0	2	245	0	0	**247**	0	0	0	0	0	**0**	0	0	218	1	0	**219**	0	**468**
5:45PM	2	0	0	0	**2**	1	1	228	0	0	**229**	0	0	0	0	0	**0**	2	0	220	0	0	**220**	0	**451**
Hourly Total	7	0	0	0	**7**	1	7	899	0	0	**906**	0	0	0	1	0	**1**	3	1	984	10	1	**996**	1	**1910**
Total	44	0	11	0	**55**	1	25	3160	3	0	**3188**	0	4	1	6	0	**11**	4	3	3245	47	1	**3296**	2	**6550**
% Approach	80.0%	0%	20.0%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	36.4%	9.1%	54.5%	0%	**-**	-	0.1%	98.5%	1.4%	0%	**-**	-	-
% Total	0.7%	0%	0.2%	0%	**0.8%**	-	0.4%	48.2%	0%	0%	**48.7%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	49.5%	0.7%	0%	**50.3%**	-	-
Lights	44	0	10	0	**54**	-	24	3100	3	0	**3127**	-	4	1	6	0	**11**	-	3	3181	47	1	**3232**	-	6424
% Lights	100%	0%	90.9%	0%	**98.2%**	-	96.0%	98.1%	100%	0%	**98.1%**	-	100%	100%	100%	0%	**100%**	-	100%	98.0%	100%	100%	**98.1%**	-	98.1%
Single-Unit Trucks	0	0	1	0	**1**	-	1	45	0	0	**46**	-	0	0	0	0	**0**	-	0	32	0	0	**32**	-	79
% Single-Unit Trucks	0%	0%	9.1%	0%	**1.8%**	-	4.0%	1.4%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	12	0	0	**12**	-	0	0	0	0	**0**	-	0	26	0	0	**26**	-	38
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	9
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

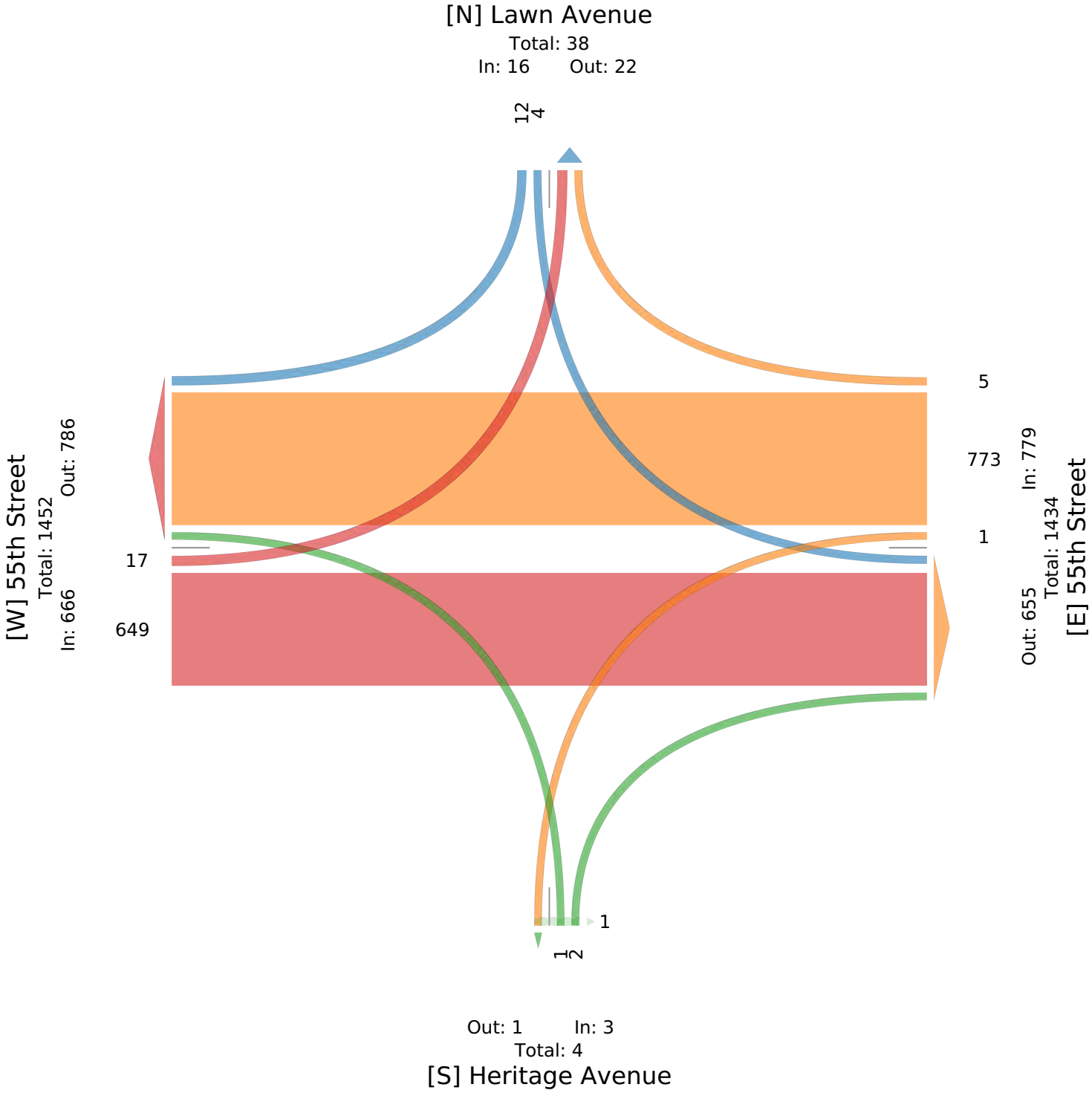
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
Total	12	0	4	0	**16**	0	5	773	1	0	**779**	0	2	0	1	0	**3**	1	0	649	17	0	**666**	0	**1464**
% Approach	75.0%	0%	25.0%	0%	**-**	-	0.6%	99.2%	0.1%	0%	**-**	-	66.7%	0%	33.3%	0%	**-**	-	0%	97.4%	2.6%	0%	**-**	-	-
% Total	0.8%	0%	0.3%	0%	**1.1%**	-	0.3%	52.8%	0.1%	0%	**53.2%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	44.3%	1.2%	0%	**45.5%**	-	-
PHF	0.600	-	1.000	-	**0.667**	-	0.417	0.859	0.250	-	**0.858**	-	0.250	-	0.250	-	**0.375**	-	-	0.891	0.607	-	**0.900**	-	0.961
Lights	12	0	4	0	**16**	-	4	746	1	0	**751**	-	2	0	1	0	**3**	-	0	634	17	0	**651**	-	1421
% Lights	100%	0%	100%	0%	**100%**	-	80.0%	96.5%	100%	0%	**96.4%**	-	100%	0%	100%	0%	**100%**	-	0%	97.7%	100%	0%	**97.7%**	-	97.1%
Single-Unit Trucks	0	0	0	0	**0**	-	1	22	0	0	**23**	-	0	0	0	0	**0**	-	0	9	0	0	**9**	-	32
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	20.0%	2.8%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.4%	0%	0%	**1.4%**	-	2.2%
Articulated Trucks	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	9
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

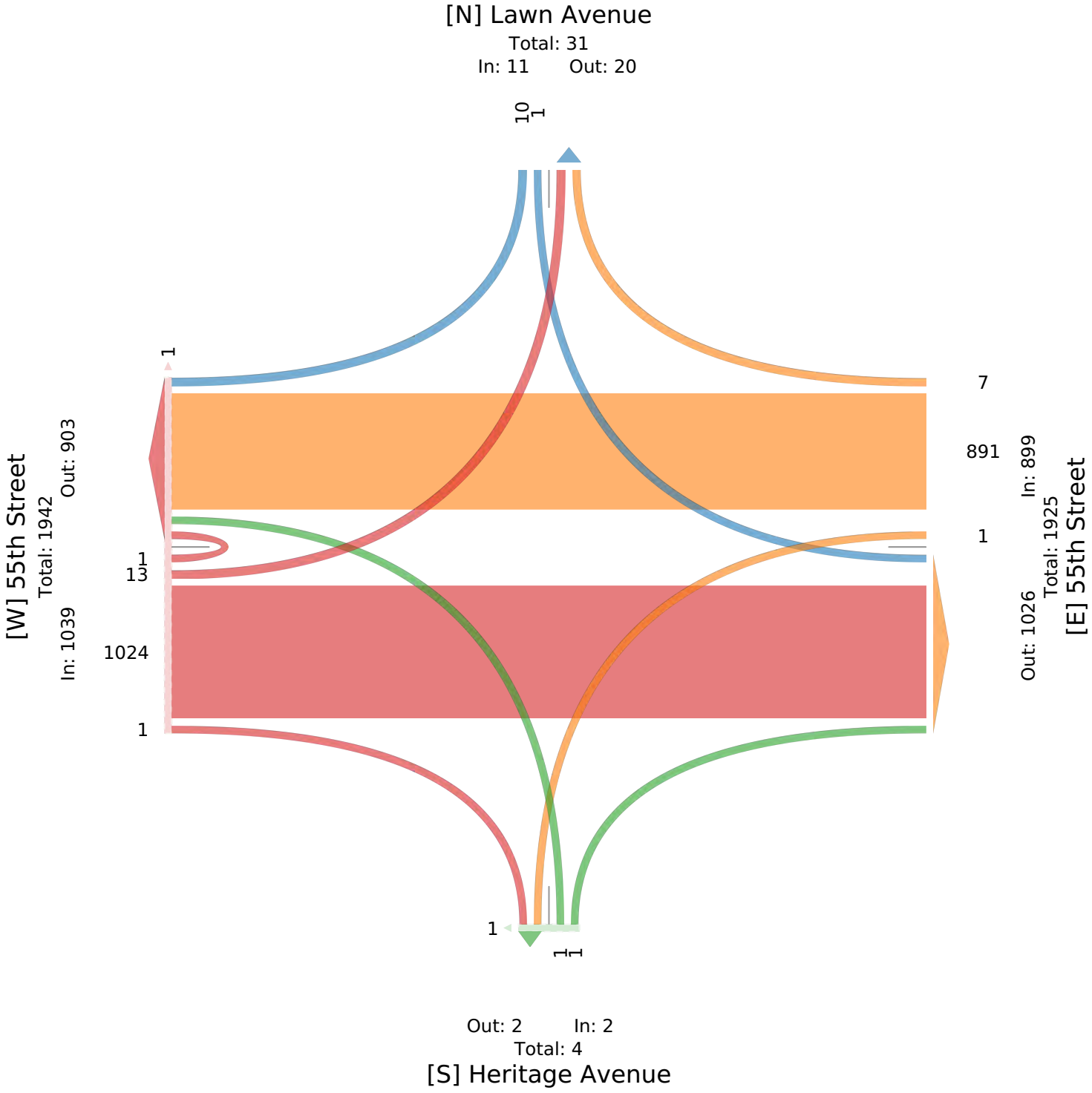
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
Total	10	0	1	0	**11**	0	7	891	1	0	**899**	0	1	0	1	0	**2**	1	1	1024	13	1	**1039**	1	**1951**
% Approach	90.9%	0%	9.1%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	50.0%	0%	50.0%	0%	**-**	-	0.1%	98.6%	1.3%	0.1%	**-**	-	-
% Total	0.5%	0%	0.1%	0%	**0.6%**	-	0.4%	45.7%	0.1%	0%	**46.1%**	-	0.1%	0%	0.1%	0%	**0.1%**	-	0.1%	52.5%	0.7%	0.1%	**53.3%**	-	-
PHF	0.417	-	0.250	-	**0.458**	-	0.875	0.936	0.250	-	**0.936**	-	0.250	-	0.250	-	**0.500**	-	0.250	0.921	0.542	0.250	**0.911**	-	0.953
Lights	10	0	0	0	**10**	-	7	888	1	0	**896**	-	1	0	1	0	**2**	-	1	1002	13	1	**1017**	-	1925
% Lights	100%	0%	0%	0%	**90.9%**	-	100%	99.7%	100%	0%	**99.7%**	-	100%	0%	100%	0%	**100%**	-	100%	97.9%	100%	100%	**97.9%**	-	98.7%
Single-Unit Trucks	0	0	1	0	**1**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	12
% Single-Unit Trucks	0%	0%	100%	0%	**9.1%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	12
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.2%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	4	0	0	0	0	0	4	0	0	0	1	9
715	0	1	0	0	0	0	0	10	0	2	0	5	18
730	0	5	0	0	0	0	0	4	1	2	0	1	13
745	2	2	0	0	0	0	0	8	2	1	0	1	16
800	0	2	0	0	0	0	0	3	2	5	0	1	13
815	2	5	0	0	0	0	0	7	3	1	0	1	19
830	3	1	0	0	0	0	0	6	1	1	0	2	14
845	0	2	0	0	0	0	0	3	1	0	0	0	6
1600	2	4	0	0	0	0	0	3	1	1	0	1	12
1615	0	4	0	0	0	0	0	6	4	3	0	0	17
1630	1	5	0	0	0	0	0	0	1	1	0	4	12
1645	1	5	0	0	0	0	0	4	1	1	0	2	14
1700	1	3	0	0	0	0	0	2	2	2	0	0	10
1715	0	9	0	0	0	0	0	8	2	1	0	0	20
1730	4	11	0	0	0	0	0	4	0	1	0	1	21
1745	1	5	0	0	0	0	0	3	2	1	0	1	13
Total	17	68	0	0	0	0	0	75	23	23	0	21	227

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	4	0	4	1	5	0	4	0	9
715	1	0	10	7	15	0	3	0	18
730	5	0	5	3	5	0	7	1	13
745	4	0	10	2	9	0	3	4	16
800	2	0	5	6	4	0	7	2	13
815	7	0	10	2	8	0	6	5	19
830	4	0	7	3	8	0	2	4	14
845	2	0	4	0	3	0	2	1	6
1600	6	0	4	2	4	0	5	3	12
1615	4	0	10	3	6	0	7	4	17
1630	6	0	1	5	4	0	6	2	12
1645	6	0	5	3	6	0	6	2	14
1700	4	0	4	2	2	0	5	3	10
1715	9	0	10	1	8	0	10	2	20
1730	15	0	4	2	5	0	12	4	21
1745	6	0	5	2	4	0	6	3	13
Total	85	0	98	44	96	0	91	40	227

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	16	0	0	0	0	0	16	0	0	0	4	36
715	0	4	0	0	0	0	0	40	0	8	0	20	72
730	0	20	0	0	0	0	0	16	4	8	0	4	52
745	8	8	0	0	0	0	0	32	8	4	0	4	64
800	0	8	0	0	0	0	0	12	8	20	0	4	52
815	8	20	0	0	0	0	0	28	12	4	0	4	76
830	12	4	0	0	0	0	0	24	4	4	0	8	56
845	0	8	0	0	0	0	0	12	4	0	0	0	24
1600	8	16	0	0	0	0	0	12	4	4	0	4	48
1615	0	16	0	0	0	0	0	24	16	12	0	0	68
1630	4	20	0	0	0	0	0	0	4	4	0	16	48
1645	4	20	0	0	0	0	0	16	4	4	0	8	56
1700	4	12	0	0	0	0	0	8	8	8	0	0	40
1715	0	36	0	0	0	0	0	32	8	4	0	0	80
1730	16	44	0	0	0	0	0	16	0	4	0	4	84
1745	4	20	0	0	0	0	0	12	8	4	0	4	52

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	16	0	16	4	20	0	16	0	36
715	4	0	40	28	60	0	12	0	72
730	20	0	20	12	20	0	28	4	52
745	16	0	40	8	36	0	12	16	64
800	8	0	20	24	16	0	28	8	52
815	28	0	40	8	32	0	24	20	76
830	16	0	28	12	32	0	8	16	56
845	8	0	16	0	12	0	8	4	24
1600	24	0	16	8	16	0	20	12	48
1615	16	0	40	12	24	0	28	16	68
1630	24	0	4	20	16	0	24	8	48
1645	24	0	20	12	24	0	24	8	56
1700	16	0	16	8	8	0	20	12	40
1715	36	0	40	4	32	0	40	8	80
1730	60	0	16	8	20	0	48	16	84
1745	24	0	20	8	16	0	24	12	52

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	2	12	0	0	0	0	0	26	3	5	0	8	56
715	2	10	0	0	0	0	0	25	5	10	0	8	60
730	4	14	0	0	0	0	0	22	8	9	0	4	61
745	7	10	0	0	0	0	0	24	8	8	0	5	62
800	5	10	0	0	0	0	0	19	7	7	0	4	52
815	5	8	0	0	0	0	0	16	5	2	0	3	39*
830	3	3	0	0	0	0	0	9	2	1	0	2	20*
845	0	2	0	0	0	0	0	3	1	0	0	0	6*
1600	4	18	0	0	0	0	0	13	7	6	0	7	55
1615	3	17	0	0	0	0	0	12	8	7	0	6	53
1630	3	22	0	0	0	0	0	14	6	5	0	6	56
1645	6	28	0	0	0	0	0	18	5	5	0	3	65
1700	6	28	0	0	0	0	0	17	6	5	0	2	64
1715	5	25	0	0	0	0	0	15	4	3	0	2	54*
1730	5	16	0	0	0	0	0	7	2	2	0	2	34*
1745	1	5	0	0	0	0	0	3	2	1	0	1	13*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	14	0	29	13	34	0	17	5	56
715	12	0	30	18	33	0	20	7	60
730	18	0	30	13	26	0	23	12	61
745	17	0	32	13	29	0	18	15	62
800	15	0	26	11	23	0	17	12	52
815	13	0	21	5	19	0	10	10	39*
830	6	0	11	3	11	0	4	5	20*
845	2	0	4	0	3	0	2	1	6*
1600	22	0	20	13	20	0	24	11	55
1615	20	0	20	13	18	0	24	11	53
1630	25	0	20	11	20	0	27	9	56
1645	34	0	23	8	21	0	33	11	65
1700	34	0	23	7	19	0	33	12	64
1715	30	0	19	5	17	0	28	9	54*
1730	21	0	9	4	9	0	18	7	34*
1745	6	0	5	2	4	0	6	3	13*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	2	0	0	1	1	2	0	0	0	0	6
715	0	0	2	2	0	2	4	5	0	0	0	0	15
730	0	3	3	4	0	5	3	2	0	0	0	0	20
745	0	0	3	7	0	4	2	3	0	0	0	0	19
800	0	0	8	3	0	5	17	2	0	0	0	0	35
815	0	5	2	3	0	15	10	3	0	0	0	0	38
830	0	0	2	4	0	1	3	3	0	0	0	0	13
845	0	1	0	2	0	2	2	1	0	0	0	0	8
1600	0	2	4	3	0	4	6	2	0	0	0	0	21
1615	0	1	3	4	0	5	3	1	0	0	0	0	17
1630	0	3	3	3	0	2	4	1	0	0	0	0	16
1645	0	1	5	2	0	4	4	2	0	0	0	0	18
1700	0	2	3	5	0	7	6	1	0	0	0	0	24
1715	0	6	4	4	0	6	3	5	0	0	0	0	28
1730	0	3	5	1	0	7	6	2	0	0	0	0	24
1745	0	2	3	3	0	8	4	2	0	0	0	0	22
Total	0	29	52	50	0	78	78	37	0	0	0	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	2	1	3	0	2	3	1	0	6
715	2	4	9	0	7	6	2	0	15
730	6	9	5	0	6	6	8	0	20
745	3	11	5	0	10	5	4	0	19
800	8	8	19	0	5	25	5	0	35
815	7	18	13	0	6	12	20	0	38
830	2	5	6	0	7	5	1	0	13
845	1	4	3	0	3	2	3	0	8
1600	6	7	8	0	5	10	6	0	21
1615	4	9	4	0	5	6	6	0	17
1630	6	5	5	0	4	7	5	0	16
1645	6	6	6	0	4	9	5	0	18
1700	5	12	7	0	6	9	9	0	24
1715	10	10	8	0	9	7	12	0	28
1730	8	8	8	0	3	11	10	0	24
1745	5	11	6	0	5	7	10	0	22
Total	81	128	115	0	87	130	107	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	8	0	0	4	4	8	0	0	0	0	24
715	0	0	8	8	0	8	16	20	0	0	0	0	60
730	0	12	12	16	0	20	12	8	0	0	0	0	80
745	0	0	12	28	0	16	8	12	0	0	0	0	76
800	0	0	32	12	0	20	68	8	0	0	0	0	140
815	0	20	8	12	0	60	40	12	0	0	0	0	152
830	0	0	8	16	0	4	12	12	0	0	0	0	52
845	0	4	0	8	0	8	8	4	0	0	0	0	32
1600	0	8	16	12	0	16	24	8	0	0	0	0	84
1615	0	4	12	16	0	20	12	4	0	0	0	0	68
1630	0	12	12	12	0	8	16	4	0	0	0	0	64
1645	0	4	20	8	0	16	16	8	0	0	0	0	72
1700	0	8	12	20	0	28	24	4	0	0	0	0	96
1715	0	24	16	16	0	24	12	20	0	0	0	0	112
1730	0	12	20	4	0	28	24	8	0	0	0	0	96
1745	0	8	12	12	0	32	16	8	0	0	0	0	88

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	8	4	12	0	8	12	4	0	24
715	8	16	36	0	28	24	8	0	60
730	24	36	20	0	24	24	32	0	80
745	12	44	20	0	40	20	16	0	76
800	32	32	76	0	20	100	20	0	140
815	28	72	52	0	24	48	80	0	152
830	8	20	24	0	28	20	4	0	52
845	4	16	12	0	12	8	12	0	32
1600	24	28	32	0	20	40	24	0	84
1615	16	36	16	0	20	24	24	0	68
1630	24	20	20	0	16	28	20	0	64
1645	24	24	24	0	16	36	20	0	72
1700	20	48	28	0	24	36	36	0	96
1715	40	40	32	0	36	28	48	0	112
1730	32	32	32	0	12	44	40	0	96
1745	20	44	24	0	20	28	40	0	88

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	3	10	13	0	12	10	12	0	0	0	0	60
715	0	3	16	16	0	16	26	12	0	0	0	0	89
730	0	8	16	17	0	29	32	10	0	0	0	0	112
745	0	5	15	17	0	25	32	11	0	0	0	0	105
800	0	6	12	12	0	23	32	9	0	0	0	0	94
815	0	6	4	9	0	18	15	7	0	0	0	0	59*
830	0	1	2	6	0	3	5	4	0	0	0	0	21*
845	0	1	0	2	0	2	2	1	0	0	0	0	8*
1600	0	7	15	12	0	15	17	6	0	0	0	0	72
1615	0	7	14	14	0	18	17	5	0	0	0	0	75
1630	0	12	15	14	0	19	17	9	0	0	0	0	86
1645	0	12	17	12	0	24	19	10	0	0	0	0	94
1700	0	13	15	13	0	28	19	10	0	0	0	0	98
1715	0	11	12	8	0	21	13	9	0	0	0	0	74*
1730	0	5	8	4	0	15	10	4	0	0	0	0	46*
1745	0	2	3	3	0	8	4	2	0	0	0	0	22*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	13	25	22	0	25	20	15	0	60
715	19	32	38	0	28	42	19	0	89
730	24	46	42	0	27	48	37	0	112
745	20	42	43	0	28	47	30	0	105
800	18	35	41	0	21	44	29	0	94
815	10	27	22	0	16	19	24	0	59*
830	3	9	9	0	10	7	4	0	21*
845	1	4	3	0	3	2	3	0	8*
1600	22	27	23	0	18	32	22	0	72
1615	21	32	22	0	19	31	25	0	75
1630	27	33	26	0	23	32	31	0	86
1645	29	36	29	0	22	36	36	0	94
1700	28	41	29	0	23	34	41	0	98
1715	23	29	22	0	17	25	32	0	74*
1730	13	19	14	0	8	18	20	0	46*
1745	5	11	6	0	5	7	10	0	22*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	3	1	0	4	4	0	0	0	0	0	12
715	0	0	5	2	0	2	5	2	0	0	0	0	16
730	0	0	7	9	0	7	3	0	0	0	0	0	26
745	0	0	4	8	0	4	3	2	0	0	0	0	21
800	0	0	25	8	0	5	13	1	0	0	0	0	52
815	0	0	12	19	0	7	8	1	0	0	0	0	47
830	0	1	4	3	0	4	7	2	0	0	0	0	21
845	0	0	2	3	0	4	2	1	0	0	0	0	12
1600	0	1	10	7	0	8	4	0	0	0	0	0	30
1615	0	1	5	8	0	4	5	1	0	0	0	0	24
1630	0	2	5	4	0	3	3	0	0	0	0	0	17
1645	0	1	10	6	0	6	5	0	0	0	0	0	28
1700	0	1	8	10	0	7	4	2	0	0	0	0	32
1715	0	1	6	9	0	8	6	1	0	0	0	0	31
1730	0	1	10	7	0	7	7	1	0	0	0	0	33
1745	0	0	6	10	0	5	3	1	0	0	0	0	25
Total	0	9	122	114	0	85	82	15	0	0	0	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	3	5	4	0	1	7	4	0	12
715	5	4	7	0	4	10	2	0	16
730	7	16	3	0	9	10	7	0	26
745	4	12	5	0	10	7	4	0	21
800	25	13	14	0	9	38	5	0	52
815	12	26	9	0	20	20	7	0	47
830	5	7	9	0	5	11	5	0	21
845	2	7	3	0	4	4	4	0	12
1600	11	15	4	0	7	14	9	0	30
1615	6	12	6	0	9	10	5	0	24
1630	7	7	3	0	4	8	5	0	17
1645	11	12	5	0	6	15	7	0	28
1700	9	17	6	0	12	12	8	0	32
1715	7	17	7	0	10	12	9	0	31
1730	11	14	8	0	8	17	8	0	33
1745	6	15	4	0	11	9	5	0	25
Total	131	199	97	0	129	204	94	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	12	4	0	16	16	0	0	0	0	0	48
715	0	0	20	8	0	8	20	8	0	0	0	0	64
730	0	0	28	36	0	28	12	0	0	0	0	0	104
745	0	0	16	32	0	16	12	8	0	0	0	0	84
800	0	0	100	32	0	20	52	4	0	0	0	0	208
815	0	0	48	76	0	28	32	4	0	0	0	0	188
830	0	4	16	12	0	16	28	8	0	0	0	0	84
845	0	0	8	12	0	16	8	4	0	0	0	0	48
1600	0	4	40	28	0	32	16	0	0	0	0	0	120
1615	0	4	20	32	0	16	20	4	0	0	0	0	96
1630	0	8	20	16	0	12	12	0	0	0	0	0	68
1645	0	4	40	24	0	24	20	0	0	0	0	0	112
1700	0	4	32	40	0	28	16	8	0	0	0	0	128
1715	0	4	24	36	0	32	24	4	0	0	0	0	124
1730	0	4	40	28	0	28	28	4	0	0	0	0	132
1745	0	0	24	40	0	20	12	4	0	0	0	0	100

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	12	20	16	0	4	28	16	0	48
715	20	16	28	0	16	40	8	0	64
730	28	64	12	0	36	40	28	0	104
745	16	48	20	0	40	28	16	0	84
800	100	52	56	0	36	152	20	0	208
815	48	104	36	0	80	80	28	0	188
830	20	28	36	0	20	44	20	0	84
845	8	28	12	0	16	16	16	0	48
1600	44	60	16	0	28	56	36	0	120
1615	24	48	24	0	36	40	20	0	96
1630	28	28	12	0	16	32	20	0	68
1645	44	48	20	0	24	60	28	0	112
1700	36	68	24	0	48	48	32	0	128
1715	28	68	28	0	40	48	36	0	124
1730	44	56	32	0	32	68	32	0	132
1745	24	60	16	0	44	36	20	0	100

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	19	20	0	17	15	4	0	0	0	0	75
715	0	0	41	27	0	18	24	5	0	0	0	0	115
730	0	0	48	44	0	23	27	4	0	0	0	0	146
745	0	1	45	38	0	20	31	6	0	0	0	0	141
800	0	1	43	33	0	20	30	5	0	0	0	0	132
815	0	1	18	25	0	15	17	4	0	0	0	0	80*
830	0	1	6	6	0	8	9	3	0	0	0	0	33*
845	0	0	2	3	0	4	2	1	0	0	0	0	12*
1600	0	5	30	25	0	21	17	1	0	0	0	0	99
1615	0	5	28	28	0	20	17	3	0	0	0	0	101
1630	0	5	29	29	0	24	18	3	0	0	0	0	108
1645	0	4	34	32	0	28	22	4	0	0	0	0	124
1700	0	3	30	36	0	27	20	5	0	0	0	0	121
1715	0	2	22	26	0	20	16	3	0	0	0	0	89*
1730	0	1	16	17	0	12	10	2	0	0	0	0	58*
1745	0	0	6	10	0	5	3	1	0	0	0	0	25*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	19	37	19	0	24	34	17	0	75
715	41	45	29	0	32	65	18	0	115
730	48	67	31	0	48	75	23	0	146
745	46	58	37	0	44	76	21	0	141
800	44	53	35	0	38	73	21	0	132
815	19	40	21	0	29	35	16	0	80*
830	7	14	12	0	9	15	9	0	33*
845	2	7	3	0	4	4	4	0	12*
1600	35	46	18	0	26	47	26	0	99
1615	33	48	20	0	31	45	25	0	101
1630	34	53	21	0	32	47	29	0	108
1645	38	60	26	0	36	56	32	0	124
1700	33	63	25	0	41	50	30	0	121
1715	24	46	19	0	29	38	22	0	89*
1730	17	29	12	0	19	26	13	0	58*
1745	6	15	4	0	11	9	5	0	25*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	5	102	0	0	0	0	0	151	3	13	0	7	281
1515	22	181	0	0	0	0	0	97	6	5	0	1	312
1530	11	158	0	0	0	0	0	100	9	21	0	5	304
1545	5	130	0	0	0	0	0	116	4	16	0	5	276
Total	43	571	0	0	0	0	0	464	22	55	0	18	1173

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 4 wolf/park

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1500	107	0	154	20	158	0	115	8	281
1515	203	0	103	6	98	0	186	28	312
1530	169	0	109	26	105	0	179	20	304
1545	135	0	120	21	121	0	146	9	276
Total	614	0	486	73	482	0	626	65	1173

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	20	408	0	0	0	0	0	604	12	52	0	28	1124
1515	88	724	0	0	0	0	0	388	24	20	0	4	1248
1530	44	632	0	0	0	0	0	400	36	84	0	20	1216
1545	20	520	0	0	0	0	0	464	16	64	0	20	1104

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	428	0	616	80	632	0	460	32	1124
1515	812	0	412	24	392	0	744	112	1248
1530	676	0	436	104	420	0	716	80	1216
1545	540	0	480	84	484	0	584	36	1104

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 4 wolf/park

Begin Time	N-Approach RT	TH	LT	E-Approach RT	TH	LT	S-Approach RT	TH	LT	W-Approach RT	TH	LT	Int Total
1500	43	571	0	0	0	0	0	464	22	55	0	18	1173
1515	38	469	0	0	0	0	0	313	19	42	0	11	892*
1530	16	288	0	0	0	0	0	216	13	37	0	10	580*
1545	5	130	0	0	0	0	0	116	4	16	0	5	276*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	614	0	486	73	482	0	626	65	1173
1515	507	0	332	53	324	0	511	57	892*
1530	304	0	229	47	226	0	325	29	580*
1545	135	0	120	21	121	0	146	9	276*

Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

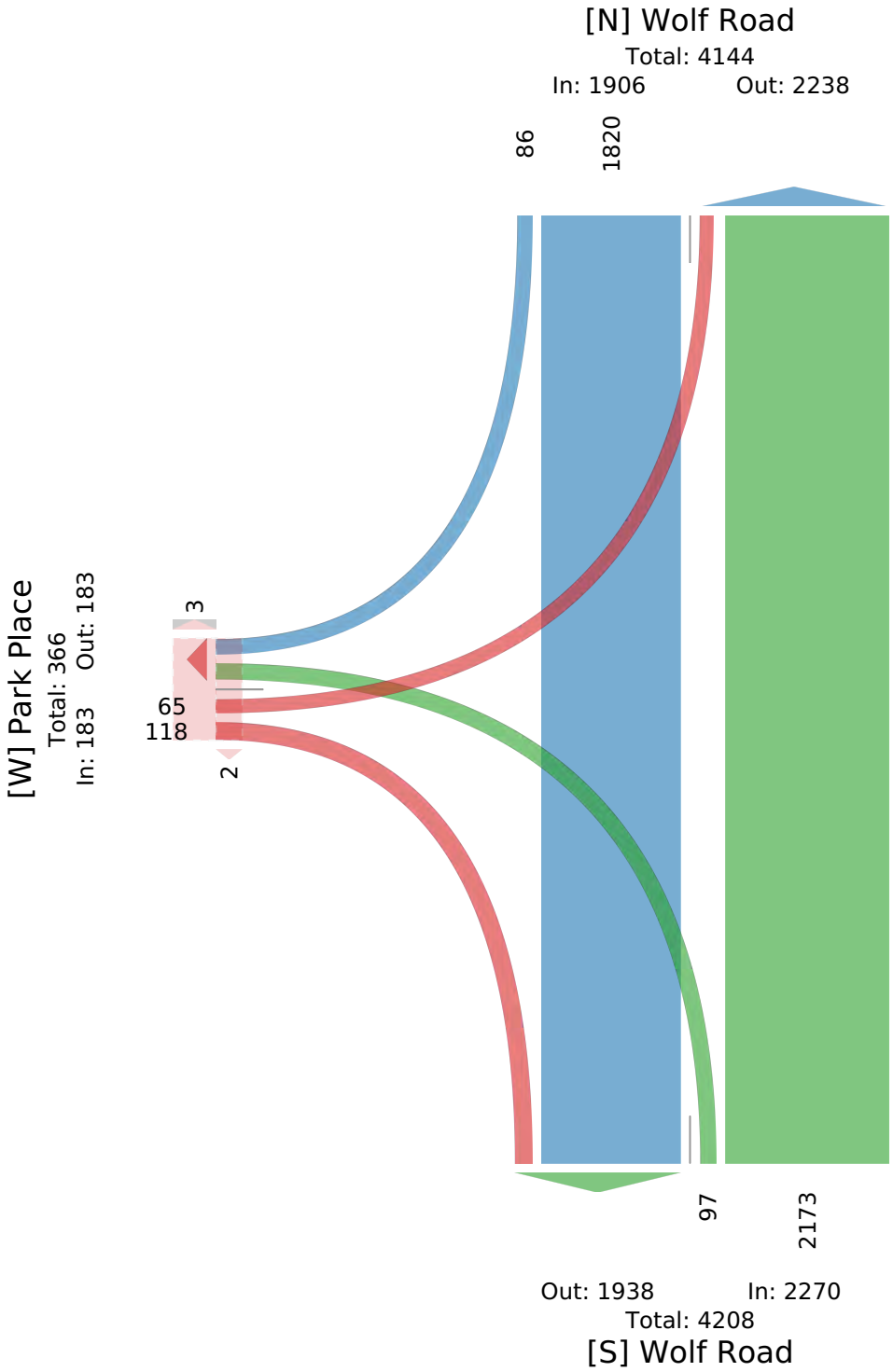
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Wolf Road					Wolf Road					Park Place					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	0	50	0	**50**	0	118	0	0	**118**	0	4	6	0	**10**	0	**178**
7:15AM	3	69	0	**72**	0	170	4	0	**174**	0	8	7	0	**15**	0	**261**
7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
Hourly Total	20	292	0	**312**	0	658	17	0	**675**	0	26	20	0	**46**	0	**1033**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
8:30AM	7	101	0	**108**	0	145	3	0	**148**	0	5	2	0	**7**	0	**263**
8:45AM	4	78	0	**82**	0	115	2	0	**117**	0	4	1	0	**5**	0	**204**
Hourly Total	27	317	0	**344**	0	588	21	0	**609**	0	43	19	0	**62**	0	**1015**
4:00PM	2	144	0	**146**	0	136	11	0	**147**	0	12	2	0	**14**	0	**307**
4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
Hourly Total	14	566	0	**580**	0	516	35	0	**551**	0	28	12	0	**40**	0	**1171**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
5:15PM	7	164	0	**171**	0	98	4	0	**102**	0	4	6	0	**10**	1	**283**
5:30PM	11	141	0	**152**	0	100	7	0	**107**	0	5	2	0	**7**	2	**266**
5:45PM	4	128	0	**132**	0	106	4	0	**110**	0	6	3	0	**9**	2	**251**
Hourly Total	25	645	0	**670**	0	411	24	0	**435**	0	21	14	0	**35**	5	**1140**
Total	86	1820	0	**1906**	0	2173	97	0	**2270**	0	118	65	0	**183**	5	**4359**
% Approach	4.5%	95.5%	0%	**-**	-	95.7%	4.3%	0%	**-**	-	64.5%	35.5%	0%	**-**	-	**-**
% Total	2.0%	41.8%	0%	**43.7%**	-	49.9%	2.2%	0%	**52.1%**	-	2.7%	1.5%	0%	**4.2%**	-	**-**
Lights	85	1787	0	**1872**	-	2126	94	0	**2220**	-	118	65	0	**183**	-	4275
% Lights	98.8%	98.2%	0%	**98.2%**	-	97.8%	96.9%	0%	**97.8%**	-	100%	100%	0%	**100%**	-	98.1%
Single-Unit Trucks	0	18	0	**18**	-	32	3	0	**35**	-	0	0	0	**0**	-	53
% Single-Unit Trucks	0%	1.0%	0%	**0.9%**	-	1.5%	3.1%	0%	**1.5%**	-	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	1	4	0	**5**	-	7	0	0	**7**	-	0	0	0	**0**	-	12
% Articulated Trucks	1.2%	0.2%	0%	**0.3%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.3%
Buses	0	11	0	**11**	-	8	0	0	**8**	-	0	0	0	**0**	-	19
% Buses	0%	0.6%	0%	**0.6%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

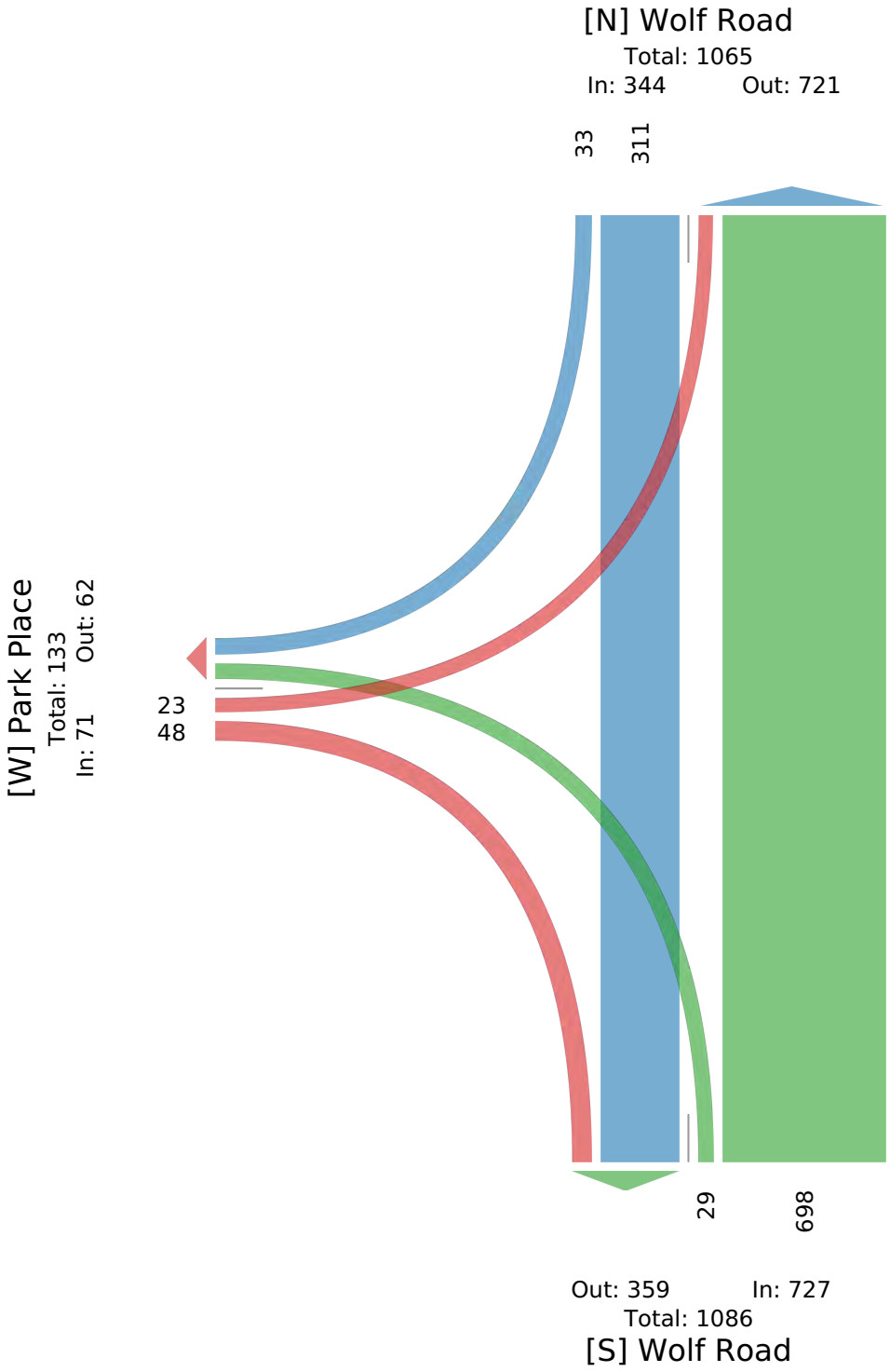
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
Total	33	311	0	**344**	0	698	29	0	**727**	0	48	23	0	**71**	0	**1142**
% Approach	9.6%	90.4%	0%	**-**	-	96.0%	4.0%	0%	**-**	-	67.6%	32.4%	0%	**-**	-	-
% Total	2.9%	27.2%	0%	**30.1%**	-	61.1%	2.5%	0%	**63.7%**	-	4.2%	2.0%	0%	**6.2%**	-	-
PHF	0.750	0.818	-	**0.827**	-	0.804	0.659	-	**0.815**	-	0.444	0.719	-	**0.507**	-	0.889
Lights	32	308	0	**340**	-	670	28	0	**698**	-	48	23	0	**71**	-	1109
% Lights	97.0%	99.0%	0%	**98.8%**	-	96.0%	96.6%	0%	**96.0%**	-	100%	100%	0%	**100%**	-	97.1%
Single-Unit Trucks	0	2	0	**2**	-	19	1	0	**20**	-	0	0	0	**0**	-	22
% Single-Unit Trucks	0%	0.6%	0%	**0.6%**	-	2.7%	3.4%	0%	**2.8%**	-	0%	0%	0%	**0%**	-	1.9%
Articulated Trucks	1	0	0	**1**	-	6	0	0	**6**	-	0	0	0	**0**	-	7
% Articulated Trucks	3.0%	0%	0%	**0.3%**	-	0.9%	0%	0%	**0.8%**	-	0%	0%	0%	**0%**	-	0.6%
Buses	0	1	0	**1**	-	3	0	0	**3**	-	0	0	0	**0**	-	4
% Buses	0%	0.3%	0%	**0.3%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

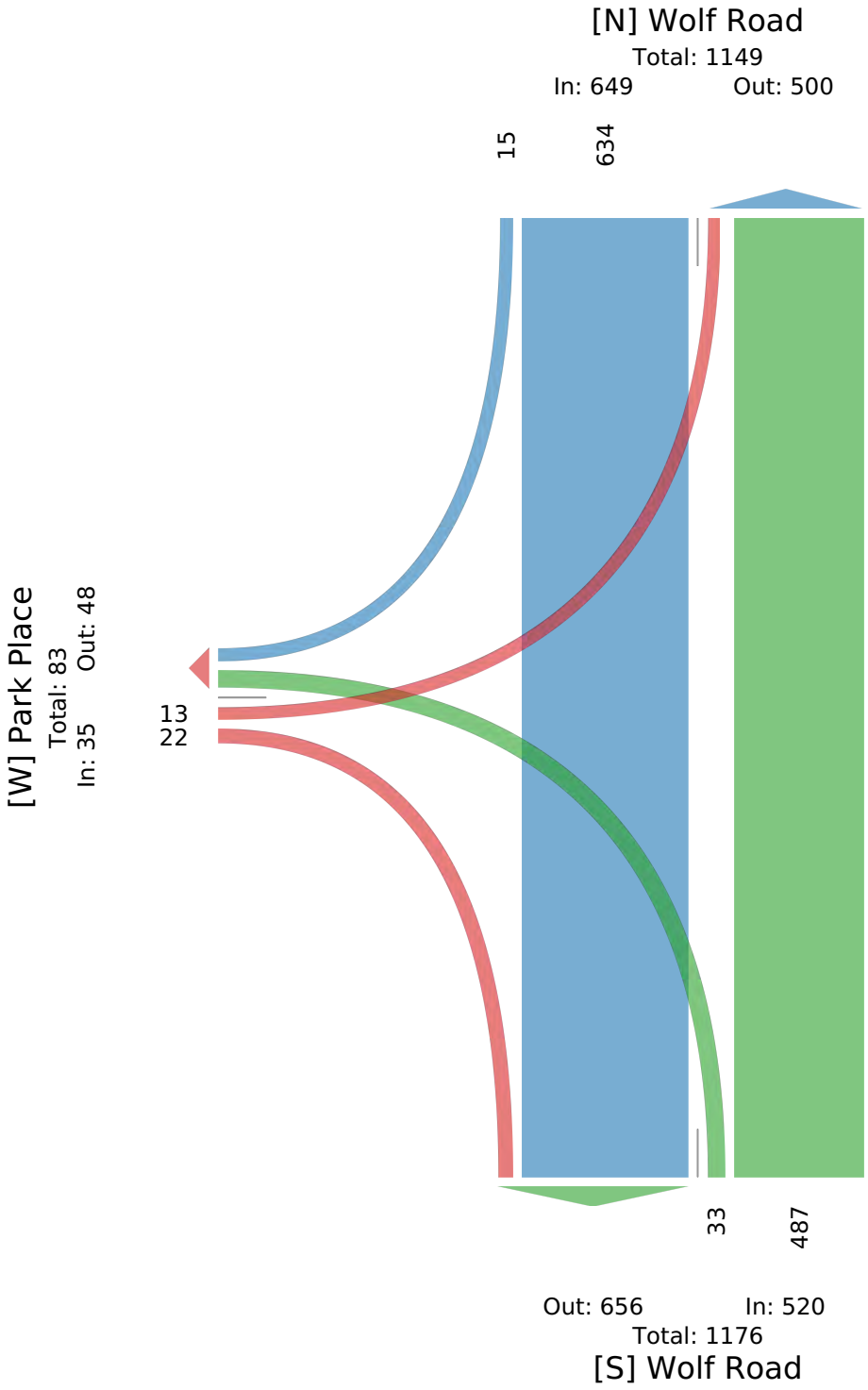
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
Total	15	634	0	**649**	0	487	33	0	**520**	0	22	13	0	**35**	0	**1204**
% Approach	2.3%	97.7%	0%	**-**	-	93.7%	6.3%	0%	**-**	-	62.9%	37.1%	0%	**-**	-	-
% Total	1.2%	52.7%	0%	**53.9%**	-	40.4%	2.7%	0%	**43.2%**	-	1.8%	1.1%	0%	**2.9%**	-	-
PHF	0.469	0.748	-	**0.755**	-	0.929	0.635	-	**0.949**	-	0.786	0.650	-	**0.729**	-	0.885
Lights	15	615	0	**630**	-	486	33	0	**519**	-	22	13	0	**35**	-	1184
% Lights	100%	97.0%	0%	**97.1%**	-	99.8%	100%	0%	**99.8%**	-	100%	100%	0%	**100%**	-	98.3%
Single-Unit Trucks	0	10	0	**10**	-	1	0	0	**1**	-	0	0	0	**0**	-	11
% Single-Unit Trucks	0%	1.6%	0%	**1.5%**	-	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.9%
Articulated Trucks	0	3	0	**3**	-	0	0	0	**0**	-	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.5%	0%	**0.5%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.2%
Buses	0	6	0	**6**	-	0	0	0	**0**	-	0	0	0	**0**	-	6
% Buses	0%	0.9%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.5%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

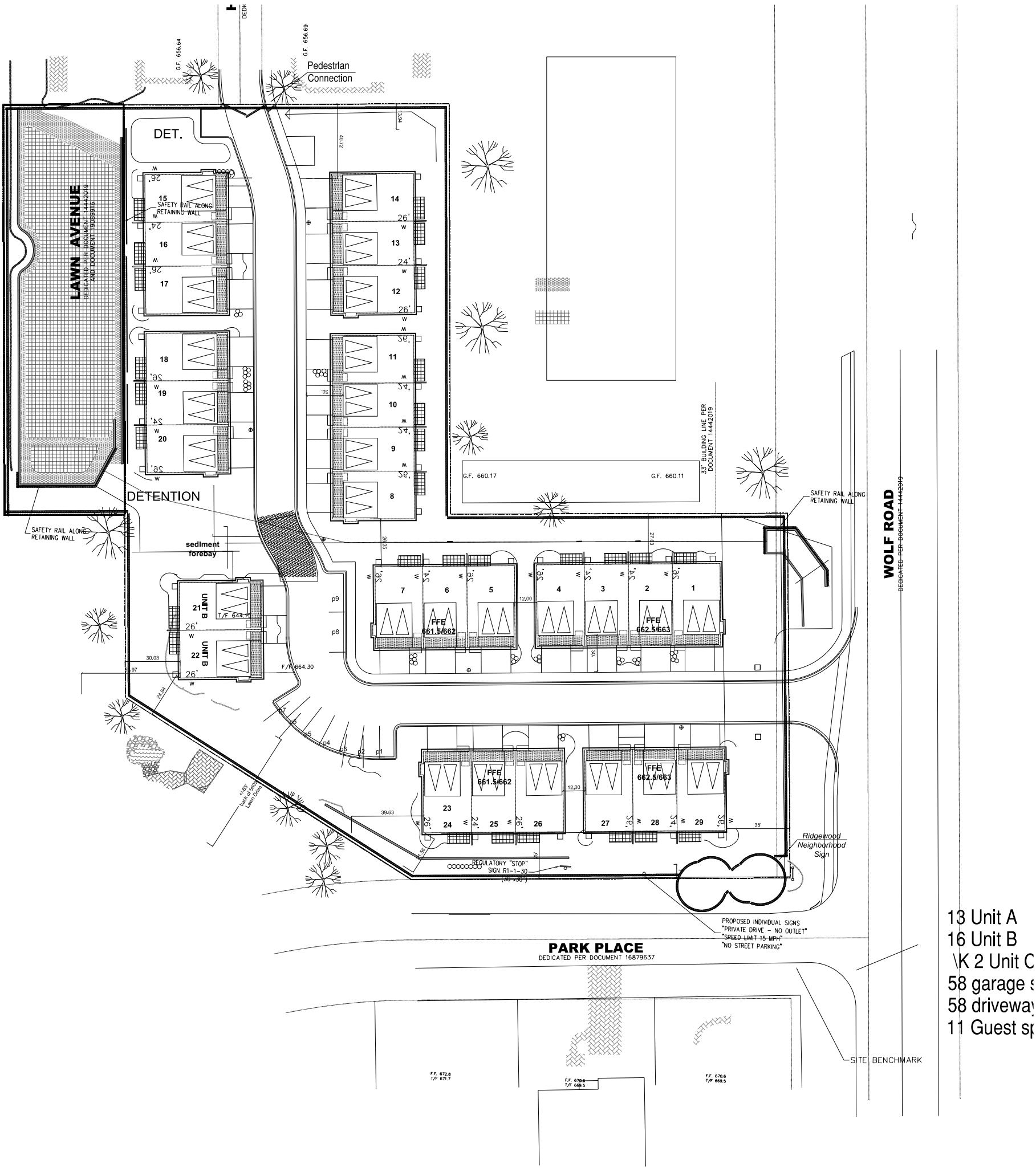
*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Site Plan


LAWN AVENUE
DEDICATED PER DOCUMENT 14442019 AND DOCUMENT 1908916
WOLF ROAD
DEDICATED PER DOCUMENT 14442019
PARK PLACE
DEDICATED PER DOCUMENT 16879637
DET.
DETENTION
Pedestrian Connection
G.F. 656.64
G.F. 656.69
G.F. 660.17
G.F. 660.11
33' BUILDING LINE PER DOCUMENT 14442019
SAFETY RAIL ALONG RETAINING WALL
sedlment forebay
UNIT B
T/F 644.15
F/F 664.30
FFE 661.5/662
FFE 662.5/663
REGULATORY "STOP" SIGN R1-1-30 (36"x36")
PROPOSED INDIVIDUAL SIGNS "PRIVATE DRIVE - NO OUTLET" "SPEED LIMIT 15 MPH" "NO STREET PARKING"
Ridgewood Neighborhood Sign
SITE BENCHMARK
F.F. 672.8 T/F 671.7
F.F. 670.6 T/F 669.5
F.F. 670.6 T/F 669.5
13 Unit A
16 Unit B
\K 2 Unit C
58 garage s
58 driveway
11 Guest sp

ITE Trip Generation Graphs

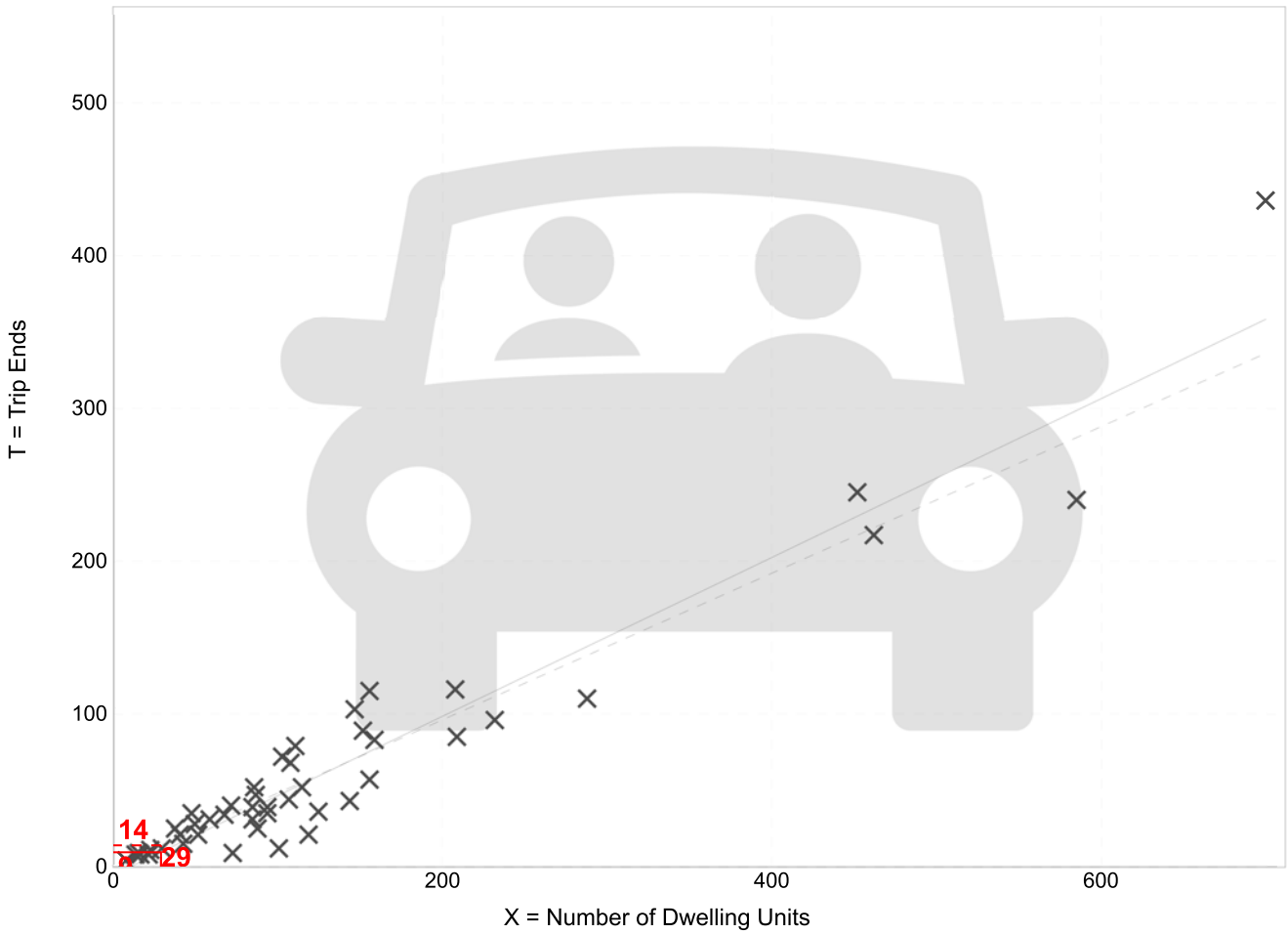
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.52(X) - 5.70

R^2= 0.92

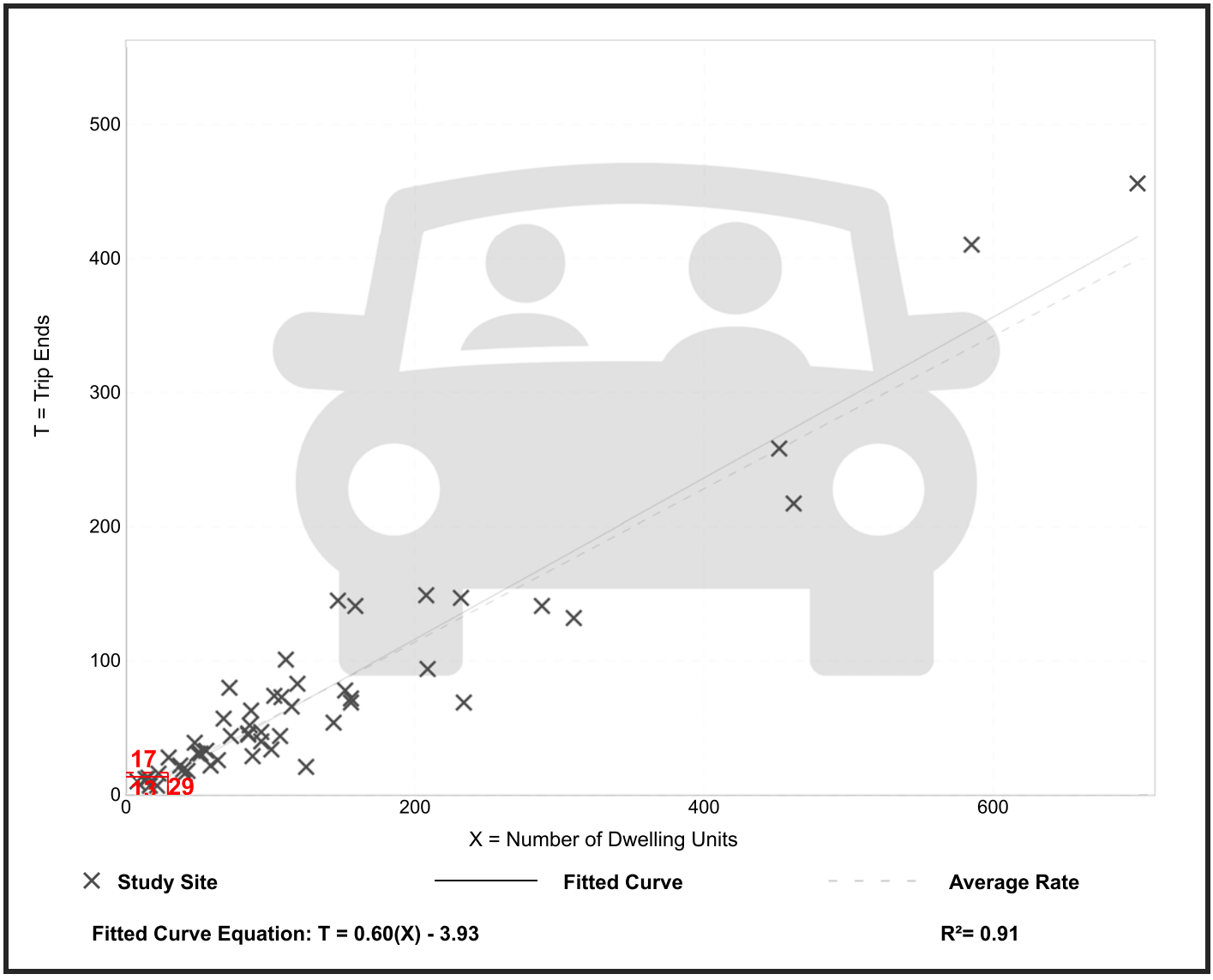
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Single-Family Attached Housing
(215)

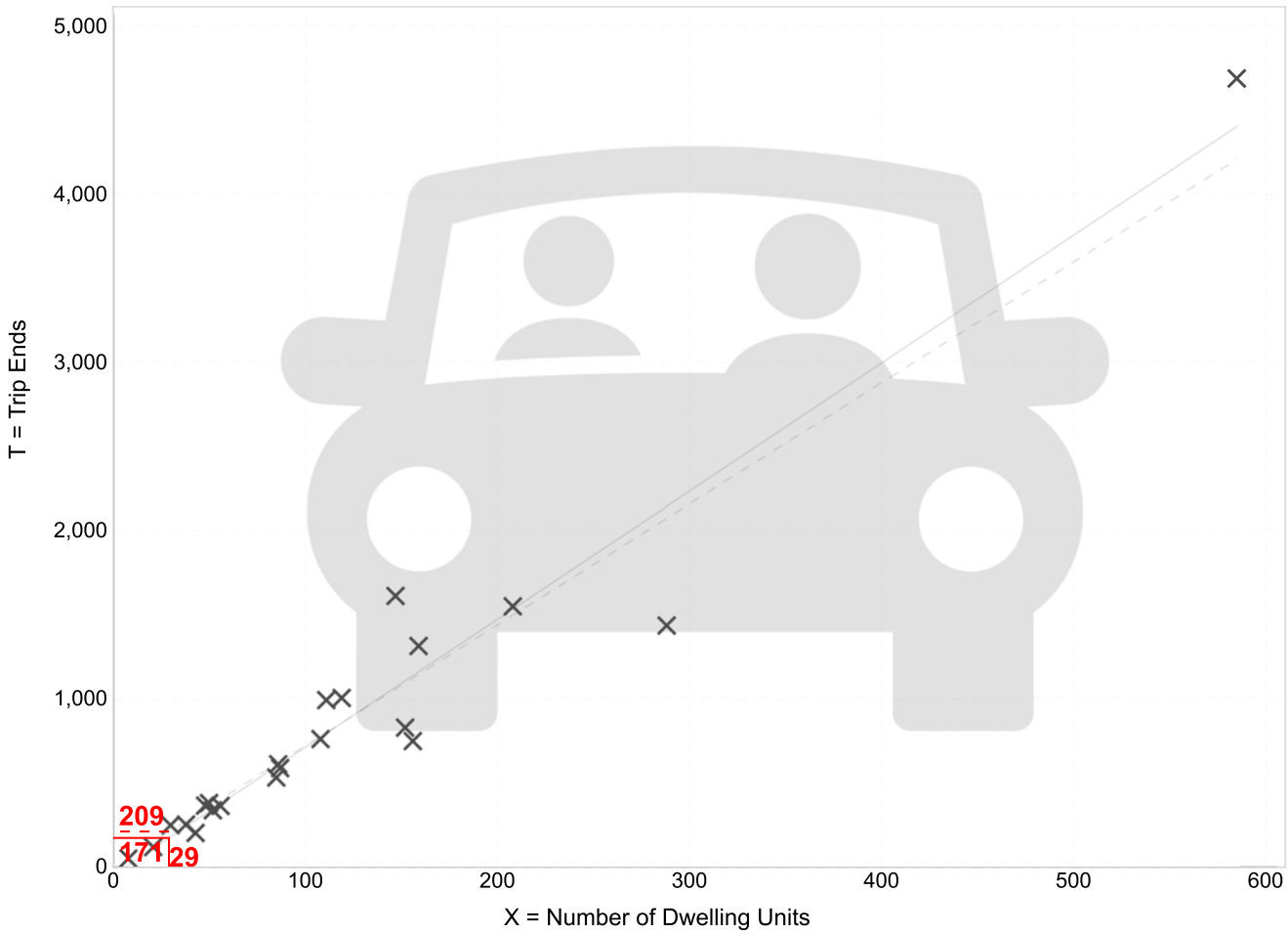
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Fitted Curve Equation: T = 7.62(X) - 50.48

R^2= 0.94

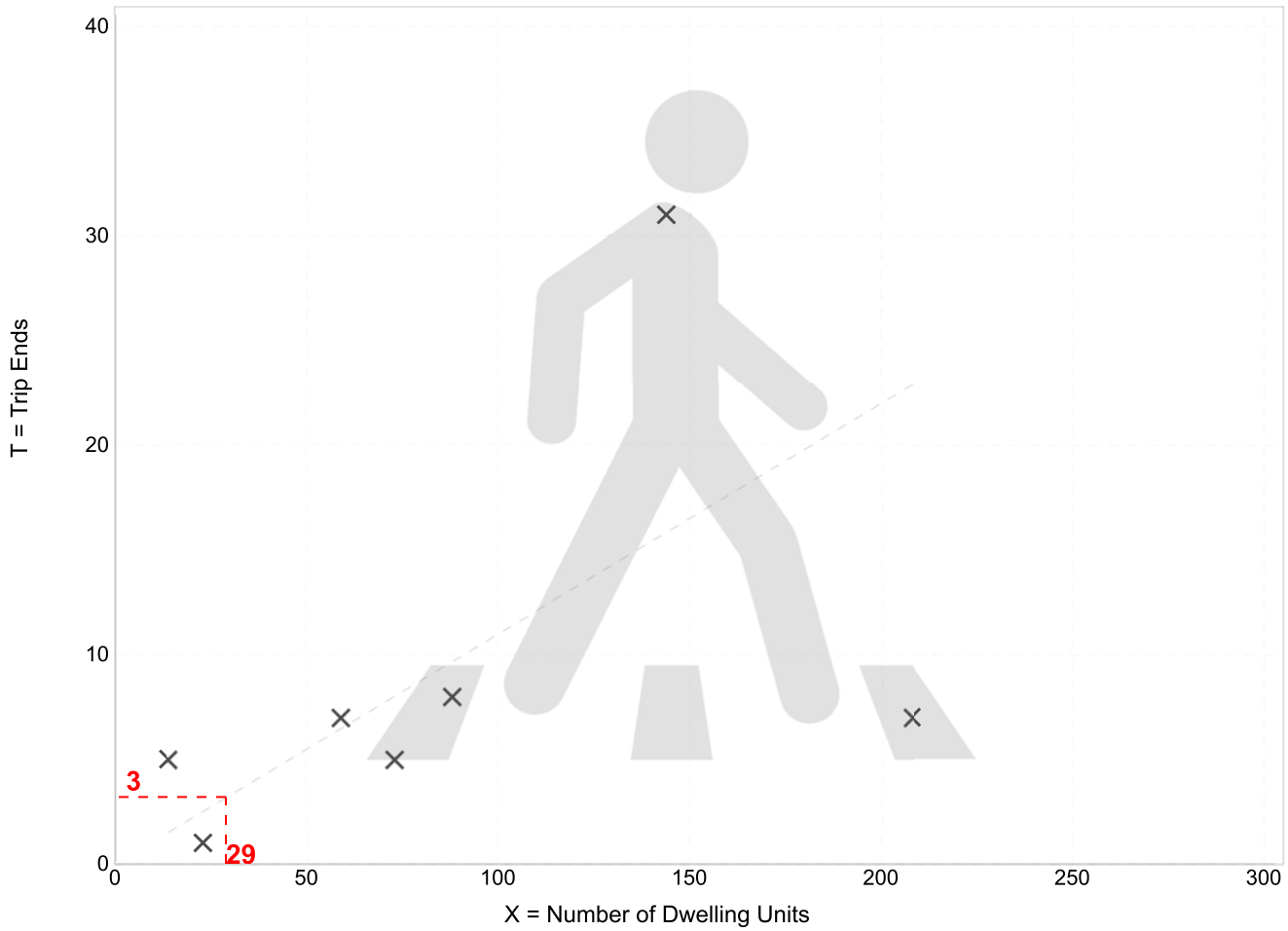
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	21% entering, 79% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.11	0.03 - 0.36	0.09

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

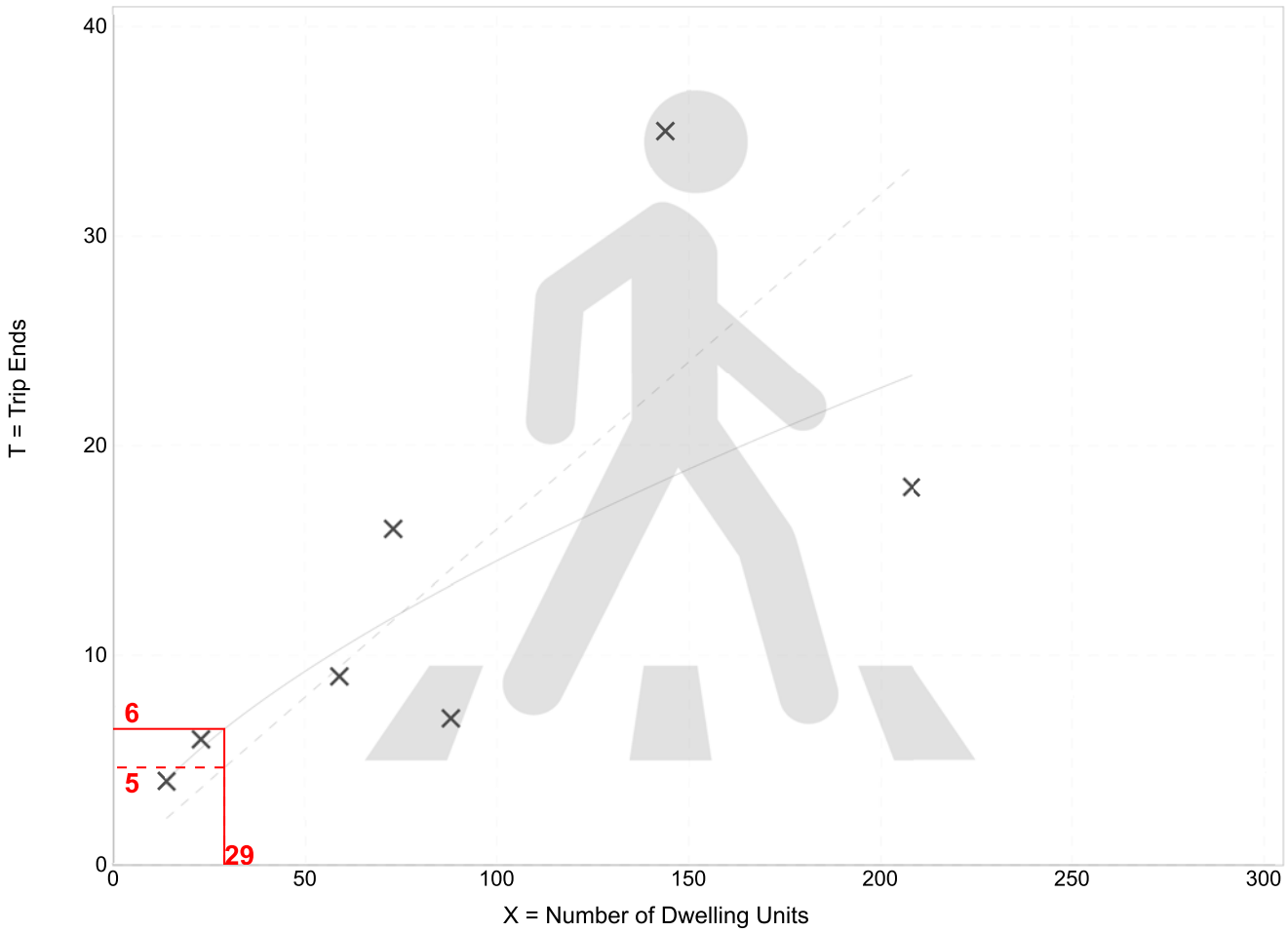
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	53% entering, 47% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.16	0.08 - 0.29	0.08

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.65 Ln(X) - 0.32

R^2= 0.70

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use			
Source: ITE *Trip Generation Manual* , 11th Edition			
Land Use Code	215		
Land Use	Single-Family Attached Housing		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	7		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.5%	0.7%	0.3%
1:00 - 2:00 AM	0.2%	0.4%	0.1%
2:00 - 3:00 AM	0.3%	0.2%	0.3%
3:00 - 4:00 AM	0.3%	0.3%	0.4%
4:00 - 5:00 AM	0.7%	0.4%	1.0%
5:00 - 6:00 AM	1.4%	0.1%	2.6%
6:00 - 7:00 AM	3.5%	1.1%	5.8%
7:00 - 8:00 AM	7.9%	2.7%	13.2%
8:00 - 9:00 AM	6.6%	3.8%	9.3%
9:00 - 10:00 AM	5.3%	3.7%	6.9%
10:00 - 11:00 AM	4.1%	4.0%	4.3%
11:00 - 12:00 PM	5.3%	4.8%	5.7%
12:00 - 1:00 PM	5.2%	5.4%	5.1%
1:00 - 2:00 PM	4.7%	4.5%	4.8%
2:00 - 3:00 PM	5.8%	5.5%	6.0%
3:00 - 4:00 PM	6.5%	8.2%	4.8%
4:00 - 5:00 PM	7.5%	9.8%	5.1%
5:00 - 6:00 PM	9.4%	12.1%	6.8%
6:00 - 7:00 PM	8.2%	9.8%	6.6%
7:00 - 8:00 PM	5.9%	7.3%	4.5%
8:00 - 9:00 PM	4.7%	5.9%	3.5%
9:00 - 10:00 PM	3.0%	4.8%	1.3%
10:00 - 11:00 PM	2.0%	3.0%	1.1%
11:00 - 12:00 AM	0.9%	1.5%	0.4%

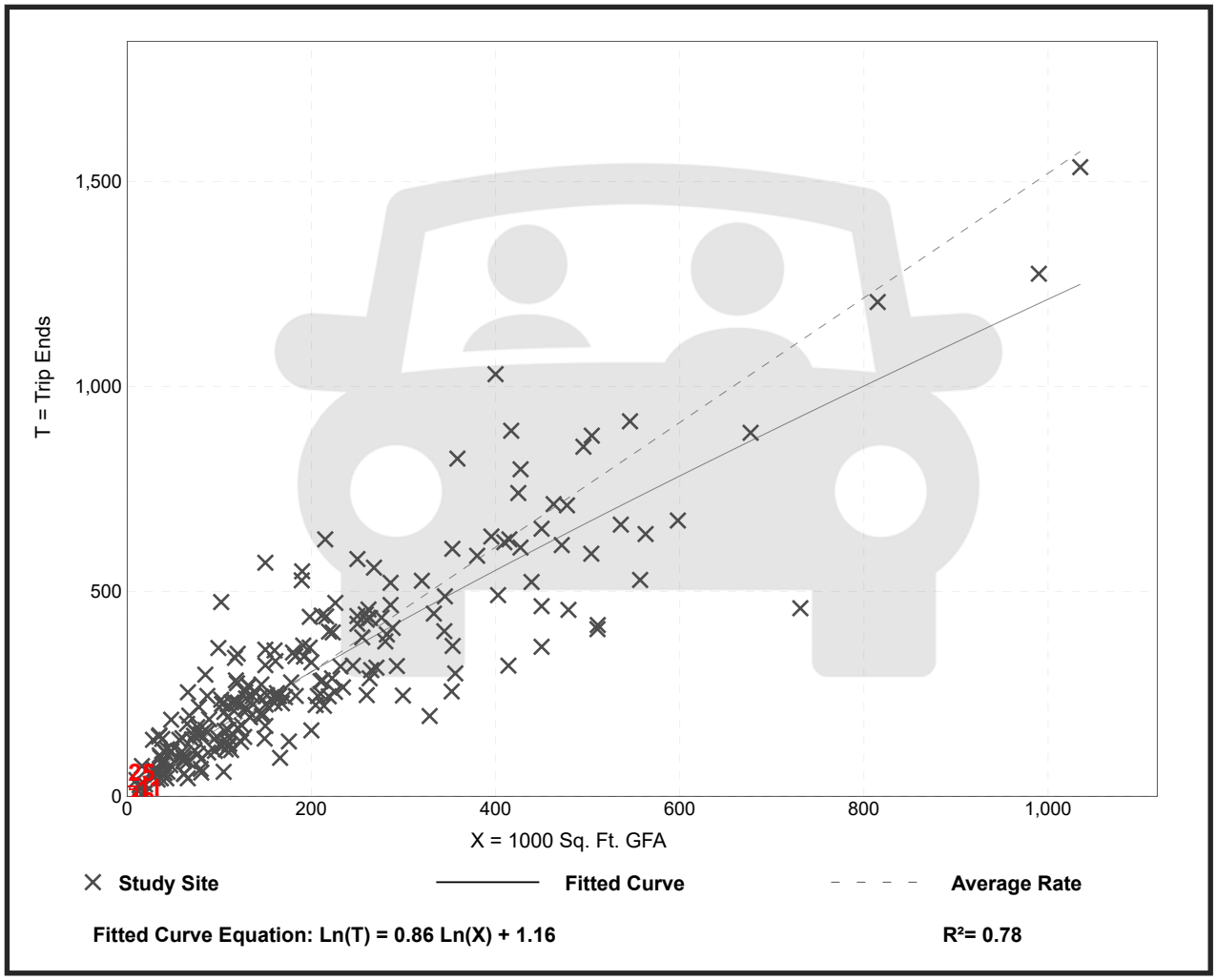
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

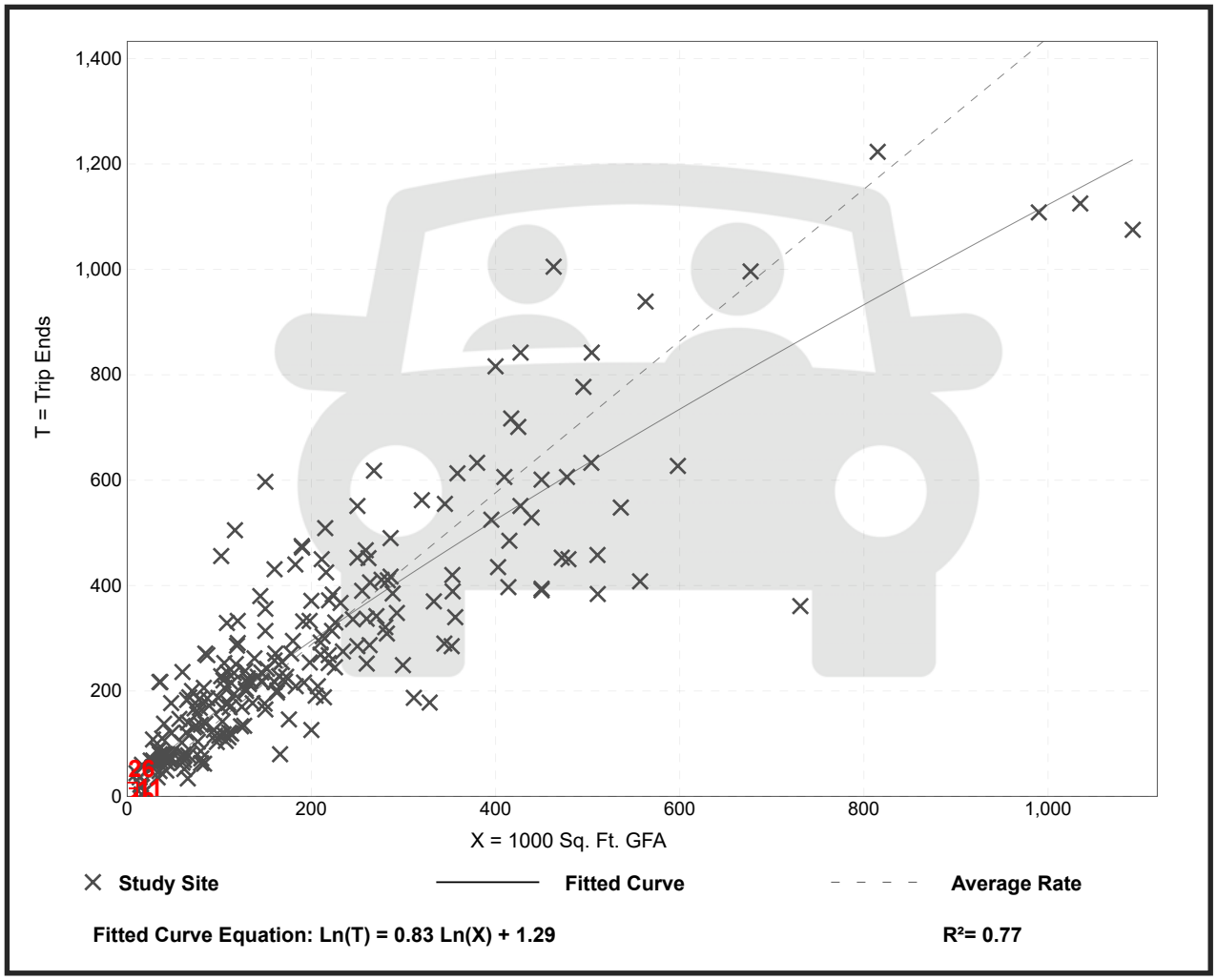
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building
(710)

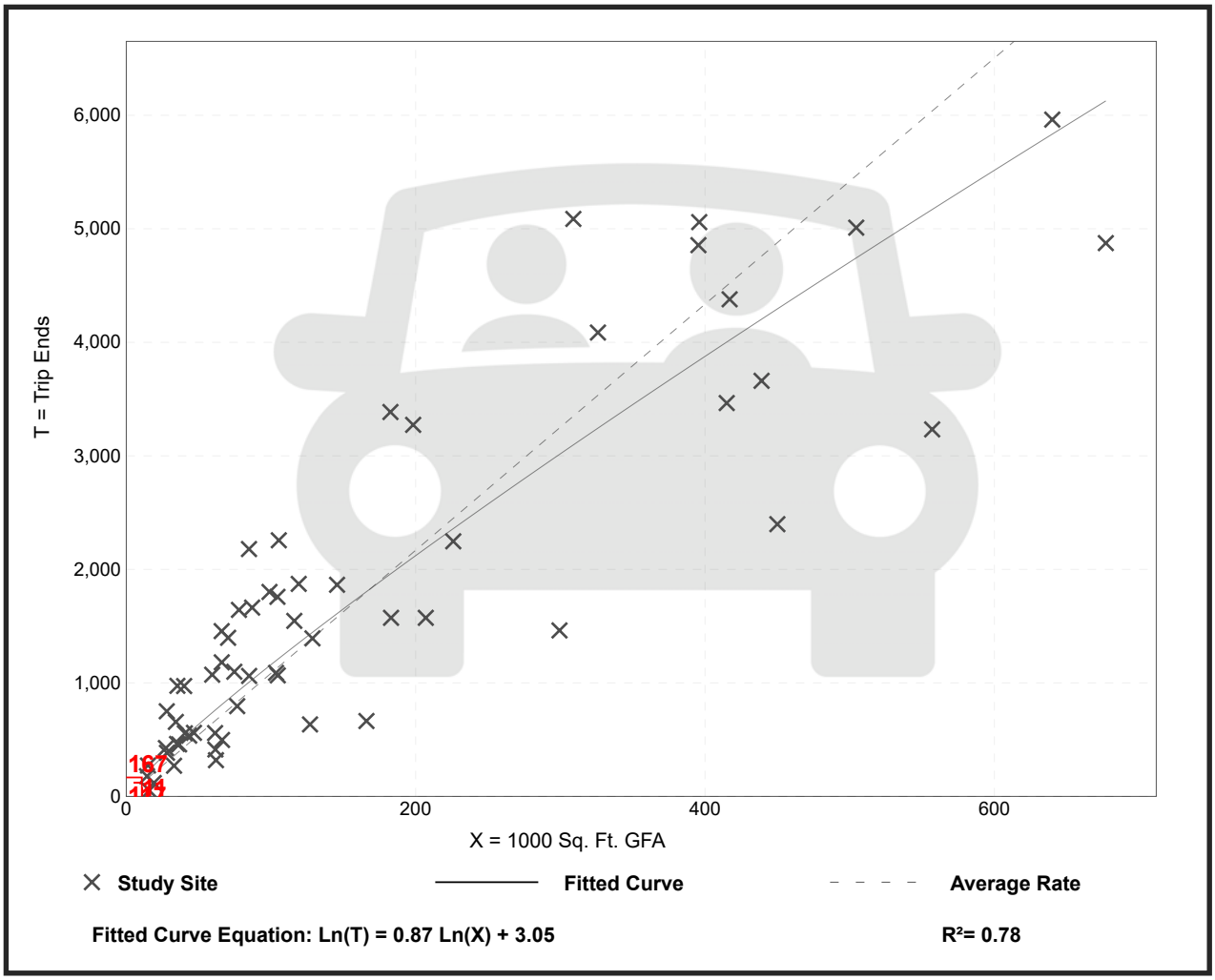
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



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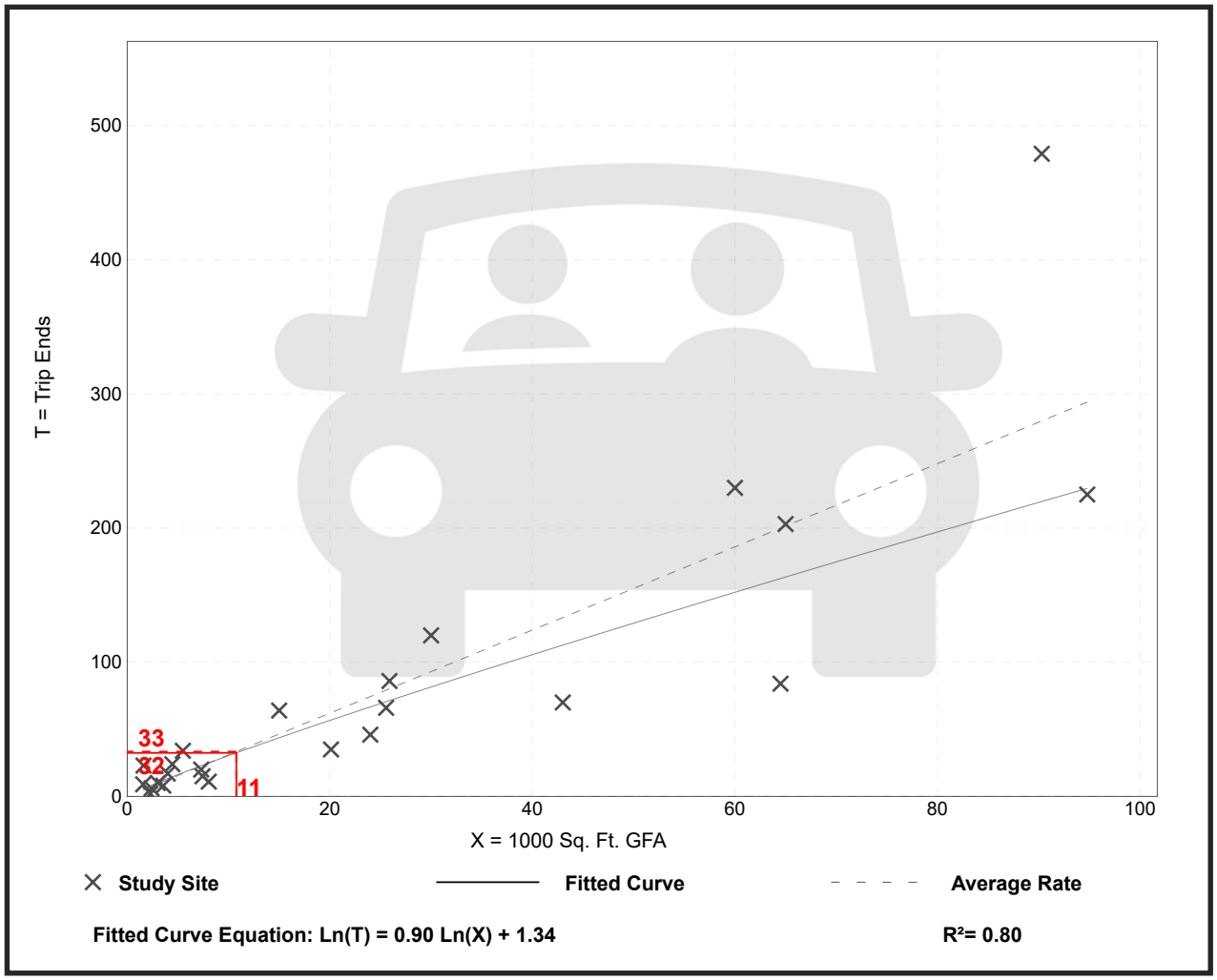
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 24
Avg. 1000 Sq. Ft. GFA: 25
Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

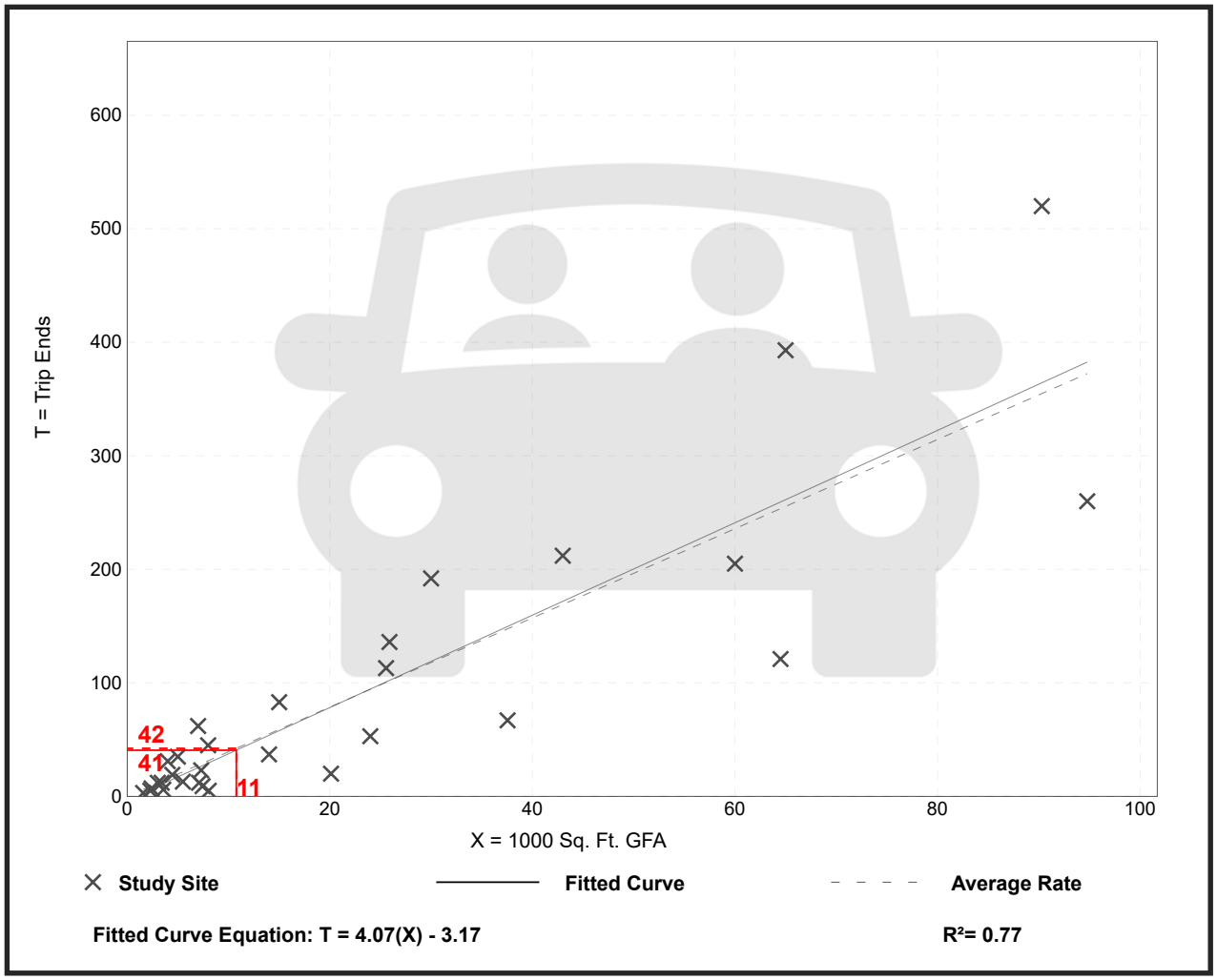
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. 1000 Sq. Ft. GFA:	23
Directional Distribution:	30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Medical-Dental Office Building - Stand-Alone
(720)

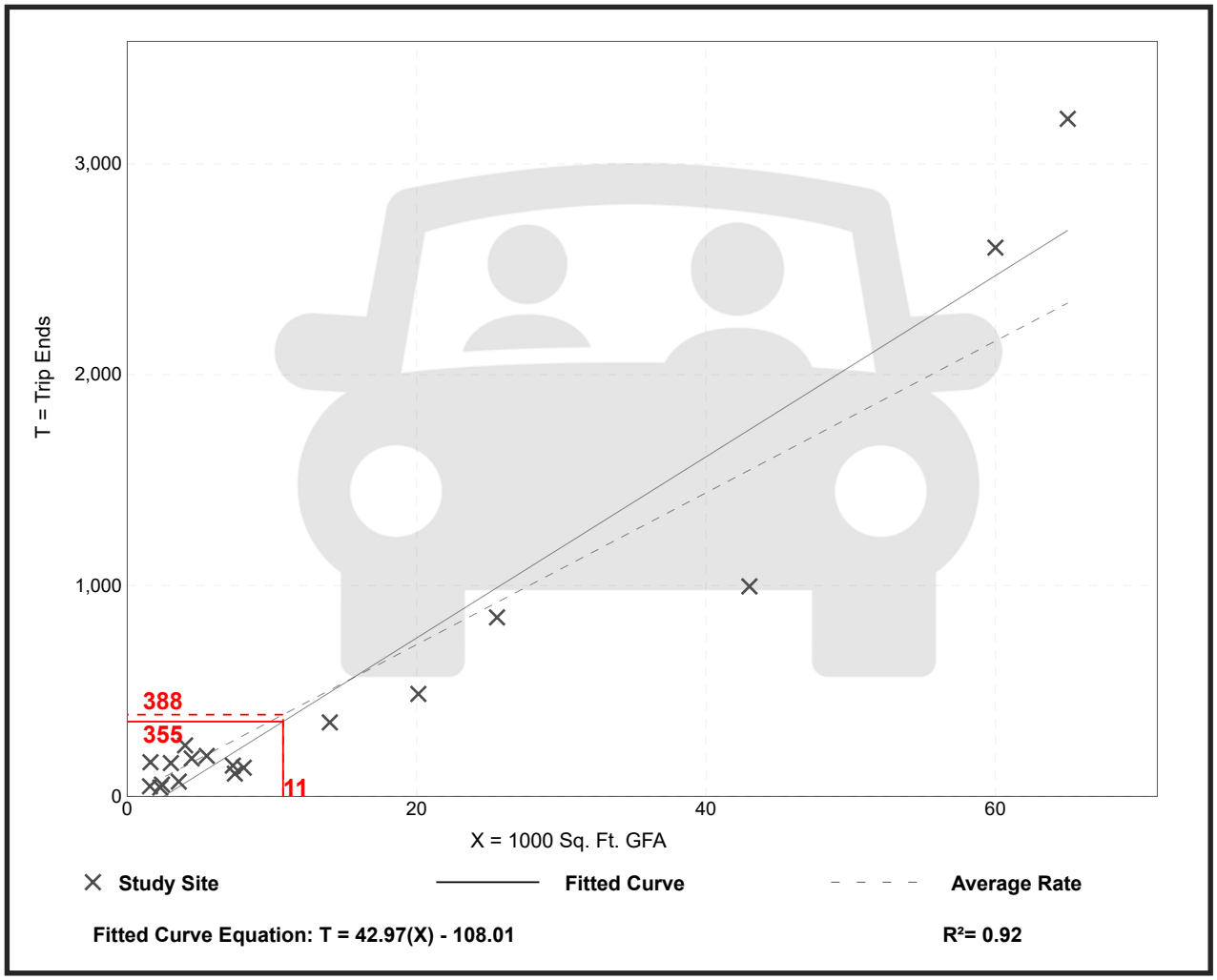
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

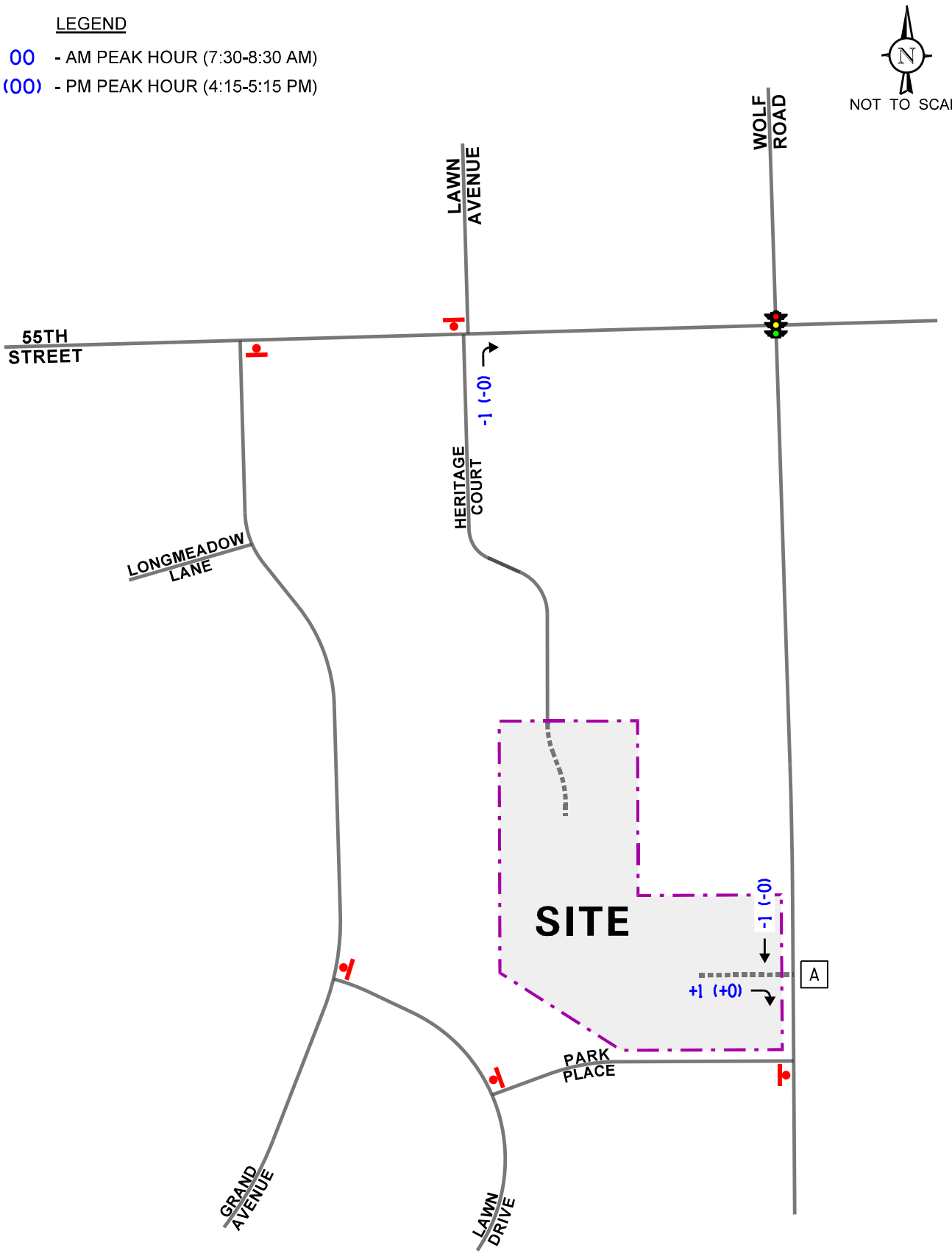
Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



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Figure A



Heritage Crossings
Western Springs, Illinois

Heritage Court Townhomes Reassignment

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: A

CMAP Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

March 6, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 55th Street @ Wolf Road \ Heritage Court \ Grand Avenue
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated March 5, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Wolf Rd, at 55th St	9,150	10,200
55th St, at Wolf Rd	16,600	18,500
Heritage Ct, at 55th St	375	410
Grand Ave, at 55th St	2,800	3,100

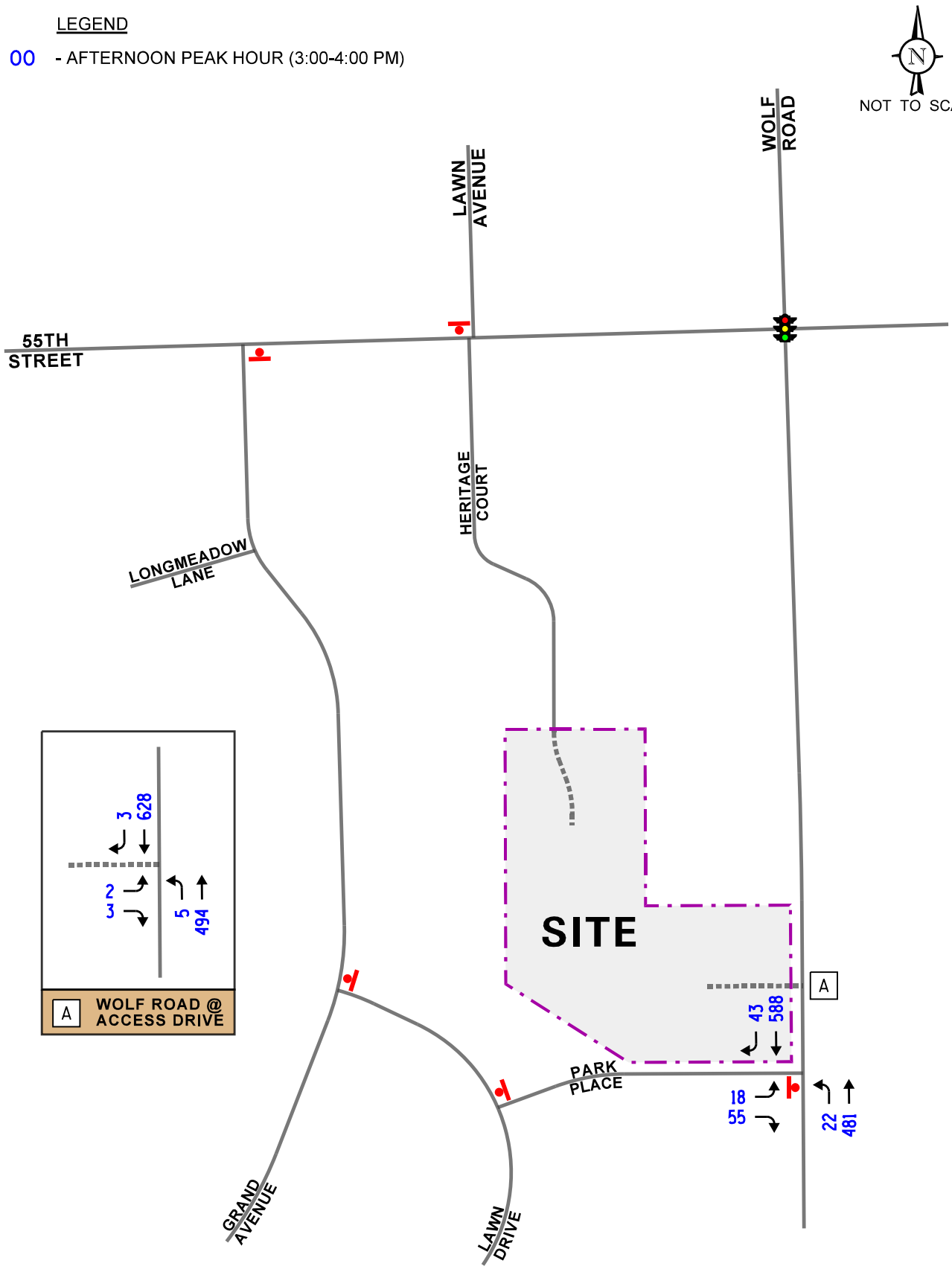
Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2024_TrafficForecasts\WesternSprings\ck-32-24\ck-32-24.docx

Figure B



Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes
(Afternoon Peak Hour)

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: B

Level of Service Table

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	643	1	14	772	6	23
Future Vol, veh/h	643	1	14	772	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	707	1	15	848	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	709	0	1164	355
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	456	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	854	-	191	647
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	853	-	186	647
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.37	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	64	-
HCM Lane V/C Ratio	0.075	-	-	0.018	-
HCM Control Delay (s/veh)	14.1	-	-	9.3	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Future Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	676	0	1	805	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	811	0	0	676	0	0	1116	1525	338	1184	1522	406
Stage 1	-	-	-	-	-	-	711	711	-	811	811	-
Stage 2	-	-	-	-	-	-	405	814	-	373	711	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1046	-	-	925	-	-	*287	158	664	249	159	*875
Stage 1	-	-	-	-	-	-	*394	439	-	576	553	-
Stage 2	-	-	-	-	-	-	*825	551	-	625	439	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1045	-	-	925	-	-	*277	154	664	243	155	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*277	154	-	243	155	-
Stage 1	-	-	-	-	-	-	*386	430	-	575	552	-
Stage 2	-	-	-	-	-	-	*812	550	-	610	430	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.01	12.02
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	453	92	-	-	5	-	-	530
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.031
HCM Control Delay (s/veh)	13	8.5	0.2	-	8.9	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	698	311	33
Future Vol, veh/h	23	48	29	698	311	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	784	349	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1199	349	387	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	207	698	1167	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	698	1167	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.68	0.33	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1167	-	388	-	-
HCM Lane V/C Ratio	0.028	-	0.206	-	-
HCM Control Delay (s/veh)	8.2	-	16.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1016	6	18	884	10	22
Future Vol, veh/h	1016	6	18	884	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1092	6	19	951	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1099	0	1610	549
Stage 1	-	-	-	-	1096	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	643	-	97	484
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	643	-	93	484
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	548	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.63	25.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	-	-	72	-
HCM Lane V/C Ratio	0.164	-	-	0.03	-
HCM Control Delay (s/veh)	25.5	-	-	10.8	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Future Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1078	1	1	938	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	945	0	0	1080	0	0	1579	2054	540	1510	2051	474
Stage 1	-	-	-	-	-	-	1107	1107	-	944	944	-
Stage 2	-	-	-	-	-	-	472	947	-	566	1107	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	959	-	-	653	-	-	*120	65	491	140	65	*836
Stage 1	-	-	-	-	-	-	*228	288	-	516	504	-
Stage 2	-	-	-	-	-	-	*789	502	-	481	288	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	959	-	-	653	-	-	*116	63	490	136	64	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*116	63	-	136	64	-
Stage 1	-	-	-	-	-	-	*223	282	-	515	503	-
Stage 2	-	-	-	-	-	-	*776	500	-	470	282	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.28	0.03	24.45	11.45
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	187	45	-	-	4	-	-	570
HCM Lane V/C Ratio	0.011	0.014	-	-	0.002	-	-	0.02
HCM Control Delay (s/veh)	24.4	8.8	0.2	-	10.5	0	-	11.5
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	487	634	15
Future Vol, veh/h	13	22	33	487	634	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	547	712	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1334	712	729	0	-	0
Stage 1	712	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	171	436	884	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	164	436	884	-	-	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	20.6	0.59	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	884	-	270	-	-
HCM Lane V/C Ratio	0.042	-	0.146	-	-
HCM Control Delay (s/veh)	9.3	-	20.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	464	571	43
Future Vol, veh/h	18	55	22	464	571	43
Conflicting Peds, #/hr	0	0	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	494	607	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1188	647	693	0	-	0
Stage 1	647	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	210	474	897	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	456	863	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	18.79	0.42	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	863	-	338	-	-
HCM Lane V/C Ratio	0.027	-	0.23	-	-
HCM Control Delay (s/veh)	9.3	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	791	6	23
Future Vol, veh/h	659	1	14	791	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	869	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1192	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.37
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	825	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	831	0	0	693	0	0	1143	1561	346	1212	1559	416
Stage 1	-	-	-	-	-	-	728	728	-	831	831	-
Stage 2	-	-	-	-	-	-	415	833	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1024	-	-	912	-	-	*272	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	557	539	-
Stage 2	-	-	-	-	-	-	*825	538	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1024	-	-	912	-	-	*262	145	656	229	146	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*262	145	-	229	146	-
Stage 1	-	-	-	-	-	-	*377	422	-	556	538	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.26
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	437	90	-	-	4	-	-	513
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	715	319	33
Future Vol, veh/h	23	48	29	715	319	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	803	358	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1227	358	396	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	199	690	1158	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	690	1158	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.11	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1158	-	377	-	-
HCM Lane V/C Ratio	0.028	-	0.212	-	-
HCM Control Delay (s/veh)	8.2	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1042	6	18	906	10	22
Future Vol, veh/h	1042	6	18	906	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1120	6	19	974	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1127	0	1649	563
Stage 1	-	-	-	-	1124	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	92	474
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	88	474
Mov Cap-2 Maneuver	-	-	-	-	88	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.77
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.172	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Future Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	1	1	961	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	968	0	0	1107	0	0	1618	2105	554	1547	2102	485
Stage 1	-	-	-	-	-	-	1134	1134	-	967	967	-
Stage 2	-	-	-	-	-	-	484	971	-	580	1135	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	935	-	-	638	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	496	489	-
Stage 2	-	-	-	-	-	-	*789	487	-	472	280	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	935	-	-	637	-	-	*106	58	481	126	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	126	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	495	488	-
Stage 2	-	-	-	-	-	-	*776	485	-	461	274	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	25.97	11.66
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	174	44	-	-	4	-	-	552
HCM Lane V/C Ratio	0.012	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	26	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	D	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	499	650	15
Future Vol, veh/h	13	22	33	499	650	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	561	730	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1365	730	747	0	-	0
Stage 1	730	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	164	425	870	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	425	870	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.28	0.58	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	260	-	-
HCM Lane V/C Ratio	0.043	-	0.151	-	-
HCM Control Delay (s/veh)	9.3	-	21.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	792	6	23
Future Vol, veh/h	659	1	14	792	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	870	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1193	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	467	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.38
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	826	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	832	0	0	693	0	0	1143	1562	346	1214	1560	417
Stage 1	-	-	-	-	-	-	728	728	-	832	832	-
Stage 2	-	-	-	-	-	-	415	834	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1023	-	-	912	-	-	*271	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	556	539	-
Stage 2	-	-	-	-	-	-	*825	537	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1022	-	-	912	-	-	*261	145	656	228	145	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*261	145	-	228	145	-
Stage 1	-	-	-	-	-	-	*377	422	-	555	537	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.27
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	90	-	-	4	-	-	512
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	717	326	33
Future Vol, veh/h	23	48	29	717	326	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	806	366	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1237	366	403	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	196	683	1150	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	683	1150	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.31	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	372	-	-
HCM Lane V/C Ratio	0.028	-	0.215	-	-
HCM Control Delay (s/veh)	8.2	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	2	738	351	1
Future Vol, veh/h	3	8	2	738	351	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	3	8	2	777	369	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1151	370	371	0	-	0
Stage 1	370	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	221	680	1199	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	680	1199	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.53	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1199	-	434	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s/veh)	8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1043	6	18	907	10	22
Future Vol, veh/h	1043	6	18	907	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1122	6	19	975	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1128	0	1651	564
Stage 1	-	-	-	-	1125	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	91	474
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	87	474
Mov Cap-2 Maneuver	-	-	-	-	87	-
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.82
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.173	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Future Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	2	1	962	7	1	0	2	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	969	0	0	1108	0	0	1619	2106	555	1548	2104	486
Stage 1	-	-	-	-	-	-	1135	1135	-	968	968	-
Stage 2	-	-	-	-	-	-	484	972	-	580	1136	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	934	-	-	637	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	495	488	-
Stage 2	-	-	-	-	-	-	*789	486	-	472	279	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	934	-	-	637	-	-	*106	58	480	125	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	125	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	494	487	-
Stage 2	-	-	-	-	-	-	*776	485	-	460	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	21.57	11.68
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	44	-	-	4	-	-	551
HCM Lane V/C Ratio	0.014	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	21.6	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	505	654	15
Future Vol, veh/h	13	22	33	505	654	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	567	735	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1376	735	752	0	-	0
Stage 1	735	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	162	423	867	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	423	867	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	528	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.51	0.57	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	867	-	257	-	-
HCM Lane V/C Ratio	0.043	-	0.153	-	-
HCM Control Delay (s/veh)	9.3	-	21.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	6	512	665	3
Future Vol, veh/h	2	4	6	512	665	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	2	4	6	539	700	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1253	702	703	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	192	442	904	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	442	904	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.98	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	904	-	307	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s/veh)	9	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	481	588	43
Future Vol, veh/h	18	55	22	481	588	43
Conflicting Peds, #/hr	0	0	46	0	0	46
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	512	626	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1230	672	717	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	198	460	879	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	439	841	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	551	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	19.76	0.41	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	841	-	321	-	-
HCM Lane V/C Ratio	0.028	-	0.242	-	-
HCM Control Delay (s/veh)	9.4	-	19.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	5	494	628	3
Future Vol, veh/h	2	3	5	494	628	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	2	3	5	520	661	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1193	663	664	0	-	0
Stage 1	663	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	208	465	934	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	465	934	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.8	0.09	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	934	-	310	-	-
HCM Lane V/C Ratio	0.006	-	0.017	-	-
HCM Control Delay (s/veh)	8.9	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Exhibit A – Available Sight Distance



IDOT BDE MANUAL - CHAPTER 31

$SSD = 1.47\ Vt + 1.075\ \frac{V^2}{a}$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, ft/s^2 (m/s^2)

$305 = 1.47\ 40(2.5) + 1.075\ (\frac{1600}{11.2})$

HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

AVAILABLE SIGHT DISTANCE

DRAWN: MD CHECKED: JM
DATE: 07-10-24 REV: 10-16-24
PROJECT #: 24-068
EXHIBIT: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Executive Summary
5/8/2024

Village of Western Springs
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Village	$	1,627,899
Total Costs to Village	$	0
Total (Cost)/Benefit to Village (Year 1 - Year 20)	**$**	**1,627,899**

School District 204
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 204	$	3,549,181
Total Costs to SD 204	$	1,125,605
Total (Cost)/Benefit to SD 204 (Year 1 - Year 20)	**$**	**2,423,575**

School District 106
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 106	$	5,429,840
Total Costs to SD 106	$	3,904,784
Total (Cost)/Benefit to SD 106 (Year 1 - Year 20)	**$**	**1,525,056**

Western Springs Library
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Library District	$	374,627
Total Costs to Library District	$	-
Total (Cost)/Benefit to Library District (Year 1 - Year 20)	**$**	**374,627**

Western Springs Park District
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Park District	$	210,634
Total Costs to Park	$	-
Total (Cost)/Benefit to Park District (Year 1 - Year 20)	**$**	**210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Village of Western Springs

Year	Village of Western Springs	Incremental Village Costs	Benefit/(Cost)
Year 1	$ 63,728	$ 0	$ 63,728
Year 2	$ 65,321	$ 0	$ 65,321
Year 3	$ 66,954	$ 0	$ 66,954
Year 4	$ 68,628	$ 0	$ 68,628
Year 5	$ 70,343	$ 0	$ 70,343
Year 6	$ 72,102	$ 0	$ 72,102
Year 7	$ 73,904	$ 0	$ 73,904
Year 8	$ 75,752	$ 0	$ 75,752
Year 9	$ 77,646	$ 0	$ 77,646
Year 10	$ 79,587	$ 0	$ 79,587
Year 11	$ 81,577	$ 0	$ 81,577
Year 12	$ 83,616	$ 0	$ 83,616
Year 13	$ 85,706	$ 0	$ 85,706
Year 14	$ 87,849	$ 0	$ 87,849
Year 15	$ 90,045	$ 0	$ 90,045
Year 16	$ 92,297	$ 0	$ 92,297
Year 17	$ 94,604	$ 0	$ 94,604
Year 18	$ 96,969	$ 0	$ 96,969
Year 19	$ 99,393	$ 0	$ 99,393
Year 20	$ 101,878	$ 0	$ 101,878
Total	**$ 1,627,899**	**$ 0**	**$ 1,627,899**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Library

Year		Library District		Incremental Costs		Benefit/(Cost)
Year 1	$	14,666	$	0	$	14,666
Year 2	$	15,032	$	0	$	15,032
Year 3	$	15,408	$	0	$	15,408
Year 4	$	15,793	$	0	$	15,793
Year 5	$	16,188	$	0	$	16,188
Year 6	$	16,593	$	0	$	16,593
Year 7	$	17,008	$	0	$	17,008
Year 8	$	17,433	$	0	$	17,433
Year 9	$	17,869	$	0	$	17,869
Year 10	$	18,315	$	0	$	18,315
Year 11	$	18,773	$	0	$	18,773
Year 12	$	19,243	$	0	$	19,243
Year 13	$	19,724	$	0	$	19,724
Year 14	$	20,217	$	0	$	20,217
Year 15	$	20,722	$	0	$	20,722
Year 16	$	21,240	$	0	$	21,240
Year 17	$	21,771	$	0	$	21,771
Year 18	$	22,315	$	0	$	22,315
Year 19	$	22,873	$	0	$	22,873
Year 20	$	23,445	$	0	$	23,445
Total	**$**	**374,627**	**$**	**0**	**$**	**374,627**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Park District

Year	Western Springs Park District	Incremental Costs	Benefit/(Cost)
Year 1	$ 8,246	$ 0	$ 8,246
Year 2	$ 8,452	$ 0	$ 8,452
Year 3	$ 8,663	$ 0	$ 8,663
Year 4	$ 8,880	$ 0	$ 8,880
Year 5	$ 9,102	$ 0	$ 9,102
Year 6	$ 9,329	$ 0	$ 9,329
Year 7	$ 9,562	$ 0	$ 9,562
Year 8	$ 9,802	$ 0	$ 9,802
Year 9	$ 10,047	$ 0	$ 10,047
Year 10	$ 10,298	$ 0	$ 10,298
Year 11	$ 10,555	$ 0	$ 10,555
Year 12	$ 10,819	$ 0	$ 10,819
Year 13	$ 11,090	$ 0	$ 11,090
Year 14	$ 11,367	$ 0	$ 11,367
Year 15	$ 11,651	$ 0	$ 11,651
Year 16	$ 11,942	$ 0	$ 11,942
Year 17	$ 12,241	$ 0	$ 12,241
Year 18	$ 12,547	$ 0	$ 12,547
Year 19	$ 12,860	$ 0	$ 12,860
Year 20	$ 13,182	$ 0	$ 13,182
Total	**$ 210,634**	**$ 0**	**$ 210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Lyons 204

Year	School District 204 Property Taxes	Incremental Student Costs	Benefit/(Cost)
Year 1	$ 138,940	$ 37,909	$ 101,031
Year 2	$ 142,414	$ 39,415	$ 102,999
Year 3	$ 145,974	$ 40,980	$ 104,994
Year 4	$ 149,623	$ 42,608	$ 107,015
Year 5	$ 153,364	$ 44,301	$ 109,063
Year 6	$ 157,198	$ 46,060	$ 111,138
Year 7	$ 161,128	$ 47,890	$ 113,238
Year 8	$ 165,156	$ 49,792	$ 115,364
Year 9	$ 169,285	$ 51,770	$ 117,515
Year 10	$ 173,517	$ 53,827	$ 119,691
Year 11	$ 177,855	$ 55,965	$ 121,891
Year 12	$ 182,302	$ 58,188	$ 124,114
Year 13	$ 186,859	$ 60,499	$ 126,360
Year 14	$ 191,531	$ 62,902	$ 128,628
Year 15	$ 196,319	$ 65,401	$ 130,918
Year 16	$ 201,227	$ 67,999	$ 133,228
Year 17	$ 206,258	$ 70,700	$ 135,558
Year 18	$ 211,414	$ 73,508	$ 137,906
Year 19	$ 216,699	$ 76,428	$ 140,271
Year 20	$ 222,117	$ 79,464	$ 142,653
Total	**$ 3,549,181**	**$ 1,125,605**	**$ 2,423,575**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary LaGrange Highlands 106

Year	School District 106 Property Taxes	School District 106 Incremental Student Costs	Benefit/(Cost)
Year 1	$ 212,563	$ 131,508	$ 81,055
Year 2	$ 217,877	$ 136,732	$ 81,145
Year 3	$ 223,324	$ 142,163	$ 81,161
Year 4	$ 228,907	$ 147,810	$ 81,097
Year 5	$ 234,629	$ 153,681	$ 80,948
Year 6	$ 240,495	$ 159,786	$ 80,709
Year 7	$ 246,508	$ 166,133	$ 80,374
Year 8	$ 252,670	$ 172,732	$ 79,938
Year 9	$ 258,987	$ 179,593	$ 79,393
Year 10	$ 265,462	$ 186,727	$ 78,734
Year 11	$ 272,098	$ 194,144	$ 77,954
Year 12	$ 278,901	$ 201,856	$ 77,044
Year 13	$ 285,873	$ 209,874	$ 75,999
Year 14	$ 293,020	$ 218,211	$ 74,809
Year 15	$ 300,345	$ 226,879	$ 73,467
Year 16	$ 307,854	$ 235,891	$ 71,963
Year 17	$ 315,550	$ 245,261	$ 70,289
Year 18	$ 323,439	$ 255,003	$ 68,436
Year 19	$ 331,525	$ 265,133	$ 66,392
Year 20	$ 339,813	$ 275,664	$ 64,149
Total	**$ 5,429,840**	**$ 3,904,784**	**$ 1,525,056**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Fair Market Value Assumptions

Type of Units	Number of Units	Unit Chunk Price	Discount Factor	Estimated FMV for Purposes of County Assessor	Estimated Taxes Per Unit
End Units	10	$ 850,000	15%	$ 722,500	$ 15,714
Middle & Duplex Units	19	$ 800,000	15%	$ 680,000	$ 14,790
Total Units	29				

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Tax Assumptions - Tax Year 2022 Tax Rates

Assessment Ratio	10%
Equalization Multiplier	2.9237
Total Tax Rate	7.439%
Lyons School District 204 Tax Rate	2.3590%
LaGrange Highlands District 106 Tax Rate	3.6090%
Village of Western Springs	1.0820%
Western Springs Library	0.2490%
Western Springs Park District	0.1400%
Annual Reassessment Growth Rate	2.50%

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Estiamted Fair Market Value									
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255	$ 8,802,961
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820	$ 15,741,765
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075	$ 24,544,726
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 438,142	$ 449,095	$ 460,323	$ 471,831	$ 483,627	$ 495,717	$ 508,110	$ 520,813	$ 533,833

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18
Estiamted Fair Market Value									
End Units	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692
Middle & Duplex Units	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308
Total Estimated FMV	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 547,179	$ 560,858	$ 574,880	$ 589,252	$ 603,983	$ 619,083	$ 634,560	$ 650,424	$ 666,684

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 19	Year 20
Estiamted Fair Market Value		
End Units	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%
Equalization Multiplier	2.9237	2.9237
Total	7.4390%	7.4390%
Taxes to from the Development	$ 683,352	$ 700,435

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 63,728	$ 65,321	$ 66,954	$ 68,628	$ 70,343	$ 72,102	$ 73,904	$ 75,752

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 77,646	$ 79,587	$ 81,577	$ 83,616	$ 85,706	$ 87,849

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 90,045	$ 92,297	$ 94,604	$ 96,969	$ 99,393	$ 101,878

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 138,940	$ 142,414	$ 145,974	$ 149,623	$ 153,364	$ 157,198	$ 161,128	$ 165,156

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 169,285	$ 173,517	$ 177,855	$ 182,302	$ 186,859	$ 191,531

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 196,319	$ 201,227	$ 206,258	$ 211,414	$ 216,699	$ 222,117

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 212,563	$ 217,877	$ 223,324	$ 228,907	$ 234,629	$ 240,495	$ 246,508	$ 252,670

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 258,987	$ 265,462	$ 272,098	$ 278,901	$ 285,873	$ 293,020

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 300,345	$ 307,854	$ 315,550	$ 323,439	$ 331,525	$ 339,813

McNaughton Devleopment
Heritage Crossing
Total
Library District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Library District Rate	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
Taxes to from the Development	$ 14,666	$ 15,032	$ 15,408	$ 15,793	$ 16,188	$ 16,593	$ 17,008	$ 17,433

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
$ 17,869	$ 18,315	$ 18,773	$ 19,243	$ 19,724	$ 20,217	$ 20,722	$ 21,240	$ 21,771	$ 22,315	$ 22,873	$ 23,445

McNaughton Devleopment
Heritage Crossing
Total
Park District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Psrk Rate	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
Taxes to from the Development	$ 8,246	$ 8,452	$ 8,663	$ 8,880	$ 9,102	$ 9,329	$ 9,562	$ 9,802

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
$ 10,047	$ 10,298	$ 10,555	$ 10,819	$ 11,090	$ 11,367	$ 11,651	$ 11,942	$ 12,241	$ 12,547	$ 12,860	$ 13,182

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School Children

Single-Family Attached Townhomes

Grades K-8

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0.000	0%	0.000	0.000
End Unit 3-Bed	10	0.292	0%	0.292	2.920
Middle & Duplex Unit 3-Bed	19	0.292	0%	0.292	5.548
4-Bedroom	0	0.000	0%	0.000	0.000
Total K-8 Children Produced					8.468

Grades 9-12

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0	0%	0.000	0.000
End Unit Master Down 3-Bed	10	0.059	0%	0.059	0.590
Middle Unit Master Down 3-Bed	19	0.059	0%	0.059	1.121
4-Bedroom	0	0.000	0%	0.000	0.000
Total 9-12 Children Produced					1.711

Total Children Produced **10.179**

Population Figures Based on Illinois School Consulting Services - Associated Municipal Consultants, Inc. Naperville, Illinois Copyright 1996

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204 Cost
Cost Assumptions

Operational Cost Per Student 2023	$ 22,156	

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%
Five-Year Average		3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106 Cost
Cost Assumptions

Operational Cost Per Student	$	15,530

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%
Five-Year Average		3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 22,156	$ 23,036	$ 23,951	$ 24,903	$ 25,892	$ 26,920	$ 27,989	$ 29,101
Total Incremental Costs of Students to SD 204 from Development	$ 37,909	$ 39,415	$ 40,980	$ 42,608	$ 44,301	$ 46,060	$ 47,890	$ 49,792

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 30,257	$ 31,459	$ 32,709	$ 34,008	$ 35,359	$ 36,763
Total Incremental Costs of Students to SD 204 from Development	$ 51,770	$ 53,827	$ 55,965	$ 58,188	$ 60,499	$ 62,902

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 38,224	$ 39,742	$ 41,321	$ 42,962	$ 44,669	$ 46,443
Total Incremental Costs of Students to SD 204 from Development	$ 65,401	$ 67,999	$ 70,700	$ 73,508	$ 76,428	$ 79,464

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 15,530	$ 16,147	$ 16,788	$ 17,455	$ 18,148	$ 18,869	$ 19,619	$ 20,398
Total Incremental Costs of Students to SD 106 from Development	$ 131,508	$ 136,732	$ 142,163	$ 147,810	$ 153,681	$ 159,786	$ 166,133	$ 172,732

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 21,208	$ 22,051	$ 22,927	$ 23,838	$ 24,784	$ 25,769
Total Incremental Costs of Students to SD 106 from Development	$ 179,593	$ 186,727	$ 194,144	$ 201,856	$ 209,874	$ 218,211

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 26,793	$ 27,857	$ 28,963	$ 30,114	$ 31,310	$ 32,554
Total Incremental Costs of Students to SD 106 from Development	$ 226,879	$ 235,891	$ 245,261	$ 255,003	$ 265,133	$ 275,664

Heritage Crossing
Western Springs
Construction Schedule, Routing & Phasing
October 11, 2024

Construction Schedule

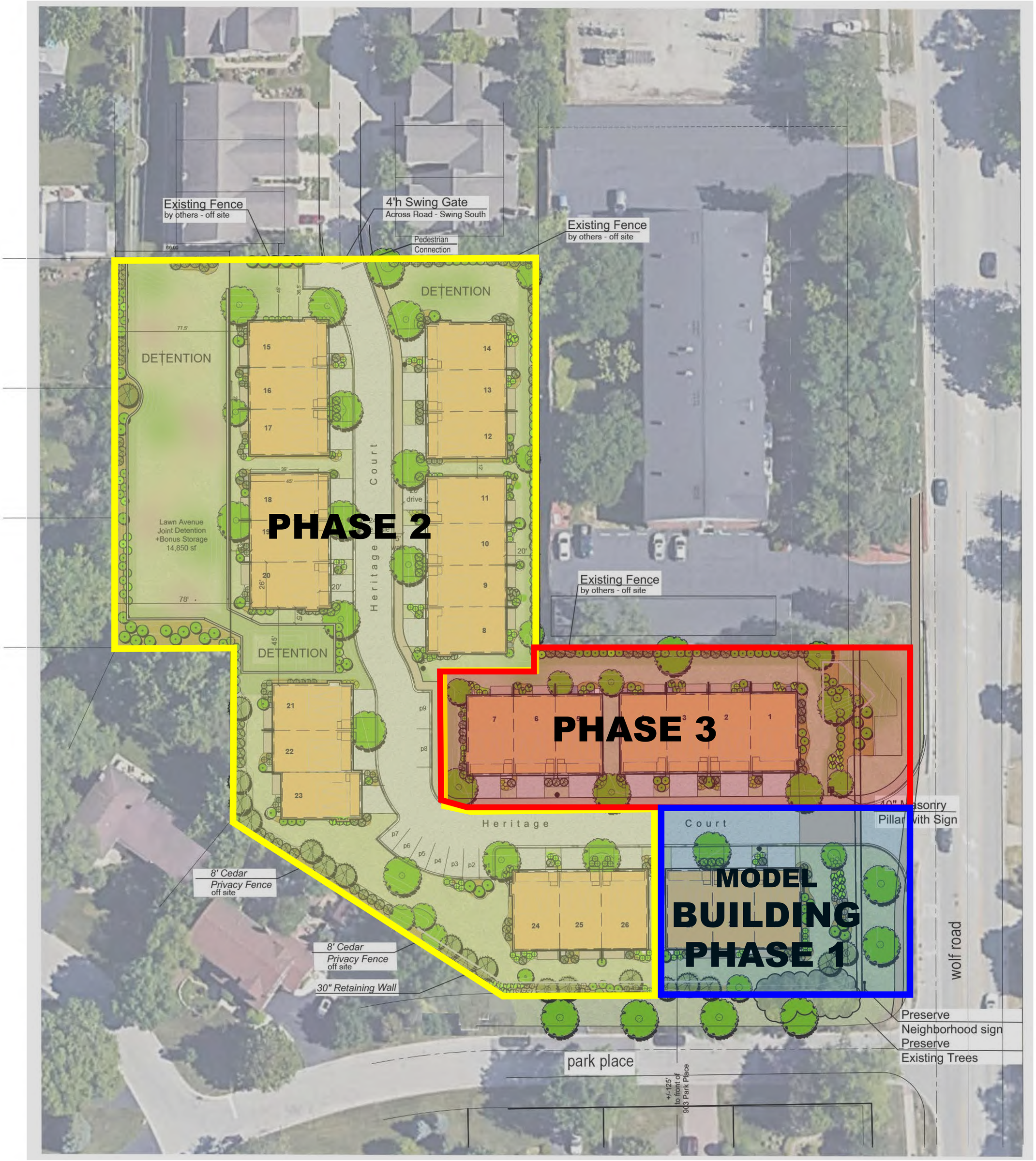
- Building demolition & site clearing of parking lot **– 1/13/025 – 2/7/2025**
- Site development work - **2/9/2025 – 4/18/2025**
    - Removal of existing storm sewer
    - Pond excavation and site grading
    - Commence construction on model home building Units #26 - # 28
    - Installation of new underground utilities – sanitary sewer, storm sewer and water main
    - Retaining wall construction
    - Site grading
    - Paving
- Commence construction on Units # 8 thru # 20 - **4/21/2025**
- Landscape – **5/5/2025 – 6/20/2025**
    - Native planting pond bottom / trees and shrubs
    - Fence replacement neighbors southwest of the site
    - Entryway landscaping
    - Installation of access gate at the existing Heritage Court
    - Common area landscaping to be complete with surrounding rowhome units
- Model Grand Opening - **9/5/2025**
- Commence construction on Units # 1 thru # 7 & # 21 thru #25 **– 1/5/2026**
- Close out sales - **12/31/2026**

Routing

All construction traffic will access and leave the property via the subdivision entrance at Wolf Road. Access to and from 55th Street via the existing Heritage Court is prohibited.

Phasing

- All development work shall be completed in a single phase of work
- To promote an orderly development of the site construction of the units will be completed in three phases according to the dates reference above
    - Model Building Units #26 - # 28
    - Northern Buildings Units # 8 thru # 20
    - Southern Buildings Units # 1 thru # 7 & # 21 thru #25



North

0 30 60 120

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: November 5, 2024

BSB DESIGN
BSBDESIGN.COM

L0.01
Site Plan

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)

© 2024 BSB Design, Inc.

Exhibit "E"

Construction Schedule

(attached)

Group Exhibit "F"

Confidential Developer Letter of funding sources for completion of the Development and Supporting Submittals and Developer's Lender's Financing Commitment Letter issued by _____ Bank and dated _____, 2025

(not attached; on file with the Village Clerk's Office)

Exhibit "G"

Operations and Maintenance Manual and Specifications and Maintenance Schedule for Stormwater Conveyance System

(attached)

Exhibit "H"

Forms of Letters of Credit

(attached)

R**EQUIRED FORM OF PERFORMANCE LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT NO.**
AMOUNT: $
EXPIRATION DATE: Two years after issuance
DATE OF ISSUE: _____202___.

[Name of Bank]
[Address]

TO: Village of Western Springs (Beneficiary)
740 Hillgrove Avenue
Western Springs, Illinois 60558
Attention: Village Manager

_____ BANK HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the UP TO AN AGGREGATE AMOUNT OF _____ United States Dollars ($_____) for account of [Developer], a _____limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words:

Drawn under _____.
Credit No. Dated: _____202___.

Drafts may be for all or any portion of the amount of this Letter of Credit, and shall be generally in the form of the sample draft attached hereto as Exhibit "1," and shall be accompanied by one of the following documents executed by the Western Springs Village Manager:

(a) A written statement on the form attached hereto as Exhibit "2" stating that, conditioned upon proper notice to the Western Springs Village Manager, Letter of Credit No. ___will expire within thirty (30) calendar days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No. ___; or

(b) A written statement on the form attached hereto as Exhibit "3" stating that all or any part of the Infrastructure as defined in and required to be constructed by the Customer / [Developer] pursuant to "An Agreement _____ (the "Development Agreement") have not been constructed in accordance with the Development Agreement and any cure period has expired; or

(c) A written statement on the form attached hereto as Exhibit "4" stating that all or any part of the costs, payments, permit fees, or other fees required to be paid to the Village of Western Springs by the Customer / [Developer] pursuant to the Development Agreement have not been paid in accordance with the Development Agreement and any cure period has expired; or

(e) A written statement on the form attached hereto as Exhibit "5" stating that all or any portion of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement has not been performed in accordance with the Development Agreement and any cure period has expired.

(f) A written statement on the form attached hereto as Exhibit "6" stating that the aggregate amount of the Letter of Credit may be reduced under Subsection __ of the Development Agreement in a certain amount.

_____[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated Expiration Date or presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on or before that date. Further, one or more drafts may be presented at [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, litigation and court costs, and other expenses incurred by the Village of Western Springs in enforcing the terms of this Letter of Credit.

3. This Letter of Credit shall expire on _____, 20___, (two (2) years from issuance) as stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice).

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager as provided in Paragraph (f) above stating that the aggregate amount of this Letter of Credit may be reduced in a specified amount as provided in Subsection ___ of the Development Agreement.

6. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term “banking day” means any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed, and a day on which payments can be effected on the Fedwire Network.

[Signature of Bank Officer] [Signature of Bank Officer]
[Officer’s Title] [Officer’s Title]

EXHIBIT “1” TO FORM OF IRREVOCABLE LETTER OF CREDIT

DRAFT (sample) , 20___ $

(place) (date) (amount in figures USD)

PAY TO THE ORDER OF: US DOLLARS (amount in words) for value received and charge to the account of:

(Letter of Credit applicant name and address)

TO:

(name of Drawee Bank)

(address)

By: _____

EXHIBIT "2" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ------
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that Letter of Credit No. _____ dated _____, 20___ in the amount of $_____will expire within thirty (30) days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No.____.

The Funds of this LOC that are be are being drawn upon by the Village of Western Springs as a consequence of the failure of the Customer / [Developer] to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC relative to above-referenced Project that are defined in more detail in the LOC.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC, in an amount agreed upon by the Beneficiary and the Customer [Developer], at least thirty (30) days prior to the Expiration Date of the LOC.

2. [Bank] has not delivered to the Village by registered letter, return receipt requested, or other courier service addressed to the attention of the Village President, any notice of expiration of the LOC as required under the SPECIAL CONDITIONS at Page 2 of the LOC.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT "3" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT "4" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. _____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT “5” TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the “Beneficiary” under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT “6” TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Reduction of Dollar Amount of Letter of Credit No.
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Customer / [Developer] has satisfactorily completed and the Village of Western Springs has accepted certain Infrastructure work and, under Subsection __ of the Development Agreement, the aggregate amount of the Letter of Credit may be reduced in the following amount to reimburse the Developer for payment of that work: $_____.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

REQUIRED FORM OF GUARANTY LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT NO.

AMOUNT:
EXPIRATION DATE: Two years from issuance
DATE OF ISSUE:
[Name of Bank]
[Address]

TO: Village of Western Springs (Beneficiary)
740 Hillgrove Avenue
Western Springs, Illinois 60558
Attention: Village Manager

[BANK] HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the _____ UP TO AN AGGREGATE AMOUNT OF _____United States Dollars ($ _____) for account of [Developer], a _____limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words: Drawn under Credit No. ____ Dated: _____, 202___.

Drafts may be for all or any portion of the amount of this Letter of Credit and shall be accompanied by one of the following documents executed by the Western Springs Village Manager on the form attached hereto as Exhibit "A" stating that all or any portion of the maintenance, repair, or restoration required to be performed related to Public Infrastructure pursuant to the Development Agreement in accordance with the Development Agreement has not been properly performed.

[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated expiration date or presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on or before that date. Further, one or more drafts may be presented at the [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, courts costs, and other expenses incurred by the Village of Western Springs in enforcing the terms hereof.

3. This Letter of Credit shall expire on _____, 20___, (two (2) years from issuance) as stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice).

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager stating that the aggregate amount may be reduced in a certain amount because the guarantee period for certain maintenance, repair, or restoration amount has expired.

7. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term "banking day" means (a) any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed and (b) any day on which payments can be effected on the Fedwire Network.

[Signature of Bank Officer] [Signature of Bank Officer]
[Officer's Title] [Officer's Title]

Exhibit "I"

Written Consent and Waiver Of Casey Gaik And Fran Gaik To Allow McNaughton Development, LLC To Enter Into A Redevelopment And Maintenance Agreement And Other Related Documents Regarding The Proposed Heritage Crossing Subdivision Located At 5600 South Wolf Road In The Village Of Western Springs, Cook County, Illinois

(attached)

After Recording Return To:
Michael T. Jurusik
Klein, Thorpe and Jenkins, Ltd.
900 Oakmont Lane, Suite 301
Westmont, Illinois 60559

Common Address:
5600 South Wolf Road
Western Springs, Illinois 60558

This space for Recorder of Deeds Office use only

Property Identification Numbers:
18-18-200-017-0000
18-18-200-038-0000
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)

THIS REDEVELOPMENT AND MAINTENANCE AGREEMENT ("**Agreement**") is dated the ___ day of _____, 2025 ("**Effective Date**"), and is entered into by and between the **VILLAGE OF WESTERN SPRINGS** , an Illinois municipal corporation ("**Village**") and **MCNAUGHTON DEVELOPMENT, LLC**, an Illinois limited liability company, with its principal corporate office located at 11S220 Jackson Street, Suite #101, Burr Ridge, Illinois ("**Applicant**" or "**Developer**"), by and through their respective duly authorized agents and/or representatives. The Village and the Developer are at times referred to below individually as a "**Party**" and collectively as the "**Parties**".

IN CONSIDERATION OF the mutual covenants and promises as contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

SECTION 1. RECITALS.

The Village, a non-home rule municipality, is a duly constituted and existing municipality within the meaning of Section 1 (Municipalities And Units Of Local Government) and Section 7 (Counties and Municipalities Other Than Home Rule Units) of Article VII (Local Government) of the Constitution of the State of Illinois of 1970.

The Village is authorized, under the provisions of Section 10 (Intergovernmental Cooperation) of Article VII (Local Government) of the State of Illinois Constitution of 1970, to contract and otherwise associate with individuals, associations and corporations in any manner not prohibited by law. The Village has the statutory authority to promote the health, safety and welfare of the Village and its residents, to encourage private development in order to enhance the local tax base, and to enter into contractual agreements with developers and redevelopers to achieve these objectives.

As of May 23, 2024, the Developer is the contract purchaser and prospective developer of the real property commonly known as 5600 South Wolf Road, Western Springs, Illinois ("Property") and has filed a General Information Application for Land Use and Development in the Village with supporting documents (the "Application") for the rezoning and redevelopment of the 5600 South Wolf Road Property. Casey and Fran Gaik (the "Property Owner") are the fee simple title owners of the Property and have submitted a written authorization to the Village that allowed the Applicant to file the Application for the redevelopment of the Property as a twenty-nine (29) unit residential townhome development as described in more detail below (the "Development"). The Property Owner has further executed a "Written Consent and Waiver" to allow McNaughton Development, LLC to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof. The Property is approximately 2.755 acres, which consists of 2.414 acres of 5600 Wollf Road and the adjacent Lawn Avenue right-of-way. The Property Tax Index Numbers for the Property are identified as follows: (1) PIN: 18-18-200-017-0000, (2) PIN: 18-18-200-038-0000 , and (3) PIN: 18-18-200-001-0000 (collectively the "**Property PINs**").

D. The Developer proposes to redevelop the Property with twenty-nine (29) unit residential townhomes consisting of nine (9) townhome buildings with varying unit counts of either three-units or four-units. Each dwelling unit will have a balcony, a rear patio, and an attached, front-loaded garage with driveways accessed by a private street through the Development. The Development will have off-street community parking spaces, on street-parking along the west and south sides of the proposed Heritage Court, sidewalks, an expanded stormwater detention basin system and stormwater management facilities and other private and public infrastructure, open space areas, landscaped areas and private streetlights. The Applicant proposes to extend private Heritage Court to the southeast through the Property to the Development's access driveway proposed along Wolf Road. The existing portion of Heritage Court, a private road, currently services only the Heritage Springs Townhome Development, connects to 55th Street to the north of the Property and is maintained by the Heritage Springs Homeowners Association. An automatic gate will separate the Development from the existing Heritage Springs Subdivision to the north. Vehicle access between the adjacent subdivisions will be controlled by a swing gate, and gate access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights. The Developer agrees to accept title to a sixty-six (66.00) foot by two hundred twenty-five (225.00) foot portion of Lawn Avenue (the "Lawn Avenue ROW Parcel") that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. A copy of the Site Plan for the Development revised as of January 27, 2025 is attached hereto as **Exhibit "A"** and made a part hereof.

E. The Developer agrees to apply for and use commercially reasonable efforts to secure all required zoning and development permit approvals from the Village and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development in conformance with the Village-approved Final Development Plans, as amended by any Village-approved zoning relief and development entitlements and any approval conditions and requirements imposed by other governmental oversight agencies. The Developer agrees to actively participate in good faith in all required zoning hearing proceedings and development permit processes and all other permits and approvals from other governmental oversight agencies in order to secure final approvals that allow for the construction and operation of the Development.

F. Based on the Application submitted by the Applicant, the Village conducted a public hearing relative to certain zoning relief requested by the Applicant in order to construct the Development. The public hearing was conducted by the Village Plan Commission and commenced on August 13, 2024 and concluded November 18, 2024. The Village Plan Commission issued Recommendation No. PC-2024-02 on November 18, 2024 that favorably recommended approval of the zoning relief contained in the Application, including a Comprehensive Plan Amendment to the Long-Range Land Use Map, a Map Amendment (Rezoning of the Property from the O – Limited Office Zoning District to the R4 - Multiple-Family Residence District), a Conditional Use for a Planned Development, and Exceptions / Variations to the Village Development Control Ordinance ("DCO"), and a Subdivision approval for the construction, operation and maintenance of a Townhome Subdivision Development referred to as "Heritage Crossing", subject to certain stated conditions of approval (the "Development Zoning Relief").

G. On February 10, 2025, the Corporate Authorities of the Village approved Ordinance No. 25-_____ that granted the Development Zoning Relief and a set of Final Development Plans, subject to final Village Engineer comments and Community Development Department comments and subject to final plan review comments at the time of application for a site development permit or a building permit, for purposes of encouraging the Developer to proceed with the necessary land acquisition, project financing, and other zoning, development or governmental permitting entitlement activities relative to securing final approvals to construct the Development (the "Approval Ordinance"). On February 10, 2025, the Corporate Authorities of the Village also approved Ordinance No. 25-_____, which vacated the Lawn Avenue ROW Parcel and approved a plat of right-of-way vacation and retention of stormwater facility easement for purposes of incorporating the Lawn Avenue ROW Parcel into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the Development. The Corporate Authorities of the Village will not unreasonably deny any requested zoning relief or permits that are consistent with the terms of this Agreement after completion of the required public hearing process or the permitting process.

H. To receive a site development permit or a construction permit for the Development, the Developer is required to submit and obtain the approval of the Corporate Authorities of the Village of a set of Final Development Plans, which shall incorporate and account for the Village-approved zoning relief after the required public hearing(s) are completed, including consideration of any recommendation issued by the advisory Village Plan Commission and public input, the Village plan review comments, the Village Engineer review comments and the Community Development Department review comments, and all required amendments issued by any other governmental authority with jurisdiction over the Development and proof of approval of all necessary development or governmental permits issued by any other governmental authority with jurisdiction over the Development.

I. The Developer intends that all roads, driveways, parking spaces, landscaping, stormwater management facilities and other infrastructure and improvements located within the Property will be privately owned and privately maintained in perpetuity, except only Public Infrastructure as defined in Section 2 of this Agreement.

J. The Developer intends to construct the Development continuously to completion once work on the Development commences.

K. The foregoing Recitals of this Section 1 are material terms and provisions and are incorporated herein and made a part of this Agreement.

SECTION 2. DEFINITIONS.

Whenever used in this Agreement, the following terms have the following meanings unless a different meaning is required by the context:

"Approval Ordinance": Western Springs Ordinance No. 25-_____ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions. See attached **Exhibit "B"**.

"Approved Plans": See Subsection 4.A. of this Agreement.

"Board of Trustees" or "Corporate Authorities": The President and Trustees of the Village of Western Springs.

"Certificate of Completion": means a certificate, issued by the Village, that confirms (a) the Development has been completed in substantial conformance with the Approval Ordinance and the Village-approved Final Development Plans; or (b) substantial completion of any significant milestone component of the Development (e.g., completion of the Infrastructure or the Stormwater Conveyance System or of a townhome building), as applicable.

Change in Law": Means the occurrence, after the Effective Date, of an event described below in this definition, provided such event materially changes the ability of the Party relying thereon to carry out its obligations under this Agreement and such event is not caused by the Party relying thereon. Change in Law means any of the following: (1) the enactment, adoption, promulgation or modification of any federal, State or local law, ordinance, code, rule or regulation (other than by the Village or with respect to those made by the Village, only if they violate the terms of this Agreement); (2) the order or judgment of any federal or State court, administrative agency or other governmental body (other than the Village); or (3) the adoption, promulgation, modification or interpretation in writing of a written guideline or policy statement by a governmental agency (other than the Village, or, with respect to those made by the Village, only if they violate the terms of this Agreement). Change in Law, for purposes of this Agreement, shall also include the imposition of any conditions on, or delays in, the issuance or renewal of any governmental license, approval or permit (or the suspension, termination, interruption, revocation, modification, denial or failure of issuance or renewal thereof) necessary for the undertaking of the actions to be performed under this Agreement (except any imposition of any conditions on, or delays in, any such issuance or renewal by the Village, except as provided herein).

"Development Director": The Village's Community Development Director.

"Developer": Includes McNaughton Development, LLC and its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, or any other person and each and all homeowners associations or their equivalent within the Property.

"Effective Date": The date that the last signatory signs this Agreement, which shall be written in the first paragraph of this Agreement.

"Force Majeure": See definition of Uncontrollable Circumstance and Subsection 17.N. of this Agreement.

"IDOT": The Illinois Department of Transportation.

"IEPA": The Illinois Environmental Protection Agency.

"Infrastructure": All utilities including without limitation drinking water, sanitary sewer, storm sewer and detention basins, electric, gas, and telecommunication; stormwater system elements including without limitation detention facilities, streets, drive aisles, driveways, drive aprons, curbs, gutters, street lights, and parking spaces; sidewalks, other pedestrian ways, pedestrian amenities, pedestrian lighting, way-finding signs, and trees and other landscaping; and all related improvements for the Development, whether private or public and whether within the Property or within adjacent rights-of-way and property.

"Infrastructure Cost Estimate": See Subsection 4.B. of this Agreement.

"LOC": An irrevocable letter of credit issued by a lending institution licensed to do business in the State of Illinois, on a form approved by the Village Attorney.

"MWRD": The Metropolitan Water Reclamation District of Greater Chicago.

"Private Infrastructure": All Infrastructure other than Public Infrastructure, including the Stormwater Conveyance System.

"Property": The real property legally described and depicted in **Exhibit "C"** attached to this Agreement.

"Public Infrastructure": Infrastructure that is being dedicated to the Village or to other governmental agencies, including without limitation drinking water mains (but not water service lines to buildings), water hydrants, sanitary sewers and other elements determined by the Village. In the event of any ambiguity, the Village will determine whether an Infrastructure element is public or private.

"Director of Engineering Department": The Village's Village Engineer.

"Reimbursable Costs": See Subsection 8. of this Agreement.

"Requirements of Law": All applicable federal and State of Illinois laws and statutes, the Zoning Code, the Village Code, and the Village's building, stormwater management, and other codes and regulations. The Title 9 Building Regulations of the Village Code will apply to architectural and structural plans and specifications for all buildings within the Development unless preempted by State of Illinois or federal law or the Village designates, in writing, other applicable standards. Otherwise, Village-adopted model codes will apply and State of Illinois building codes will apply in the absence of an applicable Village-adopted model code. Accessibility standards of the Americans with Disabilities Act (42 U.S. Code § 12101) will apply to all common areas. The Title 9 Building Regulations of the Village Code reference to 2009 ICC Accessible and Usable Buildings and Facilities (ANSI) (2003 Safe Harbor of FHA) in conjunction with the standards of the Illinois Accessibility Code will be followed for all residential units.

"Site Work": Grading land, excavating soil and debris, environmental remediation, installation of underground utilities, and similar activities.

"Stormwater Conveyance System": All elements of Infrastructure that relate to the management, detention, storage, and conveyance of stormwater, which shall be privately owned and maintained by the Developer and then by the homeowners association.

"Uncontrollable Circumstance": An event that is beyond the reasonable control of and occurs without the fault of the involved party, including without limitation to the following events: (i) an insurrection, riot, civil disturbance, sabotage act of a public enemy, explosion, nuclear incident, war, or naval blockade; (ii) an epidemic, pandemic, hurricane, tornado, landslide, earthquake, lightning, fire windstorm, or other casualty or act of God, or persistent bad weather that impedes progress; (iii) a government condemnation or taking; (iv) a strike, lockout, or other labor dispute other than those caused by the unlawful acts of the Developer; and (v) a Change in Law. Uncontrollable Circumstance does not include any of the following events or conditions: Economic hardship, impracticability of performance, commercial, economic or market conditions, or a failure of performance by a contractor (except as caused by an event that is an Uncontrollable Circumstance as to that contractor). See Subsection 17.N. regarding Force Majeure.

"Village Code": The Western Springs Code of Ordinances.

"Village Manager": The Western Springs Village Manager, or their designee.

"Zoning Code" or "DCO": The Western Springs Development Control Ordinance.

SECTION 3. PROPERTY ACQUISITION; TERMINATION.

Property Acquisition. The Developer has entered into a real estate purchase contract with the Property Owner, and, subject to the terms and conditions of this Agreement, intends to acquire fee simple title to the Property on or before March _____, 2025 (the "**Acquisition Deadline Date**"). The closing date at which the Developer obtains fee simple title to the Property is referred to as the "Acquisition Date". If the Developer does not acquire fee simple title to the Property by 5:00 p.m. CST on the Acquisition Deadline Date, the Developer shall send written notice to the Village within five (5) calendar days after of the expiration of the Acquisition Deadline Date advising that the acquisition of the Property did not occur and providing a status on the acquisition consisting of one of these responses: (i) the Property Owner or the Developer has terminated the real estate purchase contract; or (ii) the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract; or (iii) the Developer and the Property Owner have extended the Acquisition Date and are actively working on matters to complete the acquisition of the Property by the extended Acquisition Date. If the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer have mutually agreed to terminate the real estate purchase contract, this Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party. In the event the Developer does not purchase the Property from the Property Owner, this Agreement shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable, and the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Agreement based on the Developer not purchasing the Property. If the Developer and the Property Owner extend the Acquisition Date and actively work on matters to complete the acquisition of the Property by the extended Acquisition Date, this Agreement shall remain in effect until either the Property Owner or the Developer terminates the real estate purchase contract or the Property Owner and the Developer mutually agree to terminate the real estate purchase contract, subject to the next sentence. This Agreement shall automatically terminate without any further action being taken by either Party, and without any liability to either Party, if the Developer does not acquire the Property within twelve (12) months of the approval date of the Approval Ordinance, based on the DCO's automatic expiration provision that applies to Village-approved conditional use permits (See, Section 10-3-14K (Condition Uses; Revocation)) of the DCO. Notwithstanding any other provision or term in this Agreement, each Party

expressly agrees that the cure remedy under Section 16 (Default; Cure) of this Agreement shall not apply to the automatic expiration provision that applies to Village-approved conditional use permits. The Corporate Authorities of the Village, in their sole discretion, may pass an ordinance for this Development that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer agrees to waive any claims or causes of action for damages of any kind that it could file against the Village for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property. The Developer also agrees to indemnify, defend and hold harmless the Village and its appointed and elected officials, employees, engineers, attorneys, agents and representatives from any claims or causes of action or damages of any kind that could be filed against the Village by the Property Owner or any person for not passing an ordinance that extends the 12-month automatic expiration provision that applies to Village-approved conditional use permits so that the Developer has additional time to acquire the Property.

B. **Lawn Avenue Right-of-Way Vacation.** The Developer agrees to accept title to the Lawn Avenue ROW Parcel that will be vacated by the passage of a vacation ordinance and a plat of right-of-way vacation and retention of stormwater facility easement by the Village for purposes of incorporation into the Property and the Development so that the Developer can construct an expanded stormwater detention basin system as part of the construction of the Development. The Village shall provide the Developer a title commitment free and clear of any tax liens or other financial encumbrances, subject to all conditions imposed by the Village under this Agreement and the Lawn Avenue right-of-way vacation Ordinance 25-_____.

SECTION 4. DEVELOPMENT PLANS.

A. **Development Plans.** Prior to the issuance by the Village of any permit for construction within the Property, the Developer must provide to the Village the following detailed Final Development Plans for the Development, all of which must be substantially consistent with **Exhibit "D"** to the Approval Ordinance and shall be reviewed by the Community Development Director, the Director of Fire and Emergency Medical Services and the Director of Law Enforcement Services, the Village Engineer, the Village Attorney, and other Village consultants (collectively, the "Village Staff") as part of the Village development plan review process, and shall be returned to the Developer for updating and corrections to comply with the Village Staff's development plan review comments and requirements (the "Approved Plans"). The final version of the Approved Plans shall be stamped by a licensed engineer or signed by a licensed architect. The Developer may re-submit updated Final Development Plans to address the Village Staff's plan review comments and requirements. If the Developer objects to any of the Village Staff's development plan review comments and requirements, the Developer may file a written request with the Village Board seeking approval of a modification(s) to the Village Staff's development plan review comments and requirements, which may or may not be granted by the Village Board, in its sole discretion, at an open public meeting. The Approved Plans, at a minimum, shall consist of final versions of:

(i) Detailed engineering plans, including without limitation civil, structural, architectural, lighting, construction staging, mechanicals screening, on-site and off-site storm water drainage plans, and Infrastructure plans.

(ii) Detailed, dimensioned site plans.

(iii) Detailed, dimensioned landscaping plans.

(iv) Building Elevations and Village-approved Exterior Building Materials List (color, material type, etc.).

(v) Signage plan for buildings, traffic, parking and other informational signs within the Development.

(vi) Stack wall for the townhouses. Prior to issuance by the Village of any permit for construction other than Site Work, the Developer must assemble a representative "stack" wall on the Property with the Village-approved masonry, wood, and other construction materials to be used on the townhouse buildings. The stack wall must precisely show the materials and techniques to be used for the walls of the townhouses. The stack wall will be reviewed by the Community Development Director and will be approved by the Community Development Director only if it conforms to the Approved Plans.

(vii) Such other plans and documents reasonably required by the Village Staff for the construction of the Development by the Developer.

B. **Infrastructure Cost Estimate.** The Developer must prepare an itemized estimate of the cost of construction of each component of the Infrastructure (the "Infrastructure Cost Estimate") and submit the estimate to the Village prior to the issuance by the Village of any permit for construction. The Village Engineer will review, revise as necessary, and approve the Infrastructure Cost Estimate.

SECTION 5. DEVELOPMENT AND USE OF THE PROPERTY.

Commencement and Completion of Construction.

(i) The Developer intends to commence site improvement or construction work on the Development not more than one hundred eighty (180) calendar days after the Village Board's approval of the Approval Ordinance (the "**Anticipated Commencement Date**"), subject only to Force Majeure.

(ii) The date the Developer receives a Village site development permit or a building permit authorizing work to proceed on the Development, or any part thereof, shall be the "**Commencement Date**".

(iii) Construction of the Development shall substantially comply with the provisions of the Approval Ordinance and each of the conditions of approval set forth in the Approval Ordinance.

(iv) Construction of the Development shall substantially comply with, and the Development shall be substantially completed in accordance with, the timeframes outlined on Developer's "Construction Schedule", attached hereto as **Exhibit "E"** and incorporated herein (the "Construction Schedule"), but not later than twenty-four (24) months after the Commencement Date, subject to Force Majeure, with the actual date of Substantial Completion being the "**Substantial Completion Date**". "Substantial Completion" or "Substantially Completed" shall mean that the residential component of the Development is eligible to receive a certificate of occupancy, and the public improvements are completed to the Village's dedication standard, to the extent applicable to such public improvements.

(v) Developer may start construction on its model home units numbers 1 to 4 and 27 to 29 prior to the completion of the extension of Heritage Court through the Property; however, the Developer shall install a gravel stone road within the proposed width of the Heritage Court extension from the west edge of Wolf Road to the frontage of the model units (approximately except for the 108 feet). The gravel stone road shall be continuously maintained free from of potholes and wheel ruts by the Developer, at its cost, to ensure that the gravel road can be used for emergency vehicle access. All underground utilities to the model units must be installed at the same time the binder course is installed.

B. **Substantial Compliance with Approved Plans.** Except for minor alterations due to field conditions approved by the Village Engineer or Development Director, the construction of the Development shall substantially conform with: (i) the Approval Ordinance, (ii) this Agreement, (iii) the Approved Plans, and (iv) the Requirements of Law; and shall not materially impact the exterior materials and/or exterior architectural designs included in the Approved Plans, were not rejected by the Village during the design phase of the Development, and are necessary for the Developer to complete the Development, or any portion thereof, within the applicable portion of the Development Construction Schedule. Any type of approved plan changes must comply with Section 10-8 of the Village Code.

C. **Plat of Subdivision; Easements for Cross Access.** Prior to the issuance of any permit for construction, the Developer must prepare and file the final Plat of Heritage Crossing Subdivision, in a form satisfactory to the Village, granting cross access easements by the general public and the property owners of the Heritage Springs Subdivision and the Heritage Crossing Subdivision onto and across the pedestrian ways, roads (Heritage Court), and other paths within the Property.

D. **Development – Prior to Property Acquisition or Issuance of Permits.** No construction, improvement or development of any kind by the Developer shall be permitted on any portion of the Property unless and until: (a) the Developer acquires title to the Property; and (b) the Developer has been issued either a Village site development permit, demolition permit, or a Village building permit. Further, no occupancy of the Development may occur prior to the issuance of a Village Certificate of Completion for the Infrastructure and a Village certificate of occupancy for the portion of the Development that occupancy is sought (i.e., individual certificates of occupancy shall be issued for individual townhome units only after the Village issues a Certificate of Completion for the individual townhome building) Model units will only be granted a certificate of completion for daytime (7:30 am to 8:00 pm) use for marketing purposes.

E. **Development – Failure to Complete.** In the event that the Developer fails to complete the Development on or prior to the Substantial Completion Date, or fails to comply with the Construction Schedule (in either case, subject to Force Majeure), and such failure continues for more than thirty (30) calendar days after notice thereof by the Village to the Developer, then:

(i) The Village, by delivery of written notice to the Developer, may require the Developer to submit, within fifteen (15) calendar days, a plan pursuant to which the Developer will: (i) avoid falling further behind the dates set forth in the Construction Schedule; and (ii) complete construction of the Development in accordance with the Construction Schedule, as modified to reflect the "catch-up" plan (a "**Catch-Up Plan**"), for approval by the Village Manager, which approval shall not be withheld unreasonably provided that the Catch-Up Plan has been approved by the Developer's construction lender (the "**Lender**"). At such time as the Village has approved a Catch-Up Plan, the Developer shall

use commercially reasonable efforts to implement, and diligently pursue and complete, the activities of the Catch-Up Plan.

(ii) If the Developer fails to timely: (i) submit a Catch-Up Plan to the Village that has been approved by the Lender, or (ii) implement or complete the Catch-Up Plan; which failure continues for more than thirty (30) calendar days, then the Developer shall be deemed to be in default under the Catch-Up Plan and the Village shall have the right, but not the obligation, to hire a replacement contractor to complete the unfinished Public Infrastructure and Stormwater Conveyance System ("Default Work") and shall have the right to use the Developer Security (as defined below) to pay the contractor to complete such Default Work. Upon such a default by the Developer, subject to and in accordance with the terms and conditions of any construction financing agreement, the Lender will have the right, but not the obligation, to exercise and perform the Developer's rights and obligations under this Agreement, including the hiring of a replacement contractor to complete the Default Work and/or to complete the Development. If the Village elects to complete the Default Work, then the Developer shall be obligated to pay, or to reimburse the Village for, all costs and expenses of completing such work that are in excess of the proceeds of the construction financing agreement and the Developer's Security.

(iii) The Developer shall be responsible for all costs and expenses to prepare and implement and complete the Catch-Up Plan.

(iv) The rights and remedies set forth in this Subsection 5.E. shall be the sole remedies available to the Village for the failures specified in this Subsection; provided that the Village shall have: (i) the remedy of specific performance to enforce the obligations of Developer pursuant to the terms and conditions of this Subsection; and (ii) the right to recover from the Developer all costs and expenses, including reasonable attorney fees, incurred by the Village in connection with exercising its rights and remedies under this Subsection, together with interest at the rate of eight percent (8%) per annum on any Village funds expended prior to reimbursement from the Developer Security.

F. **Dedication and Maintenance of Land.** The Developer shall comply with the dedication of land and maintenance of landscaping obligations as set forth in the Conditions of the Approval Ordinance. The Developer shall use commercially reasonable efforts to convey, transfer or dedicate any portion of Property to Cook County or any other necessary governmental agency that is required to provide for the street access (ingress and egress) point onto Wolf Road for the Development.

G. **Development Covenants, Conditions, and Restrictions.** Prior to the issuance by the Village of any building permit other than a permit for Site Work, the Developer must present to the Village for review and comment and approval a set of Covenants, Conditions, and Restrictions ("CC&Rs") for the Development. The CC&Rs may not be amended without the prior express written consent of the Village at any time or in any manner that alters or interferes with any easement, grant, right, or remedy granted or reserved to the Village, including without limitation the right of the Village: (i) to cure any violation of the CC&Rs, this Agreement, the Approval Ordinance, or any other Requirements of Law, (ii) to perform necessary maintenance and repairs, (iii) to be reimbursed for all of the Village's costs and expenses related to maintenance and repairs, and (iv) to have a lien against the Property for unpaid costs and expenses. After Village approval, the CC&Rs shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Developer, at its cost.

H. **Maintenance of and Damage to Public Property and Off-Site Improvements.** During construction of the Development, the Developer must: (i) maintain all streets, sidewalks, and other public property adjacent to the Property in a good and clean condition and free of hazards at all times, (ii) promptly clean all mud, dirt, or debris deposited on any street, sidewalk, or other public property in or adjacent to the Property by the Developer or any agent of or contractor hired by, or on behalf of, the Developer, and (iii) repair or replace all damage to any private or public utilities or other private or public improvements of any kind that are located on-site or off-site relative to the Property that may be caused by the activities of, or on behalf of, the Developer or any employees, contractors, subcontractors or agents hired by, or on behalf of, the Developer. The Developer agrees to promptly repair or replace or restore such damaged improvements with like-kind and like-quality materials. If, within twenty-four (24) hours after the Village gives the Developer notice to clean mud, dirt, or debris or to repair damage in compliance with this Subsection, the Developer neglects or fails to clean or repair or to undertake with due diligence to clean or repair the affected public property, then the Village may clean or repair the affected property, either with its own forces or with contracted forces, and recover from the Developer the greater of $750.00 or the sum equal to the total cost incurred by the Village including without limitation administrative costs. The

I. **Environmental Conditions.** The Developer must remain in compliance with all applicable federal and State of Illinois environmental laws and regulations while constructing the Development.

J. **Building Certification.** RESERVED.

K. **Estimated Site Development Costs and Construction Budget.** Based on the Approved Plans, the "Estimated Site Development Costs" to develop, construct and complete the Development's public and private infrastructure is $1,285,620.35. The Developer shall deliver to the Village an itemized letter from a licensed engineer, certifying to the Village that, to such engineer's knowledge following reasonable investigation and inquiry, the Estimated Development Costs will not be less than $1,285,620.35.

L. **Development Financing.** At the time the application for a site development permit is submitted, the Developer shall provide the Village Manager with a confidential letter issued by the Developer that lists the tiered funding sources to be used to complete the Development and includes marked-confidential copies of supporting financing documents consisting of secured, fully executed construction financing term sheets, loan obligations and written proof of Developer equity contributions and investor equity contributions acceptable to the Village and sufficient to demonstrate that adequate funds are available to Substantially Complete the Development, including a financing commitment letter or a construction loan commitment letter issued by a bank or other financial lender for the Development. The Developer's financing commitments shall be sufficient to cover the equity and debt financing, including the Developer Security, to Substantially Complete the Development. In the event the Developer is unable to provide the Village with written evidence of the Development financing sufficient to Substantially Complete the Development within the time frame set forth in this Agreement, the Village may, exercising its sole discretion, terminate this Agreement and all of the Parties' rights, duties and obligations under this Agreement shall terminate without any liability being imposed on the Village or the Developer. The confidential letter and supporting financial submittals shall be retained on file with the Village Clerk's Office and shall not be attached to this Agreement but is referenced as **Group Exhibit "F"** to this Agreement.

SECTION 6. CONSTRUCTION AND MAINTENANCE OF INFRASTRUCTURE.

A. Developer's Duty to Construct Infrastructure. The Developer, at its cost, must construct and install all of the Infrastructure.

B. Standards Applicable to Infrastructure. The following standards apply to the construction of the Infrastructure.

(i) General Standards. All Infrastructure must be constructed in compliance with the standards in this Agreement and all Requirements of Law. All work performed in the construction of the Infrastructure must be conducted in a good and workmanlike manner. All materials used for construction of the Infrastructure must be new and of first-rate quality.

(ii) Special Standards. Construction of the Infrastructure must conform to the applicable standards of the La Grange Highlands Sanitary District, MWRD, IDOT, Cook County and the IEPA.

(iii) Prosecution of the Work. Once Site Work has begun, the Developer and all of its contractors must use commercially reasonable efforts to prosecute work on the Infrastructure in a diligent manner until the work is properly completed.

(iv) Inspection, Engineering, Testing Services. In general conformance with the Village Development Control Ordinance 10-10-17C, the Developer must provide, at its cost, all inspection, engineering, and testing for construction of the Infrastructure, including without limitation: (a) on-site construction supervision services, (b) periodic inspections of construction of the Public Infrastructure conducted by a professional engineer, and (c) third-party materials sampling and testing services. The Developer must promptly provide the Village with the names of the project manager and project engineer and telephone numbers at which the project manager and project engineer can be reached at all times.

(v) Village Inspections and Approvals. Village representatives have the right and authority, and the permission of the Developer, to inspect all work on the Infrastructure at all times between 8:00 a.m. and 6:00 p.m. weekdays, and at any other time work is taking place within the Property, and in the case of an emergency at any time reasonably determined by the Village, to confirm compliance with all requirements of this Agreement and all Requirements of Law.

(vi) Other Approvals. When the construction of Infrastructure requires the permission or approval of a regulatory agency, including without limitation the La Grange Highlands Sanitary District, MWRD, IDOT, Cook County or the IEPA, then the Developer must use all commercially reasonable efforts required to obtain the required permission or approval. The Developer may not commence work requiring the permission or approval of any such agency in advance of receiving that permission or approval.

C. Approvals of Infrastructure. At the time the site development permit is issued, a list of required inspections will be provided to the Developer. The Developer will be responsible for completing all required inspections. In the event that a required inspection is not completed, the Village reserves the right to request that the Developer re-expose the Infrastructure at the Developer's cost for inspection. When an Infrastructure improvement has been completed, the Developer must request final inspection and approval of that Infrastructure improvement by the Village. The Village will inspect that Infrastructure improvement and may prepare a punch list of items requiring repair or correction. The Developer must promptly make all necessary repairs and corrections as specified on the punch list. The Village will not approve an Infrastructure

improvement until it has been fully and properly completed in accordance with the Approved Plans, including without limitation all punch list work for that Infrastructure improvement.

D. Acceptance, Dedication and Acceptance of Public Infrastructure. The Developer will dedicate to the Village or to any other governmental agency with oversight jurisdiction each Public Infrastructure improvement after it is approved by the Village or the other governmental agency with oversight jurisdiction. The Village will accept a Public Infrastructure improvement when it has been fully and properly completed, but nothing will constitute an acceptance by the Village of a Public Infrastructure improvement except express written acceptance by the Village. Prior to the Village's acceptance, the Developer must execute, or cause to be executed, all documents reasonably requested by the Village to transfer ownership of the Public Infrastructure improvement to the Village, free and clear of all liens, claims, and encumbrances or restrictions that would prevent the Village from operating, maintaining, repairing, or replacing that Public Infrastructure improvement. The documents transferring ownership of a Public Infrastructure improvement to the Village (e.g., bill of sale and affidavit of title, etc.) must be reasonably acceptable in form and substance to the Village Attorney. Within thirty (30) calendar days of the acceptance, dedication or conveyance, the Developer shall provide the Village Manager with final, executed copies of the acceptance, dedication or conveyance documents that relate to each component of the Public Infrastructure improvements after it is approved by the other governmental agencies with oversight jurisdiction.

E. Infrastructure Guarantees. The Developer guarantees the prompt and satisfactory correction of every defect or deficiency in any Infrastructure that occurs or becomes evident within two (2) years after Village approval and acceptance of that Infrastructure, and in the case of stormwater management system elements three (3) years, pursuant to this Agreement. If any defect or deficiency occurs or becomes evident during the 2-year or 3-year period, then the Village will give notice to the Developer stating the defect or deficiency and the Developer must correct the defect or deficiency within ten (10) calendar days after receipt of the notice or, if the defect or deficiency cannot reasonably be corrected within that 10-day period, then within a longer period of time as is reasonably necessary to correct the defect or deficiency so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the correction. If the defect or deficiency is not corrected within the required time period, then the Village may undertake the correction and then the Village will have the right to draw from the performance securities deposited pursuant to Section 9 of this Agreement to reimburse itself for all costs and expenses incurred in making the correction. If any Public Infrastructure is repaired or replaced by the Developer pursuant to the demand of the Village, then the guaranty provided by this Subsection 6.E. will be extended, as to the repair or replacement, for two (2) full years after the date of completion of the repair or replacement.

F. Perpetual Maintenance of Private Infrastructure. The Developer, and then the homeowners association, must maintain, at its cost and expense, all Private Infrastructure at all times in good and serviceable condition consistent with Village codes and generally accepted engineering practices, including without limitation Village codes and ordinances and MWRD standards, as applicable. If at any time the Developer, or the homeowners association, is in breach of this standard, as determined by the Village, then the Village may issue a citation to, and impose a fine on, the Developer, or the homeowners association, as provided in the Village Code. In addition, the Village may issue notice stating that the Developer, or the homeowners association, must cure the breach within thirty (30) calendar days or, if the breach cannot reasonably be cured

within thirty (30) calendar days, then within a date certain set by the Village. The Developer, or the homeowners association, must promptly commence the cure and use commercially reasonable efforts to diligently and continuously pursue the cure to completion. If the cure is not completed within the required time, then the Village may, but is not in any way obligated to, undertake the cure using its own forces or outside forces. The Developer, or the homeowners association, will be liable for, and must reimburse to the Village, all costs and expenses incurred by the Village to cure the breach. If the Village's costs and expenses have not been reimbursed in full within thirty (30) calendar days after notice from the Village, then all unpaid costs and expenses will become a lien against the Property in its entirety and the Village will have the right to collect the unpaid costs and expenses and to enforce the lien in the same manner as mortgage foreclosure proceedings. Under no circumstances will the Village ever be required or obligated to maintain or repair any Private Infrastructure. The terms of this Subsection 6.F. shall be incorporated in the CC&Rs. Maintenance obligations for the Stormwater Conveyance System shall consist of:

(i) **Operations and Maintenance Manual for Stormwater Conveyance System:** The Developer shall comply with the maintenance and operations obligations for the Stormwater Conveyance System set forth in and required by the Operations and Maintenance Manual, per the Approval Ordinance and Section 10-11-11 (Stormwater Management Requirements For All Developments) of the DCO. A copy of the Operations and Maintenance Manual is attached hereto as **Exhibit "G**" and made a part hereof.

(ii) **Maintenance Obligations Imposed on the Developer and Then the Homeowners Association:** The maintenance of the Stormwater Conveyance System for the Development shall be the responsibility of the Developer and then the homeowners association. The Developer guarantees that it and all future owners of the Property shall maintain the Stormwater Conveyance System.

(iii) **Inspection Access by Village Representatives:** The Developer specifically authorizes representatives of the Village to enter onto the Property for the purpose of conducting inspections and testing of the Stormwater Conveyance System.

(iv) **Maintenance Schedule:** The Developer shall comply with the "Schedule for Regular Maintenance" of each aspect of the Stormwater Conveyance System and shall provide for access to the Stormwater Conveyance System for inspection and testing by authorized representatives of the Village. In the even that any authorized representatives of the Village notify the Developer, or the homeowners association, in writing of any maintenance problems which require correction, the Developer, or the homeowners association, shall make such corrections within thirty (30) calendar days of such notification. The Village shall be reimbursed by the Developer and then by the homeowners association for the actual costs and fees incurred relative to any inspection and/or testing conducted by its representatives. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the Developer or the or the homeowners association.

(v) **Annual Maintenance Inspections:** All components of the Stormwater Conveyance System shall be inspected by representatives of the Developer and then the homeowners association not less often than once per year. A written report shall be prepared of the results of any inspection and a copy of the report shall sent to the Village Manager detailing any problems which need

correction within thirty (30) calendar days of the date of the report or by no later than September 30 each year.

G. Abandonment of Construction. If the Developer abandons the Development or any part of the Development, then the Developer, within ninety (90) calendar days after notice from the Village, must: (i) remove all partially constructed improvements from the Property, (ii) backfill all excavations, and (iii) spread topsoil and plant grass seed throughout the Property, all to the satisfaction of the Village (collectively the "Required Restoration"). For purposes of this Subsection 6.G, "abandons" means cessation of construction for a continuous period of ninety (90) calendar days for any reason other than Force Majeure. If the Developer fails or refuses to complete the Required Restoration within the 90-day period, or such longer period of time as is reasonably necessary to complete the Required Restoration so long as the Developer has promptly commenced and uses commercially reasonable efforts to diligently pursue the Required Restoration, then the Village will have, and is granted in addition to all other rights afforded to the Village in this Agreement and by law, the right, at the Village's option, to hire a contractor to complete part or all of the Required Restoration. Thereafter, the Village may charge the Developer an amount equal to the Village's actual costs of the Required Restoration including without limitation contractor costs, disposal costs, administrative personnel fees and costs, and legal fees (collectively the "Charged Amount"). If the Charged Amount is not paid by the Developer within thirty (30) calendar days after notice from the Village, then the Charged Amount, and all costs incurred by the Village related to collection of the Charged Amount (the "Collection Costs"), may be deducted from the Developer Security and will become a lien against the Property, and the Village will have the right to collect the Charged Amount and the Collection Costs and to enforce the lien in the same manner as mortgage foreclosure proceedings.

H. Progress Meetings. At all times, the Developer and the Village shall each have an individual designated as the Developer's and the Village's primary point of contact for Development-related matters. The Developer shall meet on a monthly basis with the Development Director and Village Engineer, or their designee, and other Village staff as appropriate, to provide a comprehensive progress report on the Development. Appropriate Development team personnel shall attend the meeting on behalf of the Developer and the Village, and shall provide and exchange information regarding the status of construction and occupancy, pending permit requests and other appropriate information.

I. Village Construction Manager Consultant. The Village reserves the right to hire a construction manager consultant to assist the Village and its staff with all aspects of the Development, including but not limited to compliance with the terms of this Agreement, the plan review process, inspections, reporting and oversight of the construction of the Development. The compensation and other employment benefits payable to the construction manager consultant for their work relative to the Development qualifies as a charge under the Reimbursable Costs.

"As-Built" Development Plans. The Developer, at its cost, shall prepare and provide to the Development Director one (1) electronic copy of the "As-Built" Final Development Plans, with all minor modifications and in-field adjustments shown, at the time of issuance of the last occupancy permit for the final townhome unit as part of the Village's issuance of the Certificate of Completion for the Development. The "As-Built" Plans are subject to the review and approval by the Village Engineer and the Community Development Director, or their designees.

SECTION 7. CONSTRUCTION STAGING, TRAFFIC, PARKING; STREETS.

A. **Construction Staging.** The staging of construction work and materials must be in conformance with the Village-approved construction staging plan. The Developer must submit a staging plan for Village review and approval prior to the issuance of the permit for construction of the Development. The Developer shall not allow for the staging any construction equipment, materials or vehicles within the right-of-way of Park Place. The Developer shall not allow the staging of any construction equipment, materials or vehicles on the Property in a manner that creates sight-line issues for vehicle traffic traveling on Wolf Road or Park Place or Heritage Court, as determined by the Village Manager. The Developer or its any contractor, subcontractor or material supplier who violates the Village-approved construction staging plan or this subsection shall each be subject to a $750.00 per day fine for each separate violation that occurs.

B. **Designated Traffic Routes.** The Village, in consultation with the Developer, may designate routes of access to the Property for construction traffic to protect pedestrians and to minimize disruption of traffic and damage to particular streets.

C. **Parking.** All construction-related vehicles, including passenger vehicles and construction equipment, must be parked within the Property or in areas specifically designated in advance in writing by the Village. The Developer shall not allow construction-related vehicles, including passenger vehicles of employees of the Developer, contractors, subcontractors or material suppliers, to be parked on Park Place or Wolf Road during the construction of the Development. The Developer or its any contractors, subcontractors or material suppliers who violates this subsection shall each be subject to a $750.00 per day fine for each separate violation that occurs.

D. **Streets, Sidewalks, and Other Rights-Of-Way.** Any work on streets, sidewalks, and other rights-of-way related to the Development, public or private, must meet the following standards:

(i) Compliance with Plans. All work must comply with the Village-approved plans for that work.

(ii) Protection of Final Surface Course; Restoration. Except with the prior express written consent of the Village, no construction traffic may use any improved public right-of-way after installation of the final surface course of that right-of-way. If the Developer uses an improved public right-of-way for construction traffic, then the Developer must keep that right-of-way free and clear of mud, dirt, debris, obstructions and hazards, and must, after the use is no longer necessary, restore and repair that right-of-way to Village standards.

SECTION 8. DEVELOPER PAYABLE COSTS, FEES, AND EXPENSES AND ESCROW.

A. **Negotiation, Review, Inspection Fees.** In addition to all other costs, payments, fees, or other charges required by this Agreement or by the Requirements of Law or by the Village Code, the Developer must pay to the Village, promptly after receipt of a written demand or demands for payment:

(i) All reimbursable costs, fees, payments, charges, and expenses (collectively "Reimbursable Costs") for outside engineering, outside legal, outside building, and other outside consulting or administrative services incurred or accrued in connection with the review and processing of plans for the development of the Property and in connection with the negotiation, preparation, consideration, and review of this Agreement, at the standard rates charged to the Village, as required

by the Village Code. All Reimbursable Costs for which demand has been made, but payment has not been received, by the Village prior to execution of this Agreement must be made by a certified or cashier's check contemporaneous with the execution of this Agreement by the Village.

(ii) All Reimbursable Costs for inspections of the Property and the Development conducted by outside inspectors.

(iii) All Reimbursable Costs for inspections of an individual dwelling unit until issuance of a final certificate of occupancy for that unit.

(iv) All Reimbursable Costs incurred in connection with a future application, document or proposal, whether formal or informal, of whatever kind submitted by the Developer (or its successor) to the Village in connection with the Development or the use or future development of the Property.

(v) All Reimbursable Costs incurred by the Village for publications and recordings required in connection with the Development or the Property.

B. **Other Village Fees.** In addition to all other Reimbursable Costs required by this Agreement, the Developer must pay to the Village (as applicable): (i) all standard application, plan review, inspection, and permit fees, (ii) all standard water and sewer fees, tap-on fees, and charges, (iii) compensation for trees removed from public parkways or other public right-of-way, (iv) all costs for replacement trees, and (v) all other standard fees, charges, impact fees to the Village and to any other governmental agency with an impact fee ordinance and contributions pursuant to the Requirements of Law and the Village Code.

C. **Reimbursement for Village Work on Utilities.** If during construction of the Development the Developer discovers a water main, sewer main, or other utility that must be relocated to avoid conflict with the Development, then the Developer and the Village will determine how, where, and by whom the utility will be relocated and the Developer must pay all costs and expenses of that relocation.

D. **Developer Escrow.** The Developer shall maintain a "Developer Cash Escrow" with the Village for purposes of payment of the Reimbursable Costs and other costs payable to the Village by the Developer as required by this Agreement, and shall comply with the funding terms of the Developer Escrow as set forth in the Approval Ordinance and Section 9. below.

E. **Compensation for Development Impacts.** RESERVED.

SECTION 9. PERFORMANCE SECURITY.

A. **Developer Cash Escrow; Letter of Credit ("LOC").** As security to the Village for the performance by the Developer of the Developer's obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, the Developer shall deposit with the Village the following:

(i) Developer Cash Escrow. The sum of $58,000.00 cash (the "Developer Cash Escrow") shall be paid by the Developer to be held by the Village and drawn on to reimburse the Village for Reimbursable Costs incurred by the Developer described in Section 8. above. Any interest earned on the Developer Cash Escrow will be added to the escrow, but the Village is not required to cause interest to be earned. If draws on the Developer Cash Escrow reduce the balance in the Escrow to $10,000.00 or below at any time, then the Developer

must restore the Developer Cash Escrow to a level determined by the Village (but not exceeding $30,000.00) until the Certificate of Completion is issued by the Village for the Development. Any money remaining in the Developer Cash Escrow will be distributed to the Developer within sixty (60) calendar days after notice from the Developer to the Village requesting release of such funds, after issuance of the full, final certificate of occupancy for the final townhome building constructed within the Development.

(ii) Performance and Payment Letter of Credit. A performance and payment letter of credit in an amount equal to one hundred ten percent (110%) of the Infrastructure Cost Estimate (the "Performance LOC") in the form required in Subsection 9.E. below.

(iii) Condition Precedent. The deposit of the Performance LOC and the Developer Cash Escrow is a condition precedent to issuance of any permit by the Village for work on the Development.

B. **Maintenance of Performance LOC.** The Performance LOC shall be maintained and renewed by the Developer, and will be held in escrow by the Village, until completion of the Infrastructure and the Public Infrastructure, as determined by the Village, and the approval by the Village Manager and dedication to the Village of the Public Infrastructure, if any, and until the posting of the Guaranty Bonds required by Subsection 9.C. below. After the acceptance and posting of the Guaranty Bonds, the Village will release the Performance LOC and return it to the Developer.

C. **Guaranty Bonds.** As a condition of the Village's approval of the Public Infrastructure and the Village's acceptance, where appropriate, of any or all of the Infrastructure pursuant to Subsections D. and E. of this Section, the Developer must post two (2) Guaranty Bonds, in the form required by Subsection 9.E. below (each a "Guaranty Bond") as follows:

(i) General Guaranty Bond: This Guaranty Bond shall be security for the performance of the Developer's obligations under this Agreement related to Infrastructure. The General Guaranty Bond will be in the amount of ten percent (10%) of the Infrastructure Cost Estimate and will be held by the Village in escrow until the end of the two-year guaranty period set forth in Subsection 6.E. of this Agreement . or until two (2) years after any necessary modification to or correction of any defect or deficiency in a Public Infrastructure improvement pursuant to Section 6.E. above and payment therefor, whichever occurs later. At the end of the two-year guaranty period, the Village will inspect the Infrastructure to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the General Guaranty Bond, shall be retained for two-year period by the Village in accordance with this Subsection.

(ii)

Stormwater Detention Guaranty Bond: This Bond shall be security for the proper construction and operation of the Stormwater Conveyance System. The Stormwater Detention Guaranty Bond will be in the amount of ten percent (10%) of the elements of the Stormwater Conveyance System within the Infrastructure Cost Estimate and will be held by the Village in escrow for a three (3) year period after the certificate completion is issued by the Village for the Development, or for a two (2) year period after any necessary modification to or correction of any defect or deficiency in the Stormwater Conveyance System, whichever occurs later. At the end of the three-year guaranty period, the Village will inspect the Stormwater Conveyance System to verify whether any modification or corrective repair work needs to be performed, and, if such work is needed, the

Stormwater Detention Guaranty Bond , shall be retained for two-year period by the Village in accordance with this Subsection.

If the Village is required to draw on a Guaranty Bond by reason of the Developer's failure to fulfill its obligations under this Agreement, then the Developer, within twenty (20) calendar days thereafter, must cause the Guaranty Bond to be increased to its full original amount. "Developer Security" shall consist of the Developer Cash Escrow, the Performance LOC the General Guaranty Bond and the Stormwater Detention Guaranty Bond.

D. **Costs of Developer Security.** The Developer is responsible for the full cost of securing and maintaining the Developer Cash Escrow, the Performance LOC and the Guaranty Bonds.

E. **Forms of Letters of Credit.** The Performance LOC and the Guaranty Bonds must be in substantially the forms attached to this Agreement as **Exhibit "H",** with minor revisions as may be requested by the issuer and approved by the Village Attorney. Each letter of credit also must be from a bank having capital resources of at least $25,000,000, with an office in the Chicago Metropolitan Area or other location acceptable to the Village and insured by the Federal Deposit Insurance Corporation. Each letter of credit must, at a minimum, provide that: (i) it will expire no earlier than the later of two (2) years after the date of its issuance or thirty (30) calendar days after delivery to the Village, in the manner provided in Subsection 9.G. below, of written notice that the letter of credit will expire, (ii) it may be drawn on based on the Village Manager's certification that the Developer has failed to fulfill any of the obligations secured by the letter of credit, (iii) it does not require the consent of the Developer prior to any draw on it by the Village, (iv) it cannot be canceled without the prior written consent of the Village, and (v) if at any time it will expire within thirty (30) or any lesser number of calendar days, and if it has not been renewed, and if any obligation of the Developer secured by the letter of credit remains uncompleted or unsatisfactory, then the Village may call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all Developer obligations or employ the proceeds to complete all obligations and to reimburse the Village for any and all costs and expenses, including legal fees and administrative costs, incurred by the Village in connection therewith, as the Village may determine.

After completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, and after reimbursement of the Village for all costs and expenses incurred by the Village, including without limitation legal fees and administrative costs, then the Village will release to the Developer any proceeds remaining on deposit with the Village drawn from the Performance LOC and return the Performance LOC to the Developer. The Performance LOC will provide that the aggregate amount of the Performance LOC may be reduced once, upon joint written direction by the Developer and the Village, to the amount of twenty-five percent (25%) of the Infrastructure Cost Estimate when Infrastructure totaling seventy-five percent (75%) of Infrastructure Cost Estimate have been completed and accepted by the Village. The reduction to reimburse the Developer for payment of Infrastructure Improvement work satisfactorily completed will be allowed only after the Developer has provided certified contractors' sworn statements, certified schedule of values, partial or final waivers of lien, proof of payment of contractors and subcontractors, bank statements, etc., as may be appropriate, and all additional documentation as the Village may reasonably request to demonstrate satisfactory completion of the Infrastructure Improvement in question and full payment of all contractors, subcontractors, and material suppliers.

The Guaranty Bonds shall not be reduced to reimburse the Developer for any cost incurred in satisfaction its obligations under Section 8. or Section 9. of this Agreement.

F. **Replenishment of Developer Security.** If at any time the Village reasonably determines that the funds remaining in the Developer Cash Escrow or the Performance LOC or a Guaranty Bond are not sufficient to pay in full the remaining unpaid cost of all Infrastructure and all unpaid or reasonably anticipated Village costs, fees, and expenses, or that the funds remaining in a Guaranty Bond are not, or may not be, sufficient to pay all unpaid costs of correcting any and all defects and deficiencies in the Public Infrastructure and all unpaid or reasonably anticipated Village fees, costs, and expenses, then, within twenty (20) calendar days after a demand by the Village, the Developer must increase the amount of the Developer Cash Escrow or the Performance LOC or a Guaranty Bond to an amount, as determined by the Village Engineer, to be sufficient to pay unpaid costs, fees, and expenses. Failure by the Developer to increase the amount of the Developer Security will be grounds for the Village to retain any remaining balance of the Developer Cash Escrow and to receive the proceeds of, or to draw down, as the case may be, the entire remaining balance of the Performance LOC or a Guaranty Bond.

On completion of the Developer's obligations to construct and complete the Infrastructure pursuant to and in accordance with this Agreement, and after reimbursement of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village, then the Village will release to the Developer any remaining funds in the Developer Cash Escrow and any proceeds remaining on deposit with the Village from the Performance LOC or a Guaranty Bond and will return the letters of credit to the Developer.

G. **Use of Funds in the Event of Breach of Agreement**. If the Developer, after all required notices and cure periods under this Agreement have been provided, fails or refuses to complete the Infrastructure in accordance with this Agreement, or fails or refuses to correct any defect or deficiency in the Public Infrastructure as required by Section 6 above or this Section 9, or fails or refuses to clean or repair property in accordance with a demand made pursuant to Subsection 5.E. or Subsection 7.D.(ii) of this Agreement, or fails or refuses to pay any amount pursuant to Section 8. above within five (5) business days after demand by the Village, or in any other manner fails or refuses to meet fully any of its obligations under this Agreement secured by a letter of credit, then the Village, in its discretion and after a delivery of a 5-day notice to the Developer and the Developer's failure to cure its failure or refusal within that 5-day period, may retain all or any part of the Developer Cash Escrow and/or draw on and retain all or any of the funds remaining in the appropriate letter of credit.

The Village thereafter will have the right to exercise its rights under Subsection 5.E. above and under this Subsection 9.G., to take any other action it deems reasonable and appropriate to mitigate the effects of any failure or refusal, and to reimburse itself from the proceeds of the Developer Cash Escrow and the appropriate letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the Developer's failure or refusal to fully meet its obligations under this Agreement.

If the funds remaining in the Developer Cash Escrow or the appropriate letter of credit are insufficient to repay fully the Village for all costs and expenses, and to maintain a cash reserve equal to a required Guaranty LOC during the entire time the Guaranty LOC should have been maintained by the Developer, then the Developer, on demand of the Village therefor, must immediately deposit with the Village any additional funds as the Village reasonably determines are necessary to fully repay such costs and expenses and to establish such cash reserve.

After: (i) completion of the Developer's obligations to construct and complete the Infrastructure in accordance with this Agreement, (ii) correction of all defects and deficiencies in the Public Infrastructure as required by Subsection 6.E. above, (iii) repair of property in accordance with a demand made pursuant to Subsection 5.E. above, (iv) payment of all amounts demanded by the Village pursuant to this Section 9, (v) compliance with all other terms of this Agreement secured by a letter of credit, and (vi) reimbursement

of the Village for all fees and all costs and expenses, including legal fees and administrative costs, incurred by the Village; then the Village will release to the Developer any remaining Developer Cash Escrow and any proceeds remaining on deposit with the Village from any letter of credit and return the letter of credit to the Developer.

H. **Village Lien Rights.** If any money, property, or other consideration due from the Developer to the Village pursuant to this Agreement is not either recovered from the performance security deposits required in this Section 9. or paid or conveyed to the Village by the Developer within thirty (30) calendar days after a demand for payment or conveyance, then the money, or an amount equal to the Village's reasonable estimate of the value of the property or other consideration, together with interest and costs of collection, including legal fees and administrative expenses, will become a lien upon the Property and the Village will have the right to collect the amount or value, with interest and costs, including legal fees and administrative expenses, and the right to enforce the lien in the same manner as in statutory mortgage foreclosure proceedings.

SECTION 10. INFRASTRUCTURE SSA.

The Village will establish a special service area (the "Private Infrastructure SSA"), the boundaries of which will include all of the Property. The purpose of the Private Infrastructure SSA is to generate funds (the "Private Infrastructure SSA Tax Fund") that the Village may use to provide the special services of maintaining the Private Infrastructure if the Developer fails at any time to properly maintain the Private Infrastructure. The Private Infrastructure SSA will authorize the levy of a special service area tax from time to time on the Property to establish, replenish, and maintain the Private Infrastructure SSA Tax Fund sufficiently to pay for the special services only if the Developer or the homeowners association fails to pay for such services. The Village may from time to time levy the special service tax to replenish the Private Infrastructure SSA Tax Fund in a dollar amount, as determined by the Corporate Authorities of the Village, in their sole discretion, as reasonably necessary to pay for any special services. The Village will not levy a special service tax for collection prior to the issuance of a Certificate of Completion for the Development. The Developer approves, and agrees not to object to, the establishment of the Private Infrastructure SSA as provided in this Section 10 and the levying and expending the Private Infrastructure SSA Funds by the Village, at the Corporate Authorities of the Village's sole discretion, consistent with this Section 10. Nothing regarding the Private Infrastructure SSA will compel or require the Village to provide special services or to levy the SSA tax. The obligation to maintain the Private Infrastructure rests entirely and in perpetuity on the Developer as provided in Subsection 6.N . of this Agreement.

SECTION 11. LIABILITY AND INDEMNITY OF VILLAGE.

A. **No Village Liability.** The Developer acknowledges and agrees that the Village is not, and will not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of: (i) the Village's review and approval of any plan or specification provided by the Developer or the Developer's representatives for the Development; or (ii) the issuance of any approvals, permits, certificates, or acceptances for the Development or use of the Property and that the Village's reviews, approvals, and issuances do not, and will not in any way, be deemed to insure the Developer or any of its transferees, successors-in-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property, and or any other person, and each and all homeowners associations or their equivalent within the Property, against damage or injury of any kind at any time.

B. **Village Procedures.** The Developer agrees not to challenge the Village's approval of this Agreement or of the Approval Ordinance or any other Village approved document that relates to the Development.

C. **Indemnification.** The Developer acknowledges that the accuracy and sufficiency of the Developer's Development Plans and related specifications for the Development are entirely the responsibility of the Developer and are not the responsibility of the Village, regardless of whether the Village reviews or approves the Developer's Development Plans and related specifications for apparent consistency with the Village's codes. The Developer agrees to indemnify the Village and all Village elected or appointed officials, officers, employees, agents, representatives, engineers, and attorneys (collectively the "Indemnitees") from any and all third party claims and causes of action of any kind that may be asserted at any time against the Village and any of the Indemnitees in connection with: (i) any design defect in the Developer's Development Plans and related specifications for the Development or any Infrastructure, regardless of the Village's review and approval of any Developer Development Plans or related specification for the Development or the Infrastructure or the Village's issuance of any approval, permit, certificate, or acceptance for the Development based on the apparent consistency of any Developer Development Plans or related specification for the Development or any Infrastructure Improvement; or (ii) the design, development, construction, maintenance, or use of any portion of the Property or the Infrastructure (each a "Claim" and collectively "Claims"). This indemnity does not apply or extend to any matter concerning maintenance by the Village of any Public Infrastructure after that Public Infrastructure has been accepted by the Village in accordance with this Agreement D.

D. **Defense Expenses.** The Developer agrees to pay all reasonable expenses, including without limitation attorney fees, litigation defense fees and costs, consultant fees and administrative expenses incurred by the Village in examining and tendering the defense of any Claim to the Developer in accordance with Subsection 11.C. above. The Village must promptly notify the Developer in writing of any Claim.

SECTION 12. BINDING NATURE OF AGREEMENT.

The obligations assumed by the Developer under this Agreement are binding on the Developer, on all of the Developer's transferees, successors-interest, all legal or beneficial owners of record, assigns, tenants, licensees and all subsequent owners of the Property or any part of the Property and each and all homeowners associations or their equivalent within the Property.

SECTION 13. TERM.

This Agreement will run with and bind the Property as long as the Development and its homeowners association continues to exist and operate, and will inure to the benefit of and be enforceable by the Developer, the homeowners association and the Village.

SECTION 14. ENFORCEMENT.

Either Party to this Agreement may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding including without limitation specific performance, except that the Developer agrees that it will not seek, and does not have the right under any circumstances to seek, to recover a judgment against any Village elected or appointed official, officer, employee, agent, representative, engineer, or attorney on account of the negotiation, execution, or breach of this Agreement.

In addition to every other remedy permitted by law for the enforcement of the terms of this Agreement, the Village will be entitled to withhold the issuance of a building permit or a certificate of occupancy for work or occupancy within the Property at any time when the Developer has failed or refused to comply with a material obligation under this Agreement and has not, after the required notices stated herein, cured that failure or refusal within the cure periods, if any, allowed for that failure or refusal.

A. **Compliance with Laws.** The Developer agrees to comply with all applicable laws, rules and regulations of any federal, State or local entity or agency relating to the Development. The Developer will not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex or national origin. To the fullest extent permitted by law, the Developer will take affirmative action to ensure that applicants are employed and treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rate of pay or other forms of compensation, and selection for training, including apprenticeship.

B. **Conflict of Interest and Prohibited Interest Disclosures.** Upon the Village's request from time to time during the Term of this Agreement, the Developer will provide a list of all entities owning a greater than one percent (1%) interest in the Developer. Based in part on the information provided by the Developer and in part on information from the Village's independent investigation, the Village will affirm that its Corporate Authorities, and all appropriate Village elected and appointed officials, officers, employees, agents and representatives of the Village, have or will comply with the disclosure and conflict-of-interest provisions of the Public Officer Prohibited Activities Act (50 ILCS 105/3), the TIF Act (65 ILCS 5/11-74.4-4(n)) and the Illinois Governmental Ethics Act (5 ILCS 420). Upon the Village's request, the Developer shall provide the Village with all information required for compliance with the annual TIF report that the Village is required to file with the State of Illinois Comptroller or any such similar financial information, and required for the Village to comply with any disclosure and transparency ordinance or law enacted by the State of Illinois or DuPage County. In addition, the Developer shall provide, on an annual basis, the information required by the TIF Act.

C**.** **Successors and Assigns.** The Developer shall be liable for all of the Developer's obligations under this Agreement. All obligations assumed by the Developer under this Agreement shall be binding on the Developer, and on any and all of the Developer's successors and assigns, and on any and all of the respective successor owners of all or any portion of the Property. To assure that the Developer's successors, assigns and successor owners of all or any portion of the Property have notice of this Agreement and the obligations created by it, the Developer shall:

1. Deposit with the Village Clerk, within thirty (30) calendar days after the Acquisition Date, any consents or other documents necessary to authorize the Village to record a Memorandum of this Agreement, in form and substance reasonably acceptable to the Developer and the Village, in the Office of the Recorder of Deeds of Cook County, Illinois;
2. Notify the Village in writing at least thirty (30) calendar days prior to any date that the Developer intends to transfer fee title to any portion of the Property to any person not a party to this Agreement;
3. Include in the Restrictive Covenant a memorandum or other similar reference(s) to this Agreement sufficient to put third parties on notice of the existence of this Agreement; and

4. Require, prior to the transfer of all or any portion of the Property to any person or entity not a Party to this Agreement that occurs prior to the Substantial Completion Date, the transferee to execute an enforceable written assignment and assumption agreement, in form and substance reasonably approved by the Village Attorney (the "**Transferee Assignment and Assumption Agreement**"), agreeing to be bound by this Agreement and to provide the Village, after request, with reasonable assurance of the financial ability of the transferee to meet any remaining obligations under this Agreement. The Village and the Developer shall record against the Property a memorandum of this Agreement that obligates the owner of the Property from time to time to perform the obligations of the Developer under this Agreement and shall require notice to the Village of any transfer of the Property, which memorandum shall be in form and substance reasonably satisfactory to the Village and the Developer.

The Village agrees that, after a successor becoming bound to the obligations of the Developer created in the manner provided in this Agreement, and providing the financial assurances required in this Section, the liability of the Developer shall be deemed automatically released. The failure of the Developer to provide the Village with a fully executed copy of a Transferee Assignment and Assumption Agreement before completing the transfer shall result in the Developer remaining fully liable for all of the Developer's obligations under this Agreement, but shall not relieve the transferee of its liability for those obligations as a successor to the Developer.

D. **Representations and Warranties of the Developer.**

1. No Gifts. The Developer covenants that no officer, member, manager, stockholder, employee or agent of the Developer, or any other person connected with the Developer, have made, offered or given, either directly or indirectly, to any member of the Corporate Authorities, or any officer, employee or agent of the Village, or any other person connected with the Village, any money or anything of value as a gift or bribe or other means of influencing his or her action in his or her capacity with the Village.
2. Assignment. The Developer may not assign or transfer some or all of its rights or obligations under this Agreement without the prior written consent of the Village, the granting or denial of which consent shall be in the sole discretion of the Village; provided, however, that, without the Village's prior consent, the Developer may assign this Agreement to an entity controlling, controlled by, or under common control with the Developer and/or assign or collaterally assign any of the Developer's rights and/or obligations to the Lender.
3. Prevailing Wage. The Developer and its contractors and subcontractors are required to pay prevailing wages for all or portions of the Development work only if the Illinois Prevailing Wage Act (820 ILCS 130/) (the "IPWA") requires payment of prevailing wages.
4. Property Acquisition. The Developer shall provide the Village with sufficient documentation regarding Developer's ownership of the Property for the Development.
5. Corporate Authorization. This Agreement has been submitted for consideration and review by the board of directors, corporate officers, shareholders, members and/or managers of the Developer, and the Developer's board of directors, corporate officers, shareholders, members and/or managers have taken all

actions required to be taken prior to the execution of this Agreement in order to make the same binding upon the Developer according to the terms hereof, and any and all actions of the Developer's board of directors, corporate officers, shareholders, members and/or managers, as the case may be, precedent to the execution of this Agreement have been undertaken and performed in the manner required by law.

Agreement shall be deemed to be the agreement of any official, agent, employee, consultant or attorney of the Village, in their individual capacity, and no official, employee or attorney of the Village shall be liable personally under this Agreement or be subject to any personal liability or accountability by reason of or in connection with or arising out of the execution, delivery and performance of this Agreement, or any failure in connection therewith.

SECTION 15. INSURANCE AND INDEMNIFICATION.

A. Liability Insurance Prior to Completion. Prior to issuance of Permits, the Developer shall procure and deliver evidence of such policies to the Village, at the Developer's cost and expense, and shall maintain in full force and effect during any period of construction and through completion of construction of the Development, for both ongoing and completed operations, the following types of insurance, written on the comprehensive form and as an "occurrence" policy, in not less than the following amounts:

1. Commercial General Liability Insurance (including property damage insurance): $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
2. Contractor's Liability Insurance: $1,000,000.00 per occurrence and $2,000,000.00 in the aggregate.
3. Automobile Insurance: $1,000,000.00 per occurrence and $1,000,000.00 in the aggregate.
4. Umbrella Coverage or Excess Liability Coverage: $5,000,000.00 in the aggregate.
5. Workers Compensation Insurance: Statutory Amount.

Said insurance shall state that the insurance provided by the Developer shall be primary and that any provision of any contract of insurance or other risk protection benefit or self-insurance policy purchased or in effect or enacted by the Village and any other insurance or benefit of the Village shall be in excess of the Developer's insurance. All such policies shall be in such form and issued by such companies as shall be reasonably acceptable to the Village. Each such policy, including any related insurance certificates, endorsements and riders, shall expressly name "the Village of Western Springs and its appointed and elected officials, mayor and trustees, employees, engineers, attorneys, agents and representatives" as additional insureds.

Prior to commencement of construction of the Development, the Developer shall furnish to the Village the above-required certificates of insurance, policies, riders and policy endorsements, with premiums paid in full that contain the insurer(s) written confirmation that the nature, scope, duration and amount of insurance coverage meets the requirements of this Agreement and shall remain in effect for all aspects of the Development for both ongoing and completed operations. The Developer shall provide the Village with satisfactory proof of the above insurance requirements in the form of a certificate executed by an insurer with no less than an A rating by the most recent "AM Best Insurance Rating Guide."

The Village shall be given written notice at least thirty (30) calendar days prior to any cancellation or material amendment of the Developer's insurance policies required hereunder. Alternatively, the Developer may satisfy its insurance obligations in this **Subsection 15.A.** by way of a blanket policy or policies, which includes other liabilities, properties and locations meeting the minimum insurance coverage amounts. The Developer shall provide to the Village a replacement certificate prior to expiration, cancellation or material modification of any policy.

B. Developer's Risk Prior to Completion. Prior to completion of the construction of the Development, as certified by the Village, the Developer shall keep in force at all times builders risk insurance or similar insurance coverage, on a completed value basis, in non-reporting form, against all risks of physical loss, including collapse, covering the total value of work performed and equipment, supplies and materials furnished for the Development (including on-site stored materials), all as to work by the Developer. Such insurance policies shall be issued by companies satisfactory to the Village. The Developer shall provide written notice to the Village at least twenty-one (21) calendar days before any such policy is cancelled or materially modified.

C. Village Review. The Developer acknowledges and agrees that, except for breaches of this Agreement by the Village, the Village is not, and shall not be, in any way liable for any damages or injuries of any kind that may be sustained as the result of the Village's review, approval or denial of any plans or failure to review any plans for the Property or the Development, or the issuance of any approvals, permits, certificates or acceptances for the development or use of the Property or the Development, and that the Village's review and approval of those plans and the Development and issuance of those approvals, permits, certificates or acceptances does not, and shall not, in any way be deemed to insure the Developer, or any of its heirs, successors, assigns, tenants, invitees and licensees, or any other person, against damage or injury of any kind at any time.

D. Village Procedure. The Developer has been advised by the Village that notices, meetings and hearings have been properly given and held by the Village with respect to the approval of this Agreement, and the Developer agrees not to challenge the Village's approval of this Agreement on the grounds of any procedural infirmity or of any denial of any procedural right.

E. Indemnity and Defense Expense. The Developer undertakes and assumes all potential liability for any injuries, deaths, losses, damages, claims or judgments of any nature whatsoever resulting from or in connection with its/their redevelopment activities at the Property, and the Developer shall hold harmless, indemnify and defend the Village against any such losses, except to the extent that the same is caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives, or by the breach of this Agreement by the Village.

1. Developer Defense Expense. The Developer shall, and does, agree to pay all reasonable expenses incurred by the Village, the Village's Corporate Authorities, and all Village elected and appointed officials, officers, employees, agents, contractors and representatives in defending against any and all claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties of any kind that may, at any time, be asserted against any of the Parties by any person(s) in connection with the Development, the approval of this Agreement, any terms or provisions of this Agreement, or the Developer's duties, obligations and performance under this Agreement, including, without limitation, any claims, demands, causes of action, investigations, lawsuits, proceedings, liabilities, actions or penalties related to or associated with environmental conditions, matters or contaminants concerning or relating to the Property, in each case,

except to the extent caused by the negligence or willful misconduct of the Village or its elected and appointed officials, officers, employees, agents, contractors and representatives. These expenses shall include, without limitation, all reasonable out-of-pocket expenses, such as attorneys' and experts' fees and other litigation costs.

2. Mutual Indemnification. Each Party shall indemnify, hold harmless and defend the other Party and their respective officers, employees, agents, contractors and representatives against all injuries, deaths, losses, damages, claims, suits, liabilities, liens, including mechanic's liens, judgments, costs and expenses, including reasonable attorney fees, which may in any way arise from or accrue against the other Party as a consequence of this Agreement or which may in any way result therefrom, other than those indemnified matters which arise from or relate to the negligence or willful misconduct of the other Party or its officials, officers, employees, agents, contractors and representatives. The provisions of this Subsection and any other indemnification obligations on the part of either Party shall survive the termination or expiration of this Agreement for a period of two (2) years. In any such action against either Party, the other Party shall, at its own expense, appear, defend and pay all charges of reasonable attorney fees and all reasonable costs and other reasonable expenses arising therefrom or incurred in connection therewith; and, if any judgment shall be rendered against the Party in any such action, the other Party shall, at its own expense, satisfy and discharge such judgment. The prevailing Party shall indemnify the other Party for any costs, including reasonable attorney fees, in enforcing the provisions of this Agreement.

SECTION 16. DEFAULT; CURE.

In addition to any other "Event of Default" identified in this Agreement, an "**Event of Default**" shall mean a failure on the part of either Party to comply with any material term, representation, warranty, covenant, agreement or condition of this Agreement, which failure is not cured within thirty (30) calendar days after written notice thereof; provided, however, if the failure is of a nature that it cannot be cured within thirty (30) days, then the defaulting Party shall have such additional time as is reasonably necessary to cure such failure so long as the defaulting Party commences activities designed or intended to cure such Event of Default within such thirty (30) calendar day period and thereafter diligently pursues activities designed or intended to cure such Event of Default to completion. Upon an Event of Default by the Village in the performance of any of its obligations under this Agreement, the Developer's remedies shall include specific performance (including statutory interest on any sums deemed to be improperly withheld), and any and all rights and remedies available to the Developer at law or in equity, including termination of this Agreement. The Village shall not be liable for punitive damages, consequential damages or lost profits. Upon an Event of Default by the Developer in the performance of any of its obligations under this Agreement, the Village shall be entitled to take such action as authorized by this Agreement and pursue any other remedies available at law or in equity; provided, however, that the Developer shall in no event be liable for punitive or consequential damages. Notwithstanding anything to the contrary in this Agreement, the Developer's defaults, and the Village's remedies upon such defaults, described in **Subsections 3.A.** and **5.E.** and shall be only as expressly set forth in **Subsection 3.A.** and **5.E.**, respectively.

SECTION 17. GENERAL PROVISIONS.

A. **Notice.** Any notice or communication required or permitted to be given under this Agreement shall be in writing and shall be delivered: (i) personally; (ii) by a reputable overnight

courier; (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid; or (iv) by electronic internet mail ("Email"). Email notices shall be deemed valid only to the extent that they are: (a) opened by the recipient on a business day at the address set forth below; and (b) followed by delivery of actual notice in the manner described in either (i), (ii) or (iii) above within three (3) business days thereafter at the appropriate address set forth below. Unless otherwise provided in this Agreement, notices shall be deemed received after the first to occur of: (a) the date of actual receipt; or (b) the date that is one (1) business day after deposit with an overnight courier as evidenced by a receipt of deposit; or (c) the date that is three (3) business days after deposit in the U.S. Mail, as evidenced by a return receipt. By notice complying with the requirements of this **Subsection 17.A.**, each Party to this Agreement shall have the right to change the address or the addressee, or both, for all future notices and communications to them, but no notice of a change of addressee or address shall be effective until actually received.

Notices and communications to the Village shall be addressed to, and delivered at, the following addresses:

Ellen Baer Village Manager Village of Western Springs 740 Hillgrove Avenue Western Springs, Illinois 60558 Direct: 708.246.1800 Email: ebaer@wsprings.com	With a copy to: Michael T. Jurusik, Esq. Klein, Thorpe and Jenkins, Ltd. 900 Oakmont Lane, Suite 301 Westmont, Illinois 60559 Cell Number: 708.638.0355 Email: mtjurusik@ktjlaw.com

Notices and communications to the Developer shall be addressed to, and delivered at, the following addresses:

Paul McNaughton McNaughton Development, LLC 11S220 Jackson Street Burr Ridge, Illinois 60527 Direct: 630.325.4048 Email: pmcnaughton83@yahoo.com	With a copy to: James E. Olguin, Esq. 16101 South 108th Avenue, 1st Floor Orland Park, Illinois 60467 Direct: 630.403.8003 Email: jim@olguinlawllc.com

B. **Time of the Essence.** Time is of the essence in the performance of this Agreement.

C. **Rights Cumulative.** Unless expressly provided to the contrary in this Agreement, each and every one of the rights, remedies and benefits provided by this Agreement shall be cumulative and shall not be exclusive of any other rights, remedies and benefits allowed by law.

D. **Non-Waiver.** The Village shall be under no obligation to exercise any of the rights granted to it in this Agreement. The failure of the Village to exercise at any time any right granted to the Village shall not be deemed or construed to be a waiver of that right, nor shall the failure void or affect the Village's right to enforce that right or any other right.

E. **Consents**. Unless otherwise provided in this Agreement, whenever the consent, permission, authorization, approval, acknowledgement, or similar indication of consent of any Party to this Agreement, or of any duly authorized officer, employee, agent, or representative of any Party to this Agreement, is required in this Agreement, the consent, permission, authorization, approval, acknowledgement, or similar indication of consent will be in writing. The Property Owner has further

executed a "Written Consent of the Property Owner" to allow the Developer to enter into this Agreement, a copy of which is attached hereto as **Exhibit "I"** and made a part hereof.

F. **Facilitation of Agreement**. The Village and the Developer will act in good faith and in a reasonable and cooperative manner with respect to consents, approvals, and other matters contemplated under this Agreement. No consent or approval may be unreasonably delayed, conditioned, or withheld. The Village and the Developer will execute, acknowledge, and deliver reasonable documents and other instruments necessary to fully carry out the terms of this Agreement.

G. **Governing Law.** This Agreement shall be governed by, and enforced in accordance with, the laws of the State of Illinois.

H. **Severability.** It is the intent of the Parties that, should any provision, covenant, agreement or portion of this Agreement or its application to any person or property be held invalid by a court of competent jurisdiction, the remaining provisions of this Agreement and the validity, enforceability and application to any person or property shall not be impaired thereby, but the remaining provisions shall be interpreted, applied and enforced so as to achieve, as near as may be, the purpose and intent of this Agreement to the greatest extent permitted by applicable law.

I. **Entire Agreement.** This Agreement constitutes the entire agreement between the Parties and supersedes any and all prior agreements and negotiations between the Parties, whether written or oral, relating to the subject matter of this Agreement.

J. **Interpretation.** This Agreement shall be construed without regard to the identity of the Party who drafted the various provisions of this Agreement. Moreover, each and every provision of this Agreement shall be construed as though all Parties to this Agreement participated equally in the drafting of this Agreement. As a result of the foregoing, any rule or construction that a document is to be construed against the drafting Party shall not be applicable to this Agreement.

K. **Amendments and Modifications.** No amendment or modification to this Agreement shall be effective until it is reduced to writing and approved and executed by all Parties to this Agreement in accordance with all applicable statutory procedures.

L. **Authority to Execute.** The Village warrants and represents to the Developer that the persons executing this Agreement on its behalf have been properly authorized to do so by the Corporate Authorities of the Village. The Developer warrants and represents to the Village that: (i) the Developer has the full and complete right, power and authority to enter into this Agreement and to agree to the terms, provisions and conditions set forth in this Agreement and to bind the Property as set forth in this Agreement; (ii) all legal actions needed to authorize the execution, delivery and performance of this Agreement by the Developer have been taken; and (iii) neither the execution of this Agreement nor the performance of the obligations assumed by the Developer will: (a) result in a breach or default under any agreement to which the Developer is a party or to which it or the Property is bound; or (b) violate any statute, law, restriction, court order or agreement to which the Developer or the Property are subject.

M. **No Third-Party Beneficiaries/No Joint Venture.** Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any other entity other than the Village and the Developer, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third persons to either the Village or the Developer, nor shall any provision give any third parties any rights or subrogation or action over or against either the

Village or the Developer. This Agreement is not intended to and does not create any third-party beneficiary rights whatsoever. Nothing in this Agreement, or any actions of the Parties to this Agreement, shall be construed by the Parties or any third-party person to create the relationship of a partnership, agency or joint venture between or among such Parties.

N. **Force Majeure**. Either Party will be temporarily excused from the performance of its obligations under this Agreement when and to the extent the non-performing Party's performance is delayed or prevented by any circumstances beyond the non-performing Party's control, including but not limited to fire, flood, explosion, epidemic, pandemic, strikes or other labor disputes, acts of God or public emergency, war, rioting, malicious damage, acts or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment or service from a public utility needed for their performance or action or omission of the other Party (collectively, "Force Majeure"), provided that:

a. The non-performing Party gives the other Party reasonably prompt written notice describing the particulars of Force Majeure including, but not limited to, the nature of the occurrence, and continues to furnish timely reports with respect thereto during the period of Force Majeure;
b. The excuse of performance is of no greater scope and of no longer duration than is required by Force Majeure;
c. No obligations of either Party that arose before Force Majeure causing the excuse of performance are excused as a result of Force Majeure; and
d. The non-performing Party uses commercially reasonable and diligent efforts to remedy its inability to perform.

Economic hardship or other financial considerations, including but not limited to increases in the costs of construction materials, equipment or construction labor, of the Developer will not constitute an event of Force Majeure.

O. **Counterparts.** This Agreement may be executed in counterparts, each of which shall constitute an original document, which together shall constitute one and the same instrument.

P. **Enforcement of Agreement.** The provisions of this Agreement shall be enforceable in any action in law or in chancery. The Parties hereto agree that any legal action to enforce any right or obligation contained in or arising out of this Agreement shall be brought in the Circuit Court of Cook County, Illinois.

Q. **Exhibits.** The following Exhibits are attached hereto and made a part hereof or incorporated herein by reference and made a part hereof:

Exhibit "A":	Site Plan for the Development, Revised as of January 27, 2025 (attached)
Exhibit "B":	"Approval Ordinance": Western Springs Ordinance No. 25-_____ approving a Conditional Use Permit for Planned Development for the Construction and Operation of the Development with Conditions (attached)
Exhibit "C":	Legal Description of the Property (attached)
Exhibit "D":	Final Development Plans (to be attached after Village Board approval)
Exhibit "E":	Construction Schedule (attached)
Group Exhibit "F":	**Confidential** Developer Letter of funding sources for completion of the Development and Supporting Submittals and Developer's Lender's

	Financing Commitment Letter issued by _____ Bank and dated _____, 2025 (not attached; on file with the Village Clerk's Office)
Exhibit "G":	Operations and Maintenance Manual and Specifications and Maintenance Schedule for Stormwater Conveyance System
Exhibit "H":	Forms of Letters of Credit (attached)
Exhibit "I":	Written Consent of the Property Owner to Allow Developer to Enter into Redevelopment and Maintenance Agreement (attached)

In the event of a conflict between an Exhibit and the text of this Agreement, the text of this Agreement shall control.

R. **Estoppels.** Within ten (10) business days following request by either Party from time to time, the other Party shall execute and deliver to the requesting Party an estoppel certificate that certifies: (i) that this Agreement is unmodified and in full force and effect or, if there had been modifications, that this Agreement is in full force and effect as modified, (ii) that the Party is not in default of this Agreement or specifying any defaults, and (iii) such other information that may be reasonably requested by the Party.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates set forth below, and the date of the last signatory below shall be inserted on page 1 of this Agreement, as the Effective Date of this Agreement.

McNaughton Development, LLC,
A limited liability company

By:_____
Paul McNaughton
Member

Date:_____

ATTEST:

By:_____

Name:_____

Title:_____

Date:_____

VILLAGE OF WESTERN SPRINGS ,
an Illinois municipal corporation

By:_____
Heidi Rudolph
Village President

Date:_____

ATTEST:

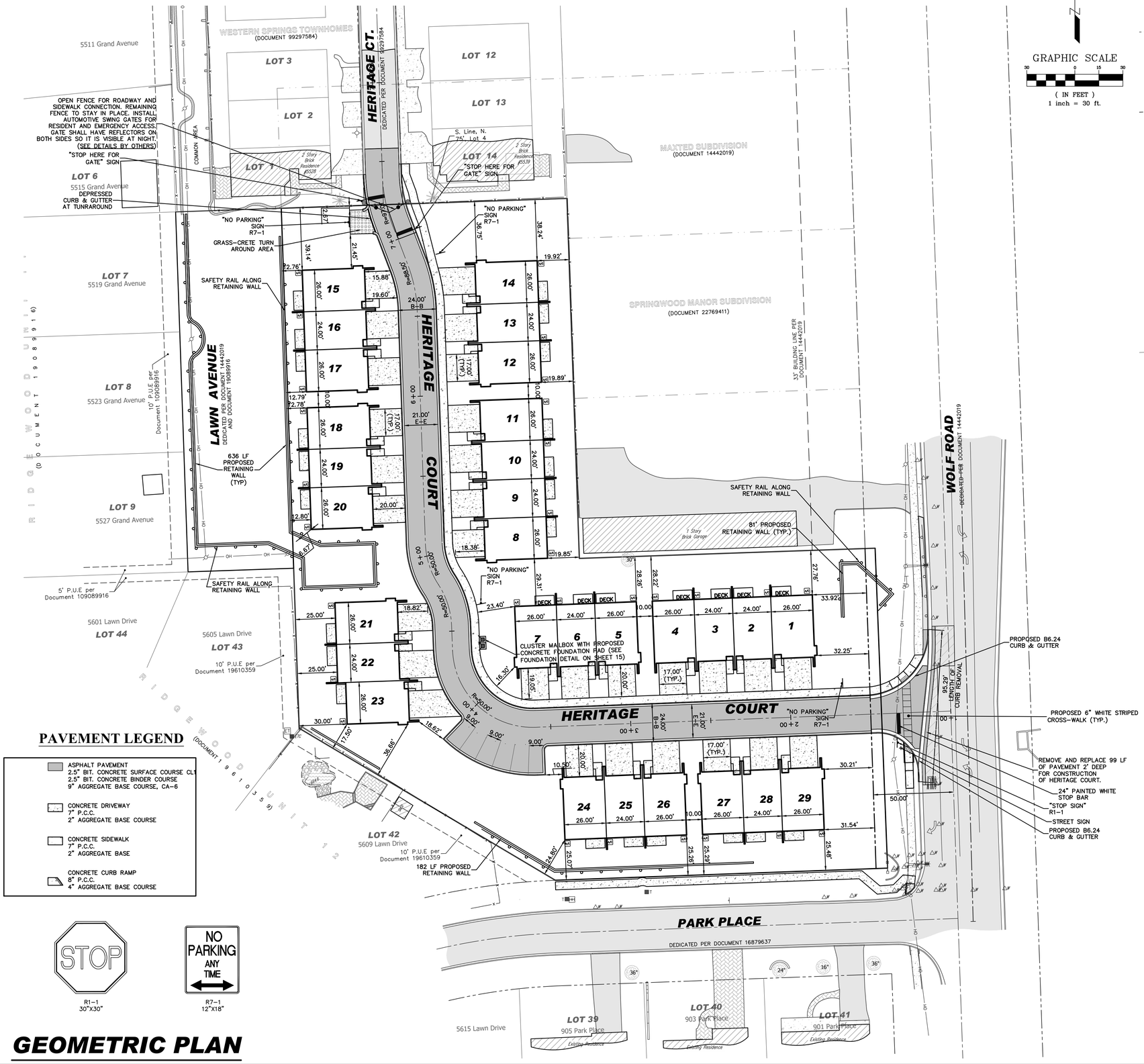
By:_____
Edward Tymick
Village Clerk

Date:_____

Exhibit "A"

Site Plan for the Development,
Revised as of January 27, 2025

(attached)



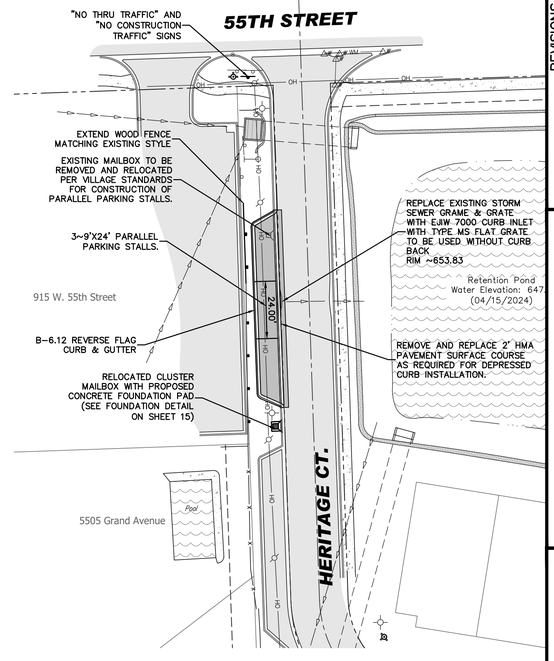
PAVEMENT LEGEND

- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

R1-1
30"X30"

R7-1
12"X18"

GEOMETRIC PLAN



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSPRINGS REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

7
OF
20

GEOMETRIC PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date:1/27/2025 2:45:05 PM By:dvanh

Exhibit "B"

"Approval Ordinance": Western Springs Ordinance No. 25-_____

ORDINANCE APPROVING A MAP AMENDMENT TO REZONE THE 5600 SOUTH WOLF ROAD PROPERTY, WESTERN SPRINGS, ILLINOIS, FROM THE O – LIMITED OFFICE ZONING DISTRICT TO THE R4 - MULTIPLE-FAMILY RESIDENCE DISTRICT; APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT FOR THE CONSTRUCTION AND OPERATION OF THE PROPOSED 29 UNIT HERITAGE CROSSING TOWNHOME DEVELOPMENT LOCATED AT THE 5600 SOUTH WOLF ROAD PROPERTY, INCLUDING THE APPROVAL OF THE COMBINED PRELIMINARY / FINAL DEVELOPMENT PLANS, SUBJECT TO VILLAGE PLAN REVIEW PROCESS, AND APPROVAL OF CERTAIN DEVELOPMENT ALLOWANCES, EXCEPTIONS AND VARIATIONS FROM THE VILLAGE ZONING REGULATIONS, INCLUDING A WAIVER OF THE FIVE (5) ACRE MINIMUM LOT AREA REQUIREMENT AND A REDUCTION OF CERTAIN PLANNED DEVELOPMENT SUBMISSION REQUIREMENTS

(attached)

Exhibit "C"

Legal Description for 5600 South Wolf Road, Western Springs, Illinois.

PARCEL 1: THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

Legal Description for the Lawn Avenue ROW Parcel:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PINS: 18-18-200-017-0000
18-18-200-038-0000
18-18-200-001-0000 (Lawn Avenue ROW Parcel)

(attached)

Exhibit "D"

Final Development Plans

(To be attached and incorporated herein
after Village Board approval)

Group Exhibit A

GENERAL INFORMATION APPLICATION
For Land Use and
Development in the Village

Applicant(s)

Name: McNaughton Development LLC

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

E-mail johnb@mcnaughtondevelopment.com

Property Owner(s)

Name: Casey & Fran Gaik

Address: 8541 Pavia Way

Lakewood Ranch, Florida 34202

Telephone: 630-408-8833

E-mail: ibitmog@gmail.com

Agent/Attorney

Name: John Barry

Address: 11S220 Jackson Street

Burr Ridge, Illinois 60527

Telephone: (630) 325-3400

Fax: (630) 325-3402

Engineer

Name: DesignTek Engineering & Survey

Address: 9930 W. 190th Street

Mokena, Illinois 60448

Telephone: (708) 326-4961

Fax: (708) 3264962

If the property is in a trust, provide name, address and number of trust. Also provide name, address and percentage ownership of trust beneficiaries.
____N/A_____

I hereby make application for the following (check as appropriate).

Annexation	_____	Map Amendment	___X___
Subdivision	_____	Resubdivision	___X___
Planned Development	X_____	Conditional Use	___X___
Variation(s)	_____	Outdoor dining	_____
Other: Comp. Plan Amendment to the Long-Range Land Use Map	X_____	Appeal	_____

Briefly describe your request (or attach a cover letter/narrative): Refer to the attached Application for Development Approval and Zoning Relief

DocuSign Envelope ID: 22C151EA-279C-4841-A603-1B35A92C1BF3

GENERAL INFORMATION APPLICATION (continued)

1. Common address or location of subject property: 5600 S. Wolf Road, Western Springs, Illinois 60558

2. Legal Description (Attach additional sheet if necessary): Refer to the attached Application for Development Approval and Zoning Relief

3. Permanent Index Number: 18-18-200-038, 18-18-200-017 & 18-18-200-001

4. Parcel Size (sq. ft. or acres): 2.755

5. Applicant is (check one):
___ Property Owner __ Attorney ___ **Contract Purchaser X** Agent ____ Other (specify)

* Provide one copy of the executed sales contract or written permission from the current owner to petition the Village

6. What are the current land uses and zoning on and around the site?

	Current Zoning	Land Uses
On Site	O-Limited Office	Office Building
North of Site	C2-Community Shop	Gas Station/ Community Shops
	A-Single Family	ComEd Facility
	R4-Multi-Family	Condominiums and Townhomes
South of Site	A-Single Family	Single Family Homes
East of Site	Unincorporated R4	Single Family Homes
West of Site	A-Single Family	Single Family Homes

7. Describe any existing structures and the site: The property is improved with a 24,000 square foot with its associated parking lots.

I hereby certify that all information contained in this application and accompanying documentation is true and correct to the best of my knowledge.

Date 5/13/2024 Signature _____
(Applicant or Contract Purchaser)

Date 5/9/2024 Signature DocuSigned by: Fran Gaik 2DDB531924AB443...
(Property Owner)

5/9/2024 DocuSigned by: CASEY Gaik 95445F2250CF41A...

APPLICATION FOR DEVELOPMENT APPROVAL AND ZONING RELIEF;

MAP AMENDMENT AND CONDITION USE PERMIT FOR PLANNED DEVELOPMENT

To: Heather Valone
Director of Community Development
Village of Western Springs
4353 Wolf Road
Western Springs, IL 60558

By: Paul R. McNaughton
John Barry
McNaughton Development, LLC
11S220 Jackson Street
Burr Ridge, Illinois 60527

Project Summary: McNaughton Development LLC, as the contract purchaser of the property at 5600 S. Wolf Road in Western Springs is making the following application to allow for the demolition of the existing underutilized office building and its associated parking lots and for the construction of twenty-nine new three-story townhome units. The current 24,000 square foot office building and the parking lot sit on two parcels of land that total 2.414 acres. The final development will also include 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. This Lawn Area right-of-way is currently being maintained by the Heritage Estates Townhome Association as a detention facility. The Heritage Crossing townhome development would require the vacation of the Lawn Avenue right-of-way and the consolidation of it and the two existing parcels creating a 2.755-acre parcel to be rezoned under a Planned Development with an underlaying zoning district of R4 – Multi Family Residence District.

Applicant: McNaughton Development LLC, will be the owner and general contractor for the new twenty-nine three-story for sale townhome units within the Heritage Crossing development.

Subject Property Address: 5600 S. Wolf Road, Western Springs, Illinois 60558

Legal Description:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

LAWN AVENUE: THAT PART OF THE 66 FEET WIDE VACATED LAWN AVENUE (VACATED PER DOCUMENT NO. 96138577), LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

PIN:

PARCEL 1:	18-18-200-038
PARCEL 2:	18-18-200-017
LAWN AVENUE RIGHT-OF-WAY:	18-18-200-001

Lot Size: Approximately 2.755 Acres

Current Zoning District:

PARCELS 1 & 2: O – Limited Office District
LAWN AVENUE
RIGHT-OF-WAY: R4PUD – Residential Planned Unit Development

Zoning Approval & Relief Requested:
Comprehensive Land Use Plan Amendment: Amend the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

Zoning Map Amendment: Amend to rezone the property to R4 – Multiple Family Residence District (Chapter 10-6-5) allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building

Plat of Consolidation: Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development

Resubdivision: Approval of a Plat of Resubdivision (10-10-3) to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road

Conditional Use for a Planned Development: Approval of Conditional Use for a Plan Development with requested deviations from the R4 – Multi Family Residence District as reflected in the following exhibits.

Vacation of Right-of-Way: Approval of the Vacation of the existing Lawn Avenue as depicted in the preceding legal description and included in the following plat of consolidation.

PROJECT NARRATIVE DESCRIPTION
McNaughton Development LLC is the contract purchaser and Casey & Fran Gaik are the owners of the property located at 5600 S. Wolf Road, Western Springs. The property is currently zoned O – Limited Office District. It is one of just five properties within the Village of Western Springs with this zoning designation. The site is improved with a 24,000 square foot office building with its associated parking lots. The property, originally developed as a private school in the 1960's was later converted into and expanded for its current office use in the early 1990's. In recent years the tenant base has vacated the property to the point where the building is at five percent occupancy due to the building's obsolescence. The owners have aggressively marketed the property to other prospective tenants with no success. In addition, it has not been attractive to owner users for any other permitted or conditional use under the O – Limited Office District. It was then decided by the owner, at the suggestion of their real estate broker, that after great effort, the property value would most likely be found in redevelopment for multi-family residential use.

The proposed multi-family residential use will continue to provide for an orderly zoning transition from the intersection of 55th Street and Wolf Road. The existing zoning classification at that corner is C2 – Community Shopping District surrounded by a small A – Single Family Residence parcel

improved with a ComEd facility, a R4 – Multi-Family Residence District improved with condominium units and a R4 – Multi-Family Residence District Planned development improved with townhome units.

The proposed zoning request would permit the resubdivision of and the redevelopment of the property into twenty-nine three-story townhome units. The twenty-nine units will be constructed in eight different buildings ranging from duplex units to four, five and six wide unit buildings. The units will be three stories tall with a two-car garage and recreation room on the ground level, the main living areas on the middle level and the bedrooms on the third level. There are no roof top deck options being offered at this time. The buildings will be 38 feet tall as measured from the proposed final grade to the midpoint of the roof. The living area within the units will range from 2,400 to 2,600 square feet. All of the units will have three bedrooms, two full and two one-half bathrooms and two-car garages. None of the units will have a basement.

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place, and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. By offsetting the access to Park Place, providing entry monumentation and proposing offsite landscaping site access has been proposed in such a way to lessen the impact on the current property owners along the south side of Park Place. A preliminary application was made to the Cook County Highway Department and their response noted that they agreed with the above noted reasoning for the applicant's decision to provide access from Park Place and not directly from Wolf Road. The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

The property will comply with the stormwater ordinances of both the Metropolitan Water Reclamation District (MWRD) and the Village of Western Springs. The proposed redevelopment will result in a reduction in the site's impervious surface as compared to the existing conditions, volume control storage and stormwater detention storage. The applicant is aware of the downstream flooding issue that are a result of approximately one hundred eighty acres of undetained stormwater from the LaGrange Highlands area east of Wolf Road which is directed through this site and ultimately reaching Flagg Creek. The proposed development will have no detrimental effect to downstream owners and the stormwater improvements will provide for marginal improvements to the area.

The proposed development is a for sale townhome development with private improvements that will be managed by its homeowner's association. The expected base purchase price is anticipated to be between $800,000.00 and $850,000.00. The exterior and interior finishes will be of the utmost quality to support the anticipated base pricing. At the same time, interior finish upgrades will be offered to the purchaser. It is anticipated that the target market will be young professionals with no or very young children and active adult move down buyers native to Western Springs and the surrounding communities. Elevator options will be possible in at least fifty percent of the units. The private improvements to be owned and maintained by the association will include the common area landscaping, stormwater improvements and the extended Heritage Crossing. Water main improvements will be turned over to Village of Western Springs and the sanitary sewer improvements to the La Grange Highlands Sanitary District.

I. PETITION FOR REQUESTED ZONING RELIEF

The applicant is requesting the following zoning relief and approvals as part of this applications:

(1) Amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre).

(2) Zoning Map Amendment

Existing Zoning and Land Use:	O – Limited Office District / 24,000 square foot office building	
Adjacent Zoning and Land Use:	**North**	C2 – Community Shopping District/ gas station and community shopping, A – Single Family Residence parcel / ComEd facility, R4 – Multi-Family Residence District / condominium units and R4 – Multi-Family Residence District Planned development / townhome units.
	South	A – Single Family Residence
	East	Unincorporated Cook County Single-Family Residence District R4
	West	A – Single Family Residence
Proposed Zoning and Land Use:	R4 – Multi Family Residence District allowing for a permitted use of multi-family dwellings not exceeding six (6) dwelling units per building	

(3) Plat of Consolidation
Approval of a Plat of Consolidation that will result in creating a parcel of 2.755 acres which is less than the five-acre minimum requirement within the R4 - Multiple Family Residence District and the Planned Development. The consolidation of the parcels will allow for an orderly redevelopment of the property, particularly as it relates to stormwater management.

(4) Resubdivision
Approval of a Final Plat of Resubdivision to allow for the construction of twenty-nine townhome units, a stormwater detention facility and a private road on a parcel of less than the five acres minimum requirement. The applicant is requesting to bypass the Resubdivision requirement to submit preliminary plans and simply request final plan approvals in light of the size of the property.

(5) Conditional Use Permit
Approval of a Conditional Use to allow for a Planned Development with the following deviations from the requirements R4 – Multi Family Residence District and per the following plans and exhibits.

R4 – Multiple Family Residence District Requirements vs Requested Relief:

Minimum Development Parcel Size
Required: 5 Acres
Requested: 2.755 Acres

Front Yard Setback
Required: Twenty-Five Feet (25)
Requested: Twenty Feet (20) Garage Face to the Closer of the Sidewalk or Curb with the permitted encroachment of the Middle Level Deck and Third Level Living Area

Interior Sideyard Yard Setback
Required: Thirty Feet (30)
Requested: Eight Feet (8) with the permitted encroachment of bay windows

Corner Sideyard Yard Setback
Required: Twenty Feet (25)
Requested: Twenty Feet (25) with the permitted encroachment of bay windows

Rear Yard Setback
Required: Thirty Feet (30)
Requested: Twenty-Five Feet (25) with the permitted encroachment of Middle and Third Level Projections and Balconies

Multiple – Family Dwelling Height
Required: Thirty-Five (35) Feet
Requested: Thirty-Eight (38) Feet

Maximum Building FAR
Required: 54,311.51 SF
Requested: 126,008.40 SF

Vacation of Right-of-Way

Approval of the vacation of the 0.341 acre of land currently owned by the village as a previous right-of-way for Lawn Avenue. The applicant is requesting that the acquisition cost of this vacation be made at no cost to the applicant. The applicant feels that its offer to make stormwater improvements to the site, including to the detention facility, and its commitment and its successors commitment of perpetual care and maintenance is sufficient compensation.

(1) MAP AMENDMENT STANDARDS

Pursuant to Section 10-3-12(F)(1) (Map Amendments) of the DCO, the Applicant must provide the information relative to each of the Standards that are to be used by the Plan Commission and the Village Board to evaluate the suitability of a map amendment.

a. Existing uses of property within the general area of the property in question. The property is currently zoned O – Limited Office District and is along Wolf Road which is under the jurisdiction of the Cook County Highway Department.

North Parcels: Gas station and community shopping, ComEd facility, condominium units and townhome units.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: Single Family Home

b. The zoning classification of property within the general area of the property in question.

North Parcels:
C2 – Community Shopping District
A – Single Family Residence
R4 – Multi-Family Residence District
R4 – Multi-Family Residence District Planned Development.

East Parcels: Unincorporated Cook County Single-Family Residence District R4

South & West Parcels: A- Single Family Residence

c. The suitability of the property in question to the uses permitted under the existing zoning classification.

The property is not suitable for uses permitted under the O – Limited Office District. This zoning district permits for professional offices, including, but not limited to, offices for attorneys, physicians, dentists, architects, consulting engineers, insurance agents, and village government offices. This use has proven to have failed in light of the current building occupancy being at 5% for an extended period of time. The zoning district does permit for multi-family however, when placed on the second floor of the other permitted uses within the development.

d. **The trend of development, if any, in the general area of the property in question, including changes, if any, which have taken place in its present zoning classification.**

The trend of development is for multi-family residential construction. In fact, the existing office building is not compatible to the trend of development. The existing office uses and commercial developments are all located along 55th Street. Wolf Road in the southwest portion of Western Springs is dominated by residential development. This property is bounded of the north with a three-story condominium building and two-story townhomes. Due to the unique shape of this parcel and its size, the continuation of a multi-family product is an appropriate transition to the single-family development to the west and south

e. **The suitability of the property in question for permitted uses listed in the proposed zoning classification.**

The property is suitable for the uses within the R4 – Multi-Family Residence District Planned Development.

The compatibility of the surrounding property with the permitted uses listed in the proposed zoning classification.

Being residential in nature, the proposed R4 – Multi-Family Residence District Planned Development is compatible with the surrounding residential uses.

The objectives of the current comprehensive plan for the village and the impact of the proposed amendment on the said objectives.

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). This amendment will not result in any detrimental effects within the village or the neighborhood. The amendment will allow for the demolition of an underperforming building, orderly redevelopment of the site providing a positive tax generating use for the village, school districts and other taxing bodies.

(2) CONDITIONAL USE PERMIT STANDARDS

Pursuant to Section 10-3-14(G) of the DCO, the following Standards need to be satisfied in order for the Village Board to approve the Conditional Use Permit establishing the Planned Development.

1. **That the establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort, or general welfare.**

The granting of the conditional use permit to allow for a R4 – Multi-Family Residence District Planned Development on a site less than 5 acres will not be detrimental to or, endanger the public health, safety, morals, comfort or general welfare or injurious to other nearby property or improvements. The proposed conditional use permit will allow for the development of a well-designed townhome development that reduces current impervious services and provides storm management facilities which results in downstream benefits. According to

a traffic study prepared by KLOA, no significant negative impacts on the surrounding road network would result from the development. Given the foregoing, granting the conditional use permit will not be detrimental to the public welfare or injurious to other property or improvements in the neighborhood in which the property is located.

2. **That the conditional use will not be injurious to the uses and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood in which it is to be located.**

The proposed conditional use will allow a well-designed townhome development that minimizes impact on natural areas and is well separated from existing development with the use of landscaping fencing and setbacks. Setbacks within the development allow adequate light and air while preserving views across the site. Density is consistent with surrounding multi-family developments and according to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated. Site engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so as to provide marginal improvements to the overall area.

As represented in the applicant's materials, a fiscal analysis indicates a positive impact on property values and real estate taxes. Given the foregoing, the proposed conditional use permit will not impair an adequate supply of light and air to adjacent property or substantially increase the congestion of the public streets, or increase the danger of fire, or impair natural drainage or create drainage problems on adjacent properties, or endanger the public safety, or substantially diminish or impair property values within the neighborhood.

3. **That the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The subject property is in an immediate area dominated by commercial development, multi-story attached single family, attached single family and detached single-family residential development. The anticipated density of the proposed development is consistent with the requested comprehensive plan amendment and is appropriate in light of the intensity of the surrounding uses and the local roadway system.

Given the foregoing, the proposed development will not impede the normal and orderly development of surrounding property but will in fact be complimentary to existing and future uses.

Those adequate public utilities, access roads, drainage and/or necessary facilities have been or will be provided.

There is an adequate supply of public utilities in the vicinity of the property. The property can be served easily by public sewer and public water. The development will cause no substantial impact on the surrounding street system. Site

engineering is designed to reduced impervious surfaces, preserve natural topography and existing drainage patterns and enhance the stormwater management facilities on-site so to provide marginal improvements to the overall area.

4. **That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.**

The property will have two access points with one at Park Place west of Wolf Road and a second, controlled access via the existing terminus of Heritage Court to the north of the site. The current access to Wolf Road is being eliminated due to a conflict with the current deceleration lane approach to Park Place, conflicts with entrance spacing between the condominium development and Park Place and the county highway department's preference to eliminate curb cuts along minor arterial roadways such as Wolf Road. The access to Park Place has been engineered in such a way to lessen the impact on the current property owners along the south side of Park Place.

The controlled access point to the north will be improved with four-foot heigh decorative aluminum operable gate. The gate will prevent cut through traffic from eastbound 55th Street to southbound Wolf Road. Gate access will be granted solely to the current fourteen residents along Heritage Court and the prospective twenty-nine residents of this proposed development. Emergency services will also be granted access to the gate.

According to a traffic study prepared by KLOA, no substantial impact on the surrounding street system is anticipated.

5. **That the proposed conditional use is not contrary to the objectives of the current comprehensive plan for the Village of Western Springs.**

The applicant is requesting an amendment to the Comprehensive Land Use Plan of the Village of Western Springs, Illinois Adopted February 24, 2003 from Office to Multiple Family (9-18 Density Units/ Acre). However, the proposed amendment and the proposed plan do meet the goals set forth in the of the Comprehensive Land Use Plan for residential areas. The proposal enhances and protects the overall single family residential feel of the village. The product provides variety in housing types available in the village to entice new residents to the village and also allow for long-term residents to remain in the community. The proposal is compatible with the commercial and multi-family uses to the north and provides for an orderly transition to the south and west.

6. **That the conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified pursuant to the recommendations of the plan commission and approved by the village board.**

The proposed development will conform with the R4 – Multi-Family Residence District except for the requested deviations requested for approval by the Village Board.

(3) ADDITIONAL SUBMITTAL REQUIREMENTS

Pursuant to DCO 10-8-8, the Applicant would like to specifically address the following submittal requirements.

3. Project Design Features:

a. A detailed site plan has been provided illustrating street and pedestrian ways, typical building layouts, setbacks building heights, open spaces and site data

b. Final engineering plans are provided with complete topographical information and stormwater calculations

c. Final engineering plans are provided indicating the feasibility of providing utility service to the site via water mains, sanitary, and storm sewers and storm water detention facilities.

d. Final landscape plans are provided depicting project signage. Project marketing signage has not been developed as of this submittal. Any public facing signage shall be submitted for review to village staff for comment and approval.

e. Final landscape plans are provided indicating the location, number and desired effect of proposed landscaping.

f. Character elevations are provided along with floor plans and exterior color pallets

g. Final engineering plans are provided indicating street lighting

h. Final engineering plans are provided including a sediment and erosion control plan indicating methods to control erosion and sedimentation on and adjacent to the site.

4. Other Requirements: Applications for planned developments shall also include the submission of the following:

a. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the Village of Western Springs and School Districts 106 & 204

b. Fiscal impact study has been provided by the applicant illustrating the impact of the development on the school districts from a fiscal and population standpoint

c. Traffic impact study has been provided by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA)

d. The applicant has provided comparable sales research and a letter from a local real estate professional in lieu of a full market study report.

e. Final engineering plans are provided indicating how construction activity will be controlled by addressing contractor ingress/egress, construction parking, street cleaning and pest control.

f. The applicant has a forty-year track record of custom development and construction will provide financial references upon request.

g. Proposed covenants are provided.

i. The applicant is a contract purchaser of the property and has included a letter from the owner authorizing the applicant to make this application.

j. Notification list for public hearing to be provided by the village.

k. Development schedule.
- Application submittal 5/10/2024
- Community meeting 6/5/2024
- Plan Commission meeting 6/19/2024
- Planning and Zoning Committee Meeting 7/2/2024
- Village Board Workshop / Village Board Meeting 7/22/2024
- Site demolition 8/19/2024
- Site grading and underground utilities 9/2/2024
- Start construction on model building 9/16/2024
- Site pavement 9/30/2024
- Model grand opening 3/1/2025

l. Final engineering plans are provided with this submittal, which complies with of all applicable plans and materials required in Chapter 11 of this Ordinance, "Flood Plain and Storm Water Management".

DEVELOPER/BUILER & PROJECT TEAM INFORMATION

McNaughton Development LLC is a custom home builder and land development company that builds architecturally exciting high-end, distinctive homes. It has extensive experience in the construction of high-end residential product. It has developed numerous properties from one to three hundred acres. McNaughton Development is a family owned and operated company that is deeply rooted in Chicagoland area since 1981 and believes that a custom home is the product of the customers ideas and dreams and our commitment to making it a reality.

DesignTek Engineering has been an established civil engineering design and consulting firm servicing the Chicagoland region, surrounding suburbs, and northwest Indiana for over 20 years. Founded in 2003, DesignTek has expanded its services and client base by providing personalized attention to the needs and expectations of their clients. Their team of professional engineers, surveyors, and support staff tackle a wide variety of diverse projects in all fields of land development including residential, commercial, industrial, institutional, and municipal projects.

BSB Design, founded in 1966 by Jack Bloodgood, began as a one-man shop operating out of a barn in Des Moines, Iowa. Today, it has grown into a renowned architectural and design firm,

making an impact on much more than just the single-family home market. With offices coast to coast, they offer national experience with regional sensitivity. As a preeminent design firm, it has leveraged its unique abilities to see the future more clearly and to create environments that transform lives.

Kenig, Lindgren, O'Hara, Aboona, Inc. was formed in 1995 by Neil Kenig, Gerald Lindgren, Donald O'Hara and Luay Aboona. Today, Luay Aboona continues with his partner Michael Werthmann to lead the firm in providing quality traffic, transportation, and parking consulting services to its clients. KLOA, Inc.'s staff of transportation engineers and planners represent over 150 years of professional experience. Their high standards, commitment to the industry, and concern for each client assure the KLOA, Inc. mission to provide superior service in a timely and cost-effective manner. They approach each project as a special assignment that requires critical analysis, detailed research, creative thinking, and communicative interaction to develop practical solutions.

VII. CONCLUSION

McNaughton Development LLC is pleased to submit this application and is confident, with the approval of the village board, that the development will be an excellent addition to the Village of Western Springs.

By: _____

Date: May 15, 2024.

5/10/2024

McNaughton DEVELOPMENT, LLC

YOUR LUXURY HOME BUILDER

With Over 40 Years of Experience

McNaughton Development LLC is Proud to Have Developed and/or Built in All of These Superior Location and Premier Communities

* not all communities are represented with a site plan

Waterfall Glen Executive Office Center
11S220 Jackson Street, Suite 100, Burr Ridge, Illinois 60527
P: 630.325.3400 F: 630.325.3402 W: mcnaughtondevelopment.com

Burr Ridge:
- Devon Woods (2)
- Longwood (1)
- Madison Estates II
- Briddle Path
- Waterfall Glen Executive Office Center
- Lakeside Pointe
- Burr Ridge Estates
- Waterview Estates

Darien:
- Rolling Knolls

Downers Grove:
- Copper Leaf
- Longfellow

Frankfort:
- Butternut Creek (10)
- Charrington
- Georgetown
- Settlers Pond
- Crystal Brook

Flossmoor:
- Ballantrae

Highland Park:
- The Highlands
- Hidden Oak

Hinsdale:
- Heather Highlands

Homer Glen:
- Meadows Edge
- Silver Leaf

Joliet:
- Deer Crossing

Killdeer:
- Preserves of Kildeer at Kemper Lakes

LaGrange Park:
- Heatherdale
- Kensington Place

Lake Forest:
- Amberly Woods

Lakewood:
- Red Tail

Lemont:
- Equestrian Estates (5)
- Equestrian Woods (5)
- Ruffled Feathers
- Briarcliffe Estates

Lockport:
- Steeplechase Farms

Long Grove:
- Royal Melbourne (2)

Mokena:
- Whispering Creek
- Foxborough Estates

Naperville:
- Silverleaf

Orland Park:
- Crystal Tree
- Cascade Ridge
- Cedar Crossing (6)
- Brittney Glen (10)
- Mallard Landings
- Fawn Creek I and II
- Evergreen View
- Meadowbrook
- Orland Woods III
- Muirfield
- Park Corners II
- Bluff Pointe
- Cascade Ridge
- Timber Lake

Oswego:
- Saddlebrook

Palos Heights:
- One Palos Place (4)
- Misty Meadows
- Keystone Crossing
- Westgate Valley Estates

Palos Park:
- Woodland Shores (5)
- Misty Harbour
- McCord Place

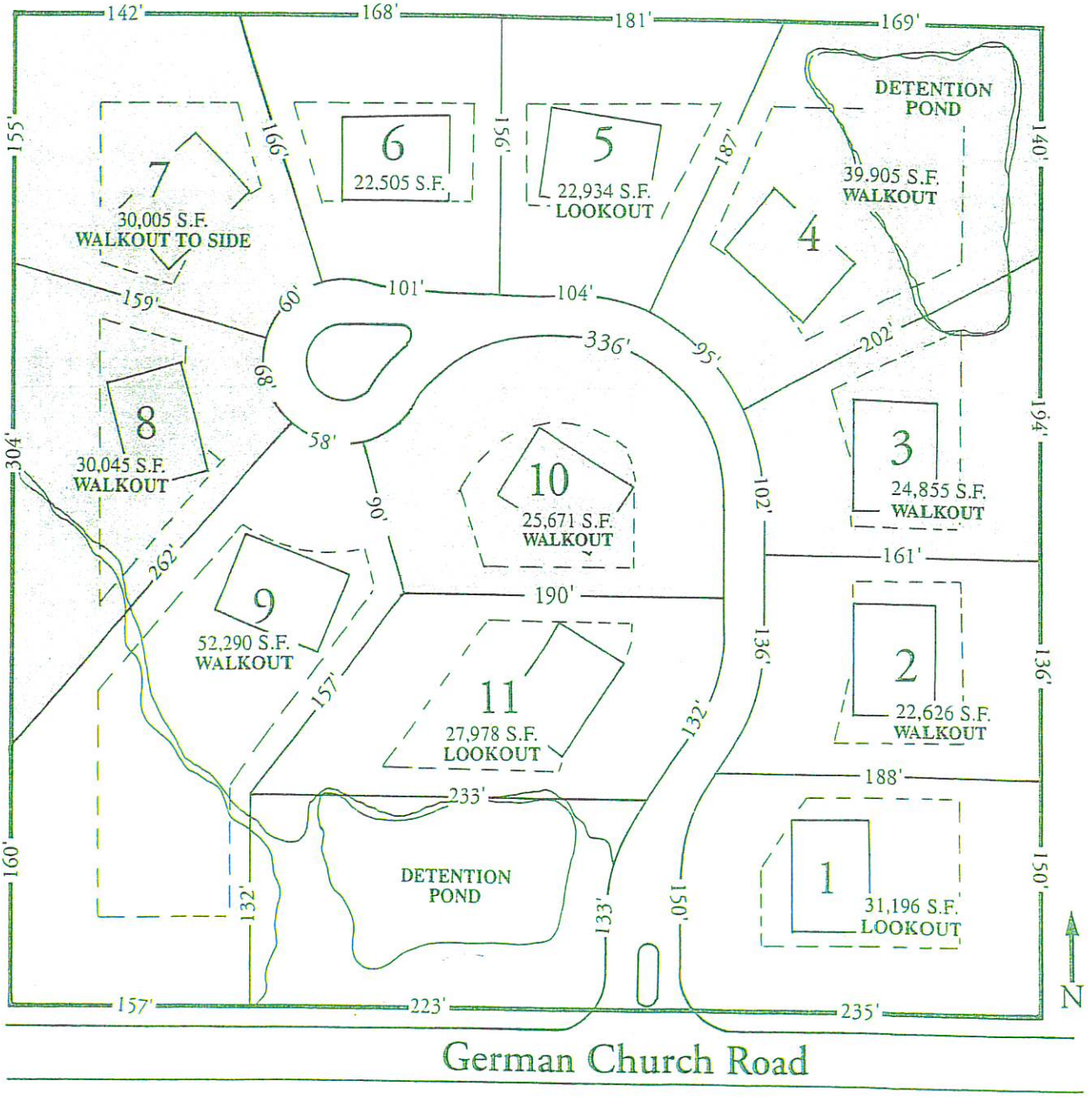
Tinley Park:
- Pheasant Lake

Western Springs:
- Timber Trails

Westmont
- Kaila's Crossing

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

BRIDLE PATH

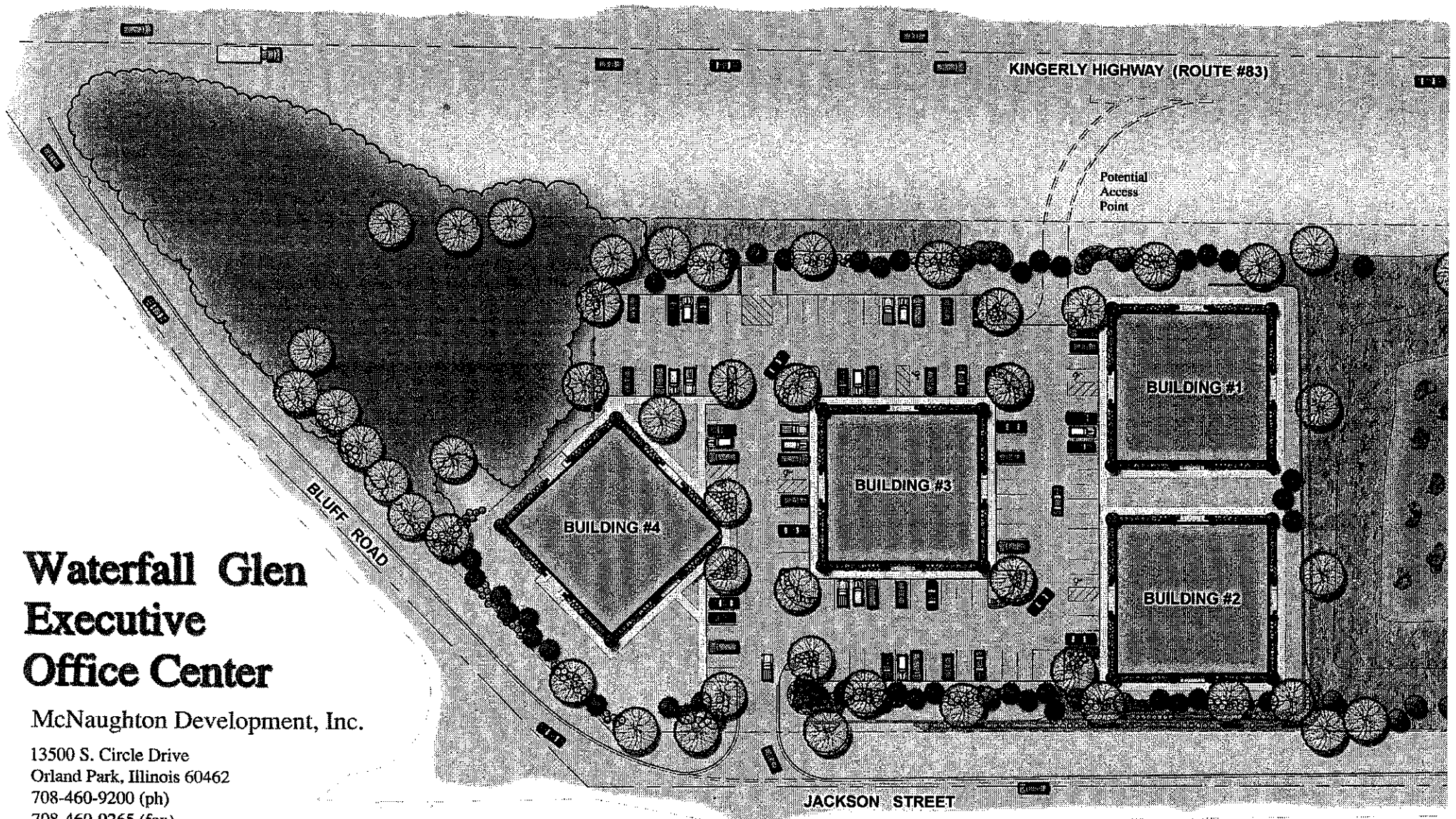


Located 1500 feet east of County Line Road on German Church Road
Burr Ridge, Illinois

NOTE:

THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464
Phone: (708) 361-8300 Fax: (708) 361-6754



Waterfall Glen Executive Office Center

McNaughton Development, Inc.

13500 S. Circle Drive
Orland Park, Illinois 60462
708-460-9200 (ph)
708-460-9265 (fax)

McNaughton DEVELOPMENT, INC.

LAND DEVELOPMENT – CUSTOM CONSTRUCTION

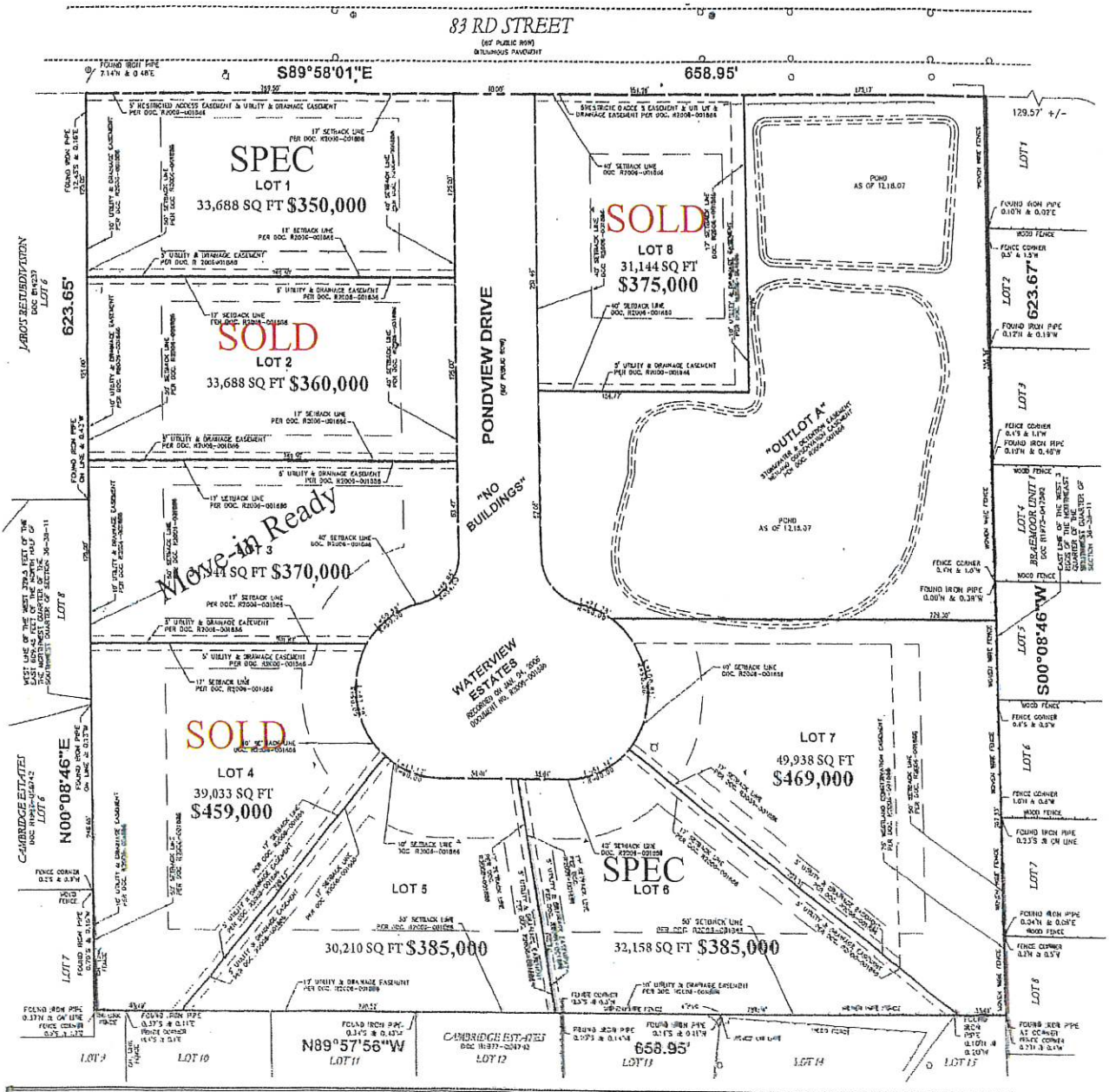
Waterview Estates

of Burr Ridge

Lot Pricing for 8

Luxury Single Family Home Sites

For built orders *only,* unless agreed to by owner.

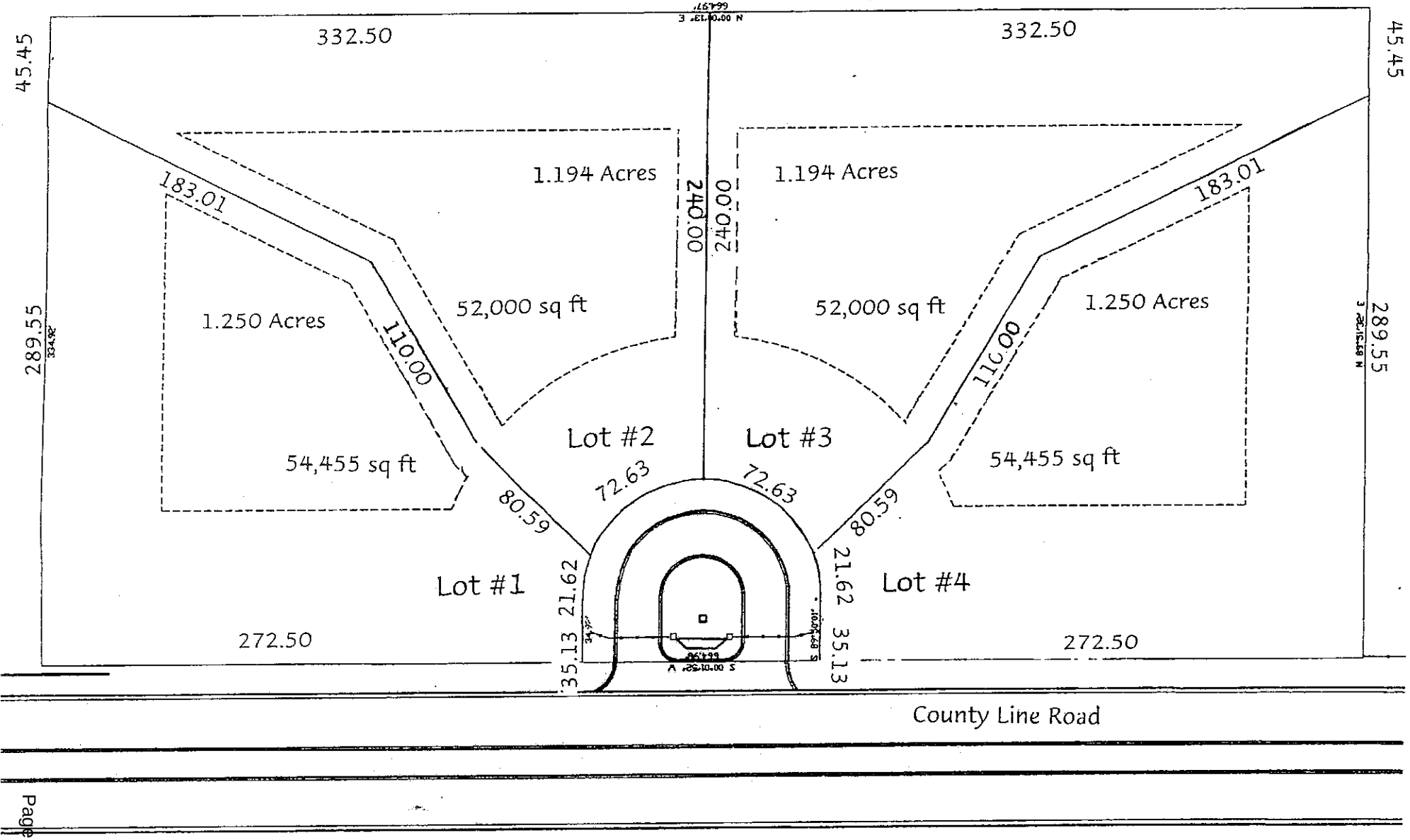


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Prices subject to change without notice 03-24-16

Burr Ridge Estates

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CUSTOM DESIGNED HOMES



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Waterfall Glen Executive Office Center * 11S 220 Jackson Street* Suite 101* Burr Ridge* IL 60527

LAKESIDE POINTE

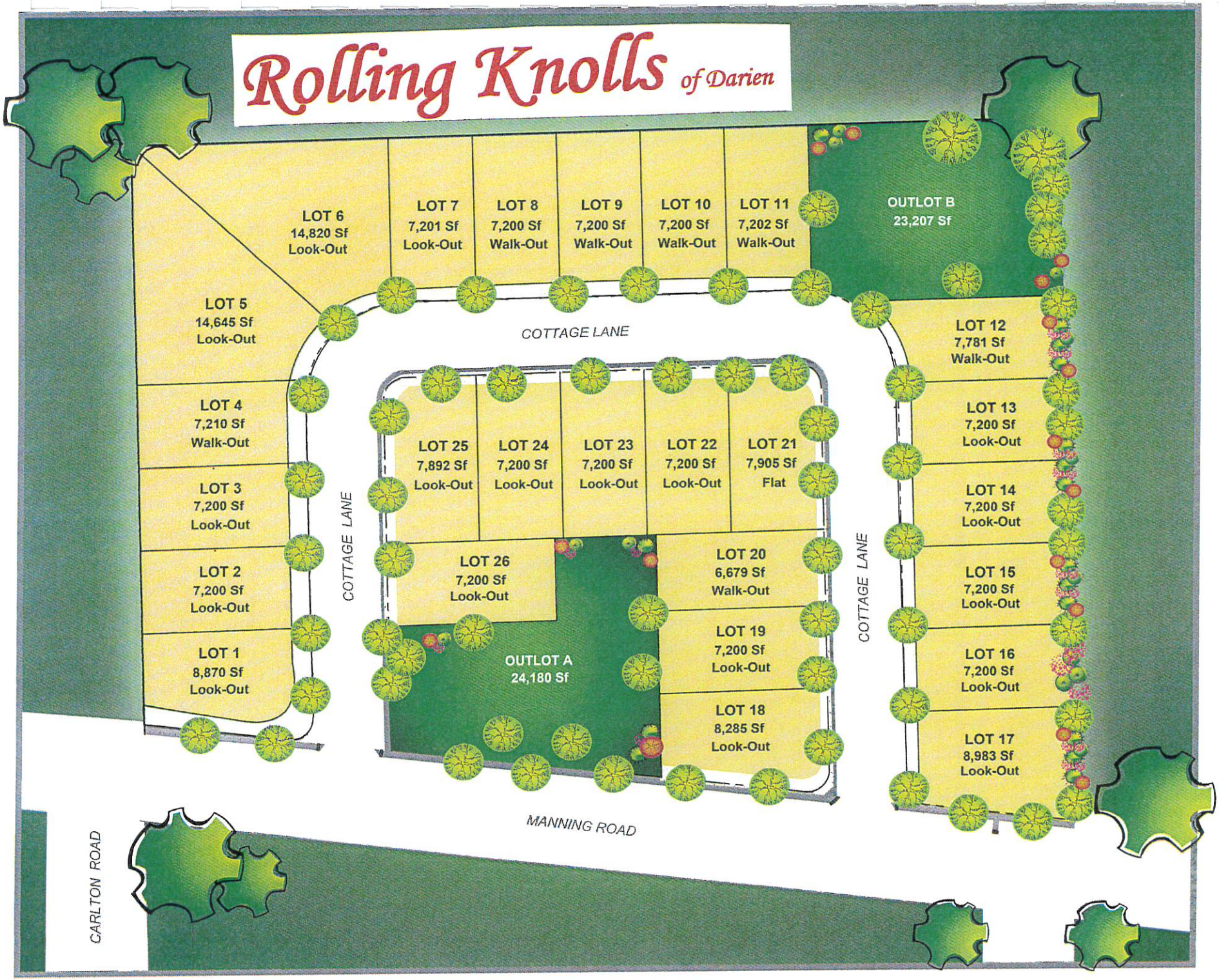
BURR RIDGE, ILLINOIS



LEGEND

B = BRICK THROUGHOUT
L/O = LOOKOUT
W/O = WALKOUT
G = THIRD CAR GARAGE

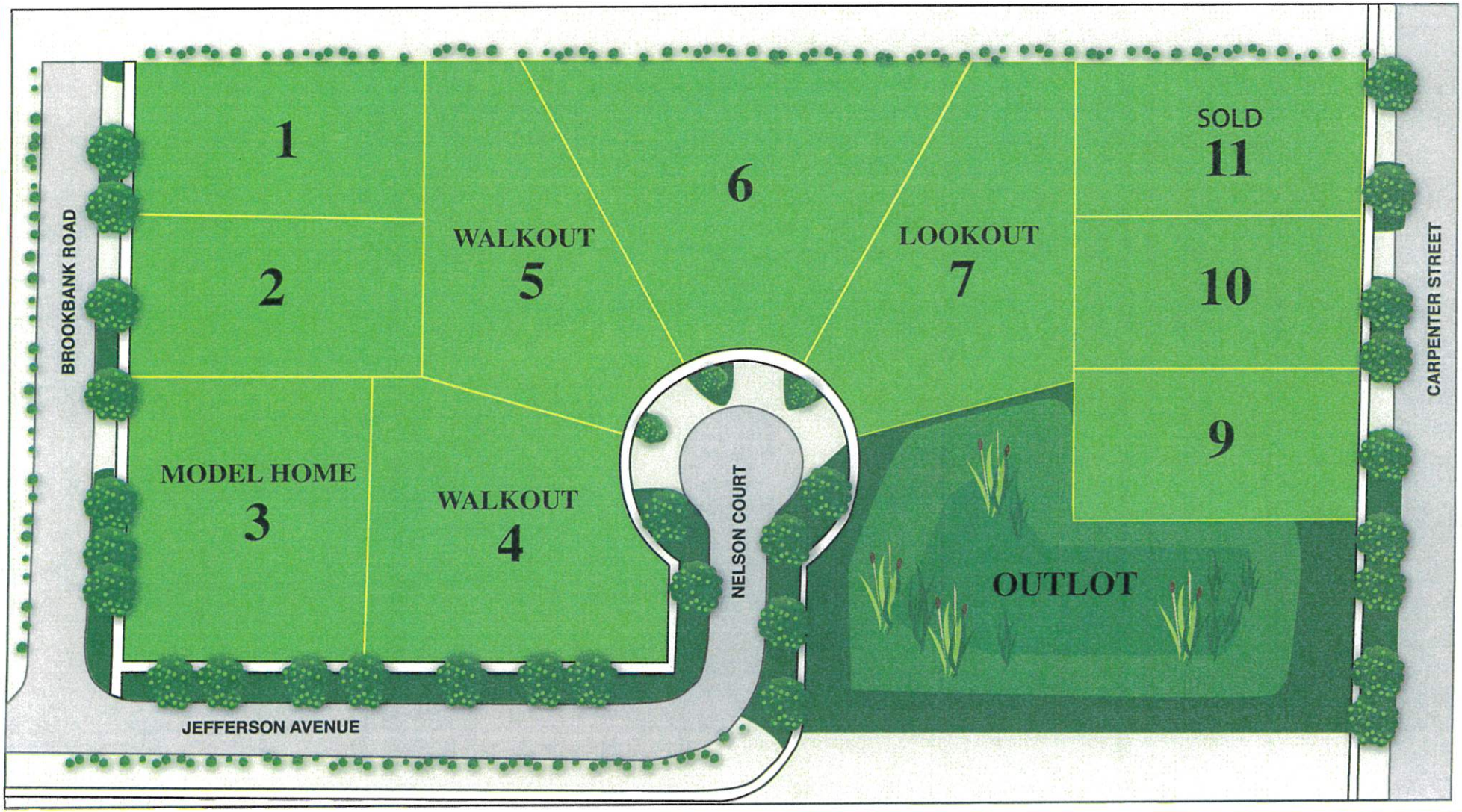
McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT – CUSTOM CONSTRUCTION


Rolling Knolls of Darien
LOT 6
14,820 Sf
Look-Out
LOT 7
7,201 Sf
Look-Out
LOT 8
7,200 Sf
Walk-Out
LOT 9
7,200 Sf
Walk-Out
LOT 10
7,200 Sf
Walk-Out
LOT 11
7,202 Sf
Walk-Out
OUTLOT B
23,207 Sf
LOT 5
14,645 Sf
Look-Out
LOT 4
7,210 Sf
Walk-Out
LOT 3
7,200 Sf
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LOT 2
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LOT 1
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COTTAGE LANE
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LOT 15
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Look-Out
LOT 16
7,200 Sf
Look-Out
LOT 17
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Look-Out
MANNING ROAD
CARLTON ROAD

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT CUSTOM CONSTRUCTION

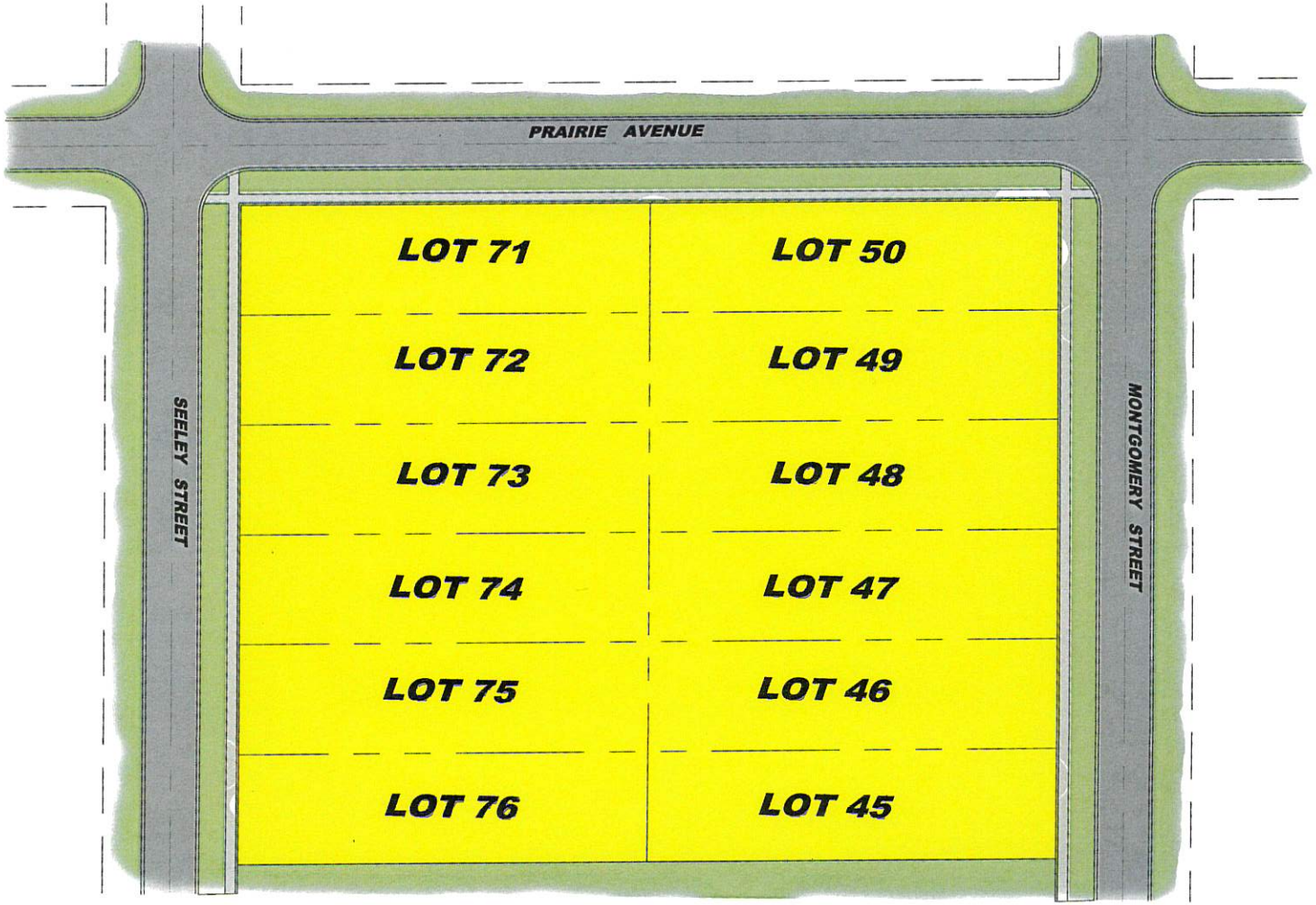
Copper Leaf

Downers Grove



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

LONGFELLOW
ON PRAIRIE

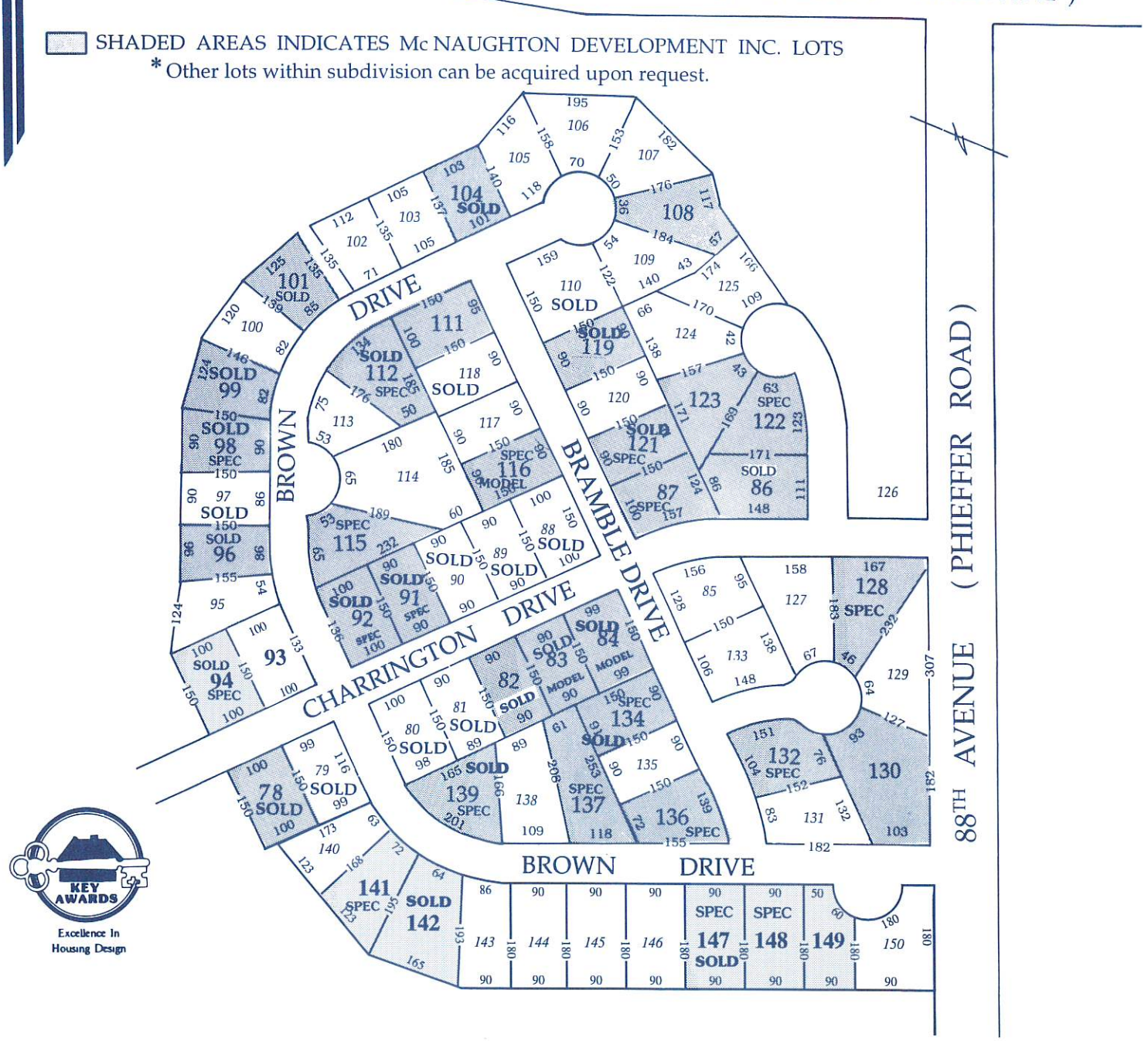


McNaughton Development Inc.

General Contractor • Builder
Custom Designed Homes **708/361-8300**

Charrington

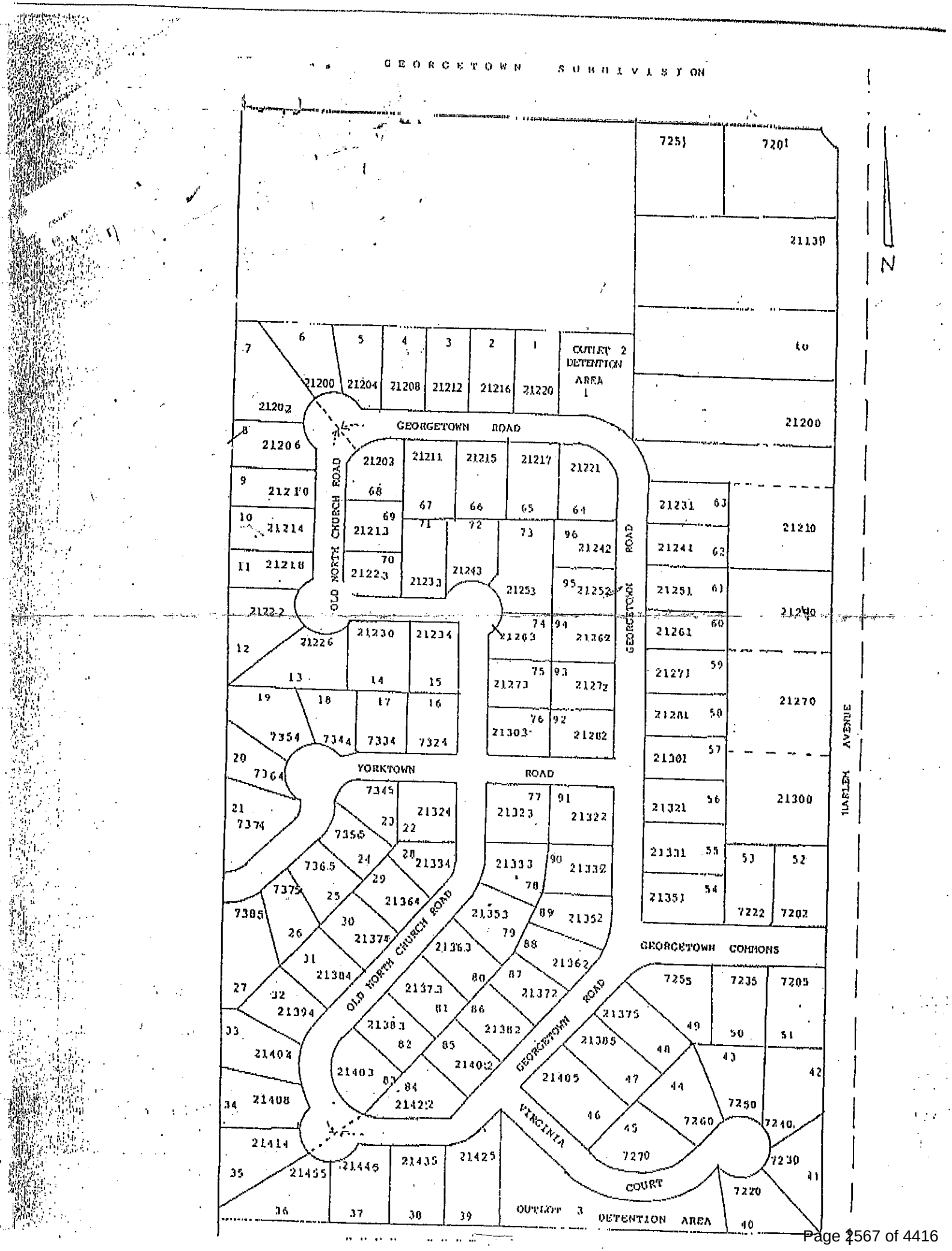
ROUTE 30 & 88TH AVENUE,
FRANKFORT

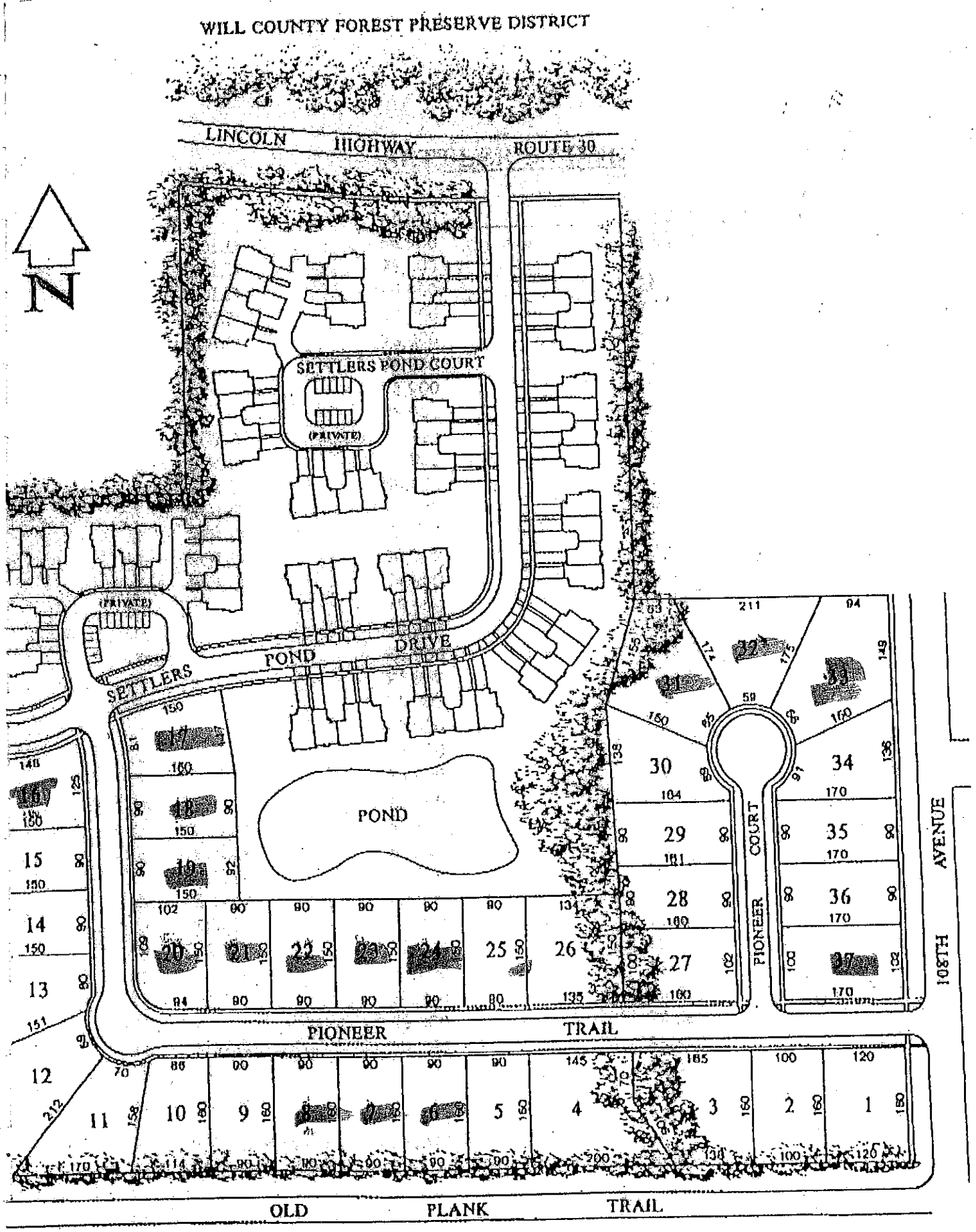


KEY AWARDS
Excellence In Housing Design

Park Corners Office Centre • 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464

McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.


GEORGETOWN SUBDIVISION
7251
7201
21139
to
21200
OUTLET 2 DETENTION AREA 1
GEORGETOWN ROAD
OLD NORTH CHURCH ROAD
GEORGETOWN ROAD
HARLEM AVENUE
YORKTOWN ROAD
OLD NORTH CHURCH ROAD
GEORGETOWN ROAD
VIRGINIA COURT
GEORGETOWN COMMONS
OUTLOT 3 DETENTION AREA
21210
21240
21270
21300
7222
7202
7255
7235
7205
7250
7240
7230
7220
7260
7270

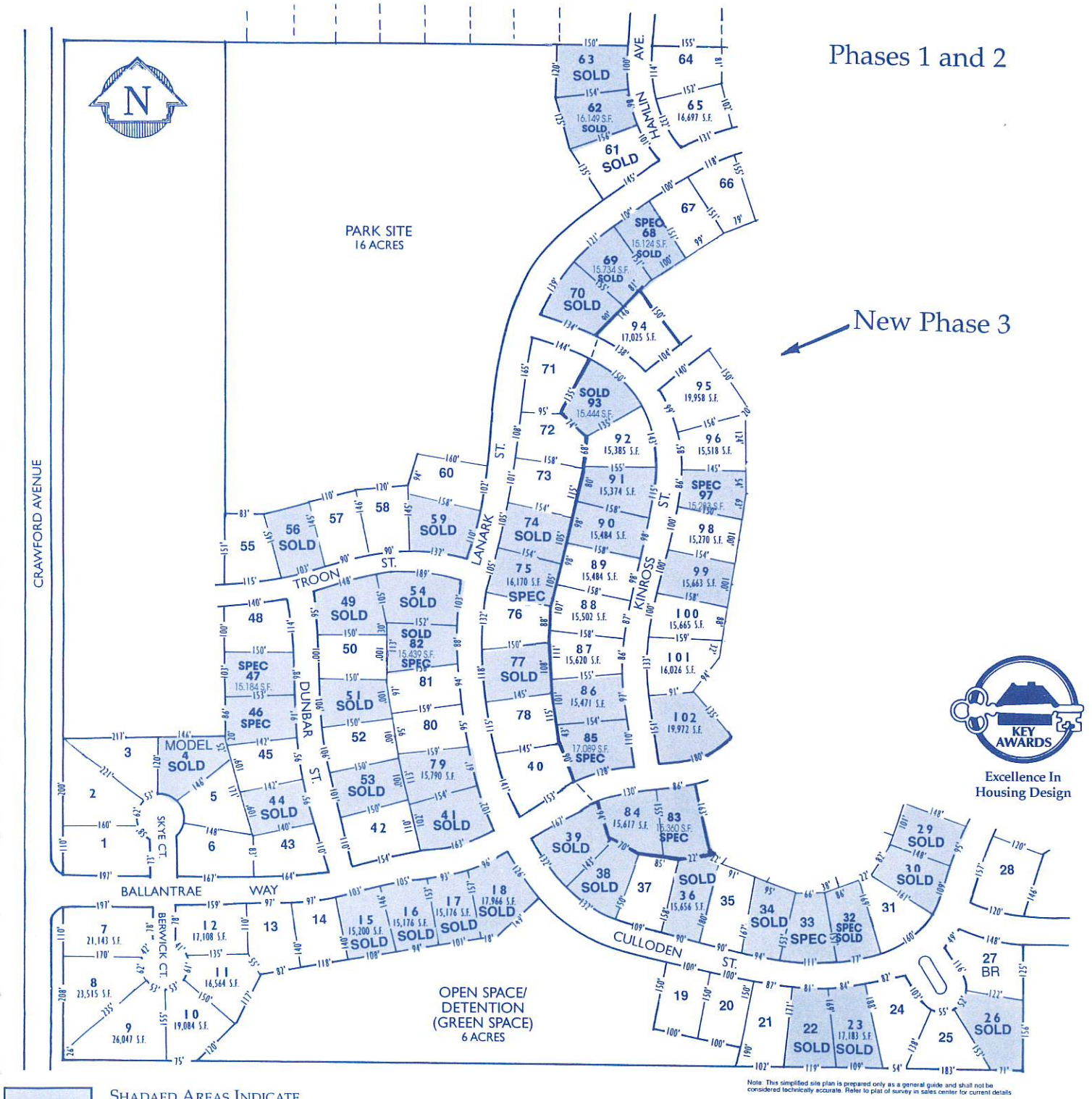

WILL COUNTY FOREST PRESERVE DISTRICT
LINCOLN HIGHWAY ROUTE 30
N
SETTLERS POND COURT
(PRIVATE)
(PRIVATE)
SETTLERS POND DRIVE
POND
PIONEER COURT
108th AVENUE
PIONEER TRAIL
OLD PLANK TRAIL
Settler's Pond
of Frankfort

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Ballantrae of Flossmoor



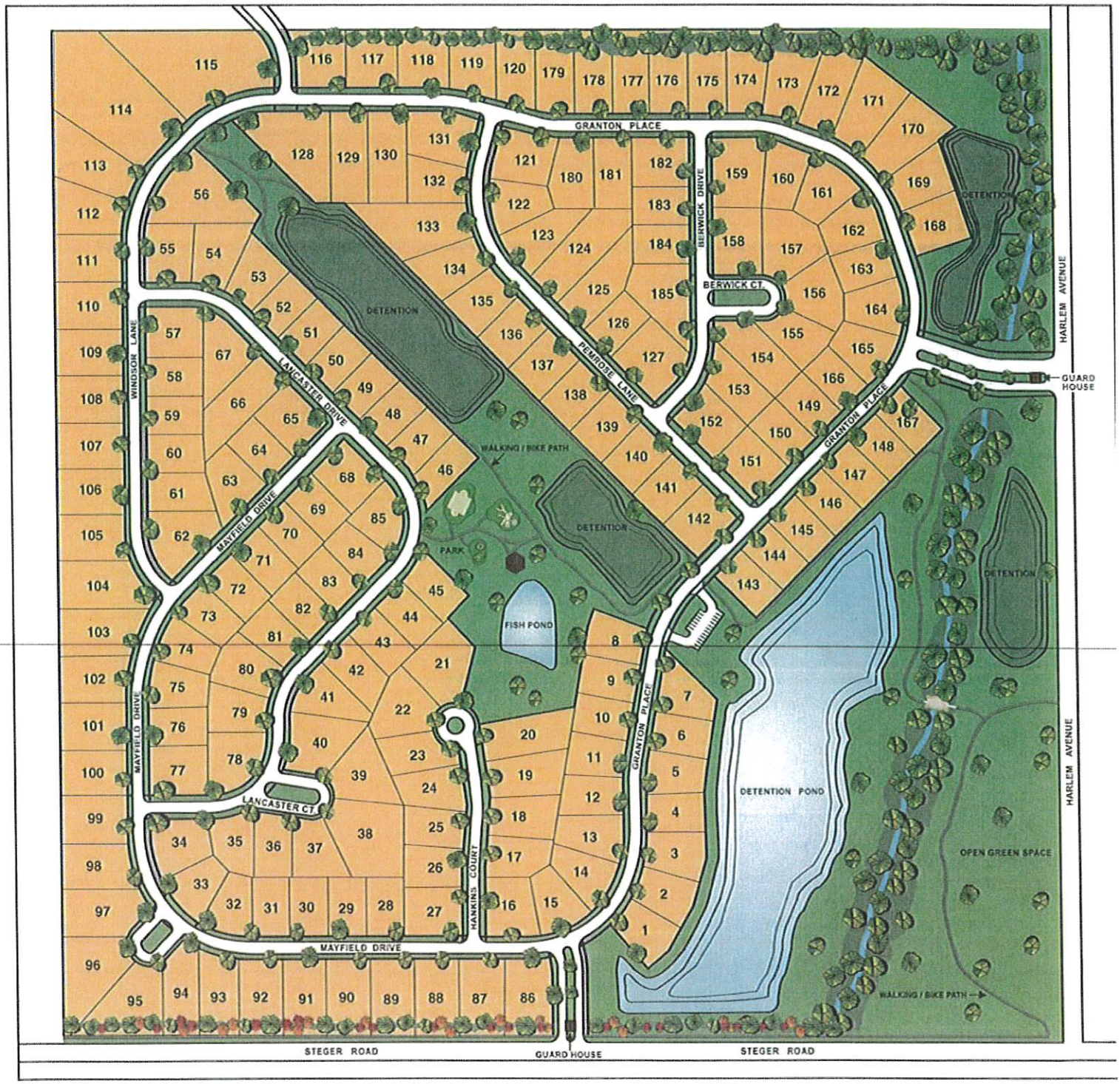
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Site Map

CRYSTAL BROOK OF FRANKFORT

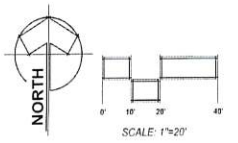


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HIDDEN OAK SUBDIVISION

HIGHLAND PARK, ILLINOIS



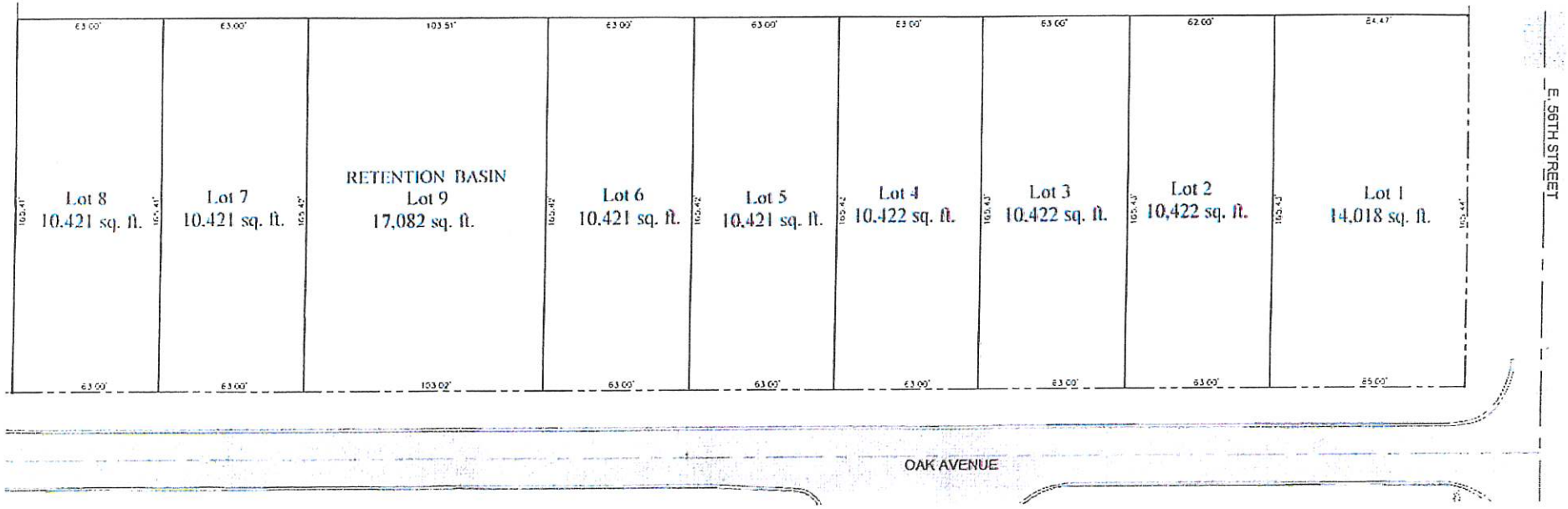
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COMING SOON ...

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT – CUSTOM CONSTRUCTION

Kaila's Crossing

56th & Oak Avenue



- 8 Single Family Lots
- Will Design & Build to Suit
- Walk-out & Look-out Lots
- Desirable Westmont Location
- Hinsdale Central School District
- 2013 Availability

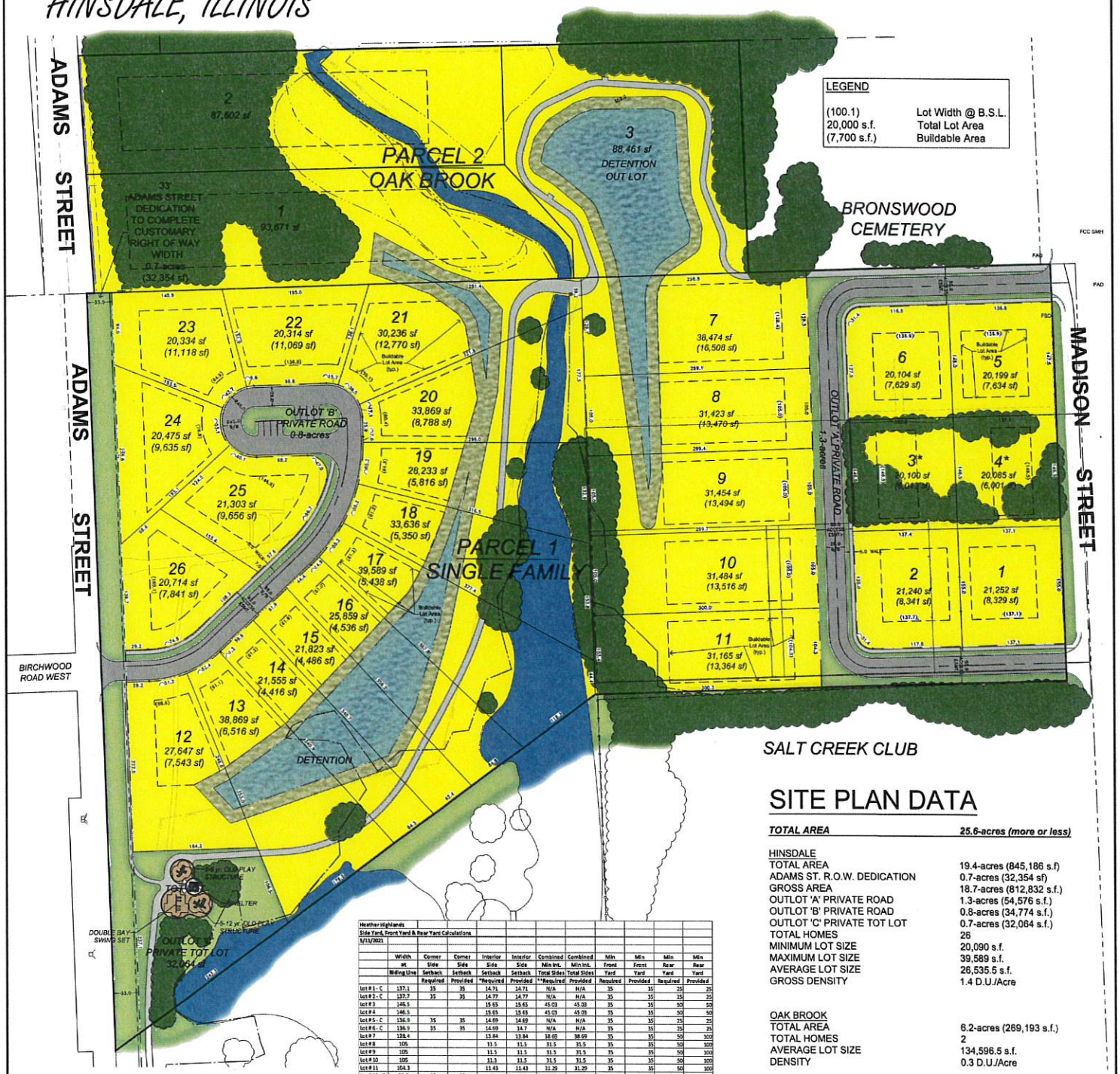
Call Today for Details and More Information

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Site Plan

HEATHER HIGHLANDS

HINSDALE, ILLINOIS



SITE PLAN DATA

TOTAL AREA	25.6-acres (more or less)

HINSDALE	
TOTAL AREA	19.4-acres (845,186 s.f)
ADAMS ST. R.O.W. DEDICATION	0.7-acres (32,354 sf)
GROSS AREA	18.7-acres (812,832 s.f.)
OUTLOT 'A' PRIVATE ROAD	1.3-acres (54,576 s.f.)
OUTLOT 'B' PRIVATE ROAD	0.8-acres (34,774 s.f.)
OUTLOT 'C' PRIVATE TOT LOT	0.7-acres (32,064 s.f.)
TOTAL HOMES	26
MINIMUM LOT SIZE	20,090 s.f.
MAXIMUM LOT SIZE	39,589 s.f.
AVERAGE LOT SIZE	26,535.5 s.f.
GROSS DENSITY	1.4 D.U./Acre

OAK BROOK	
TOTAL AREA	6.2-acres (269,193 s.f.)
TOTAL HOMES	2
AVERAGE LOT SIZE	134,596.5 s.f.
DENSITY	0.3 D.U./Acre

* The existing home and garage at 942 N. Madison, on the proposed Lots #3 & #4 are to remain.

Lots #3 & #4 are made up of the existing property at 942 Madison plus an additional ten (10) feet from the properties along Brook Place.

The bulk regulations for Lots #3 & #4 shall be determined prior to the plan commission.

Heather Highlands
Side Yard, Front Yard & Rear Yard Calculations
5/11/2021

	Width at Bldng Line	Corner Side Setback Required	Corner Side Setback Provided	Interior Side Setback *Required	Interior Side Setback Provided	Combined Min Int. Total Sides **Required	Combined Min Int. Total Sides Provided	Min Front Yard Required	Min Front Yard Provided	Min Rear Yard Required	Min Rear Yard Provided
Lot # 1 - C	137.1	35	35	14.71	14.71	N/A	N/A	35	35	35	35
Lot # 2 - C	137.7	35	35	14.77	14.77	N/A	N/A	35	35	25	25
Lot # 3	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 4	146.5			15.65	15.65	45.03	45.03	35	35	50	50
Lot # 5 - C	136.9	35	35	14.69	14.69	N/A	N/A	35	35	25	25
Lot # 6 - C	136.9	35	35	14.69	14.7	N/A	N/A	35	35	25	25
Lot # 7	128.4			13.84	13.84	38.69	38.99	35	35	50	103
Lot # 8	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 9	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 10	105			11.5	11.5	31.5	31.5	35	35	50	103
Lot # 11	104.3			11.43	11.43	31.29	31.29	35	35	50	103
Lot # 12 - C	88.6	35	35	10	8	N/A	N/A	35	25	33.38	85
Lot # 13	61.1			10	8	20	16	35	25	50	212.3
Lot # 14	61.2			10	8	20	16	35	25	50	218.7
Lot # 15	61.9			10	8	20	16	35	25	50	219.8
Lot # 16	63			10	8	20	16	35	25	50	244.3
Lot # 17	61.2			10	8	20	16	35	25	50	268.7
Lot # 18	61.2			10	8	20	16	35	25	50	214.1
Lot # 19	61.3			10	8	20	16	35	25	50	177.4
Lot # 20	60.4			10	8	20	16	35	25	50	144.7
Lot # 21	59.1			10	8	20	16	35	25	50	25
Lot # 22	136.8			14.68	8	41.03	16	35	25	50	25
Lot # 23	64.9			10	8	20	16	35	25	50	25
Lot # 24	76.9			10	8	20	16	35	25	50	33
Lot # 25 - C	146.9	35	25	15.69	15.69	N/A	N/A	35	25	25	25
Lot # 26 - C	169.1	35	25	17.91	17.91	N/A	N/A	35	35.65	25	25

*INTERIOR SIDE YARD REQUIRMENT FIGURED AS 8 FEET PLUS 10% OVER 50 FEET
**COMBINED INTERIOR SIDE YARDS FIGURED AS 30% OF THE FIRST 125 FEET IN WIDTH & THEN 35% OF EVERYTHING OVER 125 FEET
***Lots # 13 - # 25 LOT WIDTH IS BASED ON THE MEASUREMENT AT THE PROPOSED 25 FOOT FRONT YARD

McNaughton DEVELOPMENT
LAND DEVELOPMENT – CUSTOM CONSTRUCTION

SCALE: 1" = 50'-0"
April 23, 2021
Rev. May 11, 2021

NORTH

CIVIL ENGINEER:
V3 COMPANIES
7325 JANES AVE.
WOODRIDGE, IL 60517
T: (630) 724-9200
www.v3co.com

METZ & COMPANY
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

This plan was prepared to illustrate the development potential for the site. As a Site Plan, it is conceptual in nature. Therefore, all dimensions are subject to verification and the Site Plan is subject to modification pending a final planning, engineering, architecture and municipal approval.

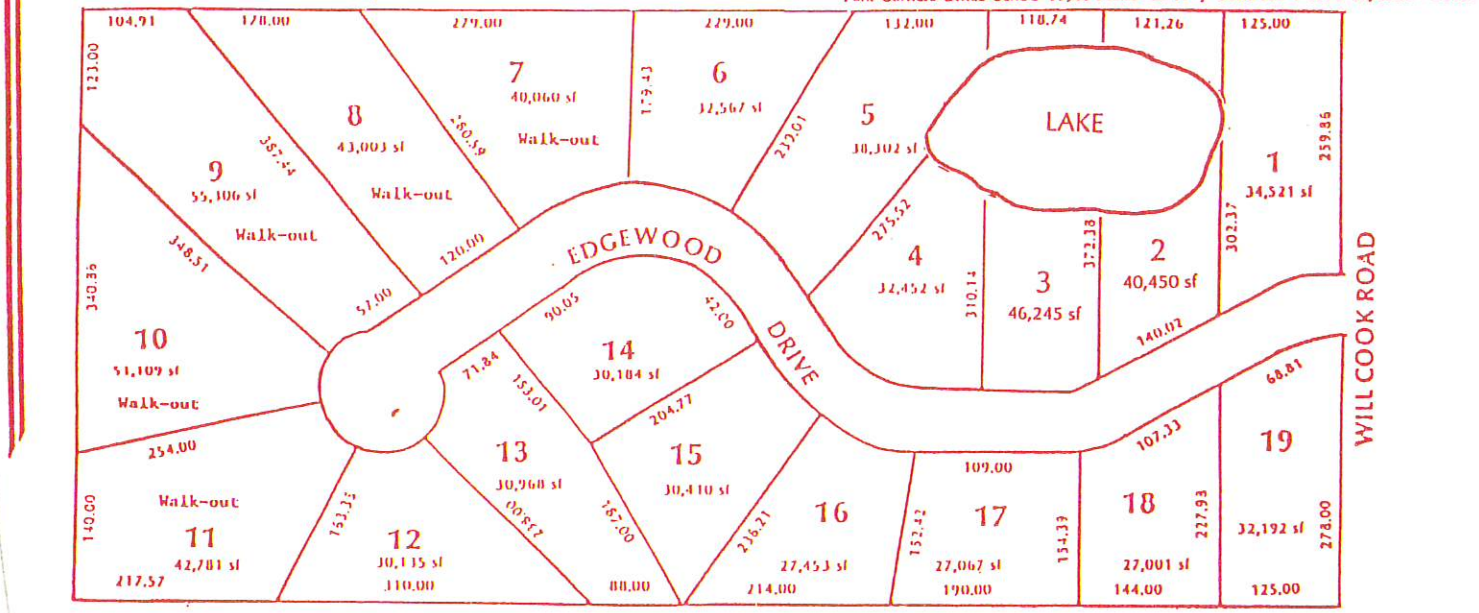


MEADOWS EDGE

McNaughton Development Inc.

General Contractor • Builder
Custom Designed Homes 708/361-8300

McNAUGHTON REALTY GROUP INC.
Park Corners Office Centre 11900 Southwest Hwy Suite 101 Palos Park, Illinois 60464



"MEADOWS EDGE" is a planned development consisting of 19 rolling homesites, many of which are wooded "walk-outs". This exclusive development provides the home owner with the serenity of a country setting with city conveniences only minutes away.

These choice lots range in size from 3/4 acre to over 1 acre. A scenic private lake will compliment this beautiful serene community. Located on Will cook Road at 14900 South, just 3 miles west of LaGrange Road (Route 45) makes this the location for your dream home!

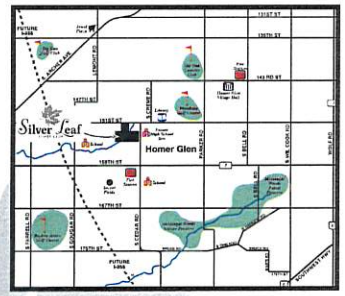
LOT #1	SPEC. HOME
LOT #2	$130,000
LOT #3	SOLD
LOT #4	$120,000
LOT #5	SOLD
LOT #6	SOLD
LOT #7	$125,000
LOT #8	$130,000
LOT #9	$135,000
LOT #10	$135,000
LOT #11	$130,000
LOT #12	$125,000
LOT #13	$120,000
LOT #14	$120,000
LOT #15	$115,000
LOT #16	SOLD
LOT #17	SOLD
LOT #18	$90,000
LOT #19	SOLD

— Prices subject to change without notice —

OVERALL SITE PLAN

Silver Leaf
HOMER GLEN





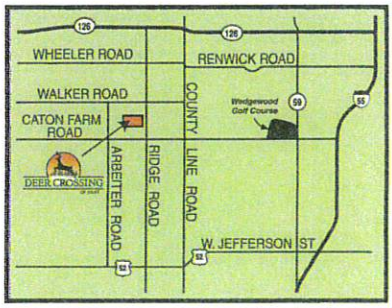
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E-mail: sales@mcnaughtondevelopment.com | www.mcnaughtondevelopment.com

This simplified site and landscape plan as shown, is an artistic representation only, and is prepared as a general guide. Not to be misinterpreted as included by the developers and builder's of offering. Refer to approved plans for specific details.

DEER CROSSING
OF JOLIET



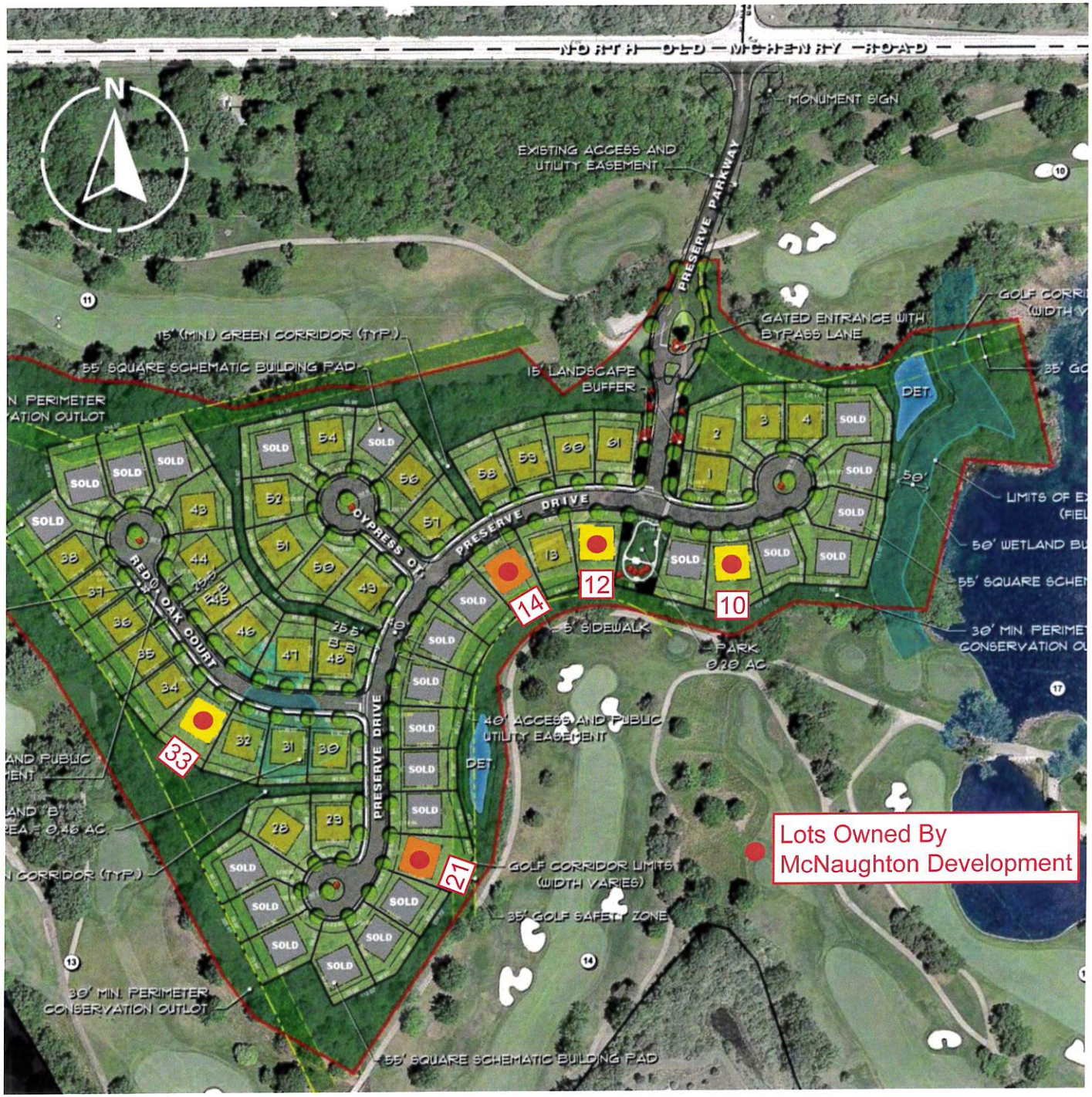




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PRESERVES OF KILDEER AT

KEMPER LAKES

LEGEND

- Available Lots
- Sold

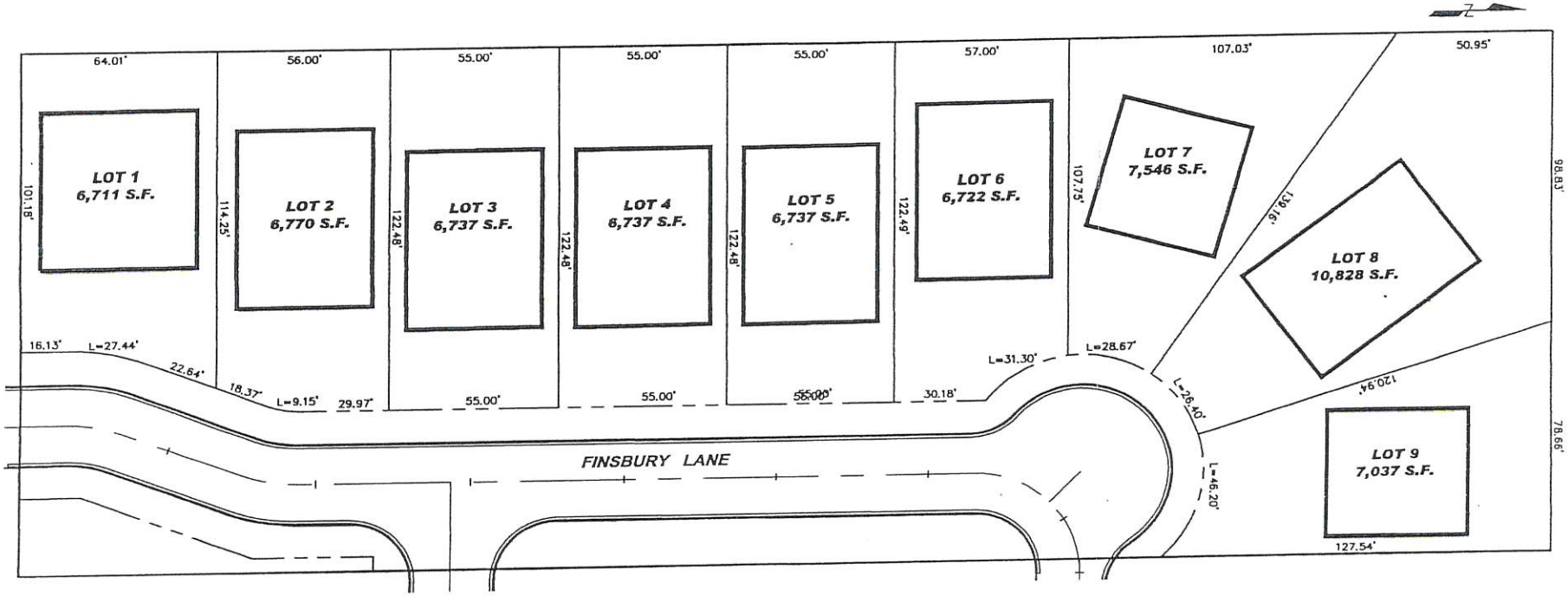
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YOUR LUXURY HOME BUILDER

McNaughton DEVELOPMENT, INC.
LAND DEVELOPMENT — CUSTOM CONSTRUCTION

Coming Soon...

Heatherdale *of LaGrange Park*



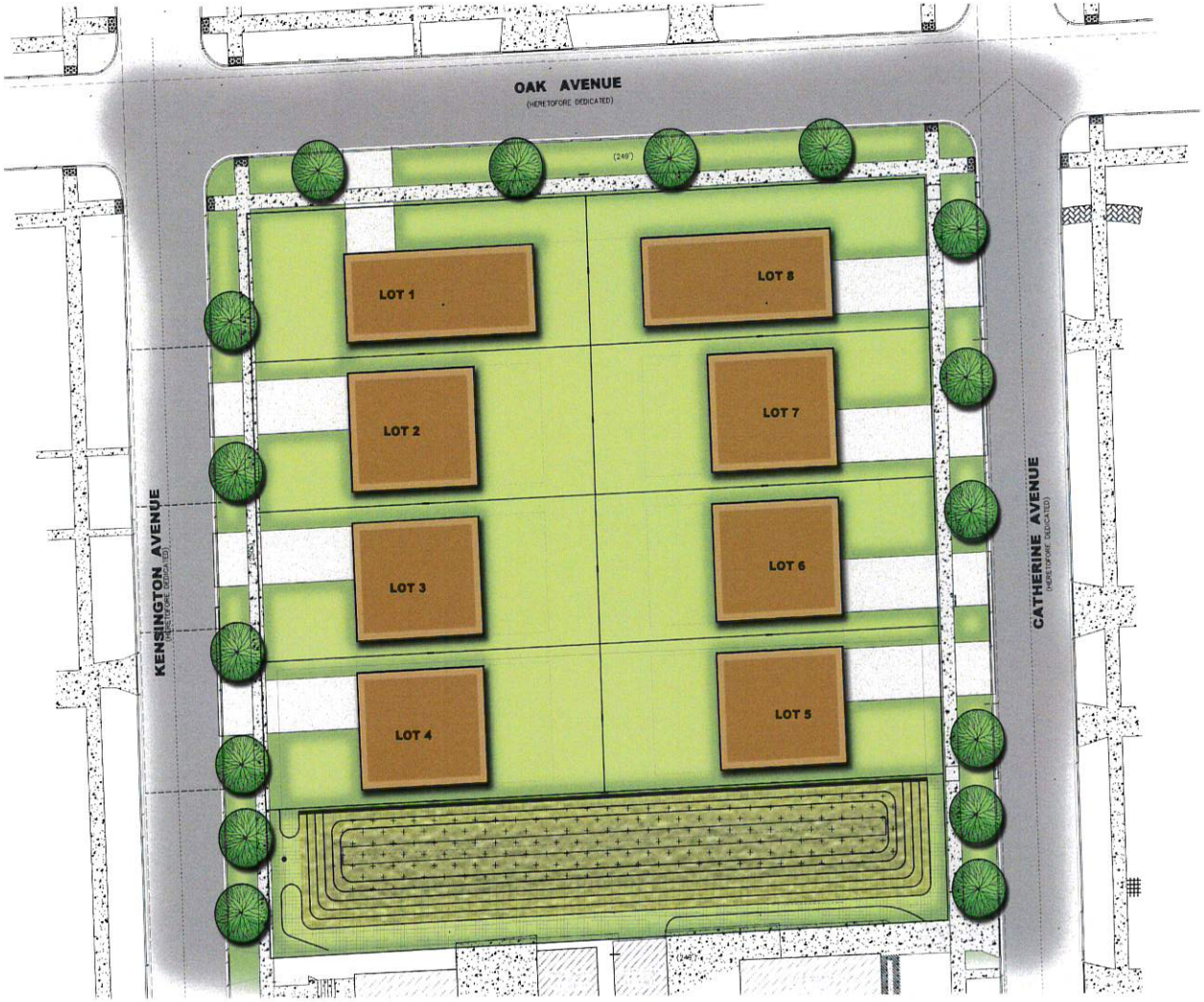
- 9 Single Family Lots
- Will design & build to suit
- Rare new construction opportunity in the desirable Village of LaGrange Park
- Lyons Township High School
- Forest Preserve views

Call Today for Details and More Information

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KENSINGTON PLACE

LaGrange Park, Illinois



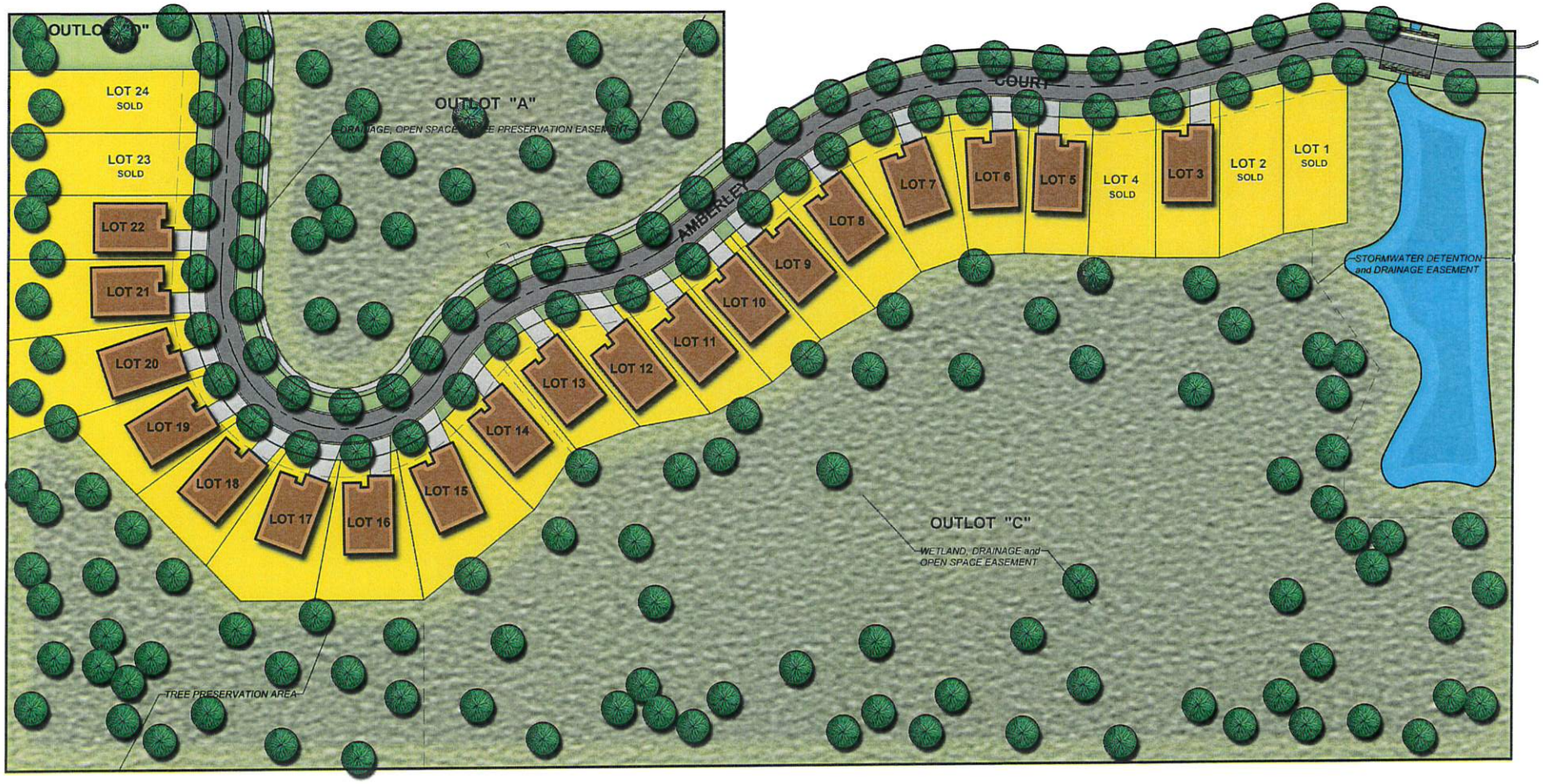
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YOUR LUXURY HOME BUILDER

SITE PLAN

AMBERLEY WOODS

LAKE FOREST, ILLINOIS

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

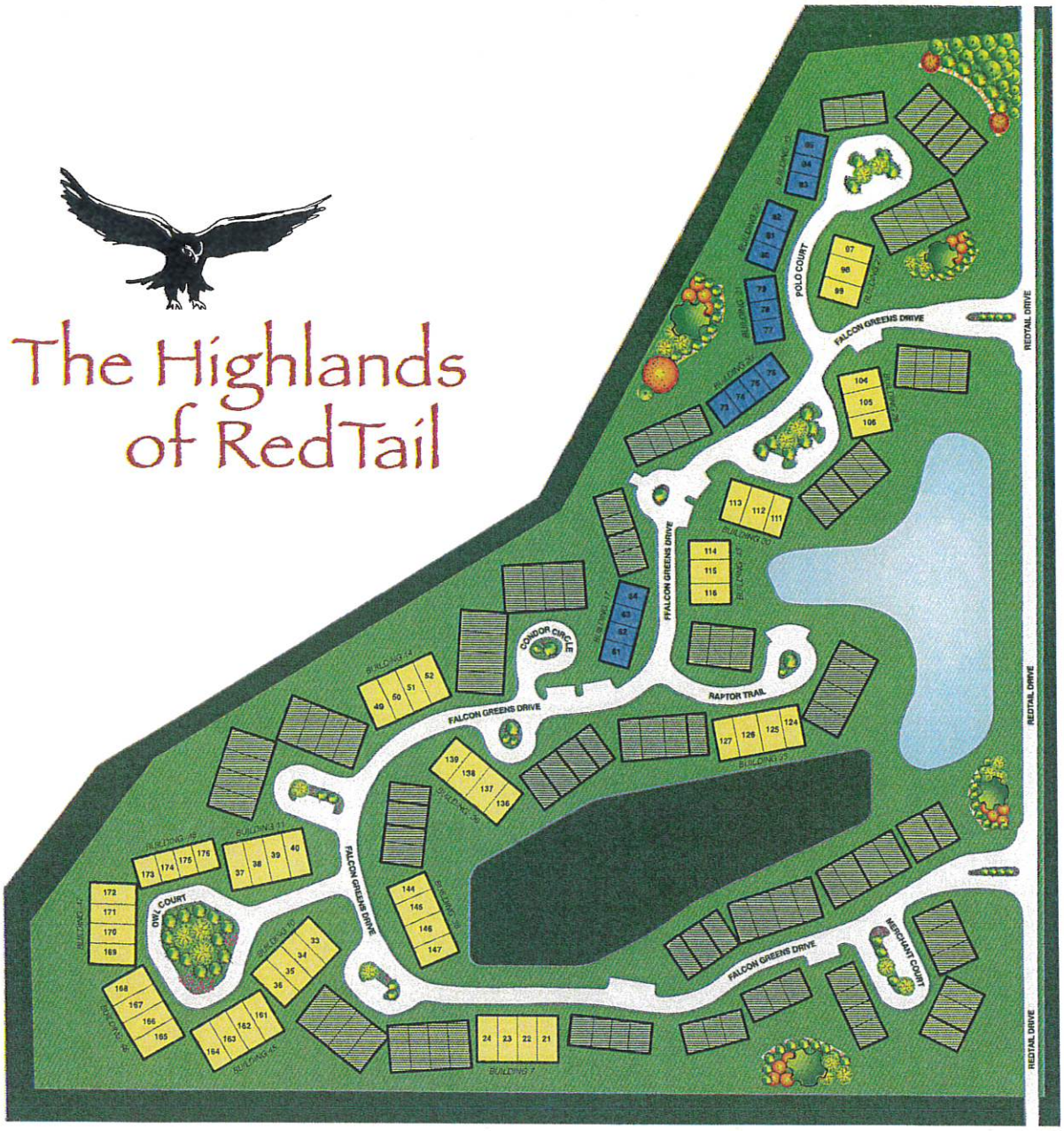




AMBERLEY WOODS - BRIDGE



The Highlands of RedTail





TOWNHOME UNITS WALK-UP UNITS SOLD UNITS

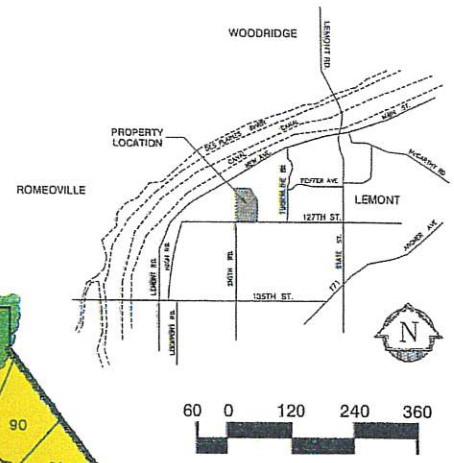
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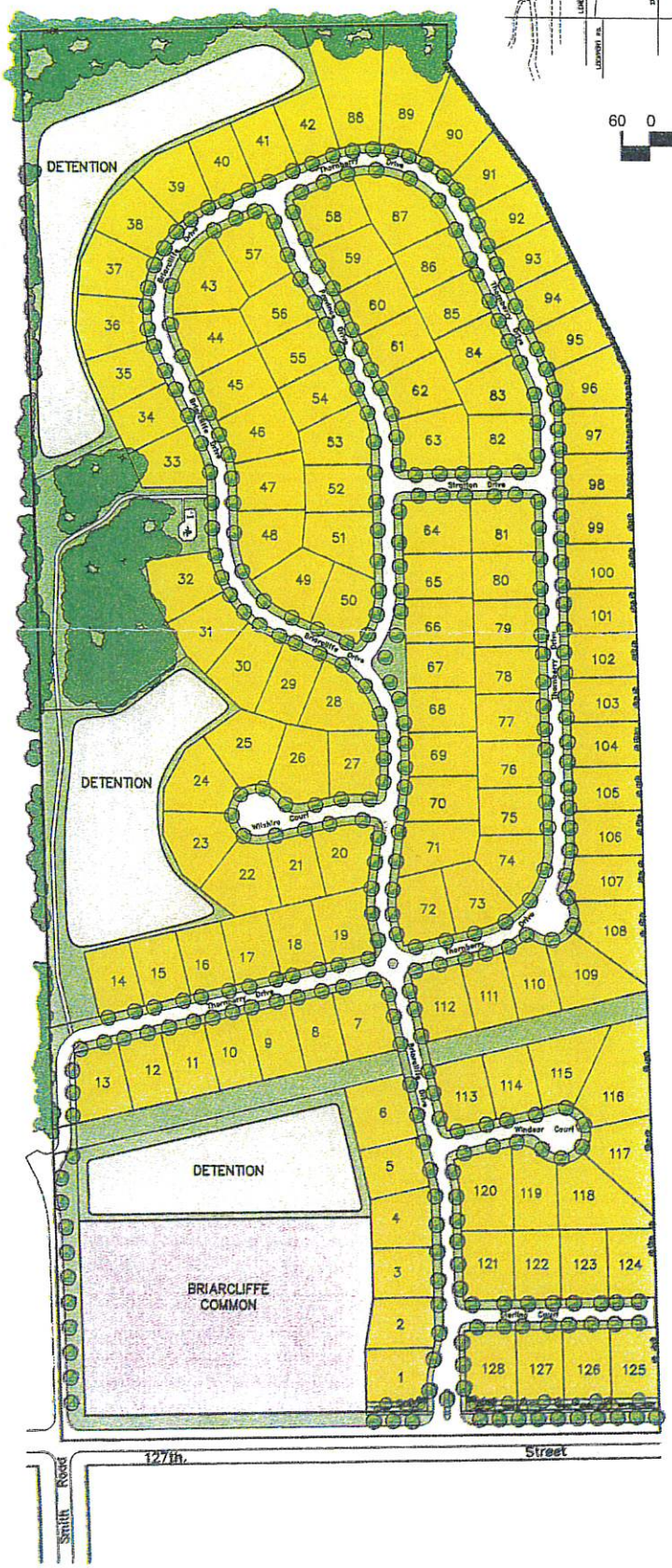
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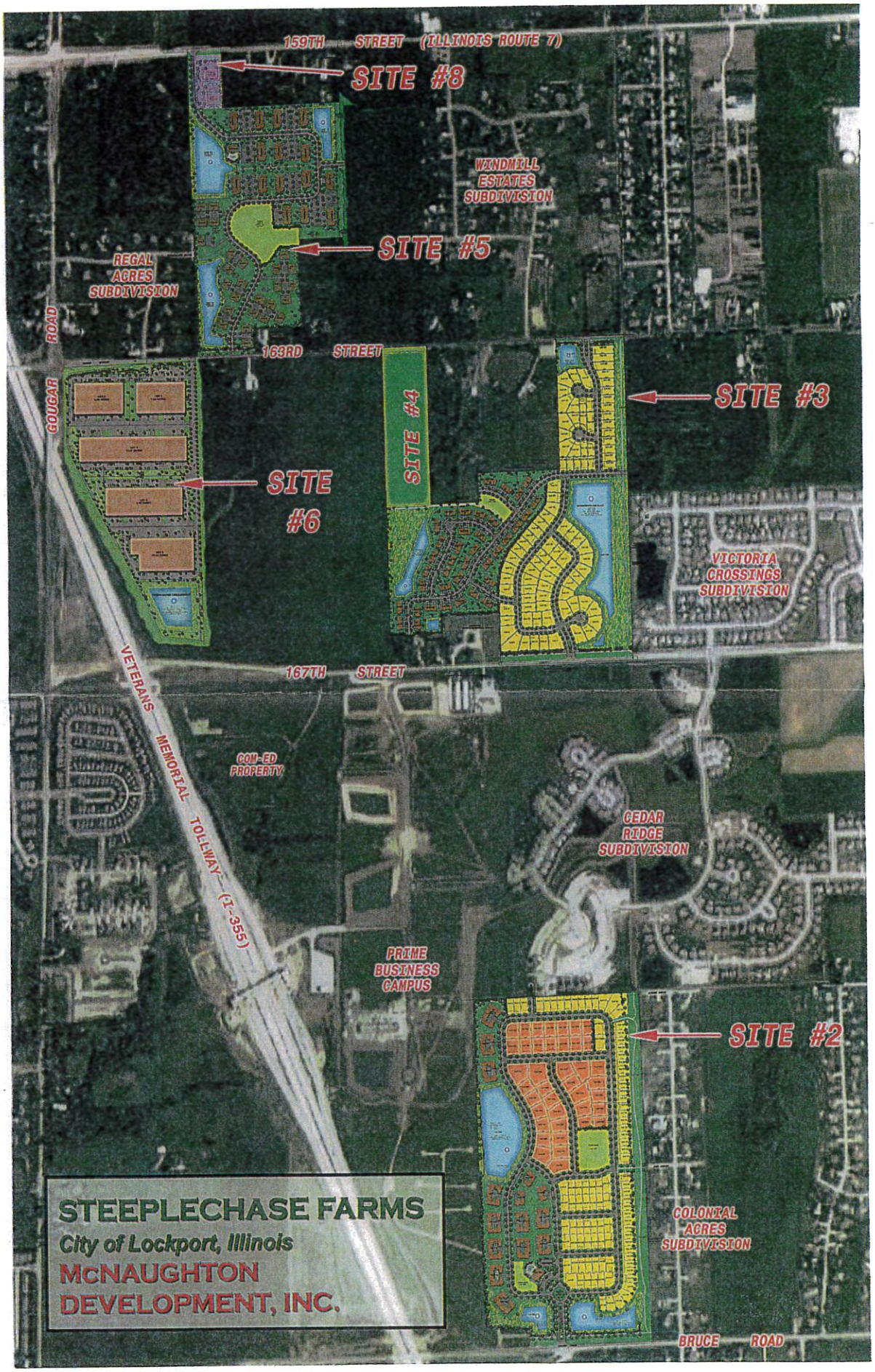


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BRIARCLIFFE ESTATES






159TH STREET (ILLINOIS ROUTE 7)
SITE #8
WINDMILL ESTATES SUBDIVISION
SITE #5
REGAL ACRES SUBDIVISION
COUGAR ROAD
163RD STREET
SITE #4
SITE #3
SITE #6
VICTORIA CROSSINGS SUBDIVISION
167TH STREET
VETERANS MEMORIAL TOLLWAY (I-355)
COM-ED PROPERTY
CEDAR RIDGE SUBDIVISION
PRIME BUSINESS CAMPUS
SITE #2
COLONIAL ACRES SUBDIVISION
BRUCE ROAD
STEEPLECHASE FARMS
City of Lockport, Illinois
McNAUGHTON DEVELOPMENT, INC.

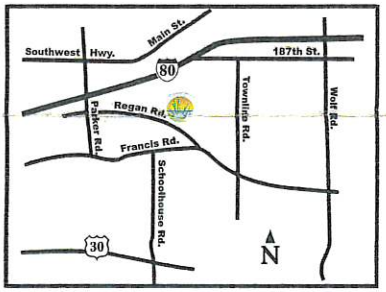
Overall Site Plan



Single Family Homes
Mokena Elementary School Dist. 159
Lincoln-Way High School Dist. 210

Single Family Homes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210

Townhomes
New Lenox Elementary School Dist. 122
Lincoln-Way High School Dist. 210





Whisper Creek
MOKENA

REGAN ROAD FARM DEVELOPMENT I, LLC
708-361-8300 | 815-485-8500
E-mail: sales@mcnaughtondevelopment.com

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A PROUD MEMBER OF SSHBA

MOKENA

FOXBOROUGH ESTATES

"Mokena's Premier Master-Planned Community"

Overall Site Plan



- **PHASE I** THE MEADOWS OF FOXBOROUGH ESTATES
- **PHASE II** THE LAKES OF FOXBOROUGH ESTATES
- **PHASE III** THE PRESERVES OF FOXBOROUGH ESTATES
- **PHASE IV** THE DEN OF FOXBOROUGH ESTATES

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GRUBB FARM DEVELOPMENT, LLC

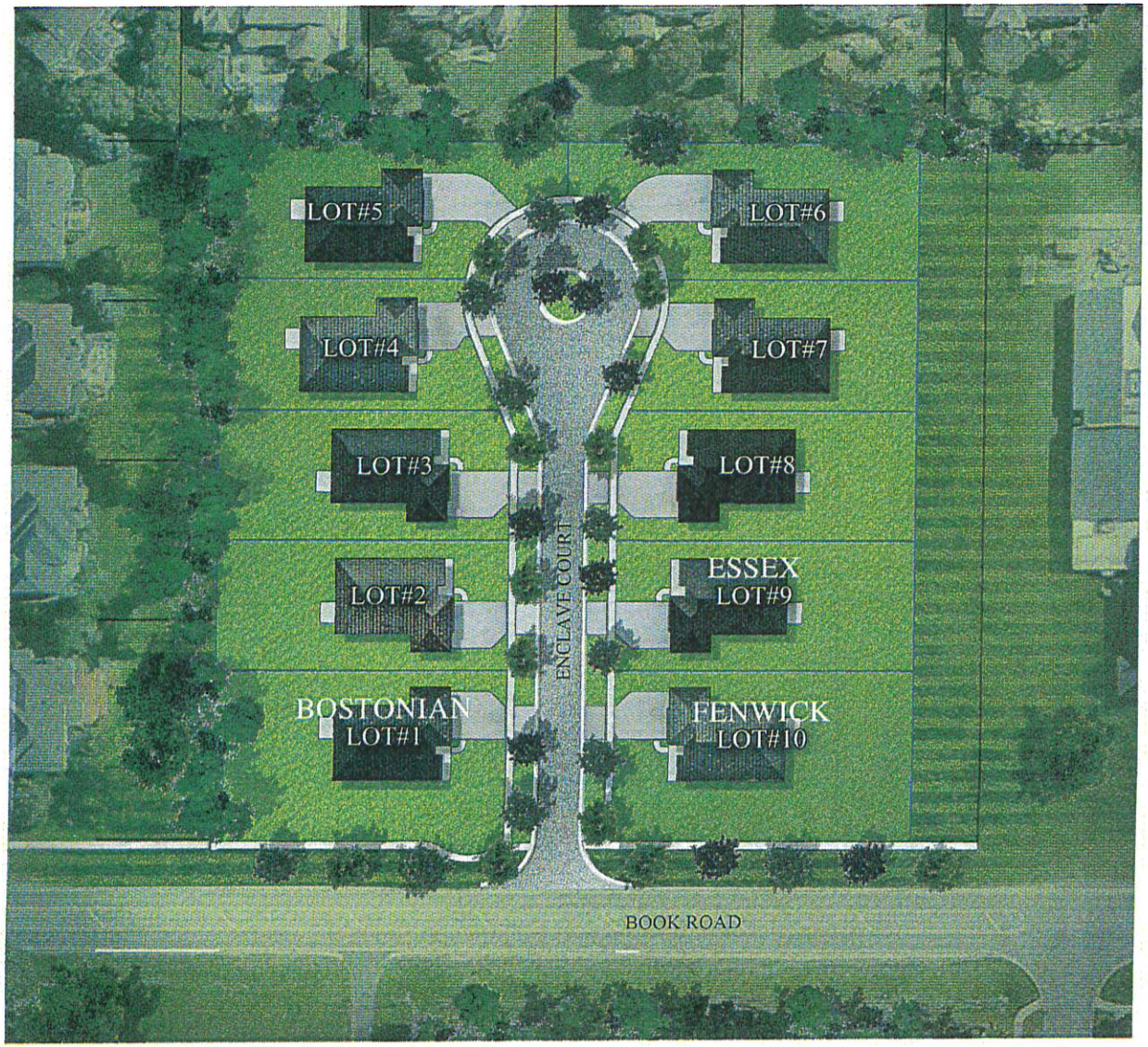
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EQUAL HOUSING OPPORTUNITY

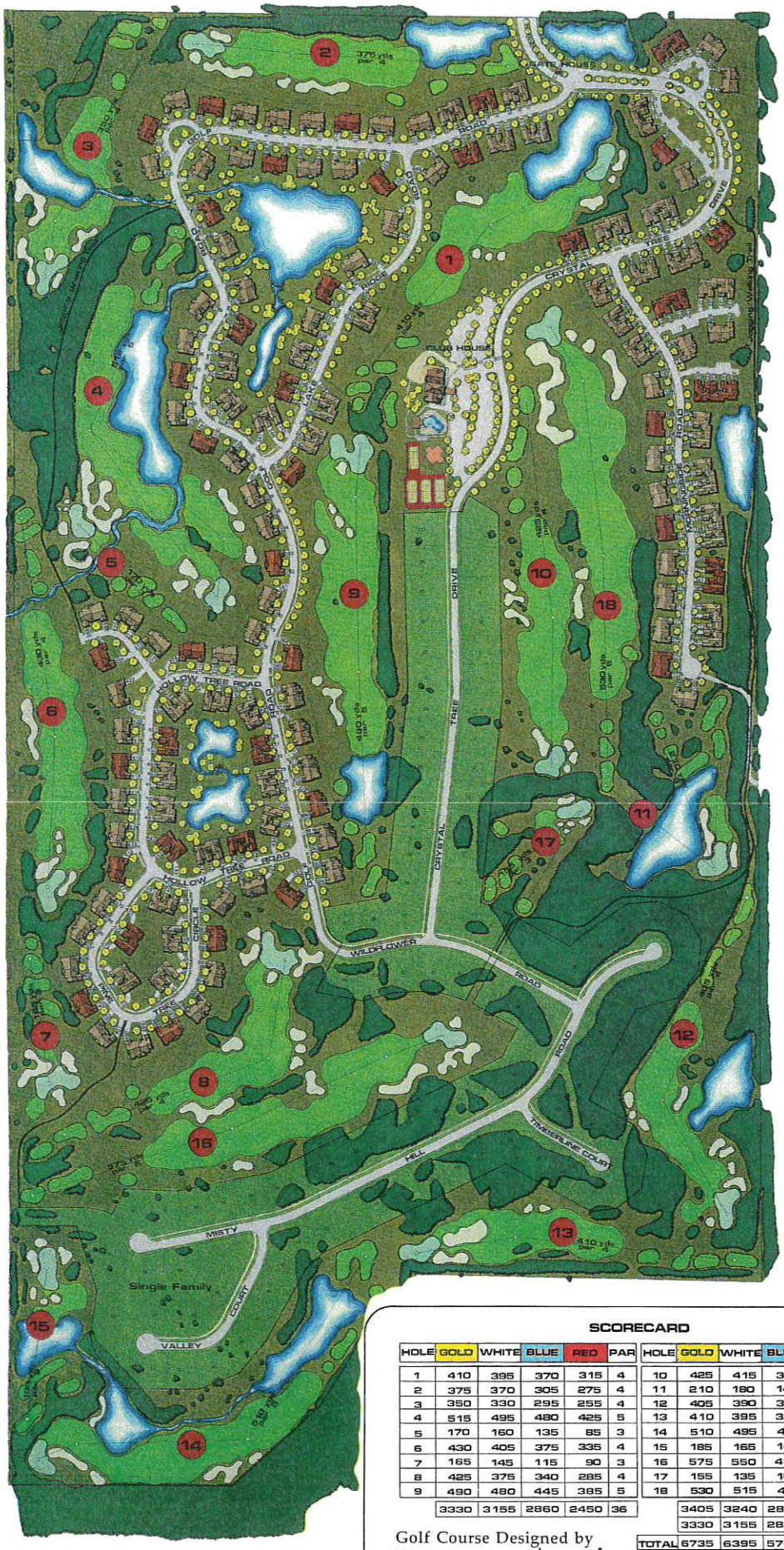
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YOUR LUXURY HOME BUILDER

SILVER LEAF
OF NAPERVILLE



CRYSTAL TREE
ORLAND PARK



SCORECARD

HOLE	GOLD	WHITE	BLUE	RED	PAR
1	410	395	370	315	4
2	375	370	305	275	4
3	350	330	295	255	4
4	515	495	480	425	5
5	170	160	135	85	3
6	430	405	375	335	4
7	165	145	115	90	3
8	425	375	340	285	4
9	490	480	445	385	5
	3330	3155	2860	2450	36

HOLE	GOLD	WHITE	BLUE	RED	PAR
10	425	415	345	305	4
11	210	180	145	120	3
12	405	390	355	295	4
13	410	395	345	300	4
14	510	495	450	405	5
15	185	165	140	105	3
16	575	550	495	440	5
17	155	135	105	95	3
18	530	515	465	400	5
	3405	3240	2845	2465	36
	3330	3155	2860	2450	36
TOTAL	6735	6395	5705	4915	72

Golf Course Designed by
Robert Trent Jones Jr.

Prepared by: The Ives/Ryan Group, Inc.
for Corley Real Estate and Financial.
Golf course design by Robert Trent Jones Jr.

This is an artist's conception and subject to modification pending final engineering.

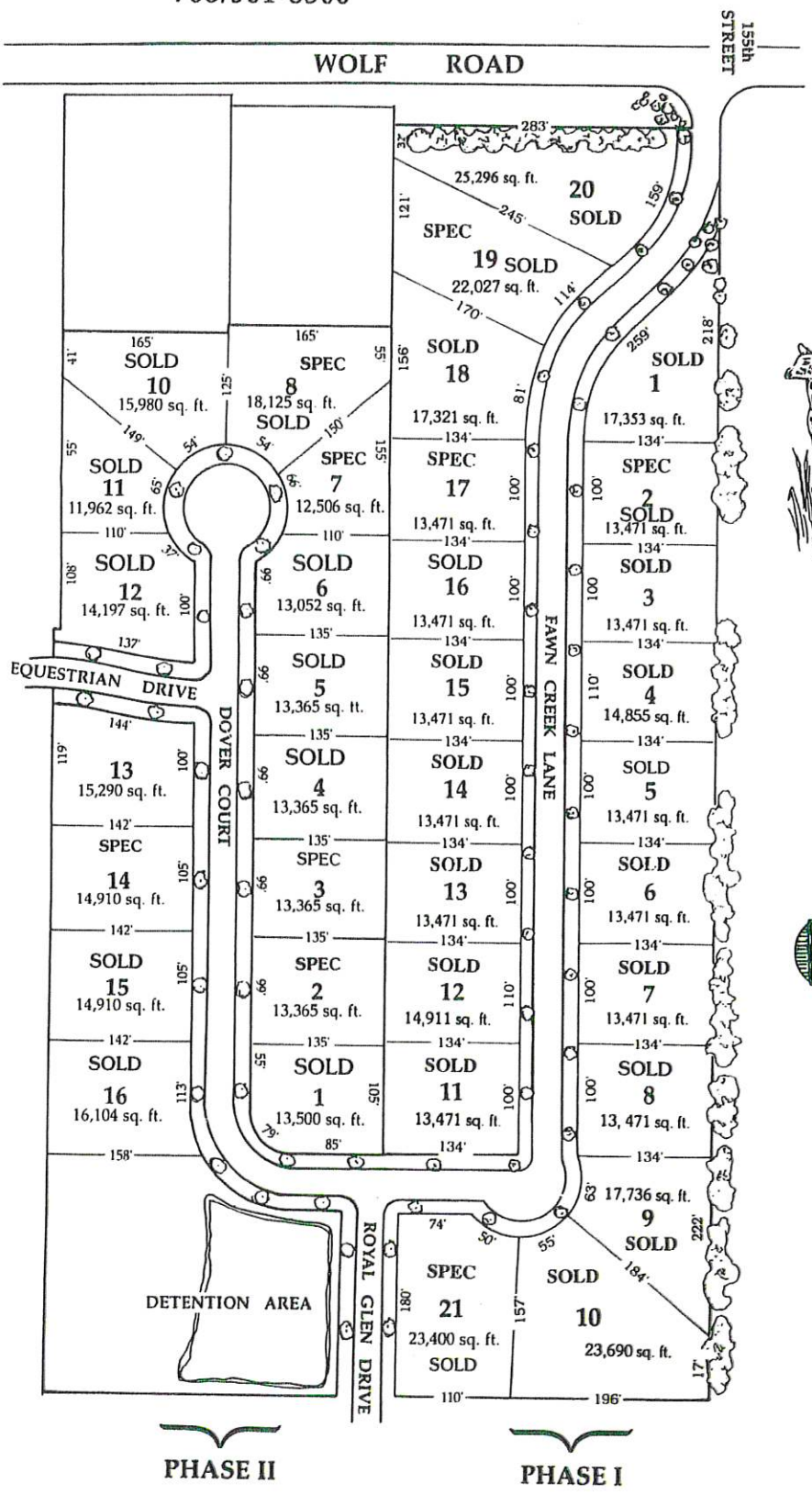
McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

KEY AWARDS

Excellence in Housing Design



FAWN CREEK

OF ORLAND PARK

PHASE I and II

EQUAL HOUSING OPPORTUNITY

N

PHASE I

Lots 11 through 18 Walkouts

Lots 19 and 20 Lookouts or Walkouts

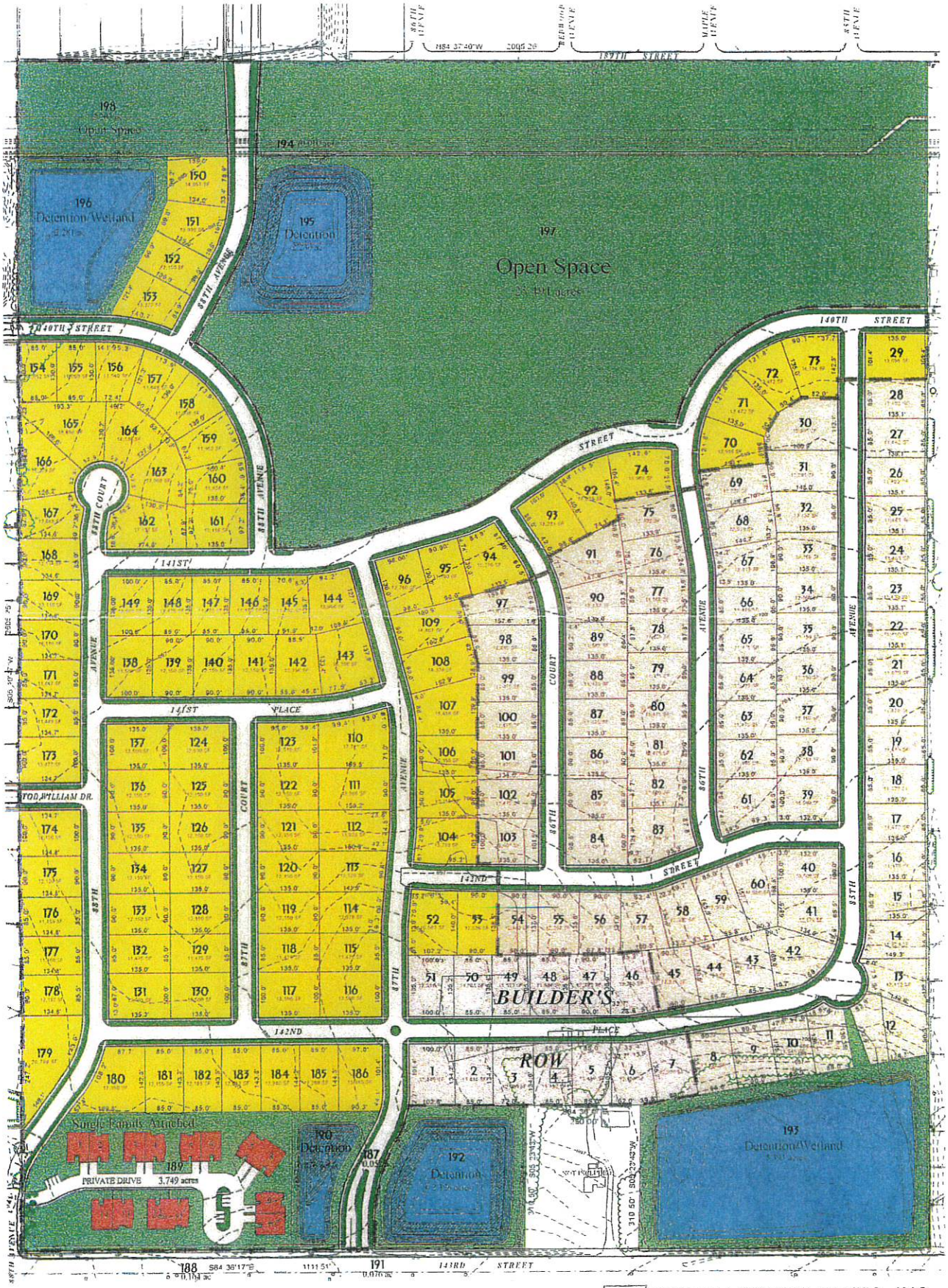
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EVERGREEN VIEW SUBDIVISION

Park Enterprises & McNaughton Development

Orland Park, Illinois



PHASE I | PHASE II | BUILDER'S ROW

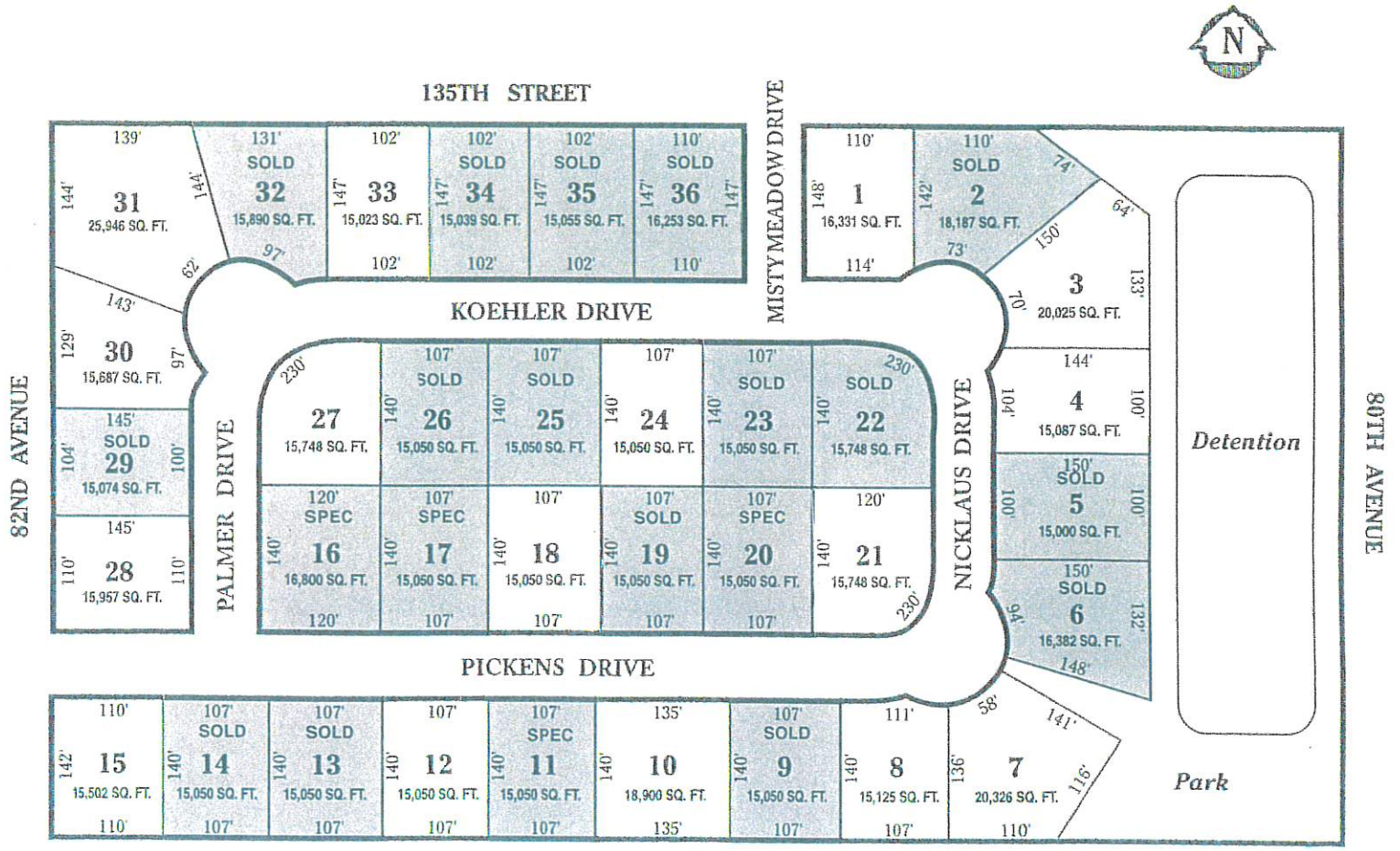
INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS

McNaughton DEVELOPMENT, INC

CUSTOM DESIGNED HOMES

708/361-8300

Meadowbrook Estates Of Orland Park



SHADED AREAS INDICATE MCNAUGHTON DEVELOPMENT INC. LOTS

KEY AWARDS

Excellence In Housing Design

NOTE: THIS SIMPLIFIED SITE PLAN IS PREPARED ONLY AS A GENERAL GUIDE AND SHALL NOT BE CONSIDERED TECHNICALLY ACCURATE. REFER TO PLAT OF SURVEY IN SALE CENTER FOR CURRENT DETAILS.

Park Corners Office Centre / 11900 Southwest Highway - Suite 101 • Palos Park, IL 60464

www.mcnaughtondevelopment.com

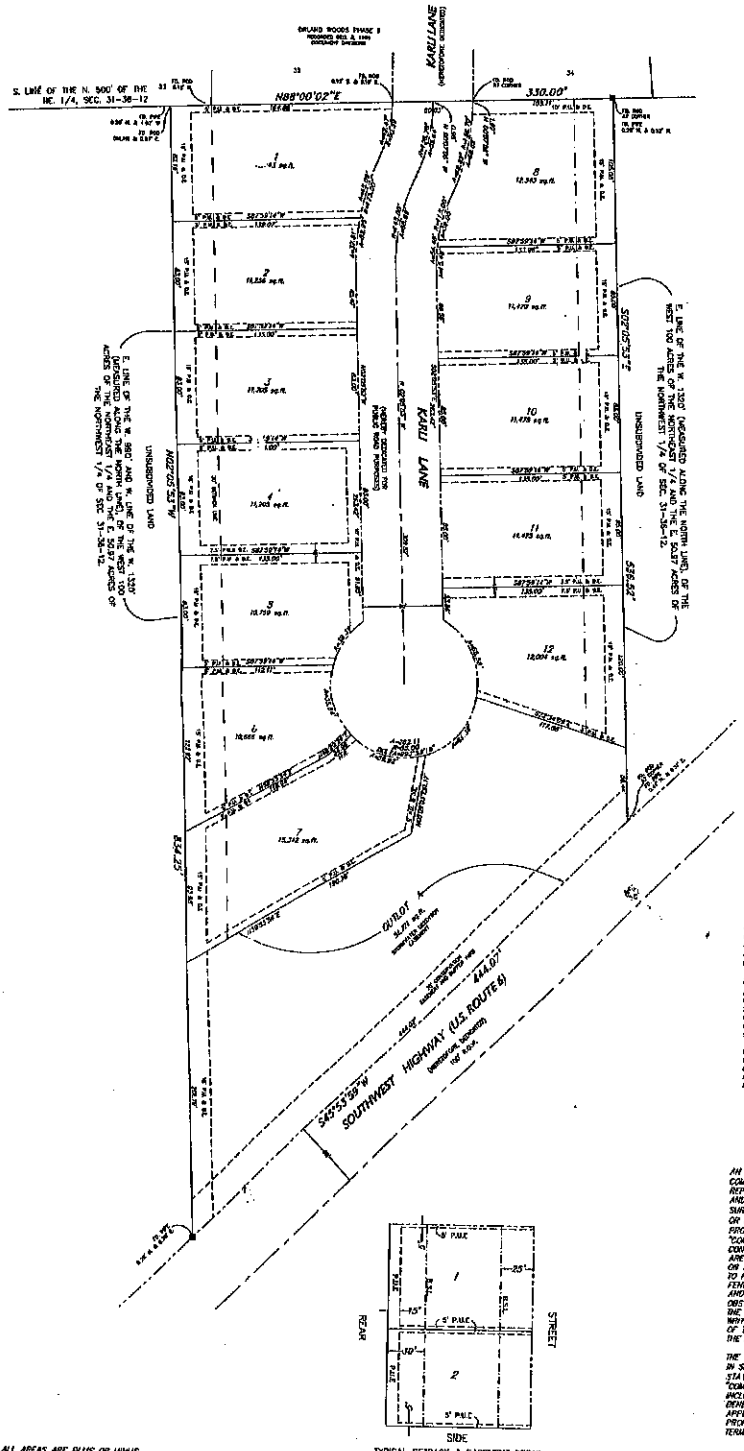
FINAL PLAT
OF
ORLAND WOODS III

BEING A SUBDIVISION IN THE NORTHEAST QUARTER OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL IN COOK COUNTY, ILLINOIS.

GLN 27-31-200-005

C:\Land Projects\03045\topo\dwg\LOCMAP.bmp
SITE

LOCATION MAP



BASIS OF BEARINGS
ASSUMED

GRAPHIC SCALE

1" = 40' (IN FEET)
1 inch = 40 ft.

LEGEND

● FIP	FOUND IRON PIPE
● FIR	FOUND IRON ROD
○ SIP	SET IRON PIPE
○ SMN	SET MAG. NAIL
■	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	PROFF-OF-WAY LINE
	CENTERLINE
	EASEMENT LINE
	BUILDING SETBACK LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(100.00')	RECORD DIMENSION	S	SOUTH
100.10'	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
FIR	FOUND IRON ROD OR PIN		
A	ARC DIMENSION		
R	RADIUS		
CH.	CHORD DIMENSION		
CB	CHORD BEARING		
D	DELTA		
P.C.	POINT OF CURVE		
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		

TYPICAL SETBACK & EASEMENT DETAIL
(UNLESS OTHERWISE SHOWN)

EASEMENT PROVISIONS

Easements are hereby reserved for and granted to the Village of Orland Park, Illinois and to those public utility companies operating under franchise from the Village of Orland Park, including, but not limited to Ameritech, Northern Illinois Gas Company (NICOR), Commonwealth Edison Company, Cable Television and their successors and assigns, over all the areas marked "Public Utilities and Drainage Easement" (P.U. & D.E.) on the plat for the perpetual right, privilege and authority to construct, reconstruct, repair, inspect, maintain and operate various utility transmission and distribution systems, community antenna television systems and including storm and/or sanitary sewers, together with any and all necessary manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said village, over, upon, along, under and through said indicated easements, together with right of access across the property for necessary men and equipment to do any of the above work.

No right is also granted to trim or remove fences, trees, shrubs or other plants on the easements that interfere with the operation of the sewers or other utilities. No permanent buildings shall be placed on said easements, but same may be used for gardens, shrubs, landscaping and other purposes that do not harm or later interfere with the aforesaid uses or rights, where an easement is used both for sewers and other utilities, the other utility installation shall be subject to the ordinances of the Village of Orland Park.

Easements are hereby reserved for and granted to the Village of Orland Park and other governmental authorities having jurisdiction of the land platted hereby over the entire easement area for ingress, egress and the performance of municipal and other governmental services, including water, storm, and sanitary sewer services and maintenance.

NICOR GAS COMPANY

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR, REPLACE AND REMOVE FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT," "COMMON AREA OR AREAS" AND STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS," TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, ON OR ADJACENT LOTS, AND COMMON AREA OR AREAS, AND TO SERVE OTHER PROPERTY, ADJACENT OR OTHERWISE, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS' FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NICOR. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THAT MEANING SET FORTH FOR SUCH TERM IN SECTION 605/2(e) OF THE "CONDOMINIUM PROPERTY ACT" (ILLINOIS COMPILED STATUTES, CH. 765, SEC. 605/1(e)), AS AMENDED FROM TIME TO TIME, THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH AREAS MAY BE DESIGNED ON THIS PLAT BY OTHER TERMS.

1. ALL AREAS ARE PLUS OR MINUS.
2. ALL EASEMENTS ARE HEREBY GRANTED.
3. ALL DISTANCE ARE IN FEET AND DECIMAL PARTS THEREOF.
4. THERE SHALL BE NO INGRESS OR EGRESS FROM OUTLOT "A" TO SOUTHWEST HIGHWAY.

PROFESSIONAL LAND SURVEYOR
STEVEN J. LAND
STATE OF ILLINOIS
035-003160
BELVIDERE, IL

DIGITAL SURVEY & DESIGN, LTD.
5249 Stone Quarry Road
Belvidere, IL 61008
Phone: 815-547-1130
Fax: 815-547-0430

PREPARED FOR:
McNAUGHTON DEVELOPMENT, INC.
11900 SOUTHWEST HIGHWAY
PALOS PARK, ILLINOIS 60464
(708) 361-8300

REVISIONS NO.	DATE	DESCRIPTION
2	11/19/03	DELETED FRONT SETBACK LINES
1	10/31/03	ADDED EASEMENT

FINAL PLAT
ORLAND WOODS III

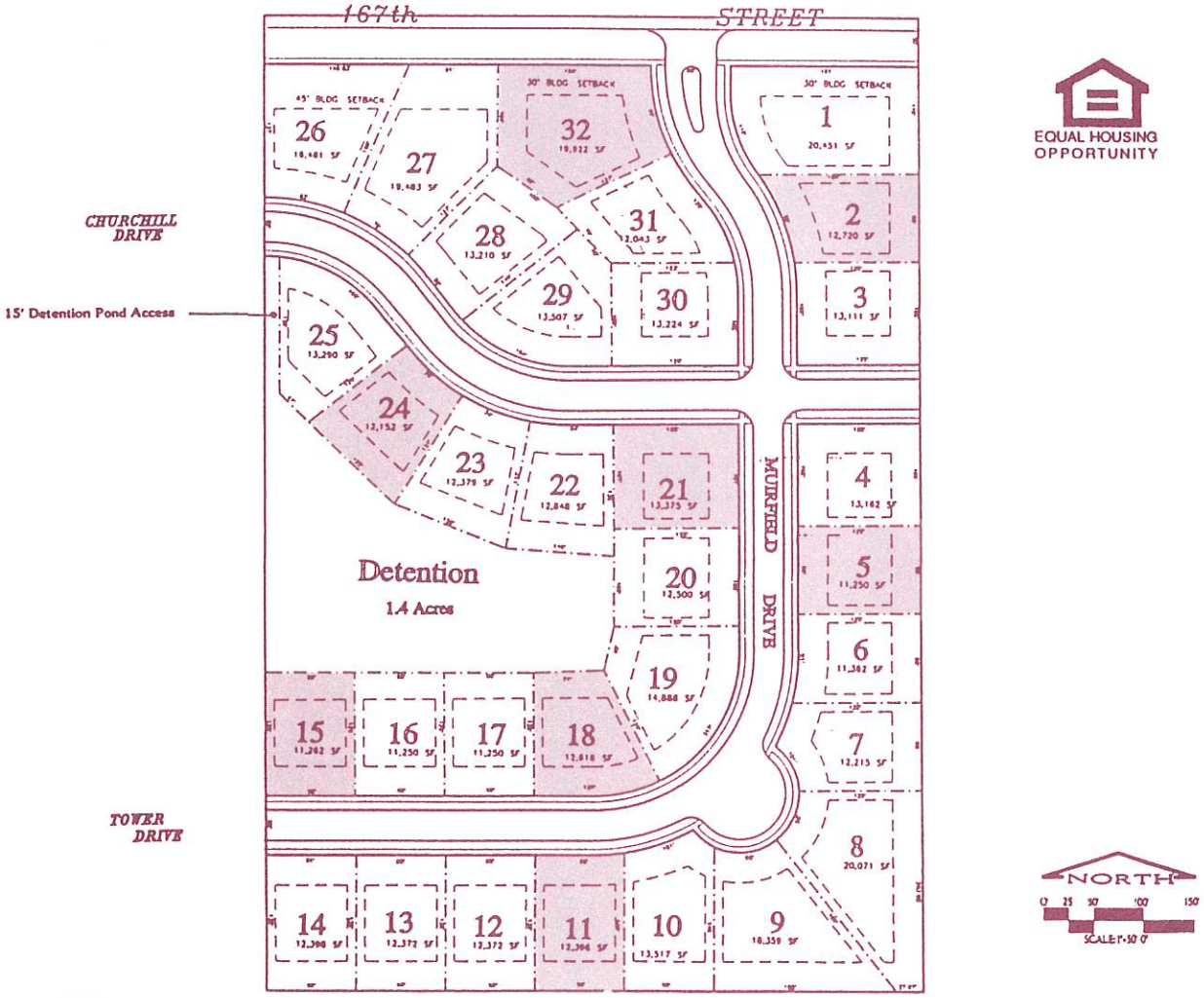
DRAFTING COMPLETED: 08/22/03 DRAWN BY: S.J. PROJECT MANAGER: S.J.
FIELD WORK COMPLETED: 08/29/03 CHECKED BY: SCALE: 1" = 40'

Project No: 03045
Group No: 03
SHEET NO. 1 of 2

MUIRFIELD

167th & 106th Avenue
ORLAND PARK

** wooded / walk-out lots



SHADED AREAS INDICATE McNAUGHTON DEVELOPMENT LOTS

*Other lots within subdivision can be acquired upon request.

PLAN DATA	
TOTAL AREA	+/-15.0 ACRES
EXTERIOR R.O.W.	0.8 ACRES
DETENTION	1.4 ACRES
NET AREA	12.8 ACRES
TOTAL HOMES	32
MIN. LOT SIZE	11,250 SF
AVERAGE LOT SIZE	13,889 SF
NET DENSITY	2.5 DU/AC.
PROPOSED ZONING	R-3

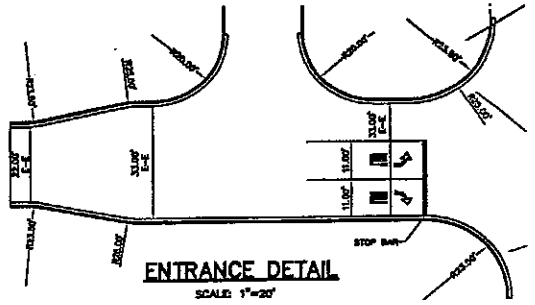
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
phone (708) 361-8300 fax (708) 361-6754

This plan is preliminary in nature and was prepared to illustrate design intent, therefore it is subject to modification pending final planning, engineering and landscape design.

FINAL SITE PLAN
FOR
PARK CORNERS II

ORLAND PARK, ILLINOIS

SITE ADDRESS:
13510 CIRCLE DRIVE, ORLAND PARK, ILLINOIS 60462
ORLAND TOWNSHIP



END

PROPOSED

S1

STOP

R1-1

S2

NO OUTLET

W14-2
36"X36"
BACKGROUND - YELLOW

NOTES:
1. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS BOOK.
2. THE PLACEMENT AND SPACING OF SIGNS SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

BY OWNER.

MENTS BY I.D.O.T.

= 0.99 ac = 43,164 SF
= 0.13 ac = 5,659 SF
= 0.86 ac = 37,523 SF
= 0.40 ac = 17,233 SF
= 11,420 SF
= 0.30
= 38 SPACES
= 38 SPACES

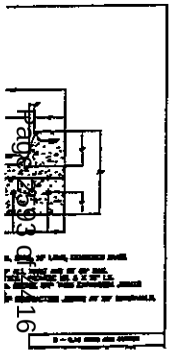
STORY)

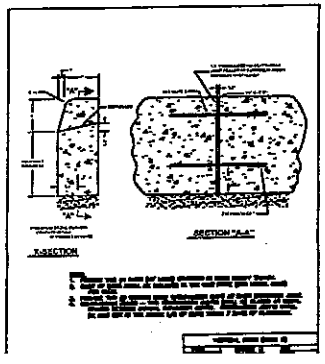
= 5,652 SF (15%)
= 14,640 SF (39%)
= 1
= 1 (BIZ ZONED)

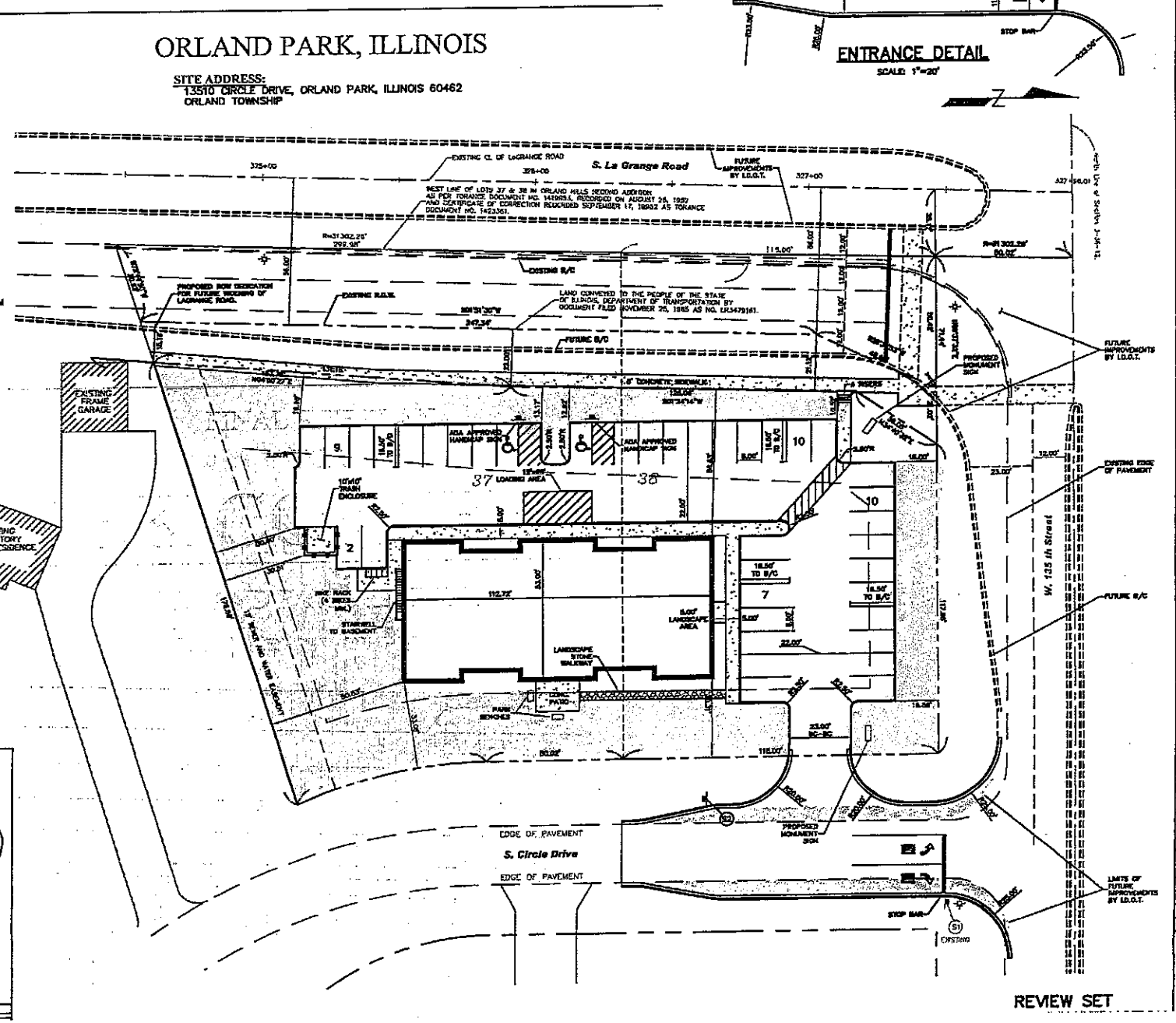
REA

ALL BE PLANTED WITH MATERIALS TO BE
OF ORLAND PARK. THESE SWALES
TANDARDS NECESSARY TO MEET "BIO

THAT PART OF SAID LOTS 37 AND 38 CONVEYED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION, BY DOCUMENT AS NUMBER LR3479161, MORE PARTICULARLY DESCRIBED AS THE NORTHWEST CORNER OF SAID LOT 38; THENCE ON AN TH 89 DEGREES 37 MINUTES 32 SECONDS EAST, ALONG THE 38, A DISTANCE OF 56.42 FEET; THENCE SOUTH 56 DEGREES WEST 96 FEET; THENCE SOUTH 1 DEGREE 01 MINUTES 30 ET TO THE SOUTHERLY LINE OF SAID LOT 37; THENCE SOUTH 50 SECONDS WEST, ALONG SAID SOUTHERLY LINE, 30.63 FEET ER OF SAID LOT 37, SAID POINT BEING A 31,302.28 FEET ER OF CIRCLE OF SAID CURVE BEARS NORTH 89 DEGREES 13 T FROM SAID POINT; THENCE NORTHERLY 300.22 FEET, ALONG T LINE OF SAID LOTS 37 AND 38 THROUGH A CENTER ANGLE 57 SECONDS, TO THE POINT OF BEGINNING) IN BLOCK 4 IN DITION, BEING A SUBDIVISION OF PART OF THE WEST HALF OF NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN







REVIEW SET

REVISIONS

MCNAUGHTON DEVELOPMENT
11900 SOUTHWEST HIGHWAY
PALOS PARK, ILLINOIS 60464

FINAL SITE PLAN
FOR
PARK CORNERS II

DESIGNTEK ENGINEERING, INC.
CONSULTING AND SITE DESIGN ENGINEERS
9500 BORNHEIT DRIVE, SUITE 304
MOKENA, ILLINOIS 60448

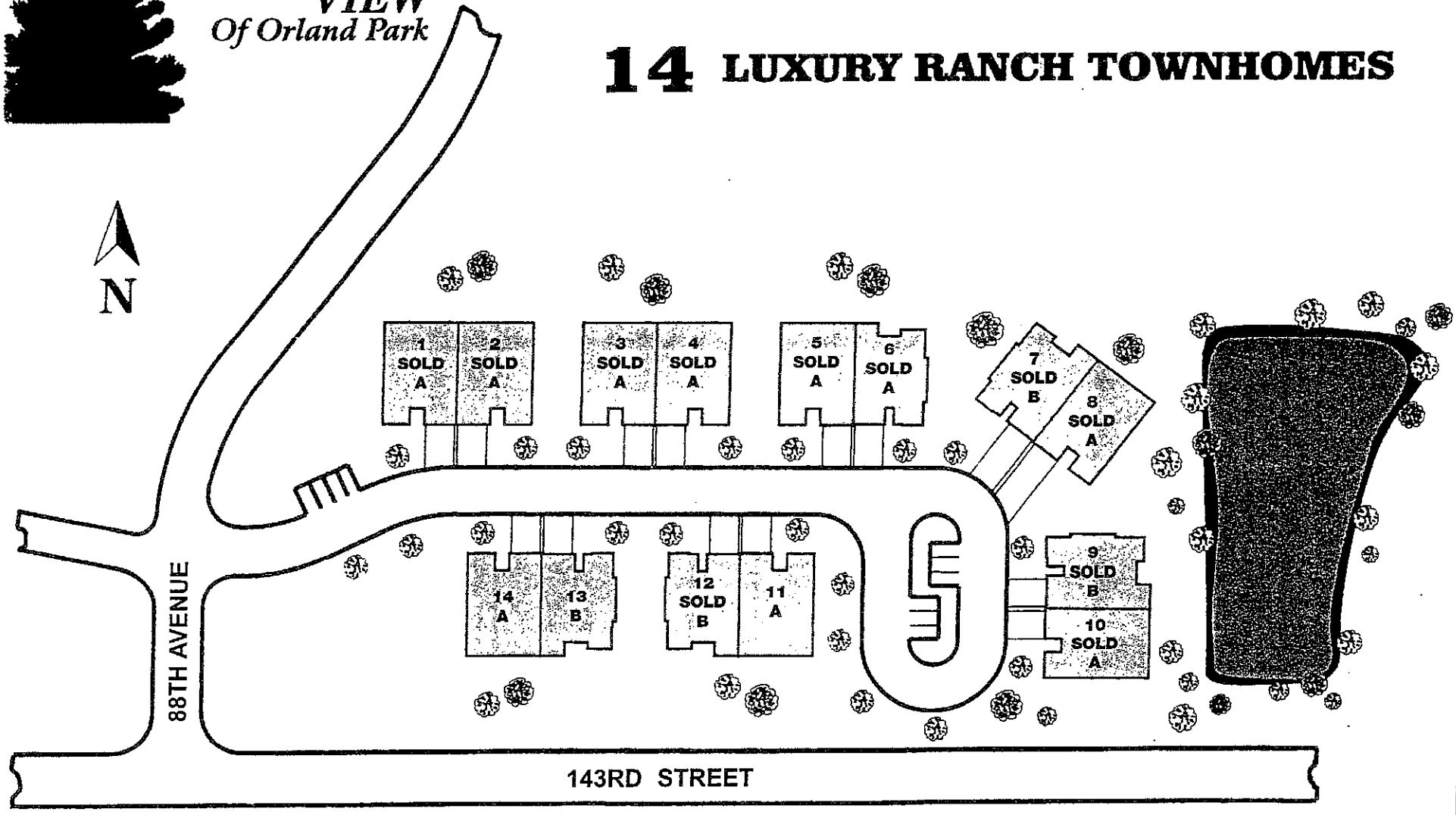
PROJECT INFO
Project No.: 07
Scale: 1"=20'
Date: 03-27-0
Design By: ADM
Drafted By: ADI
Checked By: SD

1
OF


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WOLF
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BLUFF POINTE
Orland Park, Illinois
McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER
N

Evergreen VIEW Of Orland Park

14 LUXURY RANCH TOWNHOMES



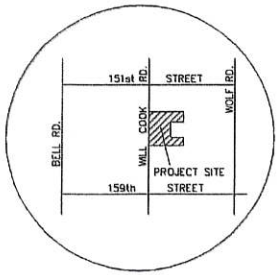
McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES
708/361-8300

This site plan in an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

SSHBA

EQUAL HOUSING OPPORTUNITY

PRELIMINARY SITE PLAN
TIMBERLAKE
ORLAND PARK, ILLINOIS



LOCATION MAP
N.T.S.



REVISIONS

NO.	DATE	DESCRIPTION

McNAUGHTON DEVELOP, INC.
11900 SOUTHWEST HIGHWAY
PALOS PARK, IL. 60464

TIMBERLAKE
PRELIMINARY SITE PLAN
ORLAND PARK, ILLINOIS

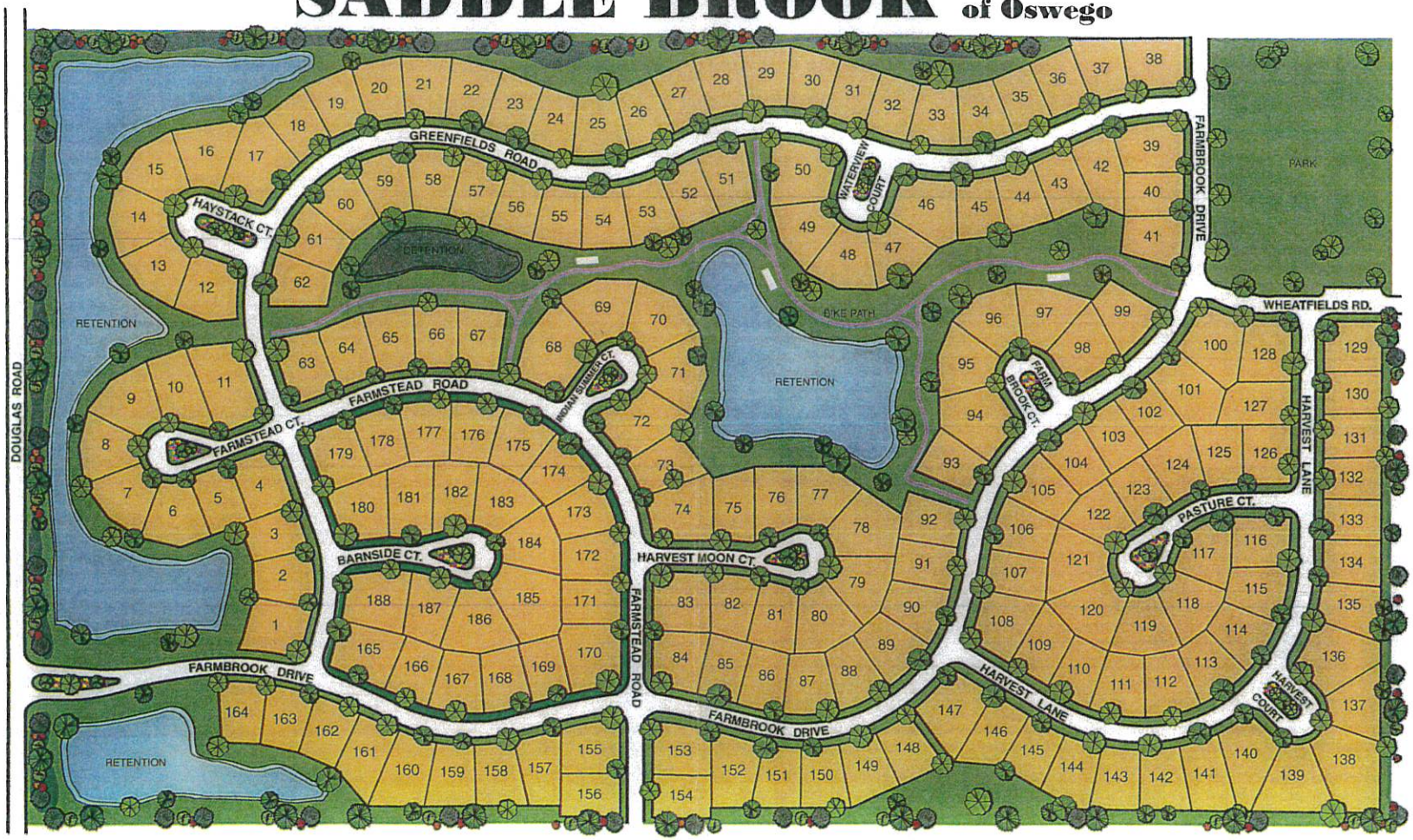
Design Tech Associates, Inc.
ENGINEERING • REAL ESTATE DEVELOPMENT
13159 West 143rd Street
Homer Glen, Illinois 60441
Phone: 708-301-0311
Illinois Professional Design Firm #184-002201

PROJECT INFORMATION

Project No.:	02-115C
File:	COLOR.DWG
Scale:	1"= N.T.S.
Date:	07-18-02
Design By:	SDS
Drafted By:	RSM
Checked By:	SDS

SHEET No.
1
of
1

SADDLE BROOK of Oswego



McNaughton DEVELOPMENT, INC

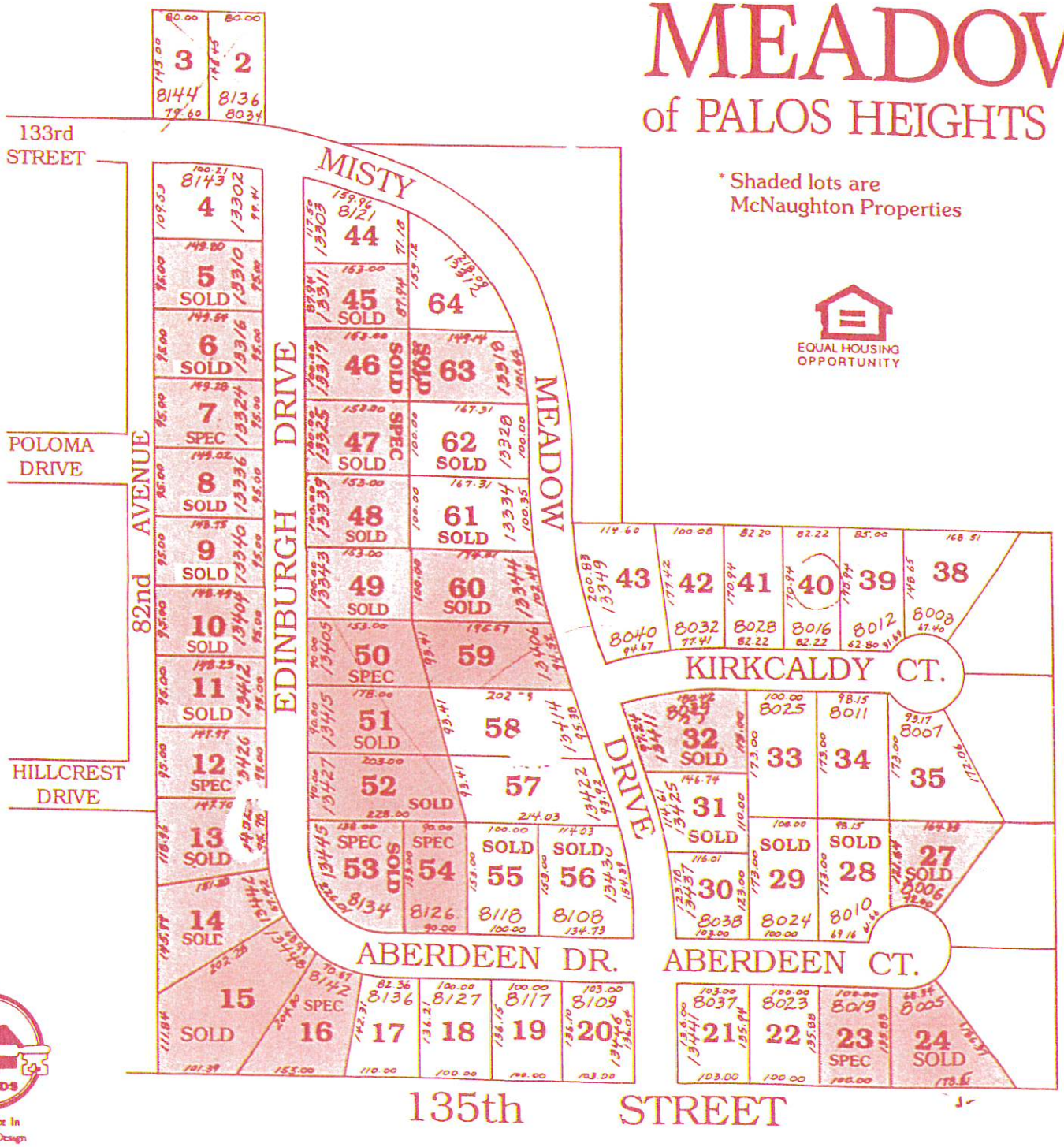
CUSTOM DESIGNED HOMES

708/361-8300

MISTY MEADOW of PALOS HEIGHTS

* Shaded lots are McNaughton Properties

EQUAL HOUSING OPPORTUNITY



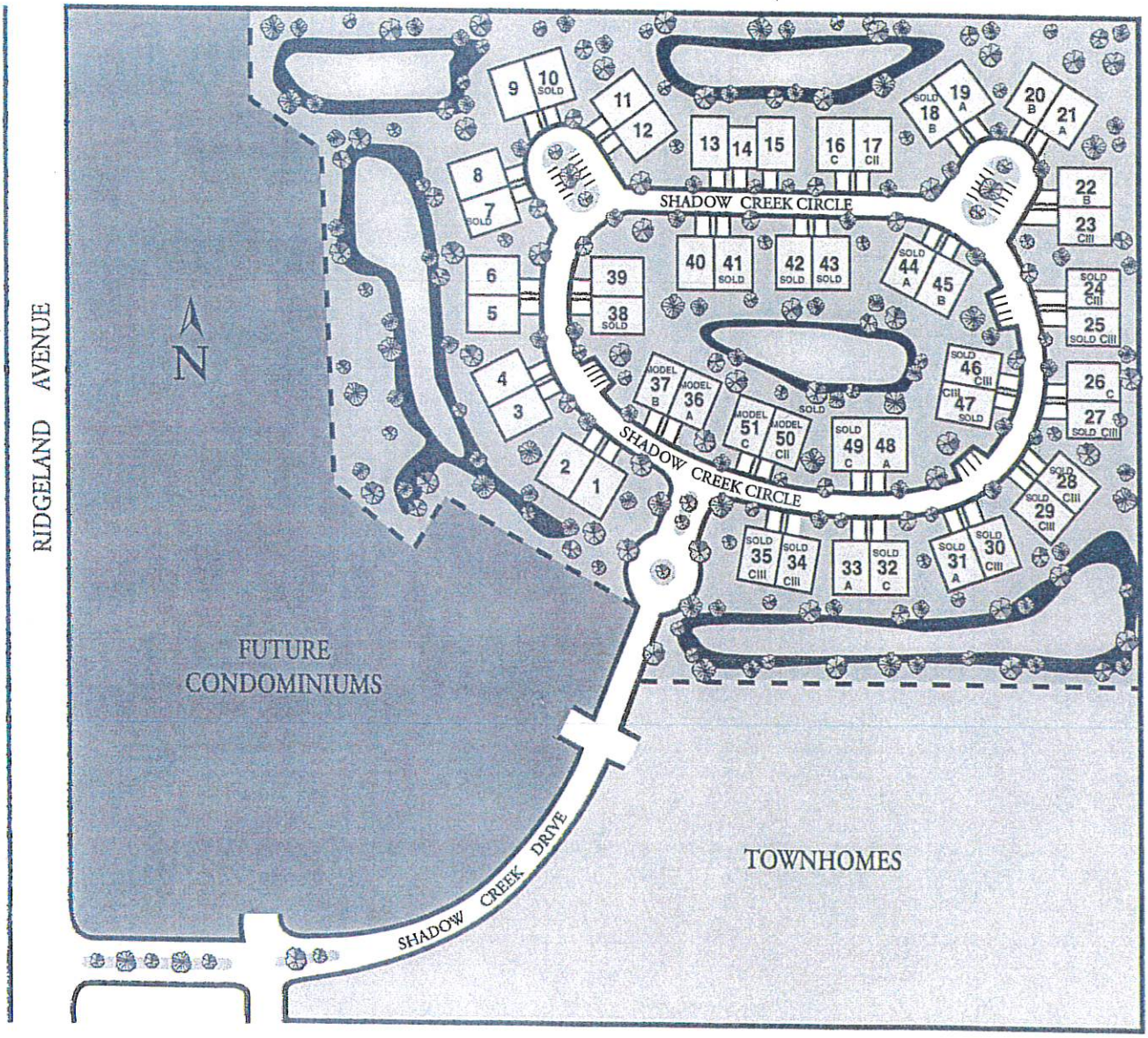
KEY AWARDS
Excellence In Housing Design

Park Corners Office Centre • 11900 Southwest Highway Suite 101 • Palos Park, Illinois 60464

McNaughton Development Inc. policy of continual improvement in design and construction requires that specifications, equipment, illustrations, dimensions, and prices be subject to change without notice. Refer to plans and specifications in the Sales Office for current details.

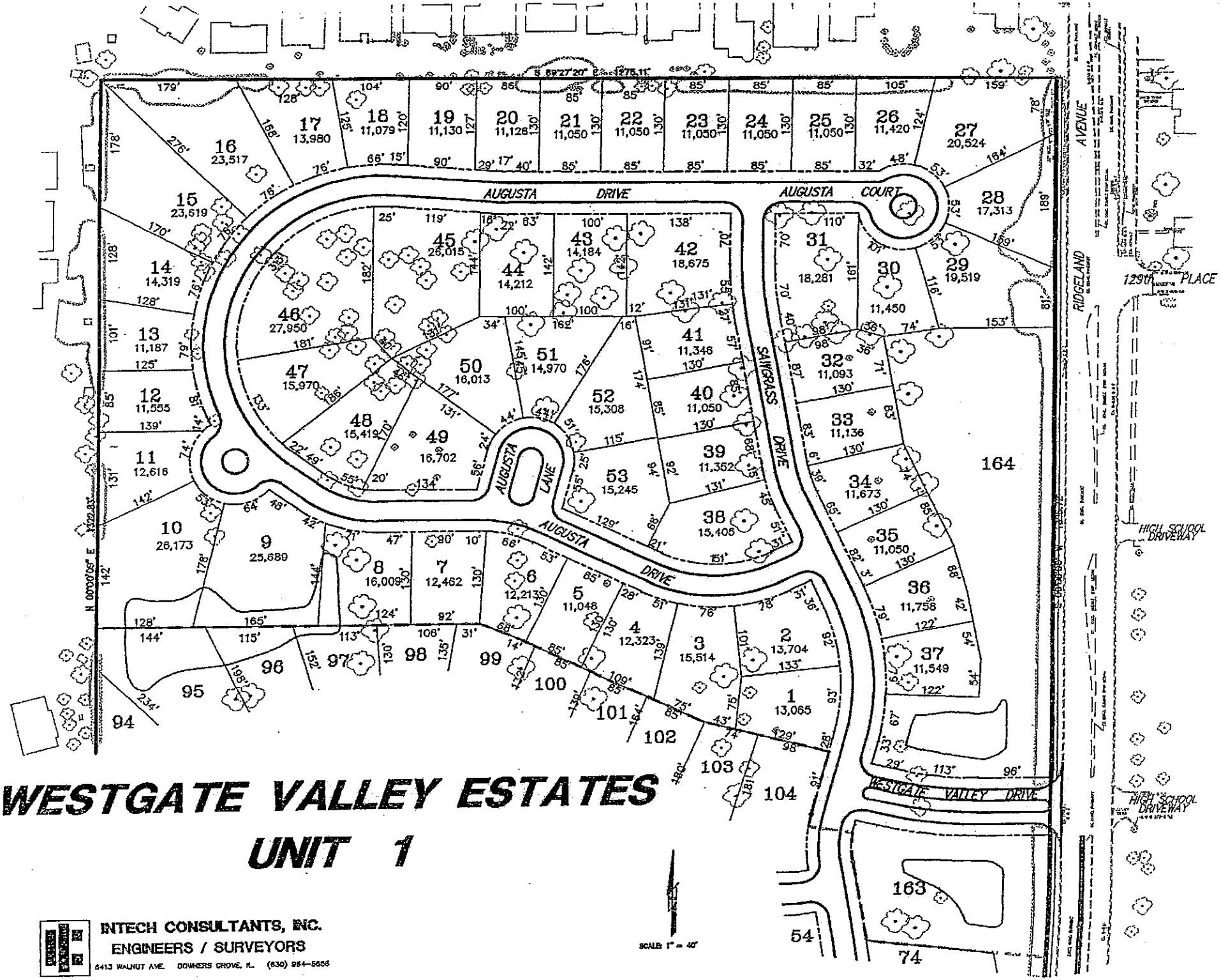
KEYSTONE CROSSING

Of Westgate Valley



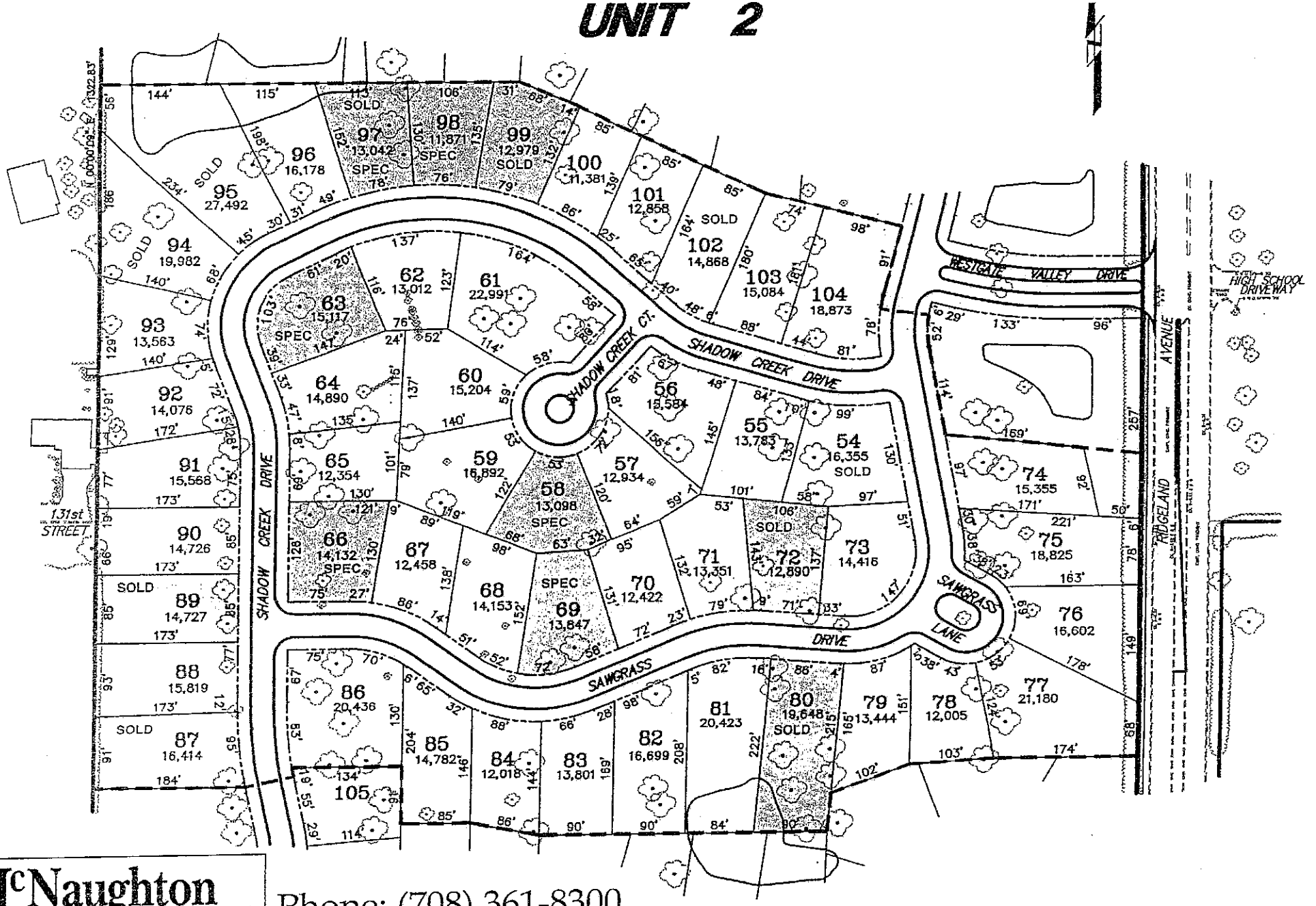
This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES


AUGUSTA DRIVE
AUGUSTA COURT
AUGUSTA LANE
SAWGRASS DRIVE
RIDGELAND AVENUE
129th PLACE
HIGH SCHOOL DRIVEWAY
WESTGATE VALLEY DRIVE
WESTGATE VALLEY ESTATES
UNIT 1
INTECH CONSULTANTS, INC.
ENGINEERS / SURVEYORS
5413 WALNUT AVE. DOWNERS GROVE, IL. (630) 964-5656
SCALE: 1" = 40'

WESTGATE VALLEY ESTATES

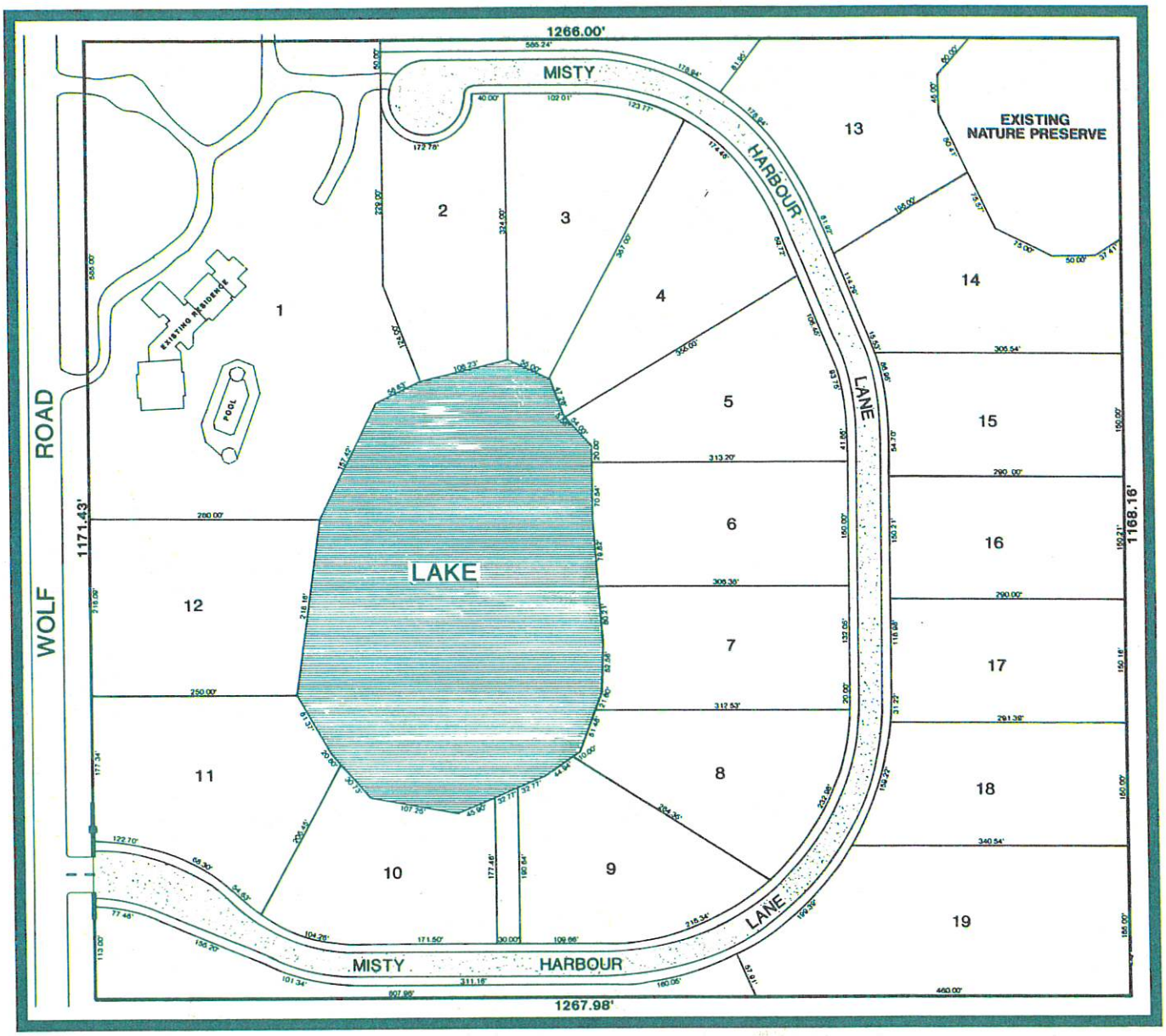
UNIT 2



McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

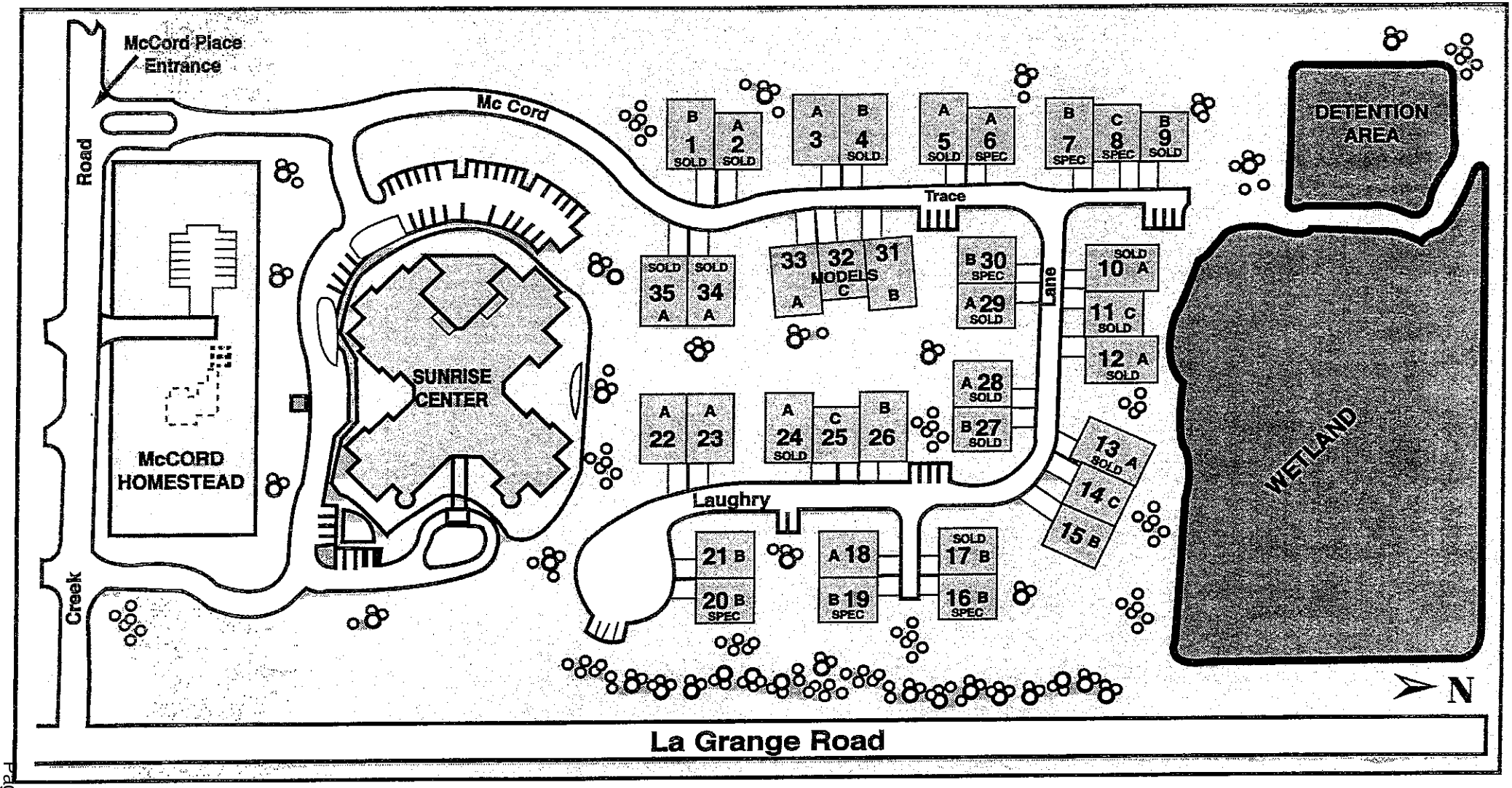
Phone: (708) 361-8300
www.mcnaughtondevelopment.com

MISTY
HARBOUR



Homesite Offerings

McCord Place
OF PALOS PARK



This site plan is an artist's representation of the site. For exact lines, see recorded subdivision plat. Subject to change.

McNaughton DEVELOPMENT, INC
CUSTOM DESIGNED HOMES

EQUAL HOUSING OPPORTUNITY

TIMBER TRAILS
of WESTERN SPRINGS



McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

McNaughton Development, Inc.
Burr Ridge, IL

BAB Building Front Perpective

Park Place Townhomes
Western Springs, IL

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.) © 2023 BSB Design, Inc.

November 6, 2024

BSB DESIGN
BSBDesign.com



Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

BAB Elevations
Park Place Townhomes
Western Springs, IL

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November 6, 2024

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McNaughton Development, Inc.
Burr Ridge, IL

4-Unit Building Front Perpective

Park Place Townhomes
Western Springs, IL

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November 6, 2024

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Rear Elevation
Scale: 1/8" = 1'-0"



Left Side Elevation
Scale: 1/8" = 1'-0"



Right Side Elevation
Scale: 1/8" = 1'-0"



Front Elevation
Scale: 1/8" = 1'-0"

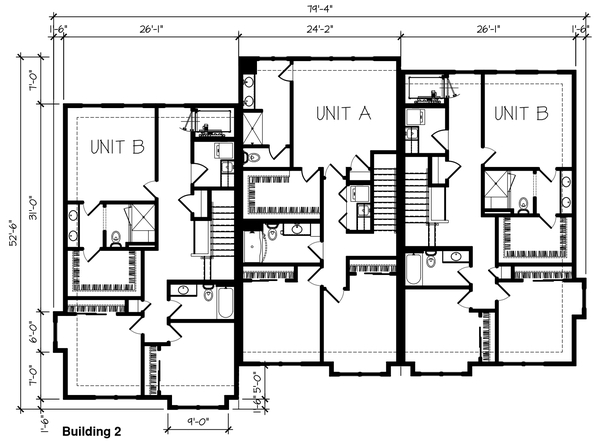
McNaughton Development, Inc.
Burr Ridge, IL

Building Type 2 Elevations
Park Place Townhomes
Western Springs, IL

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November 6, 2024

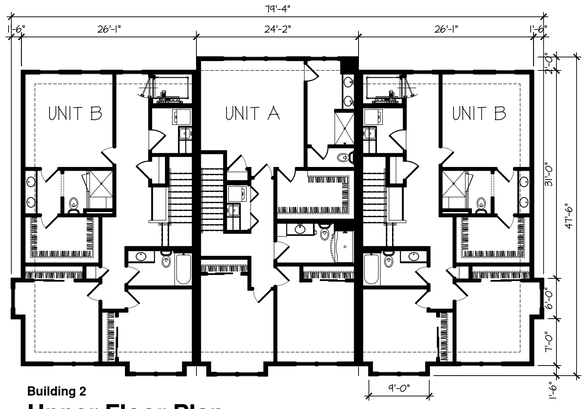
BSB DESIGN
BSBDesign.com



Building 2

Upper Floor Plan

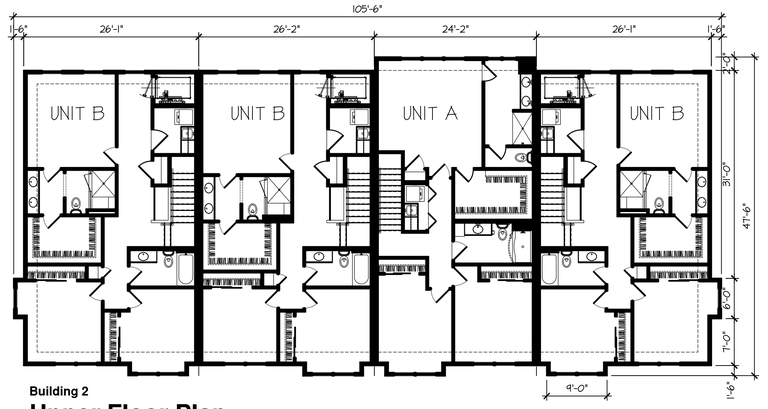
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Building 2

Upper Floor Plan

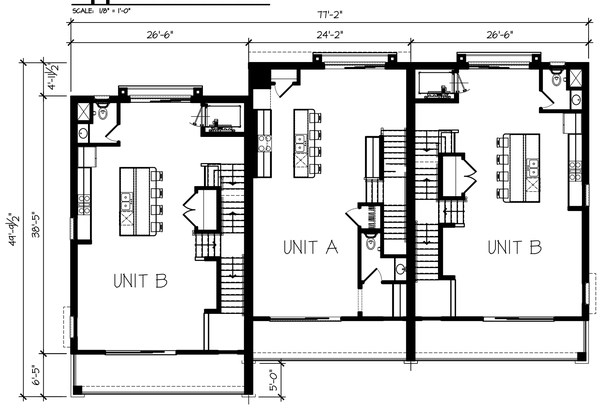
SCALE: 1/8" = 1'-0"



Building 2

Upper Floor Plan

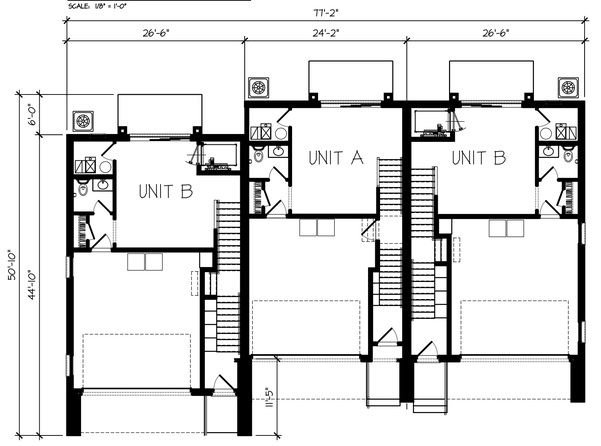
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

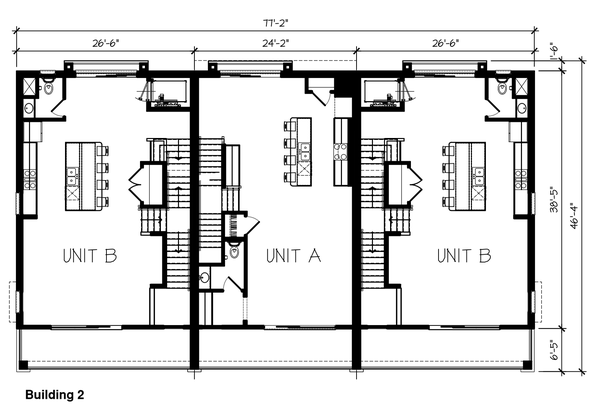
SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

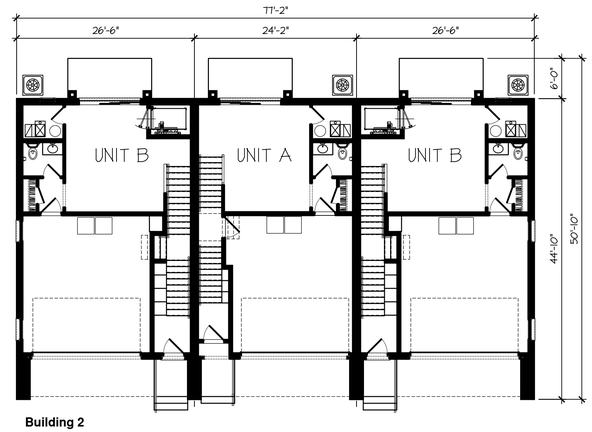
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

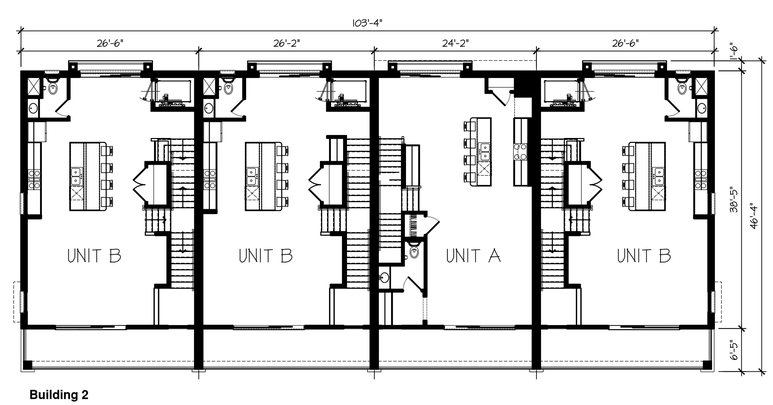
SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

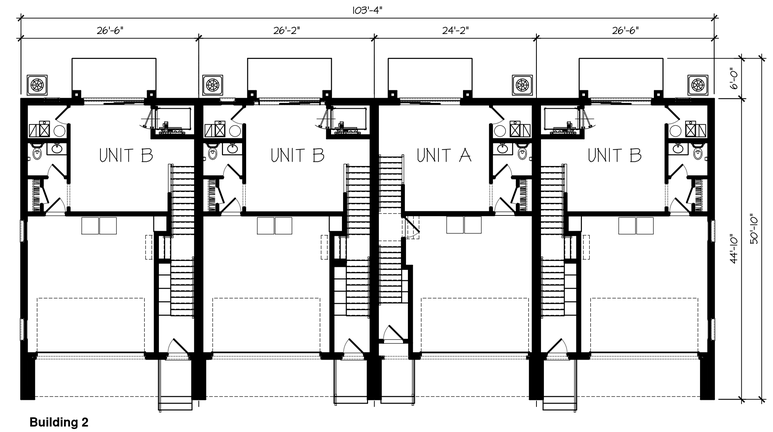
SCALE: 1/8" = 1'-0"



Building 2

Main Floor Plan

SCALE: 1/8" = 1'-0"



Building 2

Lower Floor Plan

SCALE: 1/8" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

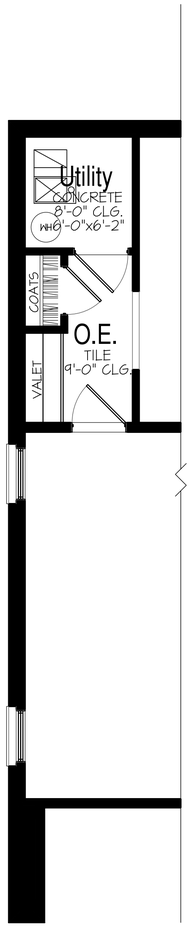
3 Unit & 4 Unit Building Assemblies

Park Place Townhomes
Western Springs, IL

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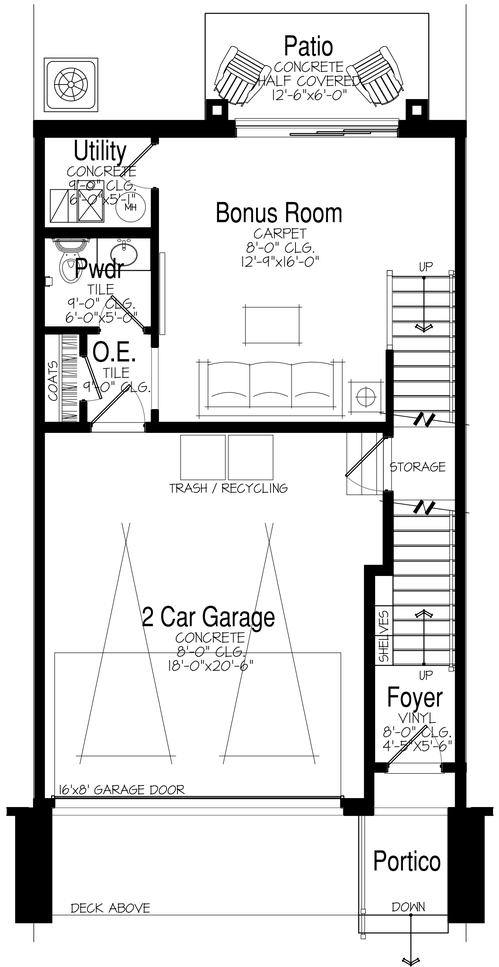
November 6, 2024



506 SF + Garage 399 SF

End Cond.

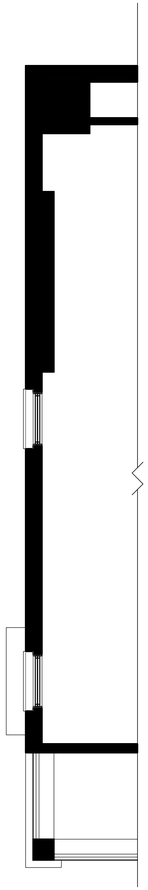
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506 SF + Garage 399 SF

Lower Floor Plan

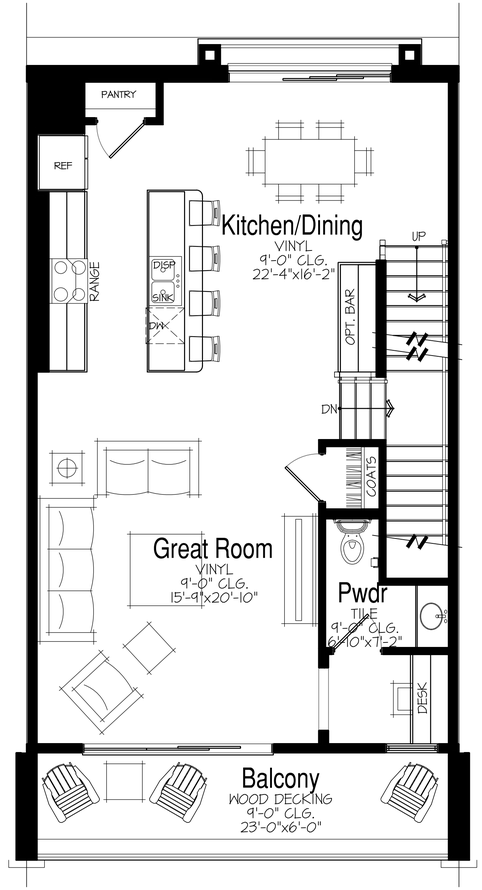
SCALE: 1/4" = 1'-0"



889 SF

End Cond.

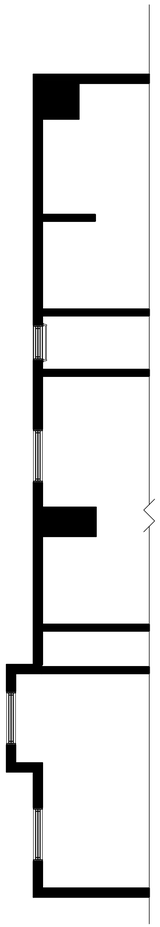
SCALE: 1/4" = 1'-0"



866 SF

Main Floor Plan

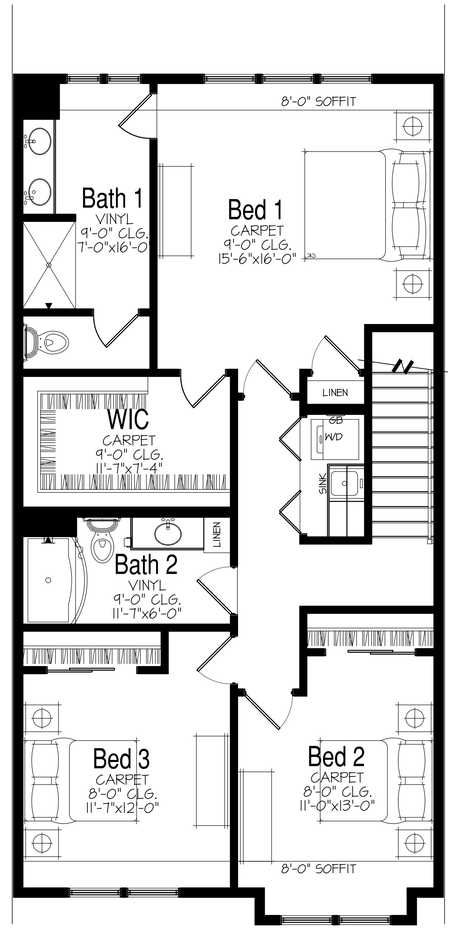
SCALE: 1/4" = 1'-0"



1080 SF

End Cond.

SCALE: 1/4" = 1'-0"



1071 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

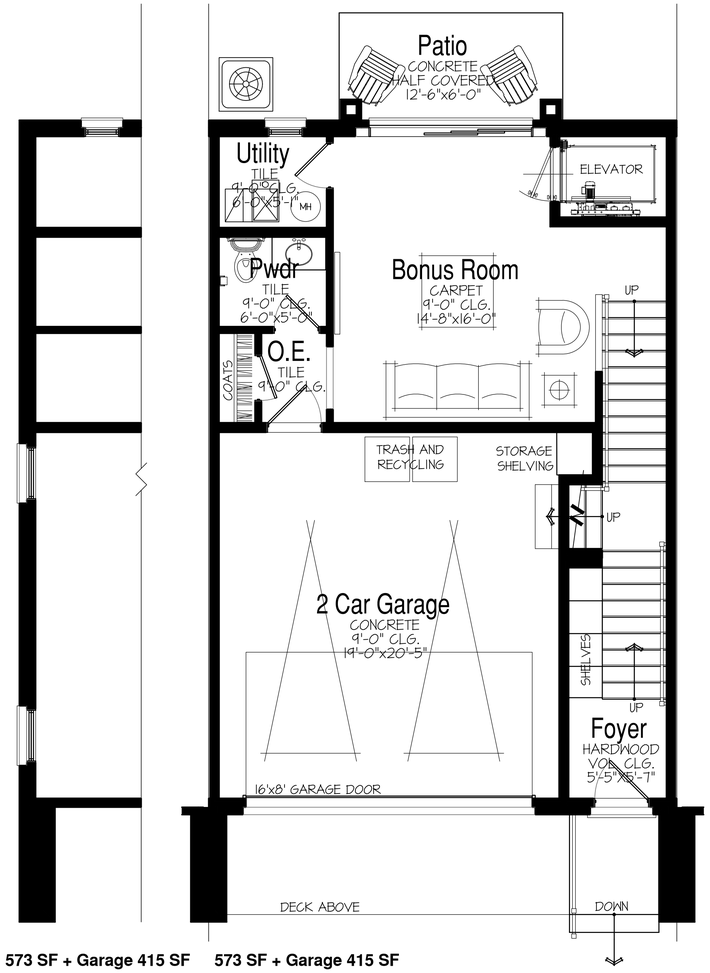
Townhome Unit A: 2,443 Total SF

Park Place Townhomes
Western Springs, IL

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November 6, 2024



573 SF + Garage 415 SF

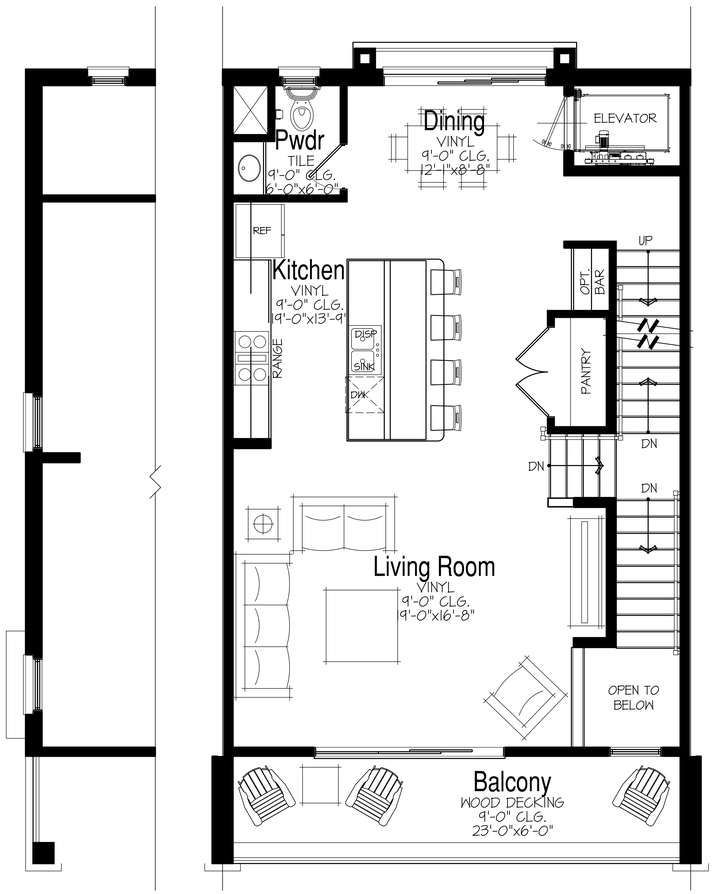
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

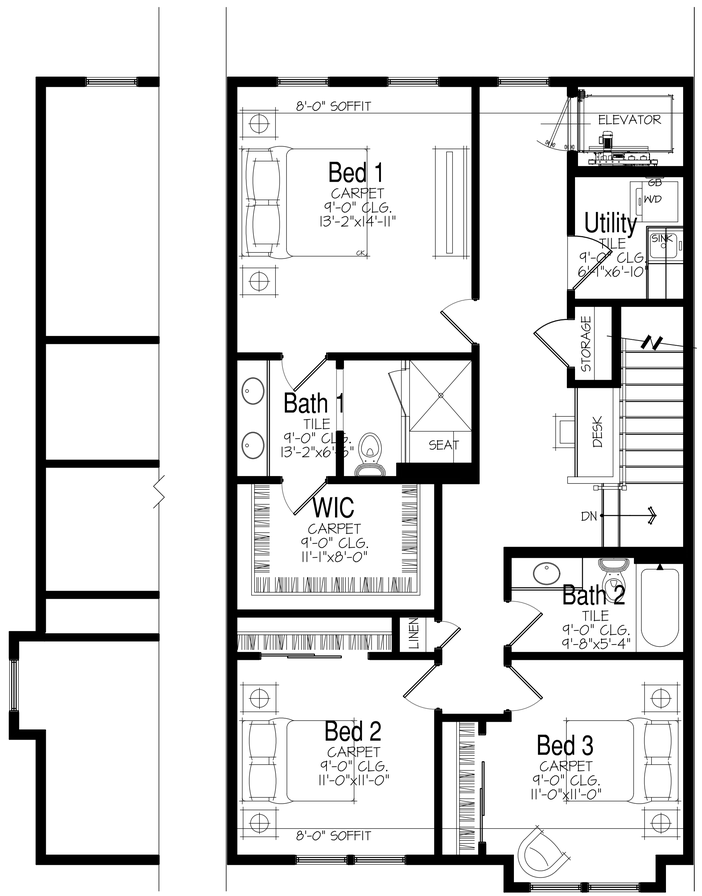
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

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Burr Ridge, IL

Townhome Unit B: 2,561 Total SF

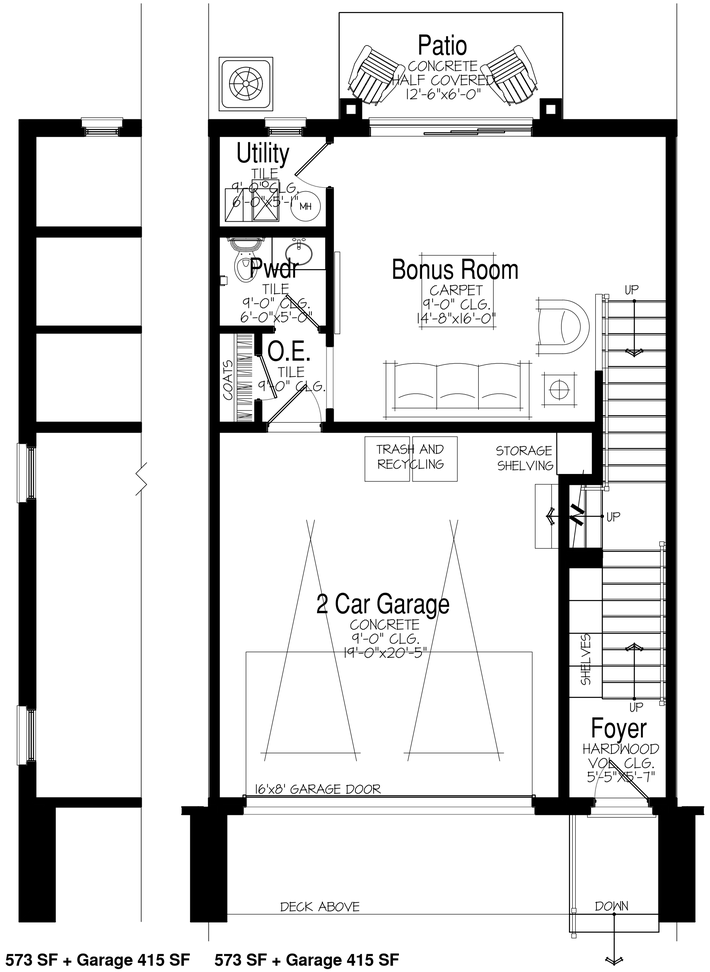
Park Place Townhomes

Western Springs, IL

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573 SF + Garage 415 SF

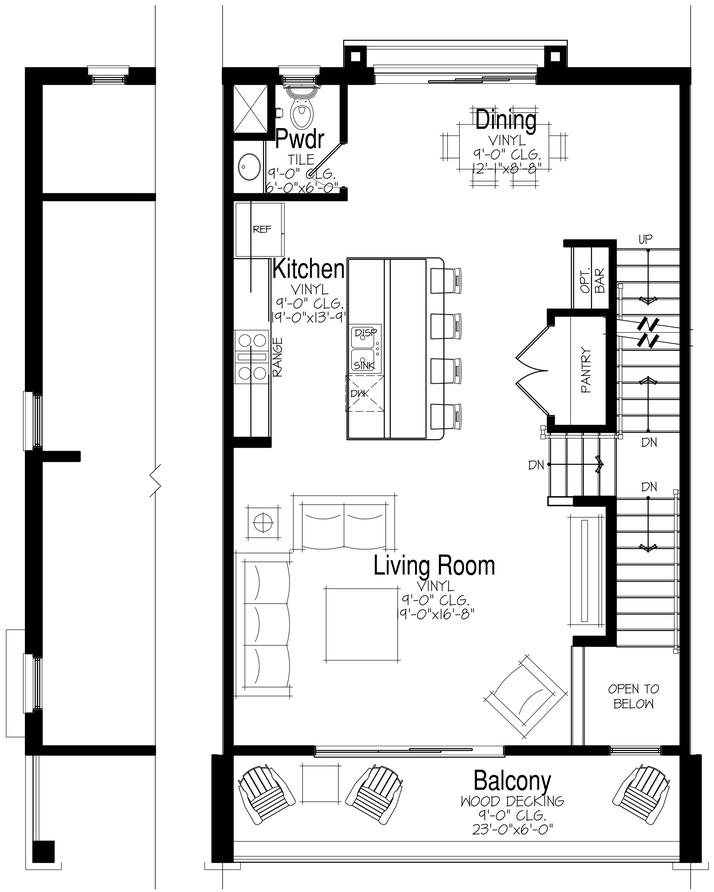
End Cond.

SCALE: 1/4" = 1'-0"

573 SF + Garage 415 SF

Lower Floor Plan

SCALE: 1/4" = 1'-0"



889 SF

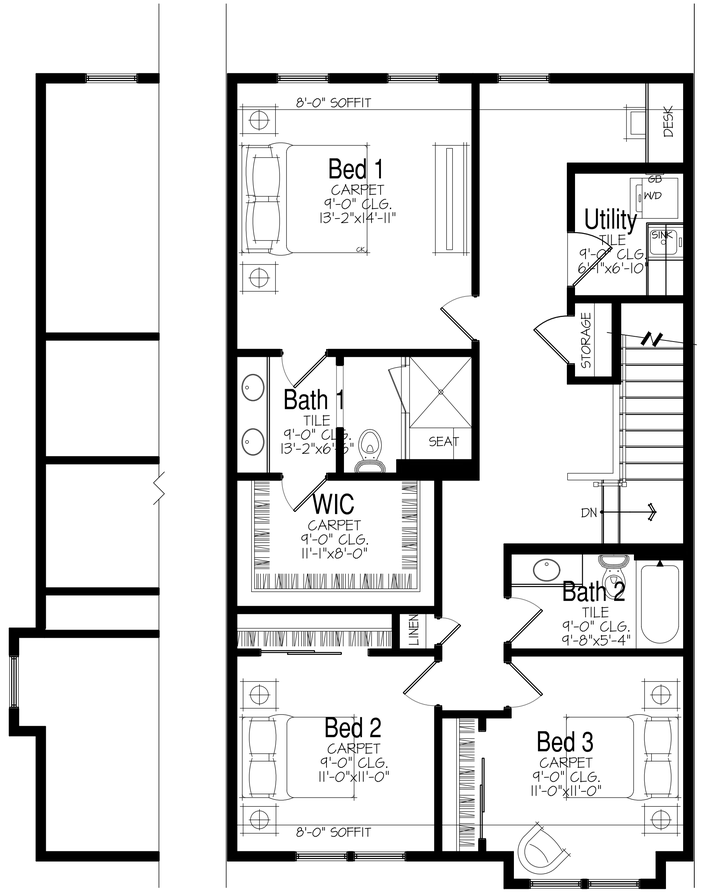
End Cond.

SCALE: 1/4" = 1'-0"

889 SF

Main Floor Plan

SCALE: 1/4" = 1'-0"



1108 SF

End Cond.

SCALE: 1/4" = 1'-0"

1099 SF

Upper Floor Plan

SCALE: 1/4" = 1'-0"

McNaughton Development, Inc.
Burr Ridge, IL

Townhome Unit B - No Elevator: 2,561 Total SF

Park Place Townhomes
Western Springs, IL

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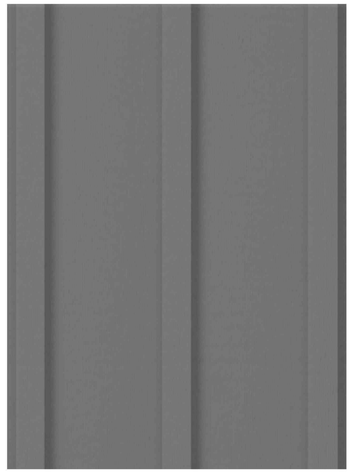
November 6, 2024



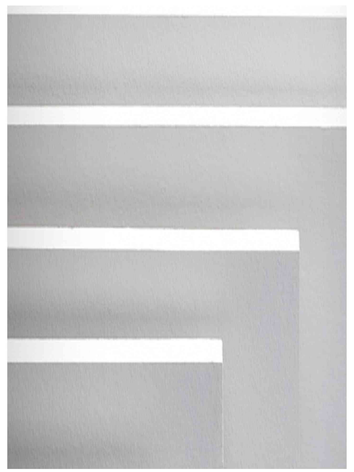
Architectural Asphalt Shingles
Owens Corning Duration
“Onyx Black”



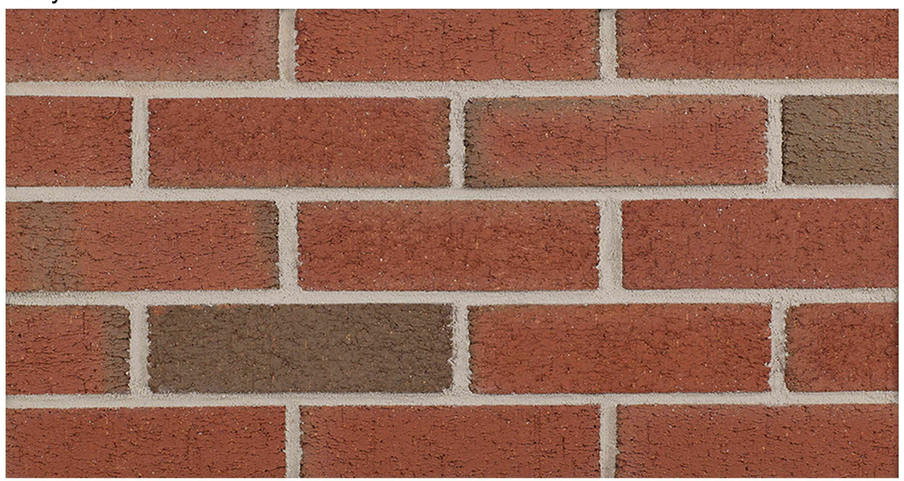
Standing Seam Metal Roof
PAC-CLAD “Black Aluminum”



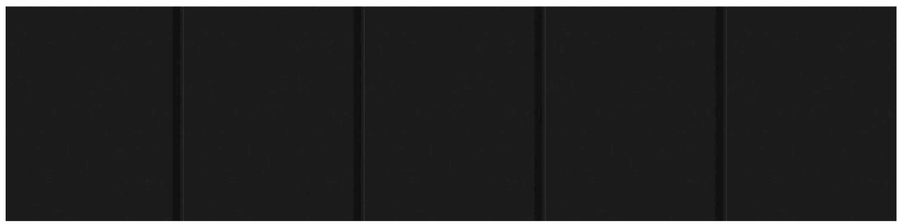
LP Smartside Vertical Siding
“SW7067 Cityscape”



Engineered Trim & Wood Columns
“SW7666 Fleur De Sel”



Glen-Gery Brick
Brick Veneer - 3-5/8 “ Standard Brick
“200 Flashed Matt”



Standing Seam Metal Roof
PAC-CLAD “Traditional Black”

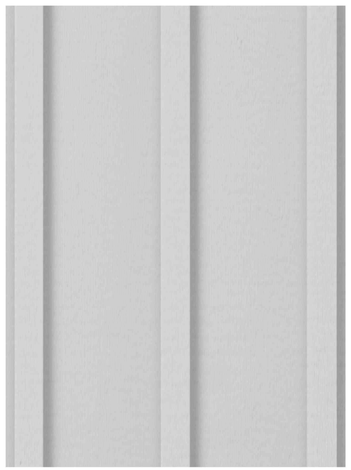


LP SmartSide Shake Siding
“SW1015 Skyline Steel”



Pre-Finished Trex Railings
“Black”

Vinyl Garage Doors
“SW6258 Tricorn Black”



LP Smartside Vertical Siding
“SW7666 Fleur De Sel”

Aluminum Gutters,
Downspouts & Soffits “White”

“White” Vinyl Single-Hung Windows

“White” Vinyl Patio Doors



Vinyl Front Entry Doors
“SW2839 Roycroft Copper Red”



Vinyl Front Entry Doors
“SW7018 Dovetail”



Vinyl Front Entry Doors
“SW2739 Charcoal Blue”



LP Smartside Panel Siding
“SW7666 Fleur De Sel”

Exterior Materials, Colors & Products

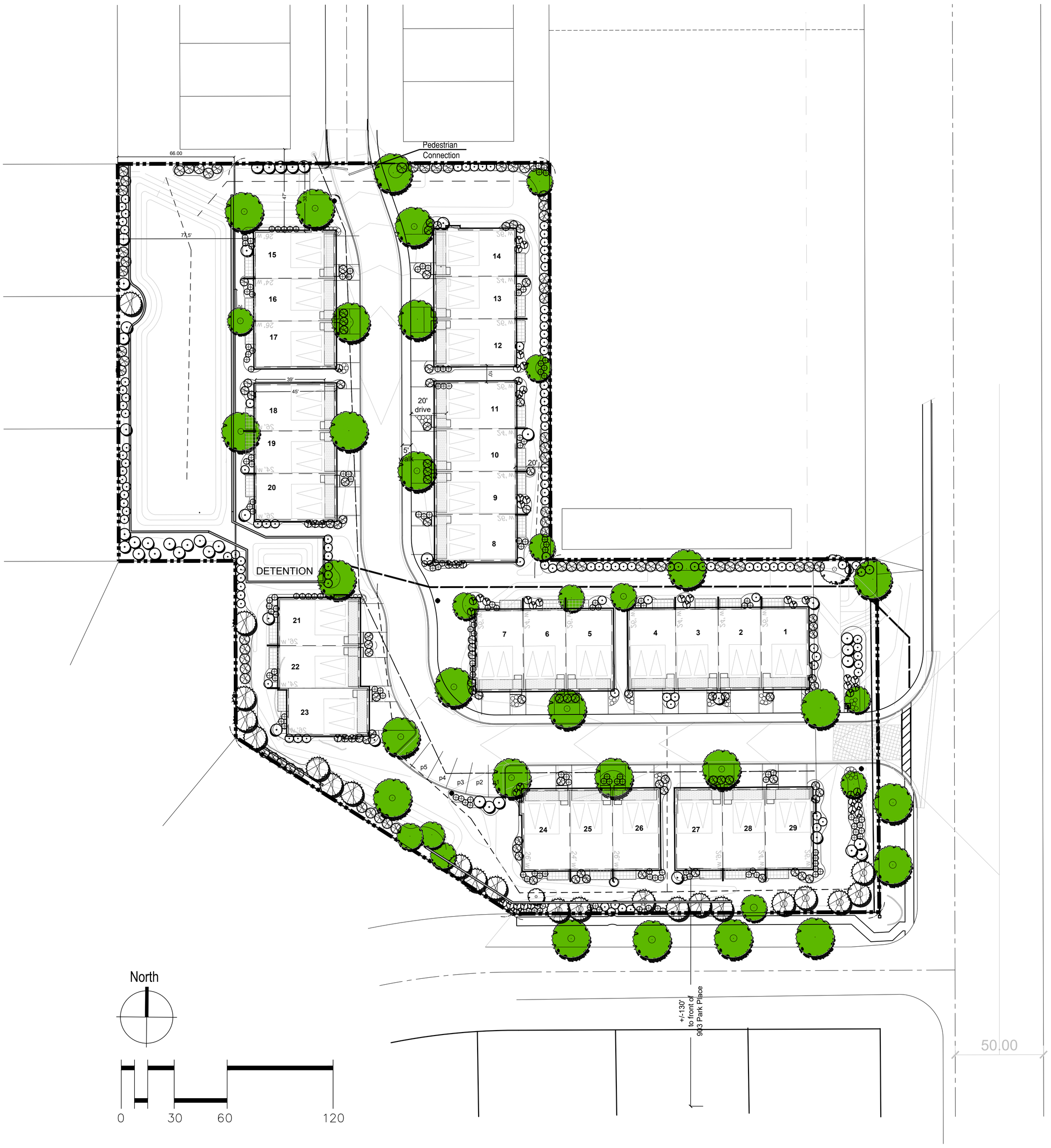
Park Place Townhomes

Western Springs, IL

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November 6, 2024



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YOUR LUXURY HOME BUILDER

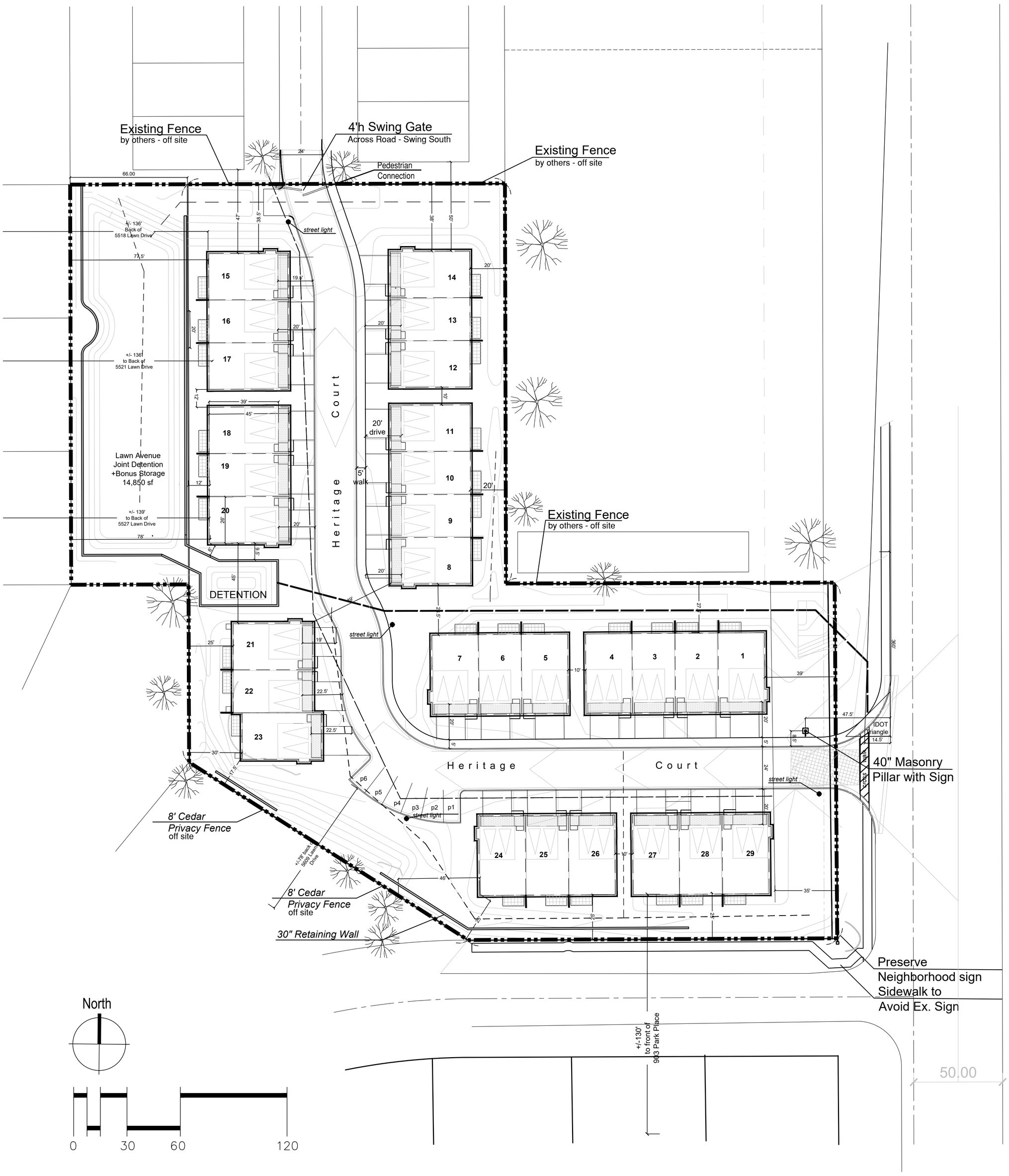
SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

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L0.01
Site Plan

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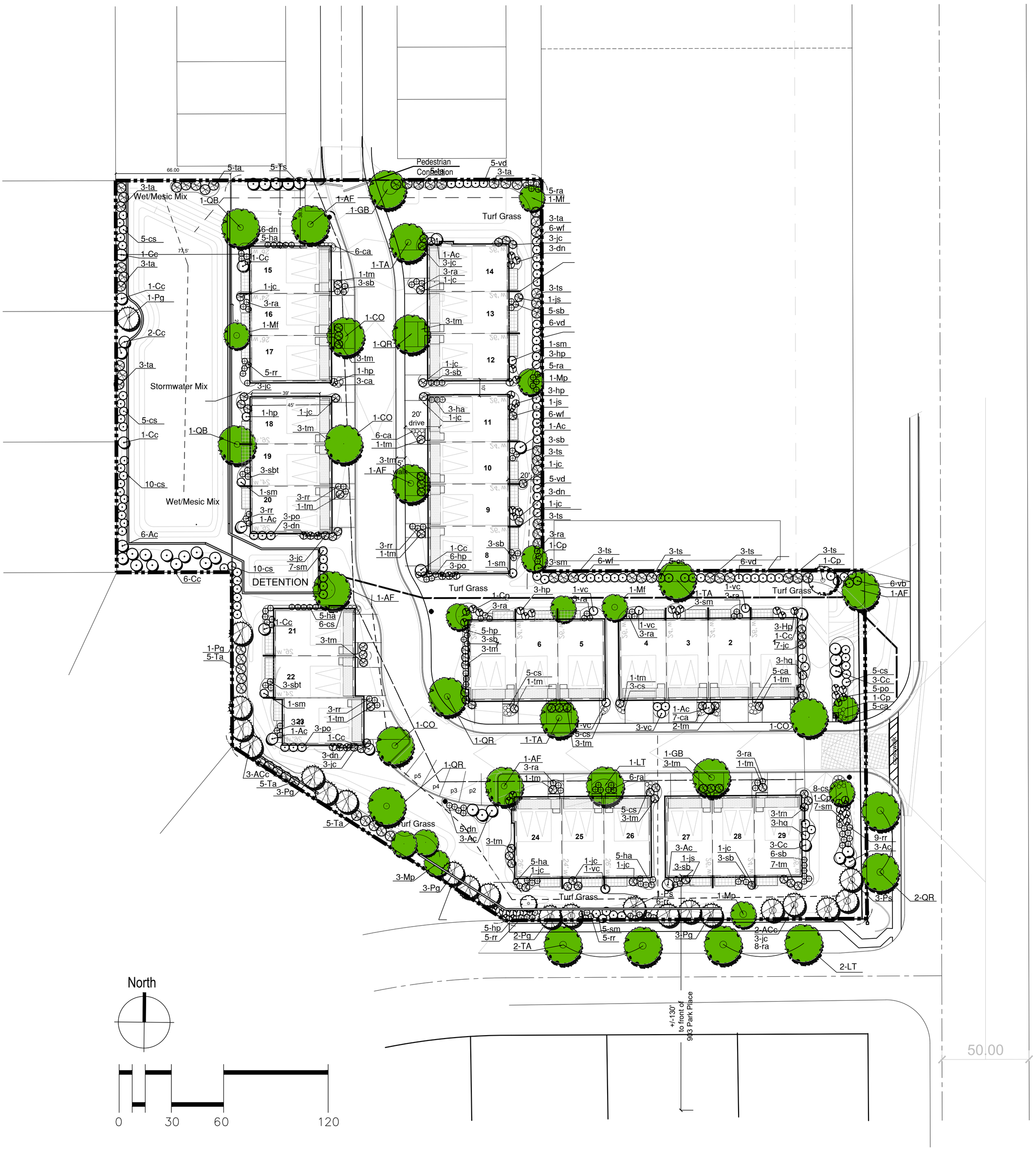
McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SITE DIMENSION PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

BSB DESIGN
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L0.02
Dimension Plan



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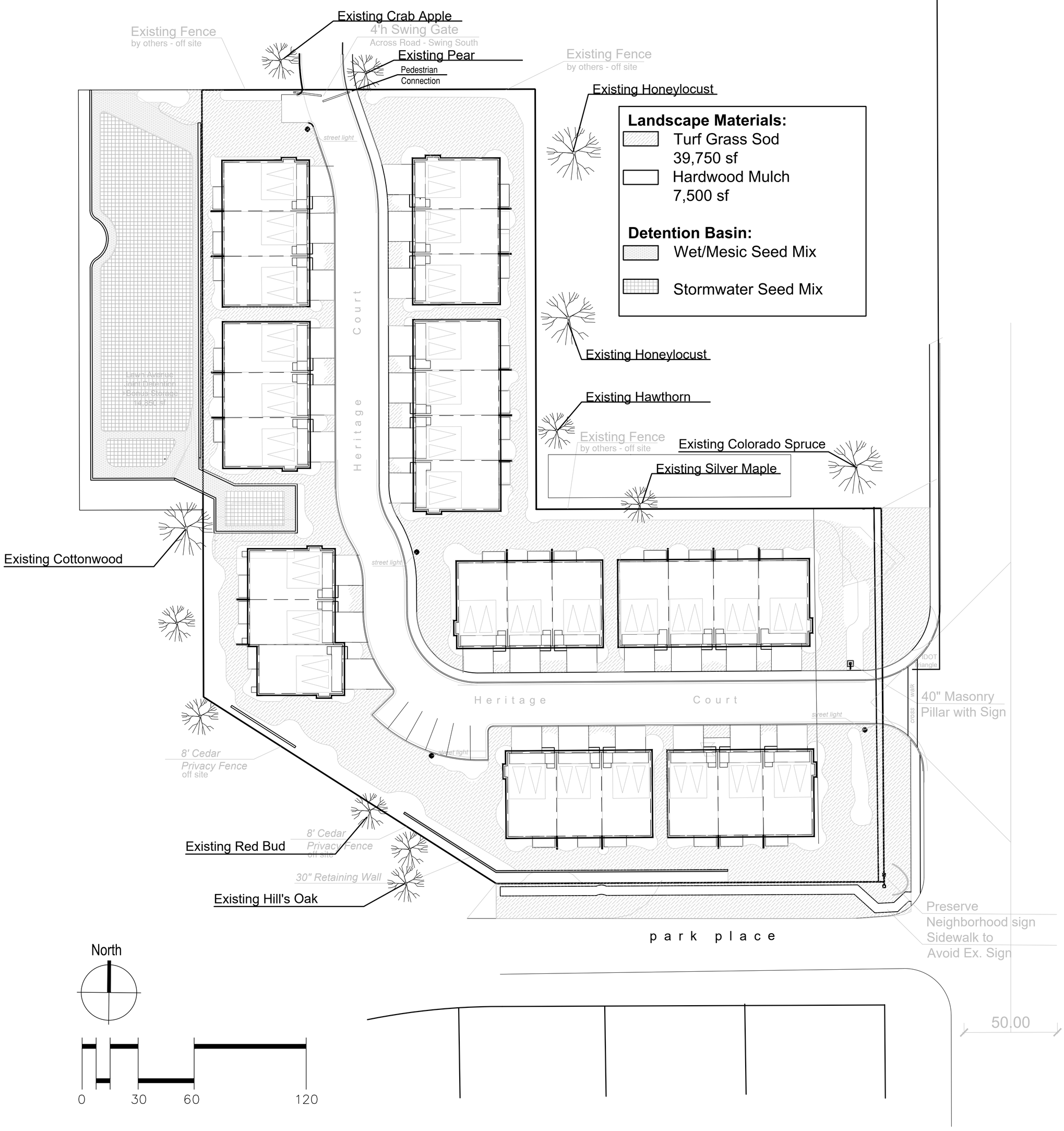
McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

PLANTING PLAN
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

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L0.03
Planting Plan



McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SITE MATERIAL PLAN
Heritage Crossing
Western Springs, Illinois

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L0.04
Material Plan

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CONCEPT PLANT SCHEDULE

		Size	Quant.
SHADE TREE			
AF	Acer x freemanii 'Marmo' Red Maple	2.5" Cal.	5
CO	Cercis Occidentalis / Hackberry	2.5" Cal.	4
GB	Gingko biloba 'Autumn Gold' / Male var. Gingko	2.5" Cal.	2
LT	Liriodendron tulipifera / Tulip Poplar	2.5" Cal.	3
QB	Quercus bicolor / Swamp White Oak	2.5" Cal.	2
QR	Quercus rubrum / Red Oak	2.5" Cal.	6
TA	Tilia americana/Redmond Linden	2.5" Cal.	4
ORNAMENTAL TREE			
ACc	Abies concolor / Concolor Fir	6' Ht.	5
Ac	Amelanchier canadensis / Canadian Serviceberry	7' clump	17
Cc	Cercis canadensis / Eastern Redbud	1.5" Cal.	27
Cp	Crataegus phaenopyrum/Washington Hawthorn	1.5" Cal.	5
Mp	Malus x 'Prairiefire' / Prairiefire Crabapple	1.5" Cal.	5
Mf	Malus floribunda / Flora Crab	1.5" Cal.	3
Pg	Picea glauca 'Densata' / Black Hills White Spruce	6' Ht.	13
Ps	Pinus strobus / Eastern White pine	6' Ht	4
SHRUBS			
cs	Cornus sericea / Red Twig Dogwood	5 gal.	74
dn	Deutzia x 'NCDX1' / Yuki Snowflake® Deutzia	3 gal.	23
ha	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	3 gal.	23
hp	Hydrangea paniculata 'Jane' / Little Lime® Panicle Hydrangea	5 gal.	31
hq	Hydrangea quercifolia / Oak leaved Hydrangea	5 gal.	6
jc	Juniperus chinensis 'Sea Green' / Sea Green Juniper	5 gal.	39
po	Physocarpus opulifolius 'Monlo' / Diabolo® Ninebark	3 gal.	14
ra	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	51
rr	Rosa rugosa 'Purple Pavement;'	3 gal.	45
sb	Spiraea betulifolia 'Tor' / White Frost™ Birchleaf Spirea	3 gal.	34
sm	Syringa meyeri 'Palibin' / Dwarf Korean Lilac	3 gal.	29
ta	Thuja americana 'Dark Green' Dark American Arborvitae	10 gal.	40
ts	Thuja smoragd 'Pyramidal' Arborvitae	10 gal.	26
tm	Taxus x media 'tautoni' / Tauton Yew	5 gal.	47
vc	Viburnum carlesii 'Compactum' / Compact Koreanspice Viburnum	3 gal.	7
Vd	Viburnum dentatum / Arrowwood Viburnum	5 gal.	28
wf	Weigela florida 'Red Prince' / Red Prince Weigela	3 gal.	18
ORNAMENTAL GRASS			
ca	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	3 gal.	27
SOD			
Poa pratensis / Kentucky Bluegrass			28,500 sf
GROUNDCOVER/PERENNIALS			
Echinacea purpurea / Coneflower		1 qt.	25
Hemerocallis x 'Mary Todd' / Mary Todd Daylily		1 qt.	25
Hosta x 'Guacamole' / Guacamole Hosta		1 qt.	25
Hosta x 'Hadspen Blue' / Hadspen Blue Hosta		1 qt.	25
Monarda fistulosa / Bergamot		1 qt.	20
Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint		1 qt.	20
Rudbeckia newmanii 'Summer Blaze' / Coneflower		1 qt.	30
DETENTION BASIN			

* See Accompanying Stormwater Basin Plan by Gary Weber and Associates

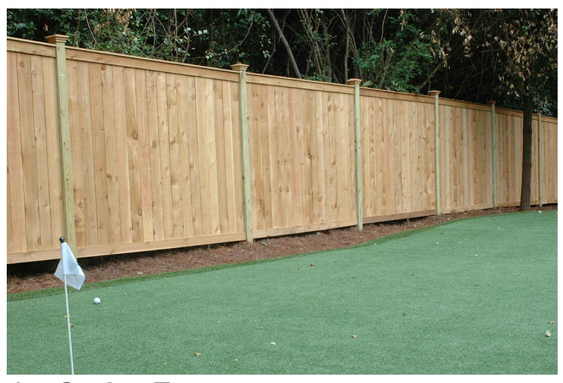
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY
1	Glen Gery Jamestown 3.5"x9.5" pavers	As Shown
2	48"h x 28" square brick pillar with limestone cap & 4' Sign Post (Brick to match residence)	
3	96"h Vertical Cedar Fence with 4" horizontal cap	AS
4	Unilock Concord Wall in Granite Blend	AS
5	Safety Gate	1



1 - Jamestown Pavers

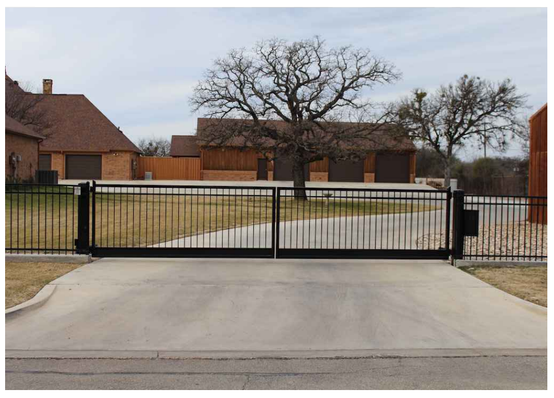
2 - Brick Sign Pillar



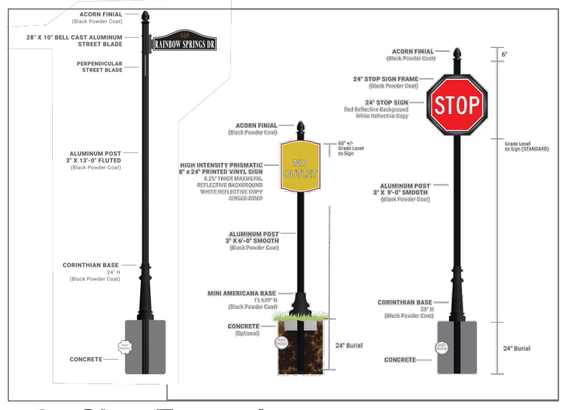
3 - Cedar Fence



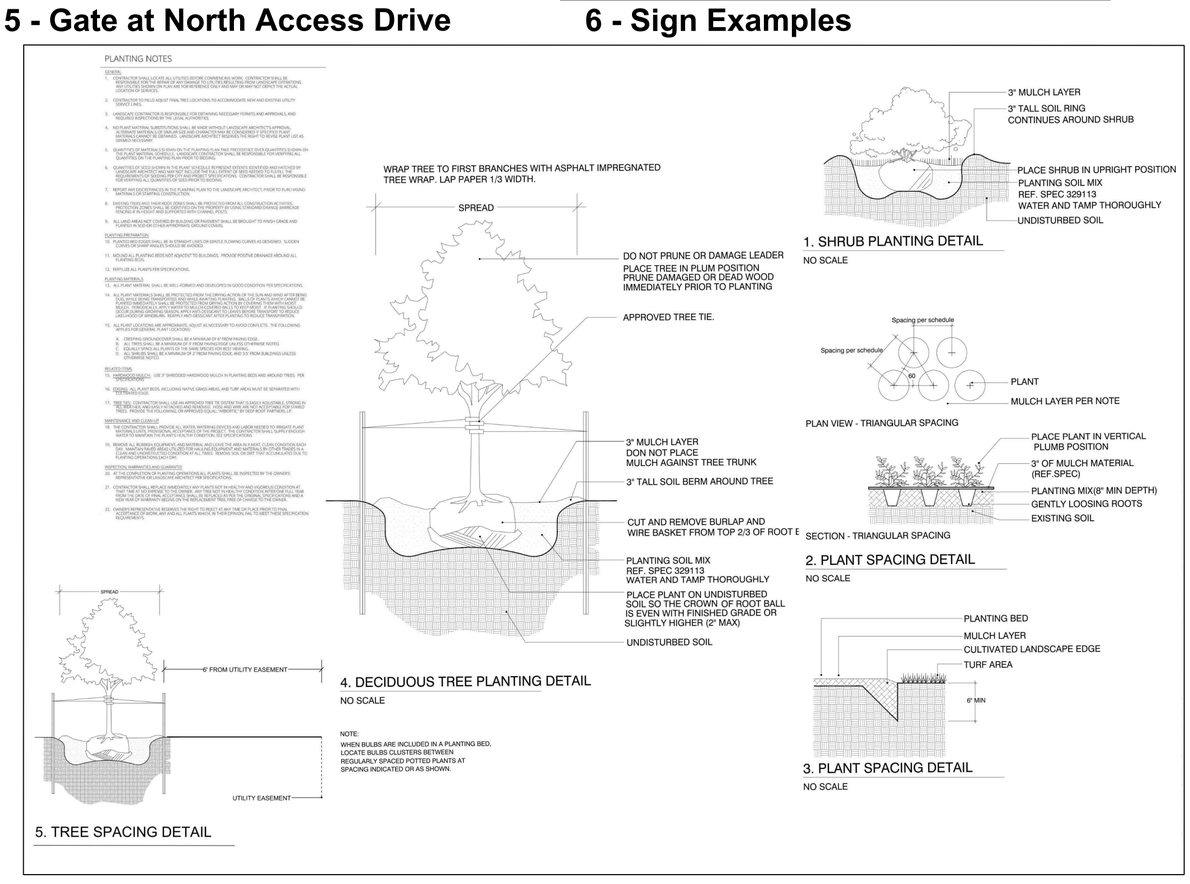
4 - Concord Retaining Wall



5 - Gate at North Access Drive



6 - Sign Examples



McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

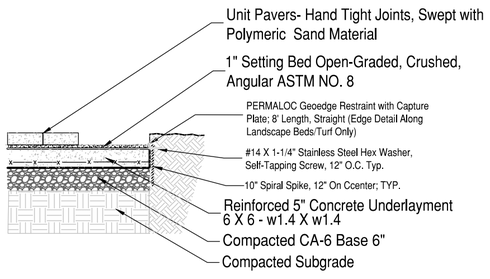
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PLANT LIST
Heritage Crossing
Western Springs, Illinois

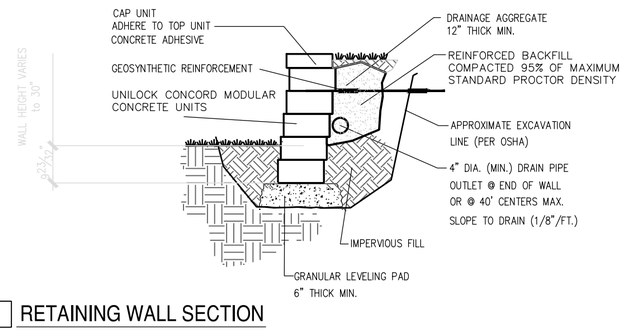
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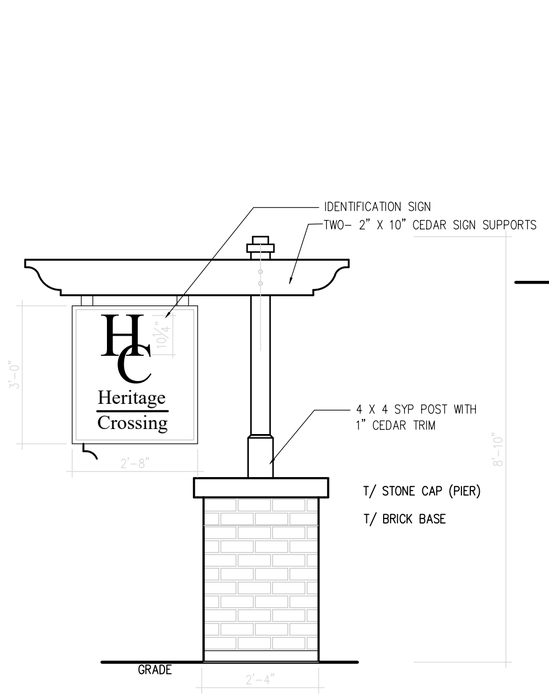
L0.05
Plant List/ Details



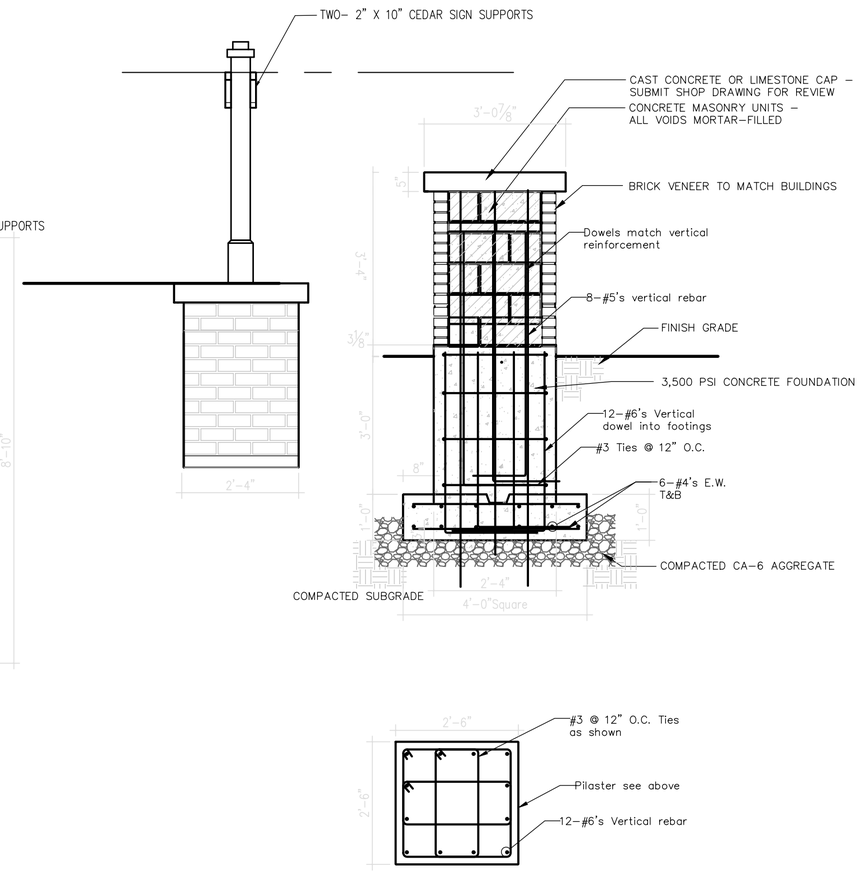
1 SIDEWALK PAVER SECTION



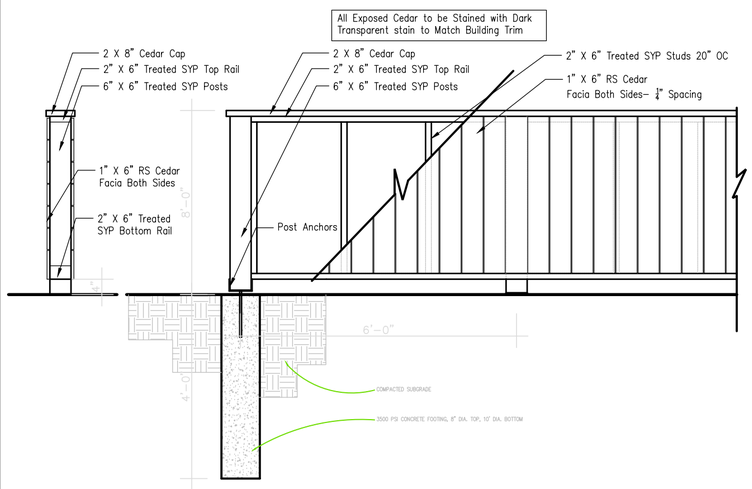
4 RETAINING WALL SECTION



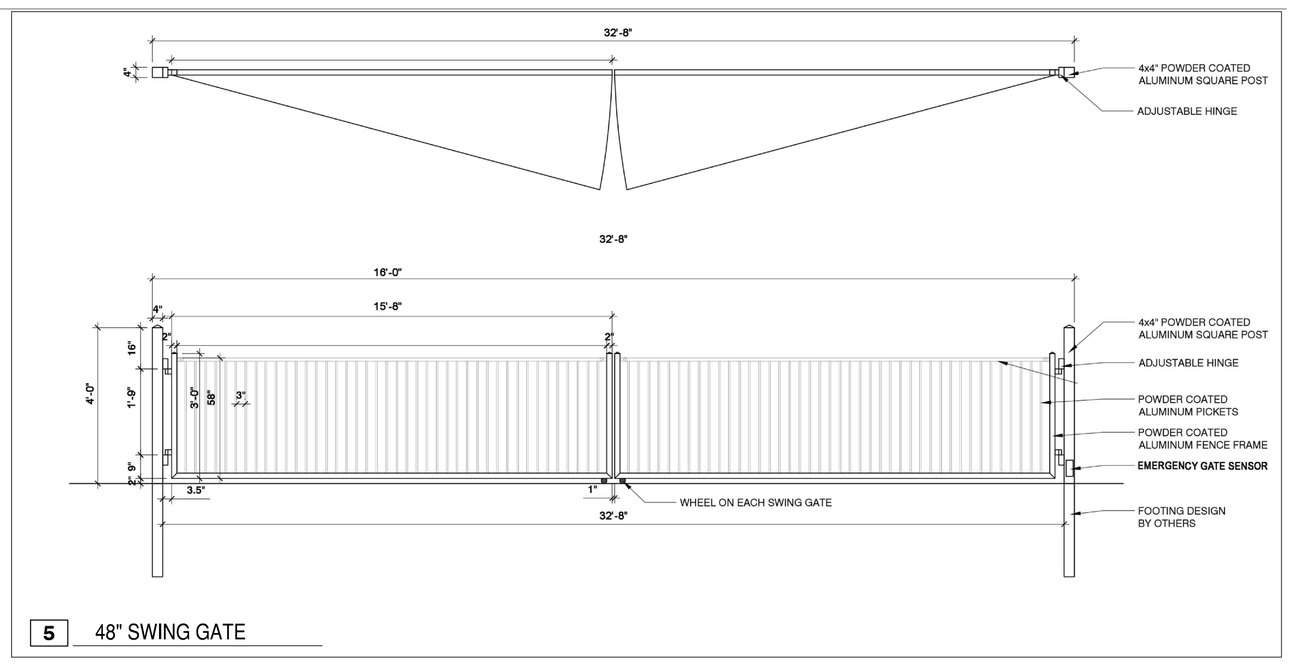
2 40" SIGN PILLAR SECTION



2 40" SIGN PILLAR SECTION



3 96" CEDAR FENCE



5 48" SWING GATE

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

DETAILS
Heritage Crossing
Western Springs, Illinois

Revised: January 29, 2025

BSB DESIGN
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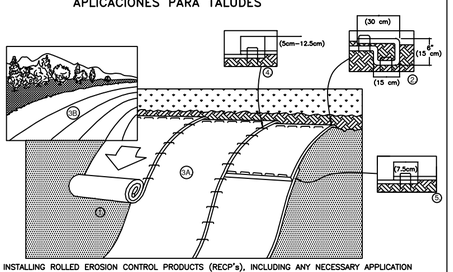
L0.06
Details

The drawings presented are illustrative of character and design intent only,
and are subject to change based upon final design considerations
(i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)
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SLOPE INSTALLATION
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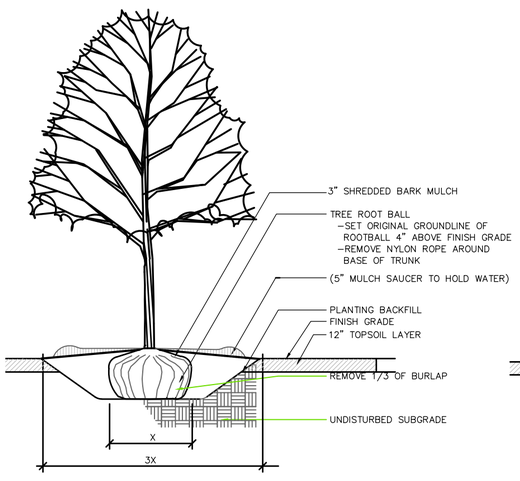


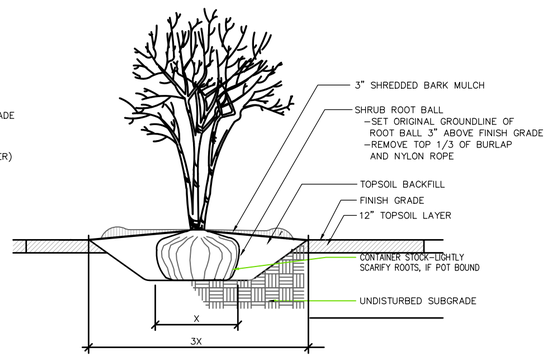
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

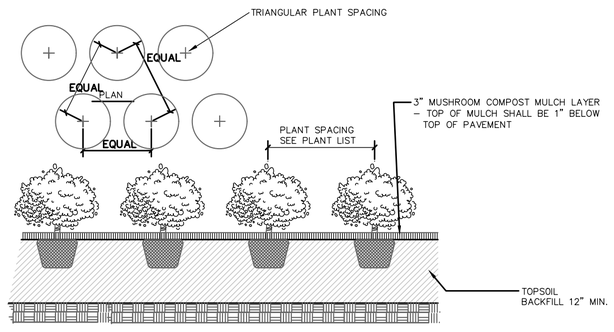
1. PREPARE EL TERRENO ANTES DE INSTALAR LAS MANTAS, INCLUYENDO LA APLICACION DE CAL, FERTILIZANTE Y SEMILLA.
   NOTA: CUANDO ESTE USANDO CELL-O-SEED NO SIEMBRE EL AREA PREPARADA. CELL-O-SEED TIENE QUE INSTALARSE CON EL LADO DE PAPEL HACIA ABAJO.
2. COMIENCE EN LA CABECERA DEL TALUD SUJETANDO LA MANTA EN UNA ZANJA DE 6" (15 CM) DE PROFUNDIDAD FOR 6" (15 CM) DE ANCHO CON APROXIMADAMENTE 12" (30 CM) DE LA MANTA EXTENDIDA MAS ALLA DE LA PENDIENTE ALTA DE LA ZANJA. SUJETE LA MANTA AL FONDO DE LA ZANJA CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA. RELLENE Y COMPACTE LA ZANJA DESPUES DEL ENGRAPE. RIEGE LA SEMILLA EN EL SUELO COMPACTADO Y DOBLE LAS 12" (30 CM) REMANENTES DE MANTA SOBRE LA SEMILLA EL SUELO COMPACTADO. ASEGURE LA MANTA SOBRE EL SUELO CON UNA LINEA DE GRAPAS O ESTACAS APROXIMADAMENTE 12" (30 CM) UNA DE LA OTRA A TRAVES DEL ANCHO DE LA MANTA.
3. DESENROLLE LAS MANTAS (3A) HACIA ABAJO U (3B) HORIZONTALMENTE A TRAVES DEL TALUD CON EL LADO APROPIADO HACIA LA SUPERFICIE DEL SUELO. TODAS LAS MANTAS DEBERAN ASEGURARSE A LA SUPERFICIE DEL SUELO POR MEDIO DE GRAPAS O ESTACAS EN LUGARES APROPIADOS TAL Y COMO SE INDICA EN EL PATRON GUIA DE ENGRAPADO. CUANDO ESTE USANDO EL DOT SYSTEM™, LAS GRAPAS O ESTACAS DEBEN COLOCARSE A TRAVES DE CADU UNDO DE LOS PUNTOS CON COLOR CORRESPONDIENTES AL PATRON DE ENGRAPADO APROPIADO.
4. LOS BORDES DE LAS MANTAS PARALELAS TIENEN QUE ENGRAPARSE CON UN TRASLAPE DE APROXIMADAMENTE 2" – 5" (5 CM – 12.5 CM) DEPENDIENDO DEL TIPO DE MANTA.
5. MANTAS CONSECUTIVAS UNIDAS EN LA BAJADA DE LOS TALUDES, DEBEN COLOCARSE ORILLA SOBRE ORILLA (TIPO ESCALONADO) CON UN TRASLAPE DE APROXIMADAMENTE 3" (7.5 CM). ENGRAPE EL AREA TRASLAPADA CON UNA SEPARACION DE APROXIMADAMENTE 12" (30 CM) A TRAVES DE TODO EL ANCHO DE LA MANTA.

   NOTA:
   * EN CONDICIONES DE SUELTO, PUEDE QUE SE NECESITEN GRAPAS O ESTACAS DE MAS DE 6" (15 CM) DE LARGO PARA ASEGURAR LAS MANTAS CORRECTAMENTE.

REV. 01/05







LANDSCAPE SPECIFICATIONS

1.11 GENERAL LANDSCAPE NOTES

A. Unless stated otherwise herein, all seeding, sodding and landscape planting work shall be performed in accordance with the Iowa Department of Transportation (IDOT) Standard Specifications for Highway and Bridge Construction (latest edition) as specified in Section 200 (Earthwork, Landscaping and Erosion Control).

B. Unless stated herein, all materials shall meet the requirements of the following Articles of Standard the Iowa DOT Specifications for Road and Bridge Construction Section 1000 – Materials:

Item	Section
Erosion Control	2601
Furnish Install Trees Shrubs/Warranty	2611
Erosion Control Materials	4169
Landscape Plant Materials	4170

1.12 TOPSOIL/FINE GRADING

A. Approved topsoil shall be supplied and installed at the following depths:
Seeded and sodded areas – 8-12" depth
Shrub bed areas and landscaped islands – 12" depth
Groundcover/perennial areas – 12" depth (amended soil mix as shown in detail)

B. Approved topsoil shall be free of roots, noxious weed seeds, sticks, rocks or miscellaneous debris which may impair plant growth. Topsoil shall not be worked or graded while frozen or in an excessively wet or dry condition. Topsoil shall not be accessibly acidic or alkaline and shall not contain any herbicide residue. The Owner reserves the right to have representative samples of the topsoil tested by a qualified soil testing laboratory at no cost to the Owner.

C. All top-soiled areas shall be fine graded to elevations indicated on the grading plan prior to receiving sod or landscaping. All areas shall drain properly so that there are no puddles or standing water in any lawn or plant bed areas. Areas improperly graded shall be regarded at the Contractor's expense.

D. Remove rocks, stones and other foreign debris while spreading and grading. If necessary, had spread topsoil around buildings, structures, walks, drives or trees to avoid damage.

E. Where graded areas interface with non-graded undisturbed edges, remove turf along edge to create a straight smooth transition line between graded and non-graded areas. Fine grade transition area so that finis grades of graded and non graded areas are flush.

1.13 SEEDING/SODDING

A. Seeding work shall conform to Section 4169 of the IDOT Standard Specifications for Highway and Bridge Construction.

B. Seed mix for seeded turf grass areas shall be the following:

1. Type A Seed Mix (General Lawn Area). Field of Dreams Reseeder Seed Mix- Blend

25% Accent Perennial Ryegrass
25% Caddieshack Perennial Ryegrass
25% Blue Chip Kentucky Bluegrass
25% Freedom III Kentucky Bluegrass

Apply at the rate of five pounds per 1,000 SF. Supplier- National Seed Company,4720 Yender Avenue, Lisle, Illinois (630) 417-9055

C. Prior to work, submit three copies of seed vendor's certificate for grass seed mixture, indicating weight, and percentages of purity, germination and weed seed.

D. Sodding work, if provided, shall conform to Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

E. Prior to work, submit three copies of sod grower's location for approval. Sod shall be from a locally grown source. Sod shall be in healthy growing condition, free of weeds, pests and cut to the specified thickness. The Owner has the right to reject unacceptable sod at the growing site.

F. All fine grading for seeded and sodded areas shall be approved by the Owner prior to work.

G. Install seeding on prepared, finished graded areas and in favorable weather conditions within the following periods: April 1st through May 31st; and August 15th through October 15th.

H. Install sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

I. Fertilize seeded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction. Fertilizer shall be a 10-10-10 Max Lawn mix (or Equal) and applied to 14.4 pounds per 1,000 square feet.

J. Fertilize sodded areas per Section 2601 of the IDOT Standard Specifications for Highway and Bridge Construction.

K. Apply seed blanket to all lawn seeded areas per the details indicated on the drawings.

L. Guarantee all seeding and sodding work for a period of one year following final acceptance. Areas not accepted upon completion of the guarantee period shall be resodded to fill in voids and areas not covered in seed or sod.

M. Maintain seeded and sodded areas for a period of 45 days following installation. Maintenance shall consist of watering, mowing and weeding. Repair and reseed bare spots or seeded and sodded areas that have not established or have washed out due to erosion.

N. Initial mowing shall be done at a 3" cutting height so than not more than 33% of the grass is removed in a single mowing. Cutting heights on follow up mowings can be readjusted to a 2.5" grass blade height.

1.14 TREE, SHRUB AND GROUNDCOVER PLANTING

A. The Owner reserves the right to inspect all material at the nursery. Only nursery grown stock will be permitted to be used on the Project.

B. All tree, shrub and groundcover planting shall be performed between the dates of March 15 and May 31, and August 15 and October 15. Actual planting shall be performed only during periods within this season when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the Owner's Representative.

A. Location for all trees, intermediate trees and evergreen trees shall be staked and outlines of bed areas shall be clearly marked on the ground by a qualified landscape representative of the Contractor, and shall be subject to approval by the Owner's Representative prior to commencement of planting.

B. All shrub beds shall be mulched with 3" of shredded hardwood bark mulch. Groundcover beds shall be mulched with 2" of mushroom compost. Provide shredded hardwood bark mulch rings (3" depth) for all shade and flowering trees. Diameter of mulch rings shall be equal to diameter of root ball.

C. Mulch shall comprise partially decomposed shred hardwood bark. Mulch shall be a brown-black color, and, free of oversized pieces (1/2" x4") and fine particles. Prior to work, Contractor shall submit three mulch samples for approval for use prior to work.

D. Imported topsoil, if necessary, shall consist of fertile, friable natural topsoil typical for this locality. It shall not contain a mixture of subsoil or slag and free of lumps, stones, plants and their roots, stalks and other extraneous matter and shall not be used while in a frozen or muddy condition. Topsoil shall have a pH range of 6.0-7.0 and shall not contain less than 12 percent organic matter.

E. Tree, Shrub and Groundcover Establishment Period, Inspections and Guarantees.

1. Establishment Period. For a period of 60 days after planting of trees, shrubs, and groundcovers, (not including dormancy periods), the Contractor shall properly care for all plants, and planning beds including watering, weeding fertilizing, cultivating, adjusting or bracings or other maintenance work which is necessary to keep the plants in a healthy condition and in a plumb position. All plants shall be watered as season conditions require, and as directed by the Owner, until provisional acceptance of the planting.

2. Provisional Acceptance. At the end of the Establishment period, the planting shall be inspected by the Owner for provisional acceptance of the planting. Any plant material which is dead, damaged, untrue to natural form of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense. The Owner shall accept maintenance responsibilities of the planting after the provisional acceptance.

3. Guarantee and Final Acceptance. The Contractor shall guarantee that all plants shall be in a healthy and vigorous condition one full growing season after the provisional acceptance. The planting shall be inspected by the Owner at the end of the guarantee period. Any plant material which is dead, damaged, untrue to natural for of the species, or otherwise unhealthy, shall be replaced by the Contractor at his expense.

4. Provisional acceptance and guaranteed periods of landscaped plantings may be in part or whole.
NATIVE PLANTING SPECIFICATIONS

2.0 PURPOSE

These specifications, and the plan drawing, detail the standards and procedures required to successfully establish native plant communities within and adjacent to the on-site stormwater detention basin (SDB). Upon successful establishment, the native vegetation will provide water quality benefits to the surrounding area by filtering sediments and pollutants from stormwater runoff generated on-site. Additionally, the floral diversity created by these plantings will provide a valuable source of wildlife habitat, as well as a unique and aesthetically pleasing landscape.

2.01 CONTRACTOR QUALIFICATIONS

The Native Landscape Contractor chosen for the establishment and enhancement of the natural areas must be experienced in the restoration, installation, and management of said areas. They must have a minimum of five years experience in the field. There shall be a supervisor available at all times that can identify non-native and native plants by genus and species. The goal of installing successful native plant communities is a long-term process. Therefore, it is imperative that a qualified Native Landscape Contractor perform the initial installation and maintenance.

2.02 QUALITY AND CONDITION

1. Native seed shall be obtained from sources east of the Mississippi River, within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Plant origins outside of the Ecoregion shall be approved by the Wetland Consultant.

2. Native seeds shall be blended by the vendor, and the mixture and ratio shall be guaranteed in writing to be as specified. The amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre for all species listed. It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.

3. Native Landscape Contractor shall provide the Wetland Consultant with the name and location of the seed supplier, origin of the various kinds of plants, and a statement of the purity of the seed.

4. Seed shall conform to applicable State and Federal regulations as in effect on the date of letting. Unless otherwise specified, seed shall not contain in excess of 1 percent weed seeds; 0 percent is desirable.

5. All storage requirements, stratification, and scarification considerations shall be the sole responsibility of the Native Landscape Contractor.

6. Mycorrhizal inoculants shall be palletized and mixed at 1 lb. per acre with the fine seeds before installation. The inoculants shall contain a diverse mixture of Glomales fungal species (Glomus spp.) in palletized form.

2.03 HANDLING

1. Native Landscape Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.

2. All native seeds shall be packed and covered in such a manner as to ensure adequate protection against damage and maintain dormancy while in transit, storage, or during planting operations.

3. Seed shall be kept dry and unopened until needed for use. Seed shall not be stored or temporarily stored in locations or vehicles where the temperature will be in excess of 90 degrees F.

Table 4. Erosion Control Blanket Details
See Plans

2.04 SITE PREPARATION

1. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Underground utility location maps and plans should be reviewed prior to work. Equipment having low unit pressure ground contact shall be utilized within the planting areas.

2. Unless the Landscape Architect agrees to another approach, the seedbed shall be prepared by working the topsoil to a depth of 3 inches. Site preparation equipment shall be of a design that can be utilized efficiently by the Native Landscape Contractor to meet the requirements for the work specified. The equipment proposed for use by the Native Landscape Contractor for disking and herbicide applications shall be subject to approval by the Landscape Architect.

3. Prior to seeding, at least 6 inches of topsoil shall be present and free of all clods, stones, roots, sticks, rivulets, gullies, crusting, and cracking. The soil aggregate size will be no greater than 2 inches in the largest diameter.

4. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to disking. If compaction is not a concern and the seedbed needs to be loosened prior to seeding to ensure good seed-soil contact, disking or raking shall be performed using equipment and the approach recommended by the Native Landscape Contractor, subject to approval by the Wetland Consultant.

5. If needed, cultivation shall occur within 24 hours prior to seeding. Seeding should occur immediately after the last cultivation preferably before a rain.

2.05 PLANT MATERIALS

See accompanying storm water Basin Plan
by Gary Weber and Associates

2.12 MANAGEMENT PLAN

See accompanying storm water Basin Plan
by Gary Weber and Associates

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

DETAILS
Heritage Crossing
Western Springs, Illinois

January 29, 2025

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Details

The drawings presented are illustrative of character and design intent only,
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FIRE STROBE 2OOO

EMERGENCY VEHICLE STROBE DETECTOR



The FIRE STROBE 2OOO provides rapid access to automatic gates and secured areas. The FIRE STROBE 2OOO opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (14Hz).

Now with STROBEWATCH™.



FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2OOO can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2OOO is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

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FIRE STROBE 2OOO Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2OOO signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately .5 seconds.

The FIRE STROBE 2OOO is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM* STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2OOO for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2OOO system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2OOO transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM* emitters, double, quad flash strobes 140-170 fpm. 100 % digital.
2. The FIRE STROBE 2OOO is fully compatible with the OPTICOM* priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2OOO has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2OOO has been abused, over voltaged, or altered in any way, The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

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FINAL ENGINEERING PLANS

FOR

HERITAGE CROSSING

WESTERN SPRINGS, ILLINOIS

LEGEND

EXISTING		PROPOSED
	SANITARY SEWER	
SS	SANITARY SERVICE	SS
	SANITARY MANHOLE	
	STORM SEWER	
	STORM SERVICE	
	CATCH BASIN	
	OPEN LID STORM MANHOLE	
	CLOSED LID STORM MANHOLE	
	STORM INLET	
	FLARED END SECTION	
WM	WATER MAIN	WM
WS	WATER SERVICE	WS
	VALVE VAULT	
	B-BOX	
	HYDRANT	
	VALVE BOX	
	STREET LIGHT	
	UTILITY POLE	
	RETAINING WALL	
	SILT FENCE	
XXX	CONTOUR	XXX
FM	FORCE MAIN	FM
XXX.X x	SPOT GRADES	XXX.XXx
	OVERFLOW ARROW	
TF XXX.XX	TOP OF FOUNDATION	TF=XXX.XX
FG XXX.XX	FINISH GRADE	FG=XXX.XX
FF XXX.XX	FINISH FLOOR	FF=XXX.XX
GF XXX.XX	GARAGE FLOOR	GF=XXX.XX

LEGAL DESCRIPTION

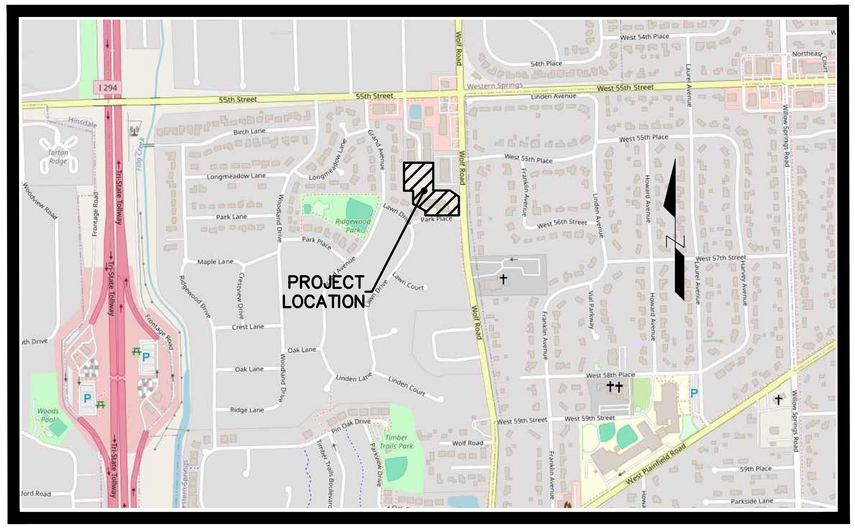
PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

OWNER:
McNAUGHTON DEVELOPMENT
11S220 JACKSON STREET
SUITE #101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

ENGINEER:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961

SURVEYOR:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961



LOCATION MAP
NOT TO SCALE

BENCHMARKS

BENCHMARK: (INITIAL) NGS PID: ME1716

BRASS DISK SET IN TOP OF CONCRETE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF 55TH STREET AND WOLF ROAD. MONUMENT IS 80' NORTH OF THE CENTERLINE OF 55TH STREET AND 40' WEST OF THE CENTERLINE OF WOLF ROAD.

ELEVATION = 662.19' (NAVD 88)

BENCHMARK: (ON-SITE)

CROSS CUT IN TOP OF CURB LOCATED 47.71' SOUTH AND 3.55' EAST OF THE SOUTHEAST CORNER OF PARCEL 2 AS SHOWN HEREON.

ELEVATION = 665.70' (NAVD 88)

INDEX OF PLAN SHEETS

1. COVER SHEET
2-3. PROJECT SPECIFICATIONS, GENERAL NOTES & EXHIBITS
4. EXISTING CONDITIONS & REMOVAL
5. SOIL EROSION & SEDIMENT CONTROL PLAN , NOTES & SPECIFICATIONS.
6. SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET
7. GEOMETRIC PLAN
8. GRADING PLAN
9. UTILITY PLAN
10. UTILITY SERVICES PLAN
11. PLAN & PROFILE
12. INTERIM BY-PASS DRAINAGE SWALE PLAN
13-16. PROJECT CONSTRUCTION DETAILS
17-18. CROSS SECTION WOLF ROAD
19. ADA INTERSECTION DETAILS
20. WOLF ROAD DETAILS

NOTES:

1. THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, ELECTRIC, CABLE TV AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT JULIE (1-800-892-0123 OR 811) AND ALL OTHER UTILITY OWNERS WHICH ARE IN THE PROJECT LIMITS BEFORE COMMENCING EXCAVATION.

2. THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI / ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILTIY DATA."

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

THE TOPOGRAPHY AND BOUNDARY SHOWN HEREON WAS PREPARED BY WOLFPAK CONSULTING, LLC AND SUPPLIED BY THE CLIENT STATED HEREON.

TOPOGRAPHIC SURVEY AND BOUNDARY NOTES:

SUPPLEMENTAL TOPOGRAPHY SHOWN HEREON WAS PREPARED BY DESIGNTEK ENGINEERING, INC.

SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
TOTAL AREA =	105,159 SQ. FT. OR 2.41 ACRES

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000

PERMIT TABLE

AGENCY	PERMIT #	APPROVAL DATE
MWRD	XXXXXXX	XX-XX-24
IEPA - WATER	XXXXXXX	XX-XX-24
IEPA - SANITARY	XXXXXXX	XX-XX-24
LaGRANGE HIGHLANDS - SANITARY SEWER MAIN	XXXXXXX	XX-XX-24
NPDES AND APPROPRIATE SCD	XXXXXXX	XX-XX-24
CCDOTH	XXXXXXX	XX-XX-24

Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.
P (708) 588-4055
E WMOJobStart@mwrd.org

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
CALL 1-800-892-0123 or 811
AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE YOU DIG
WWW.ILLINOIS1CALL.COM

REVIEW SET
NOT FOR CONSTRUCTION

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF WILL)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THESE LOT IMPROVEMENTS.

DATED 13TH DAY OF DECEMBER, 2024

LICENSED PROFESSIONAL ENGINEER
DENISE M. VIETH
062-062947
STATE OF ILLINOIS
Exp 11/30/2025

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-26-24	PER LOCAL LANDS SD	DMV
2	08-26-24	PER WESTERN SPRINGS REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS NOTED
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

1 OF 20

COVER SHEET

EARTHWORK

1. Topsoil Excavation Includes:
   a. Excavation of topsoil and other structurally unsuitable materials within those areas that will require earth excavation or compacted earth fill material, in order to achieve the plan subgrade elevations. The amount of topsoil to be stripped shall be verified in the field by a soils engineer.
   b. Placement of the excavated material in OWNER designated areas for future use within areas to be landscaped, and those areas not requiring structural fill material.
   c. Compaction of the excavated material where placed in areas not requiring structural fill material, shall be moderate.
   d. Excess materials, if not utilized as fill or if not stockpiled for future landscaping, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
2. Earth Excavation Includes:
   a. Excavation of earth and other materials which are suitable for use as structural fill. The excavation shall be to within a tolerance of 0.3 feet (+) of the plan subgrade elevations. The (+) tolerance within pavement areas shall be such that the earth material shall "balance" as part of the fine grading operation.
   b. Placement of the earth and other suitable materials shall be within those areas requiring structural fill in order to achieve the plan subgrade elevations to within a tolerance of 0.3 feet (+). The fill material shall be placed in loose lifts that shall not exceed eight (8) inches in thickness, and the water content shall be adjusted in order to achieve the required compaction. Earth material may be placed within those portions of the building site not requiring structural fill, to within four (4) inches of the plan finished grade elevation. In areas requiring structural fill, however, the earth material shall not be placed over topsoil or other unsuitable materials unless specifically directed by a Soils Engineer with the concurrence of the OWNER.
   c. Compaction of the earth and other suitable materials, shall be to at least 95% of the maximum dry density as determined by the Modified Proctor Test, ASTM D1557 laboratory procedure within proposed pavement areas and building areas, an rear yards abutting to the proposed lakes. Moderate compaction is required elsewhere. All fill shall be placed in 8" lifts, loose measure.
   d. Excess materials, if not utilized as fill, shall be completely removed from the construction site and disposed of by the CONTRACTOR.
3. Unsuitable Material
   a. Unsuitable material shall be considered as material which is not suitable for the support of pavement and building construction, and is encountered below normal topsoil depths and the proposed subgrade elevation. The decision to remove said material, and to what extent, shall be made by a Soils Engineer with the concurrence of the OWNER in writing.
4. General

   The Grading CONTRACTOR shall:
   a. Maintain proper site drainage at all times during the course of construction, and prevent storm water from running into or standing in excavated areas.
   b. Spread and compact uniformly to the degree specified all excess trench spoil after completion of the underground improvements.
   c. Scarify and compact to the degree specified the upper twelve (12) inches of the suitable subgrade material, in all areas that may be soft due to excess moisture content. This applies to cut areas as well as fill areas.
   d. Provide water to add to dry material in order to adjust the moisture content for the purpose of achieving the specified compaction.
5. Testing and Final Acceptance
   a. The CONTRACTOR shall provide as a minimum, a fully loaded tri-axle dumptruck or similar equipment for proof rolling the pavement subgrade prior to the placement of the curb and gutter and the base material. In addition, the pavement aggregate base course shall also be proof rolled. The Village Engineer shall be notified 48 hours in advance of any proof roll.
   b. Specific compaction testing may be required by the OWNER in selected fill areas. The CONTRACTOR shall bear the cost of any compaction testing which does not meet specification as well as the responsibility and cost for the necessary correction(s).
   c. Approval of the pavement subgrade by the OWNER shall be required prior to the placement of the pavement materials.
   d. The subgrade soil shall be tested by a professional geotechnical engineer at the developer's expense and shall have a minimum designated Illinois Bearing Ratio (IBR equal to three (3).
   e. A soil investigation report shall be provided to the Village to verify the in situ IBR value. Pavement structures with subgrade soil having an IBR value less than three (3) shall have an increased pavement structure as necessary to carry the design traffic loading.
6. Method of Measurement
   a. As-built measurements of earthwork for the purpose of payment shall not apply. the quantities shown in the engineer's "quantity estimate" shall be utilized unless said quantities are adjusted by mutual consent of the owner and contractor prior to the signing and acceptance of a contract.
   b. The quantities as shown in the engineer's "quantity estimate" are those estimated by the engineer and are provided solely for the convenience of the contractor. the contractor by choosing to utilize these quantities in the preparation of his "lump sum" bid, also accepts their accuracy. the contractor is therefore encouraged to make his own independent earthwork calculation, and to visit the site prior to the preparation of his bid.
   c. Prior to the removal of unsuitable material, the contractor shall notify the owner for authorization to remove said material, upon authorization and removal, the contractor shall request that the unsuitable material shall be field measured by the engineer in place.
7. Basis of payment
   a. Payment for all earthwork shall be "lump sum". the contractor shall provide unit prices for earthwork for the purpose of contract adjustment, if required.
   b. Payment for the removal of unsuitable material shall be based on the quantities as field measured by the engineer. the contractor shall provide as part of his bid a unit price per cubic yard for the removal of unsuitable material. said unit price shall include the complete removal of the material, replacement with a suitable material obtained by the contractor from a borrow source, and compaction to the required specification.

UNDERGROUND UTILITIES - GENERAL

1. The Underground CONTRACTOR Shall:
   a. Adhere to the criteria for the separation between water mains and sanitary sewers, storm sewers, combined sewers, sewer services and septic fields according to the requirements stated in the IEPA Rules for Public Water Supplies (the formal citation is Title 35, Subtitle F, Chapter II, Parts 651–654). All sewer water main separations shall be constructed per the "Standard Specifications for Water and Sewer Main Construction in Illinois".
   b. Be responsible to place on grade, and coordinate with other CONTRACTORS, all underground utility structure frames such as manholes, catch basins, and inlets.
   c. Be aware of potential conflicts with existing utilities. The CONTRACTOR shall excavate around the existing utilities to determine their exact location and elevation prior to the construction of the proposed utility improvements. Should unforeseen conflicts be found, the CONTRACTOR shall contact the ENGINEER prior to constructing the proposed improvements.
   d. Adjust or reconstruct any existing utility structure to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than two adjusting rings within a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   e. Provide poured concrete fillets conforming to the shape of the pipe in all sanitary and storm manholes, and inlets.
   f. Be responsible for maintaining the top of any utility trench at least three (3) feet away from any existing or proposed curb or pavement, in those instances where the trench runs parallel to said curb or pavement.
   g. Be responsible for the dewatering of utility trenches during construction and providing the necessary trench bracing that may be required to assure safe working conditions.
   h. Remove soft material that may be encountered at the pipe invert elevation to a depth of at least one (1) ft. below the bottom of the pipe, and backfill with compacted bedding material.
   i. No damage to the road subgrade with excessive water saturation from hydrant flushing or from leaks in the water distribution system. The cost of repair for such damage shall be borne by the CONTRACTOR. Hoses should be used to direct the water from hydrant flushing into the storm sewer system (if available).
   j. Repair any existing field drainage tile damaged during construction, and properly reroute and/or connect said tile to the nearest storm sewer outlet. All locations of encountered field drainage tile shall be properly indicated on the CONTRACTOR'S record drawing.
   k. Furnish one (1) set of Record drawings to the ENGINEER upon completion of the sanitary sewers and water mains. Drawings (or table of locations) shall indicate the location of all sanitary sewer wyes (measured from the nearest downstream manhole), sewer stubs, water service along main and b-boxes. The CONTRACTOR shall also furnish linear distance along water main from appurtenances to appurtenance (valve vault to tee, tee to bend, etc.).
   l. Be responsible for implementation of the "Soil Erosion and Sedimentation Control Measures" as applicable.
   m. Maintain erosion control measures (straw bales and filter fabric) until grass is established.
2. Method of Measurement
   a. All sanitary sewer, storm sewer, and water main pipe shall be measured in the field after its installation. Payment shall be based on these field measurements.
   b. All appurtenances such as manholes, catchbasins, inlets, valves and valve vaults, valve boxes, and fire hydrants, shall be paid for on the basis of in–place quantities.
   c. Trench backfill material shall be measured by multiplying the as–constructed length of pipe (where applicable) by the average depth of the pipe by the "Payment Quantities per foot of Conduit" listed in Table 1, pg. 138 and "Typical Detail of Conduit Installation", pg. 137 of the Standard Specification for Sewer and Water in Illinois. If requested, the CONTRACTOR shall provide load tickets to the ENGINEER for verification of the trench backfill material delivered to the construction site. Load tickets for bedding material shall be submitted separately.
3. Basis of Payment
   a. All sanitary sewer, water main, and storm sewer pipe shall be paid for at the contract unit price per LINEAL FOOT. The price shall include the necessary labor and material for a complete in–place installation, as well as all incidental construction, testing, bedding material, and connections to existing utilities.
   b. All appurtenances for the underground improvements shall be paid for at the contract unit price EACH, said price to include the necessary labor and material for a complete in–place installation. The price for manholes, inlets, and catchbasins shall also include the frame and grate and all incidental construction. The price for fire hydrants shall also include a six (6) inch valve and box, and all incidental construction.
   c. Trench backfill material shall be paid for at the contract unit price per CUBIC YARD. Compaction must be made by mechanical methods.
4. As–Built Water & Sanitary Services
   a. As–built locations shall be provided for all water and sanitary sewer stubs. They shall also be stamped on the curb.
5. Structure Castings
   a. Frames and lids (or grates) for sanitary, watermain and storm sewer structures shall be as indicated on the plans, and the cost of same shall be integrated into the representative structure costs. Each structure lid shall be cast with text identifying the type of structure (storm, sanitary, water).
   b. Manhole castings shall be adjusted to finished grade using precast adjusting rings set on bitumastic material. All structures shall have no more than two adjusting rings w/ a min. of four inches (4") and a max. of twelve inches (12") of adjusting rings.
   c. All frames shall be set on a mastic bed with all gaps tuck pointed.
   d. All castings shall be made in the U.S.A. with U.S.A. materials.
6. Trench Backfill
   a. Bedding, haunching and the initial backfill shall consist of IDOT CA–7, CA–11 OR CA–19 aggregate. The initial backfill shall be placed to at least 12" above the pipe.
   b. Final backfill of the trench shall be accomplished by careful replacement of the excavated material. Any pipe installed under or within a 45 degree angle of repose (1:1) from the top of pipe to the edge of pavement, driveway (when driveway location is known) or curb and gutter shall be backfilled to the top of the trench with compacted IDOT CA–7, CA–11 or CA–19 material.
   c. Compaction shall be in achieved using 8" lifts (uncompacted) and mechanical compaction to 95% density. All costs for compaction and testing shall be paid for by the Developer or Contractor. Results shall be copied to the Village Engineer.

SANITARY SEWER

1. Material shall be:
   a. Green polyvinyl chloride pipe (PVC) SDR 26.
   b. PVC SDR 26 or D.I.P. CL 52.
   c. sewer pipe and fittings shall be in accordance with ASTM D–3034 for sizes 4"–15" (100–375 mm).
2. Joints shall be:
   a. for PVC; flexible elastomeric seal joints, ASTM D–3139, pressure joint.
   b. for DIP; rubber gasket joints, ANSI A21.11
3. Bedding shall be as detailed on the Engineering Plan.
4. Minimum size for mains shall be eight inches (8") and the minimum size for services shall be 6".
5. Wyes or Tees shall be provided on the new sanitary sewers for proposed building services.
6. "Band Seal" or similar couplings shall be used when joining pipes of dissimilar materials.
7. All sanitary structures shall have an external wrap, MAC or approved equal.
8. Polyethylene encasement shall be provided for all DIP sanitary sewer in accordance with AWWA latest standards.
9. Prior to pipe laying and jointing, the trench shall be sufficiently dewatered to maintain the water level in the trench at or below the base of the bedding. State / Federal permits, license agreements or other required approvals shall be obtained prior to dewatering.
10. Where separation from water main cannot be maintained as required per Illinois specifications, the sanitary sewer shall be mechanical joint PVC pressure pipe meeting C–900 or C–905.
11. Sewers shall be laid straight in both horizontal and vertical planes between manholes with a minimum cover of 4 feet.
12. Sanitary sewers shall be located a minimum of 10 feeet from any building and meet separation requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
13. Services shall be a minimum 6 inches and extend to the property line or beyond any utility located in the front yard of a lot being served (single–family development), or to within five (5) feet from the face of a proposed building being served (multi–family and commercial development). The termination points shall be clearly located with a green–topped 4 inch x 4 inch stake extending a minimum 3 feet above final grade. The service lines shall be connected to the sewer using a wye at the 10:00 and 2:00 positions. Service lines not immediately connected to the building to be served shall be tightly plugged, using a plug provided by the pipe manufacturer for such use.
14. Testing and Final Acceptance
   a. Sanitary sewer mains and services shall be tested for exfiltration of air under pressure and deflection for flexible thermoplastic pipe in accordance with the Standard Specifications for Water and Sewer Construction in Illinois prior to their final acceptance. Allowable testing limits shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. Service stubs must be properly plugged and sealed and clearly located at their termination points prior to testing. All sewer mains, service lines and manholes shall be clean and free of debris prior to their final acceptance. Sanitary Sewer shall be inspected and tested in accordance with the local jurisdictional requirements for television inspection and reviewed by the Village Engineer. Two copies of all test results shall be provided to the Municipality.
   b. Sanitary Manhole structures shall be tested, prior to acceptance, for watertightness by either of the following methods in conformance with the requirements specified: ASTM C 969: "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines." OR ASTM C 1244: "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test."
   c. All public sanitary sewer extensions shall be internally video taped by remote camera. Tapes shall be in color using VHS or CD–ROM format and submitted with written reports to the Village Engineer for review and approval priot to acceptance of the sewer improvements by the Village.
   d. LaGrange Highlands will be the agency responsible for sewer main acceptance.

WATER MAIN

1. The Village of Western Springs is the agency responsible for the water main.
2. All installations shall conform to the requirements of the Standard Specifications for Water and Sewer Main Construction in Illinois.
3. Material for main pipe and fittings shall be class 52 ductile iron pipe with poly wrap for the public water main per AWWA C–151, with mechanical and push–on joints complying with AWWA C–111.
4. Material for the services shall be soft temper, Type K, copper water tubing, conforming to ASTM latest standard w/ compression fittings, unless otherwise noted on the plans.
5. Sizes for main & service lines shall be as indicated on the Engineering Plan.
6. Connections to Village water system shall be made under full water service pressure. Unless noted on plans and Village approval granted for shutdown. Shutdown requests need to be made to municipal services department 4 days prior to desired shutdown date. Contractor required to distribute shutdown notices to any impacted customers 2 business days prior. Village to provide notice text.
   a. Tapping sleeves shall include two piece bolted sleeve type with mechanical joints, Mueller–H615, or equal with joint accessories.
   b. Tapping valves shall include fully ported gate valves complying with AWWA C500 and mechanical joints type, Mueller–H667 or equal. Tapping valves shall be placed in precast concrete vaults.
7. The shut–off valve or curb stop for services shall be located as shown on the plans and shall be installed with a valve box of design approved by the Municipality. The termination point shall be clearly located with a blue–topped 4 inch x 4 inch stake extending a minimum of 3 feet above and below final grade.
8. Valves: Mueller, Clow or equal mechanical joint, resilient wedge seat, cast iron, bronze–mounted, O–ring seal, bronze non–rising stems, gate valves. Valvesshall open left and be tested to 500 psi with a 250 psi working pressure.
9. Water services, where indicated on the "Quantity Estimate" as "long" or "short", shall include the necessary length of Type "K": copper water tube of the size shown on the plans, corporation stop, curb stop, and service box, and all necessary labor, tools, equipment, excavation & backfill, for a complete installation as shown on the Engineering plans. Trench backfill will be paid for separately, when required.
10. Valve Boxes
    a. Valve boxes shall be adjustable, 3–piece cast iron, 5–1/4 inch shaft roadway–type and no–tilit drop cover with "WATER" cast into it.
    b. Valve box stabilizer of PVC manufactured by Valve Box Stabilizer, Inc. for six–inch (6") and eight–inch (8") valve boxes shall be provided.
    c. Valve box must have additional upward or downward travel when adjusted to finished grade.
11. Valve Vaults
    a. All valve vaults shall be precast reinforced concrete only.
    b. All valve vaults shall have no more than two adjusting rings with a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
    c. All lifting holes, joints between precast reinforced concrete sections, rubber gaskets cast into concrete structures need to be water tight and shall be tuckpointed with hydraulic cement.
    d. All castings shall be set on bitumastic material.
    e. Bitumastic material shall be placed between precast reinforced concrete sections.
    f. All valve vaults shall have neoprene coated or fiberglass steps.
    g. Vaults and boxes shall not be allowed under streets, sidewalks or driveways.

WATER MAIN

11. Fire Hydrants
    a. Fire Hydrants shall be Mueller super centurian 250. Factory painted safety red with 5–1/4 inch valve opening and shall be painted red.
    b. The hydrant shall be for a five foot (5') bury with mechanical joint shoe and have two 2–1/2 inch hose connections and one four and one–half inch (4–1/2") male pumper connection. Thread shall be National Standard.
    c. The hydrant shall have a break–away traffic flange and connections.
    d. All fire hydrants not in service shall be bagged.
    e. Hydrants leads shall be six–inch (6") swivel anchoring coupling. Hydrant tees shall be used in lieu of swivel anchoring coupling pipe where required to meet plan locations.
    f. The maximum distance between fire hydrants shall be 350 feet.
    g. All fire hydrants shall be kept clear of obstructions within three (3) feet in all directions. This shall include posts, fences, vehicles, growth, trash, storage, and any other material or objects.
    h. All fire hydrants to have a 10 pound anode bag attached to the hydrant.
12. Pipe Cover and Separation
    a. Cover over water pipes shall be a minimum of 5.5 feet.
    b. Horizontal and vertical separation shall meet requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois." Locations requiring alternative materials are noted on the plans.
13. Pipe Laying
    a. The contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Village Engineer.
    b. Adequate provisions shall be made for the safety, storage, and protection of all water pipe prior to installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or other debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying of the pipe. Proper equipment shall be used for the safe handling, conveying, and laying of the pipe so as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.
    c. In making joints, all portions of the jointing materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the jointing shall be in accordance with the manufacturer's installation instructions. During construction, until jointing operations are complete, the open ends of all pipes shall at all times be protected and sealed with temporary watertight plugs.
    d. During water main installation, to make a closure between two pipe ends, or between pipe end fittings, or between pipe end and valve, short lengths shall be used with proper connections or couplings. Repair sleeves shall not be used to make closures during new construction.
    e. All pipe and trenching shall be viewed and approved by the Municipality prior to cover and backfill.
    f. All bends of 22–1/2 degrees or greater, and all tees and plugs shall be thrust protected to prevent movement of the line under pressure. Thrust protection may also be attained by the use of a combination or retaining glands and threaded rods. All locations of thrust blocking or retaining glands/rods need to be marked on the as built drawing.
14. Testing and Disinfection
    a. Water main shall be tested in accordance with AWWA C–600 & the local jurisdictional requirements prior to it final acceptance. A 24 hour system pressure test needs to be performed as per the Standard Specifications. The pressure and leakage tests and disinfection of the mains shall be as described in the "Standard Specifications" unless the local requirements are more restrictive. All valve vaults shall be clean and free of debris and water, and individual service boxes shall be visible and clearly located prior to their final acceptance.
    b. The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The injector for delivering the chlorine gas into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.
    c. Water from the existing distribution system or any other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine–gas. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty parts–per–million (50ppm), or enough to meet the requirements during the retention period.
    d. Valves shall be manipulated so that the strong chlorine solution in the line being treated shall not flow back into the line supplying the water. The pipe section being chlorinated shall be kept at a lower pressure than the water system pressure.
    e. Treated water shall be retained in the pipe long enough to destroy all spore–forming bacteria. This retention period shall be at least twenty–four (24) hours. After the chlorine–treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points shall be at least twenty five parts–per–million (25ppm).
    f. In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.
    g. After all mains have been pressure tested, they shall be disinfected and tested according to the requirements of the Standards for Disinfecting Water Mains, AWWA C–601 and C–651, and as required by this Section. All disinfection, as required by this Section, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the Village Public Works Department. The contractor shall obtain two samples of water from the main for bacteriological testing. A second series of samples shall be collected no less than 24 hours after the first set of samples has been collected. The contractor and the Village will be furnished with copies of the bacteriological report for their records.

STORM SEWER

1. All storm sewer shall conform to the requirements of The Standard Specifications for Water and Sewer Main Construction in Illinois
2. Storm sewers shall be reinforced concrete pipe conforming to ASTM C76 minimum Class III with O–ring joints conforming to ASTM C443.
3. Bedding shall be minimum of 6" of CA–7.
4. Minimum size shall be twelve inches (12").
5. Storm Structures
   a. Rear yard catch basins are not allowed.
   b. All storm structures shall be precast reinforced concrete only.
   c. All storm structures shall be set on a six–inch (6") CA–7 cushion.
   d. All storm structures shall have no more than two adjusting rings within a minimum of four inches (4") and a maximum of twelve inches (12") of adjusting rings.
   e. All lifting holes, joints between precast reinforced concrete sections, gaps between pipes and structures shall be tuckpointed with hydraulic cement.
   f. Bitumastic material shall be placed between precast reinforced concrete sections.
   g. All steps shall be fiberglass or neoprene coated.
   h. All structure connections shall be concrete sewer pipe, ASTM C14 for extra strength pipe
6. Storm sewer and all storm structures shall be clean and free of debris prior to their final acceptance. Storm Sewer shall be inspected and tested in accordance with the local jurisdictional requirements including television inspection for review by the Village Engineer.
7. All flared end sections less than 48" (effective diameter) require grates in accordance with IDOT specifications.
8. All castings shall be made in the USA with USA materials. Closed covers shall be stamped per Exhibit 2B. Open covers shall have the grates as specified in the plans.

PAVING CURBS AND SIDEWALK

1. Fine Grading
   a. Prior to the construction of the curb and gutter and the placement of the base material, the streets shall be fine graded to within 0.1 feet + of final subgrade elevation, to a point two (2) feet beyond the back of the proposed curb.
2. Curb and Gutter
   a. The curb and gutter shall be the type as detailed on the Engineering Plans.
   b. The curbs shall be backfilled after their construction and prior to the placement of the base course.
3. Pavement
   a. The pavement materials shall be as detailed on the Engineering Plans. Thickness specified shall be considered to be the minimum compacted thickness.
4. General. The Paving Contractor shall:
   a. Repair any base course and binder course failures prior to the installation of the final bituminous concrete surface course.
   b. Sweep clean the binder course prior to the installation of the final bituminous concrete surface course. Excessive cleaning of the binder course that may be required, and is not the fault of the Paving CONTRACTOR, shall be paid for on a time and material basis by prior agreement with the OWNER.
   c. Permit the bituminous concrete binder course to weather one (1) winter season prior to the installation of the bituminous concrete surface course.
   d. Street signs & Traffic signs.
5. Testing and Final Acceptance
   a. Prior to the placement of the base course, the subgrade must pass a proof roll test to be approved by the local jurisdictional authority. The Village shall be contacted at least 2 business days in advance of the proof roll. (See "Testing and Final Acceptance for Earthwork")
   b. Prior to placement of the bituminous concrete surface course, the CONTRACTOR if requested by the OWNER, shall obtain specimens of the binder course with a core drill where directed by the ENGINEER, for the purpose of thickness verification. Coring shall be in accordance with the applicable provisions of ART.406.15 of the Standard Specification entitled "Standard Specifications for Road and Bridge Construction". The cost for obtaining cores, which meet or exceed the specification, shall be borne by the OWNER.
   c. Deficiencies in the bituminous concrete binder course shall be adjusted for by increasing the plan thickness of the surface course with no additional cost to the OWNER.
   d. A nuclear density test must be conducted on asphalt pavement in accordance with IDOT standards.
   e. Final acceptance of the total pavement installation shall be subject to the testing and checking requirements cited above.
6. Method of Measurement
   a. Curb and Gutter, and base course shall be measured in the field by the CONTRACTOR. The quantities shall be submitted to the OWNER for verification.
   b. When requested by the OWNER, documentation for the installed base course, bituminous concrete binder, and surface, shall be submitted to the ENGINEER for verification. Deficiencies in total bituminous concrete pavement thickness shall be adjusted for in accordance with the requirements of the jurisdictional authority.
7. Basis of Payment
   a. Curb and Gutter will be paid for at the contract unit price per LINEAL FOOT.
   b. Prime Coat material will be paid for at the contract unit price per GALLON.
   c. Base Course will be paid for at the contract unit price per SQUARE YARD.
   d. Bituminous Concrete will be paid for at the contract unit price per SQUARE YARD.

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DMV
2	08–19–24	PER VILLAGE REVIEW	SDD
3	10–17–24	PER VILLAGE REVIEW	SDD
4	11–04–24	PER CDDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
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IL PROF. LIC. NO.: 184–003740

DEI

PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

PROJECT SPECIFICATIONS

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GENERAL NOTES

1. Definition of Terms
   a. The CONTRACTOR is the individual, firm, partnership or corporation contracting with the OWNER for performance of the prescribed work.
   b. The OWNER is the individual, firm, partnership or corporation having the authority to award the contract for the prescribed work.
   c. The ENGINEER where specifically referred to in the Specifications shall be the OWNER'S representative.
2. All CONTRACTORS shall be responsible for the following, which shall also be incidental to the cost of construction:
   a. Examination of the Engineering Plans and Specifications and the existing site conditions prior to submitting a bid, and notifying the ENGINEER at once of any discrepancies.
   b. The obtaining of any necessary permits not previously applied for by the OWNER, and posting of the necessary bonds.
   c. The notification of the start of construction to theVillage of WESTERN SPRINGS Public Services Dept. at (708) 246–8540, utility companies, and the ENGINEER at least two (2) working days prior to said start. All existing utilities must be staked prior to construction. All construction, including equipment startup, shall be between the hours of 7:00 a.m. to 8:00 p.m. weekdays, and 8:00 a.m. to 7:00 p.m. weekends and holidays.
   d. Calling attention to the OWNER of any errors or discrepancies, which may be suspected in lines and grades, which are established by the OWNER. The CONTRACTOR shall not proceed with the work until the lines and grades which are believed to be in error have been verified or corrected by the OWNER. Additional staking that may be required due to CONTRACTOR negligence shall be paid for by the CONTRACTOR.
   e. The providing of safe and healthful working conditions throughout the prosecution of the construction work. This shall include, but not be limited to: the removal of debris, the protecting of construction hazards with barricades and the keeping of public street pavements clean of construction dirt and debris.
   f. The restoration to the original condition or better of any areas that are damaged by the CONTRACTOR during construction.
   g. The testing of materials, if required by the OWNER and/or the jurisdictional agencies.
   h. The guarantee of all materials and workmanship for a period of one (1) year upon final acceptance by the OWNER and other jurisdictional agencies.
   i. Trees shall be installed a minimum of five (5) feet horizontally from sanitary sewers, sanitary services, watermains, and water services. Trees and light poles shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including but not limited to manholes, valve vaults, valve boxes and fire hydrants.
   j. The contractor shall be responsible for implementation & maintenance of all soil erosion & sedimentation control measures throughout the entire project.
   k. Contractors are required to obtain applicable permits from the Municipality.
3. The OWNER shall be responsible for the following:
   a. Scheduling the necessary preconstruction meeting(s) with the jurisdictional agencies at least two (2) working days prior to the commencement of work.
   b. Insurance certificates from all contractors, naming the Village of WESTERN SPRINGS as additional insured, prior to preconstruction meeting being set.
   c. Providing the CONTRACTOR with one (1) set of control line and grade stakes (at offsets mutually agreed upon) for the proper prosecution and control of the work.
   d. Applying for IEPA, IDOT, and all applicable County, Municipal and Sanitary District Permits. Other necessary permits shall be the responsibility of the CONTRACTOR.
4. The ENGINEER shall be responsible for the following:
   a. To periodically visit the construction site in order to better carry out the duties and responsibilities assigned by the OWNER and undertaken by the ENGINEER.
   b. The ENGINEER shall not, during such visits or as a result of such observations of the CONTRACTOR(s)' work in progress, supervise, direct or have control over the CONTRACTOR(s)' work nor shall the ENGINEER have authority over or responsibility for the means, methods, techniques, sequences or procedures of construction selected by the CONTRACTOR(s)', for safety precautions and programs incident to the work of the CONTRACTOR(s) or for any failure of the CONTRACTOR(s) to comply with laws, rules, regulations, ordinances, codes or orders applicable to the CONTRACTOR(s) furnishing and performing their work. Accordingly, the ENGINEER can neither guarantee the performance of the construction contracts by the CONTRACTOR(s) nor assume responsibility for the CONTRACTOR(s)' failure to furnish and perform their work in accordance with the Contract Documents.
5. Except where modified by the contract documents, all work proposed herein shall be in accordance with the following specifications, which are hereby made a part hereof:
   a. "Standard Specifications for Road and Bridge Construction", and "Supplemental Specifications and Recurring Special Provisions", latest edition, prepared by the Illinois Department of Transportation (IDOT Standard Specifications).
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as adopted by the Illinois Society of Professional Engineers, etal.
   c. Illinois Urban Manual, latest edition.
   d. Village of WESTERN SPRINGS Codes and Ordinances, current edition when these plans were approved.
   e. American With Disabilities Act, Standards for Accessible Design, latest ed.
6. In the event of a conflict between statements, which apply to the construction work, the OWNER should contact the Public Works Director for direction.

MWRD SPECIFICATIONS

A. Referenced Specifications

1. All construction shall be in accordance with the applicable sections of the following, except as modified herein or on the plans;
   a. Sstandard Sspecifications for Road and Bridge Construction (latest edition), by the Illinois Department of Transportation (IDOTt SS) for all improvements except sanitary sewer and water main construction;
   b. Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition (SSWS) for sanitary sewer and water main construction;
   c. Village of WESTERN SPRINGS municipal code (latest edition);
   d. The Metropolitan Water Reclamation District of Greater Chicago (NWRD) Watershed Management Ordinance and Technical Guidance Manual (latest edition);
   e. In case of conflict between the applicable ordinances noted, the more stringent shall take precedence and shall control all construction.

B. Notifications

1. The MWRD local sewer systems section field office must be notified at least two (2) working days prior to the commencement of any work (call 708–588–4055).
2. The Village of WESTERN SPRINGS Engineering Department and Public Works must be notified at least 24 hours prior to the start of construction and prior to each phase of work. Contractor shall determine items requiring inspection prior to start of construction or each work phase.
3. The Contractor shall notify all utility companies prior to beginning construction for the exact locations of utilities and for their protection during construction. If existing utilities are encountered that conflict in location with new construction, immediately notify the engineer so that the conflict can be resolved. call J.U.L.I.E. at 1–800–892–0123.

C. General Notes

1. All elevations shown on plans reference the north american vertical datum of 1988 (NAVD88). Conversion factor is XXXX ft.
2. MWRD, the Municipality and the Owner or Owner's Representative shall have the authority to inspect, approve, and reject the construction improvements.
3. The Contractor(s) shall indemnify the Owner, Engineer, Municipality, MWRD, and their Agents,from all liability involved with the construction, installation, or testing of this work on the project.
4. The proposed improvements must be constructed in accordance with the engineering plans as approved by mwrd and the municipality unless changes are approved by MWRD, the Municipality, or authorized agent. The construction details, as presented on the plans, must be followed. Proper construction techniques must be followed on the improvements indicated on the plans.
5. The location of various underground utilities which are shown on the plans are for information only and represent the best knowledge of the Engineer. Verify locations and elevations prior to beginning the construction operations.
6. Any existing pavement, sidewalk, driveway, etc., damaged during construction operations and not called for to be removed shall be replaced at the expense of the Contractor.
7. Material and compaction testing shall be performed in accordance with the requirements of the Municipality, MWRD, and Owner.
8. The Underground Contractor shall make all necessary arrangements to notify all inspection agencies.
9. All new and existing utility structures on site and in areas disturbed during construction shall be adjusted to finish grade prior to final inspection.
10. Record drawings shall be kept by the Contractor and submitted to the Engineer as soon as underground improvements are completed. Final payments to the Contractor shall be held until they are received. Any changes in length, location or alignment shall be shown in red. All wyes or bends shall be located from the downstream manhole. All valves, B–Boxes, tees or bends shall be tied to a fire hydrant.

D. Sanitary Sewer

1. The Contractor shall take measures to prevent any polluted water, such as ground and surface water, from entering the existing sanitary sewers.
2. A water–tight plug shall be installed in the downstream sewer pipe at the point of sewer connection prior to commencing any sewer construction. the plug shall remain in place until removal is authorized by the Municipality and/or MWRD after the sewers have been tested and accepted.
3. Discharging any unpolluted water into the sanitary sewer system for the purpose of sewer flushing of lines for the deflection test shall be prohibited without prior approval from the Municipality or MWRD.
4. All sanitary sewer construction shall be in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition).
5. All floor drains shall discharge to the sanitary sewer system.
6. All downspouts and footing drains shall discharge to the storm sewer system.
7. All sanitary sewer pipe materials and joints (and storm sewer pipe materials and joints in a combined sewer area) shall conform to the following:

Pipe Material	Pipe Specifications	Joint Specifications
Vitrified Clay Pipe	ASTM C–700	ASTM C–425
Reinforced Concrete Sewer Pipe	ASTM C–76	ASTM C–443
Cast Iron Soil Pipe	ASTM A–74	ASTM C–564
Ductile Iron Pipe	ANSI A21.51	ANSI A21.11
Polyvinyl Chloride (PVC) Pipe 6–inch to 15–inch Diameter SDR 26 18–inch to 27–inch Diameter F/DY=46	ASTM D–3034 ASTM F–679	ASTM D–3212 ASTM D–3212
High Density Polyethylene (HDPE)	ASTM D–3350 ASTM D–3035	ASTM D–3261, F–2620 (heat fusion) ASTM D–3212, F–477 (gasketed)
Water Main Quality PVC 4–inch to 36–inch 4–inch to 12–inch 14–inch to 48–inch	ASTM D–2241 AWWA C900 AWWA C905	ASTM D–3139 ASTM D–3139 ASTM D–3139

The following materials are allowed on a qualified basis subject to District review and approval prior to permit issuance. A special condition will be added to the permit when the pipe material below is used for sewer construction or a connection is made.

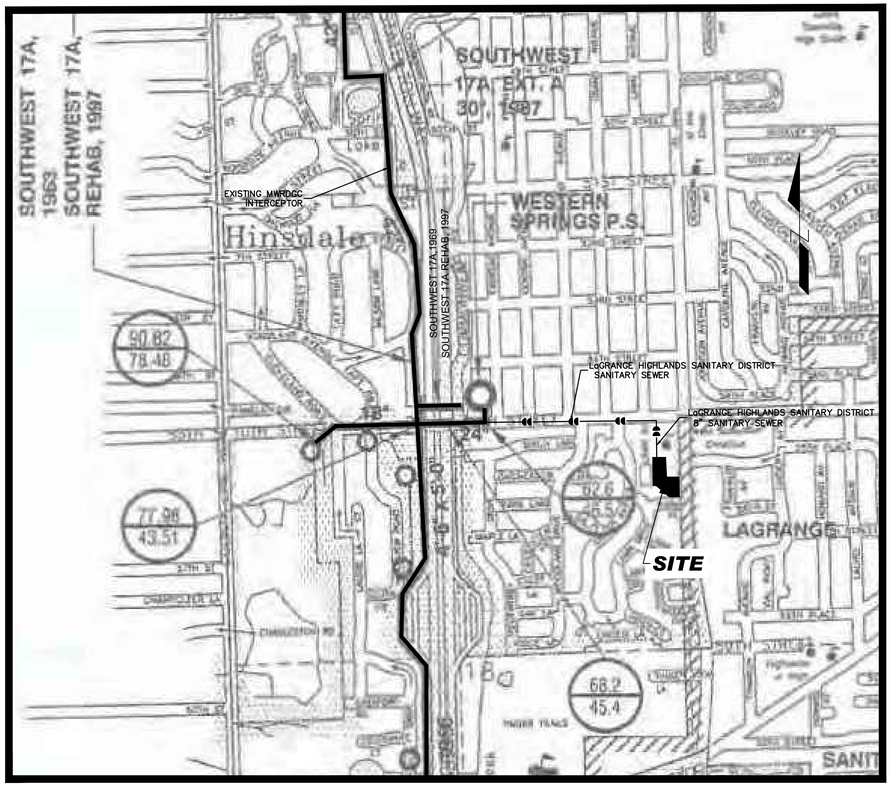
Pipe Material	Pipe Specification	Joint Specification
Polypropylene (PP) Pipe		
12–inch to 24–inch Double Wall	ASTM F–2736	ASTM D–3212,F–477
30–inch to 60–inch Triple Wall	ASTEM F–2764	ASTM D–3212, F–477

8. All sanitary sewer construction (and storm sewer construction in combined sewer areas), requires stone bedding with stone ¼" to 1" in size, with minimum bedding thickness equal to ¼ the outside diameter of the sewer pipe, but not less than four (4) inches or more than eight (8) inches. Material shall be CA–7, CA–11 or CA–13 and shall be extended at least 12" above the top of the pipe when using PVC.
9. Non–shear flexible–type couplings shall be used in the connection of sewer pipes of dissimilar pipe materials.
10. All manholes shall be provided with bolted, watertight covers. Sanitary lids shall be constructed with a concealed pickhole and watertight gasket with the word "sanitary" cast into the lid.
11. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
    a. A circular saw–cut of sewer main by proper tools ("shewer–Tap" machine or similar) and proper installation of hubwye saddle or hub–tee saddle.
    b. Remove an entire section of pipe (breaking only the top of one bell) and replace with a wye or tee branch section.
    c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "band seal" or similar couplings to hold it firmly in place.
12. Whenever a sanitary/combined sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the bottom of the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between sanitary/combined sewers and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18" vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18" vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, the sewer shall be constructed to water main standards or it shall be encased with a water main quality carrier pipe with ends sealed.
13. All existing septic systems shall be abandoned. Abandoned tanks shall be filled with a granular material or removed.
14. All sanitary manholes, (and storm manholes in combined sewer areas), shall have a minimum inside diameter of 48 inches, and shall be cast in place or pre–cast reinforced concrete.
15. All sanitary manholes, (and storm manholes in combined sewer areas), shall have precast "rubber boots" that conform to ASTM C–923 for all pipe connections. Precast sections shall consist of modified groove tongue and rubber gasket type joints.
16. All abandoned sanitary sewers shall be plugged at both ends with at least 2 feet long non–shrink concrete or mortar plug.
17. Except for foundation/footing drains provided to protect buildings, or perforated pipes associated with volume control facilities, drain tiles/field tiles/underdrains/perforated pipes are not allowed to be connected to or tributary to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers in combined sewer areas. Construction of new facilities of this type is prohibited, and all existing drain tiles and perforated pipes encountered within the project area shall be plugged or removed, and shall not be connected to combined sewers, sanitary sewers, or storm sewers tributary to combined sewers.
18. A backflow preventer is required for all detention basins tributary to combined sewers. Required backflow preventers shall be inspected and exercised annually by the property owner to ensure proper operation, and any necessary maintenances shall be performed to ensure functionality. In the event of a sewer surcharge into an open detention basin tributary to combined sewers, the permittee shall ensure that clean up and wash out of sewage takes place within 48 hours of the storm event.

MWRD SPECIFICATIONS CONT'D

E. Erosion and Sediment Control

1. The contractor shall install the erosion and sediment control devices as shown on the approved erosion and sediment control plan.
2. Erosion and sediment control practices shall be functional prior to hydrologic disturbance of the site.
3. All design criteria, specifications, and installation of erosion and sediment control practices shall be in accordance with the Illinois urban manual.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Inspections and documentation shall be performed, at a minimum:
   a. Upon completion of initial erosion and sediment control measures, prior to any soil disturbance.
   b. Once every seven (7) calendar days and within 24 hours of the end of a storm event with greater than 0.5 inch of rainfall or liquid equivalent precipitation.
6. Soil disturbance shall be conducted in such a manner as to minimize erosion. If stripping, clearing, grading, or landscaping are to be done in phases, the co–permittee shall plan for appropriate soil erosion and sediment control measures.
7. A stabilized mat of crushed stone meeting the standards of the illinois urban manual shall be installed at any point where traffic will be entering or leaving a construction site. Sediment or soil reaching an improved public right–of–way, street, alley or parking area shall be removed by scraping or street cleaning as accumulations warrant and transported to a controlled sediment disposal area.
8. Concrete washout facilities shall be constructed in accordance with the Illinois Urban Manual and shall be installed prior to any on site construction activities involving concrete.
9. Mortar washout facilities shall be constructed in addition to concrete washout facilities for any brick and mortar building envelope construction activities.
10. Temporary diversions shall be constructed as necessary to direct all runoff from hydrologically disturbed areas to an appropriate sediment trap or basin. Volume control facilities shall not be used as temporary sediment basins.
11. Disturbed areas of the site where construction activities have temporarily or permanently ceased shall be stabilized with temporary or permanent measures within seven (7) days.
12. All flood protection areas and volume control facilities shall, at a minimum, be protected with a double–row of silt fence (or equivalent).
13. Volume control facilities shall not be constructed until all of the contributing drainage area has been stabilized.
14. Soil stockpiles shall, at a minimum, be protected with perimeter sediment controls. Soil stockpiles shall not be placed in flood protection areas or their buffers.
15. Earthen embankment side slopes shall be stabilized with appropriate erosion control blanket.
16. Storm sewers that are or will be functioning during construction shall be protected by appropriate sediment control measures.
17. The contractor shall either remove or replace any existing drain tiles and incorporate them into the drainage plan for the development. Drain tiles cannot be tributary to a sanitary or combined sewer. Drain tiles allowed in combined sewer area for green infrastructure practices.
18. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion and sedimentation. Dewatering systems should be inspected daily during operational periods. the site inspector must be present at the commencement of dewatering activities.
19. The contrctor shall be responsible for trench dewatering and excavation for the installation of sanitary sewers, storm sewers, watermains as well as their services and other appurtenances. Any trench dewatering, which contains sediment shall pass through a sediment settling pond or equally effective sediment control device. Alternatives may include dewatering into a sump pit, filter bag or existing vegetated upslope area. sediment laden waters shall not be discharge to waterways, flood protection areas or the combined sewer system.
20. All permanent erosion control practices shall be initiated within seven (7) days following the completion of soil disturbing activities.
21. All erosion and sediment control measures shall be maintained and repaired as needed on a year–round basis during construction and any periods of construction shutdown until permanent stabilization is achieved.
22. All temporary erosion and sediment control measures shall be removed within thirty (30) days after permanent site stabilization.
23. The erosion and sediment control measures shown on the plans are the minimum requirements. additional measures may be required, as directed by the Engineer, Site Inspector, or MWRD.



SANITARY ROUTING EXHIBIT



STORM ROUTING EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DMV
2	10–17–24	PER WSPR VILLAGE REVIEW	SDD
3	10–29–24	PER CCDOTH REVIEW	DMV
4	11–04–24	PER CCDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

PROJECT SPECIFICATIONS & GENERAL NOTES

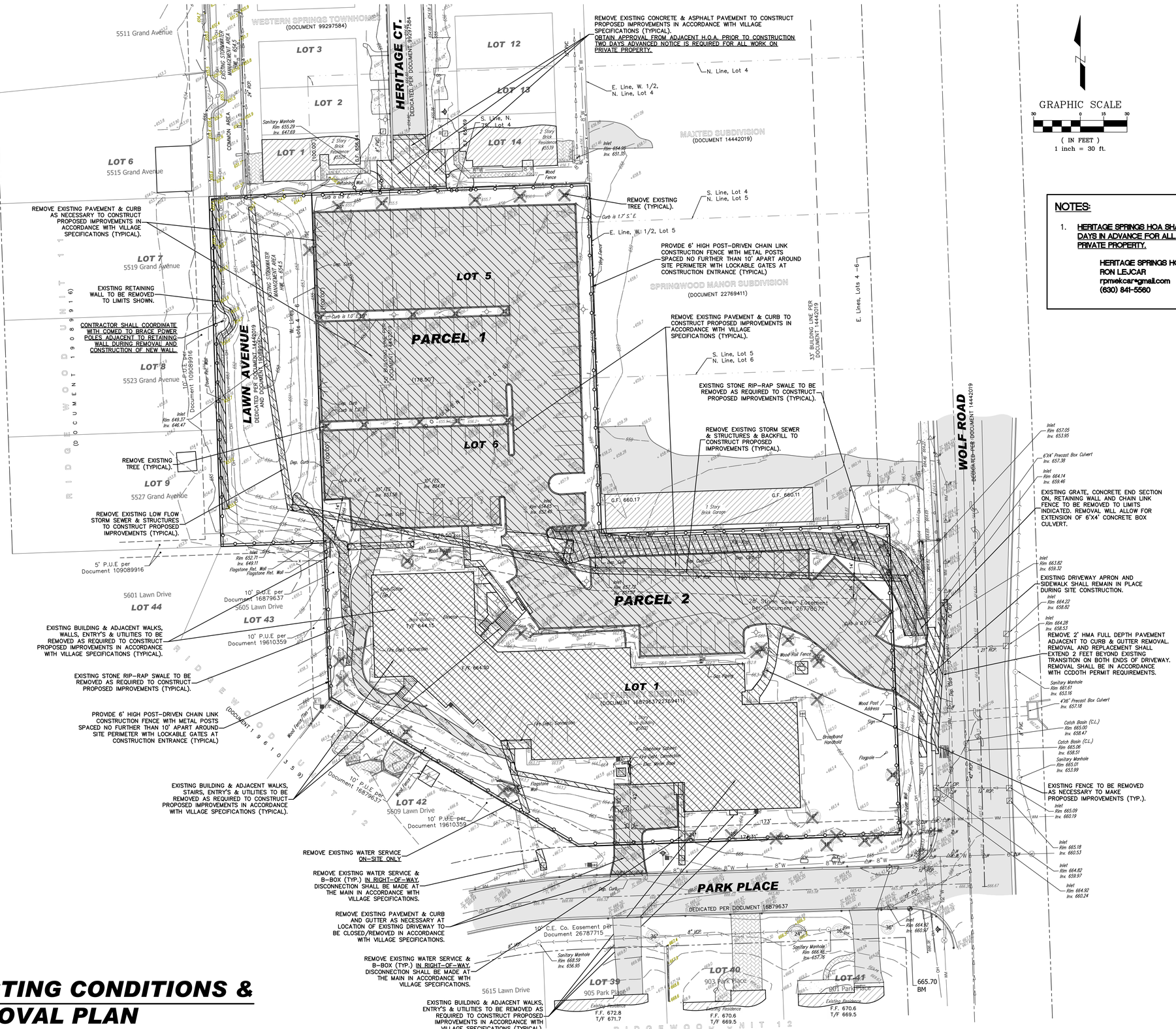
DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326–4961
FAX: (708) 326–4962
IL PROF. LIC. NO.: 184–003740

DEI

PROJECT INFORMATION
Project No.: 24–0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
20

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NOTES:

1. HERITAGE SPRINGS HOA SHALL BE NOTIFIED AT LEAST 2 DAYS IN ADVANCE FOR ALL WORK TO BE COMPLETED ON PRIVATE PROPERTY.

HERITAGE SPRINGS HOA
RON LEJCAR
rpmrekcar@gmail.com
(630) 841-5560

EXISTING CONDITIONS & REMOVAL PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER VILLAGE REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

4
OF
20

EXISTING CONDITIONS AND REMOVAL PLAN

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EROSION CONTROL & SEDIMENTATION NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL, LATEST EDITION, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. THE APPLICANT AND/OR CONTRACTOR IS RESPONSIBLE FOR INSURING THE OBTAINED PERMIT WITH THE COMPLETED SWPPP IS POSTED ON SITE IN A PROMINENT LOCATION BEFORE COMMENCEMENT OF ANY WORK ON SITE AND SHALL CONTACT THE VILLAGE AT LEAST 2 WORKING DAYS BEFORE THE START OF CONSTRUCTION, INSTALLATION OF SEDIMENT AND EROSION MEASURES AND COMPLETION OF FINAL LANDSCAPING.
3. THE VILLAGE SHALL BE PROVIDED WITH A COPY OF THE IEPA LETTER OF NOTIFICATION OF COVERAGE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE DEVELOPER IS RESPONSIBLE FOR HAVING THE SWPPP AND A STAMPED AND SIGNED COPY OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN ON SITE AT ALL TIMES AND BE PRESENTED WHEN REQUESTED BY ANY AUTHORIZED AGENCY.
5. THE DEVELOPER SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES EVERY SEVEN (7) DAYS AND AFTER 0.5" OR MORE RAINFALL. IMMEDIATE REPAIR SHALL BE MADE OF ANY DAMAGED EROSION CONTROL ELEMENTS THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
6. ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE ONLY AT PROPOSED STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON PLANS.
7. ALL DIRT, MUD, OR DEBRIS THAT REACHES THE PUBLIC ROADS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR.
8. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
9. SILT FENCE, SILT BASINS, AND STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE CONSTRUCTED AS DETAILED ON THE FINAL ENGINEERING PLANS PRIOR TO THE START OF CONSTRUCTION AND SHALL REMAIN IN PLAN UNTIL THE DISTURBED AREA IS STABILIZED. IN ADDITION, SILT FENCE SHALL BE PROVIDED FOR AREAS DRAINING 200' AND GREATER IN ACCORDANCE WITH NRCS CODE 920.
10. SCHEDULE OF CONTROL MEASURE IMPLEMENTATION:
    A. CONSTRUCT THE APPLICABLE PORTIONS OF THE EROSION AND SEDIMENTATION CONTROLS PRIOR TO SITE CLEARING.
    B. CONTROL SITE DEVELOPMENT IN ACCORDANCE WITH THE SPECIFICATIONS.
    C. MAINTAIN INLET PROTECTION, CONSTRUCTION TRAFFIC SURFACES, CLEANING OF STORM STRUCTURES AND THE LIKE ON A REGULAR BASIS AFTER EACH HEAVY RAIN OR AS OTHERWISE REQUIRED.
11. THE ESTIMATED CONSTRUCTION SCHEDULE IS AS FOLLOWS:

DEMOLITION	WINTER	2025
MASS EARTHWORK	SPRING	2025
TEMPORARY BASIN STABILIZATION	SPRING	2025
UNDERGROUND IMPROVEMENTS	SPRING/SUMMER	2025
ROADWAY (CURB & PAVEMENT)	SUMMER	2025
BUILDING CONSTRUCTION	SUMMER	2025
FINAL GRADING	SUMMER	2025
BASIN STABILIZATION	SUMMER	2025
FINAL LANDSCAPING	SUMMER	2026

    THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD AT THE CLOSE OF THE CONSTRUCTION SEASON.
12. DISTURBED AREAS WITHIN ALL PUBLIC R.O.W.'S SHALL BE RESTORED W/ 6" MIN. TOPSOIL & SOD. RESTORATION SHALL OCCUR IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION, WEATHER PERMITTING. ALL OTHER DISTURBED AREAS SHALL BE RESTORED WITH 4" TOPSOIL & SEED.
13. STRAW BALES ARE NOT PERMITTED IN AREAS OF CONCENTRATED FLOW. ROCK CHECK DAMS SHALL BE USED IN THESE AREAS. TECHNIQUES THAT DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED.
14. THE PROTECTION OF THE OPEN LID DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AS SPECIFIED IN DETAILS. ALL OPEN LID DRAINAGE STRUCTURES LOCATED IN YARD AREAS AND THE SEDIMENTATION BASIN MUST BE PROTECTED PER INLET PROTECTION DETAILS UNTIL SUCH A TIME THAT THE LANDSCAPING IS IN PLACE AND EFFECTIVELY PREVENTING POTENTIAL SILTATION OF THESE STRUCTURES. ALL OPEN LID DRAINAGE STRUCTURES IN PAVED AREAS SHALL HAVE FILTER BASKETS INSTALLED UNDER THE LIDS. IN THE EVENT THE GRAVEL BASE IS NOT IN PLACE UPON INSTALLATION, INLET PROTECTION SHALL BE PROVIDED AS INDICATED PER INLET PROTECTION DETAIL.
15. EROSION CONTROL BLANKET (ECB) SHALL BE INSTALLED TO ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 5H:1V AND IN CRITICAL AREAS (EX: DETENTION BASIN PERIMETERS, STREAMBANKS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING. S175 NORTH AMERICAN GREEN (OR SIMILAR) ECB SHALL BE USED. ECB WITH GREEN DYE IS NOT ACCEPTABLE.
16. SOIL STOCKPILES SHALL BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.
17. DURING DEWATER OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
18. AN INCIDENT OF NON-COMPLIANCE (ION) MUST BE COMPLETED AND SUBMITTED BY THE OWNER TO THE IEPA AND COPIED TO THE VILLAGE IF, AT ANY TIME, AN EROSION OR SEDIMENT CONTROL DEVICE FAILS.
19. A NOTICE OF TERMINATION (NOT) SHALL BE COMPLETED BY THE OWNER IN COMPLIANCE WITH THE NPDES PHASE II REQUIREMENTS WHEN ALL PERMANENT EROSION CONTROL MEASURES ARE IN PLACE WITH A 70% ESTABLISHED RATE OF VEGETATION. THE NOTICE OF TERMINATION SHALL BE SENT TO THE IEPA AND THE VILLAGE.
20. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

EROSION CONTROL LEGEND

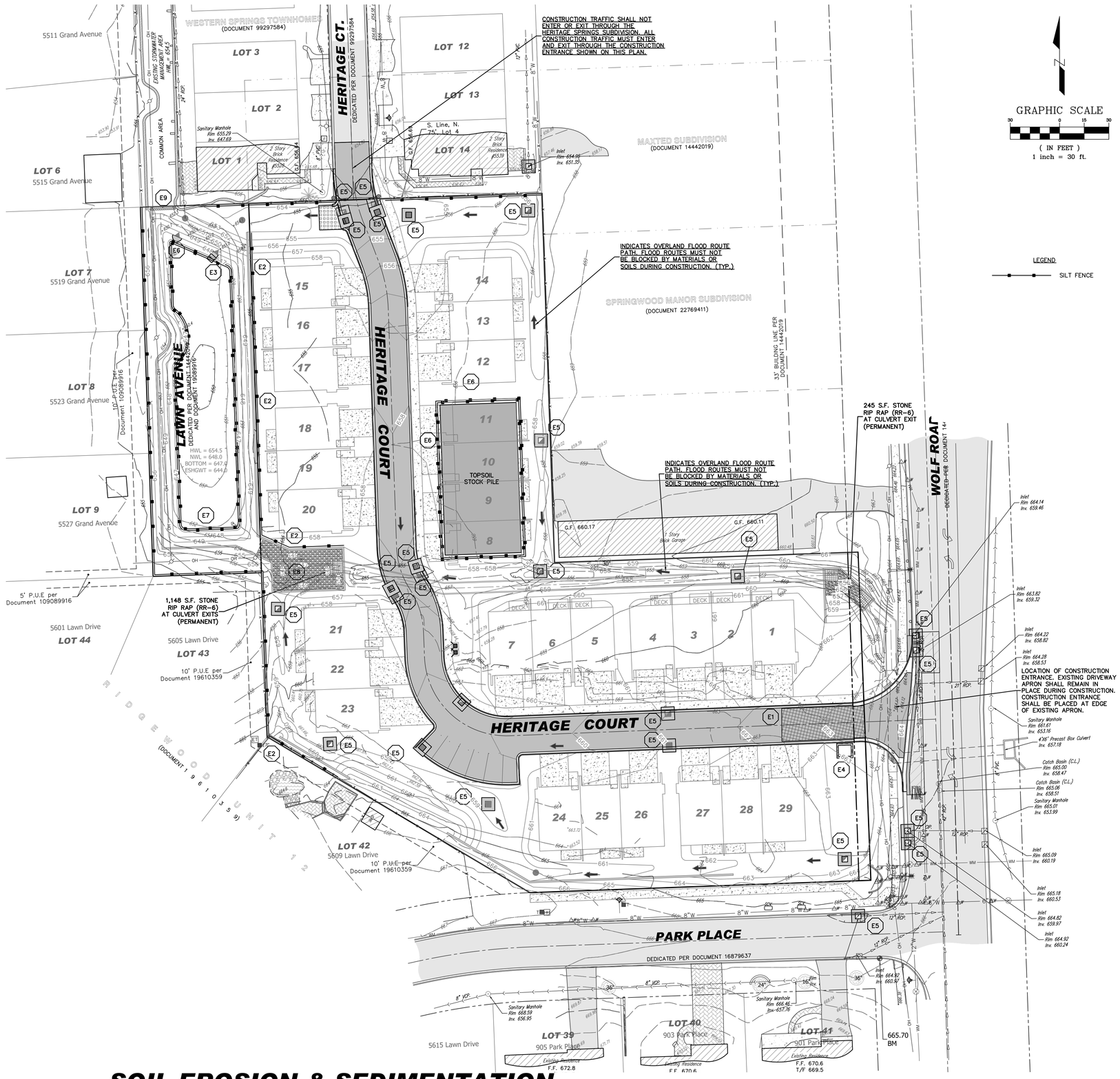
- E1 — CONSTRUCTION ENTRANCE PER NRCS SPECIFICATIONS
- E2 — SILT FENCE PER NRCS SPECIFICATIONS
- E3 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-610
- E4 — CONCRETE WASHOUT AREA
- E5 — INLET PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS
- E6 — CULVERT / FES PROTECTION PER OR EQUIVALENT TO NRCS SPECIFICATIONS AND STANDARD DRAWING NO. IL-508SF
- E7 — DOUBLE ROW OF SILT FENCE PER NRCS SPECIFICATIONS
- E8 — SEDIMENT FOREBAY (SEE MWRD DETAIL SHEET XX)
- E9 — ROLLED EROSION CONTROL

STABILIZATION TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C			*	D*					
SODDING			E**									
MULCHING	F											

A. KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYEGRASS 30 LBS/AC
B. KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYEGRASS 45 LBS/AC + 2 TONS STRAW MULCH/AC
C. SPRING OATS 100 LBS/AC
D. WHEAT OR CEREAL RYE 150 LBS/AC
E. SOD
F. STRAW MULCH 2 TONS/AC

* IRRIGATION NEEDED DURING JUNE AND JULY.
** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SOIL PROTECTION CHART



SOIL EROSION & SEDIMENTATION CONTROL PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-19-24	PER WOLF AGF REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

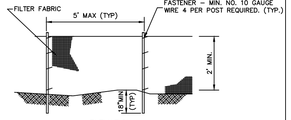
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

5 OF 20

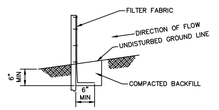
SOIL EROSION SEDIMENTATION & CONTROL PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date=1/27/2025 2:44:56 PM By:dneth

SILT FENCE PLAN



ELEVATION

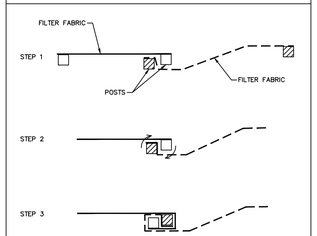


FABRIC ANCHOR DETAIL

NOTES:
1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 509 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
3. FENCE POSTS SHALL BE WITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS–SECTIONAL AREA OF 3.0 SQ. IN.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 11-20-01
Approved Date		

SILT FENCE

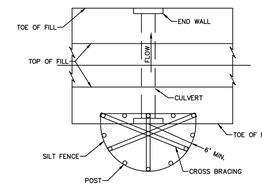


ATTACHING TWO SILT FENCES

NOTES:
1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 18 INCHES INTO THE GROUND AND BURY THE FLAP.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-620(W)
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 1-29-99
Approved Date		

CULVERT INLET PROTECTION - SILT FENCE

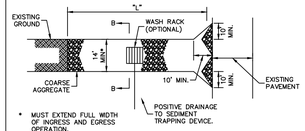


PLAN VIEW

NOTES:
1. THE SILT FENCE SHALL MEET THE REQUIREMENTS AS SHOWN ON STANDARD DRAWING IL-620 SILT FENCE EXCEPT THE MINIMUM POST SPACING SHALL BE 3 FEET AND THE TOPS OF POSTS SHALL BE CROSS BRACED.
2. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE HEIGHT OF THE SLT FENCE.
3. THE MAXIMUM DRAINAGE AREA TO THE CULVERT BEING PROTECTED IS 1 ACRE.

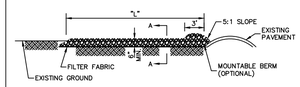
REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-508SF
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 1-29-99
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.

PLAN VIEW

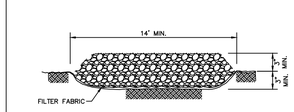


SIDE ELEVATION

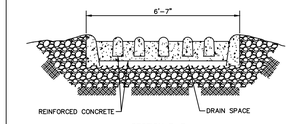
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I,II OR IV AND SHALL BE PLACED OVER CLEARED AREA PRIOR TO THE PLACING OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATION, CA–1, CA–2, CA–3, OR CA–4 AND BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 25 ROCKFILL USING PLACEMENT METHOD 1 AND CLASS III COMPACTION.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
4. IF WASH RACKS ARE USED THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 8-15-94
Approved Date		

STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A–A



SECTION B–B

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-630
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 2
Checked Date		DATE 8-15-94
Approved Date		

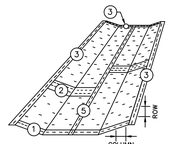
PIPE OUTLET SEDIMENT TRAP - ST I

NOT TO SCALE

6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH 1/2" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SLIT AND 6" BELOW THE LOWEST SLIT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND–COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER AND 12" DEEP WITH THE RISER EMBEDDED 9". STEEL PLATE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, 1/4" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.
15. ANTI SEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 16 AND DETAILS 13 AND 14).
16. CONCENTRIC TRASH RACK AND ANTI–VORTEX DEVICE DESIGN DETAILS ARE ON DETAIL 16.
17. REFER TO SECTION D FOR DEWATERING REQUIREMENTS OF SEDIMENT TRAPS.
18. OUTLET – AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.
19. WHERE DISCHARGE OCCURS AT THE PROPERTY LINE, LOCAL ORDINANCES AND DRAINAGE EASEMENT REQUIREMENTS SHALL BE MET.

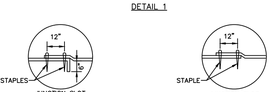
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE D–15–8	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

EROSION BLANKET PLAN





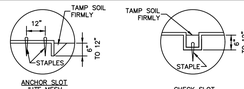
DETAIL 1



DETAIL 2

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 2
Checked Date		DATE 5-24-94
Approved Date		

EROSION BLANKET PLAN



DETAIL 3 DETAIL 4

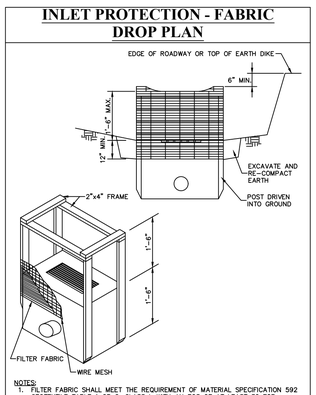


DETAIL 5

NOTES:
1. ON EROSION CONTROL PAPER, CHECK SLOTS, IN DITCH CHANNEL SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6% ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'x 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'x 150 ROLL OF MATERIAL.
3. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
4. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-530
Designed Date	Natural Resources Conservation Service	SHEET 2 OF 2
Checked Date		DATE 3-1-95
Approved Date		

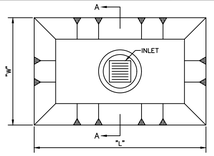
INLET PROTECTION - FABRIC DROP PLAN



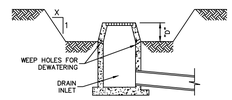
NOTES:
1. FILTER FABRIC SHALL MEET THE REQUIREMENT OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, WITH AN EOS OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. THE WIRE MESH SHALL HAVE A MAXIMUM OPENING OF AT LEAST 6 INCHES.
3. LIMIT DRAINAGE AREA TO THE INLET PROTECTION TO 1 ACRE.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-560
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 6-29-93
Approved Date		

INLET PROTECTION - EXCAVATED DRAIN PLAN



PLAN VIEW



TYPICAL SECTION A–A

NOTES:
1. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED ON A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
2. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
3. ALL CUT SLOPES SHALL BE 2:1 OR FLATTER.

REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-555
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 3-11-93
Approved Date		

TABLE 1

ROCK RIPRAP SIZES AND THICKNESS

IDOT Gradation Number	d50 (in.)	dmax (in.)	Minimum Blanket Thickness (in.)
RR-3 1/	5	10	15
RR-4	9	14	20
RR-5	12	19	28
RR-6	15	22	32
RR-7	18	27	32

1/ Concrete block may be used to replace RR-3.

TABLE 2

MINIMUM IDOT ROCK SIZES AND APRON LENGTH FOR MAXIMUM AND MINIMUM TAILWATER CONDITIONS

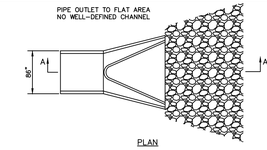
Culvert Dia. (in.)	Minimum Tailwater				Maximum Tailwater			
	5 fps 1/		10 fps 1/		5 fps 1/		10 fps 1/	
	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)	Rock Gradation	La (ft.)
12	No. 3	10	No. 3	12	No. 3	12	No. 3	15
18	No. 3	14	No. 4	16	No. 3	12	No. 3	16
24	No. 3	16	No. 4	20	No. 3	14	No. 4	17
30	No. 3	18	No. 4	22	No. 3	16	No. 4	20
36	No. 4	20	No. 5	24	No. 3	16	No. 4	22
48	No. 4	24	No. 6	28	No. 4	20	No. 4	24
60	No. 5	32	No. 6	36	No. 4	22	No. 5	26
72	No. 6	40	No. 6	44	No. 5	24	No. 5	29
96	No. 7	50	No. 7	54	No. 5	26	No. 5	32

1/ Maximum conduit velocity fps.

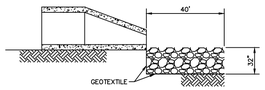
Rock Gradation source: Illinois Department of Transportation, 1997.

910-5

4'X6' " PIPE OUTLET TO FLAT AREA



PLAN



SECTION A–A

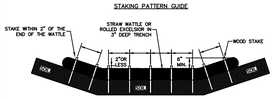
NOTES:
1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II OR III.
2. THE ROCK RIPRAP SHALL MEET THE IDOT REQUIREMENTS FOR THE FOLLOWING GRADATION: RR R–$\frac{6}{7}$, QUALITY A.
3. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

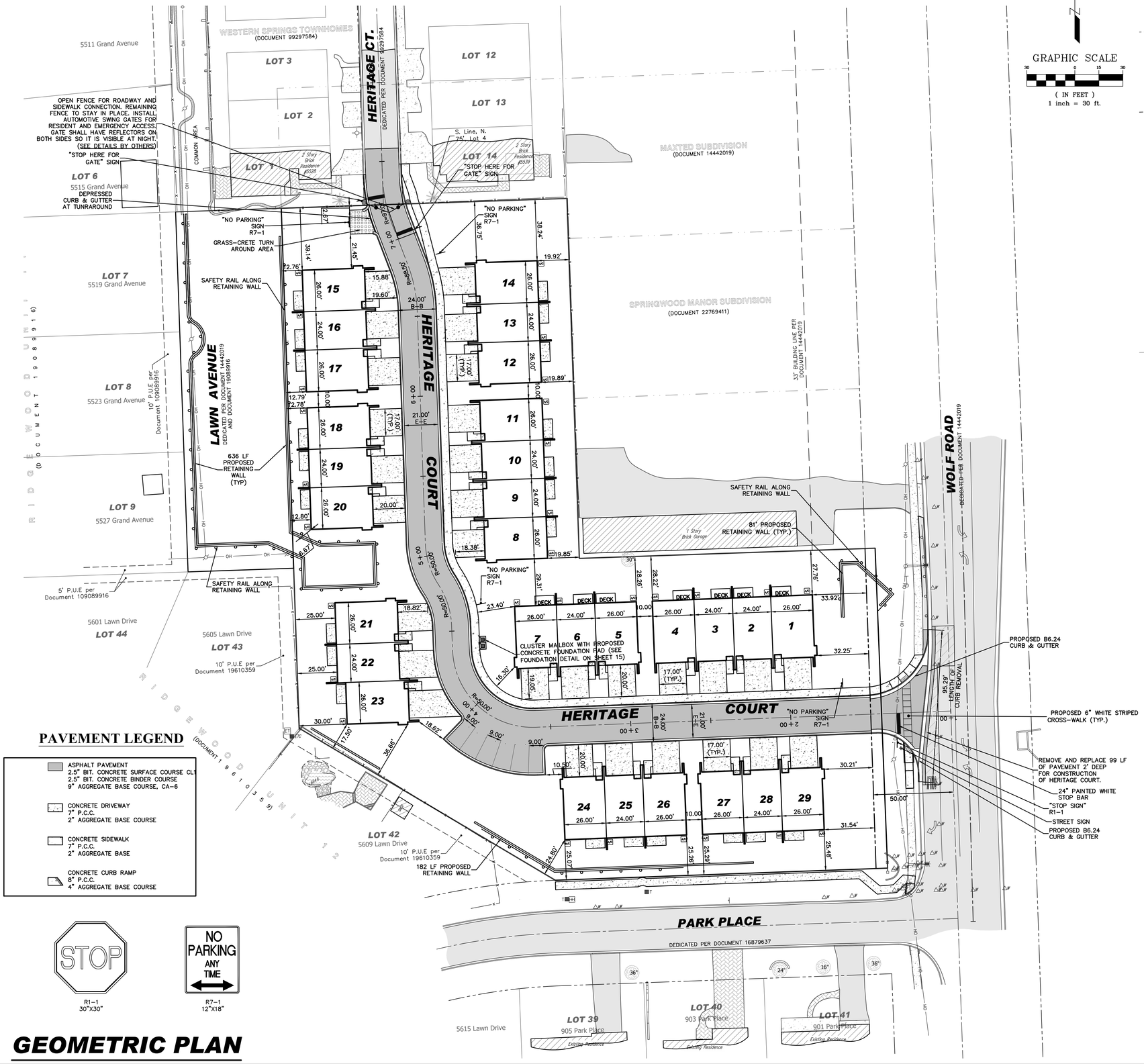
REFERENCE		STANDARD DWG. NO.
Project	NRCS	IL-610
Designed Date	Natural Resources Conservation Service	SHEET 1 OF 1
Checked Date		DATE 9-15-93
Approved Date		

ROLLED EROSION CONTROL PRODUCTS

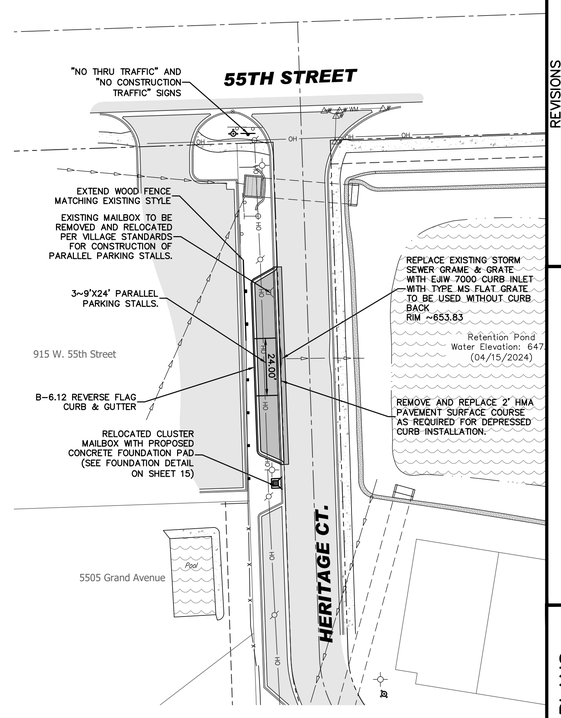
NOT TO SCALE

STAKING PATTERN GUIDE


STAKE WITHIN 2" OF THE END OF THE MATTLE
STRAW MATTLE OR ROLLED EXCELSIOR 4– 3" DEEP TRENCH
WOOD STAKE
6" MIN.
4'OR 14'ESS
4'OR 14'ESS
6" MIN.
6" MIN.
6" MIN.



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

PAVEMENT LEGEND

- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

R1-1
30"X30"

R7-1
12"X18"

GEOMETRIC PLAN

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSPGS VILLAGE REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

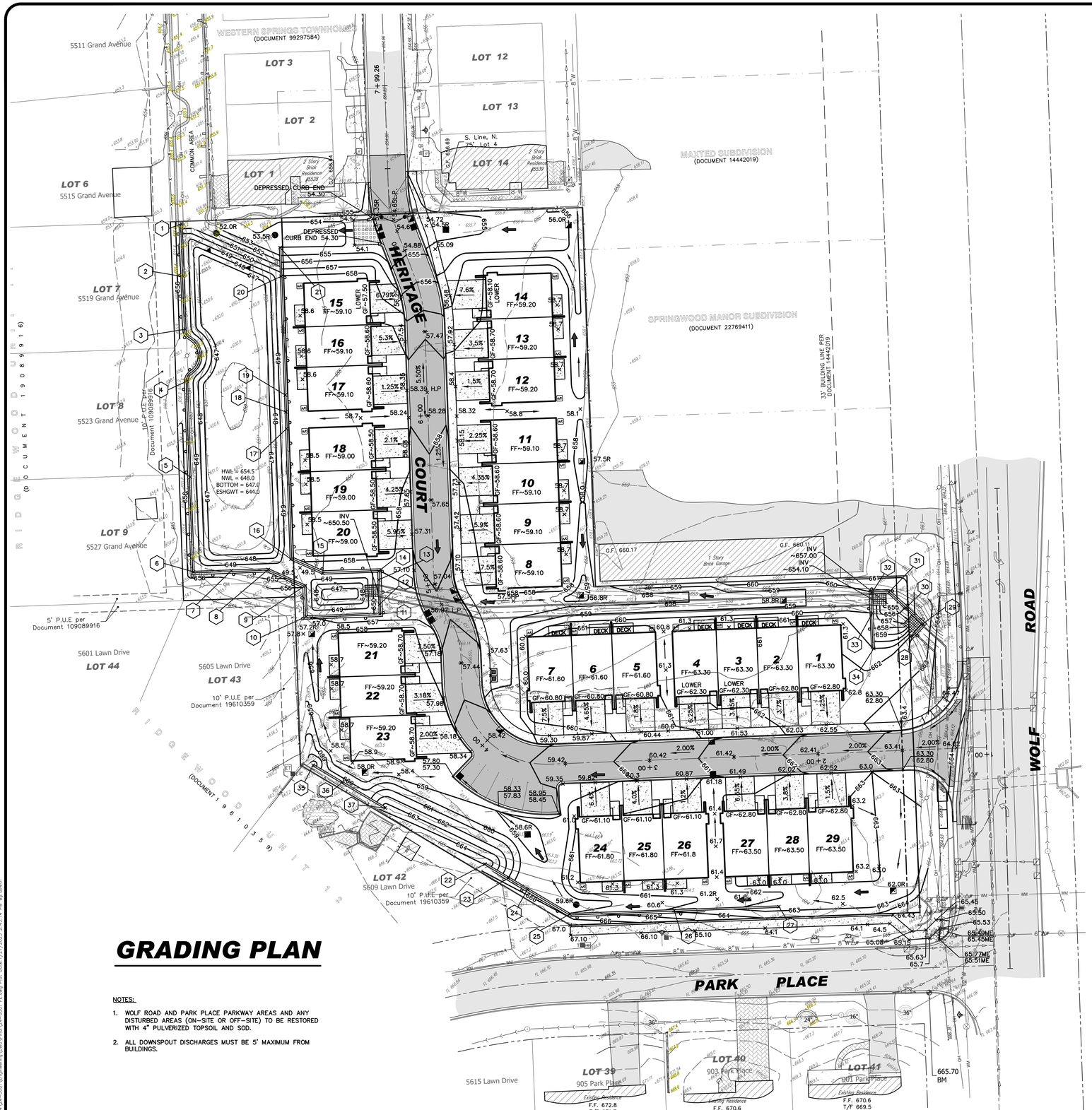
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PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

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OF
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GEOMETRIC PLAN

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GRADING PLAN

NOTES:

1. WOLF ROAD AND PARK PLACE PARKWAY AREAS AND ANY DISTURBED AREAS (ON-SITE OR OFF-SITE) TO BE RESTORED WITH 4" PULVERIZED TOPSOIL AND SOD.
2. ALL DOWNSPOUT DISCHARGES MUST BE 5' MAXIMUM FROM BUILDINGS.

RETAINING WALL (XX)

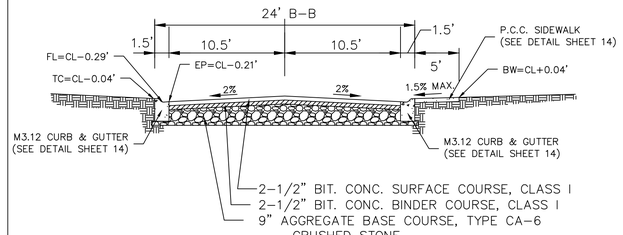
GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

(1) TW=656.00 BW=652.00 EX TW=655.99	(12) TW=656.00 BW=650.50	(23) TW=665.00 BW=660.00
(2) TW=656.50 BW=650.00 EX TW=655.98	(13) TW=656.00 BW=650.50	(24) TW=655.50 BW=660.00
(3) TW=656.50 BW=650.00 EX TW=656.26	(14) TW=657.00 BW=650.50	(25) TW=666.00 BW=660.00
(4) TW=656.50 BW=650.00 EX TW=656.25	(15) TW=657.00 BW=650.00	(26) TW=664.00 BW=661.00
(5) TW=656.50 BW=650.00 EX TW=656.16	(16) TW=658.00 BW=650.00	(27) TW=662.50 BW=662.50
(6) TW=656.50 BW=650.00 EX GND=656.00	(17) TW=658.00 BW=650.00	(28) TW=662.50 BW=662.50
(7) TW=655.00 BW=650.00	(18) TW=658.00 BW=650.00	(29) TW=662.50 BW=662.50
(8) TW=654.00 BW=650.00	(19) TW=656.50 BW=650.00	(30) TW=661.00 BW=656.00
(9) TW=656.00 BW=650.00	(20) TW=658.50 BW=650.00	(31) TW=660.00 BW=654.10
(10) TW=657.50 BW=65000	(21) TW=654.00 BW=654.00	(32) TW=660.00 BW=654.10
(11) TW=656.50 BW=650.50	(22) TW=665.00 BW=665.00	(33) TW=660.00 BW=658.00
		(34) TW=661.00 BW=661.00
		(35) TW=662.50 BW=662.50
		(36) TW=663.00 BW=660.50
		(37) TW=663.50 BW=663.50

OFFSITE PARKING PLAN

TYPICAL ROADWAY SECTION

NOT TO SCALE



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2	10-17-24	PER WRAP REVIEW	SDD
3	10-29-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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FINAL ENGINEERING PLANS
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WESTERN SPRINGS, ILLINOIS

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IL PROF. LIC. NO.: 184-003740

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Project No.: 24-0001
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Drawn By: DEI
Checked By: SDD

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GRADING PLAN

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UTILITY PLAN

NOTES:

1. ALL PIPE LENGTHS ARE APPROXIMATE. THOSE WHICH INCLUDE A FLARED END SECTION ARE TO THE END OF THE SECTION.
2. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.

= TRENCH BACKFILL

SANITARY STRUCTURES (XX)

1. EX. 48" M.H., C.L.
   EX. RIM 655.29
   EX. INV 647.69
   PR. INV 647.69
2. 48" M.H., C.L.
   RIM 656.00
   INV 647.90
3. 48" M.H., C.L.
   RIM 657.00
   INV 648.71
4. 48" M.H., C.L.
   RIM 656.90
   INV 649.17
5. 48" M.H., C.L.
   RIM 663.10
   INV 650.01

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

WATER VALVE VAULTS (XX)

1. 8" VALVE IN 60" VAULT
   RIM 657.00
2. 8" VALVE IN 60" VAULT
   RIM 658.00
3. 8" PRESSURE CONNECTION IN 60" VAULT
   RIM 665.00

FIRE HYDRANTS (XX)

1. FIRE HYDRANT ASSEMBLY
   GRADE RING 662.90
2. FIRE HYDRANT ASSEMBLY
   GRADE RING 660.00
3. FIRE HYDRANT ASSEMBLY
   GRADE RING 658.20
4. FIRE HYDRANT ASSEMBLY
   GRADE RING 656.50

STORM SEWER STRUCTURES (XX)

- A1 12" FES W/ GRATE
  INV 648.00
- A2 48" DIA. MH., C.L.
  RIM 653.50
  INV 650.30 (E, 12")
  INV 649.00 (SW, 12")
- A3 48" DIA. CATCHBASIN, O.L.
  RIM 654.37 (FL)
  INV 651.09 (W&E, 12")
  INV 651.30 (N, 12")
- A3d 24" DIA. INLET
  RIM 654.35 (FL)
  INV 651.35 (N, 12")
- A4 48" DIA. MH., O.L.
  RIM 654.37 (FL)
  INV 651.29 (N,W&E 12")
- A4d 24" DIA. INLET
  RIM 654.35 (FL)
  INV 651.35 (S 12")
- A5 48" DIA. MH., O.L.
  RIM 654.50
  INV 651.50 (E&W, 12")
- A6 24" DIA. INLET
  RIM 656.00
  INV 653.00 (W 12")
- C1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.65 (N, 12")
- C2 24" DIA. INLET
  RIM 656.80
  INV 653.70 (S, 12")
- C3 24" DIA. INLET
  RIM 657.50
  INV 654.50 (S, 12")
- D1 CONNECT TO 4'X6' BOX CULVERT
  INV ~653.05 (S, 15")
- D2 48" DIA. CATCHBASIN
  RIM 656.68 (FL)
  INV 653.13 (SW, 15")
- D3 60" DIA. M.H., O.L.
  RIM 656.68 (FL)
  INV 653.20 (NW&SE, 15")
- D4 72" DIA. M.H., O.L.
  RIM 657.30
  INV 654.20 (NW, 15")
  INV 654.45 (NE,W, E&SE, 12")
- D5 48" DIA. M.H., C.L.
  RIM 659.60
  INV 655.60 (NW&SE, 12")
- D6 48" DIA. M.H., C.L.
  RIM 659.60
  INV 656.60 (NW&E, 12")
- D7 24" DIA. INLET
  RIM 662.00
  INV 659.00 (W, 12")
- D8 48" DIA. M.H., O.L.
  RIM 660.93 (FL)
  INV 657.73 (N&W, 12")
- D9 24" DIA. INLET
  RIM 660.93 (FL)
  INV 657.93 (S, 12")
- D10 24" DIA. INLET
  RIM 658.17 (FL)
  INV 655.17 (S, 12")
- D11 24" DIA. INLET
  RIM 658.00
  INV 655.00 (E, 12")
- E1 24" PVC RISER
  RIM 658.80
- F1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.10 (N, 12")
- F2 24" DIA. INLET
  RIM 656.99 (FL)
  INV 653.13 (N&S, 12")
- F3 24" DIA. INLET
  RIM 656.69 (FL)
  INV 653.18 (S, 12")
- G1 CONNECT TO 4'X6' BOX CULVERT
  INV 653.24 (N, 12")
- G2 24" DIA. INLET
  RIM 657.20
  INV 654.20 (N, 12")
- H1 24" FES W/ GRATE
  INV 648.00
- H2 48" DIA. MH., C.L.
  RIM 652.00
  EX INV 646.34 (N, 24")
  PR INV 646.34 (SW, 24")

STORM SEWER GRATES

ROADWAY: EJIW 7525Z & EJIW 7525M
GRASS: EJIW 6527
(UNLESS OTHERWISE NOTED ON PLANS)

UTILITY CROSSING INFORMATION (XX)

1. MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN WATERMAIN AND STORM/SANITARY SEWERS.
2. DEPTHS OF EXISTING WM ARE ASSUMED AND MUST BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION.
3. WHEN THE WM CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS THAT COMPLY WITH 35 IAC 653.119 OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WM TO THE SEWER IS AT LEAST 10 FEET. IN ADDITION, THE WM MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER. THIS 18 INCHES IS A STRUCTURAL PROTECTION TO PREVENT THE SEWER FROM SETTLING AND BREAKING THE WM.
4. WHEN THE WM CROSSES ABOVE A SEWER AND IT IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHERE THE PIPE CROSSES, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS (COMPLIANCE SAME AS ABOVE) OR A CASING PIPE CAN BE INSTALLED AROUND THE WM OR THE SEWER. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WM. CONCRETE IS NOT AN ACCEPTABLE ENCASEMENT.
5. WHEN THE ENCASEMENT OPTION IS USED, IT SHALL BE ONE CONTINUAL SECTION (NO JOINTS).

(XX)

ID	BOTTOM OF PIPE	TOP OF PIPE	VERTICAL SEPARATION	CROSSING INFO.
1	650.83	648.47	2.36'	STORM OVER SANITARY
2	651.24	649.18	2.06'	STORM OVER WATERMAIN (STORM SEWER TO BE C900 PIPE)
3	650.20	649.37	0.83'	STORM OVER SANITARY
4	650.83	649.30	1.53'	STORM OVER WATERMAIN (LOWER AND ENCASE WATERMAIN)
5	653.39	649.55	3.84'	STORM OVER SANITARY
6	654.58	649.75	4.83'	STORM OVER SANITARY
7	654.76	649.83	4.93'	STORM OVER SANITARY

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4	12-12-24	PER VILLAGE REVIEW	DMV
5	01-27-25	PER REVISED GEOMETRY	DMV
6			

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FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

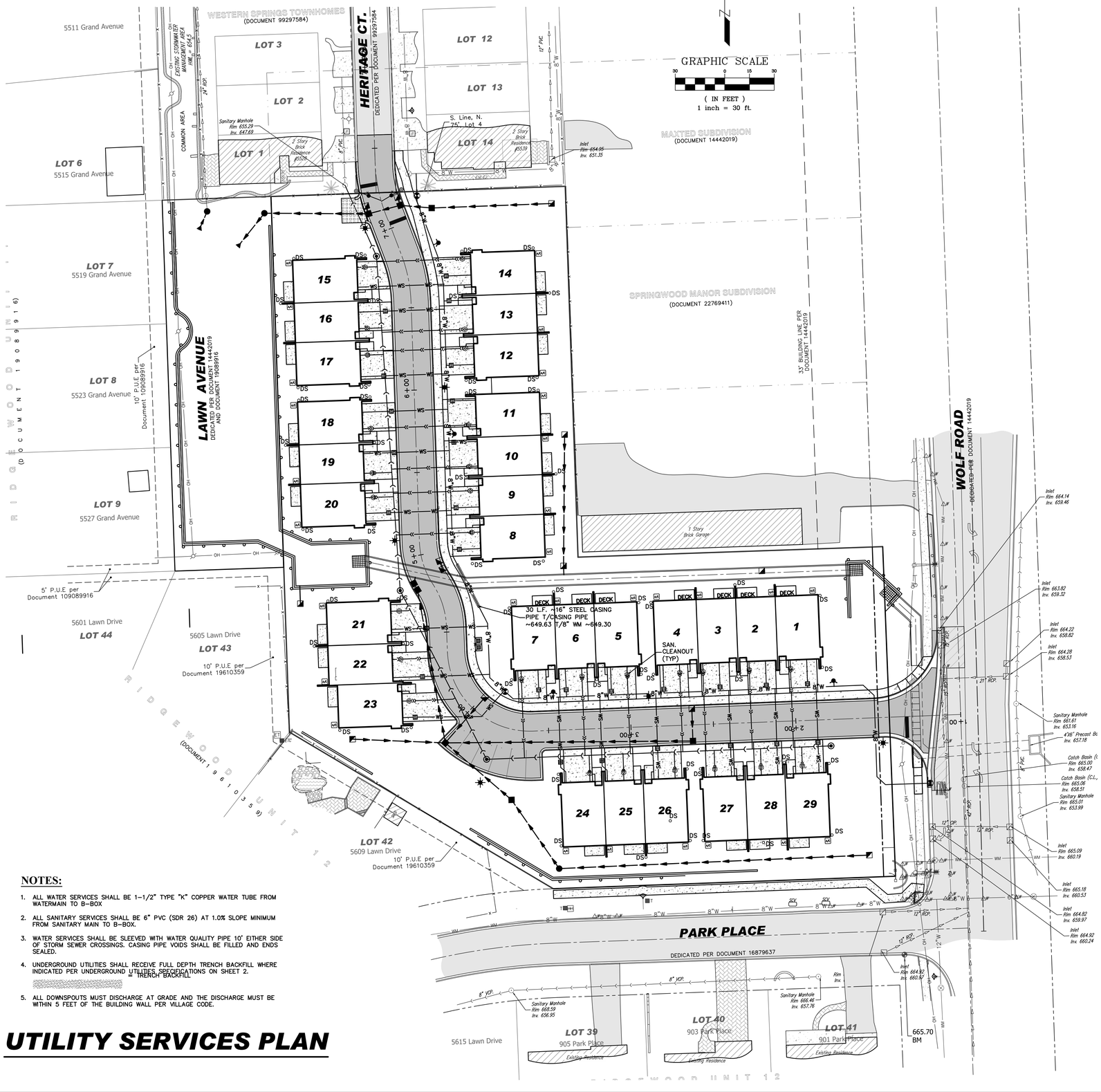
DESIGNTEK ENGINEERING, INC.
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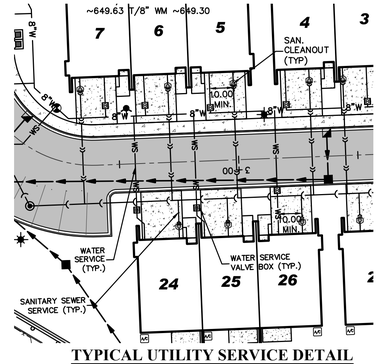
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Project No.: 24-0001
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UTILITY PLAN





TYPICAL UTILITY SERVICE DETAIL

NOTES:

1. ALL WATER SERVICES SHALL BE 1-1/2" TYPE "K" COPPER WATER TUBE FROM WATERMAIN TO B-BOX
2. ALL SANITARY SERVICES SHALL BE 6" PVC (SDR 26) AT 1.0% SLOPE MINIMUM FROM SANITARY MAIN TO B-BOX.
3. WATER SERVICES SHALL BE SLEEVED WITH WATER QUALITY PIPE 10' EITHER SIDE OF STORM SEWER CROSSINGS. CASING PIPE VOIDS SHALL BE FILLED AND ENDS SEALED.
4. UNDERGROUND UTILITIES SHALL RECEIVE FULL DEPTH TRENCH BACKFILL WHERE INDICATED PER UNDERGROUND UTILITIES SPECIFICATIONS ON SHEET 2.
   = TRENCH BACKFILL
5. ALL DOWNSPOUTS MUST DISCHARGE AT GRADE AND THE DISCHARGE MUST BE WITHIN 5 FEET OF THE BUILDING WALL PER VILLAGE CODE.

UTILITY SERVICES PLAN

REVIEW SET
NOT FOR
CONSTRUCTION

REVISIONS

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1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WSFD FIRE DEPT REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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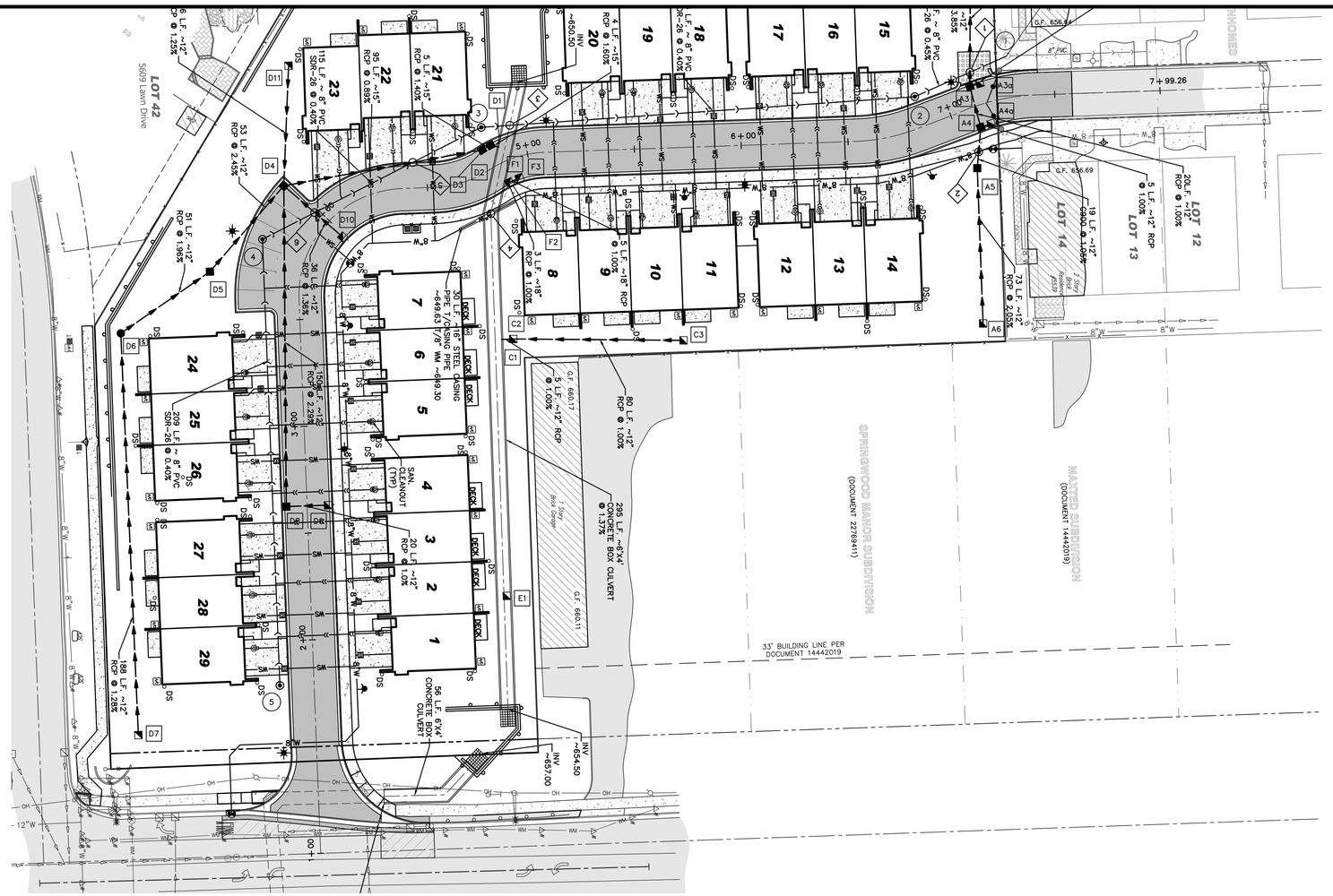
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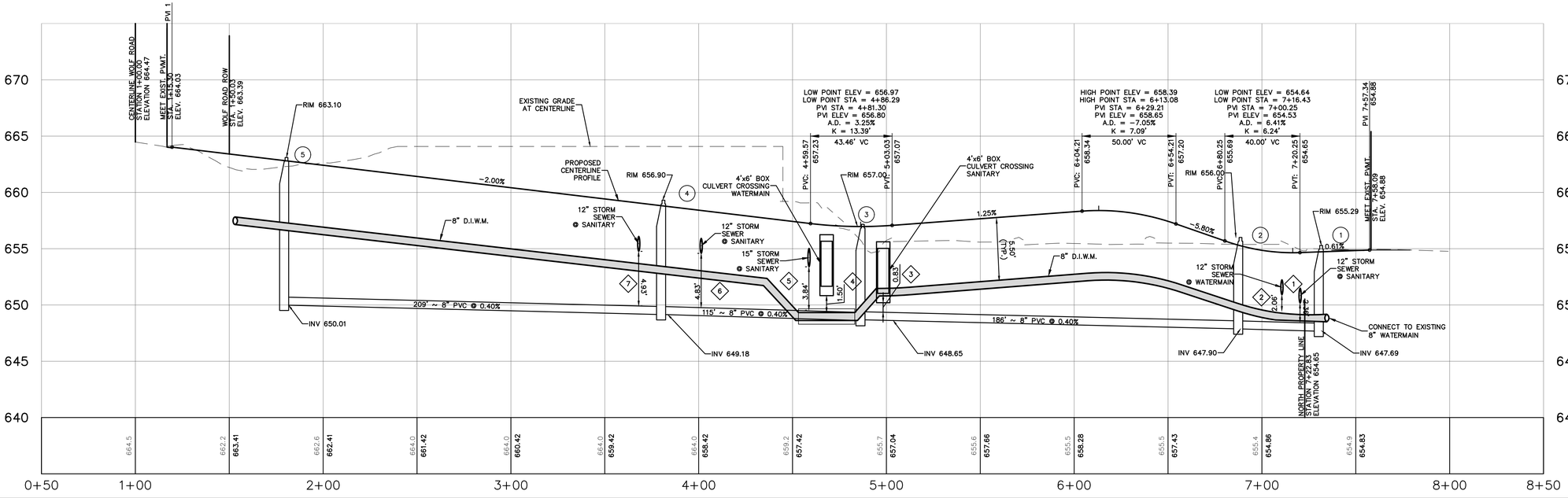
UTILITY SERVICES PLAN

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HERITAGE COURT

STATION: 0+50.00 TO 8+50.00



PROFILE SCALE
H: 1" = 30'
V: 1" = 5'

REVIEW SET NOT FOR CONSTRUCTION

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

REVISIONS			
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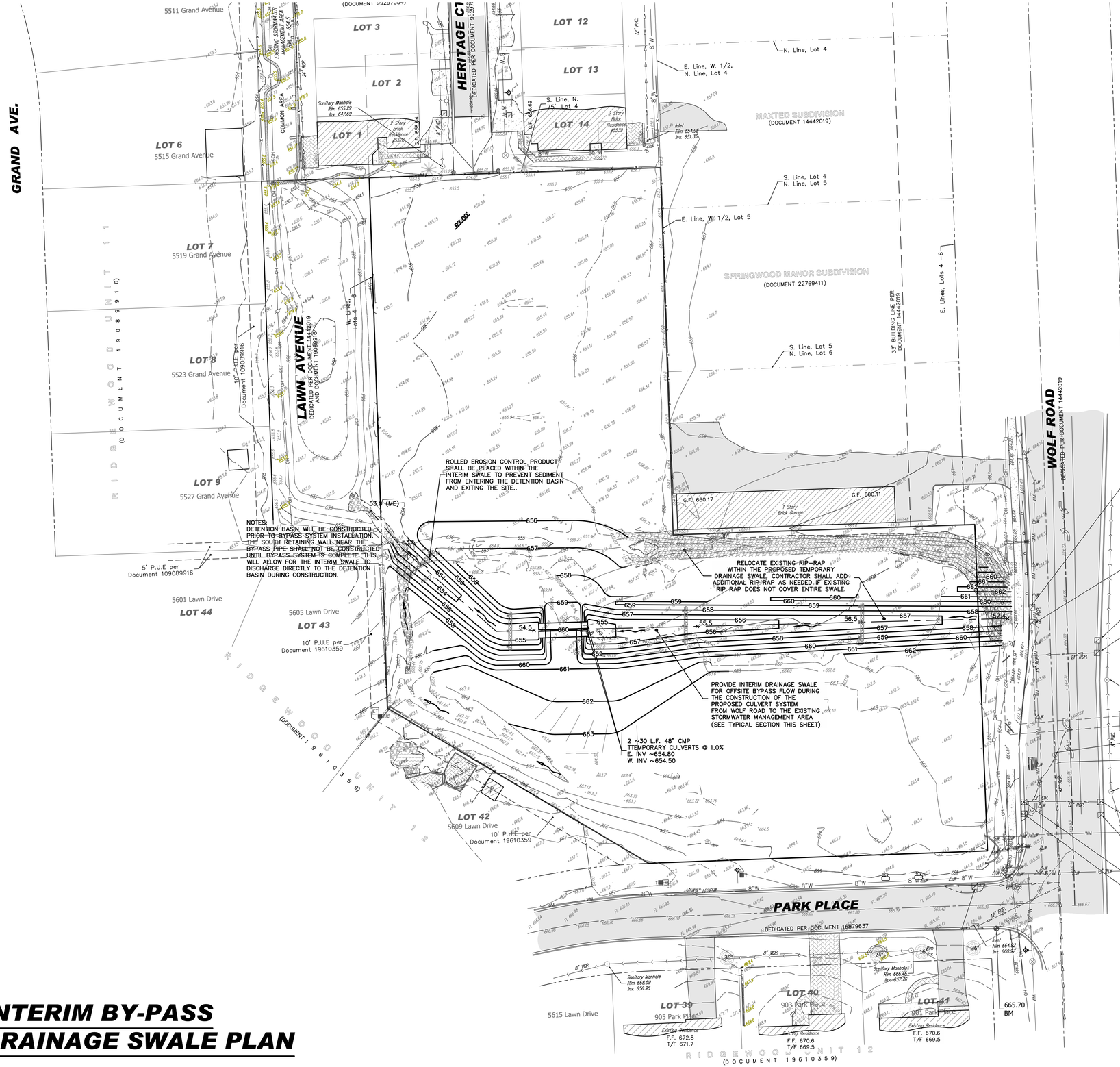
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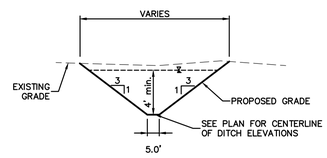
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Project No.: 24-0001
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Checked By: SDD

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OF
20

HERITAGE COURT PLAN & PROFILE 1+00 TO 8+50

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TEMPORARY DRAINAGE SWALE SECTION
NOT TO SCALE

INTERIM BY-PASS DRAINAGE SWALE PLAN

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5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

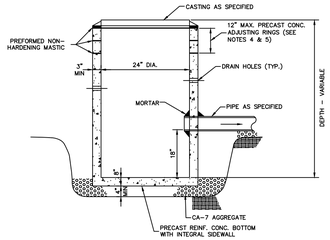
DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
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IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

12
OF
20

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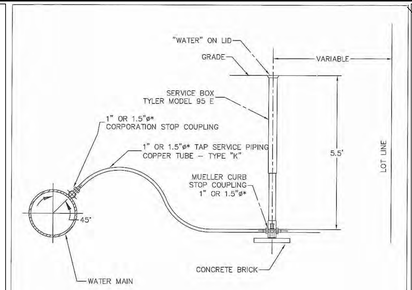


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA- 11 AROUND CATCH BASIN TO SUBGRADE IN PAVED AREAS
2. ALTERNATE INLET BOTTOM – PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON-SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (RUB-R-NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

CATCH BASIN TYPE C

NOT TO SCALE

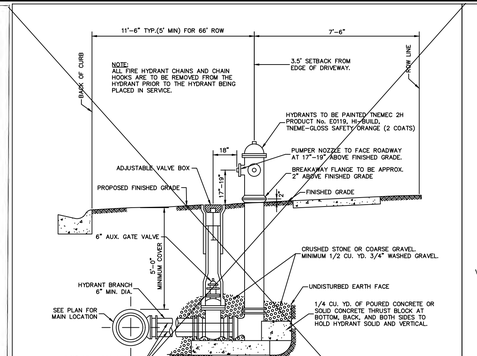


NOTES:

1. ALL FITTINGS SHALL BE COMPRESSION TYPE.
2. TRENCH BACKFILL (CA–7 CRUSHED LIMESTONE) SHALL BE USED UNDER AND WITHIN 2 FEET OF ALL PAVED AREAS (SIDEWALK, DRIVEWAY AND ROADWAY).
3. NO OPEN CUTTING OF PAVEMENT WILL BE PERMITTED. AUGER AND PUSH OR DIRECTIONAL BORE TO RECEIVING PIT IF MAIN IS UNDER PAVEMENT. SEE VILLAGE STANDARD DETAILS FOR PAVEMENT, SIDEWALK OR DRIVEWAY REPLACEMENT. ALL PAVEMENT, SIDEWALK, CURB AND DRIVEWAYS MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
4. ON 4" WATER MAINS, AN ALL STAINLESS STEEL TAPPING CLAMP SHALL BE USED. IN ADDITION, THE HOLE DRILLED IN THE MAIN SHALL NOT EXCEED 1". EXCEPT FOR THE HOLE DRILLED IN THE MAIN, ALL HARDWARE FOR A 1.5" SERVICE SHALL BE SIZED FOR 1.5"ø.
5. Abandonment of existing water service requires removal of the corporation stop and placement of a stainless solid sleeve repair clamp.
6. NEW SERVICES SHALL BE TAPPED MIN. OF 2 FT. FROM EXISTING TAP.
7. RESTORATION OF PARKWAY SHALL BE MINIMUM 4" OF TOPSOIL AND SOD.
8. ANY DEVIATION FROM THIS PLAN SHALL BE APPROVED IN WRITING BY THE DEPARTMENT OF PUBLIC WORKS (708)246–1800 EXT. 200

**SIZE DETERMINED BY FIXTURE LOAD PER ILLINOIS PLUMBING CODE*

VILLAGE OF WESTERN SPRINGS WATER SERVICE revised 6/28/2002

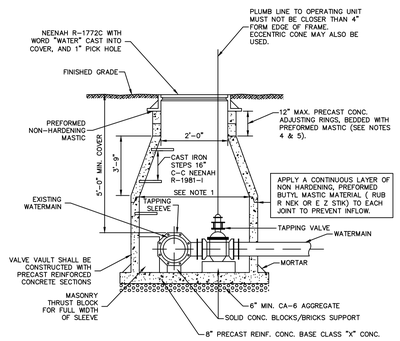


PERMITTED TYPES

FOR RESIDENTIAL AREAS ON 6" OR 8" MAINS	FOR ALL OTHER AREAS
WATEROUS TREND WB–77 4–3/4" VALVE OPENING	WATEROUS PACER WB–67 5–1/4" VALVE OPENING
CLOW F–2900 4–1/2" VALVE OPENING	CLOW F–2500 6–1/4" VALVE OPENING
MUELLER CENTURION A–421 4–1/2" VALVE OPENING	MUELLER CENTURION A–423 5–1/4" VALVE OPENING

FIRE HYDRANT

NOT TO SCALE

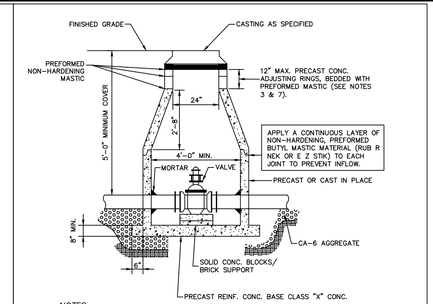


NOTES:

1. 60" DIA FOR ALL PRESSURE CONNECTIONS.
2. PIPE OPENINGS TO BE CAST INTO WALL.
3. PROVIDE CA–6 AGGREGATE BACKFILL AROUND WAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
4. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED;HOWEVER NO MORE THAT ONE TWO INCH ADJUSTING RING OR NO MORE THAN TWO RINGS IN TOTAL MAY BE USED.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PERFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT FOR PRESSURE CONNECTION

NOT TO SCALE



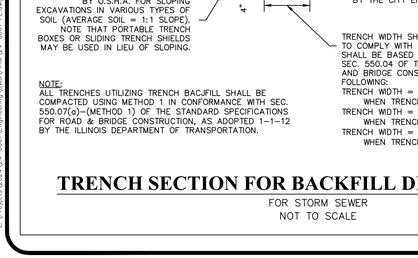
NOTES:

1. VAULT DIAMETER TO BE ONE FOOT LARGER, WHERE VALVE IS LOCATED AT TEE CONNECTION OF MAIN.
2. PROVIDE CA–6 AGGREGATE BACKFILL AROUND VAULT TO SUBGRADE ELEVATION, IN PAVED AREAS.
3. NO MORE THAN 12 INCHES OF ADJUSTING RINGS MAY BE USED. HOWEVER NO MORE THAN ONE, TWO INCH ADJUSTING RING OR NO MORE TAN TWO RINGS IN TOTAL MAY BE USED.
4. VALVE MUST BE ALIGNED WITH CENTER OF VAULT OPENING.
5. CONES MUST BE CONCENTRIC WITH VALVES 12" AND SMALLER.
6. BUTTERFLY VALES REQUIRE ECCENTRIC CONES.
7. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES (12").

VALVE VAULT TYPE A

(WATER TIGHT)

NOT TO SCALE

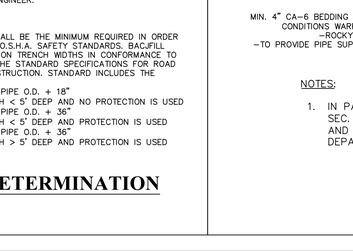


NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE MANHOLE BOTTOM – PRECAST REINFORCED CONCRETE
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL MANHOLES IN PAVED AREAS.

STORM MANHOLE TYPE A

NOT TO SCALE

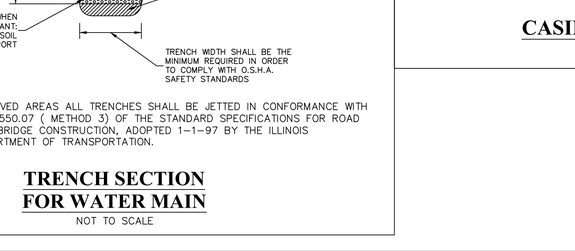


NOTES:

1. CATCH BASINS ARE TO BE USED IN PAVED AREAS ONLY.
2. PROVIDE SELECT GRANULAR BACKFILL, CA– 11 AROUND CATCH BASIN TO SUBGRADE ELEVATION.
3. ALTERNATE CATCH BASIN BOTTOM – PRECAST REINFORCED CONCRETE BASE.
4. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN THE CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE).
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR APPROVED EQUAL) TO A MAX. HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE (3) INCHES.
6. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
7. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE CATCH BASIN WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL CATCH BASINS.

CATCH BASIN TYPE A

NOT TO SCALE



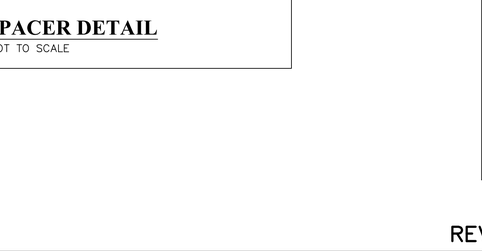
STEEL PIPE CASING		
WM DIA	STEEL CASING PIPE DIA	MIN. THICKNESS STEEL CASING
6"	12"	0.188"
8"	16"	0.219"
10"	18"	0.250"
12"	20"	0.281"
14"	24"	0.344"
16"	24"	0.344"
18"	30"	0.406"
20"	30"	0.406"
24"	30"	0.406"

NOTES:

1. IN LIEU OF 45 DEGREE BENDS, WATER MAIN DEPRESSION MAY BE CONSTRUCTED BY DEFLECTING WATERMAIN PER MANUFACTURERS RECOMMENDATION TO ACHIEVE THE MINIMUM 18" OF VERTICAL SEPARATION.
2. ALL FITTINGS AND JOINT RESTRAINTS ARE INCIDENTAL TO COST OF WATERMAIN.
3. THIS TYPE OF CROSSING CASING SHALL BE INSTALLED WHENEVER THE WATERMAIN IS CONSTRUCTED BELOW SEWERS.
4. THE STEEL CASING SHALL BE ONE CONTINUAL SECTION (NO JOINTS).
5. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

WATERMAIN DEPRESSION WITH CASING PIPE

NOT TO SCALE

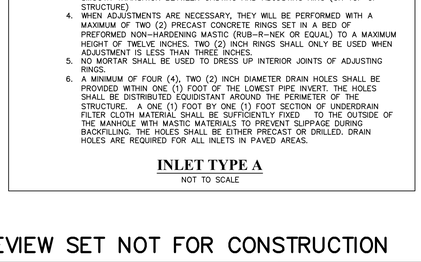


TYPICAL WATER MAIN THRUST BLOCKING

NOT TO SCALE

PIPE DIA.	APPROX. WT.(LBS)	WALL	A	B	C	D	E	G	R	SLOPE
12"	530	2"	4"	24"	4'–0 7/8"	6'–0 7/8"	24"	2"	9"	1:2.4
15"	740	2 1/4"	6"	27"	3'–10"	6'–1"	30"	2 1/4"	11"	1:2.4
18"	990	2 1/2"	9"	27"	3'–10"	6'–1"	36"	2 1/2"	12"	1:2.4
21"	1280	2 3/4"	9"	35"	38"	6'–1"	3'–6"	2 3/4"	13"	1:2.4
24"	1520	3"	9 1/2"	3'–7 1/2"	30"	6'–1 1/2"	4'–0"	3"	14"	1:2.5
30"	2190	3 1/2"	12"	4'–6"	19 3/4"	6'–1 3/4"	5'–0"	3 1/2"	15"	1:2.5
36"	4100	4"	15"	5'–3"	34 3/4"	8'–1 3/4"	6'–0"	4"	20"	1:2.5
48"	6530	5"	24"	6'–0"	28"	8'–2"	7'–0"	5"	22"	1:2.5
60"	8730	6"	35"	5'–0"	39"	8'–3"	8'–0"	5"	*	1:1.9

* RADIUS AS FURNISHED BY MANUFACTURER ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICLE DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H)



NOTES:

1. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M–170 CLASS III, WALL "B" REINFORCED CONCRETE PIPE.
2. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
3. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS ADOPTED 7–1–94. COST INCIDENTAL TO END SECTION.
4. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH I.D.O.T. STANDARD 2449–1.
5. ALL FLARED END SECTIONS FOR PIPE GREATER THAN 12" IN DIAMETER SHALL BE PROVIDED WITH A GRATE.

PRECAST REINFORCED CONCRETE FLARED END SECTION

NOT TO SCALE

NOTE:
ALL TRENCHES UTILIZING TRENCH BACJFILL SHALL BE COMPACTED USING METHOD 1 IN CONFORMANCE WITH SEC. 550.07(a)–(METHOD 1) OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, AS ADOPTED 1–1–12 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR BACKFILL DETERMINATION

FOR STORM SEWER

NOT TO SCALE

NOTES:

1. IN PAVED AREAS ALL TRENCHES SHALL BE JETTED IN CONFORMANCE WITH SEC. 550.07 (METHOD 3) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED 1–1–97 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

TRENCH SECTION FOR WATER MAIN

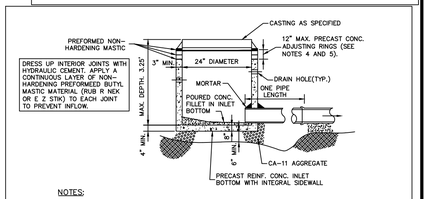
NOT TO SCALE

NOTES:

1. SPACERS TO BE SIZED TO ALLOW CARRIER PIPE TO BE CENTERED IN CASING LOCATE SPACERS 2' FROM END OF CASING AND EVERY 6' EACH PIPE LENGTH
2. CASING TO BE SEALED AT BOTH ENDS WITH WATERTIGHT BITUMINOUS PLUG.
3. CASING PIPE SHALL CONFORM TO ASTM A 139, GRADE B, WITH 60,000 P.S.I. MINIMUM TENSILE STRENGTH. CASING PIPE SHALL BE BITUMINOUS COATED.

CASING SPACER DETAIL

NOT TO SCALE



NOTES:

1. PROVIDE SELECT GRANULAR BACKFILL, CA–11 AROUND INLET TO SUBGRADE ELEVATION IN PAVED AREAS.
2. ALTERNATE INLET BOTTOM: PRECAST REINFORCED CONCRETE BASE.
3. CONCRETE FILLETS SHALL BE MADE WITH NON–SHRINK MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN CASTING AND ADJUSTING RING (OR TOP OF STRUCTURE)
4. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON–HARDENING MASTIC (RUB–R–NEK OR EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES. TWO (2) INCH RINGS SHALL ONLY BE USED WHEN ADJUSTMENT IS LESS THAN THREE INCHES.
5. NO MORTAR SHALL BE USED TO DRESS UP INTERIOR JOINTS OF ADJUSTING RINGS.
6. A MINIMUM OF FOUR (4), TWO (2) INCH DIAMETER DRAIN HOLES SHALL BE PROVIDED WITHIN ONE (1) FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A ONE (1) FOOT BY ONE (1) FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIALS TO PREVENT SLIPPAGE DURING BACKFILLING. THE HOLES SHALL BE EITHER PRECAST OR DRILLED. DRAIN HOLES ARE REQUIRED FOR ALL INLETS IN PAVED AREAS.

INLET TYPE A

NOT TO SCALE

REVIEW SET NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06–17–24	PER LAGRANGE HIGHLANDS SD	DNV
2	10–17–24	PER WSPRINGS REVIEW	SDD
3	10–29–24	PER VILLAGE REVIEW	DMV
4	11–04–24	PER CDDOTH REVIEW	DMV
5	12–12–24	PER VILLAGE REVIEW	DMV
6	01–27–25	PER REVISED GEOMETRY	DMV

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325–3400

DESIGNTEK ENGINEERING, INC.
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9930 W. 190TH STREET, SUITE L
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IL PROF. LIC. NO.: 184–003740

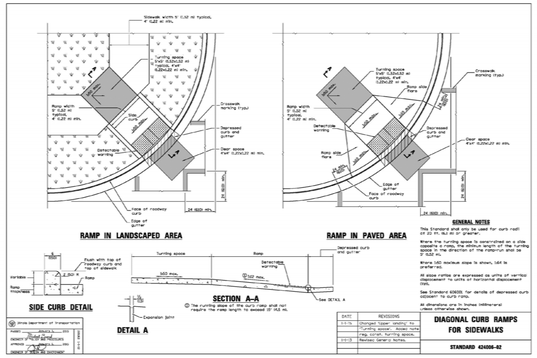
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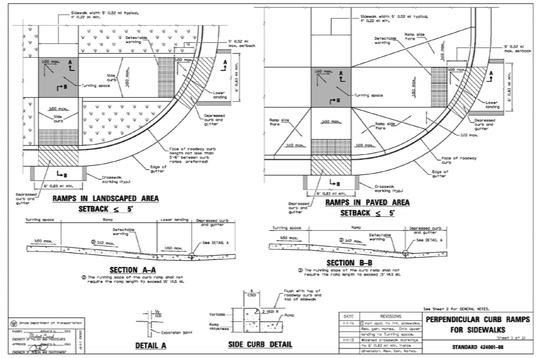
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Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

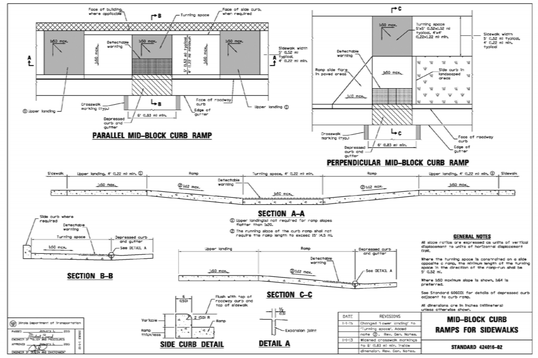
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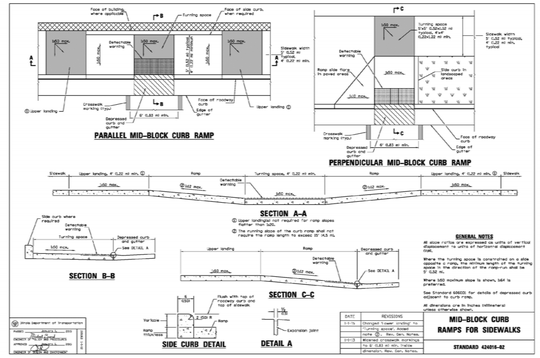
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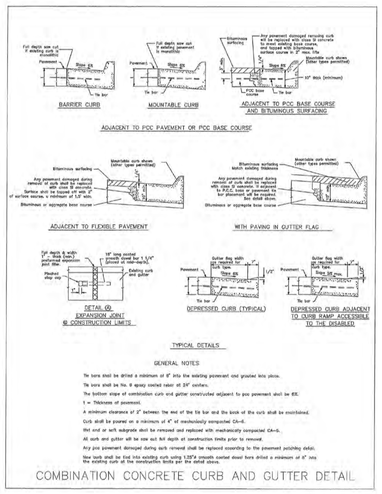
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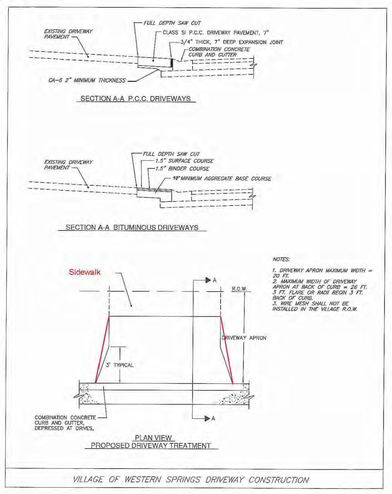


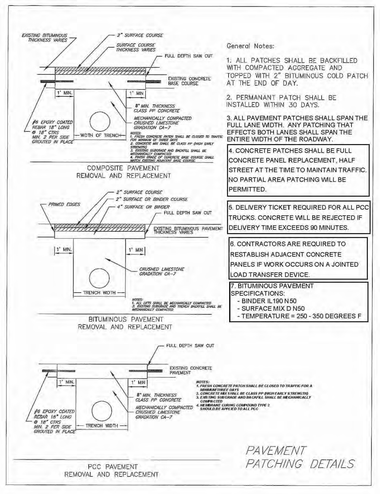


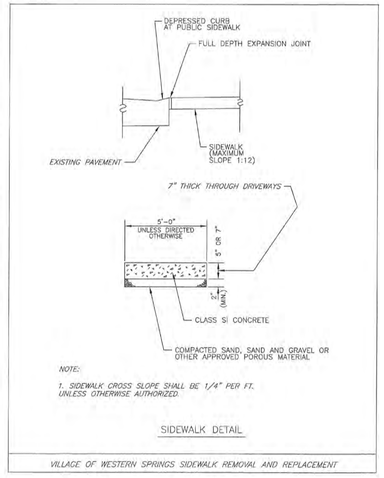


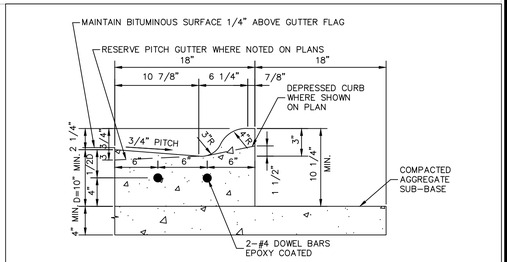






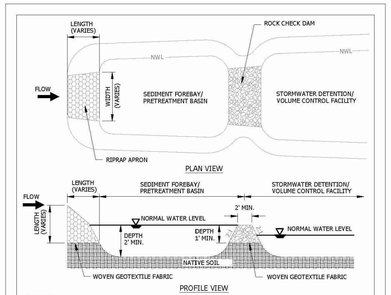


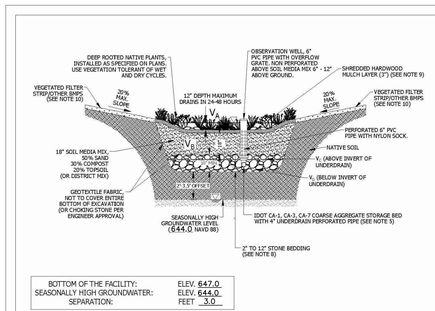




M3.12 CURB AND GUTTER

NOT TO SCALE





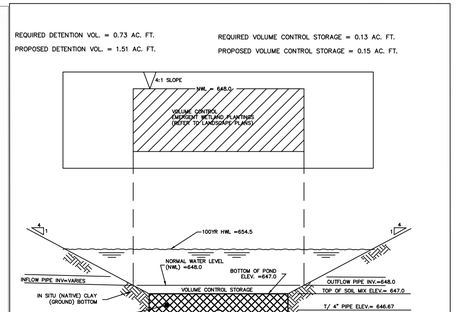
BOTTOM OF THE FACILITY:	ELEV. 647.0
SEASONALLY HIGH GROUNDWATER SEPARATION:	ELEV. 644.0 FEET 3.0

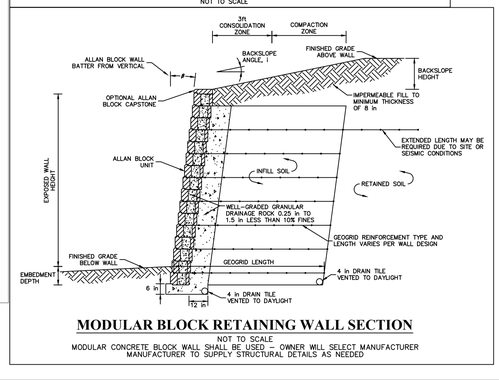
VOLUME TYPE	SURFACE AREA	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_A : SURFACE STORAGE	7,261	1.0'	1.00	1.00 X V_A	7,261 ft³
V_B : SOIL MEDIA MIX	N/A	N/A	0.25	0.50 X 0.25 X V_B	0
V_C : COARSE AGGREGATE (ABOVE INVERT)	N/A	N/A	0.36	0.50 X 0.36 X V_C	0
V_D : COARSE AGGREGATE (BELOW INVERT)	N/A	N/A	0.36	0.36 X V_D	0
				TOTAL	7,261 ft³

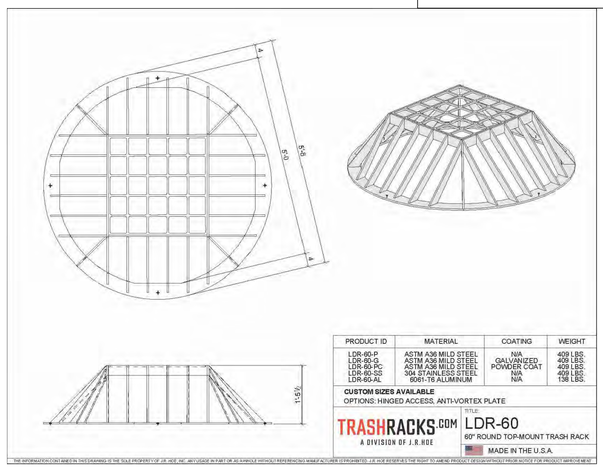
NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20-FEET FROM ROADWAY GRAVEL SHOULDER; AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. AVOID INSTALLATION ON SLOPES GREATER THAN 3.00%. AVOID COMPACTING NATIVE SOILS. SCARIFY ANY COMPACTED SOIL.
4. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF IUM MATERIAL SPECIFICATION 592, FOR WOVEN: APPARENT OPENING SIZE OF 0.50 MM (TABLE 1, CLASS 1). FOR NON WOVEN: APPARENT OPENING SIZE OF 0.30 MM (TABLE 2, CLASS II).
5. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, DISTRICT VULCAN MIX, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
6. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF BMP AND SEASONALLY HIGH GROUNDWATER LEVEL.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN EVERY 30 FEET ON CENTER. PROVIDE A SOIL REPORT DOCUMENTING NATIVE INFILTRATION RATE TO FOREGO UNDERDRAINS. NO FILTER FABRIC COVER/SOCK.
8. MINIMUM UNDERDRAIN BEDDING OF 2 INCHES, MAXIMUM OF 12 INCHES.
9. MULCH LAYER SHALL BE HARDWOOD MULCH OR OTHER NON-FLOATING GROUND COVER.
10. FOLLOW THE REQUIRED PRETREATMENT MEASURES LISTED ON THE VOLUME CONTROL PRETREATMENT MEASURES DETAIL.

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL
10/11/18
BIORETENTION FACILITY DETAIL
STD. DWG. NO.1
PAGE NO.1







PRODUCT ID	MATERIAL	COATING	WEIGHT
LDR-60-P	ASTM A36 MILD STEEL	N/A	409 LBS.
LDR-60-G	ASTM A36 MILD STEEL	GALVANIZED	409 LBS.
LDR-60-PC	ASTM A36 MILD STEEL	POWDER COAT	409 LBS.
LDR-60-SS	304 STAINLESS STEEL	N/A	409 LBS.
LDR-60-AL	6061-T6 ALUMINUM	N/A	138 LBS.

CUSTOM SIZES AVAILABLE.
OPTIONS: HINGED ACCESS, ANTI-VORTEX PLATE

TRASHRACKS.COM
A DIVISION OF J.R.HOE
TITLE: LDR-60
60" ROUND TOP-MOUNT TRASH RACK
MADE IN THE U.S.A.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF J.R. HOE, INC. ANY USAGE IN PART OR AS A WHOLE WITHOUT REFERENCING HOE'S CONSENT IS STRICTLY PROHIBITED. J.R. HOE RESERVES THE RIGHT TO MAKE PRODUCT DESIGN IMPROVEMENTS FROM TIME TO TIME WITHOUT IMPROVE NOTICE

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WOLF ROAD REVIEW	SDD
3	10-29-24	PER VILLAGE REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

14
OF
20

PROJECT DETAILS

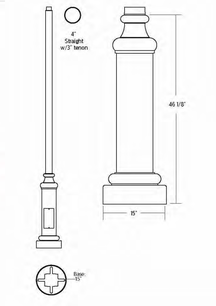
L:\Projects\2024\24-0001\Engineering\GWC\Final\24-0001 TC.dwg Plot Date: 1/27/2025 2:45:34 PM By: dmh

HADCO by @ignify | Outdoor | Poles and Brackets | P4030 Straight Round Smooth

4" Straight w/3" tenon

P4030 Poles and Brackets

Straight Round Smooth



Project:
Location:
QM NO.
Type:
Catalog #:
Notes: QTY:

example: P4030 3.5 F S

Order guide

Product Code	Pole Height	Finish	Outlet Location	Outlet Options
P4030	14	A		
	12'	A Black	T 12" Down from Top - Aligned with Hinge Side	D Standard Duplex
	14'	W White	B 6" Up from Top of Base - Aligned with Hinge Side	S GFI Duplex
	16'	N Bronze		
		G Green		

EPA calculated based on deductive break loading. For AASHTO clothing, contact factory.

Pole Data

Pole Model	Pole Shape	Pole Type	Shaft Dimensions	Pole Plated	Anchor Base Shape	Bolt Circle	Base Dim (W)	Hand Hole Dim (H)
P4030	Round	Straight	4	Smooth	round	8 to 12	15 x 45.125	6 x 12

Pole Family	Catalog Number	Nominal Height (ft)	Tenon Section (in)	Wall Thickness (in)	EPA Rating 90 MPH (sq. ft)	EPA Rating 100 MPH (sq. ft)	Anchor Bolts (in)
P4030	P4030-12	12	3	0.125	10.69	11.61	3/4-10 by
P4030	P4030-14	14	3	0.125	12.16	7.16	3/4-39 by
P4030	P4030-16	16	3	0.125	12.71	6.00	3/4-10 by
P4030	P4030-18	18	3	0.125	11.40	4.83	3/4-39 by

Specifications

HOUSING:
16GI HH high-strength, low-copper, proprietary cast aluminum alloy. 6000-T5 extruded aluminum. Anchor rods are hot dipped galvanized steel. Tenon is 356 HH sand cast aluminum.

FINISH:
A durable polyurethane enamel finish is applied after assembled use shot blasted to create a surface profile which allows for the highest level of paint adhesion. Laboratory tested for superior weatherability and fade resistance in accordance with ASTM B-117-64 and ANSI/ASTM G53-77 specifications. For larger projects where a custom color is required, contact the factory for more information.

WARRANTY:
Please visit **www.signify.com/warranties** for more details on structural and finish warranty.

OUTLET:
Standard Duplex Outlet has universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant. GFI Duplex Outlet has ground fault function indicator light, universal metal weatherproof cover. Weatherproof while in use. Heavy-duty all-metal construction. Lockable security cover. Meets NEC 406.9 (B). Weather resistant.

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Hadco_P4030_R06_SpecSheet 11/19 page 2 of 2

HADCO by @ignify | Urban | Hagerstown | TX03 Post top



Project: HERITAGE CROSSING
Location: WESTERN SPRINGS
Qty: 56
Type: TX03
Notes: Qty: 1

Hadco's Hagerstown LED post top gives you the ability to create a unique style through our modular post top concepts to blend into any residential and historic urban settings. With the latest LED technology you can seamlessly replace traditional HID technology to maximize energy savings and significantly reduce total cost of ownership. The Hagerstown luminaire provides excellent uniformity, traditional cosmetics look, with the benefits of modern technology.

Ordering guide

example: TX03-32-12B-3-A-A-F-E-N-363-A-E-0SP1-SP1

Series	LEDs	Gen.	Pods	Finials	Fasteners	Finishes	Optical System	Photo controls
TX03 Hagerstown LED post top	32 32 LED 48 48 LED 64 64 LED	03 Gen3	B Octagonal fitter; R Round fitter; w/sculpted petals C Octagonal fitter; w/tapered hourglass fitter D Smooth tapered hourglass fitter E Tapered fluted fitter; w/sculpted flower petals F Tall round fluted fitter* H Round contemporary fitter J Round fitter; w/round stepped fitter L Round fluted long fitter Decorative leaf fitter; w/sculpted petals	A A-Finial B B-Urn ball C C-Vase D D-Urn E E-Vase F F-Vase G G-Vase H H-Vase N No finial	1 Hex head bolts 3 Allen head bolts	A Black B White G Green	2 Type 2 3 Type 3 4 Type 4 5 Type 5 RWK Type 3 NEMA w/ RWK photocontrol	E Bottom eye photo controls N 120 VAC P 208-277 VAC 5 347 VAC R Twist-lock receptacle* N None

Ordering guide (continued)

Future Proof controls	Color Temp	Voltages	Drivers	Driver Options	Surge protection
N	740	A	S	N	SP1
R7 7-Pin Receptacle* N None	T30 3000K T40 4000K	120-277 VAC 347-480 VAC	3 350mA 4 530mA 5 700mA 6 1000mA 8 1050mA	4N 4 hrs 25% reduction* 5N 5 hrs 50% reduction* 6N 6 hrs 70% reduction* 7N 7 hrs 75% reduction* 8N 8 hrs 75% reduction* DF 8 hrs 75% reduction* DH 8 hrs 50% reduction* DJ 8 hrs 70% reduction* DL Compatible with DALI 0-10V 1% dimming 0-10V Programmable with wattage selector SRD Sensor ready driver (standard if not ordered) SRDT Sensor ready driver with timer configured via*	SP1 10kV/10kA (standard) SP2 20kV/20kA (optional)

1. Configurations with 48 (6A) and 64 (8A) LED array boards are limited to a 25C ambient rating with the 1000mA (1) drive current.
2. Consult factory for availability.
3. Closed Fixtures.
4. Photocontrol receptacle (C,D,J) is only available in compatible with the Twist Lock receptacle (R) photocontrol.
5. "RT" should be on the top of the roof, NOTE: Fitter is required.

TX03 Hagerstown

Post top

Lumen Charts

LED module 3000K	LED qty	System Current	Color Temp	Average System Watts**	Type 2 Lumens Output	Type 2 B.U.G. Rating	Type 2 Efficacy	Type 3 Lumens Output	Type 3 B.U.G. Rating	Type 3 Efficacy	Type 3W Lumens Output	Type 3W B.U.G. Rating	Type 3W Efficacy
TX0332-Gb-w740-3	32	350	4000	35.4	4284	B1-U2-G1	121	4200	B1-U2-G1	119	4125	B1-U2-G1	117
TX0332-Gb-w740-5	32	530	4000	51.8	6977	B2-U3-G2	135	6972	B1-U3-G1	135	6858	B2-U3-G2	132
TX0332-Gb-w740-7	32	700	4000	71.9	7829	B2-U3-G2	109	8125	B2-U3-G2	113	8066	B2-U3-G2	112
TX0332-Gb-w740-8	32	900	4000	93.9	8536	B2-U3-G2	91	9521	B2-U3-G2	101	9825	B2-U3-G2	105
TX0332-Gb-w740-1	32	1050	4000	107.7	10814	B2-U3-G2	100	10806	B2-U3-G2	100	11141	B3-U3-G3	103
TX0348-Gb-w740-5	48	350	4000	51.4	6247	B2-U3-G2	122	6241	B2-U3-G2	121	6418	B2-U3-G2	125
TX0348-Gb-w740-7	48	530	4000	75.5	8942	B2-U3-G2	118	8935	B2-U3-G2	118	9213	B2-U3-G2	122
TX0348-Gb-w740-8	48	700	4000	98.4	10784	B2-U3-G2	109	10784	B2-U3-G2	109	11784	B3-U3-G3	120
TX0348-Gb-w740-9	48	900	4000	126.8	13907	B3-U3-G3	102	14328	B3-U3-G3	102	14328	B3-U3-G3	105
TX0348-Gb-w740-1	64	1050	4000	138.4	15164	B3-U3-G3	109	15164	B3-U3-G3	109	16774	B4-U3-G3	121
TX0364-Gb-w740-5	64	530	4000	68.7	8121	B2-U3-G2	118	8121	B2-U3-G2	118	8373	B2-U3-G2	122
TX0364-Gb-w740-7	64	700	4000	91.6	9754	B2-U3-G2	106	9754	B2-U3-G2	106	10784	B3-U3-G3	118
TX0364-Gb-w740-8	64	900	4000	119.9	11954	B3-U3-G3	100	11954	B3-U3-G3	100	13082	B3-U3-G3	109

LED module 4000K	LED qty	System Current	Color Temp	Average System Watts**	Type 4 Lumens Output	Type 4 B.U.G. Rating	Type 4 Efficacy	Type 5 Lumens Output	Type 5 B.U.G. Rating	Type 5 Efficacy
TX0332-Gb-w740-3	32	350	4000	35.4	4349	B1-U2-G1	123	4124	B1-U2-G1	116
TX0332-Gb-w740-5	32	530	4000	51.8	6064	B1-U3-G2	117	6312	B2-U3-G2	122
TX0332-Gb-w740-7	32	700	4000	71.9	7843	B2-U3-G2	110	8068	B2-U3-G2	115
TX0332-Gb-w740-8	32	900	4000	93.9	9635	B2-U3-G2	103	10011	B4-U3-G2	107
TX0332-Gb-w740-1	32	1050	4000	107.7	10971	B2-U3-G2	102	11420	B4-U3-G2	106
TX0348-Gb-w740-5	48	350	4000	51.4	6317	B2-U3-G2	123	6317	B2-U3-G2	123
TX0348-Gb-w740-7	48	530	4000	75.5	9072	B2-U3-G2	120	9443	B4-U3-G2	125
TX0348-Gb-w740-8	48	700	4000	98.4	11064	B2-U3-G2	112	11293	B4-U3-G2	115
TX0348-Gb-w740-9	48	900	4000	126.8	14169	B3-U3-G3	103	14686	B4-U3-G3	107
TX0364-Gb-w740-5	64	350	4000	68.7	8091	B2-U3-G2	121	8630	B3-U3-G2	126
TX0364-Gb-w740-7	64	530	4000	100.5	11867	B2-U3-G2	112	12283	B4-U3-G2	117
TX0364-Gb-w740-8	64	700	4000	138.4	15164	B3-U3-G3	109	15774	B4-U3-G3	114
TX0364-Gb-w740-9	64	900	4000	179.9	19254	B4-U3-G3	102	19012	B5-U3-G3	106

Lumen charts continue on next page.

* Configurations with 64 (8A) LED array boards are limited to a 25C ambient rating with the 900mA (9) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Equivalence should always be confirmed by a photometric report.

Note: Equivalence should always be confirmed by a photometric layout. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

TX03 Hagerstown

Post top

Lumen Charts

LED module 3000K	LED qty	System Current	Color Temp	Average System Watts**	Type 2 Lumens Output	Type 2 B.U.G. Rating	Type 2 Efficacy	Type 3 Lumens Output	Type 3 B.U.G. Rating	Type 3 Efficacy	Type 3W Lumens Output	Type 3W B.U.G. Rating	Type 3W Efficacy
TX0332-Gb-w730-3	32	350	3000	35.4	4060	B1-U2-G1	115	4208	B1-U2-G1	119	4125	B1-U2-G1	117
TX0332-Gb-w730-5	32	530	3000	51.8	6667	B2-U3-G2	129	6972	B1-U3-G1	135	6858	B2-U3-G2	132
TX0332-Gb-w730-7	32	700	3000	71.9	7423	B2-U3-G2	103	7727	B3-U3-G2	107			
TX0332-Gb-w730-8	32	900	3000	93.9	9042	B2-U3-G2	96	9412	B4-U3-G2	100			
TX0332-Gb-w730-1	32	1050	3000	107.7	10253	B2-U3-G2	95	10673	B4-U3-G2	99			
TX0348-Gb-w730-5	48	350	3000	51.4	5977	B2-U3-G2	116	6241	B2-U3-G2	121			
TX0348-Gb-w730-7	48	530	3000	75.5	8478	B2-U3-G2	112	8825	B3-U3-G2	117			
TX0348-Gb-w730-8	48	700	3000	104.7	10061	B2-U3-G2	103	10288	B4-U3-G2	108			
TX0348-Gb-w730-9	48	900	3000	126.8	13186	B3-U3-G3	96	13725	B4-U3-G2	100			
TX0364-Gb-w730-5	64	350	3000	68.7	7748	B2-U3-G2	113	8085	B3-U3-G2	117			
TX0364-Gb-w730-7	64	530	3000	100.5	11061	B2-U3-G2	105	11548	B4-U3-G2	109			
TX0364-Gb-w730-8	64	700	3000	138.4	14163	B3-U3-G3	102	14742	B4-U3-G3	107			
TX0364-Gb-w730-9	64	900	3000	179.9	17550	B3-U3-G3	98	17358	B5-U3-G3	99			

* Configurations with 64 (8A) LED array boards are limited to a 25C ambient rating with the 900mA (9) drive current.

** System wattage or total luminaire wattage includes the LED module and the LED driver. Note: Equivalence should always be confirmed by a photometric report.

Note: Equivalence should always be confirmed by a photometric layout. Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Signify.

TX03 Hagerstown

Post top

Specifications

Roof
Roof (0.090" thick spun aluminum (12"x1/4"x 16"x1/4"). Easy fuse replacement of either roof or bottom globe section if required.

Globe
Narrow body globe is constructed of clear injection-molded vertically ribbed UV stabilized acrylic. Globe is mounted in a cast aluminum wheels gasketing of .1"x1" and an ourabberstrick diameter of 9". Globe (wasnoff) has a 13"x14"x 14"x14"W".

Cage
Cage for narrow body globes (10" dia.) is constructed of die-cast 360 aluminum alloy with hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (10"x14"x 16"x16"W).

Pods
Wiring block to accept three #8 solid or stranded wires/easy cast aluminum post construction. Pod is secured to the pole with stainless steel set screws (Hex head or Allen head as specified) for mounting to 3" O.D. post tenon. Globe holder has an integral water trap to prevent water from entering fabbed aluminum pole. Globe holder is secured with 5/16-18 black cadmium stainless steel fasteners (Hex head or Allen head as specified). All hardware to be stainless steel captive

Optional Decorative Pods
Octagonal fitter (A) is constructed of die-cast 360 aluminum alloy with bottom-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (10"x14"x 16"x16").

Round fitter with sculpted petals (B)
is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (10"x14"x 16"x16").

Fluted tapered hourglass fitter (E)
is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (11"x 14"x 19"W).

Smooth tapered hourglass fitter (D)
is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell. (11"x 14"x 19"W).

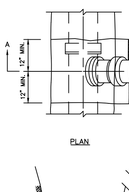
Tapered fluted fitter with sculpted flower petals (E) is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal button eye photocell (10"x14"x 15"x16").

Tall round fluted fitter (G) is constructed of die-cast 360 aluminum alloy with removable door providing entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (14"x 19"W).

Round contemporary fitter (H) is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Two easy access to photo eye through top/rear door on pod (10"x14"x 16"W).

Round fluted long fitter (L) is constructed of 356 HH High-Strength, Low-Copper cast aluminum with a side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or button eye photocell. Two easy access to photo eye through the door on the pod (10"x14"x 19"x16"W).

Decorative leaf fitter with sculpted petals (T) is constructed of 356 HH High-Strength, Low-Copper cast aluminum with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (10"x14"x 15"x16").

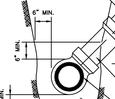


Tall round fluted fitter (F) is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (14"x 19"W).

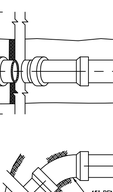
Round contemporary fitter (H) is constructed of 356 HH High-Strength, Low-Copper cast aluminum. Optional internal twist-lock photocell receptacle or optional internal button eye photocell. Two easy access to photo eye through top/rear door on pod (10"x14"x 16"W).

Round fluted long fitter (L) is constructed of 356 HH High-Strength, Low-Copper cast aluminum with a side-hinged door providing 180° entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or button eye photocell. Two easy access to photo eye through the door on the pod (10"x14"x 19"x16"W).

Decorative leaf fitter with sculpted petals (T) is constructed of die-cast 360 aluminum alloy with side-hinged door providing 180 degrees entry into the fitter assembly for easy access to the electrical components. Optional internal twist-lock photocell receptacle or optional button eye photocell. Easy access to photo eye through the door on the pod (10"x14"x 15"x16").



Finials
All finials are cast aluminum mounted with 1/4-20 stainless steel threaded studs. Standard finial is Urn ball. Optional finials finish as specified. Finish to Powdercoat customer.



Fasteners
Used to secure post fitter to post tenon and globe to globe holder: Hex Head (1) and Allen Head (3) are 5/16-18 black cadmium stainless steel.

Light Engine
LED grid is composed of five-plain components: Heat Sink, Lens, LED array, Optical System, and Driver. Electrical components are RoHS compliant.

LED Engine
Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA (on - Neutral White, 4000 kelvin nominal (3985K to 4509K) or 3000 kelvin nominal (2926K to 3220K), CRI 70 Min. 75 Typical.

Heat Sink
Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Future Proof Control
R7 - Receptacle with 7 pin enabling dimming and additional functionality (to be determined). Can be used with a twist lock nute or a shorting cap. Will ship with a shorting cap installed for ease of wiring. Remove shorting cap when you're ready to install your node.

Optical System
2: Type 2
3: Type 3
3L: Type 3 with House side shield
3HL: Type 3 with House side shield
3W: Type 3 Wide
3WHL: Type 3 Wide with House side shield
4: Type 4
5: Type 5

Above options are all composed of high performance optical grade PMMA acrylic refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Optical system is sealed to IP66 and is mounted to the Light Bar LM-63, LM-76 and TM-16 (6061) certifying its photometric performance. Street side indicated.

TX03 Hagerstown

Post top

Driver
Driver comes standard with 0-10V dimming capability, high power factor of 95%. Electronic driver, operating range 50/60Hz. Auto-adjusting universal voltage input from 120 to 277 VAC (347 to 480 VAC optional). Class P, Class A (connected to neutral, Class), THD of 20% max. Maximum ambient operating temperature from 40°F (4°C) to 130°F (50°C). Certified in compliance to UL1310, cULus requirements (dry and damp locations). Driver is accessible from the top with two-latch disconnect plug resisting to 22°F (105°C). The current supplying the LEDs will be reduced by the driver if the internal driver experiences internal overheating as a protection to the driver and the LED light source components. Output is protected from short circuits, voltage overload and current overload conditions. Driver has a 10kV/10kA surge protection built-in driver surge protection of 2.5kV (min).

Driver Options
SRD: Sensor Ready Driver including SR functionality (but with 24V auxiliary supply and a signal signal input (LS5) connected to the top NEMA twist lock receptacle.
SRDR: Sensor Ready Driver including SR functionality (but with 24V auxiliary supply and a signal signal input (LS5) not connected to the top NEMA twist lock.
DA: 4 Hrs 25% Reduction
DB: 5 Hrs 50% Reduction
DC: 6 Hrs 70% Reduction
DD: 6 Hrs 25% Reduction
DE: 7 Hrs 75% Reduction
DF: 8 Hrs 75% Reduction
DG: 8 Hrs 50% Reduction
DH: 8 Hrs 70% Reduction
DJ: 8 Hrs 75% Reduction
DL: Pre-set driver compatible with the DALI hypenthetic control system

Predicted Lumen Performance Data

Predicted lumen depreciation data*			
Ambient Temperature (°C)	Driver Id	Calculated L(p)hours^	Lumen Maintenance % at 60,000 hours
25°C	up to 1050 mA	>100,000 hrs	>100,000 hrs	92.49%

1. Predicted performance derived from LED manufacturer's lateral exposure to lumen depreciation based on ISSNI LM-80 methodology. Actual exposure may vary due to field application conditions.
2. Calculated per ISSNI TM-21 methodology. Values reported at 25°C ambient.
3. Calculated per ISSNI TM21-11. Published by Illuminating Engineering Society.

Surge Protection
Surge protector tested in accordance with ANSI/IEEE C62.41 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-0-ound, Line-Neutral and Neutral-Ground. Surge protector tested to DOE (US Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) solid state lighting (SSL) outdoor luminaire surge and electrical fast transient/burst requirements for High Test Level 3kV / 10kA. Option for SP2 20kV/20kA.

Finish
Color in accordance with the ASMA 2603 standard. Application of polyester powder coating. Super durable TGIC polyester, 2.5 mil minimum of tolerance. The Thermosetting resins provides a discoloration resistant finish, which is suitable for UV exposure. The finish as well as outer retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 1000 hours salt spray resistance rating in accordance with testing performed and in ASTM B117 standard.

Luminaire Useful Life
The LED light source energy consumption and delivered lumens for each option. Based on ISTMT in situthermal testing in accordance with LM-80 and TM-21 (10,000 hours with 4,752 lumen maintenance @ 25°C). Luminaire useful life accounts for LED lumen maintenance and additional factors, including LED life, driver life, PCB substrate, solder joints and flexpoint cycles and burning hours for normal applications.

LED product is manufacturing standard
This electronic component is in accordance to the International Electrotechnical Commission standard (IEC) for high existing diodes (LEDs) are assessed in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so to eliminate ESD events that could decrease the useful life of the product.

Quality Control
The manufacturer must provide a written statement that is ISO 9001:2008 and ISO 14001:2004 International Quality Standards Certification.

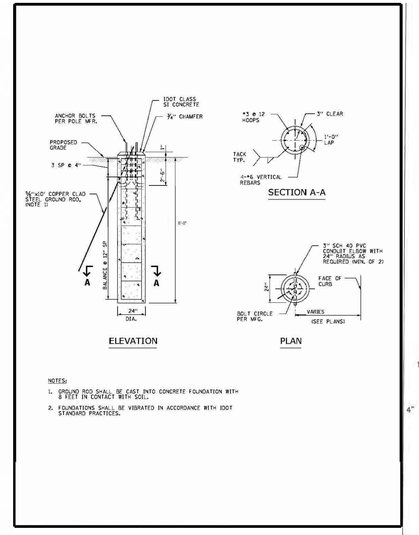
Vibration Resistance
Meets the ANSI C136.31-2001, American National Standard for Roadway Luminaire's Vibration specifications for normal Applications.

Certifications and Compliance
UL listed to Canadian safety standards for luminaires. Luminaire is IP66 rated per IEC60529 Standards. UL8750 and UL1598 compliant. ETL listed to U.S. safety standards for wet locations: cETL listed to Canadian safety standards for wet locations. LM80 & LM79 tested.

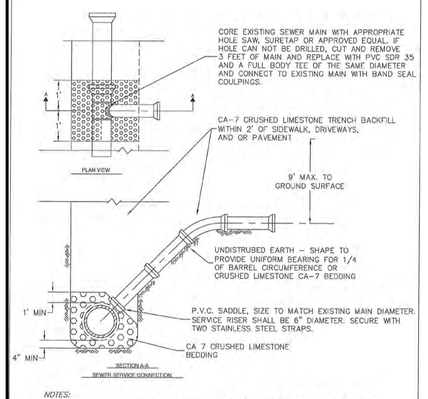
IP Rating: The LED optics chamber is IP66 rated. The LED driver is IP66 rated.

Warranty: 5-year extended warranty.

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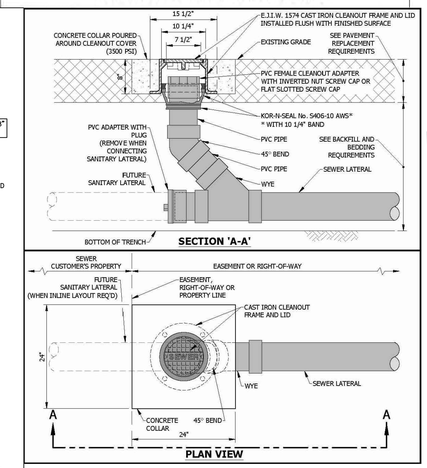


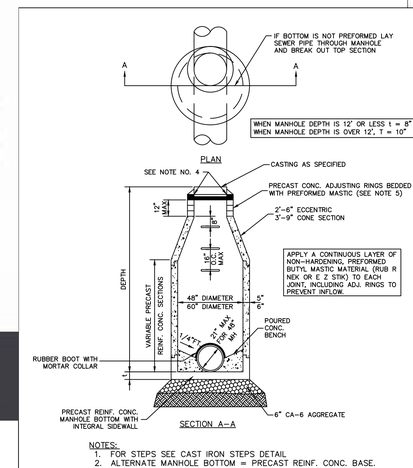
NOTES:
1. GROUND ROD SHALL BE CAST INTO CONCRETE FOUNDATION WITH 8 FEET IN CONTACT WITH SOIL.
2. FOUNDATIONS SHALL BE VIBRATED IN ACCORDANCE WITH IDOT STANDARD PRACTICES.



NOTES:
1. ALL PAVEMENT, SIDEWALK, DRIVEWAYS, AND CURB MUST BE SAW CUT FULL DEPTH PRIOR TO REMOVAL.
2. UNDER NO CIRCUMSTANCES SHALL AN EXTERNAL CLEANOUT BE PLACED IN VILLAGE RIGHT OF WAY.

SANITARY SEWER SERVICE DETAIL

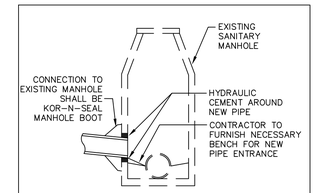




NOTES:
1. FOR STEPS SEE CAST IRON STEPS DETAIL
2. ALTERNATE MANHOLE BOTTOM = PRECAST REINF. CONC. BASE.
3. PROVIDE CA-6 AGGREGATE BACKFILL AROUND MANHOLE TO SUBGRADE ELEVATION IN PAVED AREAS.
4. CONCRETE FILLETS SHALL BE MADE WITH MORTAR TO PROVIDE A SMOOTH TRANSITION BETWEEN CASTING, RINGS OR TOP OF STRUCTURE.
5. WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO PRECAST CONCRETE RINGS SET IN A BED OF PREFORMEDNON-HARDENING MASTIC (RUB R NEK OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF TWELVE INCHES.
6. TWO INCH ADJUSTING RINGS SHALL ONLY BE PERMITTED WHEN THE HEIGHT OF THE ADJUSTMENT IS LESS THAN 3 INCHES.

SANITARY MANHOLE

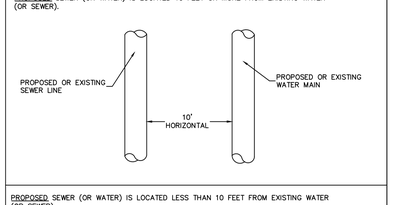
NOT TO SCALE



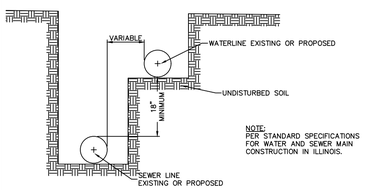
CONNECT TO EXIST. SANITARY MANHOLE

NOT TO SCALE

PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR MORE FROM EXISTING WATER (OR SEWER).



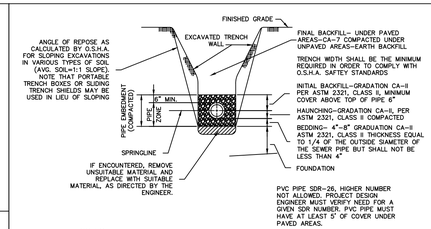
PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER (OR SEWER).



NOTE:
PER STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.

WATER AND SEWER SEPARATION REQUIREMENTS

NOT TO SCALE


FINISHED GRADE
EXCAVATED TRENCH WALL
ANGLE OF REPOSE, AS CALCULATED BY O.S.H.A. FOR SLOPING EXCAVATIONS IN VARIOUS TYPES OF SOIL. (AVG. SOIL=1:1 SLOPE). NOTE THAT PORTABLE TRENCH BOXES OR SLIDING TRENCH SHIELDS MAY BE USED IN LIEU OF SLOPING
FINAL BACKF

FIRE STROBE 2000

EMERGENCY VEHICLE STROBE DETECTOR

The FIRE STROBE 2000 provides rapid access to automatic gates and secured areas. The FIRE STROBE 2000 opens gates when activated by an emergency vehicle equipped with the standard operational strobe. The most common frequency is (1440).

Now with STROBEWATCH™.





FEATURES:

RAPID DETECTION OF ANY EMERGENCY STROBE

- Fire
- Paramedics
- Police
- 911 Response Vehicles
- Double and Quad Flash Strobes
- 100% Digital

FIELD PROGRAMMABLE

- Coated Optics
- 2 Relay Outputs
- Relay Timing

EASE OF INSTALLATION

- FIRE STROBE 2000 can be installed on any existing gate system
- Sensitive photodiode complete with PVC housing and lens assembly can be mounted in a variety of ways
- FIRE STROBE 2000 is designed to accommodate AC or DC operation
- Units are provided with a 12 VAC plug in transformer

MANUFACTURED BY:
ACCESS PRODUCTS, INC.
(858) 292-1561 FAX (858) 292-6955
www.firestrobe.com

DISTRIBUTED BY:

FIRE STROBE 2000 Technical Specifications

BASIC CONCEPT

The FIRE STROBE 2000 signal is received optically by line of sight. The range varies with the ambient light and intensity of the strobe emitter. A typical range varies from 150 feet to 500 feet. The detector will not allow false operation with unwanted signals from radio interference and/or flashing headlights or loud sounds.

The acquisition time from the emitter light source to the discriminate module is approximately 5 seconds.

The FIRE STROBE 2000 is widely used for security /electric gate access. It can be used for firehouse garage doors and other related access needed by emergency vehicles. This emergency-vehicle strobe detector provides rapid access to any gated community that has been serviced by fire and emergency equipment from the OPTICOM® STROBE SYSTEM.

INSTALLATION & TESTING

Complete installation instructions are provided with the FIRE STROBE 2000 for simple hook-up of the unit to interface with your gate or access control. Two dry contacts are also provided for bi-directional operation where needed.

The photoeye assembly is typically mounted 8 feet to 10 feet above the street level and is aimed for optimal strobe signal. (A total of (2) photoeye assemblies may be used). A 12 VAC power supply is provided with the FIRE STROBE 2000 system.

Testing can be accomplished with the optional fire strobe transmitter tester. This FIRE STROBE 2000 transmitter will enable a throughput of signals from the photoeye assembly to the relay output. This is a hand-held transmitter which operates via 9-volt battery.

TECHNICAL SPECIFICATIONS

1. Frequency 14.035 Hz+/- .25 Hz for class II signals. For OPTICOM® emitters, double, quad flash strobes 140-170 fpm. 100% digital.
2. The FIRE STROBE 2000 is fully compatible with the OPTICOM® priority control emitter.
3. Now with Strobewatch™ programmable for double and quad flash, vehicle mounted strobes. These are usually found on police and other emergency vehicles.
4. The strobe acquisition time is .5 seconds.
5. The PC board construction is mounted in the enclosed 8" x 8" x 4" rain-tight NEMA J-Box.
6. The weight is approximately seven pounds.
7. The power requirements are 12/24 volts AC/DC non-polarity conscious, approximately 1 watt draw.

WARRANTY

The FIRE STROBE 2000 has a one year warranty when used according to the manufacturer's specifications. This warranty does not apply when the FIRE STROBE 2000 has been abused, over voltaged, or altered in any way. The warranty coverage is at the sole discretion of the manufacturer. This unit is to be used only for the operations described above.

*OPTICOM is a trademark of 3M

INSTALLATION

⚠CAUTION

- *To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging more than 18 inches (46 cm) deep.*
- ALWAYS wear protective gloves and eye protection when changing the battery or working around the battery compartment.

Installation Tips

Do's

- Weld a horizontal bar across entire gate on any installation for strength. Make sure that the operator is mounted level or it will not function properly.
- Make sure there is slack in the operator cable.
- The operator can be mounted on top of the gate frame.
- The operator must be installed at least 12" (30 cm) from the ground.





Don'ts

- DO NOT install upside-down.
- DO NOT install next to sprinklers or any area that may expose the bottom of operator to water.
- DO NOT install on uphill or downhill gates.
- DO NOT install on ANY pedestrian passageways, doorways, or gates.
- DO NOT over-bend the operator cable. Doing this will cause the wires to eventually break.
- DO NOT weld the crossbar on just a few pickets, or they could bend.

INSTALLATION

Large Metal Control Box

The control box MUST be mounted within 5 feet (1.52 m) of the gate operator. Mount the control box as high as possible for best radio reception. Make sure the control box is level.

***NOTE:** The Large Metal Solar Control Box (Model XLSOLARCONTUL) does not have the electrical outlets or the expansion board shown in the images.*

Wall or Column Mount

1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. Remove the toroid assembly from the control box by loosening the three screws and lifting the assembly up and out.
3. Use knock outs located at the 4 corners of the control box and knock out using a screwdriver and hammer.
4. Secure the control box to mounting surface using the provided screws (4).

Post Mount

***NOTE:** The post mount option is not recommended for the 33AH battery application.*

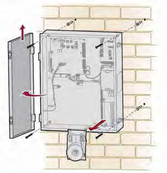
1. Open the control box. The control box door may be removed by opening the door 90°. Lift the door from the hinges and set aside until the installation is complete.
2. The control box can be mounted to a post with 'U' bolts (refer to chart). The knock out will accommodate a 3/8" diameter 'U' bolt. Select center mounting holes (top and bottom) and knock out using a screwdriver and hammer.
3. Secure the control box to mounting surface with U-bolts and rubber washers (not provided) to ensure a watertight seal.

TYPE AND SIZE	'U' BOLT OPENING
Standard 2" Round Pipe	3-1/2"
Standard 4" Square Post	4"
Standard 6" Square Post	6"

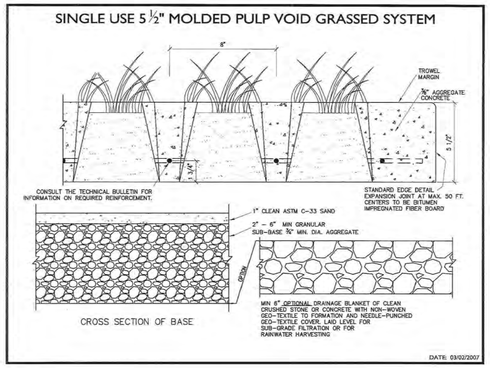
Wall or Column Mount

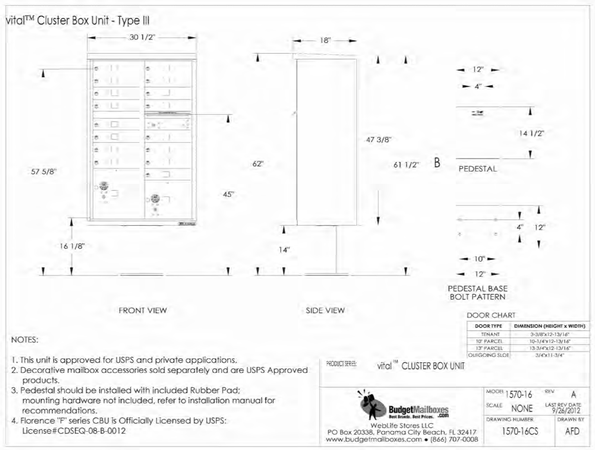


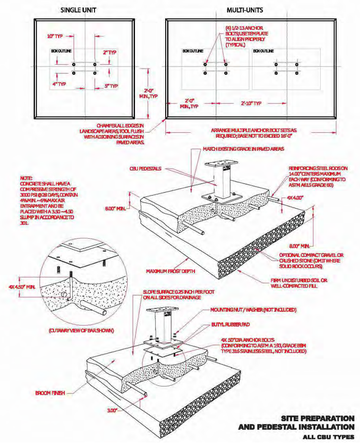
Post Mount

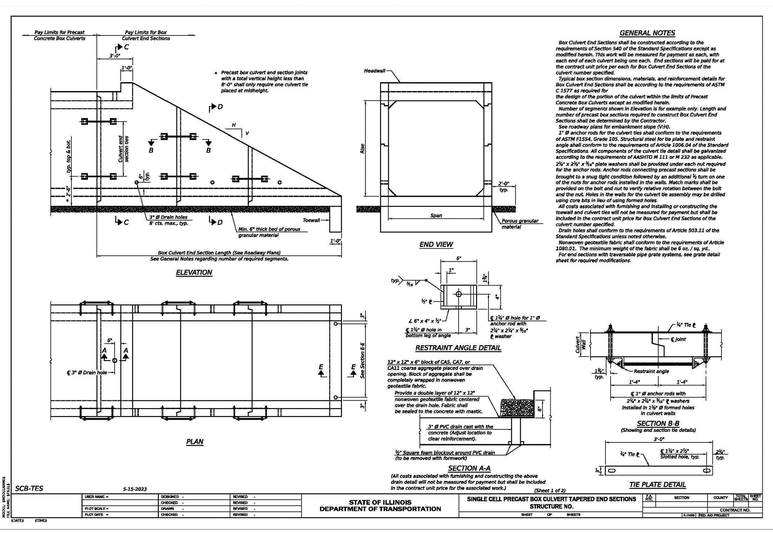


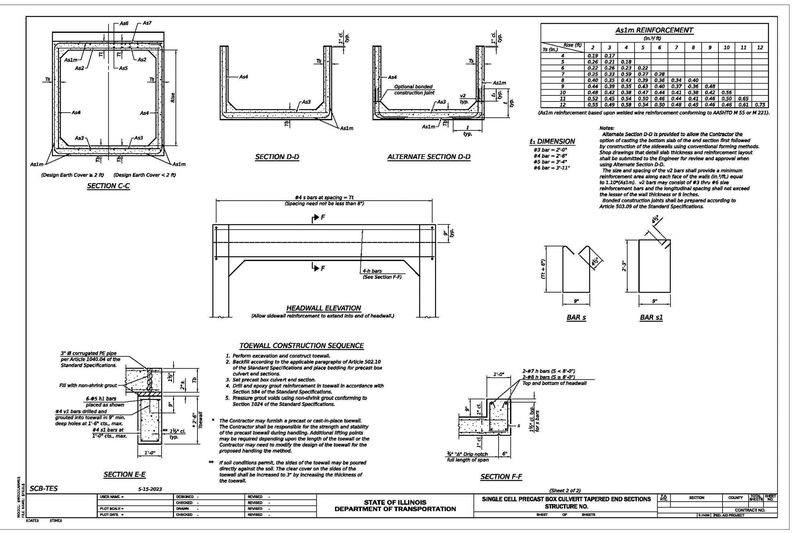
SINGLE USE 5 ½" MOLDED PULP VOID GRASSED SYSTEM











REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-19-24	PER WILLAGE REVIEW	SDD
3	10-17-24	PER CDDOTH REVIEW	DMV
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

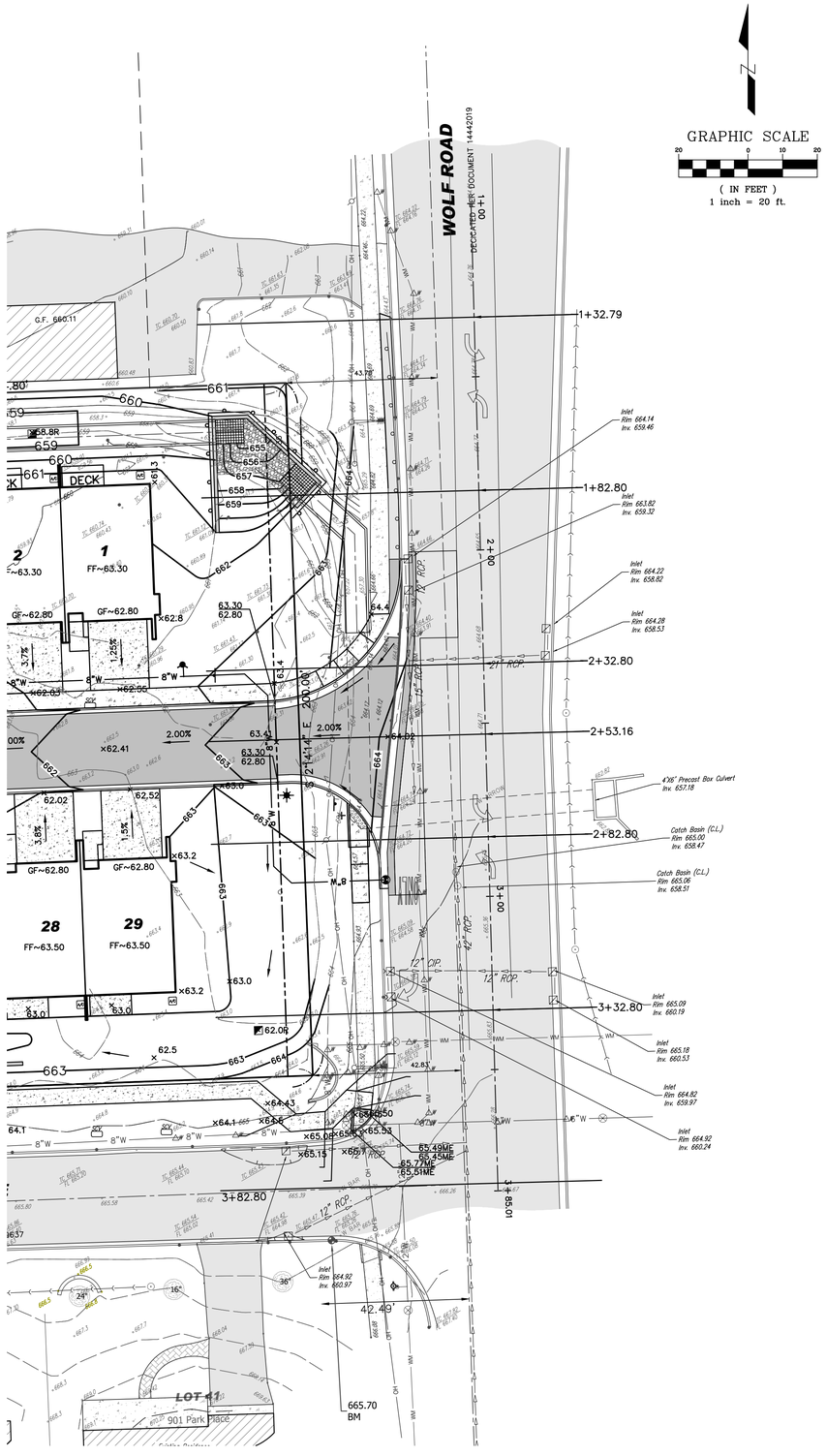
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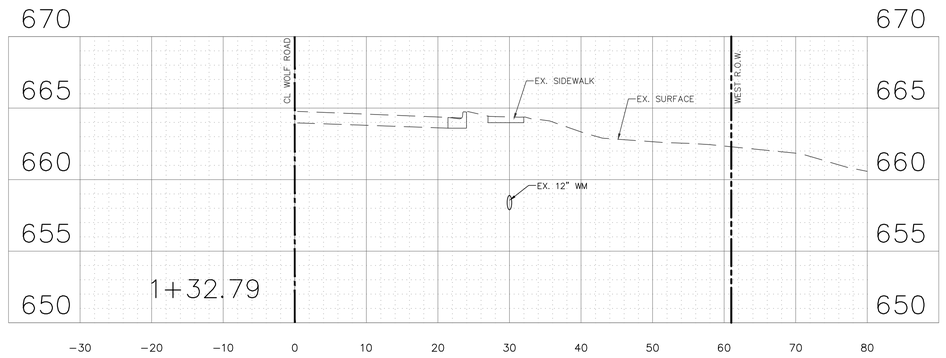
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Scale: NONE
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

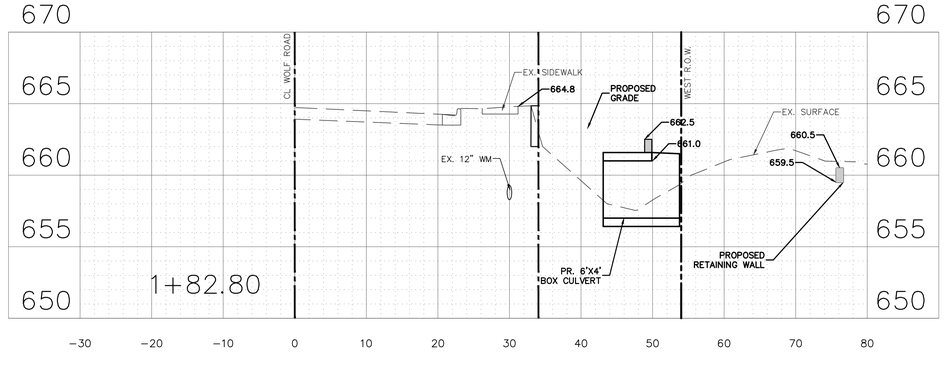
16
OF
20

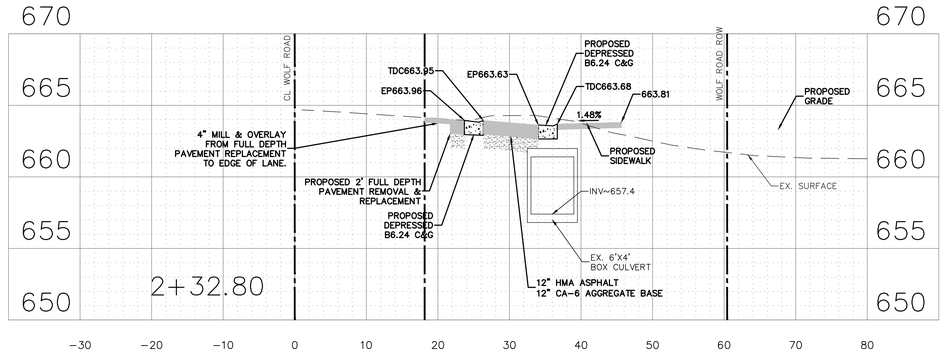
PROJECT DETAILS

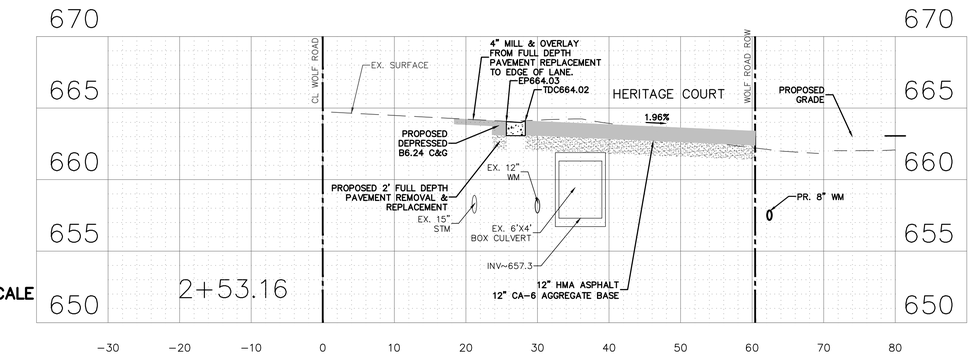
L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 TE.dwg Plot Date:1/27/2025 2:45:37 PM By:dseth











CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WDS REVIEW	DMV
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

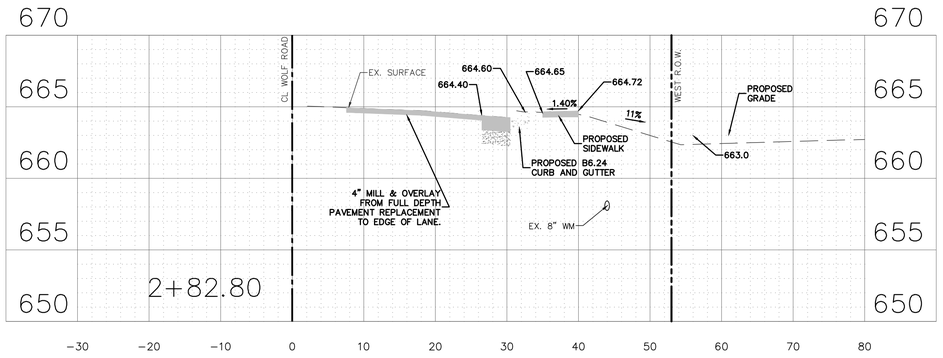
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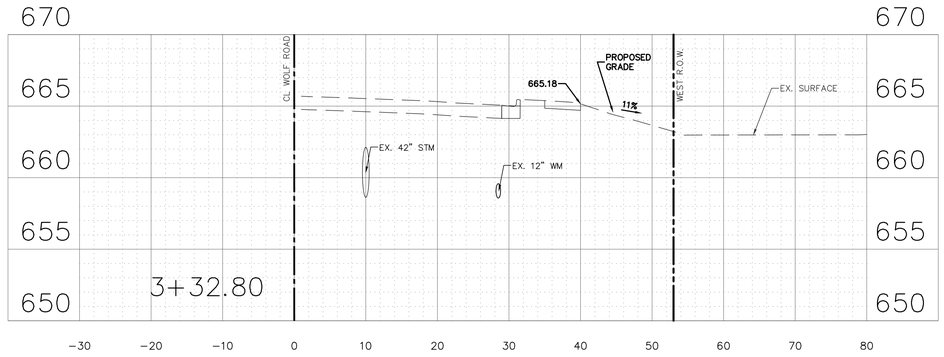
PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

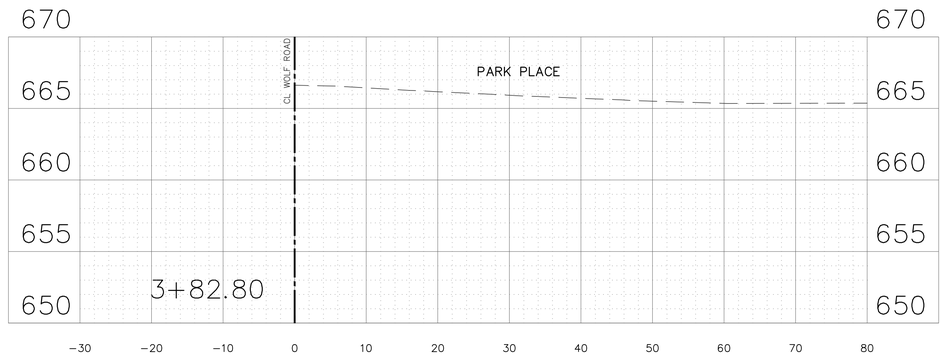
17
OF
20

CROSS SECTIONS STA. 1+32.79 TO 2+53.16

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CROSS-SECTION SCALE
H: 1" = 10'
V: 1" = 5'

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-26-24	PER WSSD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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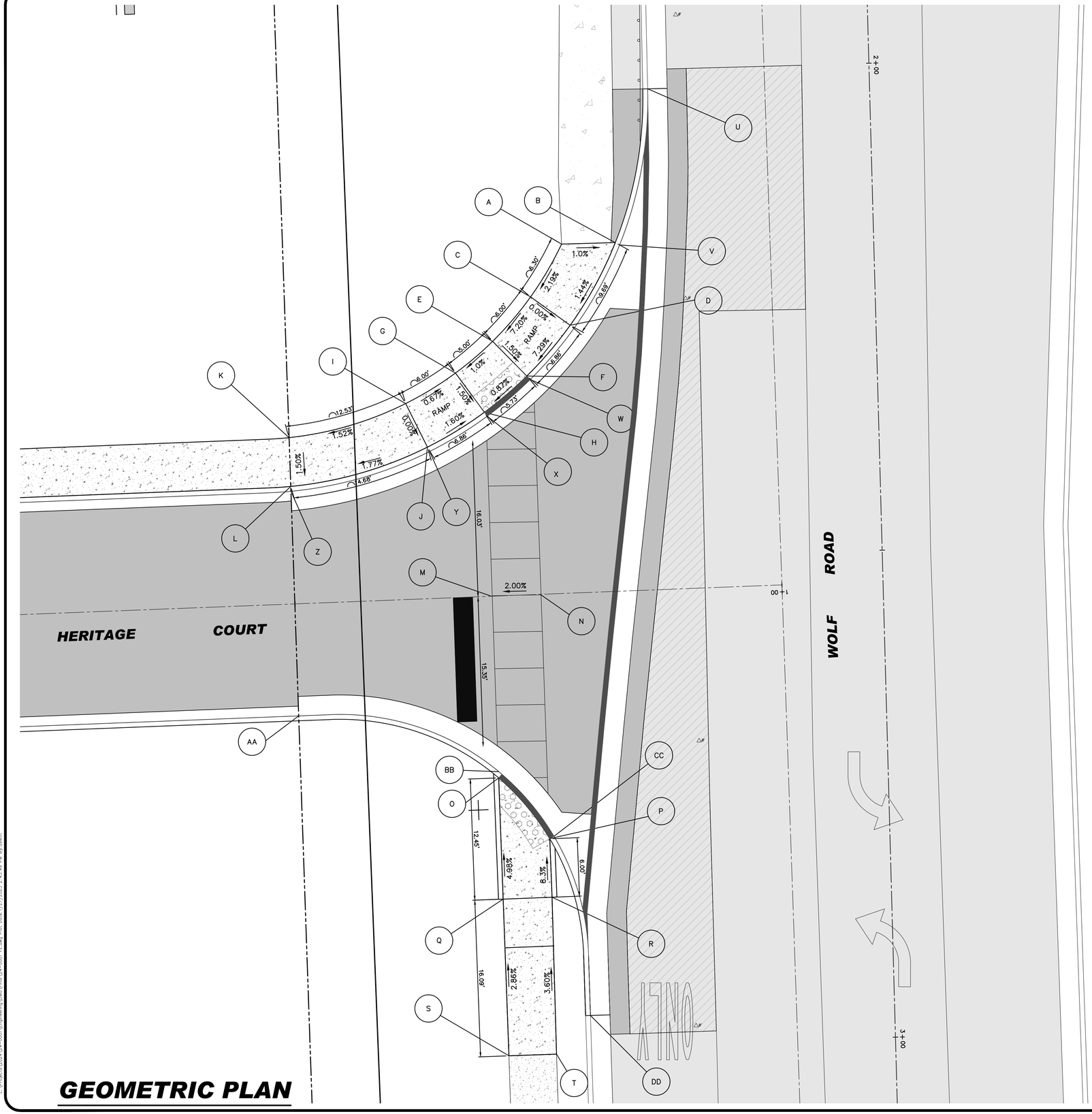
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PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

18
OF
20

CROSS SECTIONS STA. 2+82.80 TO 3+82.80

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GEOMETRIC PLAN

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

	STATION	OFFSET	ELEV.
A	2+17.70	32.03' R.	664.47ME
B	2+17.70	26.96' R.	664.42ME
C	2+23.03	33.37' R.	664.21
D	2+26.03	31.40' R.	664.21
E	2+27.48	39.38' R.	663.85
F	2+31.14	35.97' R.	663.78
G	2+30.63	43.28' R.	663.78
H	2+34.74	40.42' R.	663.71
I	2+33.62	48.48' R.	663.82
J	2+38.14	46.37' R.	663.82
K	2+36.79	60.53' R.	663.63
L	2+41.80	60.50' R.	663.56
M	2+53.63	40.21' R.	664.15
N	2+53.57	35.20' R.	664.05
O	2+72.59	39.99' R.	663.69
P	2+78.55	34.99' R.	663.81
Q	2+84.61	39.84' R.	664.31
R	2+84.56	34.93' R.	664.31
S	3+00.83	39.71' R.	694.77ME
T	3+00.79	34.82' R.	664.89ME
U	2+02.01	22.76' R.	664.14ME
V	2+17.98	26.08' R.	663.92
W	2+31.50	35.63' R.	663.65
X	2+35.15	40.14' R.	653.58
Y	2+38.61	46.15' R.	663.32
Z	2+42.30	60.49' R.	663.06
AA	2+65.37	60.33' R.	663.06
BB	2+71.65	39.96' R.	663.56
CC	2+78.44	34.48' R.	663.78
DD	2+96.92	31.23' R.	664.36ME

PAVEMENT LEGEND

- 4" MIL AND OVERLAY
- ASPHALT PAVEMENT CCDOTH ROW
  12" HMA CONCRETE SURFACE COURSE CL1
  12" AGGREGATE BASE COURSE, CA-6
- ASPHALT PAVEMENT
  2.5" BIT. CONCRETE SURFACE COURSE CL1
  2.5" BIT. CONCRETE BINDER COURSE
  9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY
  7" P.C.C.
  2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK
  7" P.C.C.
  2" AGGREGATE BASE
- CONCRETE CURB RAMP
  8" P.C.C.
  4" AGGREGATE BASE COURSE

REVIEW SET
NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	08-19-24	PER WOLF ROAD REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

19
OF
20

ADA DETAIL

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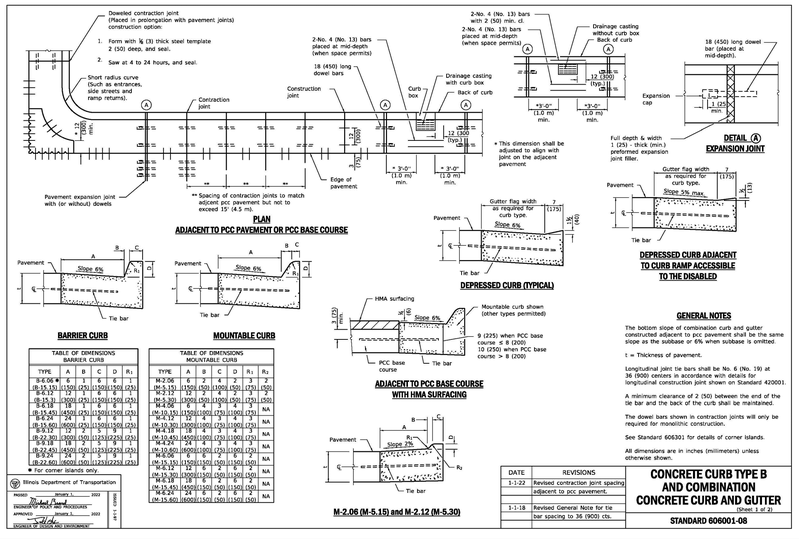


TABLE OF DIMENSIONS BARRIER CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06 ● (M-5.15)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.12 (M-5.30)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.18 (M-5.45)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.24 (M-5.60)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.30 (M-5.75)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.36 (M-5.90)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]

TABLE OF DIMENSIONS MOUNTABLE CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06 (M-5.15)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.12 (M-5.30)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.18 (M-5.45)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.24 (M-5.60)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.30 (M-5.75)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.36 (M-5.90)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.42 (M-6.05)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.48 (M-6.20)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.54 (M-6.35)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.60 (M-6.50)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]
M-2.66 (M-6.65)	1 [150]	6 [150]	6 [150]	1 [25]	3 [75]	3 [75]

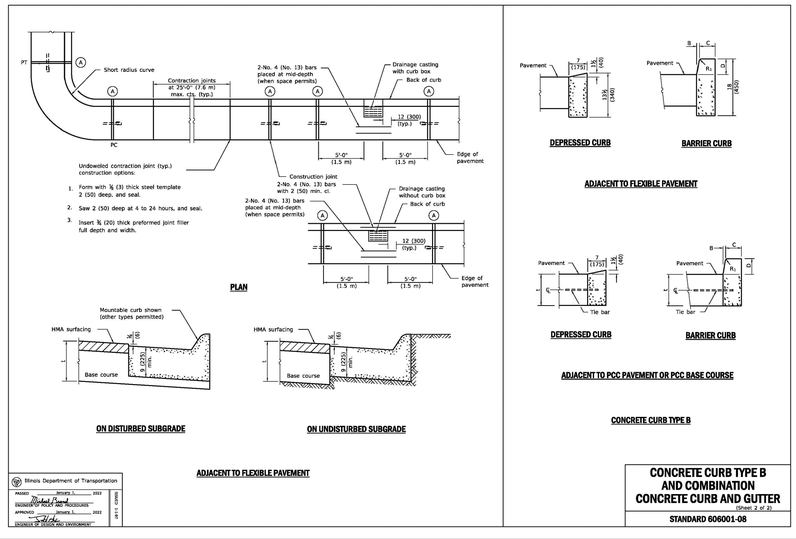
● For corner islands only.

Illinois Department of Transportation
PASSED January 1, 2022 — Engineer of Policy and Procedures
APPROVED January 1, 2022 — Engineer of Design and Environment
BDE/ISTHA

DATE	REVISIONS
1-1-22	Revised contraction joint spacing adjacent to pcc pavement.
1-1-18	Revised General Note for tie bar spacing to 36 (900) ctr.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 1 of 2)

STANDARD 606001-08



Illinois Department of Transportation
PASSED January 1, 2022 — Engineer of Policy and Procedures
APPROVED January 1, 2022 — Engineer of Design and Environment
BDE/ISTHA

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 2 of 2)

STANDARD 606001-08

SPECIAL PROVISION FOR DETECTABLE WARNINGS (SPECIAL)

Effective: *10/01/18* (Modification of IDOT D1 Special Provision for Detectable Warnings (Special) in City of Chicago)
Revised: *4/13/21 (added Galvanized and Stainless Steel material options)*

Description:

Work under this item shall consist of installing cast iron or steel detectable warning tiles as shown on the plans. Work shall be performed according to Section 424 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, except as herein modified.

Materials:

Detectable warning tiles shall be of uniform quality, and free of surface defects. The detectable warnings shall be constructed out of one of the following:
1) Cast iron meeting requirements of ASTM A 48 Class 30 or better.
2) Galvanized steel – 10 gauge, C90 galvanization or better
3) Stainless steel – 10 gauge or better

The dome size and spacing of the detectable warnings shall meet all requirements of sections R305.1.1 and R305.1.2 of PROWAG.

The color of the detectable warning tiles is to be approved by the Engineer unless otherwise specified in the plans and comply with the requirements of section R305.1.3 of PROWAG.

If a concrete border is required for installation of the detectable warnings, it shall comply with section R305.2 of PROWAG.

Responsibility of the Contractor:

The contractor shall verify all dimensions with the product manufacturer. If using radial units, the contractor shall verify that the radius of the detectable warnings supplied by the manufacturer matches that of the curb radius.

The contractor shall ensure that the supplied detectable warnings allow placement of the rows of domes that are aligned parallel with the path of travel. Where detectable warnings are radial, dome orientation is not significant.

The contractor shall ensure a maximum vertical transition of ¼" between the edge of the detectable warnings and adjacent concrete.

Measurement and Payment:

This work will be paid for at the contract unit price per square foot for DETECTABLE WARNINGS (SPECIAL).

MUNICIPALITY, IL MUNICIPALITY, IL MAINT. TOWNSHIP	COUNTY HIGHWAY	XXX	COMPUTED: XXX	REVISIONS	DATE	COUNTY OF COOK DEPARTMENT OF TRANSPORTATION AND HIGHWAYS	PORTLAND CEMENT CONCRETE SIDEWALK CONSTRUCTION DETAIL COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS STANDARD C-003	C-XXX
	FISCAL YEAR:	XXXX	DRAWN: XXX	1 CURB	11/2021			
	SECTION:	XX-XXXX-XX-XX	CHECKED: XXX	2 NEW SIDEWALK SLOPE C.O.	11/2021			NOT TO SCALE SHEET 2

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date=1/27/2025 2:45:50 PM By:dvath

NO.	DATE	REVISIONS DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	10-17-24	PER WILLAGE REVIEW	SDD
3	11-04-24	PER CCDOTH REVIEW	DMV
4	11-04-24	PER CCDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

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FINAL ENGINEERING PLANS
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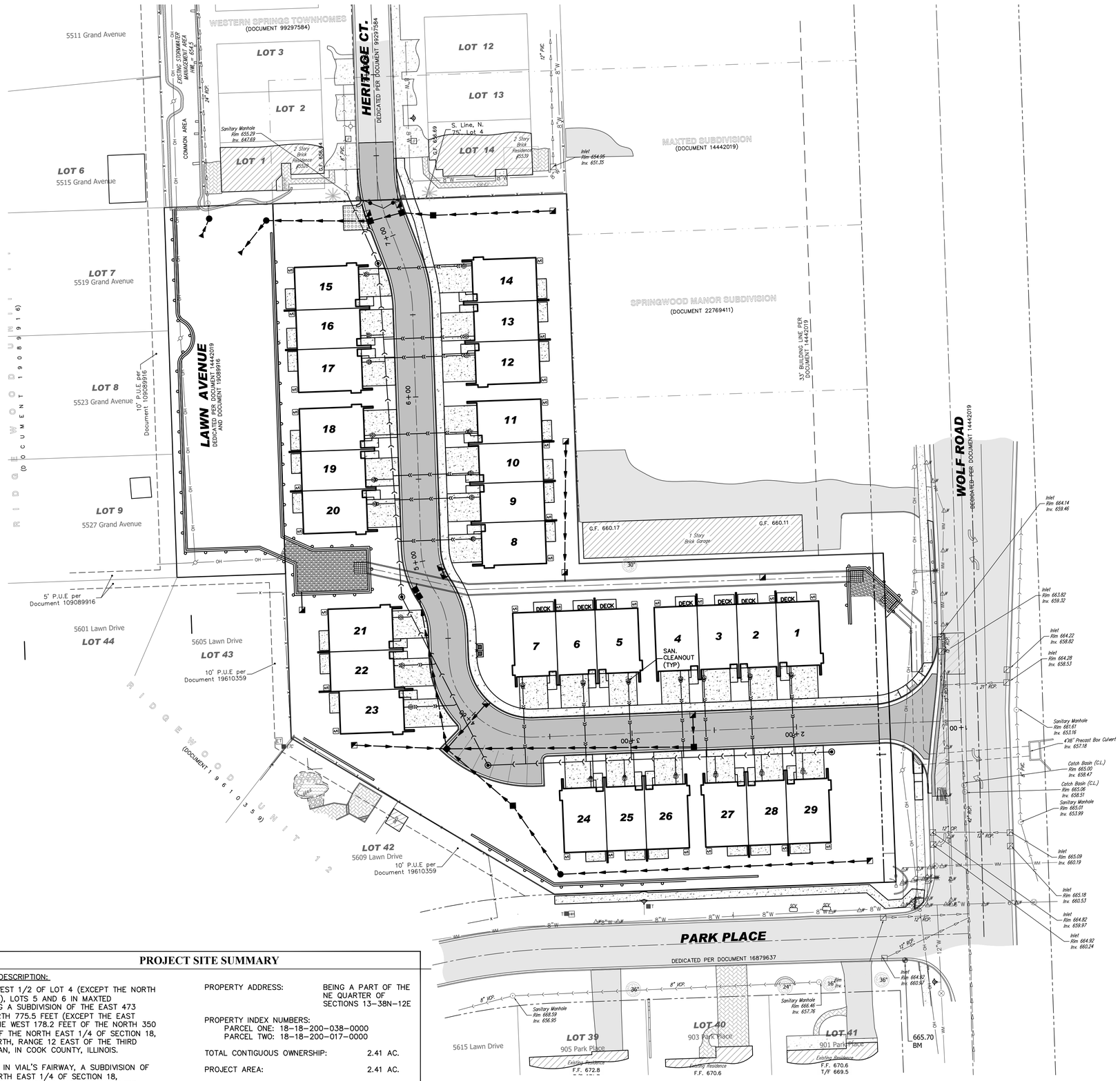
DESIGNTEK ENGINEERING, INC.
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(708) 326-4961
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IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: AS SHOWN
Date: DATE
Design By: SDD
Drawn By: DJB
Checked By: SDD

20 OF 20

CCDOTH DETAILS



PROJECT SITE SUMMARY

PROPERTY LEGAL DESCRIPTION:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PROPERTY ADDRESS:	BEING A PART OF THE NE QUARTER OF SECTIONS 13-38N-12E
PROPERTY INDEX NUMBERS:	
PARCEL ONE:	18-18-200-038-0000
PARCEL TWO:	18-18-200-017-0000
TOTAL CONTIGUOUS OWNERSHIP:	2.41 AC.
PROJECT AREA:	2.41 AC.
TOTAL MULTI FAMILY RESIDENTIAL UNITS:	29

THE OWNER OF HERITAGE CROSSING SUBDIVISION, MCNAUGHTON DEVELOPMENT, LLC. WITH FACILITIES AS SHOWN ON THIS EXHIBIT (EXHIBIT R), SHALL ASSUME RESPONSIBILITY FOR THE FOLLOWING MAINTENANCE ACTIVITIES, UNTIL SUCH TIME WHERE CERTAIN REQUIREMENTS ARE MET. STORM WATER RETENTION AND DETENTION FACILITIES SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (H.O.A.)

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

1. General
Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
- X Litter and debris shall be controlled
- X Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- X Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- X Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- X Roads shall be swept, vacuumed and/or washed on a regular basis

2. Stormwater Management Facilities
All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

Side Slopes/Embankment/Emergency Overflow Structure
- X Inspect embankments for settlement and erosion
- X Remove woody growth from the embankment
- X Any breaks, hire Registered Professional Engineer for design resolution
- X Seed and sod any eroded areas
- X Signs of piping (leakage) or seepage, repair
- ___ Stabilize emergency overflow structure if erosion observed
- ___ Remove obstructions blocking emergency overflow spillway

Vegetated Areas
- X Regular mowing to control vegetation, no cutting of native vegetation
- X Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes or other vehicles, repair
- X Check for invasive vegetation, remove where possible
- X All vegetation must be maintained per the approved planting plan

Outlet Control Structure
- ___ Inspect restrictor and remove debris if clogged or discharge reduced
- ___ Remove accumulated sediment at outlet
- ___ Scour and erosion at outlet, repair and reseed
- ___ Any ice damage to outlet of pipe, repair if necessary
- ___ Condition of trash tracks, remove debris
- ___ Outlet channel conditions downstream

Access for Maintenance Equipment
- X Remove any obstructions placed in maintenance easements

Safety Features
- ___ Access controls to hazardous areas
- X Fences
- X Loose or damaged posts
- X Loose or broken wires
- X Condition of gates
- X Signs

Detention Volume
- X Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

3. Volume Control Facility
Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:
- ___ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
- ___ Surface of permeable pavement shall be cleaned with low-pressure power washer.
- X Accumulated sediment from surface shall be vacuumed out and disposed of properly.
- X Appropriate signage shall be repaired if damaged or illegible.

4. Stormwater Collection System
The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
- X Remove accumulated leaves and other debris from grates
- X Reset covers/lids on as-needed basis
- X Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers/Culverts
- X Visually inspect pipes by removing manhole lids, make repairs as necessary
- X Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- X Restore riprap at outfalls if erosion observed
- X Restore riprap at outfalls
- X Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)
- X Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
- X Remove any obstructions that have been placed in the drainage path
- X Seed and sod any eroded areas
- X Restore riprap as necessary
- X Regrade to provide positive drainage as necessary
- X Regular mowing to control vegetation

5. Vegetated Areas
- X Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- X Evidence of grazing, motorbikes, or other vehicles, repair.
- X Check for invasive vegetation, remove when possible.
- X Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
- X Dead or damaged non-native grassy areas – repair with seeding with fertilization or seeding with mulch.
- ___ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

6. Qualified Sewer Construction
- X Perform manhole inspections once every five years, make repairs as necessary.
- X Perform sewer inspections once every five years, make repairs as necessary.
- X Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
- X Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

STORMWATER SUMMARY

	REQUIRED (AC. FT.)	PROVIDED (AC. FT.)
VOLUME CONTROL STORAGE	0.13	0.15
DETENTION VOLUME	1.51	0.729

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WRSC REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
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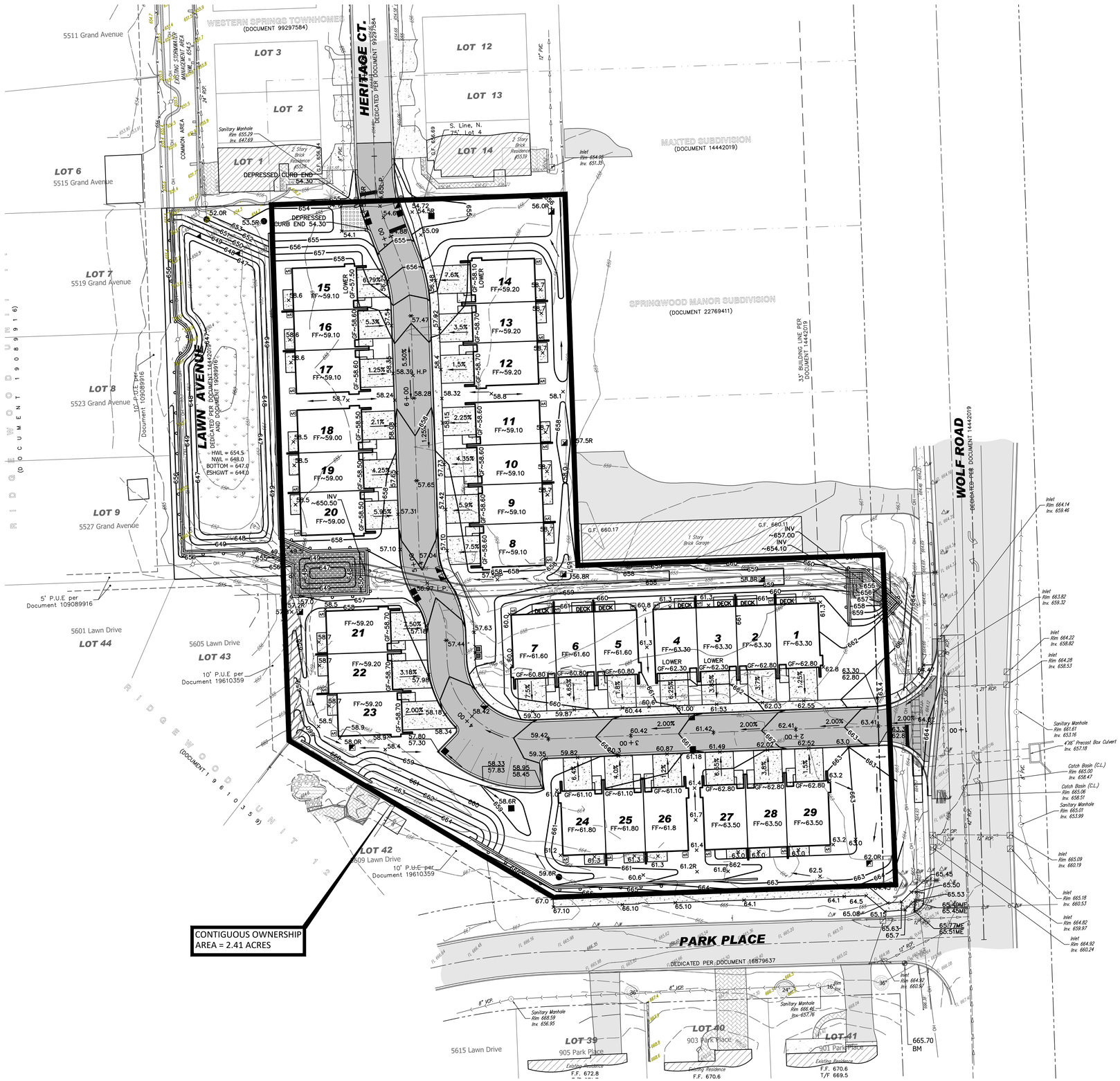
PROJECT INFORMATION

Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

MW1
OF
MW1

MWRD EXHIBIT R

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N

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

TRIBUTARY
IMPERVIOUS AREA =1.50 ACRES

TRIBUTARY
PERVIOUS AREA = 0.89 ACRES

VOLUME CONTROL

DEVELOPMENT AREAS NOT
TRIBUTARY TO POND = 0.02 ACRES

STORM WATER REQUIREMENTS

VCBMP:
VOLUME REQUIRED = 0.13 Ac. Ft.
OR
65,114 x (1"/12) = 5,426 Cu. Ft.

VCBMP VOL. PROVIDED = 0.15 Ac. Ft.
648–647 = 1.0' x (6,621) = 6,621 Cu. Ft.
(STORM WATER LOT)

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAKERANGE HIGHLANDS SD	DNV
2	10-17-24	PER WESTERN SPRINGS REVIEW	SDD
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6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

MW2
OF
MW2

MWRD DRAINAGE EXHIBIT

REVIEW SET
NOT FOR CONSTRUCTION

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Heritage Crossing - Western Springs, IL 12/17/2024

Existing Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 1hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			2.90	38	0.001	
	649.37	13				0.0009
			0.63	126	0.003	
	650.00	506				0.0038
			1.00	2,614	0.060	
	651.00	5,647				0.0638
			1.00	8,338	0.191	
	652.00	11,358				0.2552
			1.00	12,572	0.289	
	653.00	13,827				0.5439
			1.00	14,929	0.343	
	654.00	16,059				0.8866
			0.50	8,275	0.190	
Design HWL	654.50	17,045				1.0765
			0.50	11,383	0.261	
	655.00	29,013				1.3379
			0.70	27,797	0.638	
Overflow at Heritage Ct.	655.70	51,472				1.9760
			0.30	16,943	0.389	
	656.00	61,632				2.3649
			0.10	6,357	0.146	
Top of Existing Wall	656.10	65,528				2.5109

REVISIONS			
NO	DATE	DESCRIPTION	BY
1	9/27/24	PER VILLAGE REVIEW	SMW

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

EXISTING FLOODING EXHIBIT
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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PROJECT INFORMATION
Project No.: 24-0001
Scale: 1"=30'
Date: 09-05-2024
Design By: SDD
Drawn By: SDD
Checked By: DMV

1 OF 1

EXISTING CONDITIONS FLOODING EXHIBIT



GRADING PLAN



LEGEND

- EXISTING EMERGENCY OVERFLOW ROUTE
- PROPOSED EMERGENCY OVERFLOW ROUTE
- LIMITS OF PROPOSED FLOODING PER DETAILED FLOOD ANALYSIS PREPARED BY DESIGNTEK ENGINEERING, INC. (CRITICAL DURATION STORM EVENT WHICH IS THE 100YR, 1-HOUR RAINFALL EVENT)

Heritage Crossing - Western Springs, IL

12/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 1hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

REVISIONS		
NO.	DATE	DESCRIPTION
1	12/17/24	PER VILLAGE REVIEW

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
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PROPOSED FLOODING EXHIBIT
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
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IL PROF. LIC. NO.: 184-003740

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1"=30'
Date: 09-05-2024
Design By: SDD
Drawn By: SDD
Checked By: DMV

1 OF 1

PROPOSED CONDITIONS FLOODING EXHIBIT

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DESIGNTEK ENGINEERING, INC.
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FINAL STORMWATER MANAGEMENT REPORT



FOR:

HERITAGE CROSSING
WSTERN SPRINGS, ILLINOIS

Prepared For:

McNaughton Development
11S220 Jackson Street – Suite 101
Burr Ridge, Illinois 60527
(630) 325-3400

December 13, 2024

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- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)

Stormwater Management Analysis Proposed Conditions

- Analysis Documentation
- 2yr-2hr Storm Event (peak flowrate & elevations)
- 10yr-2hr Storm Event (peak flowrate & elevations)
- 100yr-1hr Storm Event (peak flowrate & elevations)
- Bypass System Capacity calculations
- Interim Swale Capacity Calculation

SUMMARY

The Heritage Crossing re-development is approximately 2.41 gross acres with the current use being professional office buildings and associated parking lot areas. An existing stormwater detention basin is located adjacent to the site in a 0.34-acre parcel dedicated as Lawn Avenue. The proposed re-development consists of twenty-nine residential single family attached units with related roadway, utilities, and a stormwater management area. The existing stormwater management facility (South Detention Pond) owned by the Village of Western Springs and maintained by the Heritage Springs HOA will be enhanced to provide the MWRD required volume control elements and will include increased stormwater storage volume to provide additional detention to attenuate more of the off-site upstream stormwater run-off prior to being released downstream. The FEMA FIRM map 17031CO467J effective 8/19/2008 indicates that there are no special flood hazard areas (floodplain) on the subject property (Zone "X"). The intent of this report is to convey the existing site conditions along with the final planning development and calculations that have been completed to support Final Engineering.

The existing site is not located in the FEMA mapped floodplain. Evidence has shown that the existing site and the Heritage Springs subdivision experience flooding during large storm events. DesignTek Engineering was contracted to complete a detailed flood analysis for the detention system maintained by the Heritage Springs HOA. An off-site area of approximately172.3 acres, to the east of Wolf Road was determined to be tributary to the subject site via an existing 4'x6' concrete box culvert that crosses under Wolf Road. The upstream off-site area is developed, and the area was divided into two sub-areas. They were delineated as Ashbrook Subdivision and LaGrange Highlands offsite with areas 42.90 acres and 129.40 acres, respectively. Time of concentrations and curve numbers were calculated for each area. MWRD permit number 99-0525 was obtained for the Ashbrook Subdivision. This information was used in HEC HMS computer modeling software to analyze the system and determine a 100-year critical duration peak flowrate of 359.61 cfs. This occurs during the 1-hour event. The high-water level (HWL) for the existing detention basin (basin C) was determined to be 655.16.

To allow for the required Cook County DOTH site distance requirements the existing box culvert under Wolf Road will be extended 66 feet away from the proposed Heritage Court intersection. A bypass system will be constructed to collect and convey the peak discharge through a proposed 4'x6' concrete box culvert. The box culvert matches the upstream condition. The calculated peak HWL was determined to be 655.11 for the proposed condition. This is a reduction of 0.05'. The site will be inundated with water at the north end of Heritage Court, near the property line. Under existing conditions this area was also inundated with water. The proposed condition will have no significant impacts when compared to existing conditions. An interim swale will be constructed on site to convey the discharge during rainfall events during the construction of the bypass system. The swale was designed to carry the peak discharge.

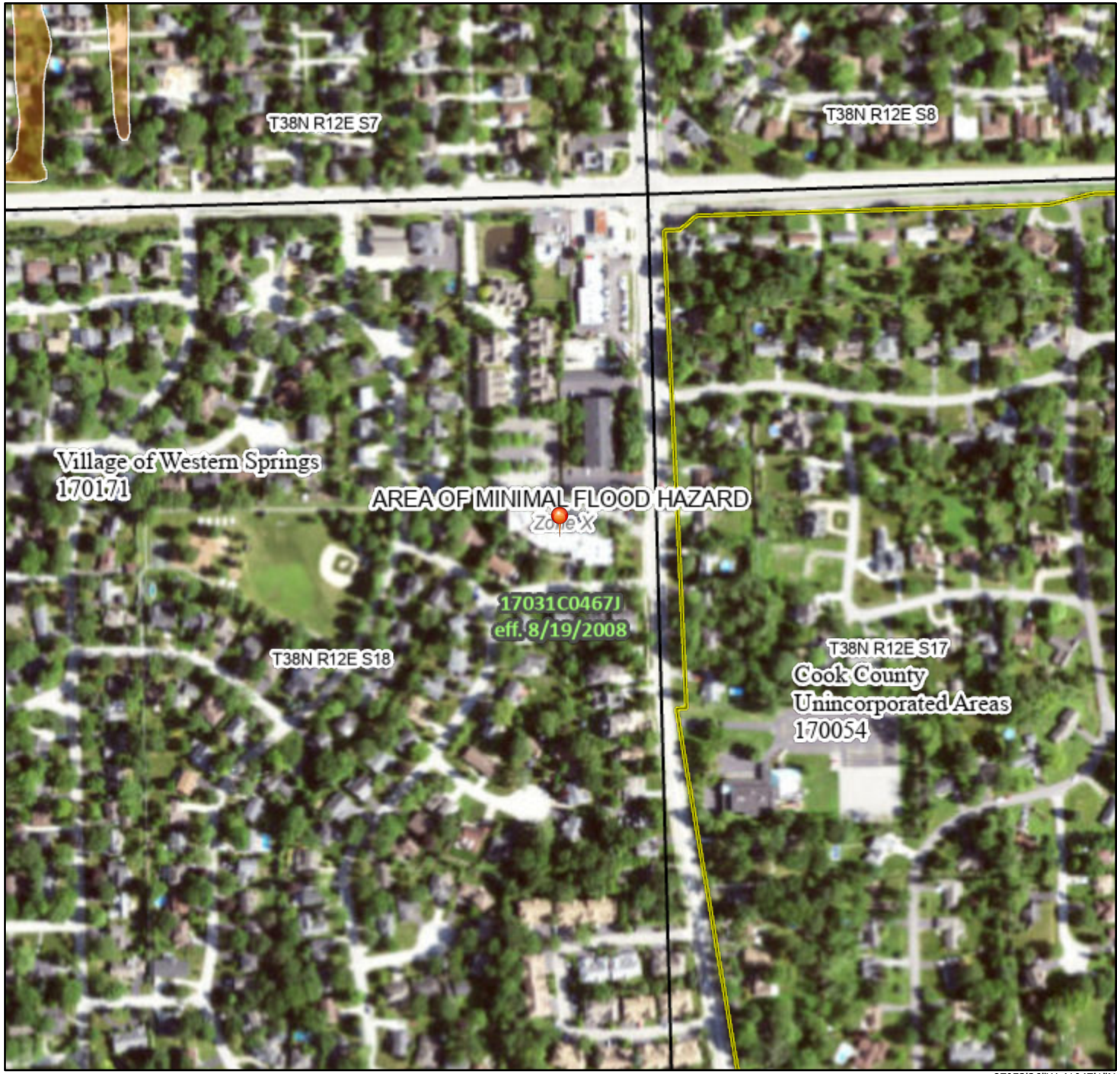
The existing condition (professional office buildings) has a total impervious area of 1.67 acres with the proposed re-development (residential) consisting of 1.50 acres equating to a total reduction in impervious area of 0.17 acres or 10%. Utilizing the proposed impervious area within the re-development site, the required MWRD volume control storage has been calculated to be 0.13 ac-ft. This volume is proposed as surface storage (elevations 647.0 – 648.0) below the NWL in the stormwater management pond and has a proposed volume of 0.15 ac-ft. A PVC underdrain is proposed below the volume control area. Recent soil investigation for the existing south detention pond revealed that the Estimated Seasonal High Groundwater Table (ESHGWT) is at

elevation 644.0, 3’ feet below the proposed pond bottom. See enclosed Soil Investigation Report within the appendix section of this report for reference.

The previously issued MWRD permit (99-228) for the original development was obtained and is included in the appendix for reference. Upon examination the detention review sheet within the permit does not depict any detention volume requirements for the original development. Although the as-built plan dated (09-29-2007) for the original development depicts the volume provided for the subject “South Detention Pond” as 0.729 Ac-Ft. and based on the recent topographic survey for the proposed re-development we have calculated the South Detention Pond storage volume to currently be 0.76 Ac-Ft. which appears to match the original intent. Initial conversations with Village staff revealed that even though the re-development has a decrease in impervious area they have experienced stormwater flooding issues off-site and further downstream within the same tributary of the subject site and expansion of the existing stormwater facility, if possible, would be a regional benefit. Taking this into account the proposed re-development will include an expansion of the South Detention Pond volume to 1.64 Ac-Ft increasing the storage volume by 0.85 Ac-Ft which essentially doubles the volume. The 100-year peak flowrate for the development site will also be reduced to 13.96 cfs from the existing condition of 15.64 cfs (+/- 11% reduction). The proposed residential buildings also will not have basements and therefore no sump pump discharges will be tributary to the stormwater management area.

National Flood Hazard Layer FIRMette

87°54'14"W 41°47'28"N



87°53'36"W 41°47'1"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/22/2024 at 1:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cook County, Illinois

Heritage Crossing



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,140 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 17, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 13, 2020—Jul 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
854B	Markham-Ashkum-Beecher complex, 1 to 6 percent slopes	3.0	100.0%
Totals for Area of Interest		**3.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cook County, Illinois

854B—Markham-Ashkum-Beecher complex, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: 28shj
Elevation: 510 to 930 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Markham and similar soils: 40 percent
Ashkum and similar soils: 30 percent
Beecher and similar soils: 25 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Markham

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 21 inches: silty clay loam
H3 - 21 to 32 inches: silty clay loam
H4 - 32 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 55 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Description of Ashkum

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium and in the underlying till

Typical profile

H1 - 0 to 12 inches: silty clay loam
H2 - 12 to 29 inches: silty clay
H3 - 29 to 54 inches: silty clay loam
H4 - 54 to 60 inches: silty clay loam

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R110XY008IL - Wet Glacial Drift Upland Prairie
Hydric soil rating: Yes

Description of Beecher

Setting

Landform: End moraines, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Thin mantle of loess or other silty material and in the underlying till

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 24 inches: silty clay loam
H3 - 24 to 36 inches: silty clay loam
H4 - 36 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 24 to 45 inches to densic material
Drainage class: Somewhat poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: R110XY010IL - Moist Glacial Drift Upland Savanna
Hydric soil rating: No

Minor Components

Orthents, clayey

Percent of map unit: 5 percent
Landform: Lake plains, ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

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CONFIDENTIAL

SOIL INVESTIGATION REPORT
5600 S. Wolf Road
(North of Park Place & S. Wolf Road)
Western Springs, IL 60480

AET Project Number: Geo – 9951
April 29, 2024

Prepared for:

McNaughton Development

Mr. John Barry
McNaughton Development
11S220 Jackson Street, Suite # 101
Burr Ridge, Illinois 60527

April 29, 2024

Soil Investigation Report
5600 S. Wolf Road
Western Springs, IL

AET Project Number: Geo – 9951

Gentleman / Madam,

Associated Engineering & Technology, Inc. (AE&T) has completed two (2) soil borings and sampling of soils to determine the Estimated Seasonal High Groundwater Level (ESHGWL) at the above referenced site in Western Springs, IL. The borings were done at the existing detention pond area and the locations are shown in the appendix of this report. The soil samples were analyzed in the laboratory for soil description, visual classification and moisture content by a geotechnical engineer. Munsell Chart and FEMA maps were also used to estimate the seasonal high groundwater elevations. Based upon our investigation the ESHGWL was noted to be at six (6) feet below the bottom of existing pond.

If you have any questions regarding this report, please contact us.

Sincerely,
Associated Engineering & Technology, Inc.



Ashok Medhi, M.S.
Geotechnical Engineer

Toby C. Mickey, P.E.
Senior Engineer

1.0 SOIL BORING

A total of two (2) soil borings were done were done at the proposed development to 10 feet depth each in accordance with American Society for Testing and Materials procedure for Standard Penetration Test and Split Barrel Sampling of Soils (ASTM 1586). The borings were done with a CME 45 drill rig mounted on All-Terrain Vehicle.

The soil samples were collected at 2-1/2 feet interval to a depth of 10 feet and thereafter at 5 feet interval. The boreholes were backfilled with auger cuttings after completion of drilling.

The soil samples were placed in glass containers and brought to our laboratory. A site plan showing the approximate soil boring locations is included in appendix. Log of the soil borings along with lab classifications are included in Appendix B.

2.0 LABORATORY TESTING

All samples were visually classified according to the Unified Soil Classification System (ASTM D-2488) by a geotechnical engineer. The Auger boring samples are disturbed and were generally used for classification testing (D2487, D2488), moisture content and pocket penetrometer test (ASTM D 854) to evaluate unconfined compressive strength for clayey and clayey silt soils. The primary purpose of this investigation was to determine the Estimated Seasonal High Groundwater Elevation. The boring logs with soil description are included in the Appendix.

3.0 SOIL DESCRIPTION & ANALYSIS

The sub-surface materials in the borings (B-1 & B-2) comprised 8 to 10 inches of black topsoil with roots.

It was underlain by very stiff to hard moist **brown silty Clay** with fine sand and gravel (CL) to depths of about 6.0 feet. Beneath it, medium dense moist **brownish gray fine to medium Sand** trace small gravel (SP) was noted to depths of 8 feet and changed color to **gray** Fine Sand trace small gravel (SP) to the boring depths of 10 feet.

Groundwater was **not** encountered during and after completion of the borings.

3.1 Estimated Seasonal High Ground Water Level

The Estimated seasonal high groundwater level (ESHGWL) at Borings B-1 and B-2 located at existing Detention Pond is at about (six) 6 feet. It is based upon visual classification of the soil samples, existing groundwater levels, site topography, soil conditions, color description and change of color from brown to brownish gray at 6 feet, FIRM maps and Munsell chart (10 YR**).**

Note: Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles.

Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

5.0 Warranty / Limitations of liability

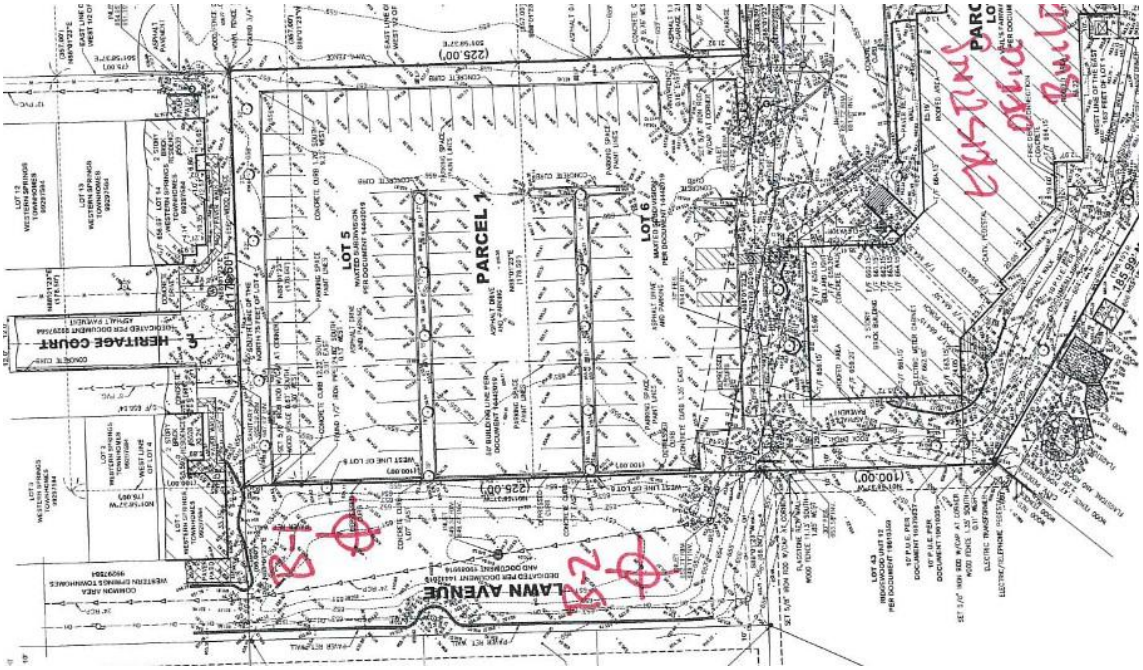
Associated Engineering & Technology, Inc. understands that the Boring log depicts conditions disclosed at the particular location and date indicated and may vary within 5 feet of vertical and lateral distance from the borings.
If significant variations or changes are in evidence during construction, it may then be necessary to re-evaluate the recommendations of this report.
In no event shall Associated Engineering & Technology, Inc. be liable for any indirect, special, consequential or incidental damages, of any kind or nature however caused and based on any theory of liability, arising out of or relating to this report, whether or not such party has been advised of the possibility of such damages.

APPENDICES

BORING LOCATION
BORING LOGS
GENERAL NOTES &
USCS CLASSIFICATION CHART
MUNSELL CHART (10 YR)

BORING LOCATION PLAN

(Not to Scale)



BORING LOG

BORING NO. **B – 1**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Very stiff to hard Brown Silty Clay Sand and gravel (CL) -		2.5	1	AU		16.5	3.0	8	
None			5	2	AU		16	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

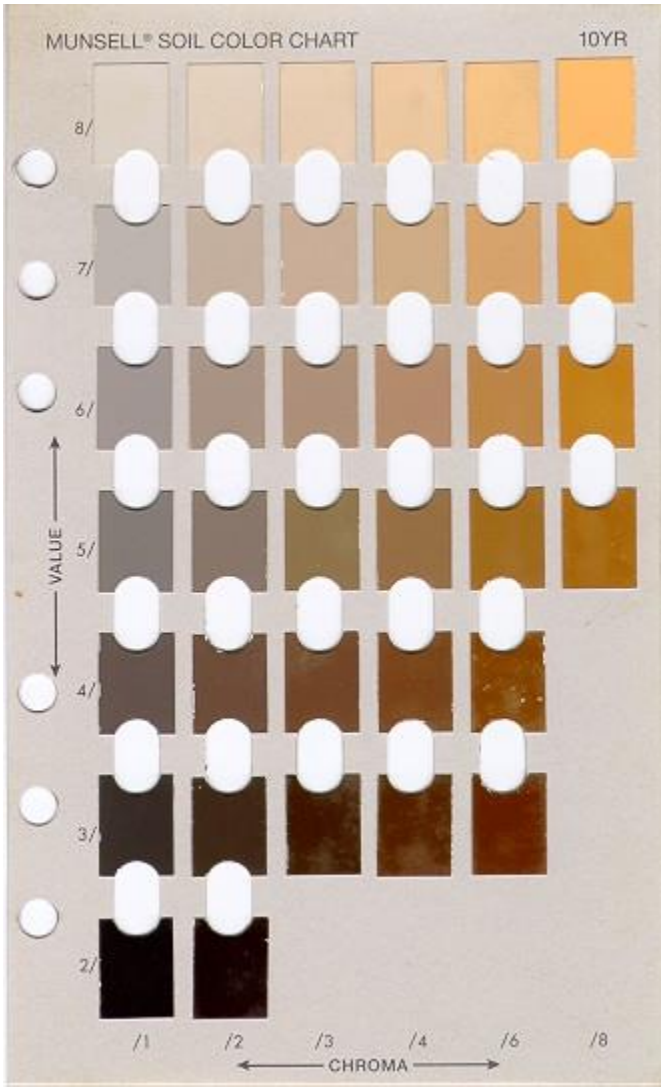
BORING LOG

BORING NO. **B – 2**
LOCATION**: 5600 S. Wolf Road, Western Springs, IL** DATE: April 27, 2024

WATER LEVEL (ft)	MATERIAL DESCRIPTION	STRATA DEPTH (ft)	SAMPLE DEPTH (ft)	SAMPLE NUMBER	SAMPLE TYPE	SPT N-value	MOISTURE CONTENT (%)	Qu (TSF)	RECOVERY (IN.)	NOTE
	Topsoil & grass	0.9								
	Hard moist Brown Silty Clay Trace fine sand And gravel (CL)		2.5	1	AU		15	4.0	8	
None			5	2	AU		15.5	4.0	8	
	Medium dense moist Brownish gray fine to Medium SAND Trace gravel	6	7.5	3	AU				8	
	Medium dense moist Gray fine Sand (SP) Trace gravel	8								
	End of Boring	**10**	10	4	AU				8	

W/D: While Drilling **A/D: After Drilling,**

MUNSELL SOIL COLOR CHART



Soil colors are expressed in terms of hue, value, and chroma, in accordance with the standardized Munsell color system (Soil Survey Staff, 1951). Hue refers to the wavelength, value expresses the degree of lightness or darkness, whereas chroma notes the purity or strength of a particular color (Munsell, 1974). This system is used to describe the matrix or dominant soil color and the blotches of less-prevalent colors commonly called mottles. Soil colors are commonly associated with the presence or absence of iron. Weathering of soil minerals is a slow process but with time causes the release of mineral constituents to the environment. Soluble weathering-products are removed from the soil profile, while more stable compounds will precipitate. Iron (Fe), released from a mineral, frequently coats soil particles with thin oxide-coatings. Well-aerated soils typically are yellowish brown-colored from these iron-oxide coatings. Depending on the intensity of the weathering cycles, the iron-oxides may display different colors.

GENERAL NOTES

In order to provide uniformity throughout our project, the following system has Been adopted to describe each soil sample. Rock Shale and other materials will be described in detail as encountered.

CONSISTENCY OF COHESIVE SOIL		RELATIVE DENSTY OF GRANULAR SOIL	
UNCONFINED COMPRESSIVE STRENGTH **QU(TSF)**	**CONSISTENCY**	**"N" VALUE (Blows/foot)**	**RELATIVE DENSITY**
<0.25	VERY SOFT	0 – 3	VERY LOOSE
0.26 – 0.49	SOFT	4 – 9	LOOSE
0.50 – 0.99	MEDIUM STIFF	10 – 29	MEDIUM DENSE
1.00 – 1.99	STIFF	30 – 49	DENSE
2.00 – 3.99	VERY STIFF	50 – 80	VERY DENSE
4.00 – 8.00	HARD	>80	EXTREMELY DENSE
> 8	VERY HARD		

- **Number of blows per foot required to drive a 2" O.D. split-spoon sampler using a140lb. Weight falling free for 30 inches, except where otherwise noted.**

COLOR AS DETERMINED ON THE FRESH, MOST SAMPLES

PREDOMINATE COLORS		SHADES	MODIFYING ADJECTIVE
Black	Yellow	Light	Vari-colored
Brown	Red	Dark	Streaked
Gray	Blue		Mottled

GRADATION DESCRIPTION AND TERMINOLOGY

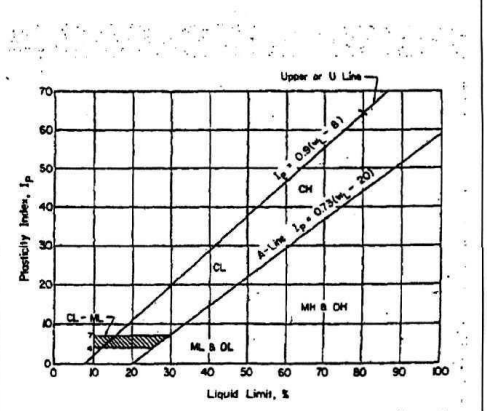
COMPONENTS	SIZE RANGE
BOULDER	OVER 8 INCHES
COBBLE	8 INCHES TO 30 INCHES
GRAVEL	3 INCHES TO #4 SIEVE (4.75 mm)
SAND	#4 SIEVE TO #200 SIEVE (0.075 mm)
SILT	PASSING # 200 SIEVE (0.075 mm)
CLAY	SMALLER THAN 0.005 mm.

DESCRIPTION OF COMPONENT ALSO PRESENT IN SAMPLE	PERCENT OF DRY WEIGHT
TRACE	1 – 9
LITTLE	10 –19
SOME	20 - 34
AND	35 - 50

GROUND WATER LEVEL

Water levels are those observed when boring were made, or as noted. Porosity of soil strata, variation of rainfall, Site topographic, ect., may cause changes on these levels.

Associated Engineering & Technology, INC.

MAJOR DIVISIONS			GROUP SYMBOL	TYPICAL NAMES	UNIFIED SOIL CLASSIFICATION SYSTEM
COARSE- GRAINED SOILS More than 50 % of coarse retained on # 4	GRAVEL 50% or more of coarse fraction Related of # 4 Sieve	LEAN GRAVEL	GW	WELL GRADED GRAVELS AND GRAVELS. SAND MIXTURES LITTLE OR NO FINE	CLASSIFICATION ON BASIS OF PERCENTAGE OF FINES GW,GP,SW, GM,GC,SM,SC borderline cases requiring use of dual symbols. Less than 5% passing sieve No.200 sieve More than 12% passing No.200 sieve 5% To 12% passing No.200 sieve
			GP	POORLY GRADED GRAVELS AND GRAVEL – SAND MIXT--URE LITTLE OR NO FINES	$CU = \frac{D60}{D10}$ GREATER THAN 4 $Cc = \frac{(D30)^2}{D10 \times D60}$ Between 1 and 3
		GRAVELS WITH FINE	GM	SILTY GRAVELS AND GRAVELS-SAND-SILT MIXTURE	NOT MEETING BOTH CRITERIA FOR GW
			GC	CLAYEY GRAVELS GRAVEL – SAND – CLAY MIXTURE	ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4 / ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7 — ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
	SAND > 50 % of coarse fraction < # 4 sieve		SW	WELL GRADED SAND AND GRAVELY SAND, LITTLE OR NO FINES	$CU = \frac{D60}{D10}$ GREATER THAN 4 $Cc = \frac{(D30)^2}{D10 \times D60}$ Between 1 and 3
			SP	POORLY GRADED GRAVEL AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES	NOT MEETING BOTH CRITERIA FOR GW
			SM	SILTY – SANDS SAND SILT MIXTURE	ATTERBERG LIMITS PLOT BELLOW "A" LINE OR PLASTICITY INDEX LESS THAN 4 / ATTERBERG LIMITS PLOT ABOVE"A" LINE AND PLASTICITY INDEX LESS THAN 7 — ATTERBERG LIMITS PLOTING IN HATCHED AREA ARE BORDERING CLASSIFICATION USE OF DUAL SYMBOLS
			SC	CLAYEY SANDS SAND-CLAY MIXTURE	
FINE – GRAINED SOIL More than 50% passes on # 200 sieve	SILTS AND CLAY Liquid limit 50% or less		ML	INORGANIC SILTS,VERY FINE SAND,ROCKS,FLOUR SILTY OR CLAYEY FINE SANDS	
			CL	INORGANIC CLAYS, OF LOW TO HIGH PLASTICITY,GRAVELY CLAY, SANDY CLAYS, SILTY CLAYS, LEAN CLAY	
			OL	ORGANIC SILT AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAY Liquid limit Grater than 50%		MH	INORGANIC SILTS,MICACEOUS DIATOMACEOUS FINE SAND OR SILTS, ELASTIC SILTS	
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY	
HIGHLY ORGANIC SOIL			PT	PEAT, HIGHLY ORGANIC SOIL	PLASTICITY CHART(USCG)

Associated Engineering & Technology, INC.

Existing Detention Basins
Stormwater Storage Volume Verification

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "A" (Siebert Engineers) & East Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.6	0				0.0000
			0.45	10	0.000	
	650.0	65				0.0002
			1.00	383	0.009	
	651.0	849				0.0090
			1.00	1,371	0.031	
	652.0	1,970				0.0405
			1.00	2,288	0.053	
	653.0	2,622				0.0930
			1.00	3,004	0.069	
	654.0	3,402				0.1620
			0.50	1,919	0.044	
Design HWL	654.5	4,292				0.2060

2007 As-Builts (Kudrna & Associates, LTD) = 0.212 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "B" (Siebert Engineers) & North Retention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.8	10,543				0.0000
			0.20	2,139	0.049	
	648.0	10,848				0.0491
			1.00	11,883	0.273	
	649.0	12,948				0.3219
			1.00	14,312	0.329	
	650.0	15,720				0.6504
			1.00	16,448	0.378	
	651.0	17,186				1.0280
			1.00	17,186	0.395	
	652.0	17,186				1.4226
			1.00	17,186	0.395	
	653.0	17,186				1.8171
			1.00	17,186	0.395	
	654.0	17,186				2.2116
			0.50	8,593	0.197	
Design HWL	654.5	17,186				2.4089
			0.50	8,826	0.203	
	655.0	18,123				2.6115
			1.00	18,123	0.416	
	656.0	18,123				3.0276
			0.30	5,437	0.125	
Overland Flow Out Elevation	656.3	18,123				3.1524

2007 As-Builts (Kudrna & Associates, LTD) = 2.201 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & South Detention Pond (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	649.4	0				0.0000
			0.60	101	0.002	
	650.0	506				0.0023
			1.00	2,244	0.052	
	651.0	4,685				0.0538
			1.00	5,880	0.135	
	652.0	7,163				0.1888
			1.00	8,277	0.190	
	653.0	9,443				0.3788
			1.00	10,449	0.240	
	654.0	11,489				0.6187
			0.50	5,962	0.137	
Design HWL	654.5	12,366				0.7556

2007 As-Builts (Kudrna & Associates, LTD) = 0.729 AC-FT

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Pond "C" (Siebert Engineers) & West Channel Between Retaining Walls (Kudrna & Associates As-builts from 2007)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom	650.3	0				0.0000
			0.70	224	0.005	
	651.0	962				0.0052
			1.00	2,389	0.055	
	652.0	4,195				0.0600
			1.00	4,289	0.098	
	653.0	4,384				0.1585
			1.00	4,477	0.103	
	654.0	4,570				0.2612
			0.50	2,312	0.053	
Design HWL	654.5	4,679				0.3143

2007 As-Builts (Kudrna & Associates, LTD) = 0.309 AC-FT

UTILITY AND GRADING AS-BUILT PLAN
HERITAGE SPRINGS TOWNHOMES
WESTERN SPRINGS, ILLINOIS

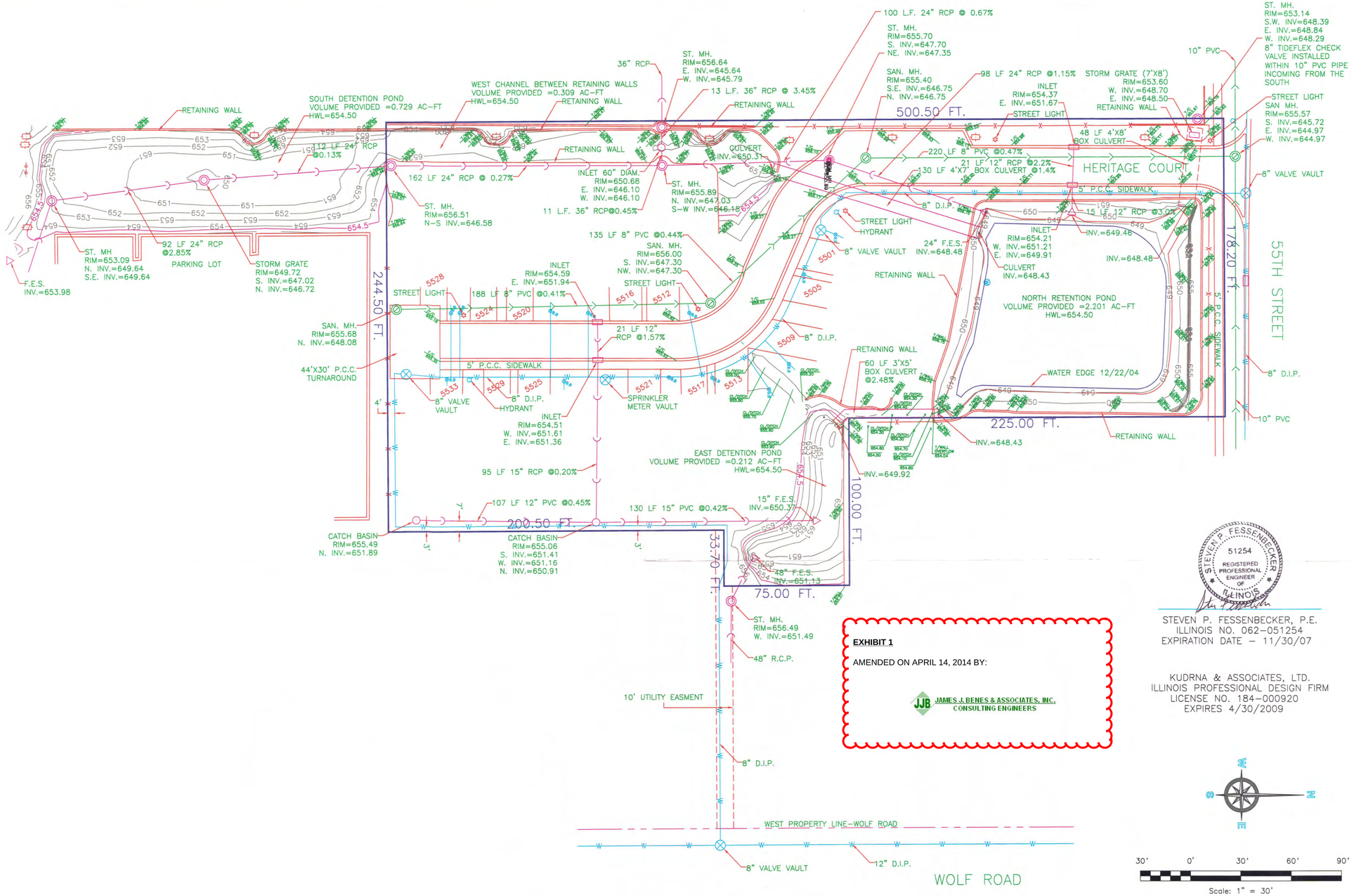


EXHIBIT 1

AMENDED ON APRIL 14, 2014 BY:

JAMES J. BENES & ASSOCIATES, INC.
CONSULTING ENGINEERS

LEGEND	ITEM	OWNERSHIP (MAINTENANCE RESPONSIBILTY)
W	8" WATER MAIN (Including Hydrants)	VILLAGE OF WESTERN SPRINGS
☼	STREET LIGHTS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	SANITARY SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	WATER SERVICES	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	STORM SEWER	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	DETENTION PONDS	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	RETENTION POND	HERITAGE SPRINGS HOMEOWNERS ASSOCIATION
	8" SANITARY SEWER	LAGRANGE HIGHLANDS SANITARY DISTRICT

VILLAGE OF WESTERN SPRINGS

STEVEN P. FESSENBECKER
51254
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

STEVEN P. FESSENBECKER, P.E.
ILLINOIS NO. 062-051254
EXPIRATION DATE - 11/30/07

KUDRNA & ASSOCIATES, LTD.
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000920
EXPIRES 4/30/2009

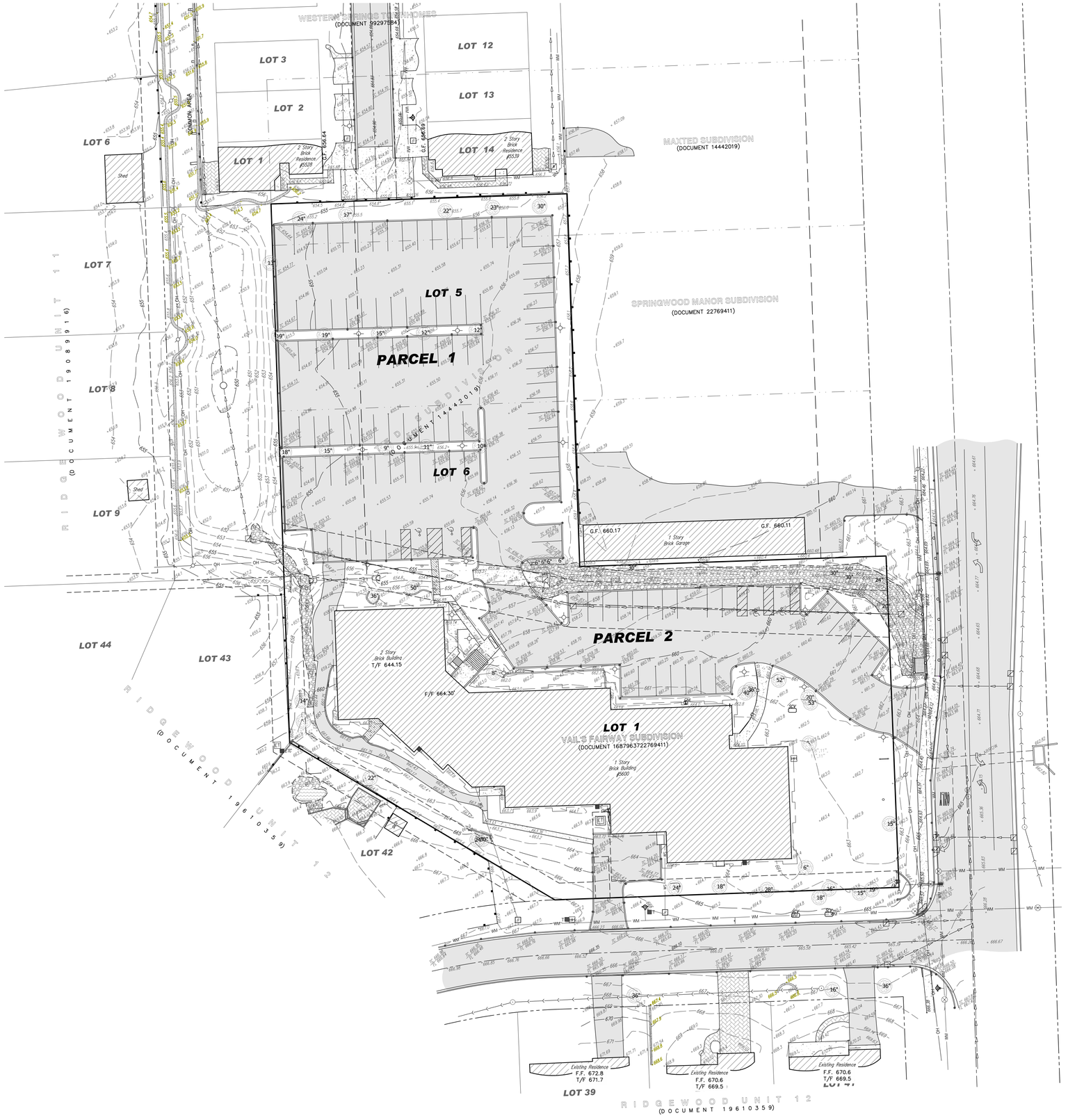
30' 0' 30' 60' 90'
Scale: 1" = 30'

REVISIONS

KUDRNA & ASSOCIATES, LTD.
CIVIL ENGINEERING
PLANNING • DESIGN • LAND SURVEY • CONSTRUCTION MANAGEMENT
203 NORTH CASS AVENUE • WESTMONT, ILLINOIS • 60559 • (630) 969-3060
400 SOUTH GREEN STREET • SUITE 304 • CHICAGO, ILLINOIS • 60607 • (312) 738-1522

Checked By: GDL
Drawn By: AJP/FJS
Date: SEPTEMBER 29, 2007
Scale: 1"=30'
Job Number: 5294
Title: HERITAGE SPRINGS TOWNHOMES
Sheet: 1 of 1

P:\5294 00 - Community 55th and Wolf\dwg\5294-rev.dwg, 9/27/2007 2:53:11 PM



N

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1 inch = 20 ft.

LEGEND

- ANCHOR
- B-BOX
- BENCHMARK
- GROUND FLOOD LIGHT
- POWER POLE
- SIGN
- SPRINKLER CONTROL VALVE
- HANDHOLD
- TRANSFORMER PAD
- CATCH BASIN
- STORM INLET
- FLARED END SECTION
- CLOSED LID MANHOLE
- WATER VALVE
- HYDRANT
- C CABLE TV PEDESTAL
- E ELECTRIC PEDESTAL
- T TELEPHONE PEDESTAL
- C E T TEL., ELEC., CABLE PEDESTALS
- E ELECTRIC METER
- G GAS METER
- FIP FOUND IRON PIPE
- 10" DECIDUOUS TREE W/ TRUNK SIZE
- LIGHT POLE W/MAST ARM
- PARKING LOT LIGHT (1)

HATCHING

- ASPHALT SURFACE
- ADA DETECTABLE WARNING
- BRICK SURFACE
- BUILDING LIMITS
- CONCRETE SURFACE
- RIP-RAP
- WATER

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- WOOD FENCE
- GUARDRAIL
- OH OVERHEAD WIRES
- WM WATER MAIN
- SANITARY SEWER
- SS SANITARY SERVICE
- STORM SEWER
- EDGE OF WATER
- BARRIER CURB
- DEPRESSED CURB
- CURB & GUTTER
- DEPRESSED CURB & GUTTER
- RETAINING WALL
- ### CONTOUR LINE

ABBREVIATIONS

◦ ###	EXIST. SPOT ELEVATION
CMP	CORRUGATED METAL PIPE
D.E.	DRAINAGE EASEMENT
DIP	DUCTILE IRON PIPE
F.F.	FINISHED FLOOR
INV	INVERT
MH	MANHOLE
P.U.E.	PUBLIC UTILITY EASEMENT
RCP	REINFORCED CONCRETE PIPE
T/F	TOP OF FOUNDATION
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE
N	NORTH
S	SOUTH
E	EAST
W	WEST
(###.##')	RECORD/DEED
###.##	MEASURED

REVISIONS

NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

TOPOGRAPHIC MAP
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 04/02/2024
Field Date: BY OTHERS
Drawn By: SJL
Checked By: SDS

2 OF 2

EXISTING CONDITIONS - GRADING

L:\Projects\2024\24-0001\Survey\dwg\Topography\24-0001 Topo.dwg Plot Date:4/26/2024 8:47:08 AM By: SJL

HERITAGE SPRINGS STORMWATER EXHIBIT

55TH STREET

HERITAGE CT.

915 W. 55th Street

5505 Grand Avenue

5507 Grand Avenue

5511 Grand Avenue

5515 Grand Avenue

5519 Grand Avenue

Retention Pond
Water Elevation: 647.8
(04/15/2024)

WESTERN SPRINGS TOWNHOMES
(DOCUMENT 99297584)

MAXTED SUBDIVISION
(DOCUMENT 14442019)

SPRINGWOOD MANOR SUBDIVISION

LOT 1
LOT 2
LOT 3
LOT 5
LOT 6
LOT 7
LOT 12
LOT 13
LOT 14

COMMON AREA

EXISTING OVERLAND FLOOD ROUTE

Inlet
Rim 650.17
(18") Inv. 648.00

Catch Basin (CL)
Rim 652.78
(18" RCP) Inv. 647.96

7.5' x 9' Storm Box w/Grate
Rim 653.16
(18" RCP, W) Inv. 648.38
(Box Culvert, E) Inv. 648.13

Catch Basin (CL)
Rim 653.83
(12" RCP, W) Inv. 650.32
(12" RCP, E) Inv. 649.31

Catch Basin (CL)
Rim 653.87
(12" RCP) Inv. 651.45

Inlet
Rim 651.84

Box Culvert
Inv. 648.06
(See detail)

12" YES
Inv. 649.02

24" RCP
Inv. 648.06

Box Culvert
Inv. 648.00
(See detail)

Box Culvert
Inv. 648.02
(See detail)

Box Culvert
Inv. 649.55
(See detail)

18" YES
Inv. 650.32

Catch Basin (CL)
Rim 655.26
(24" RCP) Inv. 646.81

Box Culvert
Inv. 649.90
(See detail)

Catch Basin (CL)
Rim 656.18
(36" RCP) Inv. 645.23

Catch Basin (CL)
Rim 650.30
(36" RCP) Inv. 645.98

Catch Basin (CL)
Rim 655.47
(36" RCP) Inv. (No Data)

Sanitary Manhole
Rim 655.29
Inv. 647.69

Inlet
Rim 654.95
Inv. 651.35

2 Story Brick Residence
#528

2 Story Brick Residence
#555

Retaining Wall

Wood Fence

Vinyl Fence

Existing Stormwater Basin

Curb is 0.9' E.

Curb is 1.7' S.' E.

N. Line, Lot 4

E. Line, W. 1/2, N. Line, Lot 4

S. Line, N. 75', Lot 4

S. Line, Lot 4
N. Line, Lot 5

E. Line, W. 1/2, Lot 5

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DNV
2	08-26-24	PER WESTERN SPRINGS REVIEW	SDD

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDS

1
OF
1

HERITAGE SPRINGS STORMWATER EXHIGIT

REVIEW SET
NOT FOR CONSTRUCTION

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date: 7/12/2024 2:18:09 PM By: dsteh

On-Site & Off-Site
Existing & Proposed Conditions
Summary Analysis Tables

Heritage Crossing
On-Site Reservoir & Peak Flow Rate Summary Analysis

Storage West Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	658.86	656.77	-2.09
2YR - 2HR	658.88	656.81	-2.07
2YR - 3HR	658.84	656.72	-2.12
2YR - 6HR	658.72	656.38	-2.34
2YR - 12HR	658.58	656.00	-2.58
2YR - 24HR	658.41	655.62	-2.79
2YR - 48HR	657.56	655.35	-2.21
10YR - 1HR	659.44	658.54	-0.90
10YR - 2HR	659.44	658.55	-0.89
10YR - 3HR	659.38	658.36	-1.02
10YR - 6HR	659.17	657.70	-1.47
10YR - 12HR	658.93	656.96	-1.97
10YR - 24HR	658.69	656.28	-2.41
10YR - 48HR	658.52	655.84	-2.68
100YR - 1HR	660.32	660.39	0.07
100YR - 2HR	660.30	660.36	0.06
100YR - 3HR	660.15	660.20	0.05
100YR - 6HR	659.84	659.82	-0.02
100YR - 12HR	659.42	658.47	-0.95
100YR - 24HR	659.11	657.52	-1.59
100YR - 48HR	658.85	656.75	-2.10

Basin "C"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET	Existing Discharge C.F.S.	Proposed Discharge C.F.S.
2YR - 1HR	650.72	650.61	-0.11	59.54	58.39
2YR - 2HR	650.78	650.71	-0.07	60.13	59.40
2YR - 3HR	650.67	650.61	-0.06	59.05	58.35
2YR - 6HR	650.27	650.22	-0.05	54.59	54.05
2YR - 12HR	649.51	649.49	-0.02	45.02	44.70
2YR - 24HR	648.76	648.75	-0.01	32.26	32.16
2YR - 48HR	648.31	648.31	0.00	23.95	23.89
10YR - 1HR	652.46	652.44	-0.02	75.73	75.49
10YR - 2HR	652.49	652.47	-0.02	75.96	75.77
10YR - 3HR	652.31	652.30	-0.01	74.48	74.37
10YR - 6HR	651.70	651.69	-0.01	69.14	69.03
10YR - 12HR	650.95	650.94	-0.01	61.89	61.82
10YR - 24HR	650.13	650.13	0.00	52.97	52.92
10YR - 48HR	649.15	649.14	-0.01	39.37	39.28
100YR - 1HR	655.16	655.11	-0.05	95.49	95.13
100YR - 2HR	655.14	655.08	-0.06	95.38	94.97
100YR - 3HR	654.64	654.50	-0.14	92.00	91.08
100YR - 6HR	653.74	653.74	0.00	85.65	85.64
100YR - 12HR	652.47	652.46	-0.01	75.75	75.72
100YR - 24HR	651.52	651.51	-0.01	67.42	67.38
100YR - 48HR	650.71	650.71	0.00	59.43	59.42

Basin "A" & "B"

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	649.47	649.07	-0.40
2YR - 2HR	650.20	649.85	-0.35
2YR - 3HR	649.81	649.48	-0.33
2YR - 6HR	648.54	648.33	-0.21
2YR - 12HR	647.80	647.80	0.00
2YR - 24HR	647.80	647.80	0.00
2YR - 48HR	647.80	647.80	0.00

10YR - 1HR	653.41	653.39	-0.02
10YR - 2HR	653.41	653.41	0.00
10YR - 3HR	653.39	653.38	-0.01
10YR - 6HR	653.33	653.32	-0.01
10YR - 12HR	653.29	653.29	0.00
10YR - 24HR	648.95	648.90	-0.05
10YR - 48HR	647.80	647.80	0.00
100YR - 1HR	654.19	654.18	-0.01
100YR - 2HR	654.19	654.18	-0.01
100YR - 3HR	654.07	654.01	-0.06
100YR - 6HR	653.72	653.72	0.00
100YR - 12HR	653.41	653.41	0.00
100YR - 24HR	653.31	653.31	0.00
100YR - 48HR	653.28	653.28	0.00

2.41 Acre Developmental Site (Peak Flow Rates)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Reduction %
2YR - 1HR	3.91	2.97	-24.04%
2YR - 2HR	3.15	2.53	-19.68%
2YR - 3HR	2.53	2.10	-17.00%
2YR - 6HR	1.63	1.41	-13.50%
2YR - 12HR	1.05	0.93	-11.43%
2YR - 24HR	0.65	0.60	-7.69%
2YR - 48HR	0.45	0.43	-4.44%
10YR - 1HR	7.75	6.45	-16.77%
10YR - 2HR	5.91	5.14	-13.03%
10YR - 3HR	4.59	4.08	-11.11%
10YR - 6HR	3.01	2.62	-12.96%
10YR - 12HR	1.78	1.66	-6.74%
10YR - 24HR	1.05	1.02	-2.86%
10YR - 48HR	0.72	0.70	-2.78%
100YR - 1HR	15.64	13.96	-10.74%
100YR - 2HR	11.43	10.41	-8.92%
100YR - 3HR	9.07	8.21	-9.48%
100YR - 6HR	5.72	5.31	-7.17%
100YR - 12HR	3.14	3.04	-3.18%
100YR - 24HR	1.81	1.78	-1.66%
100YR - 48HR	1.21	1.19	-1.65%

Heritage Crossing
Off-Site Reservoir & Peak Flow Rate Summary Analysis

Box Inlet East Side Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	660.51	660.47	-0.04
2YR - 2HR	660.55	660.51	-0.04
2YR - 3HR	660.46	660.42	-0.04
2YR - 6HR	660.11	660.08	-0.03
2YR - 12HR	659.73	659.70	-0.03
2YR - 24HR	659.35	659.32	-0.03
2YR - 48HR	659.08	659.05	-0.03
10YR - 1HR	662.29	662.24	-0.05
10YR - 2HR	662.30	662.25	-0.05
10YR - 3HR	662.11	662.06	-0.05
10YR - 6HR	661.45	661.40	-0.05
10YR - 12HR	660.70	660.66	-0.04
10YR - 24HR	660.02	659.98	-0.04
10YR - 48HR	659.57	659.54	-0.03
100YR - 1HR	664.98	664.94	-0.04
100YR - 2HR	664.96	664.92	-0.04
100YR - 3HR	664.86	664.78	-0.08
100YR - 6HR	663.86	663.57	-0.29
100YR - 12HR	662.23	662.17	-0.06
100YR - 24HR	661.27	661.22	-0.05
100YR - 48HR	660.49	660.45	-0.04

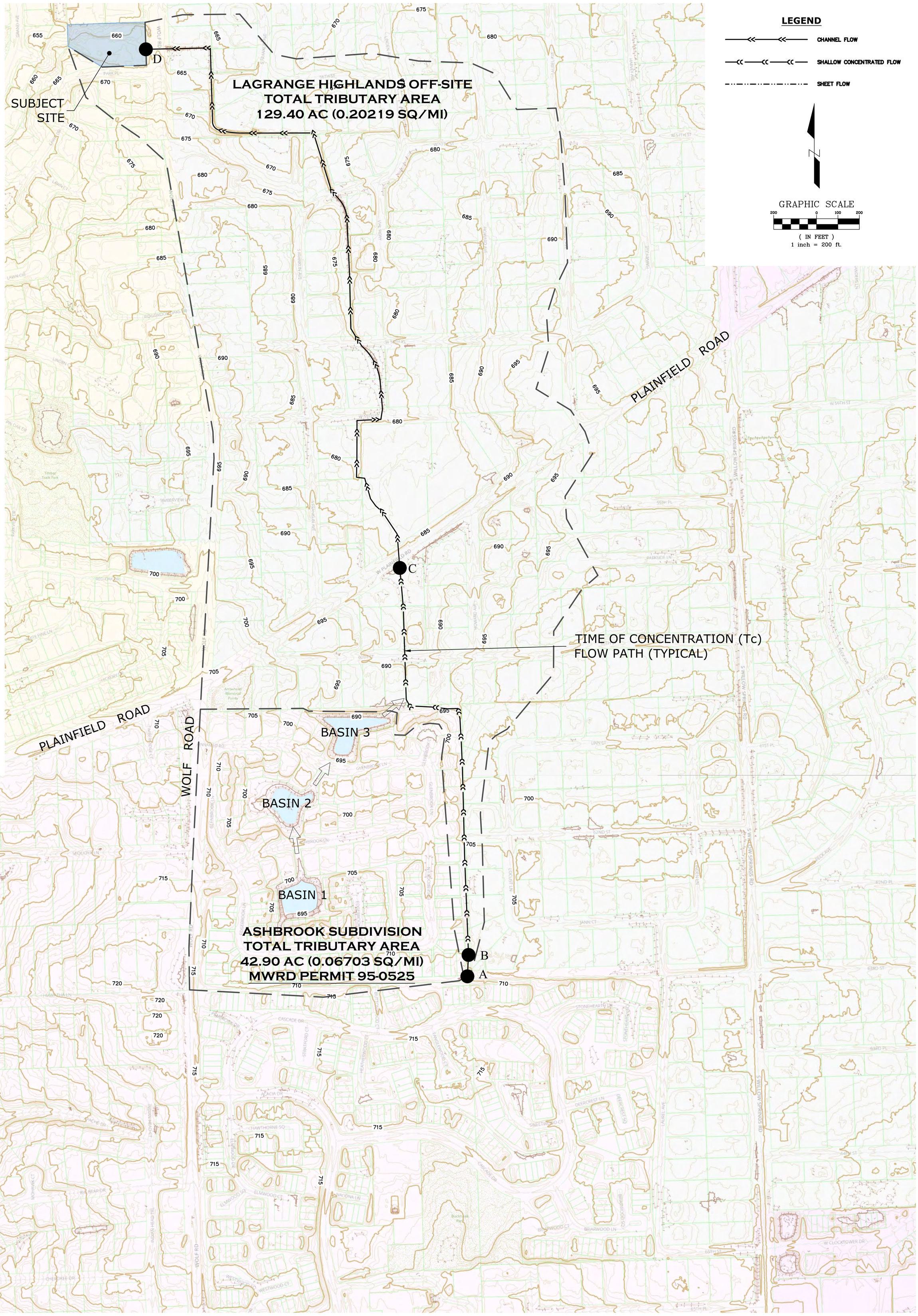
Storage East Side of Wolf Road

STORM EVENT	Existing Condition HWL	Proposed Condition HWL	Proposed Differential FEET
2YR - 1HR	661.95	661.95	0.00
2YR - 2HR	662.02	662.02	0.00
2YR - 3HR	661.86	661.86	0.00
2YR - 6HR	661.18	661.18	0.00
2YR - 12HR	660.28	660.28	0.00
2YR - 24HR	659.53	659.53	0.00
2YR - 48HR	659.08	659.08	0.00
10YR - 1HR	663.56	663.56	0.00
10YR - 2HR	663.56	663.56	0.00
10YR - 3HR	663.53	663.53	0.00
10YR - 6HR	663.09	663.09	0.00
10YR - 12HR	662.20	662.20	0.00
10YR - 24HR	660.98	660.98	0.00
10YR - 48HR	659.92	659.92	0.00
100YR - 1HR	664.00	664.00	0.00
100YR - 2HR	663.98	663.98	0.00
100YR - 3HR	663.91	663.91	0.00
100YR - 6HR	663.72	663.72	0.00
100YR - 12HR	663.54	663.54	0.00
100YR - 24HR	662.90	662.90	0.00
100YR - 48HR	661.92	661.92	0.00

Off-Site Tributary Area East of Wolf Road (LaGrange Highlands)

STORM EVENT	Existing Condition CFS	Proposed Condition CFS	Proposed Differential CFS
2YR - 1HR	74.30	74.30	0.00
2YR - 2HR	75.98	75.98	0.00
2YR - 3HR	72.01	72.01	0.00
2YR - 6HR	58.07	58.07	0.00
2YR - 12HR	44.10	44.10	0.00
2YR - 24HR	31.65	31.65	0.00
2YR - 48HR	23.52	23.52	0.00
10YR - 1HR	163.13	163.13	0.00
10YR - 2HR	162.60	162.60	0.00
10YR - 3HR	150.72	150.72	0.00
10YR - 6HR	116.39	116.39	0.00
10YR - 12HR	81.52	81.52	0.00
10YR - 24HR	54.17	54.17	0.00
10YR - 48HR	38.67	38.67	0.00
100YR - 1HR	359.61	359.61	0.00
100YR - 2HR	349.64	349.64	0.00
100YR - 3HR	317.93	317.93	0.00
100YR - 6HR	257.01	257.01	0.00
100YR - 12HR	154.46	154.46	0.00
100YR - 24HR	106.91	106.91	0.00
100YR - 48HR	72.59	72.59	0.00

Off-Site Upstream Tributary Area Analysis Documentation



LEGEND

- CHANNEL FLOW
- SHALLOW CONCENTRATED FLOW
- SHEET FLOW

N

GRAPHIC SCALE

200 0 100 200

(IN FEET)
1 inch = 200 ft.

EX1
OF
EX1

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 200'
Date: 04-11-24
Design By: SSD
Drawn By: AJS
Checked By: SSD

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326 - 4962
IL PROF. LIC. NO.: 184 - 003740

TRIBUTARY AREA EXHIBIT
FOR
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

McNAUGHTON DEVELOPMENT
11S220 S. JACKSON STREET
BURR RIDGE, ILLINOIS
(630) 325-3400

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	07-12-24	PER VILLAGE REVIEW	SSD

UPSTREAM TRIBUTARY AREA EXHIBIT

Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t)

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

Conditions (i.e. Present / Developed) Existing conditions - LaGrange Highlands Off-Site 129.4 Acre

NOTES: Space for as many as two segments per flow type can be used for each worksheet.
Include a map, schematic, or description of flow segments.

Sheet Flow: (Applicable to T_c only)		Segment ID	AB			
1 Surface Description (Table 3-1)			grass			
2 Manning's Roughness Coeff., '**n**' (Table 3-1)			0.24			
3 Flow Length, **L** (Total < 300 ft)		ft	100			
4 Two-year, 24-hour Rainfall, P_2		in	3.34	3.34		
5 Land slope, **S**		ft / ft	0.0200	0.0100		
6 $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}S^{0.4}}$	Compute T_t	hr	0.23	+ 0.00	=	0.23

Shallow Concentrated Flow:		Segment ID	BC			
7 Surface Description (paved or unpaved)			unpaved			
8 Flow Length, **L**		ft	2028			
9 Watercourse slope, **S**		ft / ft	0.0180			
10 Average Velocity, **V** (Figure 3-1)		ft / s	2.2			
11 $T_t =$ **L** / 3600**V**	Compute T_t	hr	0.26	+	=	0.26

Channel Flow:		Segment ID	CD			
12 Cross Sectional Flow Area, **a**		ft^2				
13 Wetted Perimeter, p_w		ft				
14 Hydraulic Radius, **R** = **a**/p_w		ft				
15 Channel Slope, **S**		ft / ft				
16 Manning's Roughness Coeff., '**n**'						
17 **V** = [1.49$R^{2/3}S^{1/2}$]/**n**		ft / s	3	3		
18 Flow Length, **L**		ft	3436	0		
19 $T_t =$ **L** / 3600**V**	Compute T_t	hr	0.32	+ 0.00	=	0.32
20 Watershed or Subarea T_c or T_t (add T_t in steps 6, 11, and 19)					hr	**0.81**

L:\Projects\2024\24-0001\Engineering\Storm Water\Reports - Preliminary\Initial Submittal\Tributary Area Calcs\[24-0001 Tc Calc.xls]Trib. to Site 129

Curve Number

Project: Heritage Crossing By: AJS Date: 10/31/2024

Location: Western Springs Chkd: SDS Date: 10/31/2024

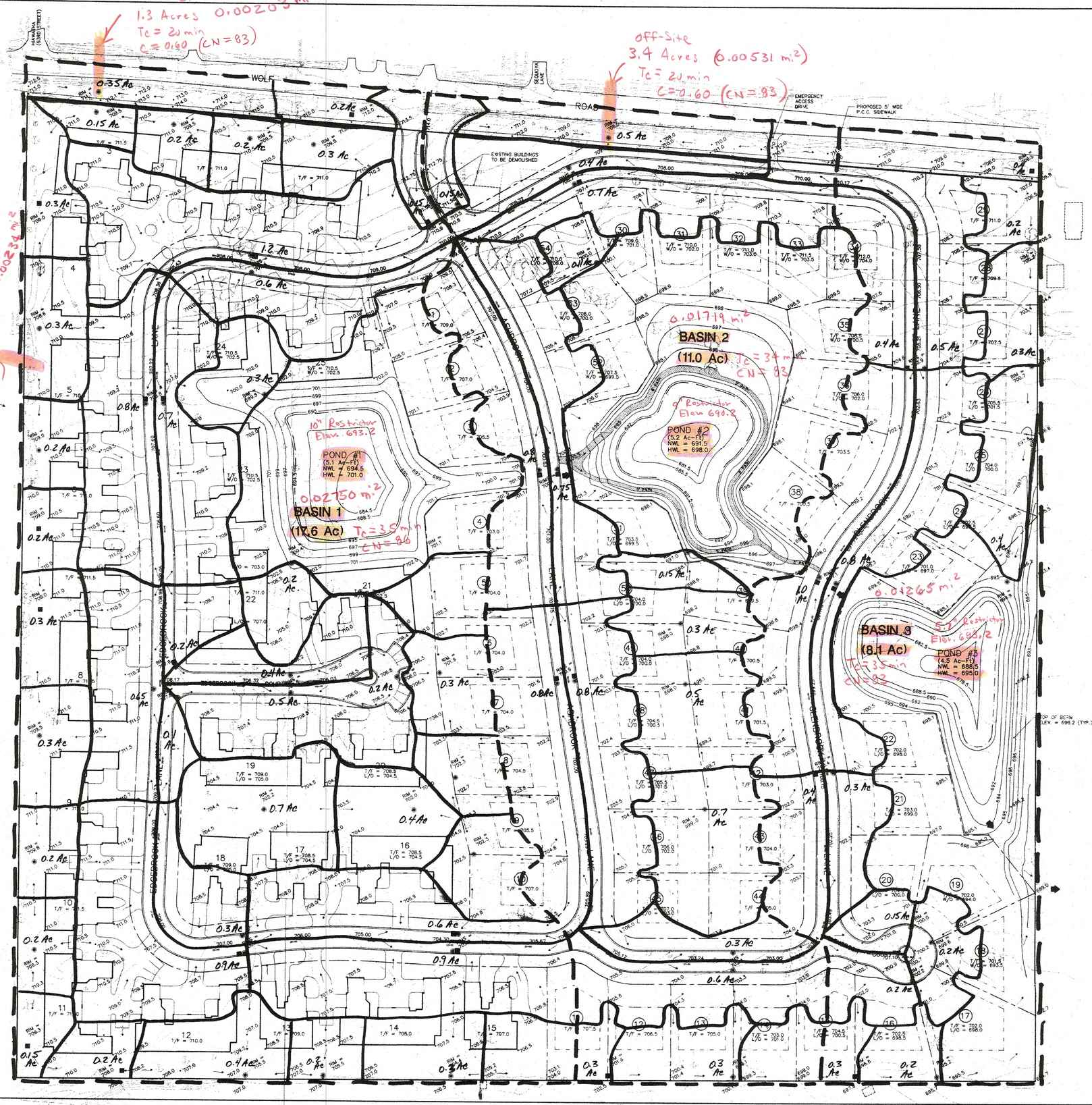
Conditions (i.e. Present / Developed): Existing conditions - Tributary

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	School / Church	94			23.1100	2172.34
C	Residential (town houses)	90			30.1400	2712.60
C	Residential 1/4 acre lots	83			31.5300	2616.99
C	Residential 1/2 acre lots	80			44.6200	3569.60
				Totals =	129.4000	11071.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{11071.53}{129.4000} =$ 85.56 ; use CN = **85.56**



ASHBROOK SUBDIVISION

1" = 50'
10/31/95

STORM WATER MANAGEMENT PLAN

LEGEND

BASIN BOUNDARY

STORM STRUCTURE
DRAINAGE AREA LIMIT

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVE. NORTHFIELD, IL 60093 PH. (708) 446-1000 FAX (708) 446-1002

NOTE:
REFER TO SEPARATE MODEL AND SALES CENTER EXHIBIT BY DONVEN HOMES FOR MORE INFORMATION REGARDING MODEL PHASE SITE PLAN.

NOTE:
REFER TO SEPARATE PLANS FOR PROPOSED WOLF ROAD IMPROVEMENTS

EXISTING GRAVEL PARKING LOT TO BE REMOVED. GRAVEL TO BE REUSED ON-SITE AT TEMPORARY CONSTRUCTION ENTRANCE.

PROPOSED 5' WIDE P.C.C. SIDEWALK

18' WIDE EMERGENCY ACCESS DRIVE (SEE PAVEMENT DETAIL ON SHEET CE-21)

EXISTING BUILDINGS TO BE DEMOLISHED. EXSISTING SEPTIC TANK AND FIELD TO BE REMOVED.

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EXISTING PLEASANT VIEW ESTATES SUBDIVISION

MODEL PHASE

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

POND #1
(5.1 Ac-Ft)
NWL = 694.5
HWL = 701.0

POND #2
(5.2 Ac-Ft)
NWL = 691.5
HWL = 698.0

POND #3
(4.5 Ac-Ft)
NWL = 688.5
HWL = 695.0

LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)

ASHBROOK LANE

GLENBROOK LANE

EDGEBROOK COURTYARD

MATCH LINE

MATCH LINE

SEE SHEET CE-4 FOR CONTINUATION

SECTION A-A

SECTION B-B

SECTION C-C

GRADING PLAN (WEST)

REVISIONS

DATE	DESCRIPTION
2/21/95	PER VILLAGE, SAN. DIST., FIRE DEPT., & DEVELOPER

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495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

GRADING PLAN (WEST)

DESIGN: T.M.L. | DRAFTING: M.J.

SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-3

SEE SHEET CE-3 FOR CONTINUATION

MATCH LINE

EXISTING ACACIA RESIDENTIAL DEVELOPMENT

EDGEBROOK

EDGEBROOK COURT

ASHBROOK LANE

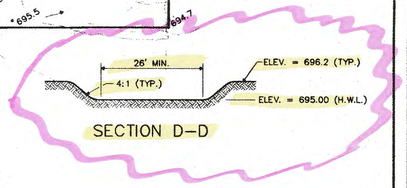
GLENBROOK LANE

POND #3
LANDSCAPE TREATMENT REQUIRED WHERE SLOPES EXCEED 3:1 (REFER TO LANDSCAPING PLANS)
(4.5 Ac-Ft)
NWL = 688.5
HWL = 695.0

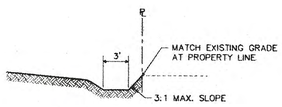
TOP OF BERM ELEV. = 696.2 (TYP.)

EXISTING PLEASANT VIEW ESTATES SUBDIVISION

EXISTING ACACIA ACRES SUBDIVISION



SECTION D-D



SECTION E-E

TYPICAL SWALE SECTION
ALONG EAST PROPERTY LINE

NOTE:
DOWNSPOUTS FOR HOMES ON LOTS 66 & 67 ARE TO BE CONNECTED TO STORM SEWER.

GRADING PLAN (EAST)

REVISIONS

DATE	DESCRIPTION
12/21/95	PER VILLAGE, SAN. DIST., FIRE DEPT., & DEVELOPER

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CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
495 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (708) 446-1000 FAX (708) 446-1002

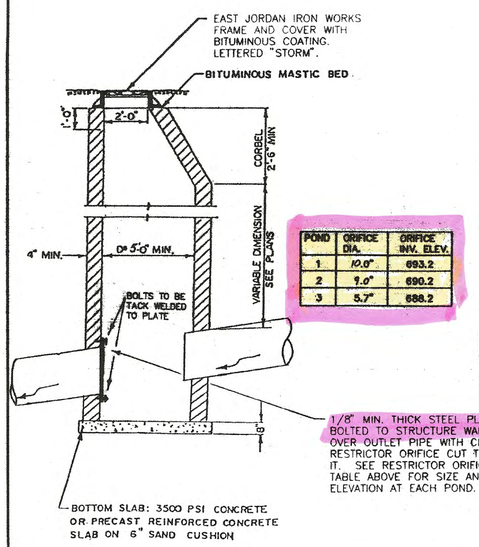
GRADING PLAN (EAST)

DESIGN: T.M.L. | DRAFTING: M.J.
SCALE: 1" = 50' | DATE: 10/31/95

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

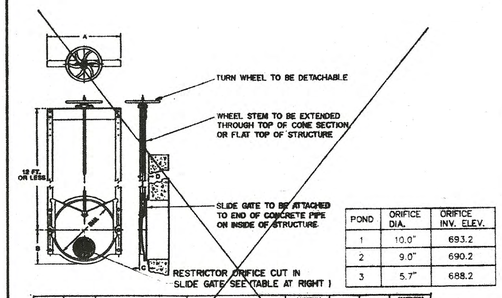
CE - 4



POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

1/8" MIN. THICK STEEL PLATE BOLTED TO STRUCTURE WALL OVER OUTLET PIPE WITH CIRCULAR RESTRICTOR ORIFICE CUT THROUGH IT. SEE RESTRICTOR ORIFICE TABLE ABOVE FOR SIZE AND ELEVATION AT EACH POND.

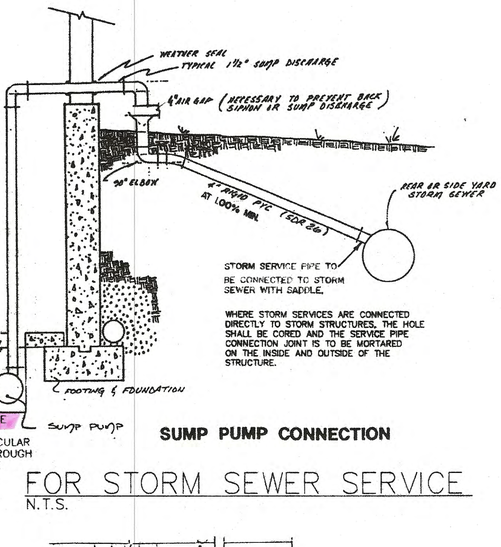
CATCH BASIN W/RESTRICTOR
N.T.S.



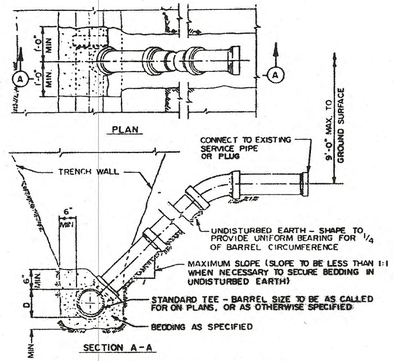
POND	ORIFICE DIA.	ORIFICE INV. ELEV.
1	10.0"	693.2
2	9.0"	690.2
3	5.7"	688.2

GATE SIZE (mm)	A	SPIGOT BACK GATE B	C	D	FLAT BACK GATE B	C	D	MINIMUM FRAME WEIGHT (KT)	STEM DIA.	TYPE LIFT	MAXIMUM WORKING HEAD (FT)
6	9.37	4.37	4.12	2.50	4.37	4.12	2.50	2	¾	H1-10	20
8	11.37	5.12	3.37	1.75	5.37	4.12	2.50	2	¾	H1-10	20
10	13.37	6.12	3.37	1.75	6.37	4.12	2.50	2	¾	H1-10	20
12	15.37	7.12	3.37	1.75	7.37	4.12	2.50	3	¾	H1-10	20
15	18.37	8.62	3.37	1.75	8.87	4.12	2.50	3	¾	H1-10	20
18	22.87	10.50	3.37	2.25	10.75	5.12	3.12	3	1¼	H1-14	20
21	25.87	12.00	4.85	2.25	12.25	5.12	3.12	4	1¼	H1-14	16
24	28.87	13.50	4.25	2.25	13.75	5.12	3.12	4	1¼	H1-14	12
30	35.87	17.37	5.12	3.00	17.12	5.87	3.75	5	1¼	H1-14	10
36	41.87	20.37	5.75	3.00	20.12	6.50	3.75	6	1½	H2-24	8
42	47.87	23.40	5.75	3.00	23.12	6.50	3.75	6	1½	H2-30	8
48	53.87	26.75	5.75	3.00	26.12	6.87	4.12	7	1½	H8-24	7
54	61.0	29.25	7.75	4.87	29.25	7.75	4.87	8	2"	H8-30	5
60	68.0	32.25	9.0	5.50	32.25	9.0	5.50	8	2"	H8-30	4

SLIDE GATE RESTRICTOR DETAIL



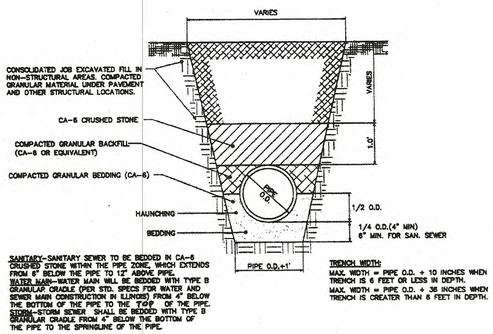
SUMP PUMP CONNECTION
FOR STORM SEWER SERVICE
N.T.S.



SANITARY SERVICE PIPE TO BE 6" MIN. DIA. SDR-26 PVC OR APPROVED EQUIVALENT.

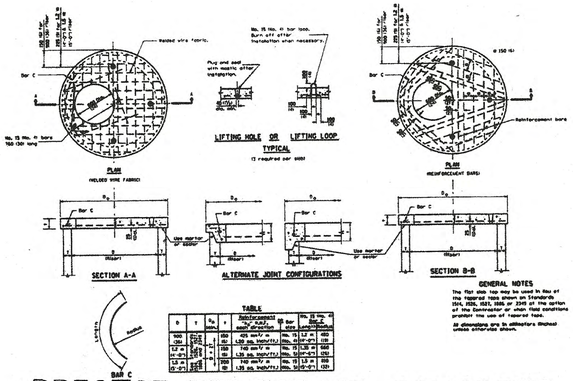
NOTES:
1. RISERS TO BE CONSTRUCTED IN LIEU OF WYES WHERE SEWER DEPTH EXCEEDS 12'-0" FOR PIPE MATERIAL AND CONCRETE. SEE SPECIFICATIONS.
2. ALL SANITARY SERVICES SHALL BE INSPECTED BY THE LA GRANGE HIGHLANDS SANITARY DISTRICT OR THE VILLAGE OF INDIAN HEAD PARK PRIOR TO THE TRENCH BEING BACKFILLED.

SANITARY SEWER SERVICE



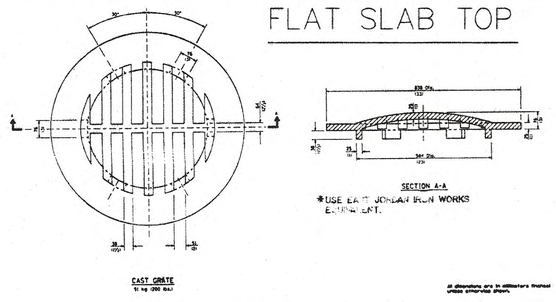
SANITARY-SANITARY SEWER TO BE BEDDED IN CA-6 CRUSHED STONE WITHIN THE PIPE ZONE, WHICH EXTENDS FROM 6" BELOW THE PIPE TO 12" ABOVE PIPE.
WATER MAIN-WATER MAIN WILL BE BEDDED WITH TYPE B GRANULAR CRADLE (PER STD. SPECS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS) FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE TOP OF THE PIPE.
STORM-STORM SEWER SHALL BE BEDDED WITH TYPE B GRANULAR CRADLE FROM 4" BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE OF THE PIPE.

PIPE BEDDING AND BACKFILL

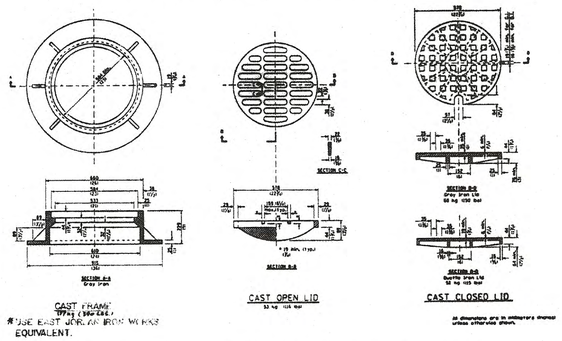


D	t	t_2	t_3	Reinforcement Bar Size & Spacing (Circumferential)	Qty per Slab	Min. Bs No. of Bars per Slab (Radial)
1200 (48")	150 (6")	100 (4")	125 (5")	#13 @ 100 mm (4") o.c.	10	12
1350 (54")				#13 @ 100 mm (4") o.c.	11	13
1500 (60")				#13 @ 100 mm (4") o.c.	12	14
1650 (66")				#13 @ 100 mm (4") o.c.	13	15
1800 (72")	175 (7")	125 (5")	150 (6")	#13 @ 100 mm (4") o.c.	14	16

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

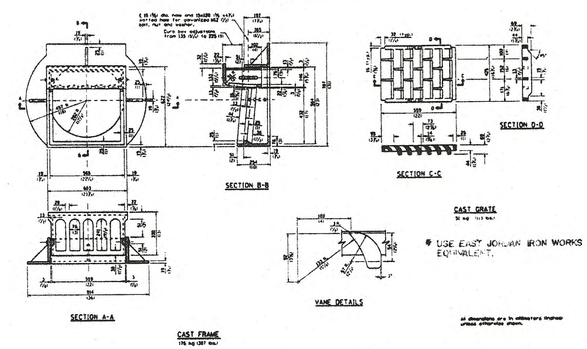


TYPE 8 GRATE *
(FOR ALL OPEN LID STORM STRUCTURES IN GRASS AREAS)



* USE EAST JORDAN IRON WORKS EQUIVALENT.

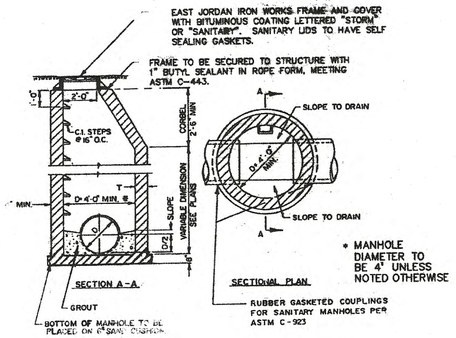
TYPE 1* FRAME AND LIDS
(FOR ALL CLOSED LID STRUCTURES OR STRUCTURES IN PAVEMENT AREAS OUTSIDE OF CURB AND GUTTER)



* USE EAST JORDAN IRON WORKS EQUIVALENT.

TYPE 3V* FRAME AND GRATE
(FOR ALL STORM STRUCTURES WITHIN B-6.12 CURB AND GUTTER)

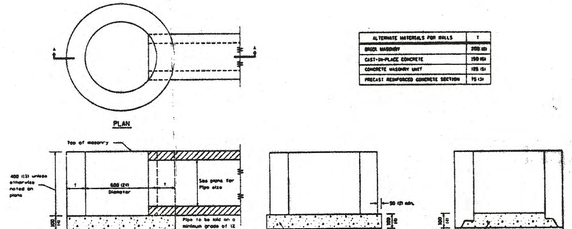
MATERIAL WALL THICKNESS
PRE-CAST CONC. MIN. 1/12 "D"
CONC. MASONRY UNITS MIN. 3"
CAST-IN-PLACE CONC. MIN. 6"
BRICK MASONRY UNITS MIN. 8"



* MANHOLE DIAMETER TO BE 4' UNLESS NOTED OTHERWISE

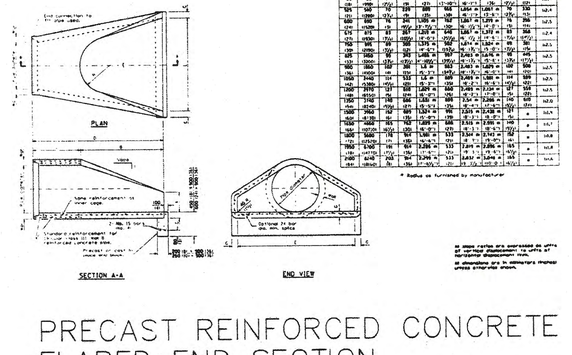
NOTE:
1. MANHOLE BARREL SECTIONS SHALL BE SEALED WITH 1" BUTYL JOINT SEALANT IN ROPE FORM, MEETING ASTM C-443.
2. SANITARY MANHOLES SHALL HAVE MONOLITHICALLY CAST BOTTOM SECTIONS.

STORM & SANITARY MANHOLE STRUCTURE



ALTERNATE MATERIALS FOR WALLS	t
BRICK MASONRY	200 (8)
CAST-IN-PLACE CONCRETE	150 (6)
CONCRETE MASONRY UNIT	135 (5)
PRECAST REINFORCED CONCRETE SECTION	75 (3)

STORM INLET STRUCTURE



PRECAST REINFORCED CONCRETE FLARED END SECTION

REVISIONS

DATE	DESCRIPTION
12/20/95	PER VILLAGE, SAN. DIST., FIRE DEPT., AND DEVELOPER.
1/3/96	POND RESTRICTORS PER MWRD
1/26/96	PER VILLAGE, I.E.P.A., M.W.R.D. & DEVELOPER

INFRACON, INC.
CIVIL ENGINEERS • SITE PLANNERS • MUNICIPAL CONSULTANTS
405 CENTRAL AVENUE NORTHFIELD, ILLINOIS 60093 PH. (847) 446-1000 FAX (847) 446-1002

DESIGN: T.L. | DRAFTING: V.B. G.F. | DATE: 10/31/95 | SCALE: NONE

CONSTRUCTION STANDARDS

ASHBROOK SUBDIVISION
INDIAN HEAD PARK, ILLINOIS

PROJECT No. 95233

CE-23

ASHBROOK SUBDIVISION

Indian Head Park, Illinois

FINAL
STORM WATER MANAGEMENT CALCULATIONS

October 31, 1995
REVISED 1/22/96 (per MWRD) OFFICE COP

95-525

Prepared By:

INFRACON, Inc.
495 Central Avenue
Northfield, IL 60093
(708) 446 - 1000

LOCAL SEWER SYSTEMS SECTION
96 FEB -1 AM 10: 32
M.W.R.D. OF GRT. CHGO.

CONTENTS

Section

1. Storm Water Management Summary

2. HydroCAD 100-Year Storm Routing Calculations

3. Bypass Flow, Pond Overflow Weir Sizing, and Downstream Sewer Calculations

4. Proposed Storm Sewer Sizing Calculations

5. Miscellaneous Technical Reference Data

Exhibit: Storm Water Management Plan

SECTION 1

Storm Water Management Summary

Storm Water Management Summary

Existing Conditions:

The subject 37.9 acre property is located along the east side of Wolf Road between 60th and 63rd Streets in Indian Head Park, Illinois (refer to the location map included in this section). The site is lightly wooded and currently consists of a par three golf course with a small clubhouse building and gravel parking lot. It is bounded by single family homes to the west, north and east and the Acacia multi-family development along its entire southern border. Except for approximately one half acre in the southeast corner of the property, the parcel drains unrestricted in a northerly direction to a pair of 12" diameter storm sewer pipes at the north boundary which in turn discharge to an existing 24" x 18" corrugated metal pipe under 60th street. This culvert then conveys storm water to a drainage swale which flows northerly to Plainfield Road.

There are approximately 6.2 acres of tributary watershed to the west and south of the site (refer to the USGS map copies in section 3). This upstream area is comprised of three separate drainage areas. The first two are approximately 3.4 and 1.3 acres in size and drain to the property through separate 18" diameter culverts under Wolf Road. The third off-site area consists of an estimated 1.5 acres of rear yards of the adjacent Acacia development along the south boundary of the property. Record drawings for the Acacia development indicate that the majority of that site now drains to the southeast and away from the proposed Ashbrook Subdivision.

Proposed Development Conditions:

The proposed Ashbrook Subdivision will occupy 36.4 acres of the 37.9 gross acreage, with 1.5 acres being dedicated to the Wolf Road right-of-way. The development will consist of 25 multi-family buildings containing a total of 112 townhome units and 54 single family home sites. Wolf Road will be widened to provide a left turn lane into the site.

A proposed storm sewer system and drainage swales will convey storm water to three on-site storm water retention ponds which will provide the necessary detention storage in the event of a 100-year frequency storm event. The high water level on each of the three retention ponds has been designed at a minimum of 1.5 feet below the lowest adjacent proposed foundation elevation. Each pond will contain an overflow weir to accommodate the appropriate off-site 100-year bypass flow without exceeding a flow depth of 0.5 feet. The discharge from each pond will be restricted by a circular orifice cut into a metal plate permanently mounted (in accordance with MWRD regulations) over the outflow pipe inside of a downstream catch basin. The site release has been reduced beyond typical allowable rates so that only one of the two existing downstream 12" diameter storm sewer pipes will be needed to convey it. Finally, the existing 24" x 18" culvert under 60th Street, which is in poor condition, will be replaced with a brand new pipe of the same material and size.

Storm Water Management Calculations:

HydroCAD storm water modeling software, which employs the SCS TR-20 and TR-55 methods, was utilized along with Bulletin 70 rainfall intensities in determining the 100-year storm runoff hydrographs for the site and routing the resultant flows through the proposed retention ponds. Section 2 includes all data calculated for basin characteristics, times of concentration, runoff hydrographs, detention storage, and pond routing. The off-site bypass flows were calculated using the rational method and Bulletin 70 rainfall intensities and are shown in Section 3. Storm sewers on the site have been designed, utilizing the rational method and the Bulletin 70 rainfall data to convey a 10-year frequency storm flow. The calculations for these are in Section 4. Supporting technical reference data can be found in Section 5.

The primary calculated hydrologic information is as follows:

POND	TRIBUTARY BASIN AREA (Ac)	N.W.L. ELEV.	H.W.L. ELEV.	STORAGE VOLUME (Ac-Ft)	RESTRICTOR ORIFICE DIAMETER (in)	MAX.100-YR STORM RELEASE (cfs)
1	17.57	694.5	701.0	5.1	10.0	4.2
2	11.02	691.5	698.0	5.2	9.0	3.5
3	8.07	688.5	695.0	4.5	5.7	2.2

Total Development Area = 36.4 Ac

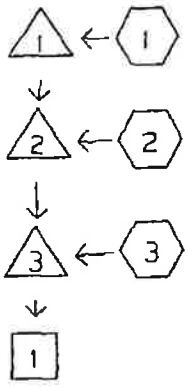
Total Proposed Detention Volume = 14.8 Ac-Ft

Proposed Site Release = 2.2 cfs (0.06 cfs/Ac)

SECTION 2

HydroCAD 100-Year Storm Routing Calculations

WATERSHED ROUTING ==========



SUBCATCHMENT REACH POND LINK

SUBCATCHMENT 1	= BASIN NO. 1	-> POND 1
SUBCATCHMENT 2	= BASIN NO. 2	-> POND 2
SUBCATCHMENT 3	= BASIN NO. 3	-> POND 3
REACH 1	= EXISTING 12" DIA. STORM PIPE	->
POND 1	= RETENTION POND NO. 1	-> POND 2
POND 1 secondary	= RETENTION POND NO. 1	-> POND 2
POND 2	= RETENTION POND NO. 2	-> POND 3
POND 2 secondary	= RETENTION POND NO. 2	-> POND 3
POND 3	= RETENTION POND NO. 3	-> REACH 1
POND 3 secondary	= RETENTION POND NO. 3	-> REACH 1

RUNOFF BY SCS TR-20 METHOD: TYPE II 24-HOUR RAINFALL= 7.4 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	17.57	35.5	1%98 3%99 34%98 2%98 9%98 52%74 - -	86	-	76.4	12.25	7.41
2	11.02	34.4	1%98 4%99 20%98 11%98 64%74 - - -	83	-	46.4	12.24	4.42
3	8.07	35.0	0%98 5%99 21%98 11%98 63%74 - - -	83	-	33.6	12.25	3.23

POND 3 INFLOW PEAK= 37.1 CFS @ 12.25 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.8
11.00	2.0	2.3	2.6	3.0	3.4	4.0	4.8	6.2	8.8	13.8
12.00	21.5	30.7	36.4	36.2	31.7	25.7	20.4	16.7	14.0	12.0
13.00	10.5	9.5	8.7	8.1	7.6	7.2	6.9	6.7	6.4	6.3
14.00	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.4
15.00	5.3	5.3	5.3	5.2	5.2	5.1	5.1	5.1	5.0	5.0
16.00	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.7	4.7
17.00	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6
18.00	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4
19.00	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3
20.00	4.3									

POND 3 TOTAL OUTFLOW PEAK= 2.2 CFS @ 20.00 HOURS

HOUR	0.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
10.00	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	.1	.2
11.00	.2	.3	.3	.4	.5	.6	.7	.7	.8	.8
12.00	1.0	1.1	1.2	1.4	1.5	1.6	1.6	1.7	1.7	1.7
13.00	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9
14.00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
15.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16.00	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
17.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18.00	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19.00	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2
20.00	2.2									

SECTION 3

Off-site Bypass Flow, Overflow Weir Sizing, and Downstream Sewer Calculations

INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY DATE
SCALE

SITE BYPASS FLOW

1. OFF-SITE AREA A ≈ 3.4 Ac ON WEST SIDE OF WOLF RD. (SEE ATTACHED USGS MAP'S)

ASSUME T_c = 20 MIN & C = 0.60

Q_{100} = C · I · A = 0.60 × 6.9"/HR × 3.4 ≈ 14.1 cfs

2. OFF-SITE AREA B ≈ 1.3 Ac ON WEST SIDE OF WOLF ROAD (SEE ATTACHED USGS MAPS)

ASSUME T_c = 20 min & C = 0.60

Q_{100} = 0.60 × 6.9"/HR × 1.3 ≈ 5.4 cfs

3. OFF-SITE AREA C ≈ 1.5 Ac ALONG ACACIA DEVELOPMENT TO SOUTH (BASED ON 1275' × 50' AVG BACK YARD AREA. REMAINING PORTION OF ACACIA DRAINS TO SOUTH PER SITE RECORD DRAWINGS.)

ASSUME T_c = 10 min & C = 0.50

Q_{100} = 0.50 × 10.02"/HR × 1.5 ≈ 7.5 cfs

∴ BYPASS FLOW THROUGH POND #1 = 5.4 + 7.5
= 12.9 cfs

BYPASS FLOW THROUGH POND #'S 2 & 3 = TOTAL BYPASS FLOW
= 27.0 cfs

PRODUCT 204-1 (Single Sheets) 205-1 (Packets) ACCO Inc., Gurnee, Mass. 01471. To Order PHONE TOLL FREE 1-800-225-6380

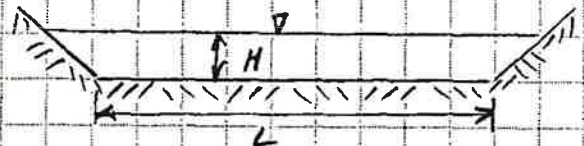
INFRACON
495 Central Avenue, Suite 101
NORTHFIELD, ILLINOIS 60093
(708) 446-1000 FAX (708) 446-1002

JOB ASHBROOK SUBDIVISION
SHEET NO. 1 OF 1
CALCULATED BY TML DATE 9/30/95
CHECKED BY _____ DATE _____
SCALE _____

POND OVERFLOW WEIRS (FOR 100-YR BYPASS FLOWS)

POND #1:

100-YR BYPASS FLOW = 12.9 CFS



LET H = 0.5' (LEAVING 1.0' FREEBOARD TO T/F'S)

$Q = 3LH^{3/2}$

$12.9 = 3L(0.5^{3/2}) \Rightarrow L = 12.2'$ MIN.

POND #'S 2 & 3:

100-YR BYPASS FLOW = 27.0 CFS

$Q = 3LH^{3/2}$

$27 = 3L(0.5)^{3/2} \Rightarrow L = 25.5'$ MIN.

PRODUCT 204-1 (Single Sheets) 205-1 (Padded) NEBS, Inc., Groton, Mass. 01471 To Order PHONE TOLL FREE 1-800-225-6380

Stormwater Analysis
Existing Conditions

Curve Number

Project: Western Springs By: AJS Date: 1/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 1/26/2024

Conditions (i.e. Present / Developed): Existing

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			0.6635	49.10
C	Pavement, parking, Curb and Gutter	98			1.6663	163.30
C	Rock Ditch	89			0.0802	7.14
				Totals =	2.4100	219.53

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{219.53}{2.4100} = 91.09$; use CN = **91.09**

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			2.90	38	0.001	
	649.37	13				0.0009
			0.63	126	0.003	
	650.00	506				0.0038
			1.00	2,614	0.060	
	651.00	5,647				0.0638
			1.00	8,338	0.191	
	652.00	11,358				0.2552
			1.00	12,572	0.289	
	653.00	13,827				0.5439
			1.00	14,929	0.343	
	654.00	16,059				0.8866
			0.50	8,275	0.190	
Design HWL	654.50	17,045				1.0765
			0.50	11,383	0.261	
	655.00	29,013				1.3379
			0.70	27,797	0.638	
Overflow at Heritage Ct.	655.70	51,472				1.9760
			0.30	16,943	0.389	
	656.00	61,632				2.3649
			0.10	6,357	0.146	
Top of Existing Wall	656.10	65,528				2.5109

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081

Heritage Crossing - Western Springs, IL

8/20/2024

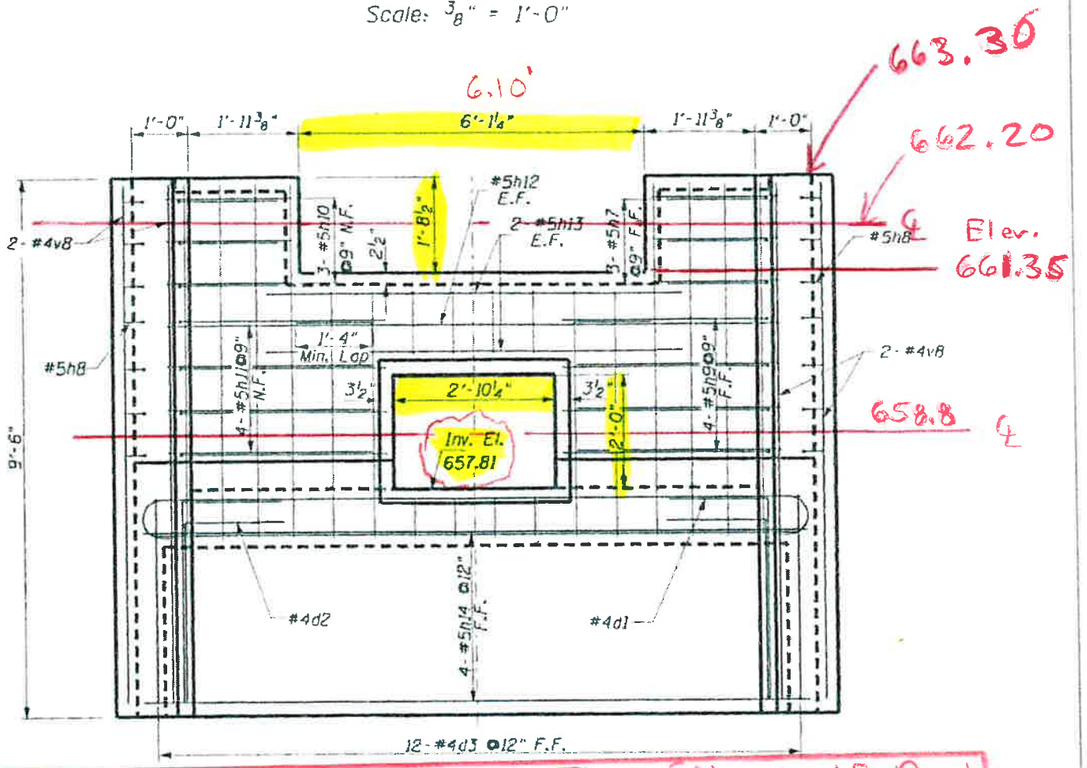
Existing Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	653.95	13				0.0000
			0.05	1	0.000	
	654.00	13				0.0000
			1.00	13	0.000	
	655.00	13				0.0003
			1.00	13	0.000	
	656.00	13				0.0006
			1.05	14	0.000	
	657.05	13				0.0009
			0.95	183	0.004	
	658.00	484				0.0051
			1.00	702	0.016	
	659.00	946				0.0212
			1.00	1,156	0.027	
	660.00	1,379				0.0478
			1.00	2,051	0.047	
	661.00	2,806				0.0948

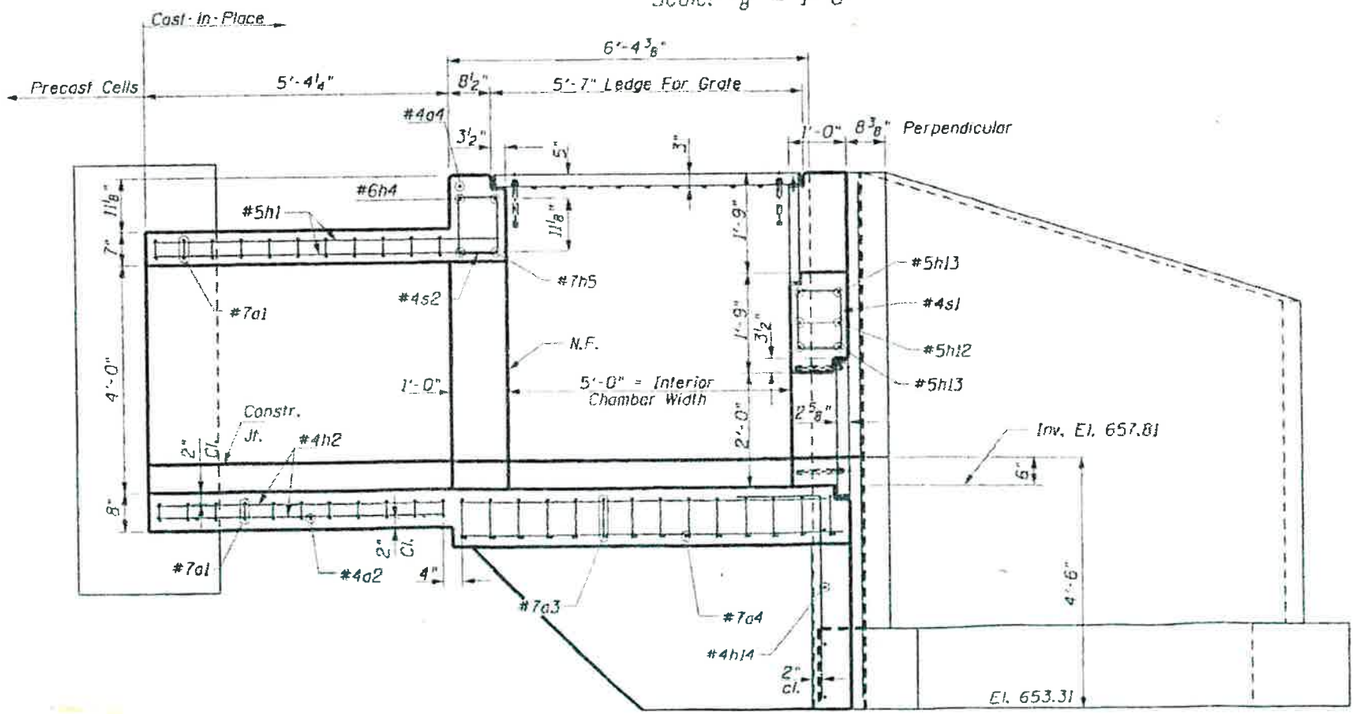
Showing Top Slab Reinforcement
Scale: $\frac{3}{8}$" = 1'-0"

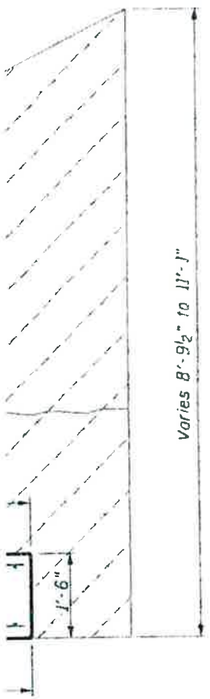


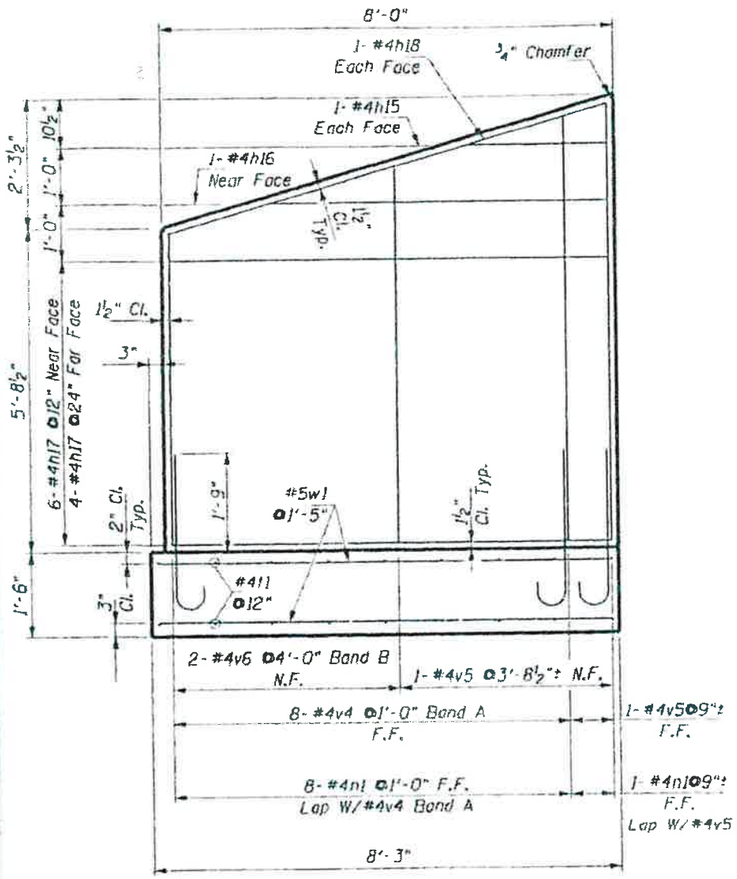
Flood Control Box Inlet East Side Wolf Road

HEADWALL ELEVATION VIEW F-F

Scale: $\frac{3}{8}$" = 1'-0"







WINGWALL ELEVATION VIEW G-G

Scale: $\frac{3}{8}$" = 1'-0"

Concret
Reinfor
Fine or
Concret

JOHI
PRESIDE

(REVISION)
DATE BY

Heritage Crossing- Western Springs, IL

8/21/2024

East Side of Wolf Road - Flood Control Structure / Box Inlet
Stage-Discharge Tables

1) Tributary Areas:

Tributary Area

Delineated Area: 172.30 acres
0.2692188 Square Miles

2) Curve Numbers:

See attached Worksheet 2 for each area.

3) Time of Concentration:

See attached Worksheet 3 for each area.

Notes	Elevation	Bottom Orifice Flow (cfs)	Rectangular Weir Flow (cfs)	Inlet Box Structure Flow (cfs)	Total Flow (cfs)
Orifice	657.80	0.00			0.00
	658.00	3.67			3.67
	659.00	22.00			22.00
	659.80	36.66			36.66
	660.00	40.16			40.16
	661.00	54.37			54.37
Weir	661.35	58.54			58.54
	662.00	65.58	8.63		74.21
	663.00	75.13	34.91		110.03
Inlet Box Grate	663.30	77.76	44.85		122.61
	663.40	78.62	48.34	1.90	128.86
	663.50	79.47	51.92	5.37	136.76
	663.60	80.31	55.59	9.86	145.76
	663.70	81.15	59.33	15.18	155.66
	663.80	81.97	63.16	21.21	166.34
	663.90	82.79	67.07	189.59	339.44
	664.00	83.59	71.05	204.78	359.42
	664.10	84.39	75.11	218.92	378.42
	664.20	85.19	79.24	232.20	396.63
	664.30	85.97	83.45	244.76	414.18
	664.40	86.75	87.73	256.71	431.19
	664.50	87.52	92.08	268.12	447.72

1) Bottom Orifice Flow

C = 0.80
Rectangular Orifice 2.0' x 2.85'
Area = 5.71 feet

Centerline of Orifice = 658.80

2) Rectangular Weir

Weir Flow

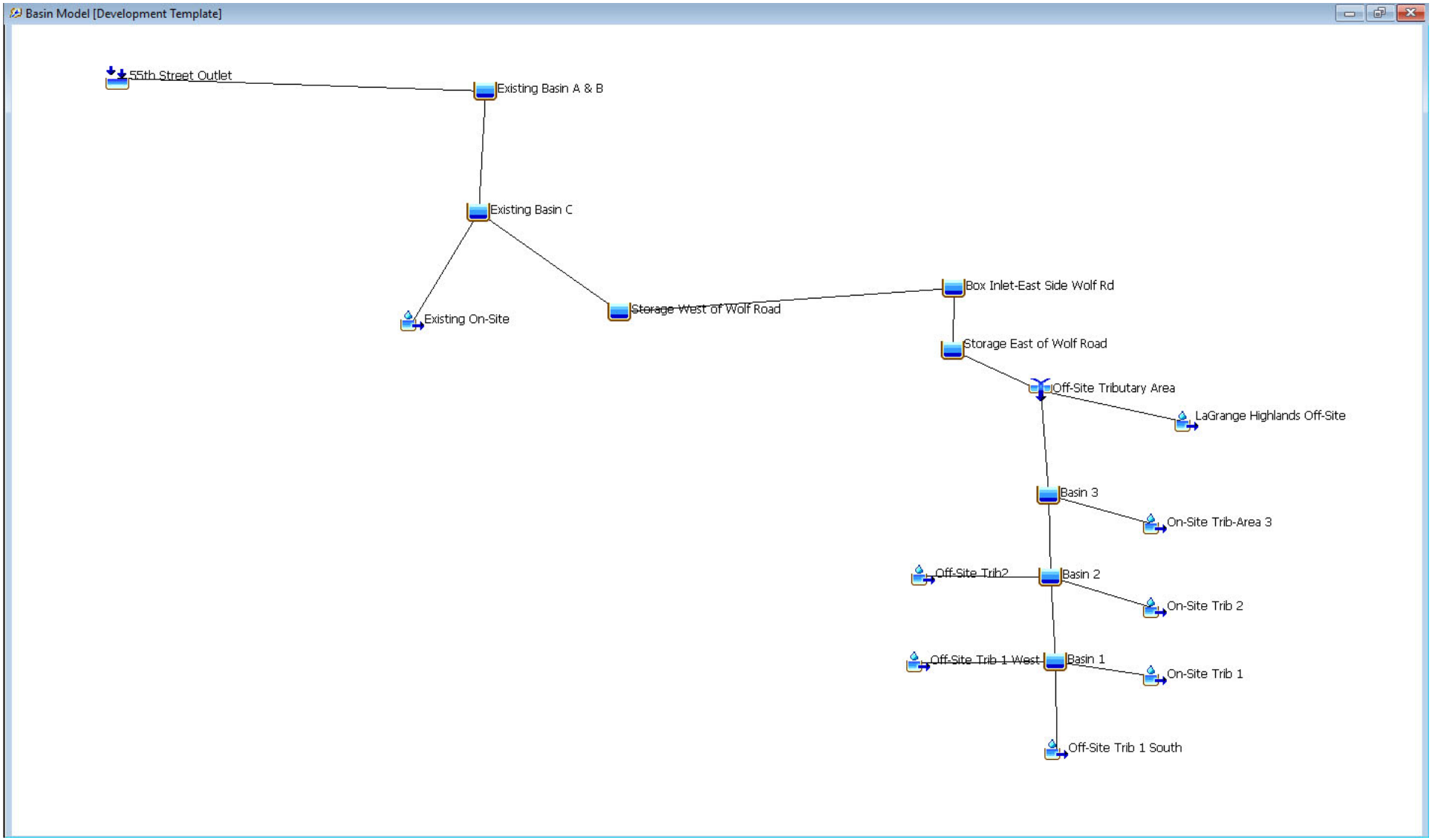
C = 2.700
Length = 6.1
Elevation = 661.35

3) Inlet Box Structure

10'x5' Grate

Water Elevation (feet)	Head (feet)	Weir Flow (cfs)	Orfice Flow (cfs)
663.30	0.00	0.00	
663.40	0.10	1.90	
663.50	0.20	5.37	
663.60	0.30	9.86	
663.70	0.40	15.18	
663.80	0.50	21.21	
663.90	0.60		189.59
664.00	0.70		204.78
664.10	0.80		218.92
664.20	0.90		232.20
664.30	1.00		244.76
664.40	1.10		256.71
664.50	1.20		268.12

Weir Formula	Orfice Formula
Q = CLH^3/2	Q = AC √64.4(H)
Q = (3)(20)H^3/2	Q = (50)(0.61) √64.4(H)
Q = (60)H^3/2	Q = (30.5) √64.4(H)


Basin Model [Development Template]
55th Street Outlet
Existing Basin A & B
Existing Basin C
Existing On-Site
Storage West of Wolf Road
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:29

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Storage West of Wolf Road	0.27	75.02	01Jan2000, 01:10	0.77
Existing On - Site	0	3.15	01Jan2000, 00:33	1.12
Existing Basin C	0.27	60.13	01Jan2000, 01:11	0.72
Existing Basin A & B	0.27	60.11	01Jan2000, 01:12	0.57

55th Street Outlet	0.27	60.11	01Jan2000, 01:12	0.57

Subbasin: On-Site Trib 1

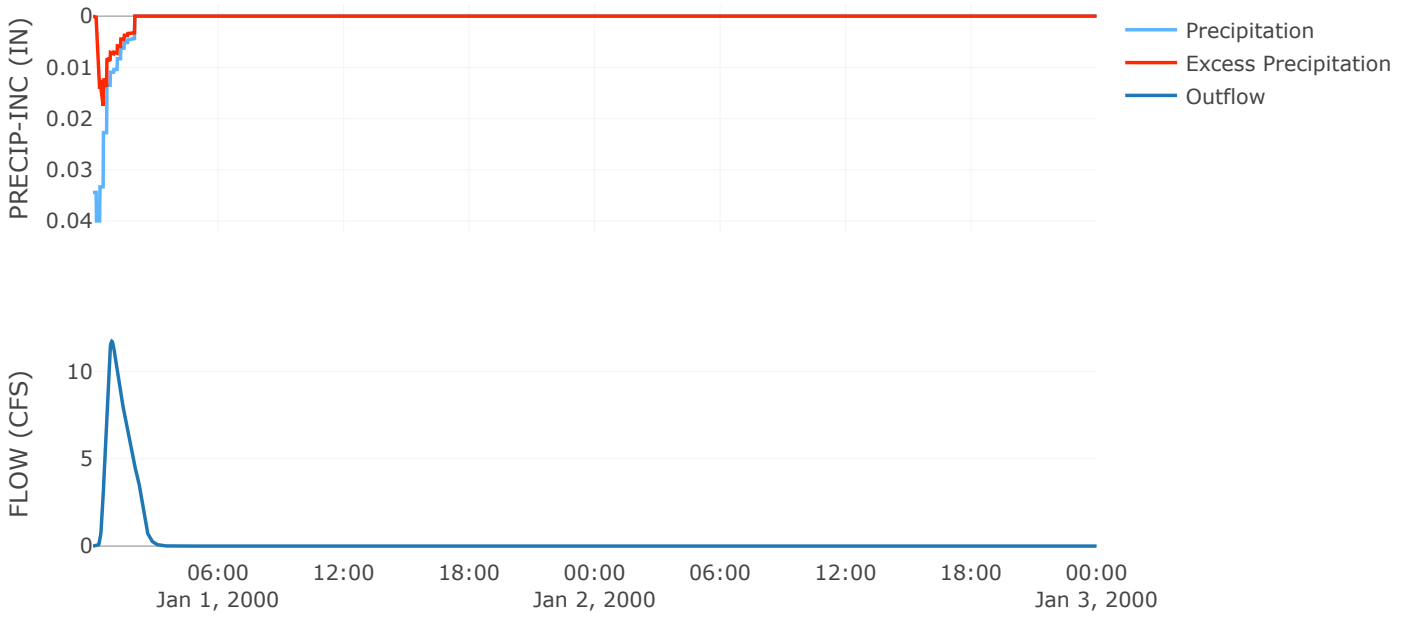
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

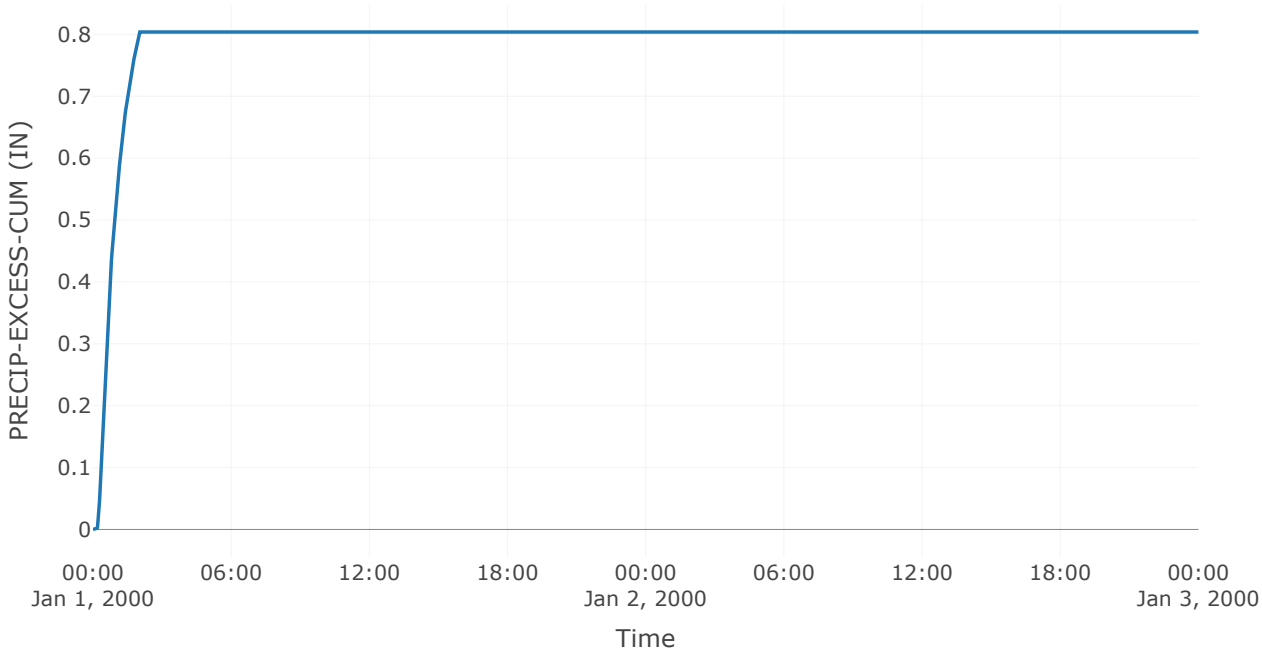
Transform: Scs	
Lag	21
Unitgraph Type	Standard

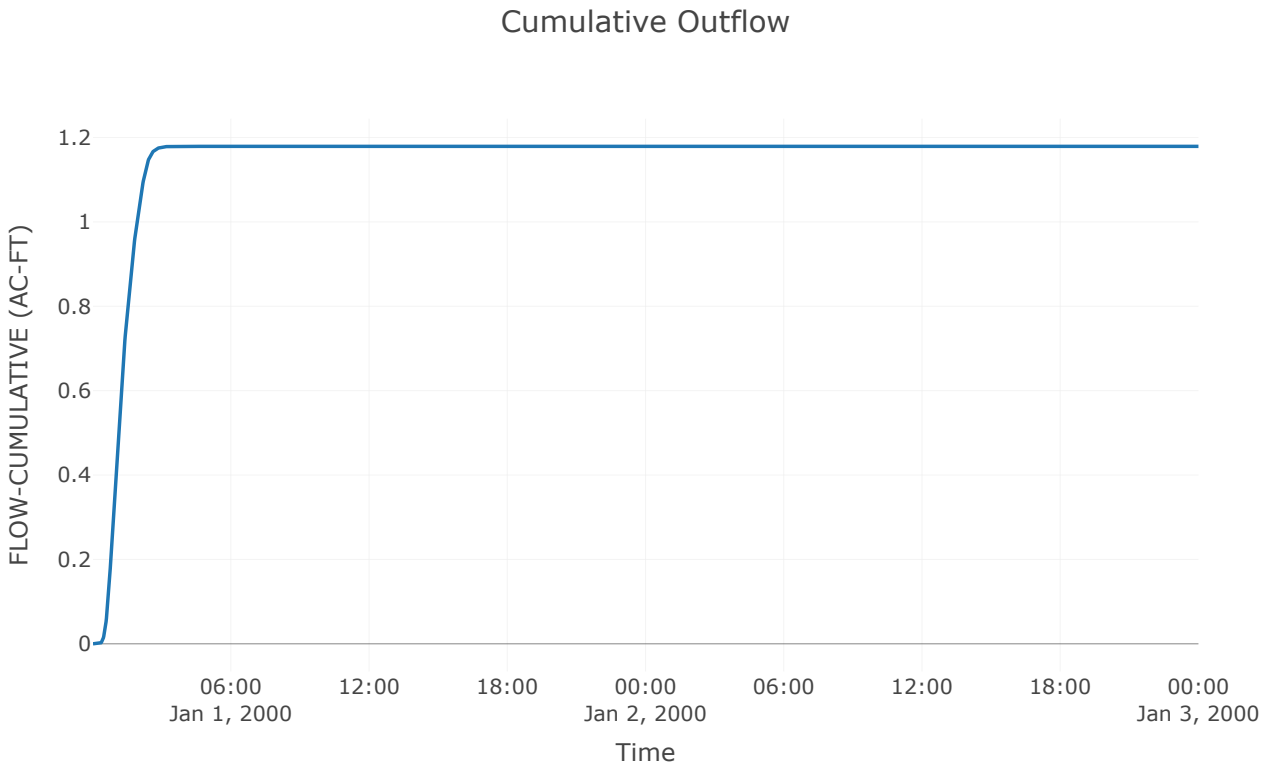
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

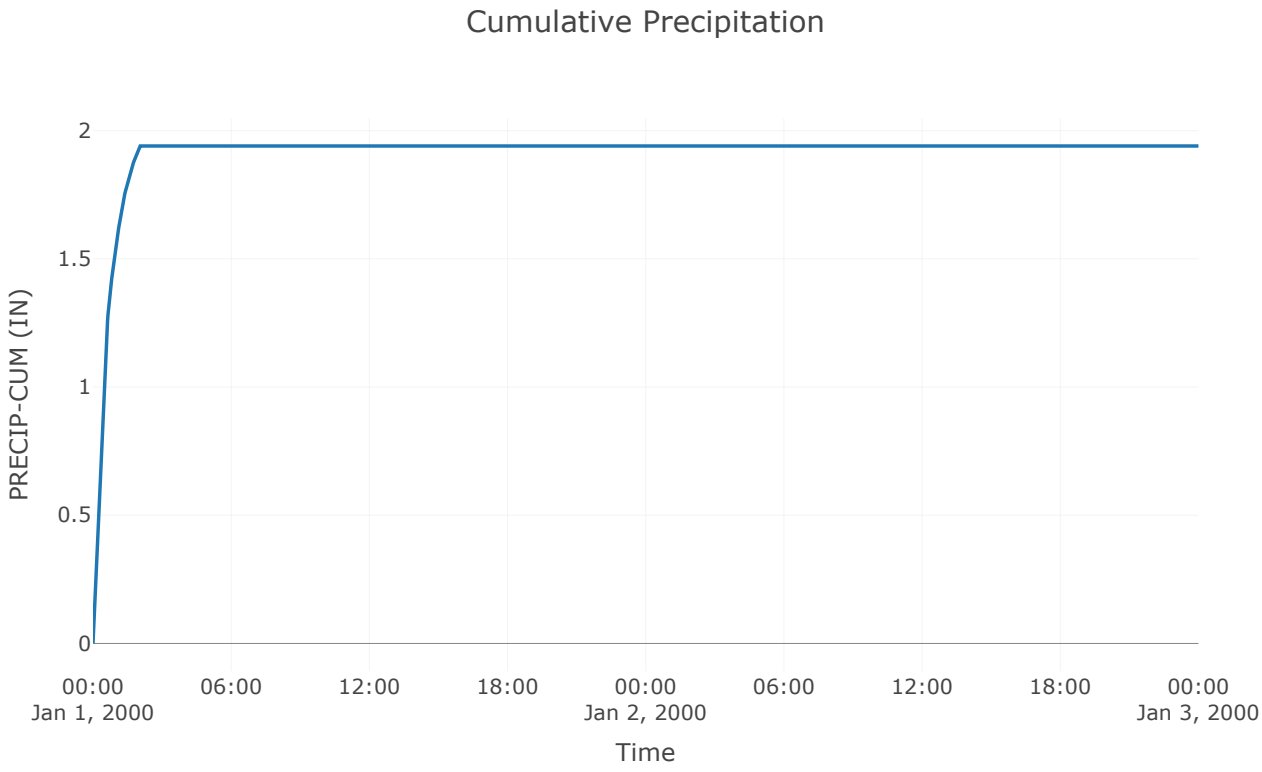
Precipitation and Outflow

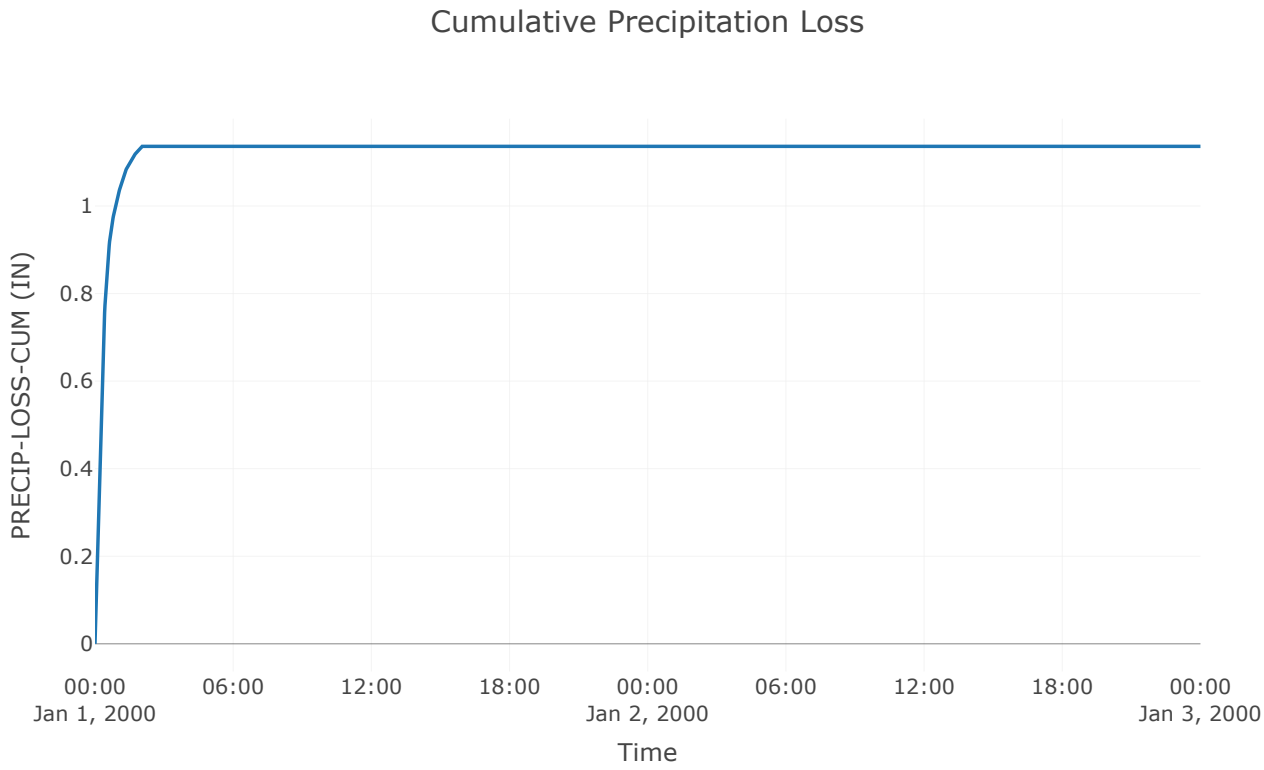


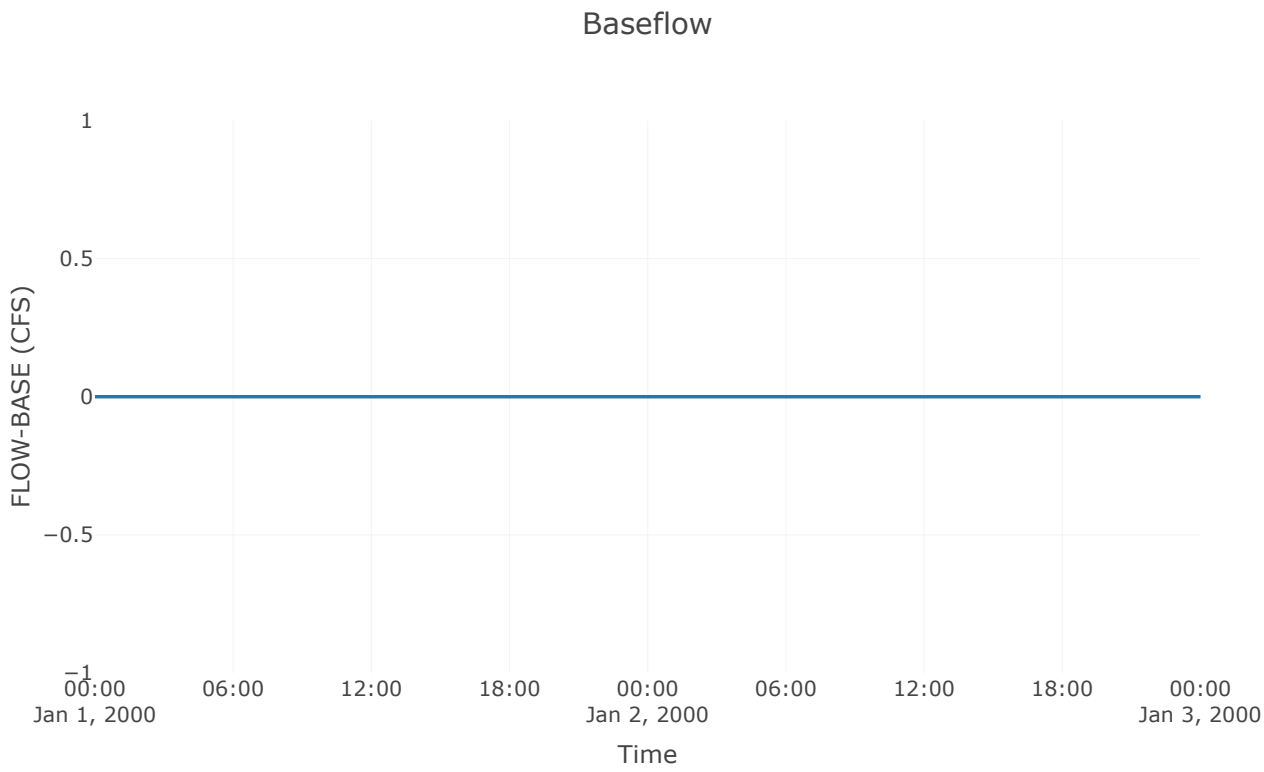
Cumulative Excess Precipitation

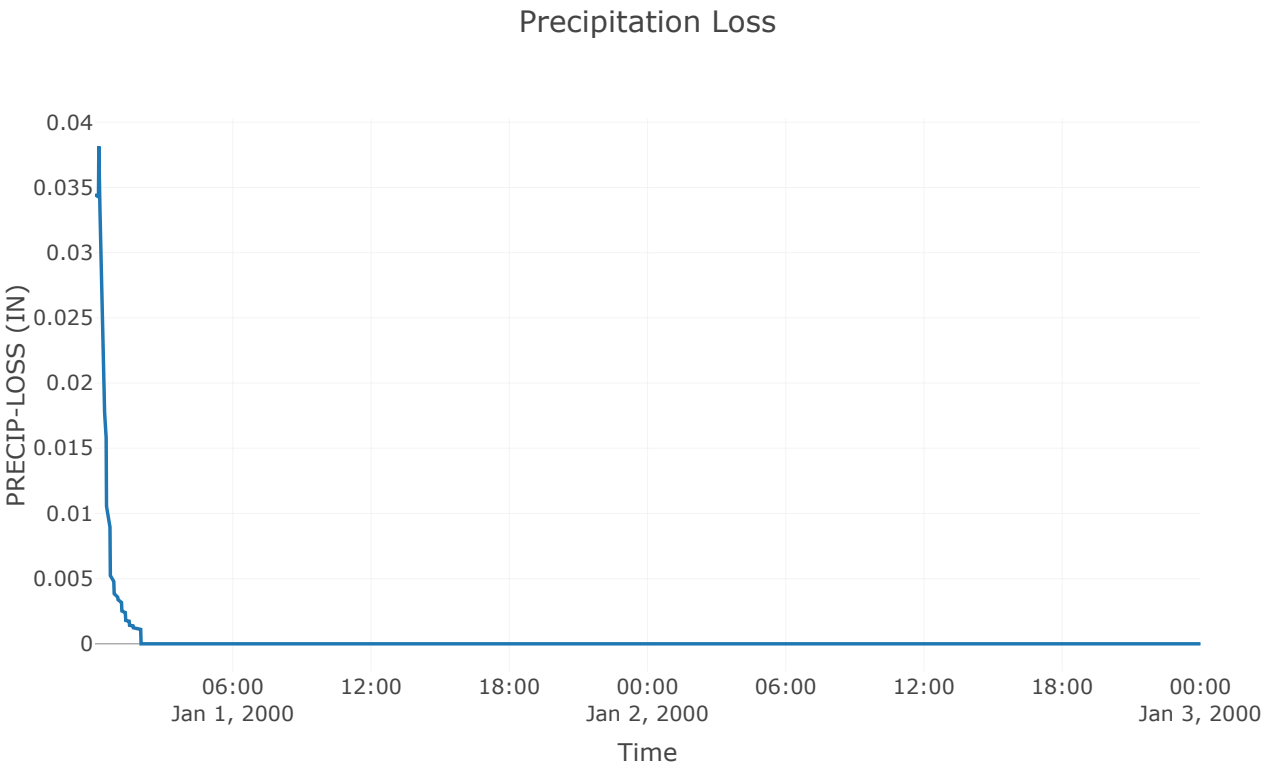


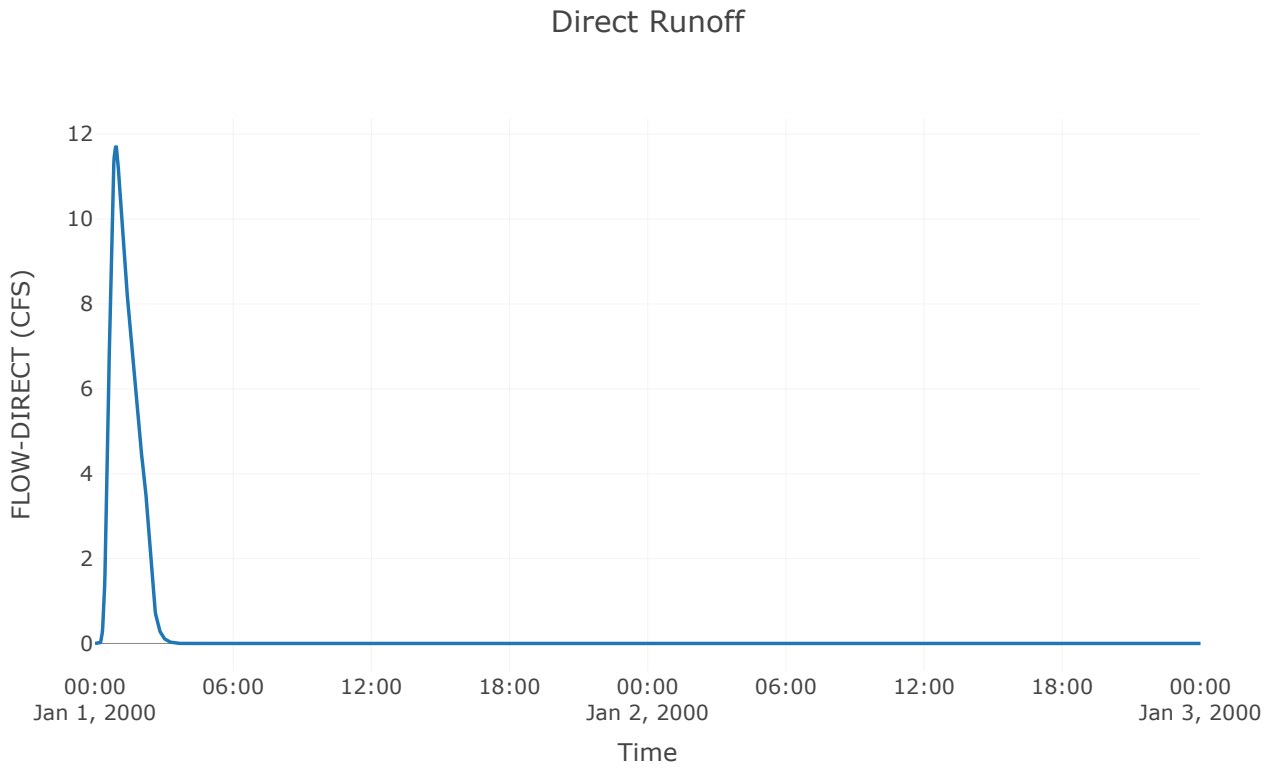

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

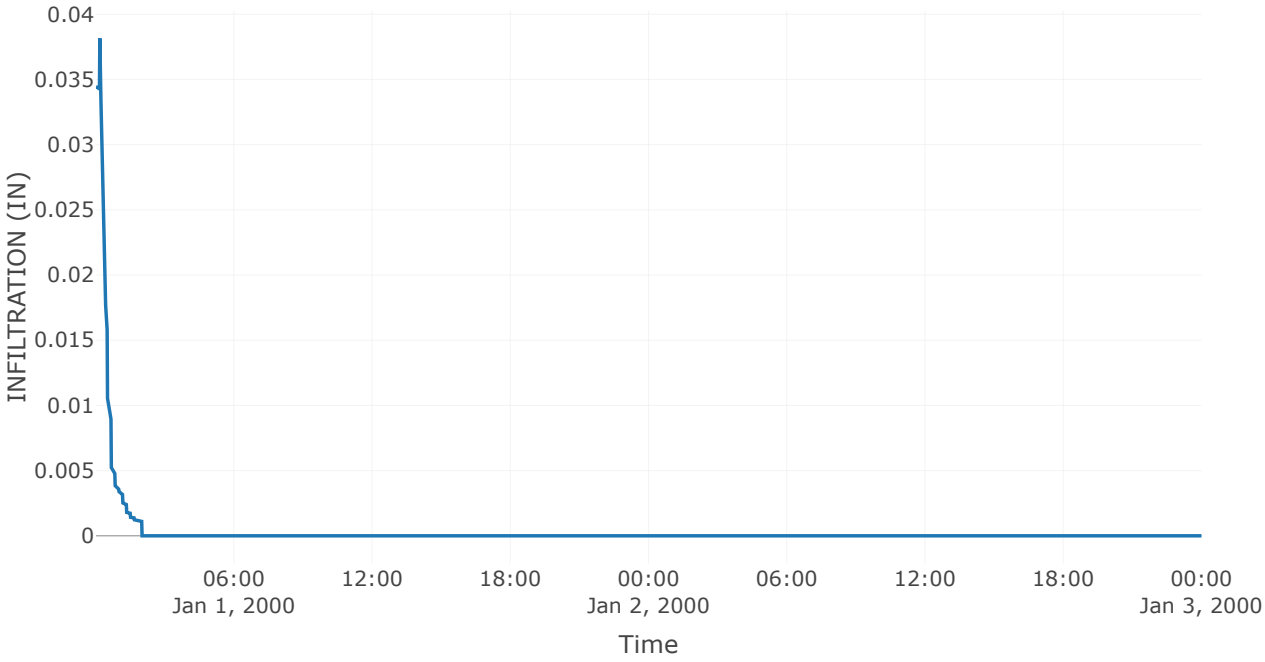

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

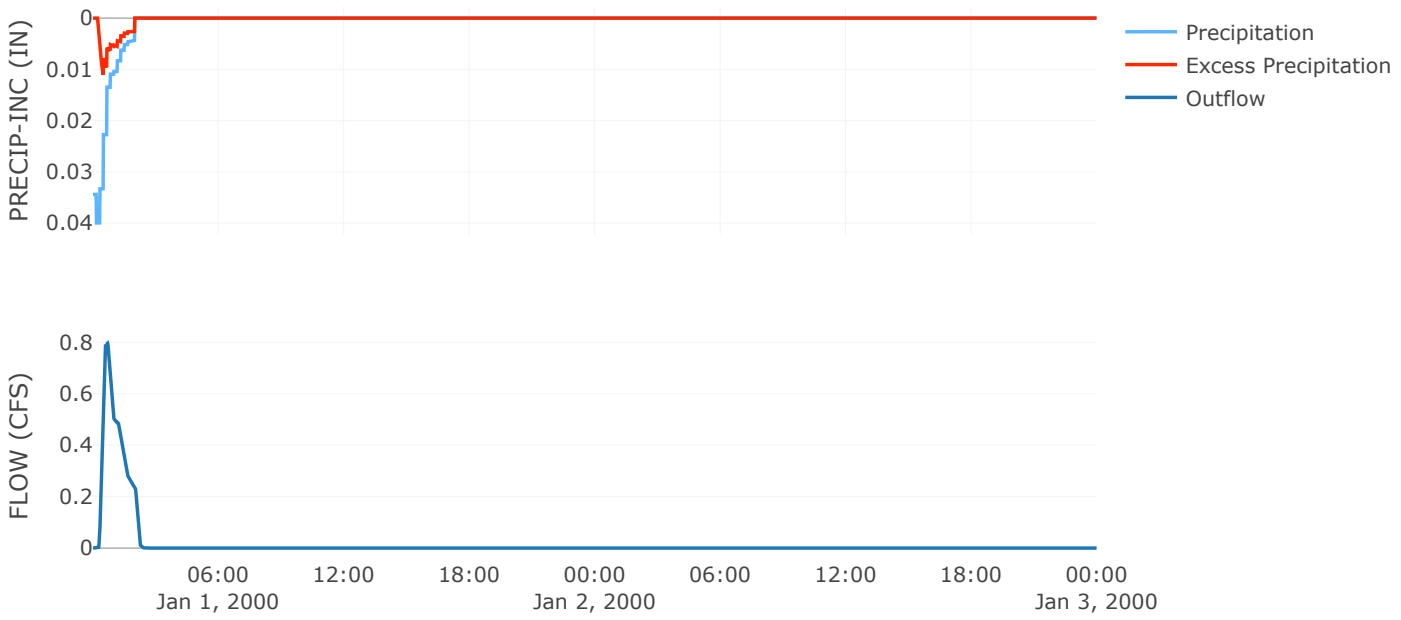
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

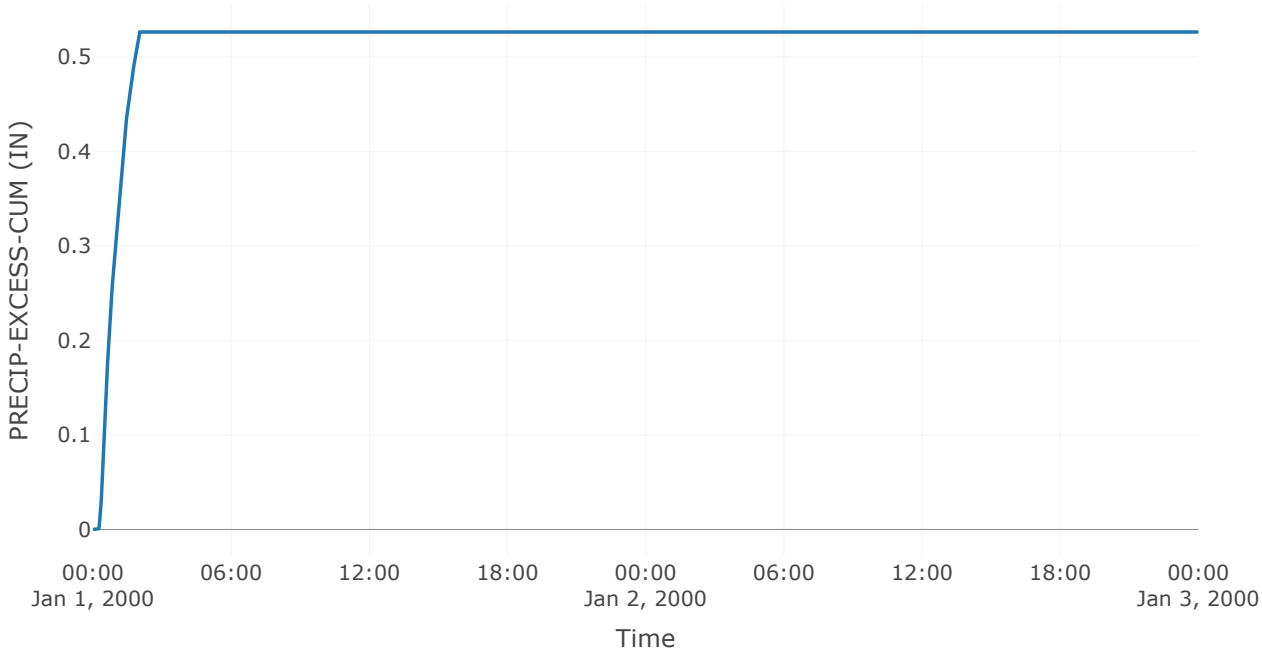
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

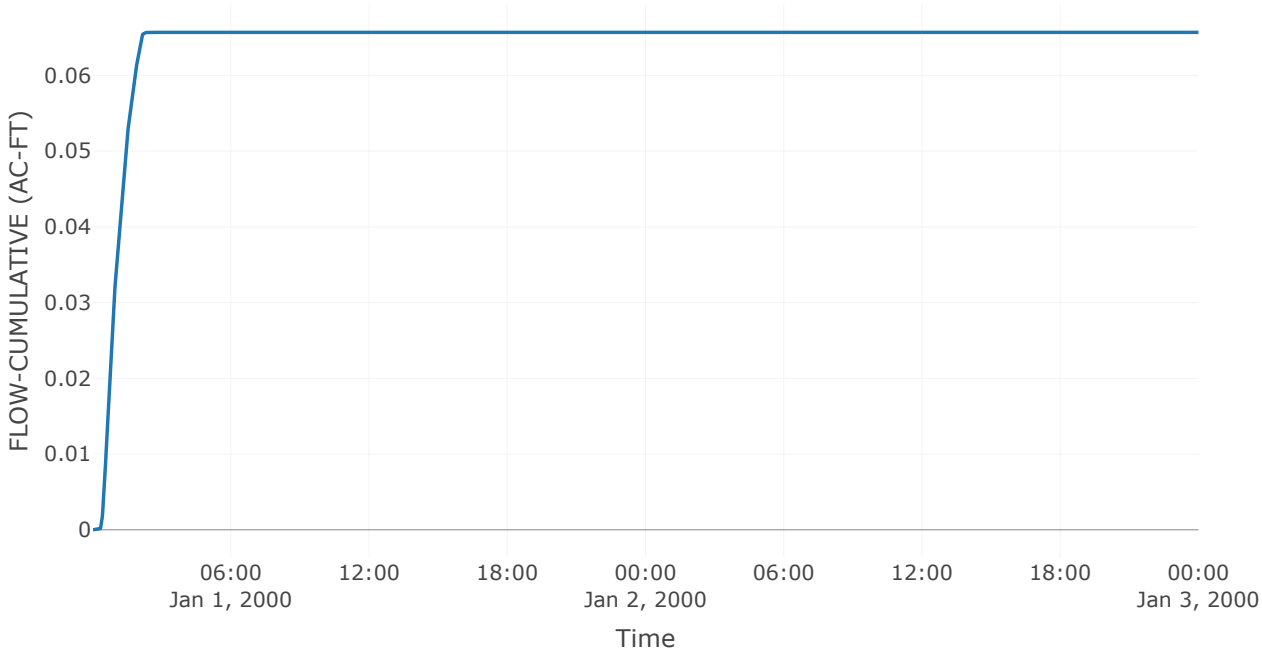
Precipitation and Outflow



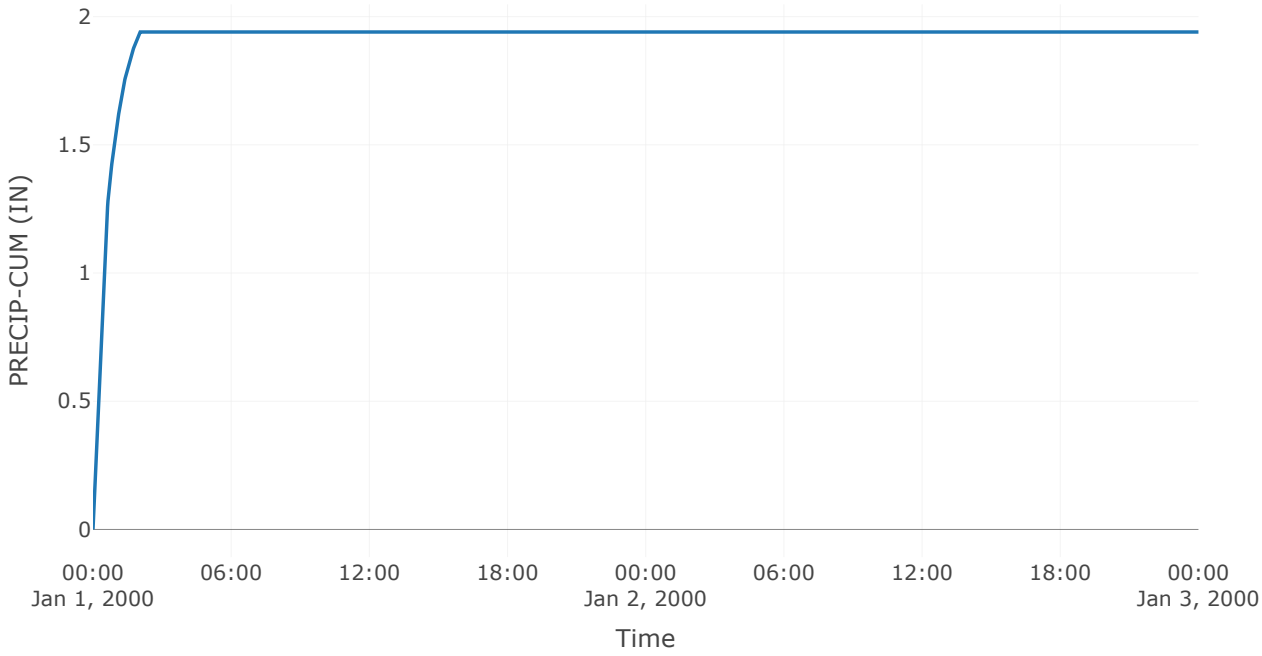
Cumulative Excess Precipitation

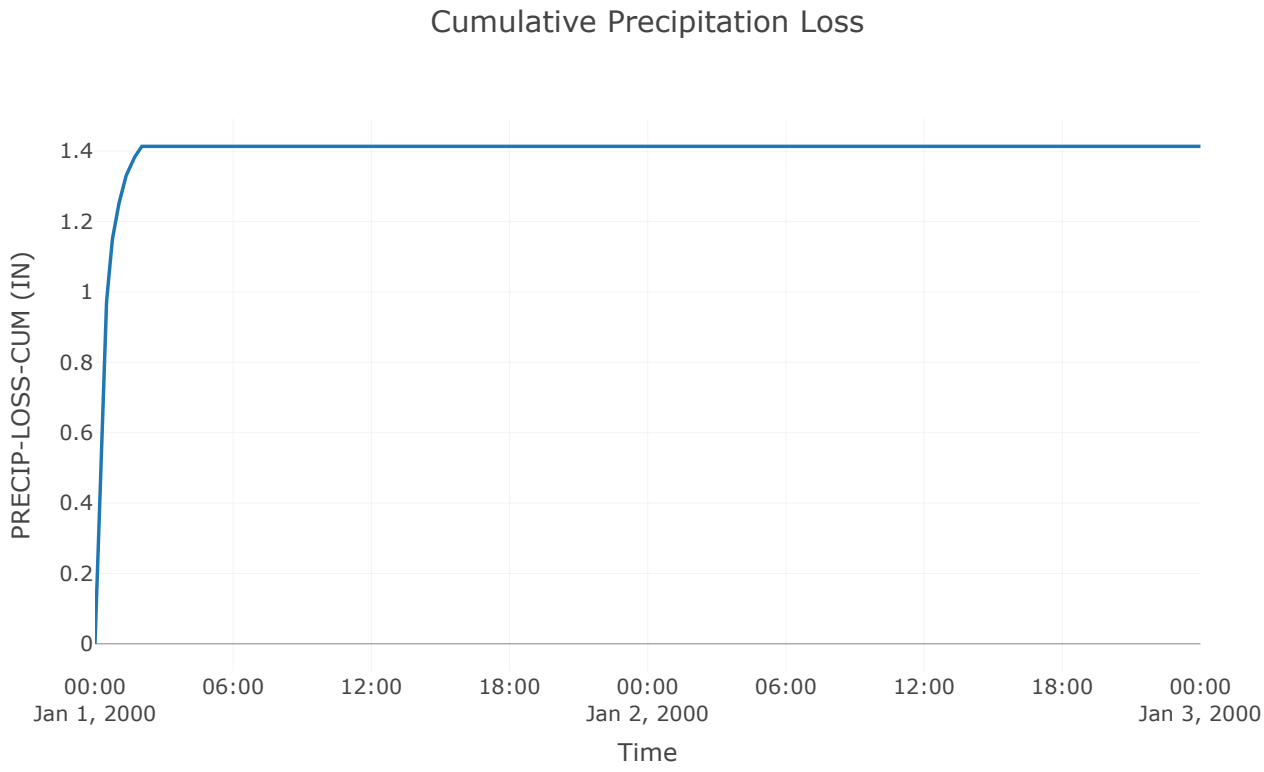


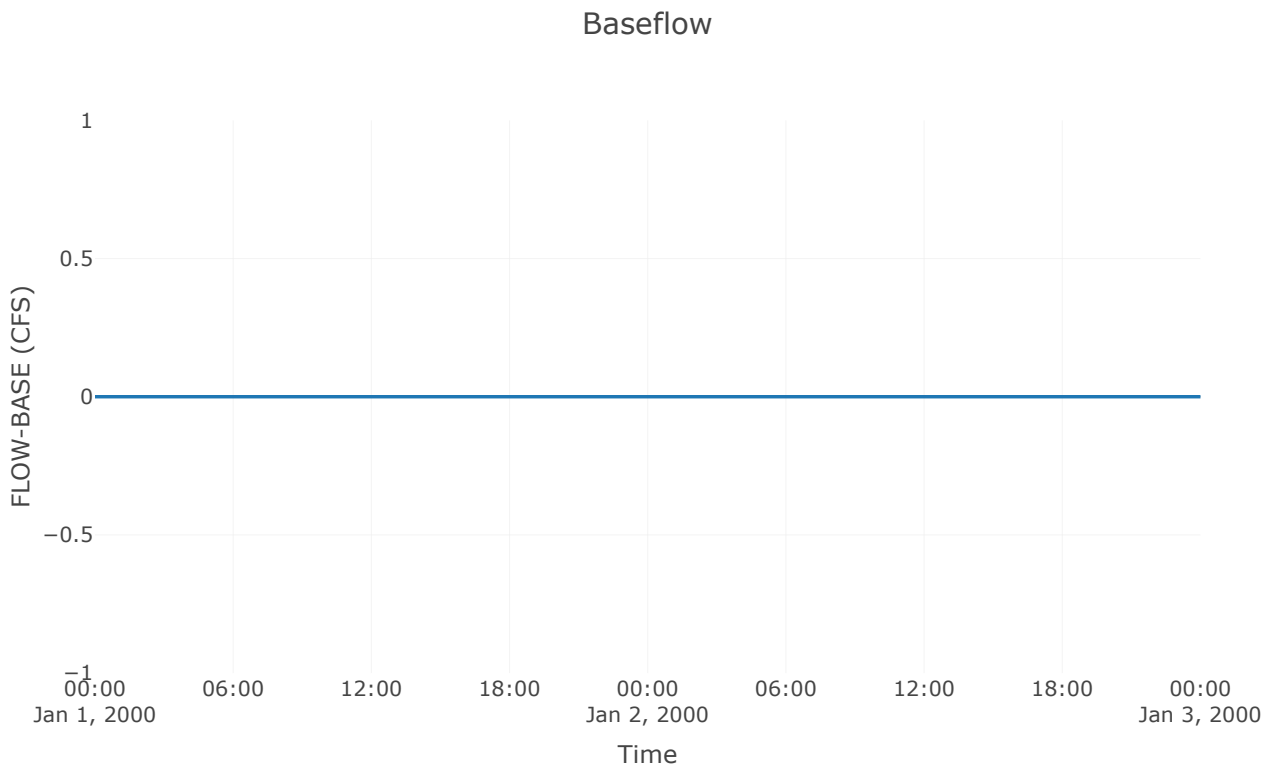
Cumulative Outflow



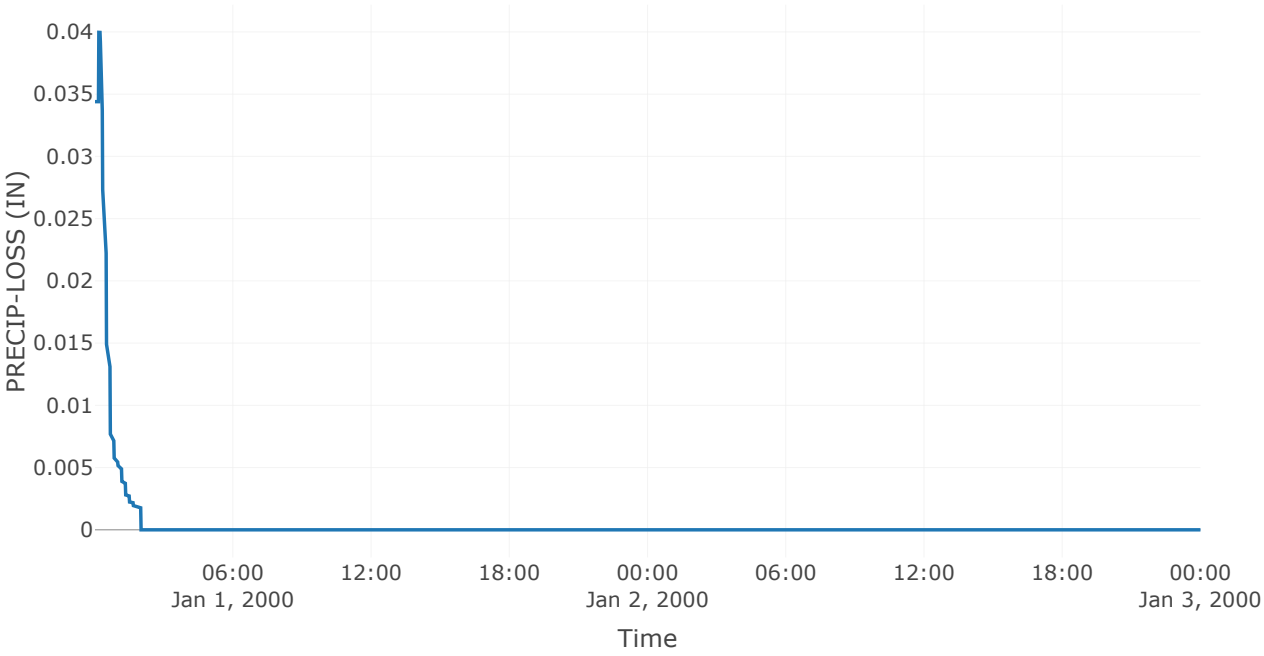
Cumulative Precipitation



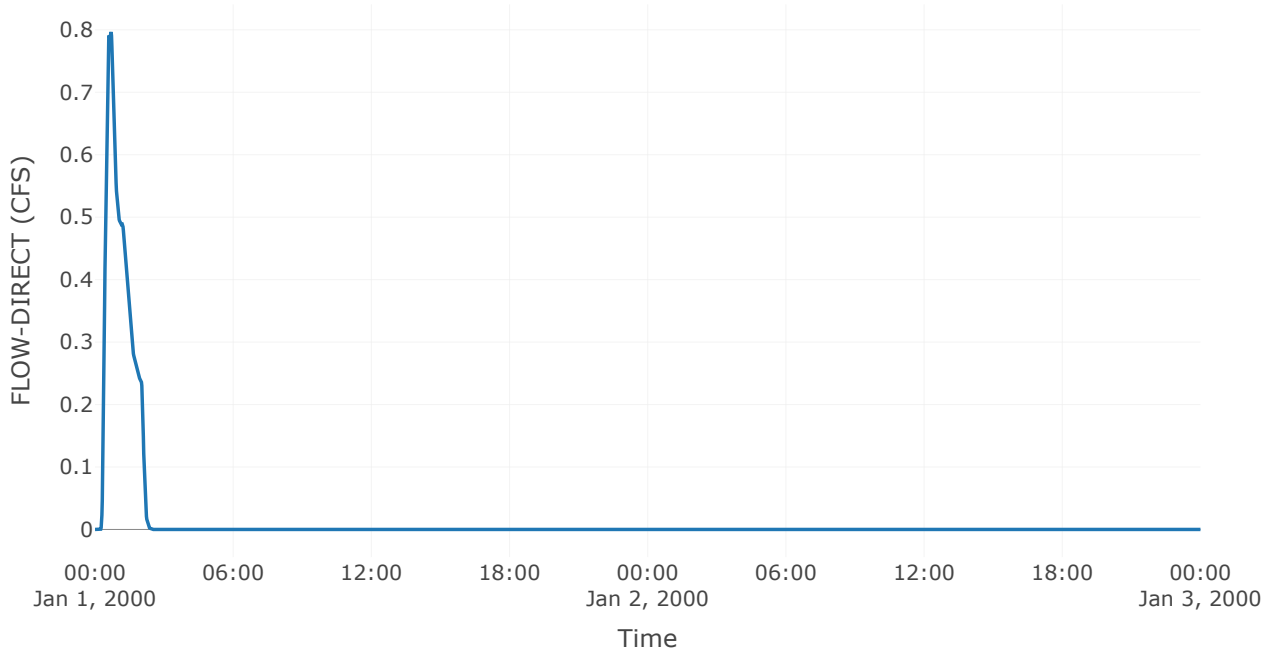

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

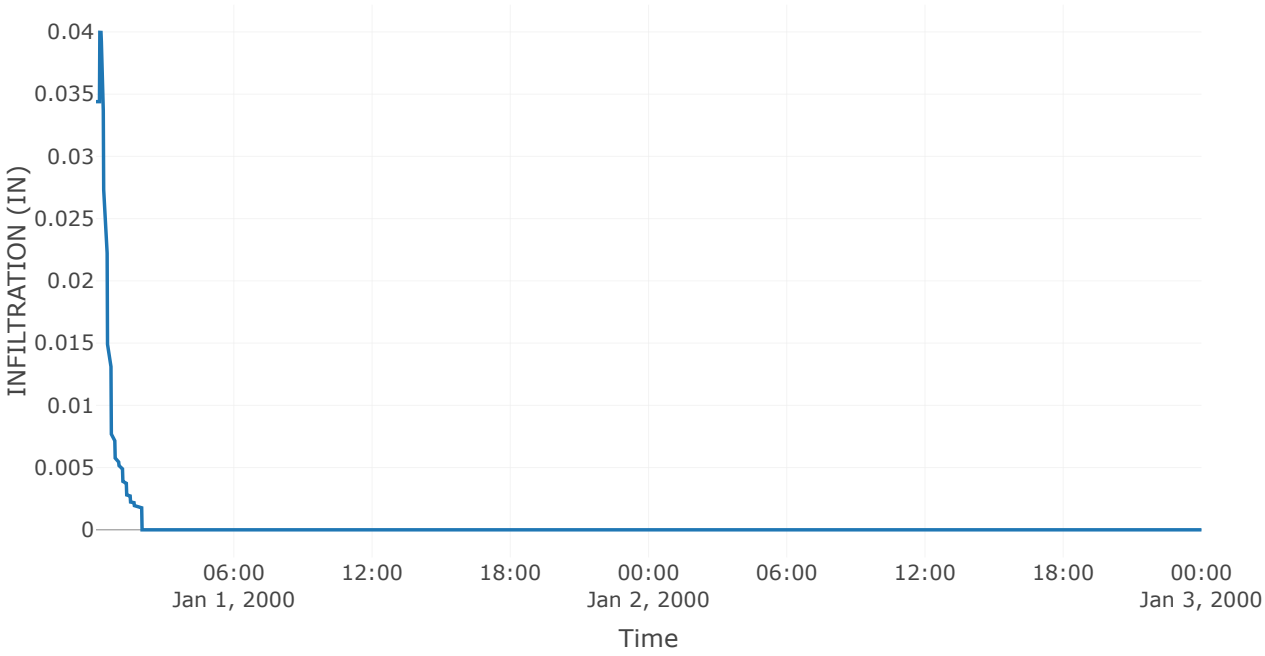

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

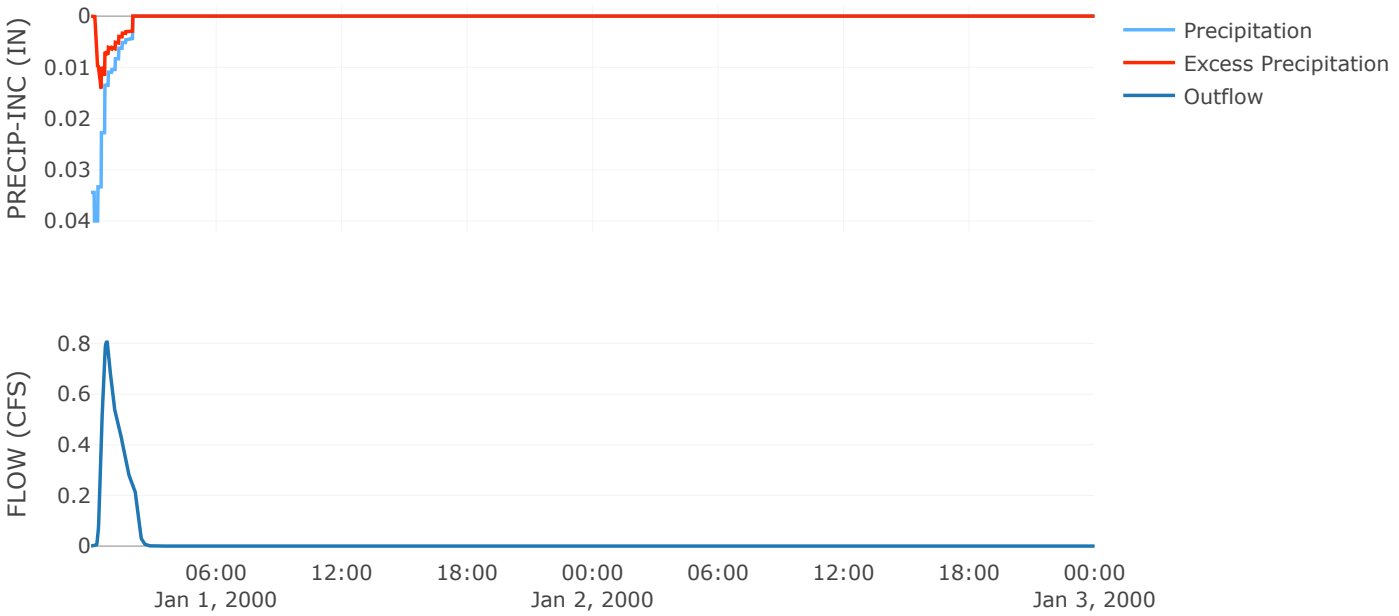
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

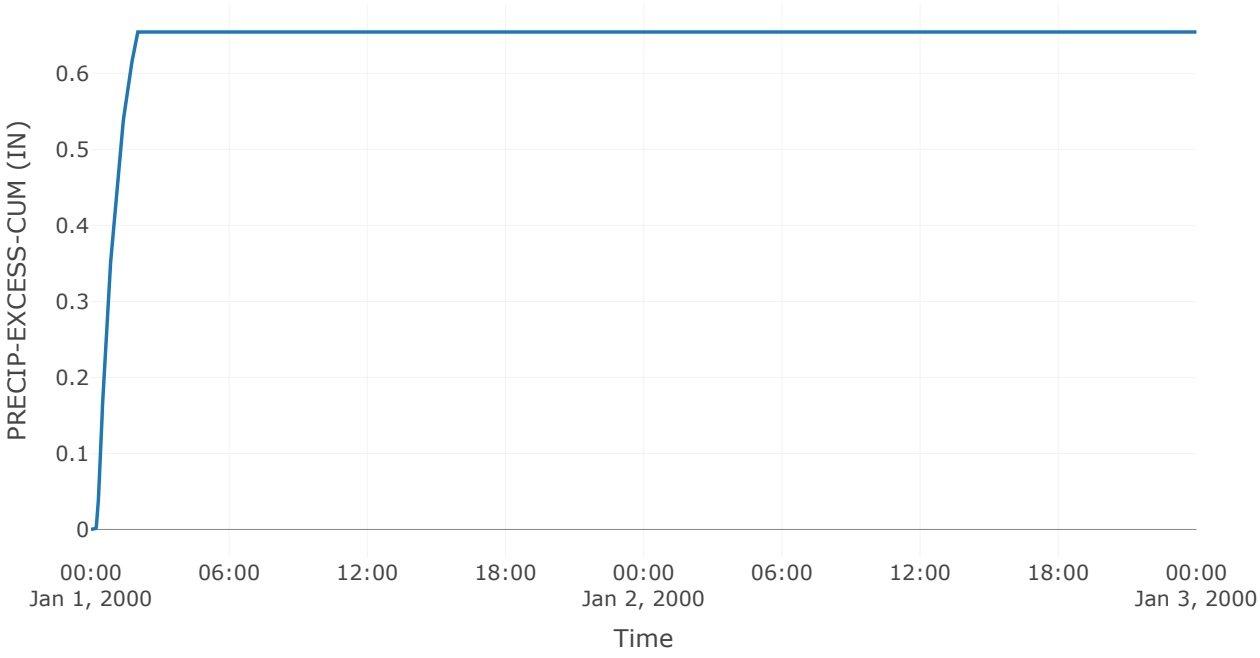
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

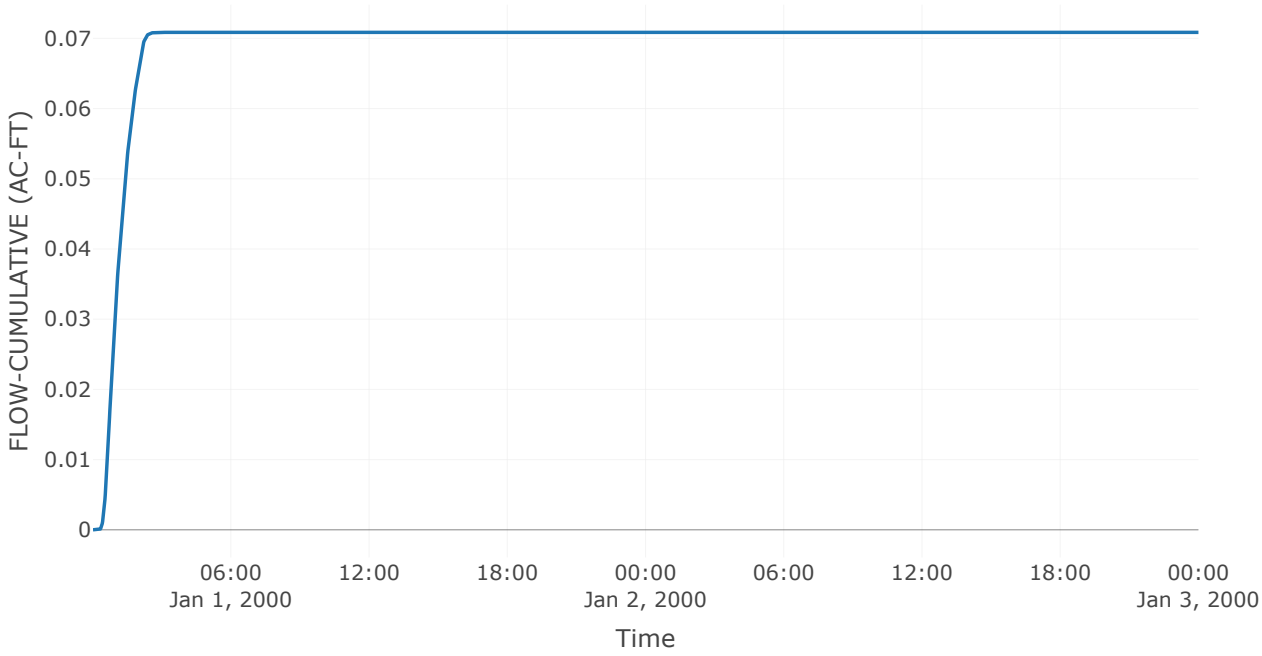
Precipitation and Outflow



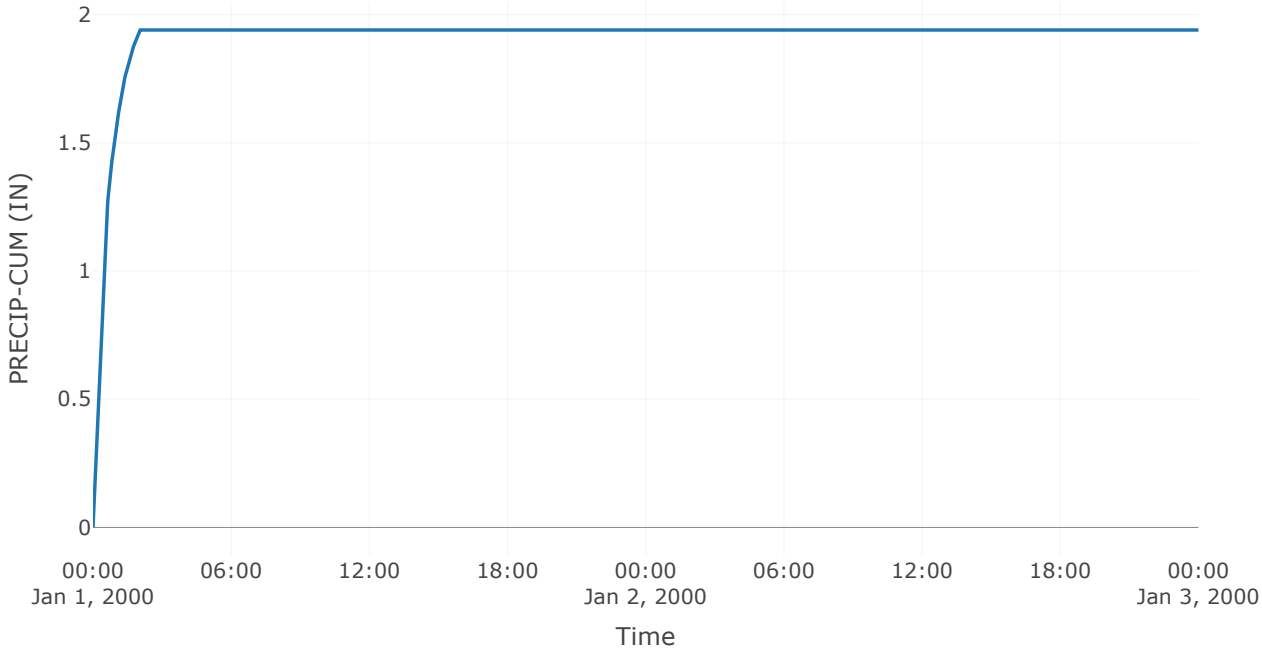
Cumulative Excess Precipitation

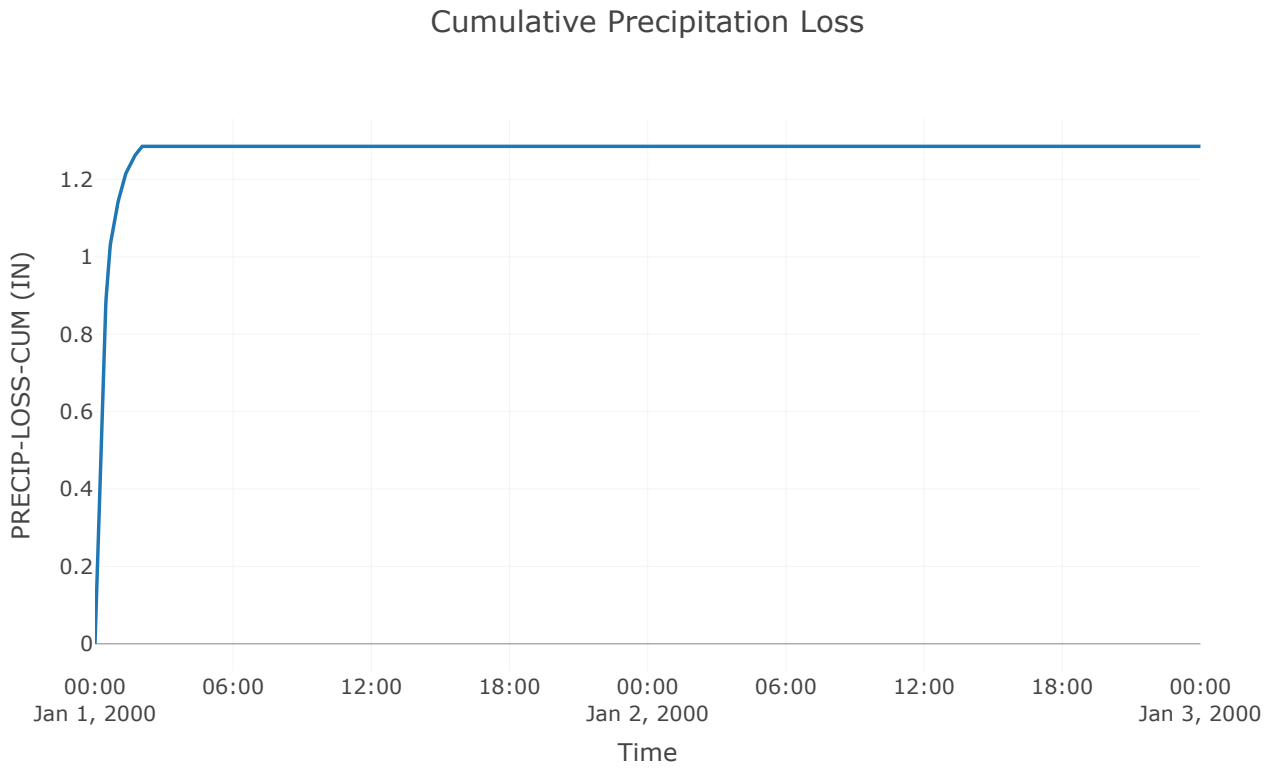


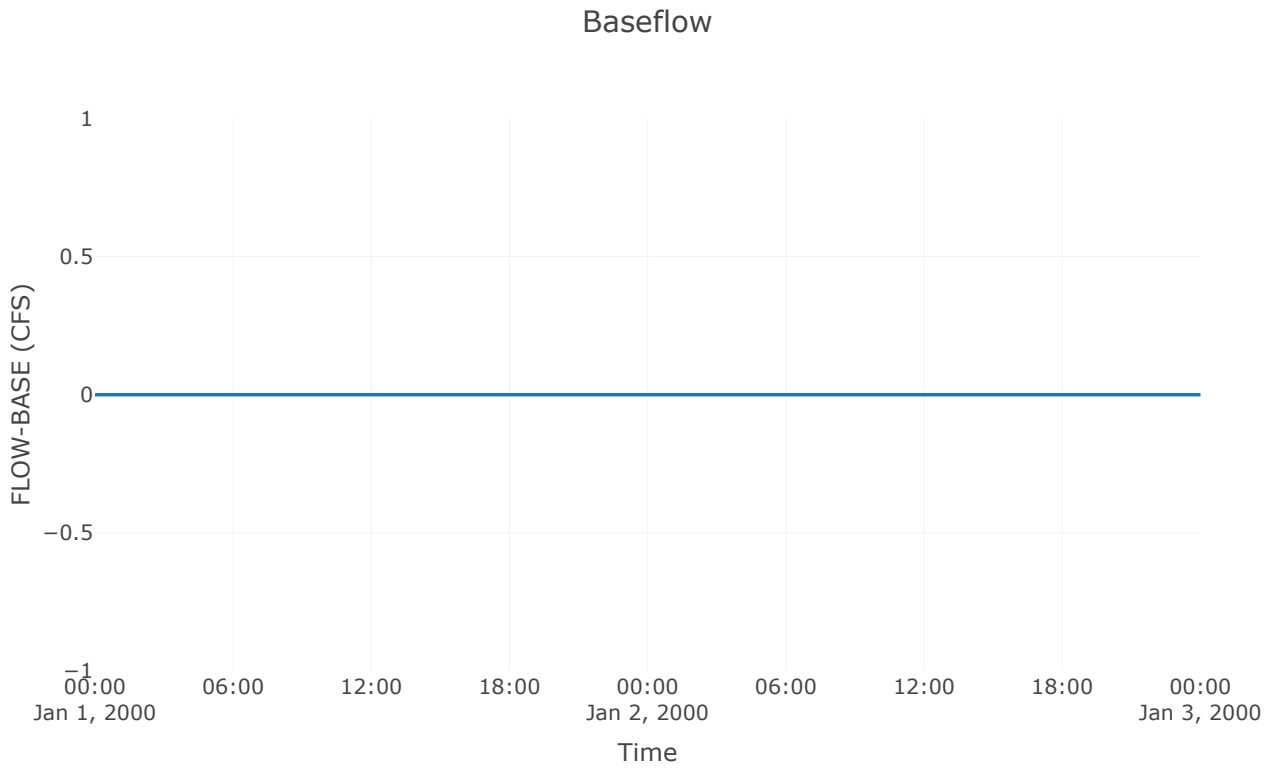
Cumulative Outflow



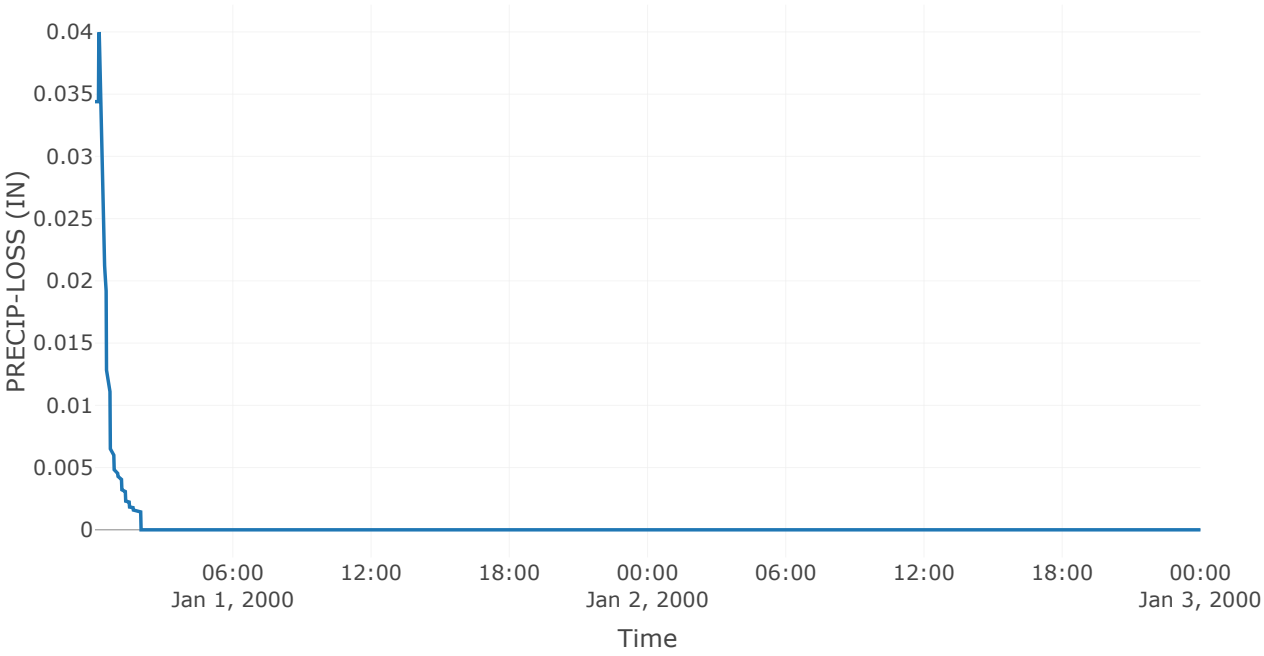
Cumulative Precipitation



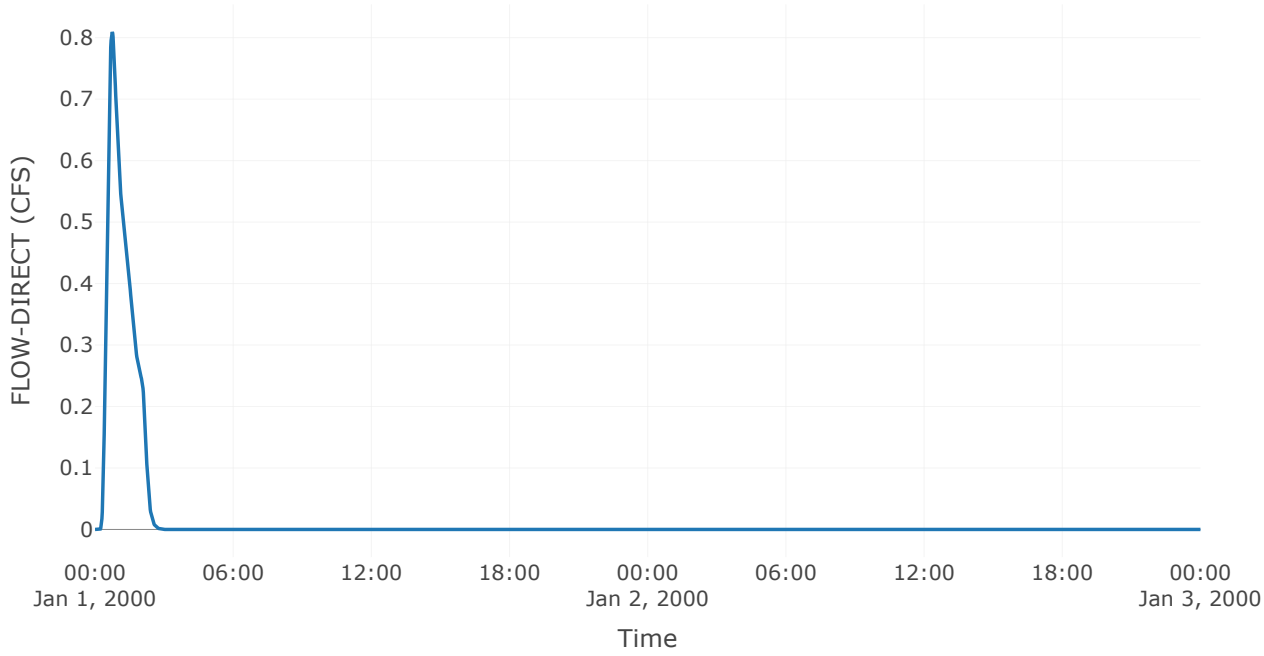

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

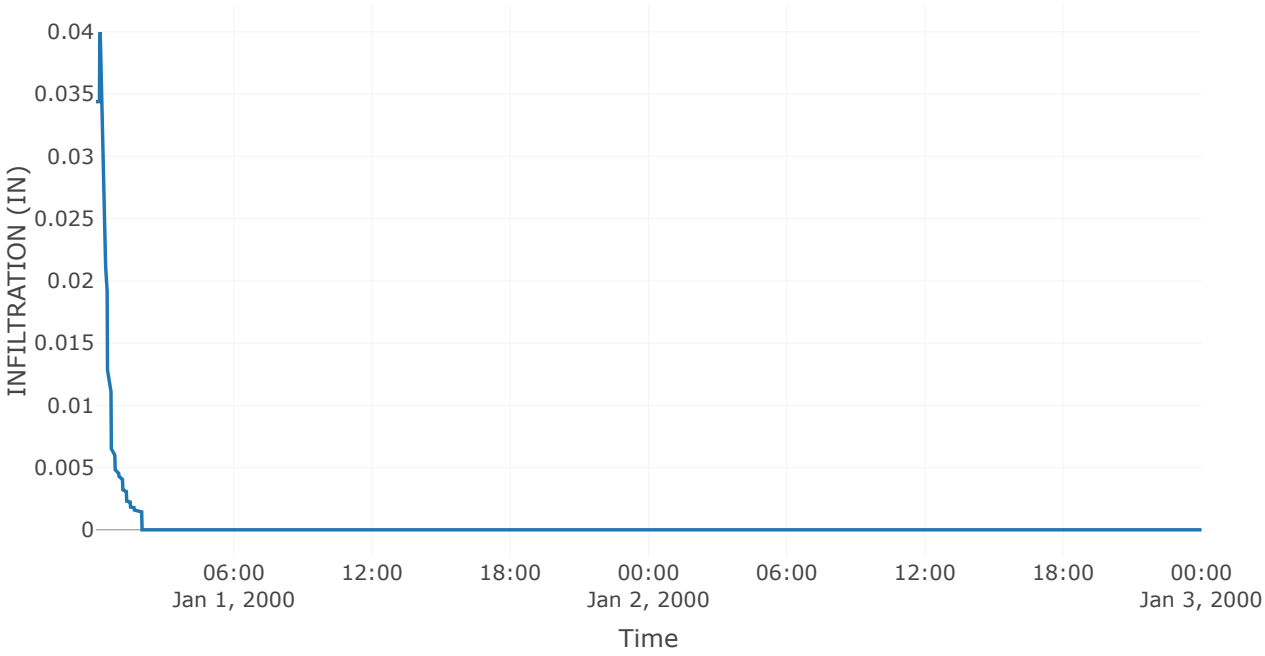

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



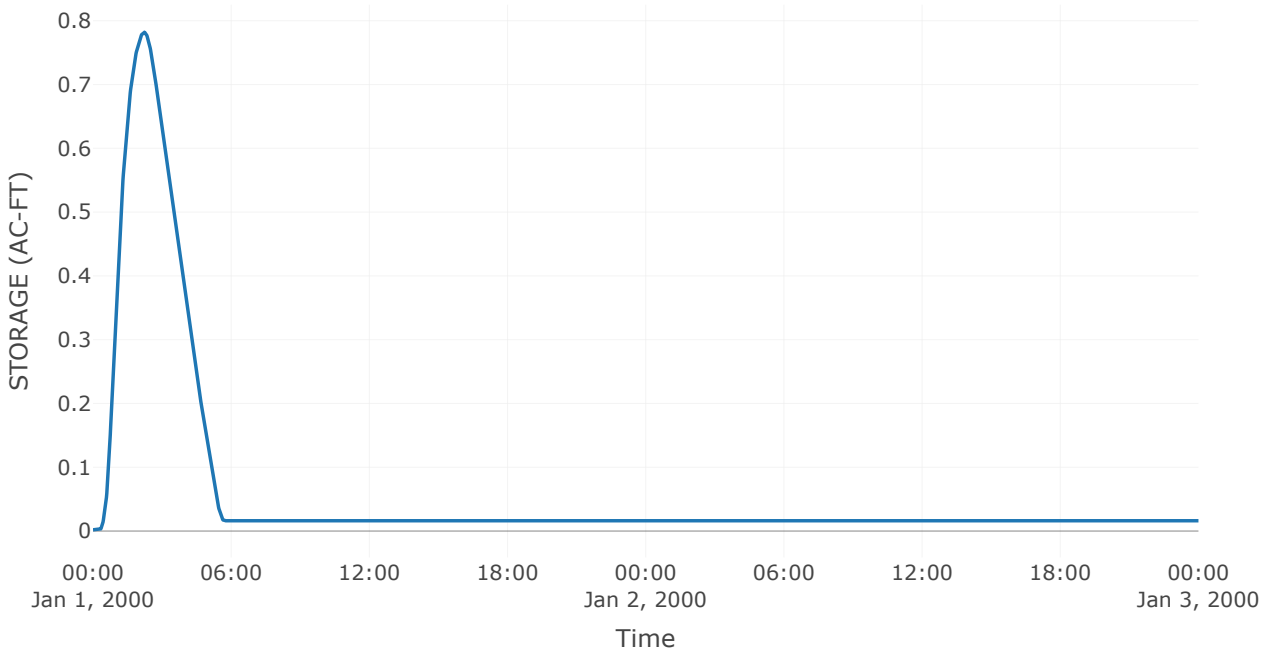

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

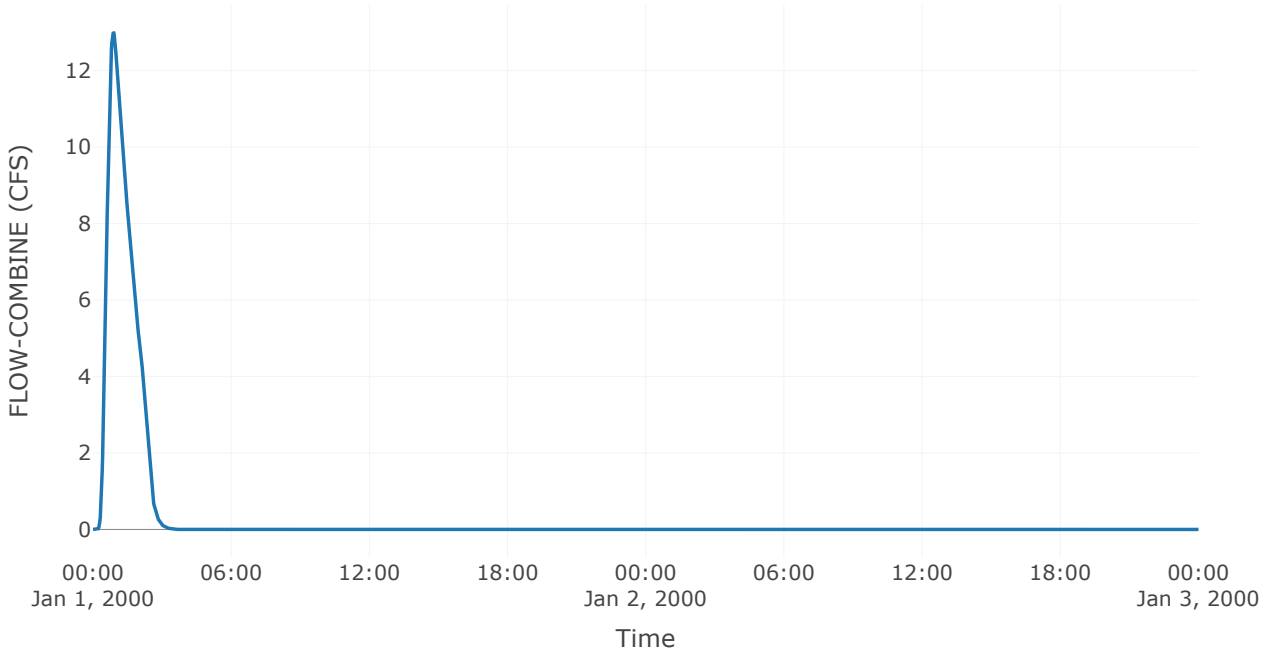
Downstream : Basin 2

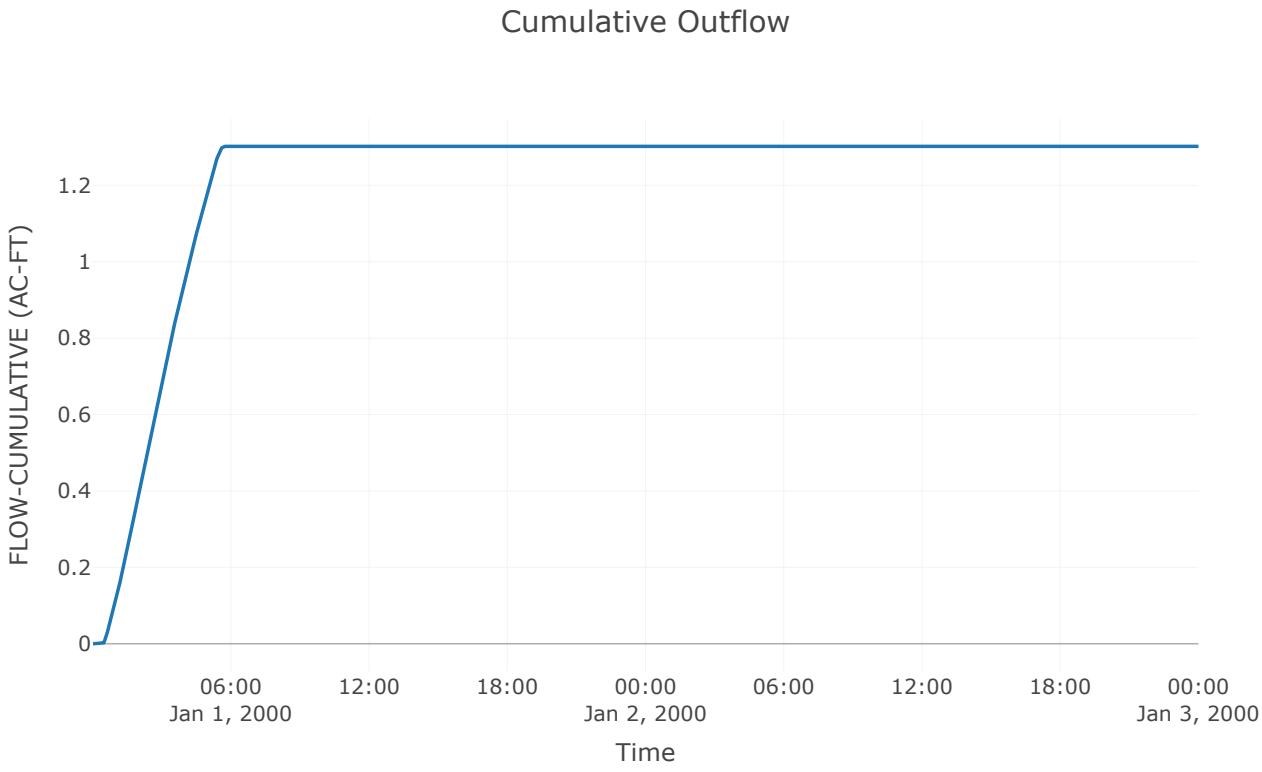
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

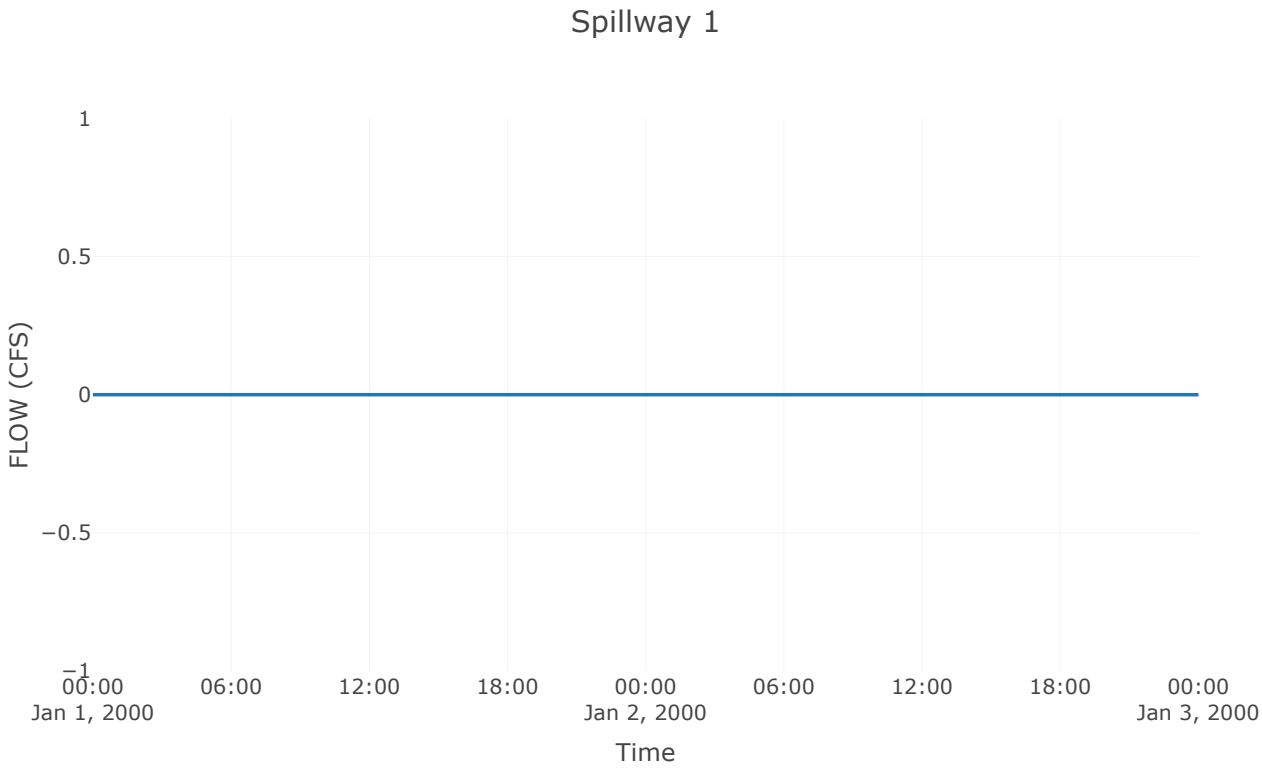
Storage

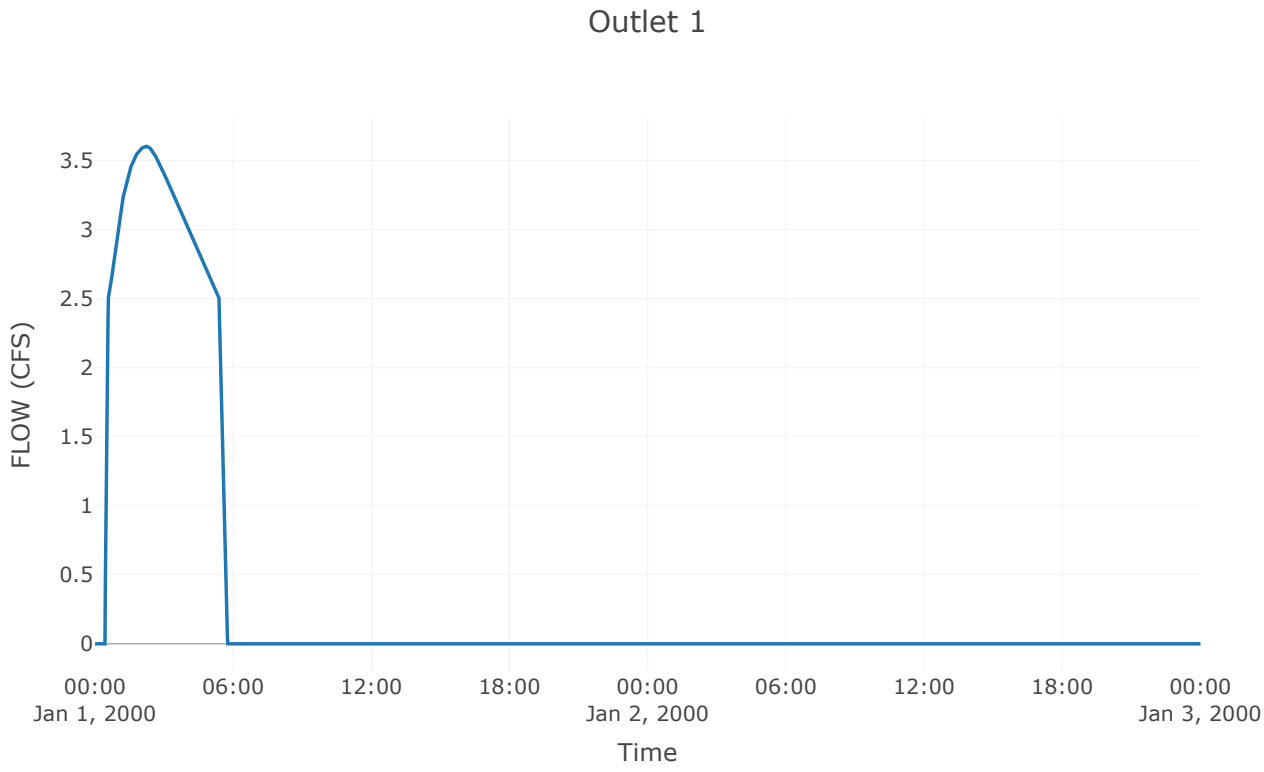


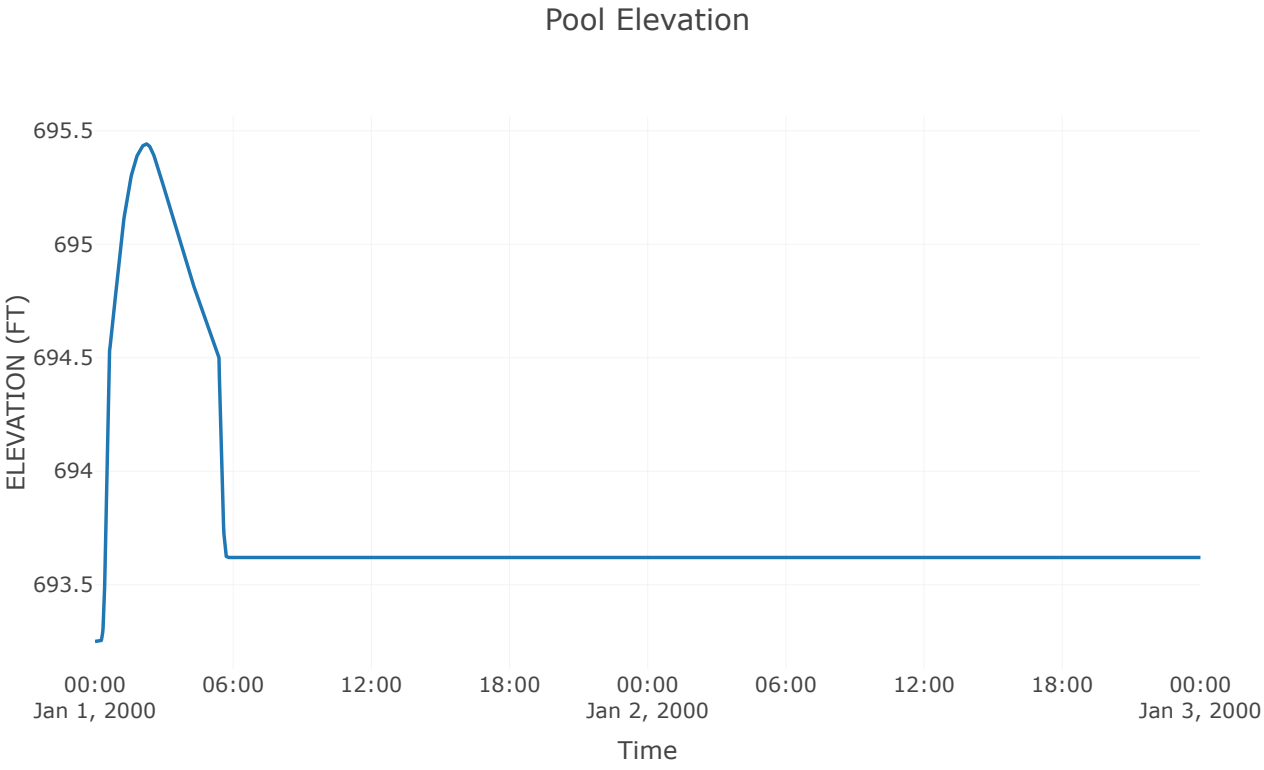
Combined Inflow

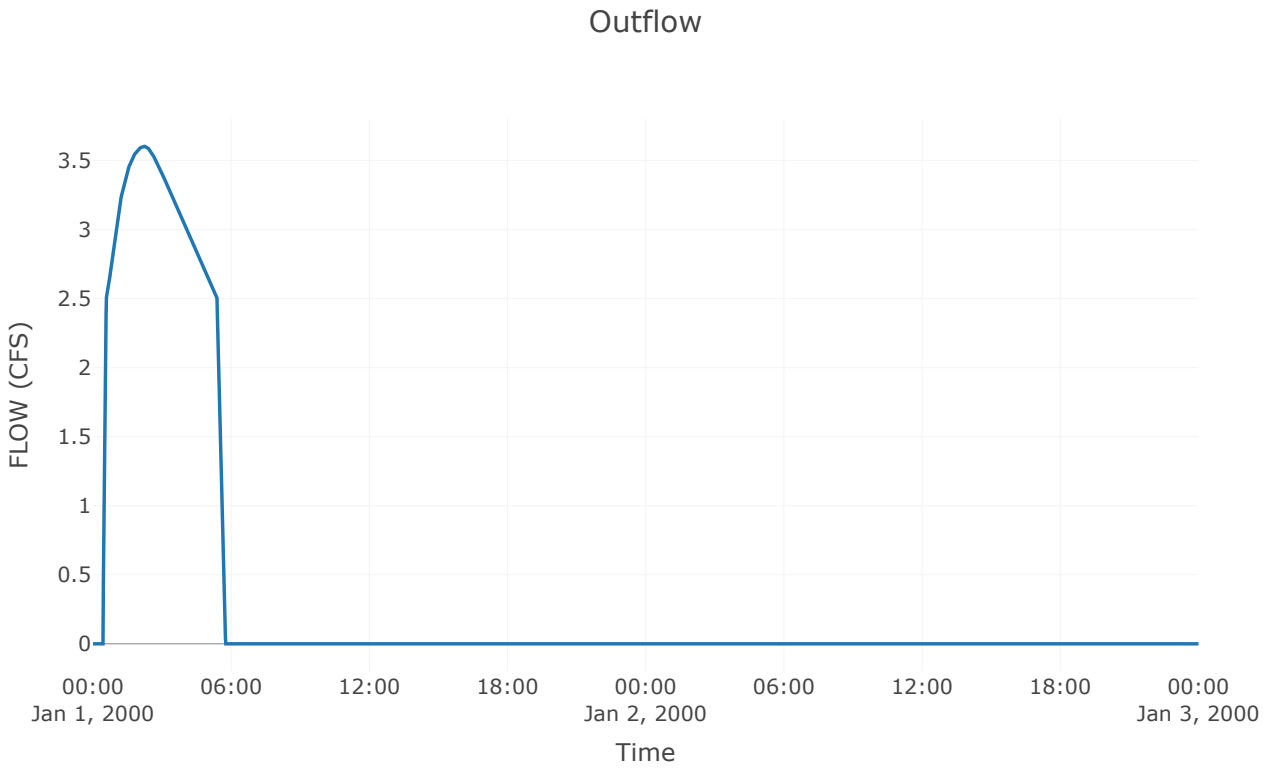



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695.5
695
694.5
694
693.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

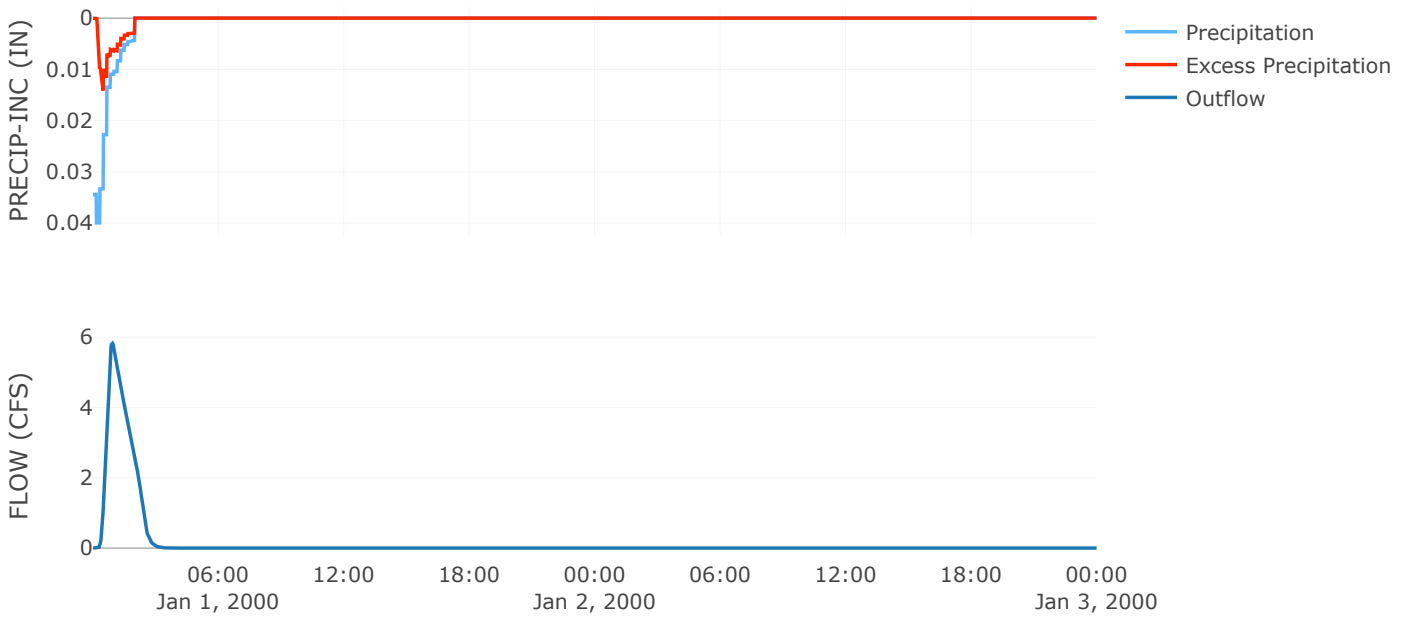
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

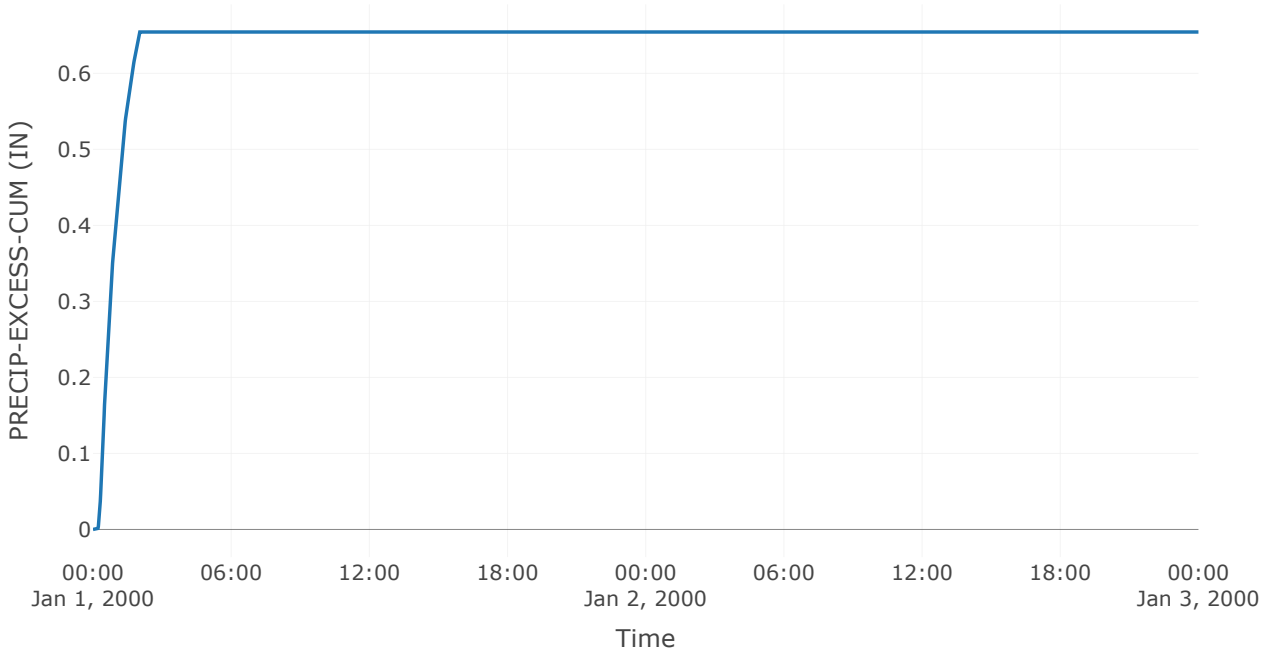
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

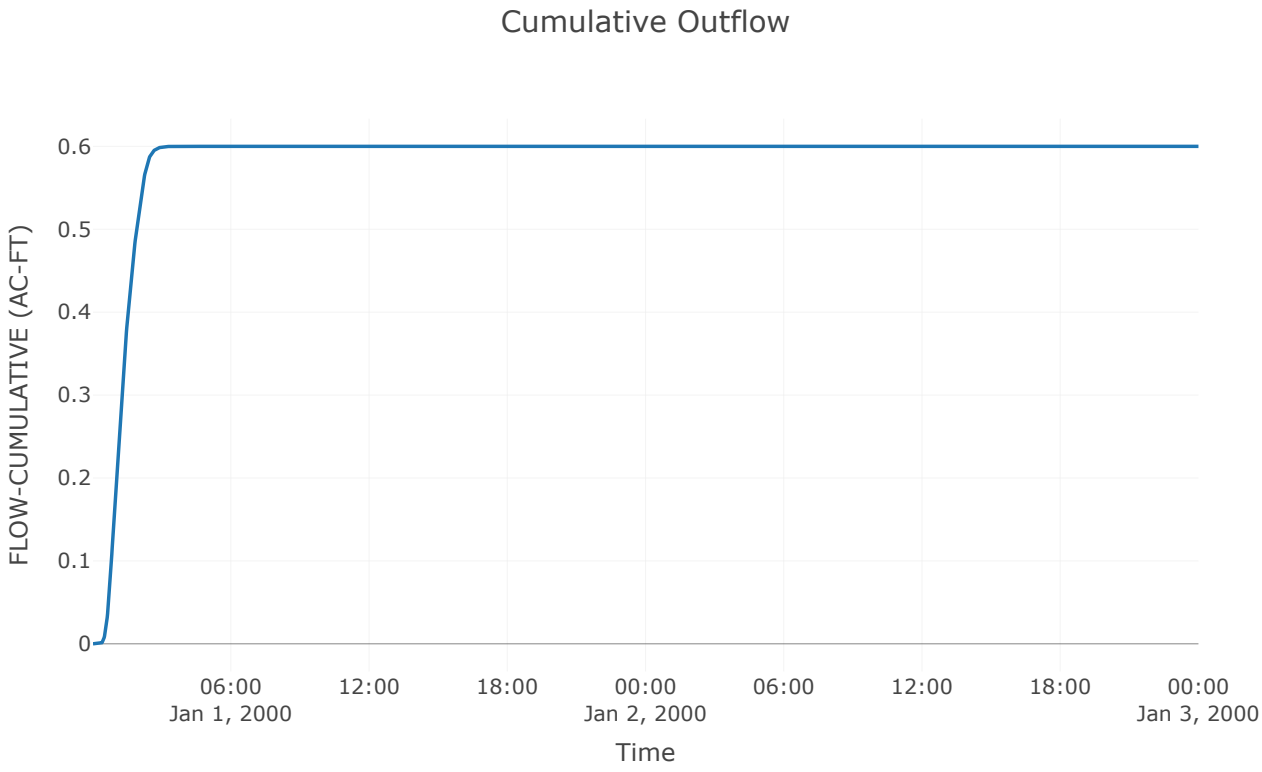
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

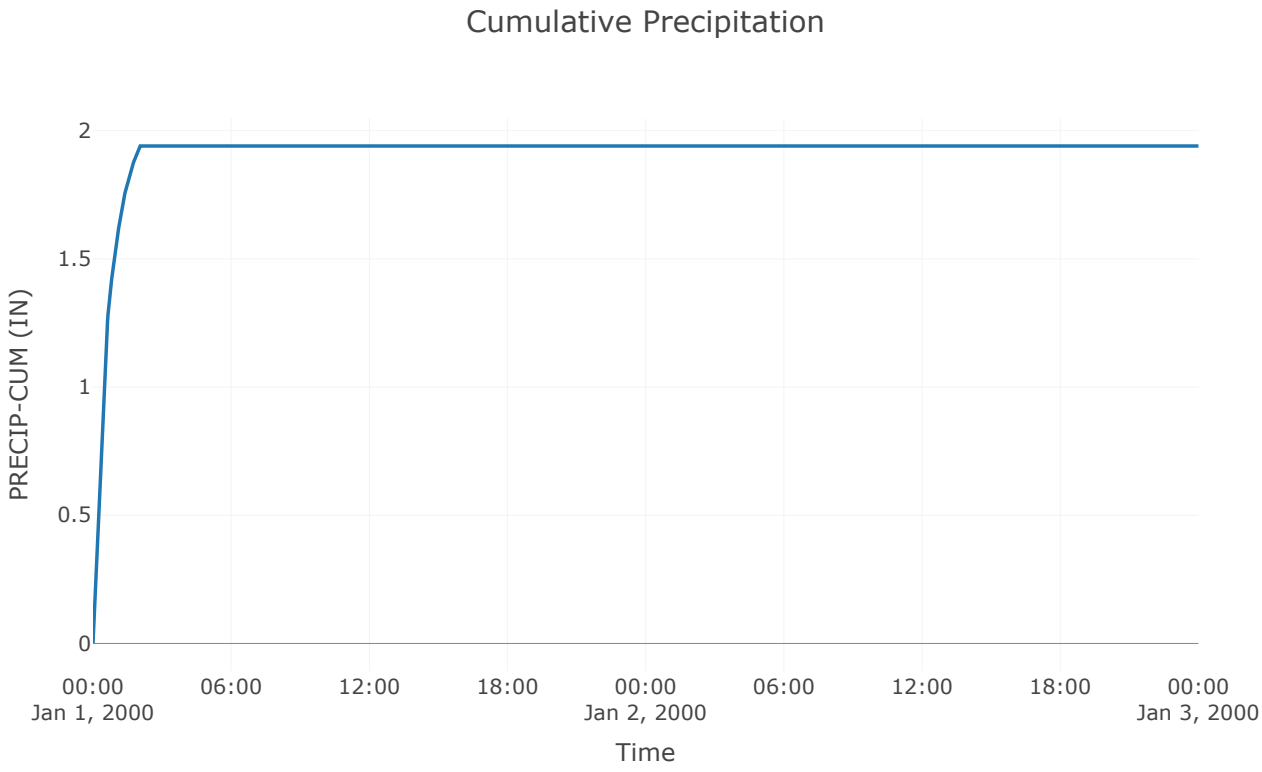
Precipitation and Outflow

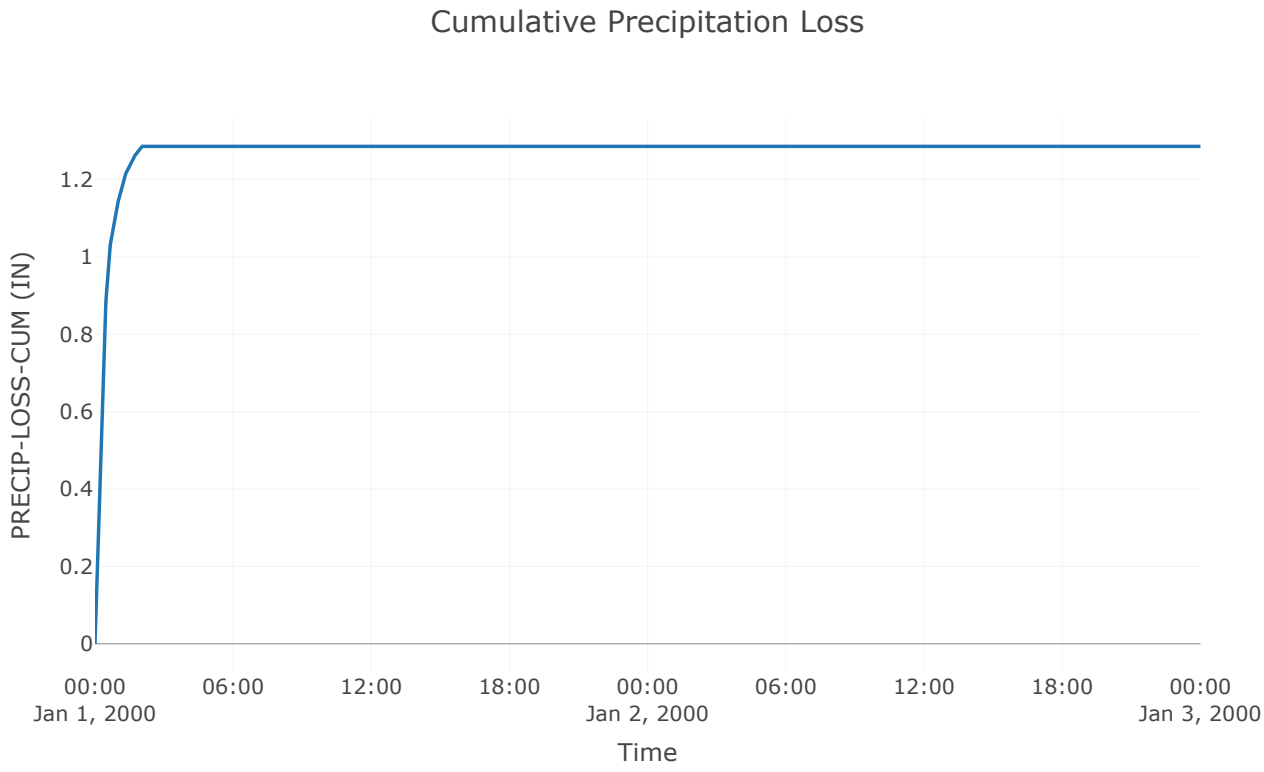


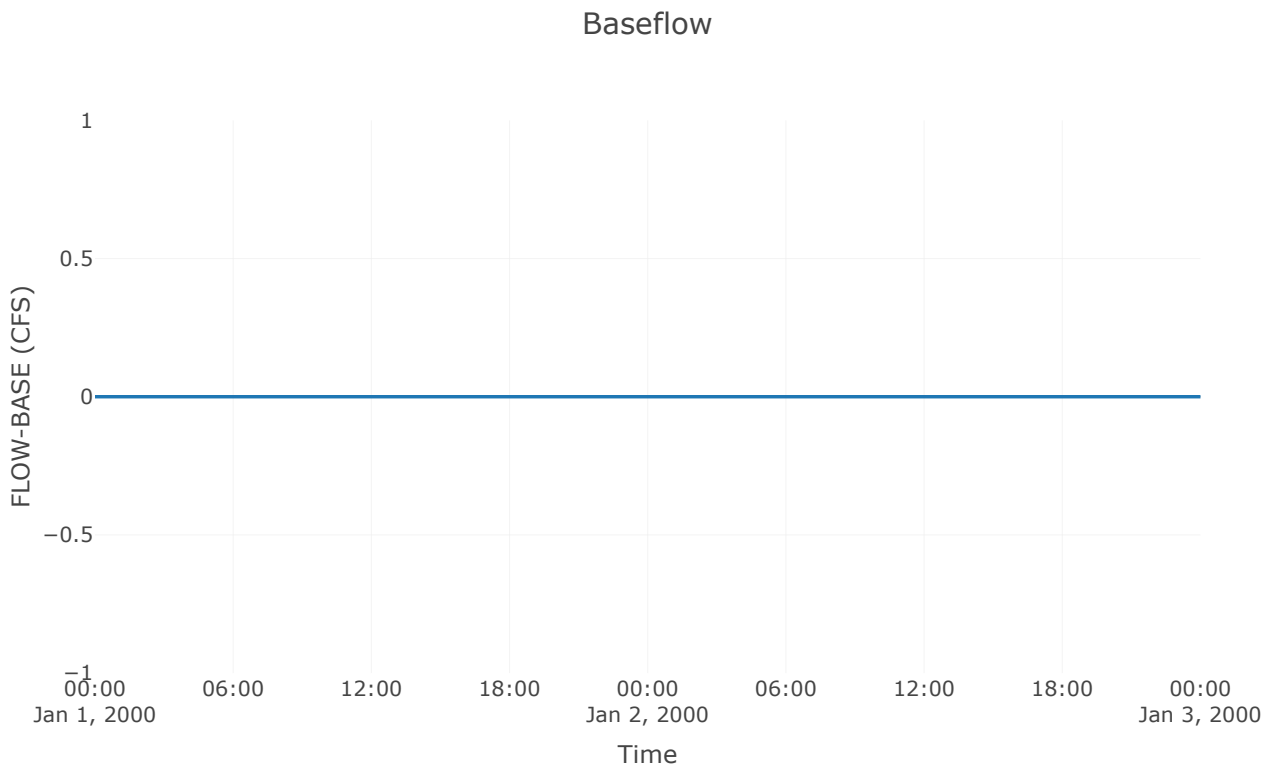
Cumulative Excess Precipitation



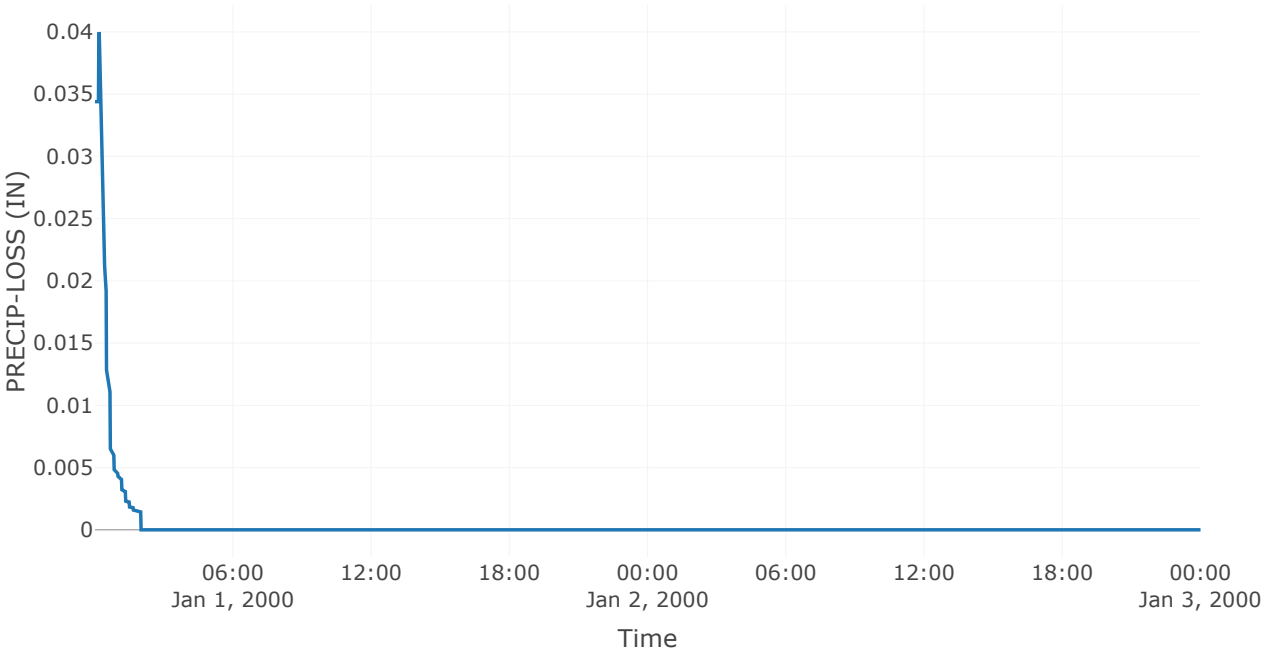

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

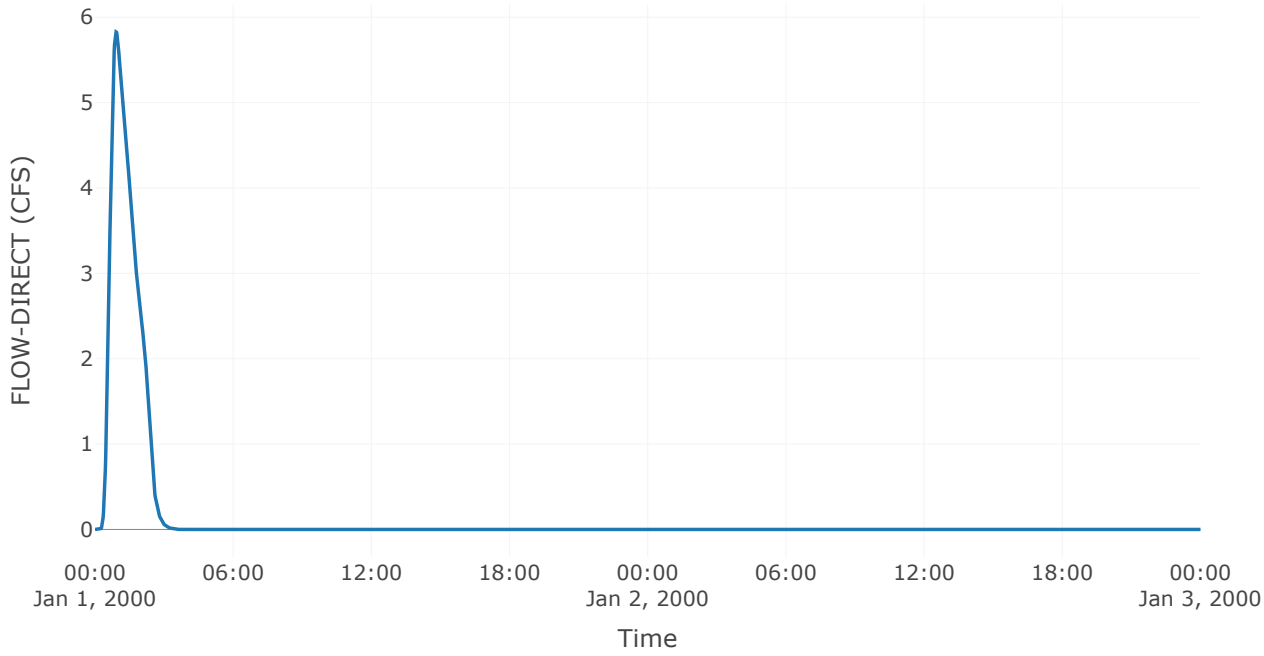

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

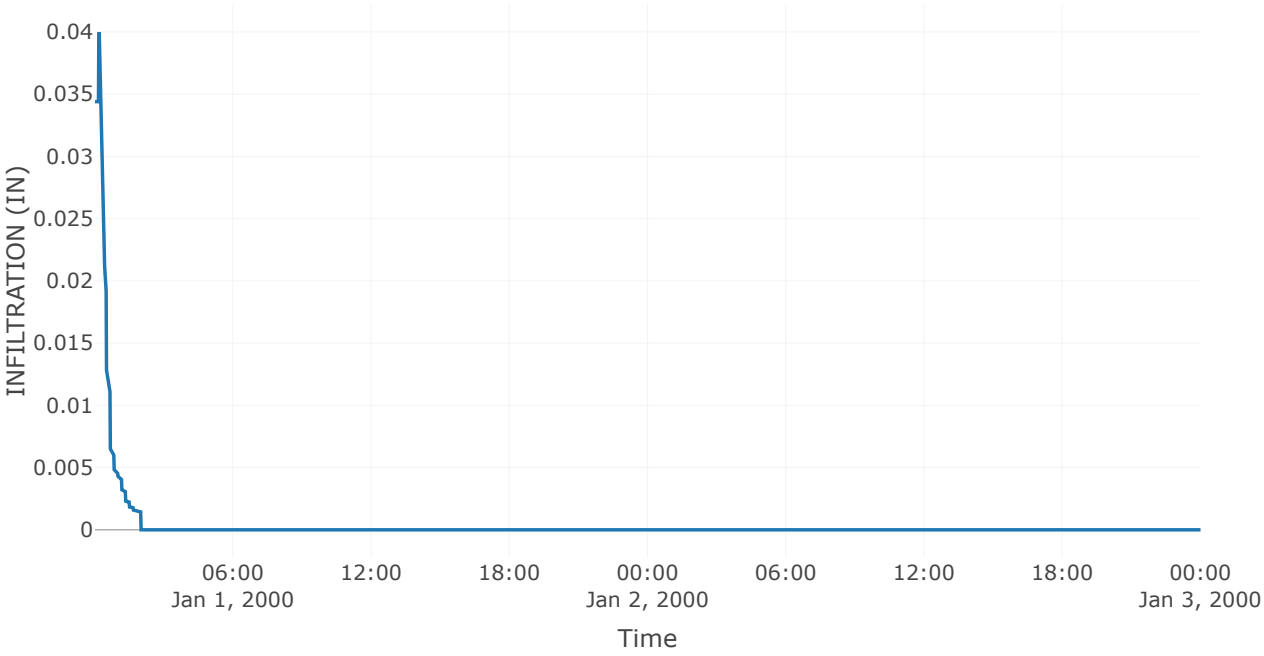

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

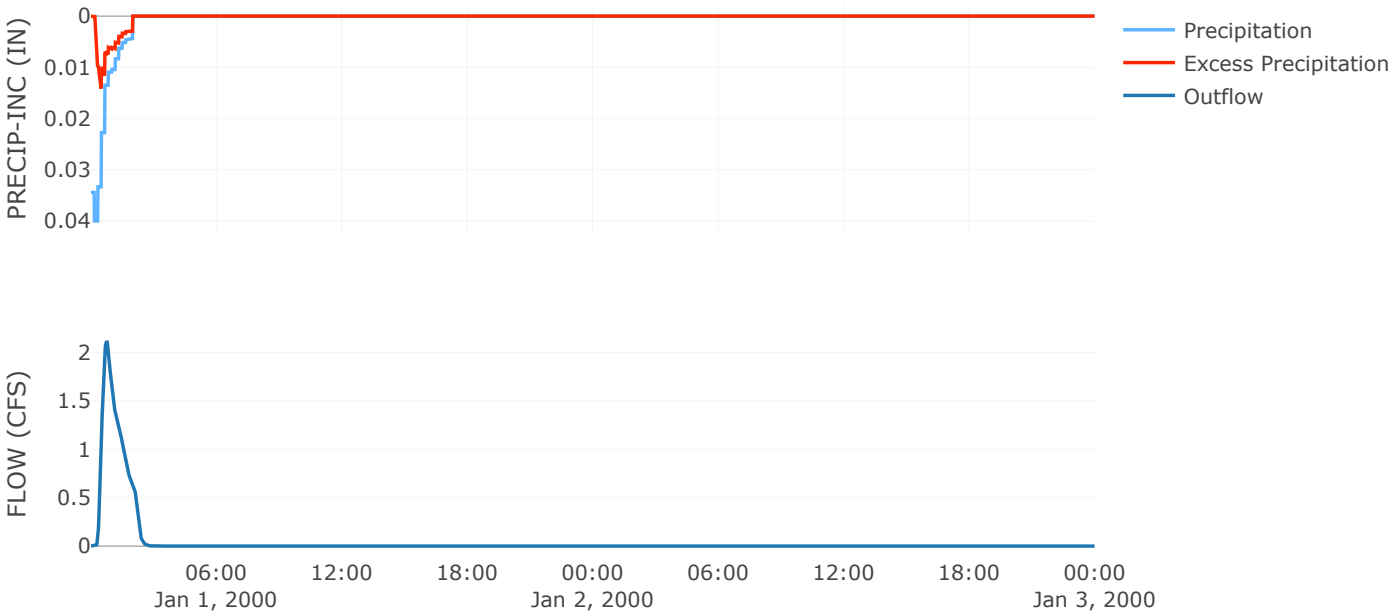
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

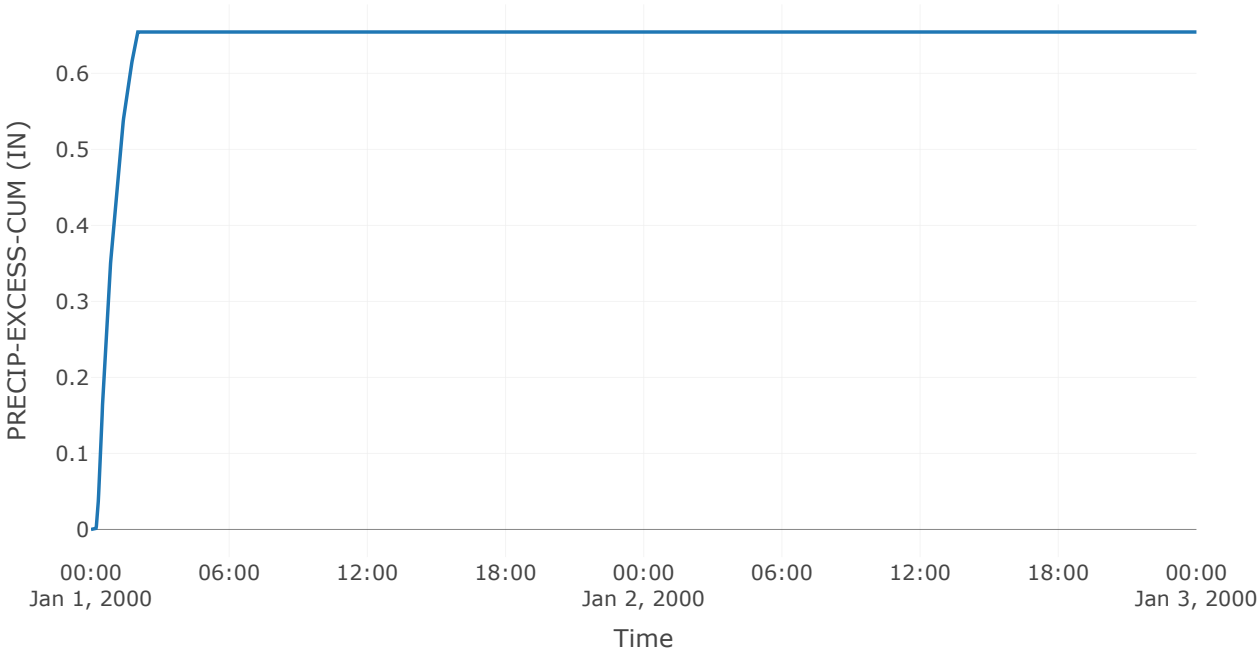
Transform: Scs	
Lag	12
Unitgraph Type	Standard

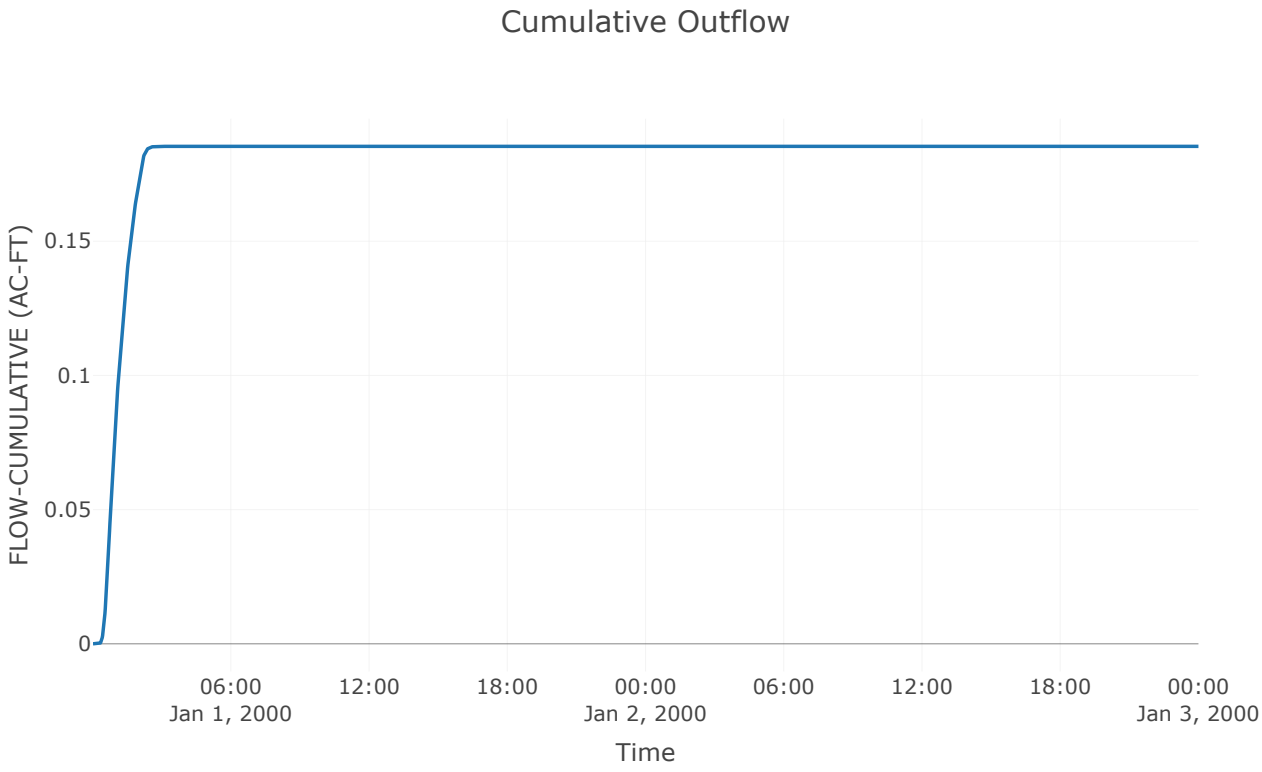
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

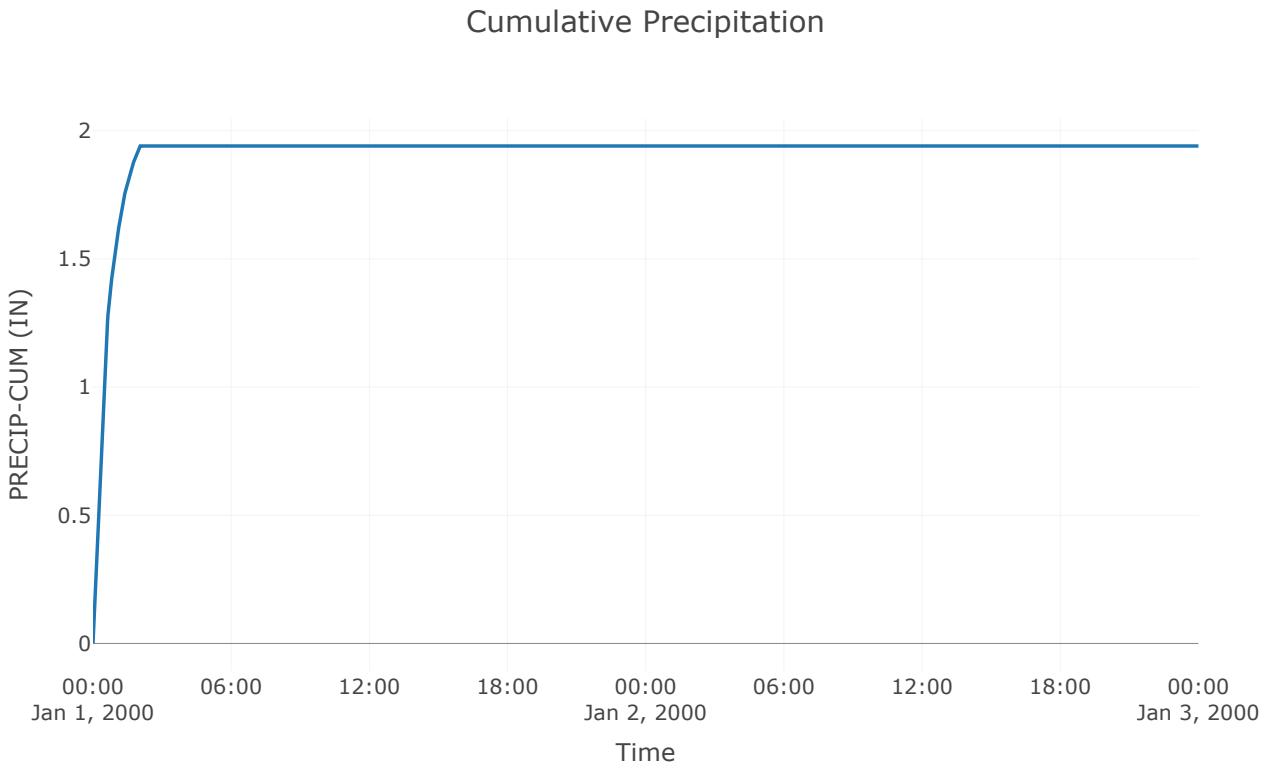
Precipitation and Outflow

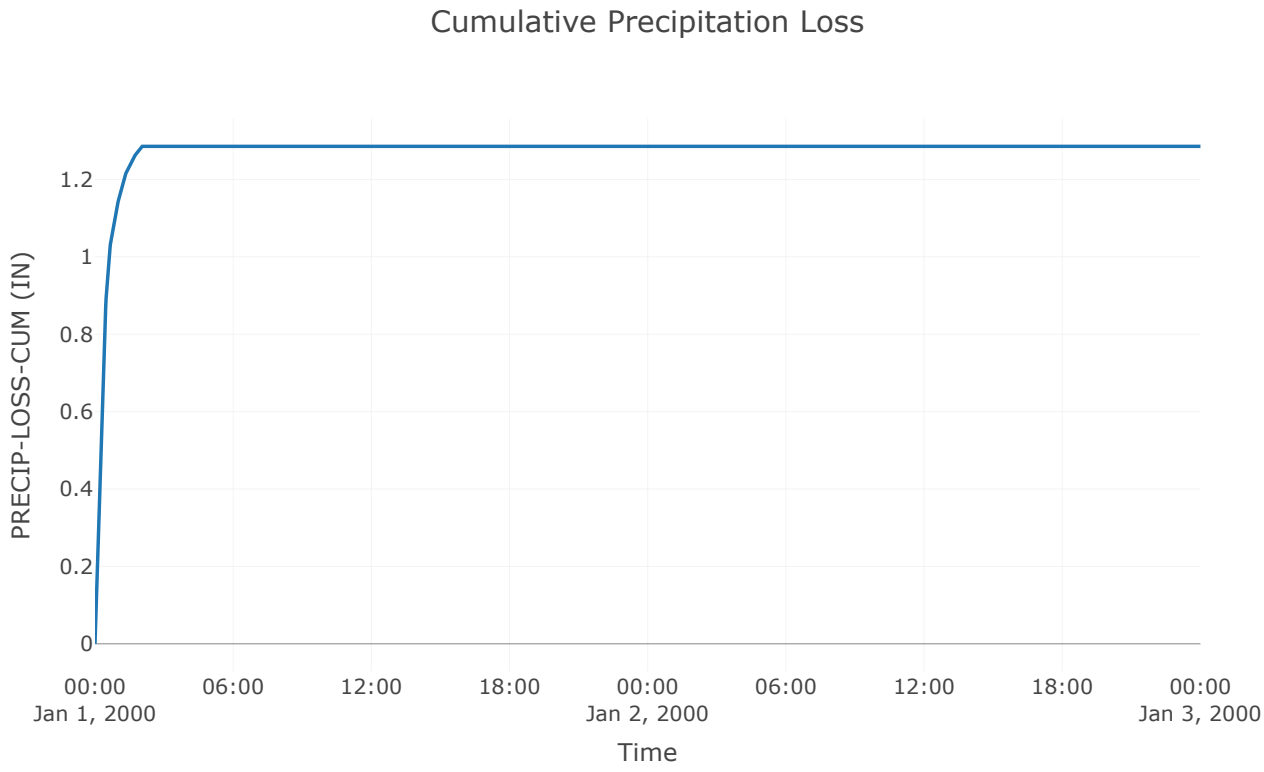


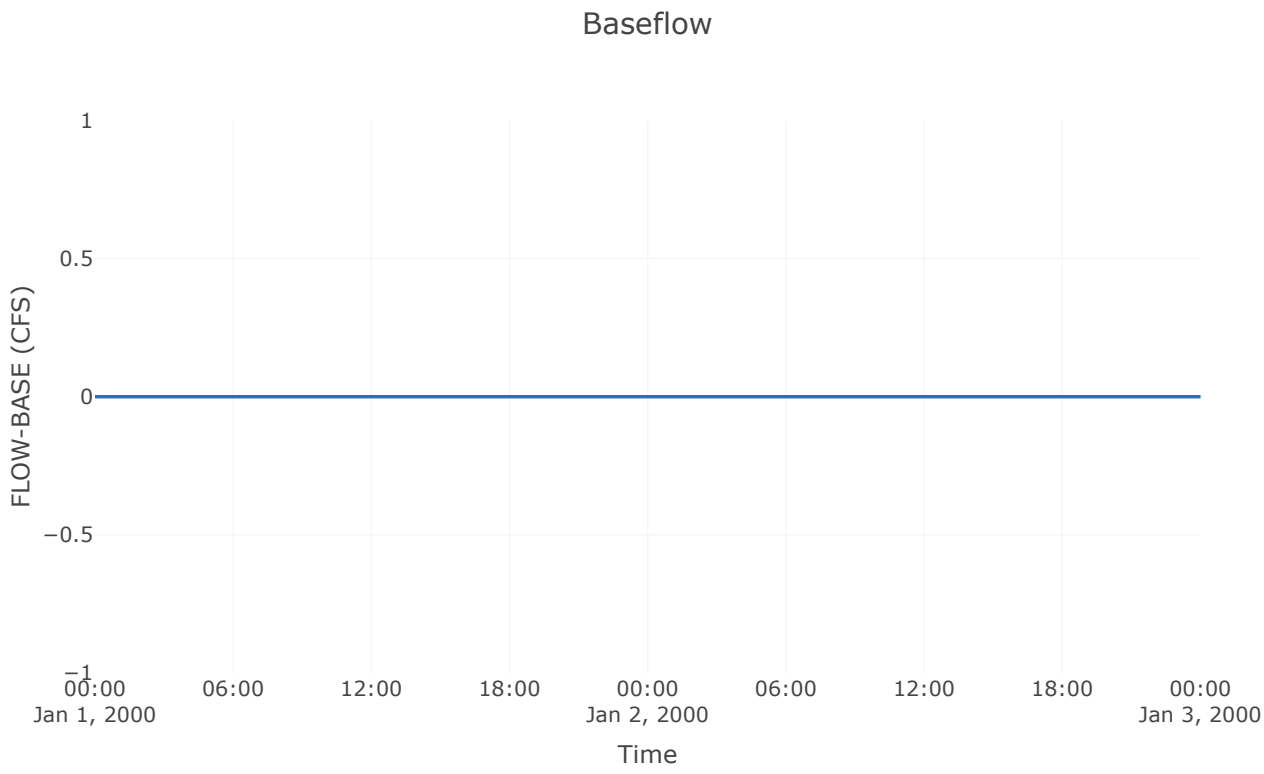
Cumulative Excess Precipitation

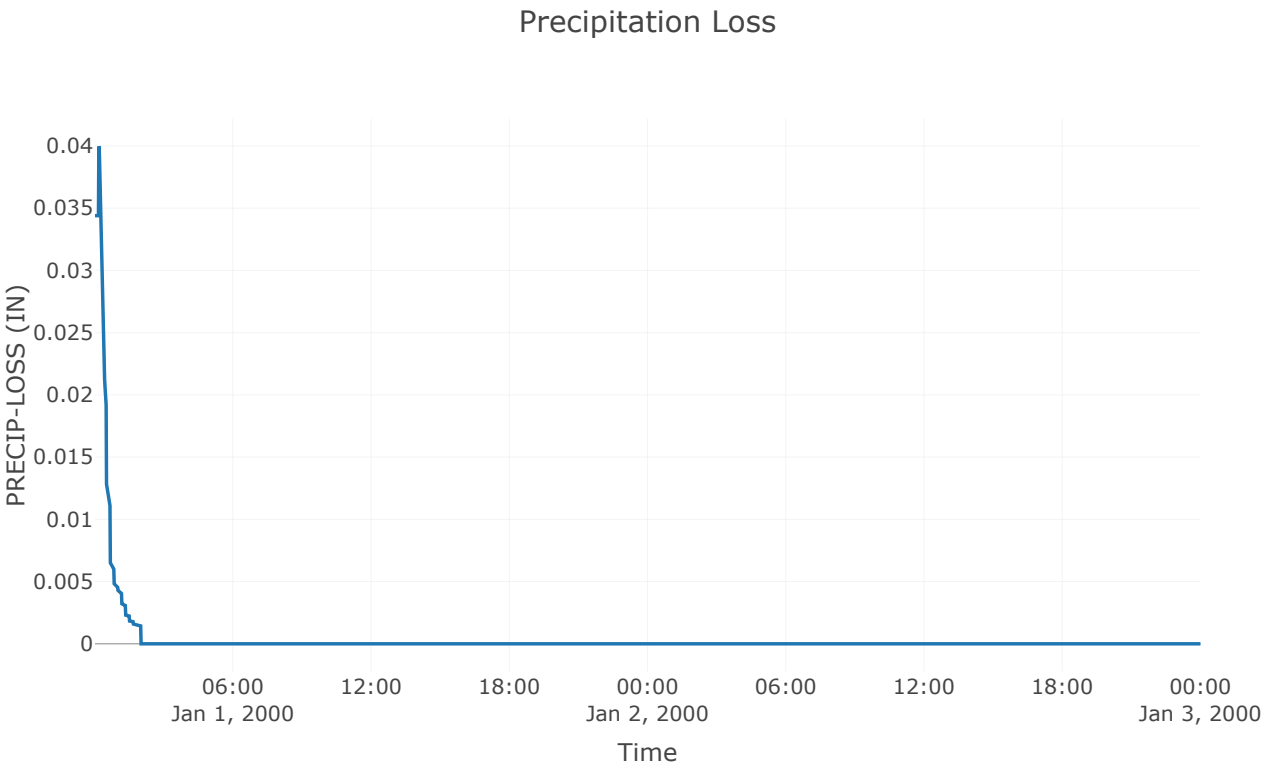


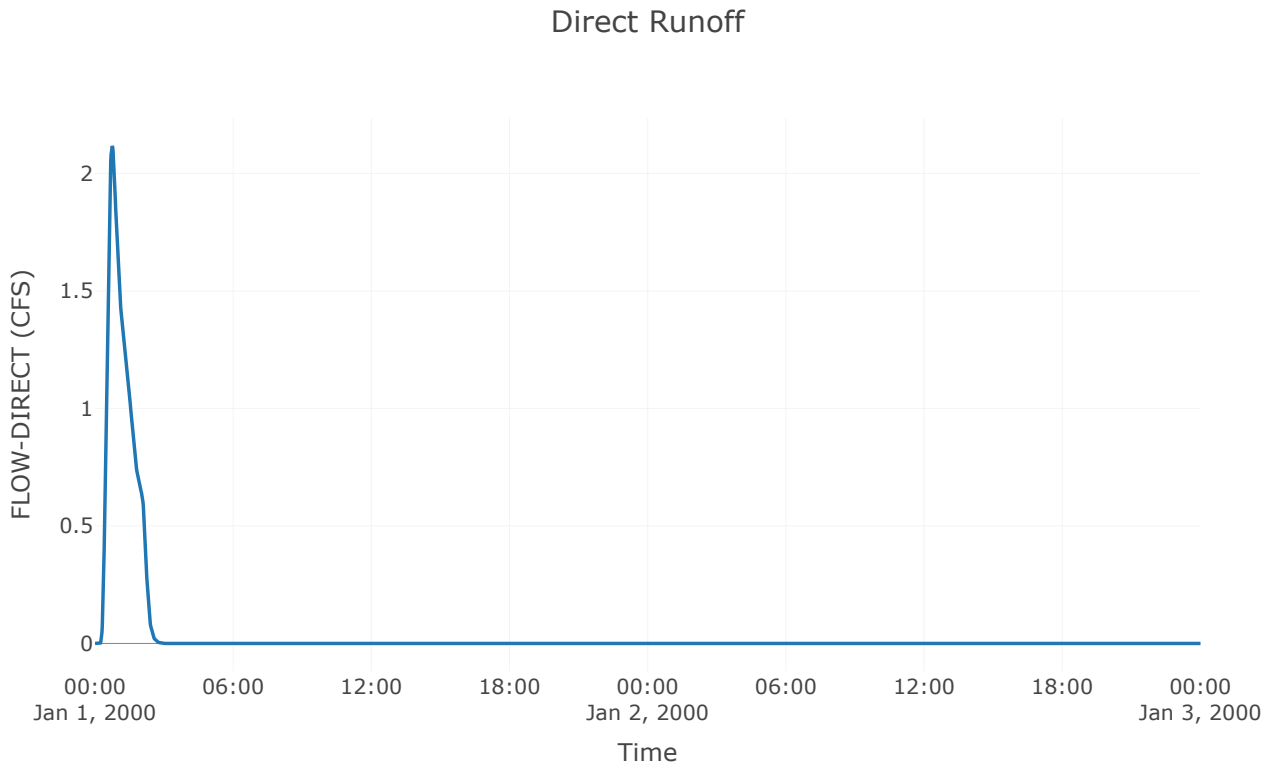

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

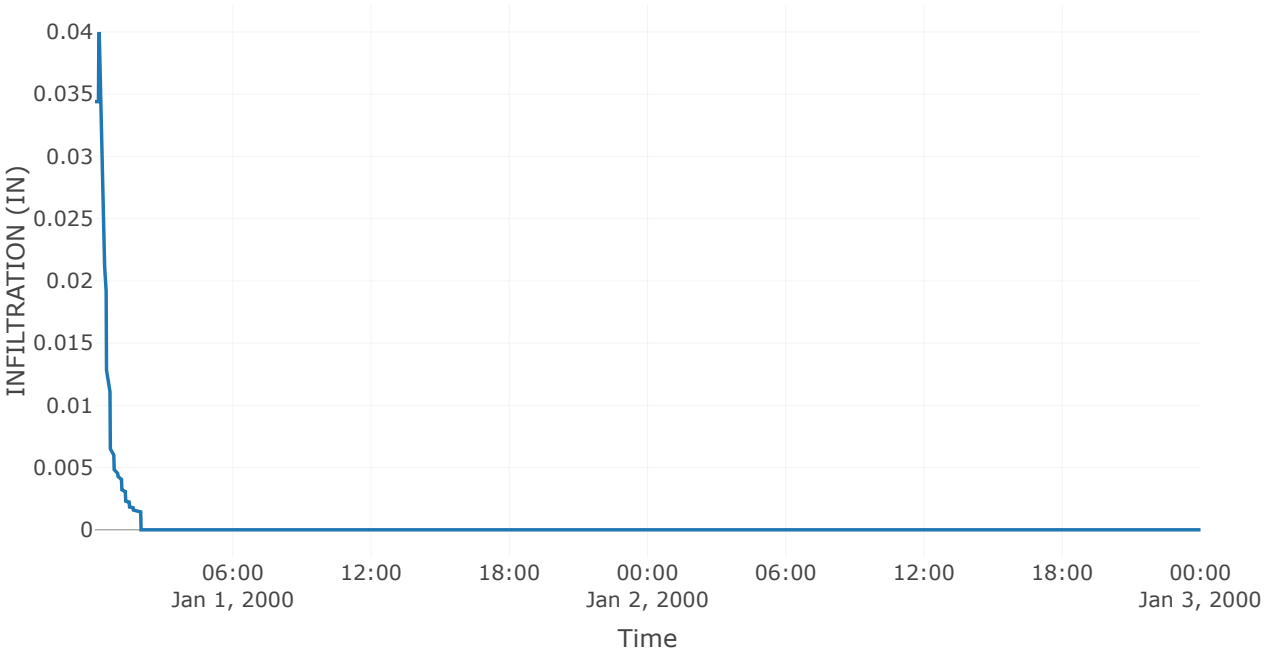

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

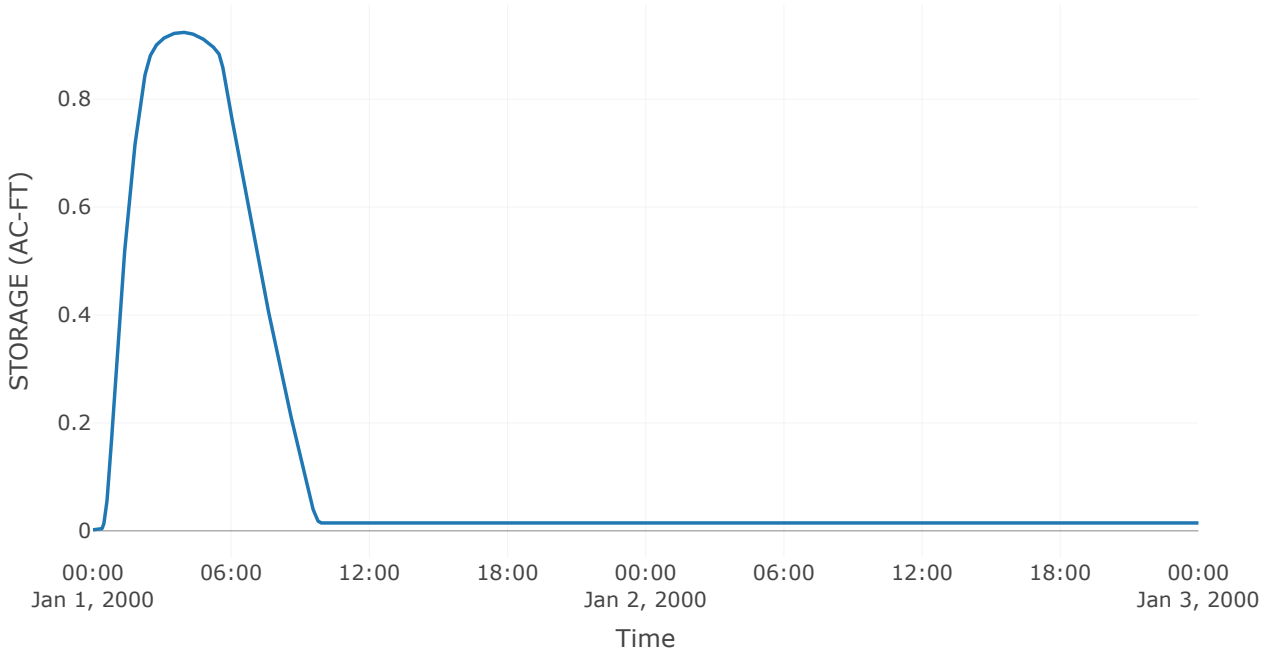

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

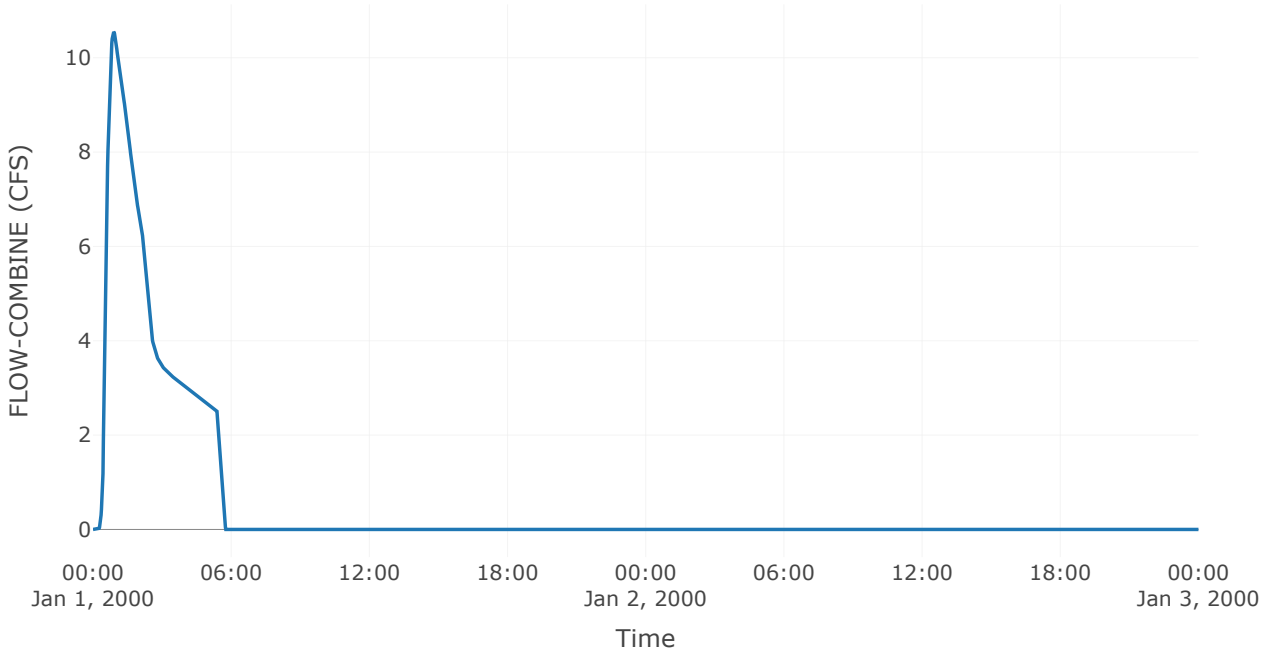
Downstream : Basin 3

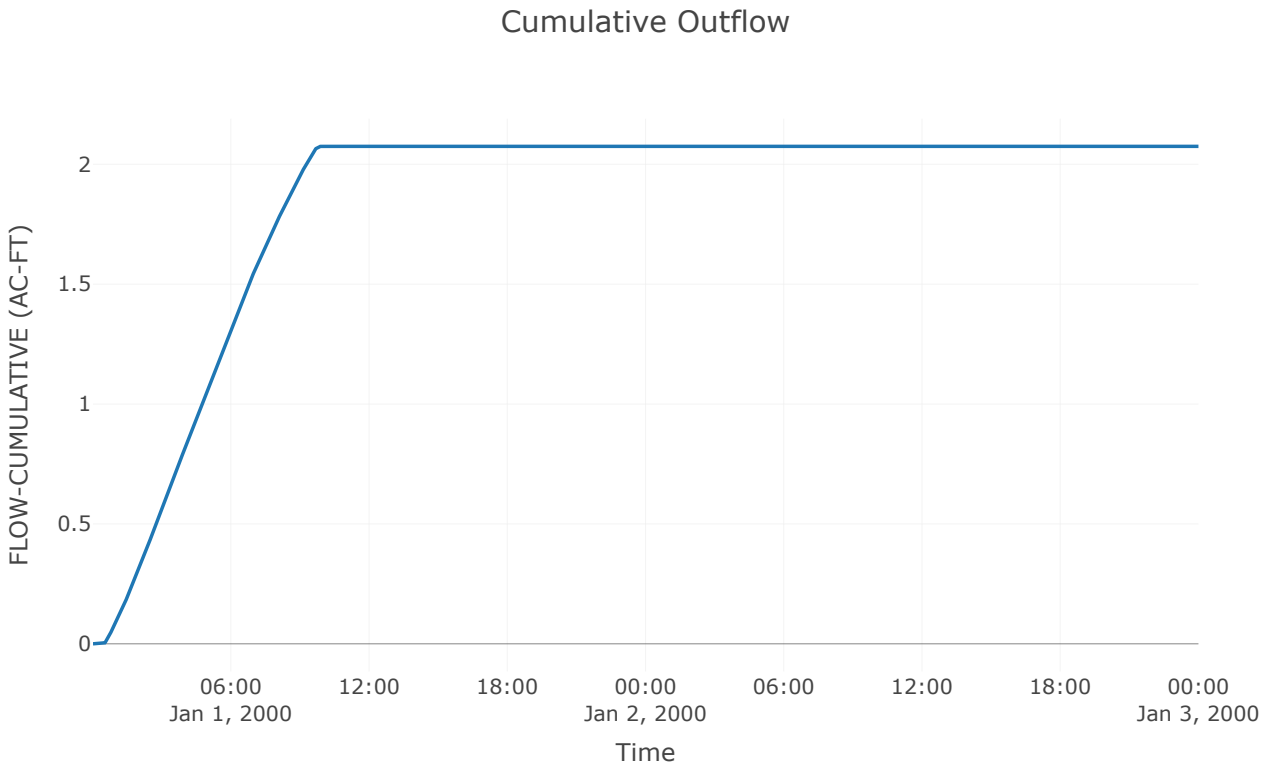
Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

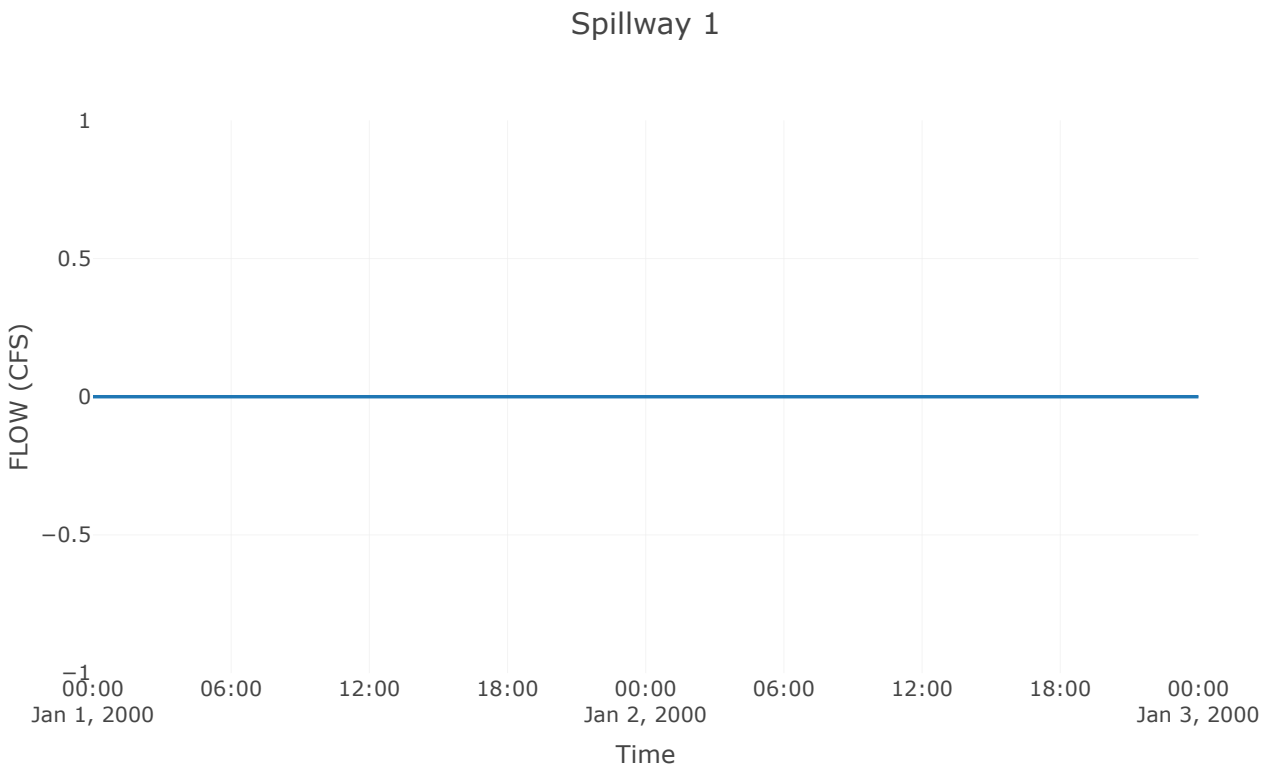
Storage

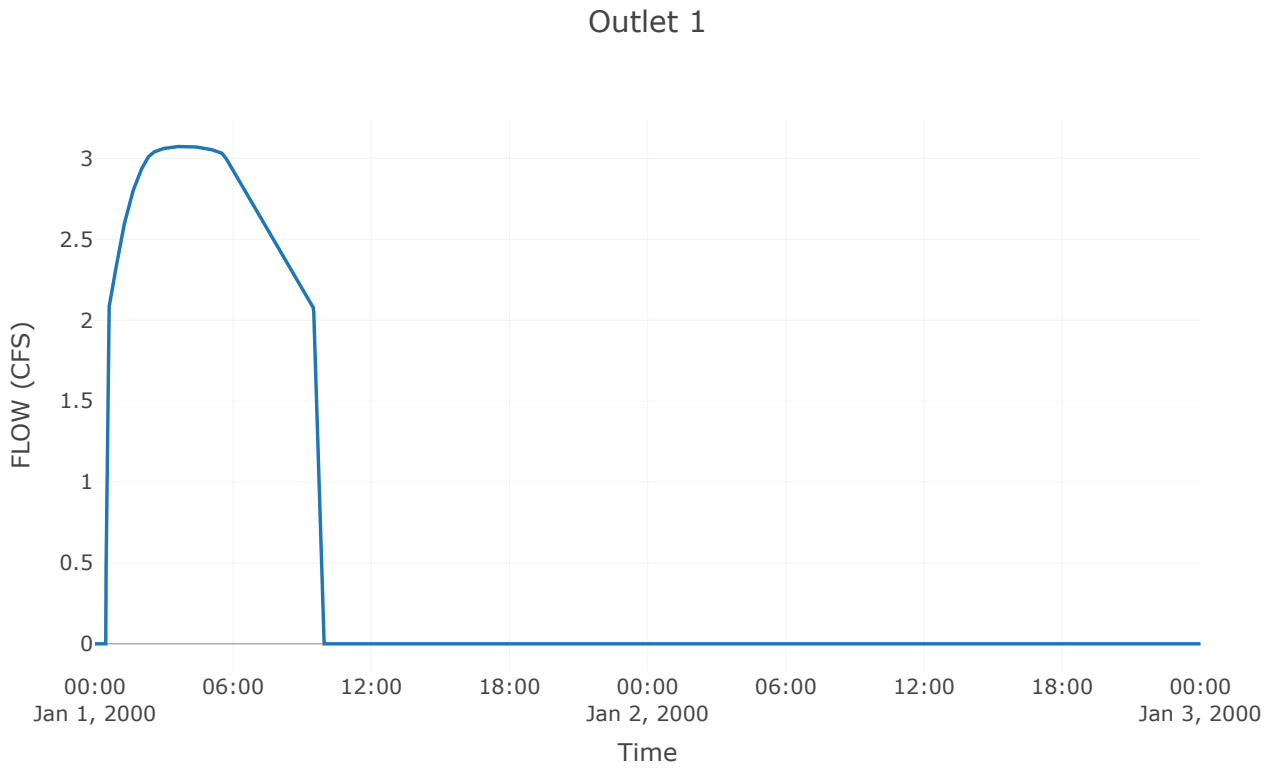


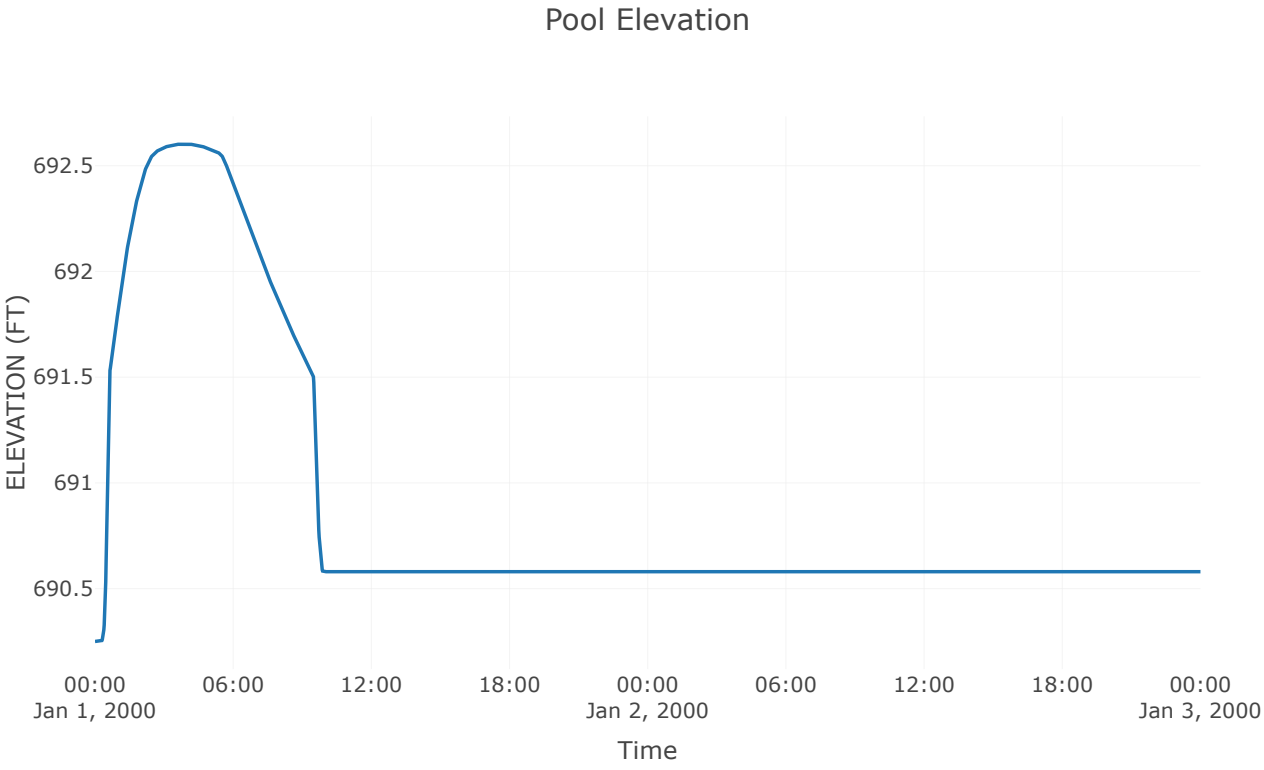
Combined Inflow

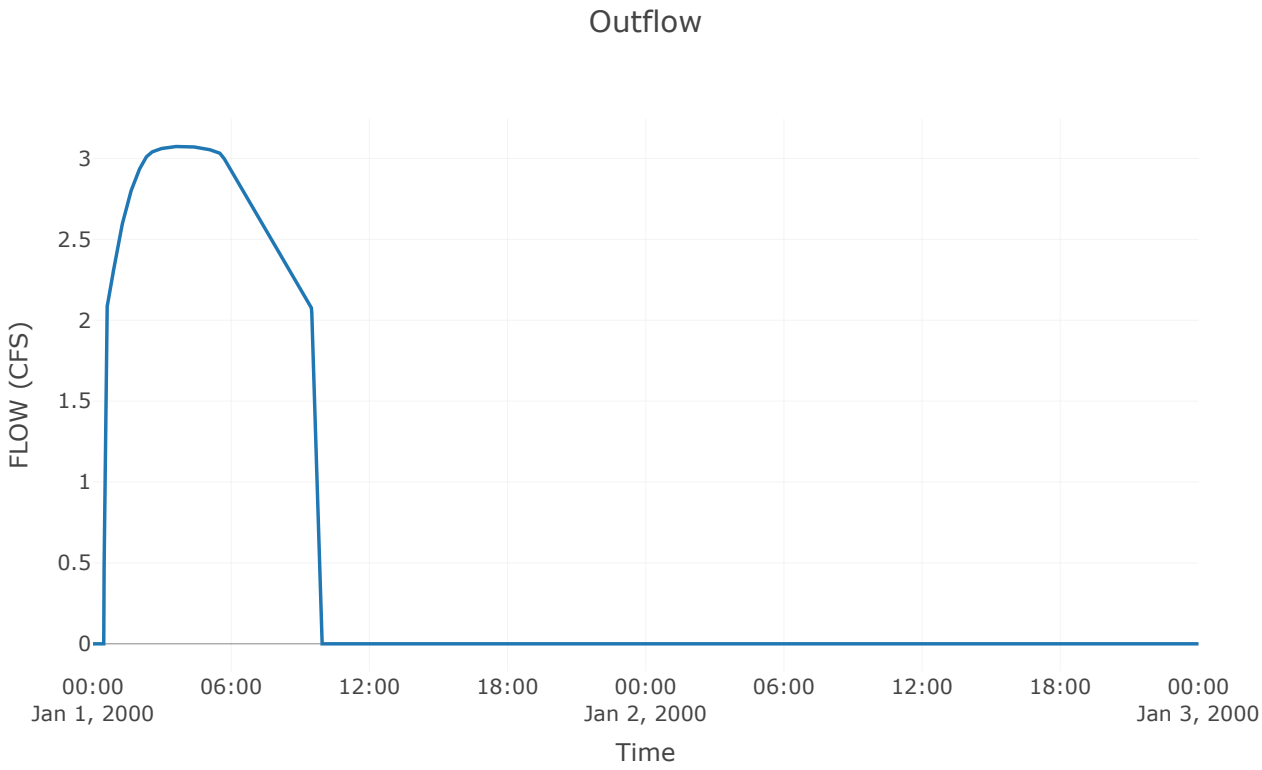



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
692.5
692
691.5
691
690.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

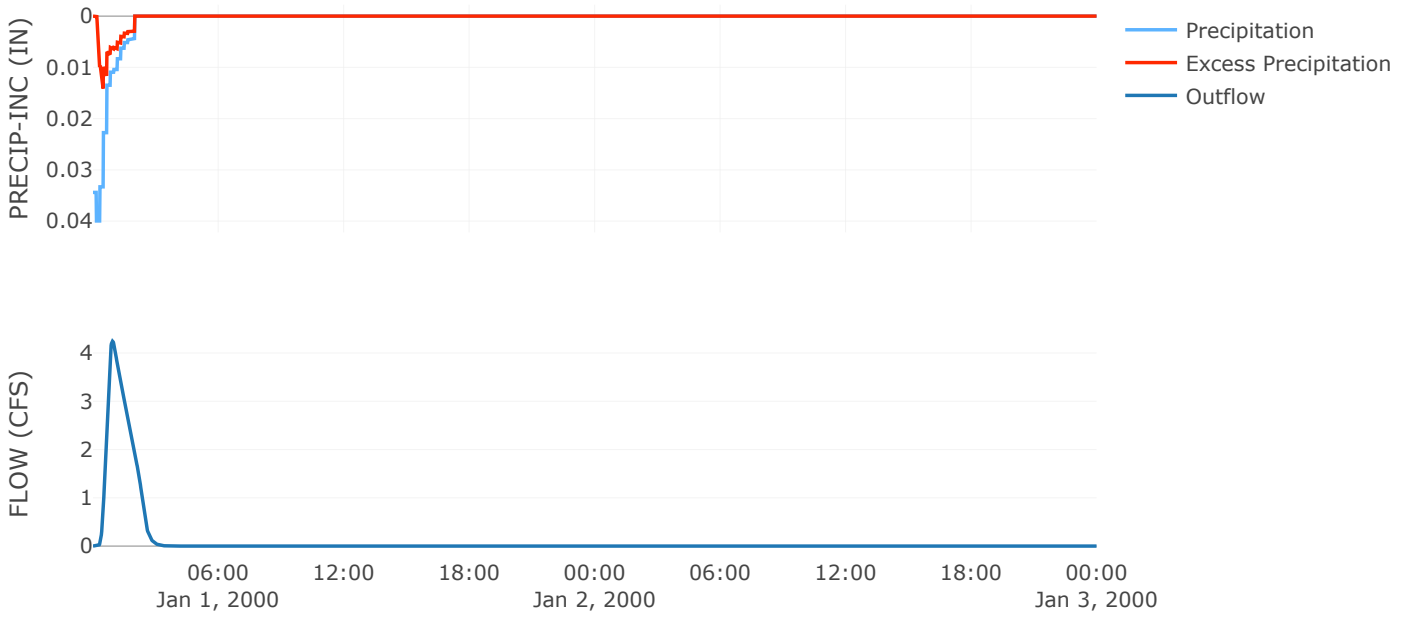
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

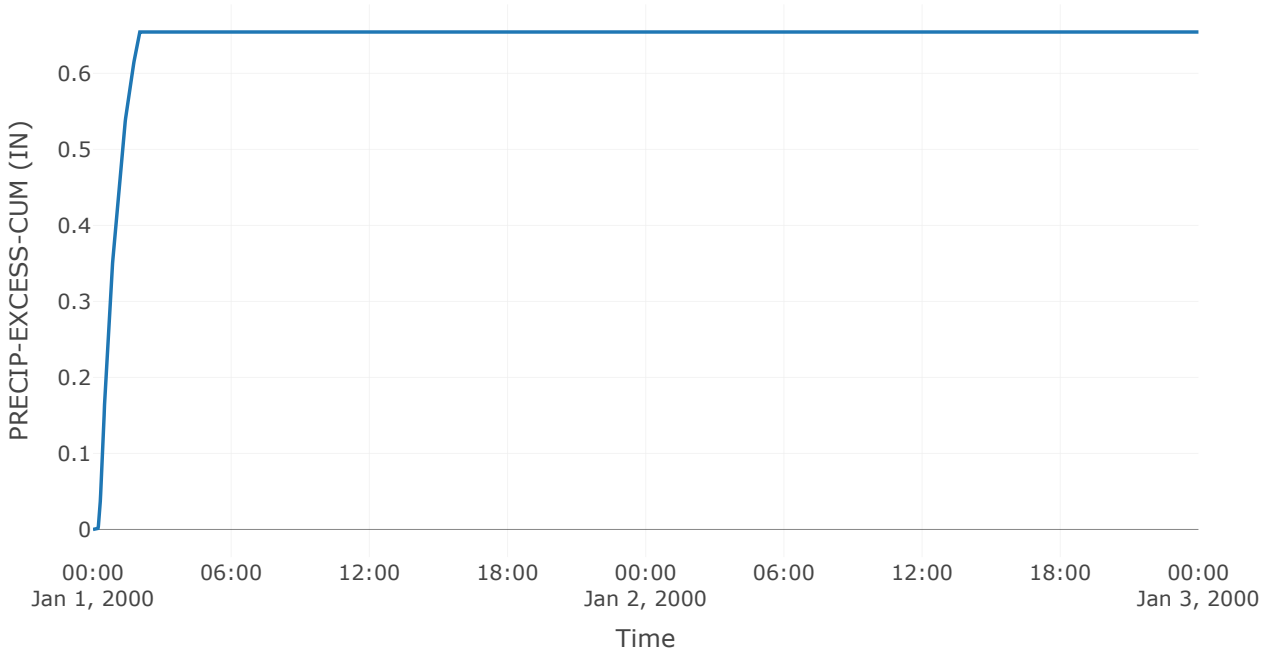
Transform: Scs	
Lag	21
Unitgraph Type	Standard

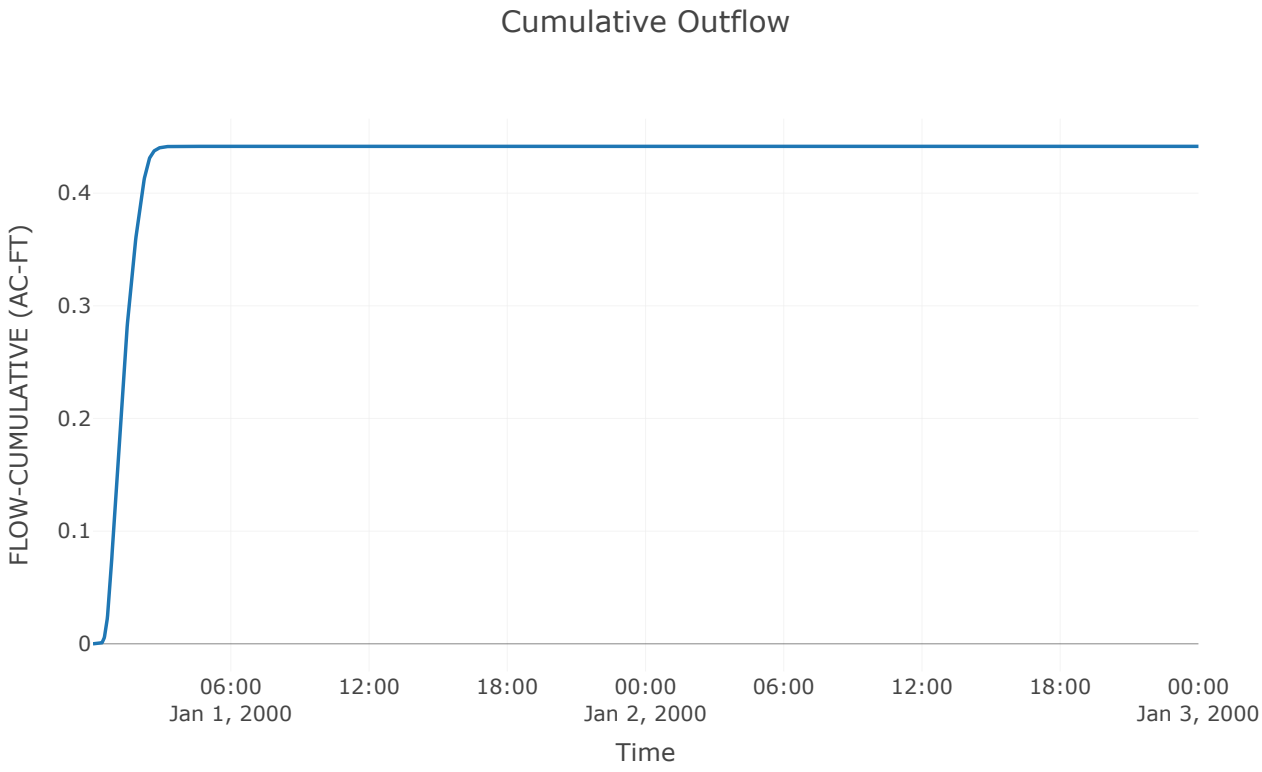
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

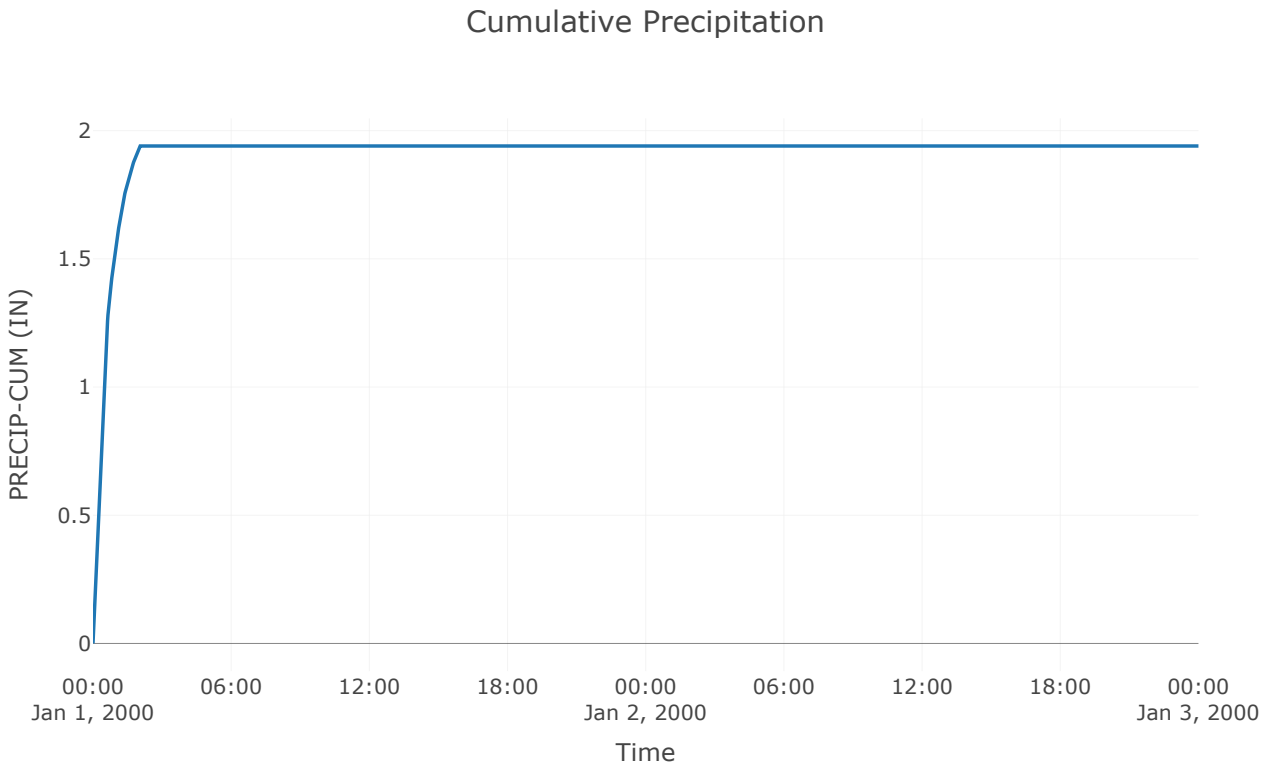
Precipitation and Outflow

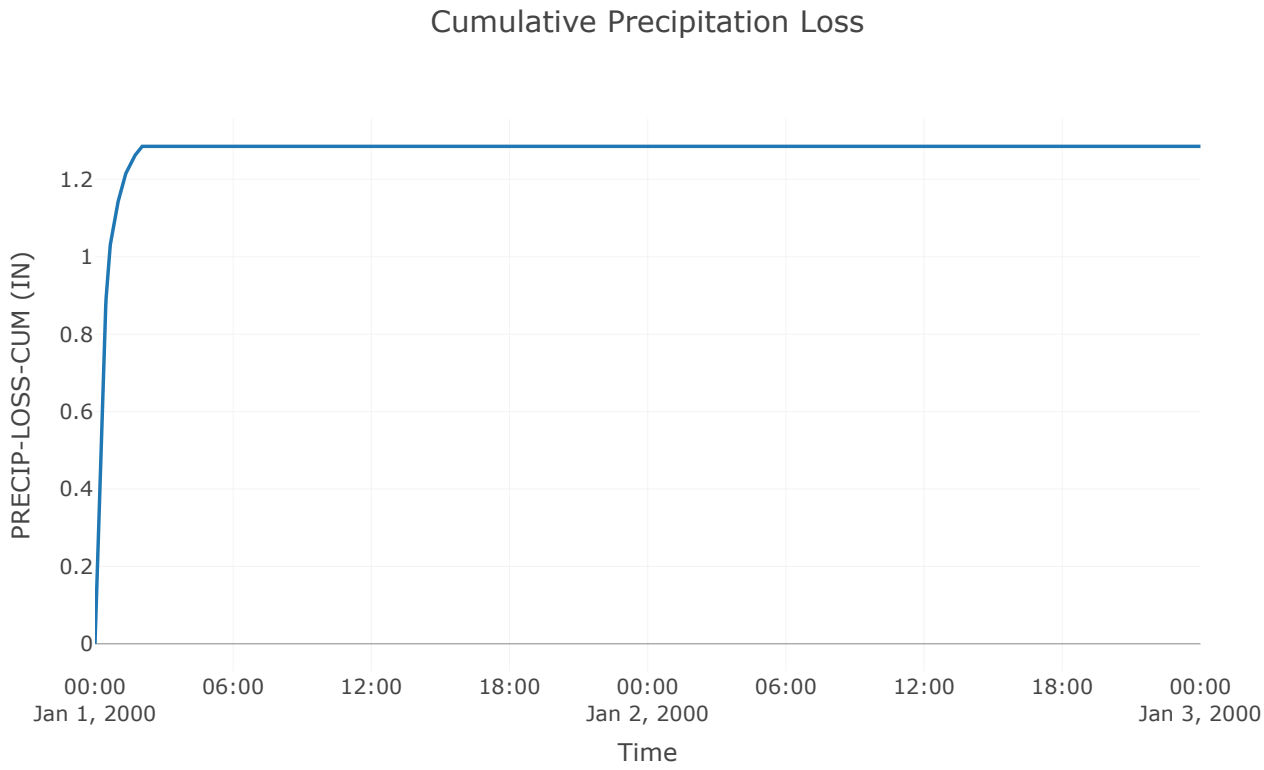


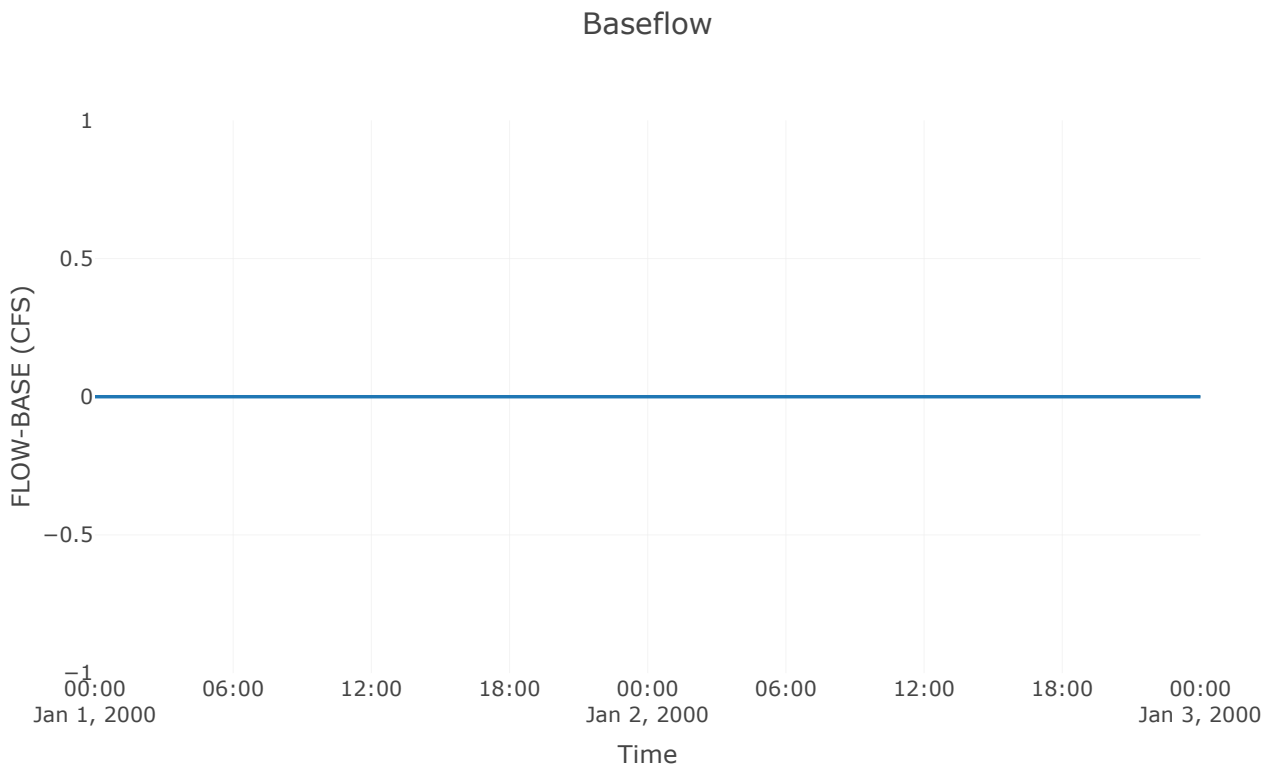
Cumulative Excess Precipitation



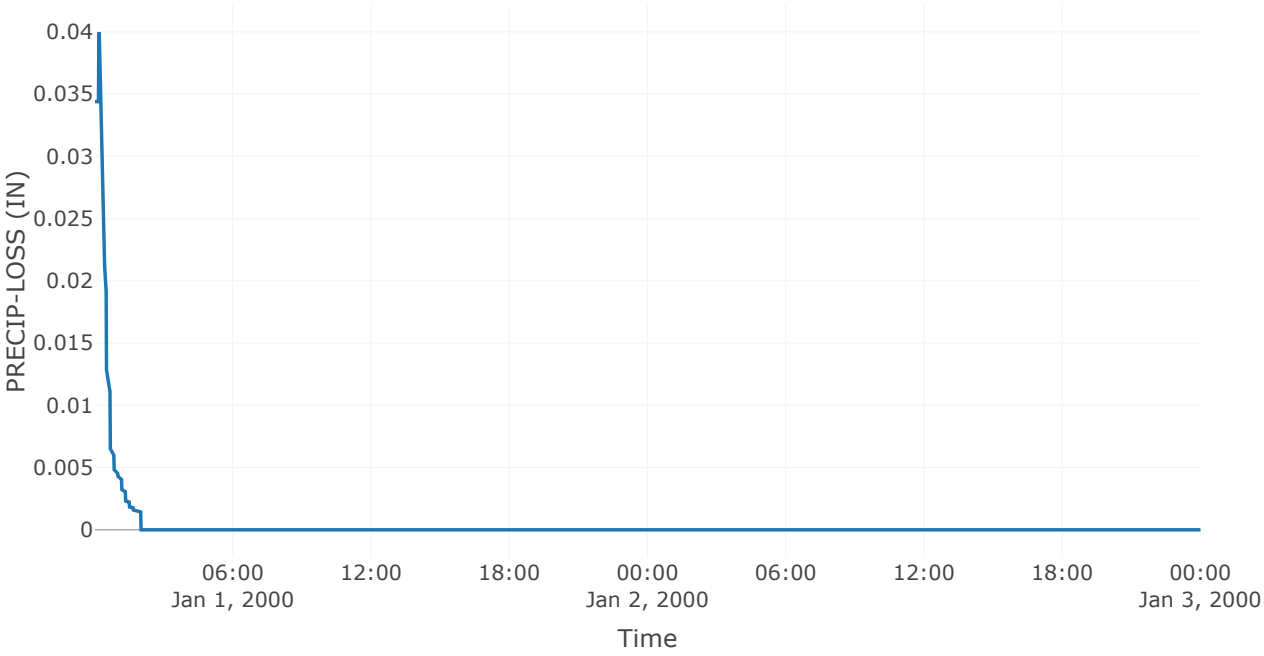

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

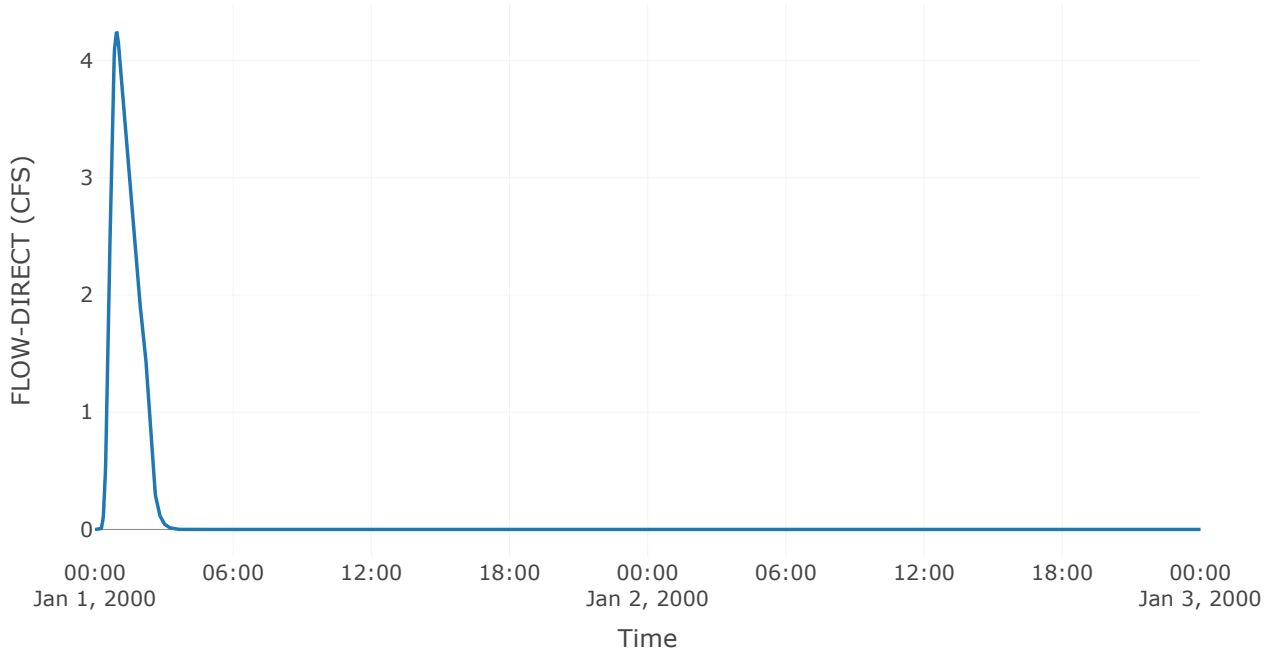

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

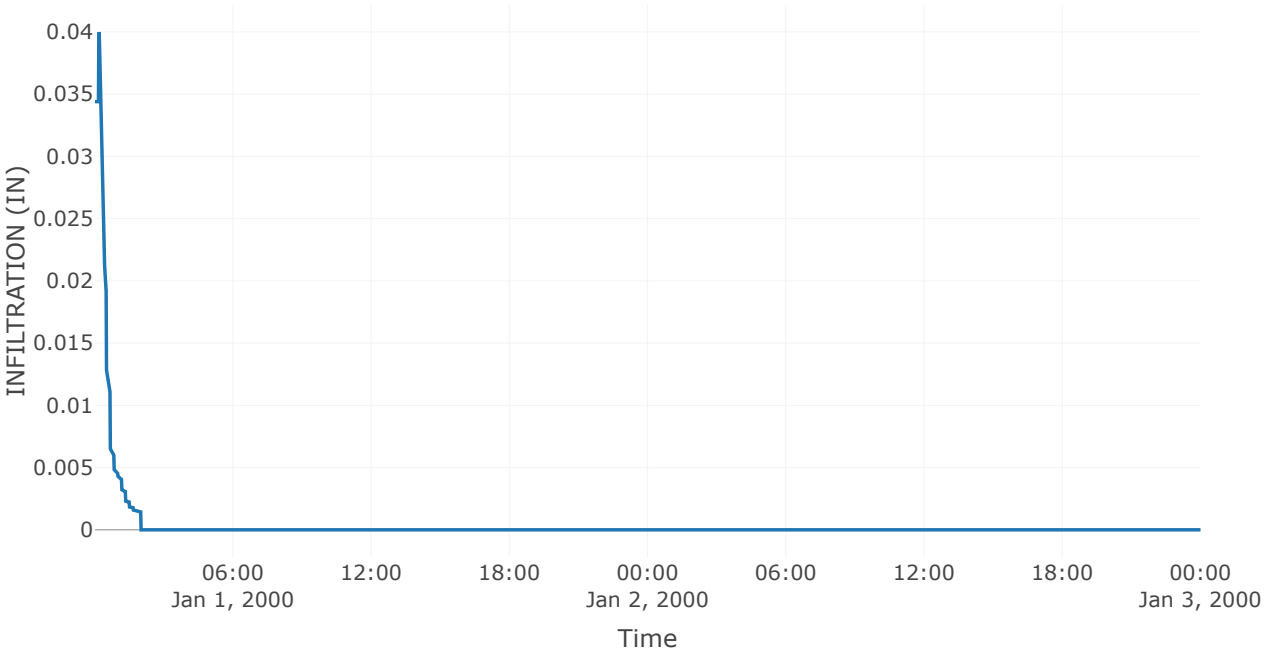

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

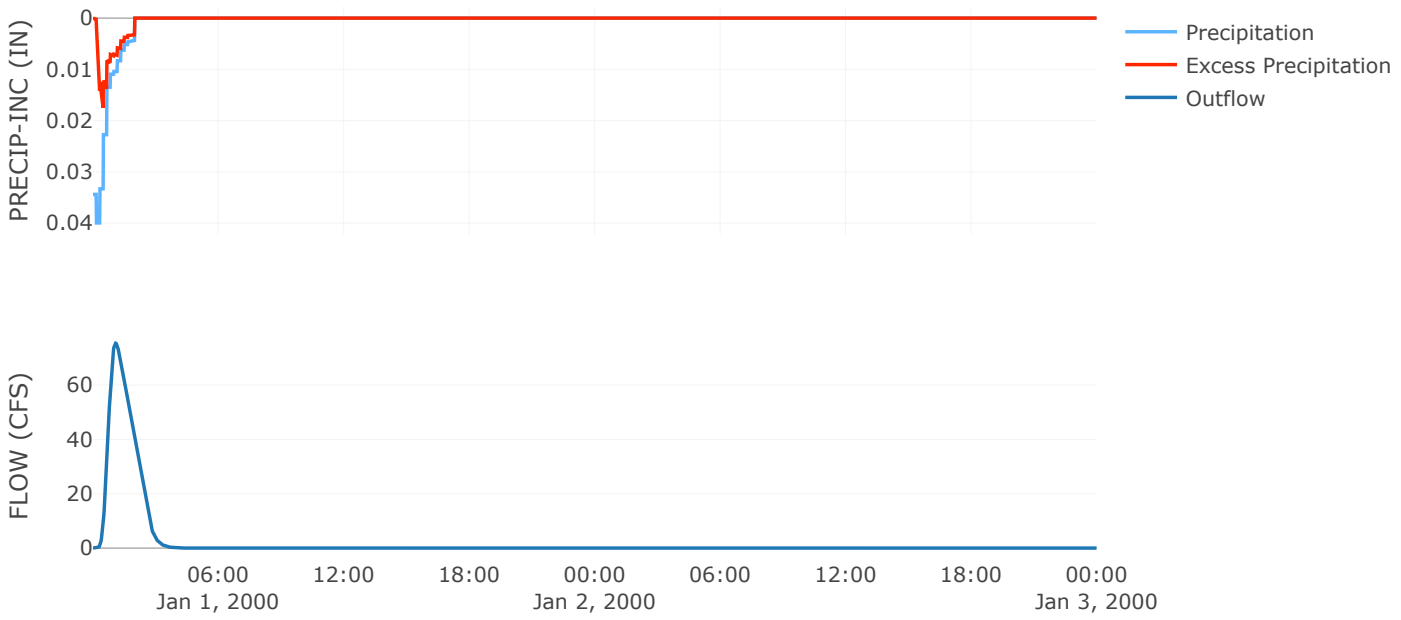
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

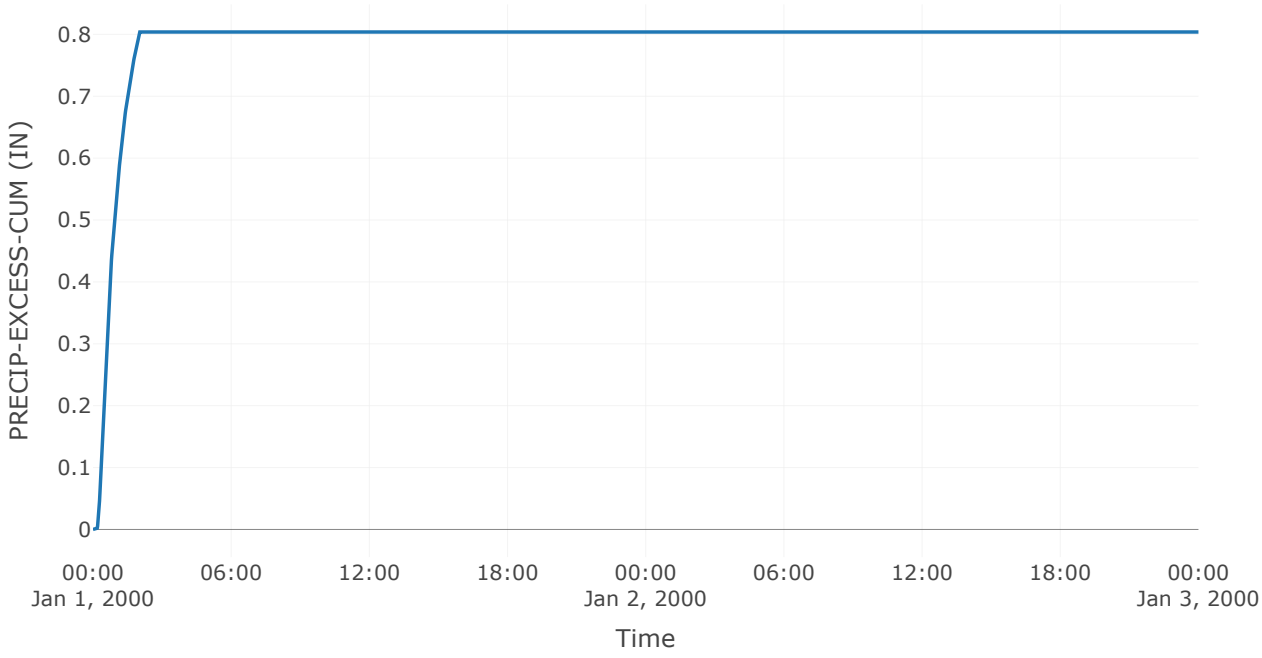
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

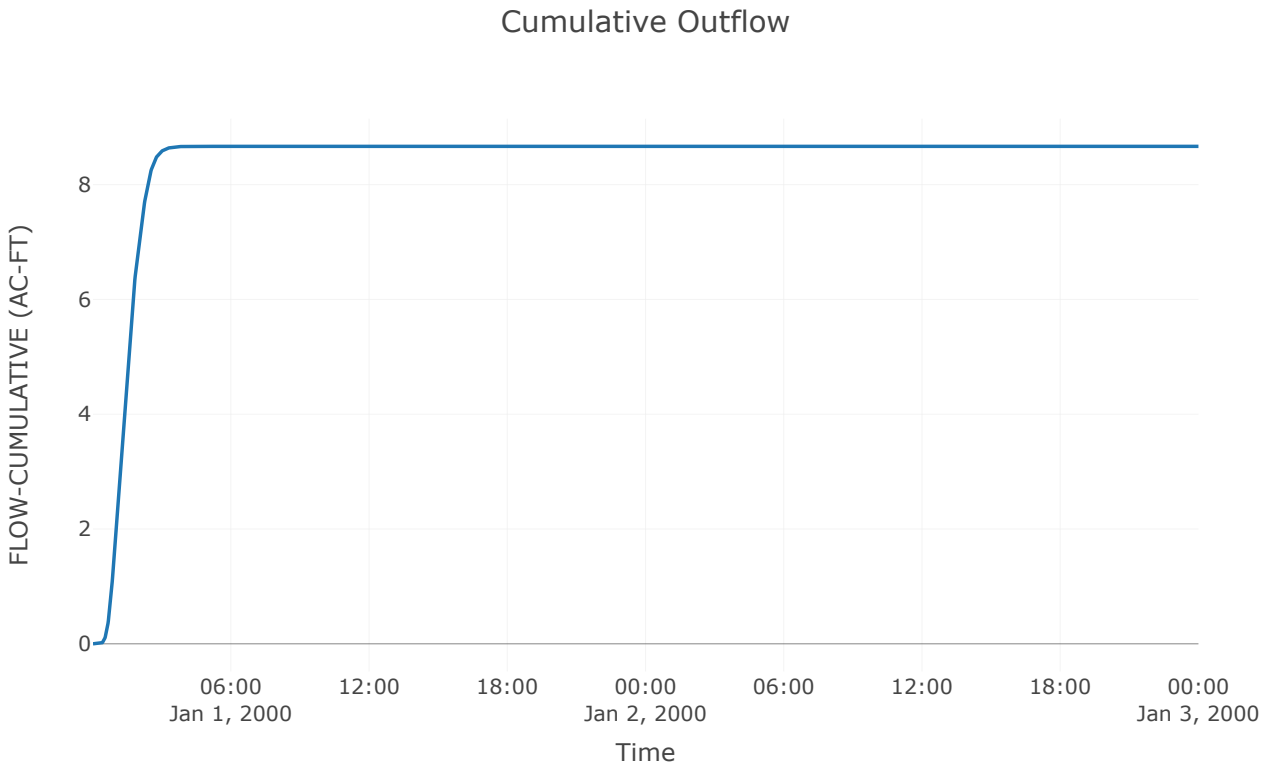
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

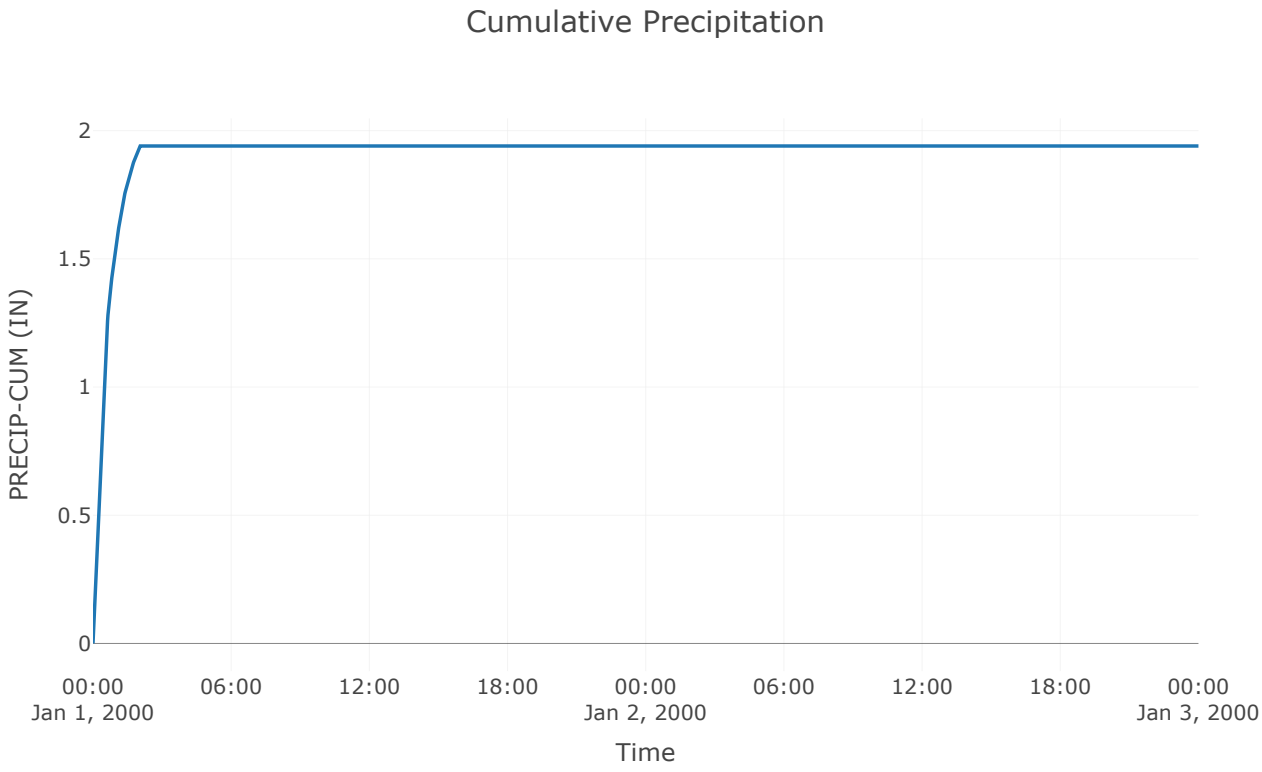
Precipitation and Outflow

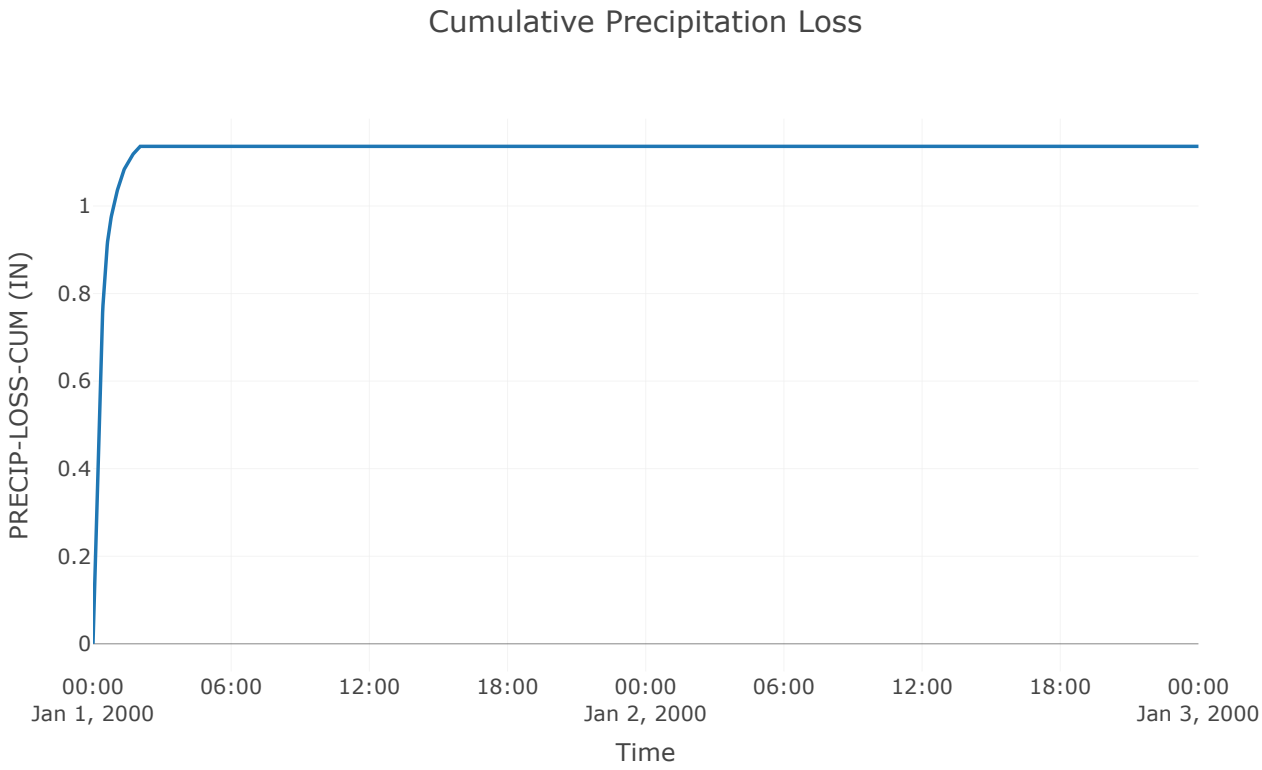


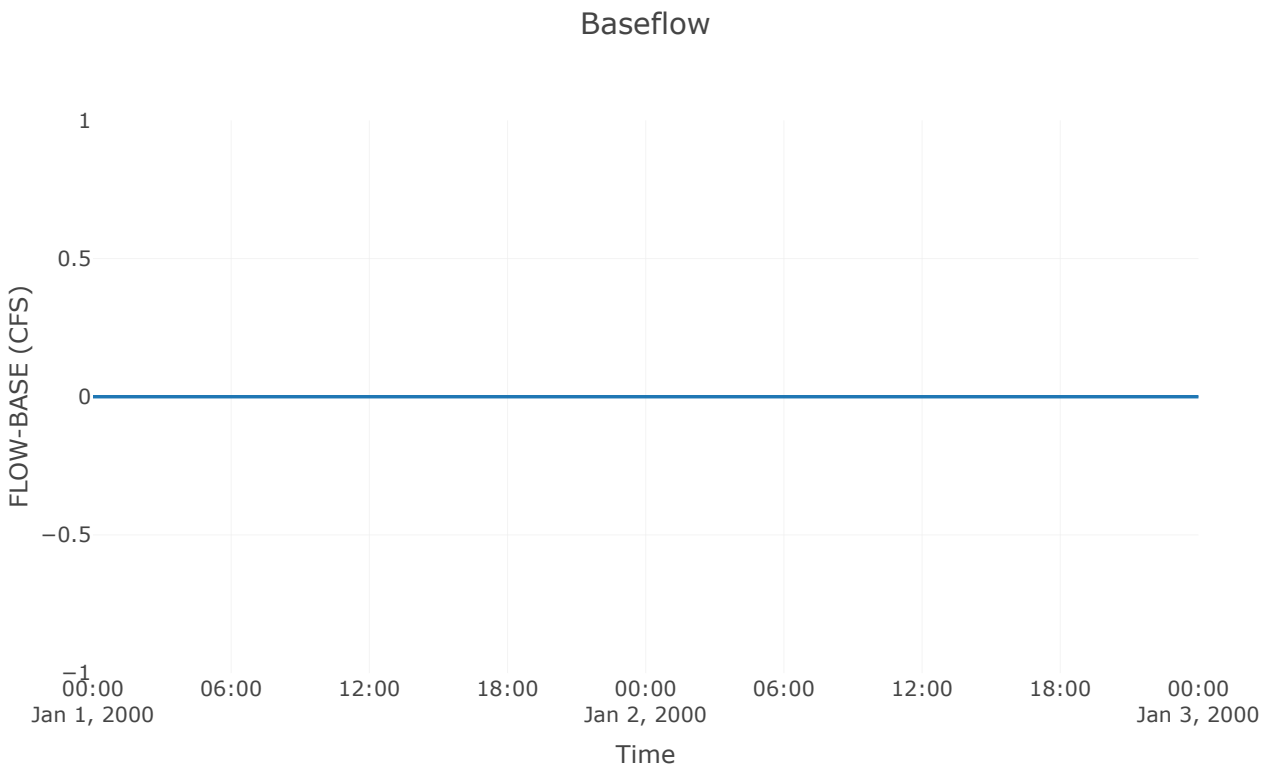
Cumulative Excess Precipitation

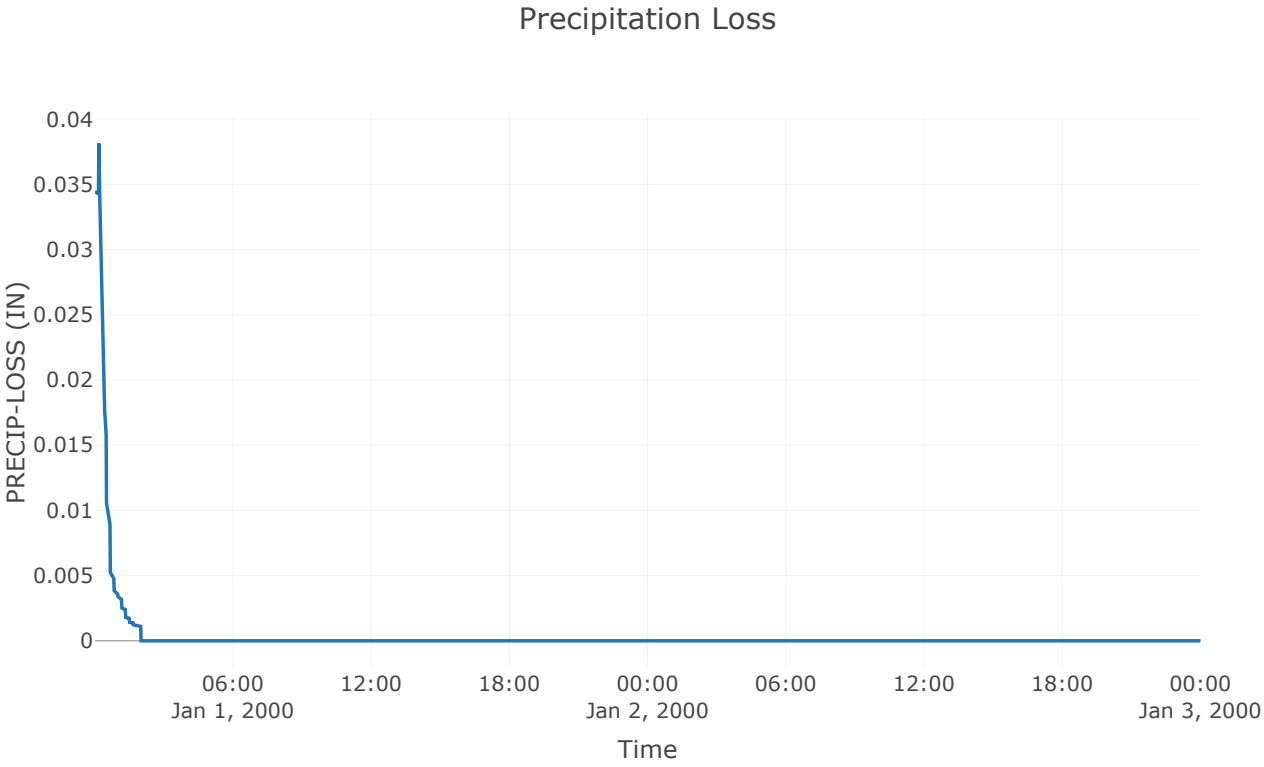


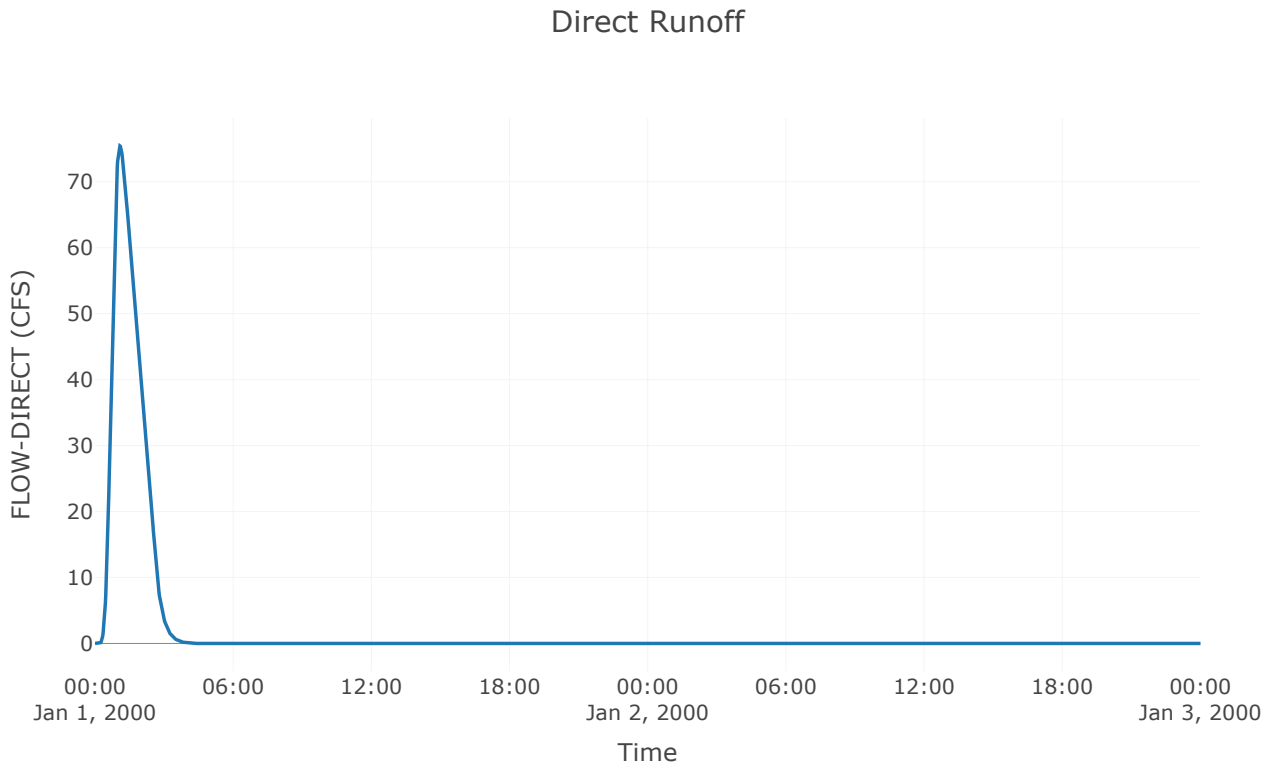

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

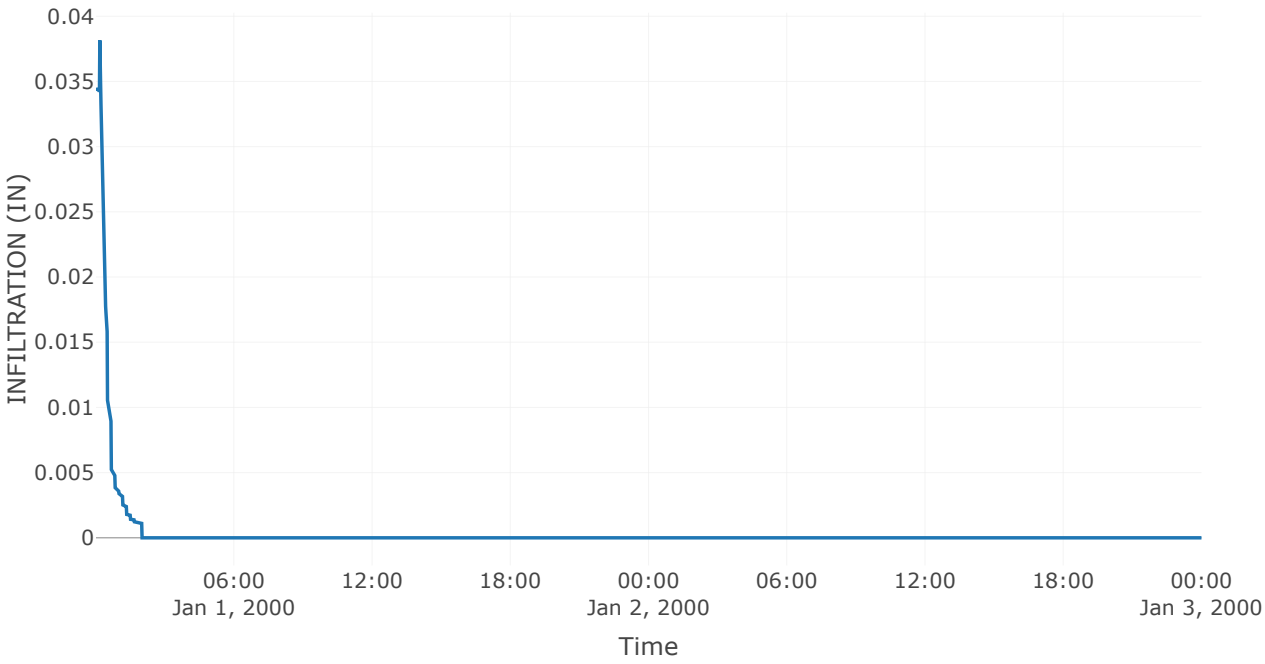

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

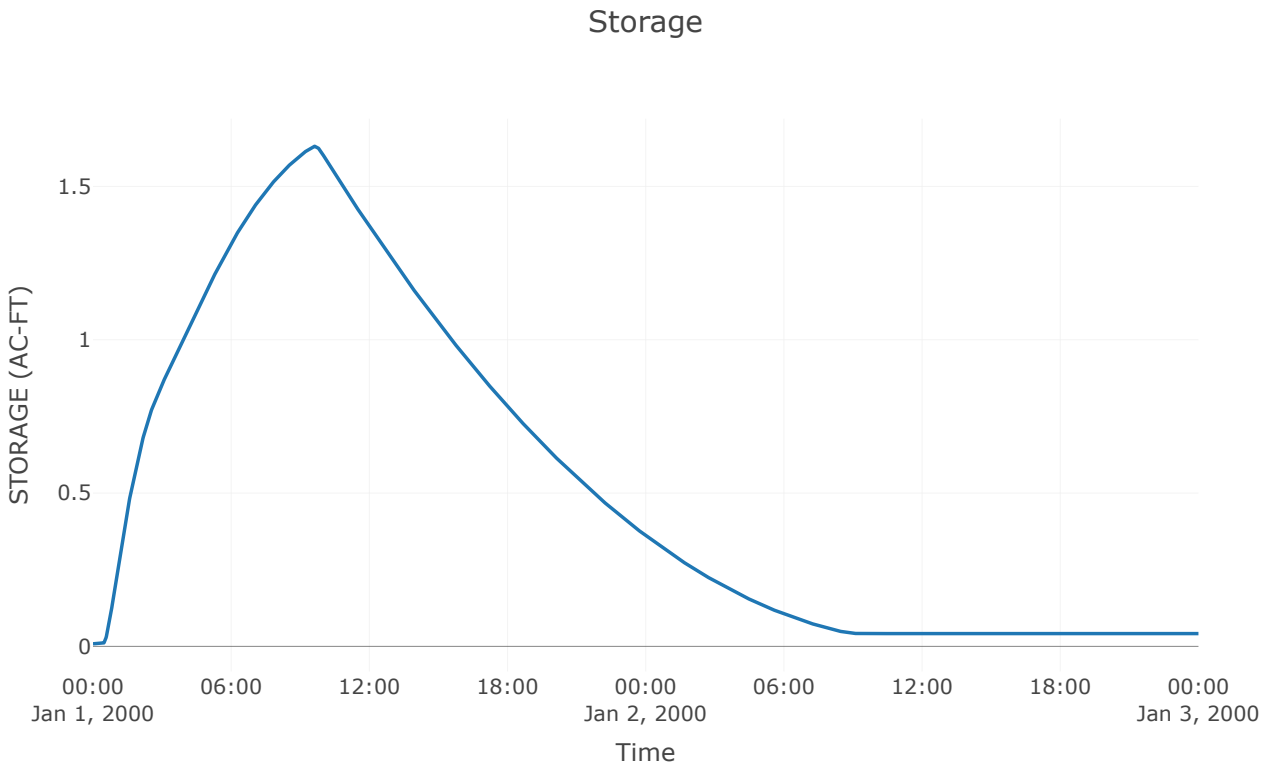

Direct Runoff
FLOW-DIRECT (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

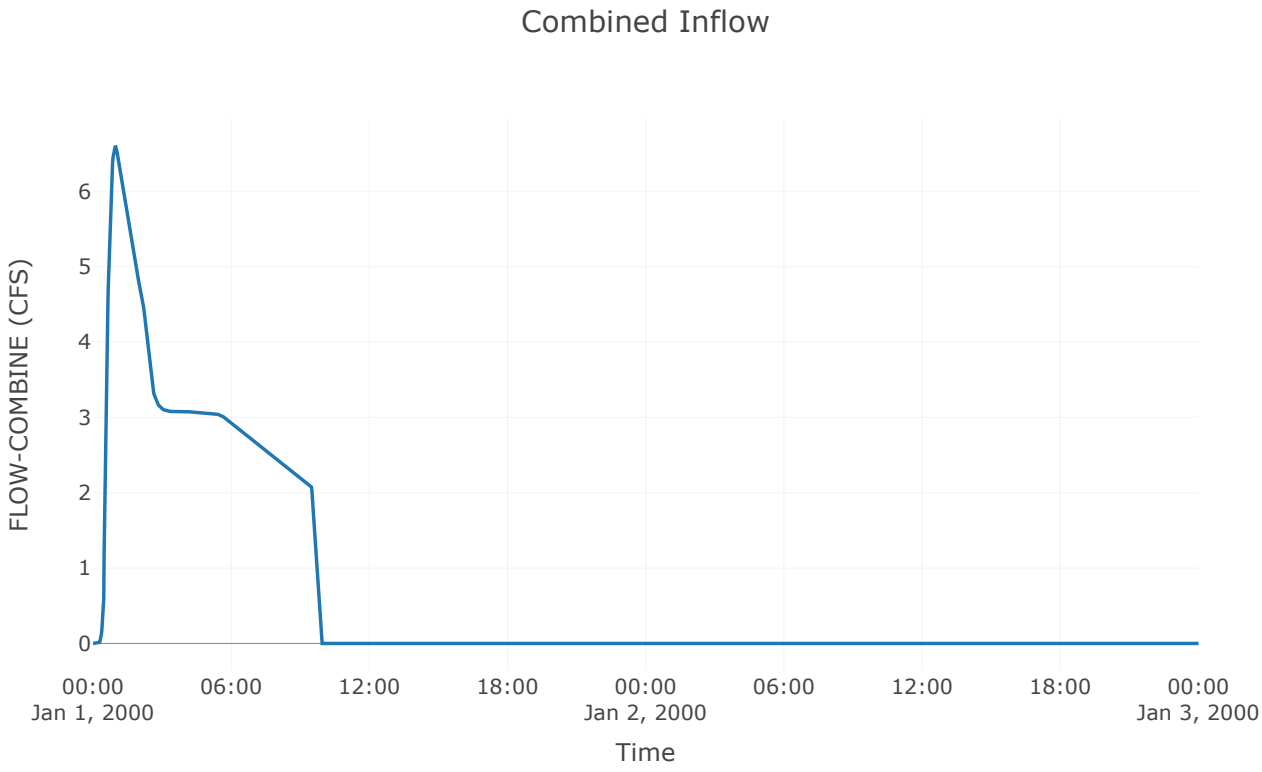

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

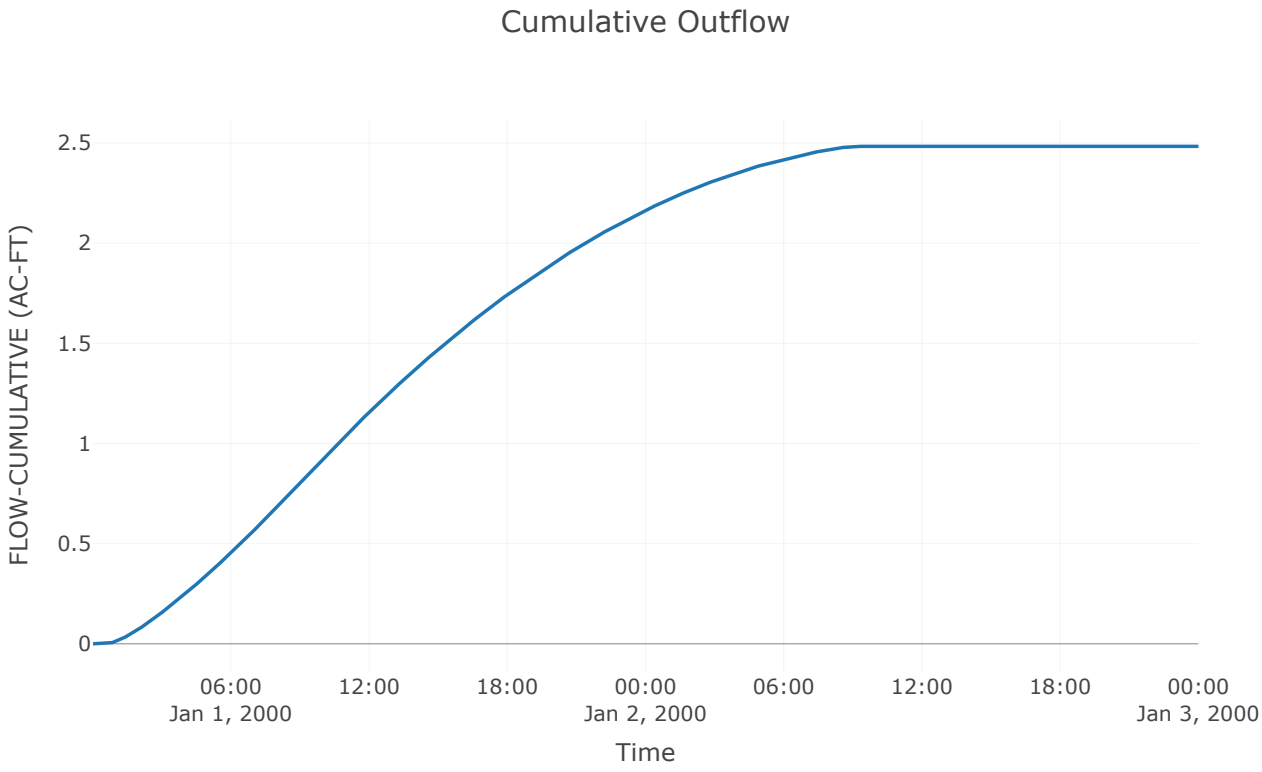
Reservoir: Basin 3

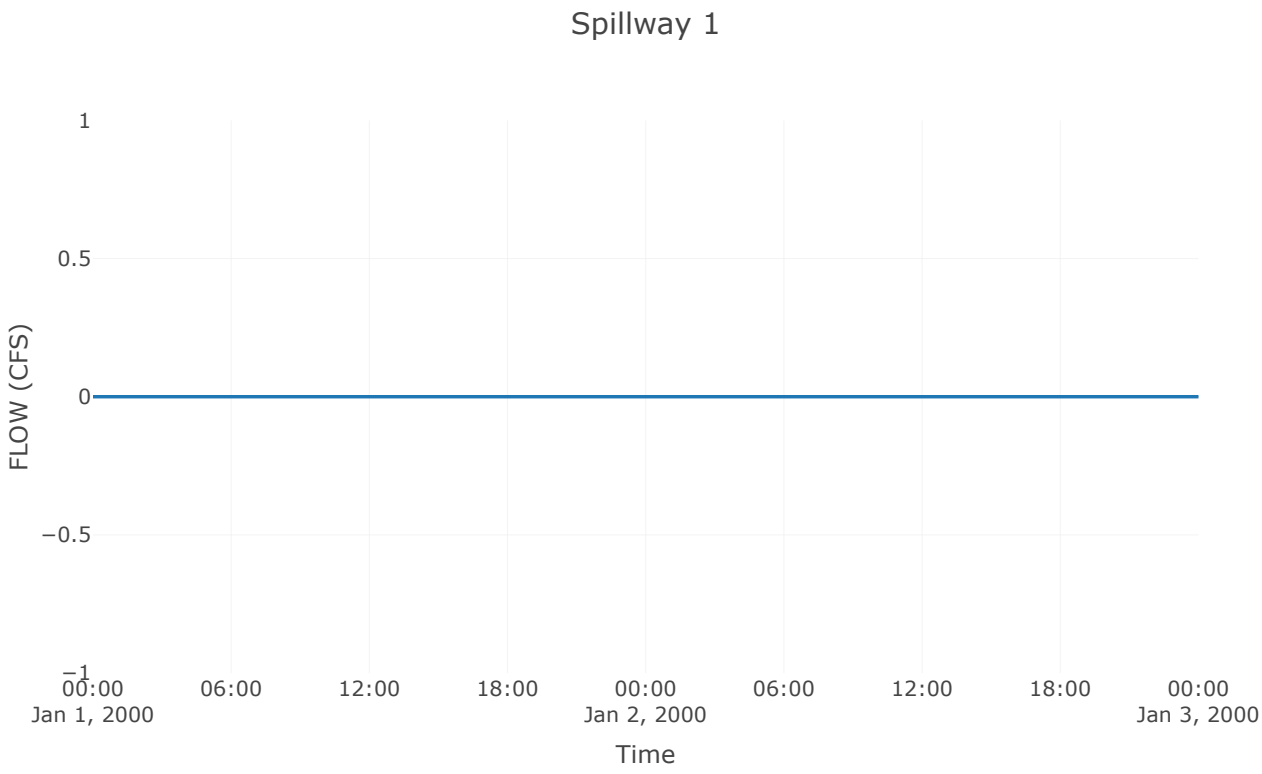
Downstream : Off - Site Tributary Area

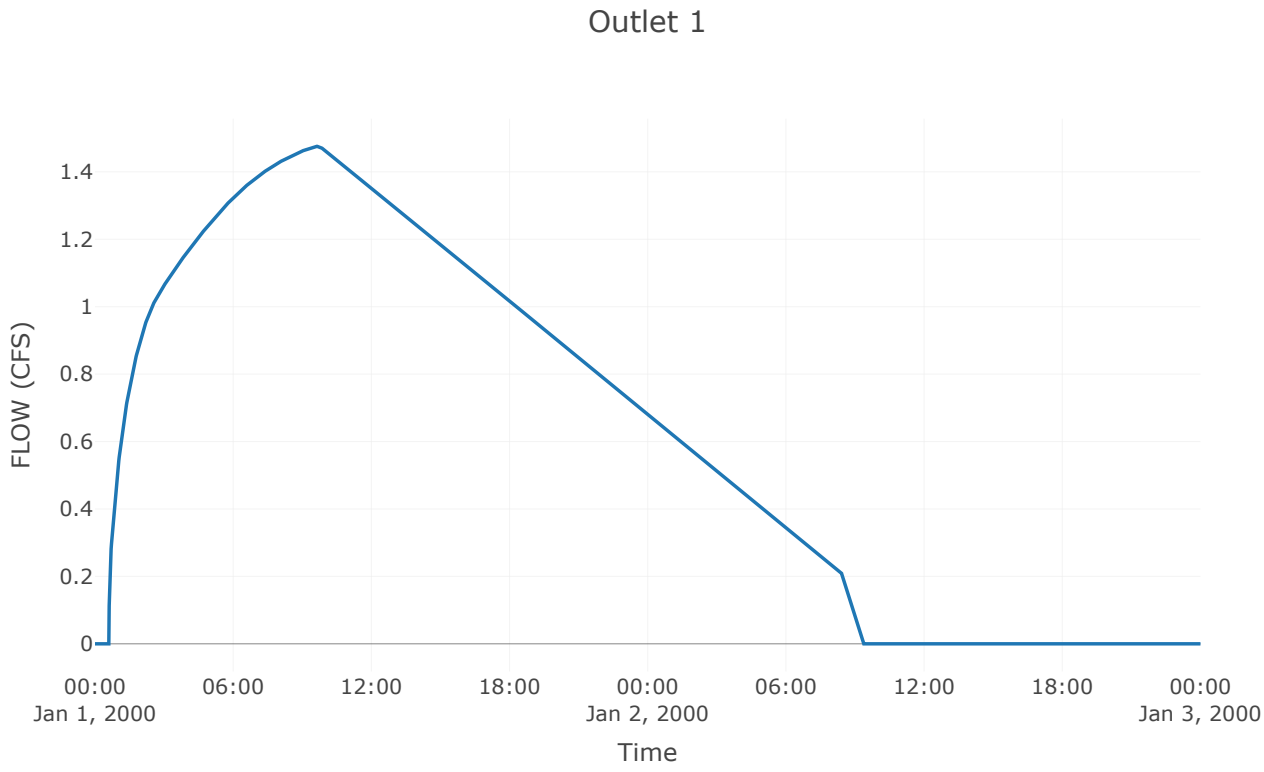
Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

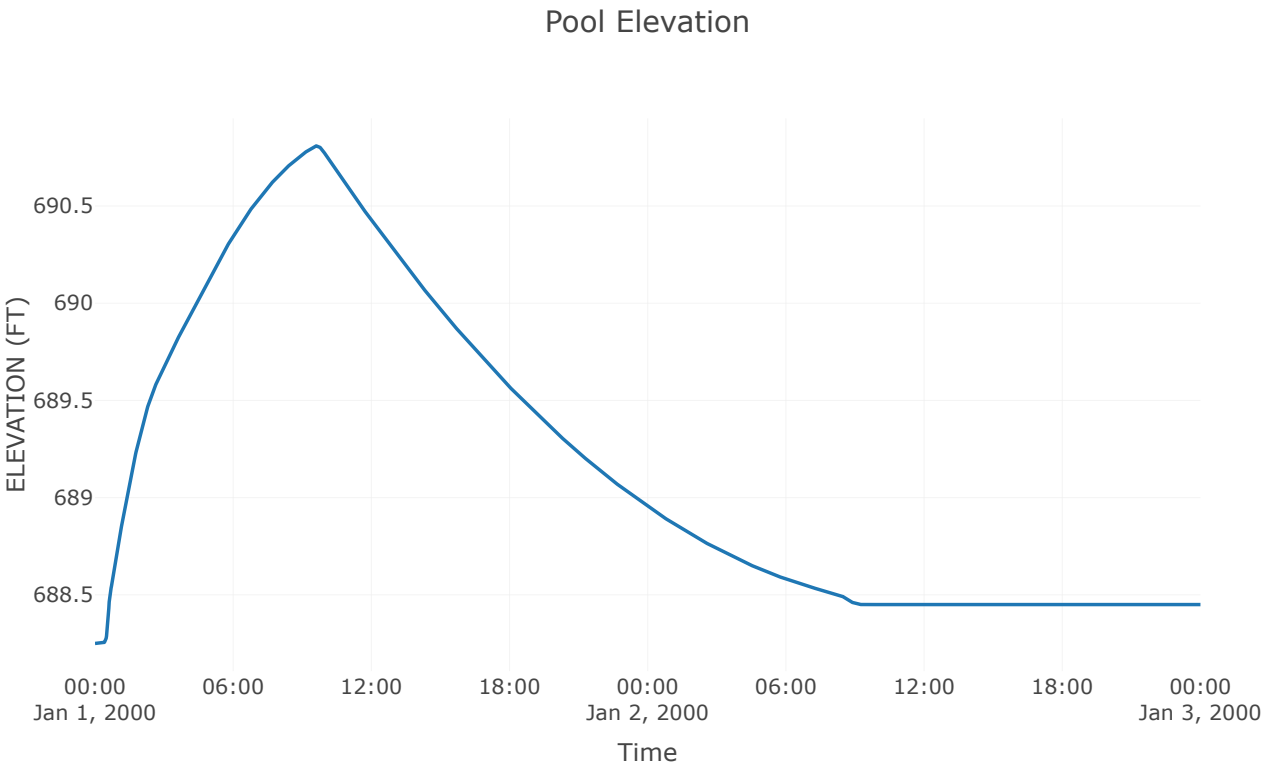

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

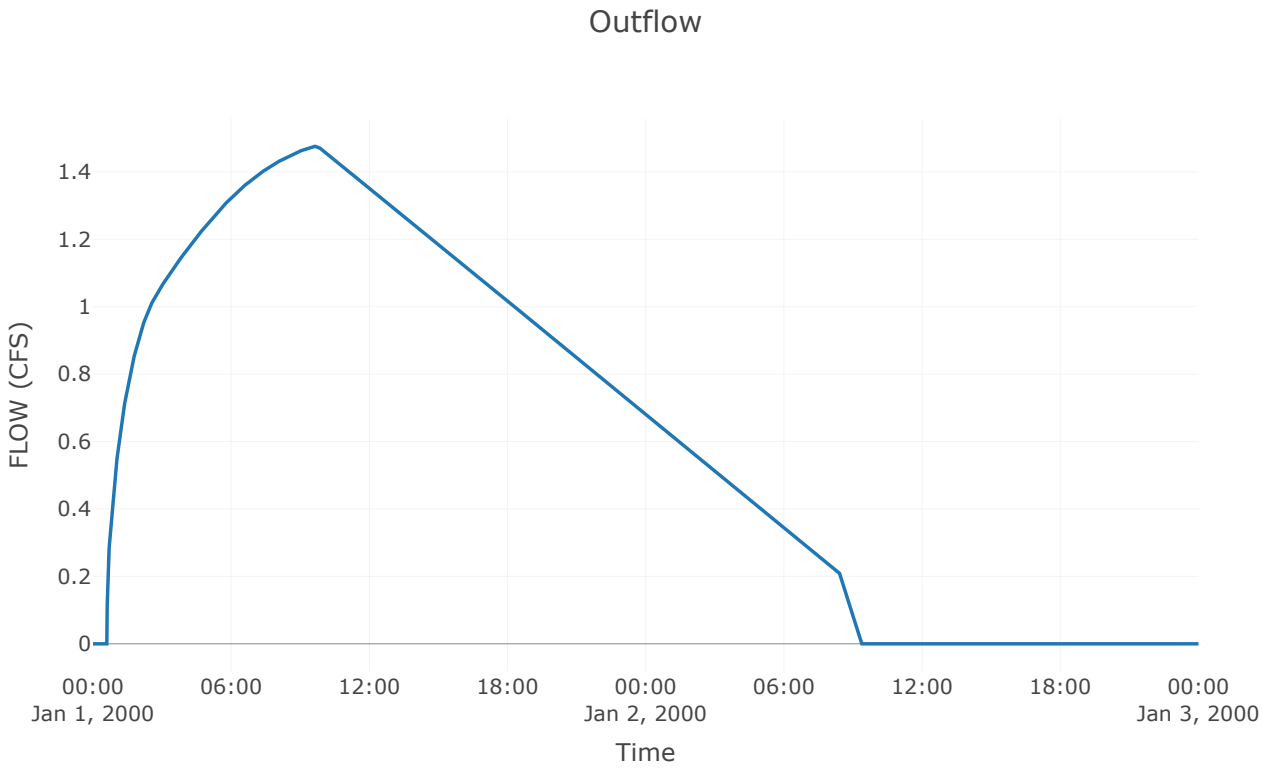

Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
690.5
690
689.5
689
688.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

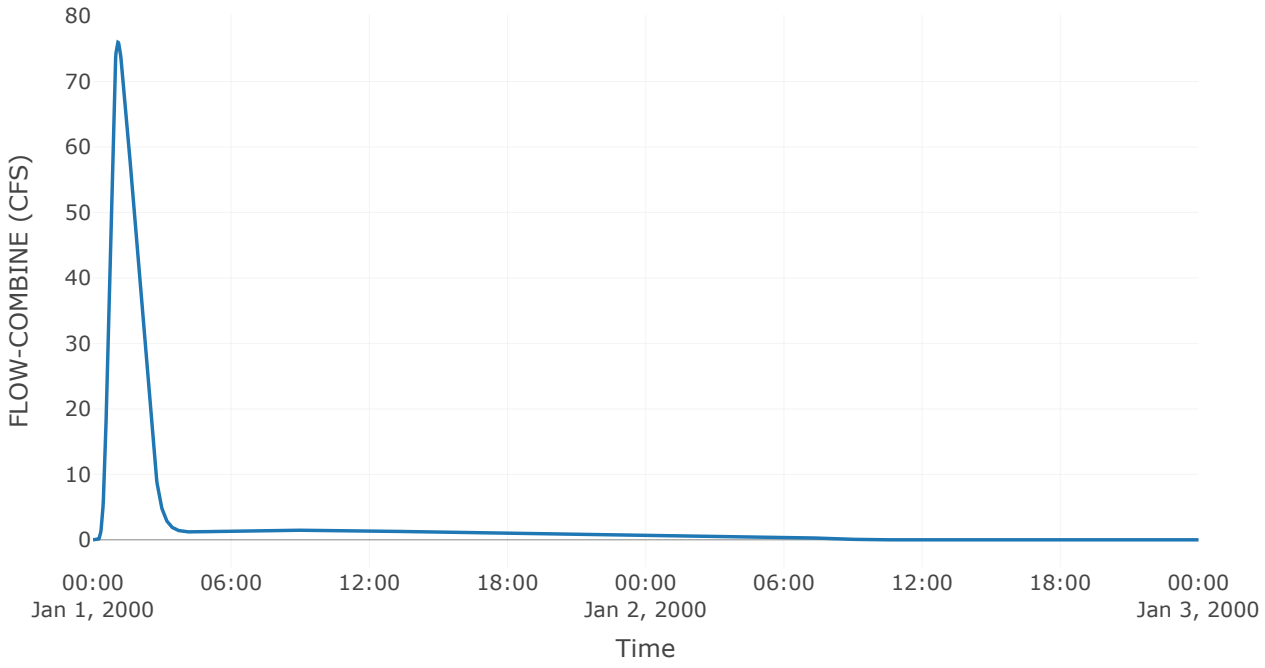

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

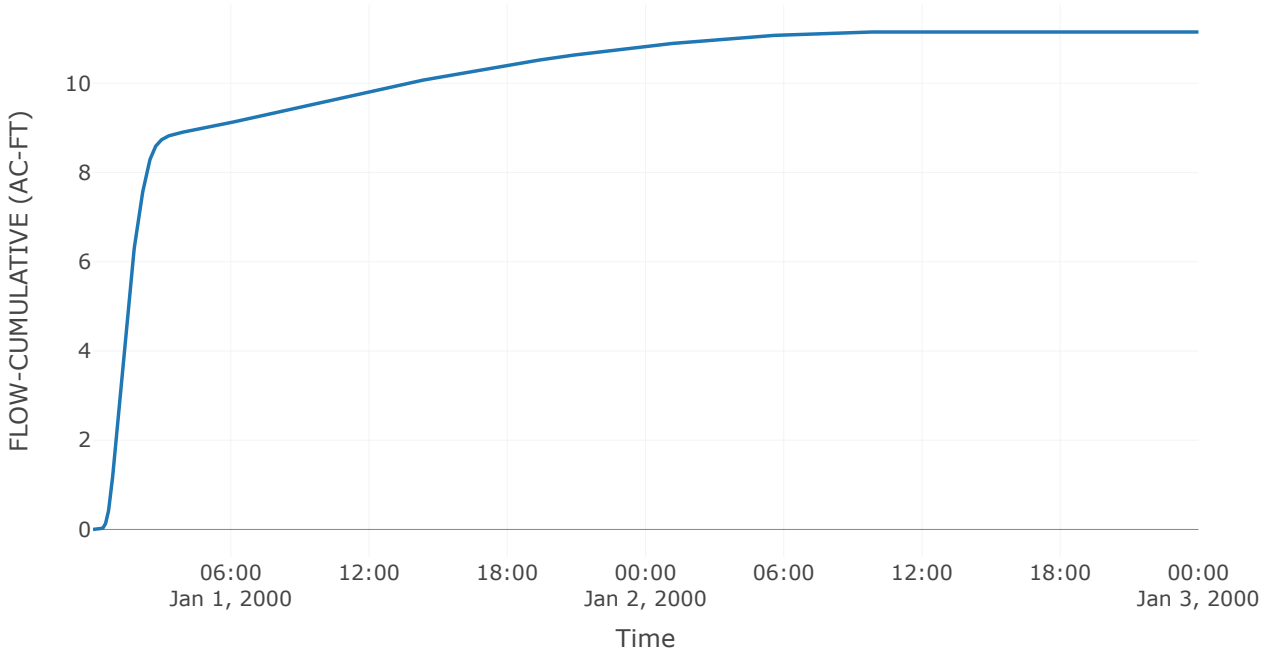
Downstream : Storage East of Wolf Road

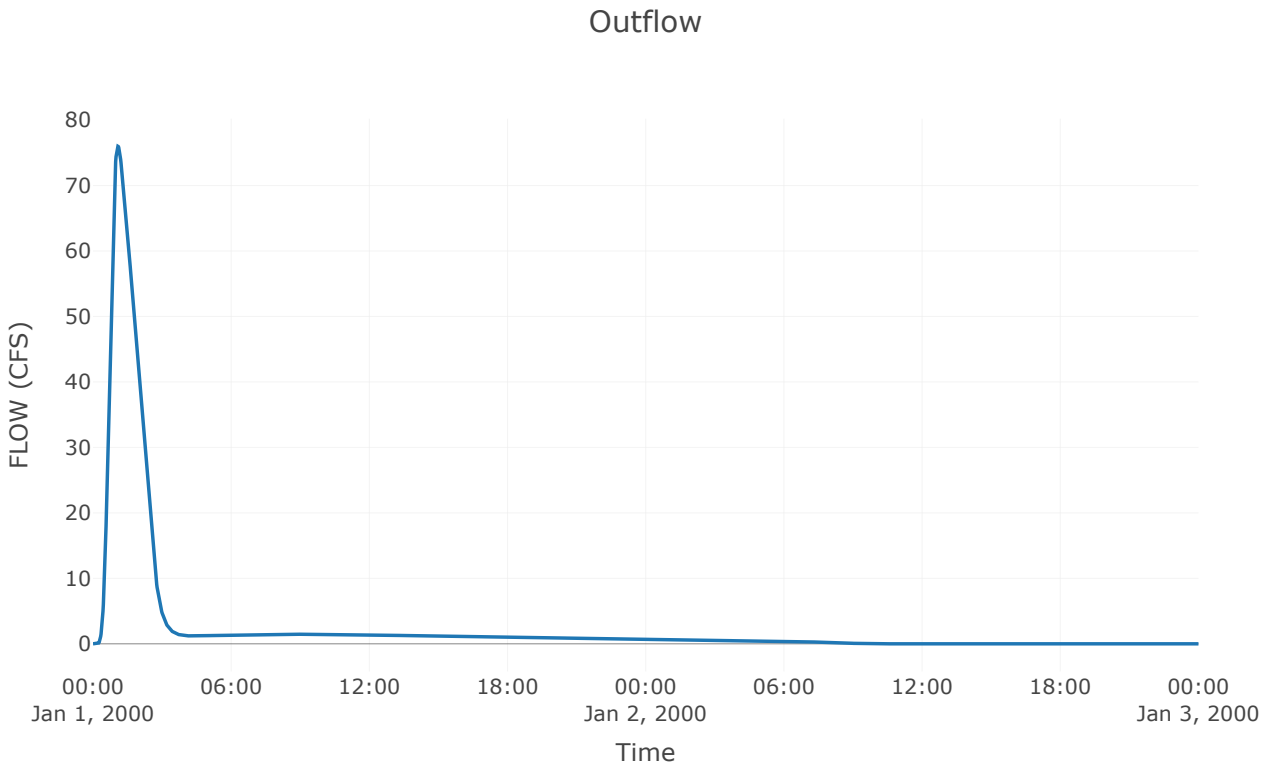
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78

Combined Inflow



Cumulative Outflow

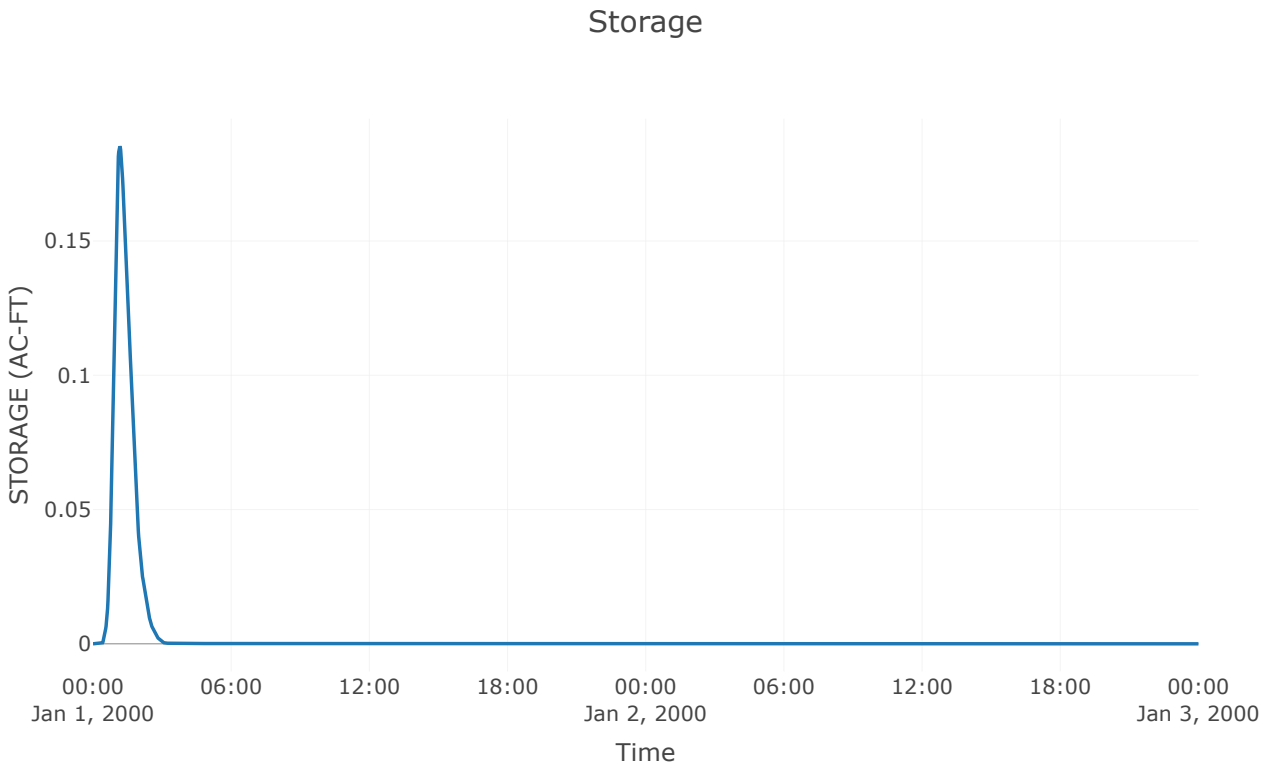


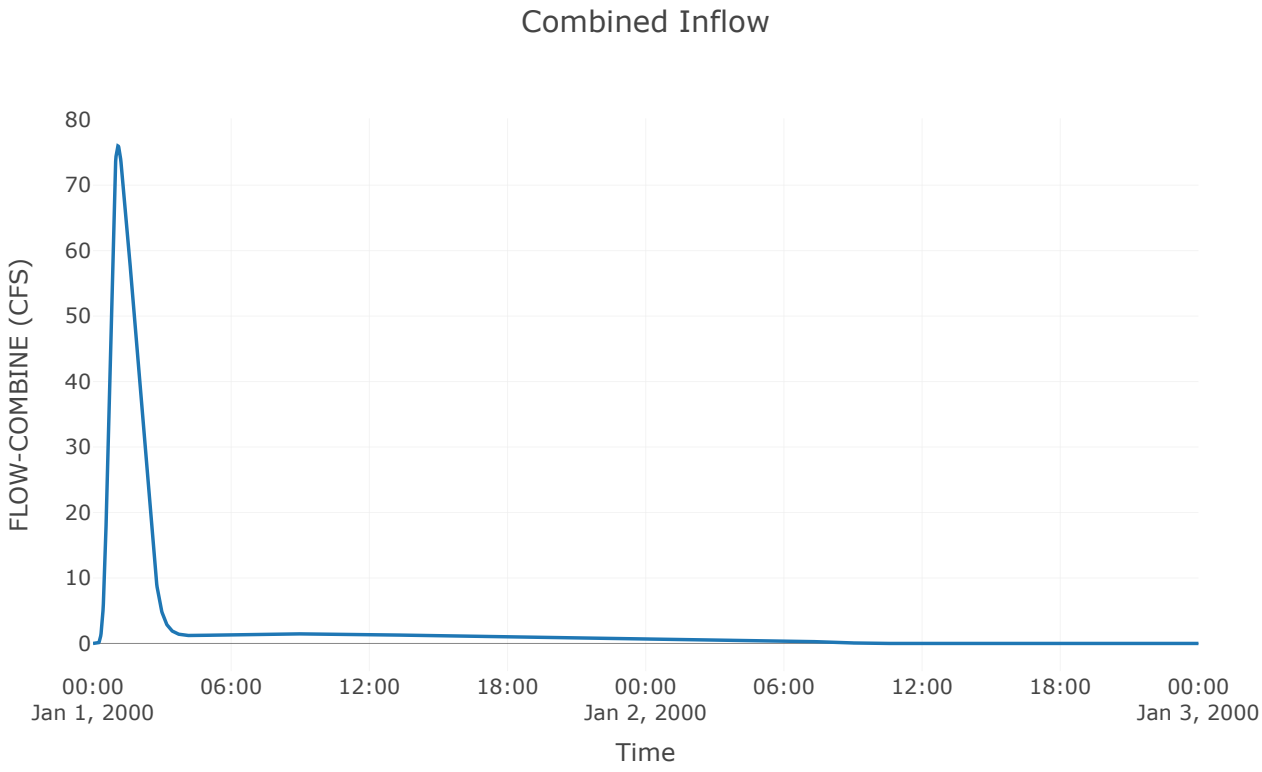

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

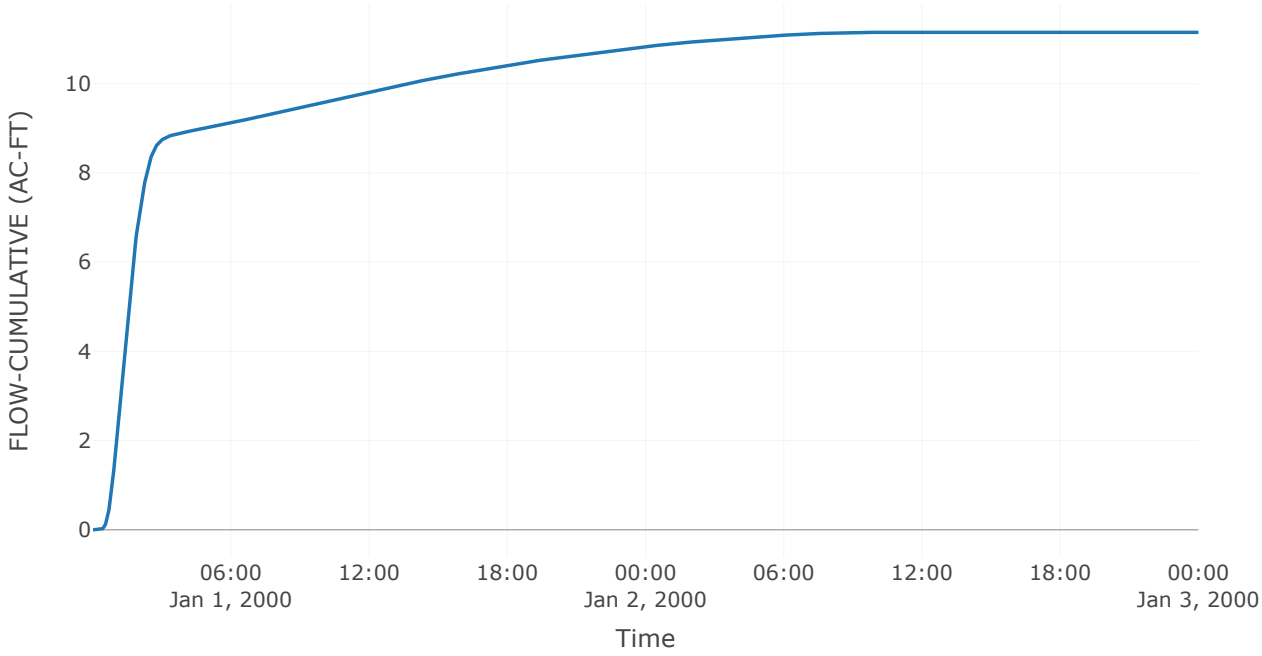
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

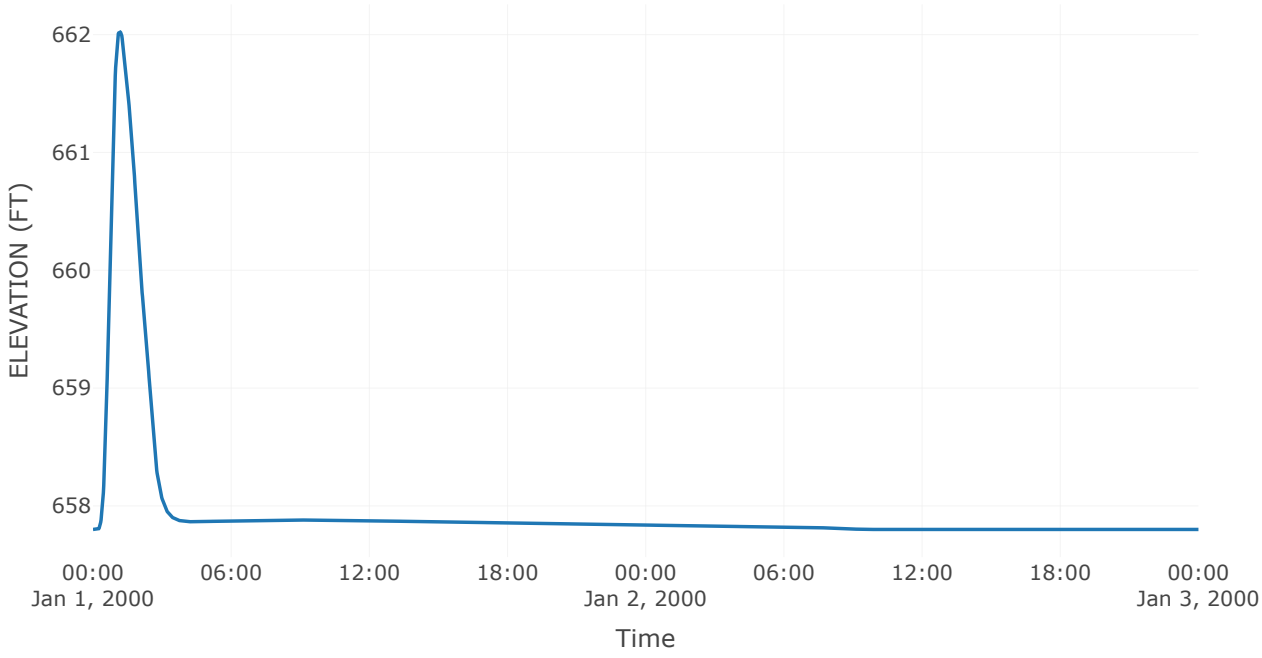

Storage
STORAGE (AC-FT)
0.15
0.1
0.05
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

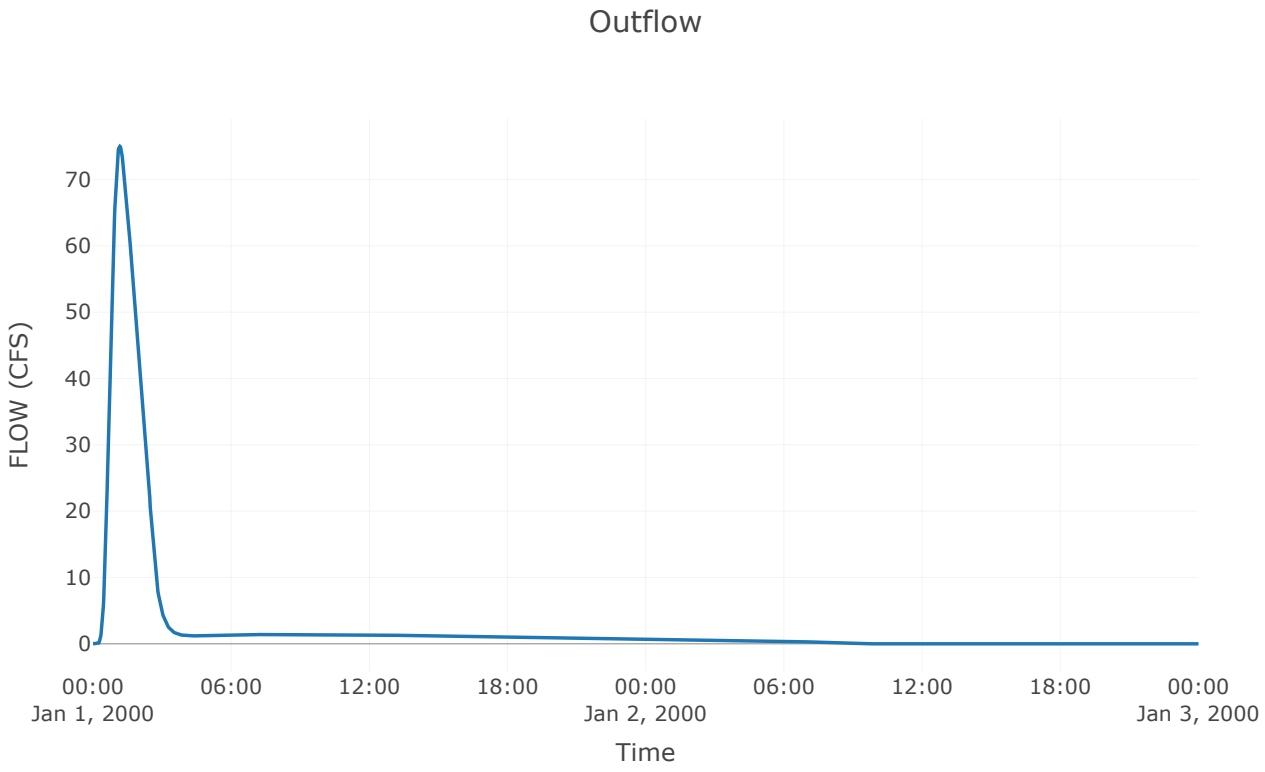

Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Cumulative Outflow



Pool Elevation



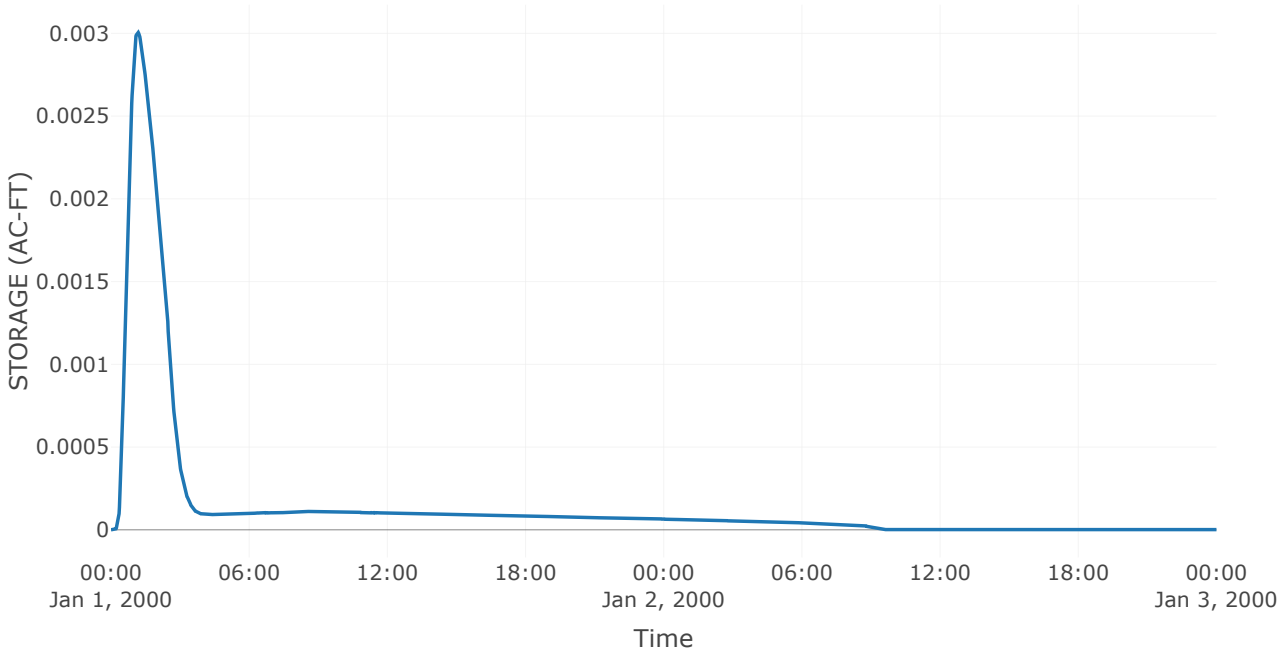

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

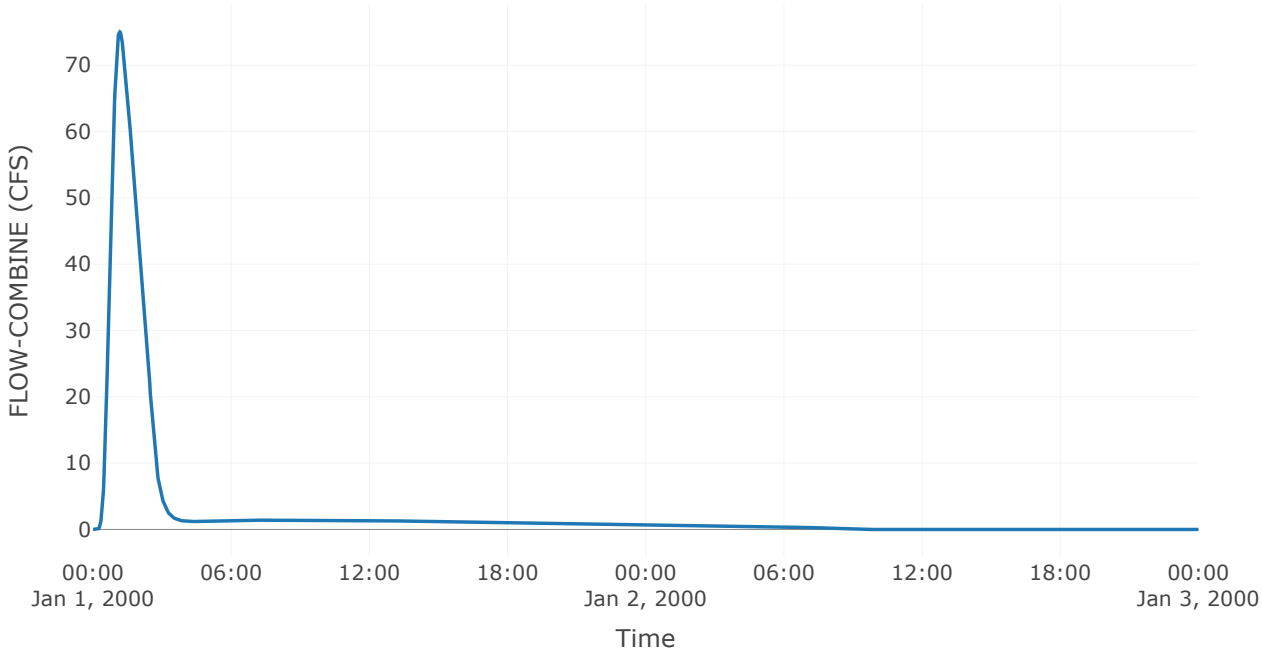
Downstream : Storage West of Wolf Road

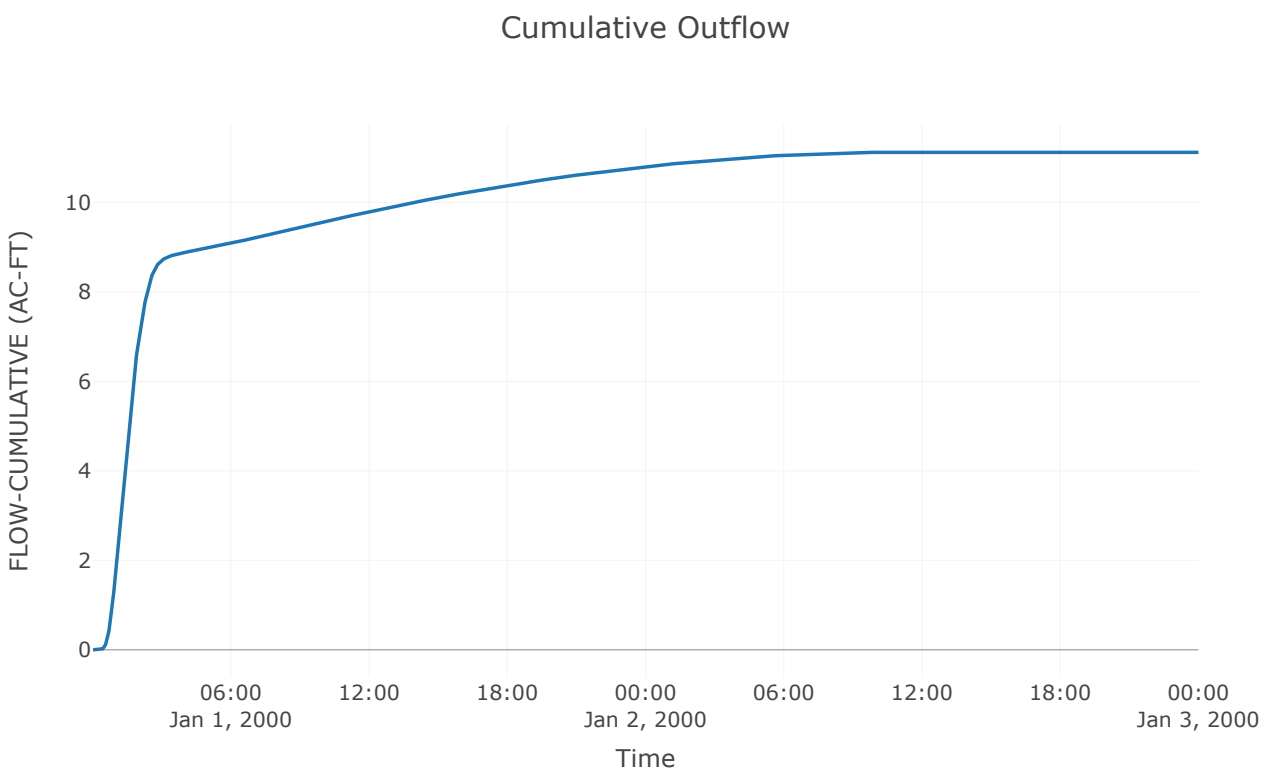
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.55
Discharge Volume (AC - FT)	11.12

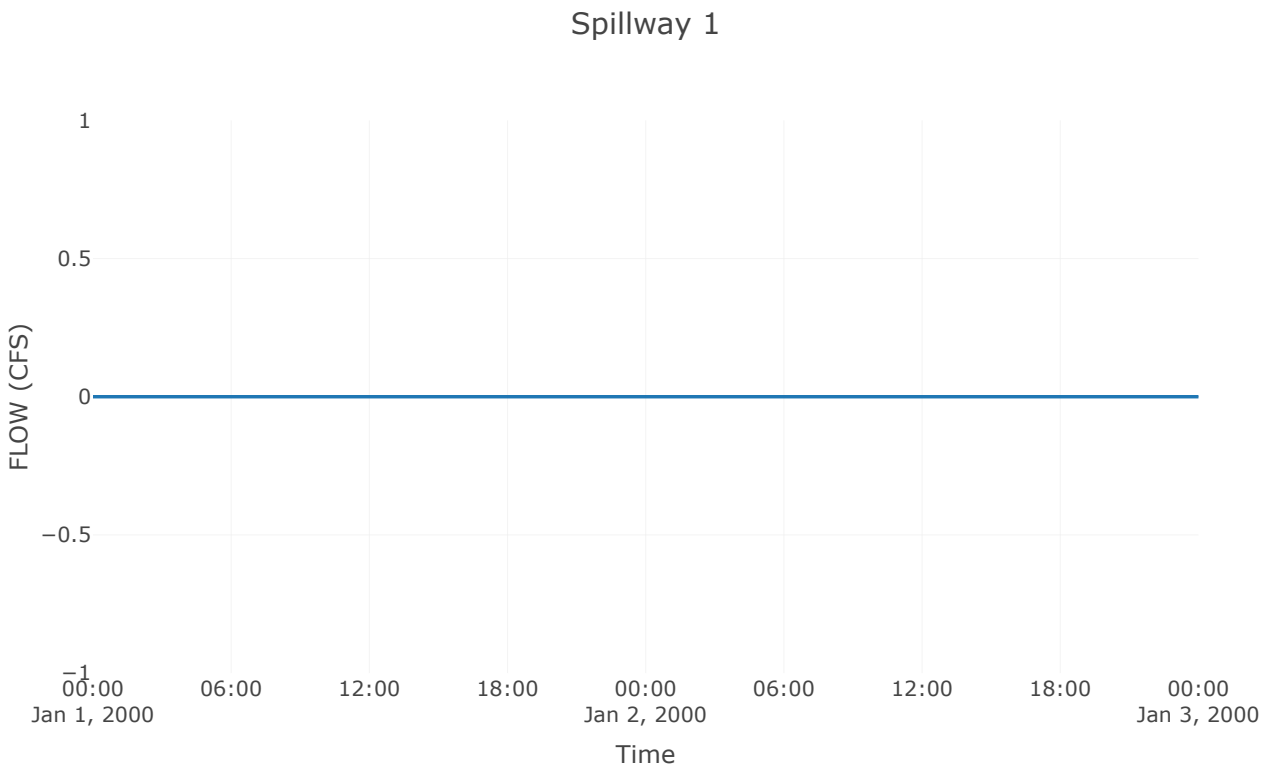
Storage



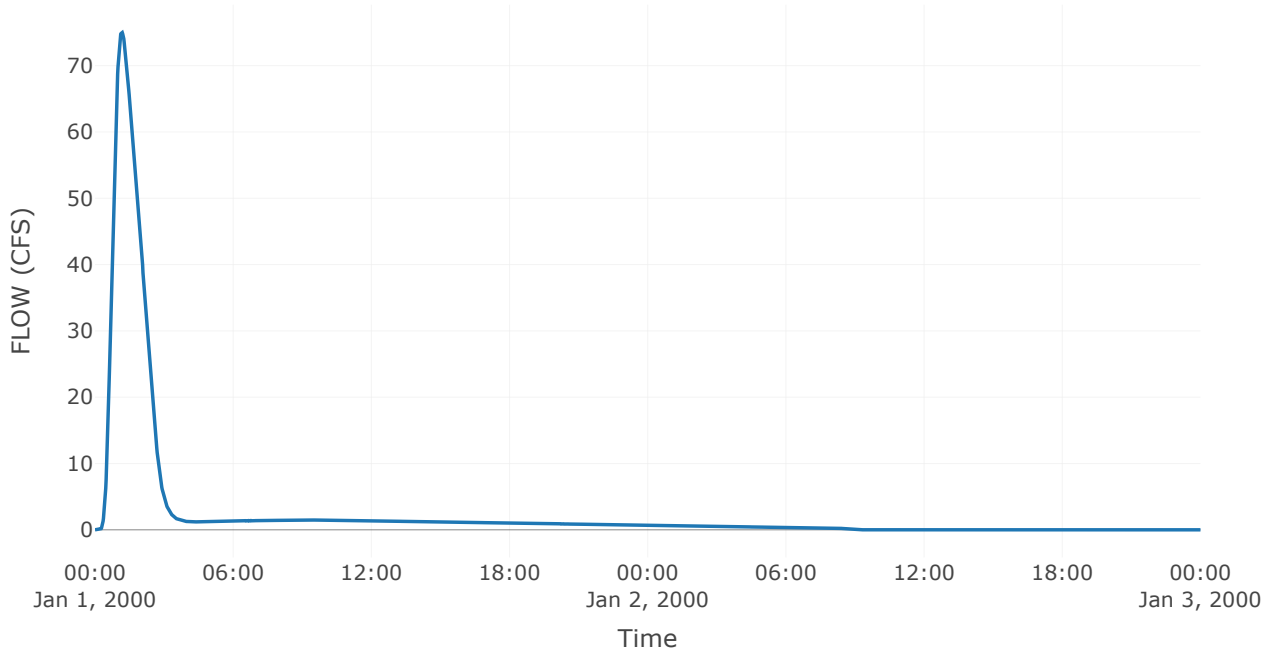
Combined Inflow



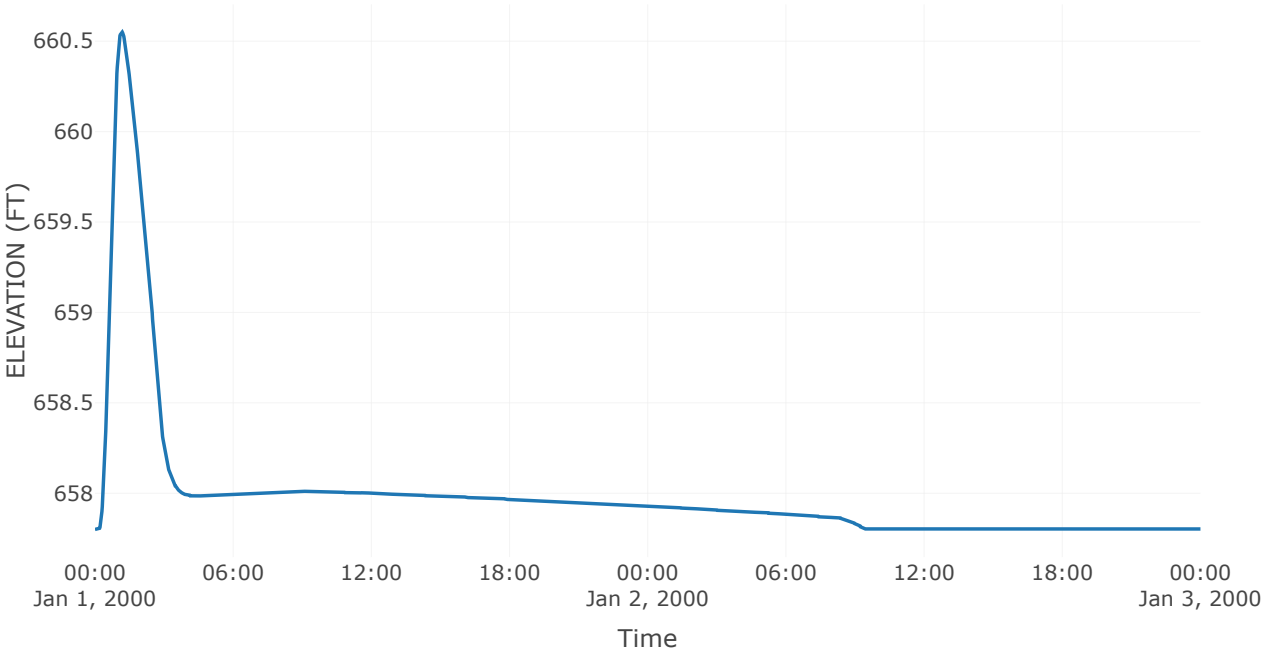

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

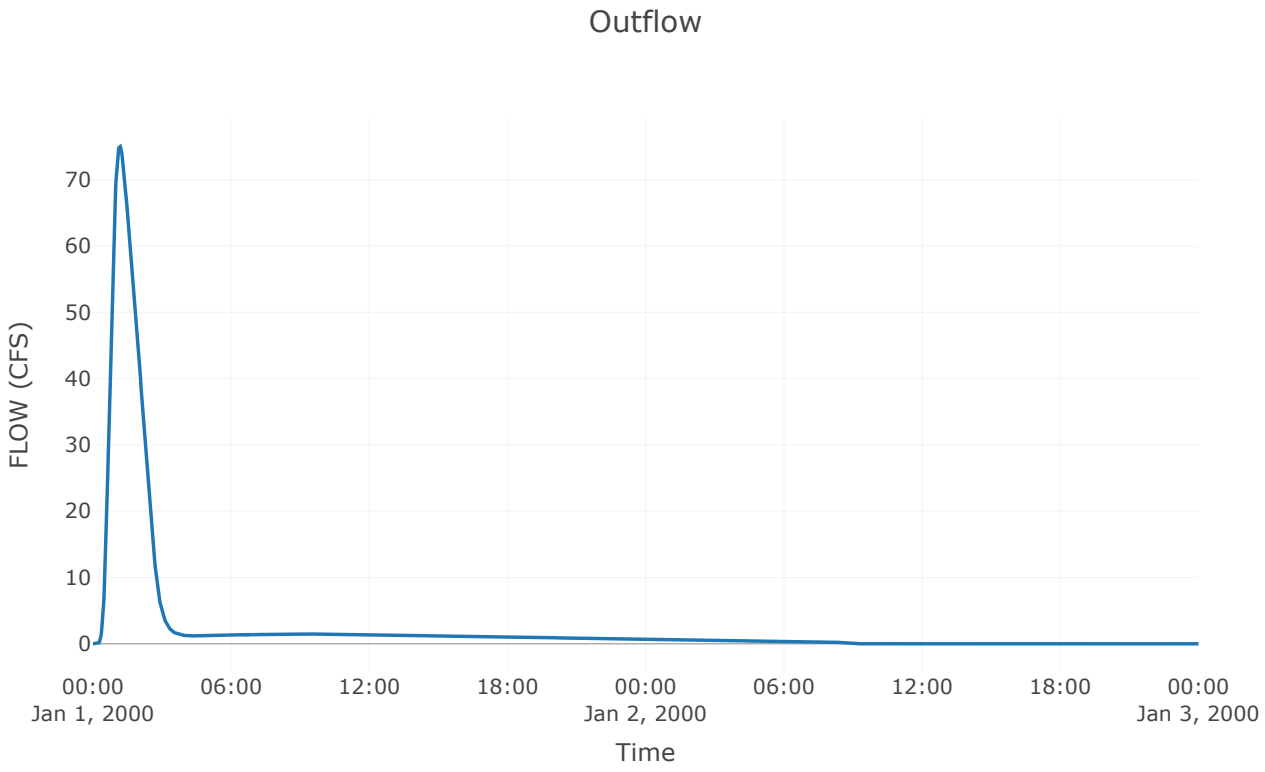

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



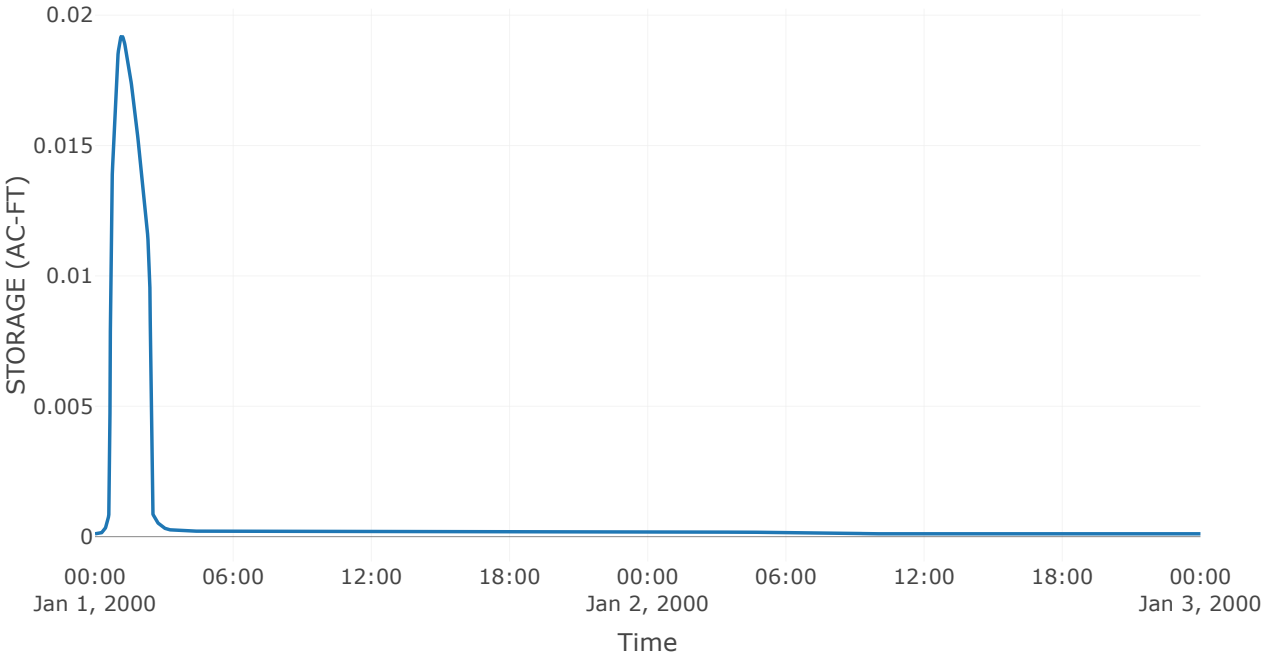

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

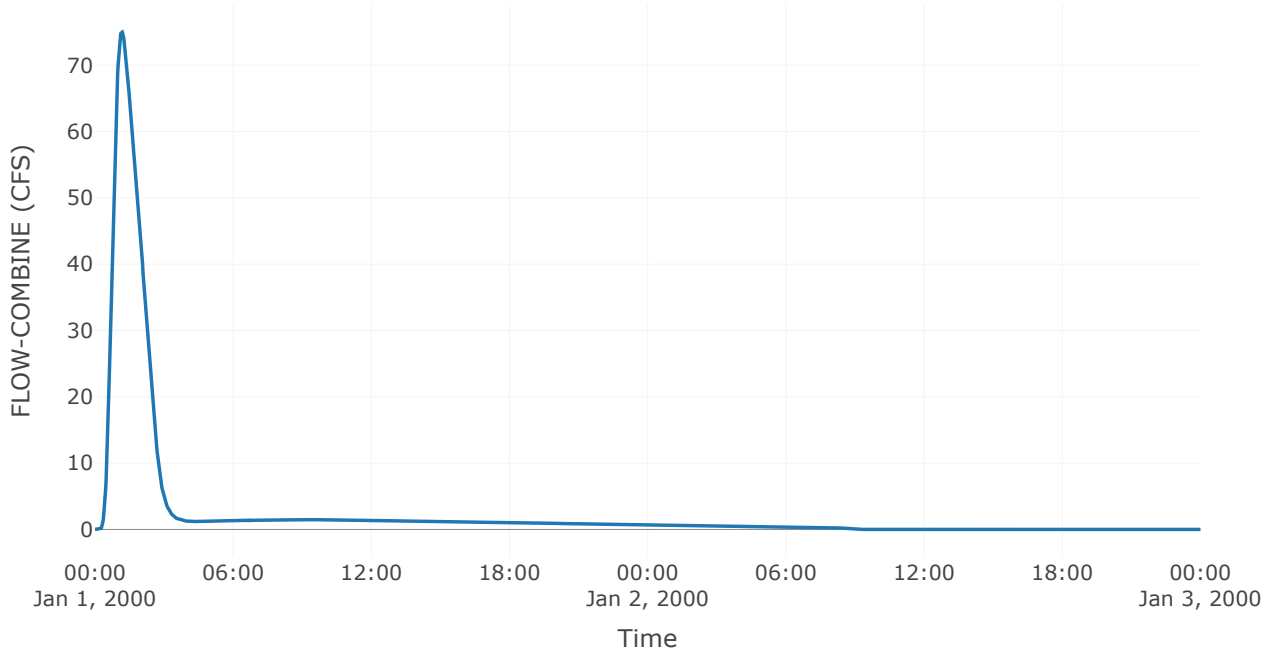
Downstream : Existing Basin C

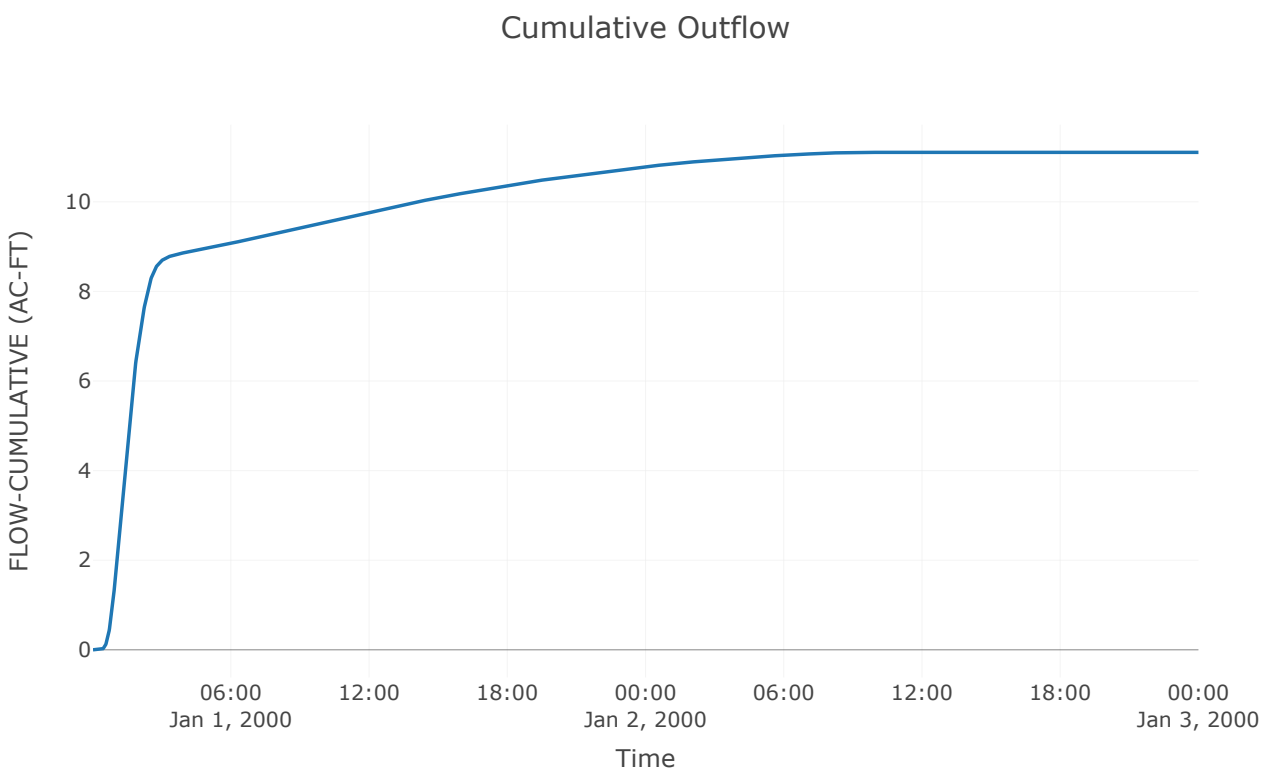
Results: Storage West of Wolf Road	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	658.88
Discharge Volume (AC - FT)	11.1

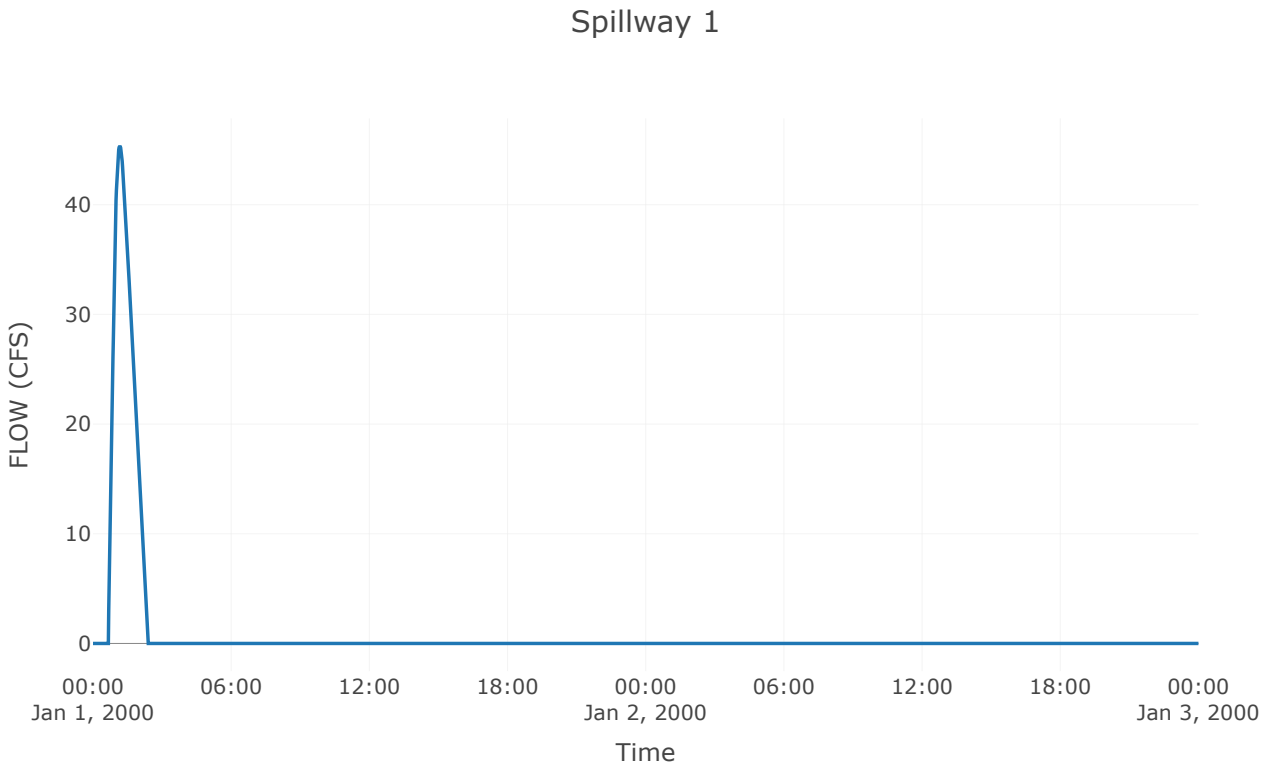
Storage



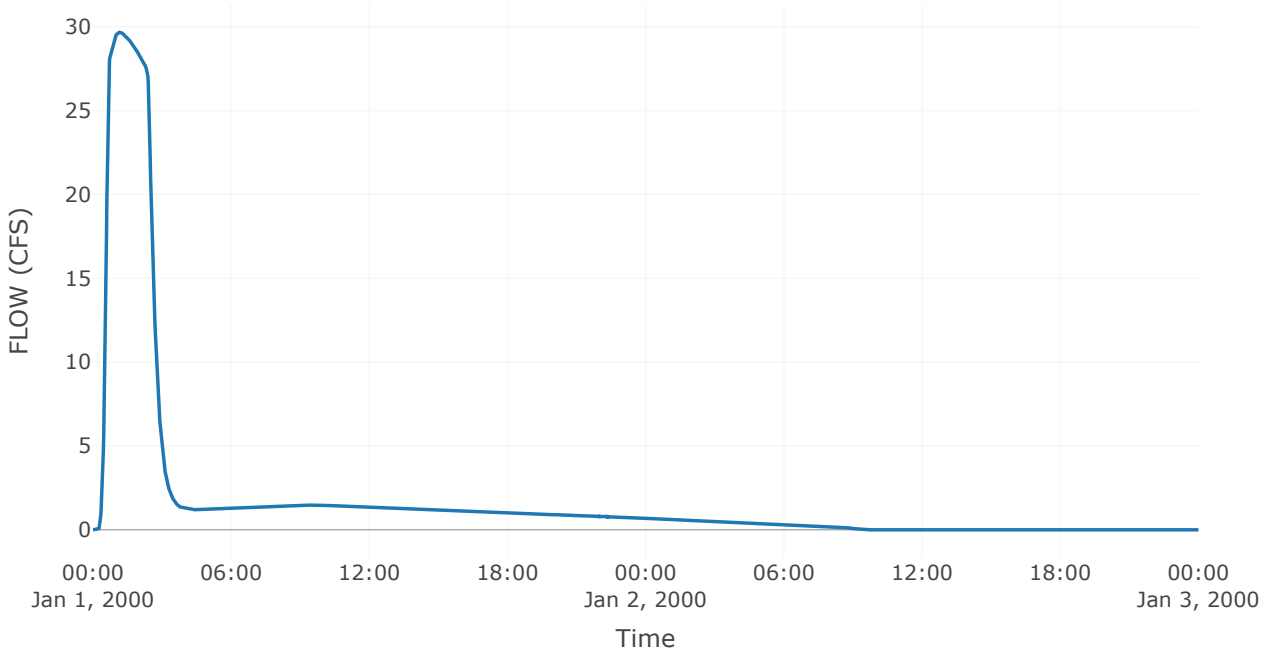
Combined Inflow



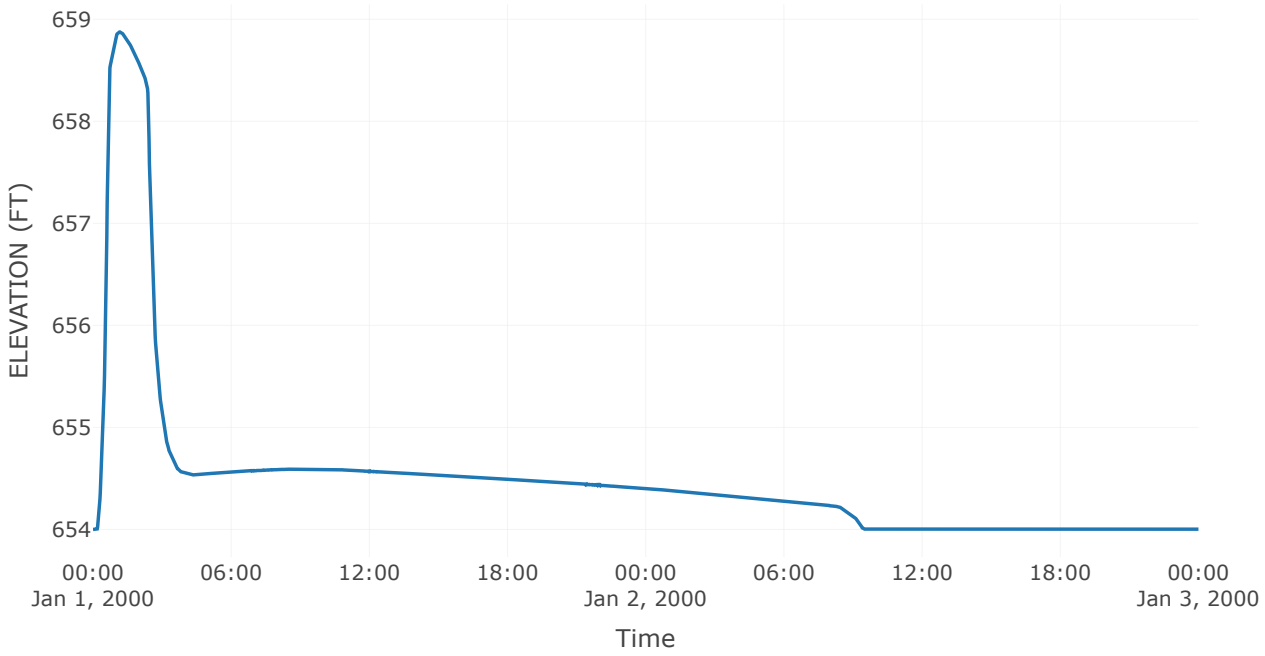

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0
2
4
6
8
10
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

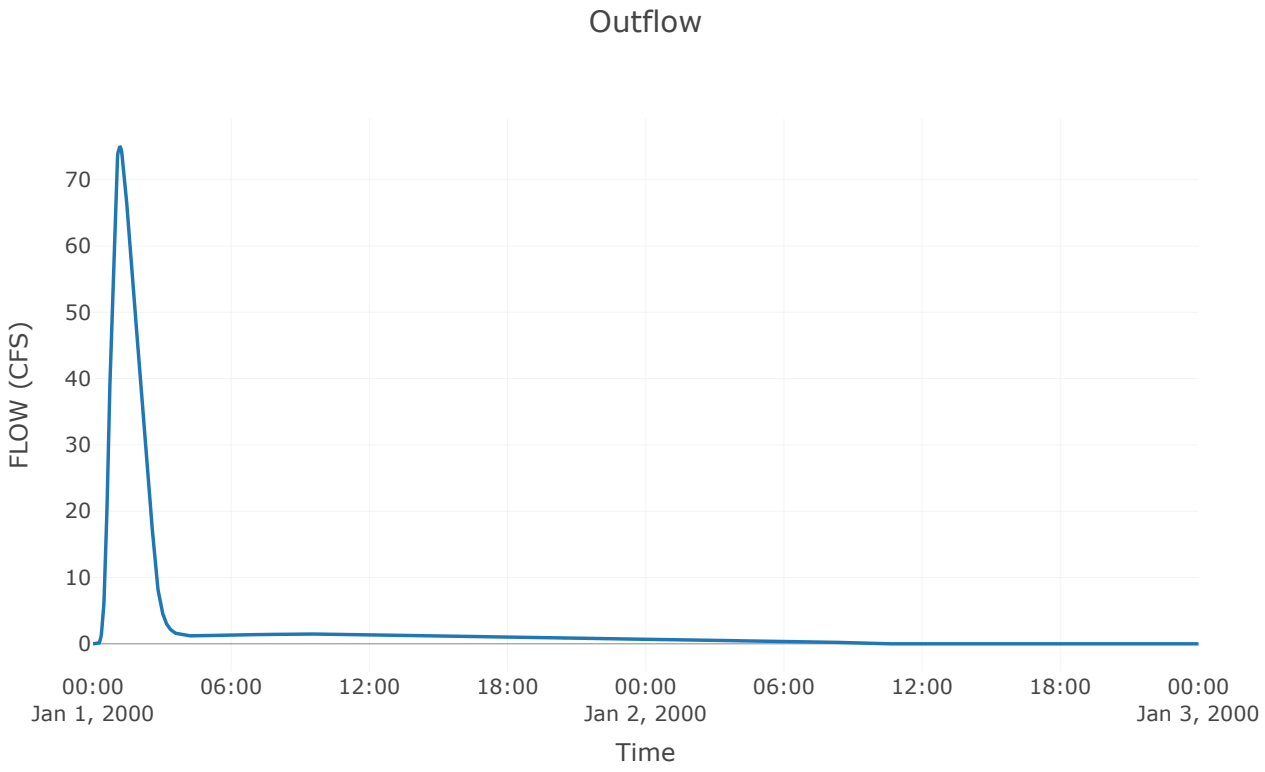

Spillway 1
FLOW (CFS)
0
10
20
30
40
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

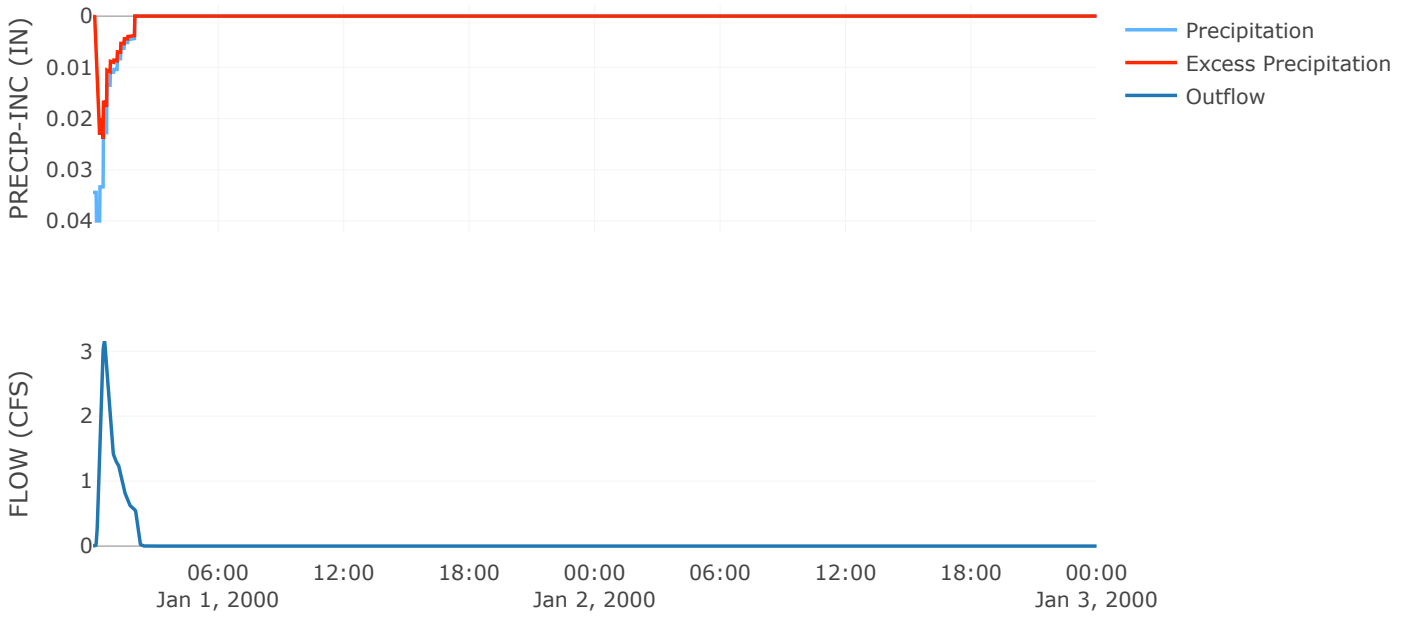
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

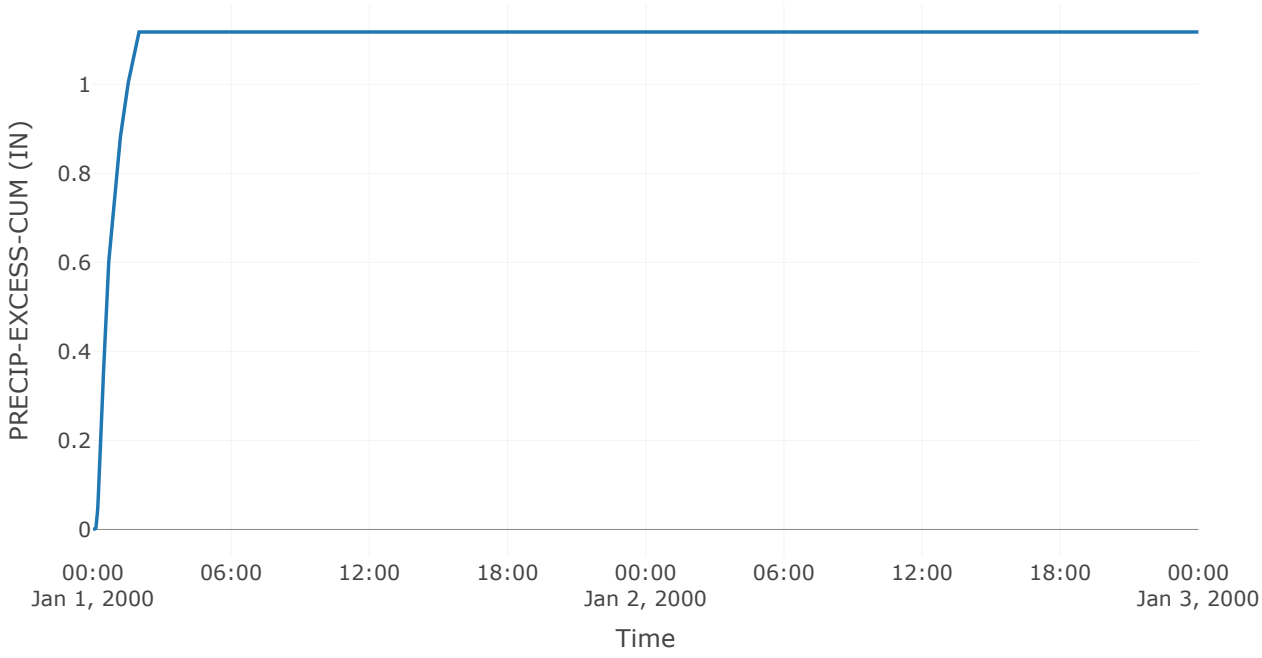
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	3.15
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	1.12
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.22
Direct Runoff Volume (AC - FT)	0.22
Baseflow Volume (AC - FT)	0

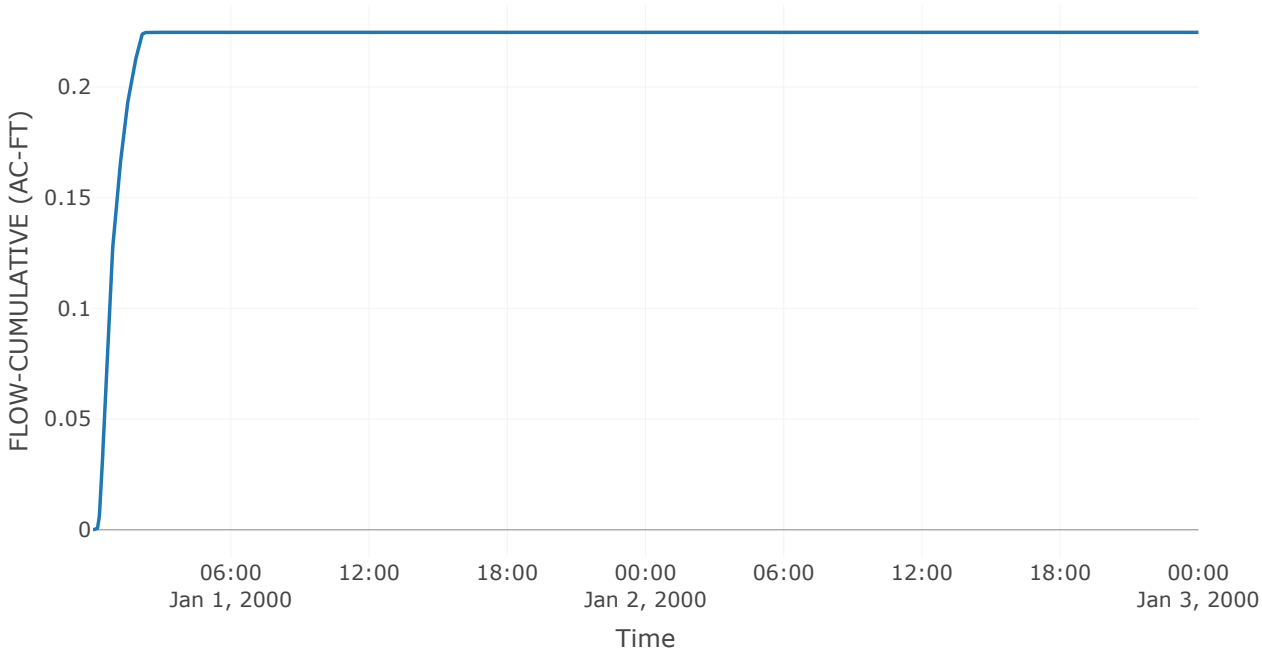
Precipitation and Outflow



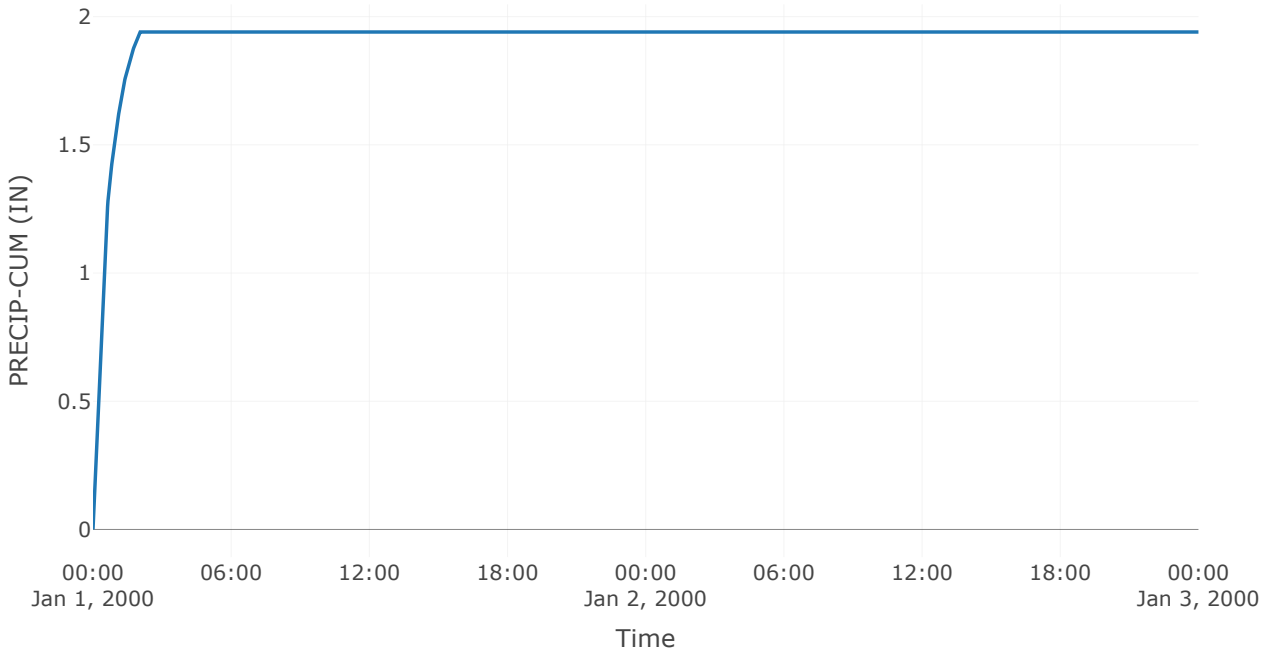
Cumulative Excess Precipitation

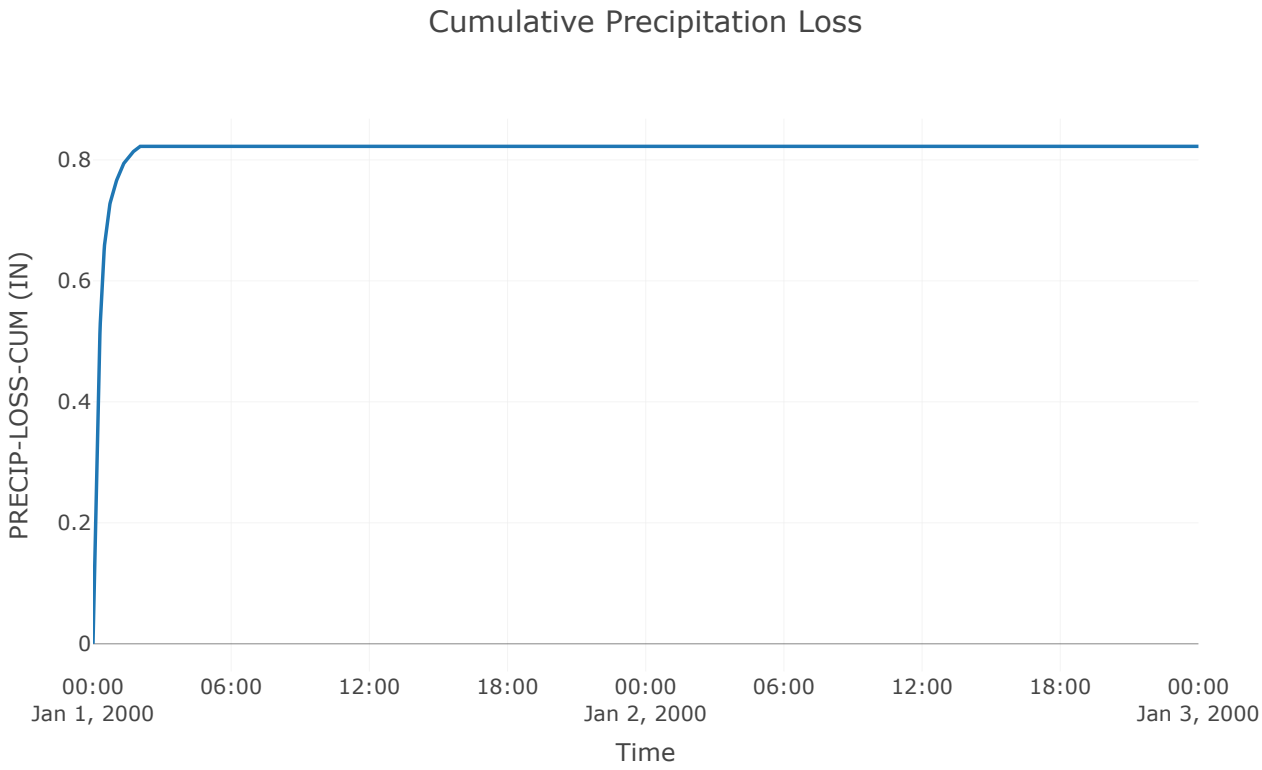


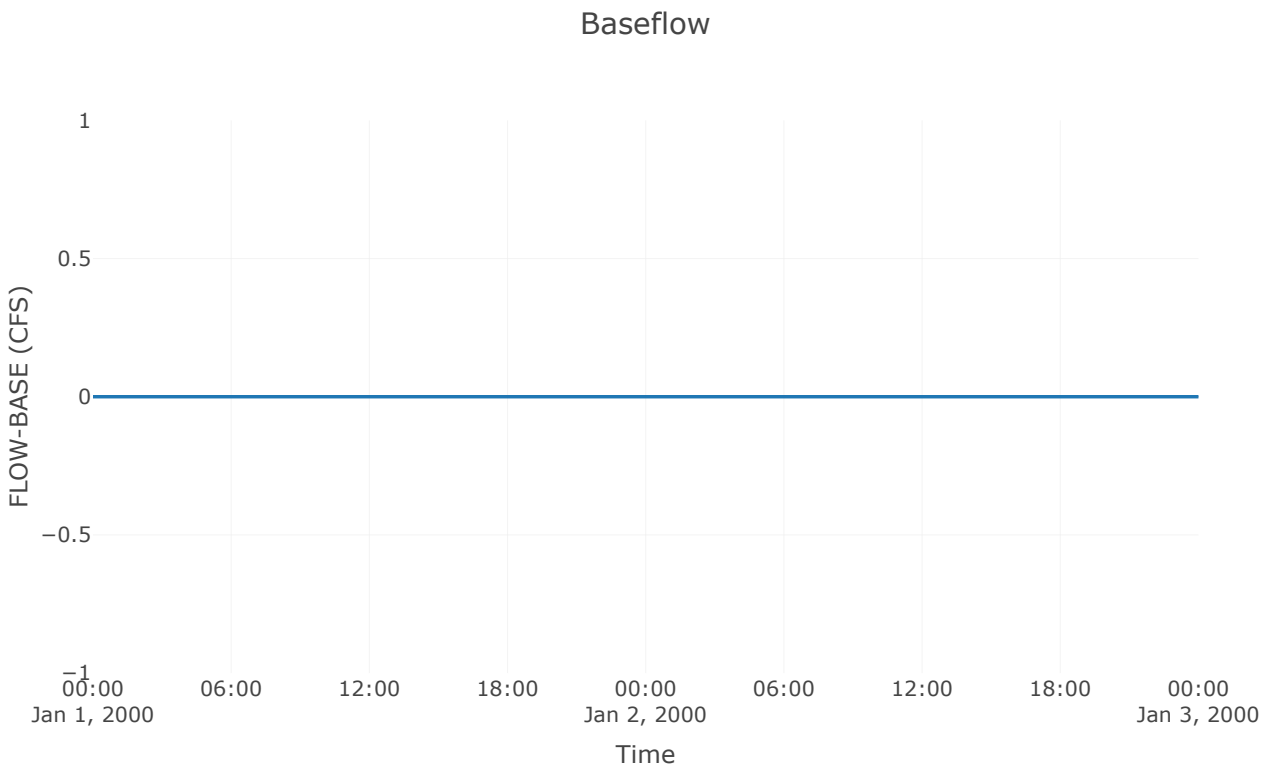
Cumulative Outflow



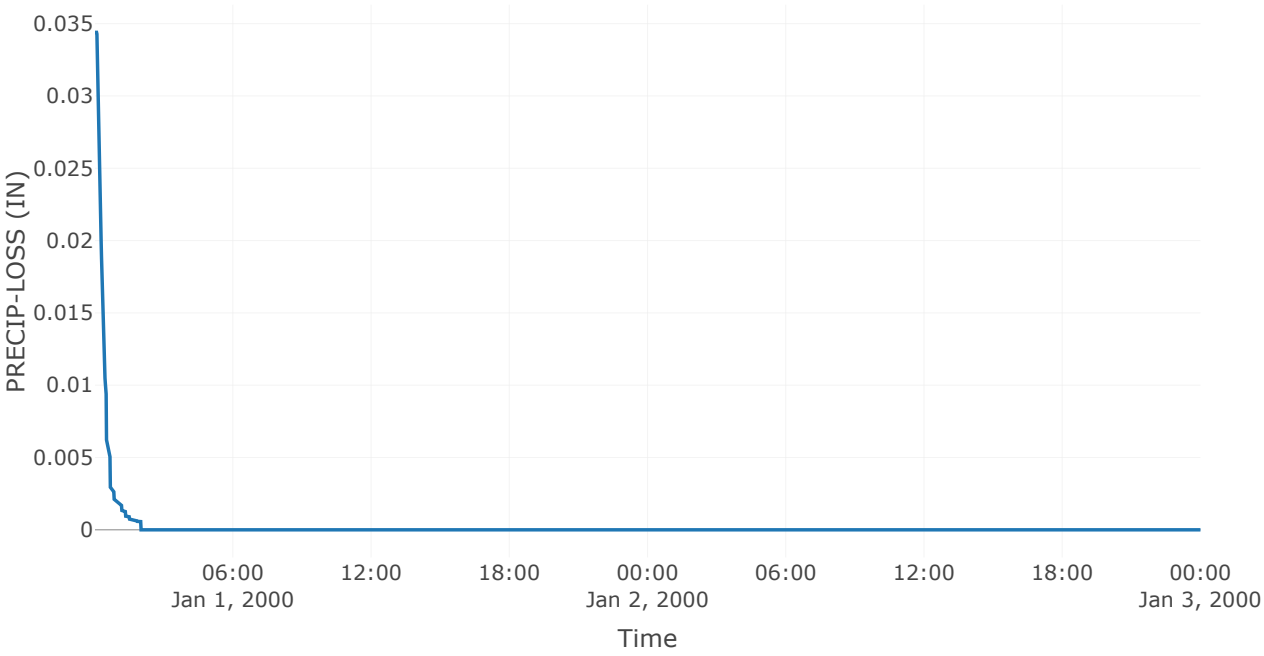
Cumulative Precipitation



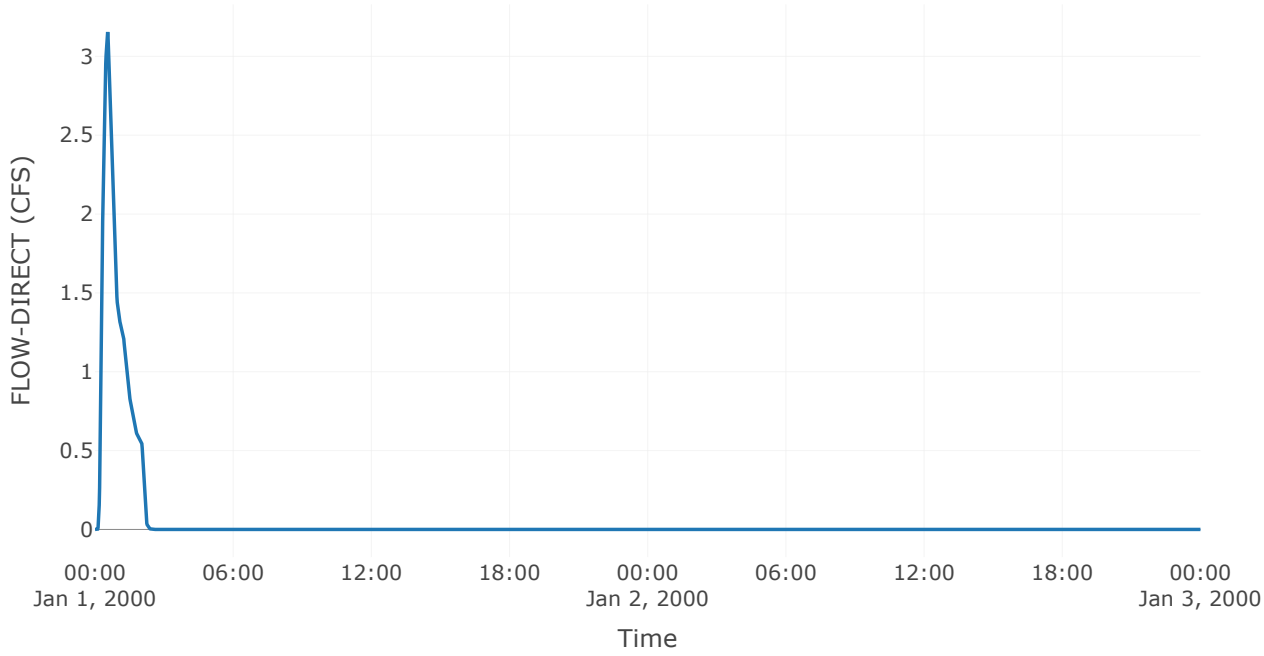

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

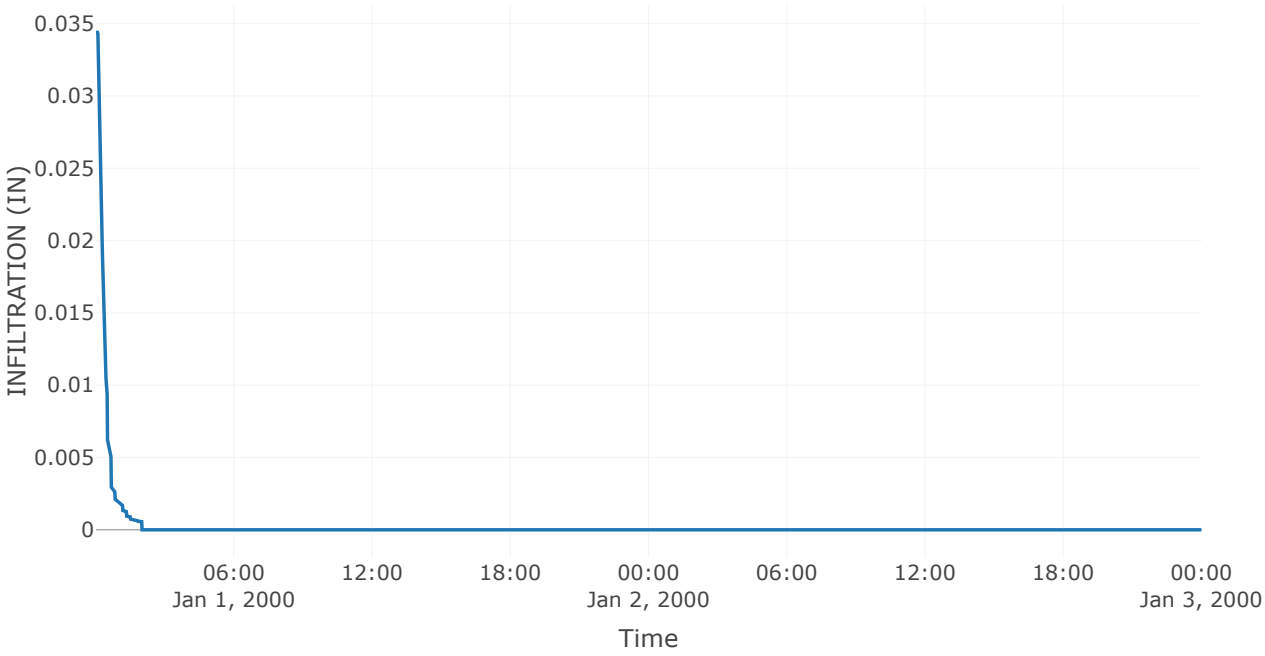

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



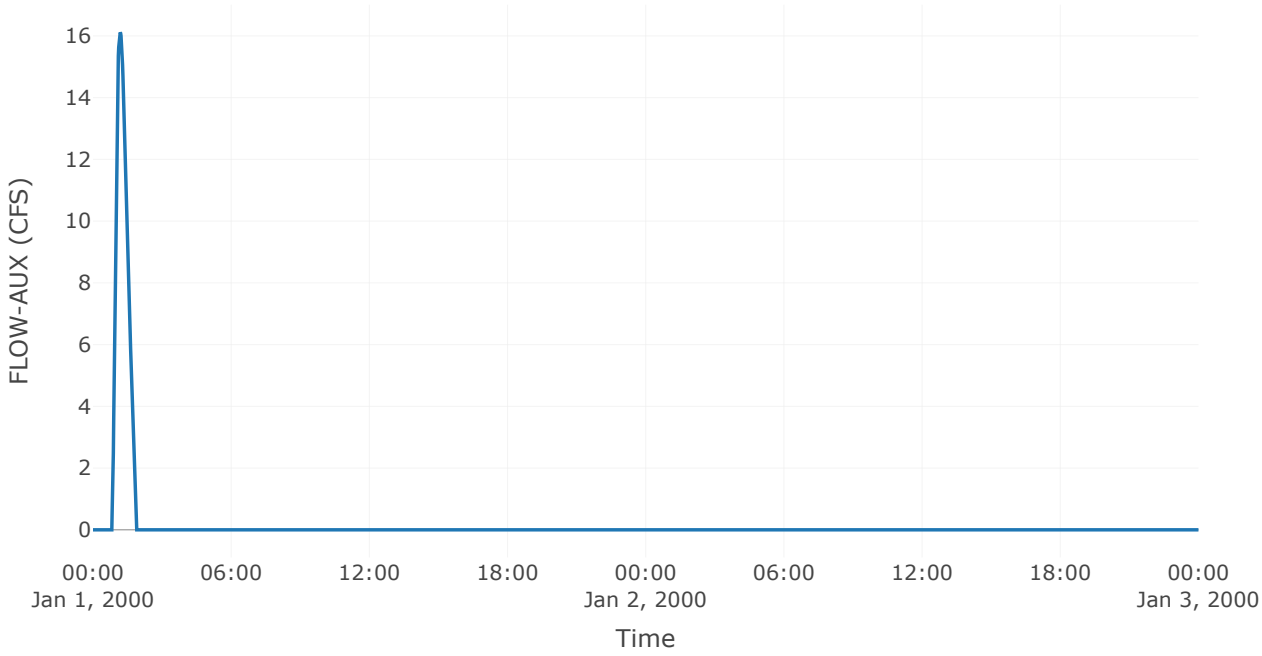

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

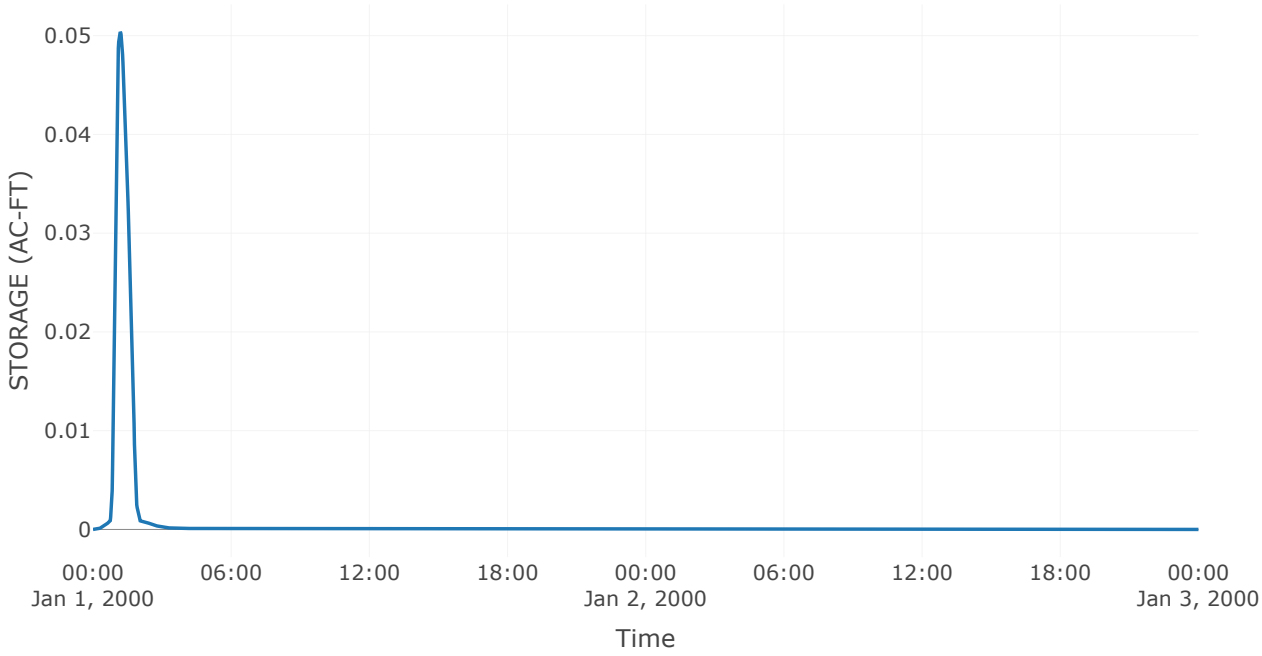
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	60.13
Time of Peak Discharge	01Jan2000, 01:11
Volume (IN)	0.72
Peak Inflow (CFS)	76.3
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.33
Maximum Storage (AC - FT)	0.05
Peak Elevation (FT)	650.78
Discharge Volume (AC - FT)	10.53

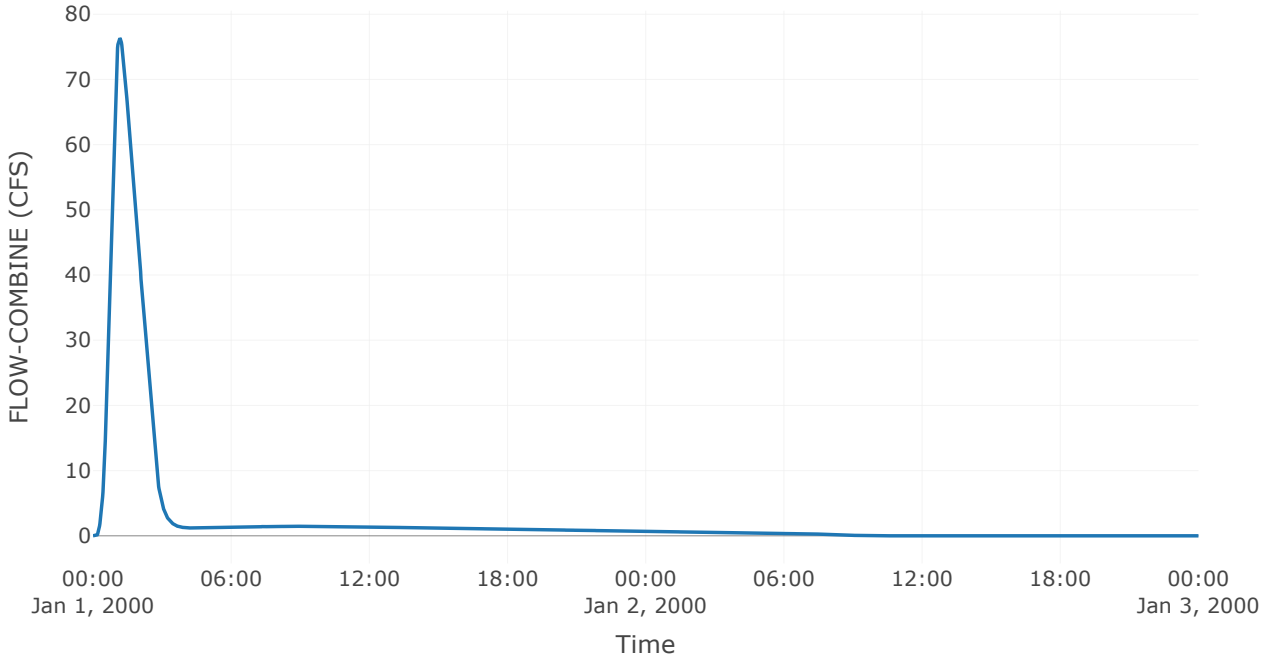
Auxiliary Outflow



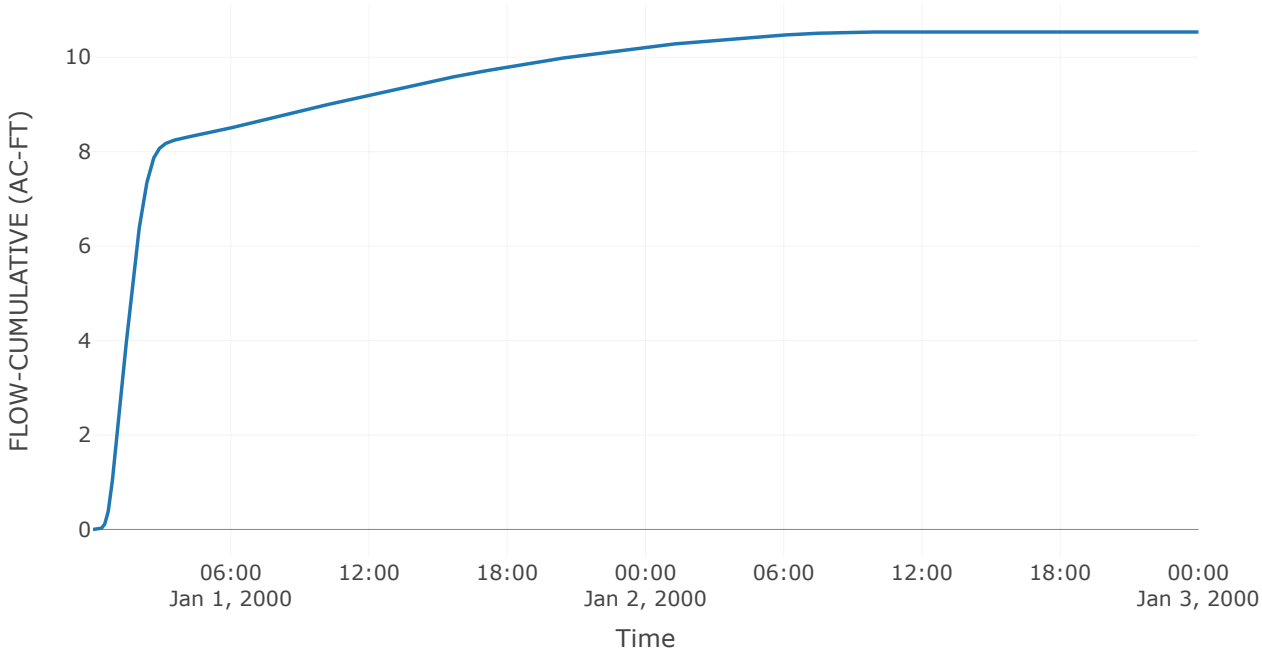
Storage

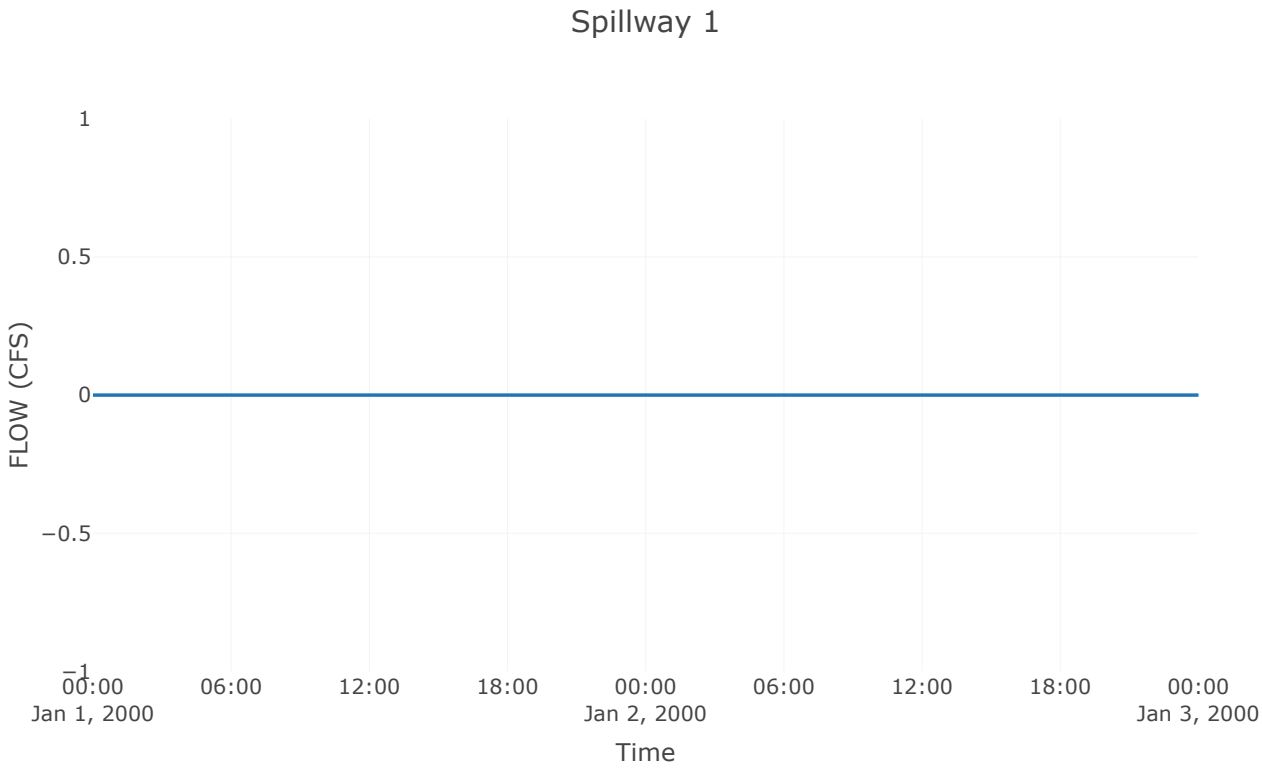


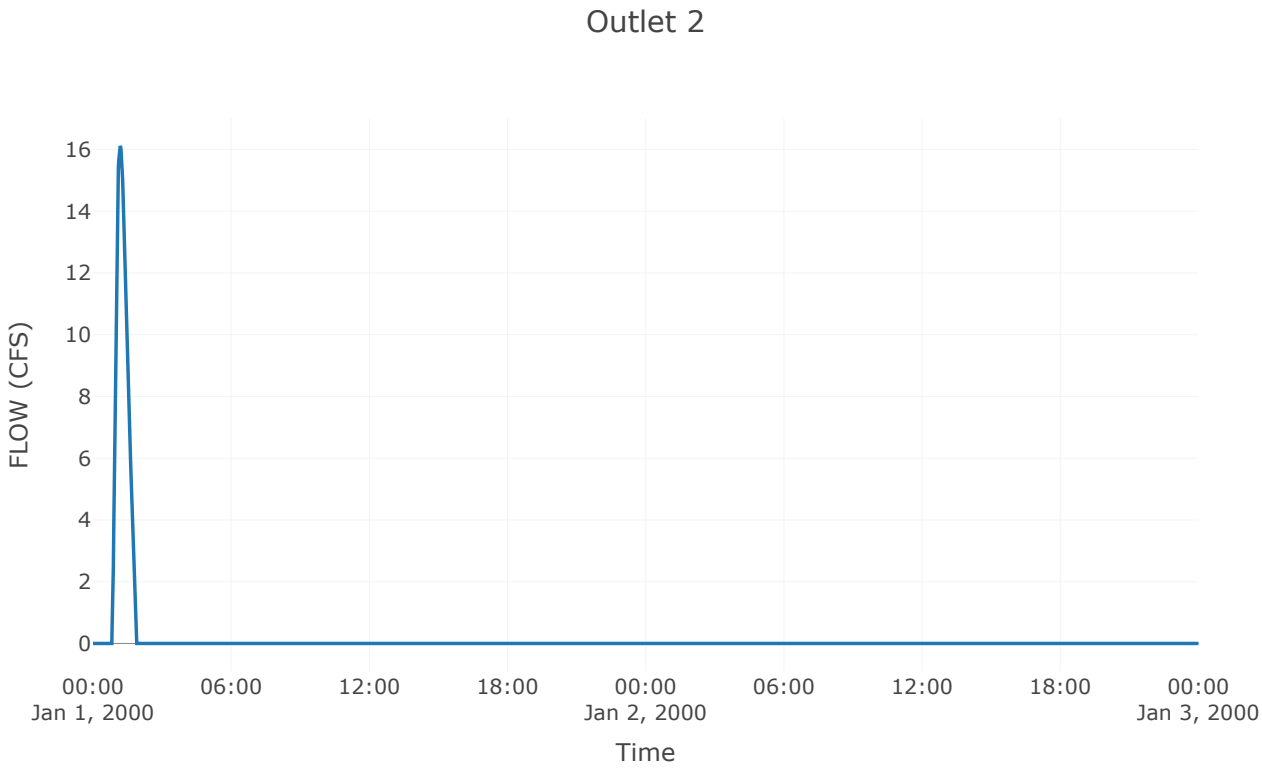
Combined Inflow



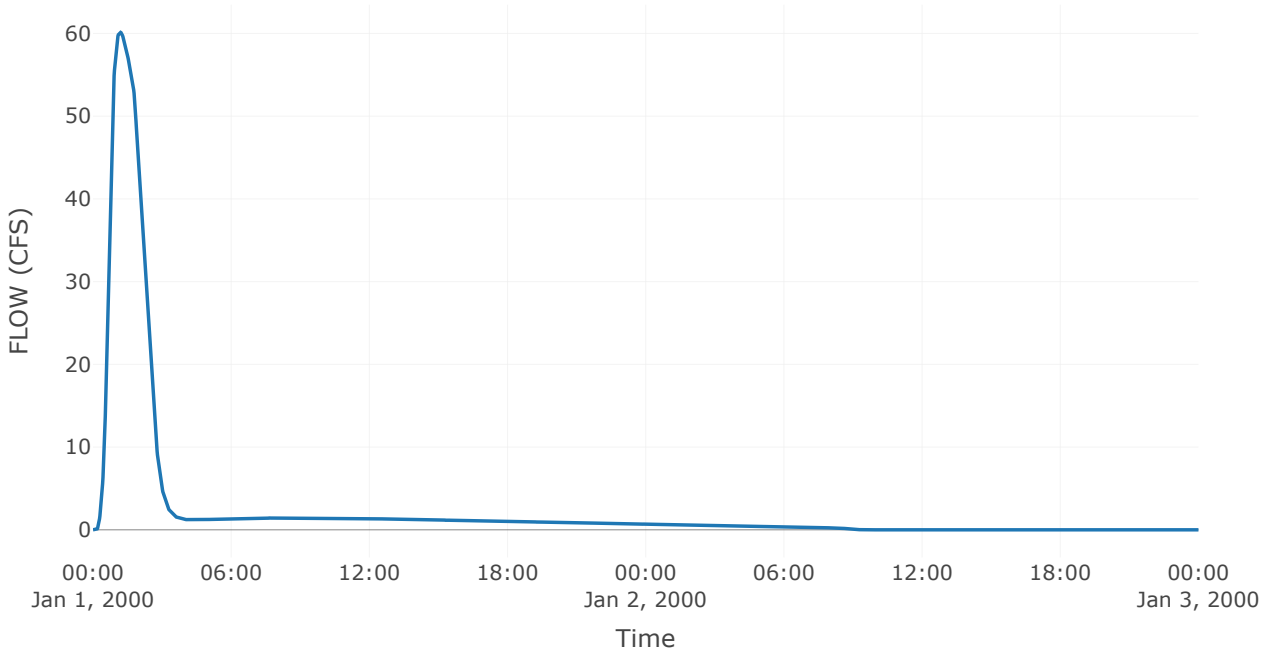
Cumulative Outflow



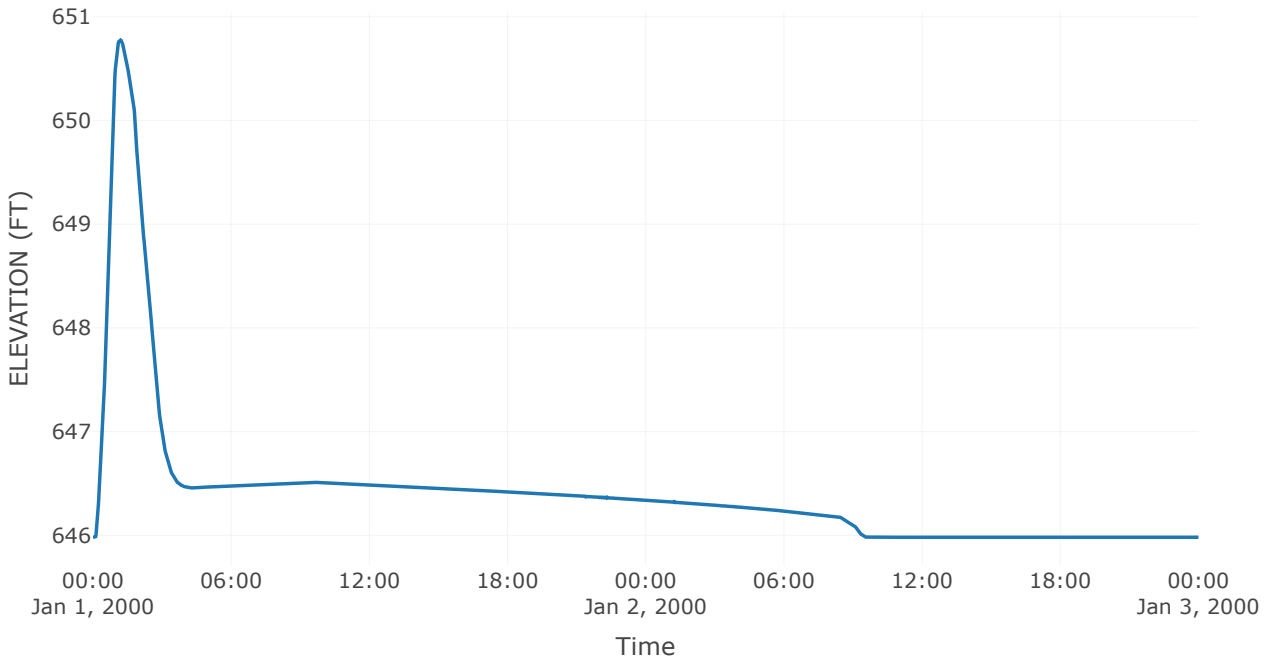

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

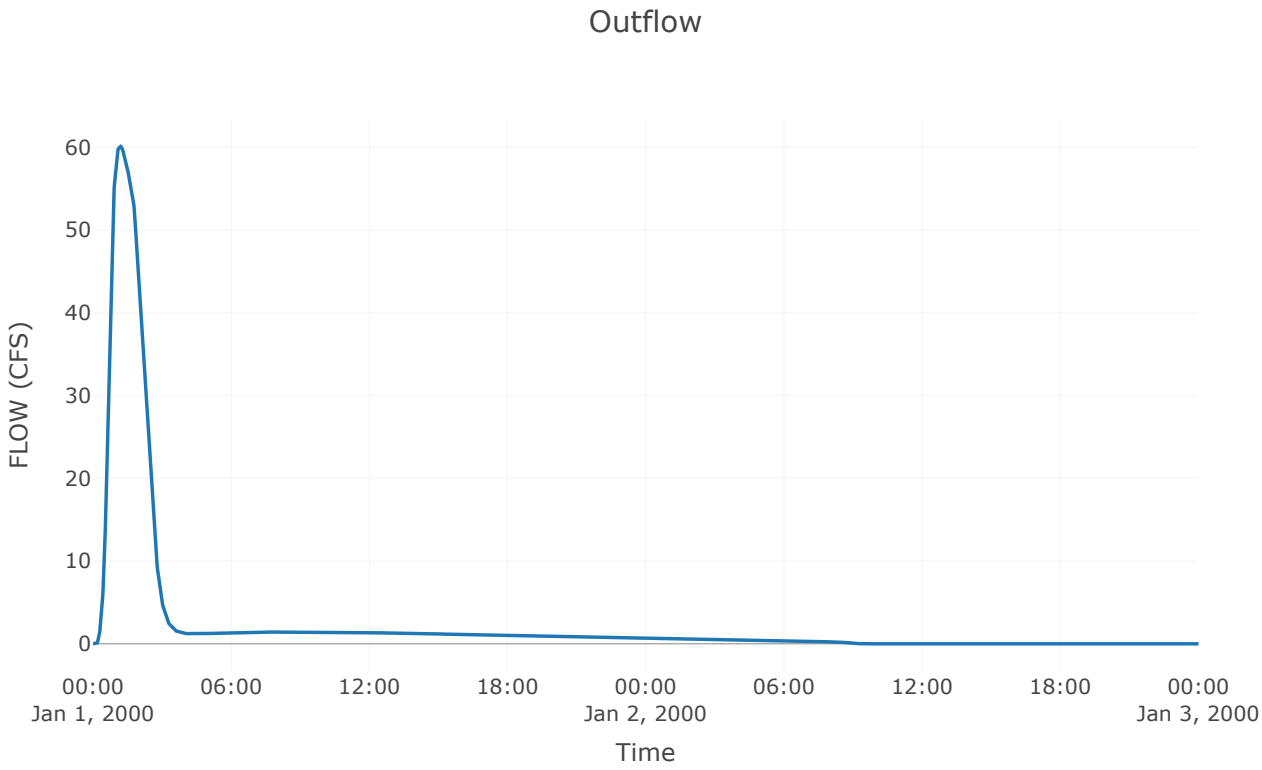

Outlet 2
16
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

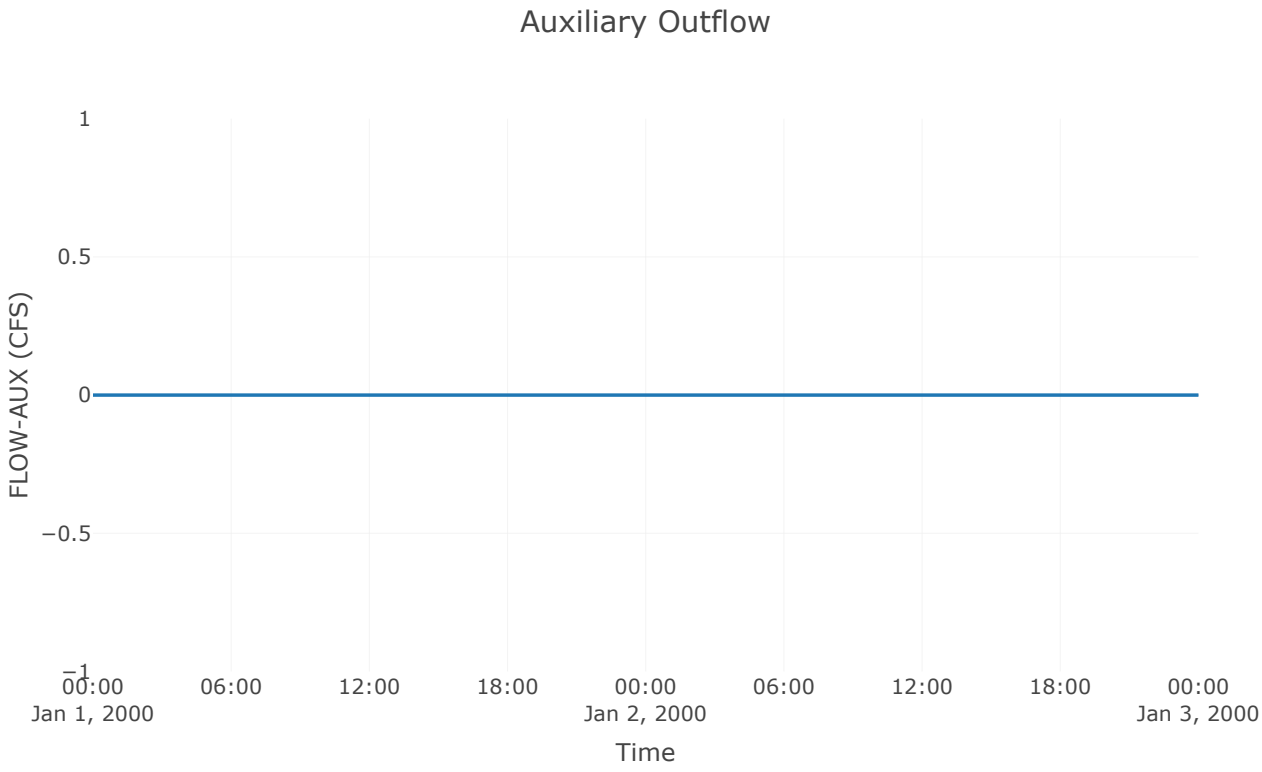


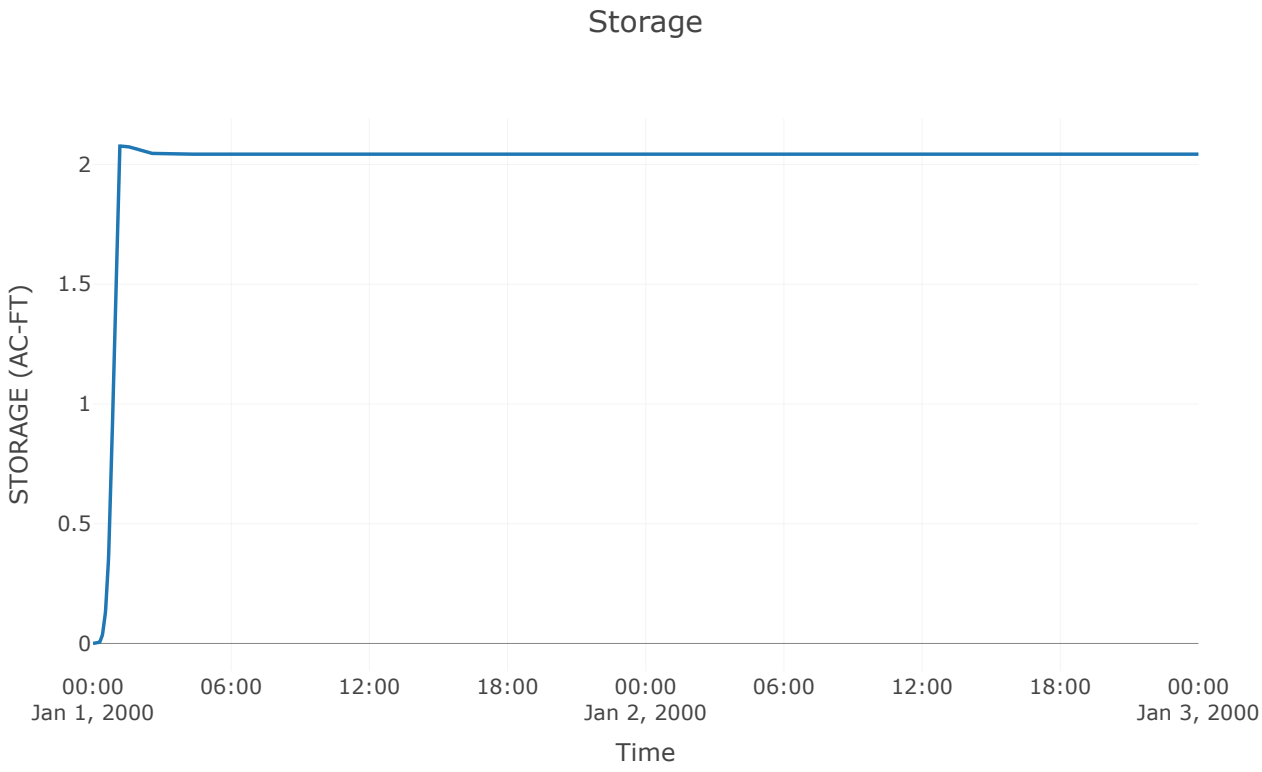

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

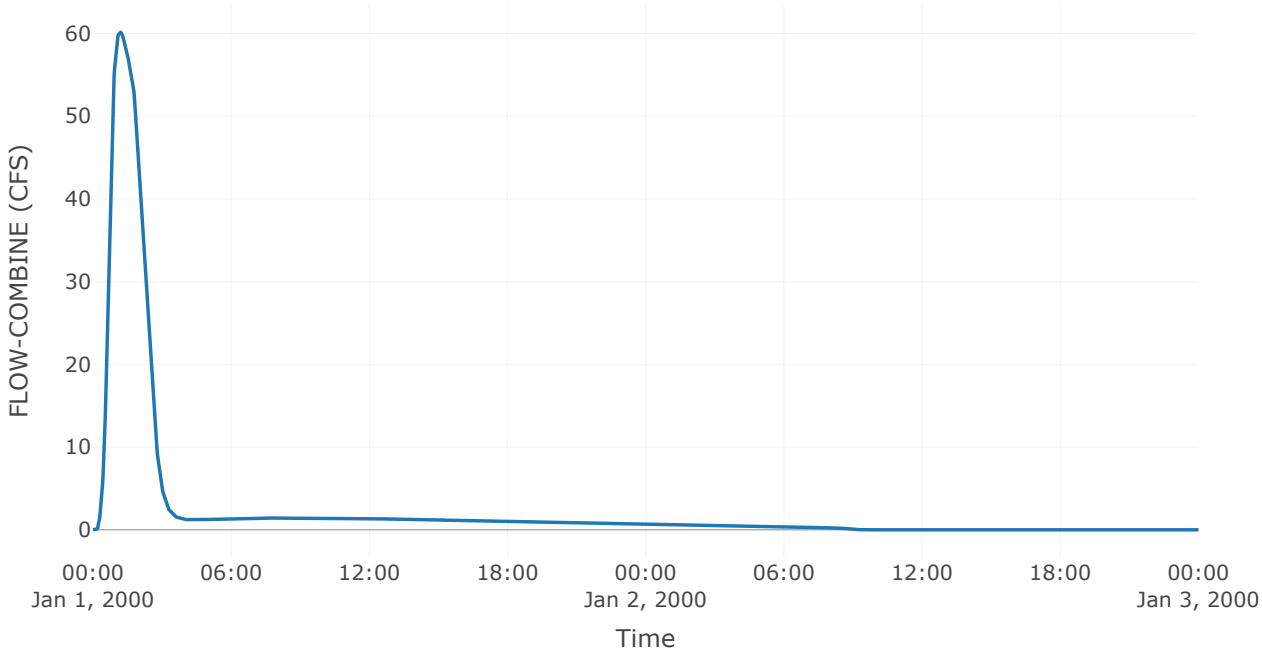
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57
Peak Inflow (CFS)	60.13
Time of Peak Inflow	01Jan2000, 01:11
Inflow Volume (AC - FT)	10.53
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.3

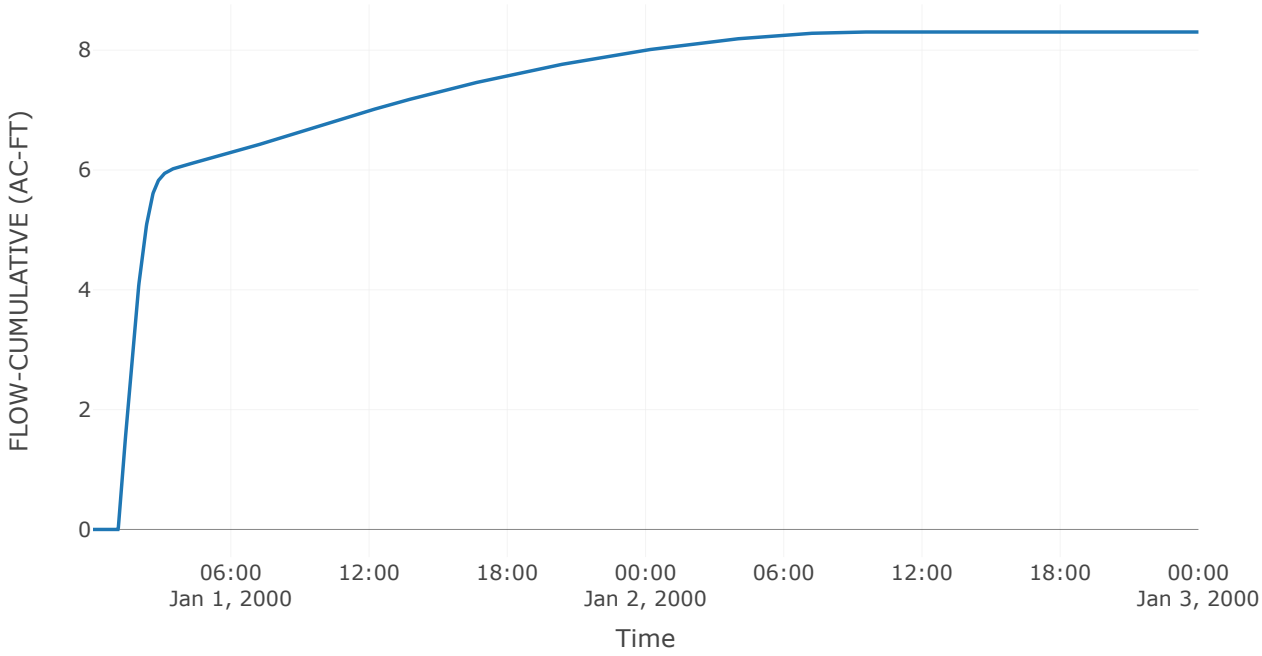

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

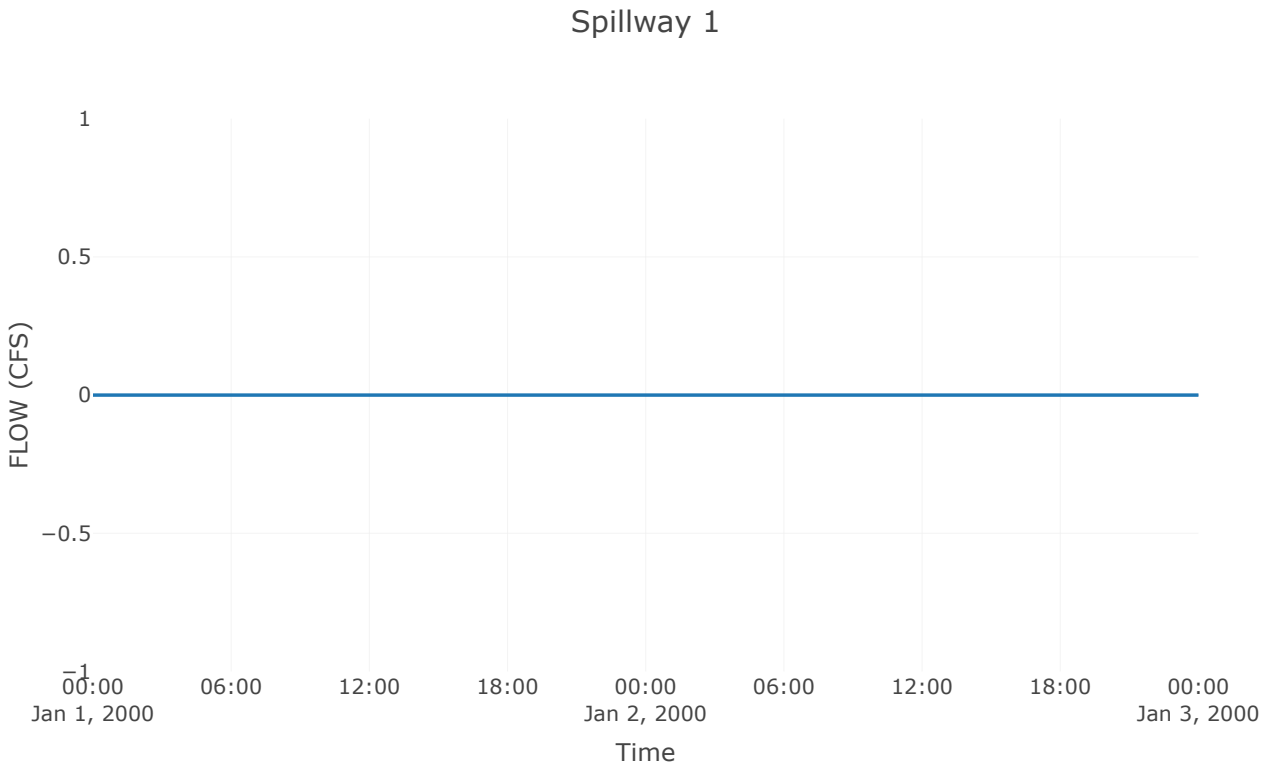

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

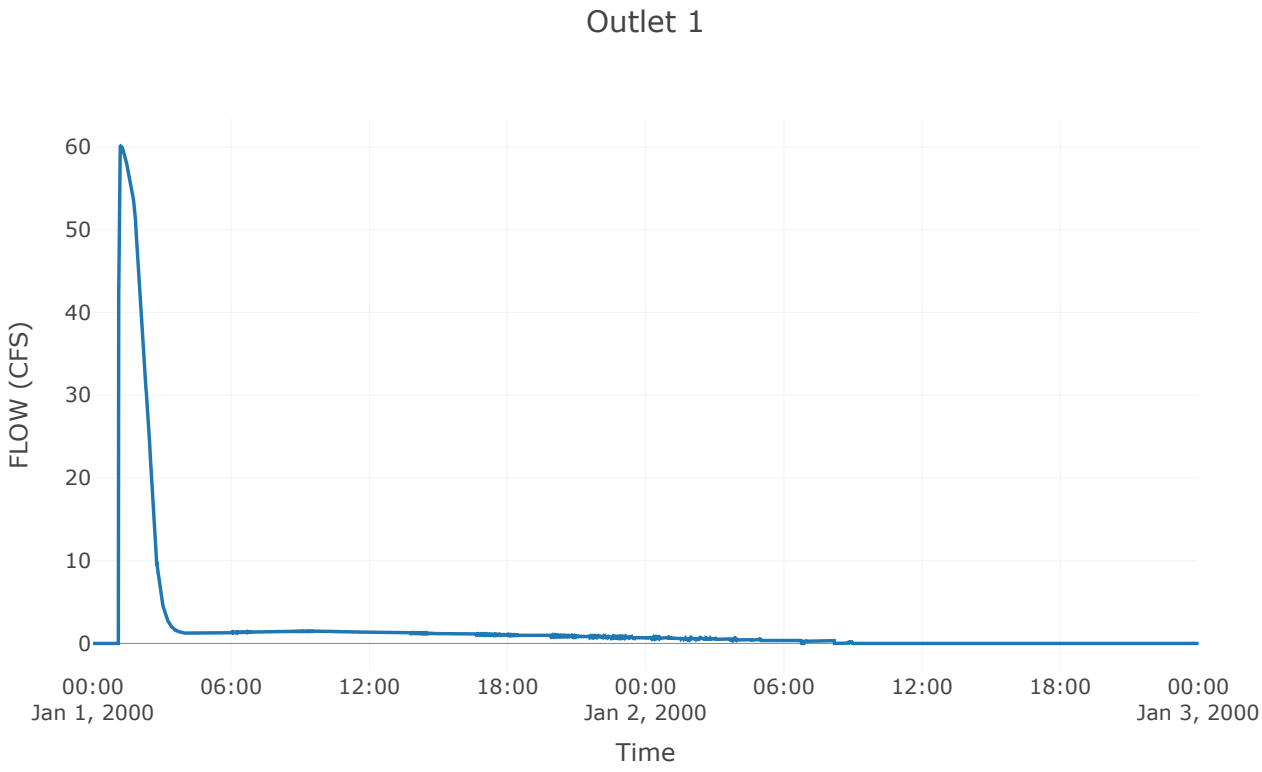
Combined Inflow



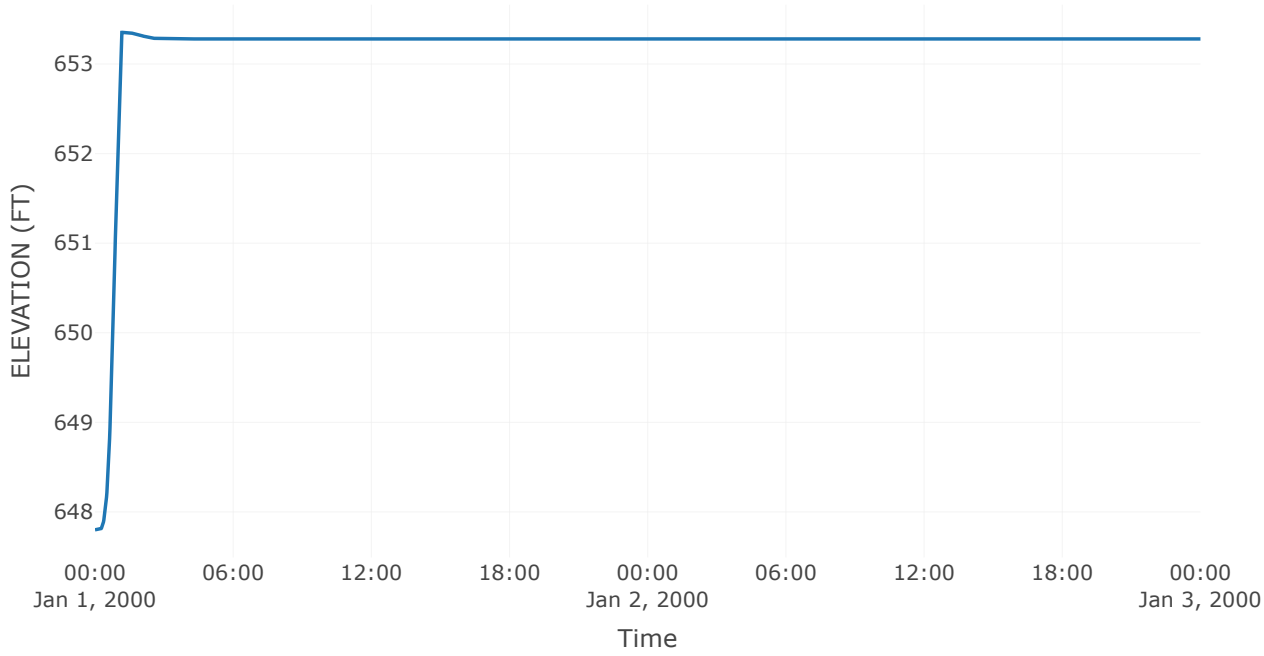
Cumulative Outflow



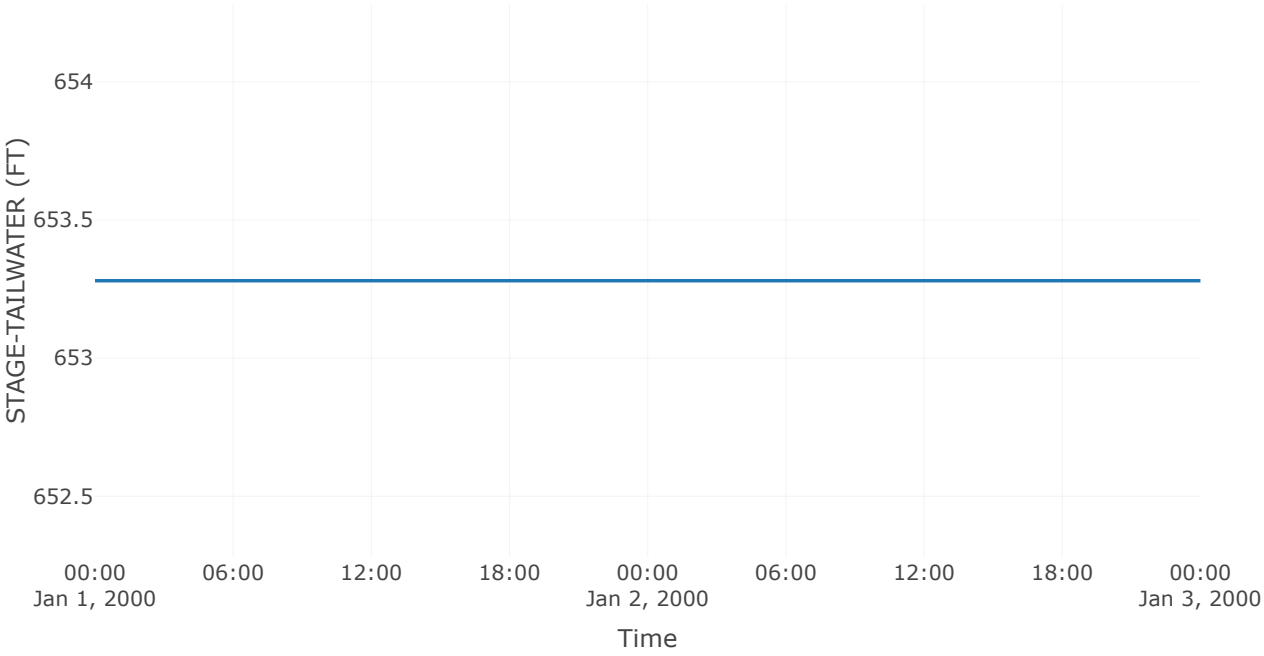

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

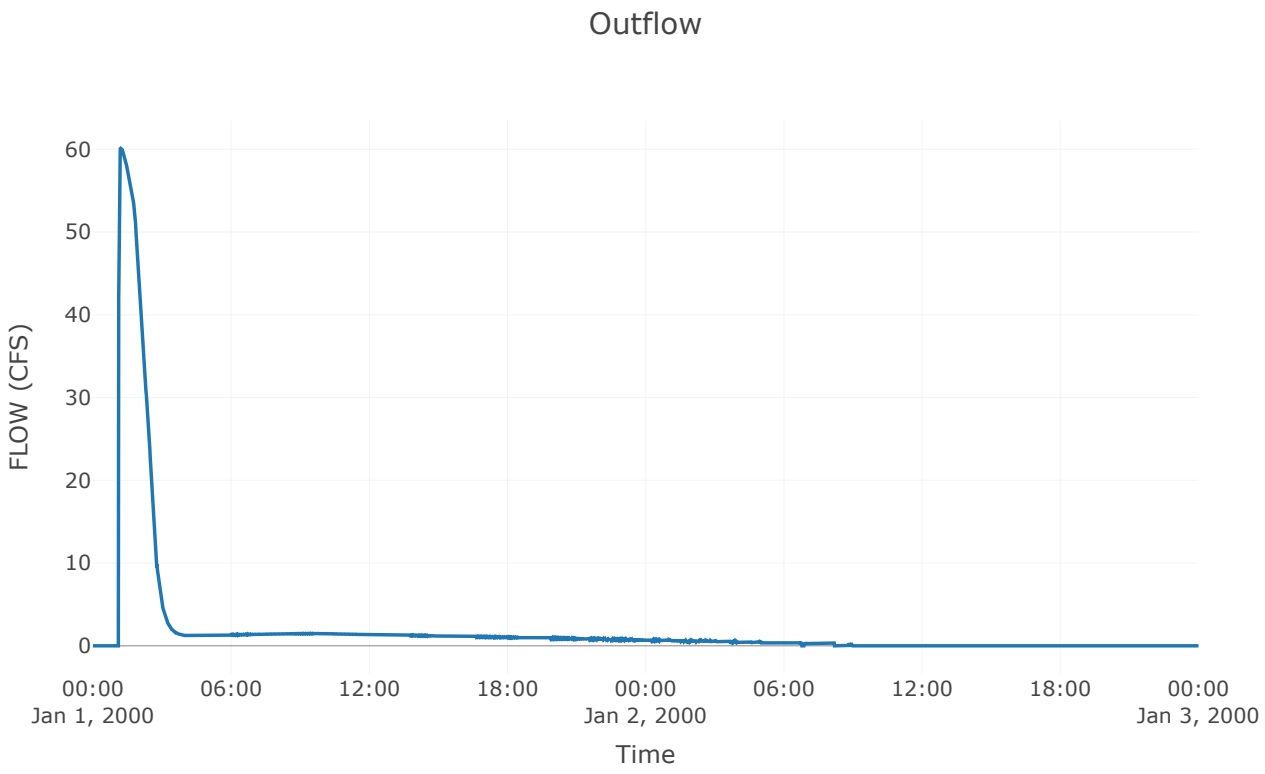

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

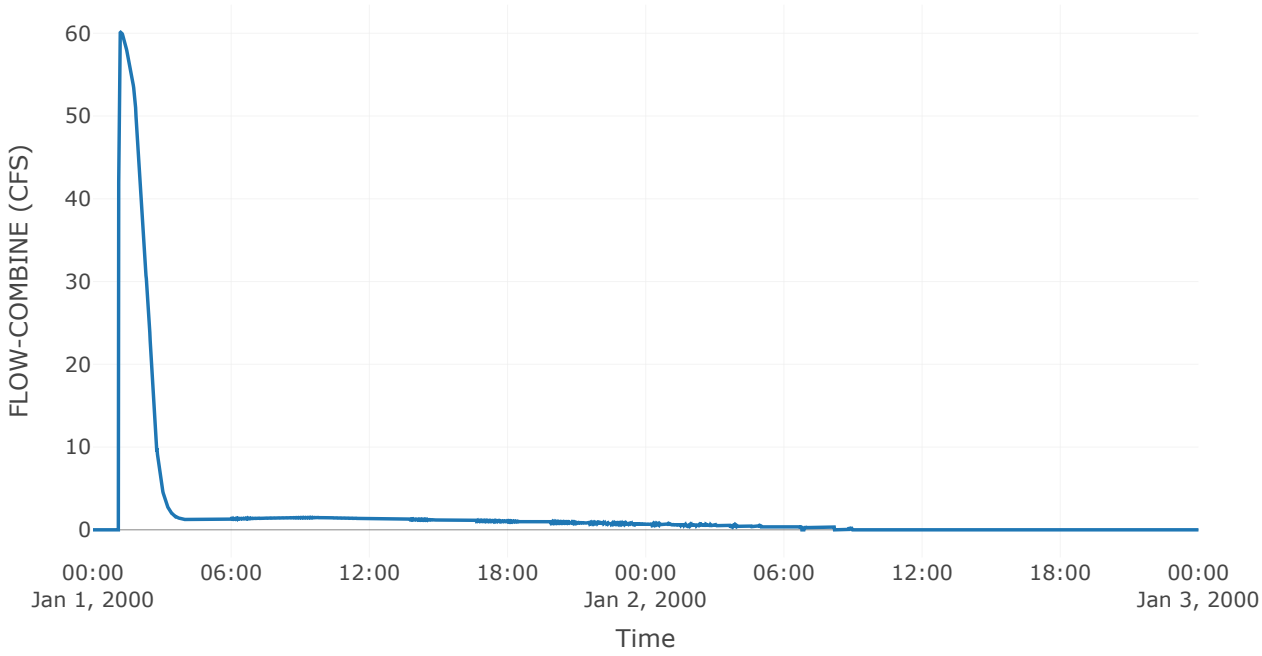



Outflow
FLOW (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

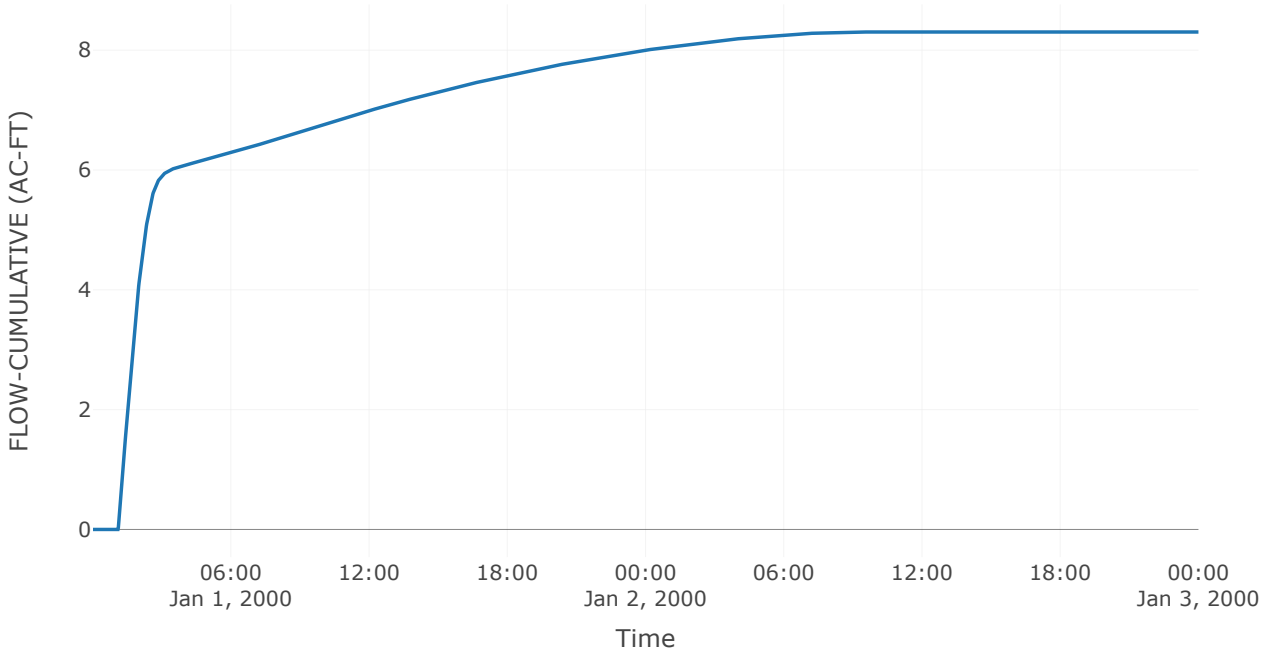
Sink: 55th Street Outlet

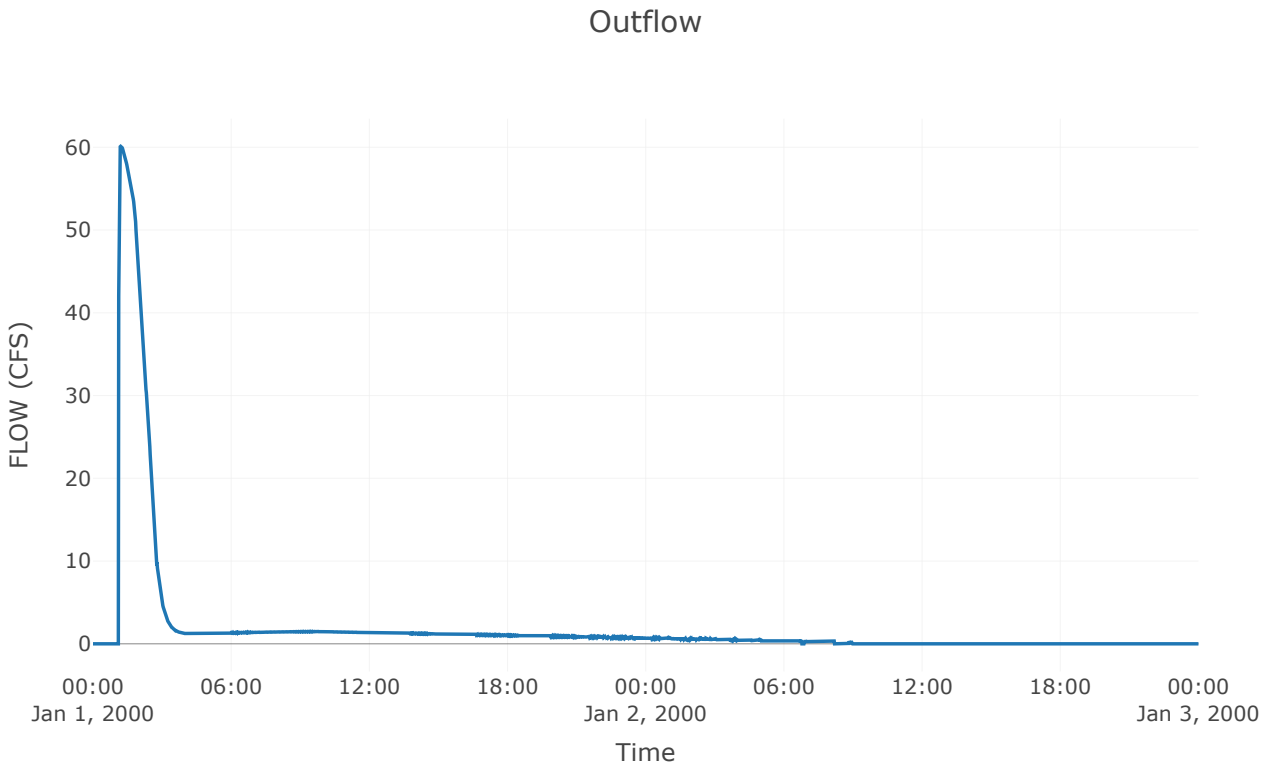
Results: 55th Street Outlet	
Peak Discharge (CFS)	60.11
Time of Peak Discharge	01Jan2000, 01:12
Volume (IN)	0.57

Combined Inflow



Cumulative Outflow




Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:34

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.38	01Jan2000, 01:10	1.61
Storage West of Wolf Road	0.27	157.38	01Jan2000, 01:10	1.6
Existing On - Site	0	5.91	01Jan2000, 00:32	2.07
Existing Basin C	0.27	75.96	01Jan2000, 01:14	1.17
Existing Basin A & B	0.27	75.95	01Jan2000, 01:15	1.02

55th Street Outlet	0.27	75.95	01Jan2000, 01:15	1.02

Subbasin: On-Site Trib 1

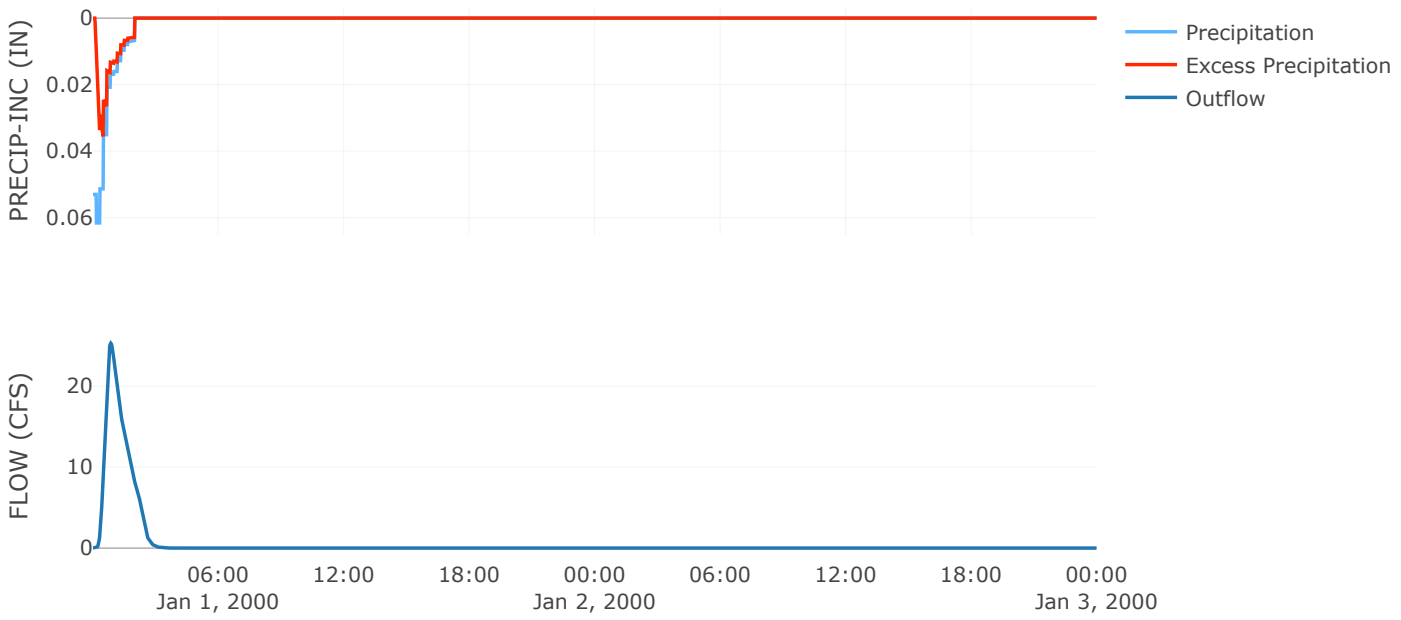
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

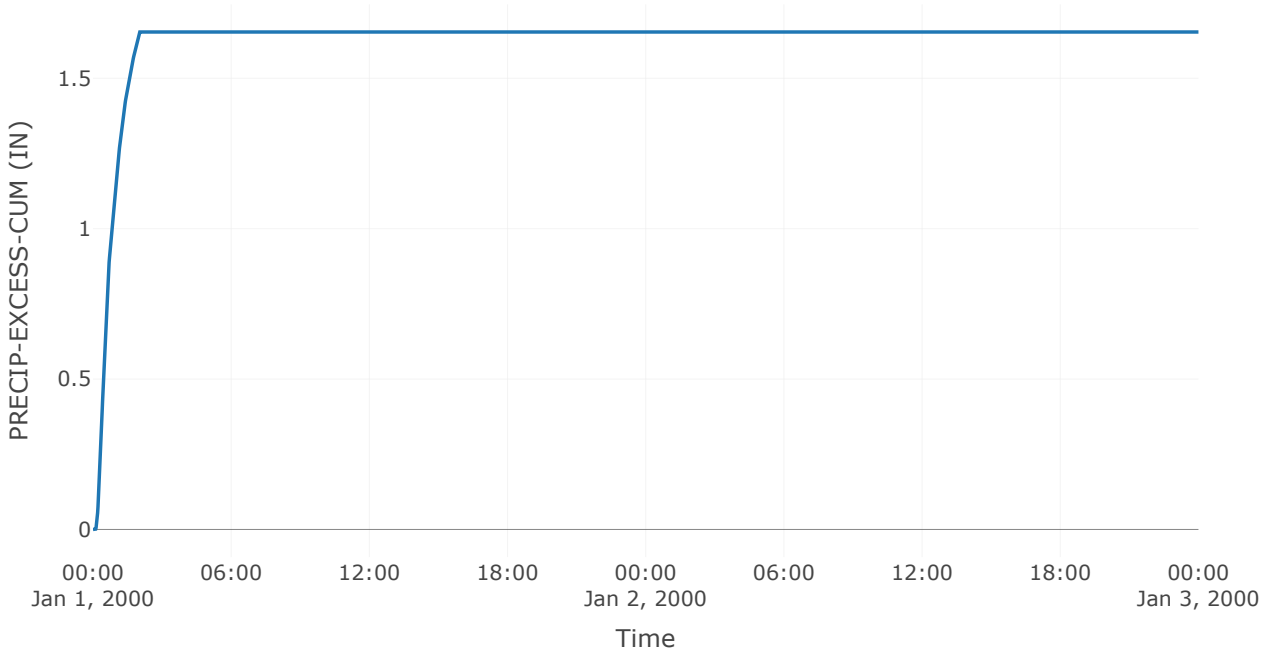
Transform: Scs	
Lag	21
Unitgraph Type	Standard

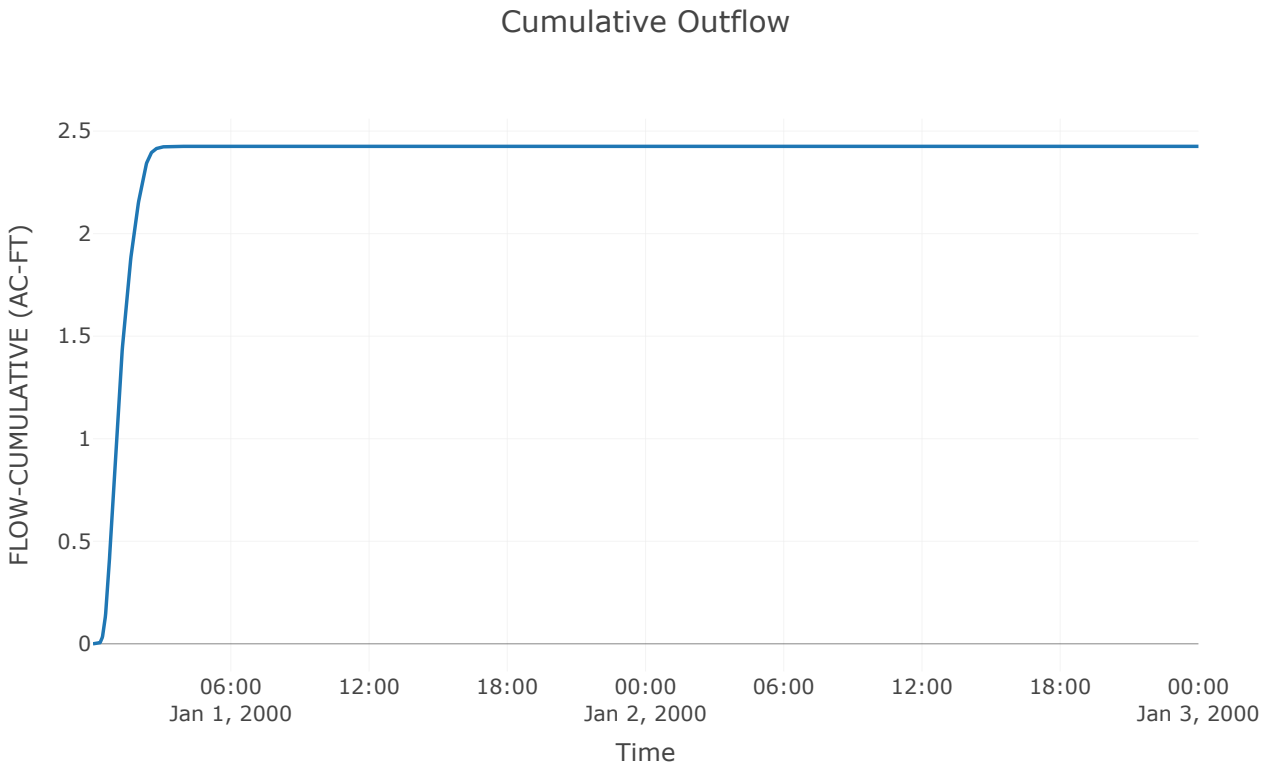
Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

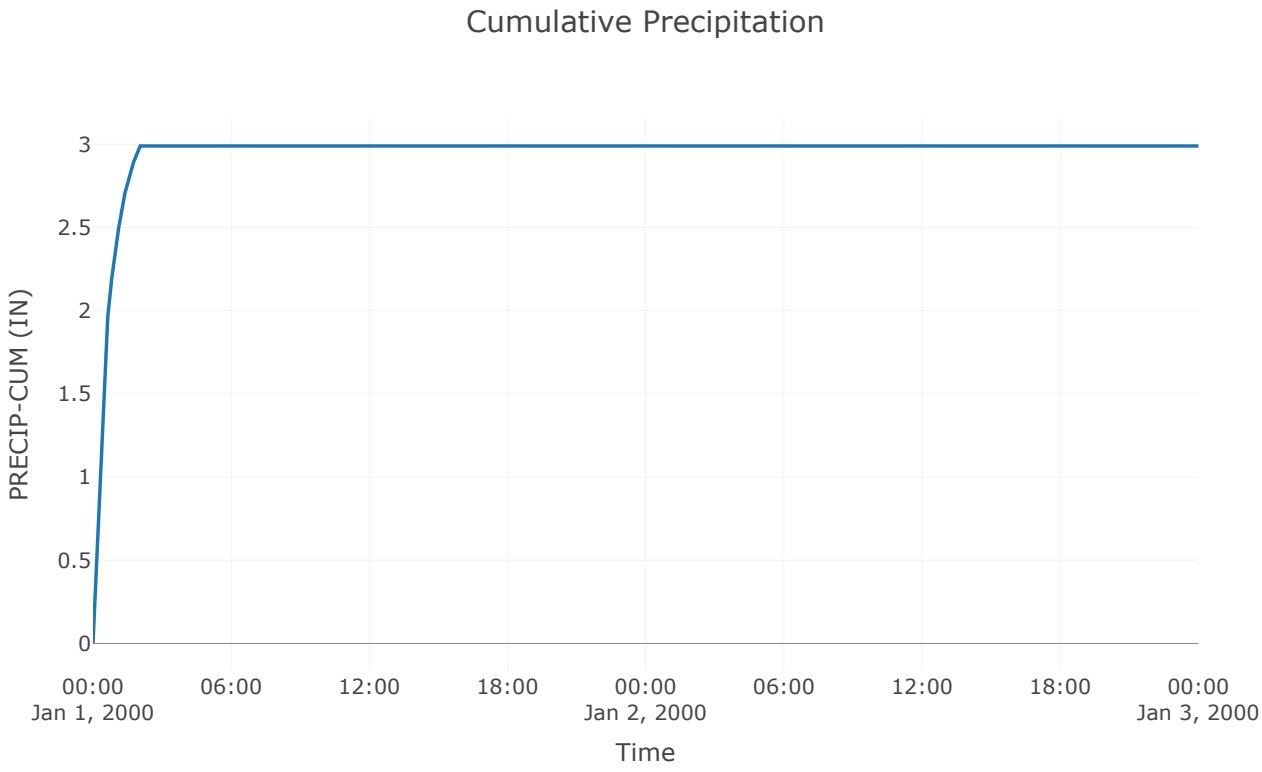
Precipitation and Outflow

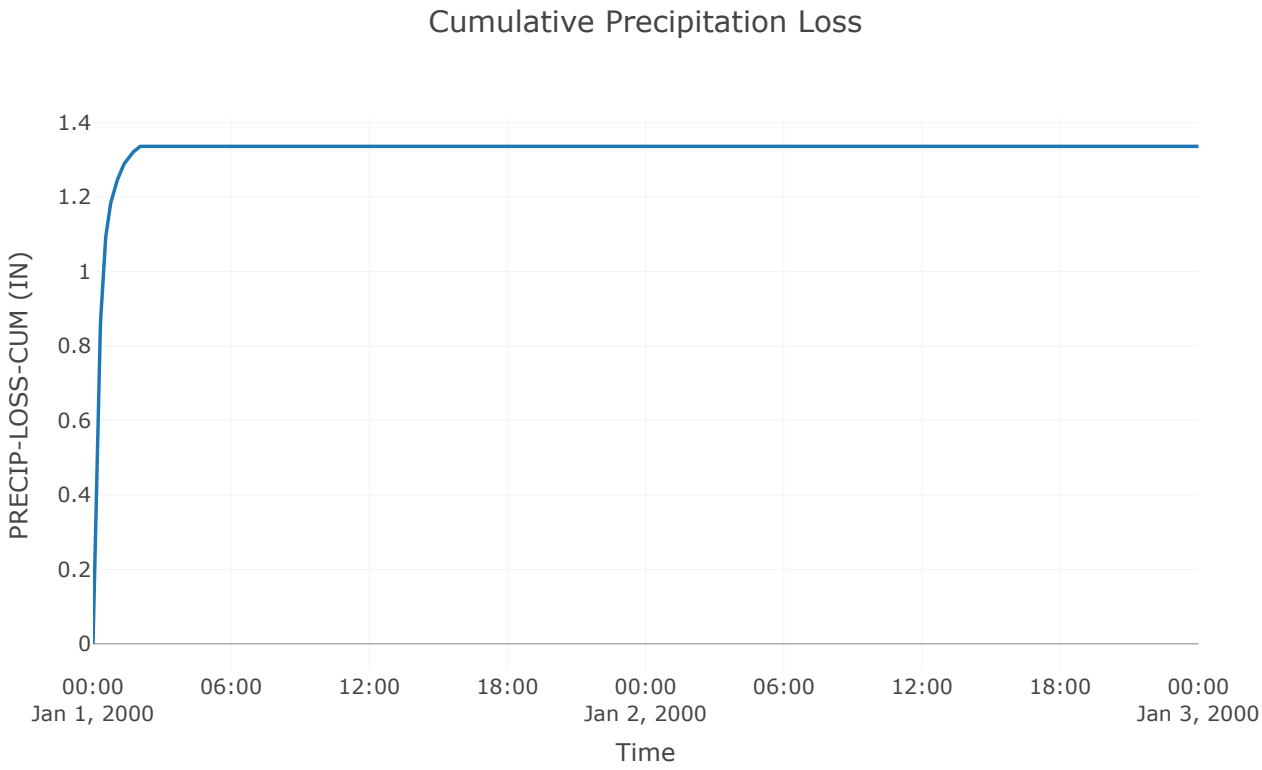


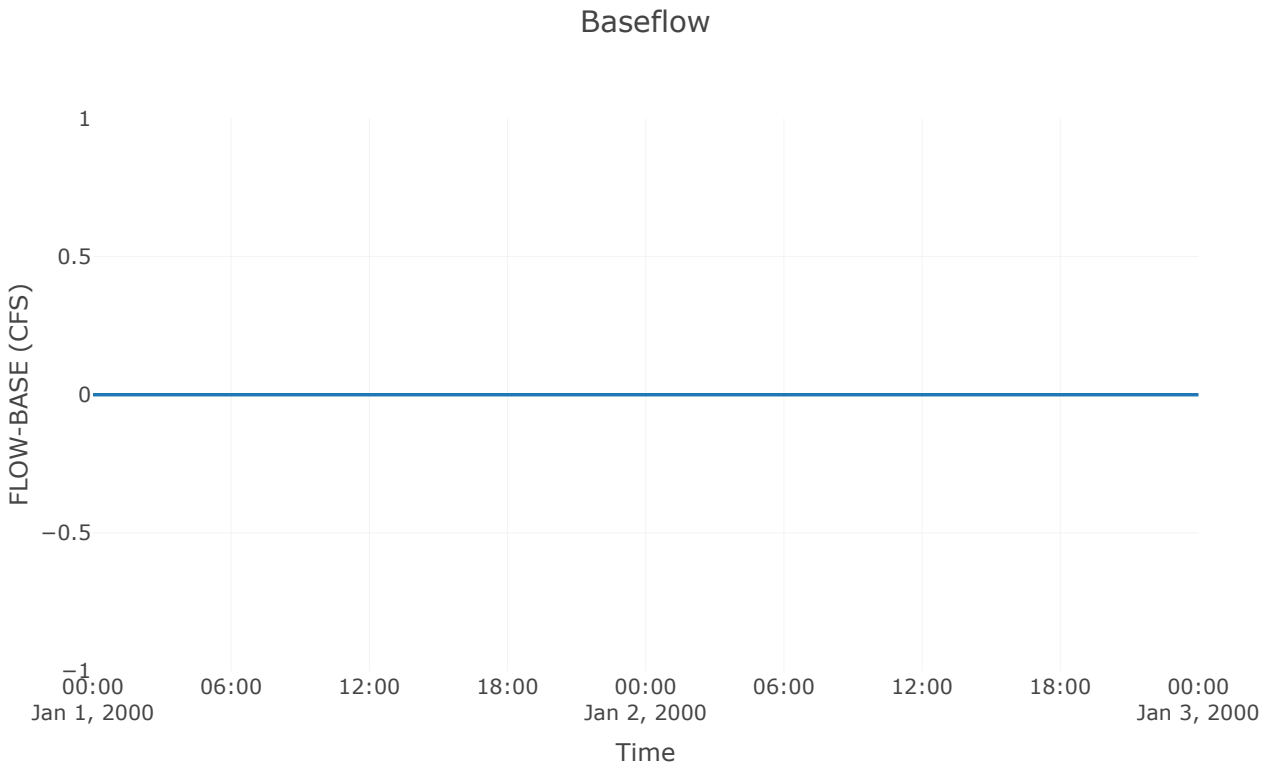
Cumulative Excess Precipitation

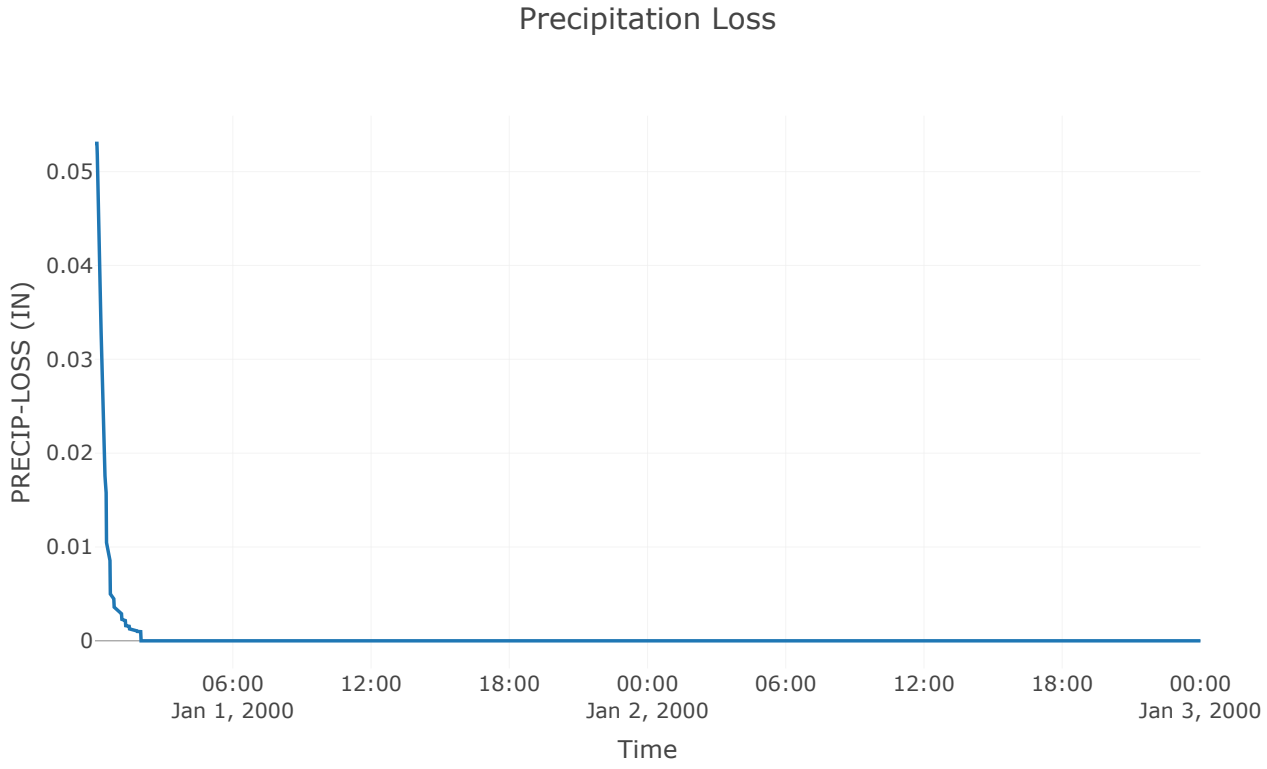


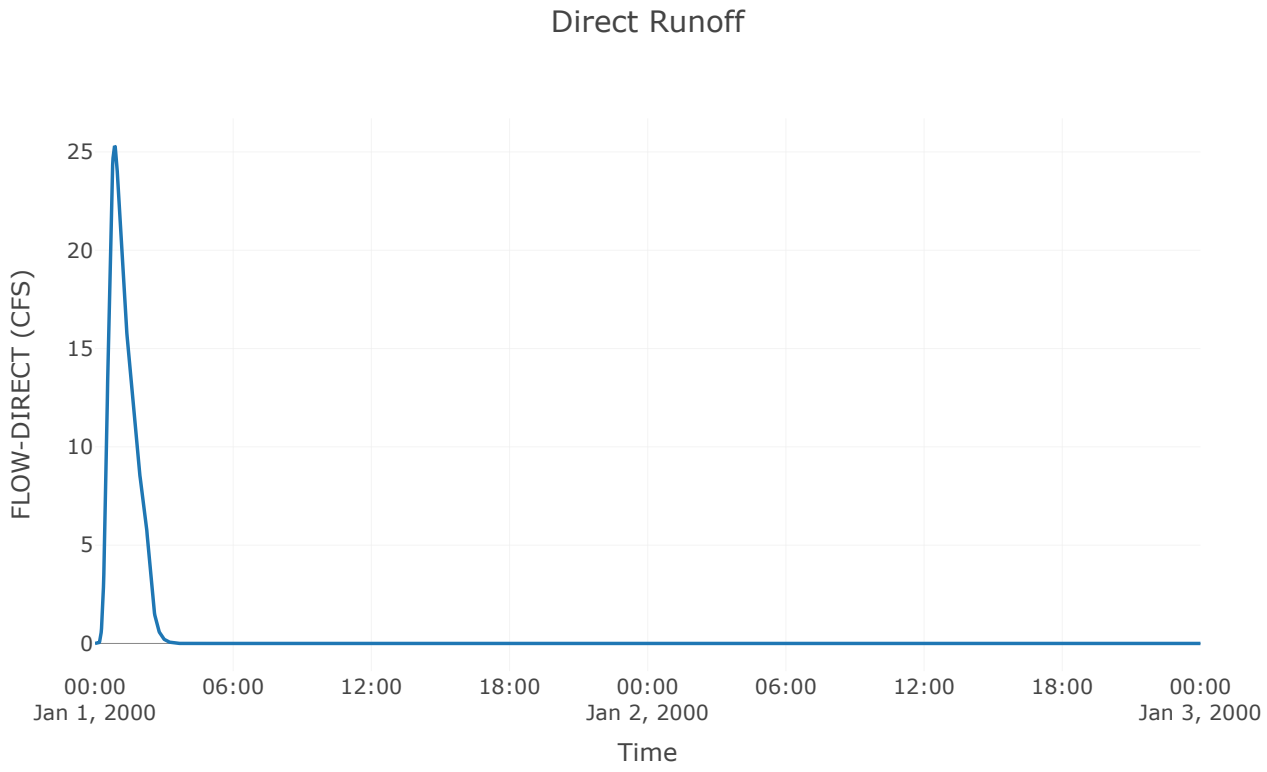

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

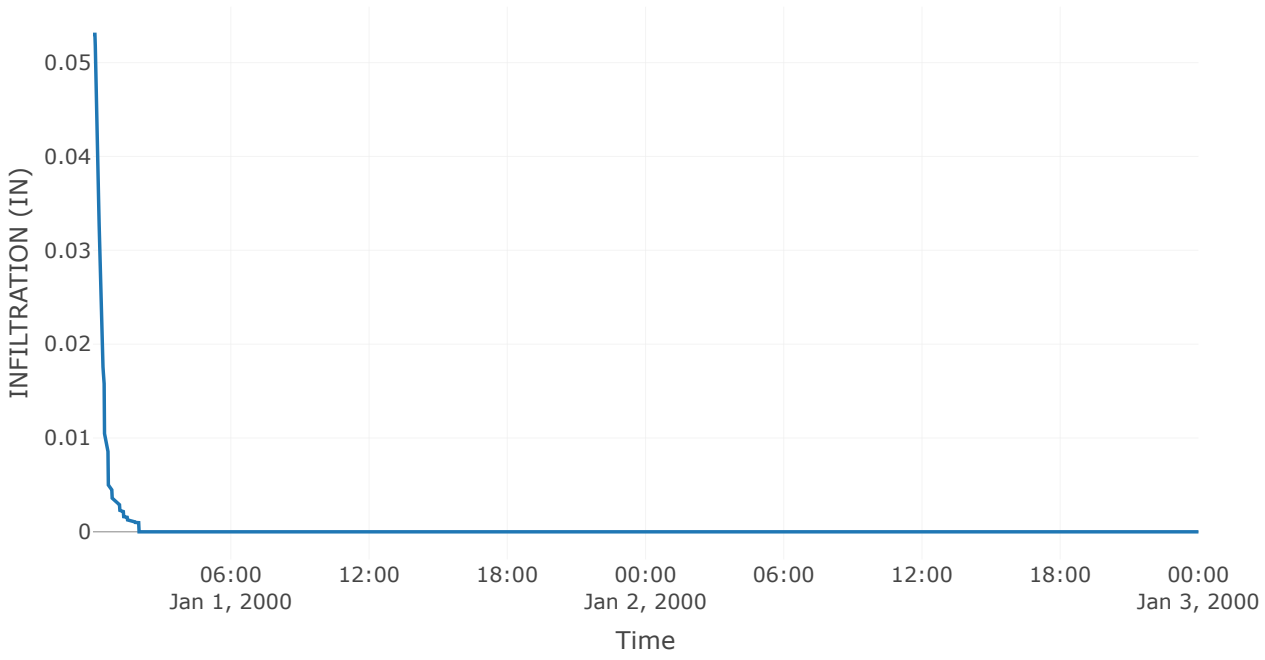

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

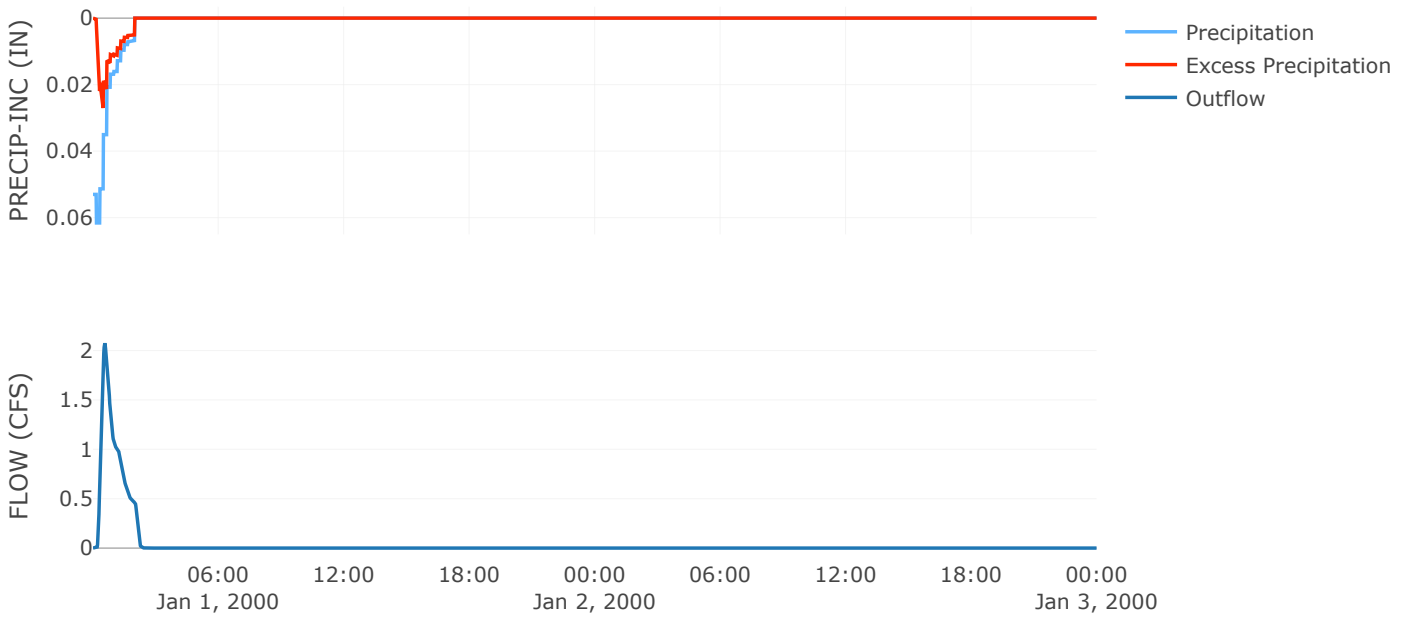
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

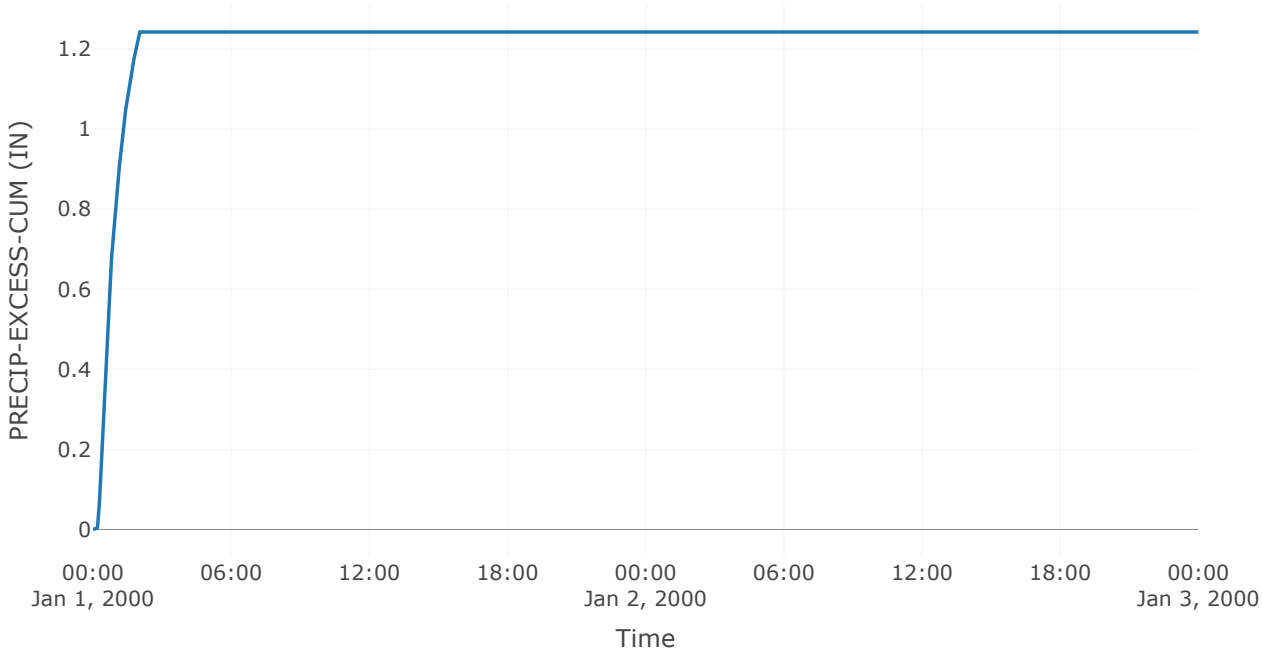
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

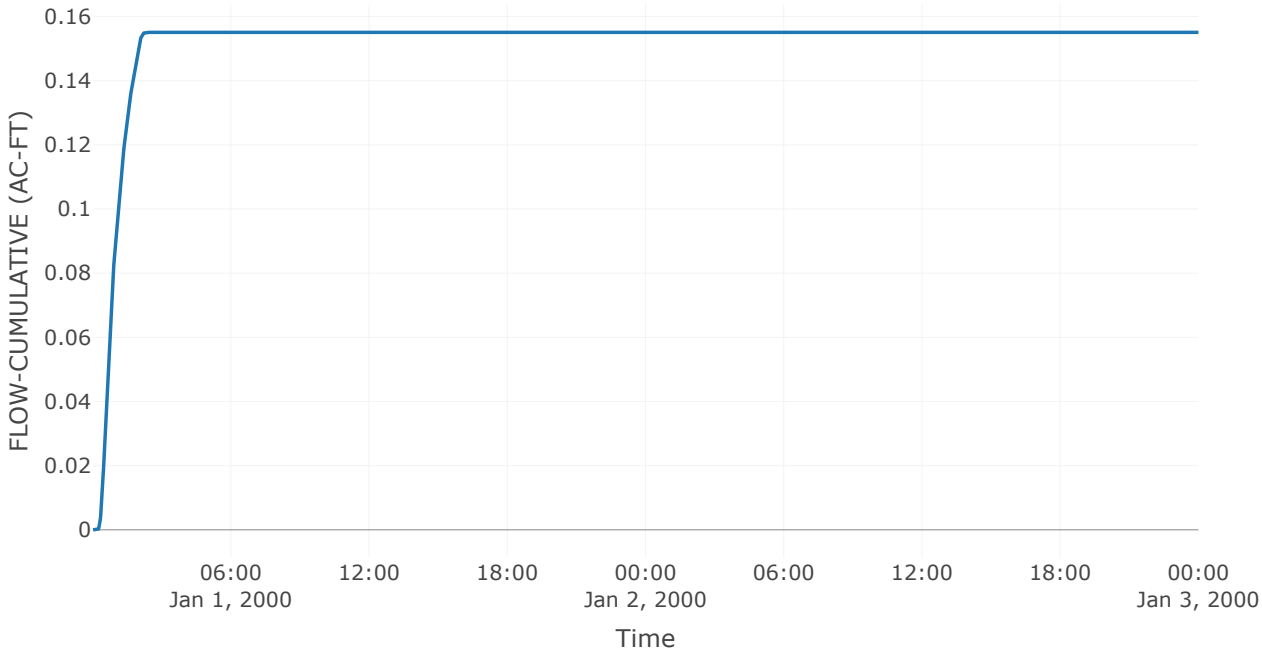
Precipitation and Outflow



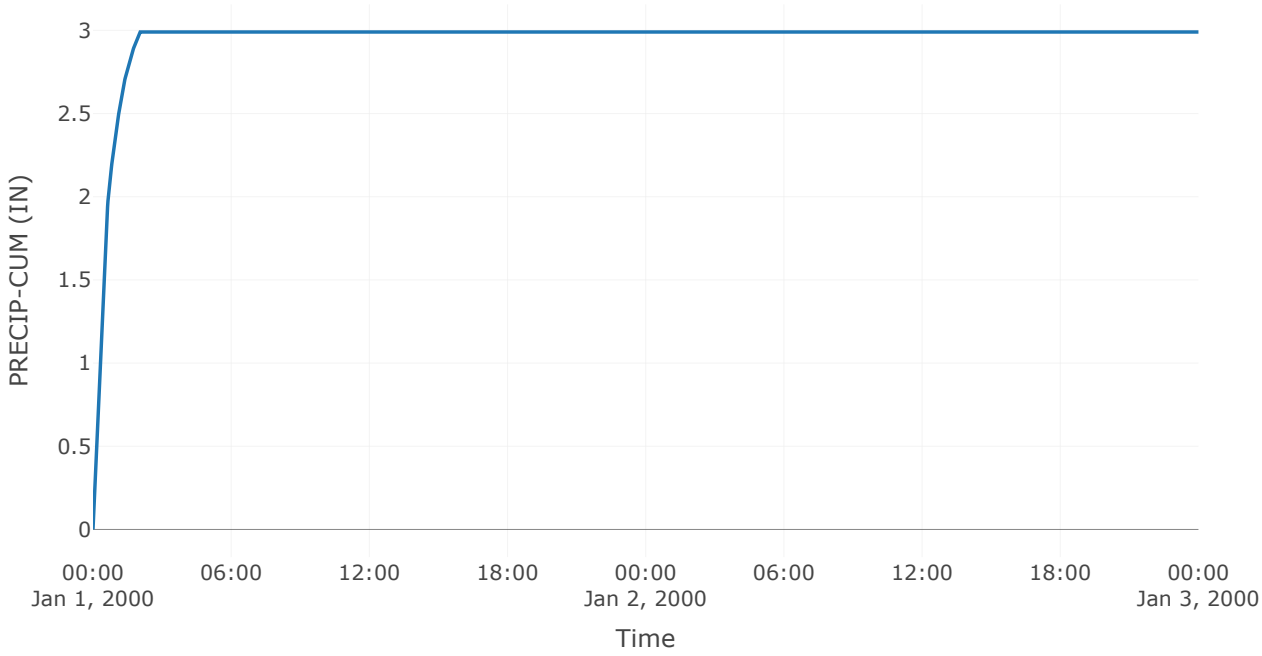
Cumulative Excess Precipitation

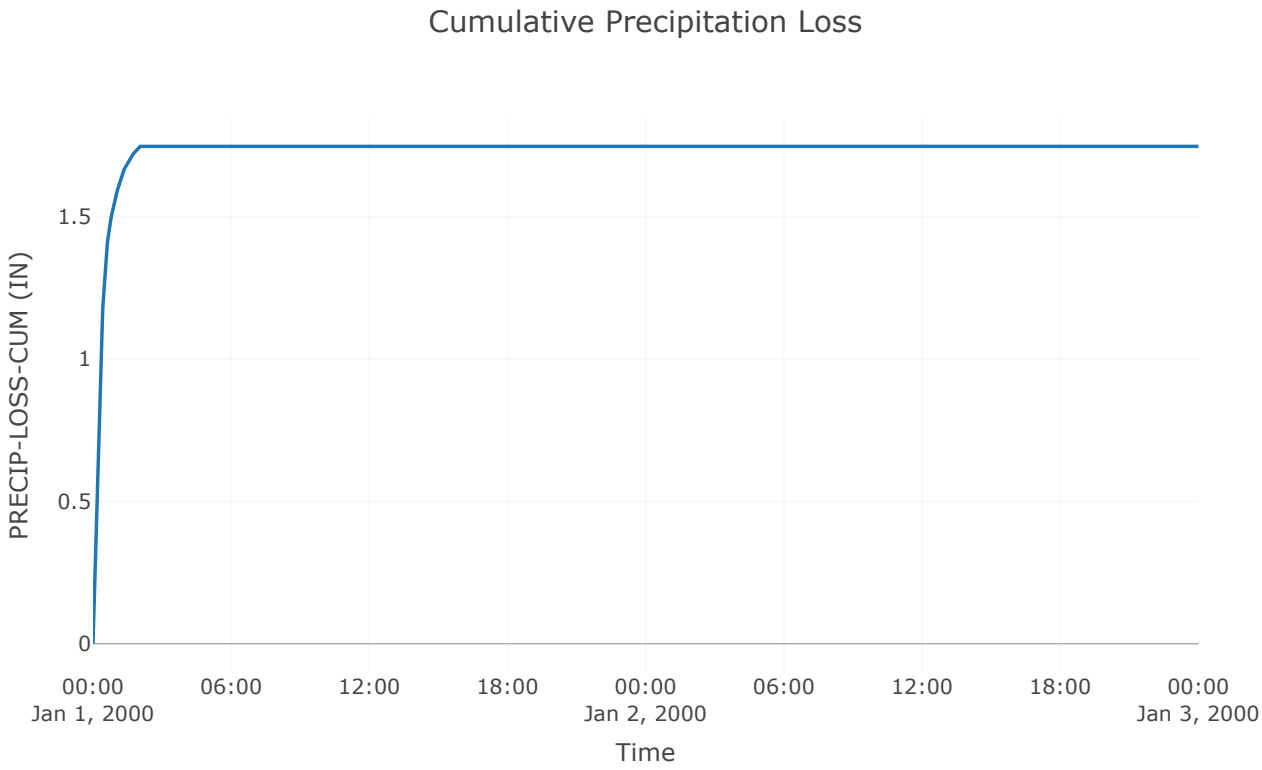


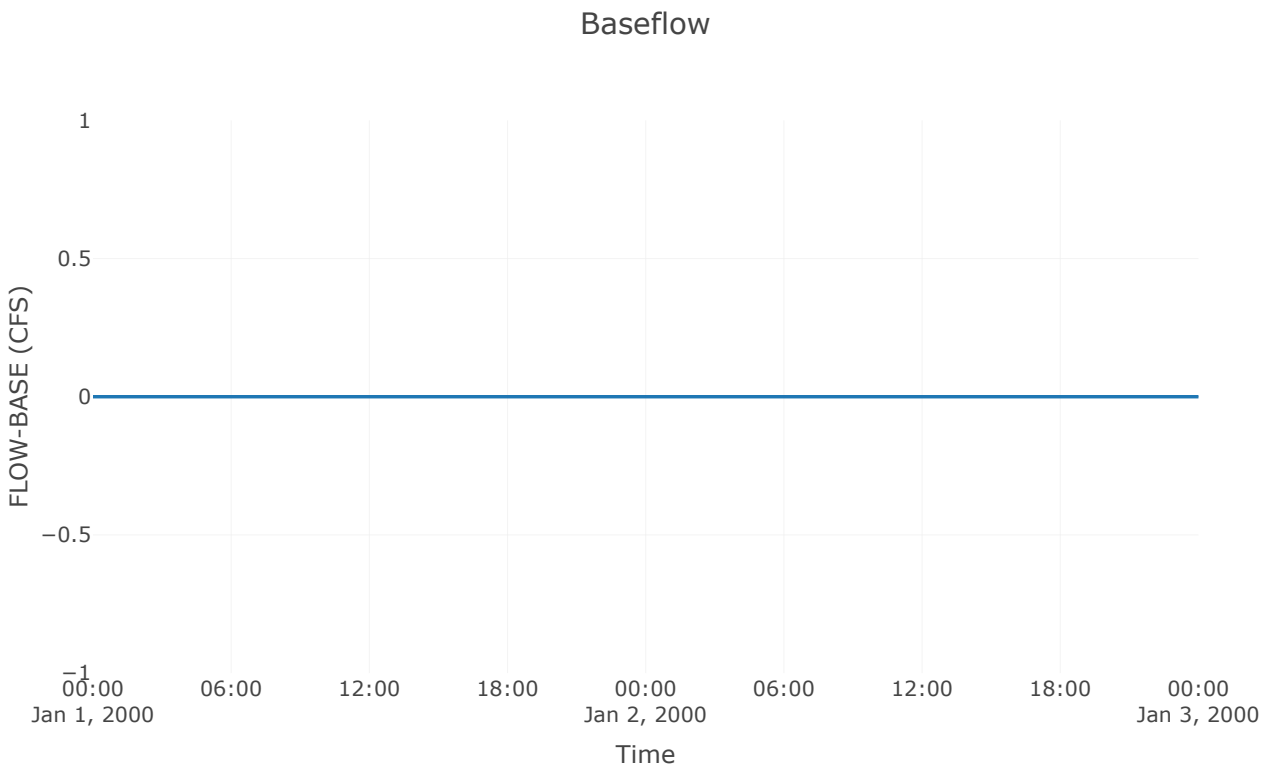
Cumulative Outflow

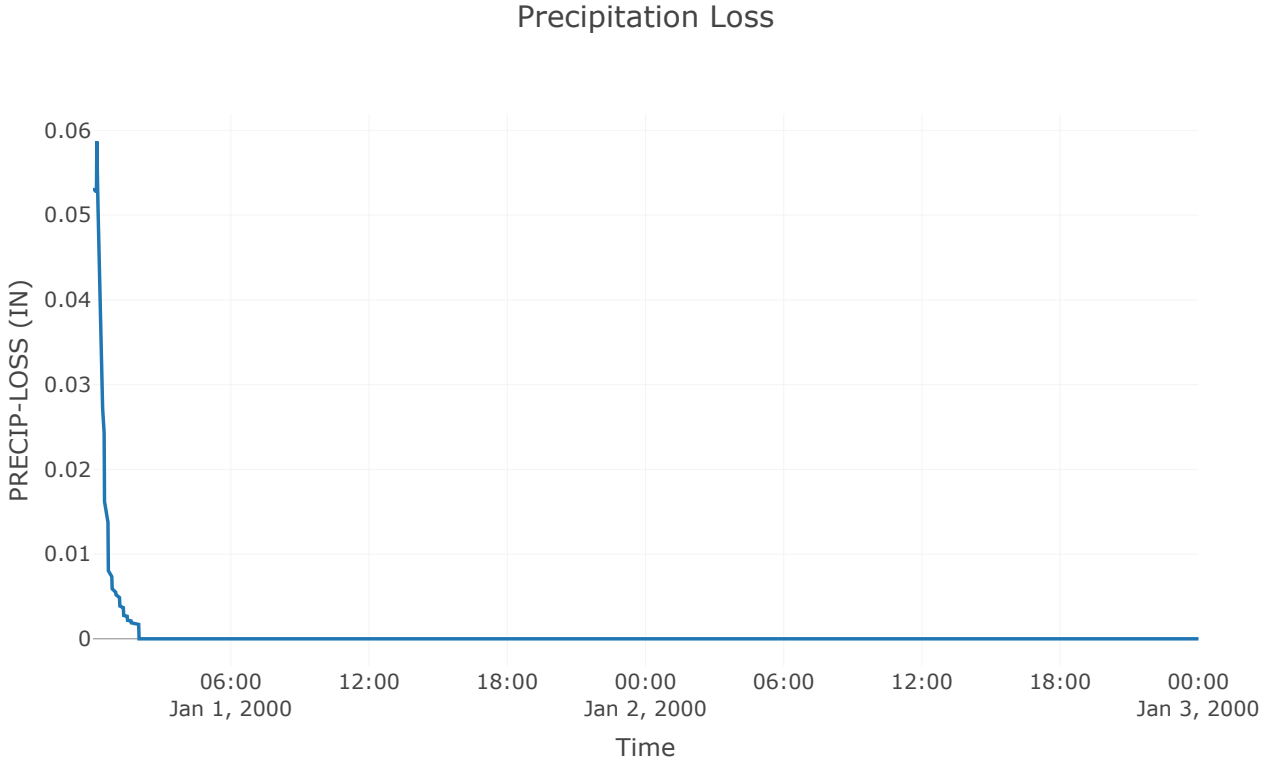


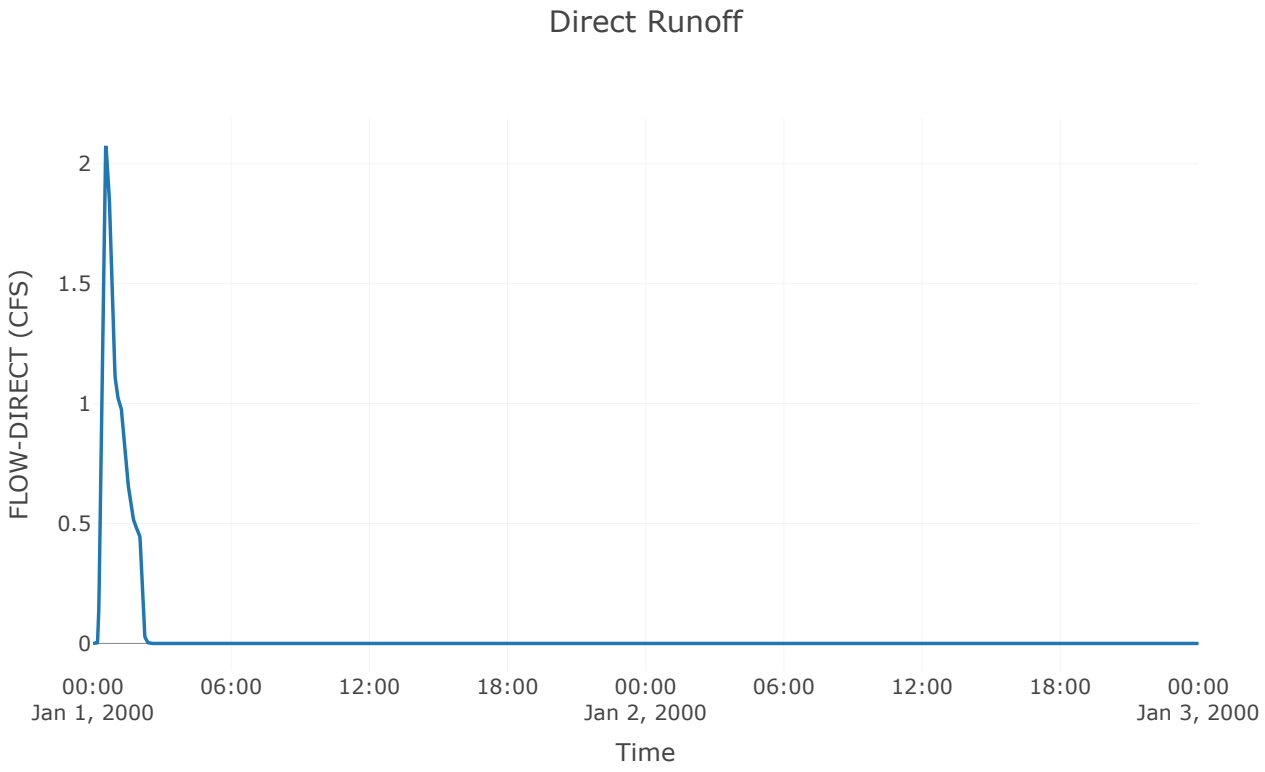
Cumulative Precipitation

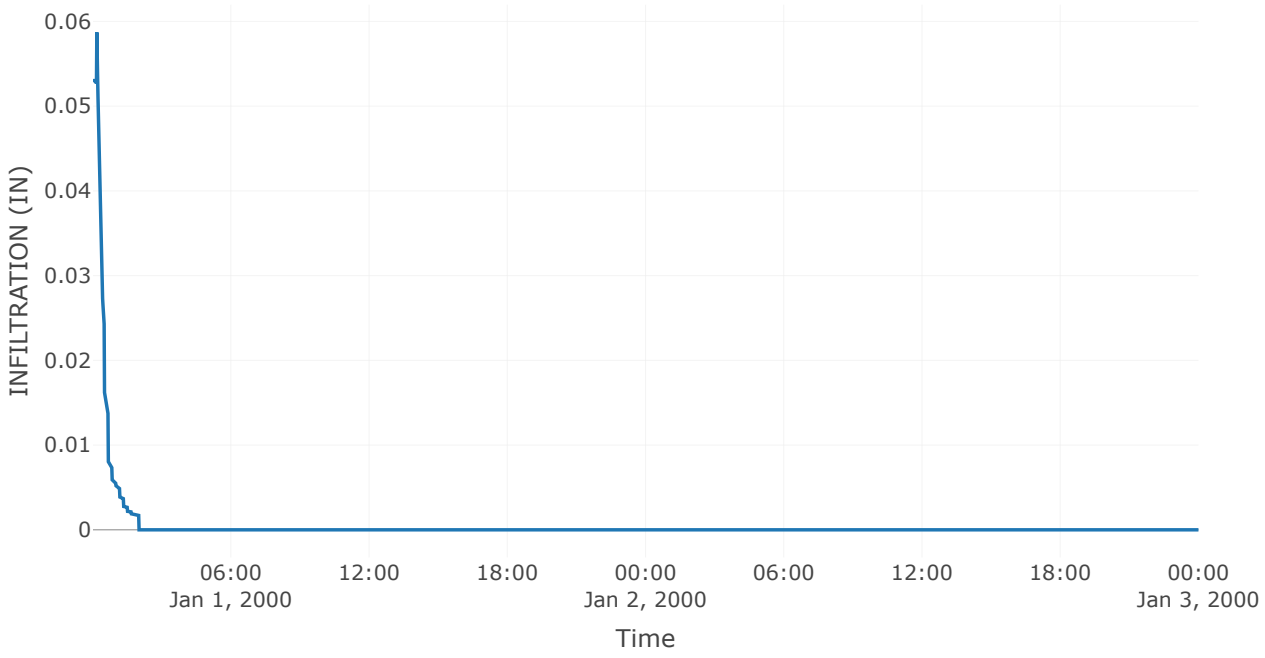



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

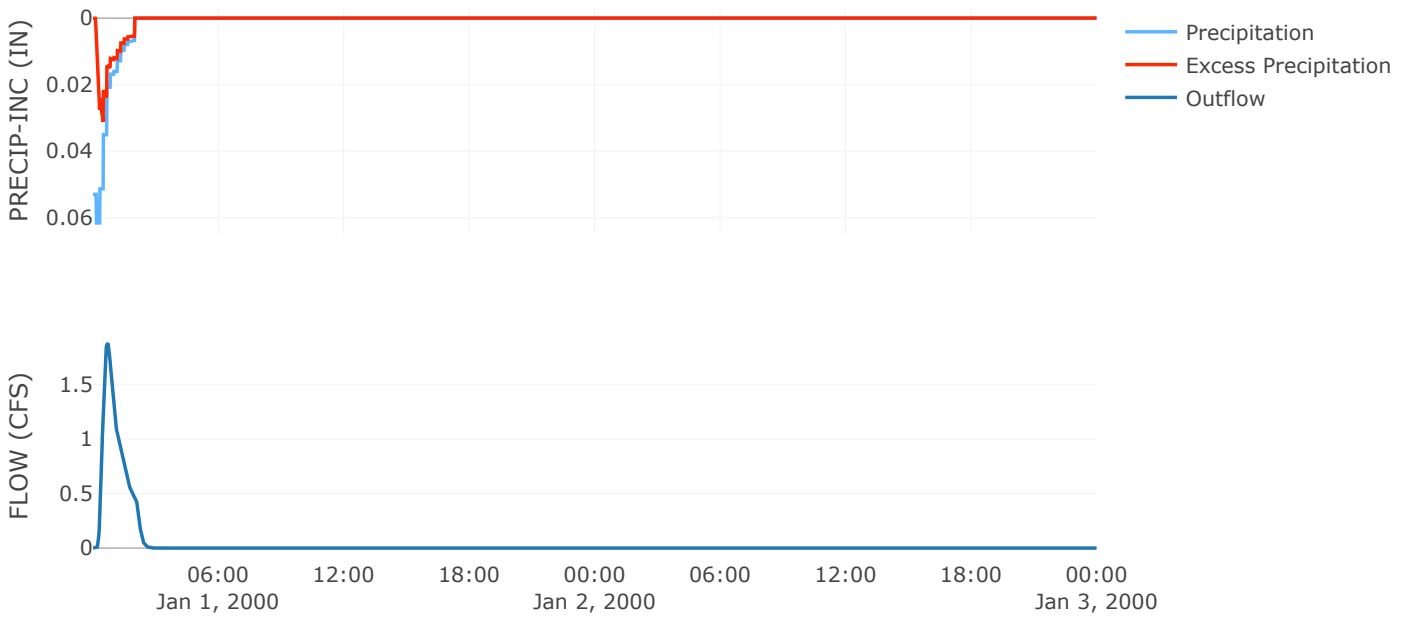
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

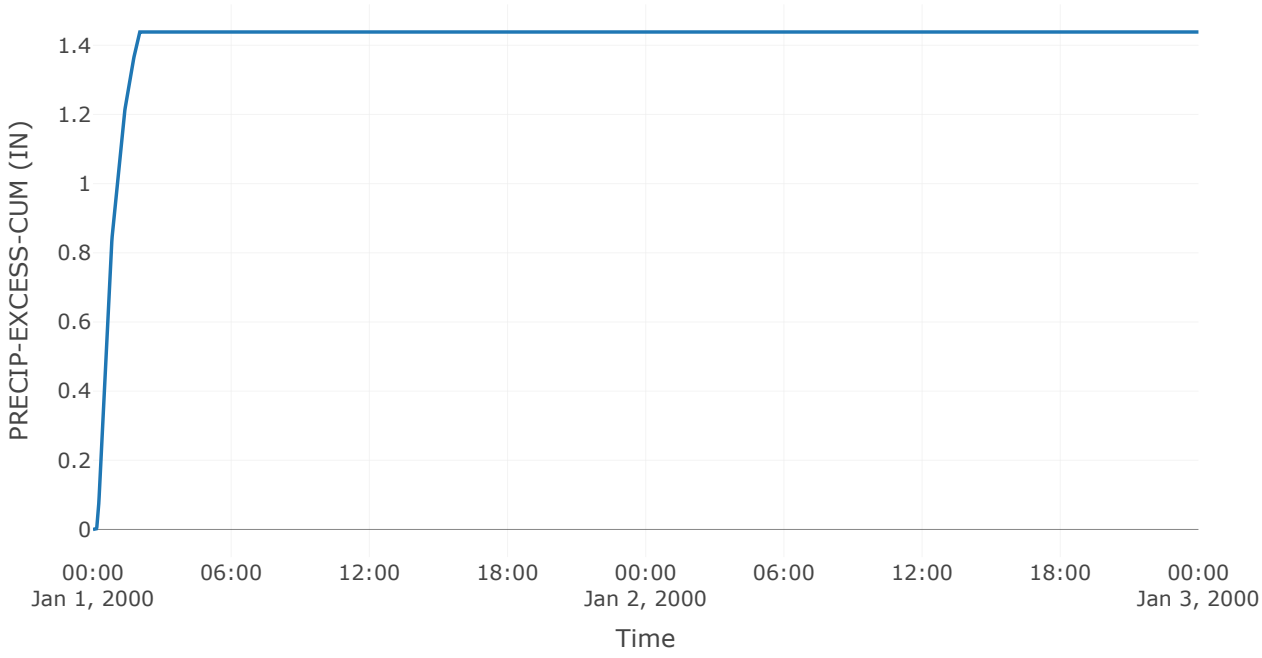
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

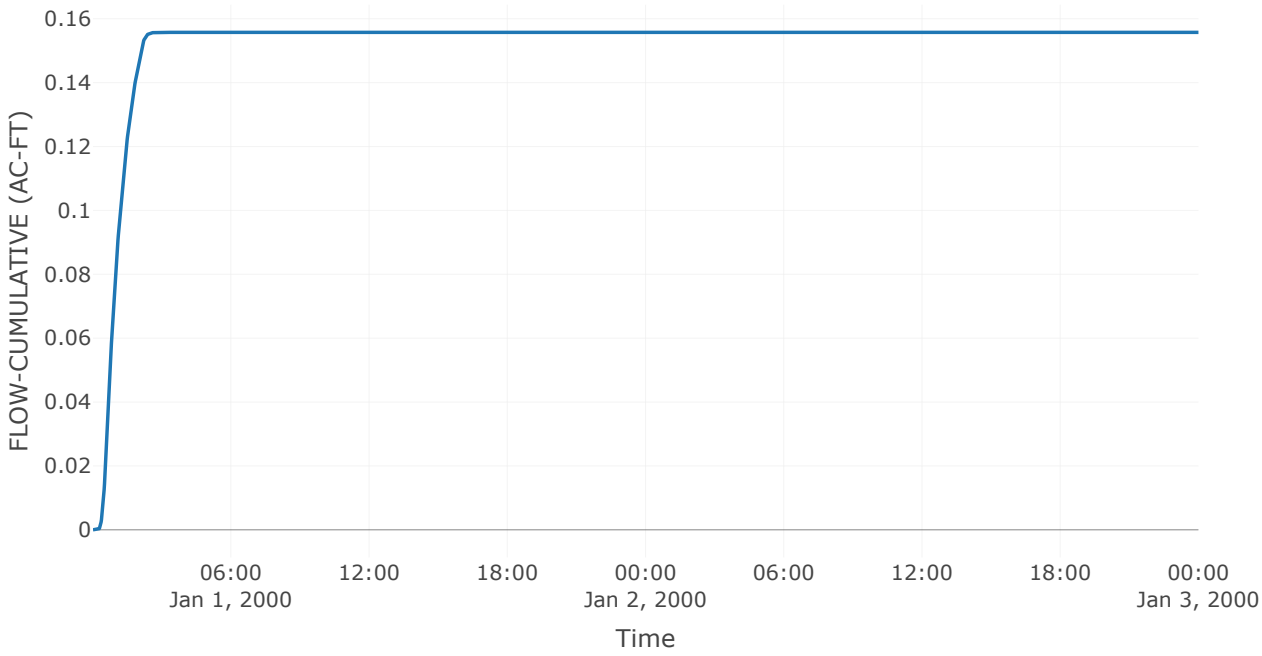
Precipitation and Outflow



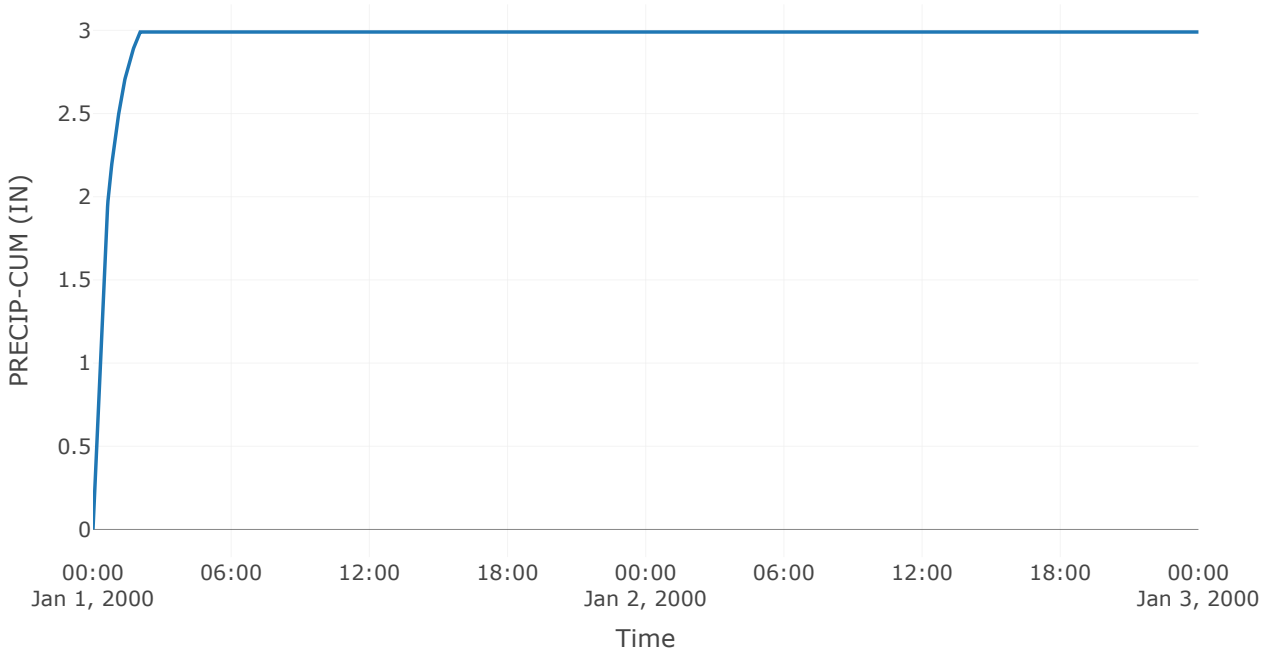
Cumulative Excess Precipitation

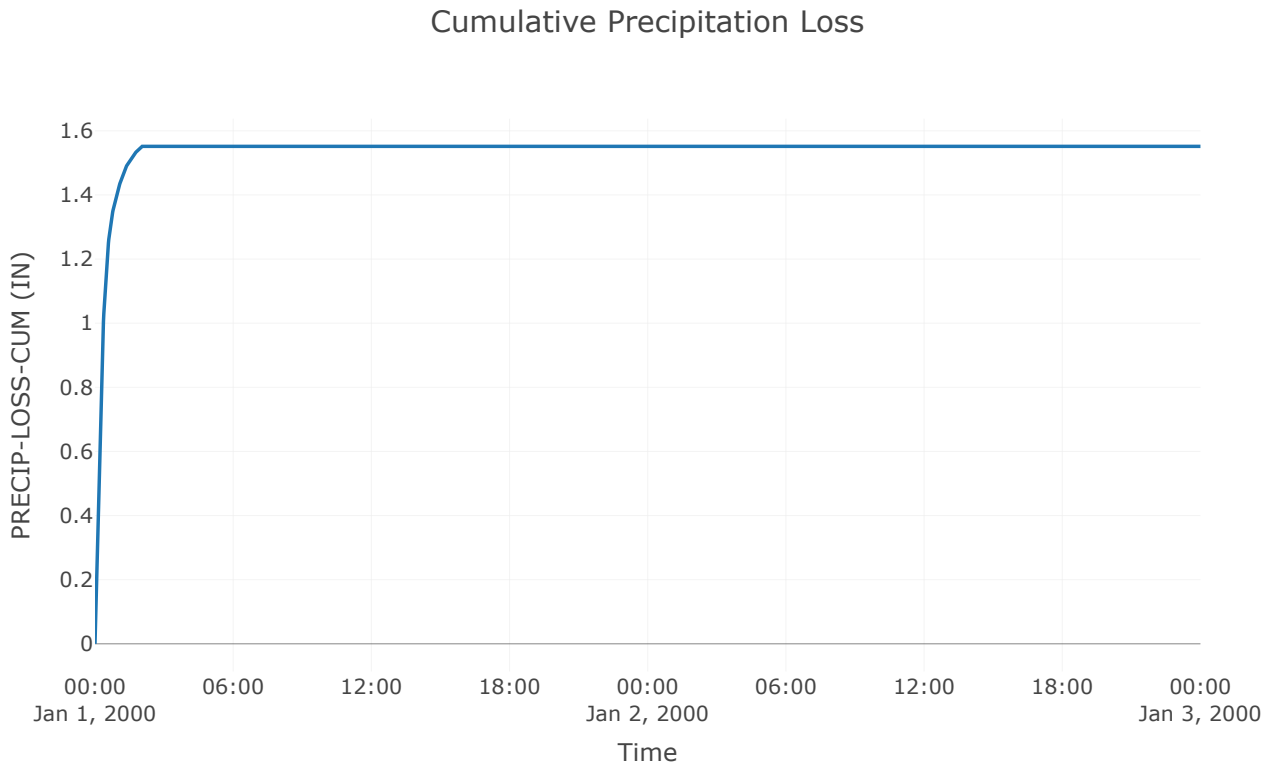


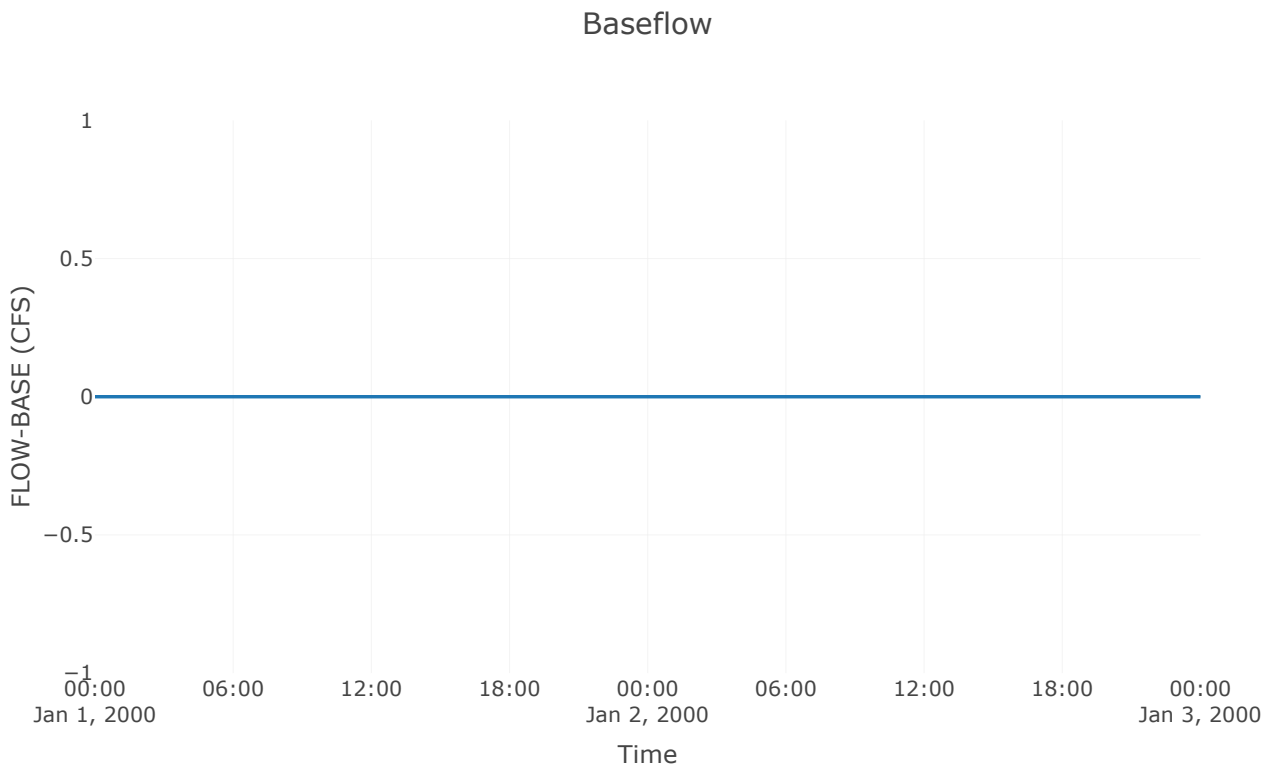
Cumulative Outflow



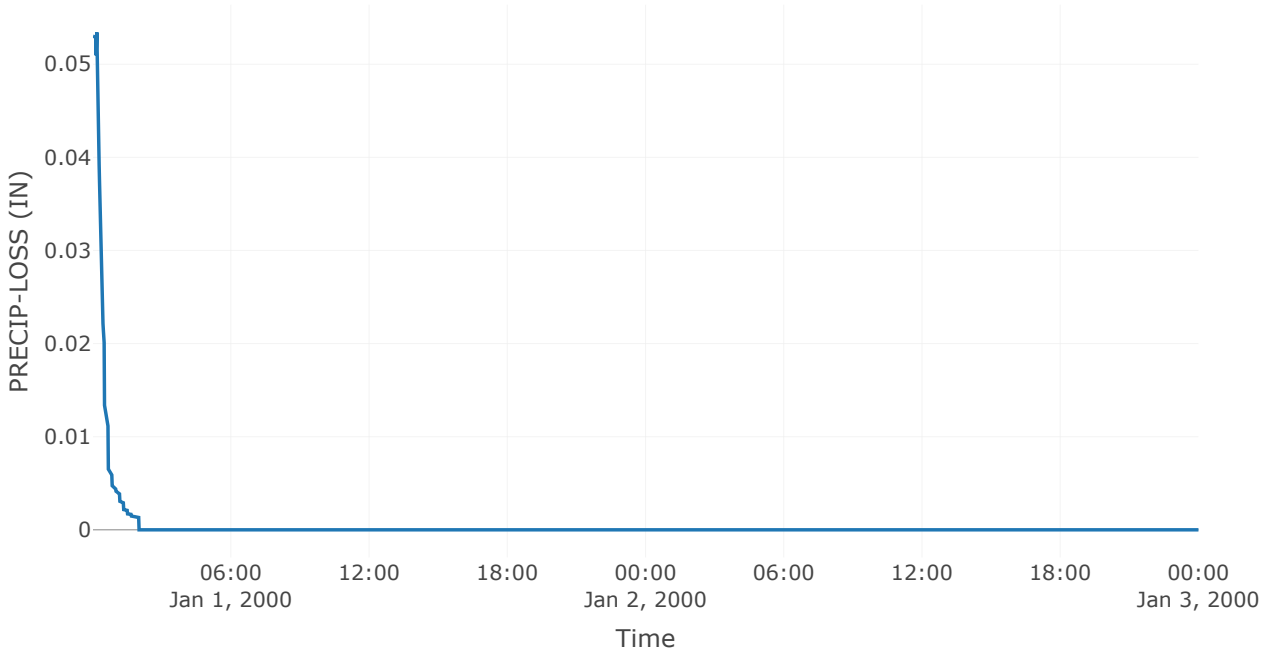
Cumulative Precipitation



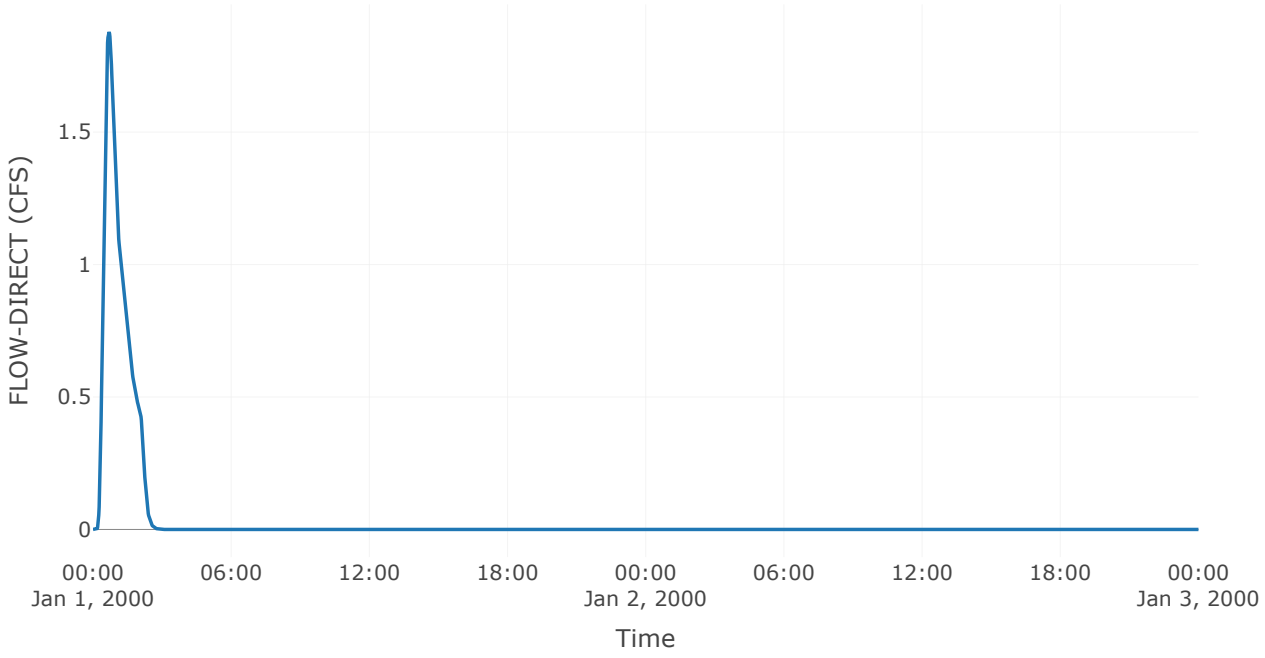

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

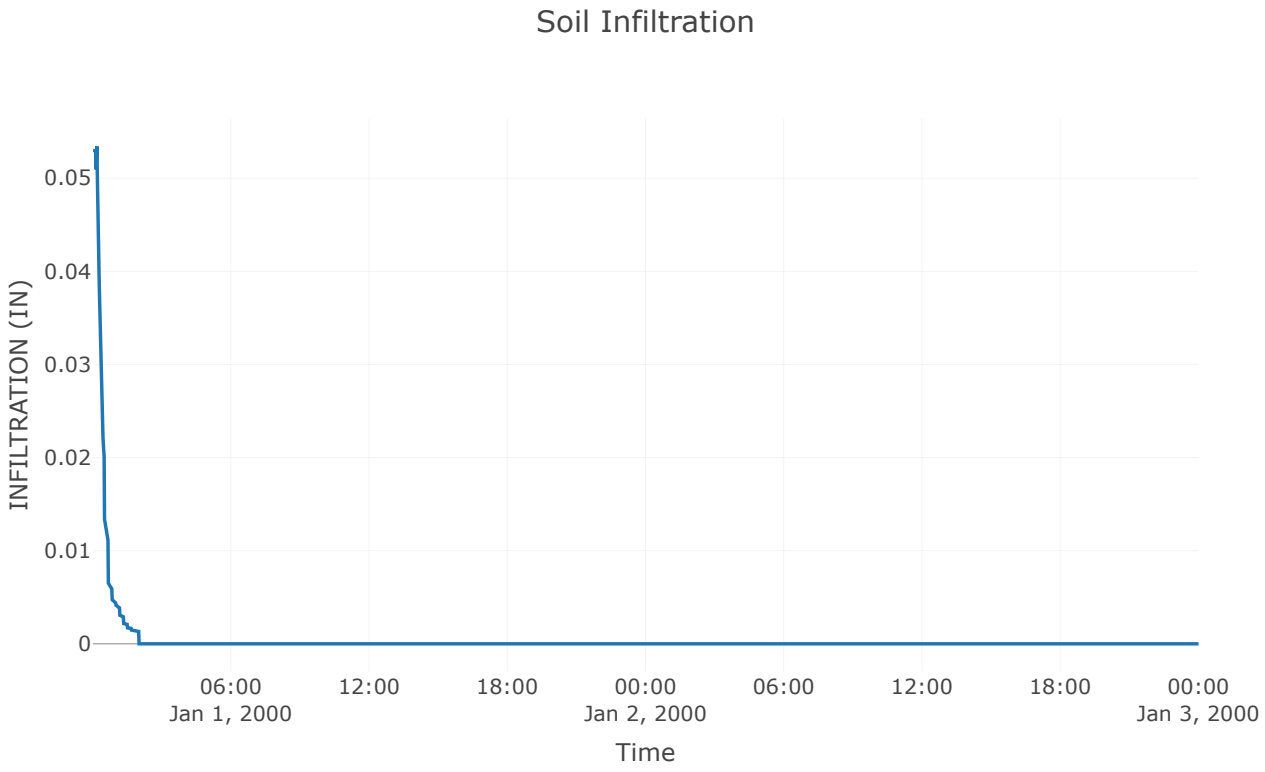

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



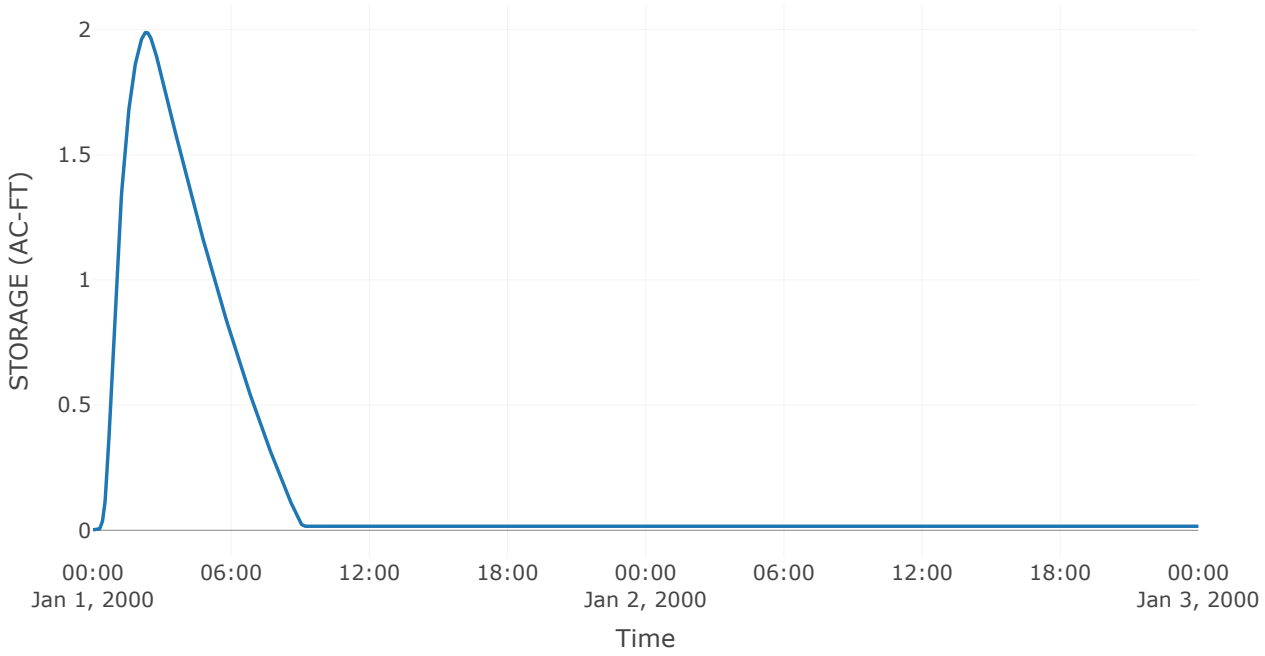

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

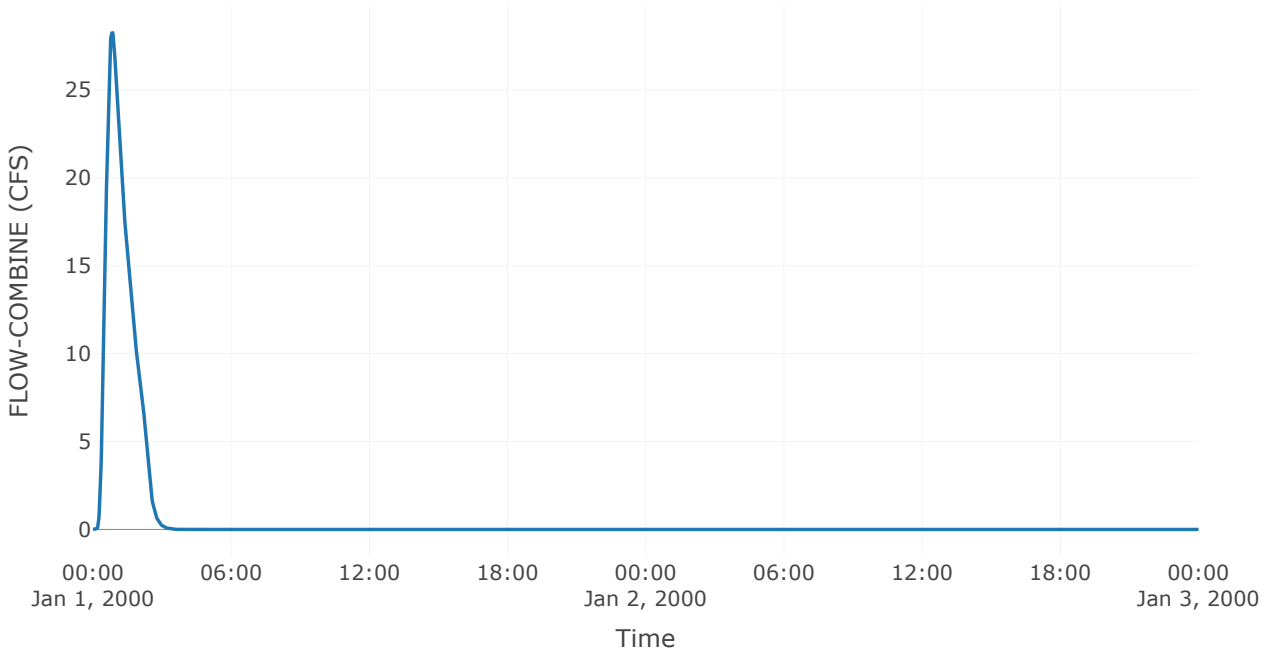
Downstream : Basin 2

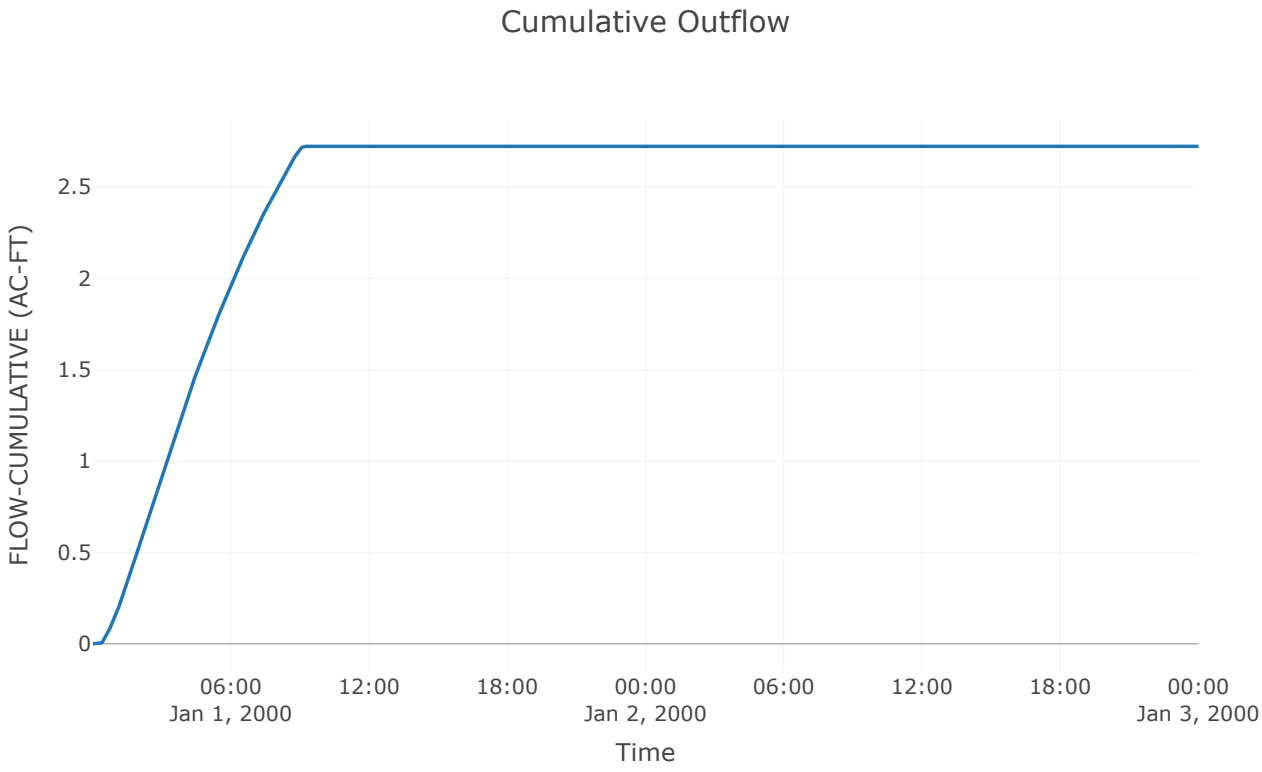
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

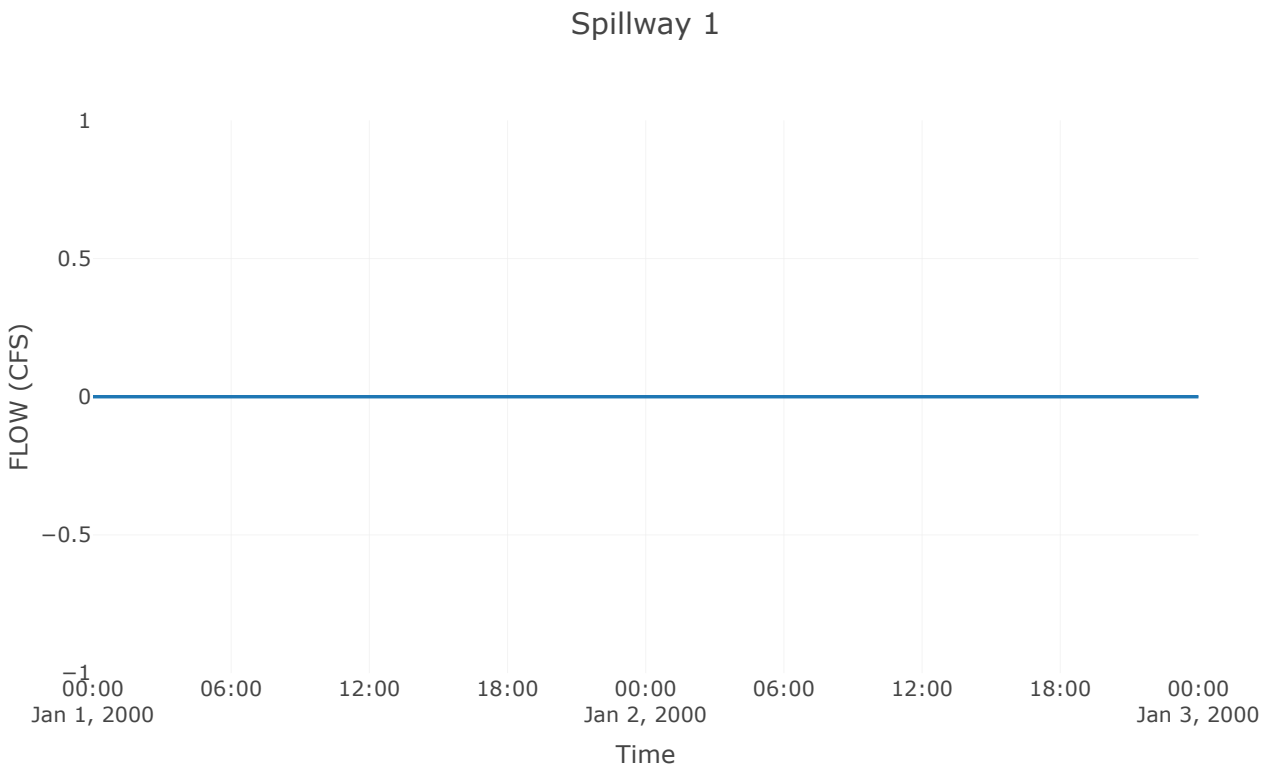
Storage



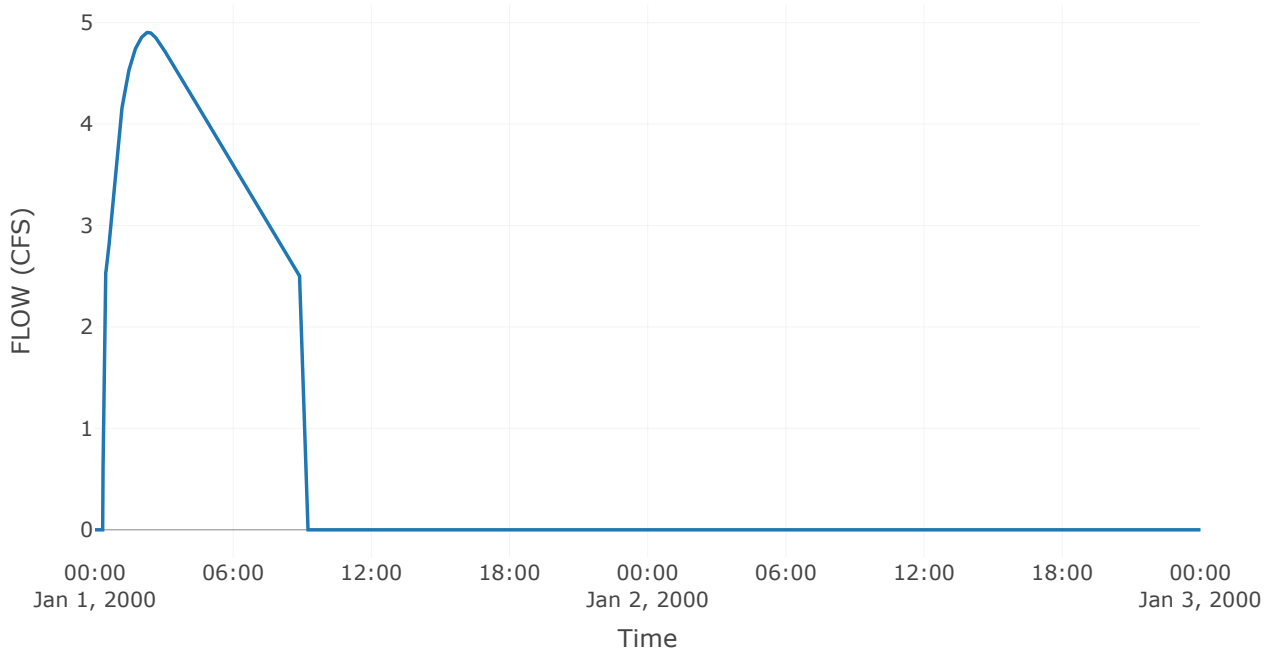
Combined Inflow



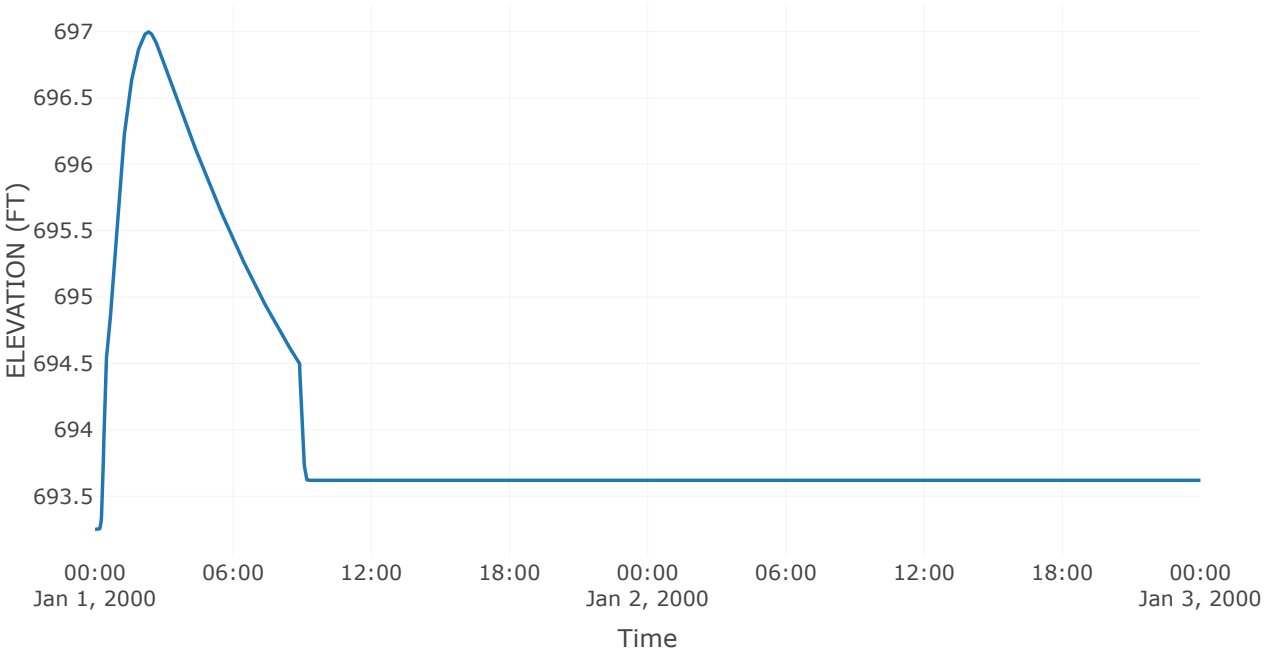

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

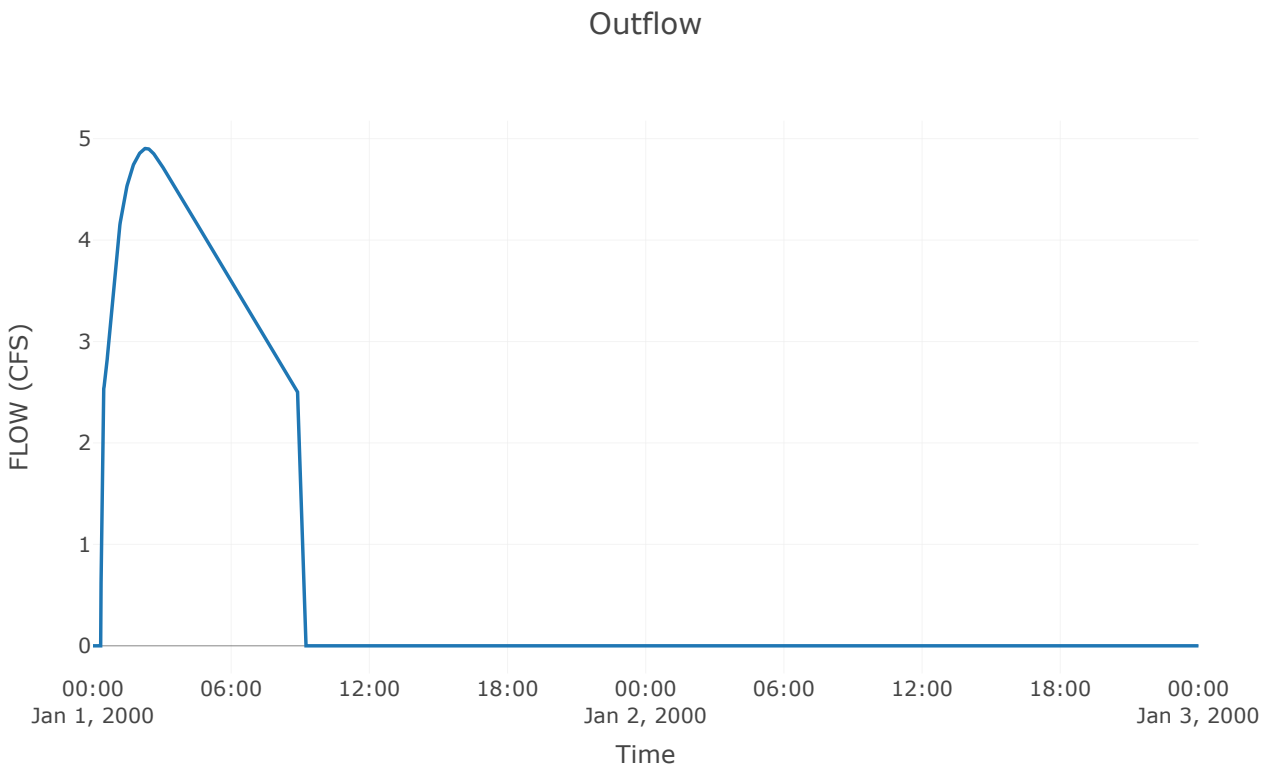

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

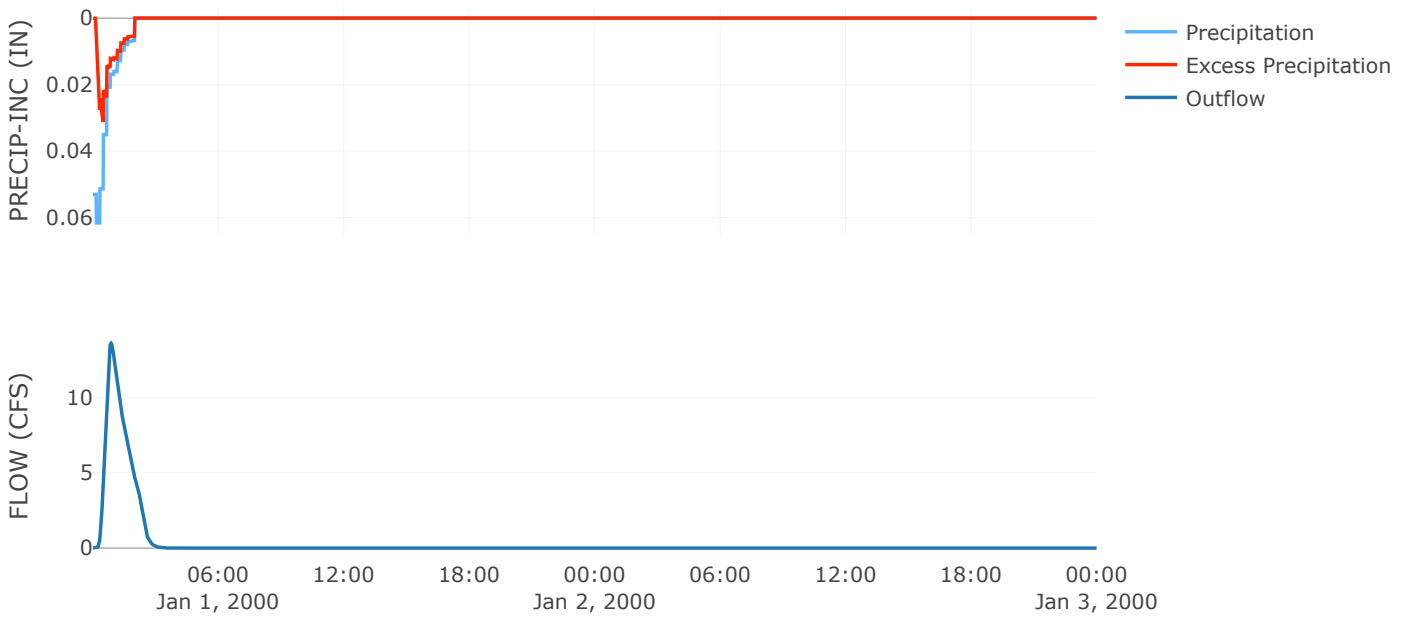
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

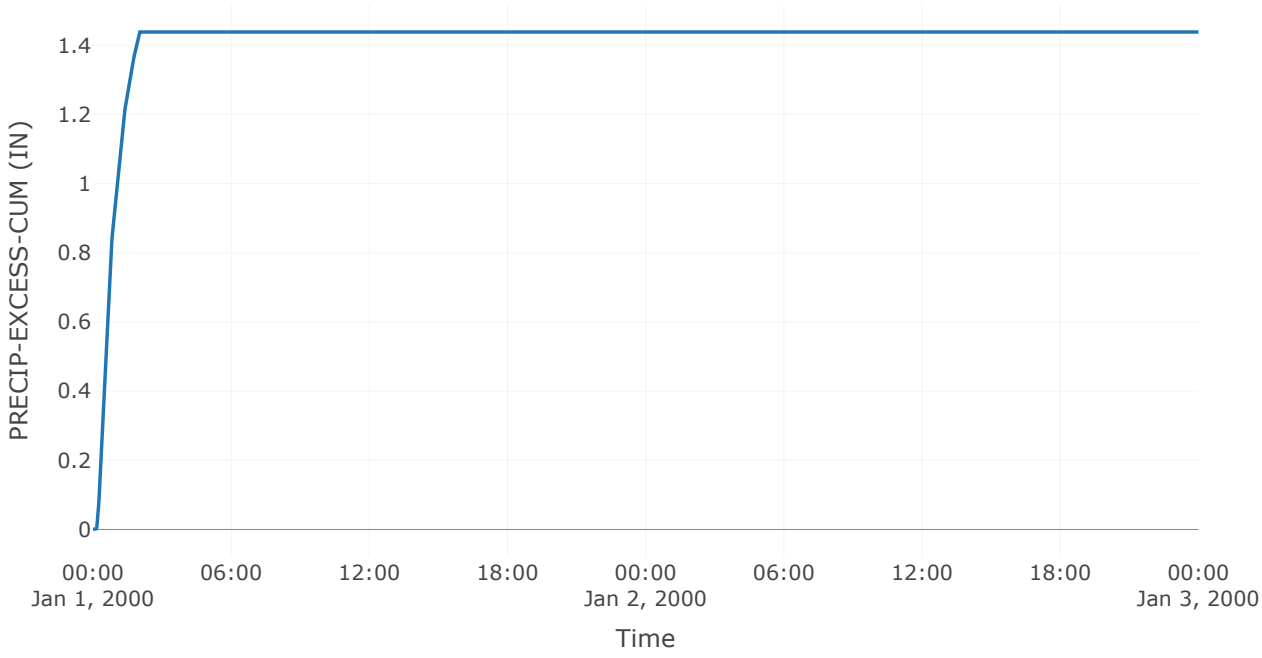
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

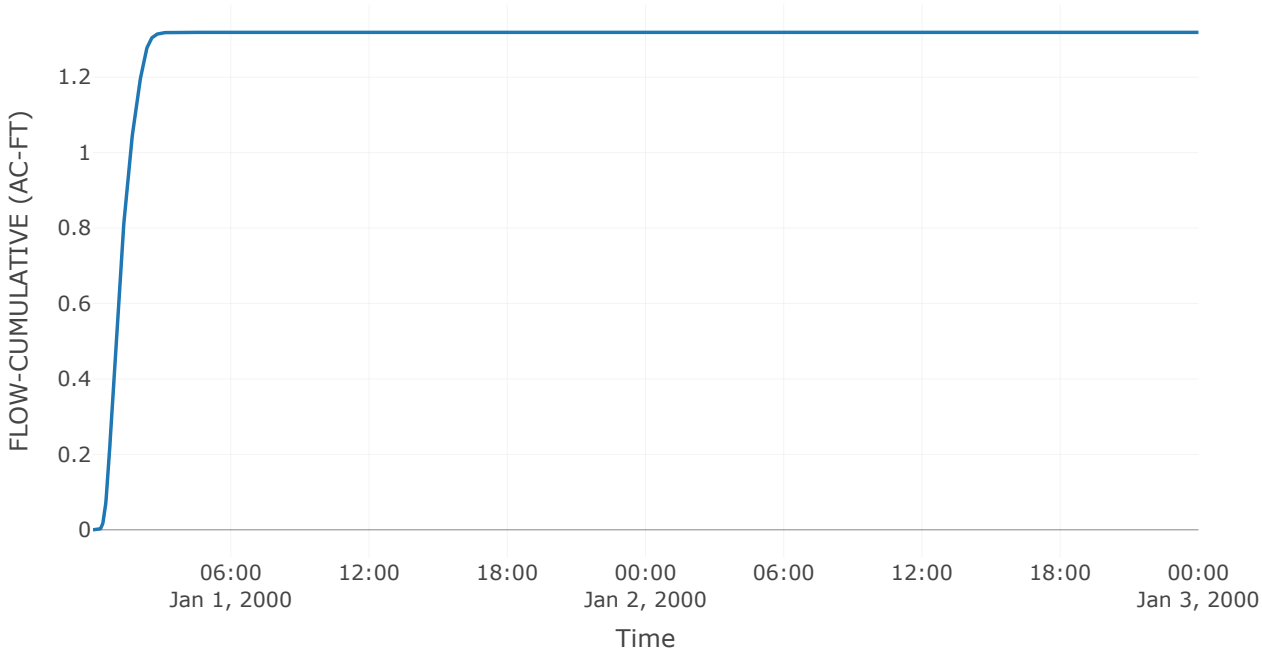
Precipitation and Outflow



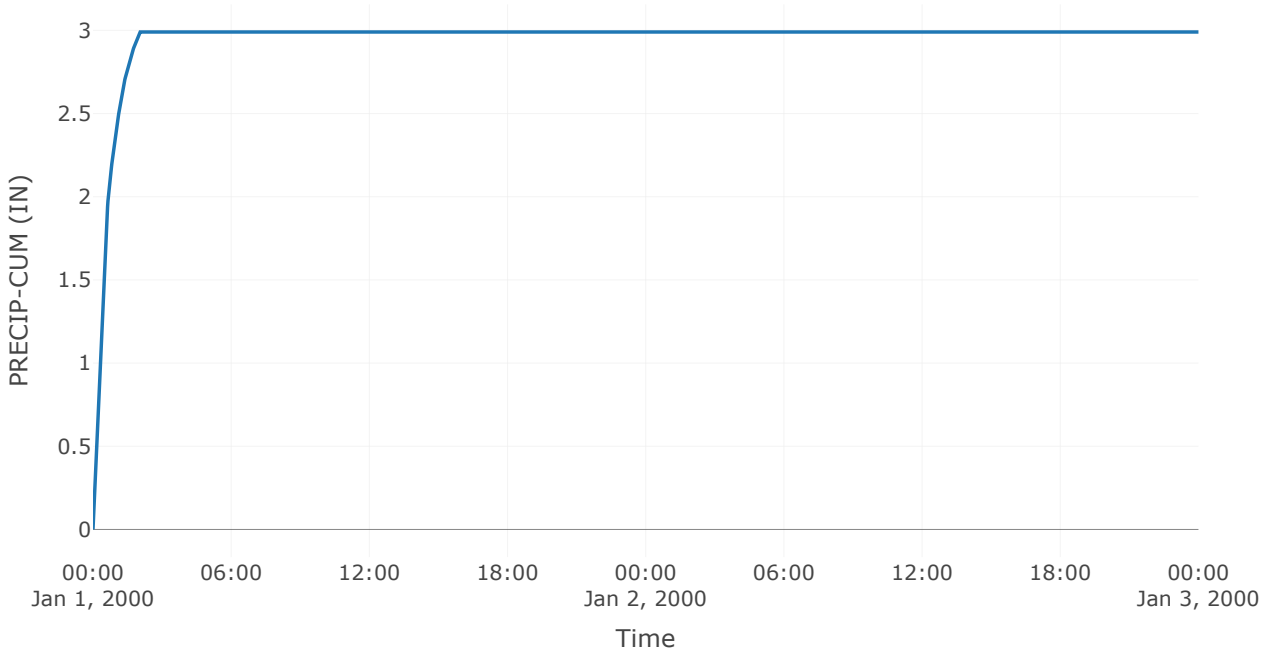
Cumulative Excess Precipitation

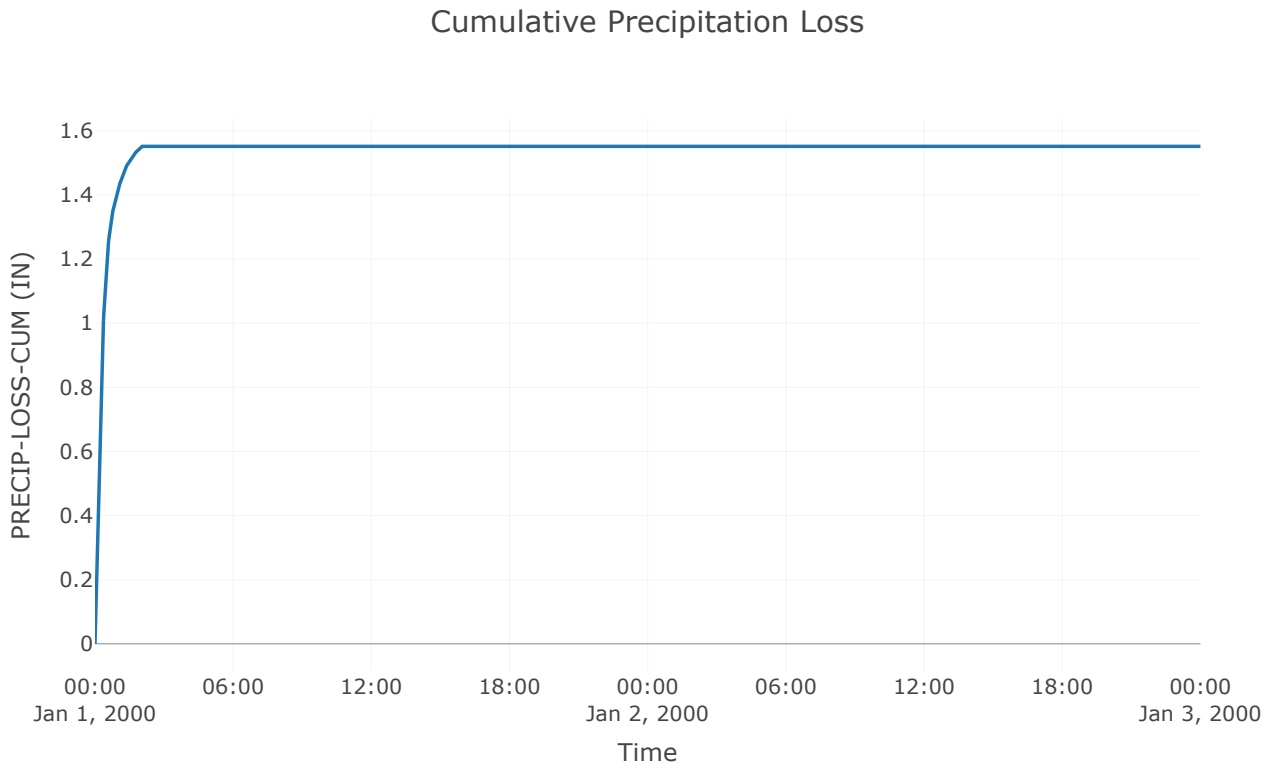


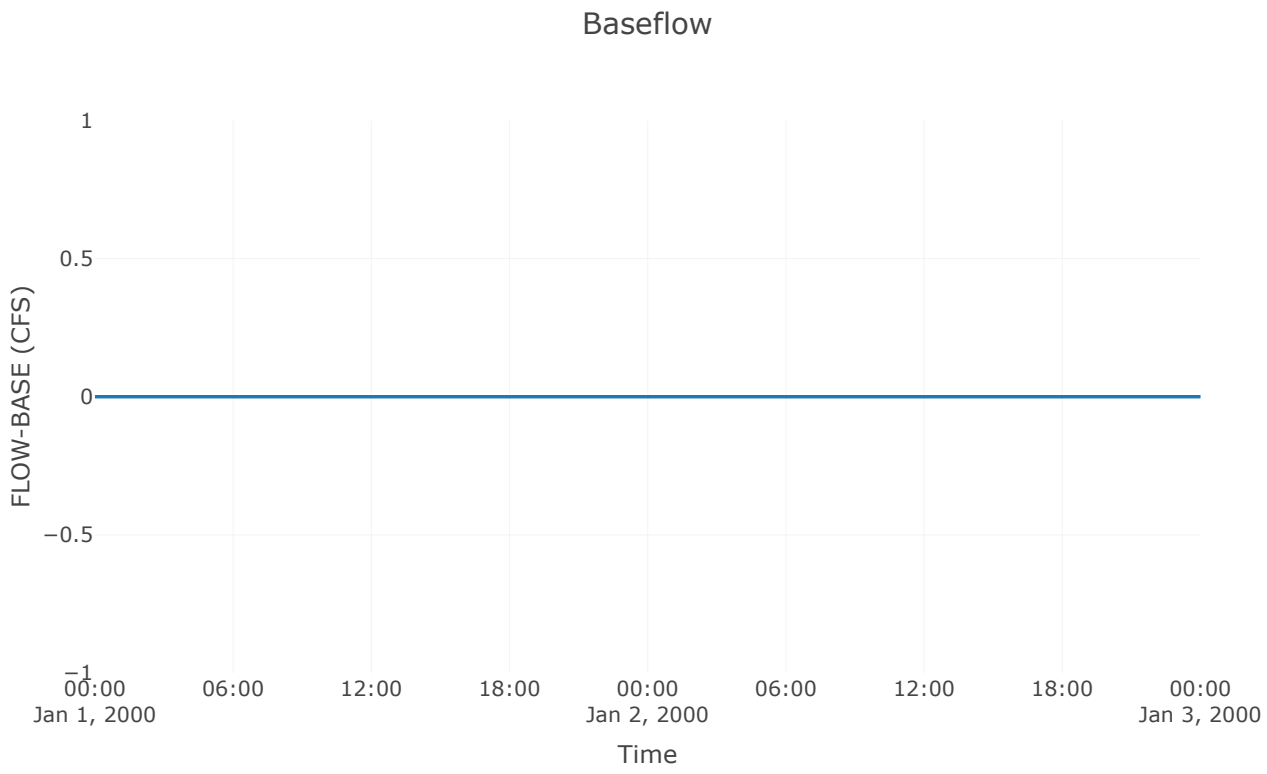
Cumulative Outflow



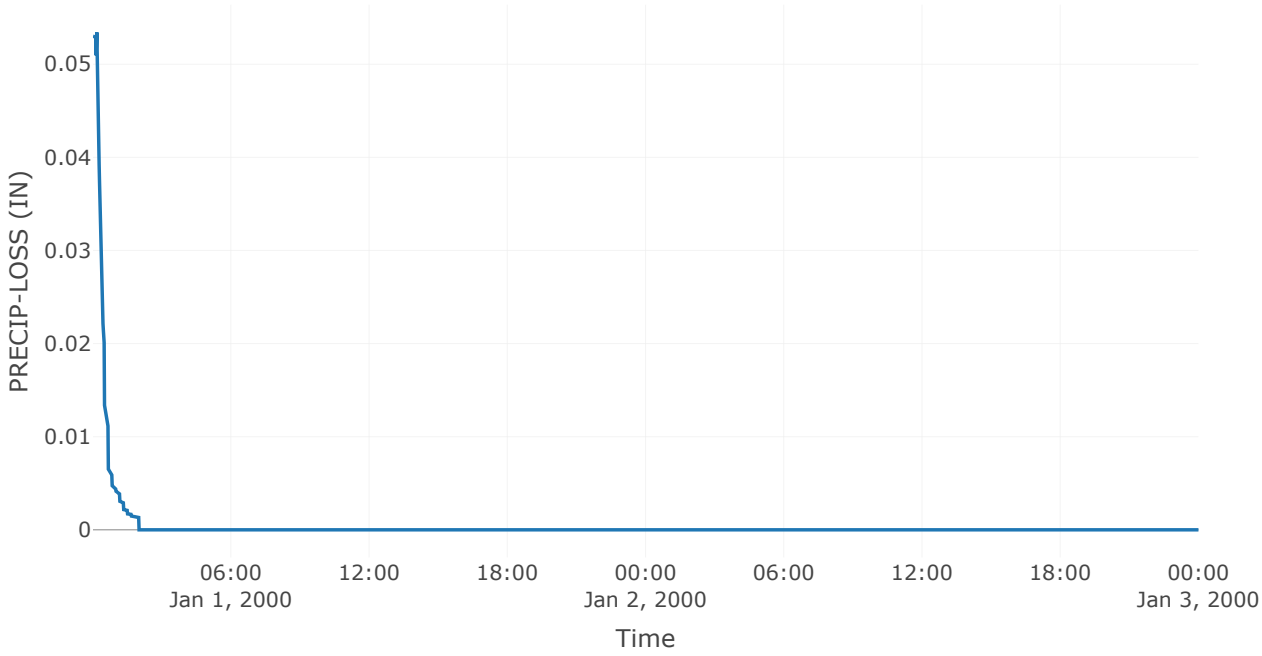
Cumulative Precipitation



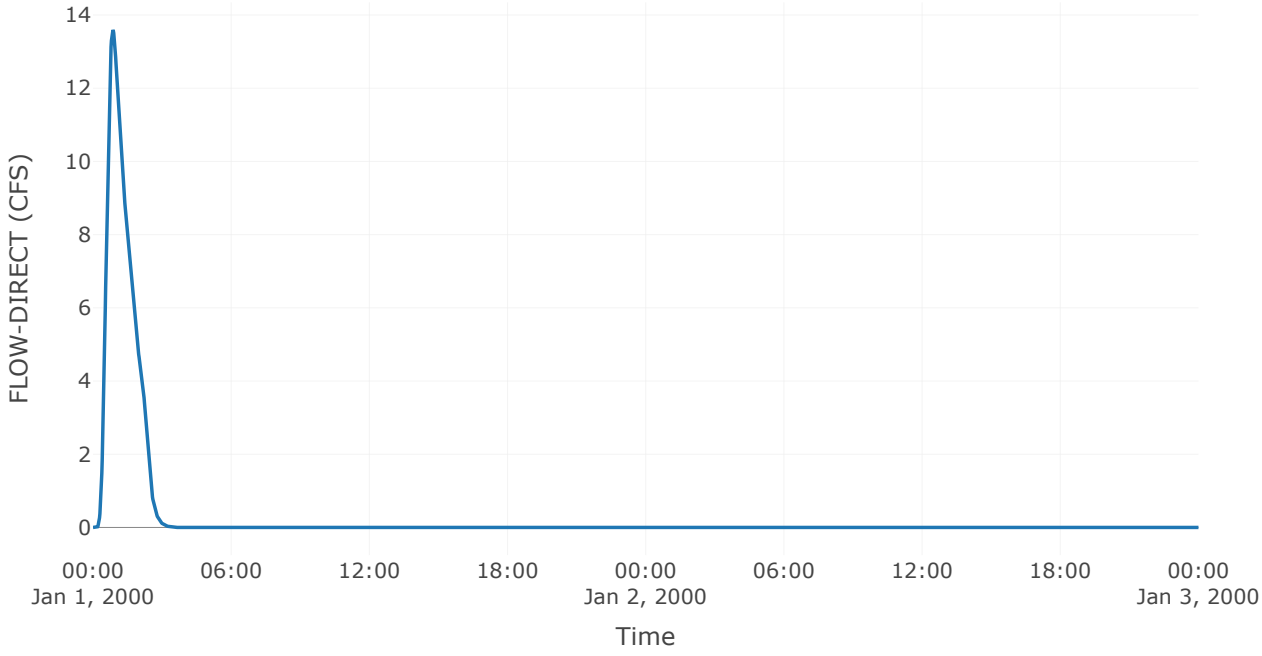

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

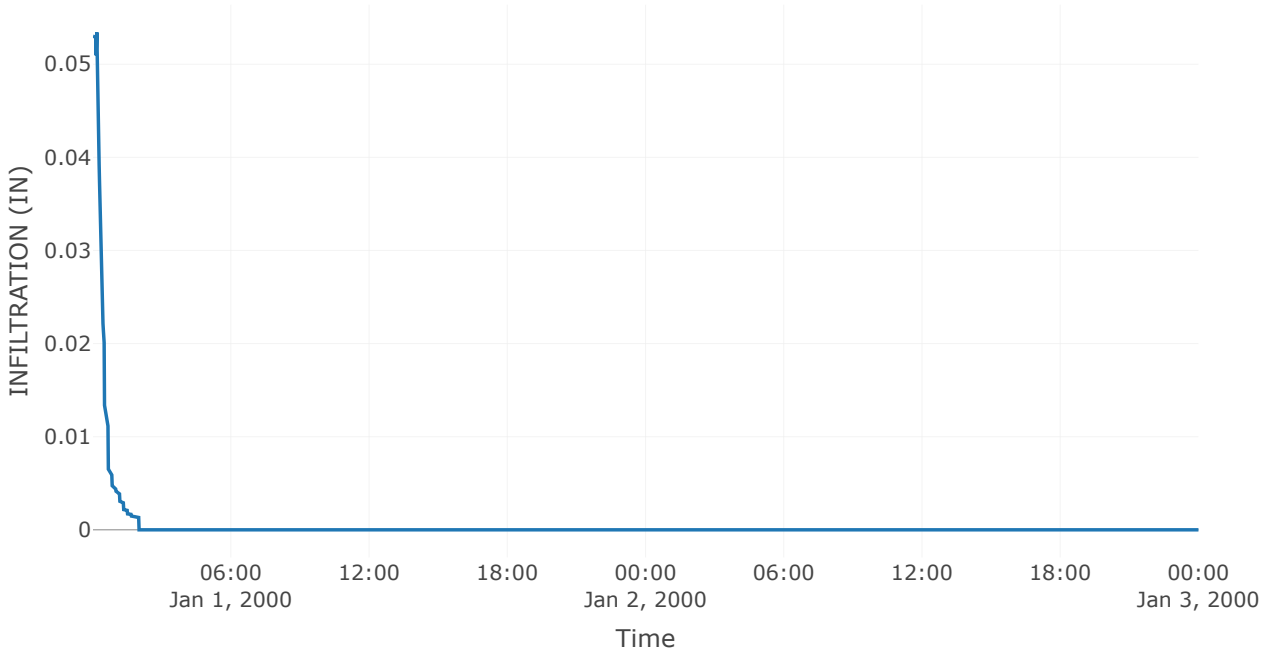

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

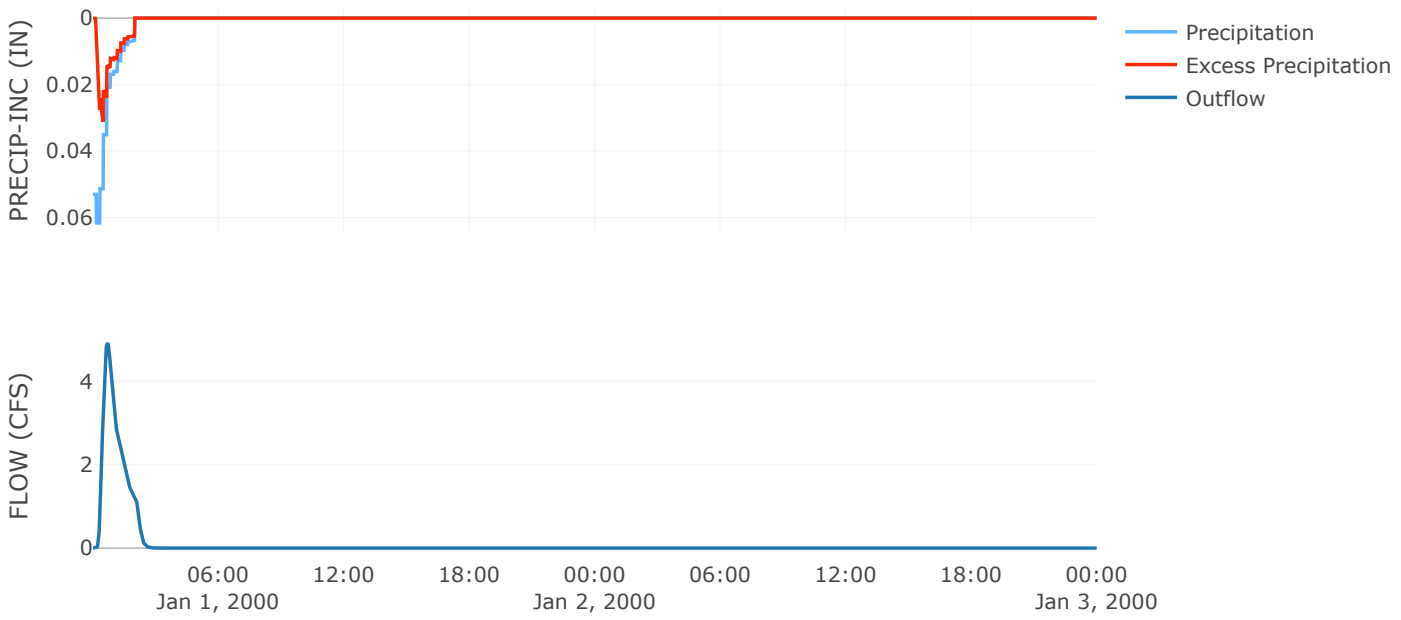
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

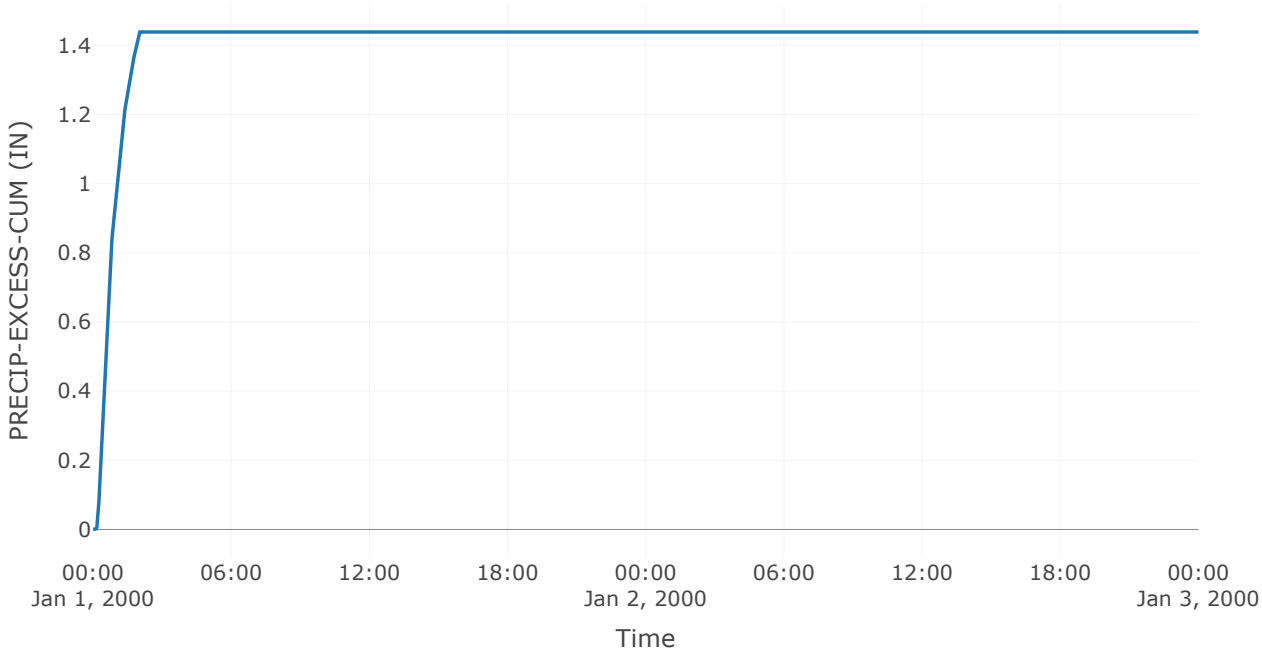
Transform: Scs	
Lag	12
Unitgraph Type	Standard

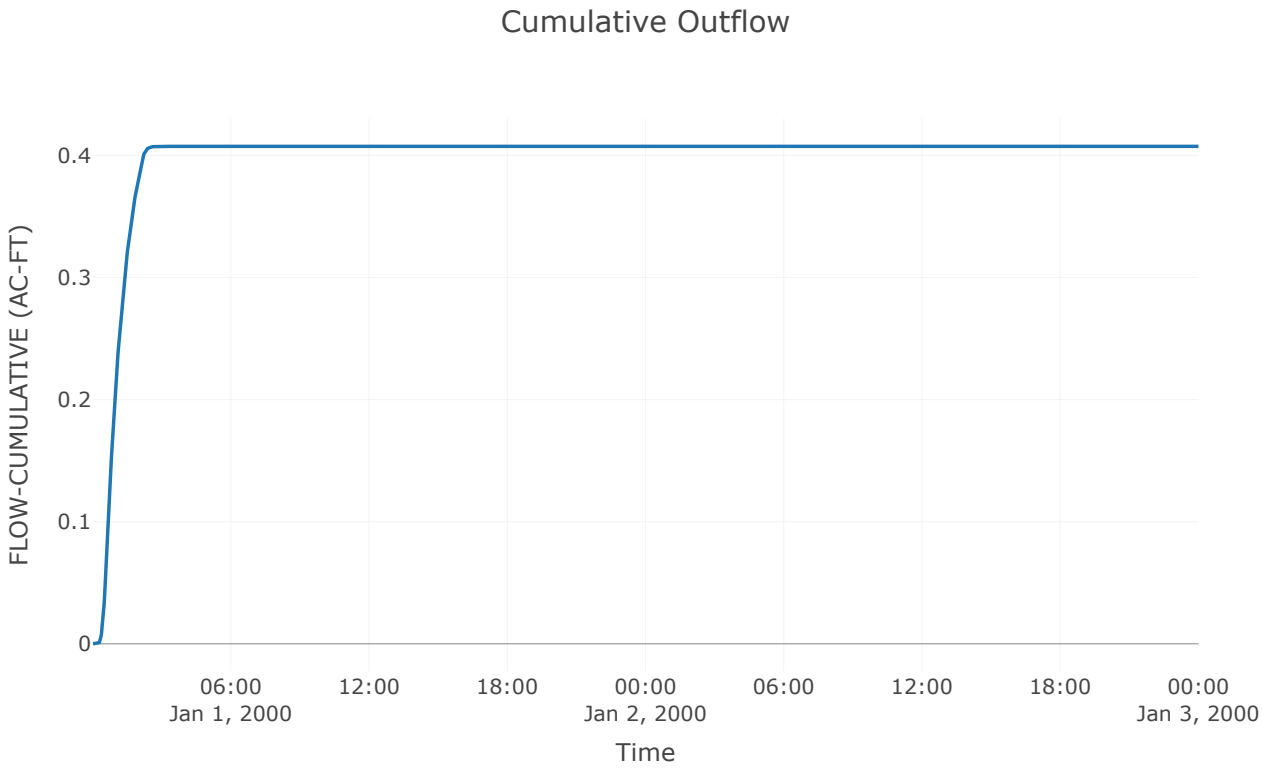
Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

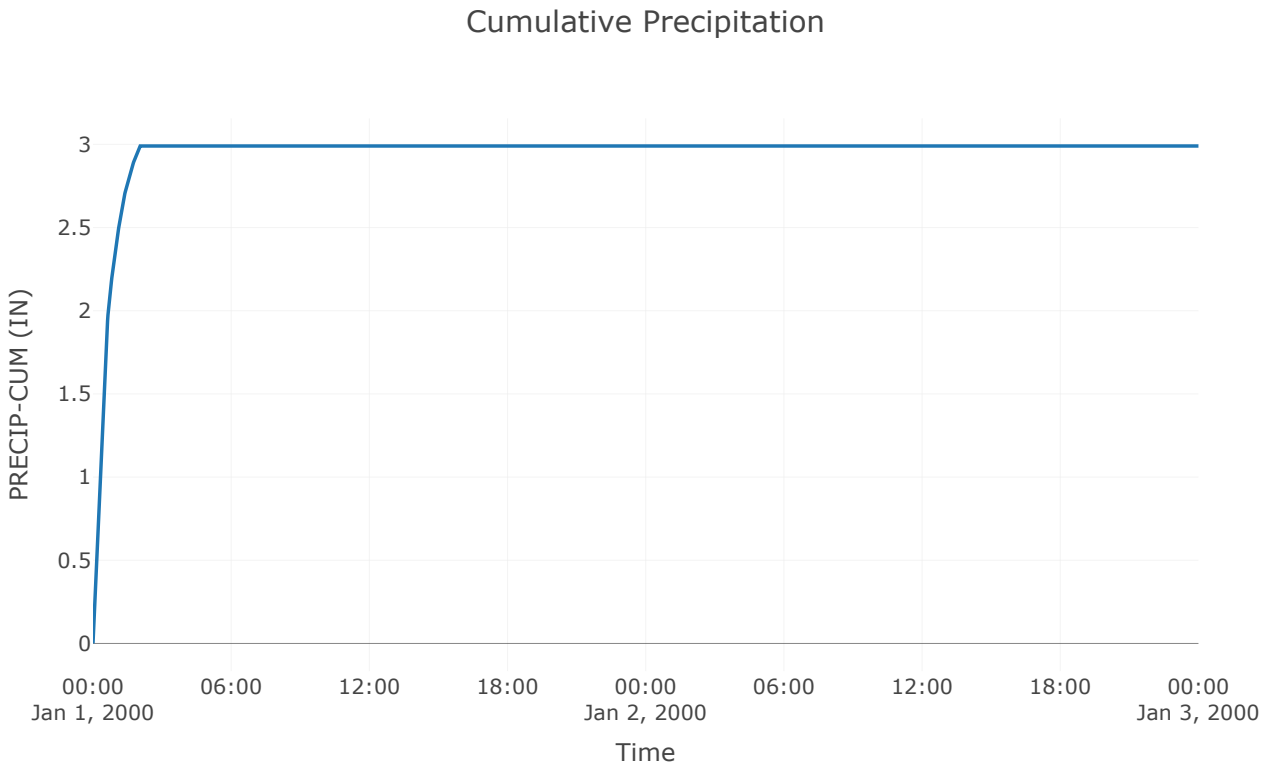
Precipitation and Outflow

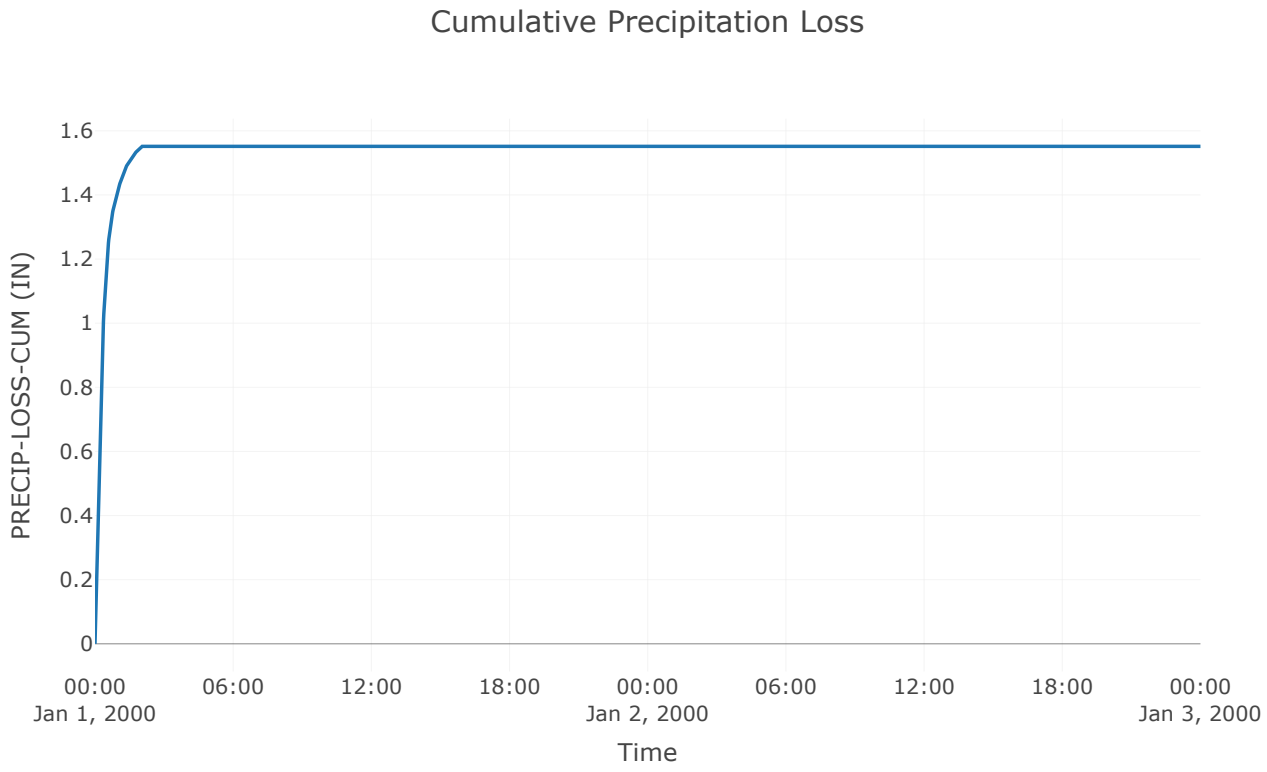


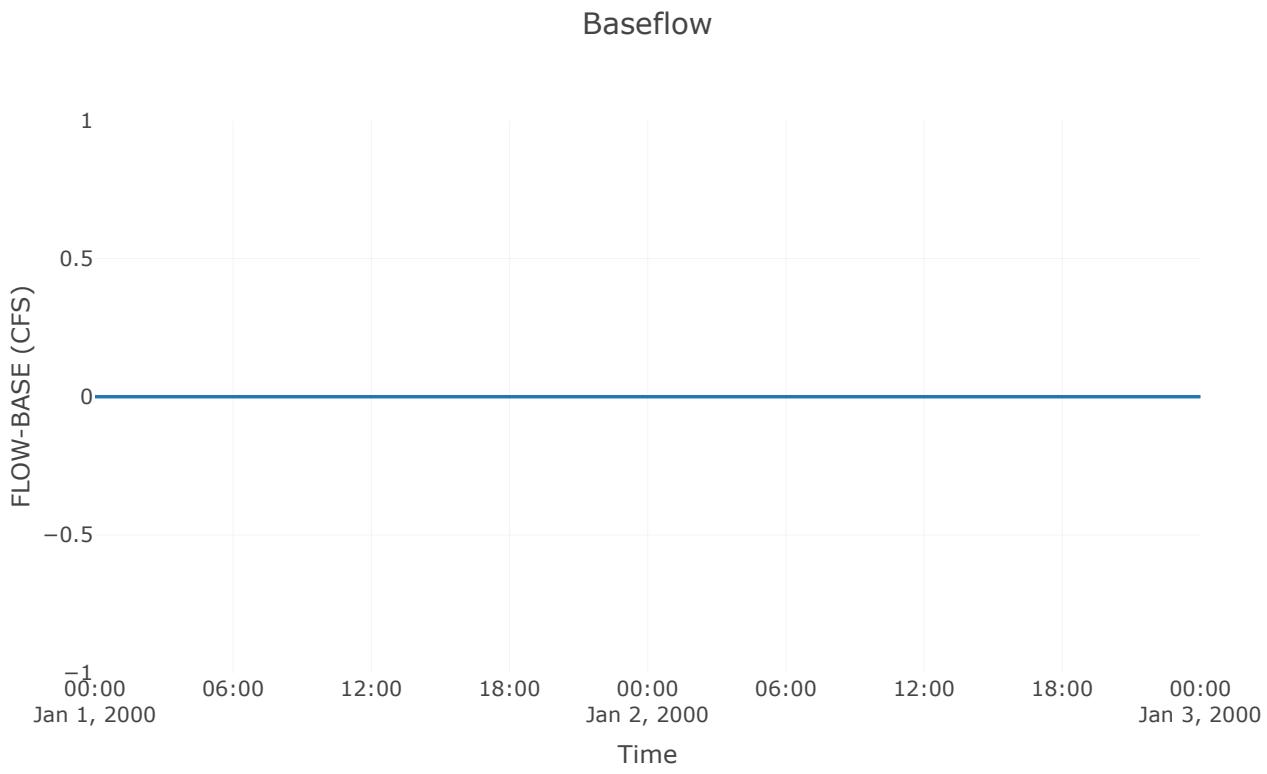
Cumulative Excess Precipitation

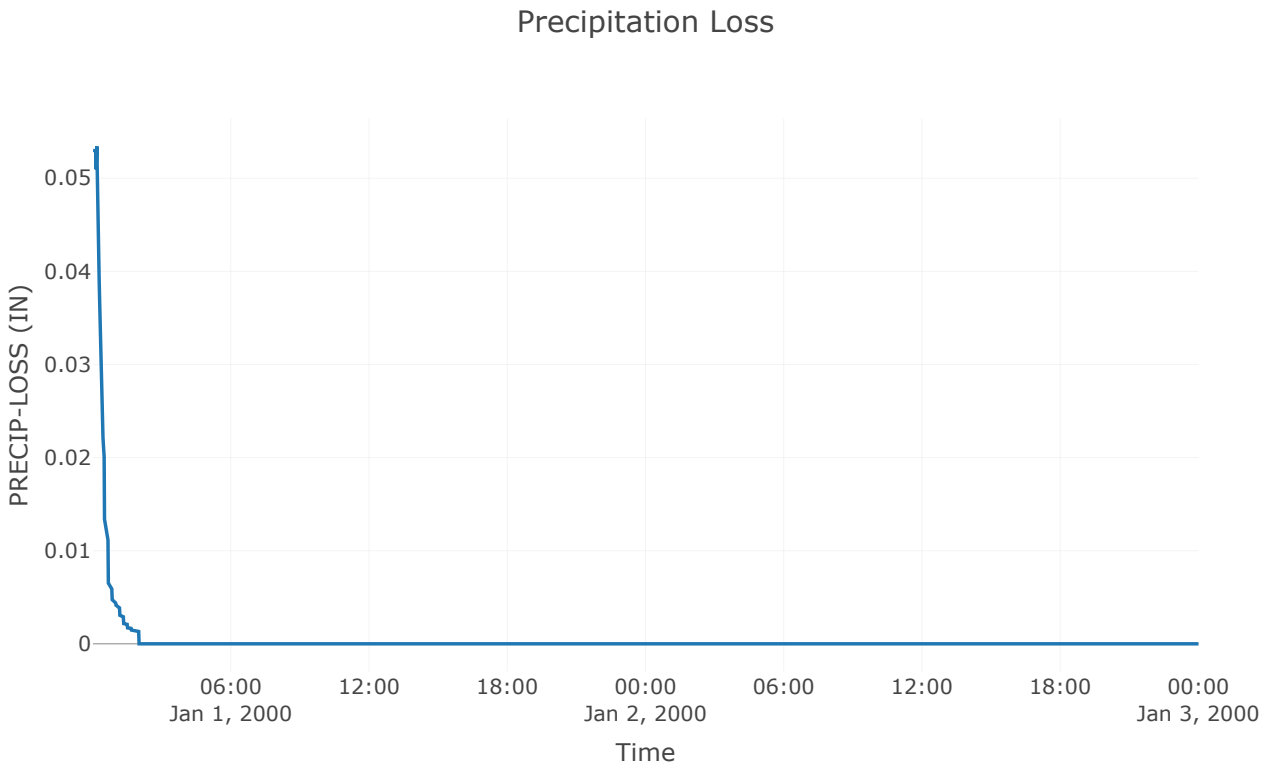


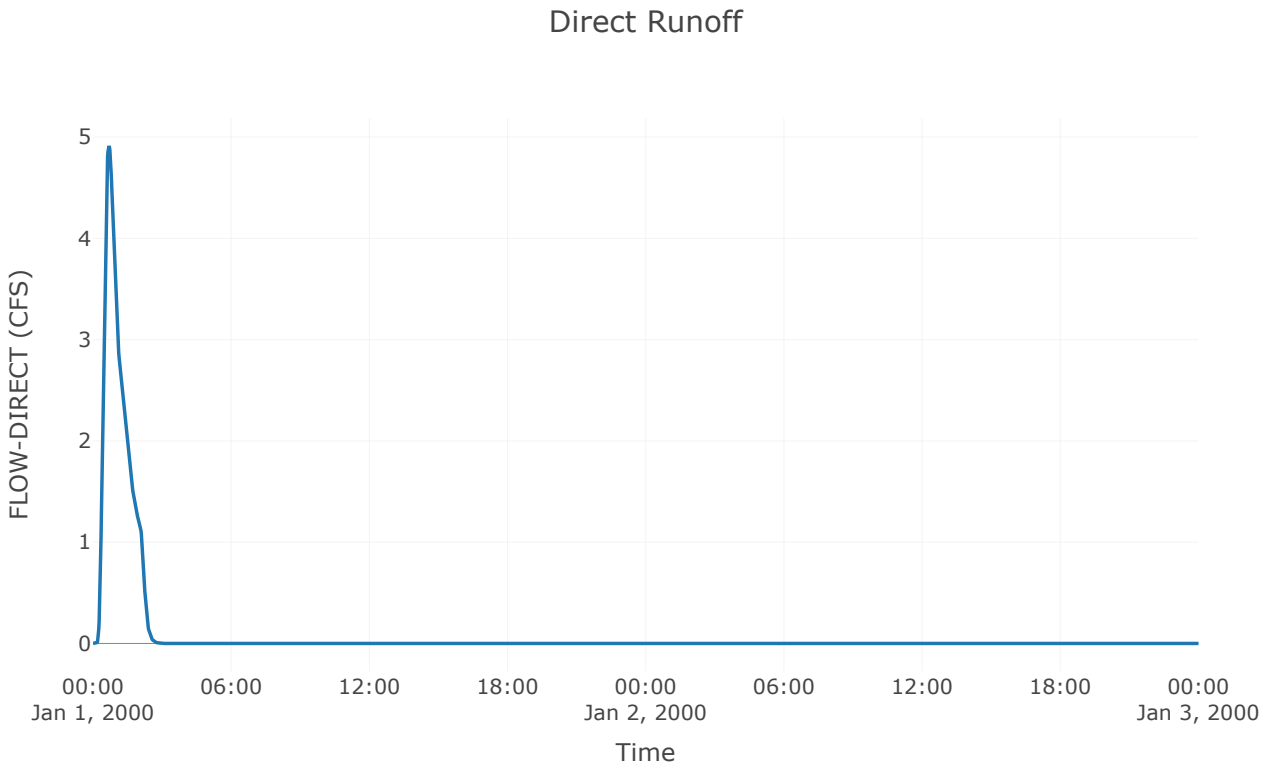

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

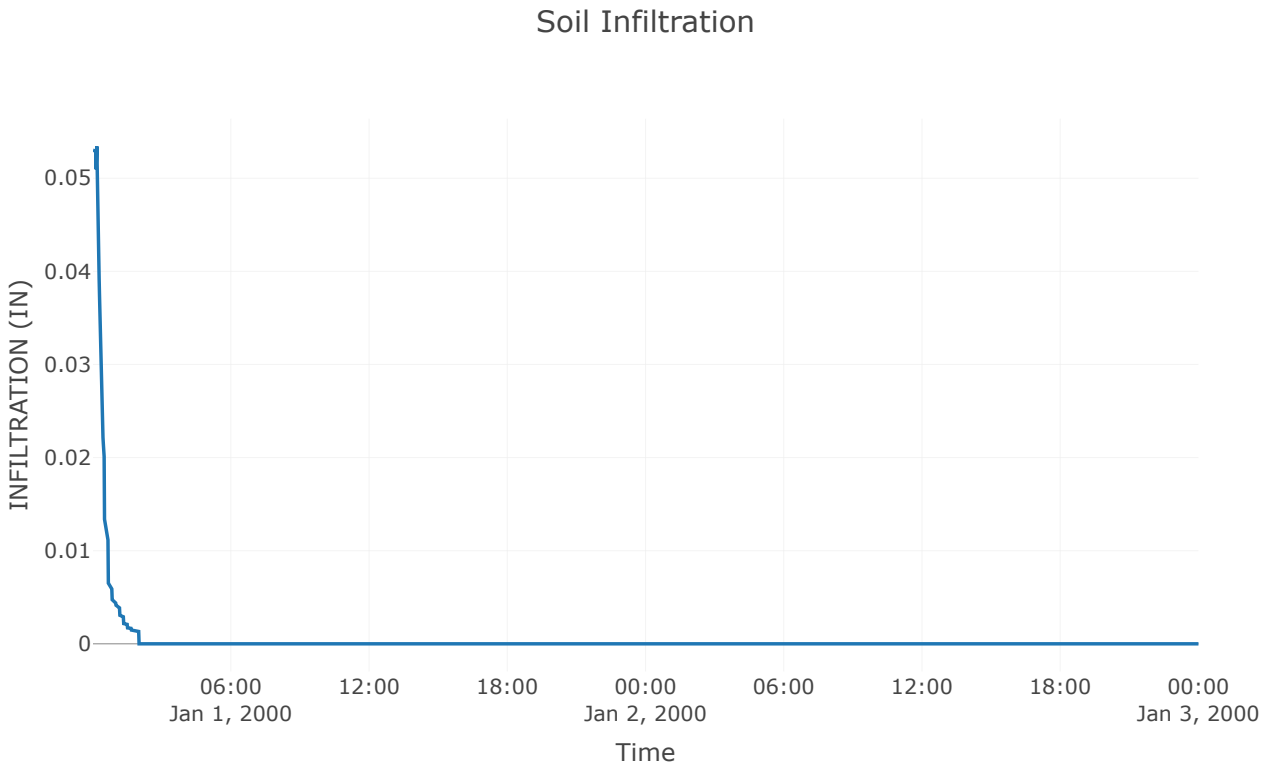

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

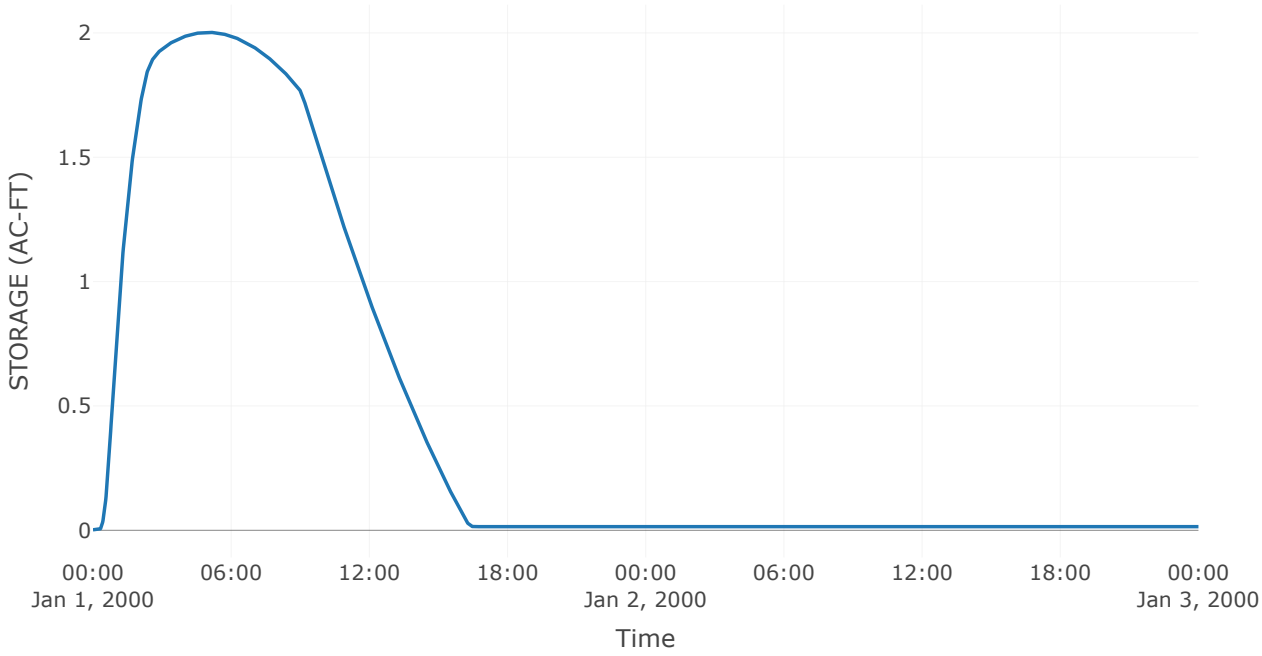

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

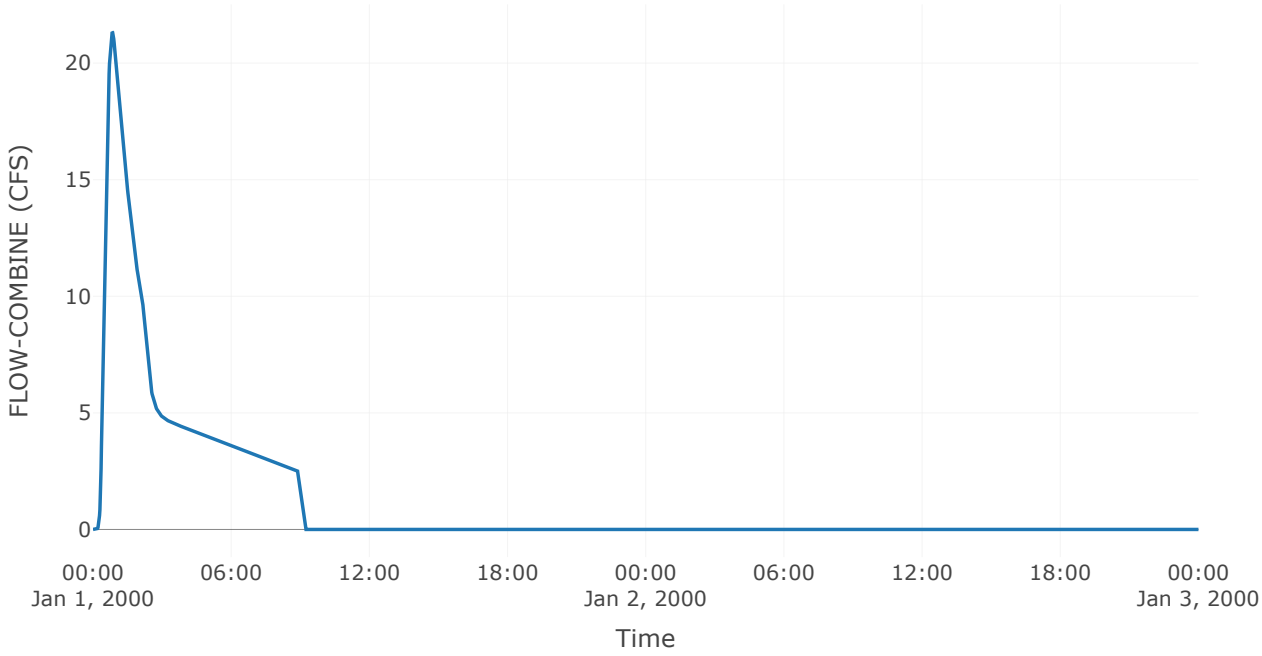
Downstream : Basin 3

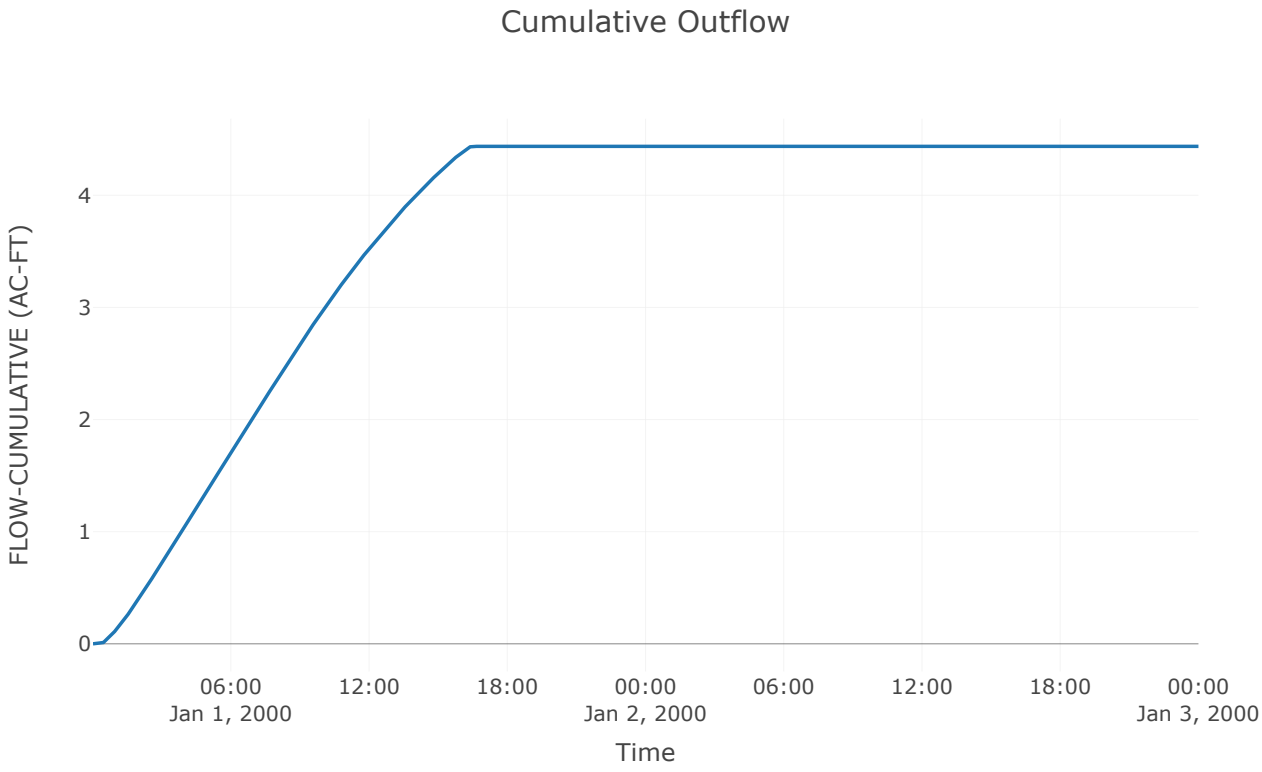
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

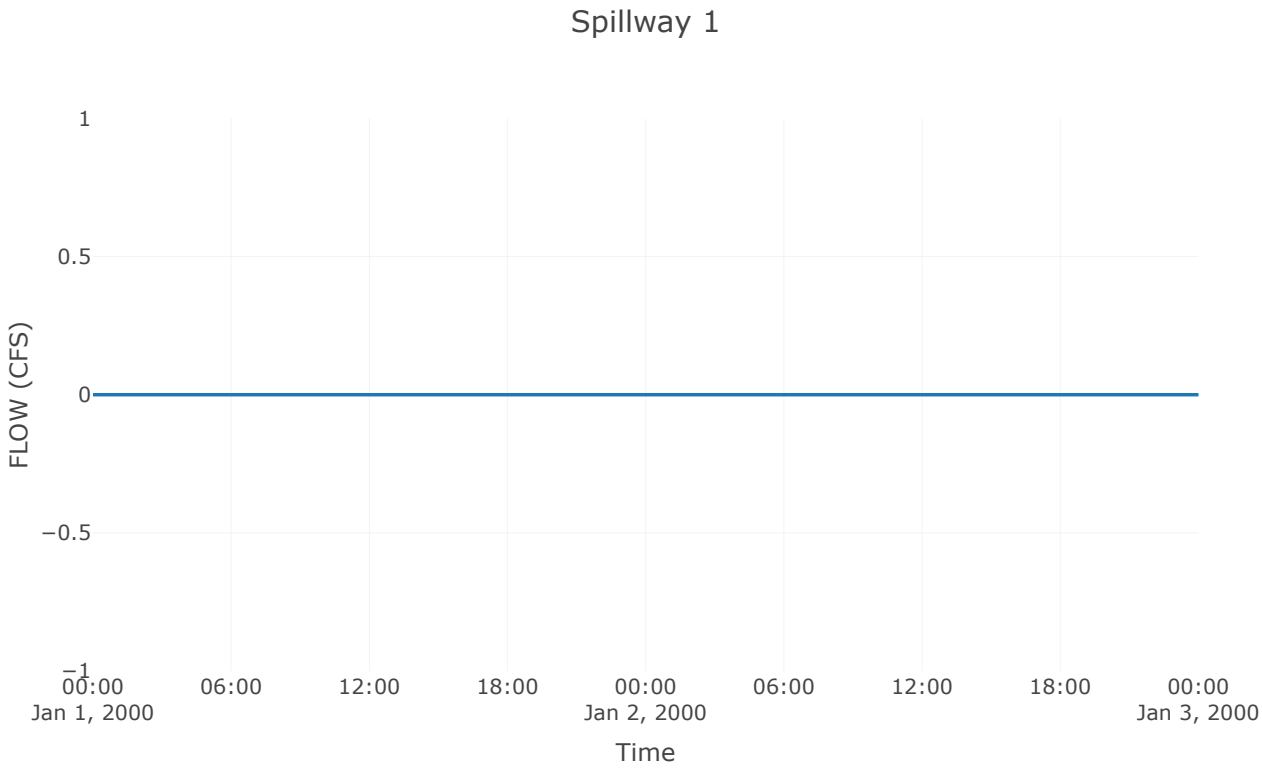
Storage



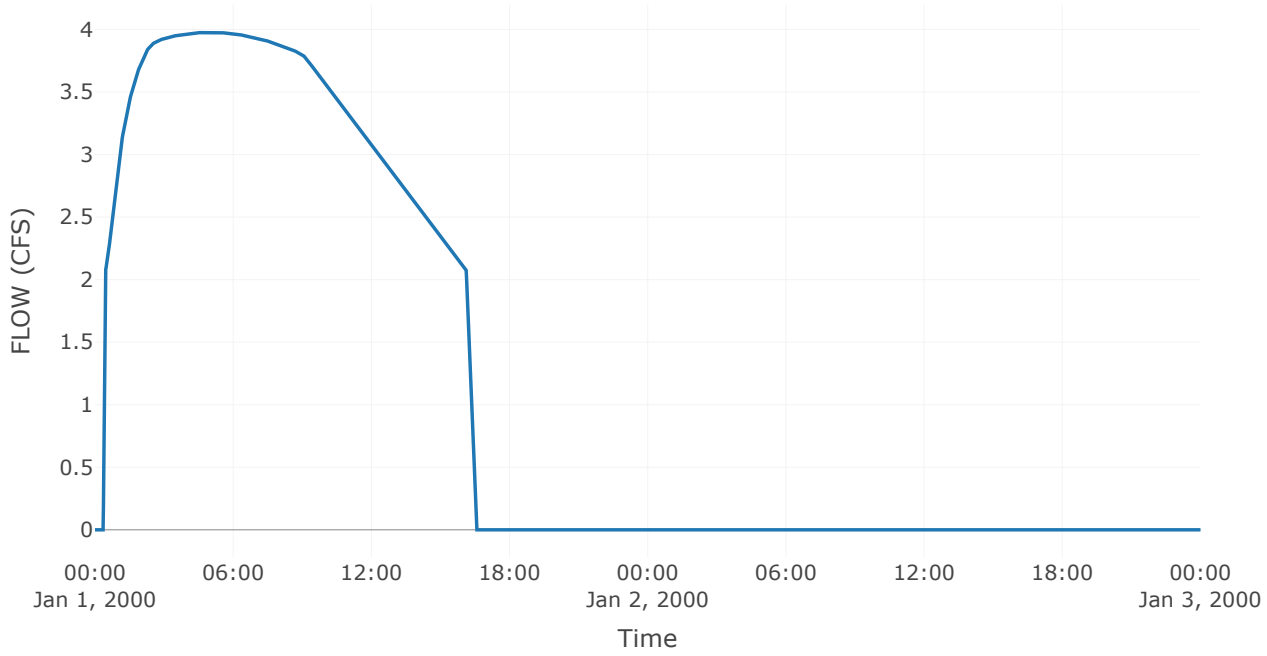
Combined Inflow



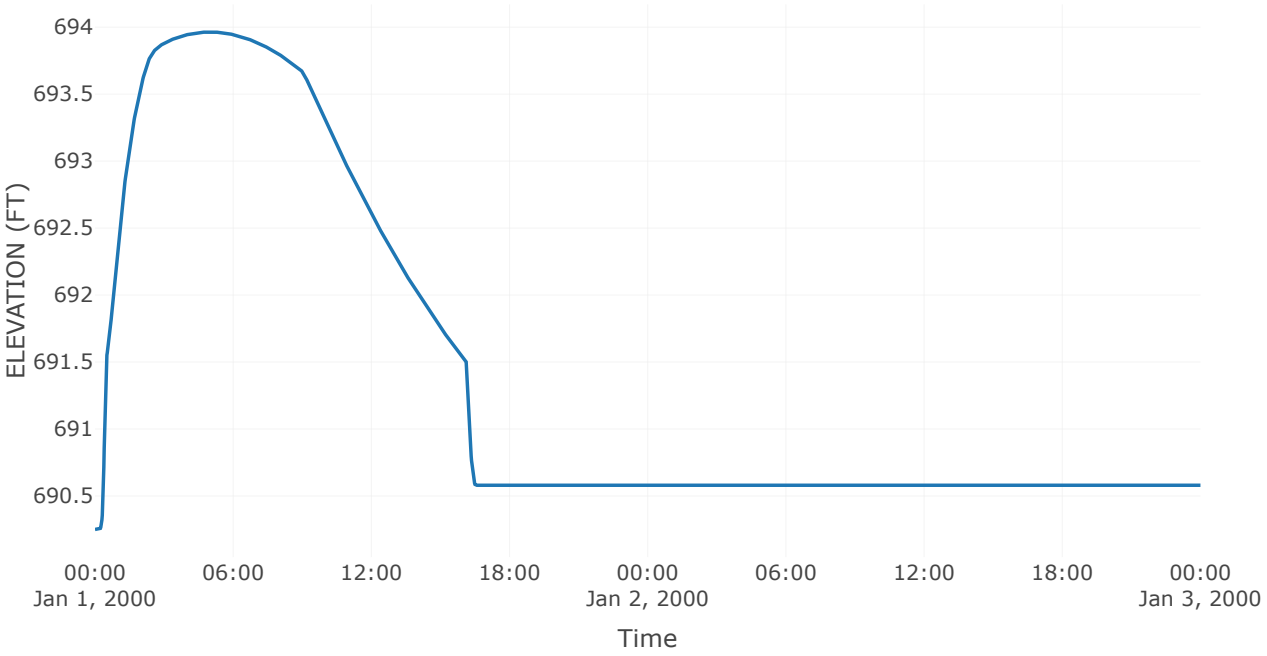

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

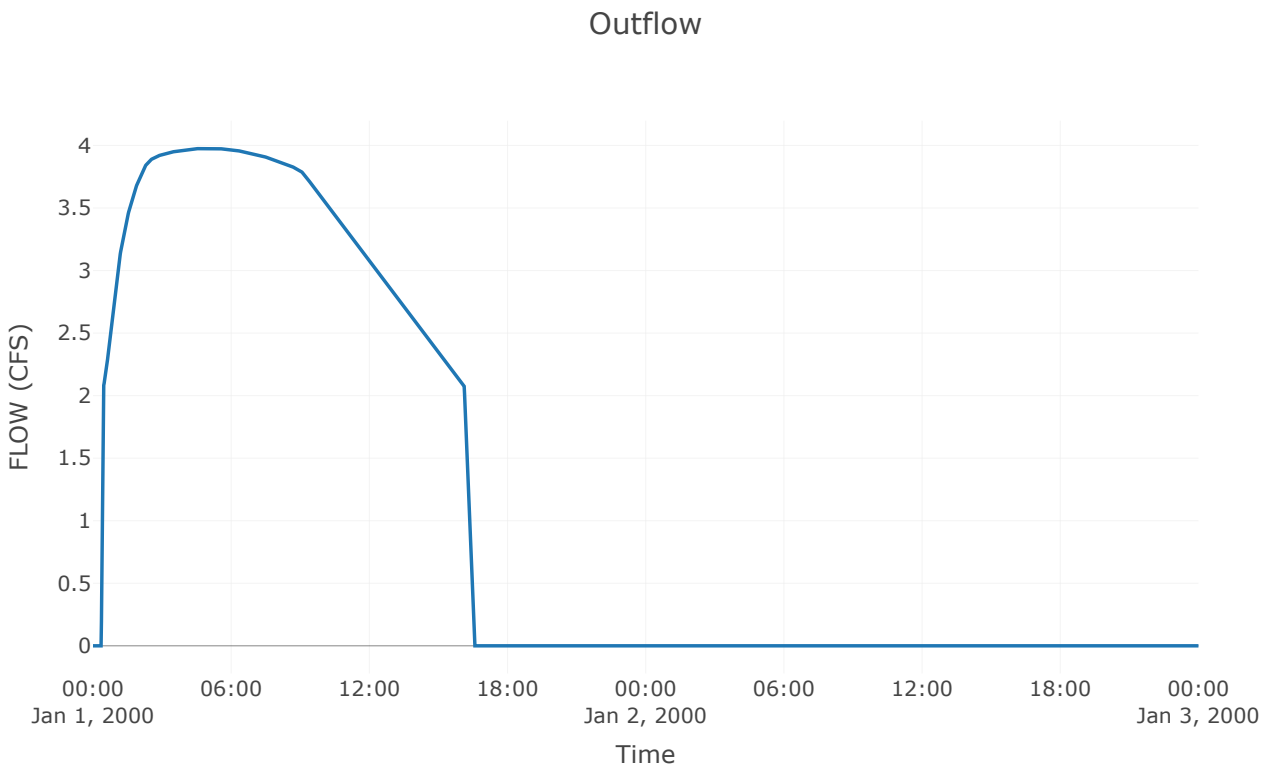

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

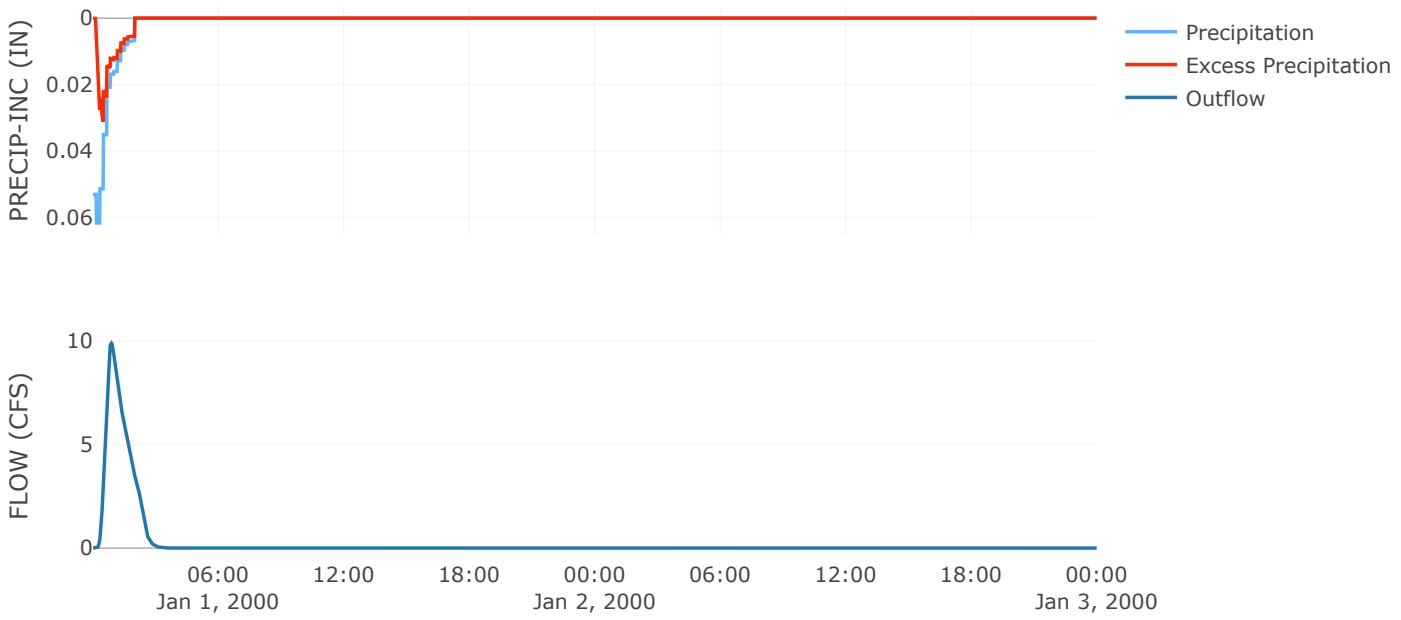
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

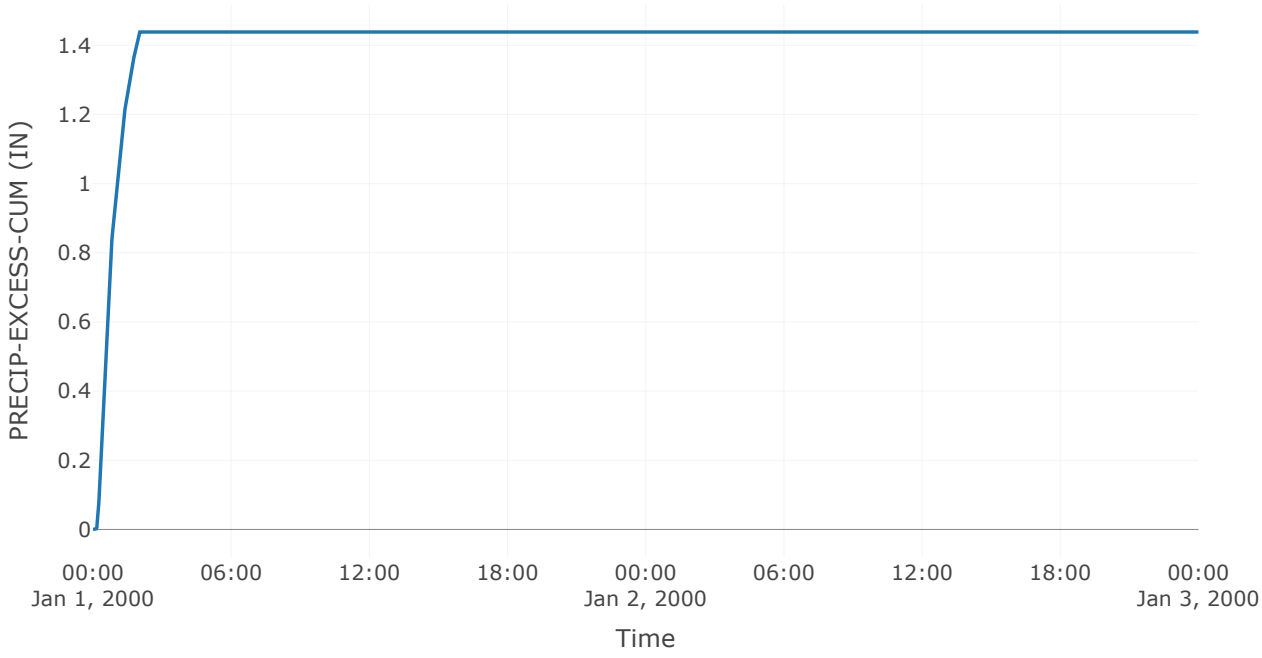
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

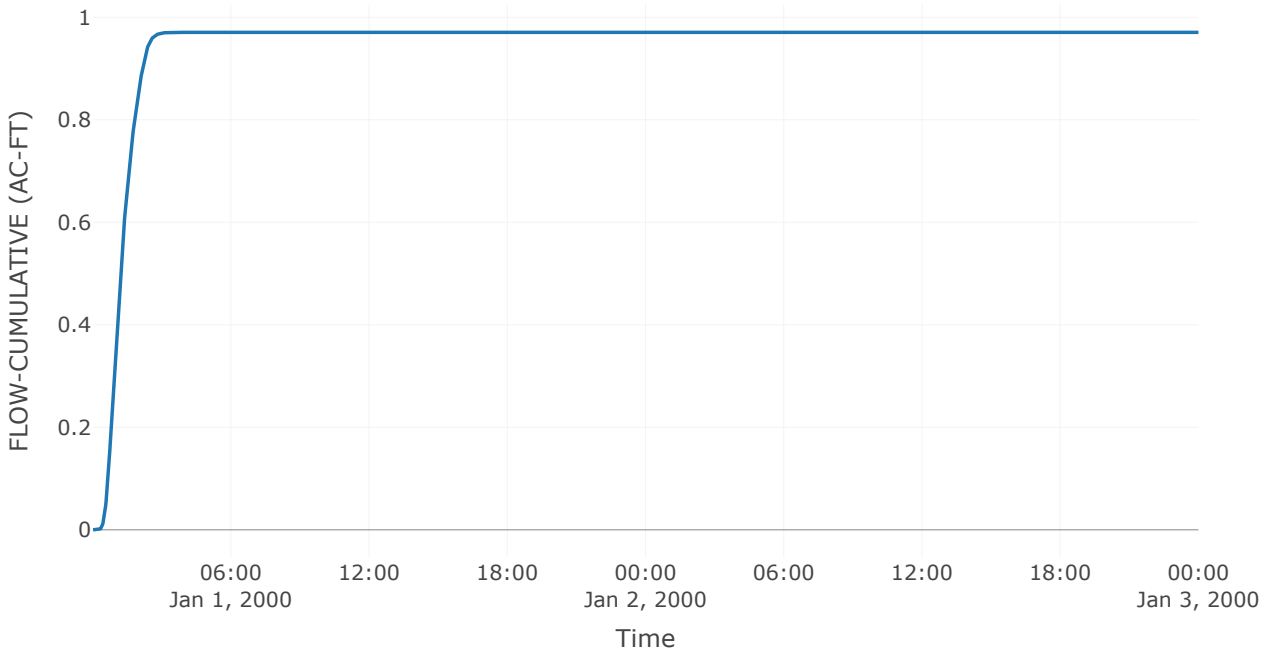
Precipitation and Outflow



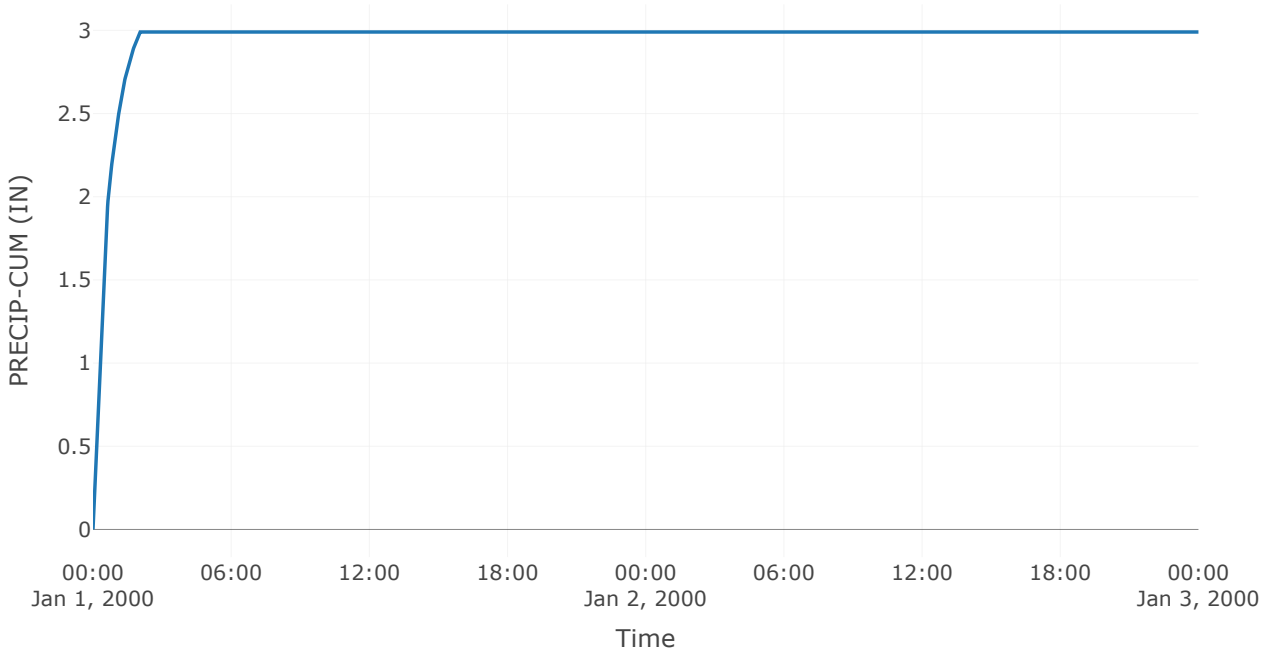
Cumulative Excess Precipitation

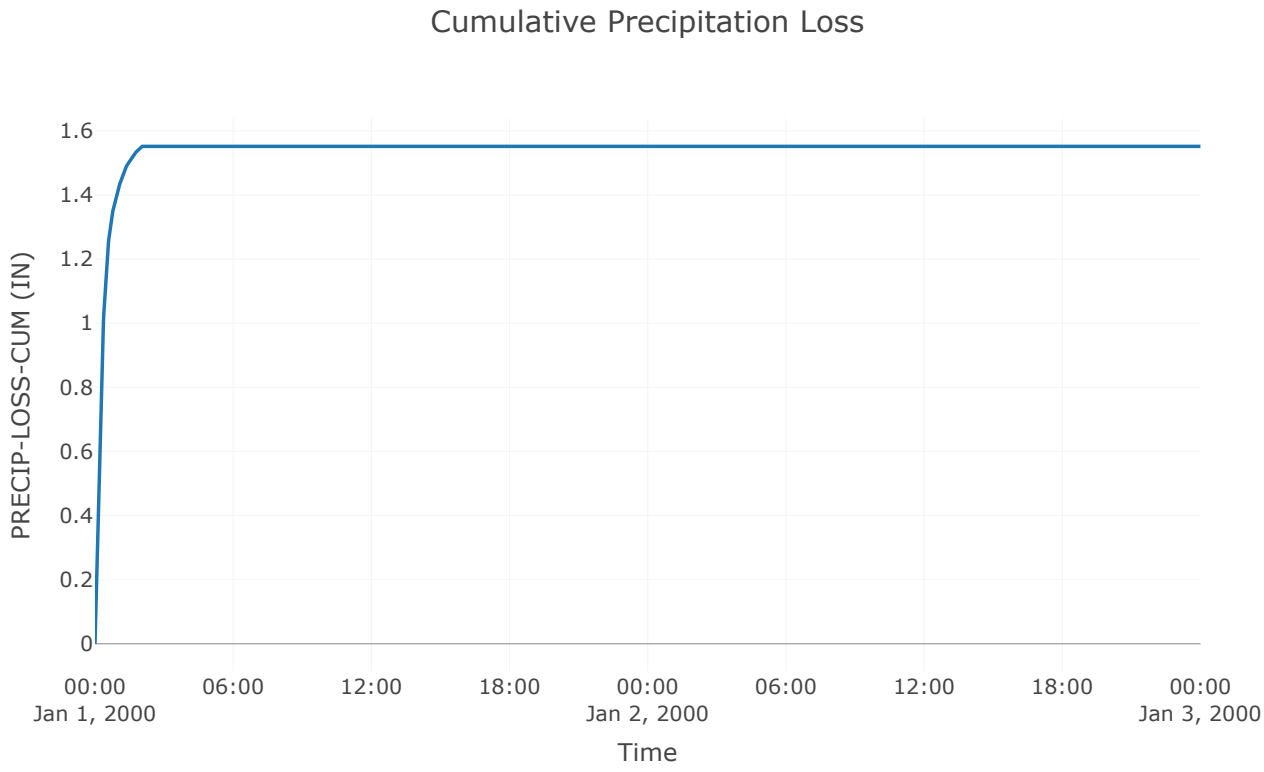


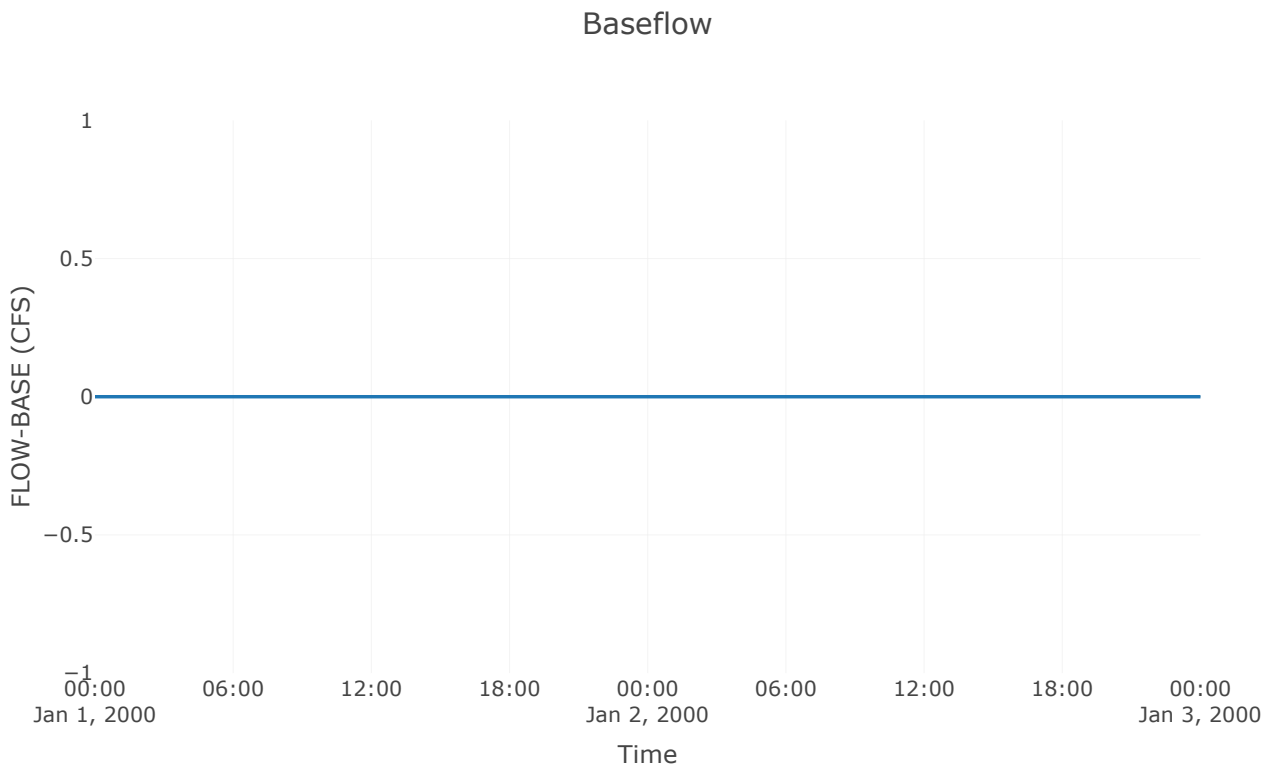
Cumulative Outflow

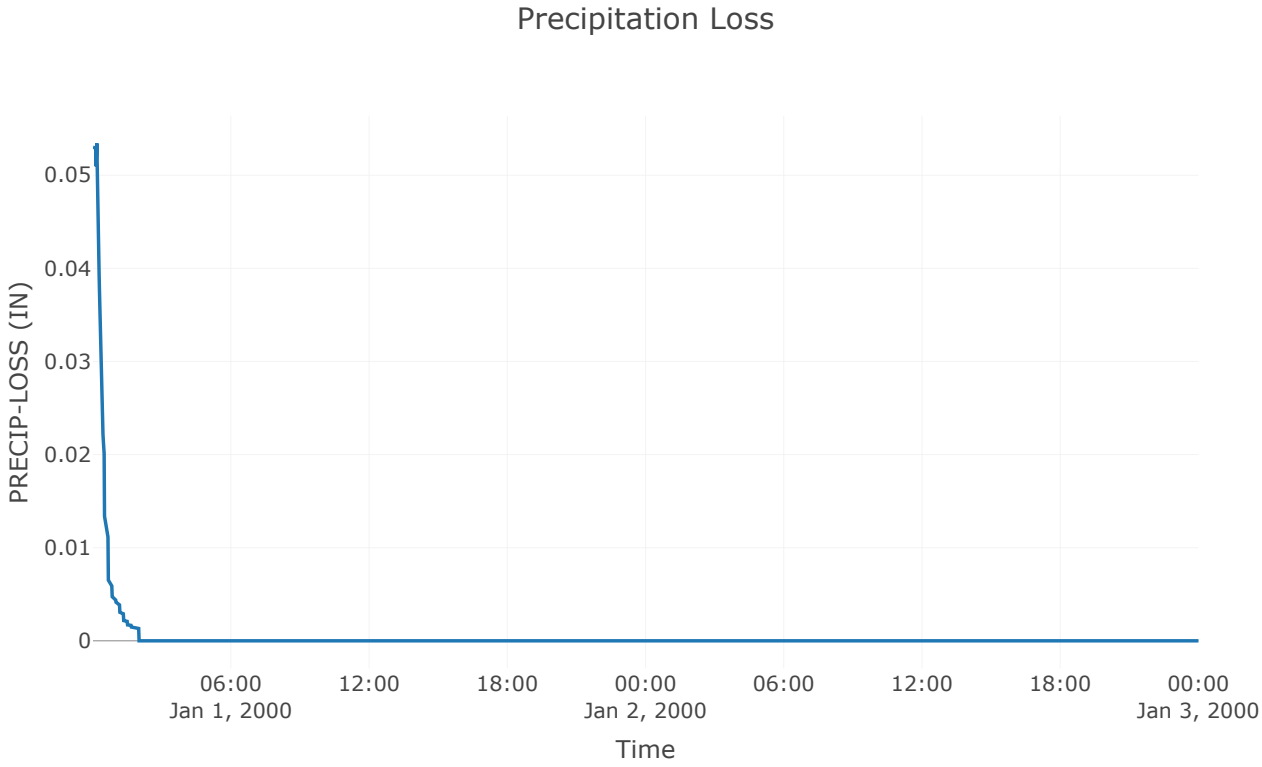


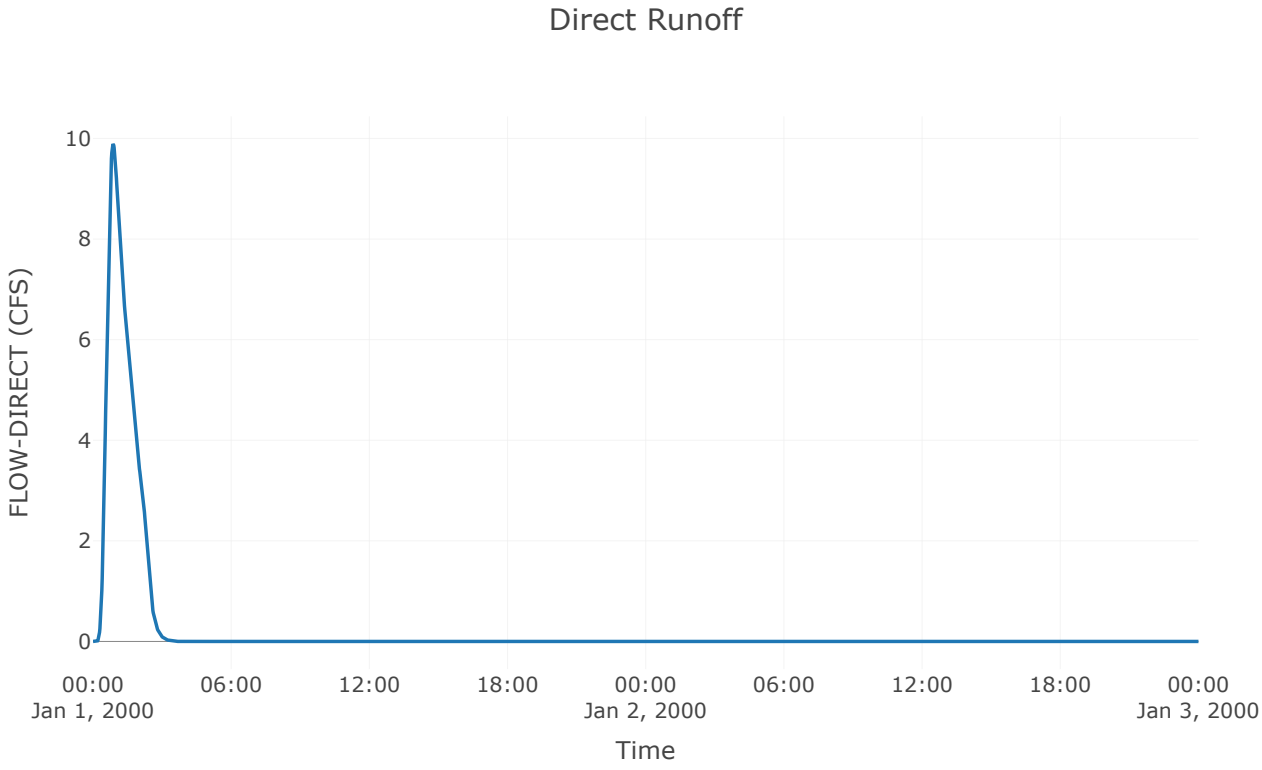
Cumulative Precipitation

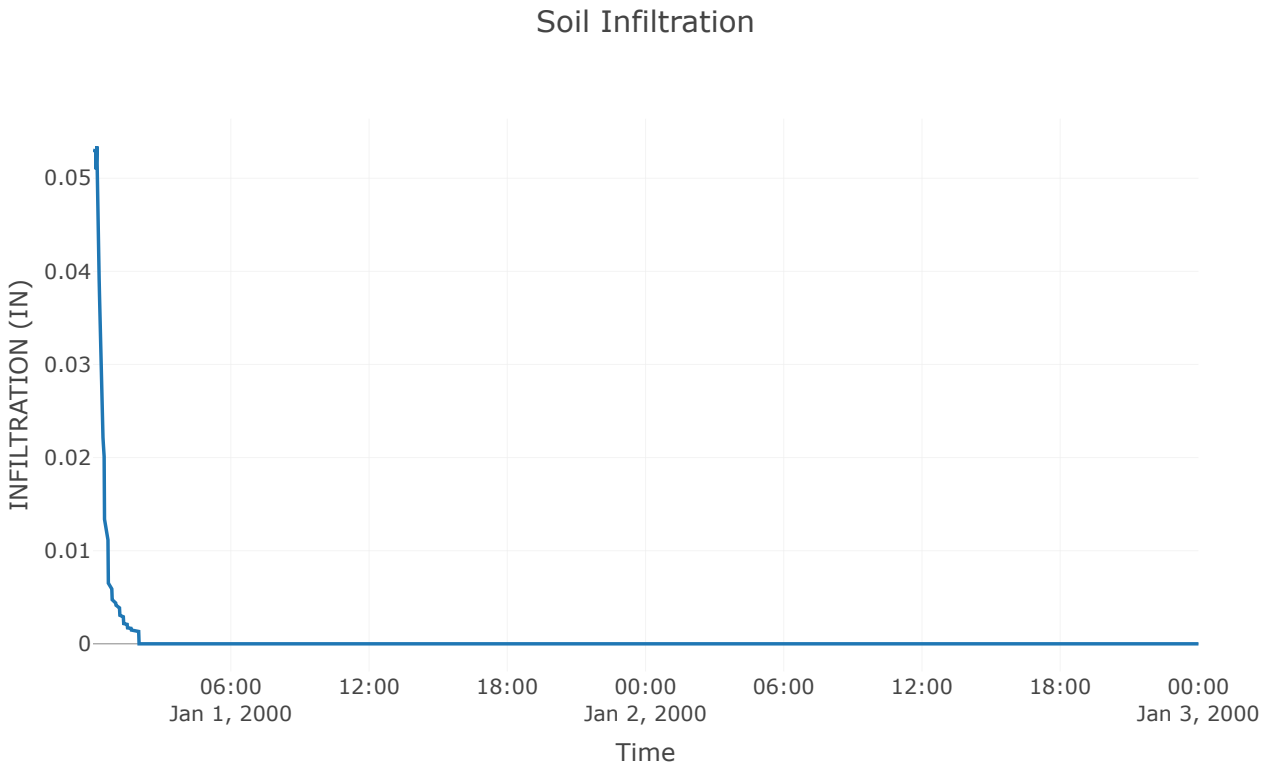



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

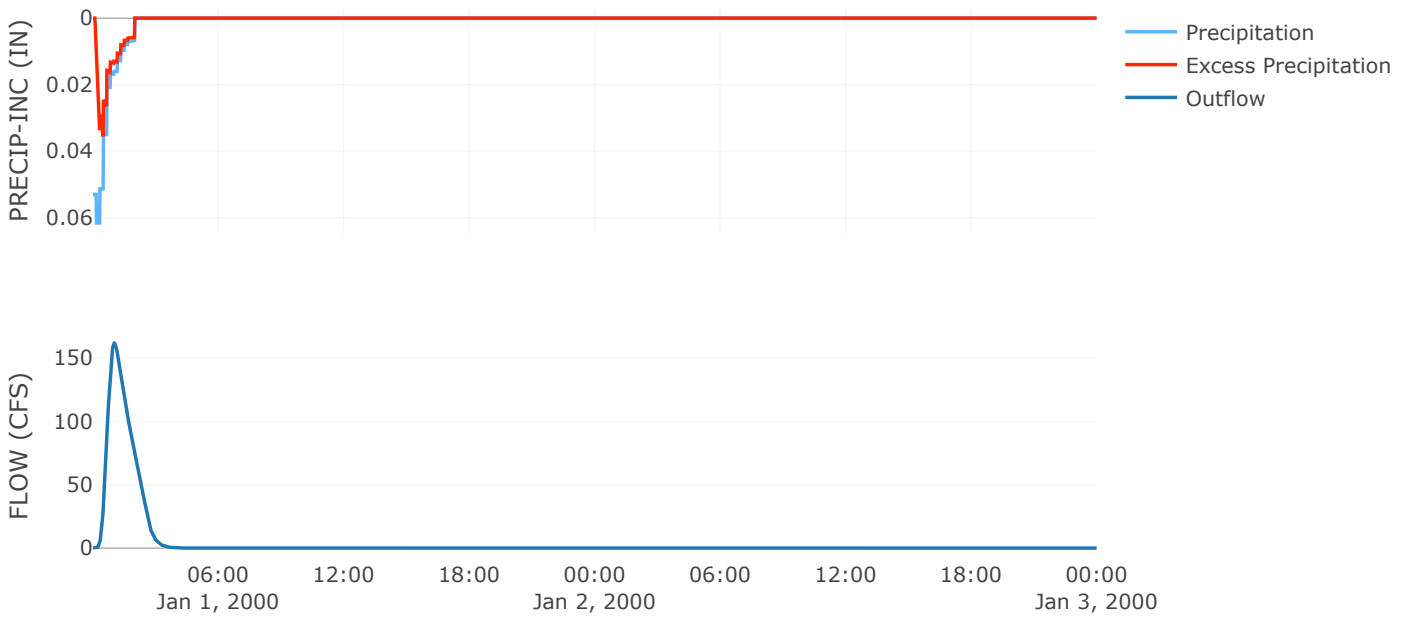
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

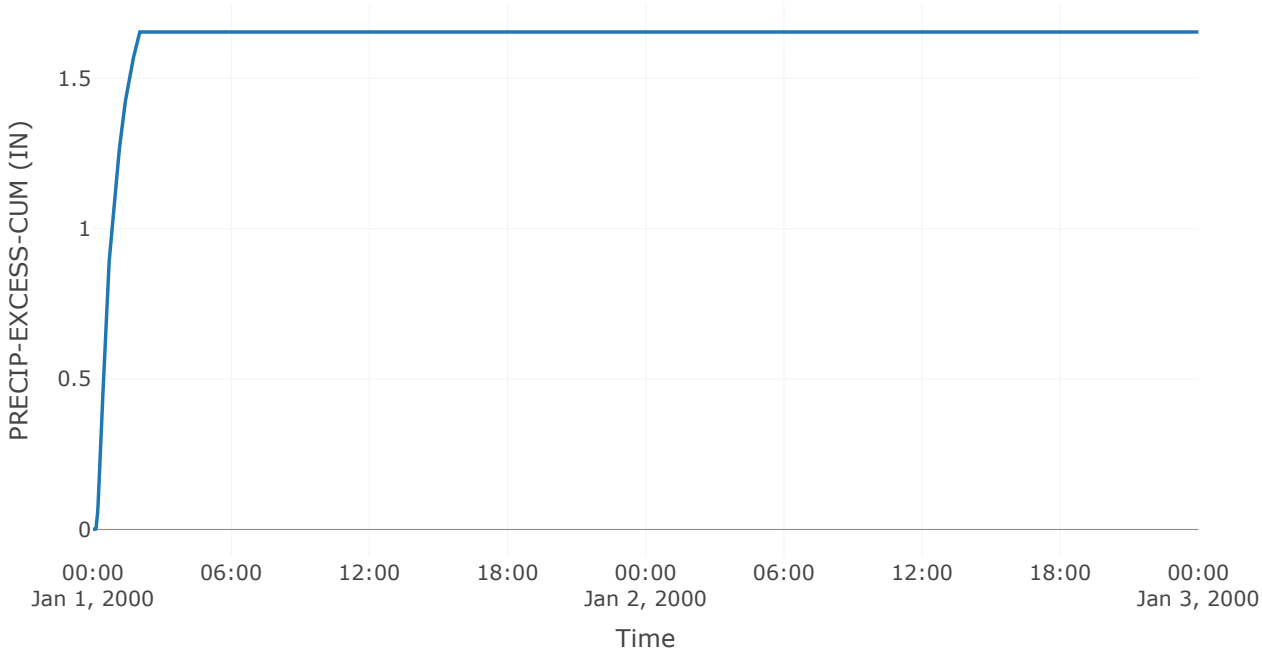
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

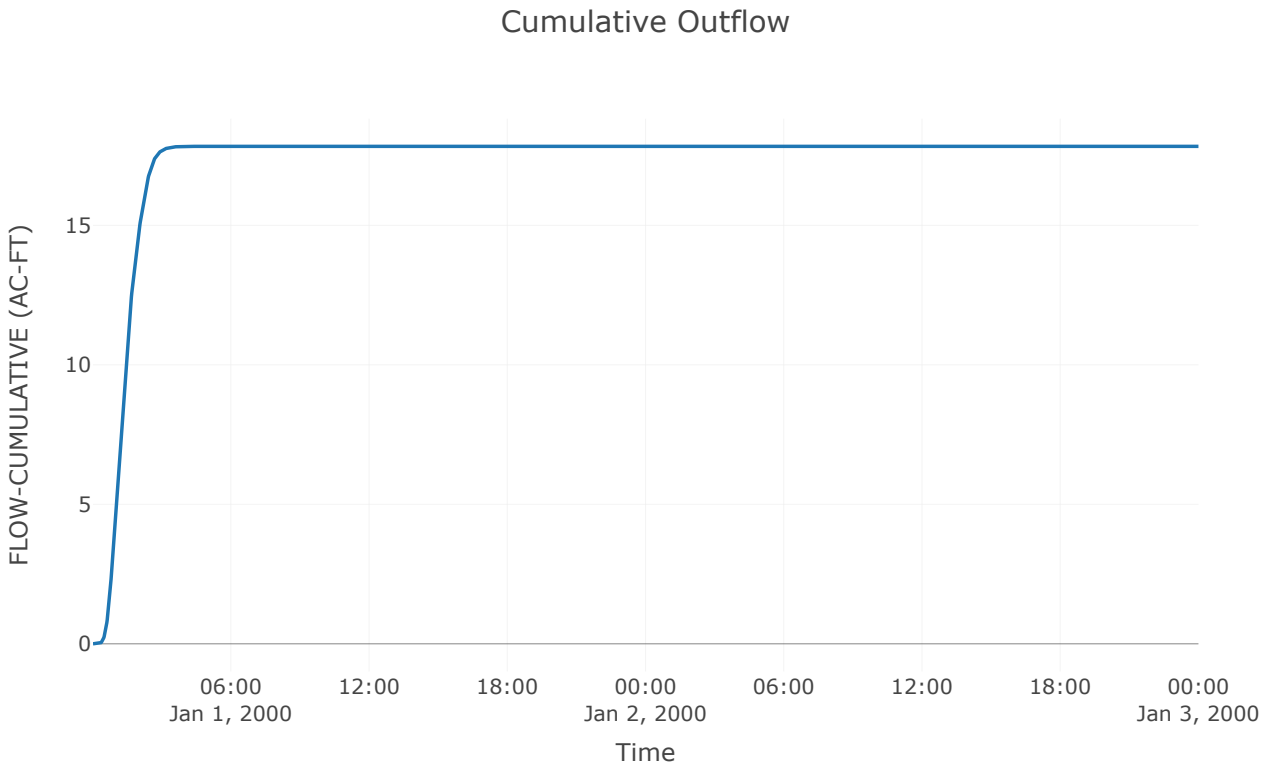
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

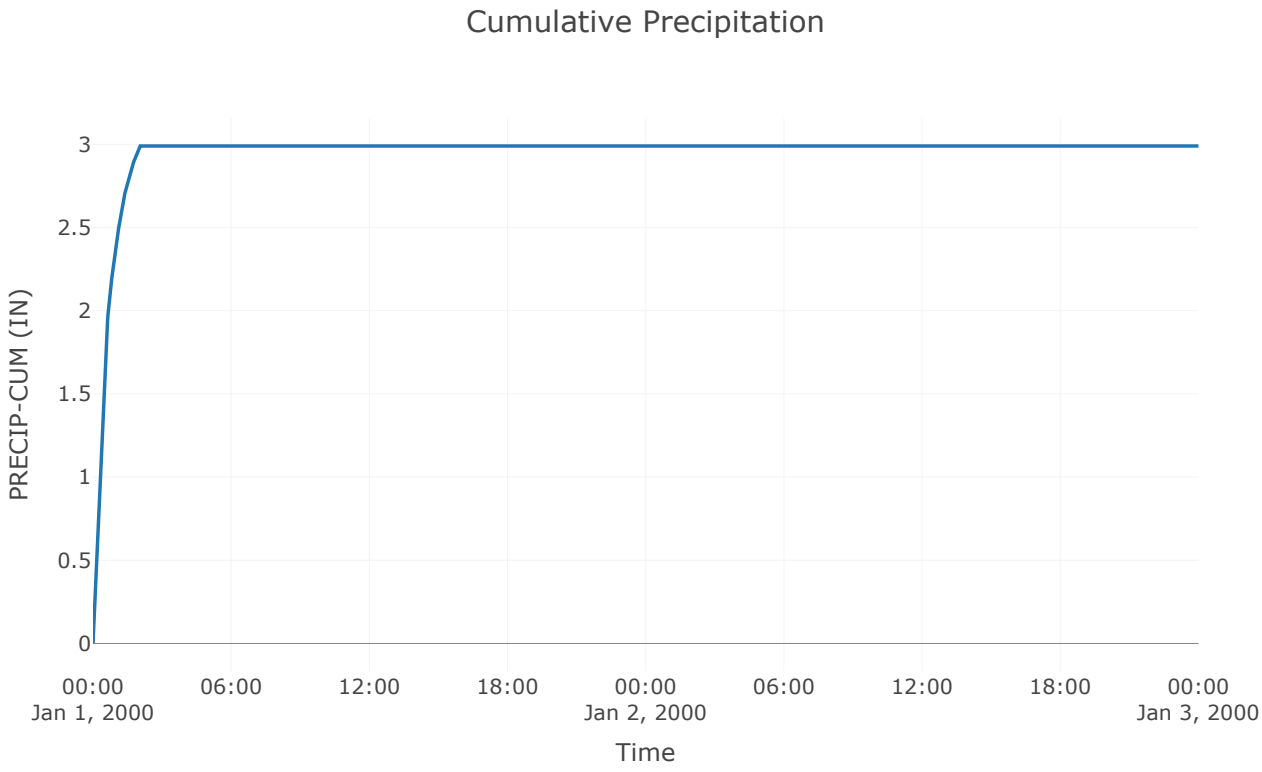
Precipitation and Outflow

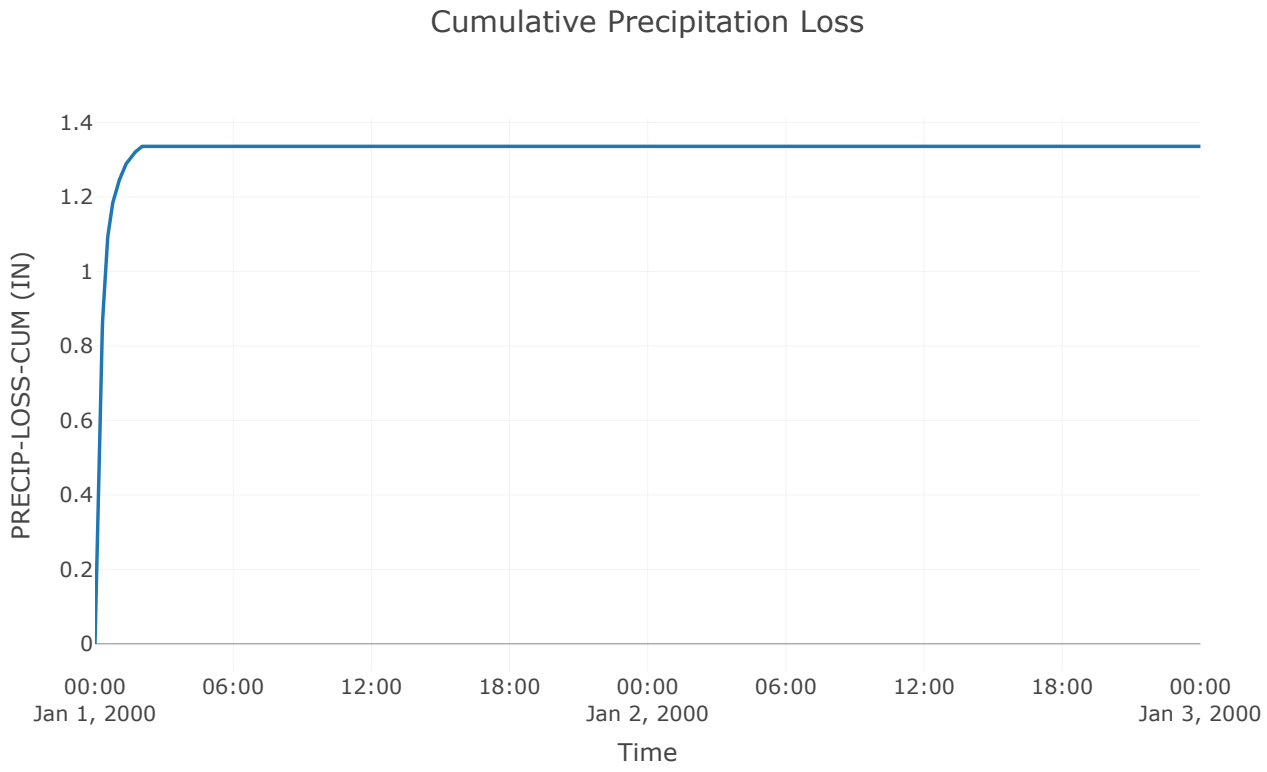


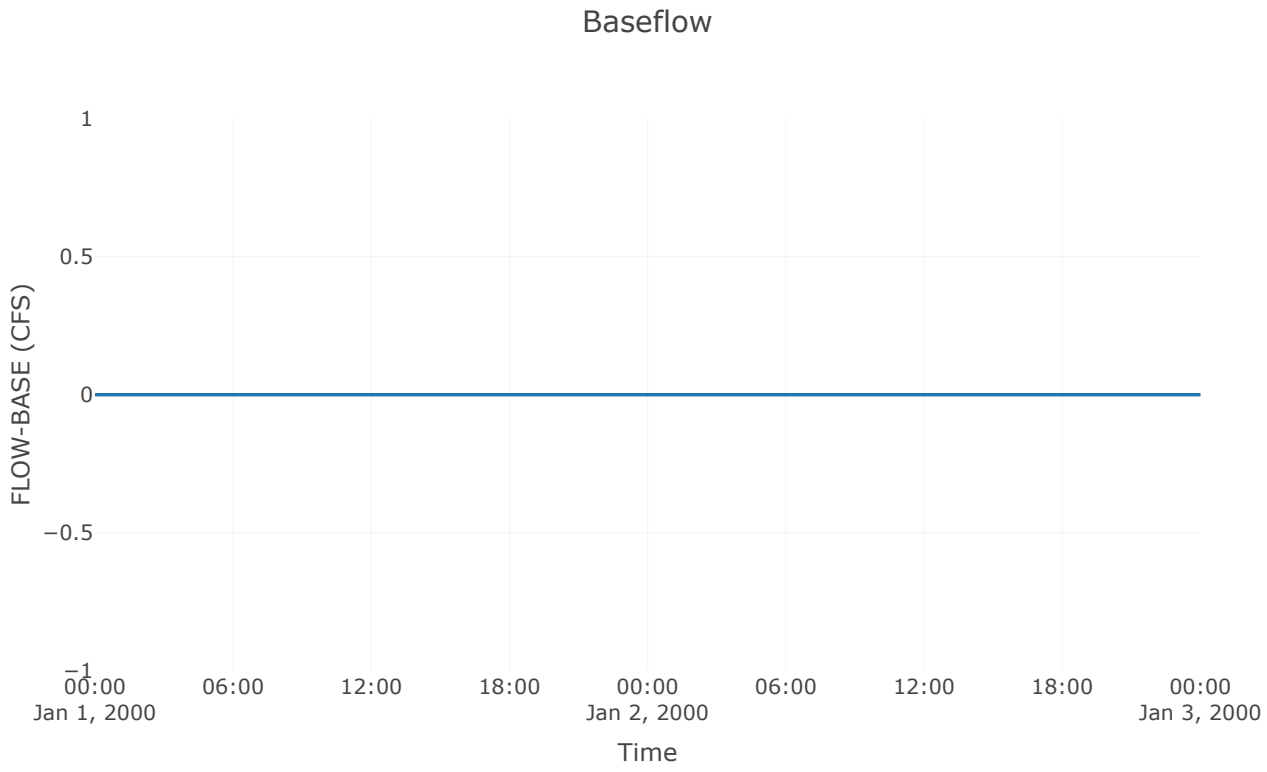
Cumulative Excess Precipitation



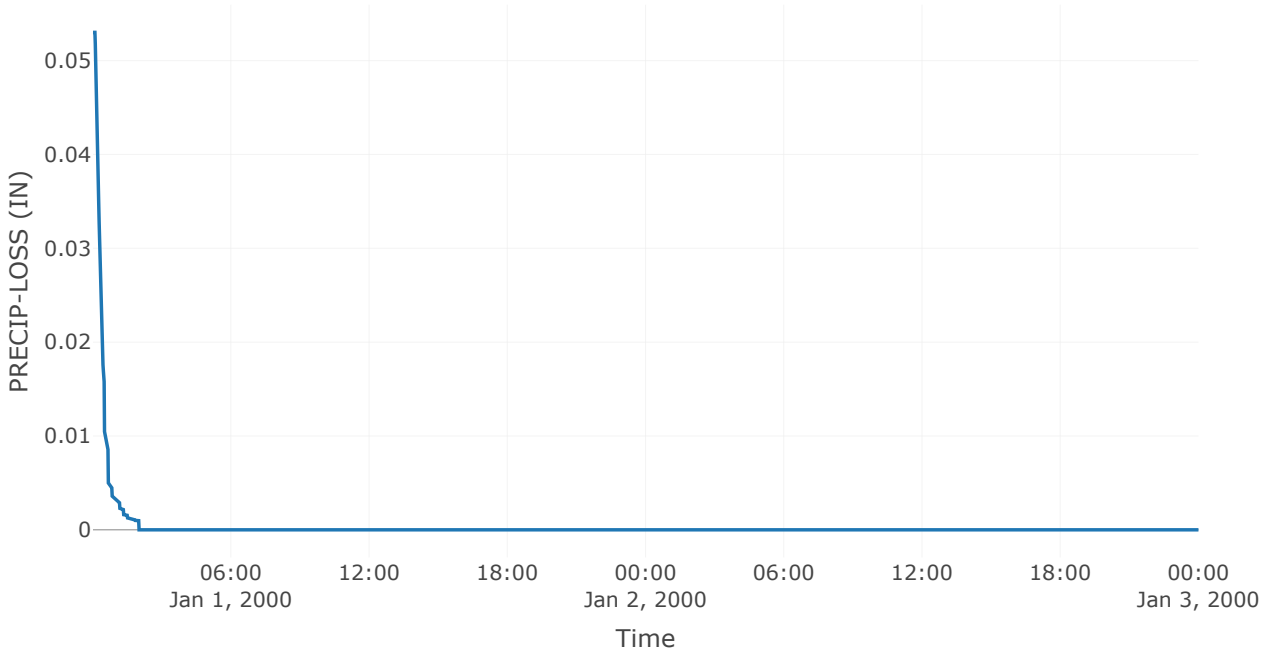

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

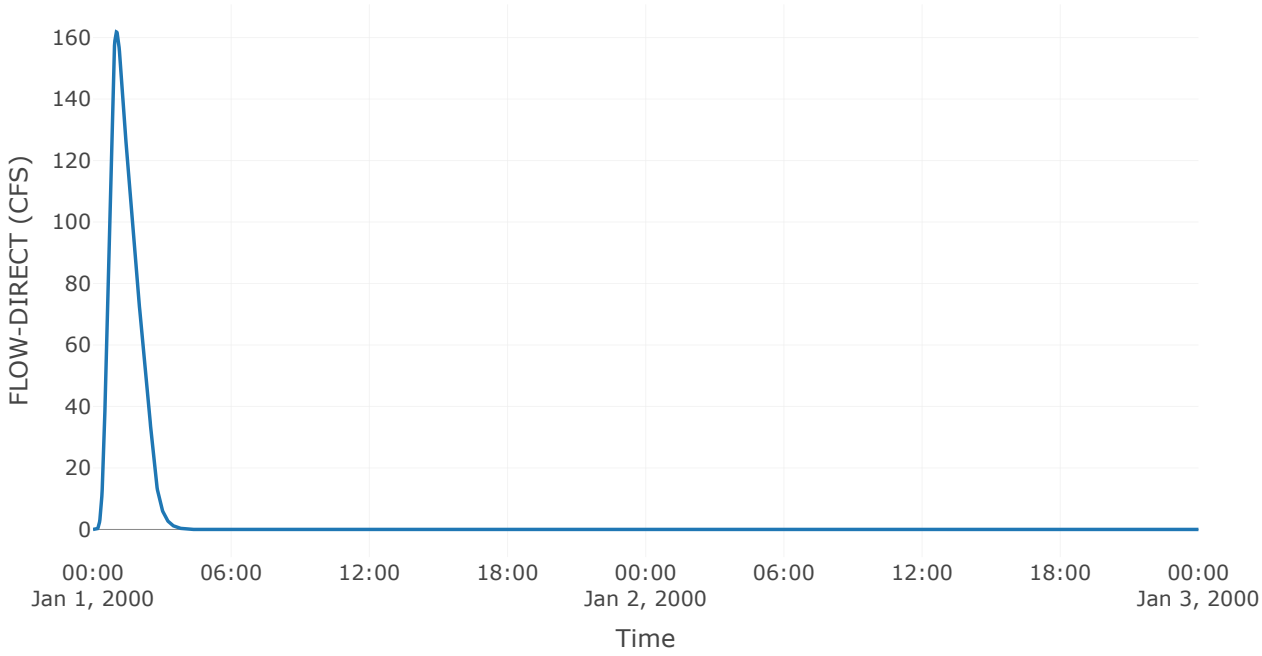

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

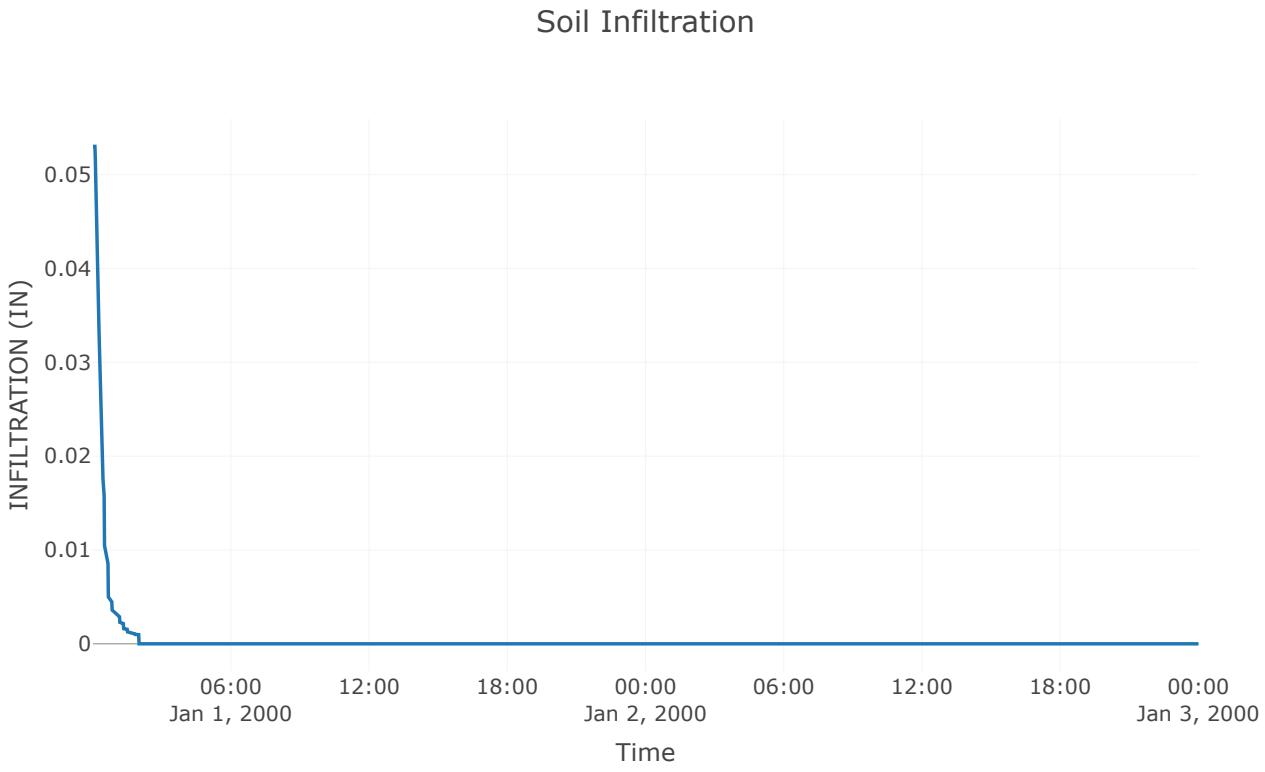

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



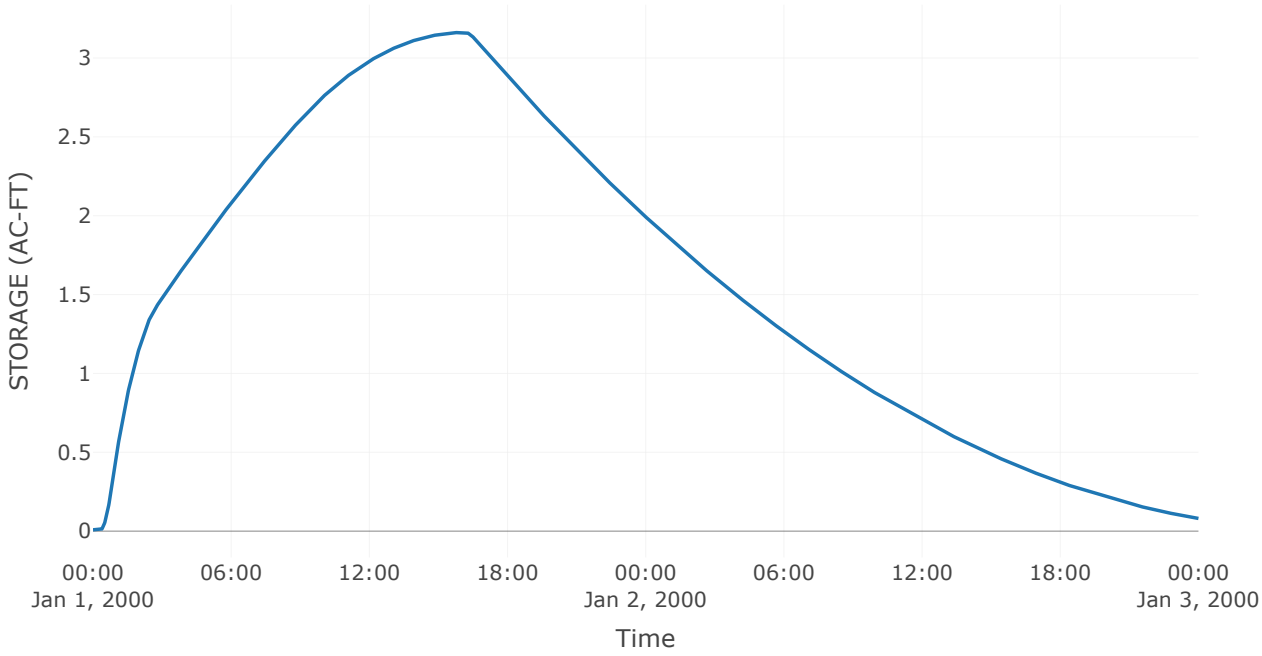

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

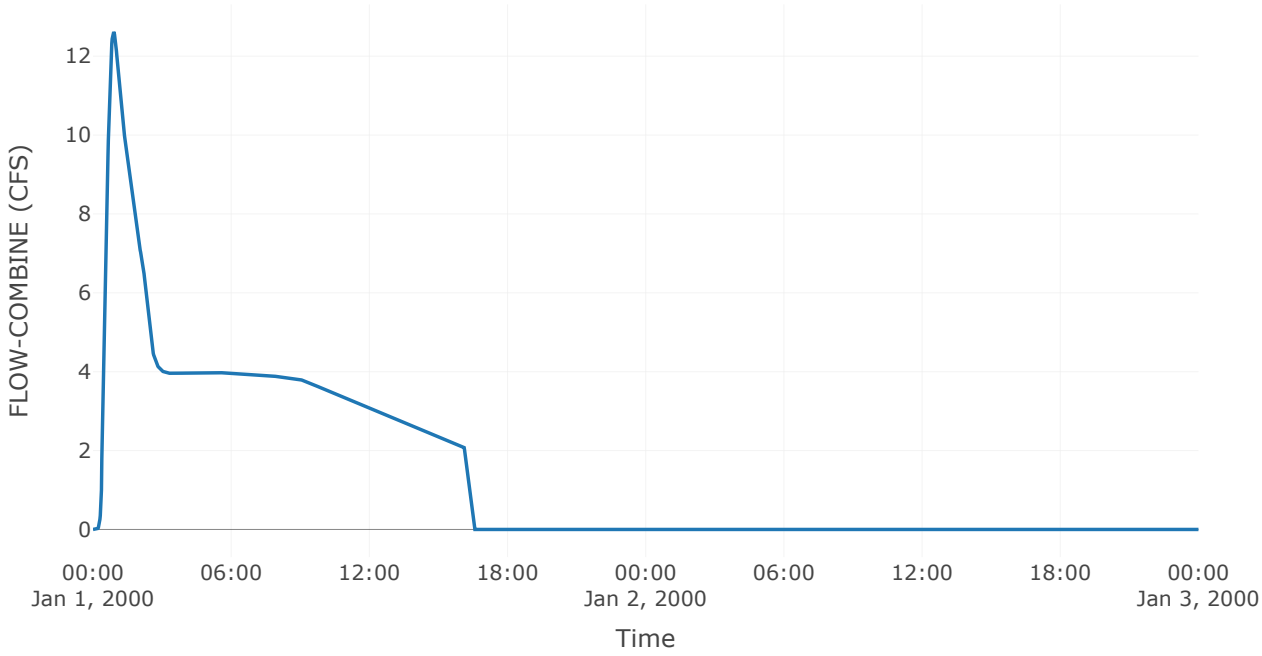
Downstream : Off - Site Tributary Area

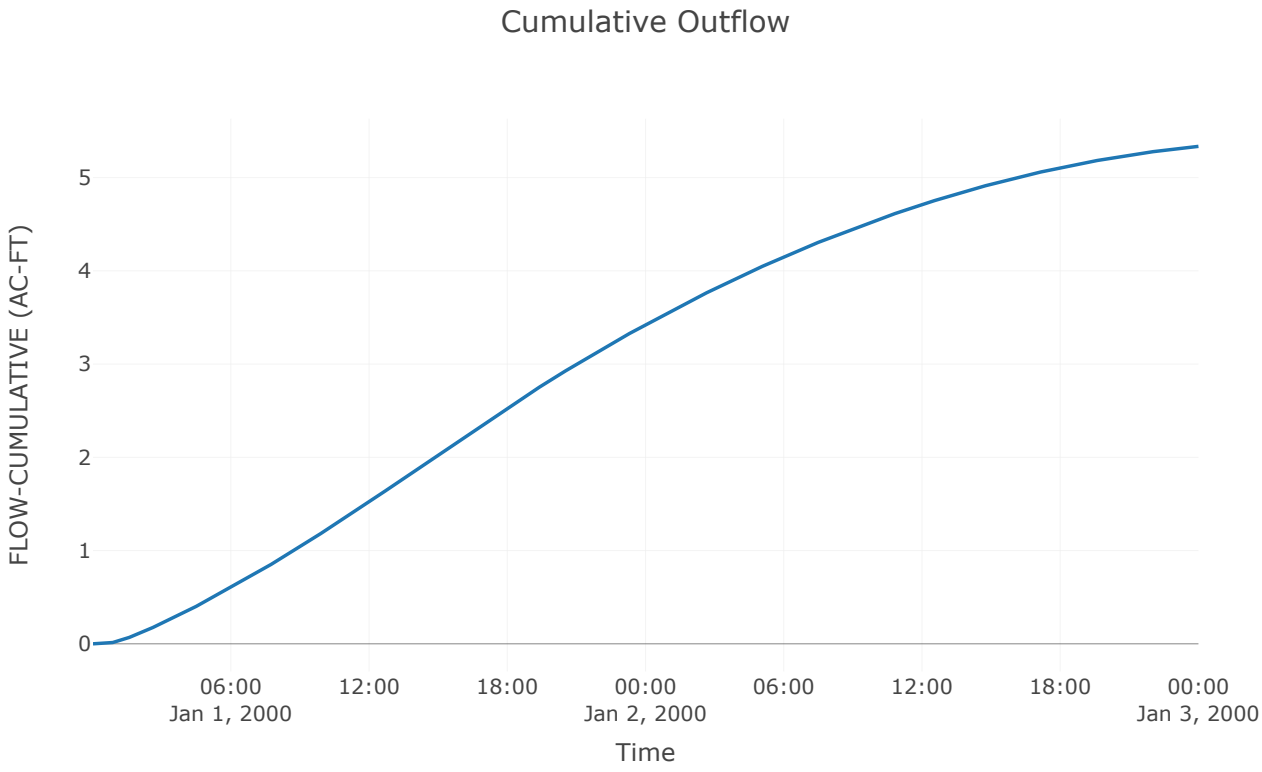
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

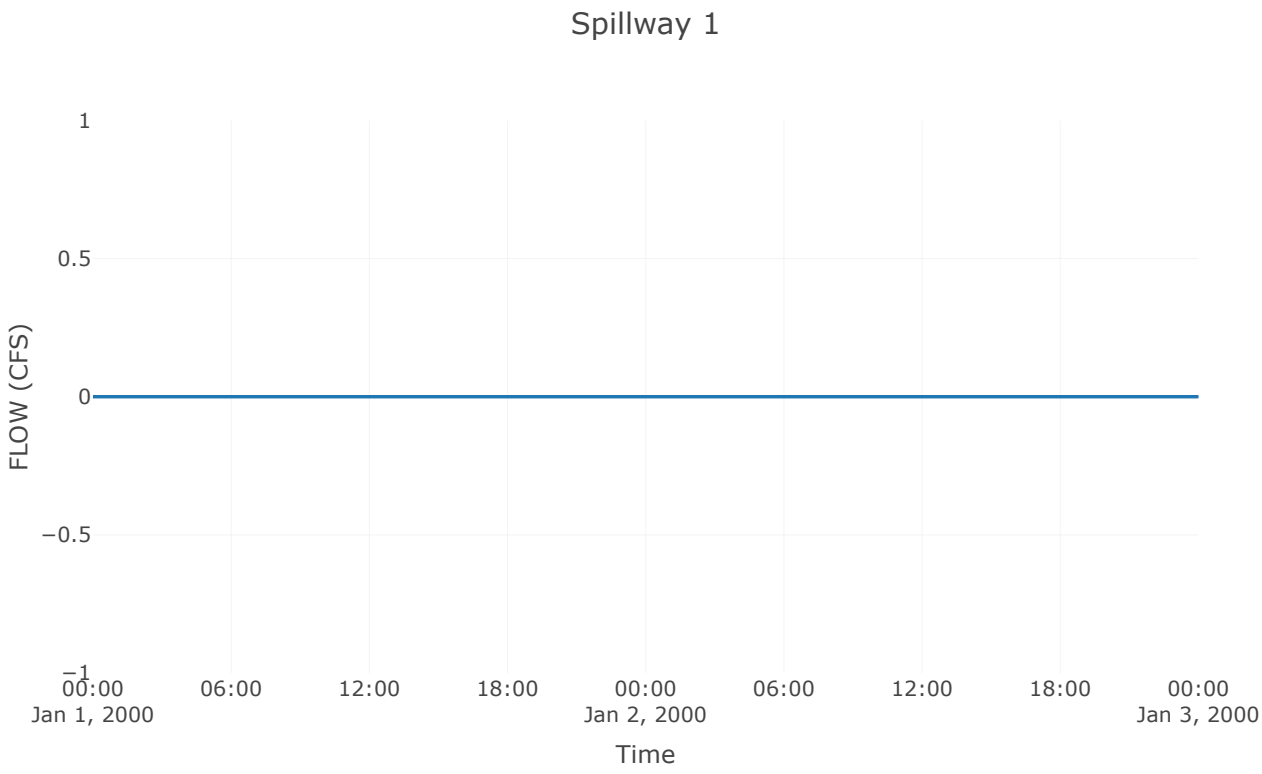
Storage

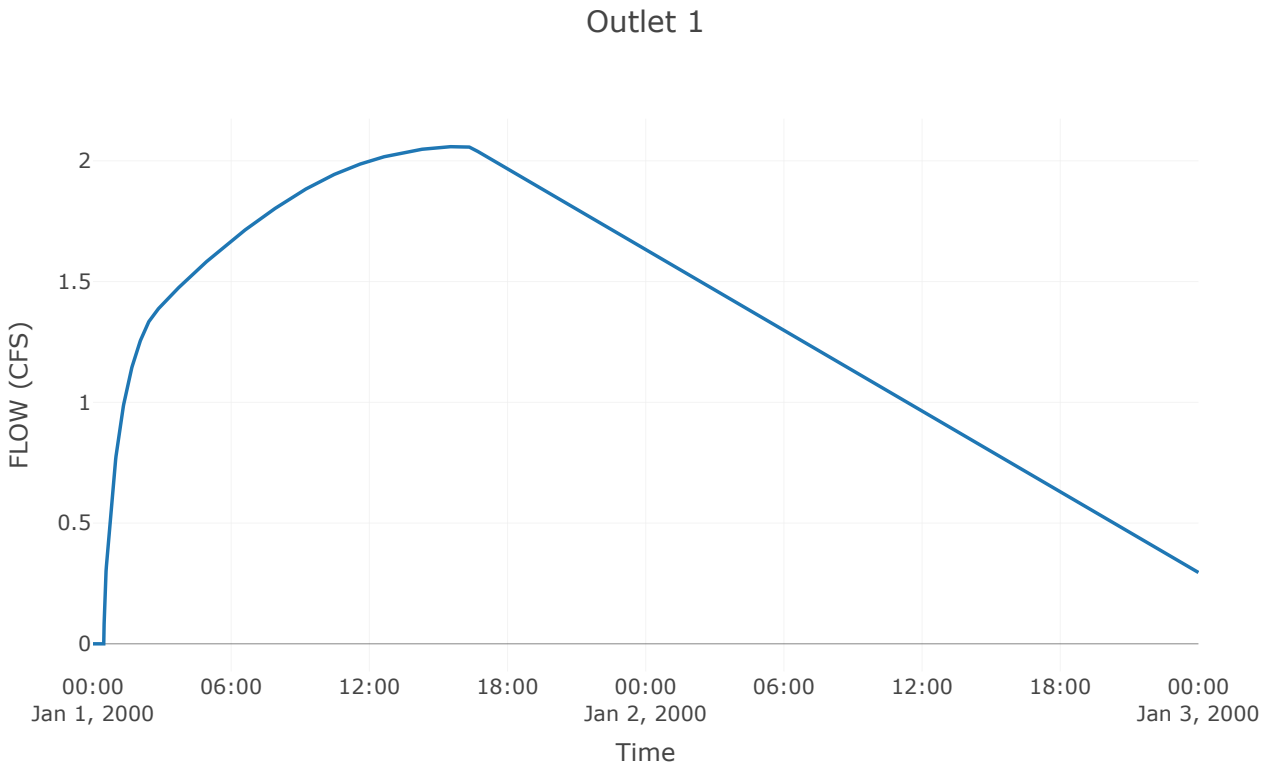


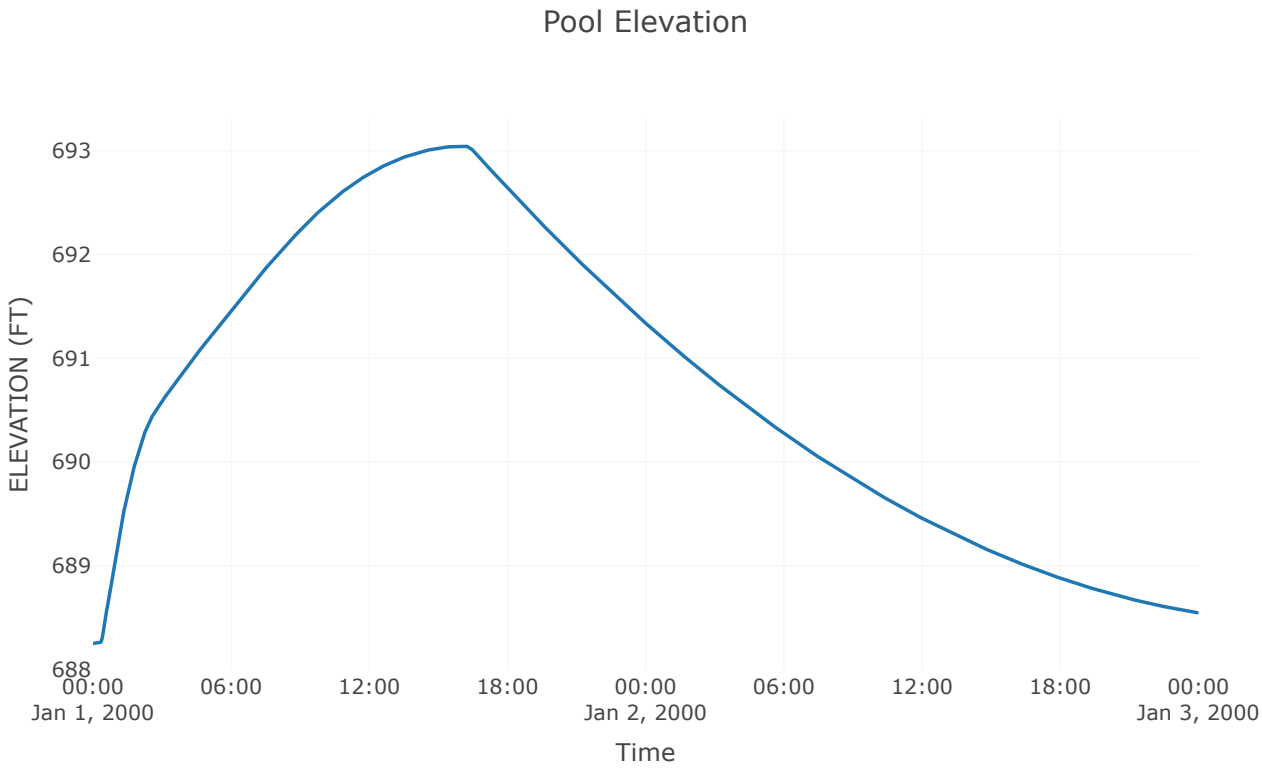
Combined Inflow

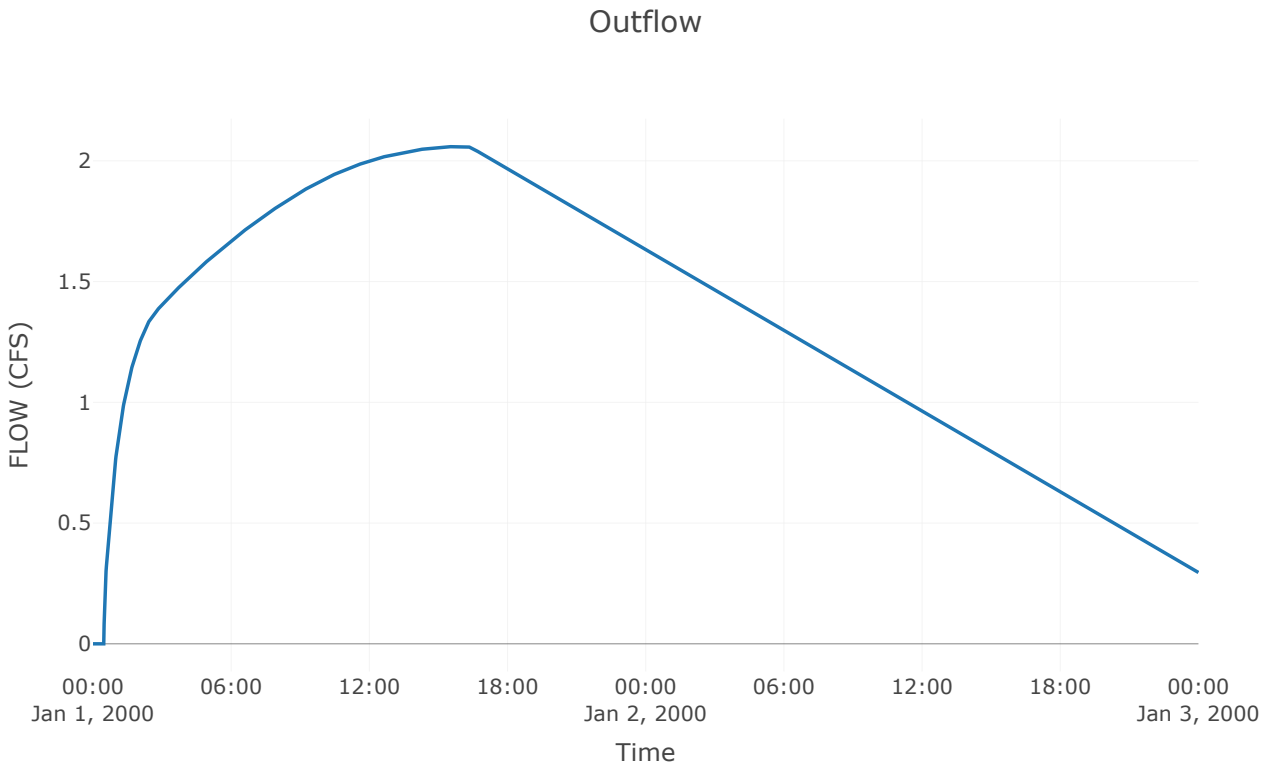



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

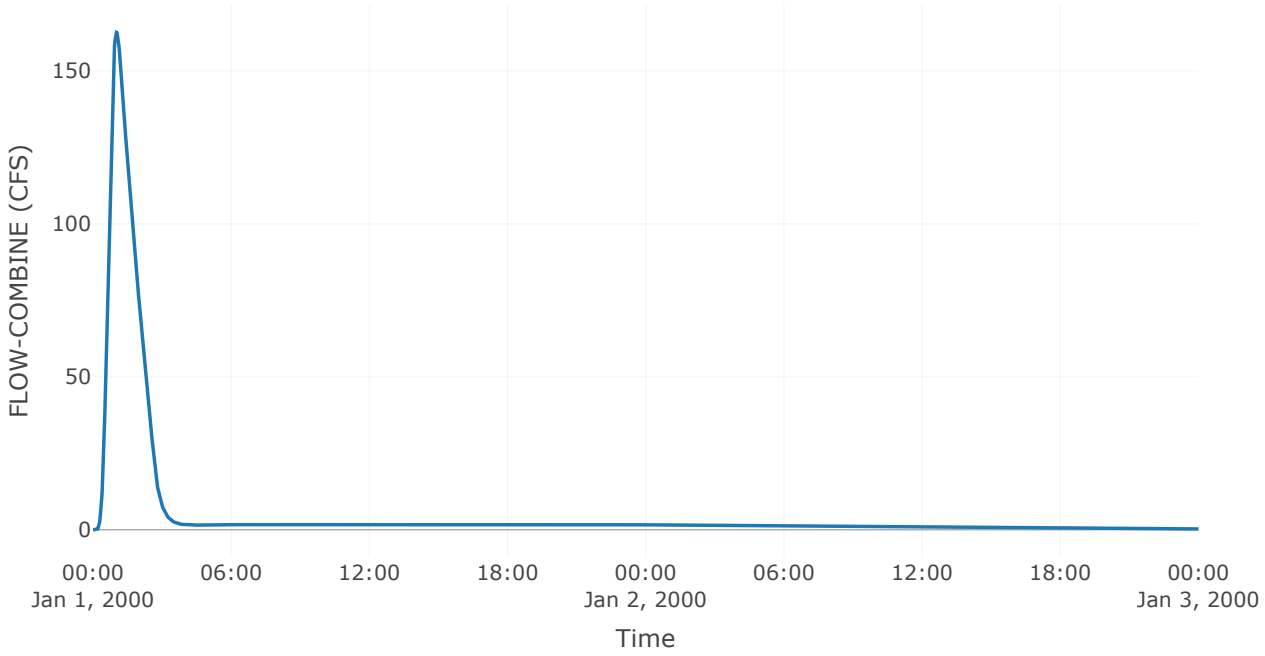

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

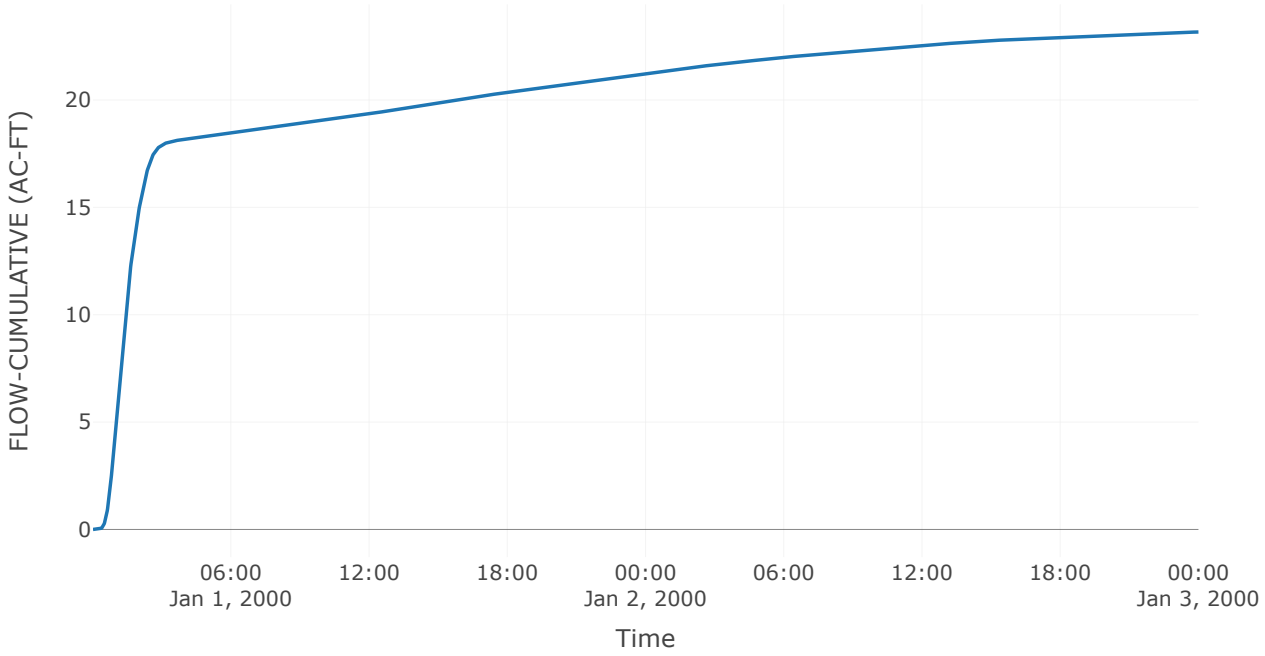
Downstream : Storage East of Wolf Road

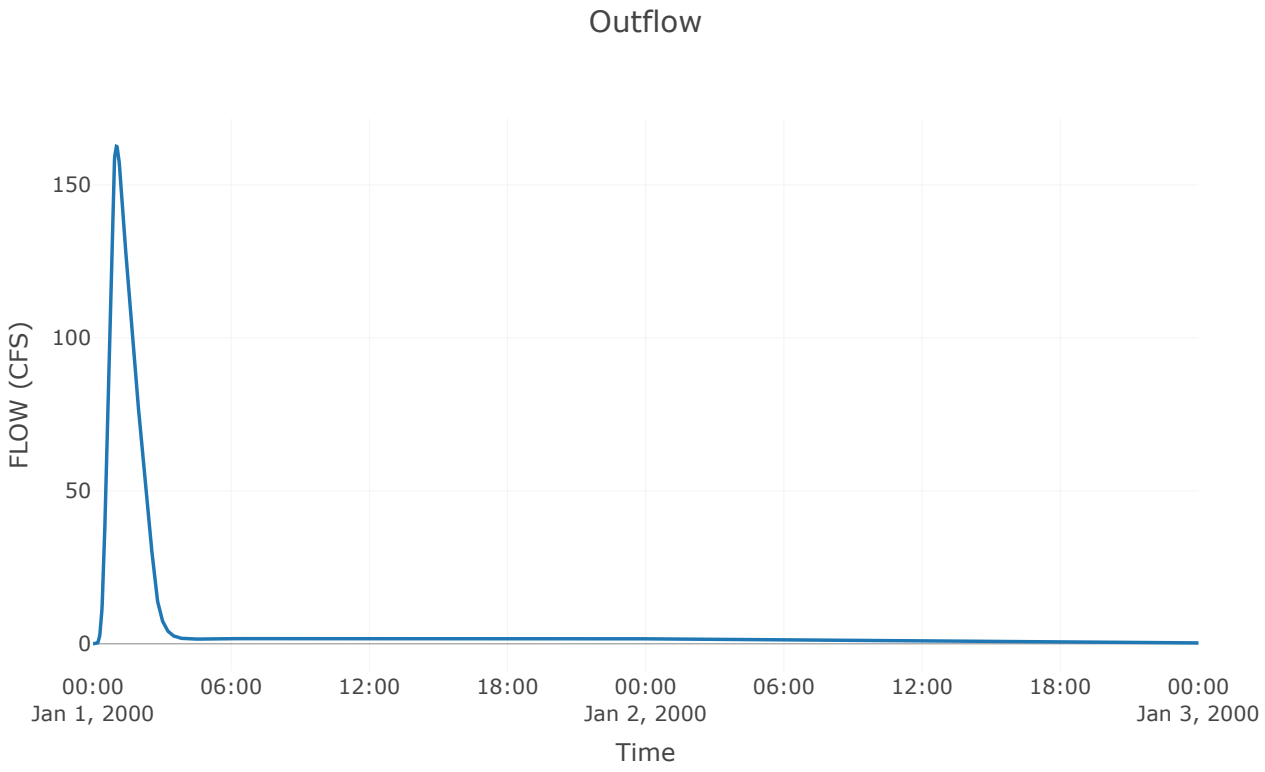
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61

Combined Inflow



Cumulative Outflow



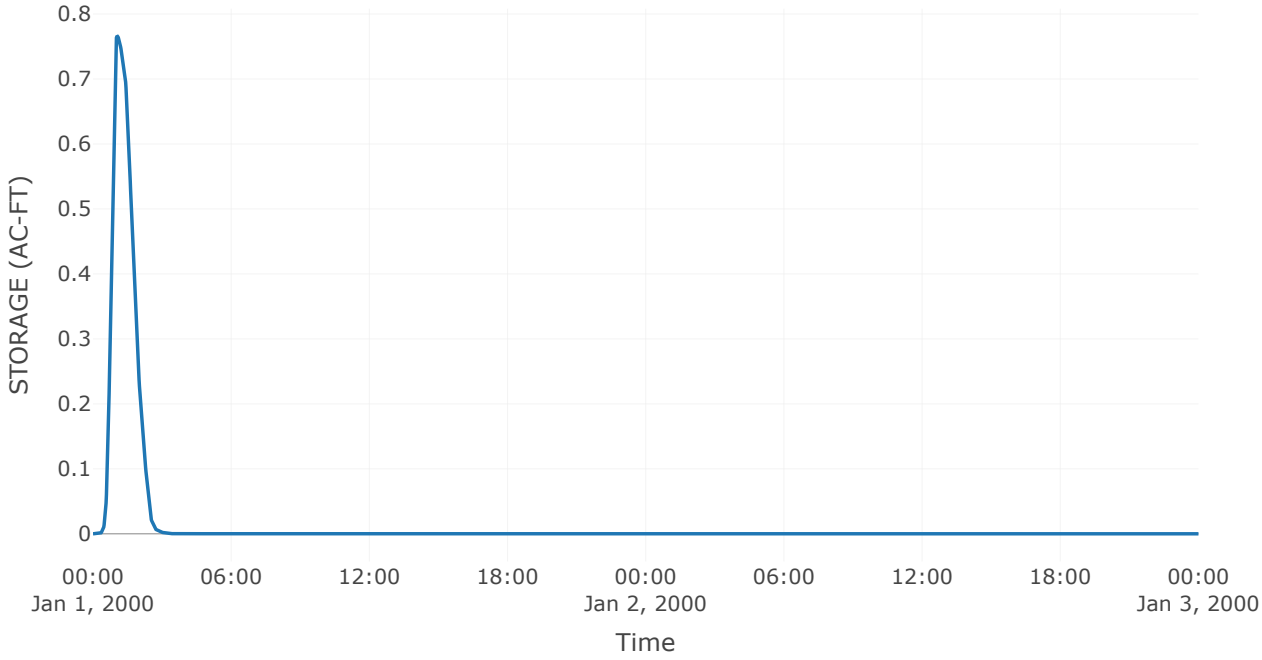

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

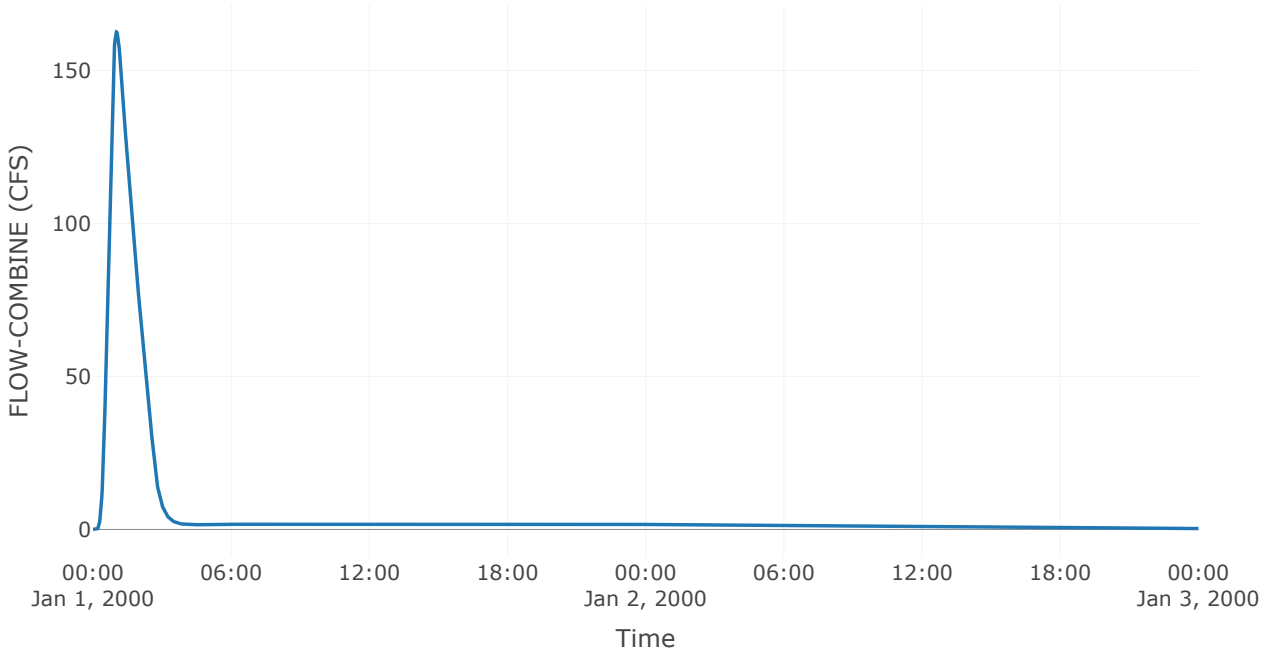
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

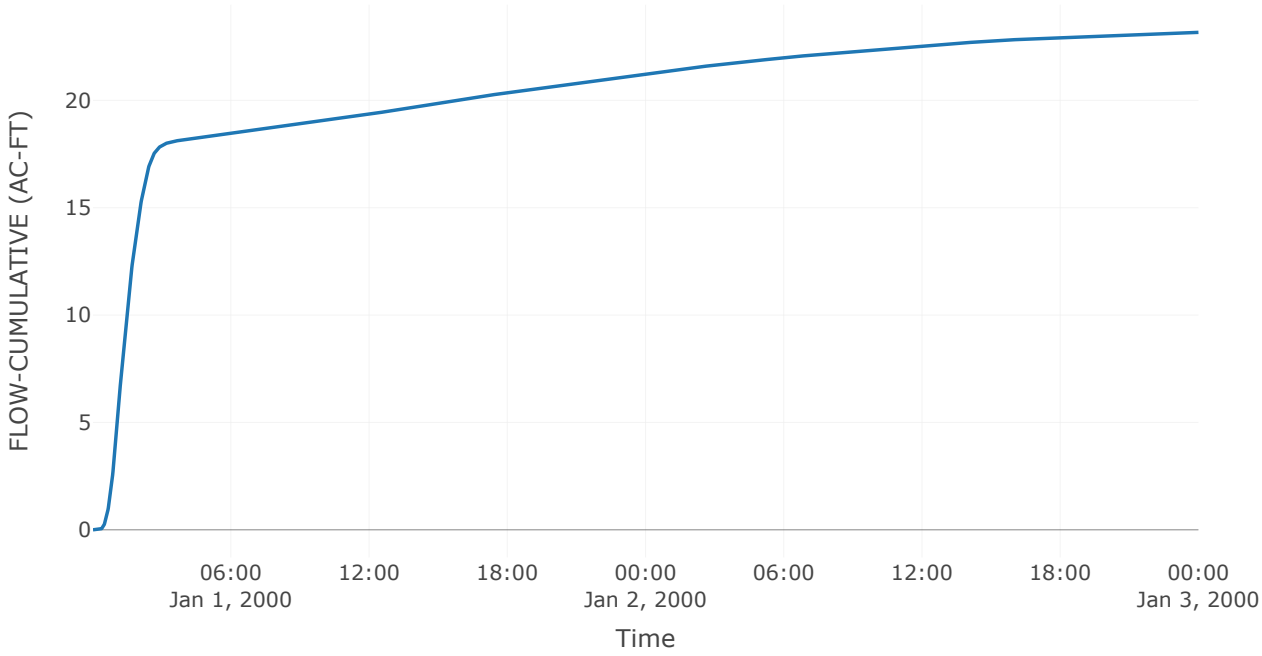
Storage



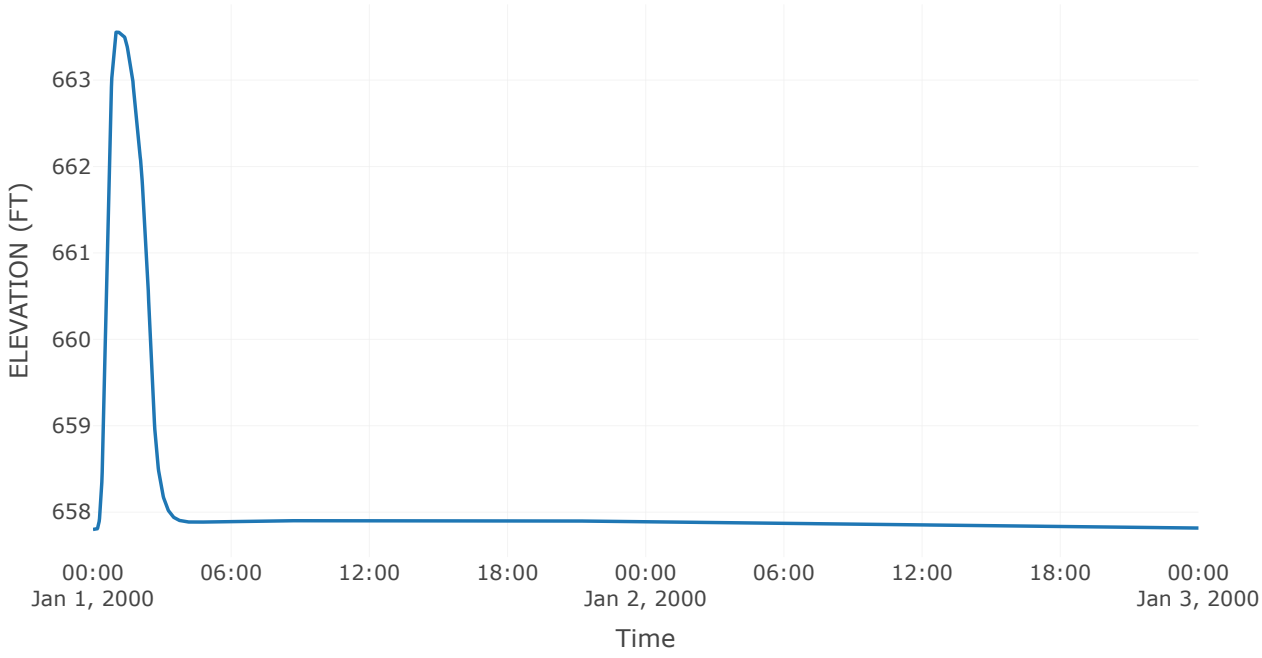
Combined Inflow

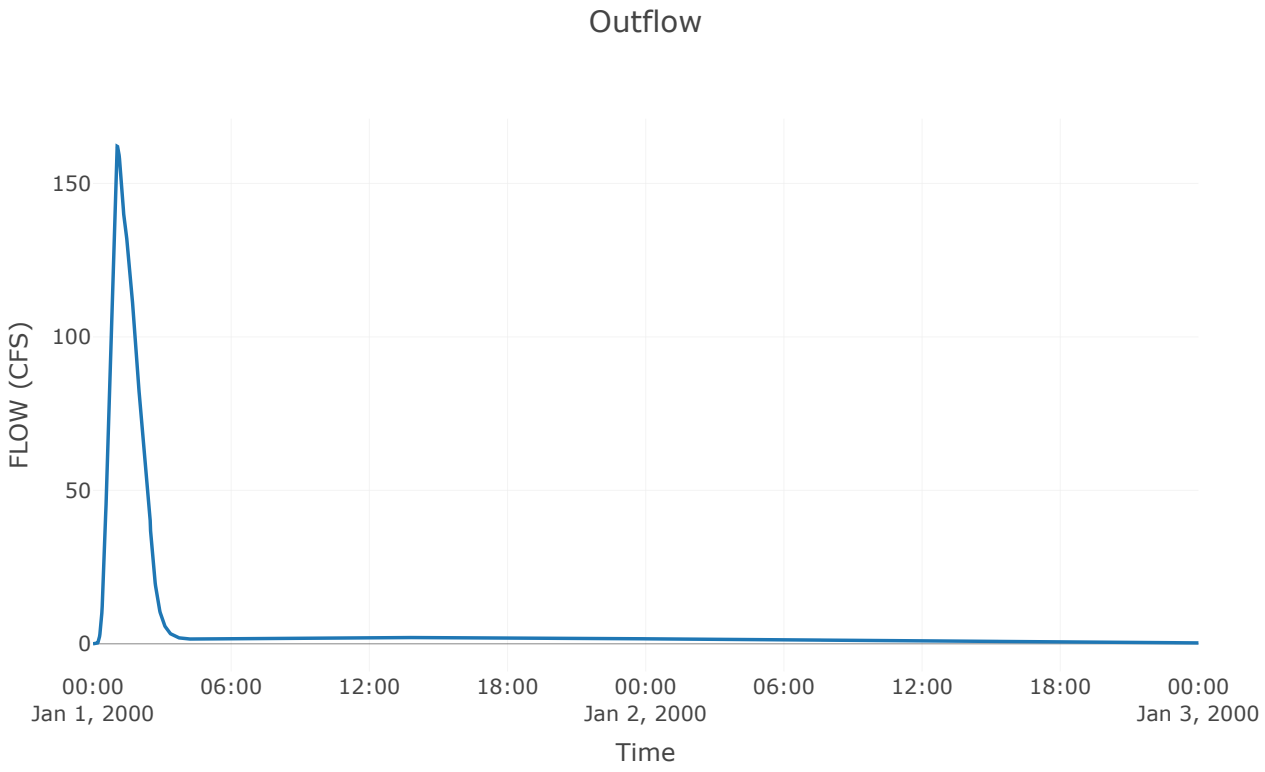


Cumulative Outflow



Pool Elevation



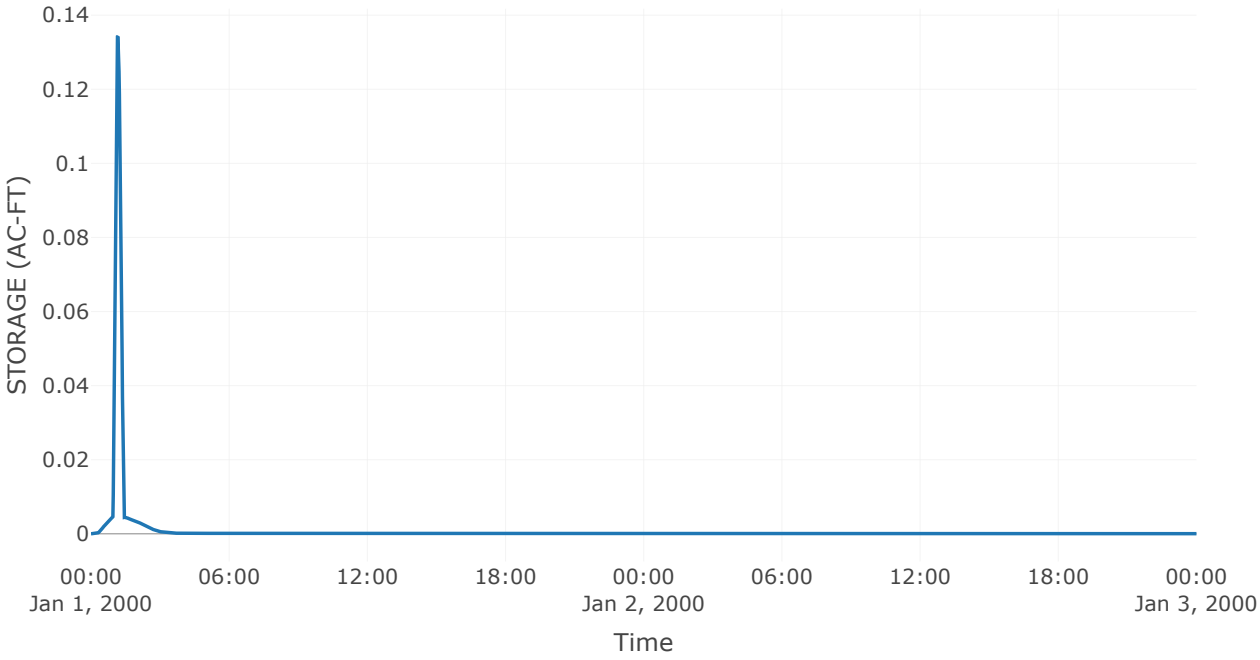

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

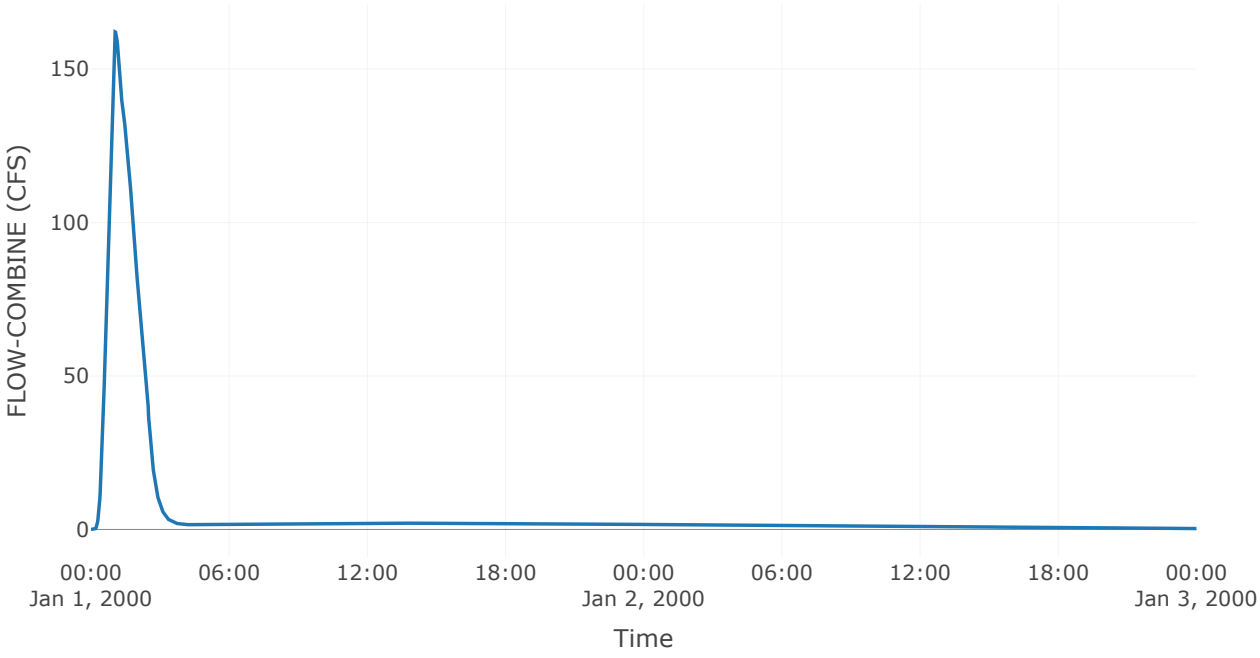
Downstream : Storage West of Wolf Road

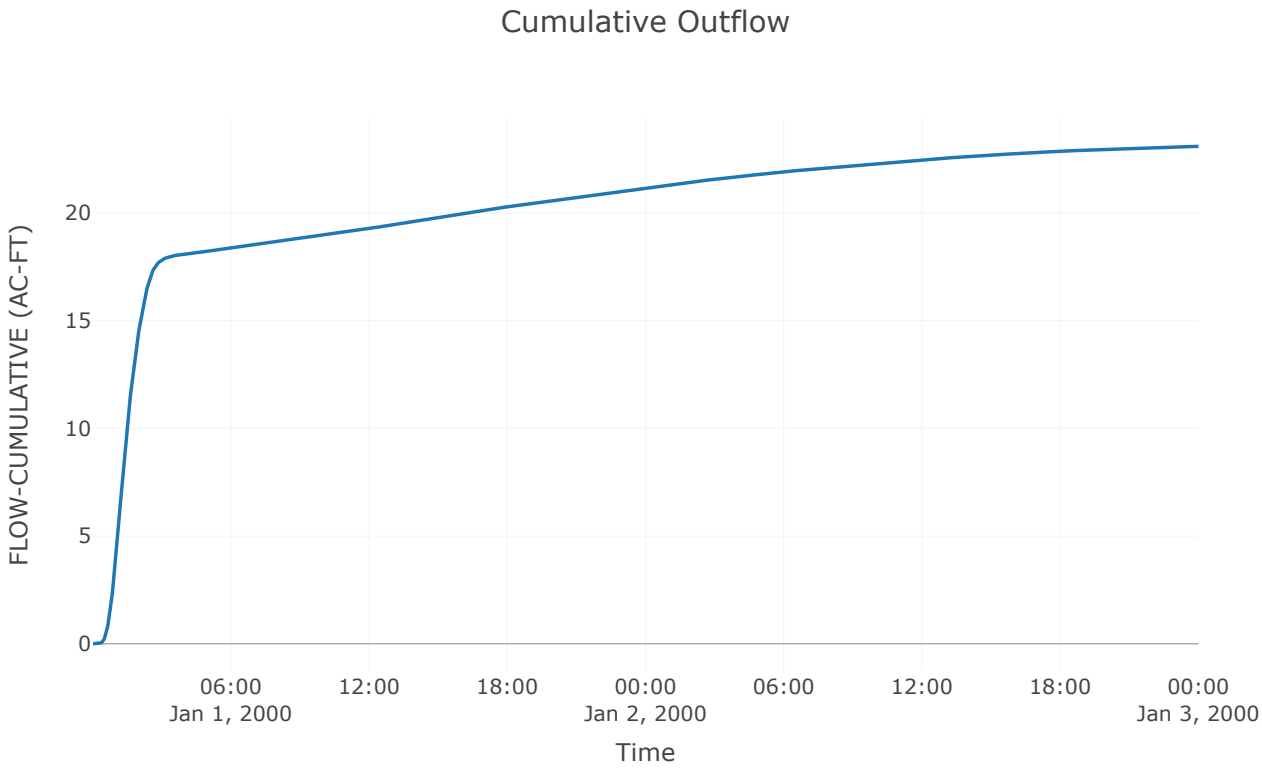
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.13
Peak Elevation (FT)	662.3
Discharge Volume (AC - FT)	23.09

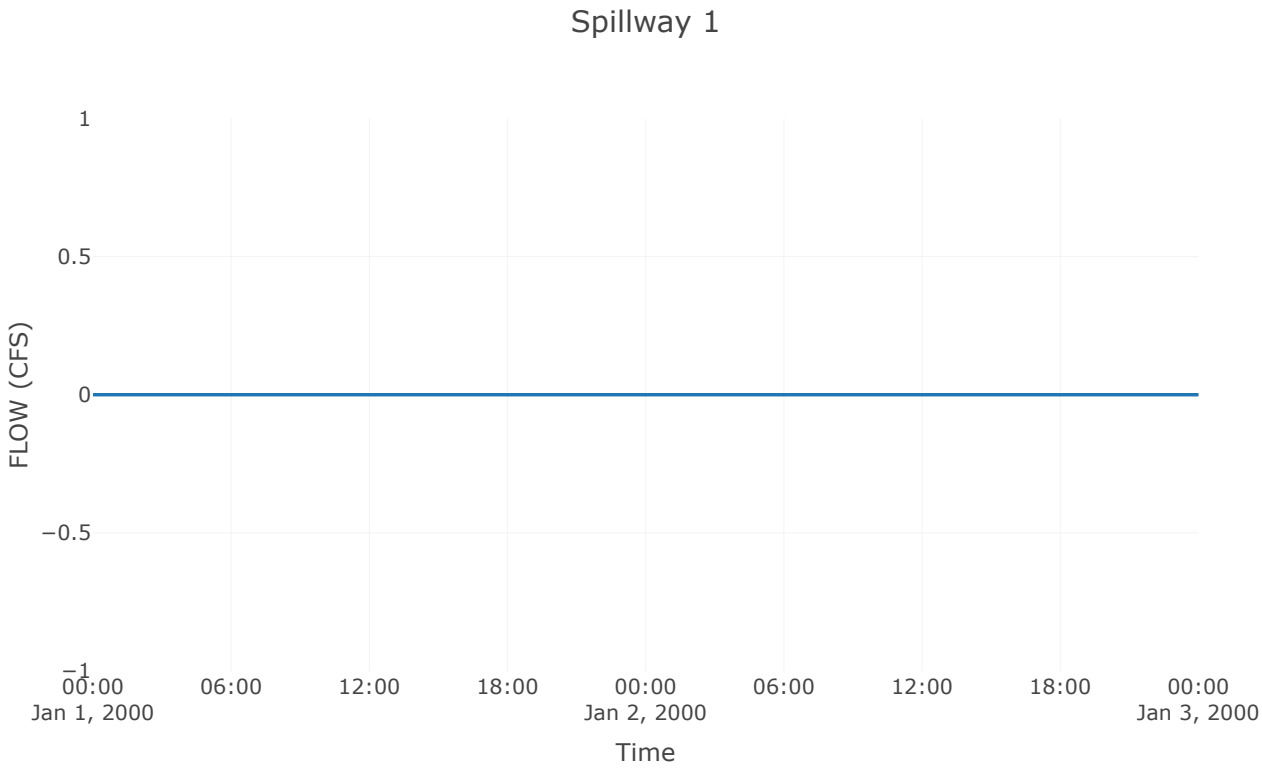
Storage



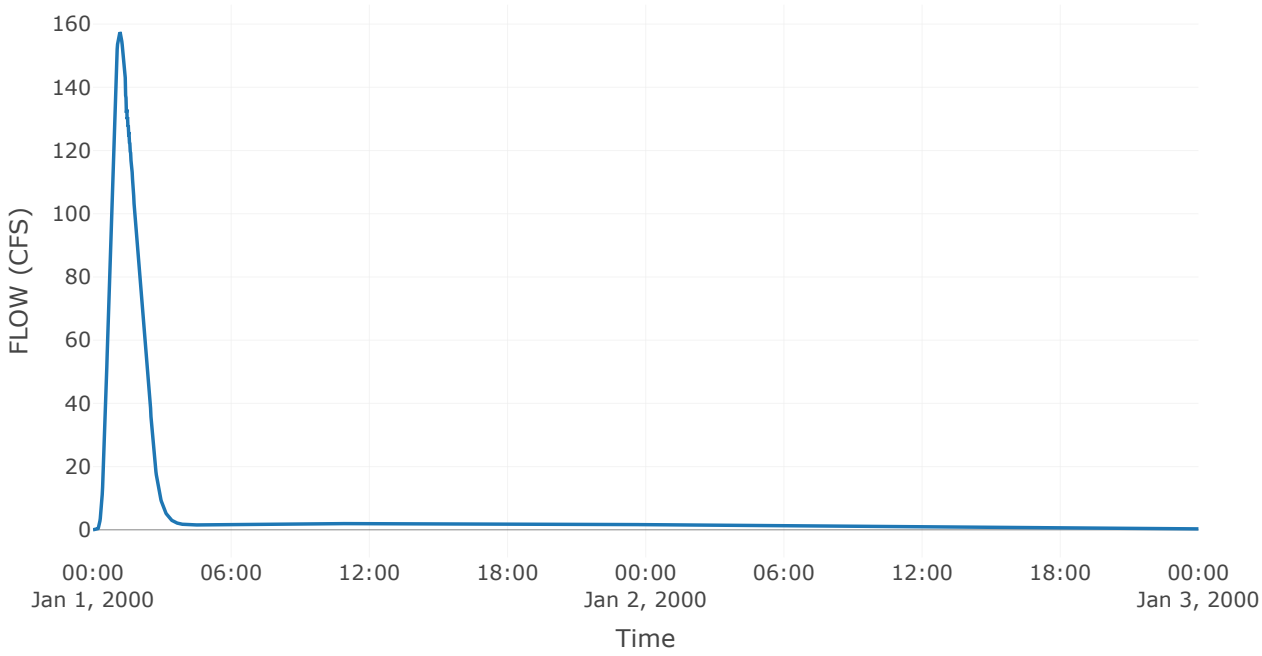
Combined Inflow



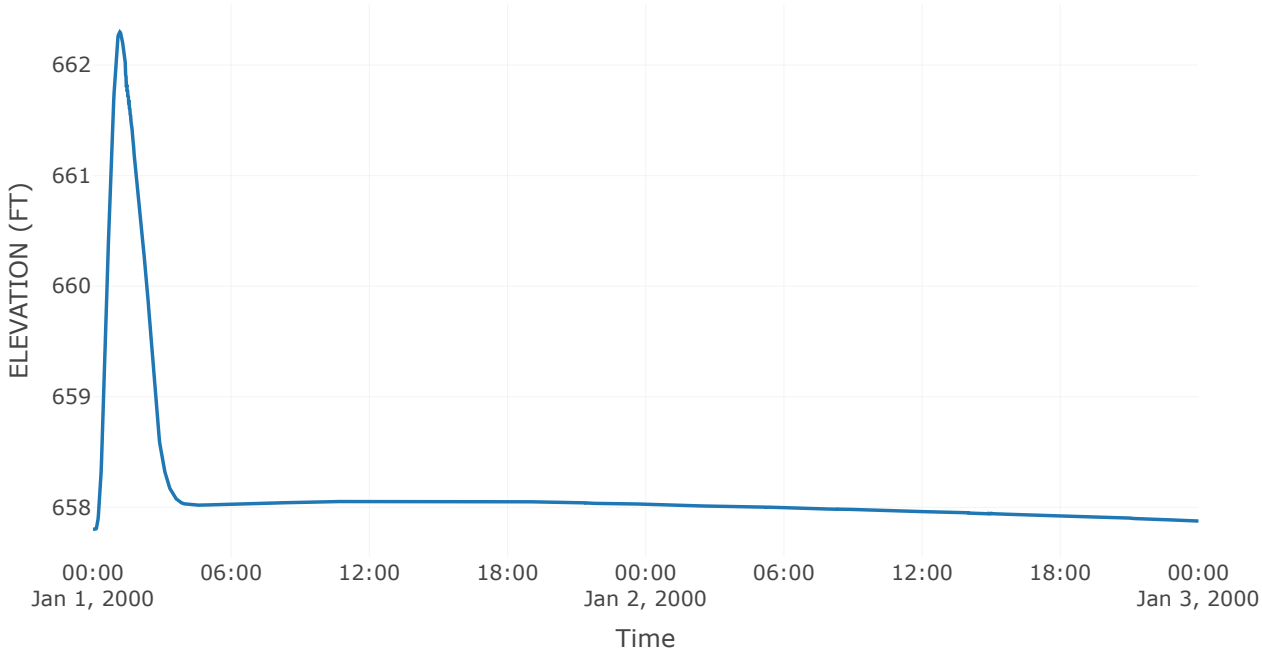

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

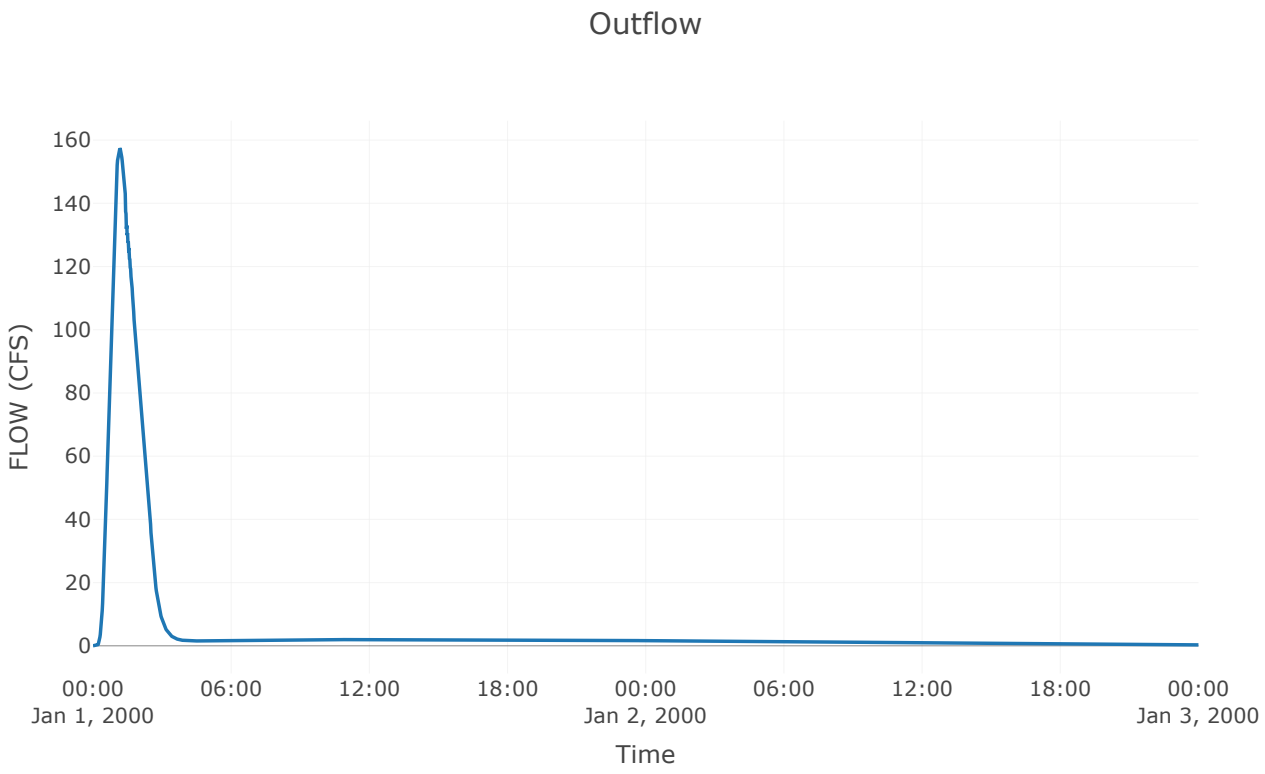

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



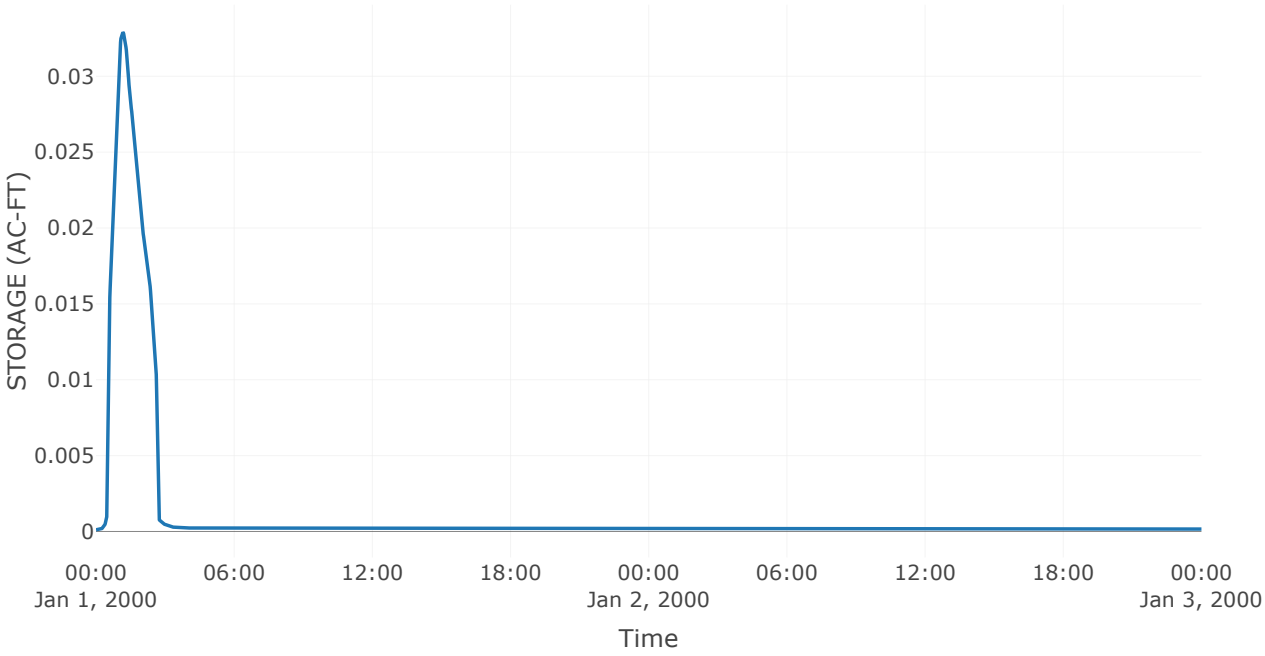

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

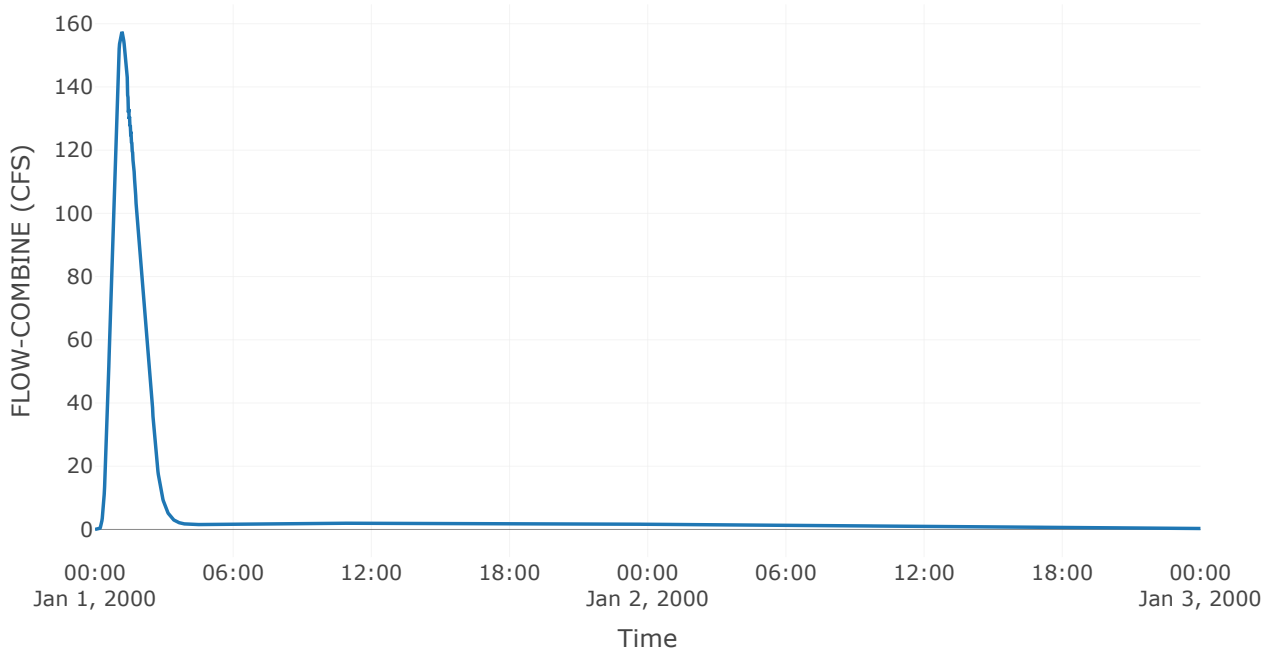
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	157.38
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	1.6
Peak Inflow (CFS)	157.38
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.03
Peak Elevation (FT)	659.44
Discharge Volume (AC - FT)	23.04

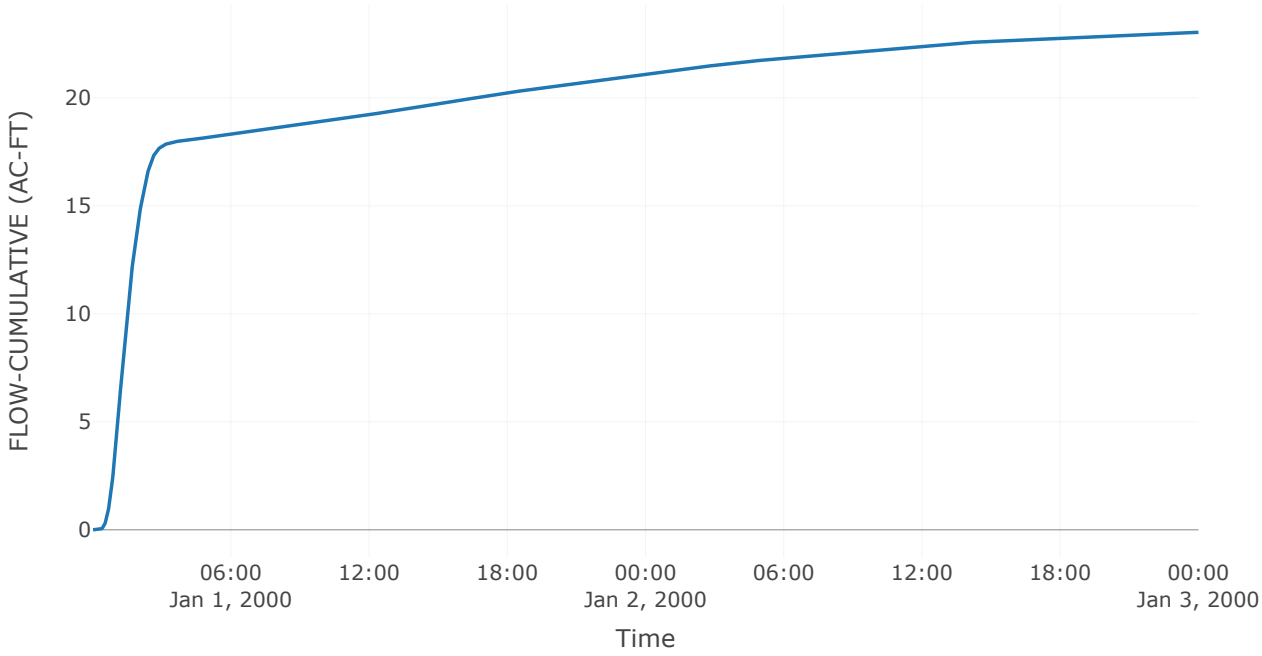
Storage



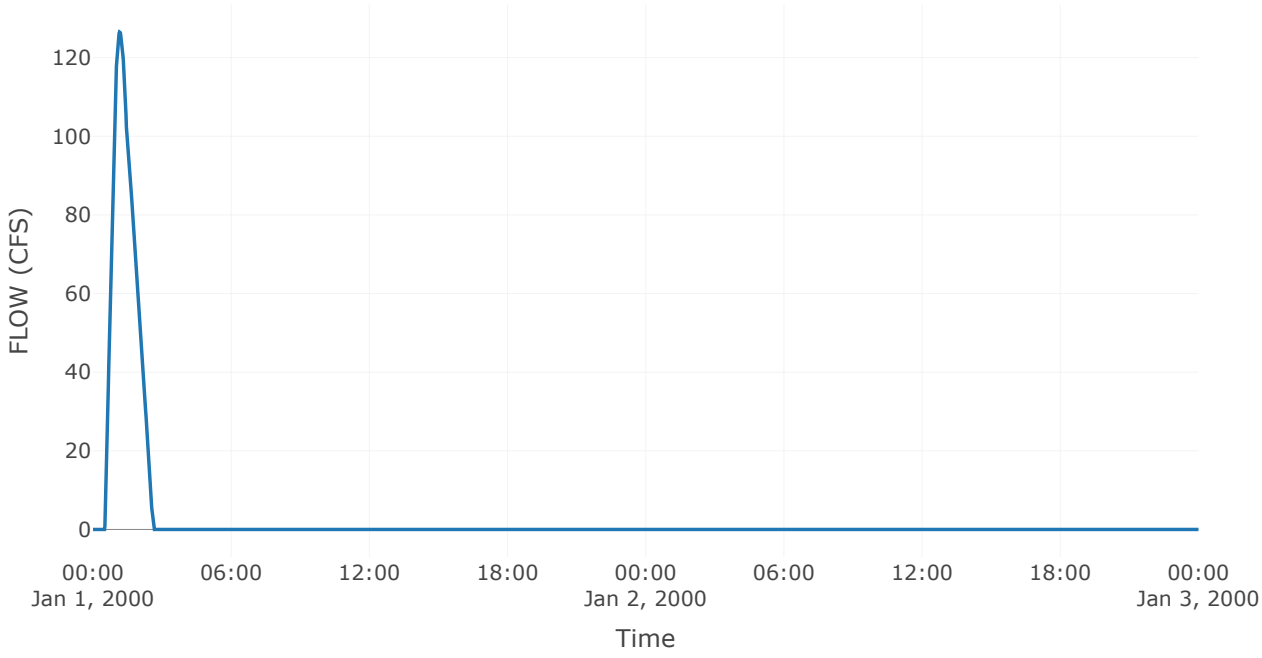
Combined Inflow



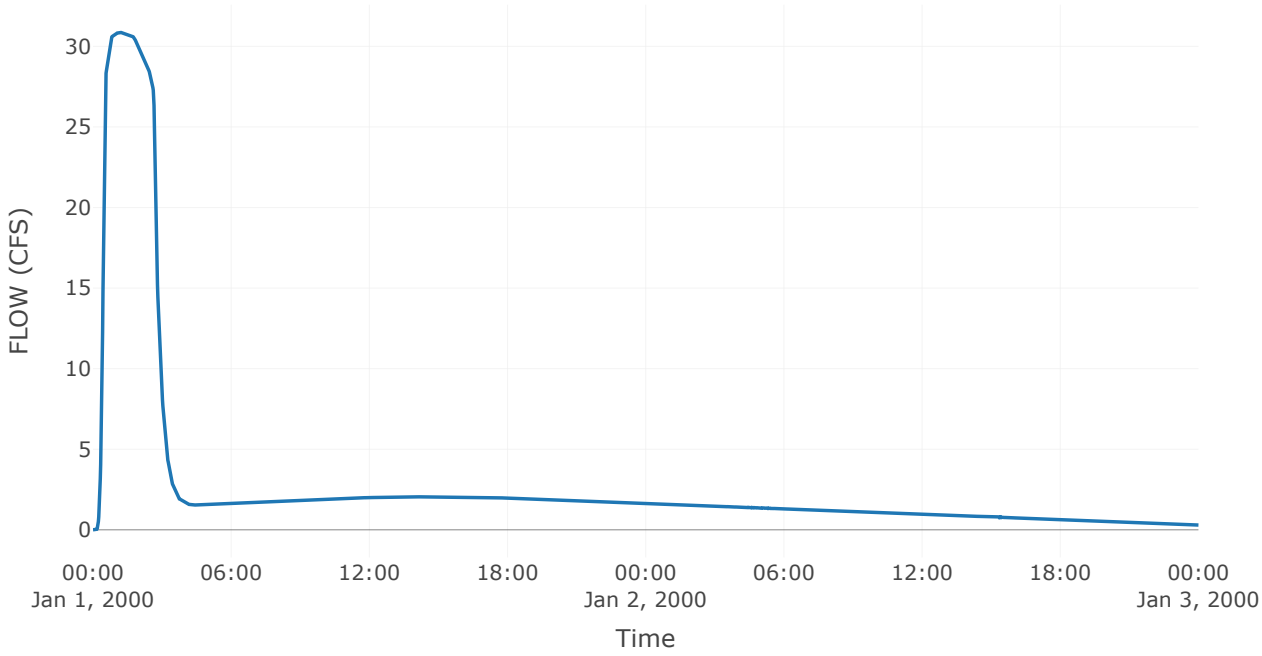
Cumulative Outflow



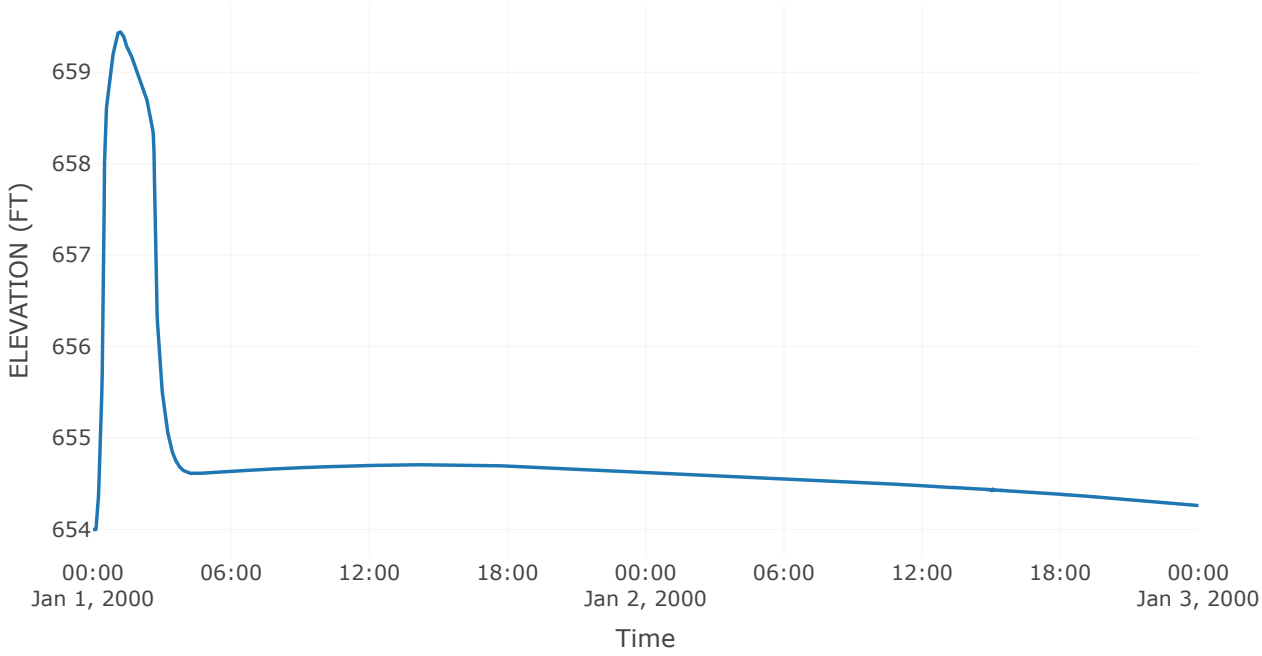
Spillway 1

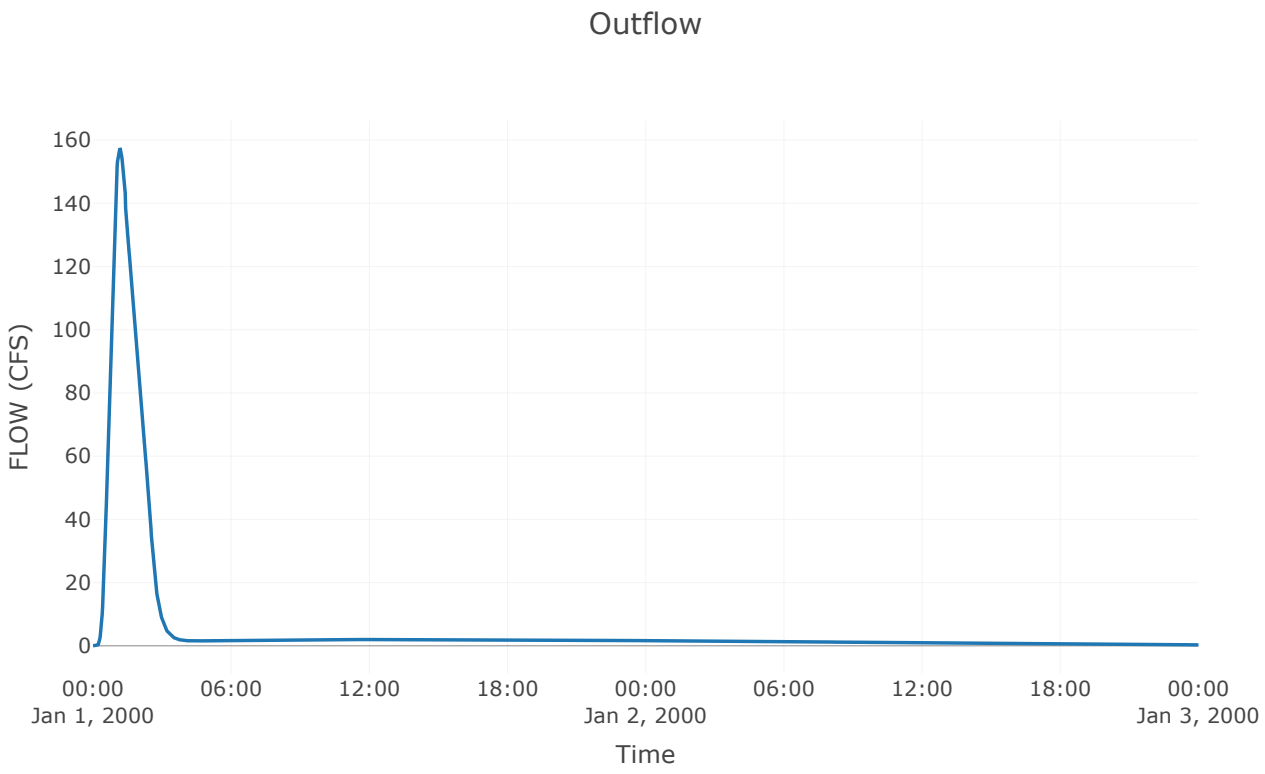


Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

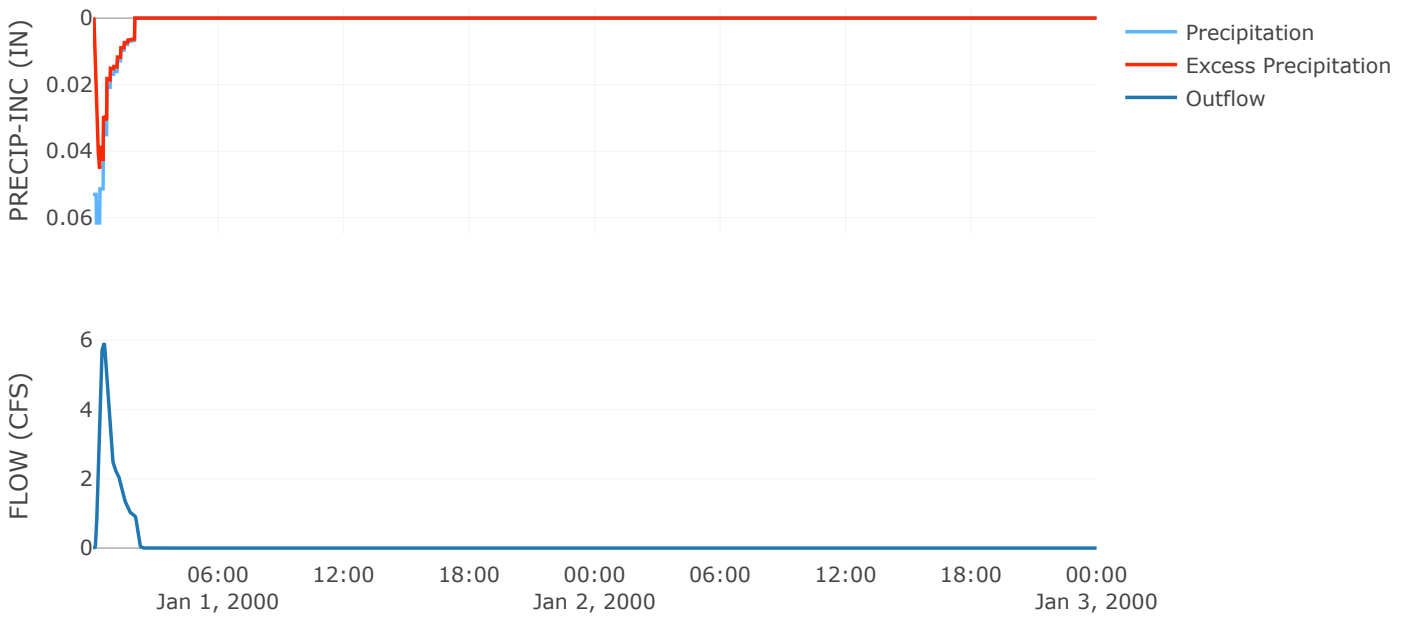
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

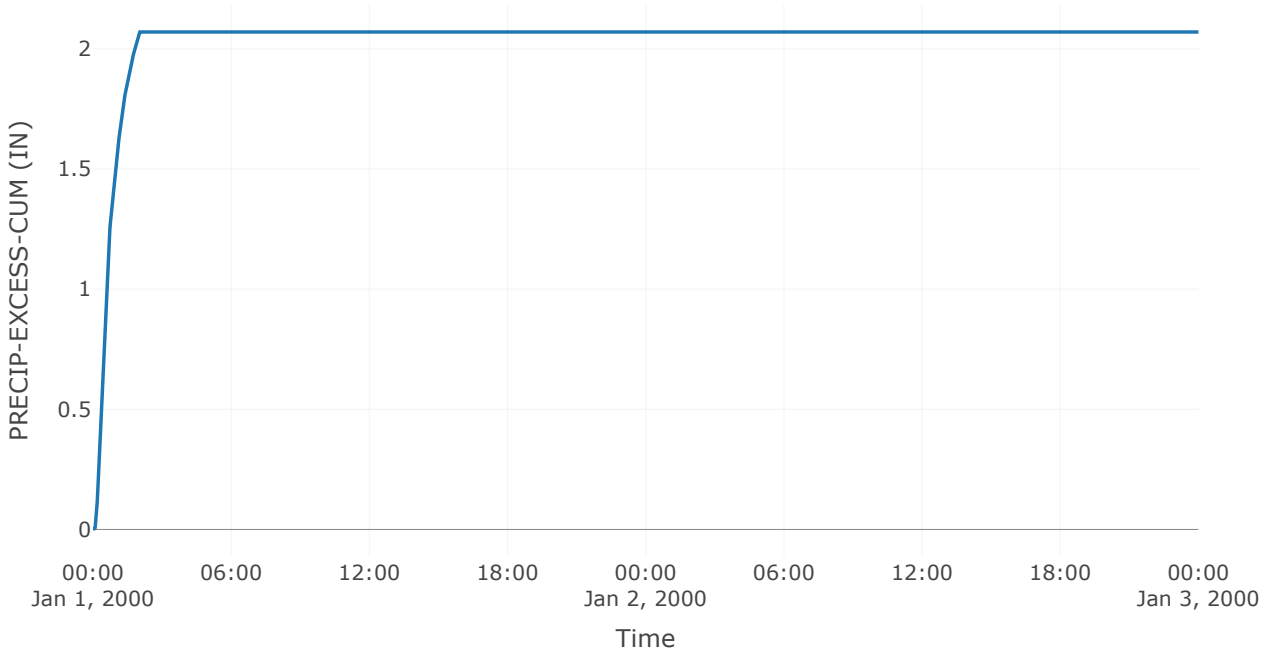
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	5.91
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.42
Direct Runoff Volume (AC - FT)	0.42
Baseflow Volume (AC - FT)	0

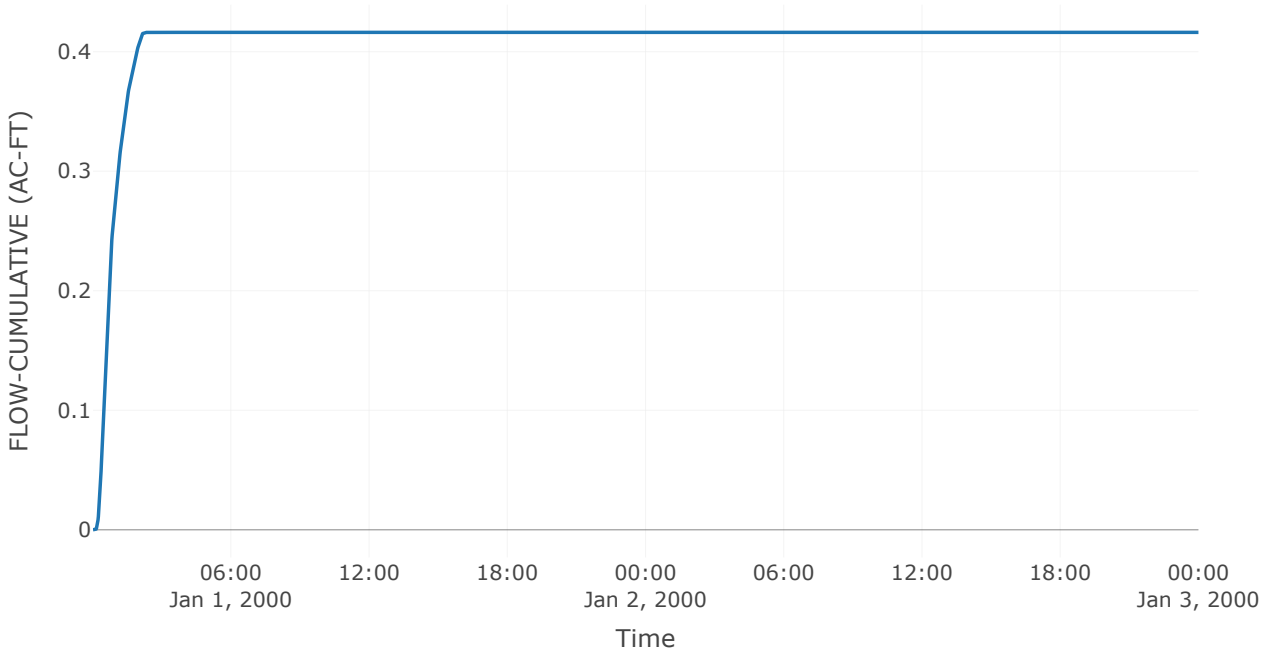
Precipitation and Outflow



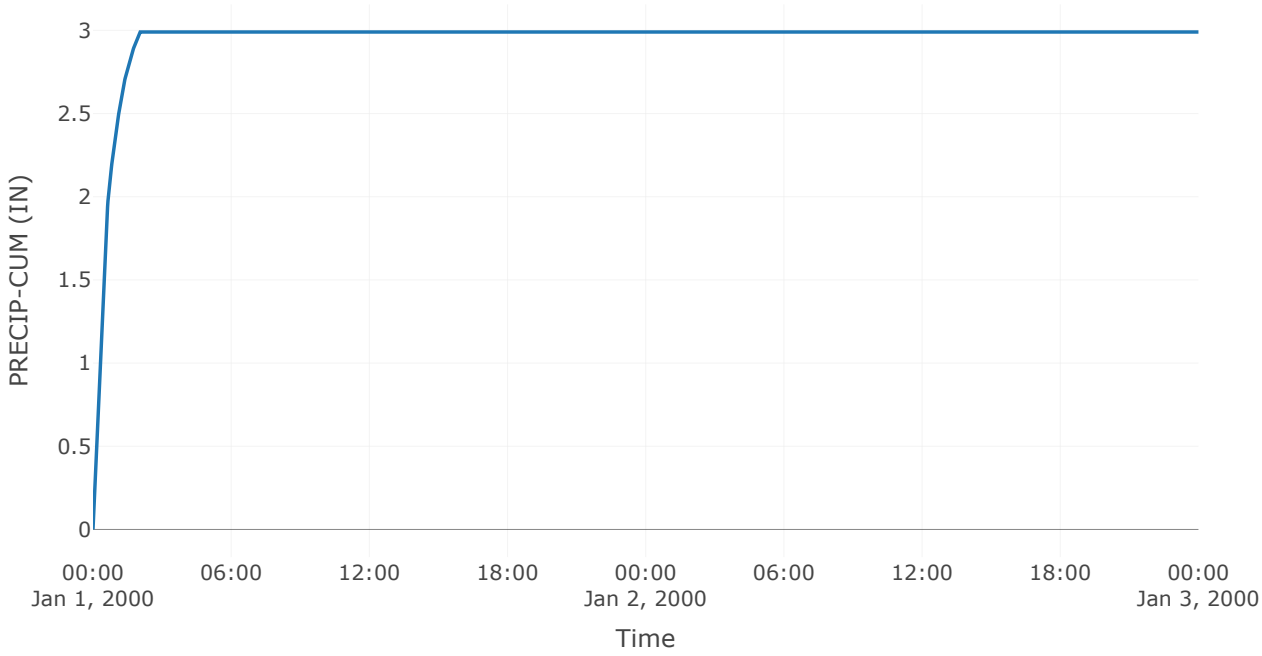
Cumulative Excess Precipitation

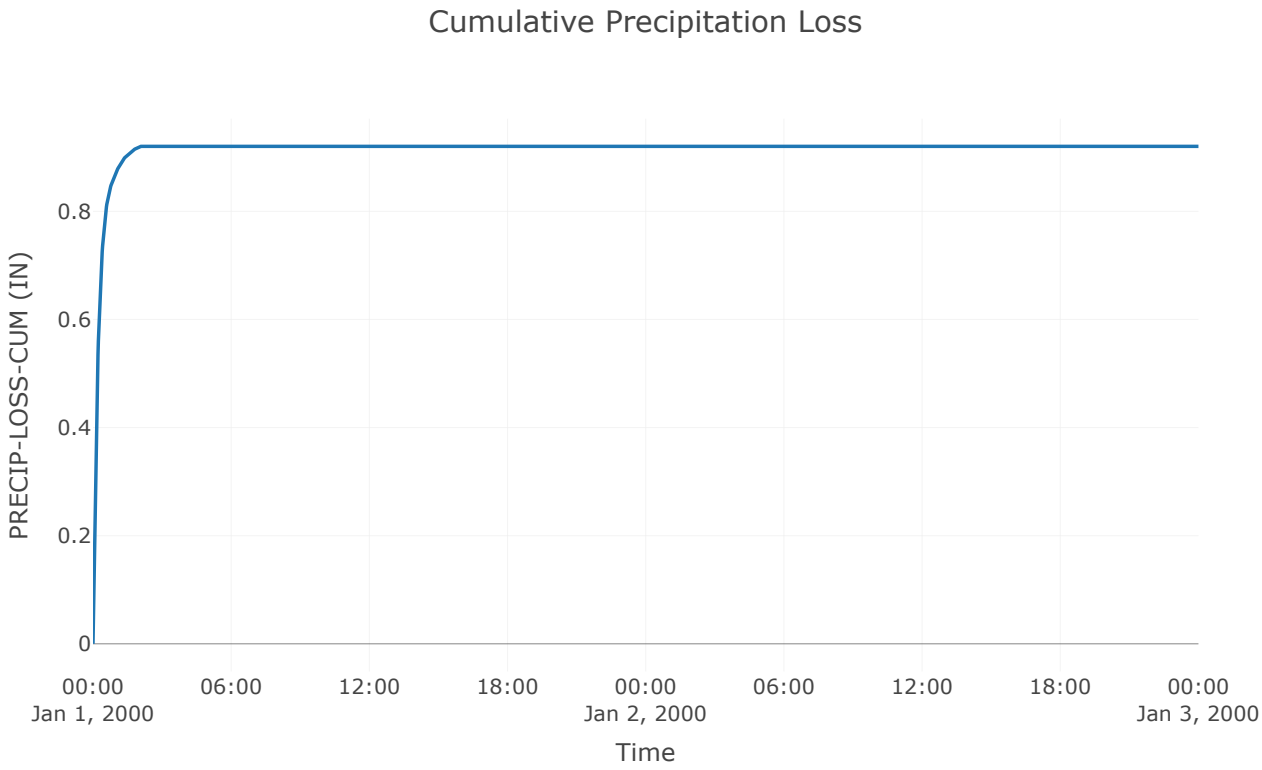


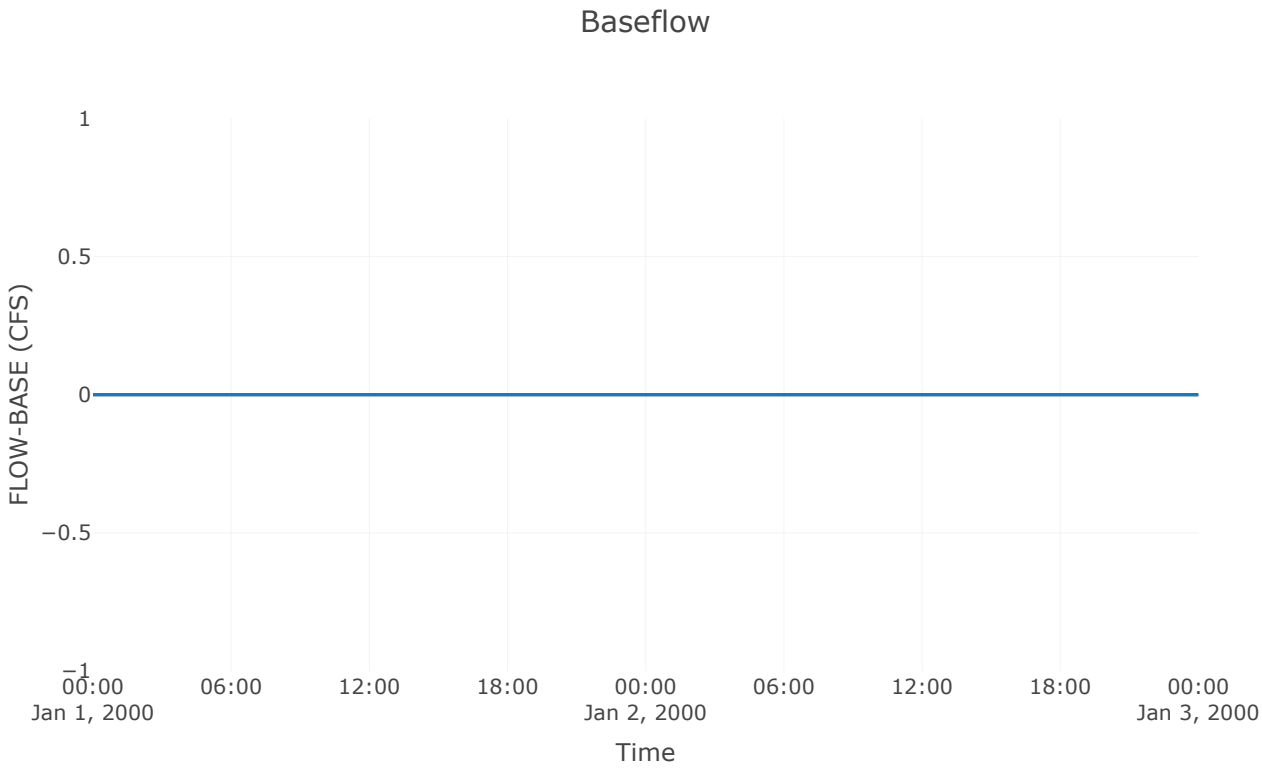
Cumulative Outflow

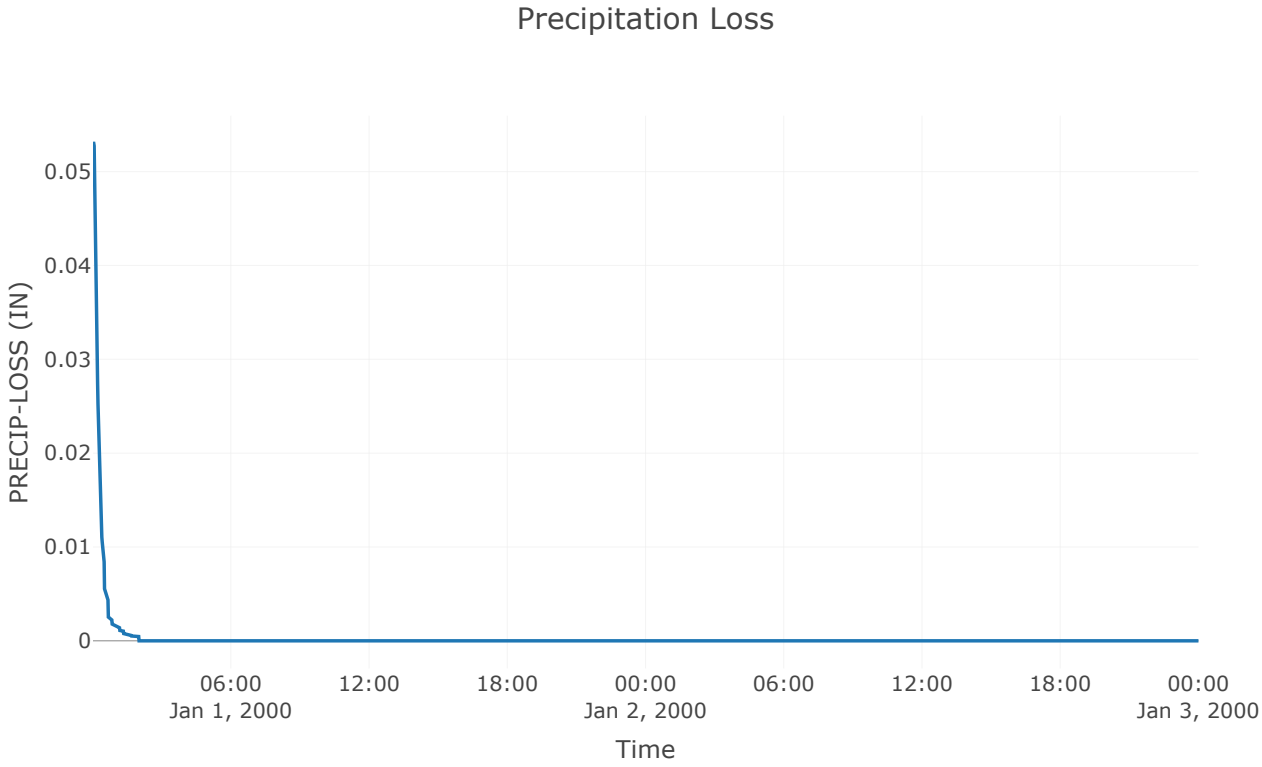


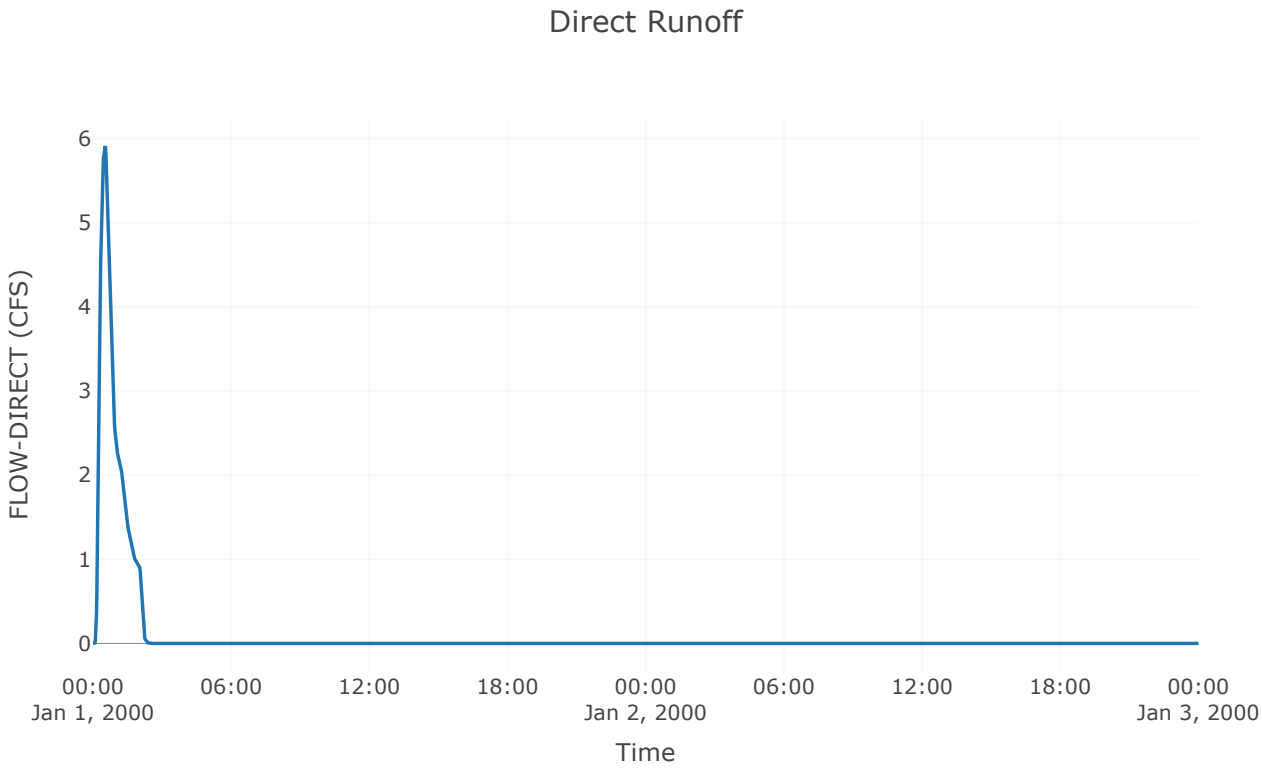
Cumulative Precipitation

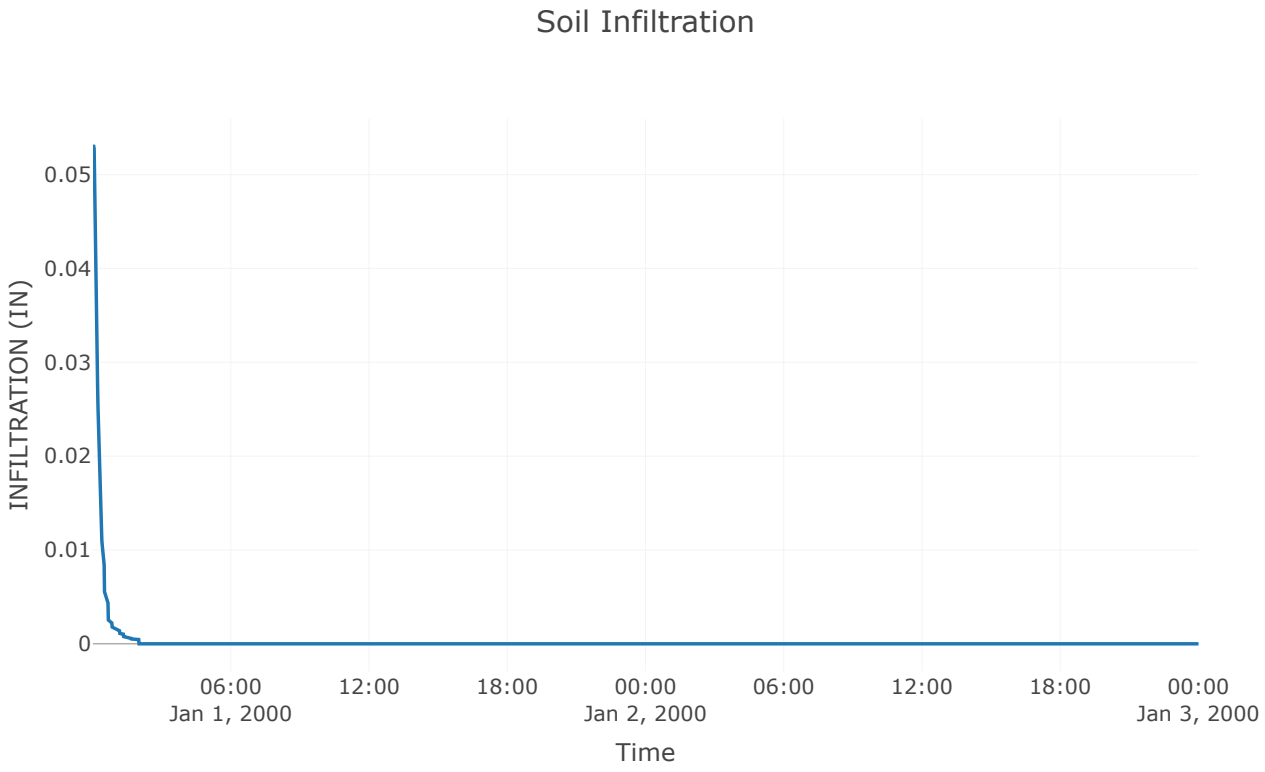



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

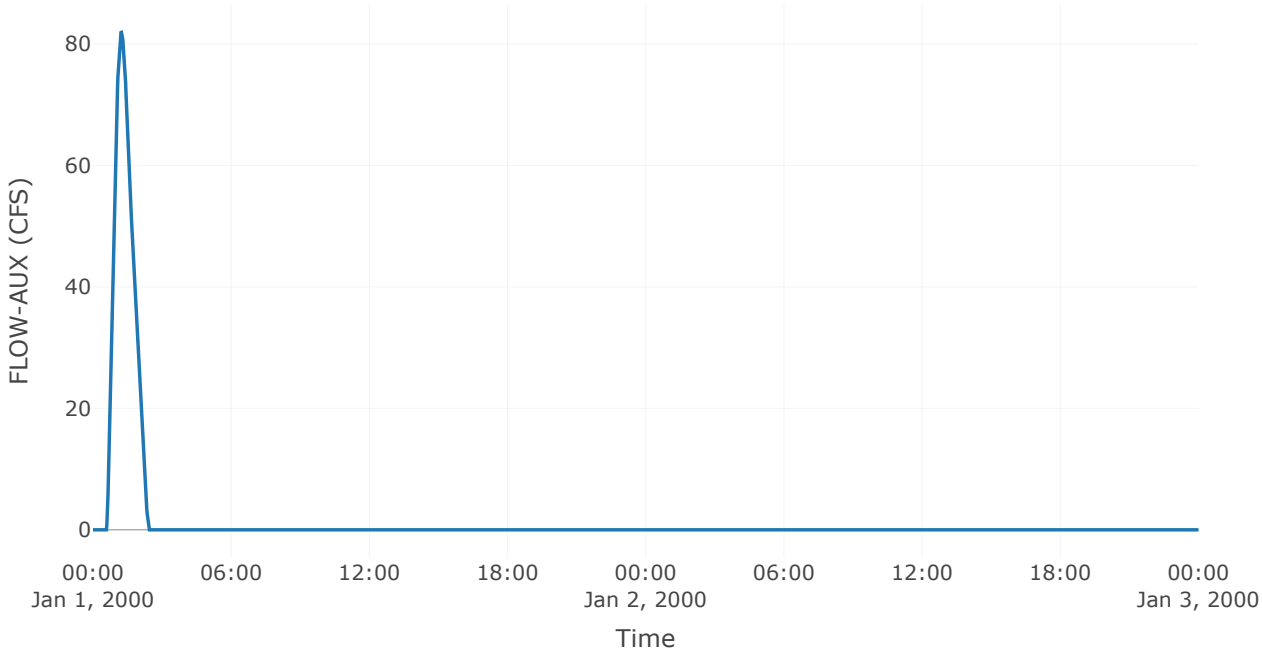

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

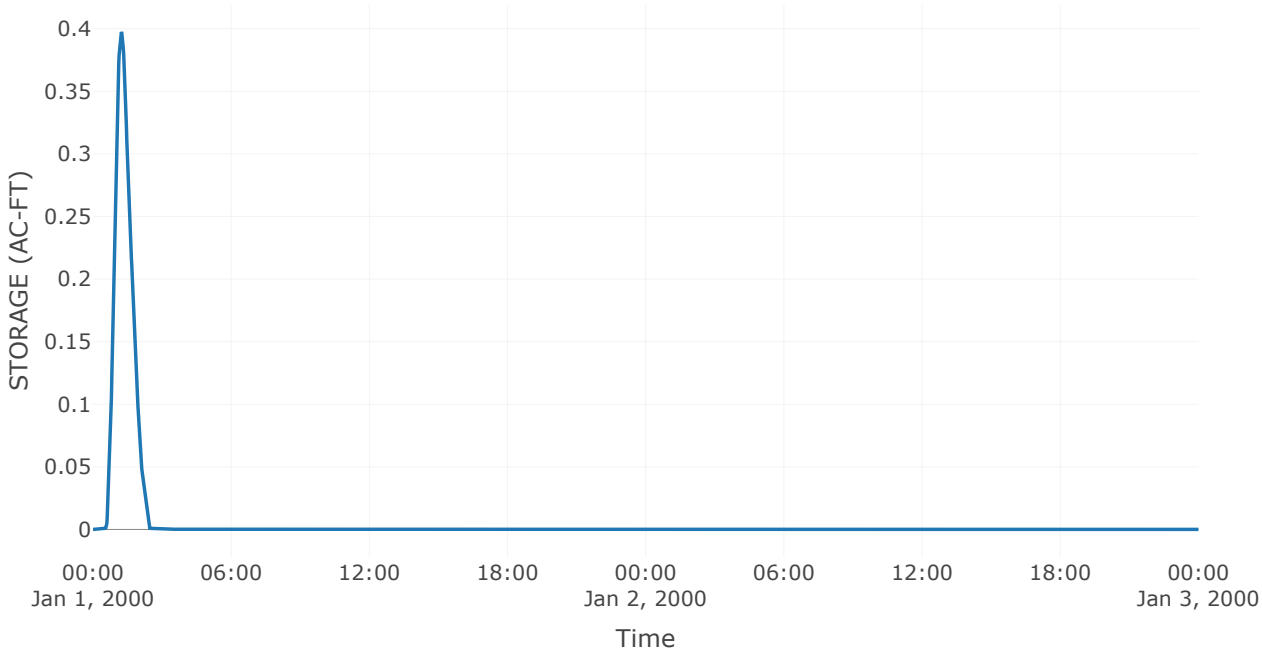
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	75.96
Time of Peak Discharge	01Jan2000, 01:14
Volume (IN)	1.17
Peak Inflow (CFS)	159.55
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	23.45
Maximum Storage (AC - FT)	0.4
Peak Elevation (FT)	652.49
Discharge Volume (AC - FT)	17.07

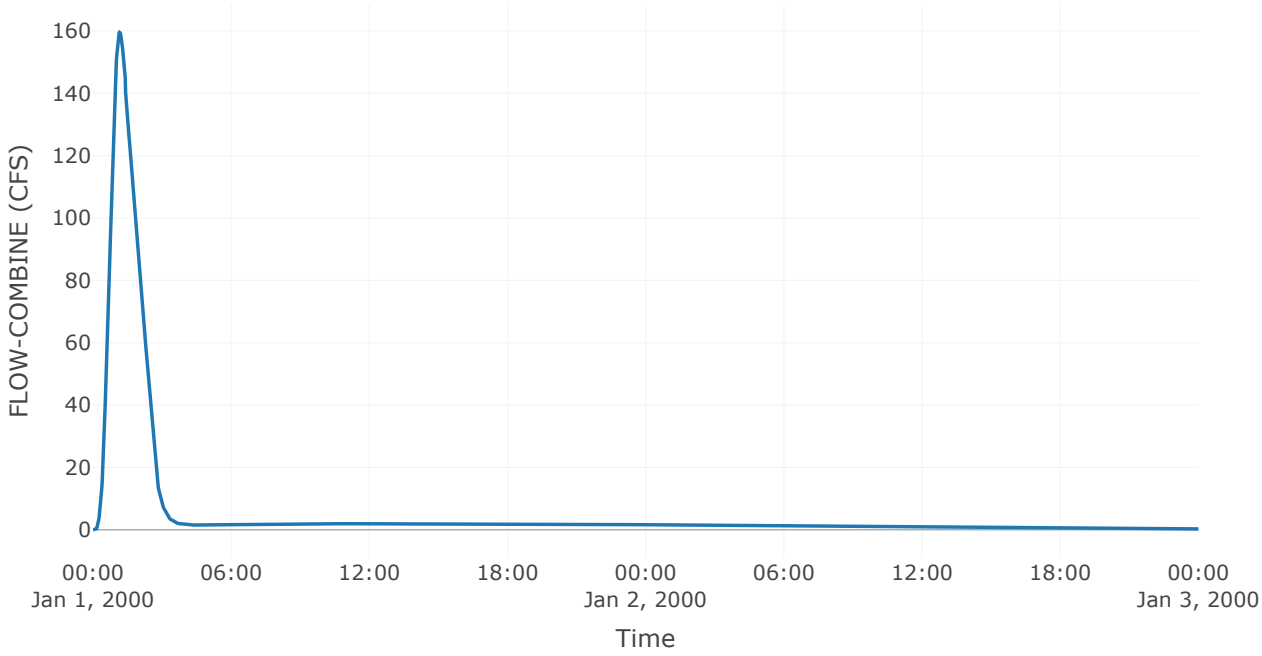
Auxiliary Outflow



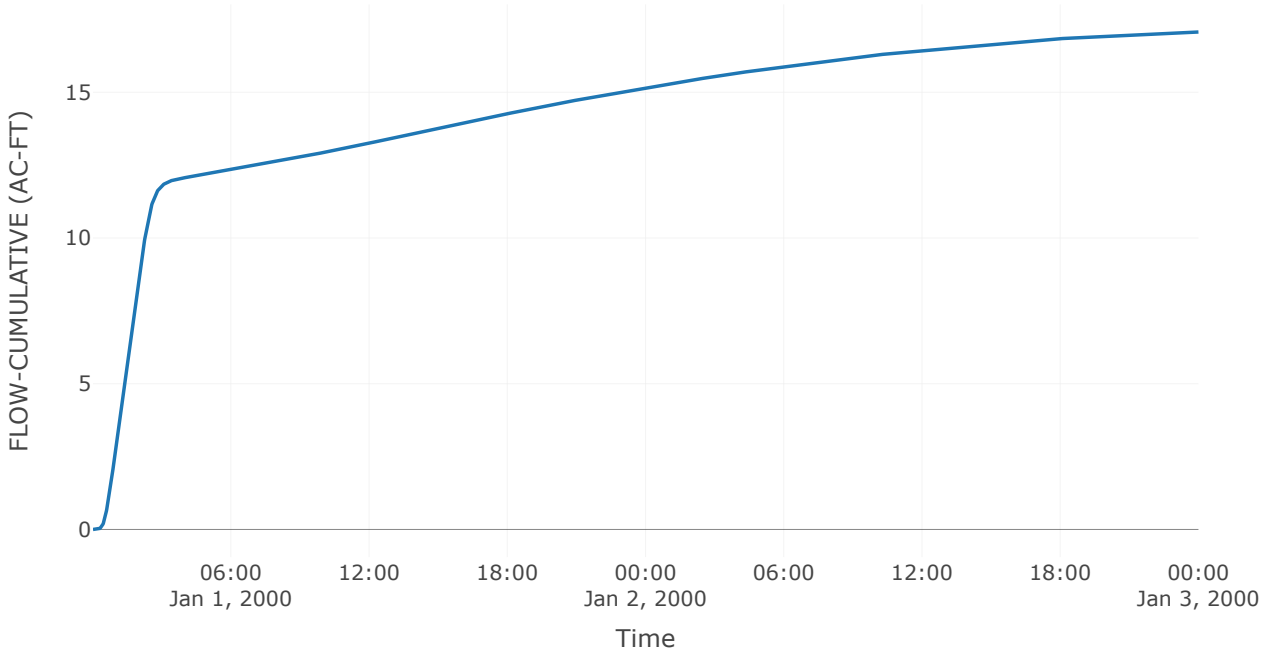
Storage

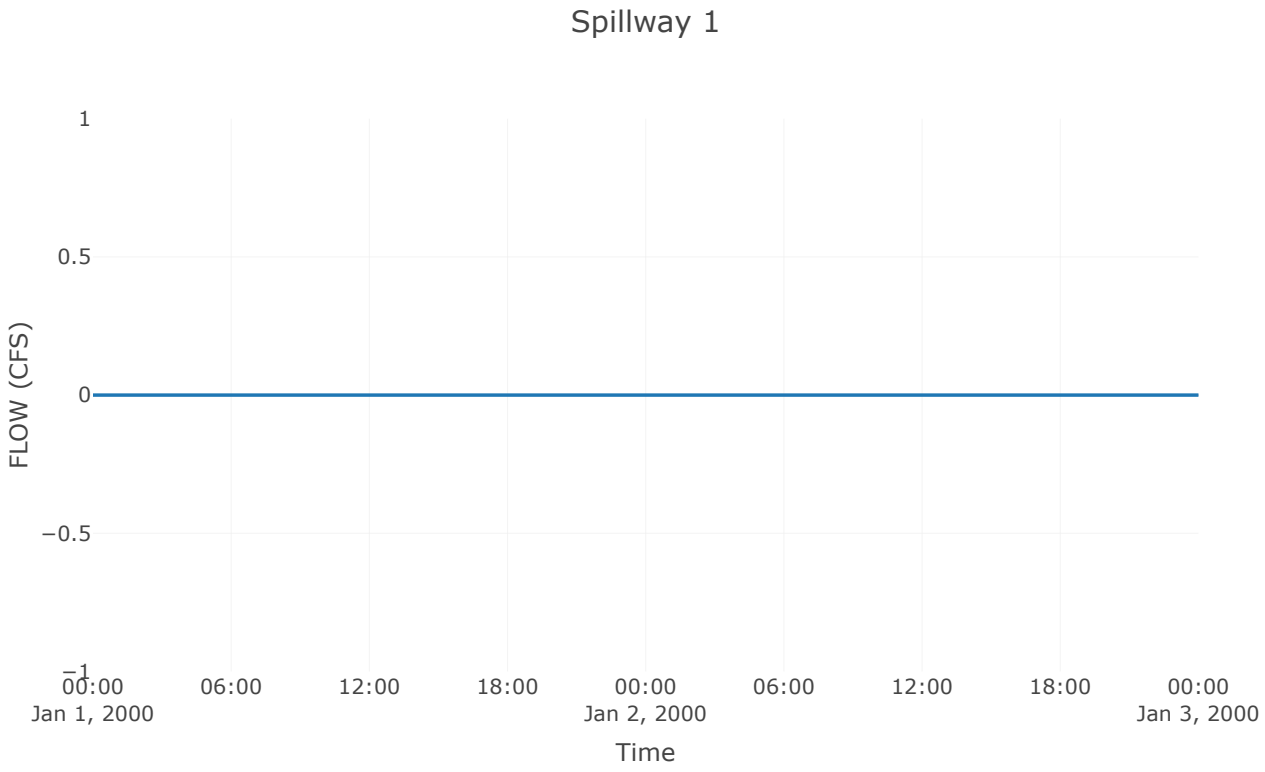


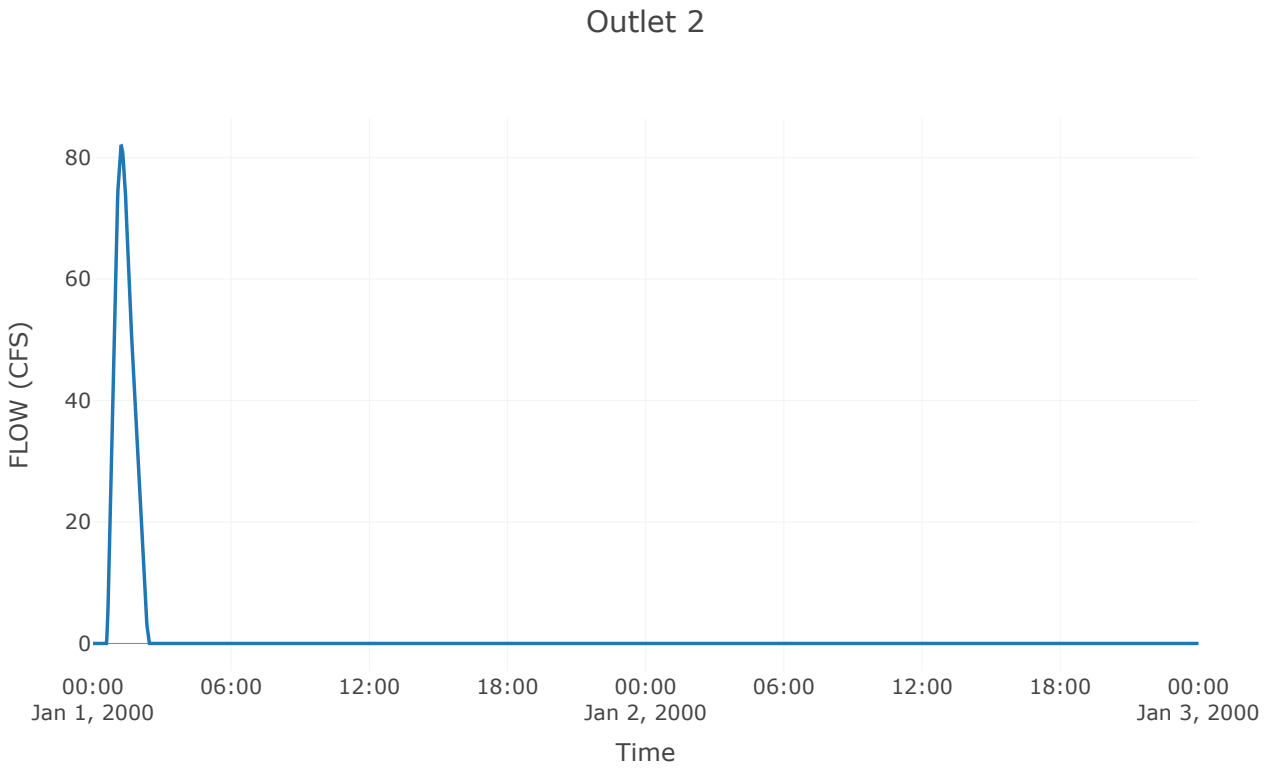
Combined Inflow



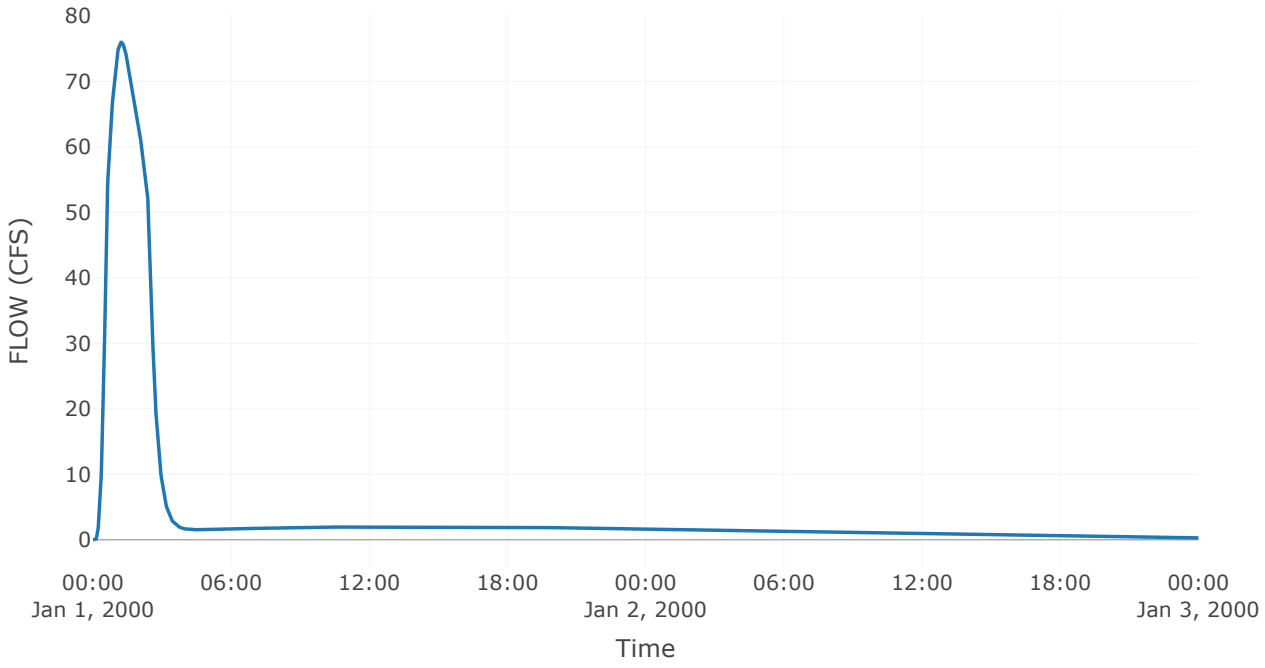
Cumulative Outflow



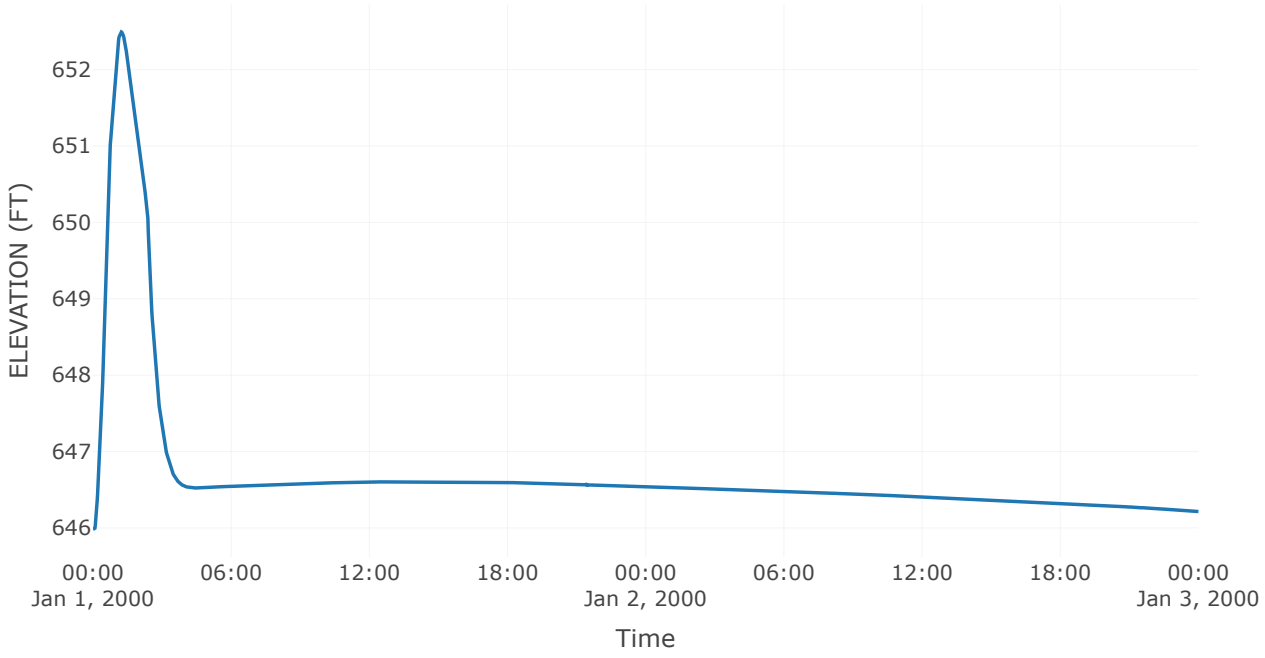

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

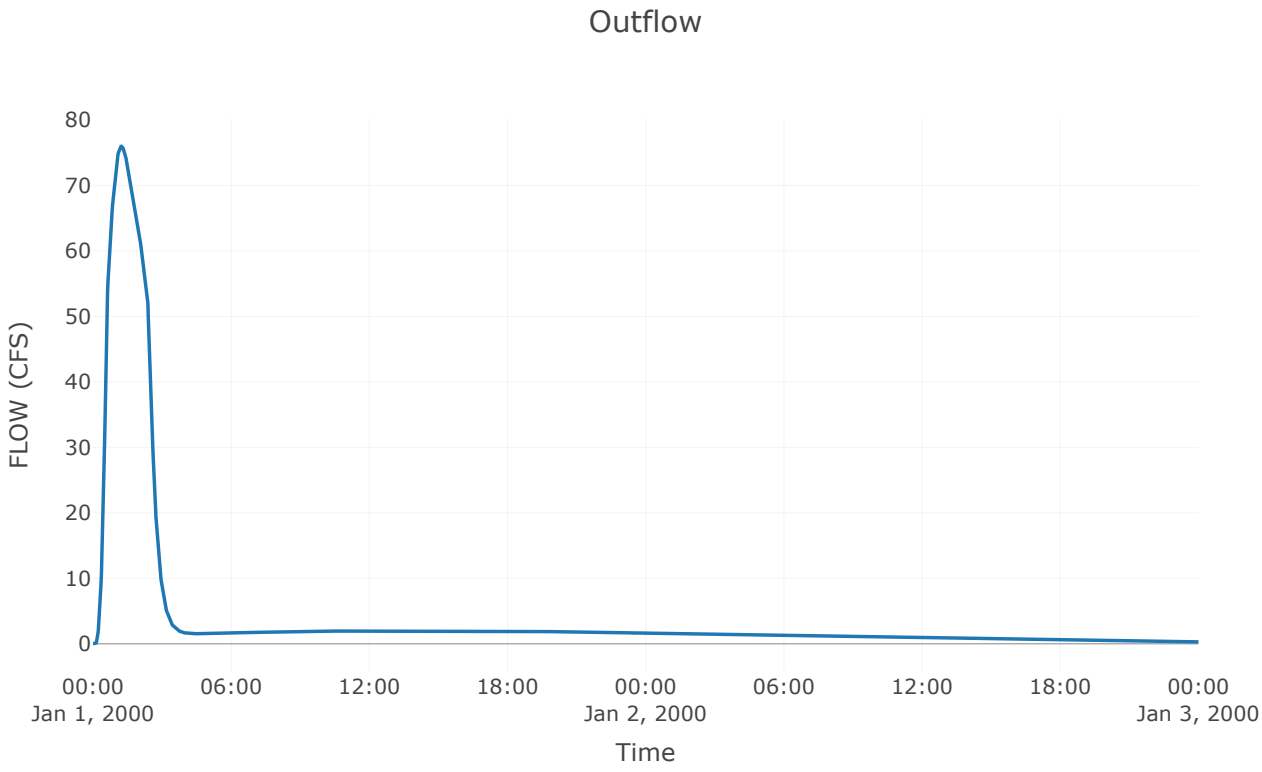

Outlet 2
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

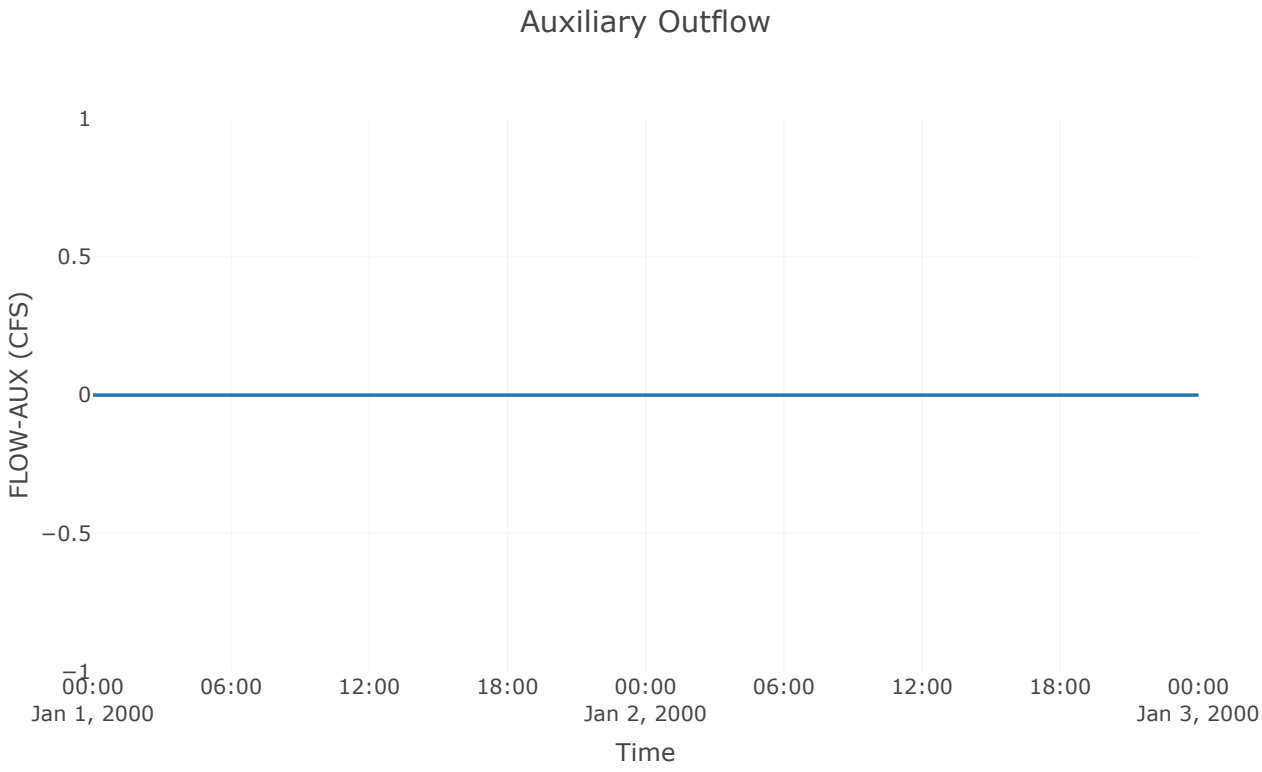


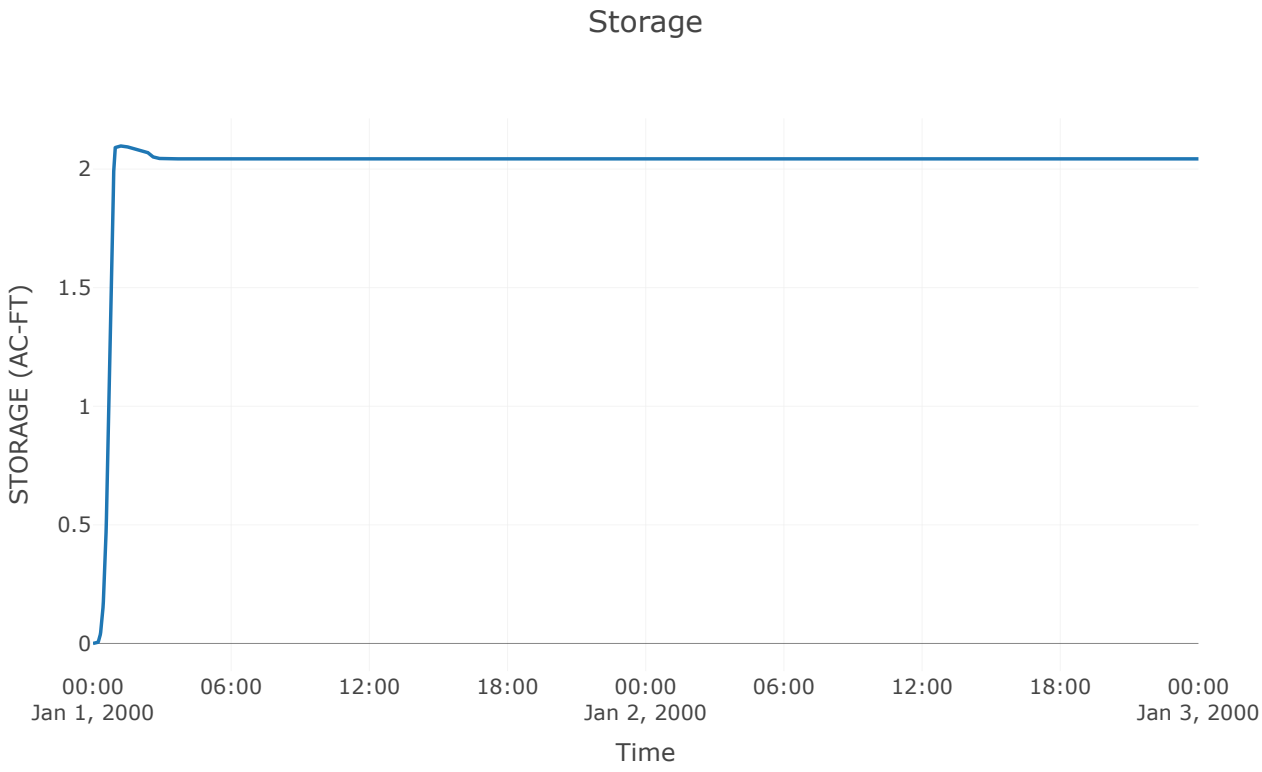

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

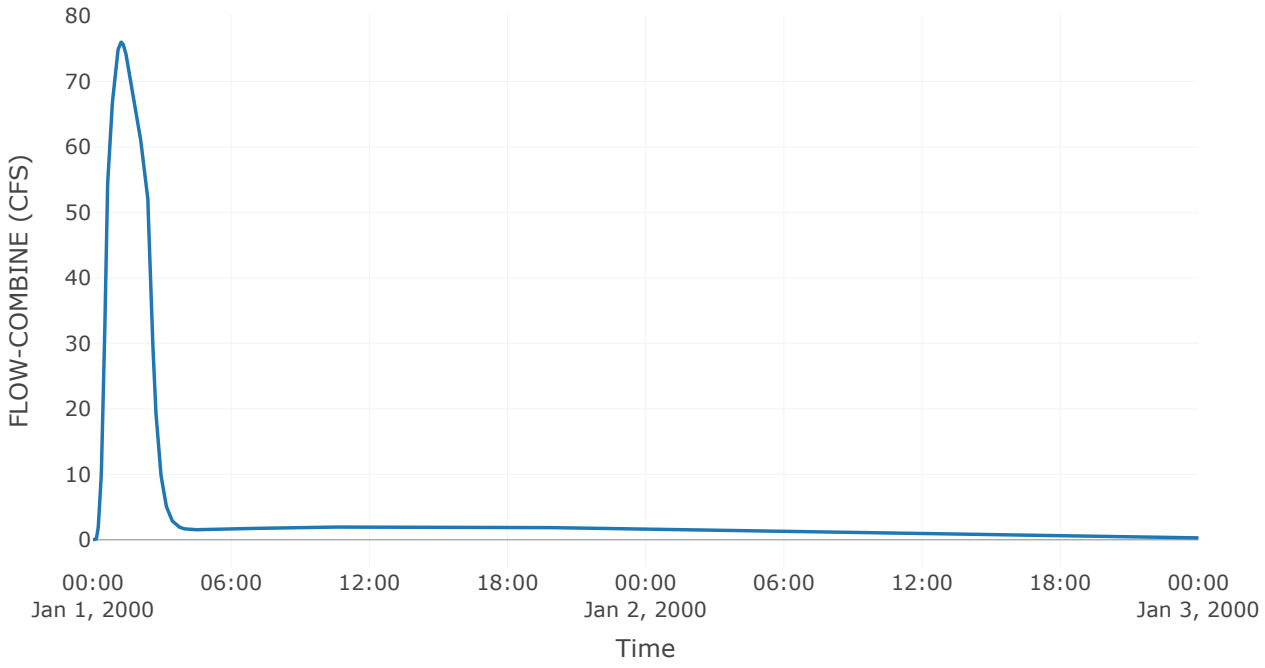
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02
Peak Inflow (CFS)	75.96
Time of Peak Inflow	01Jan2000, 01:14
Inflow Volume (AC - FT)	17.07
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	14.86

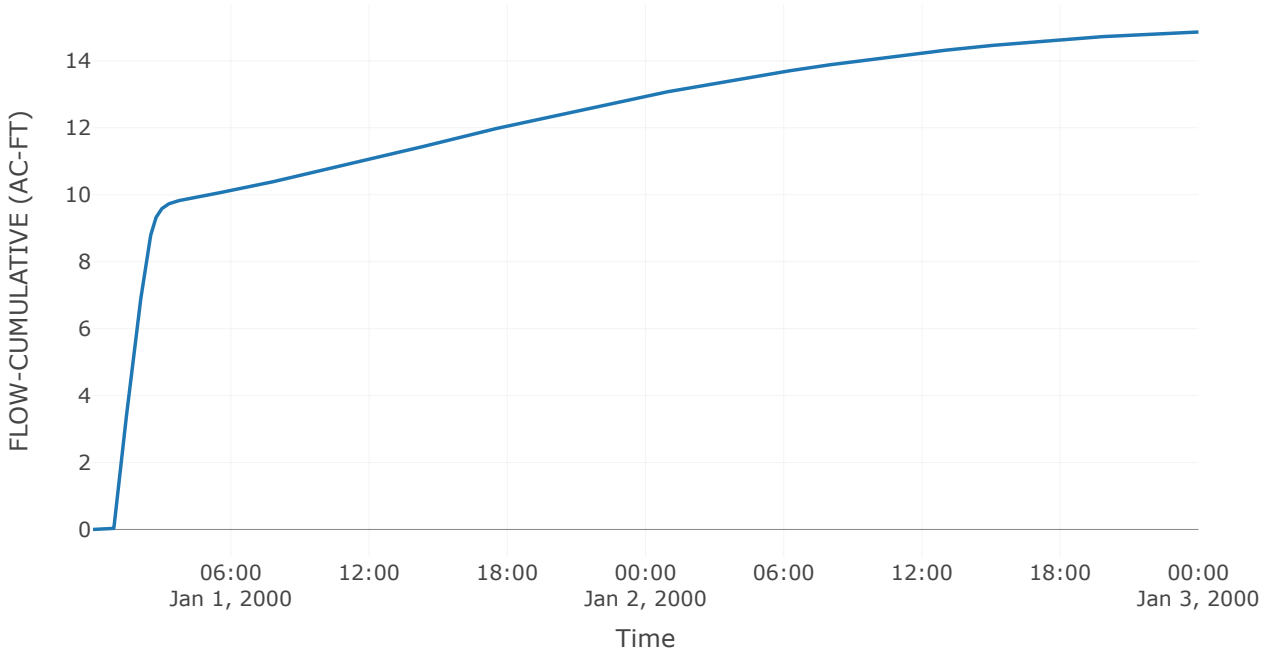

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

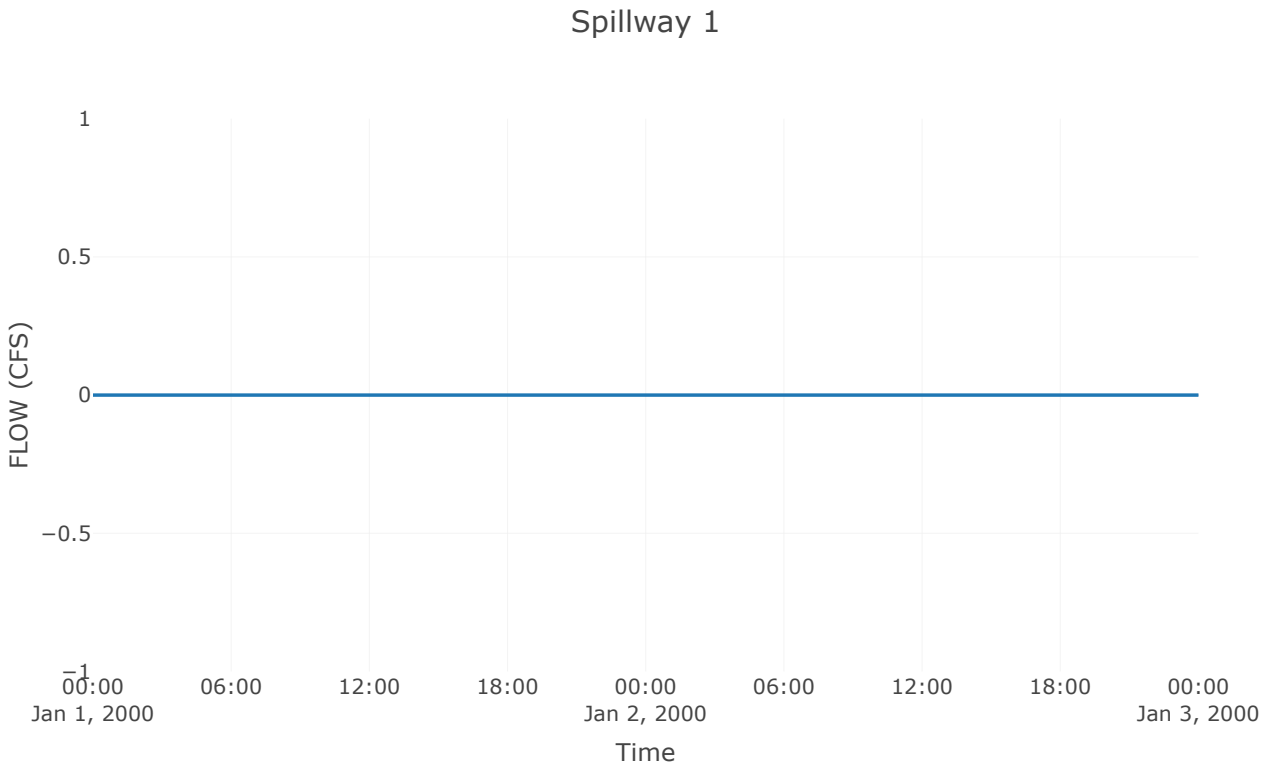

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

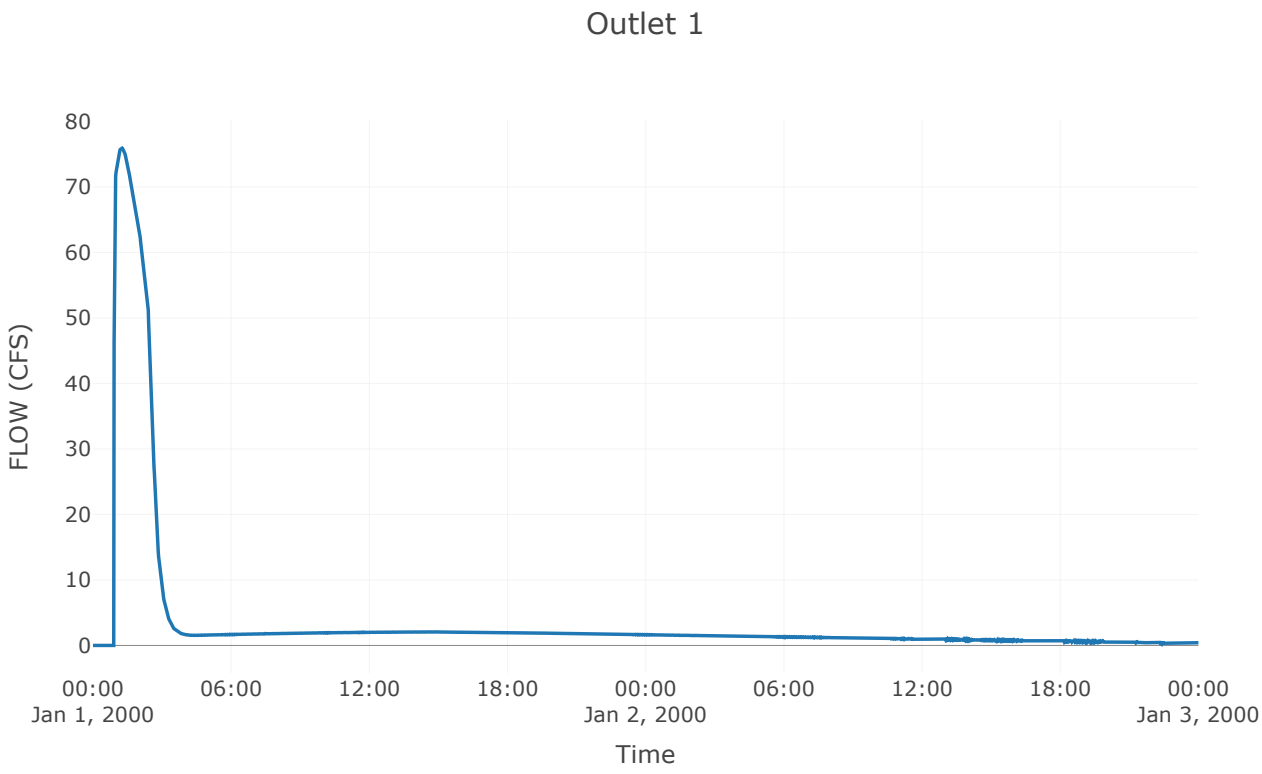
Combined Inflow



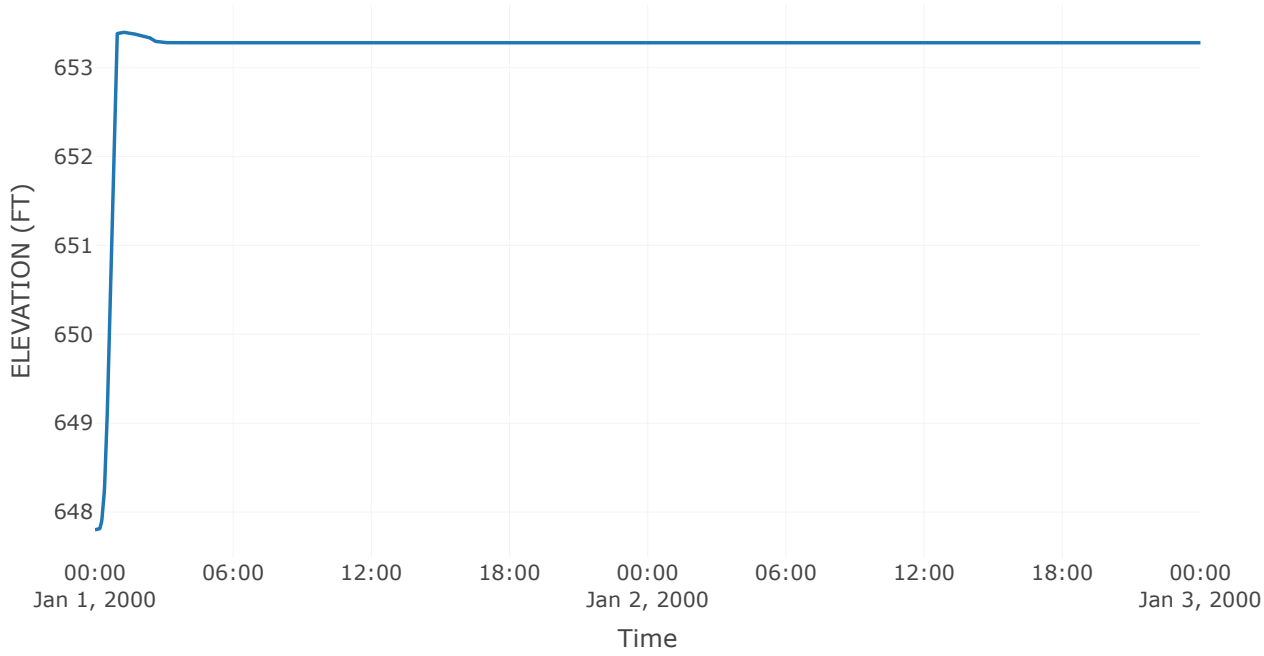
Cumulative Outflow



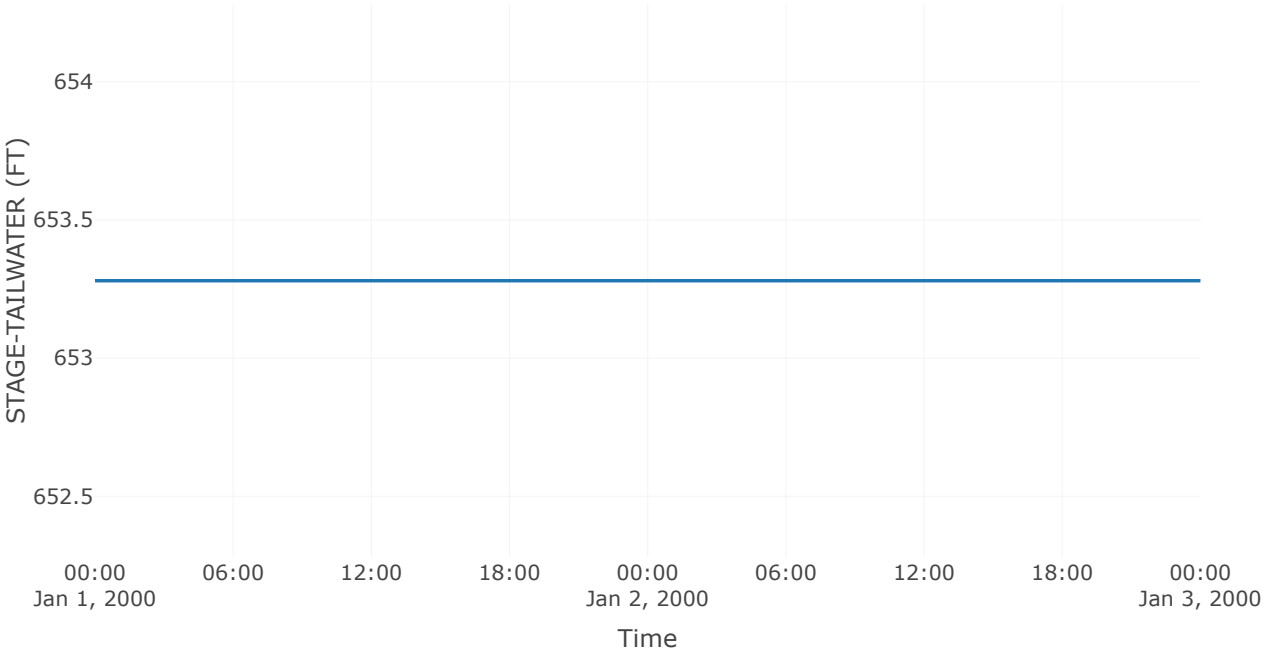

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

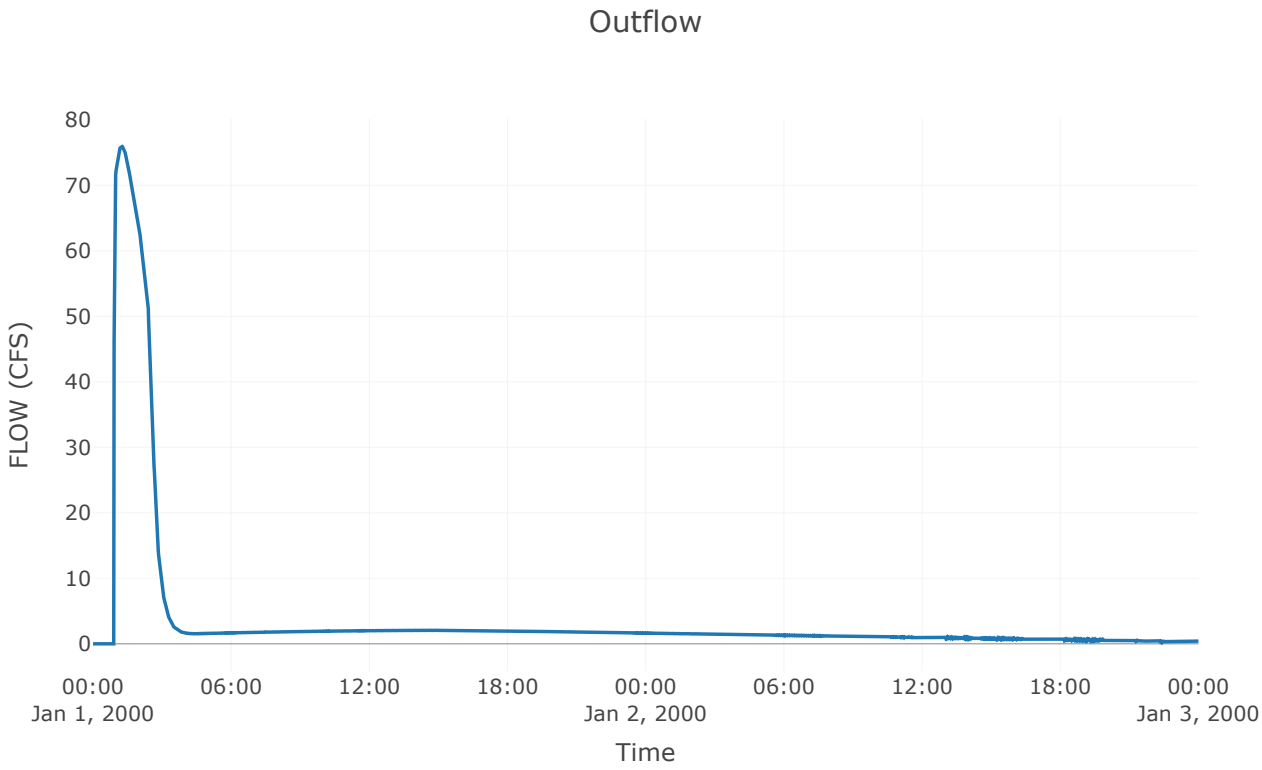

Outlet 1
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

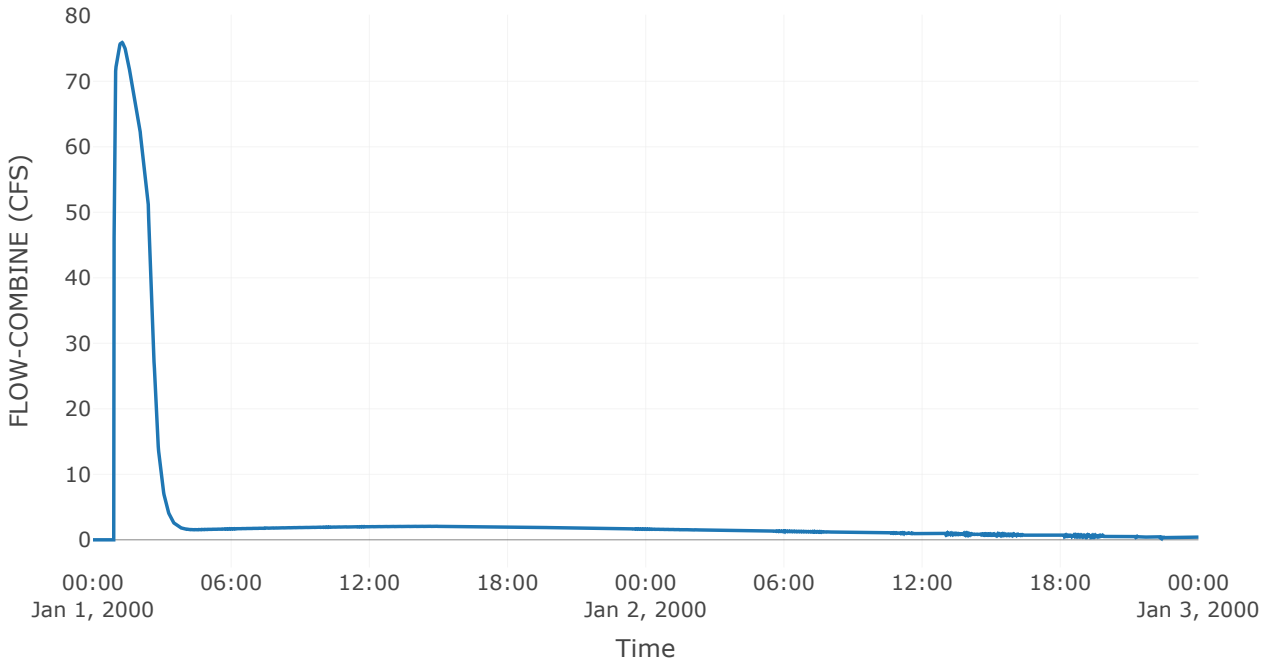



Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

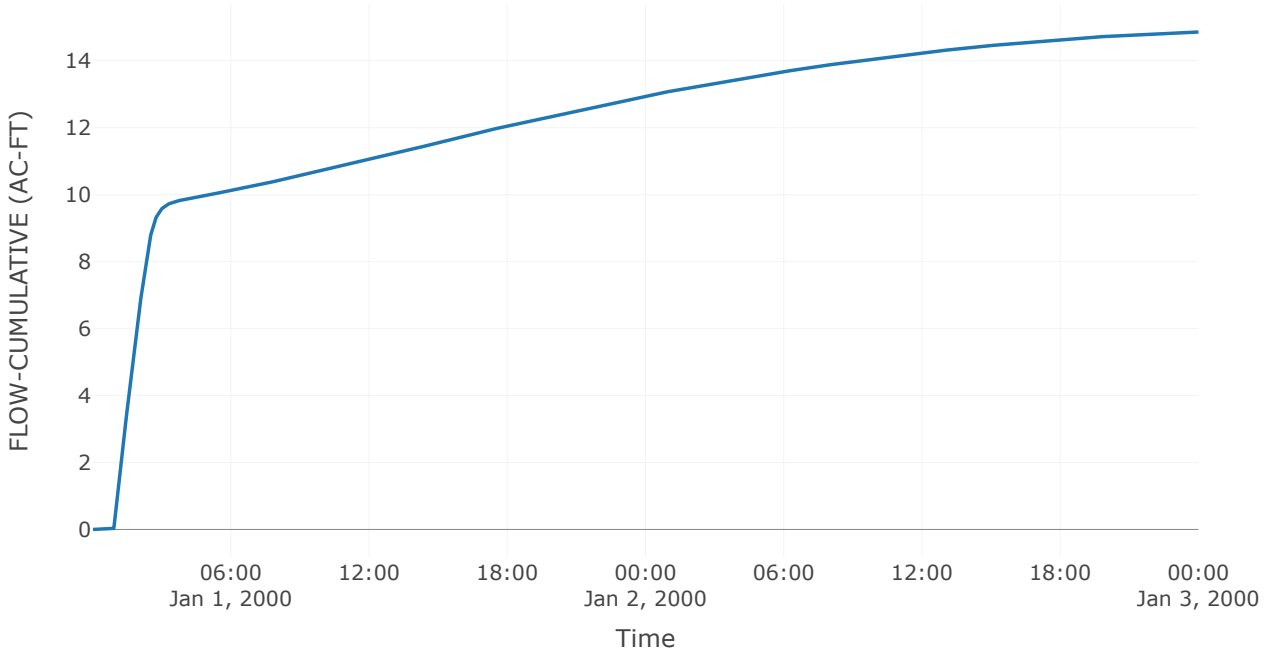
Sink: 55th Street Outlet

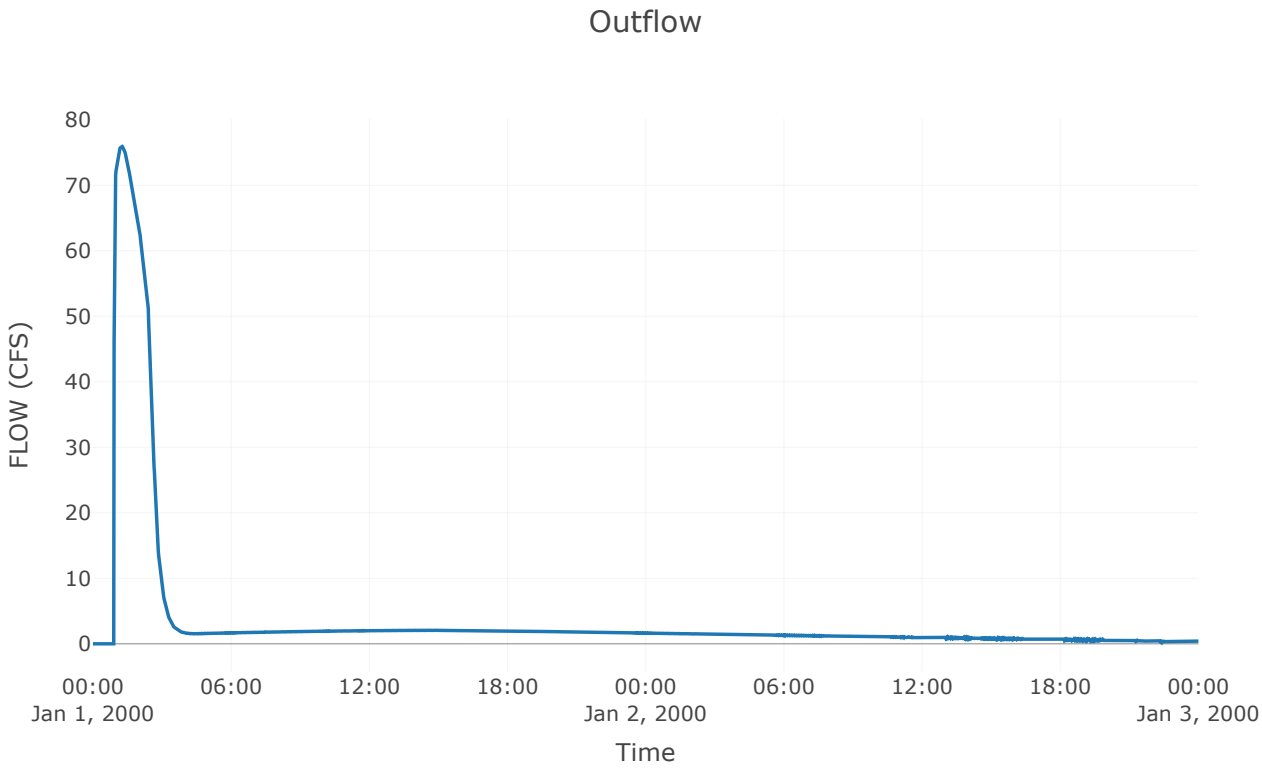
Results: 55th Street Outlet	
Peak Discharge (CFS)	75.95
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.02

Combined Inflow



Cumulative Outflow




Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:39

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Existing On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Existing On - Site	Existing Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Existing On - Site	0	91.09

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Existing On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	331.13	01Jan2000, 01:00	2.48
Storage West of Wolf Road	0.27	331.51	01Jan2000, 01:00	2.48
Existing On - Site	0	15.64	01Jan2000, 00:18	3.06
Existing Basin C	0.27	95.49	01Jan2000, 01:08	1.35
Existing Basin A & B	0.27	95.45	01Jan2000, 01:09	1.2

55th Street Outlet	0.27	95.45	01Jan2000, 01:09	1.2

Subbasin: On-Site Trib 1

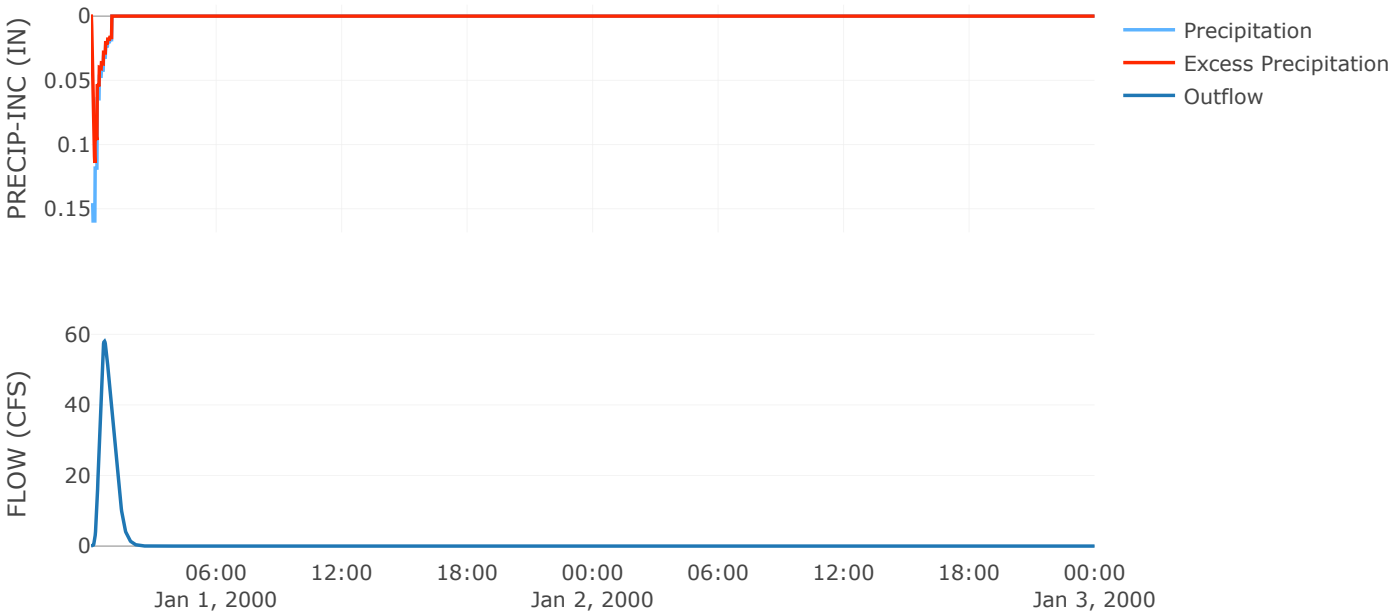
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

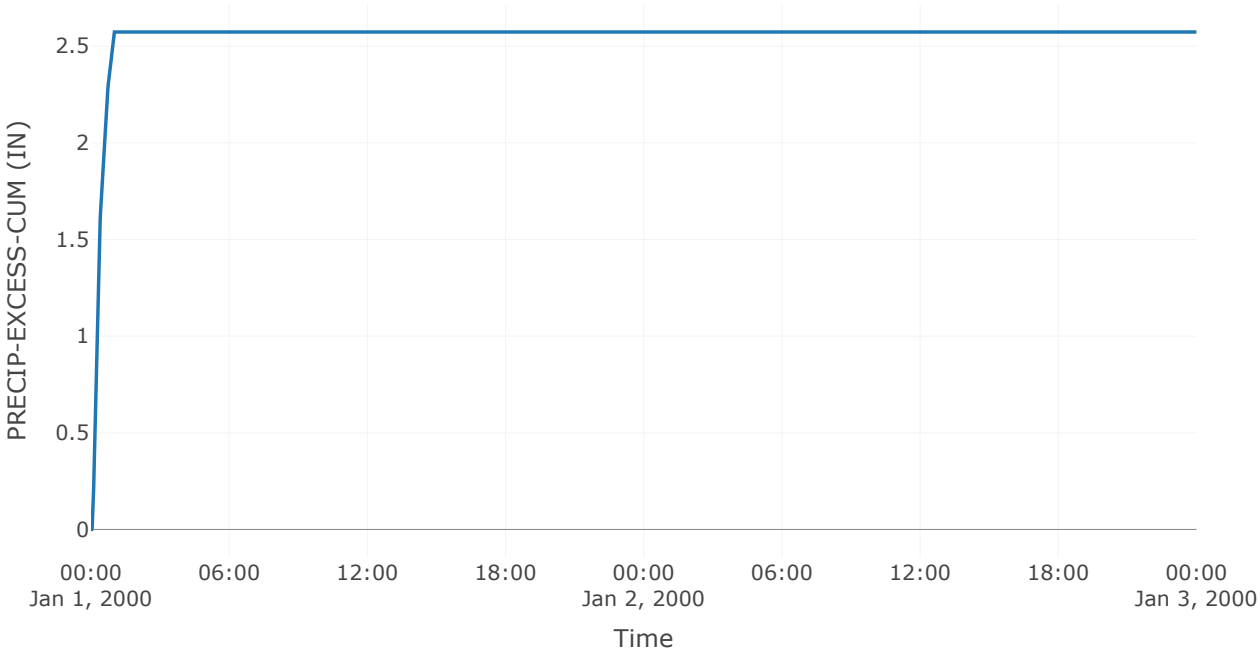
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

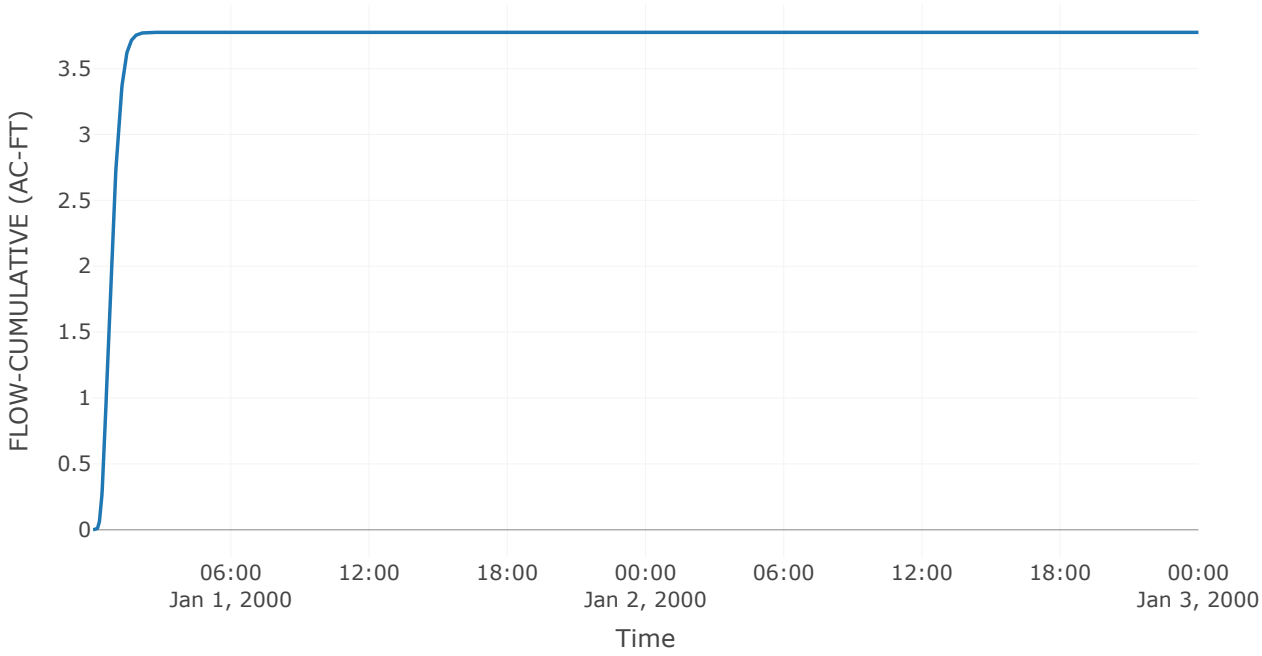
Precipitation and Outflow



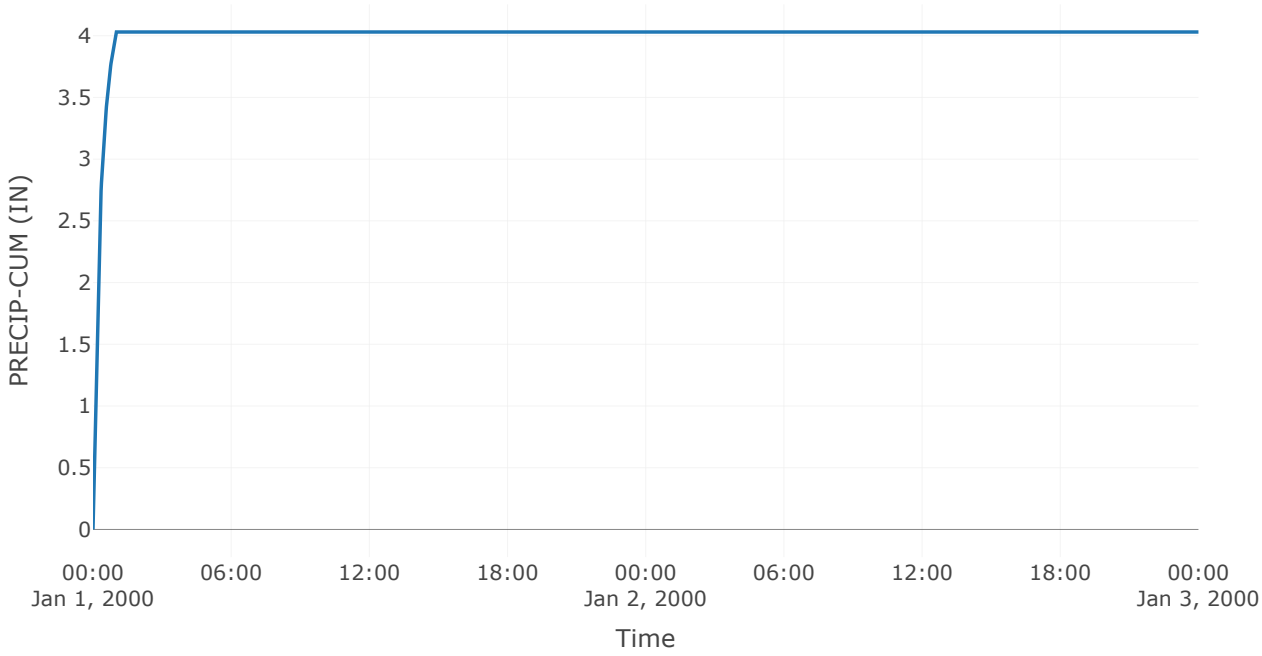
Cumulative Excess Precipitation

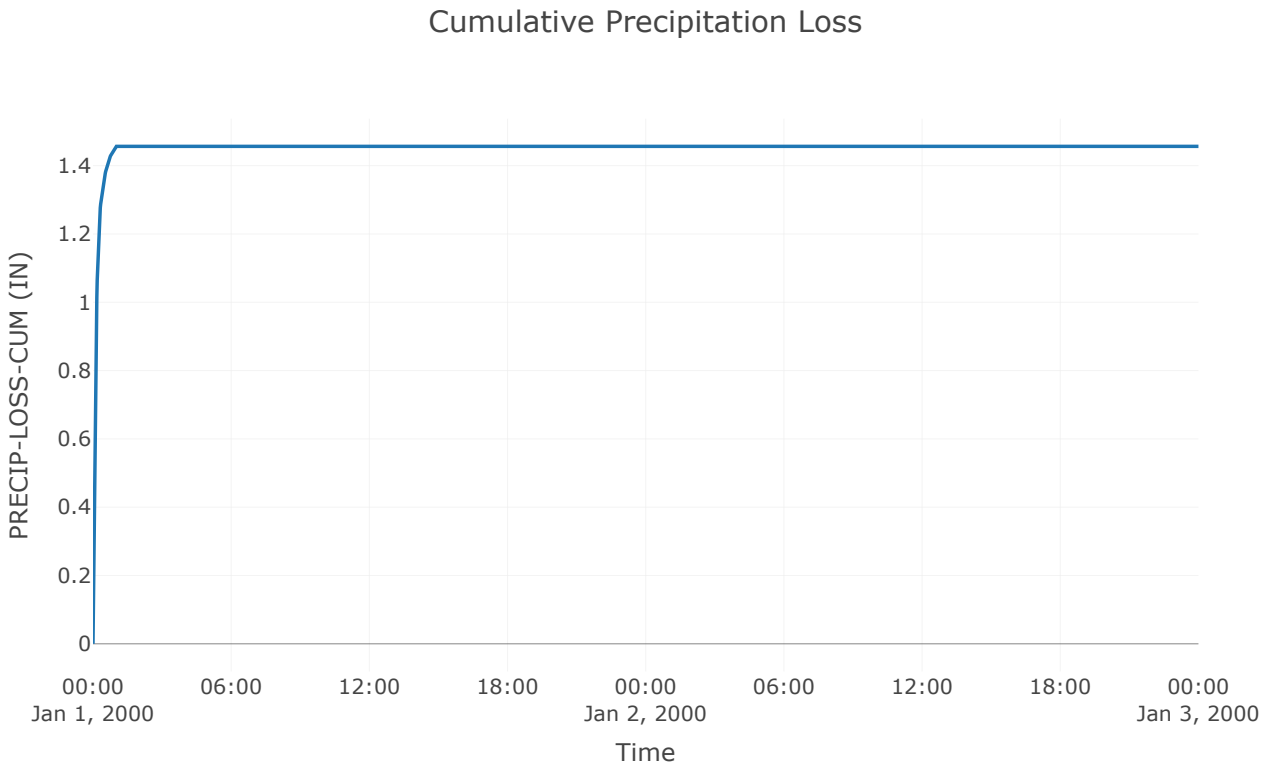


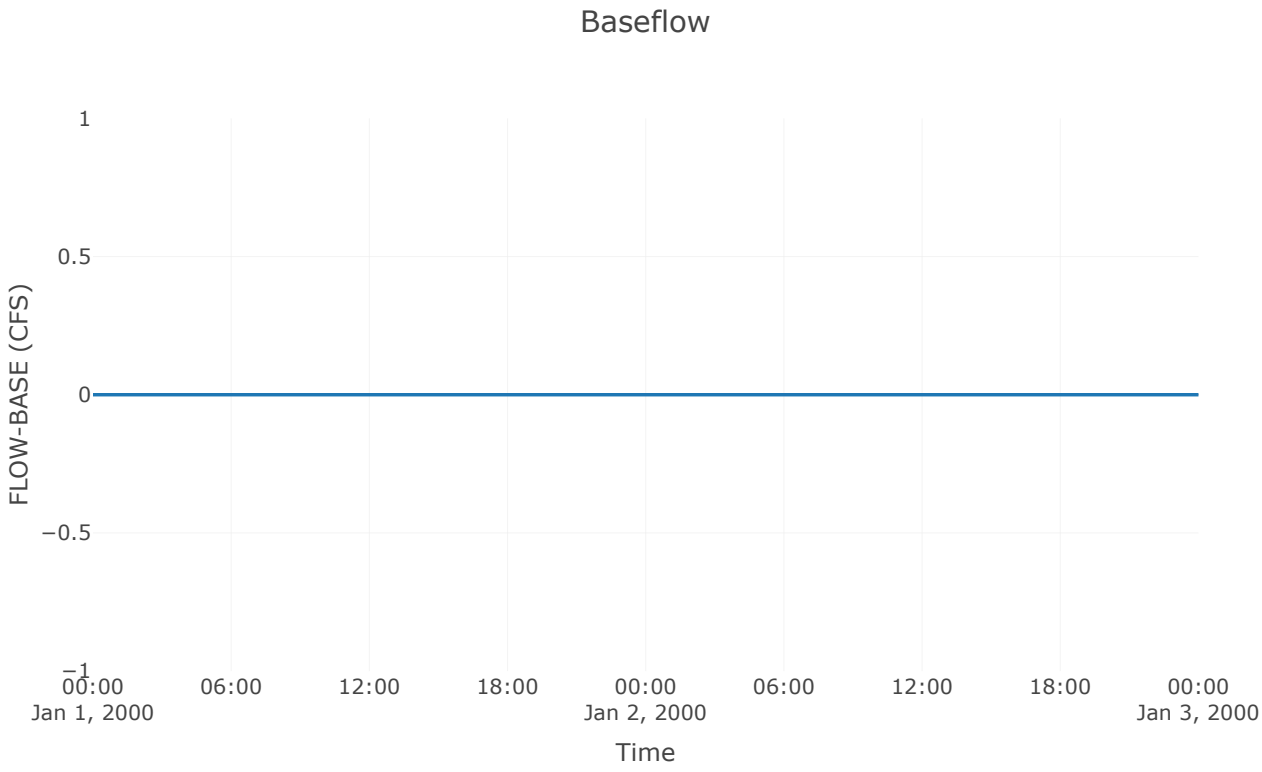
Cumulative Outflow

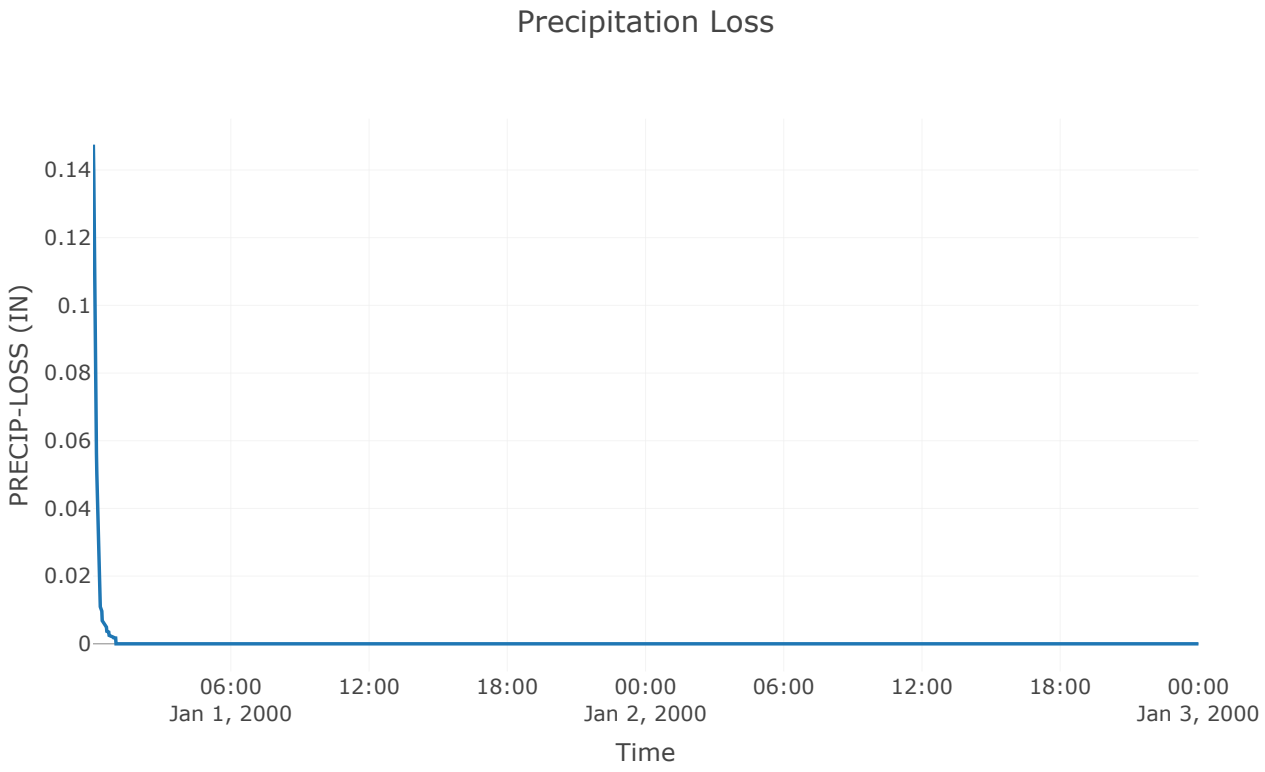


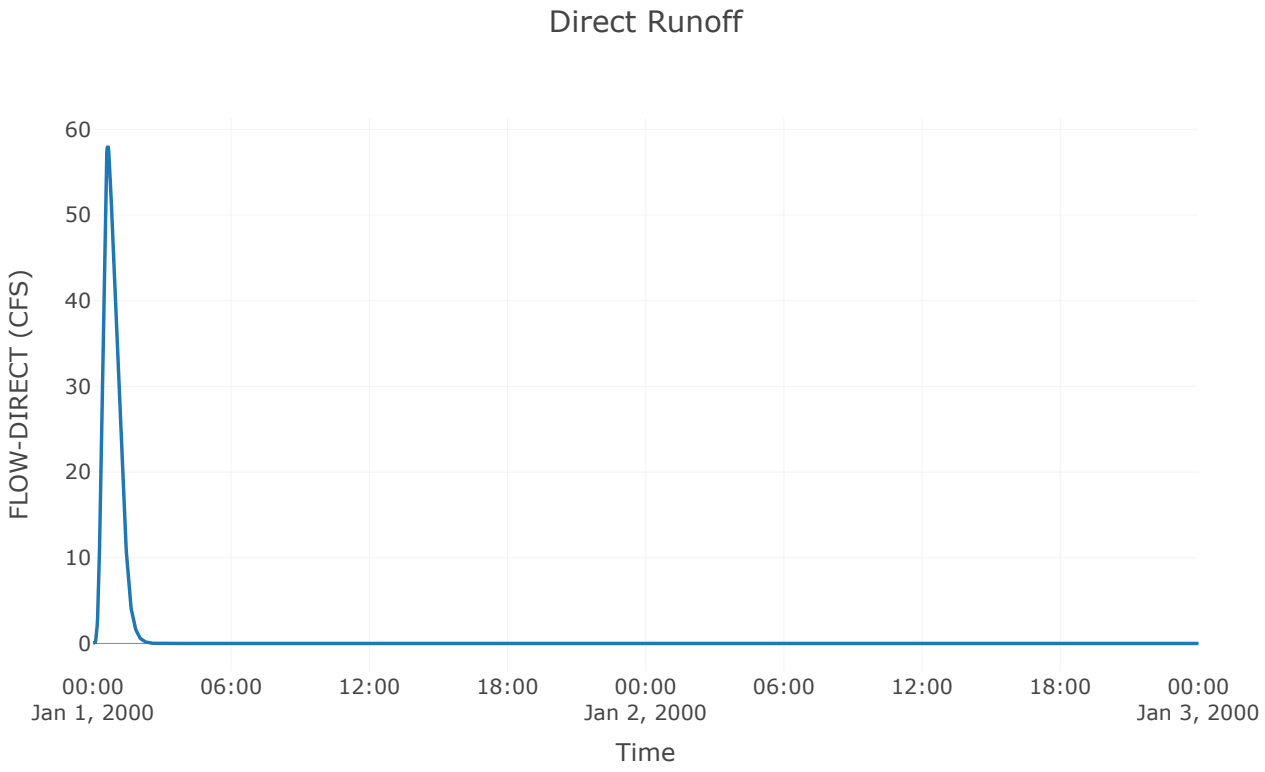
Cumulative Precipitation

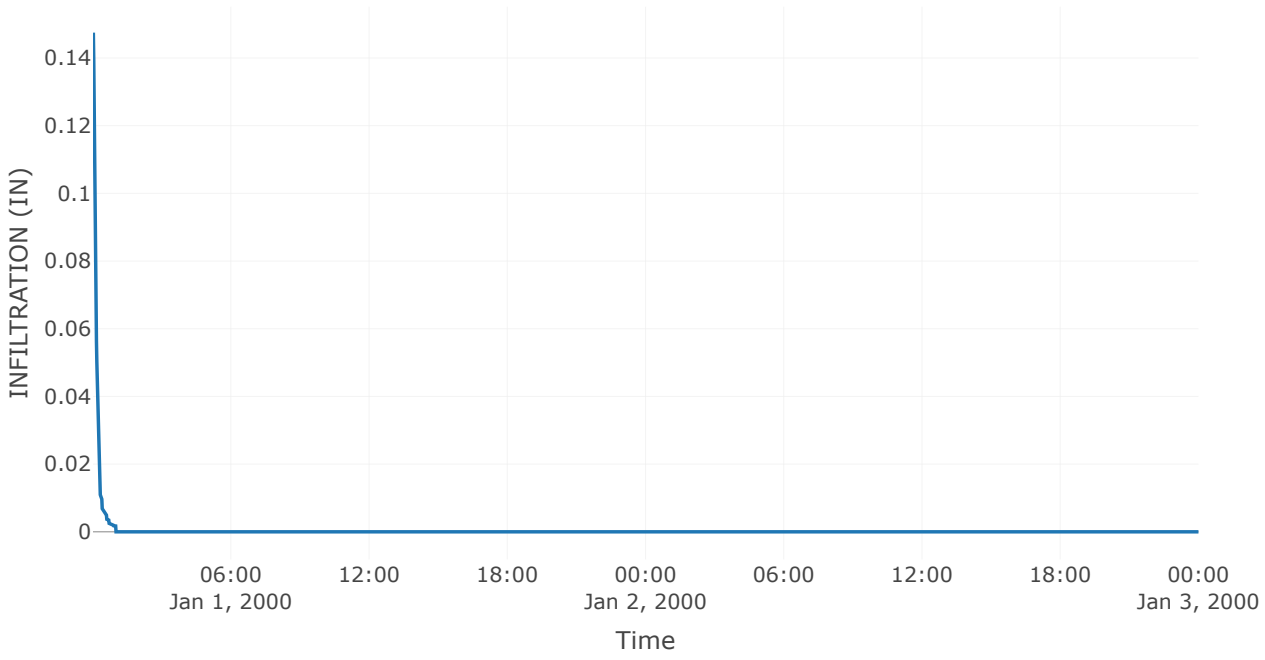



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

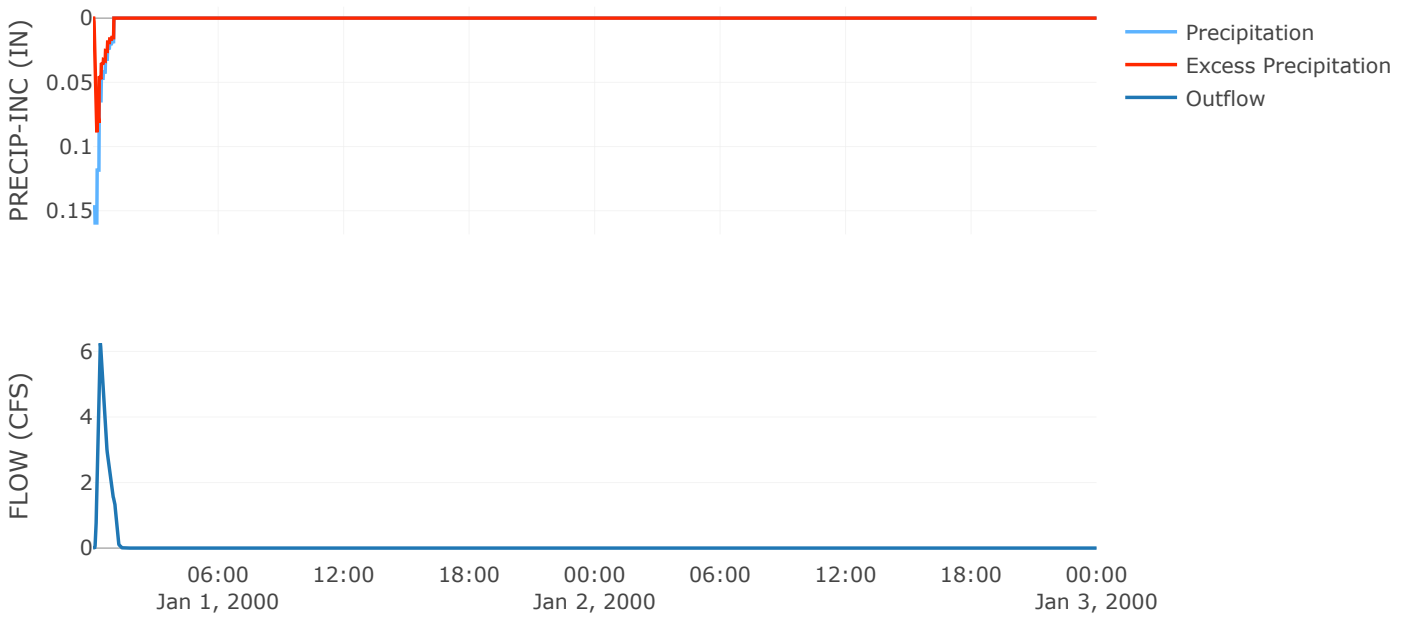
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

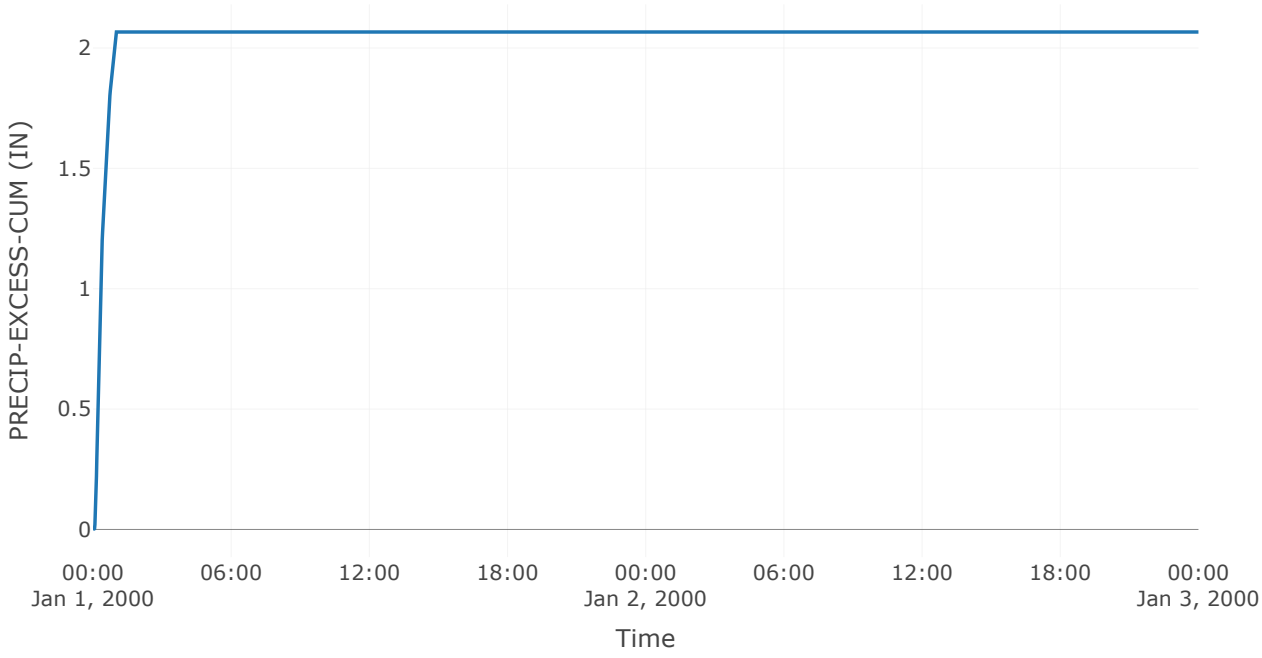
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

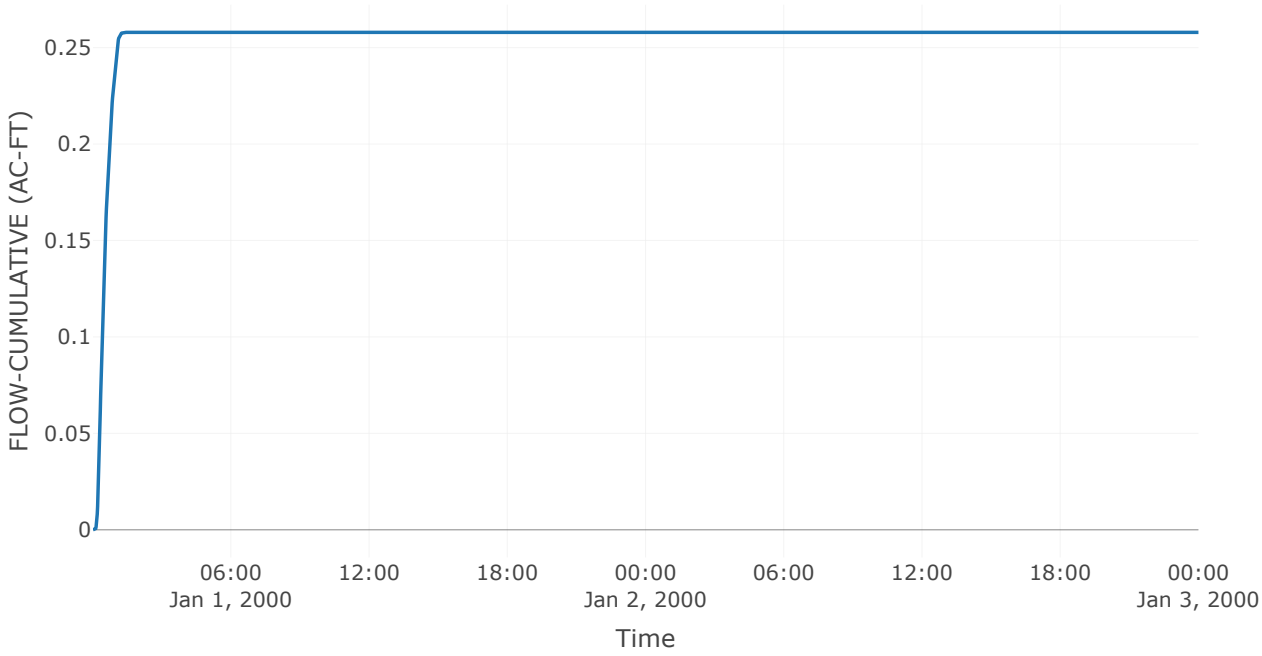
Precipitation and Outflow



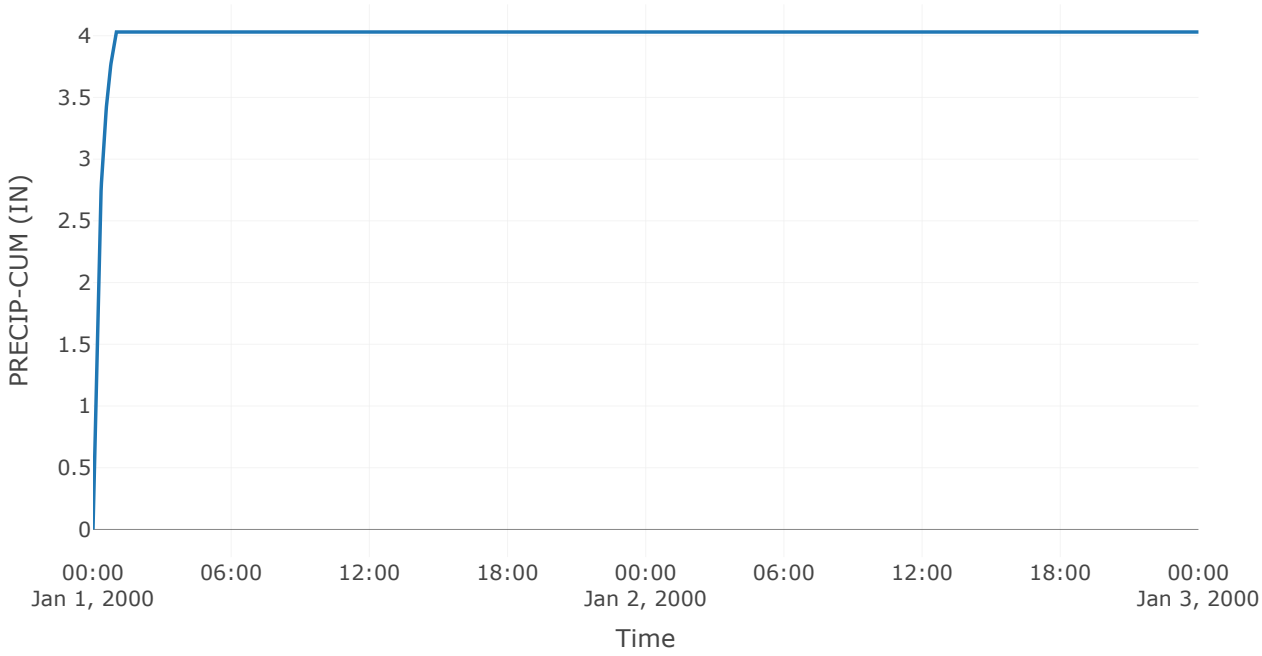
Cumulative Excess Precipitation

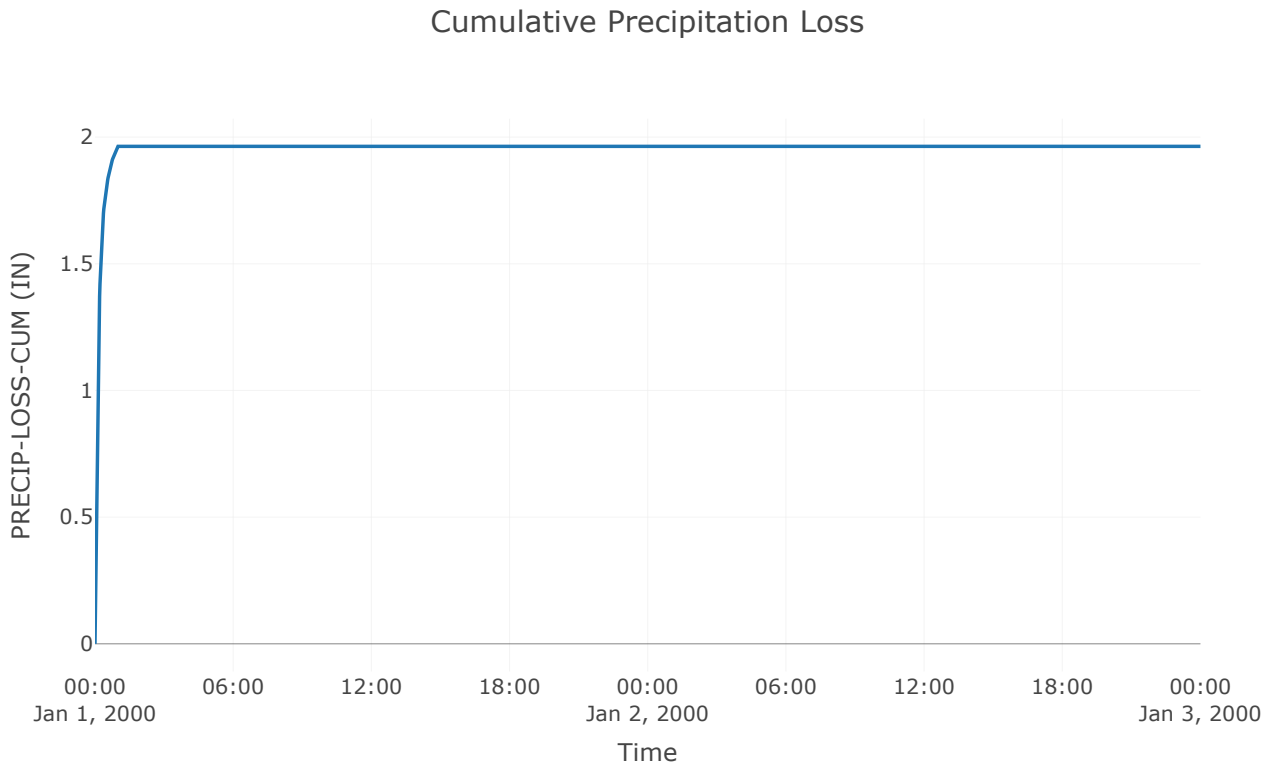


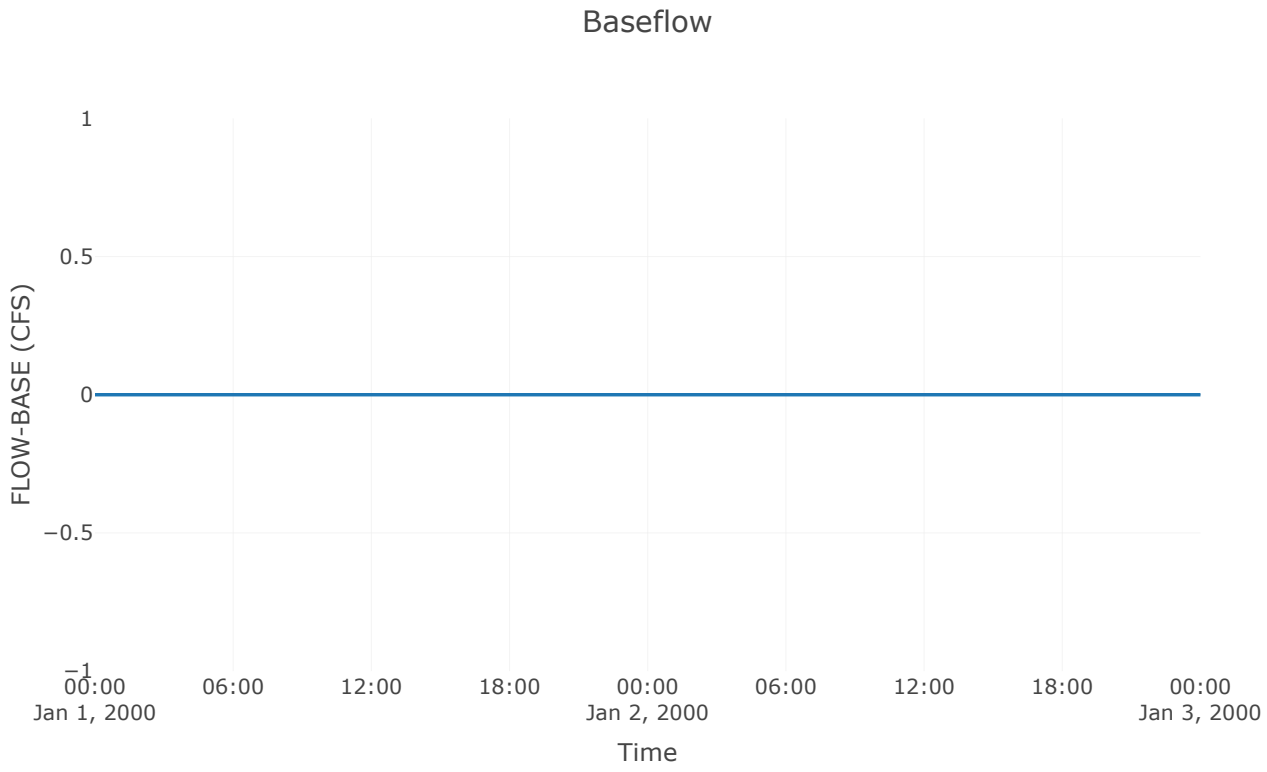
Cumulative Outflow



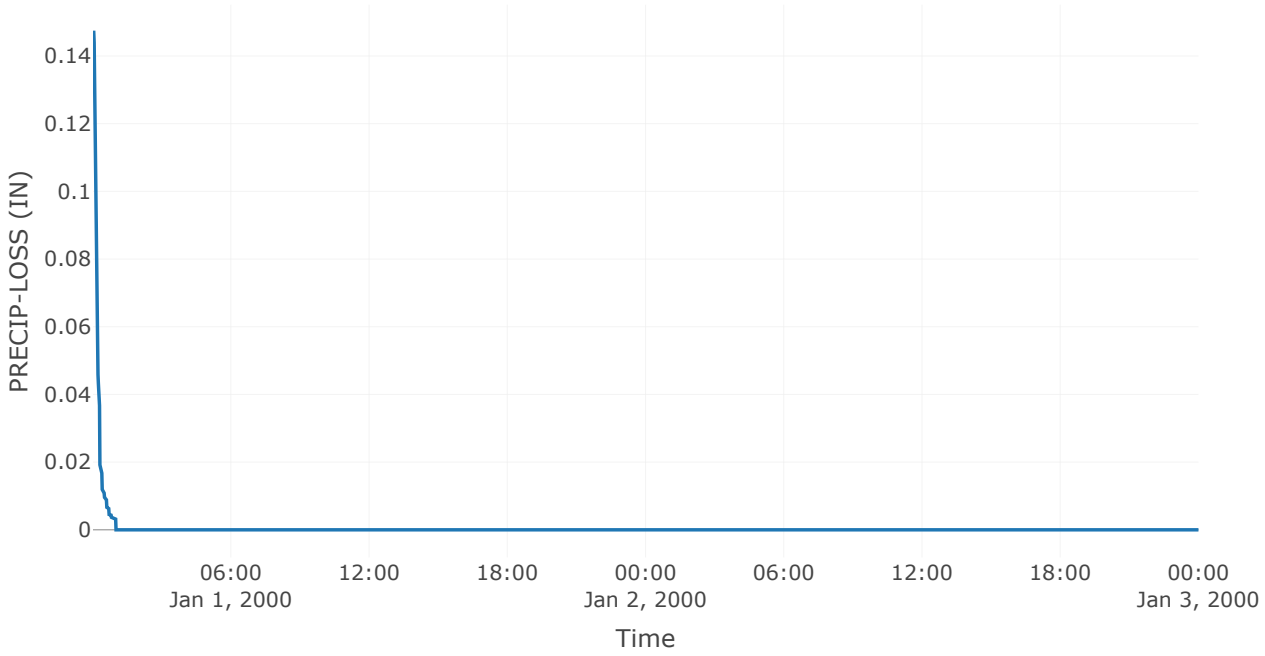
Cumulative Precipitation



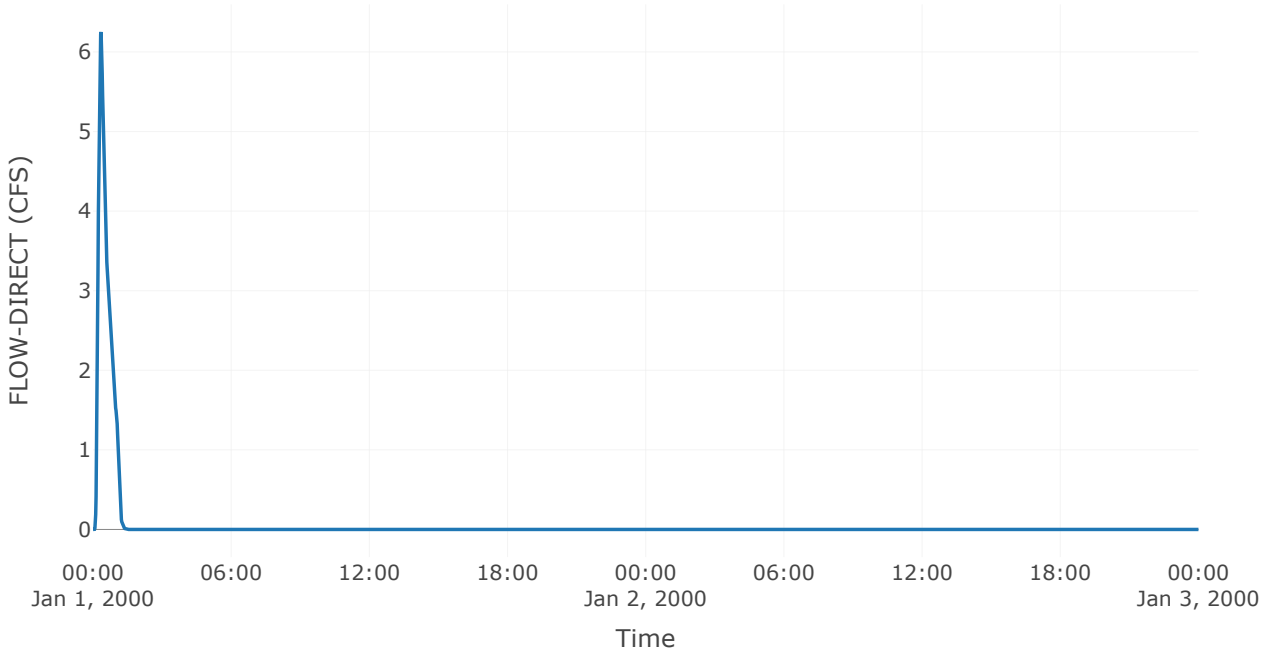

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

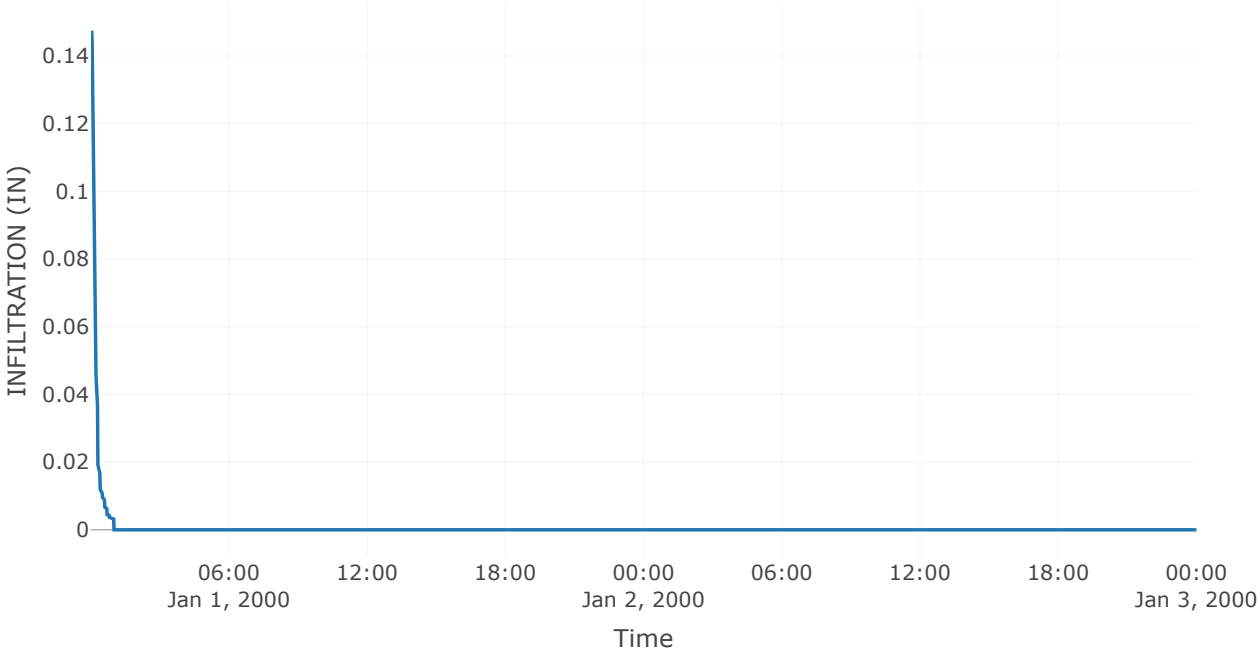

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

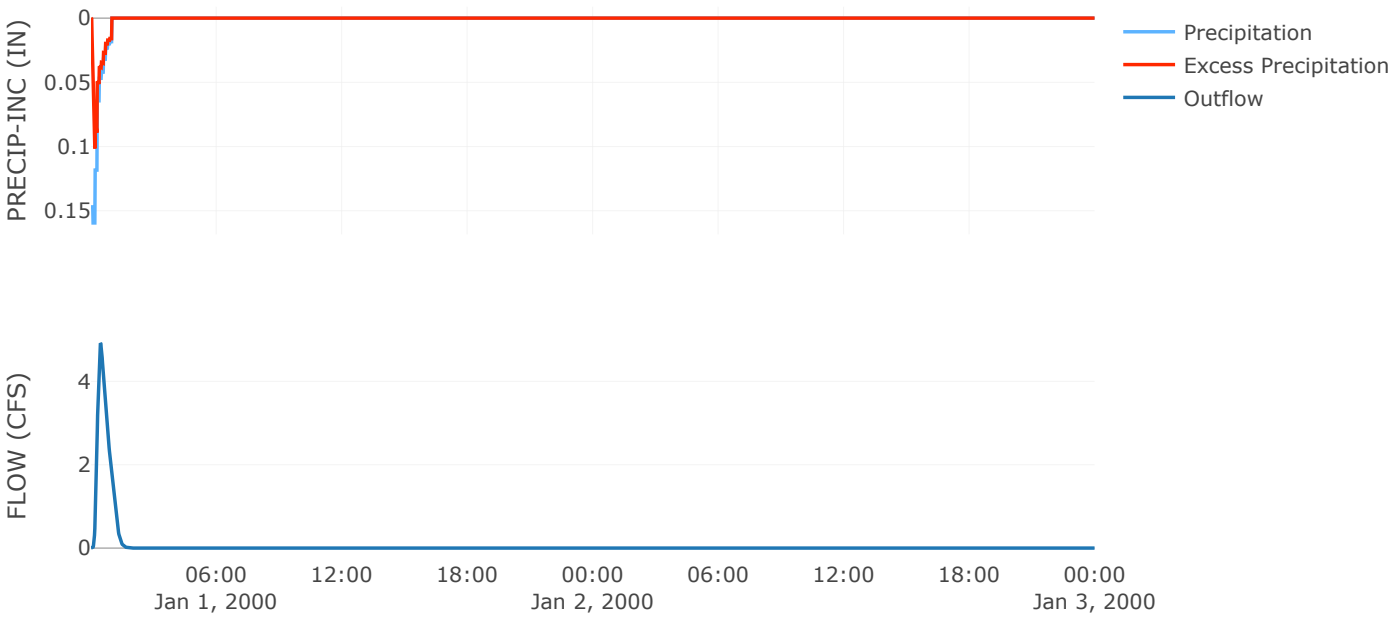
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

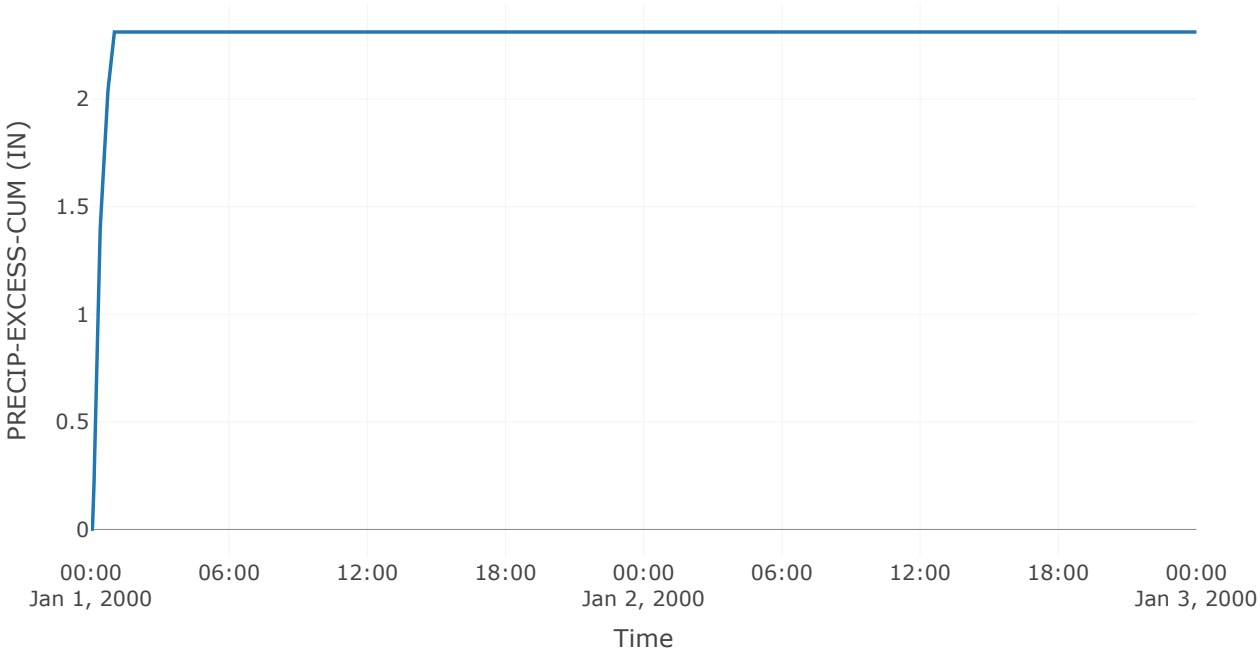
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

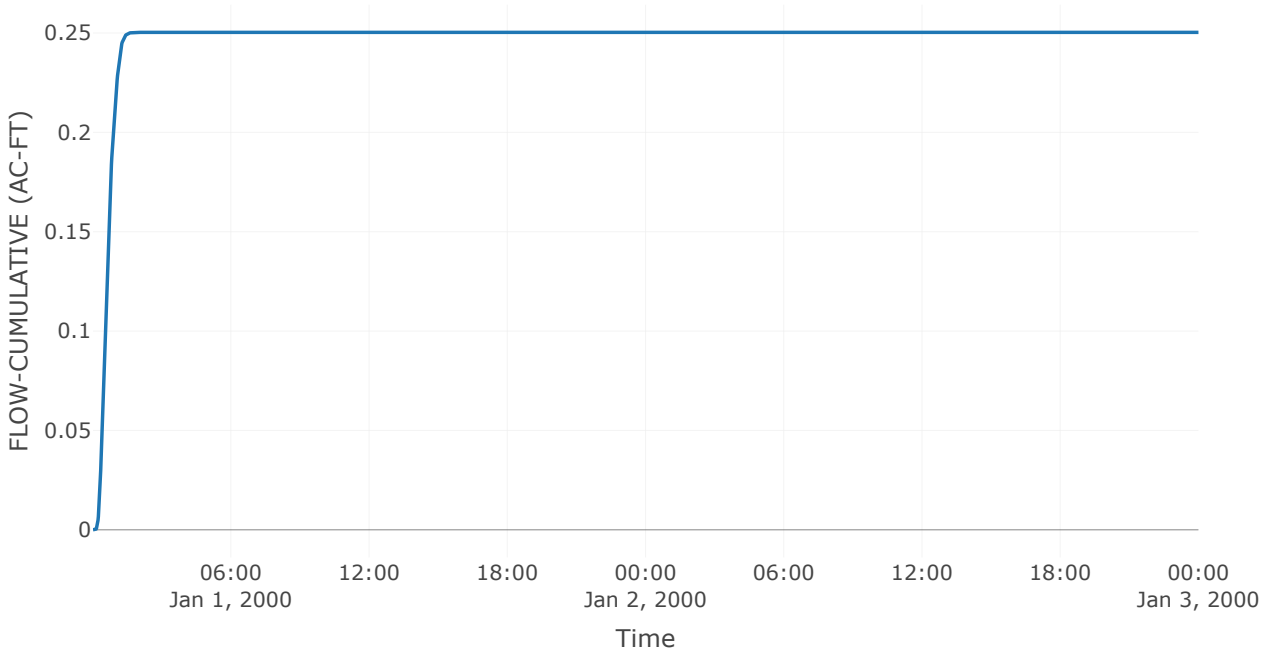
Precipitation and Outflow



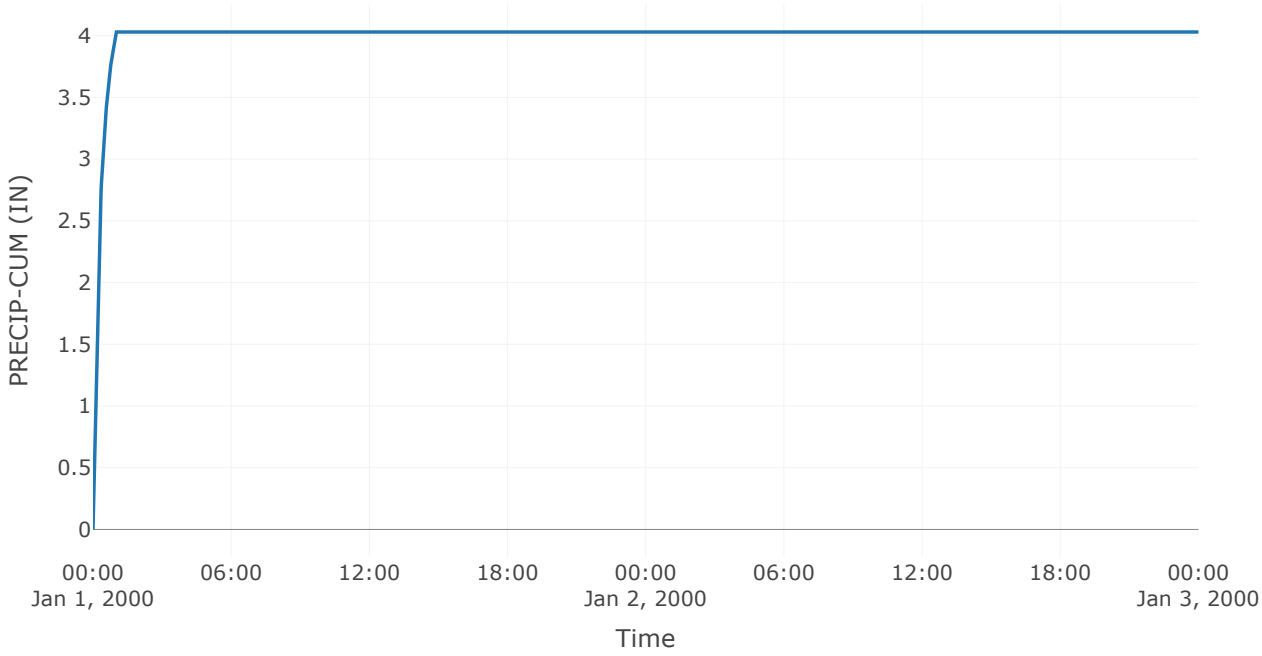
Cumulative Excess Precipitation

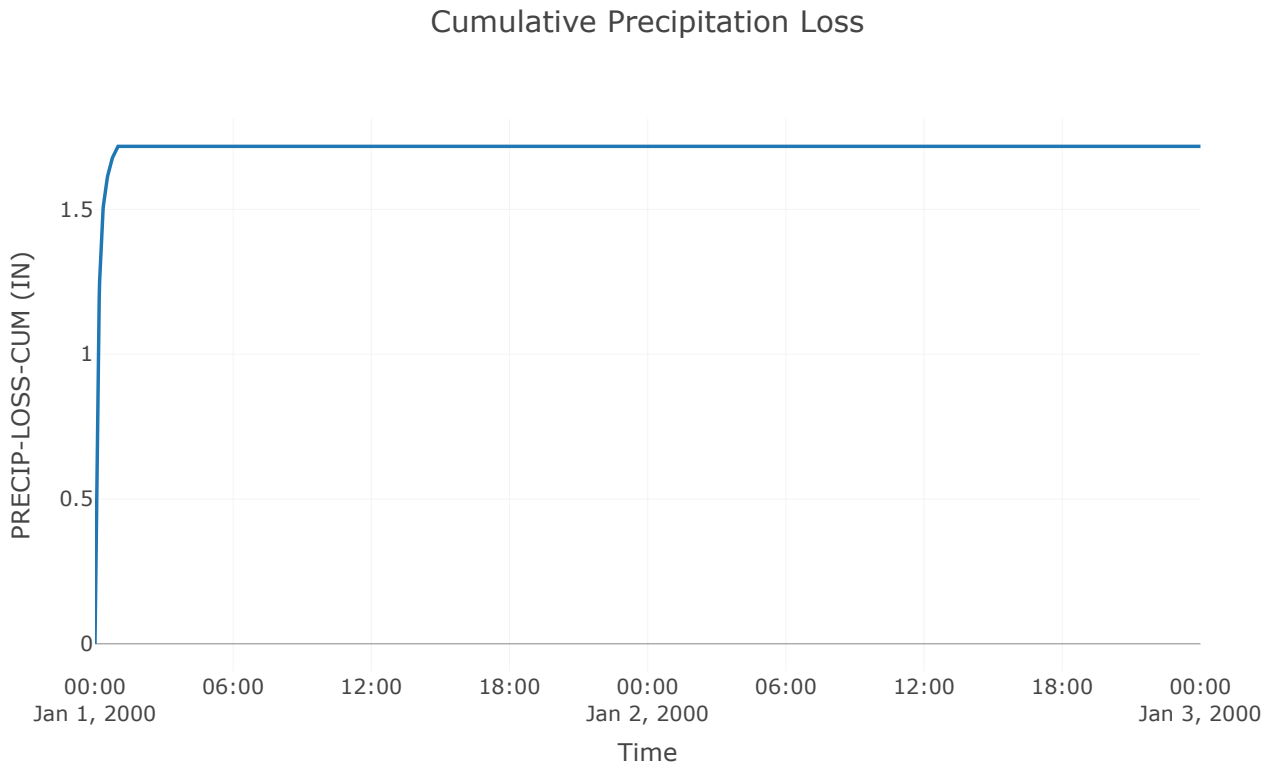


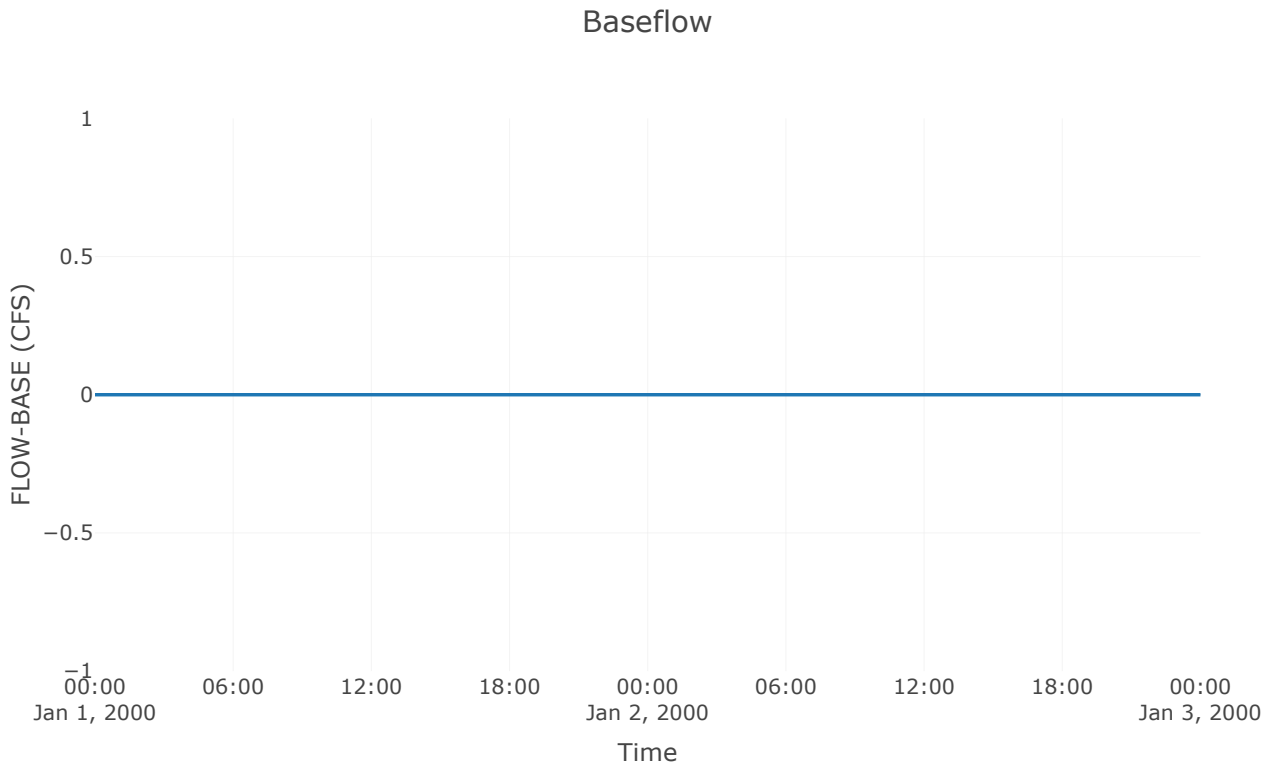
Cumulative Outflow

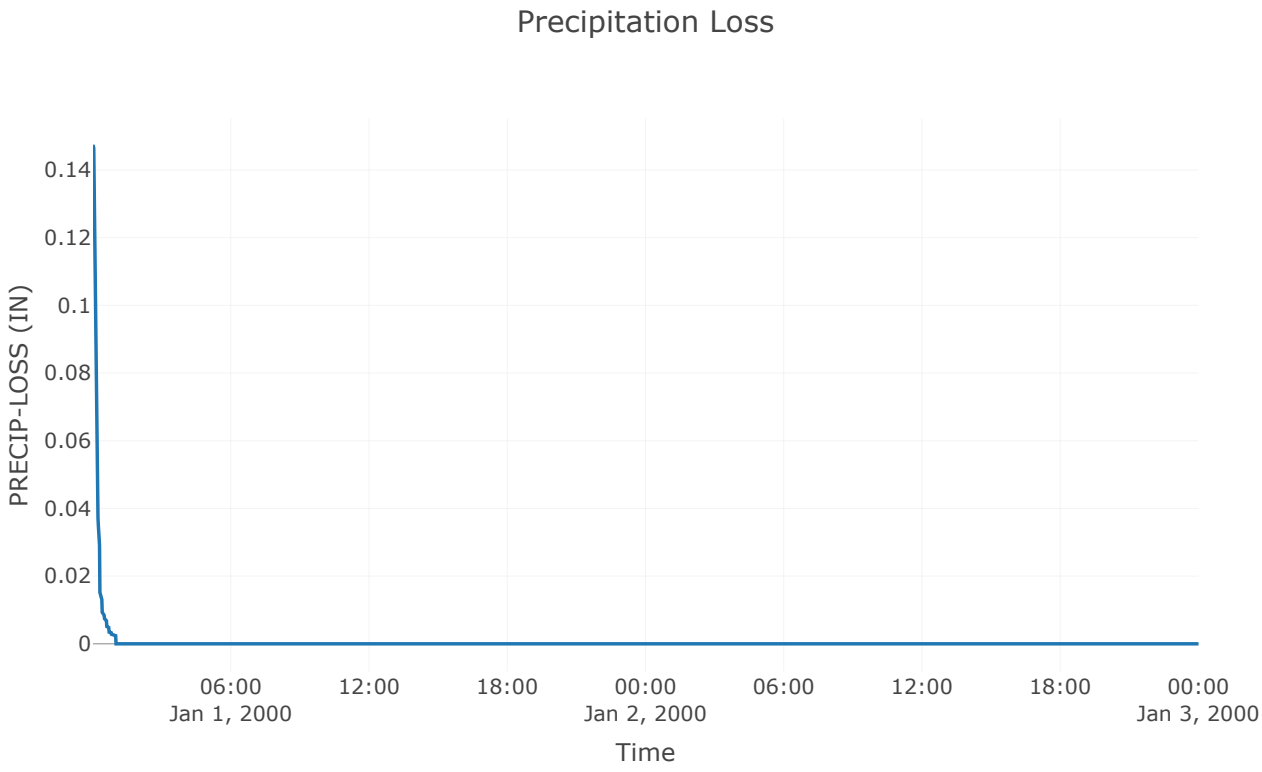


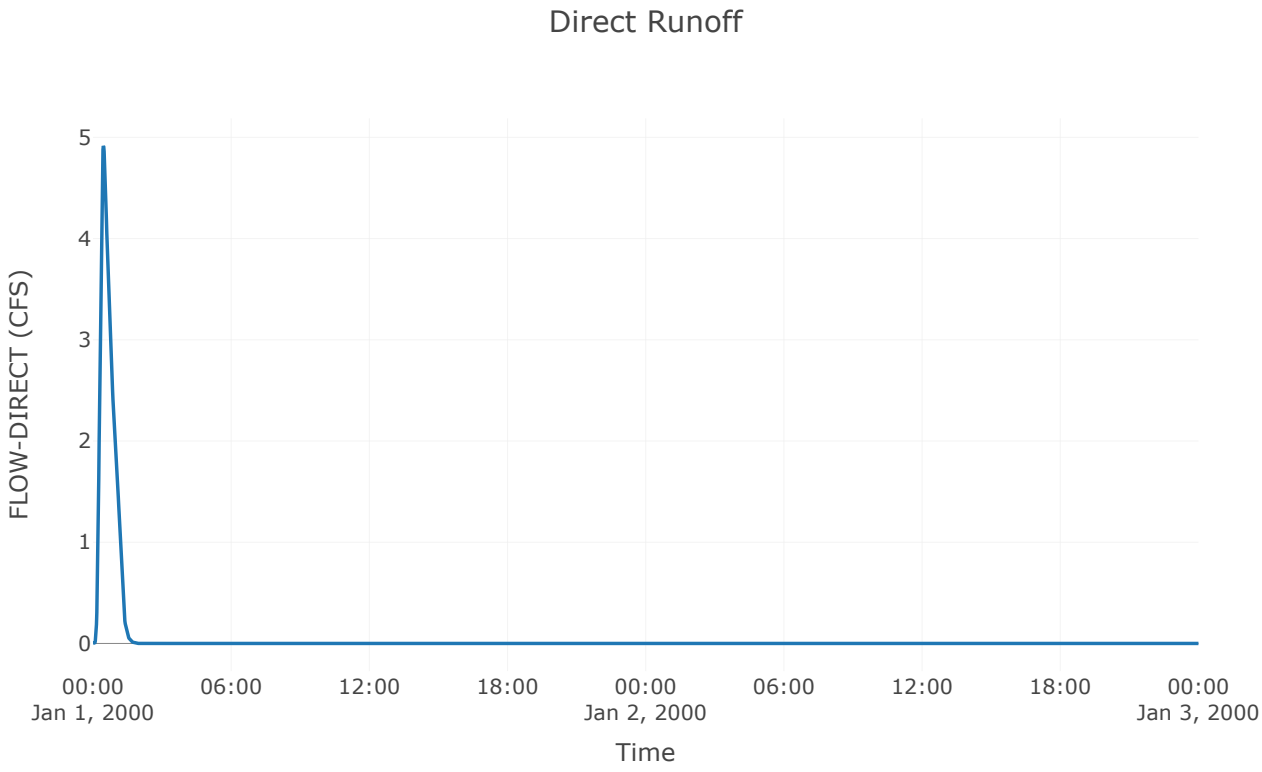
Cumulative Precipitation

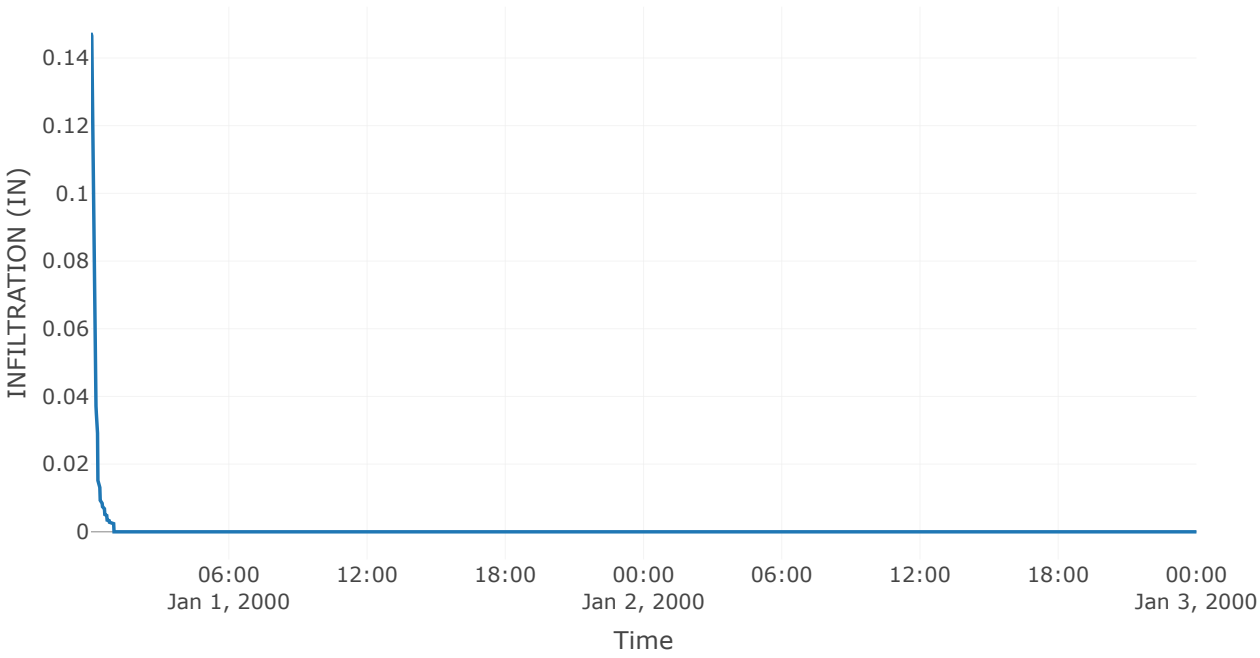



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

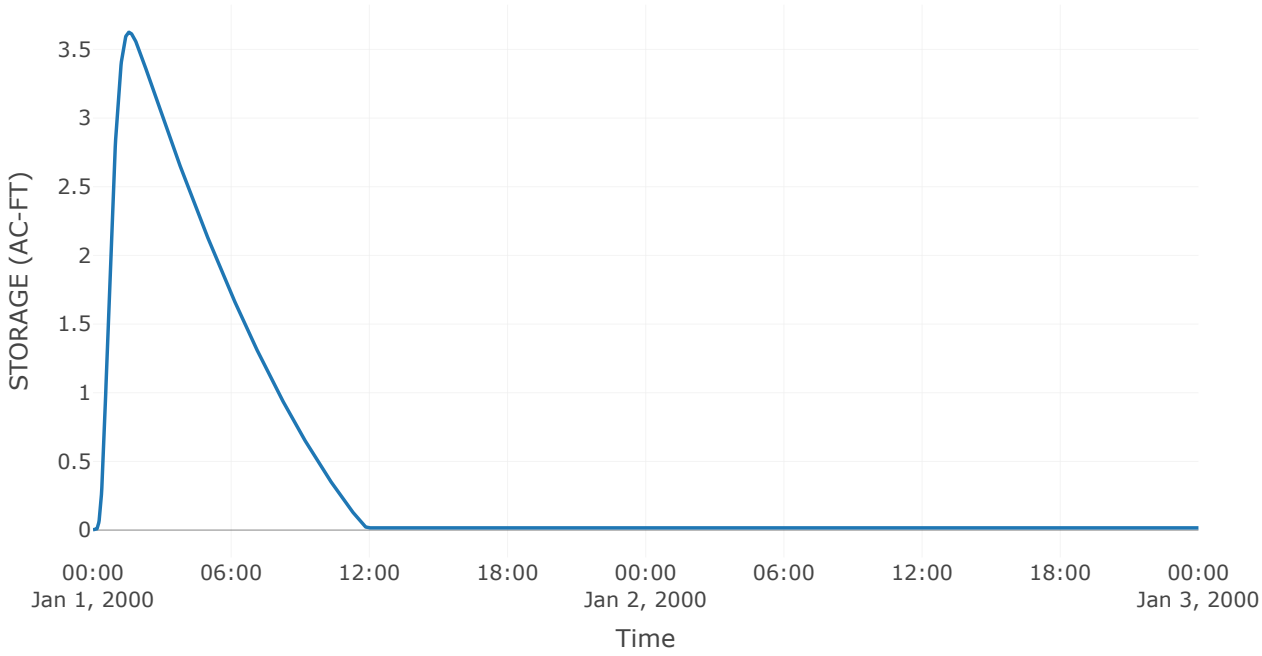

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

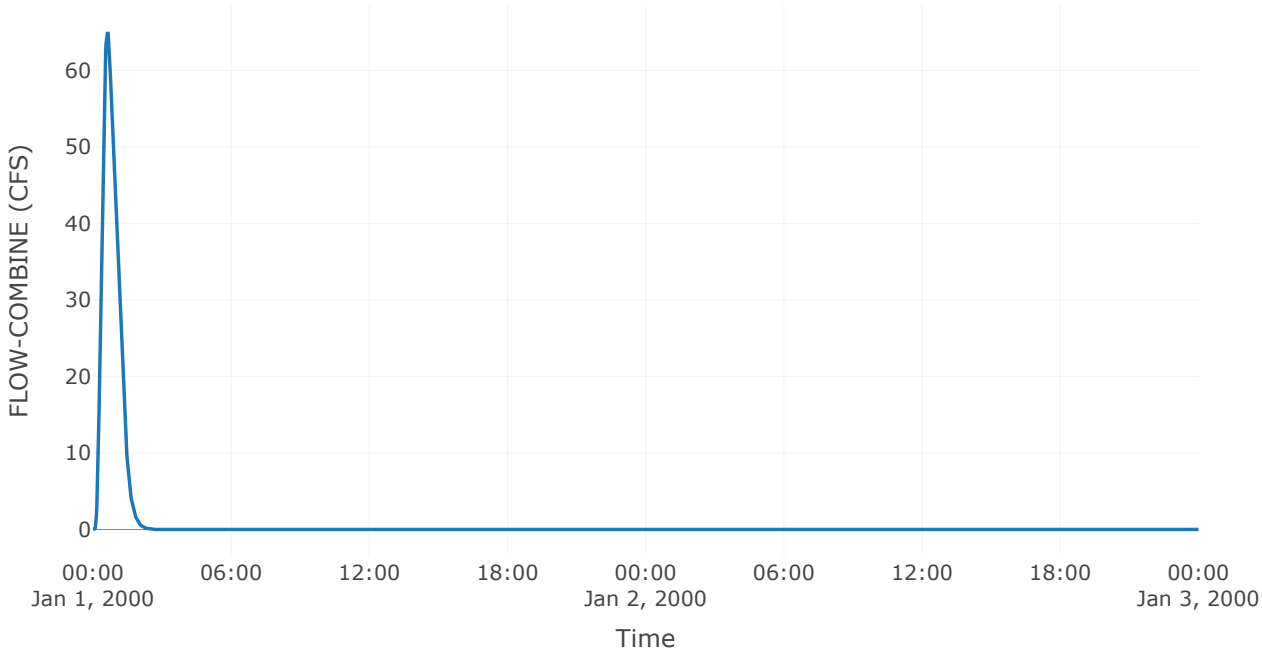
Downstream : Basin 2

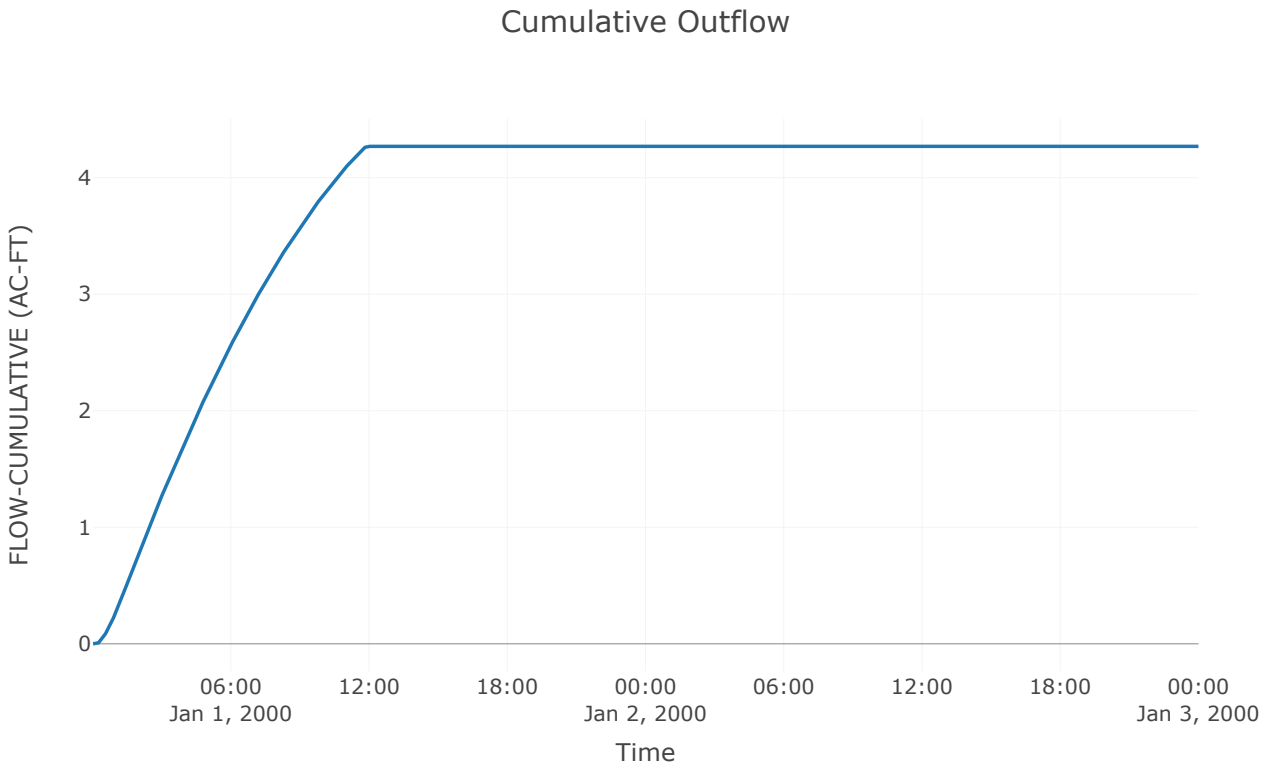
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

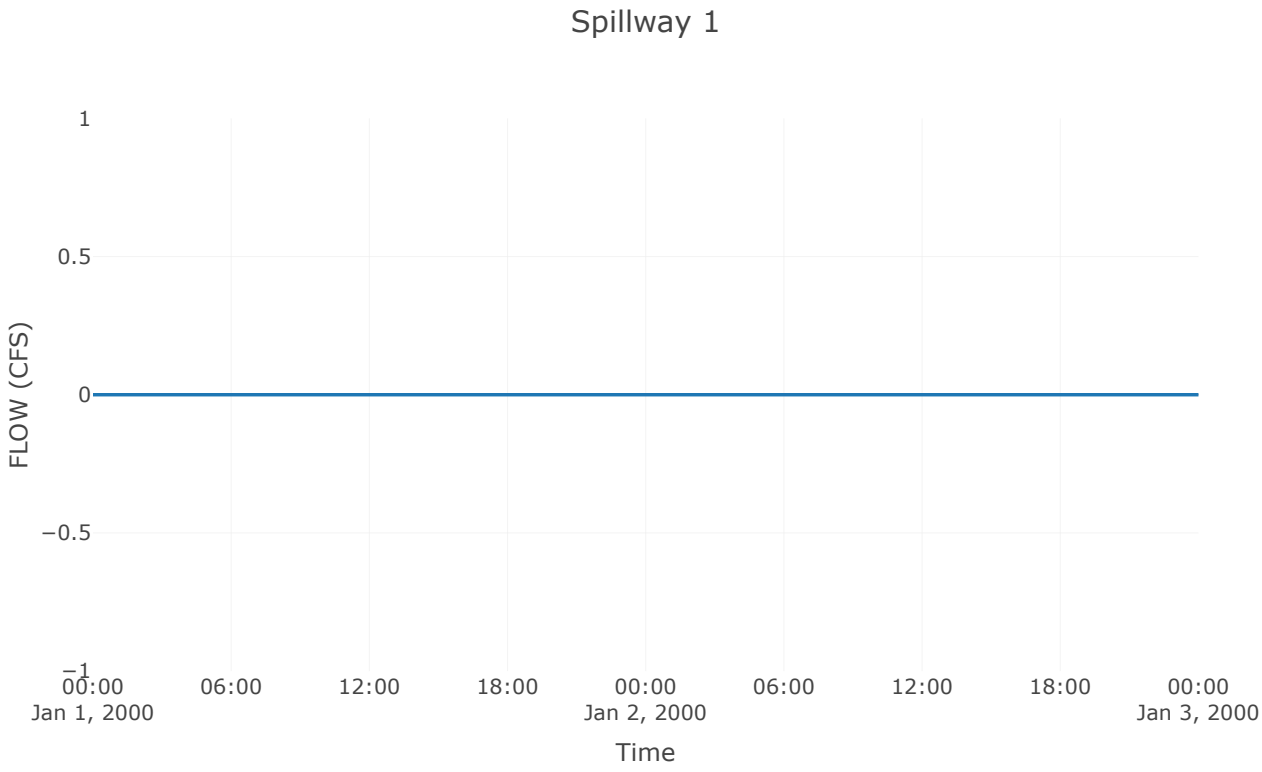
Storage



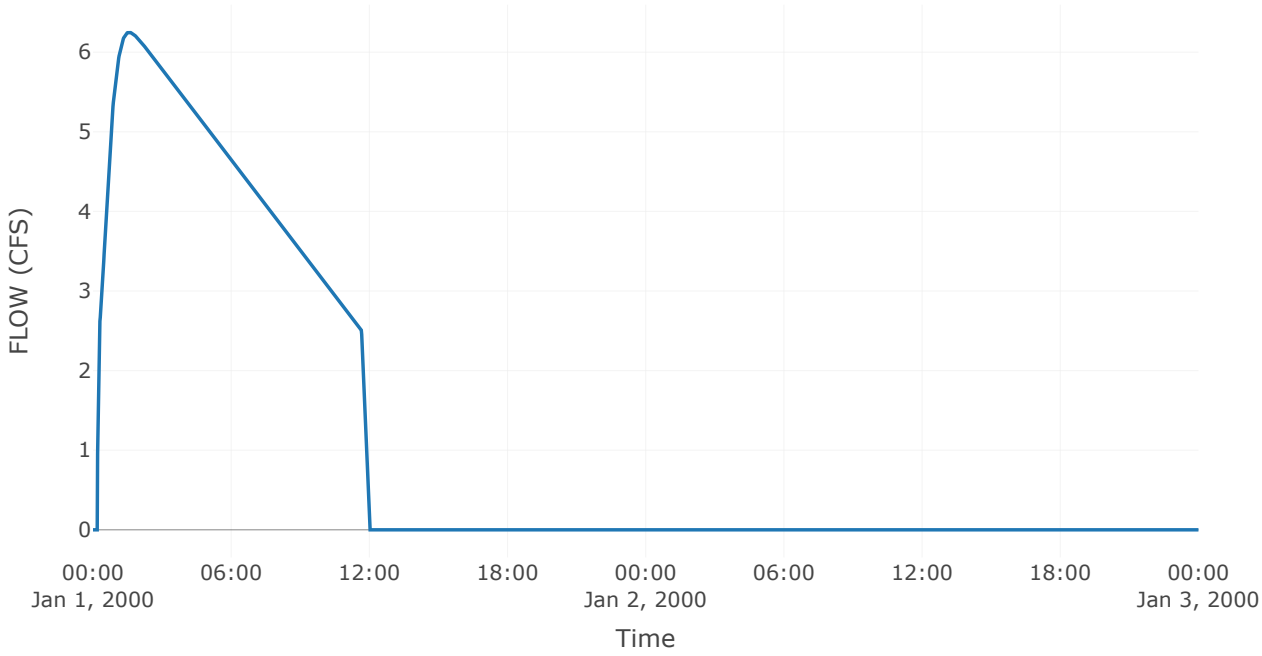
Combined Inflow



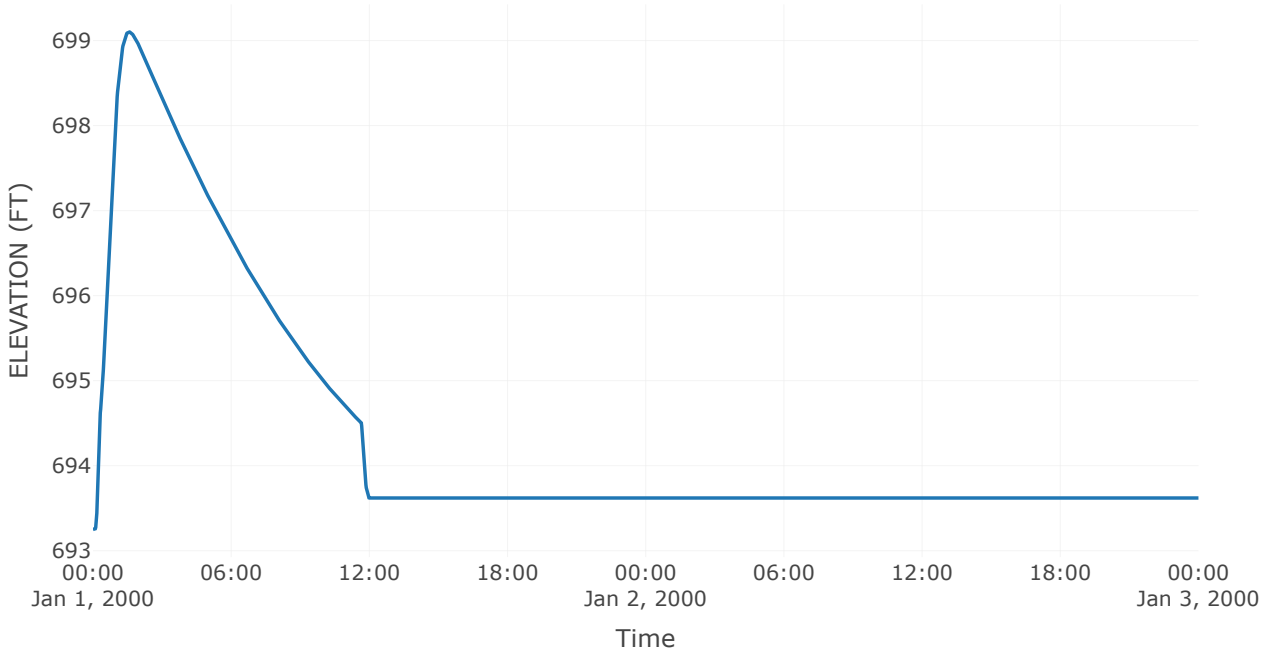

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

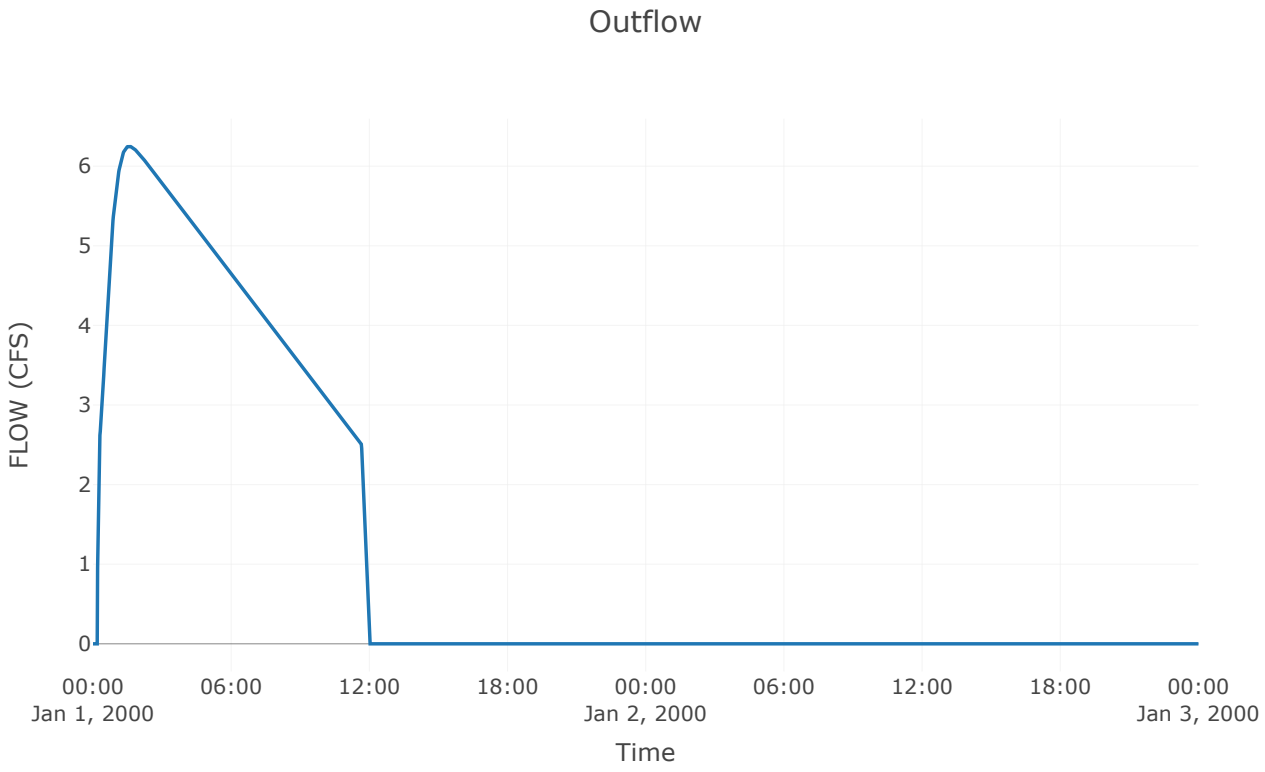

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

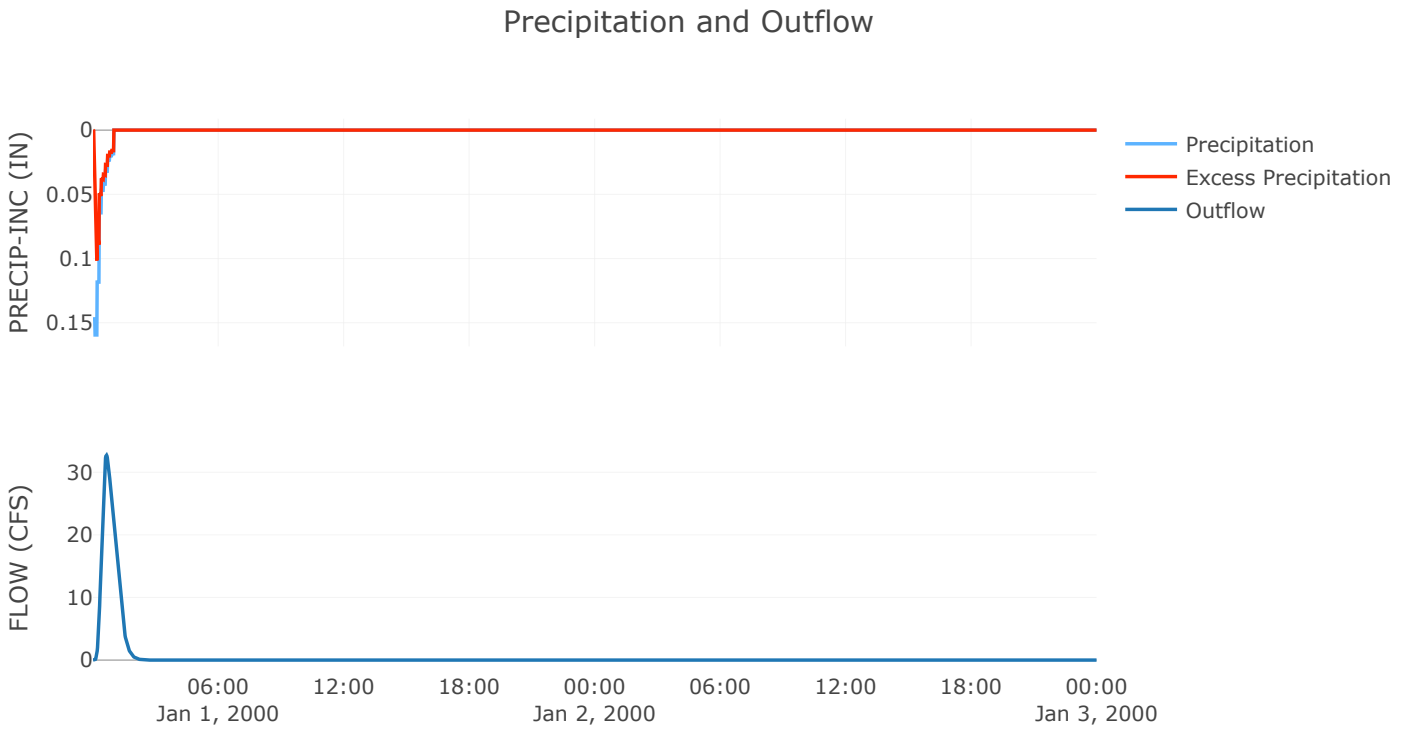
Subbasin: On-Site Trib 2

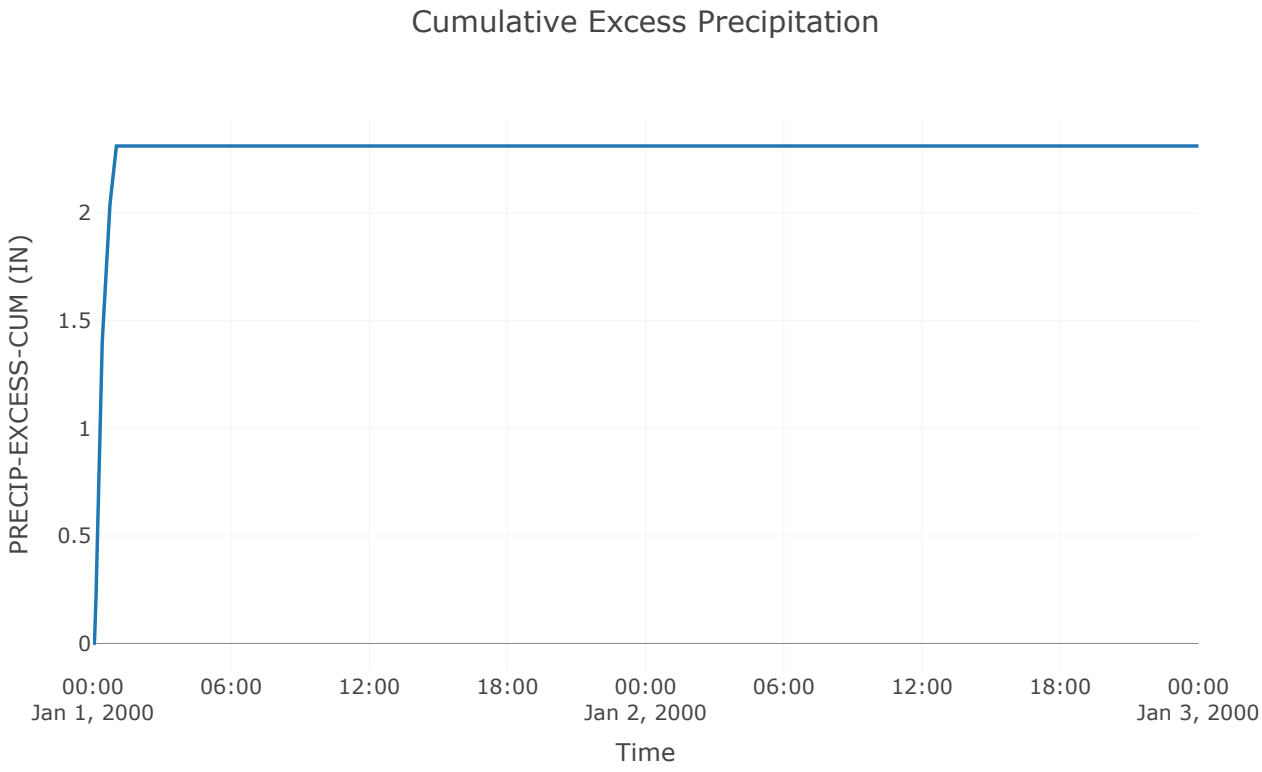
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

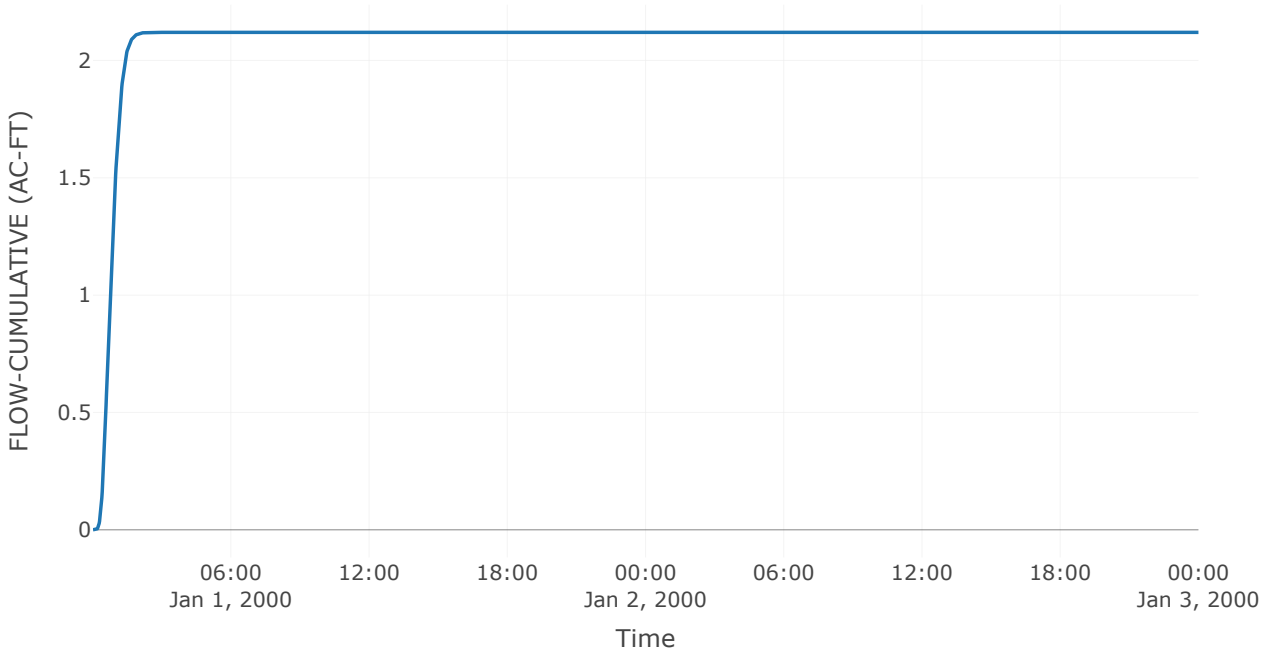
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

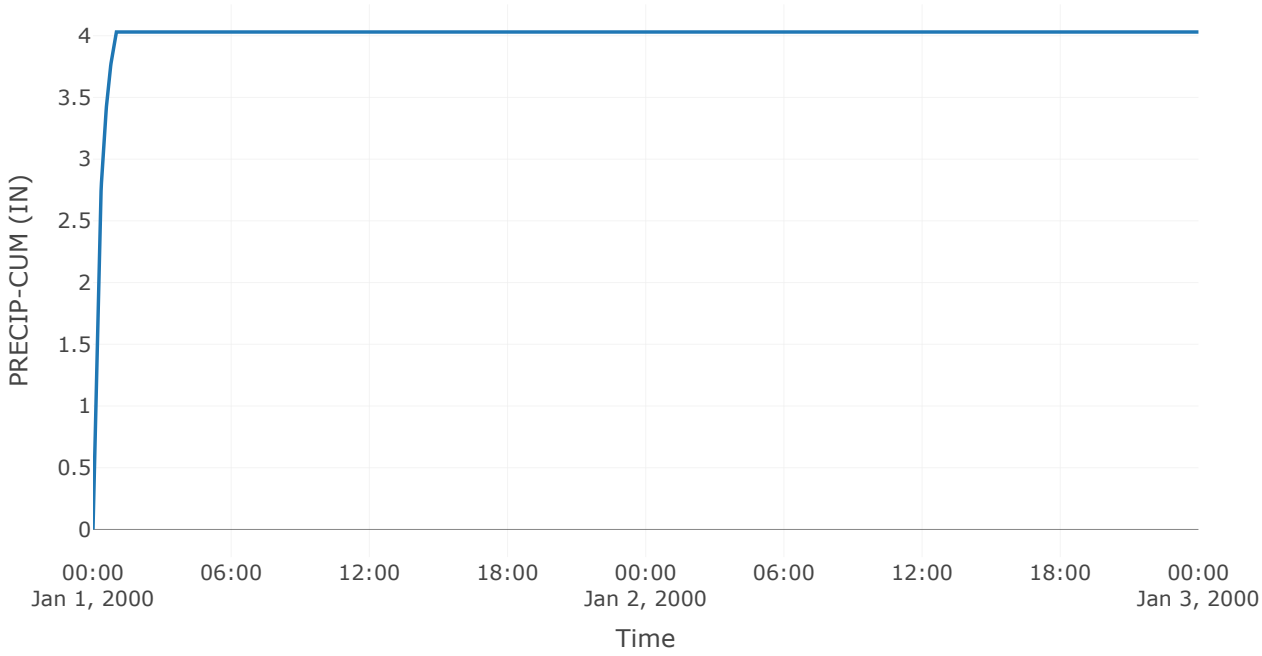

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
30
20
10
0
06:00
12:00
18:00
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
Jan 3, 2000

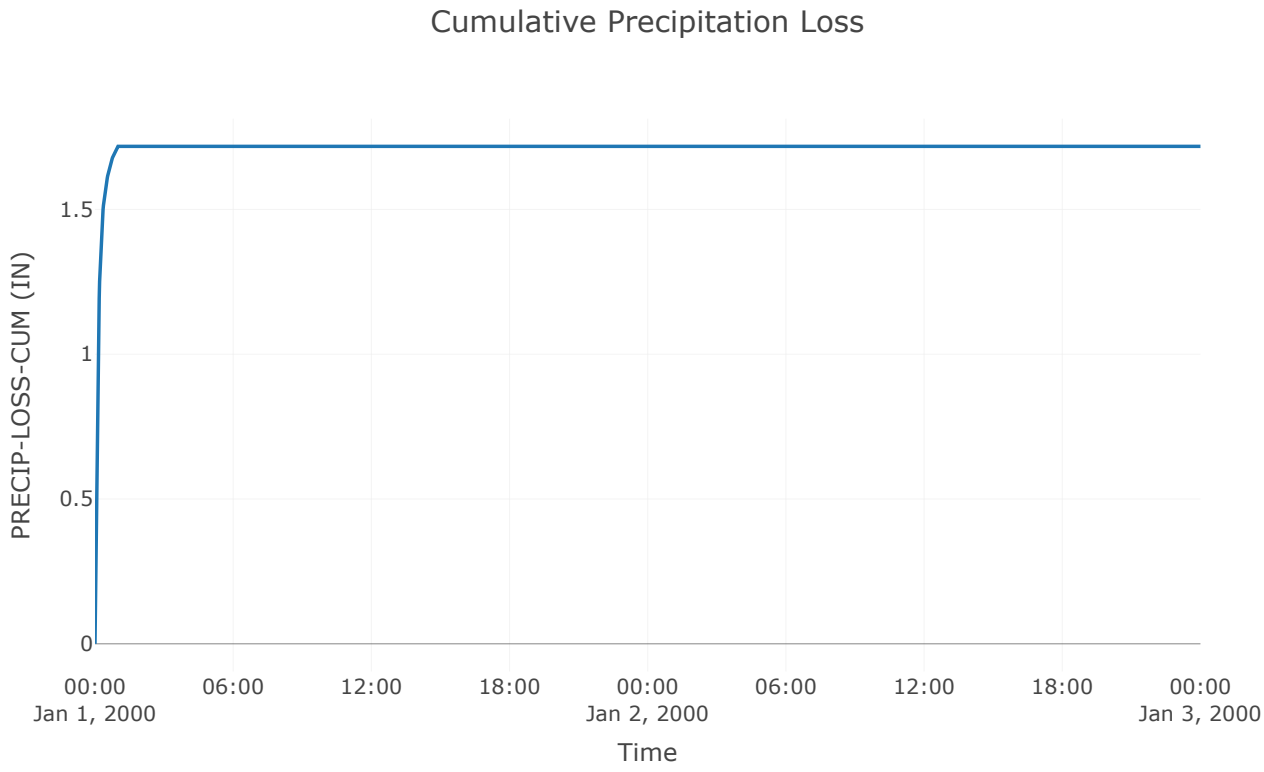

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

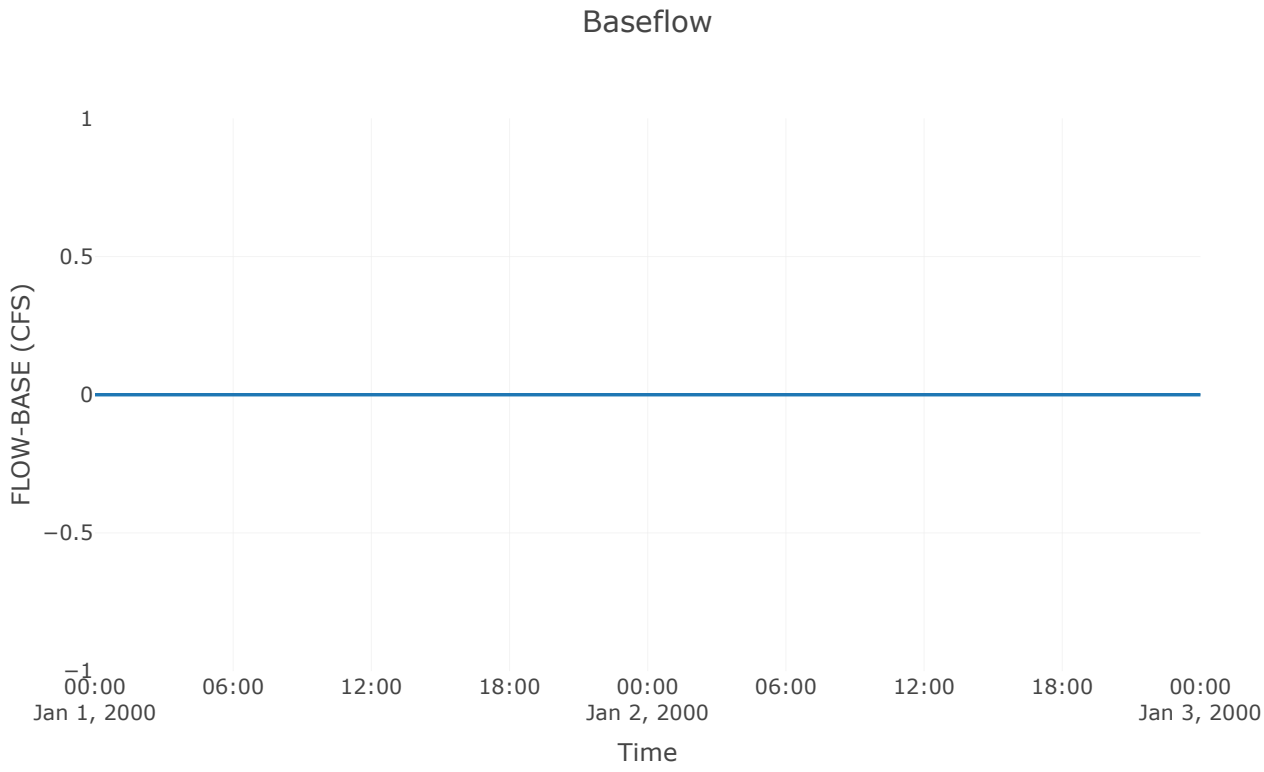
Cumulative Outflow

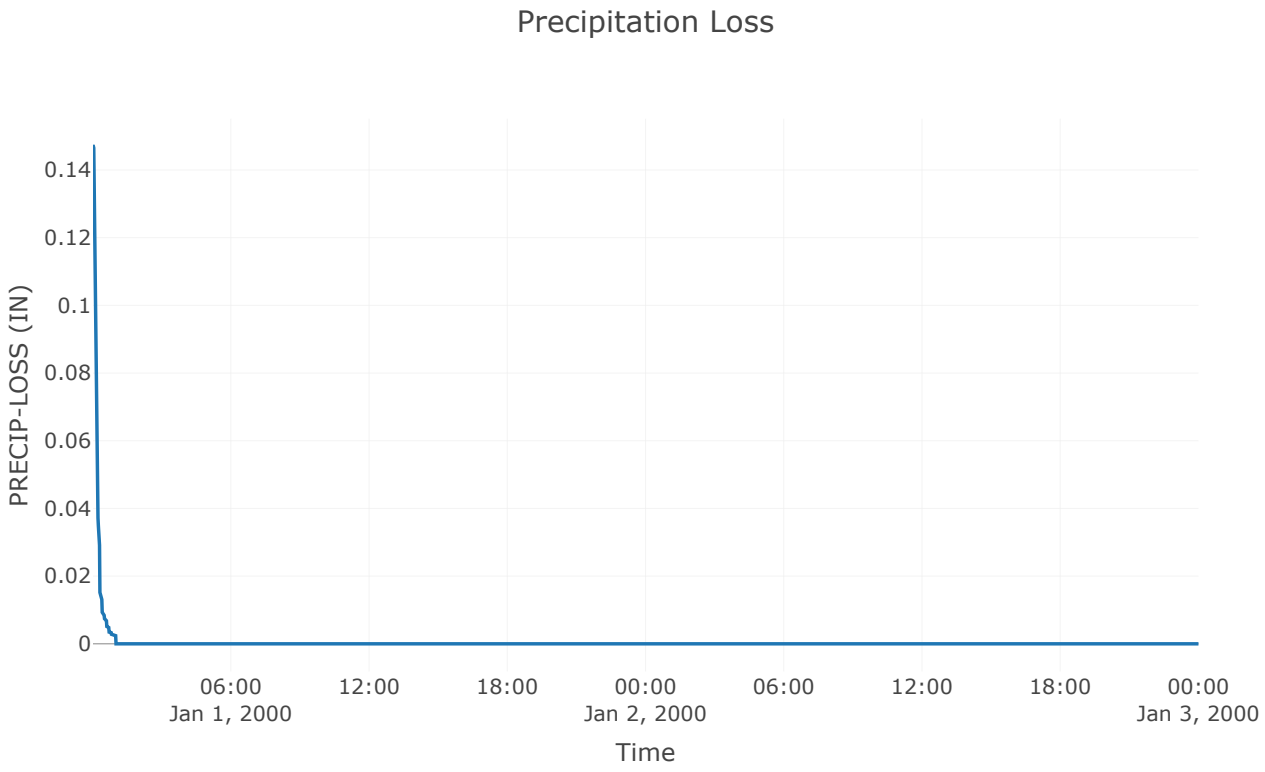


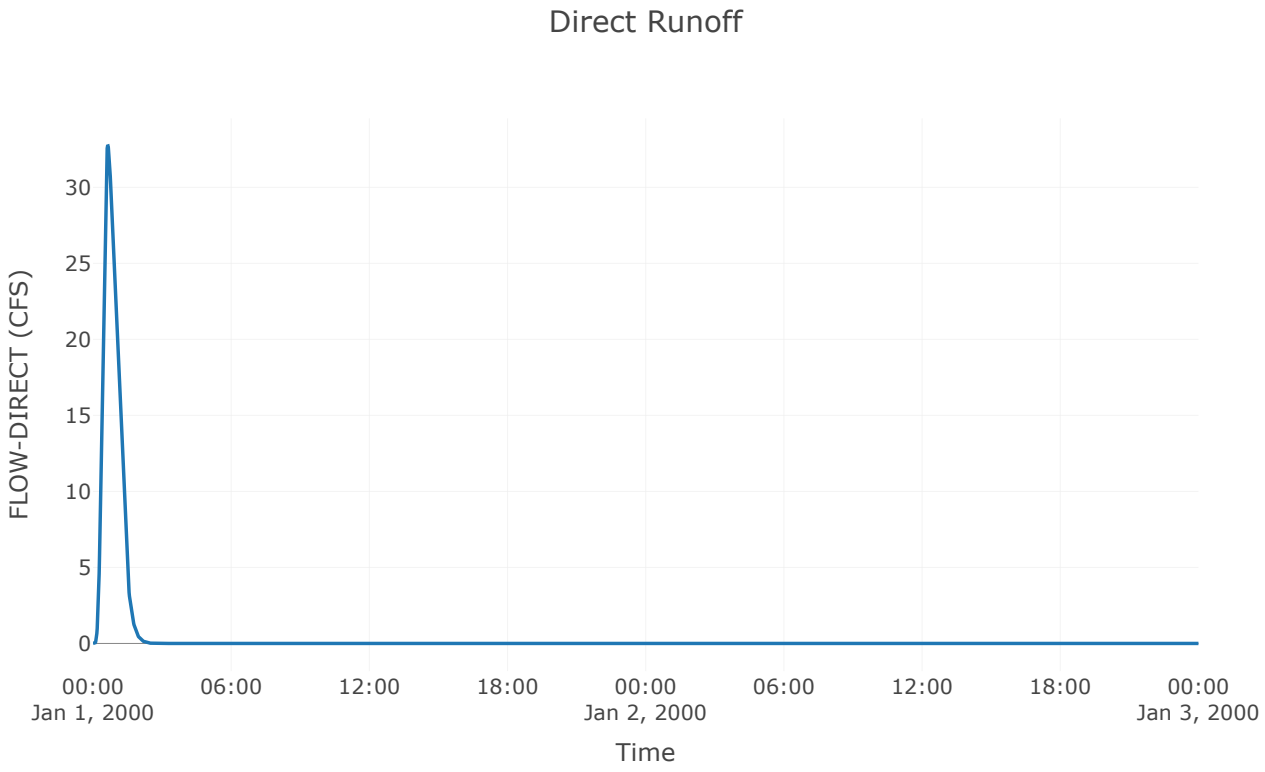
Cumulative Precipitation

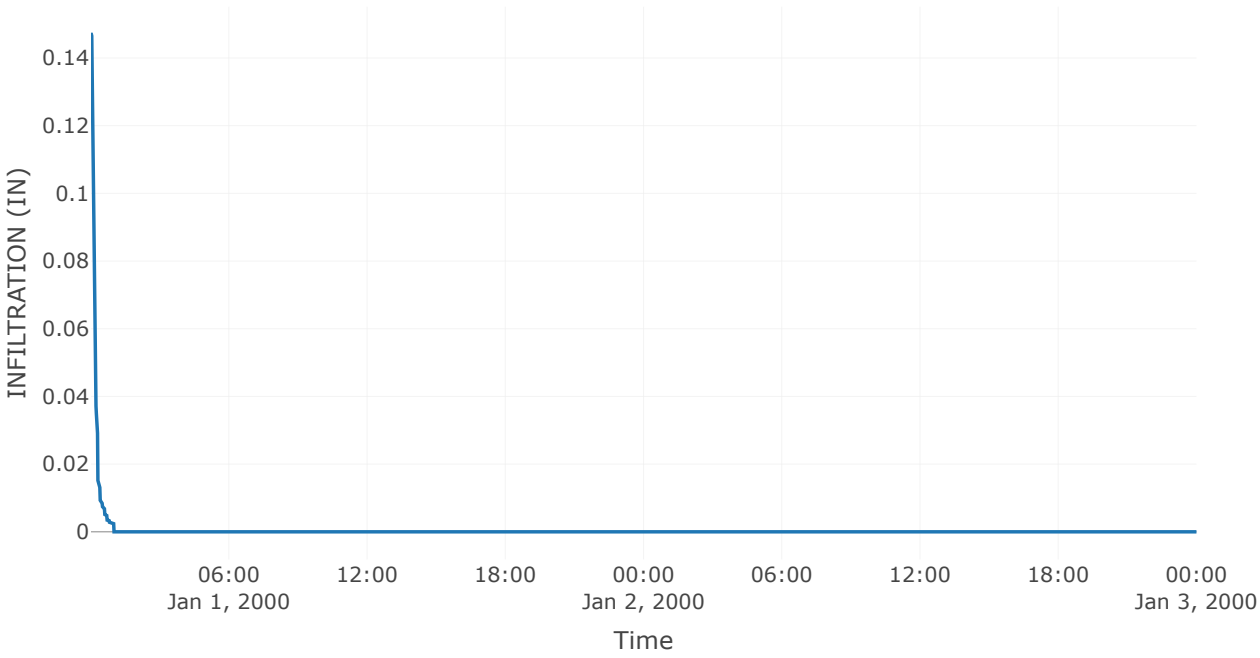



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
30
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

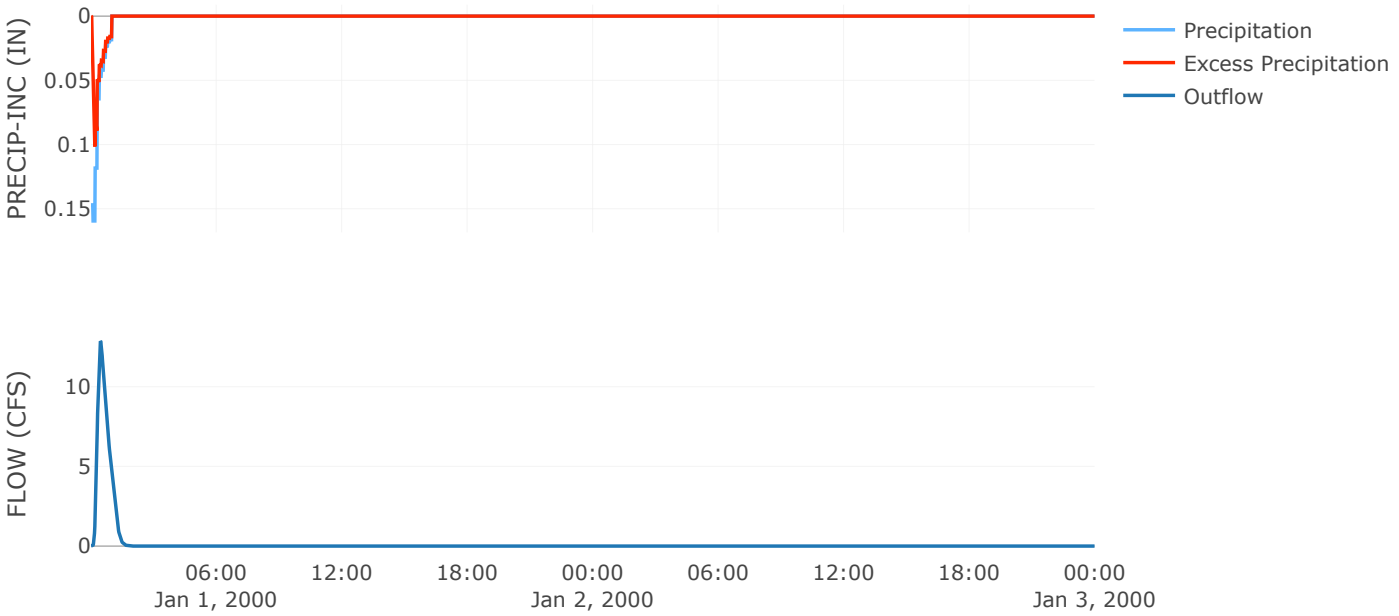
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

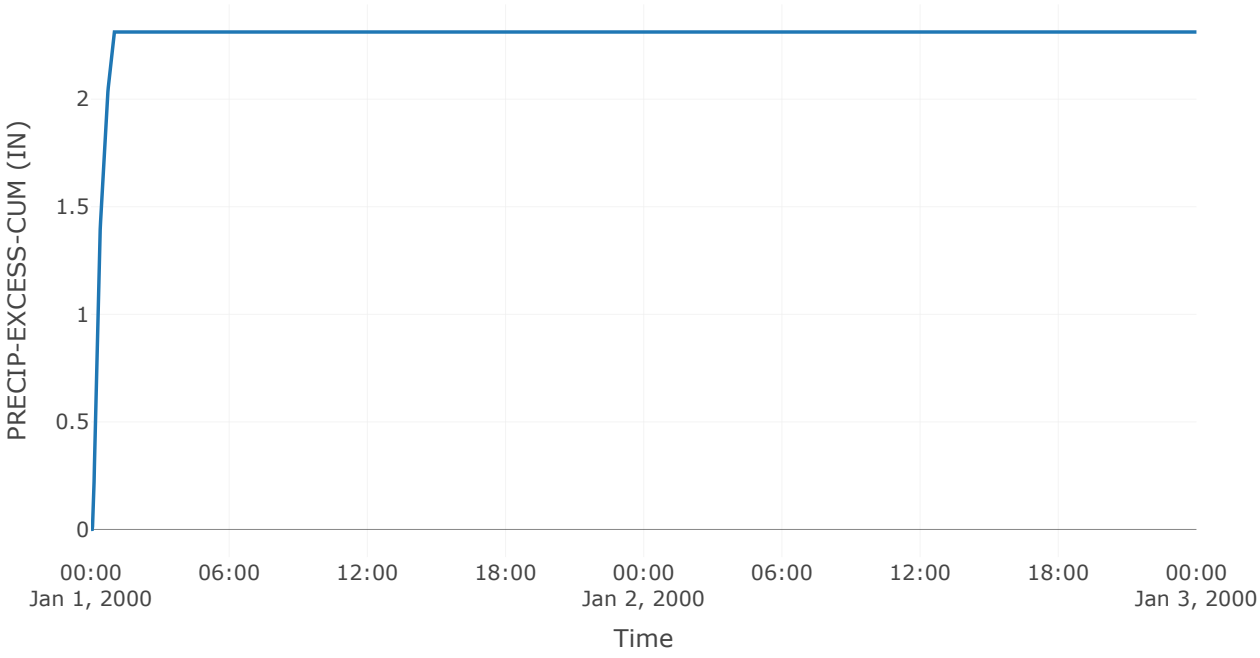
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

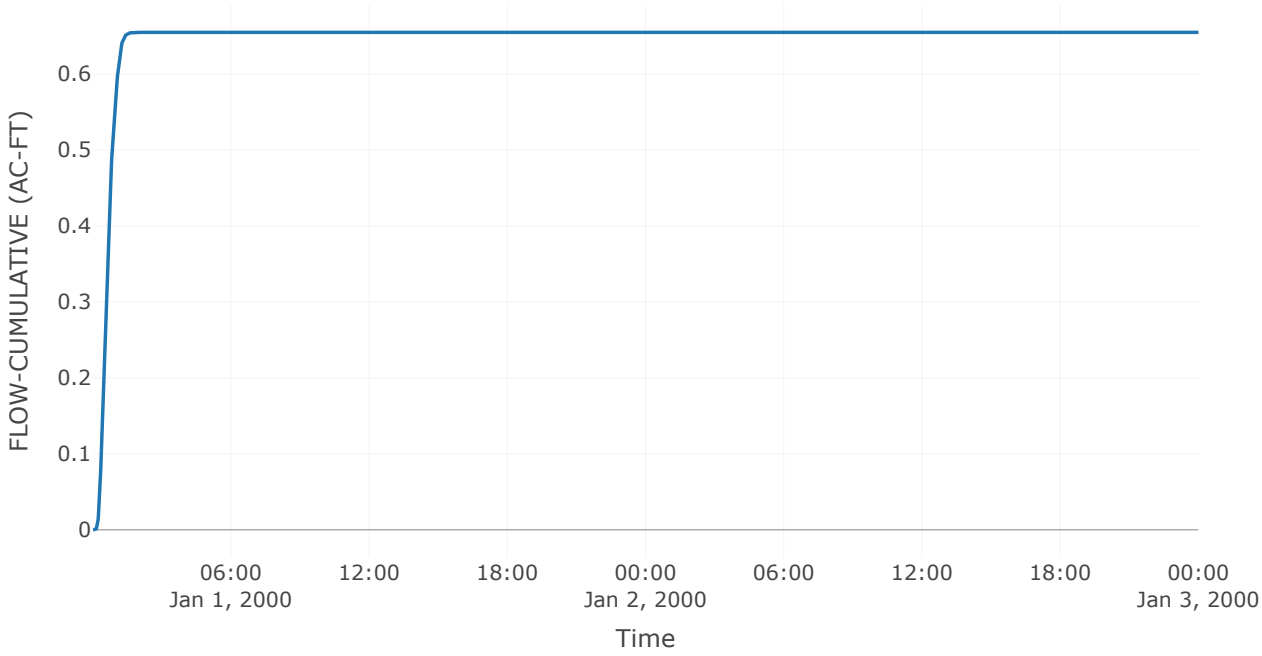
Precipitation and Outflow



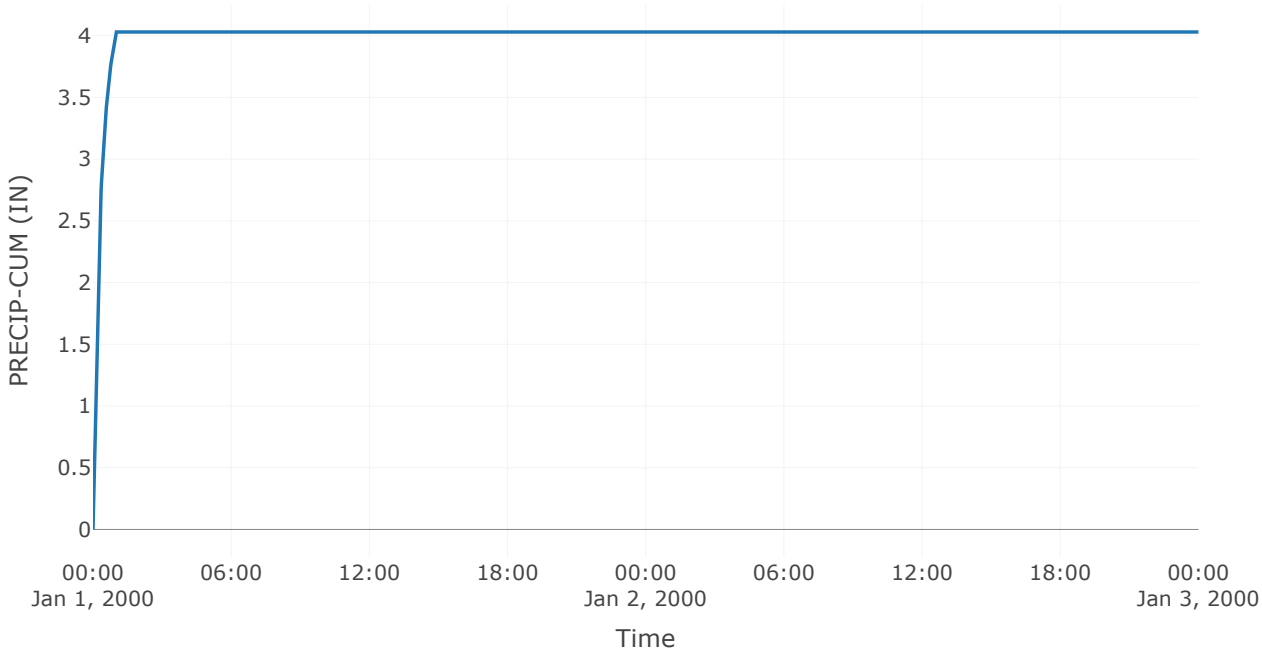
Cumulative Excess Precipitation

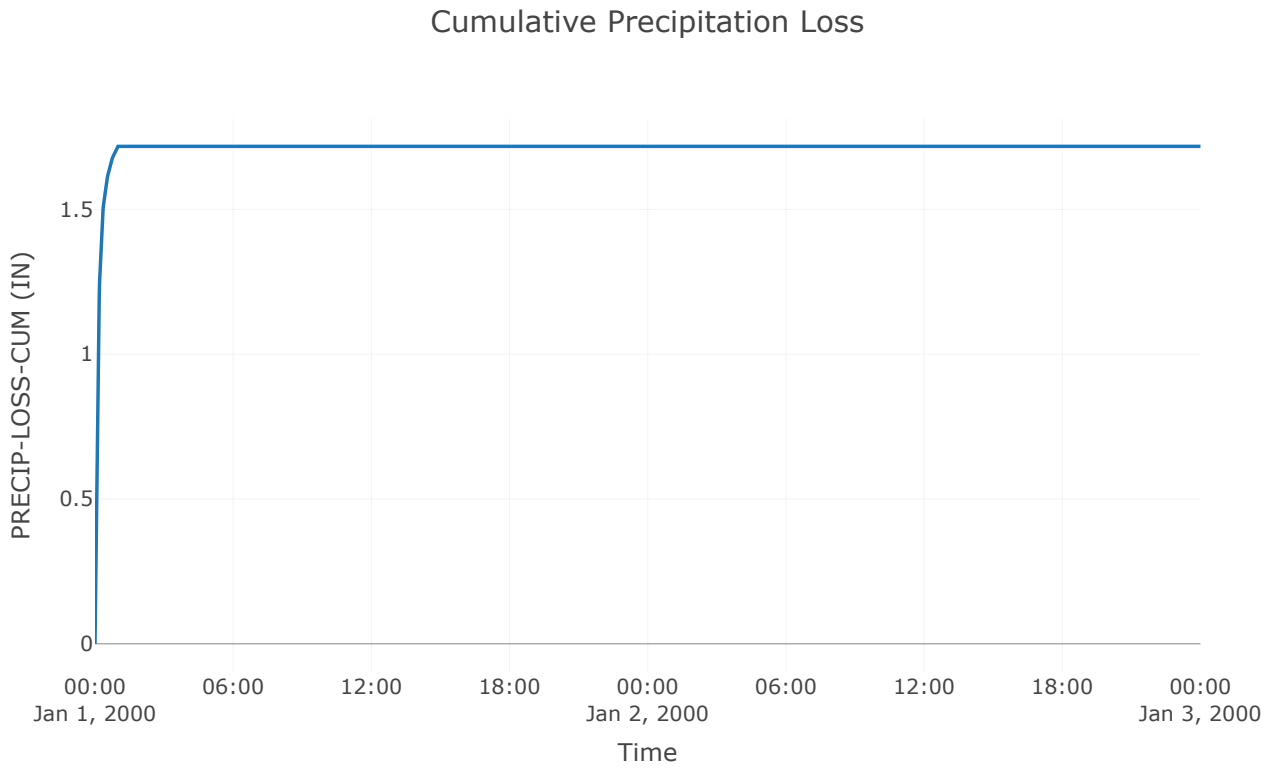


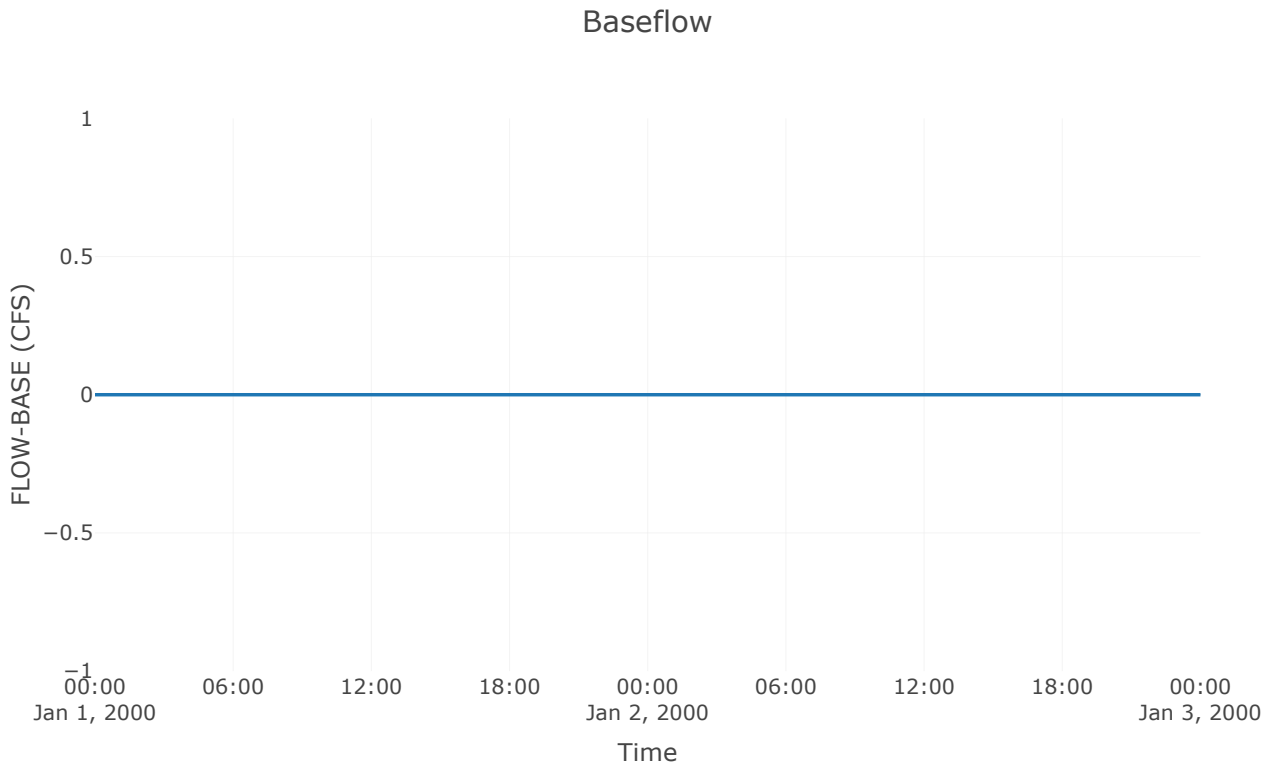
Cumulative Outflow

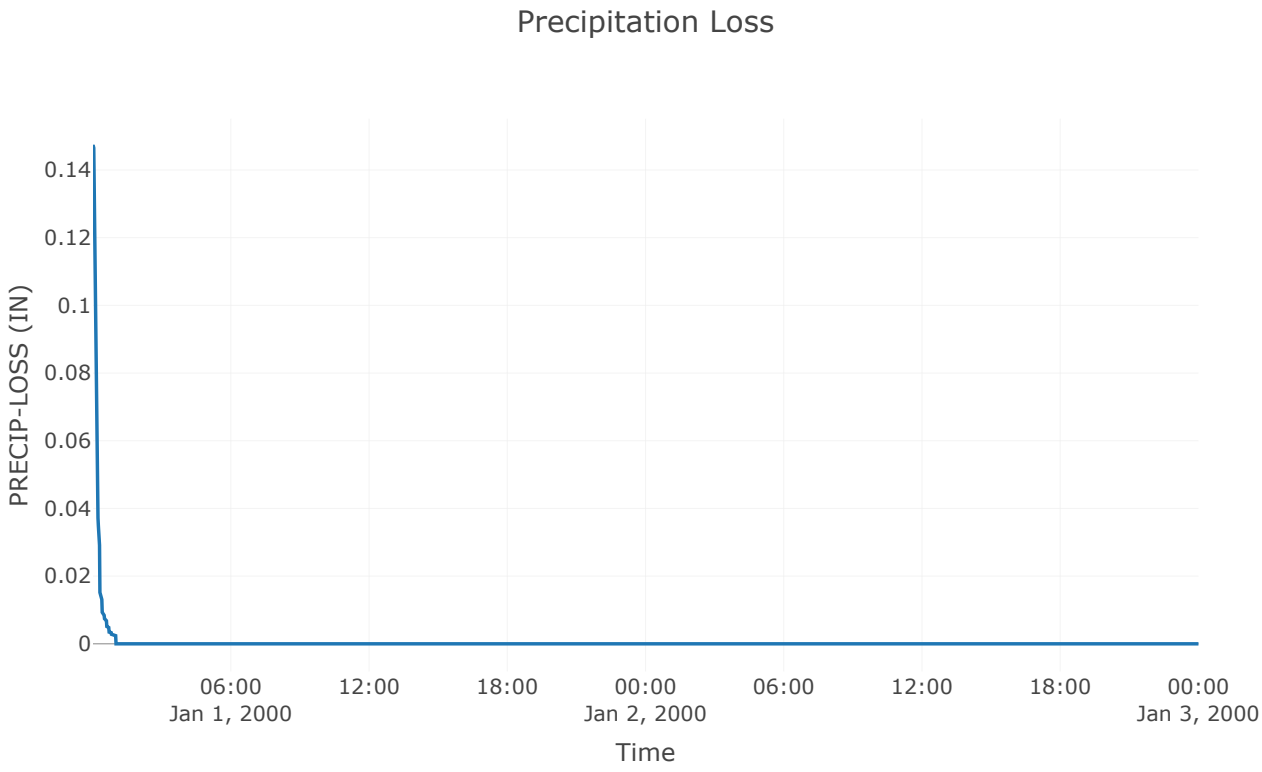


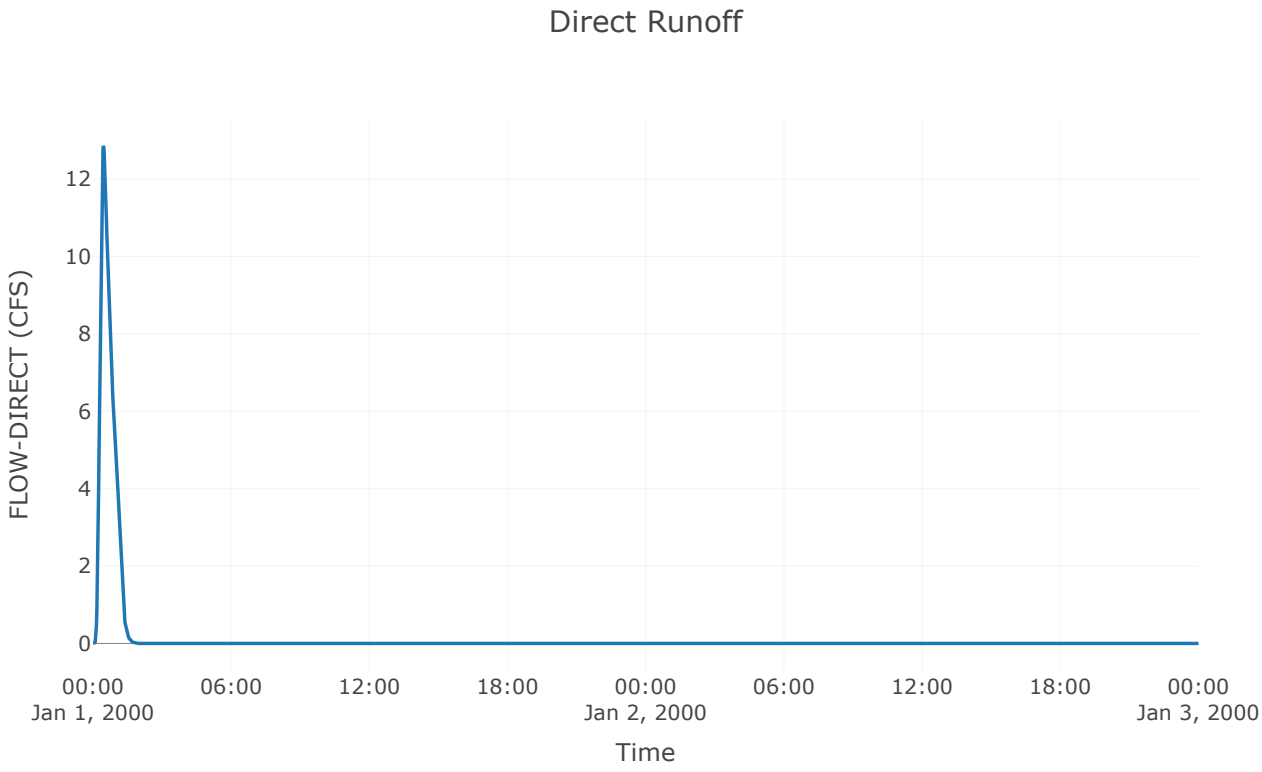
Cumulative Precipitation

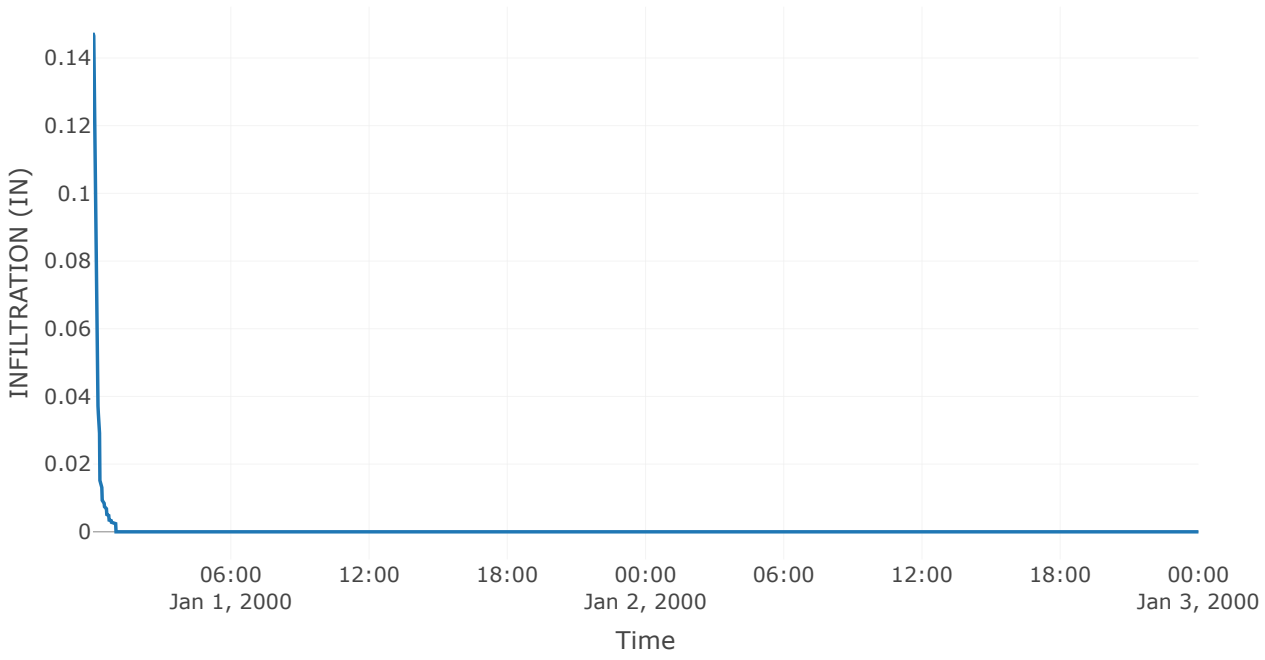



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

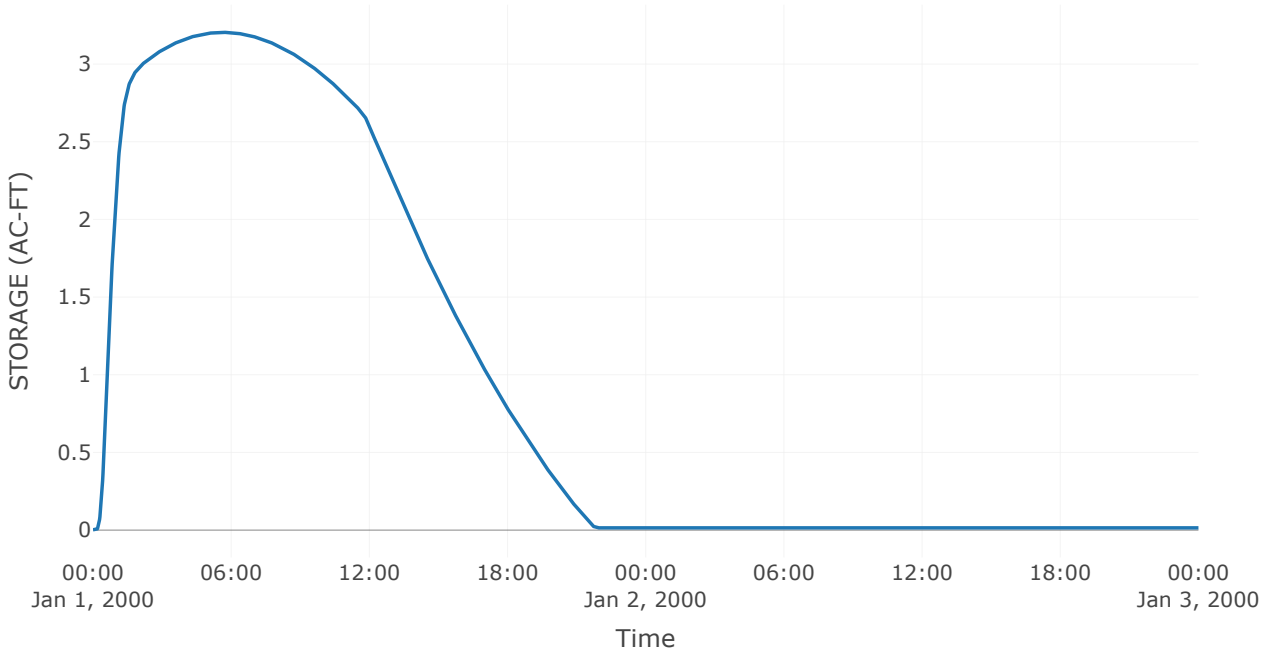

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

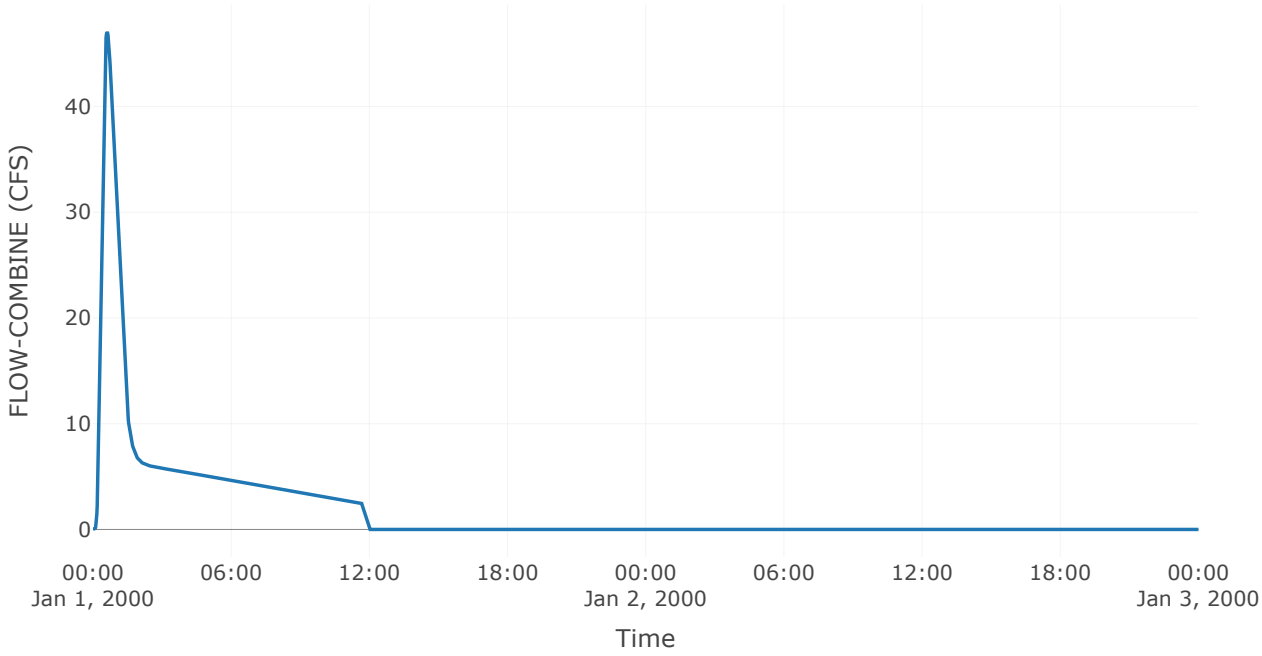
Downstream : Basin 3

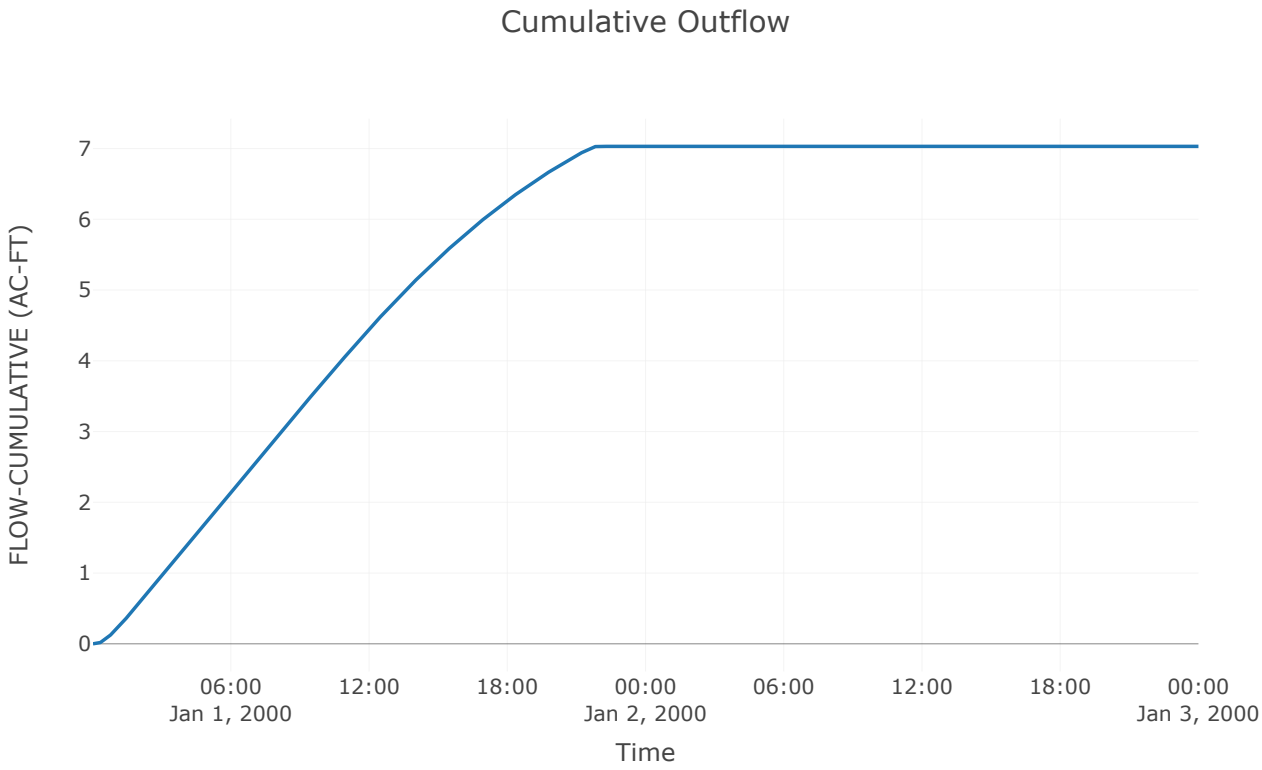
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

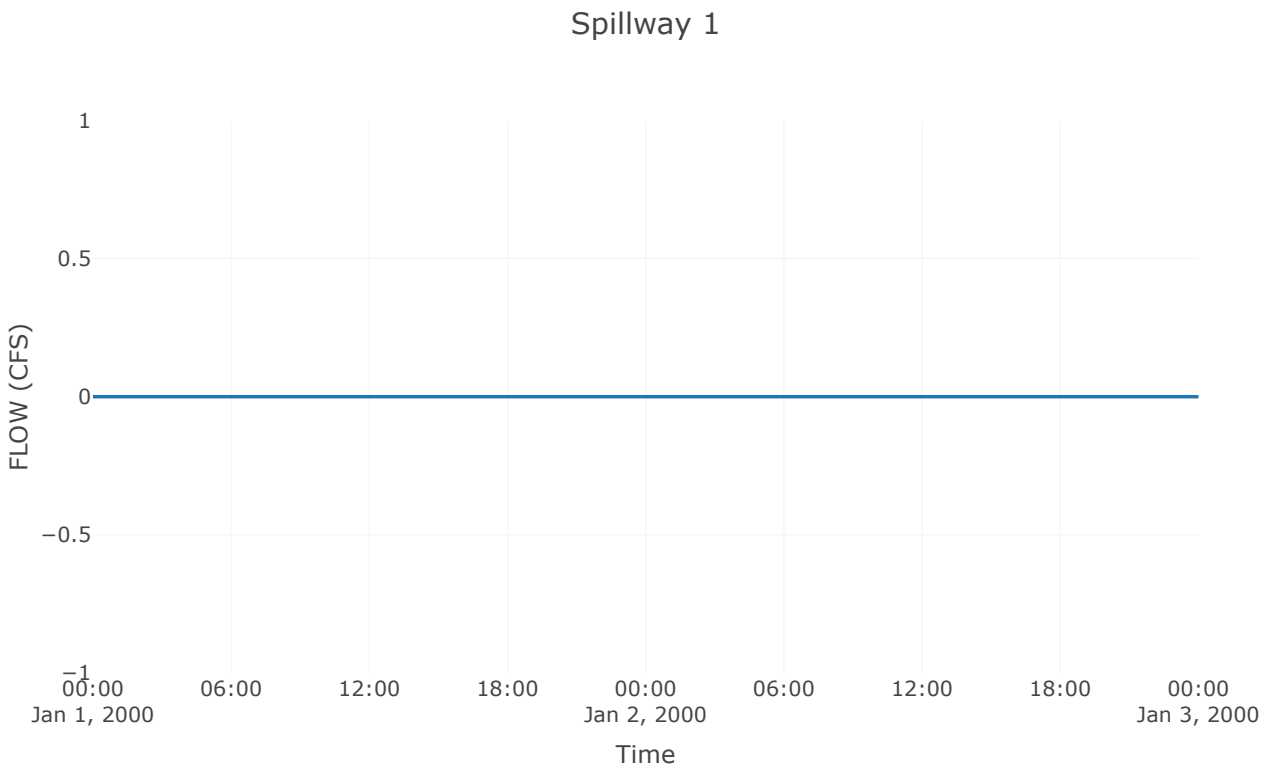
Storage

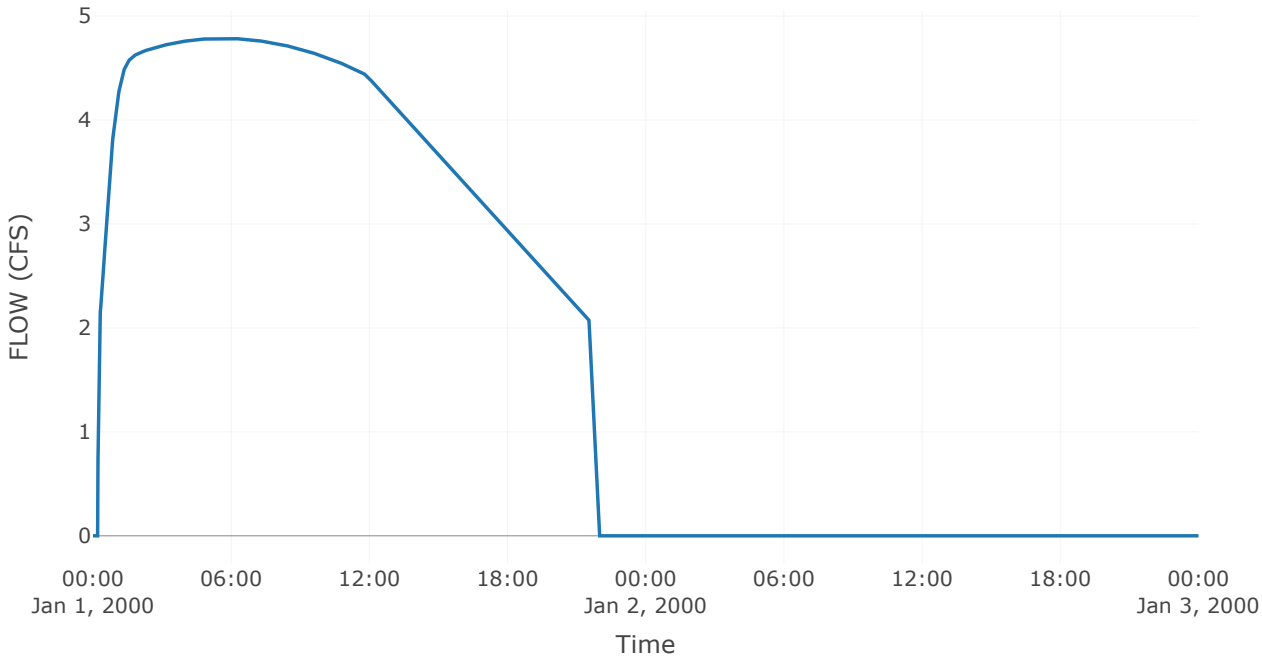


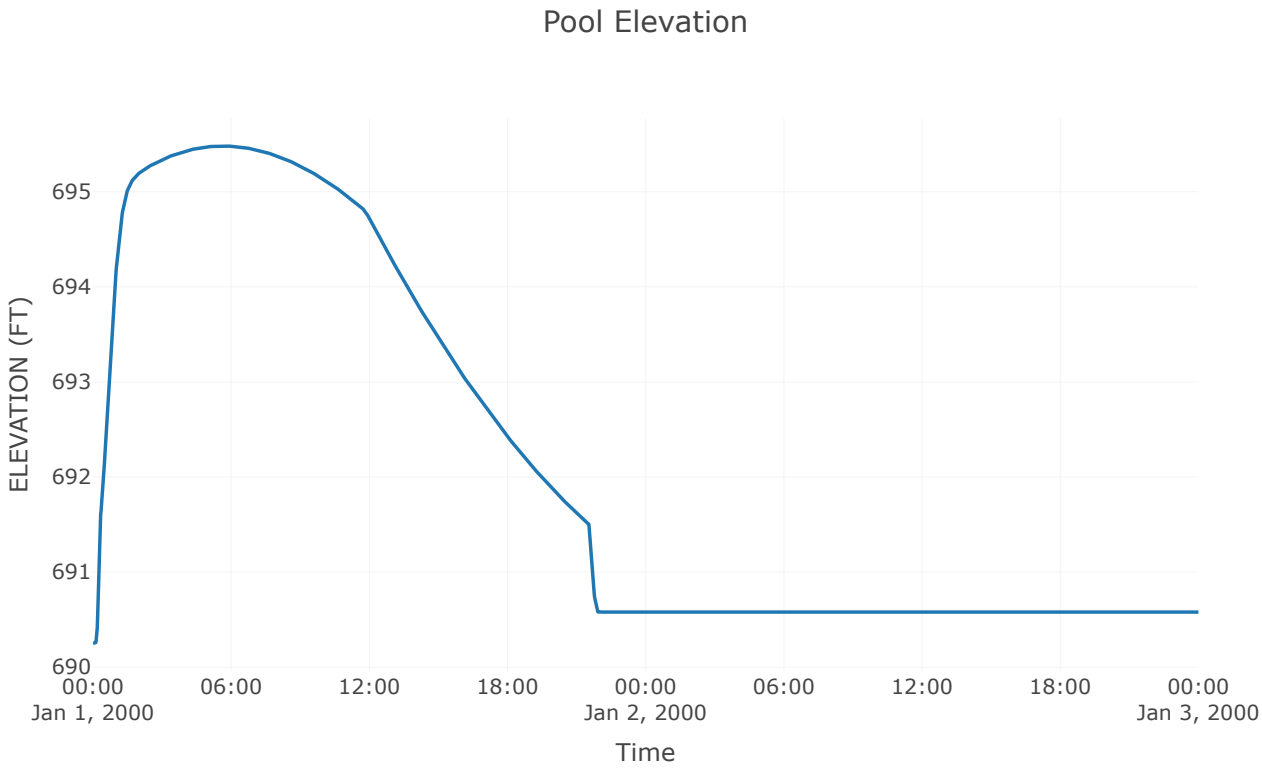
Combined Inflow

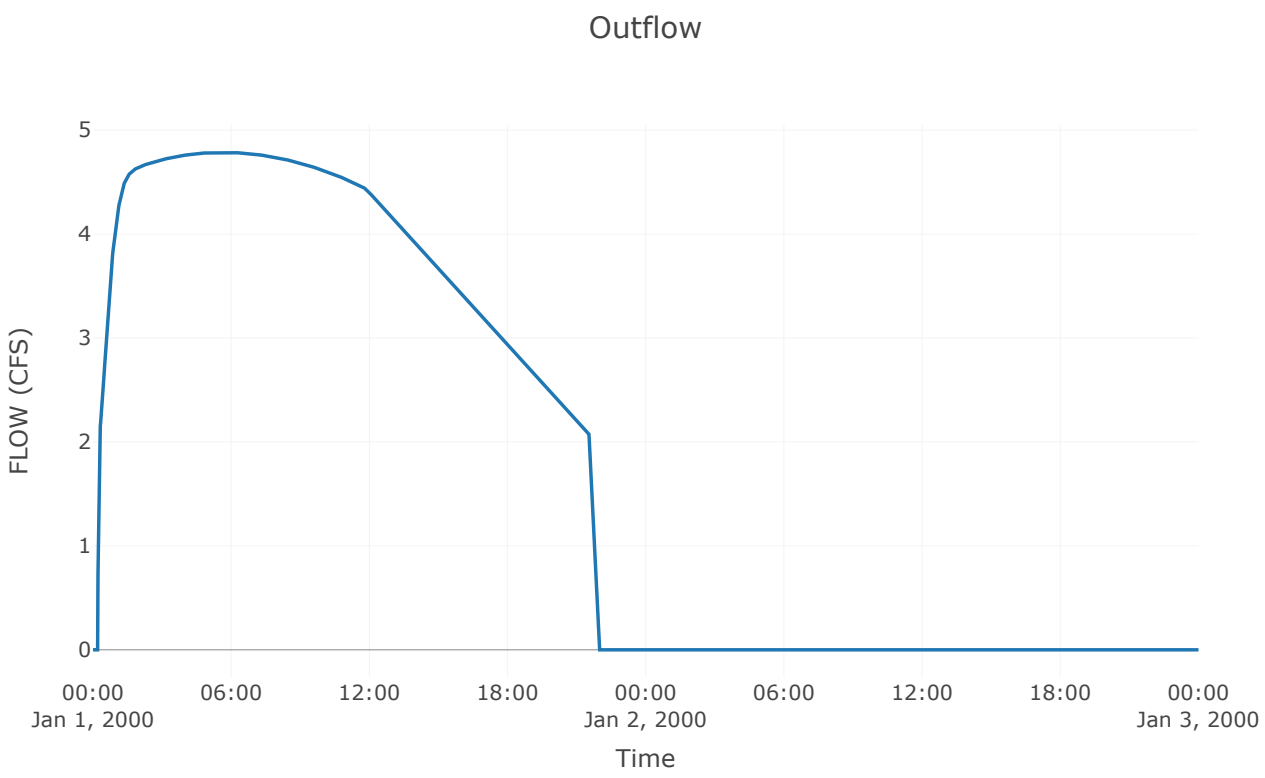



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695
694
693
692
691
690
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

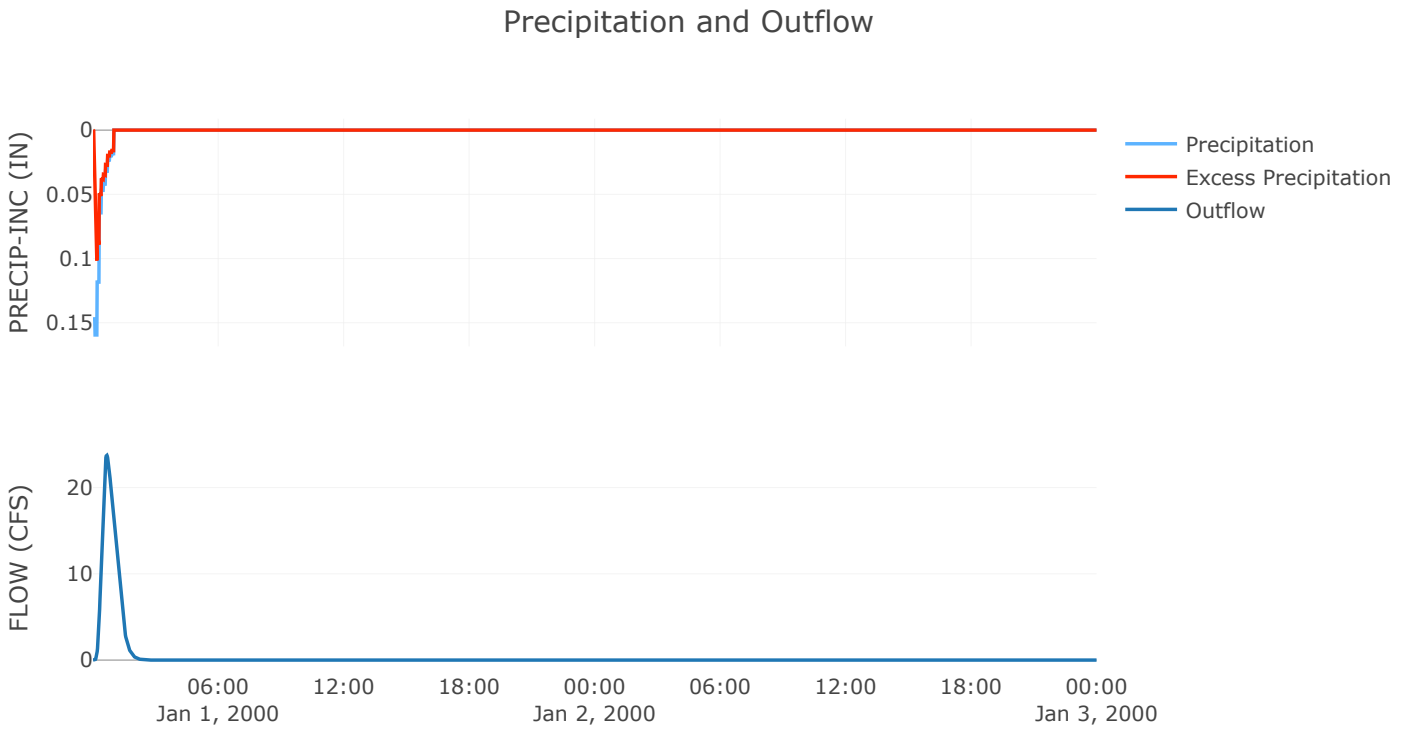
Subbasin: On-Site Trib-Area 3

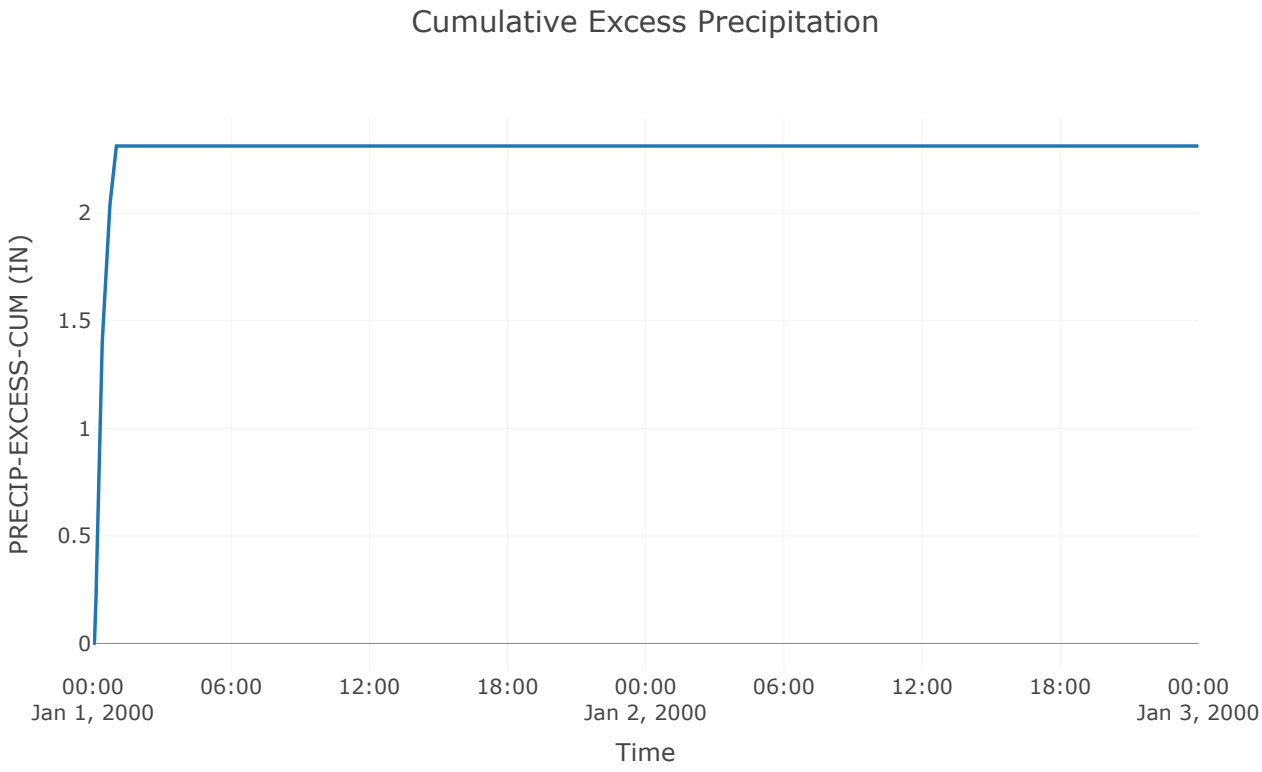
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

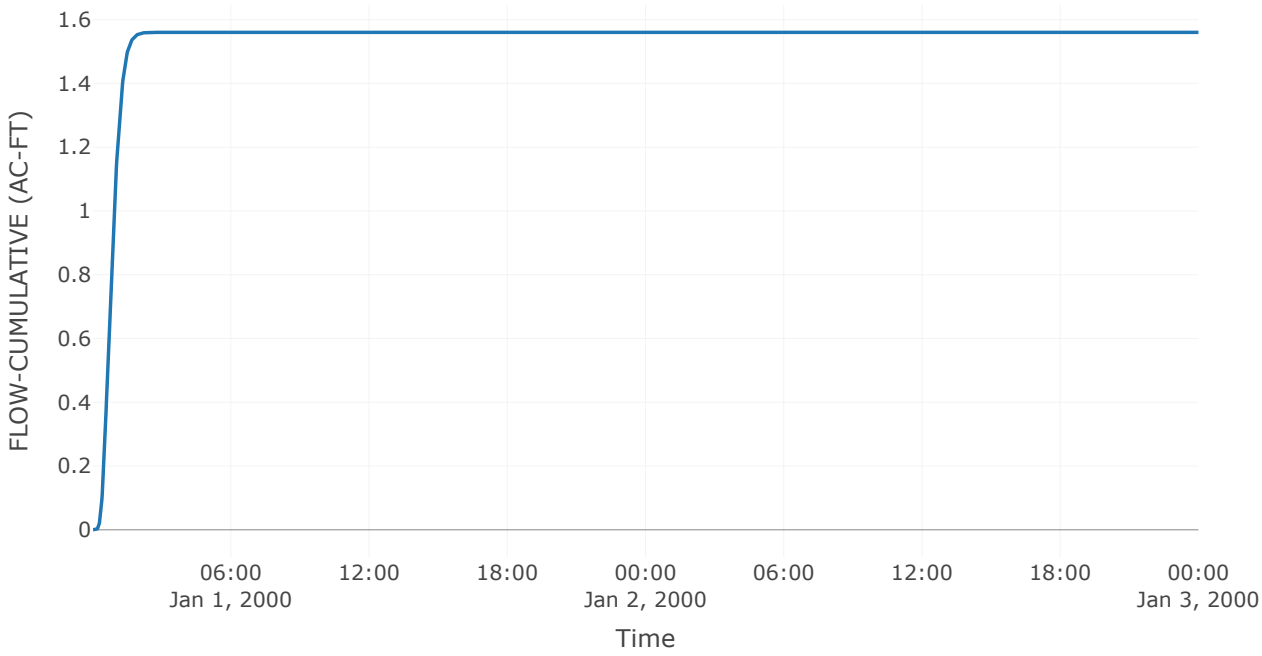
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

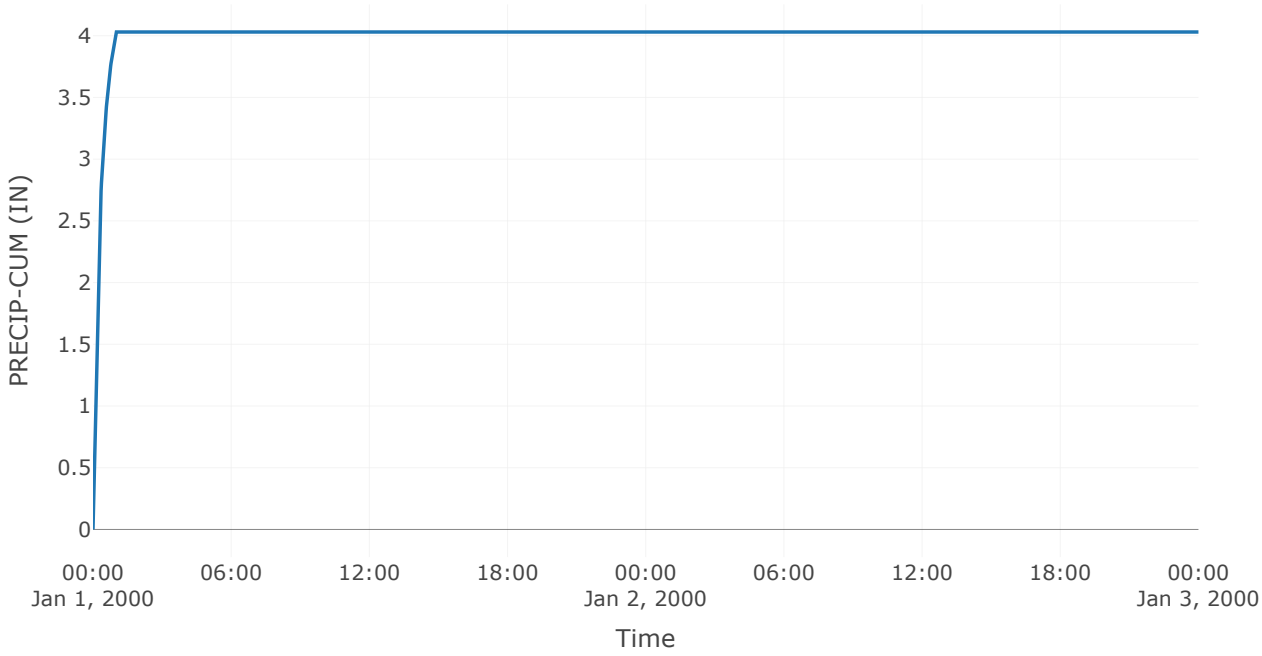

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
20
10
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000

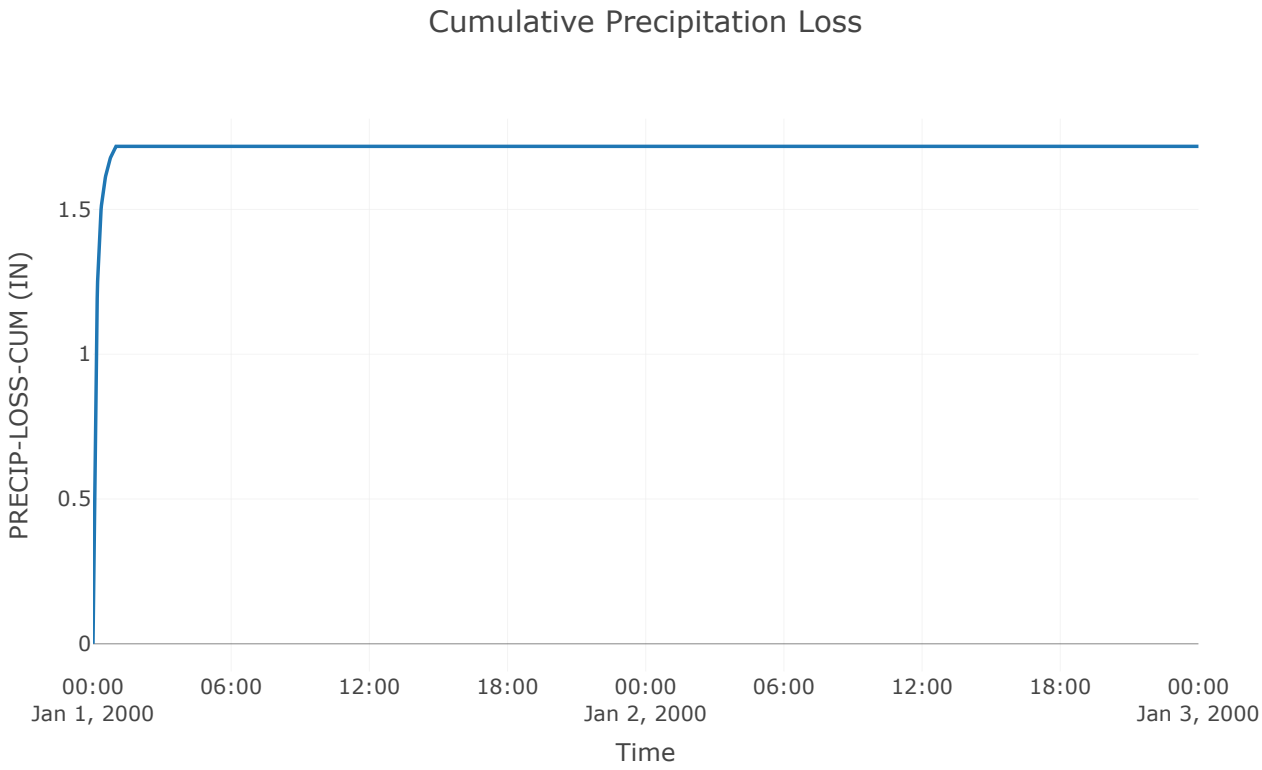

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

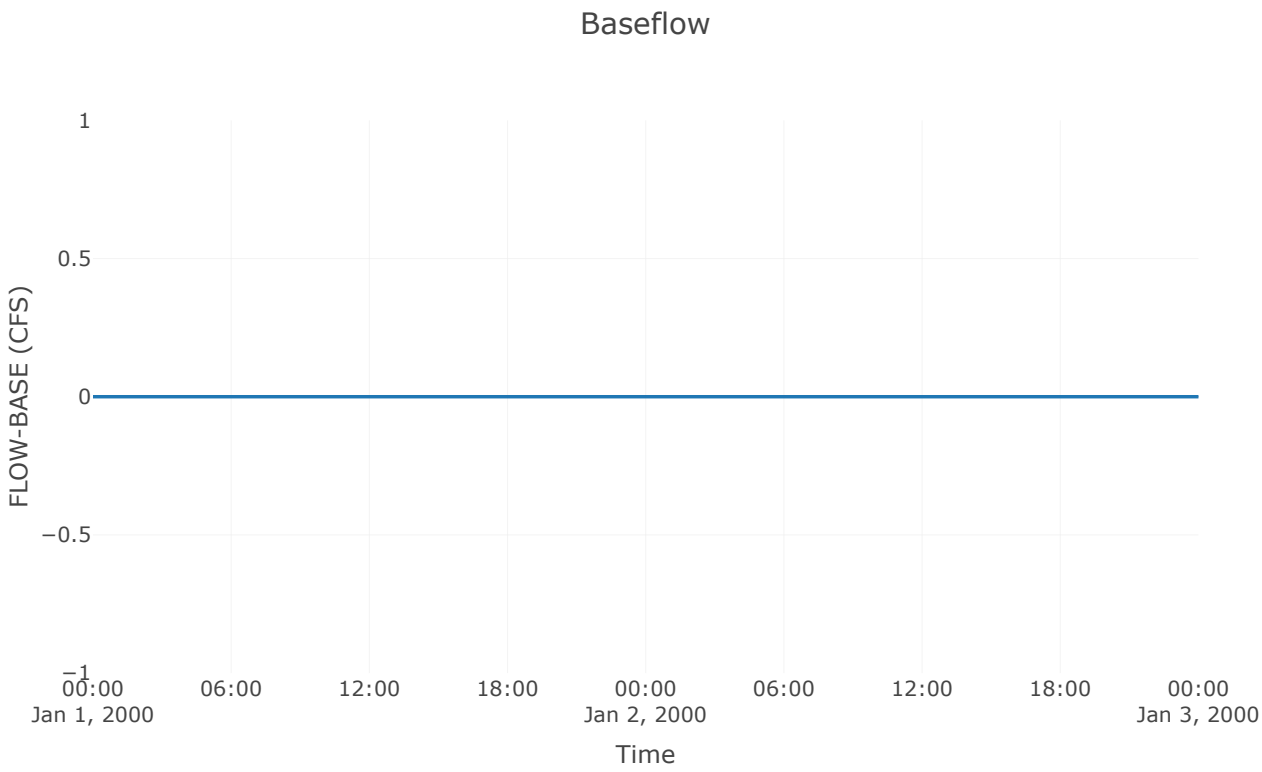
Cumulative Outflow

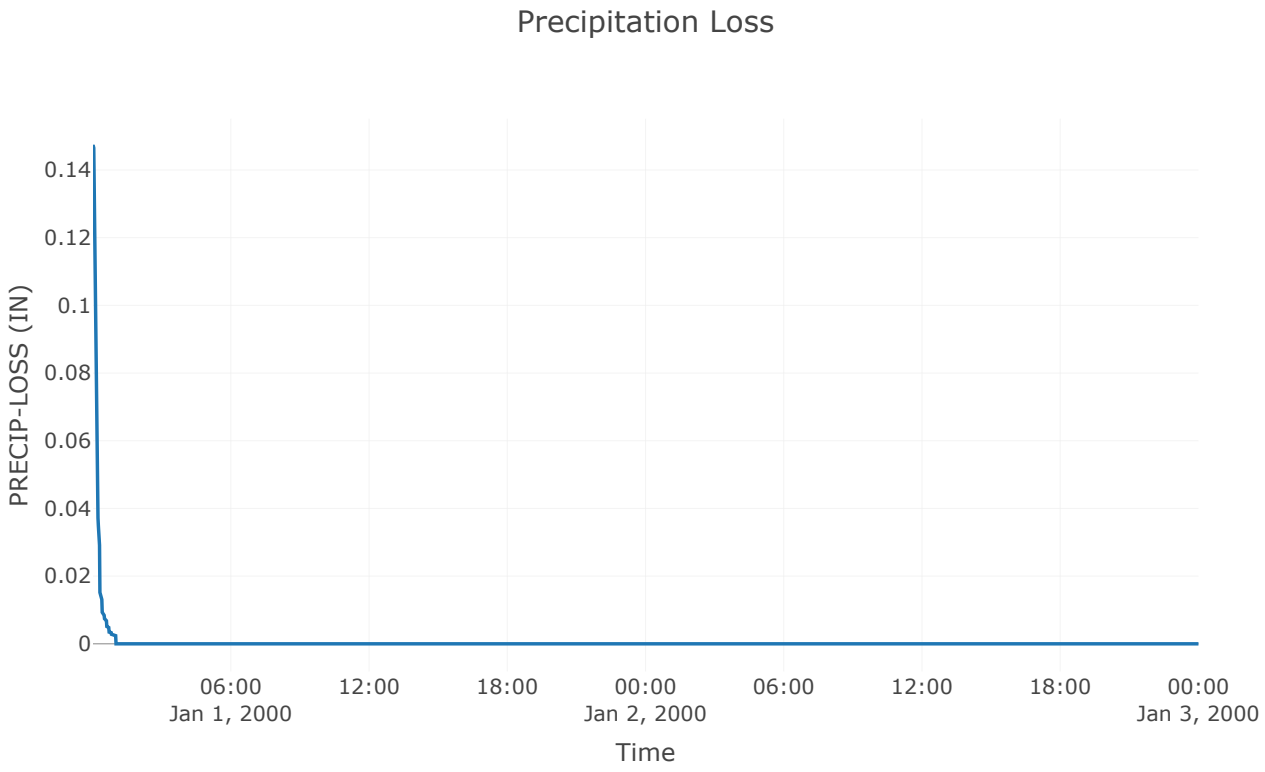


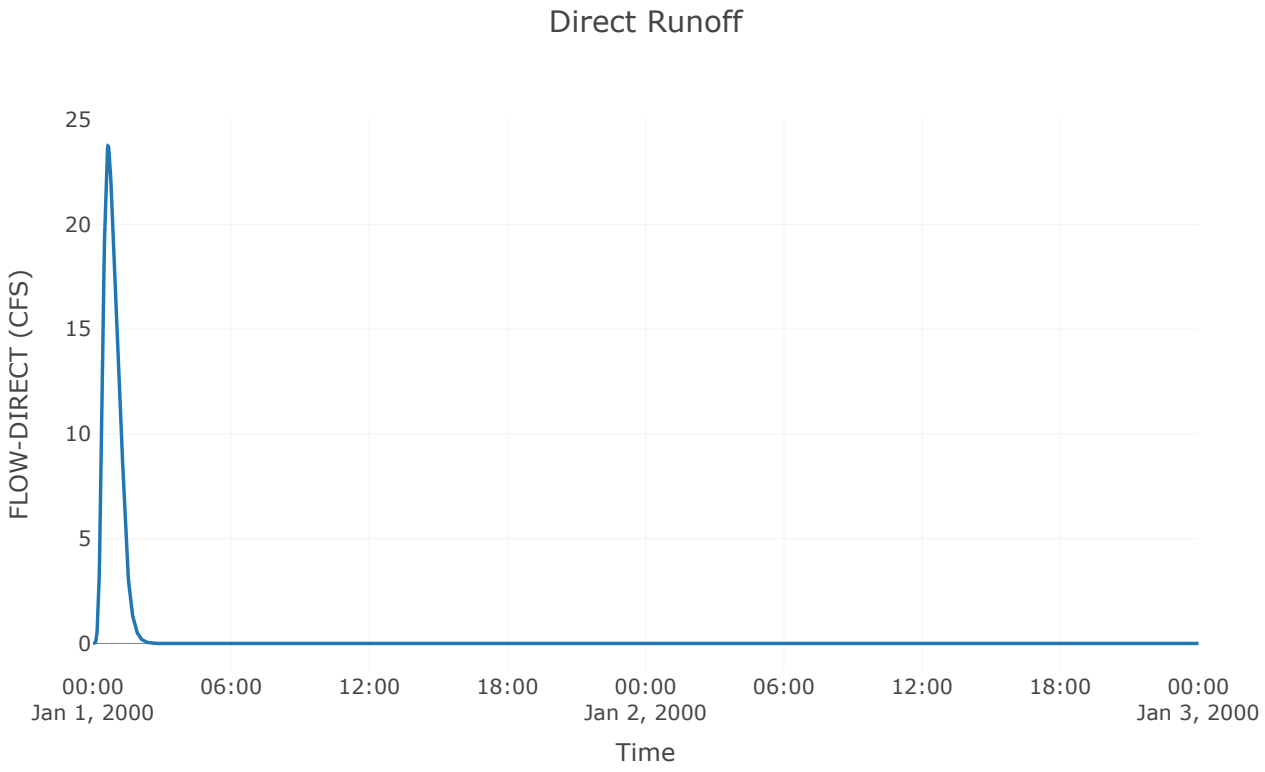
Cumulative Precipitation

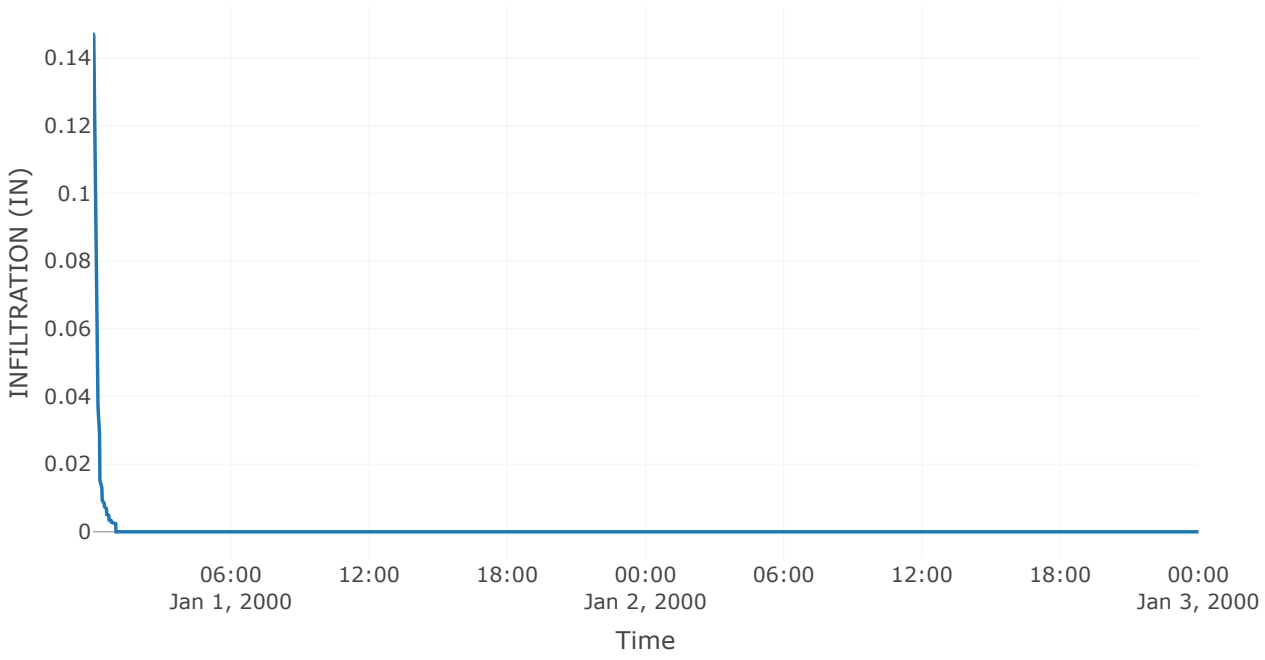



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

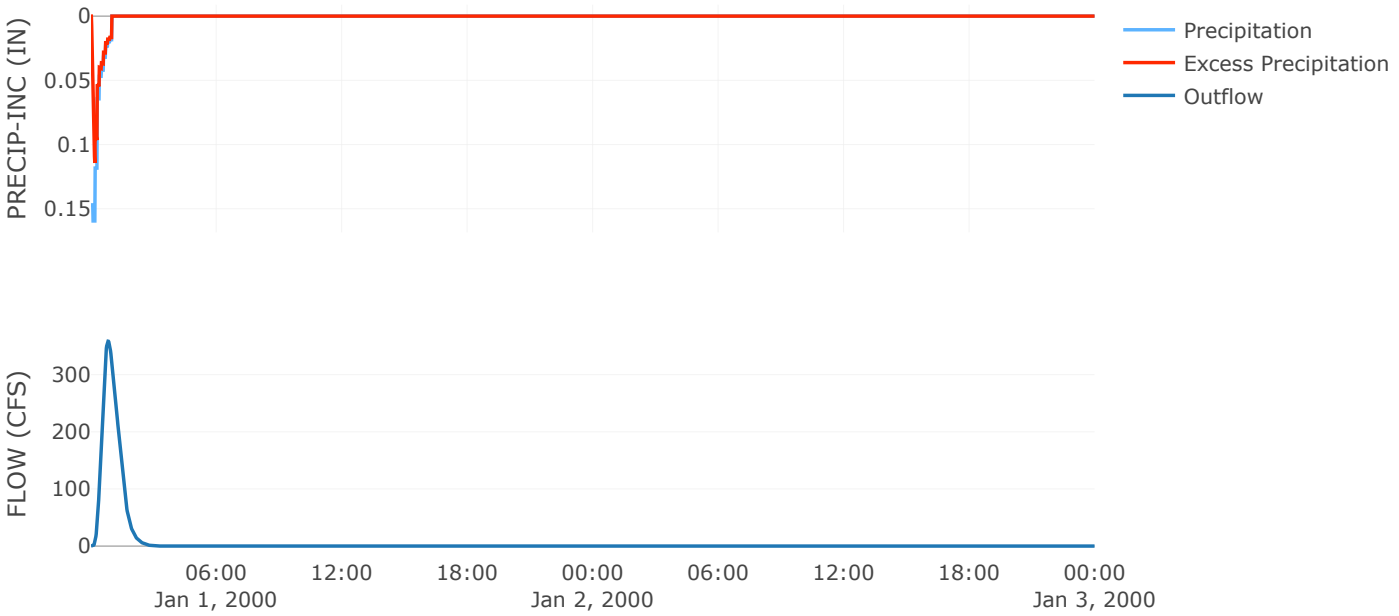
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

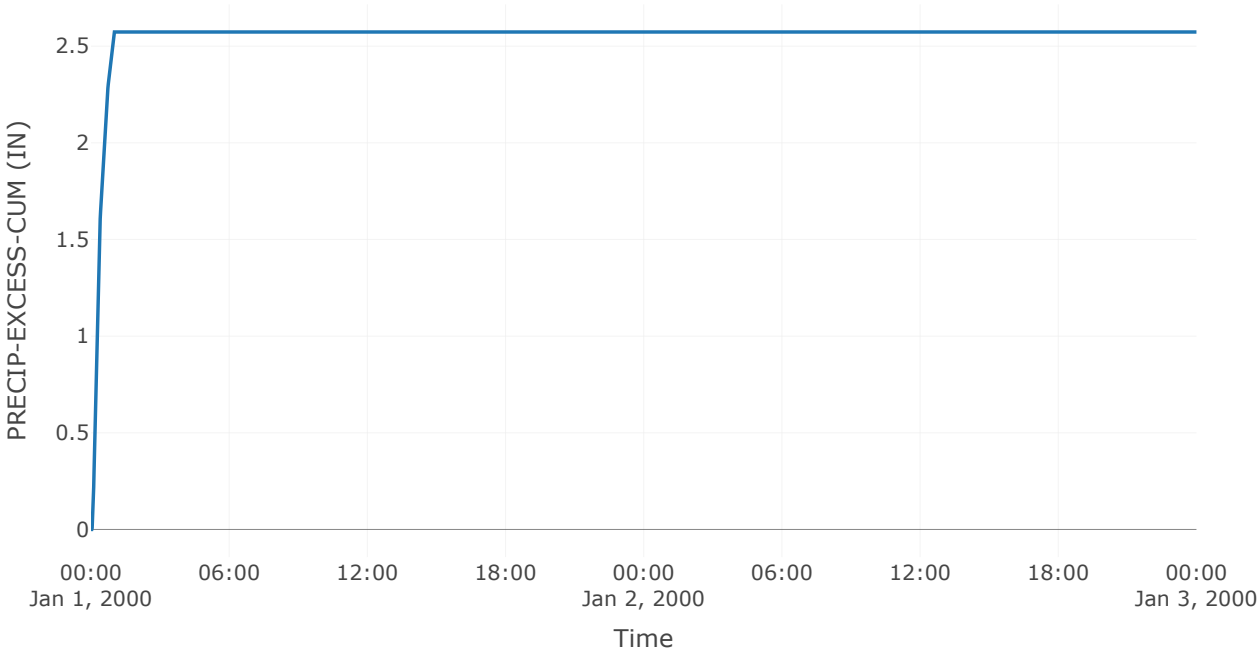
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

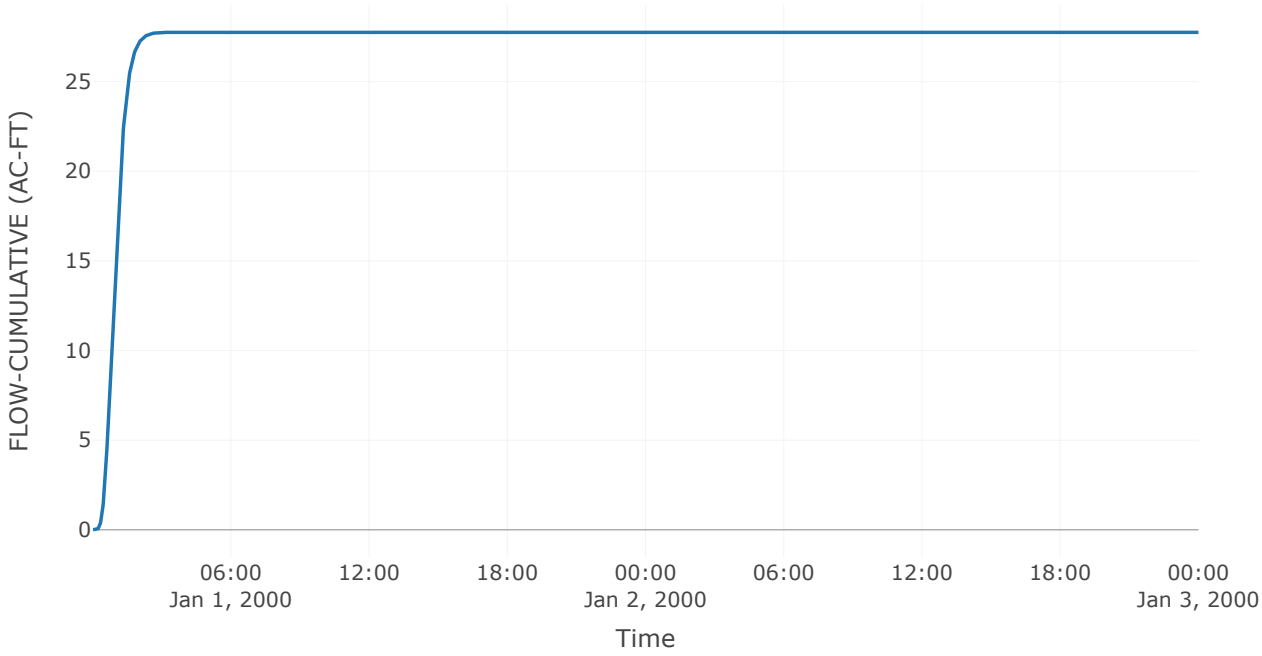
Precipitation and Outflow



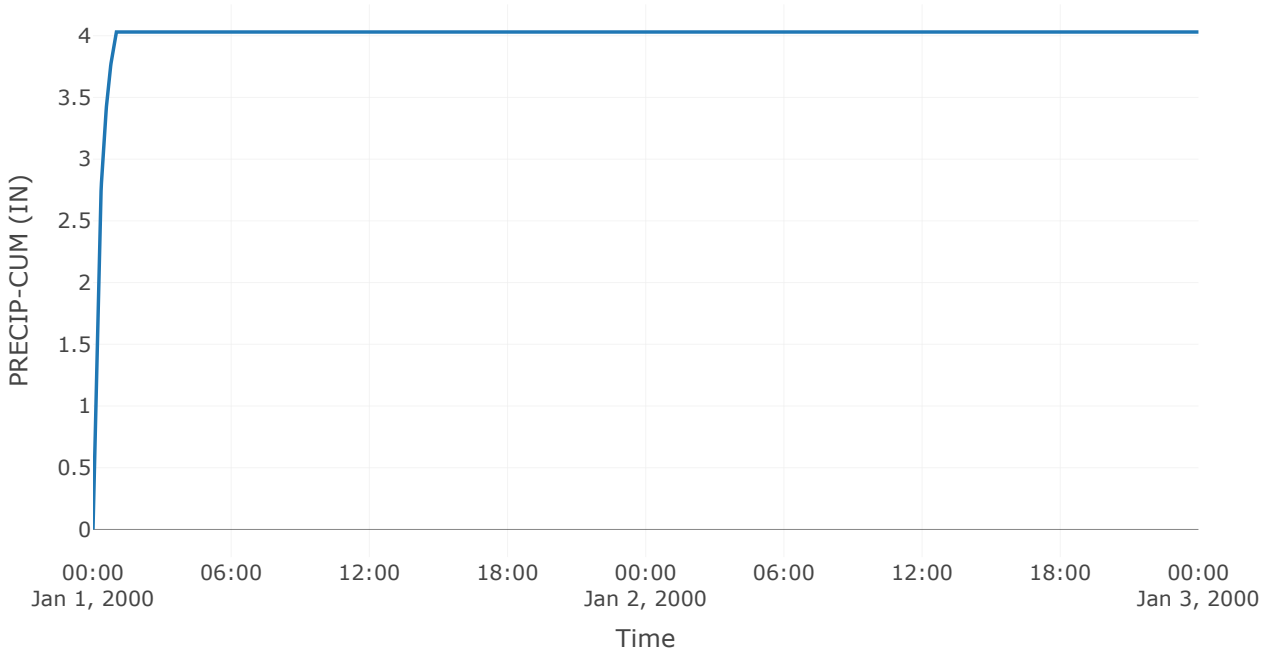
Cumulative Excess Precipitation

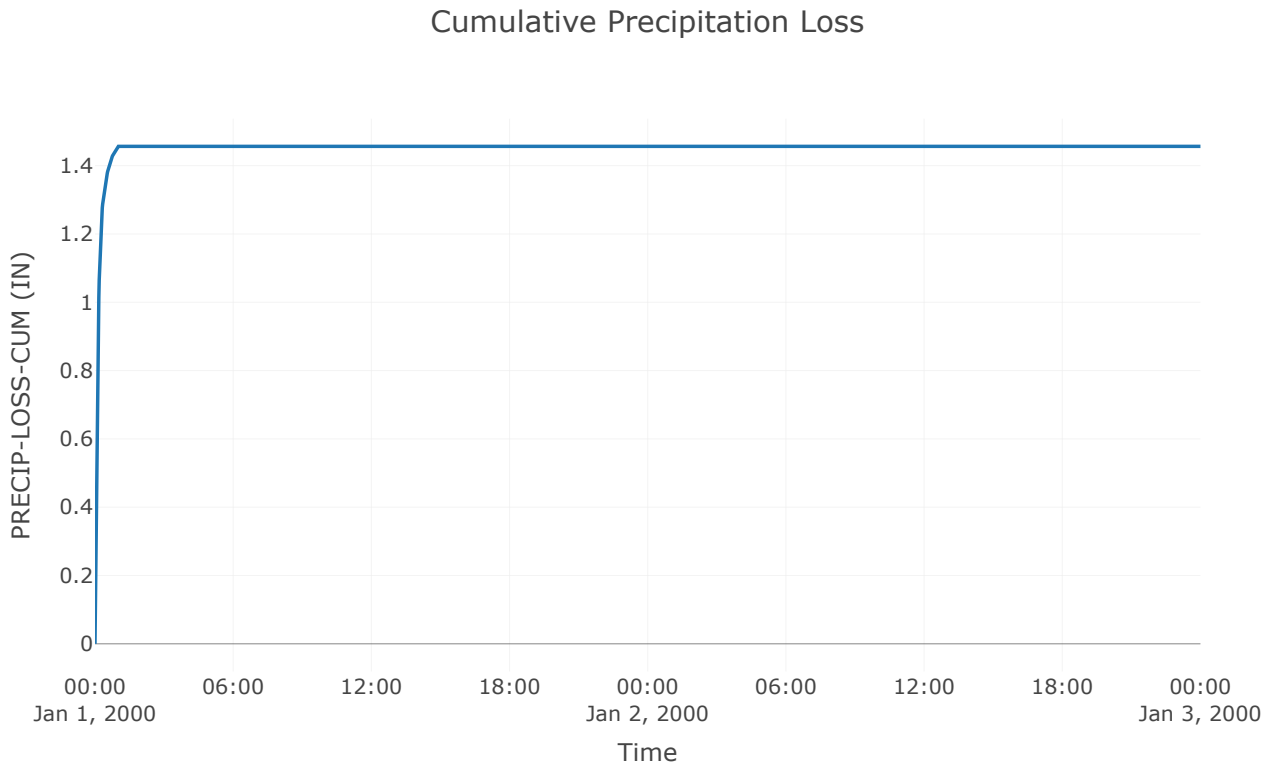


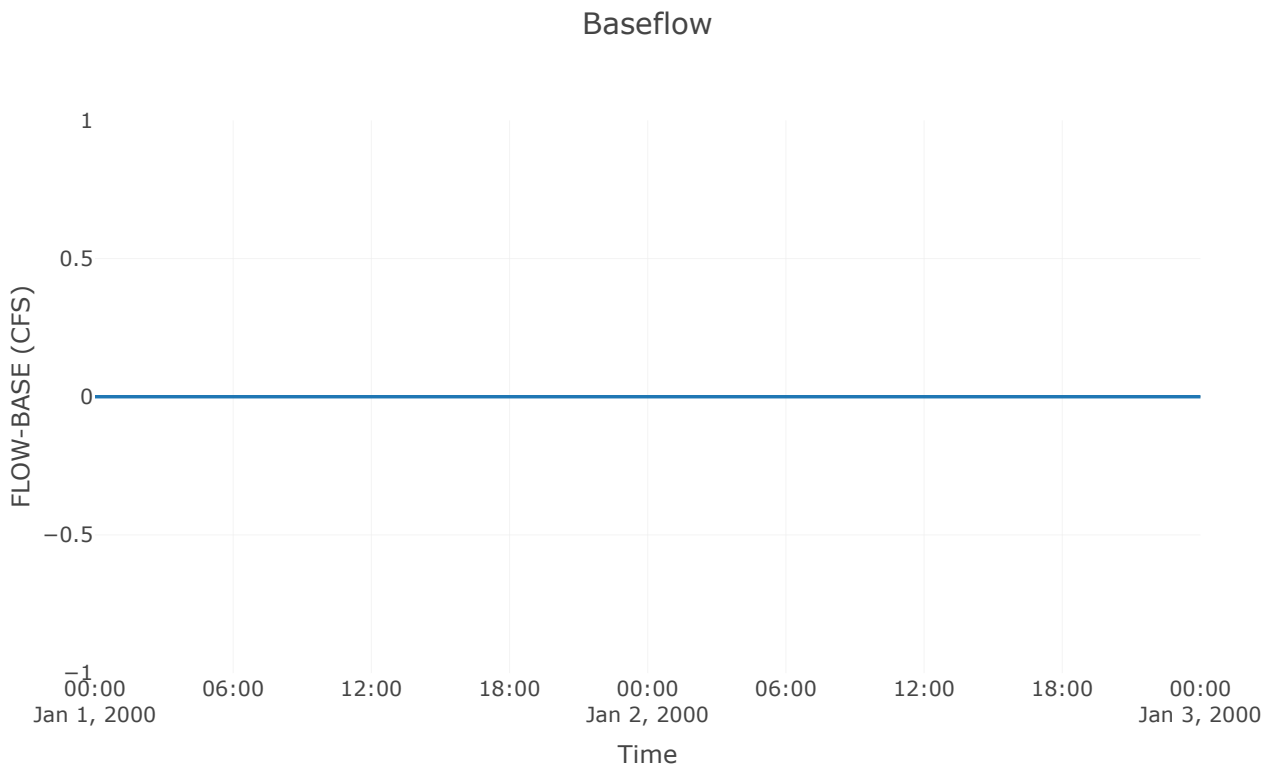
Cumulative Outflow



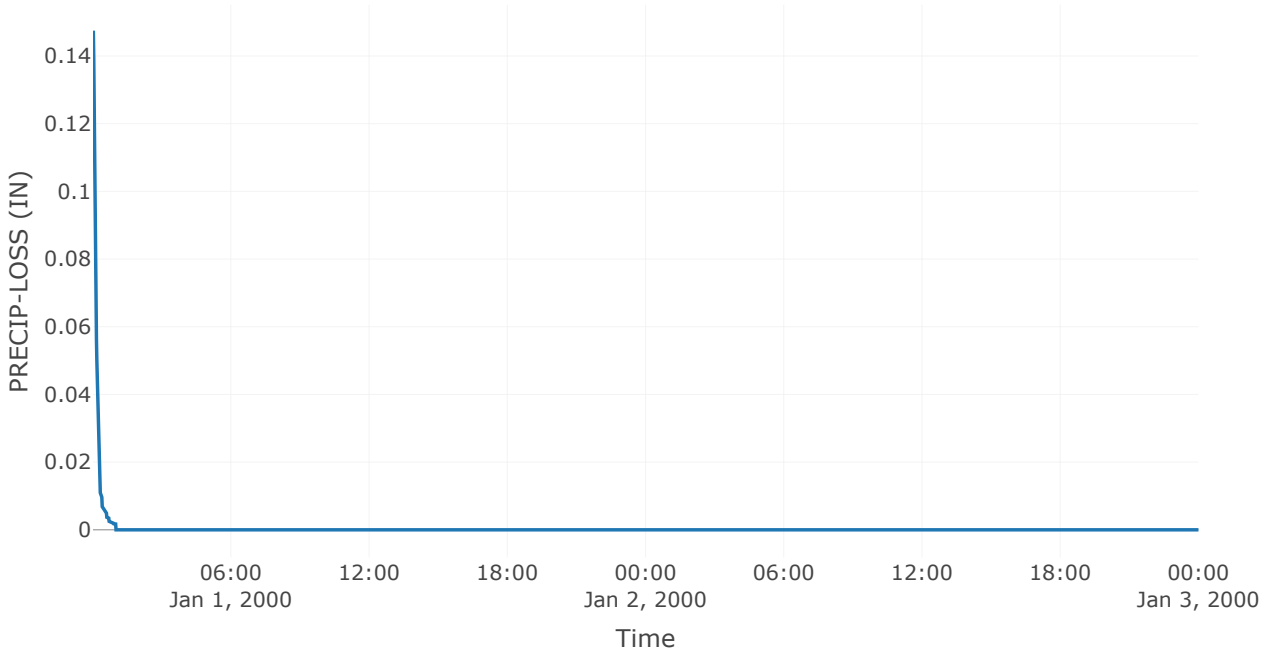
Cumulative Precipitation



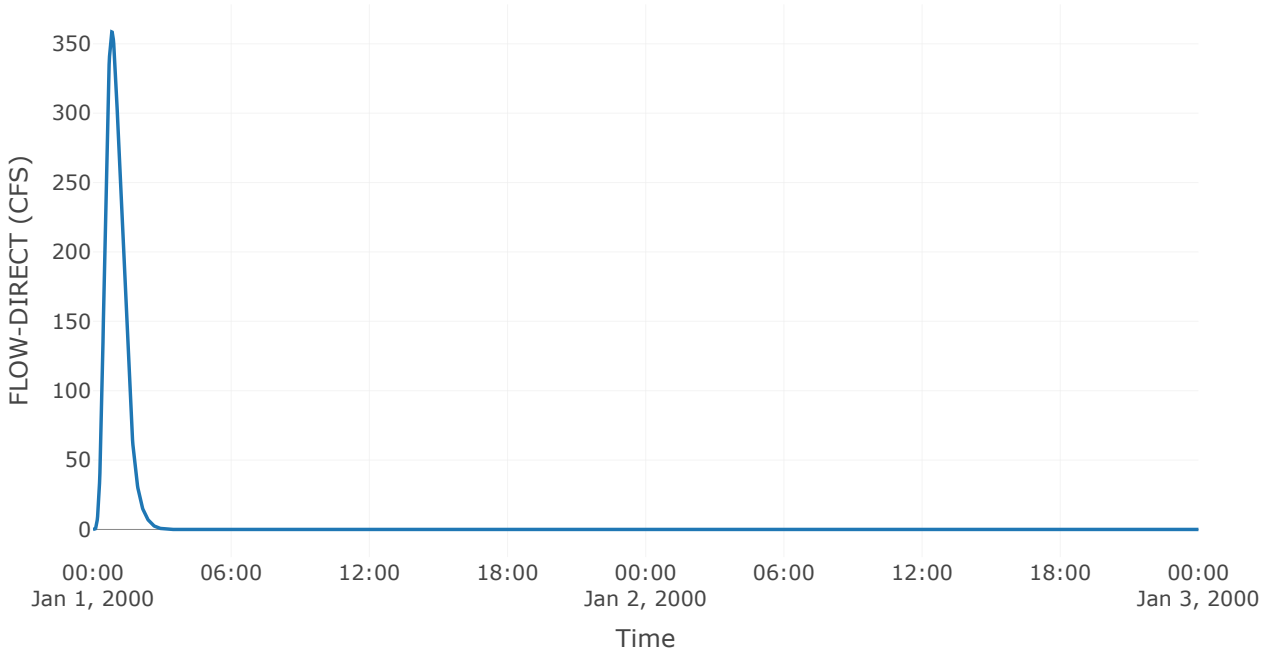

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

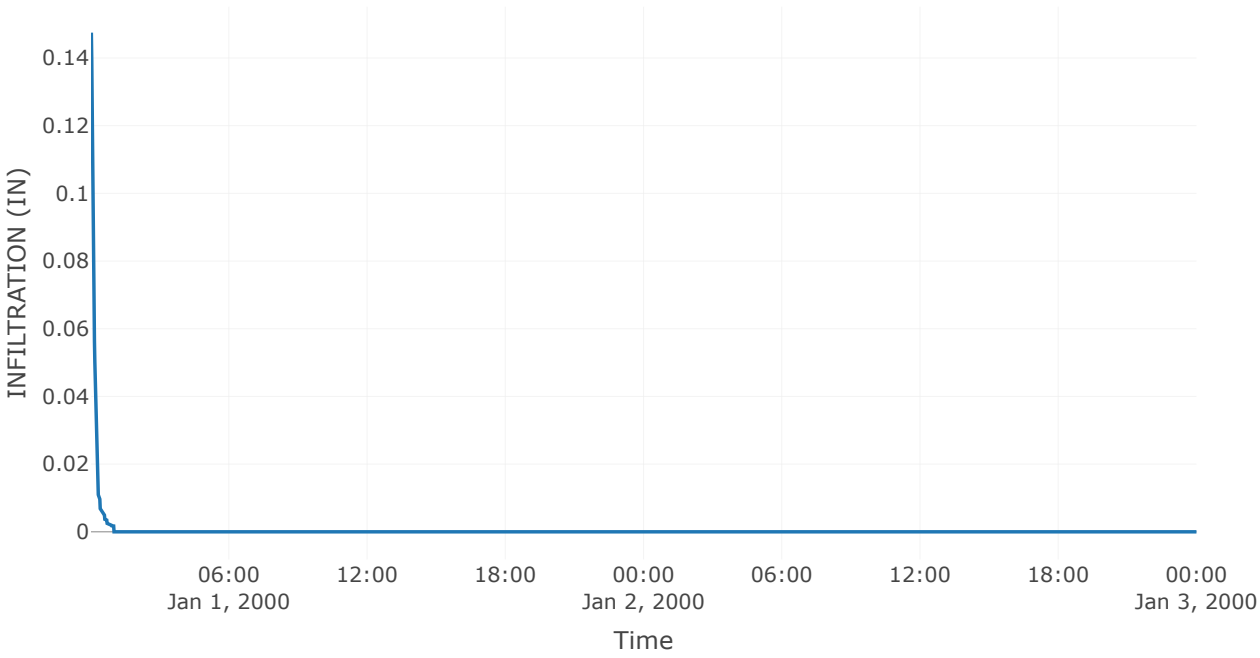

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

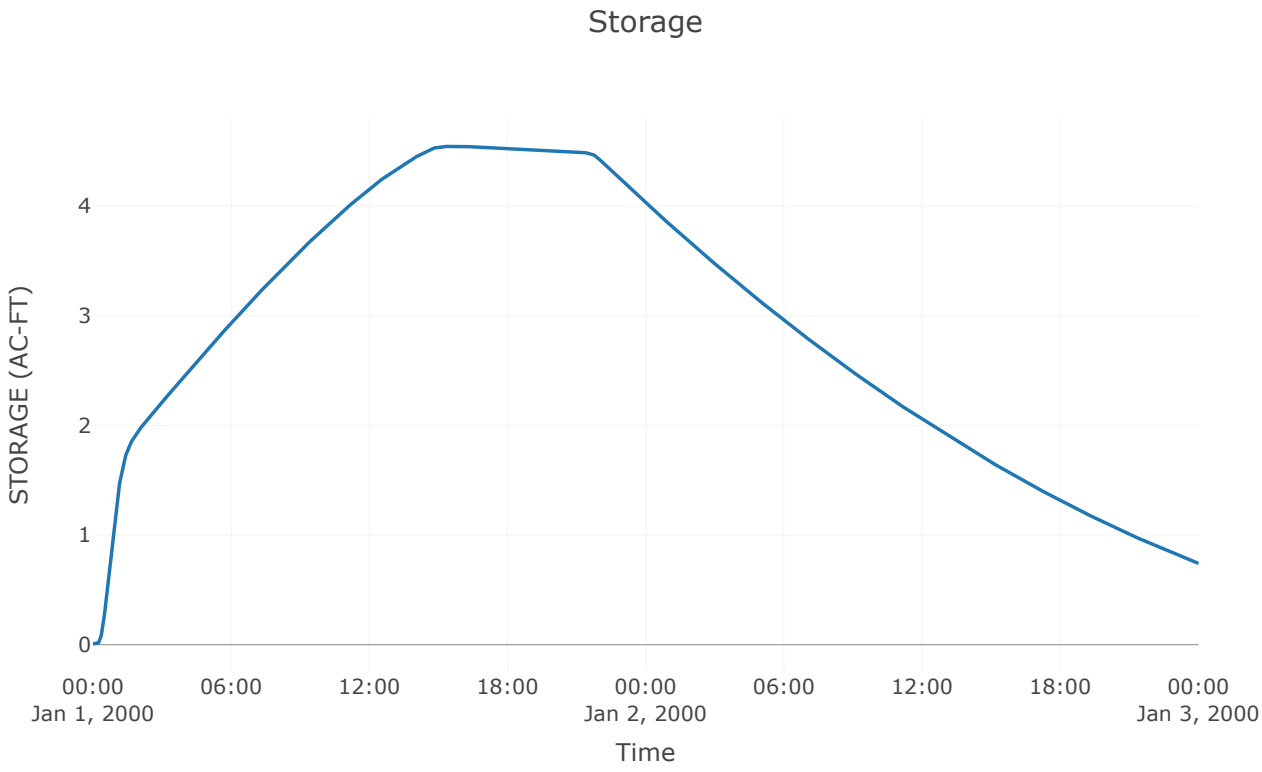


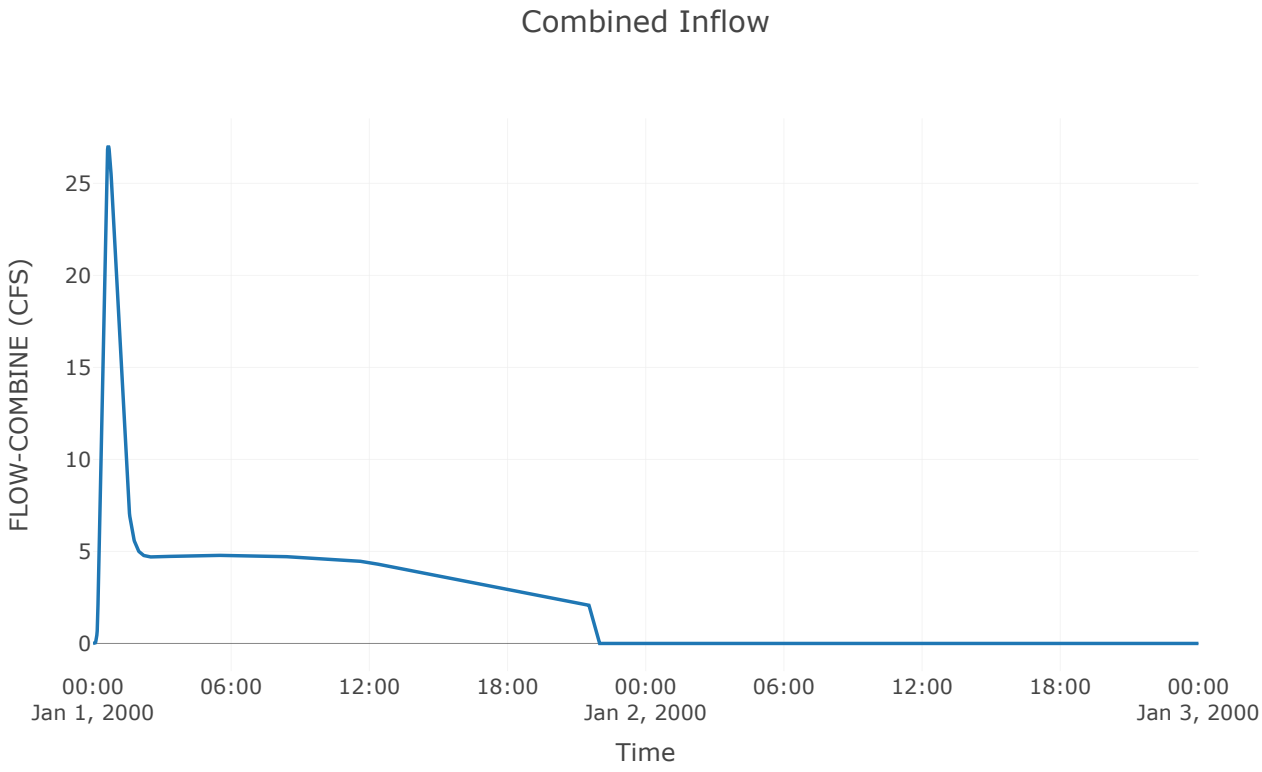

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

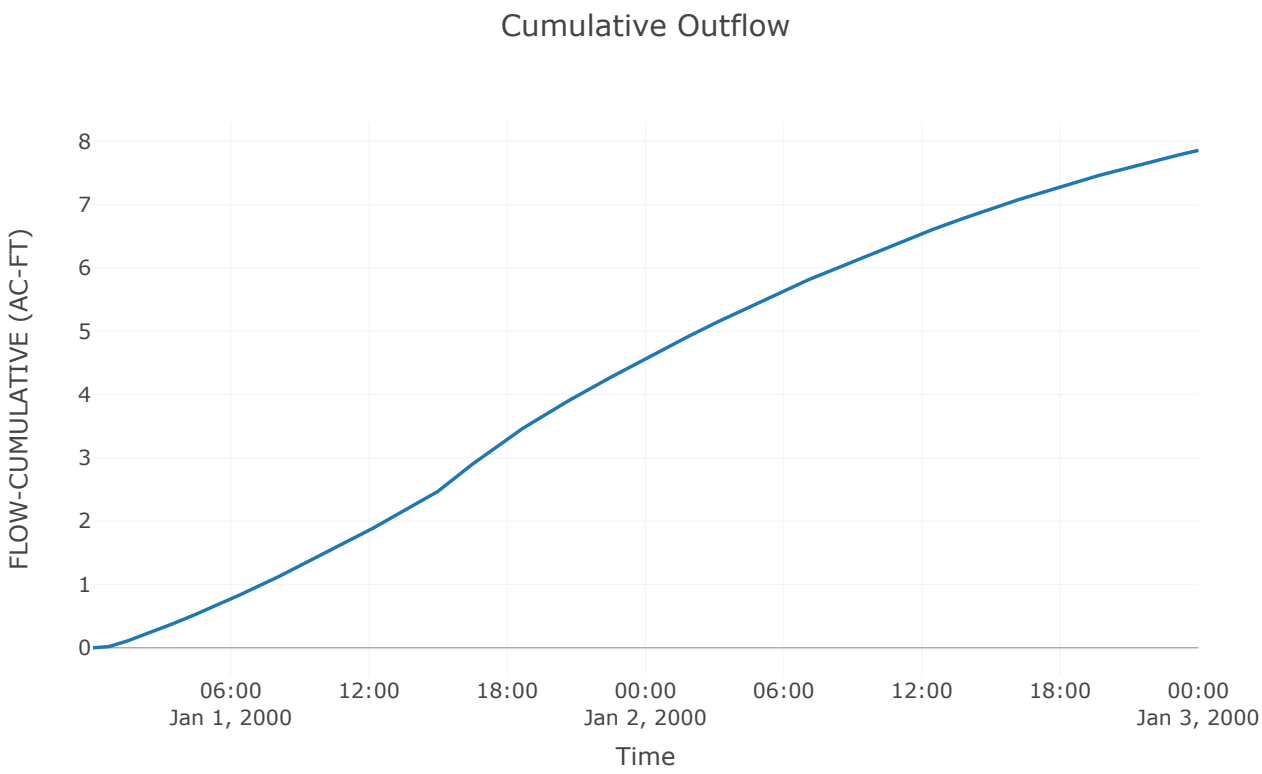
Reservoir: Basin 3

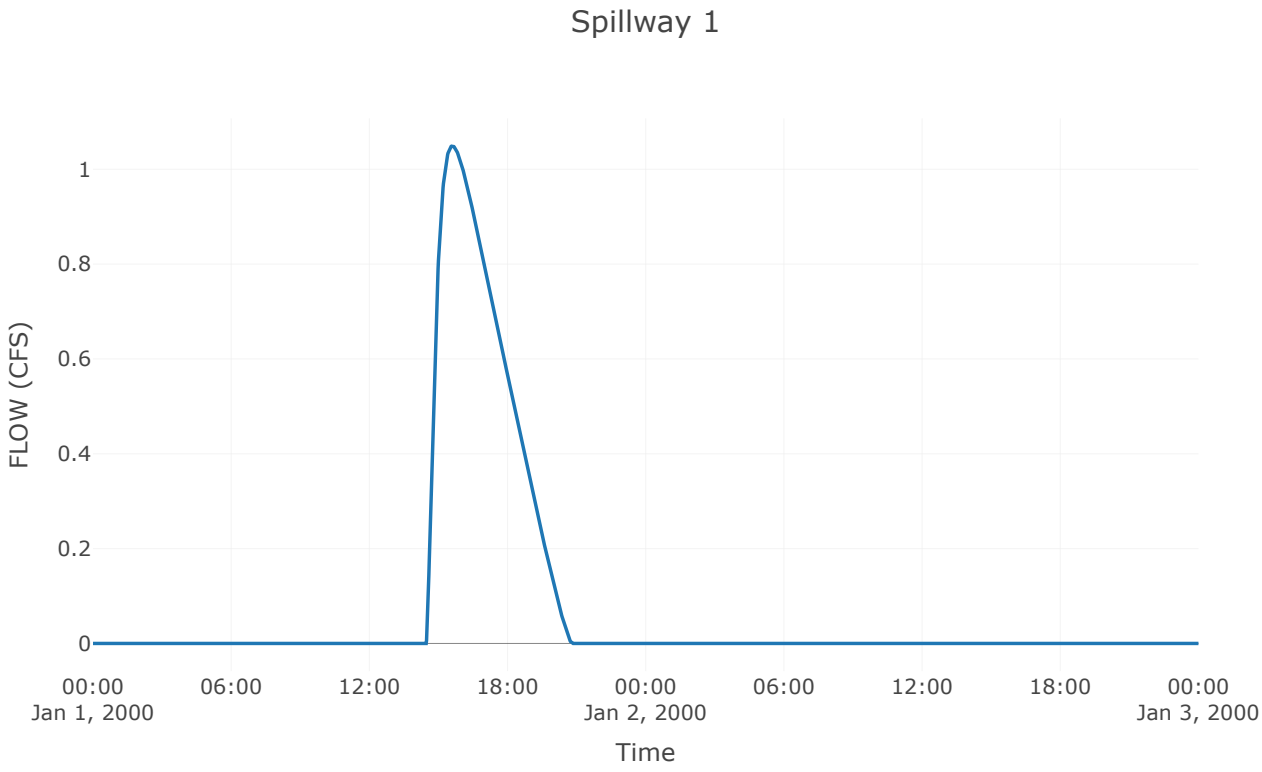
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

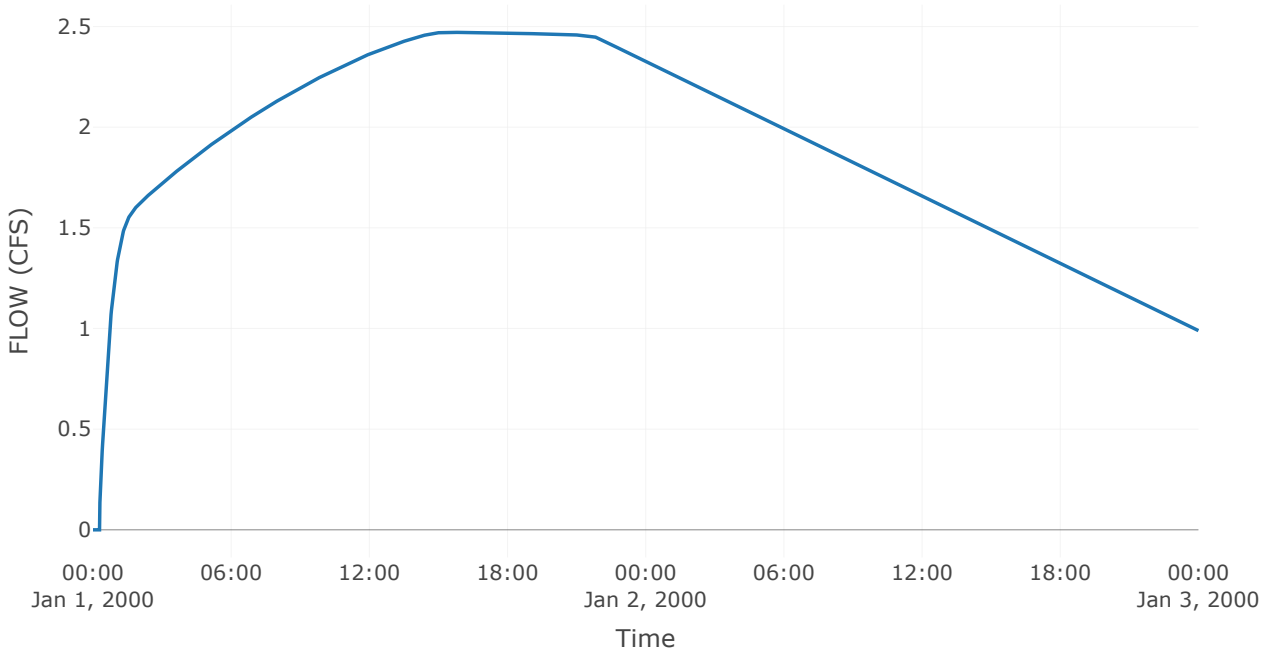

Storage
STORAGE (AC-FT)
0
1
2
3
4
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
0
5
10
15
20
25
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

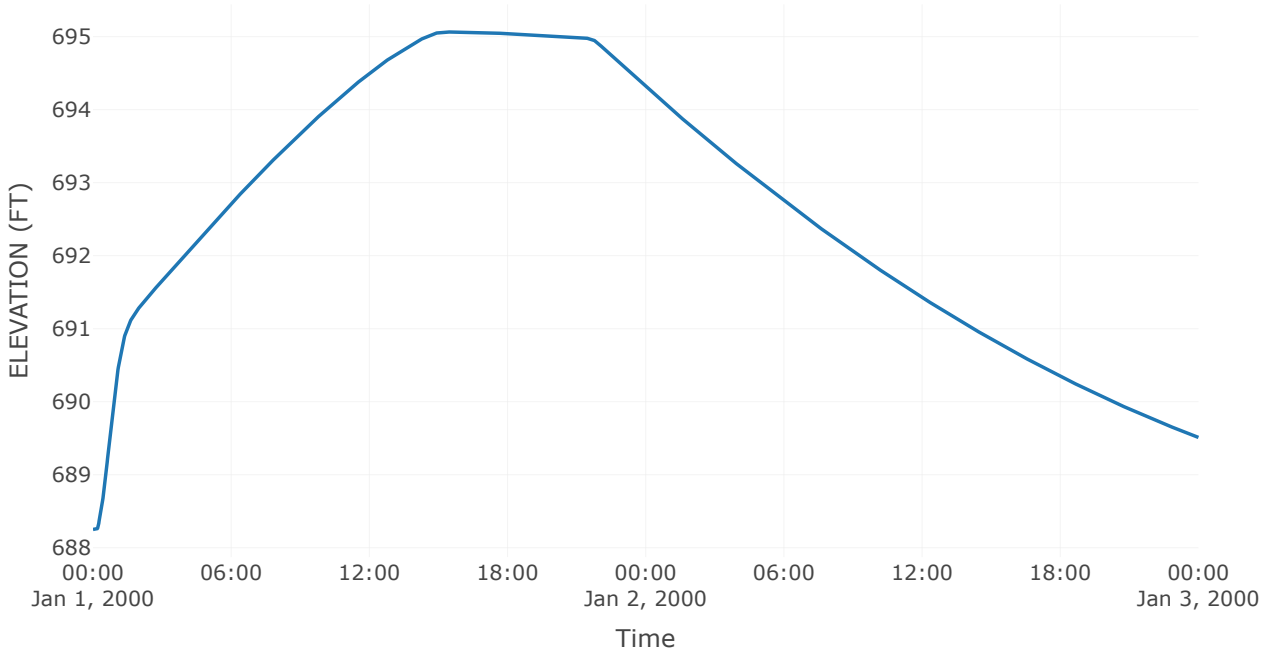

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

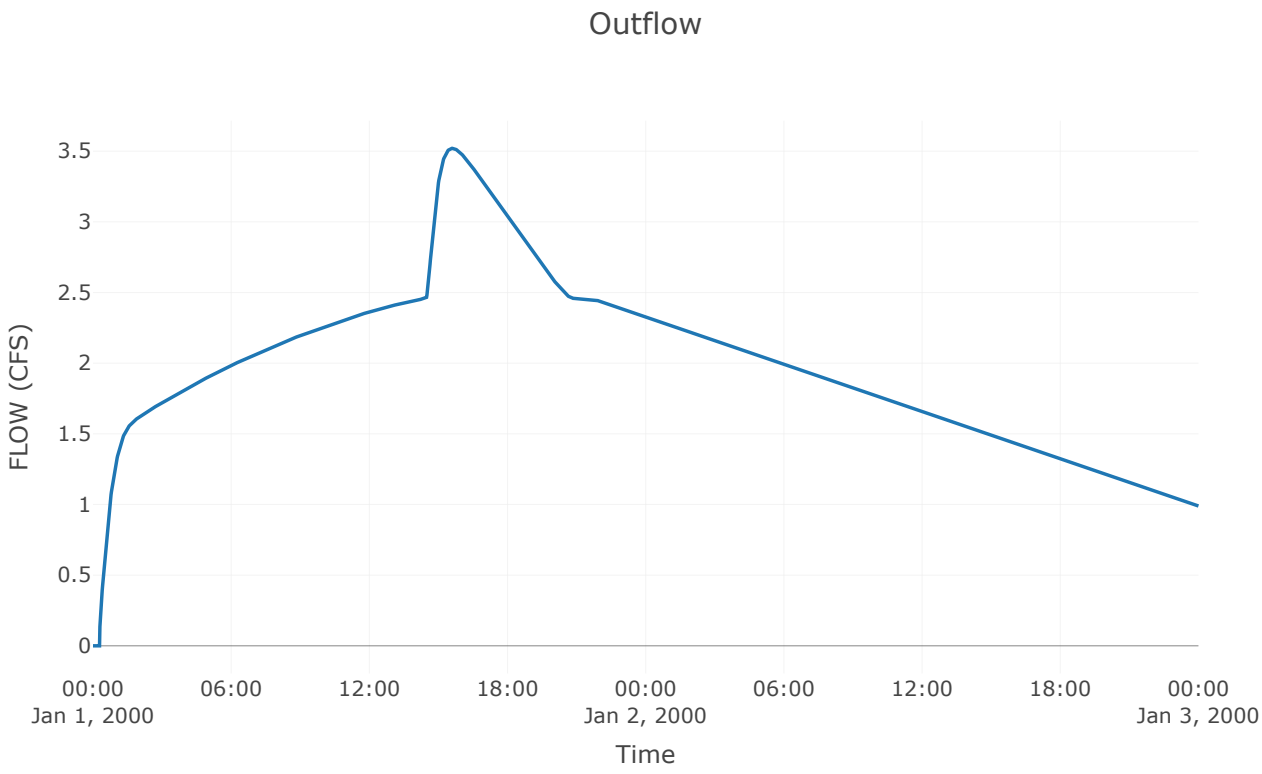

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



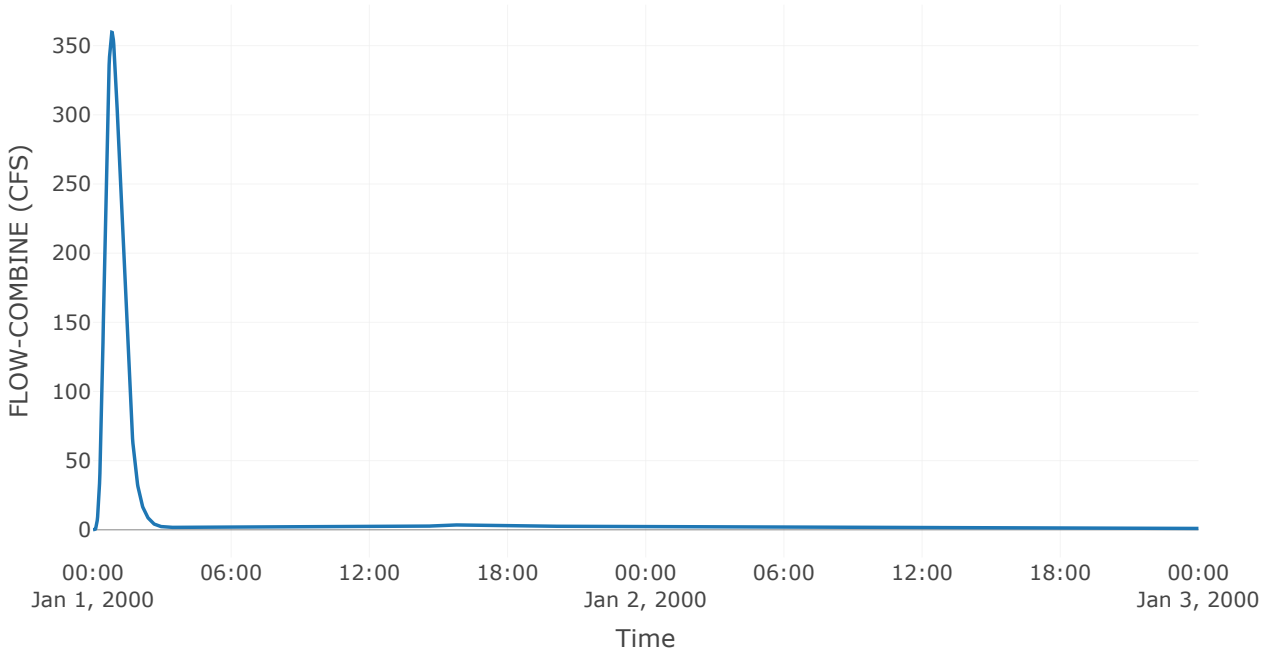

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

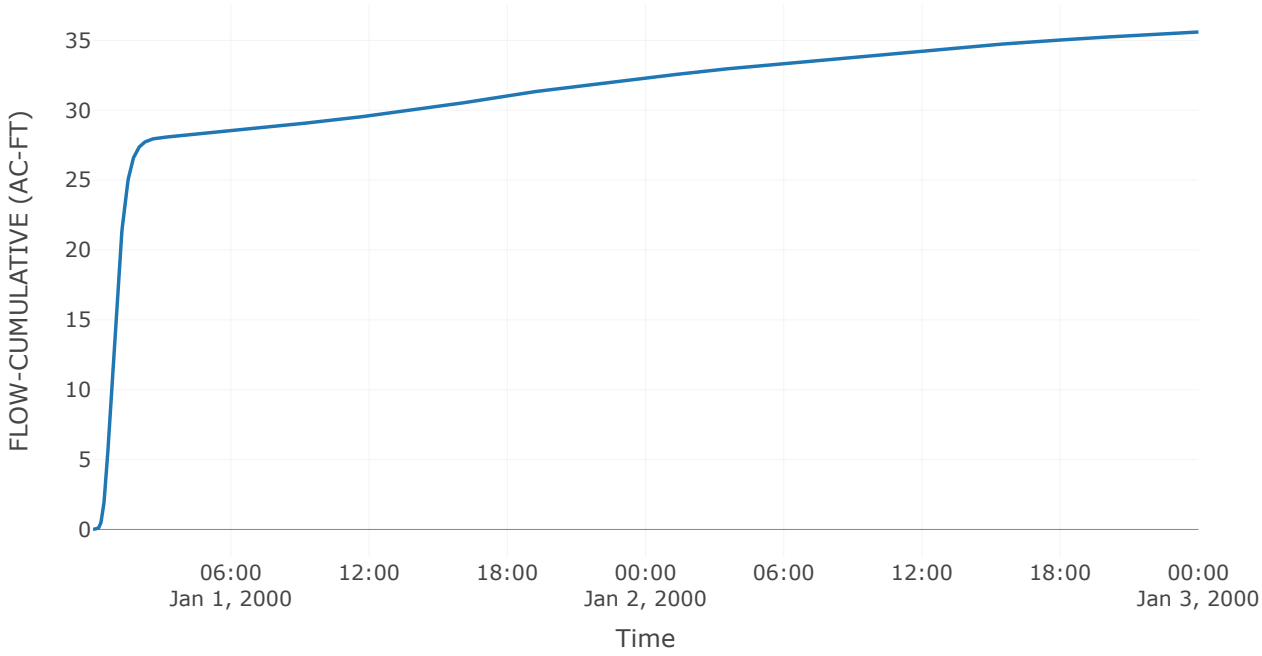
Downstream : Storage East of Wolf Road

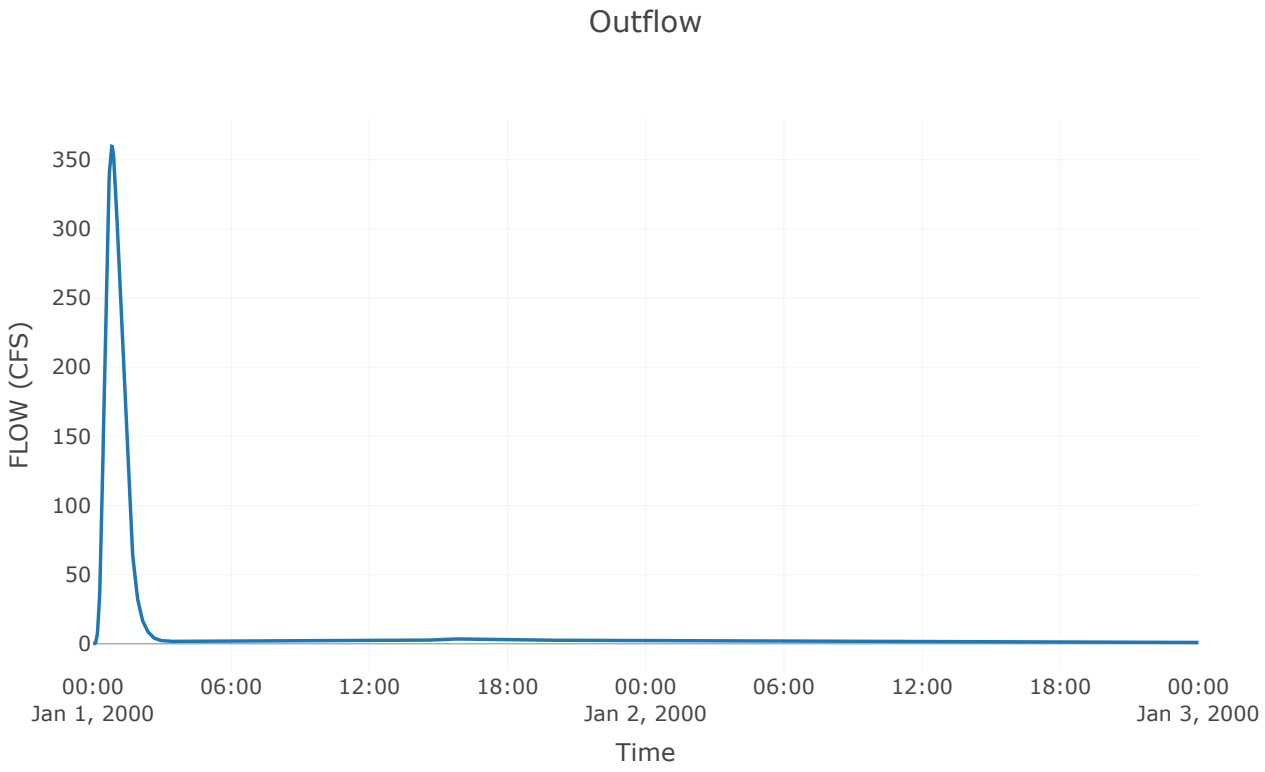
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



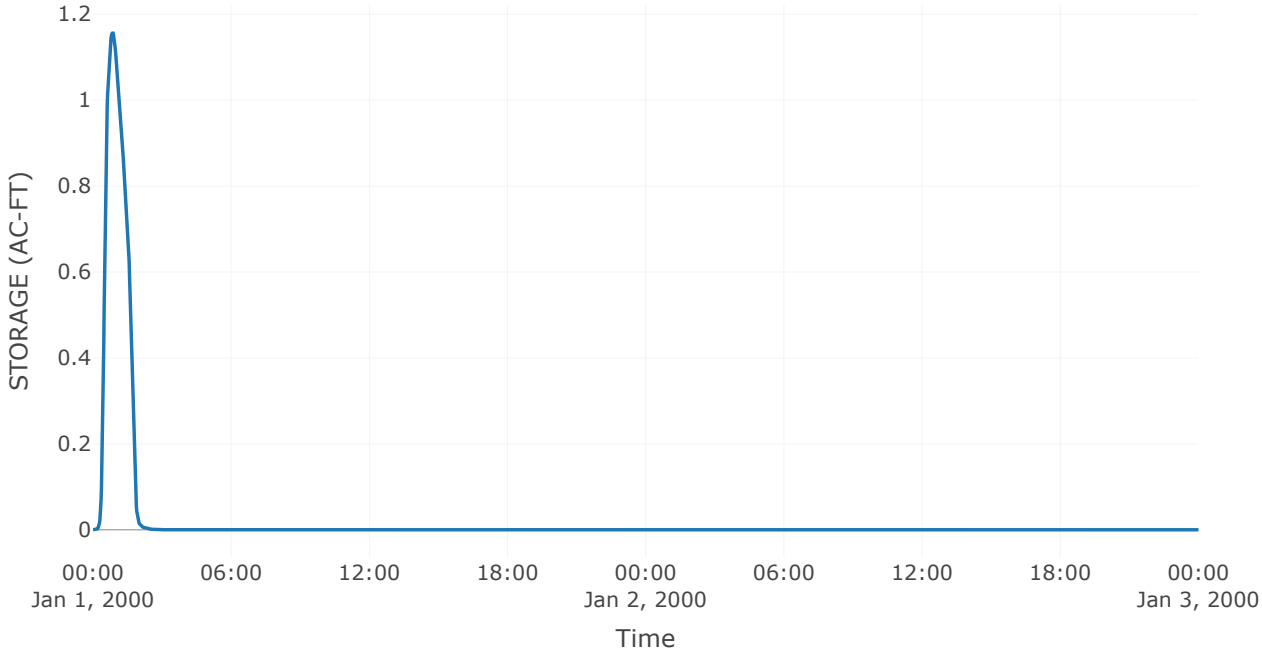

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

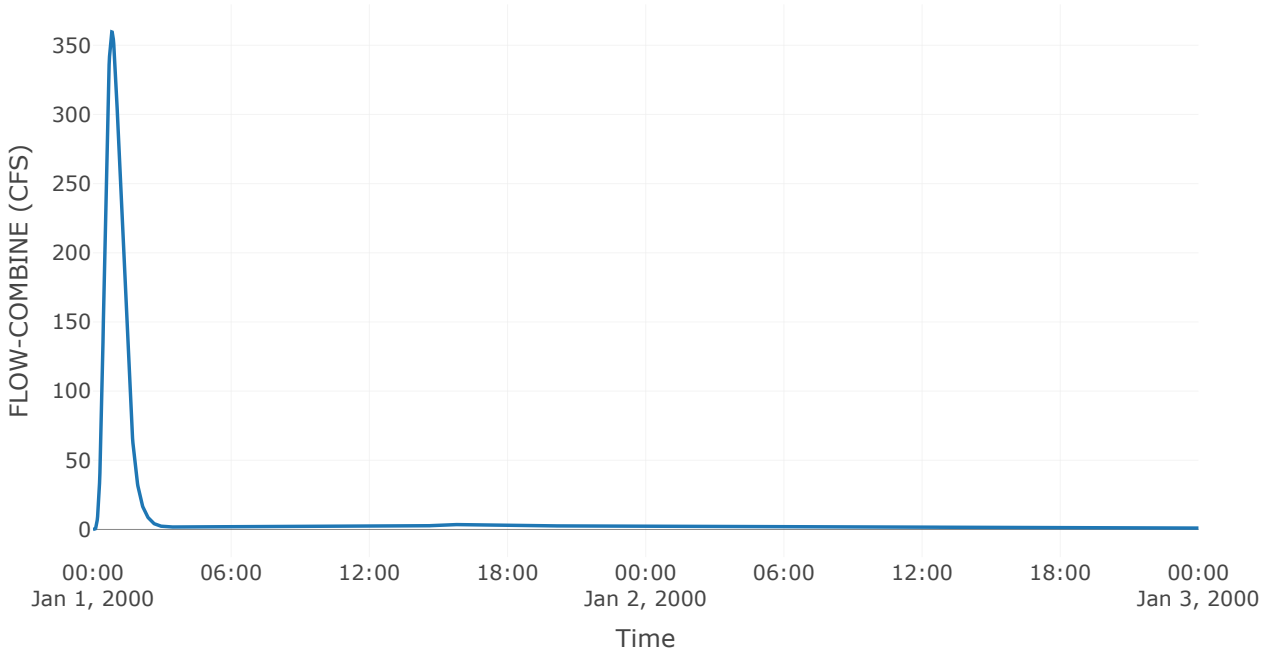
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

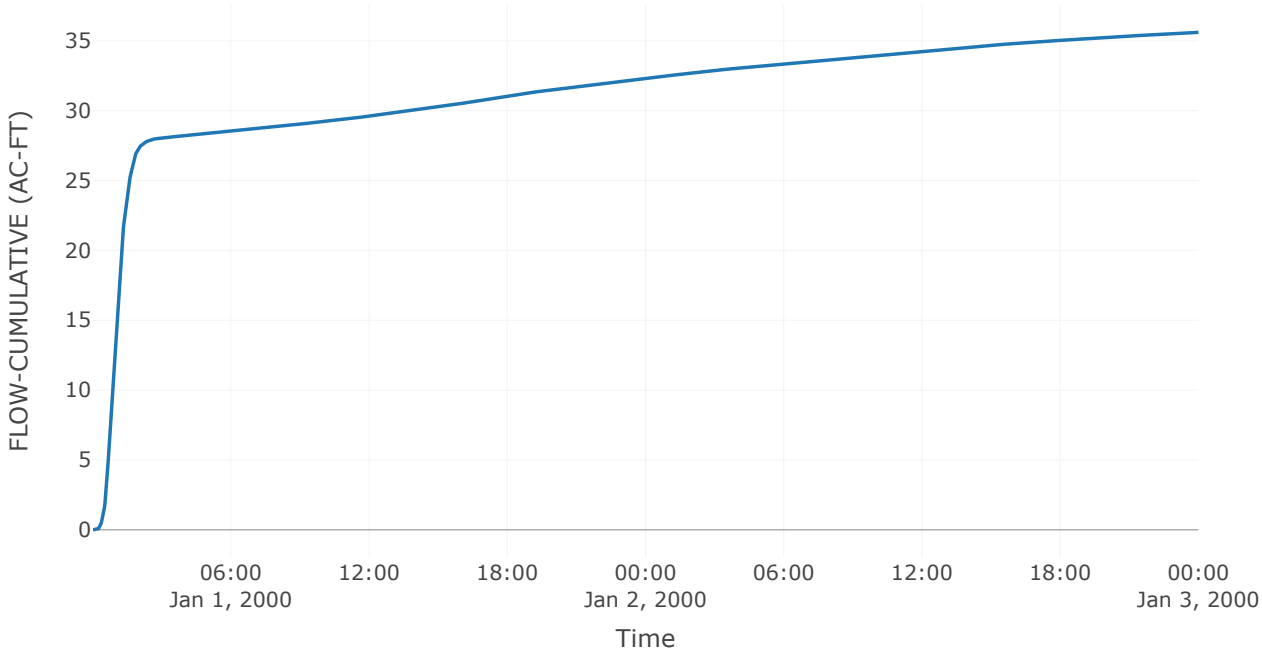
Storage



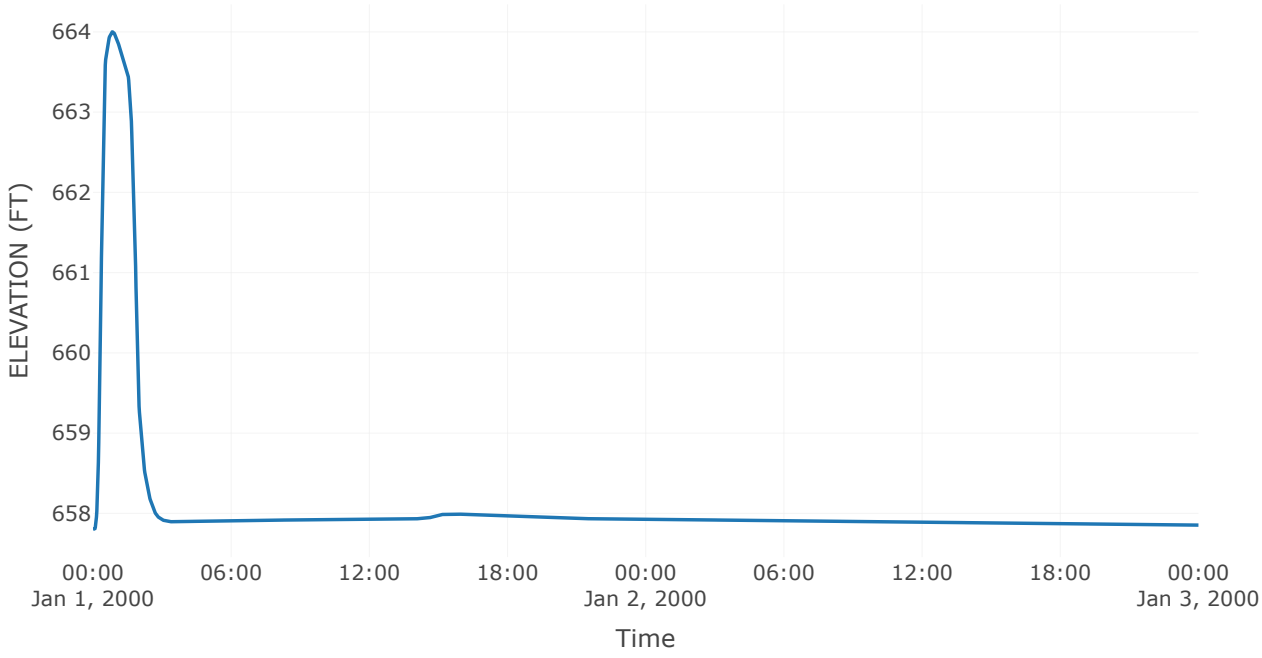
Combined Inflow

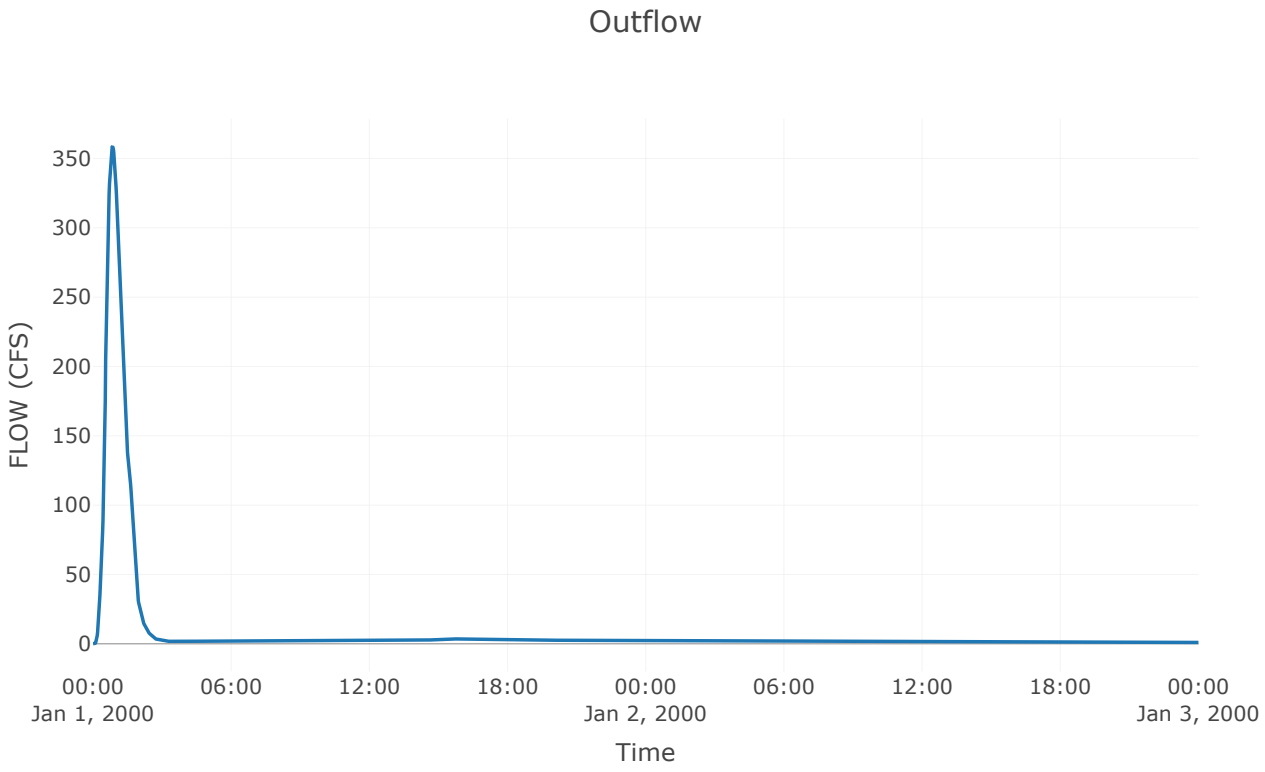


Cumulative Outflow



Pool Elevation



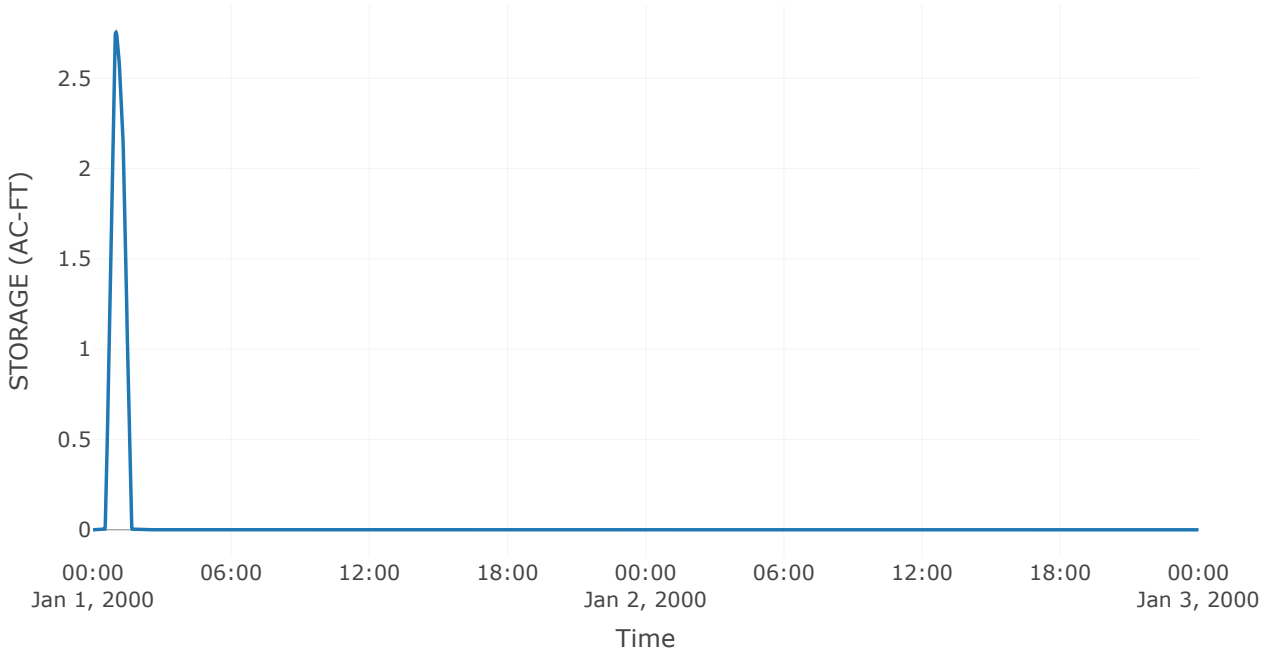

Outflow
FLOW (CFS)
350
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

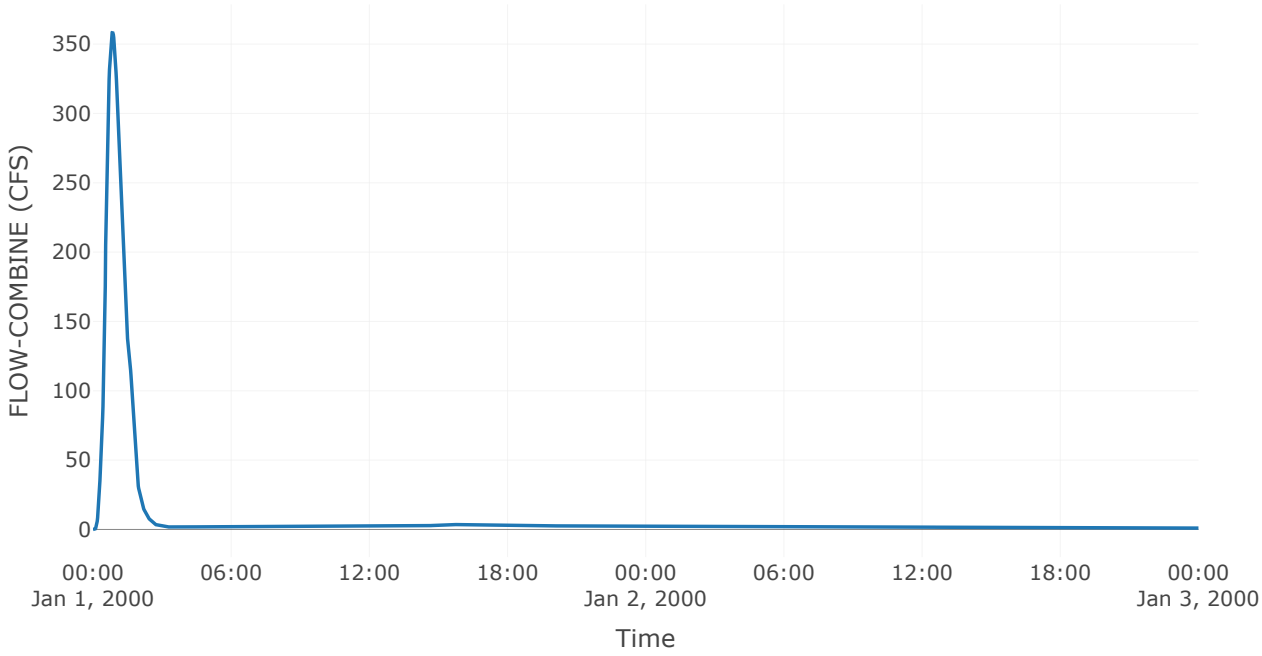
Downstream : Storage West of Wolf Road

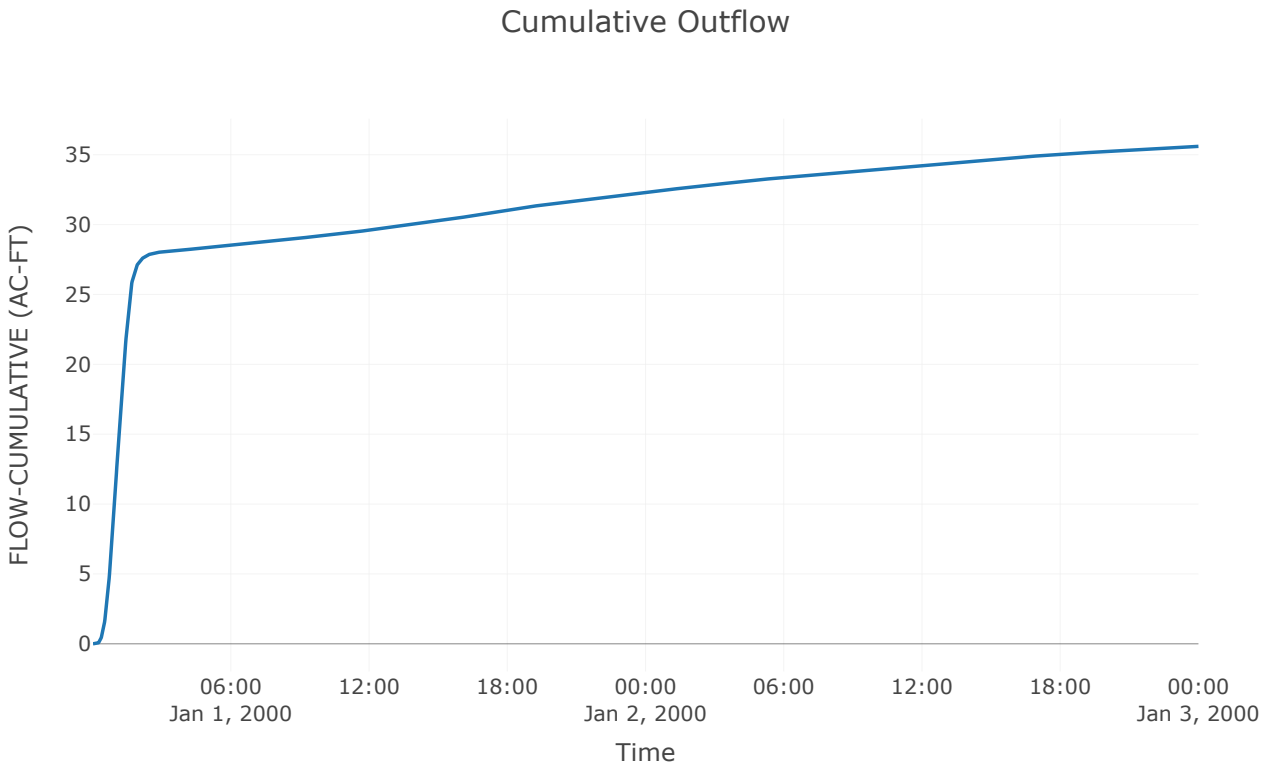
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	331.13
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.75
Peak Elevation (FT)	664.98
Discharge Volume (AC - FT)	35.6

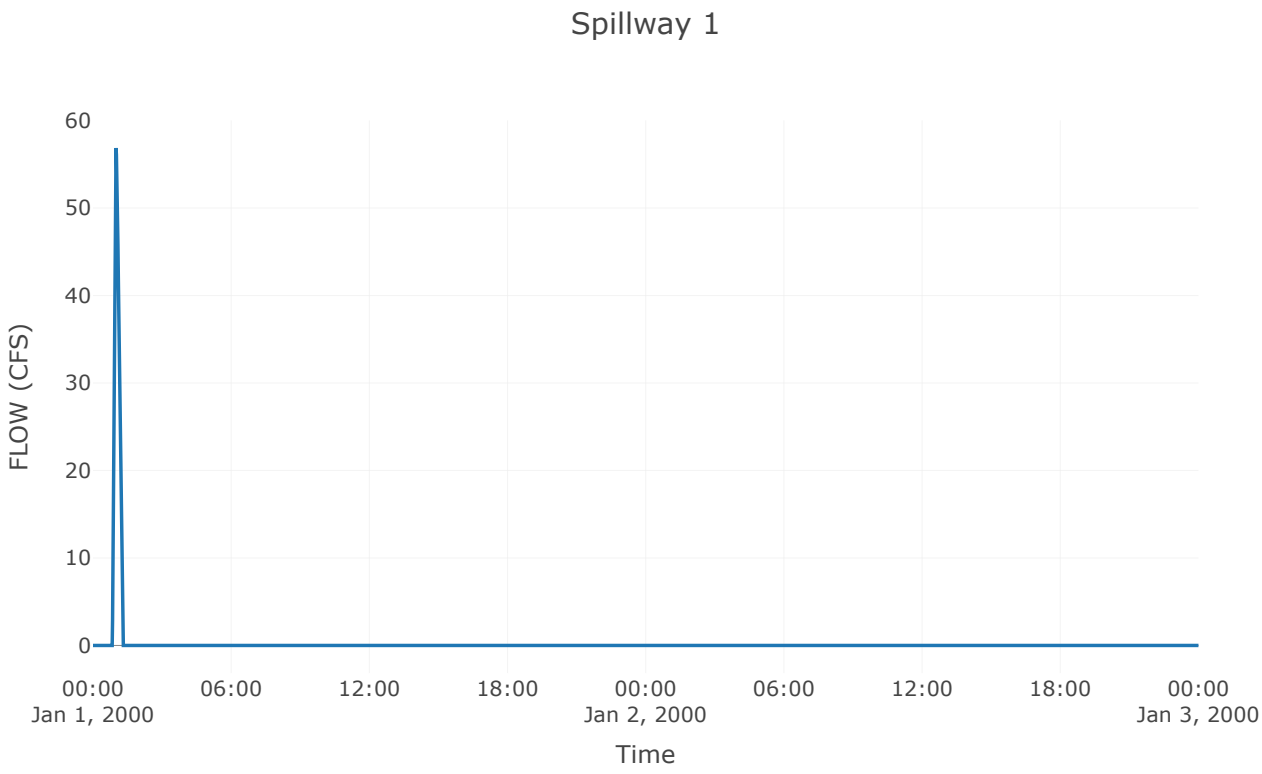
Storage



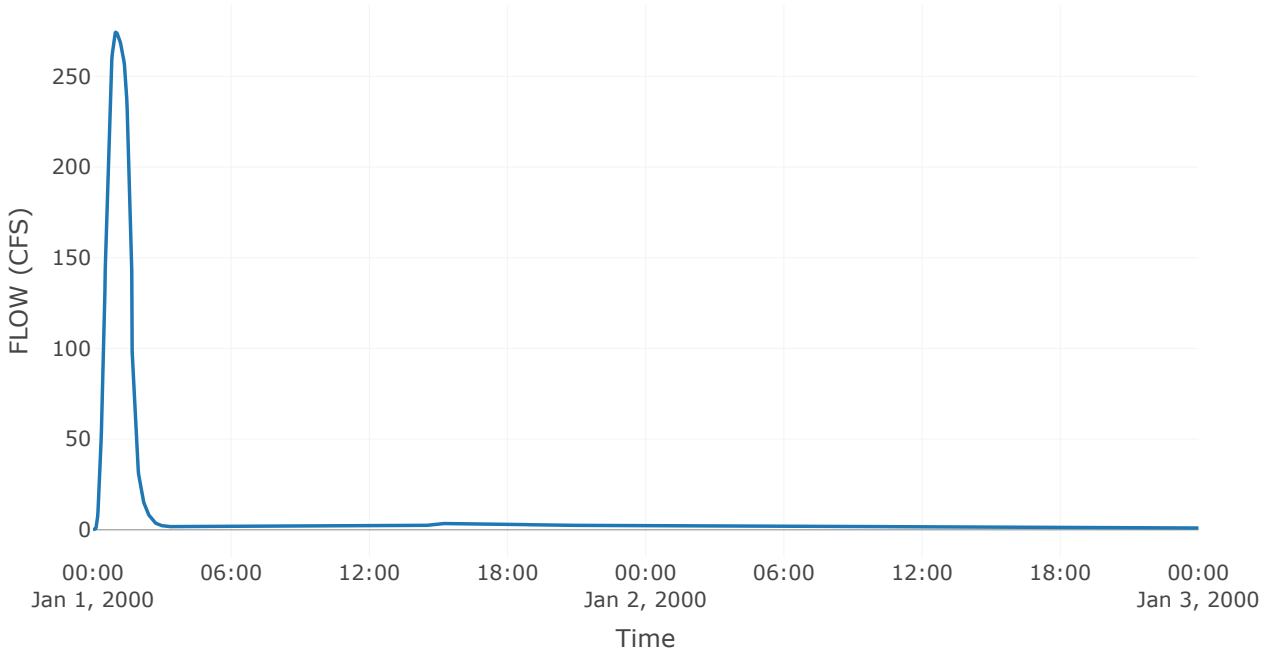
Combined Inflow



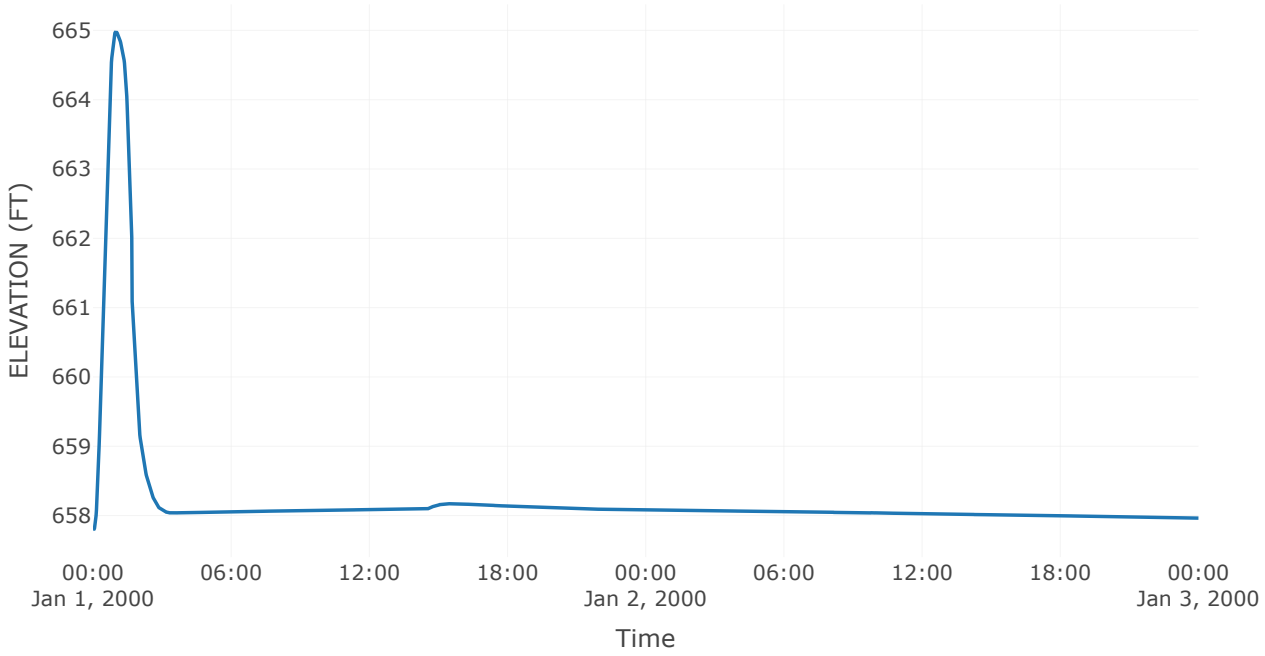

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
35
30
25
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

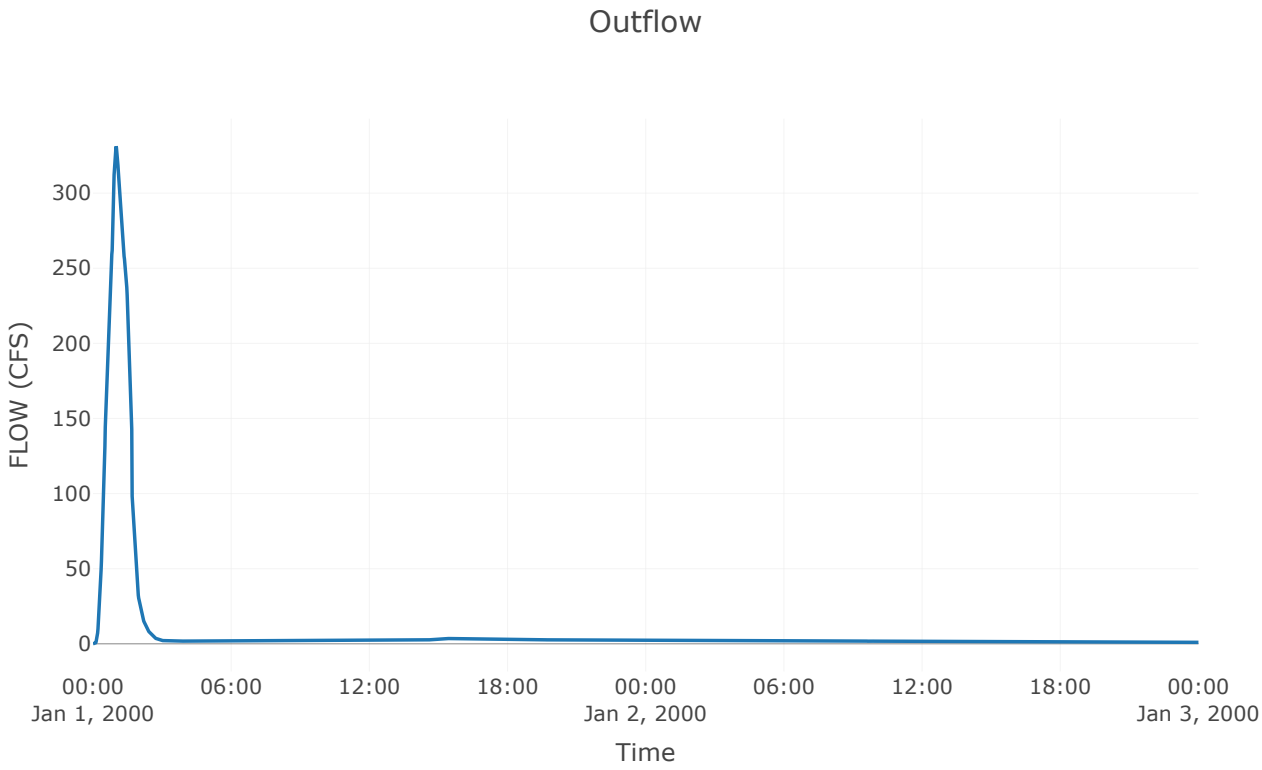

Spillway 1
FLOW (CFS)
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



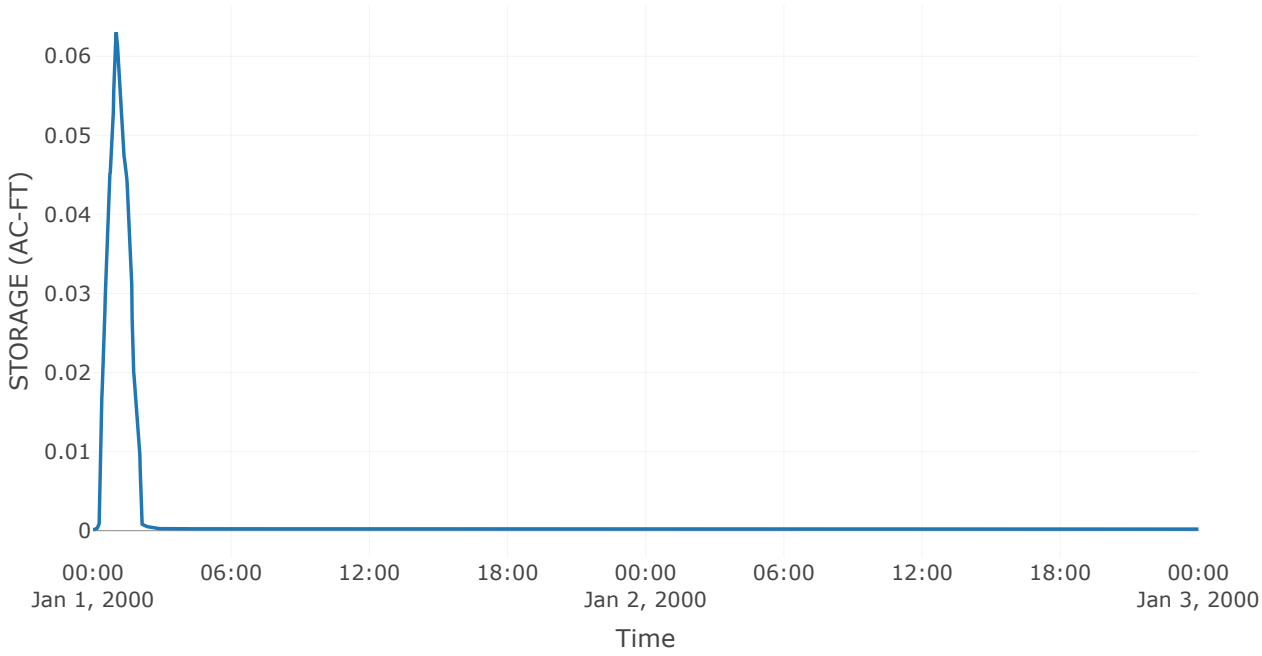

Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage West of Wolf Road

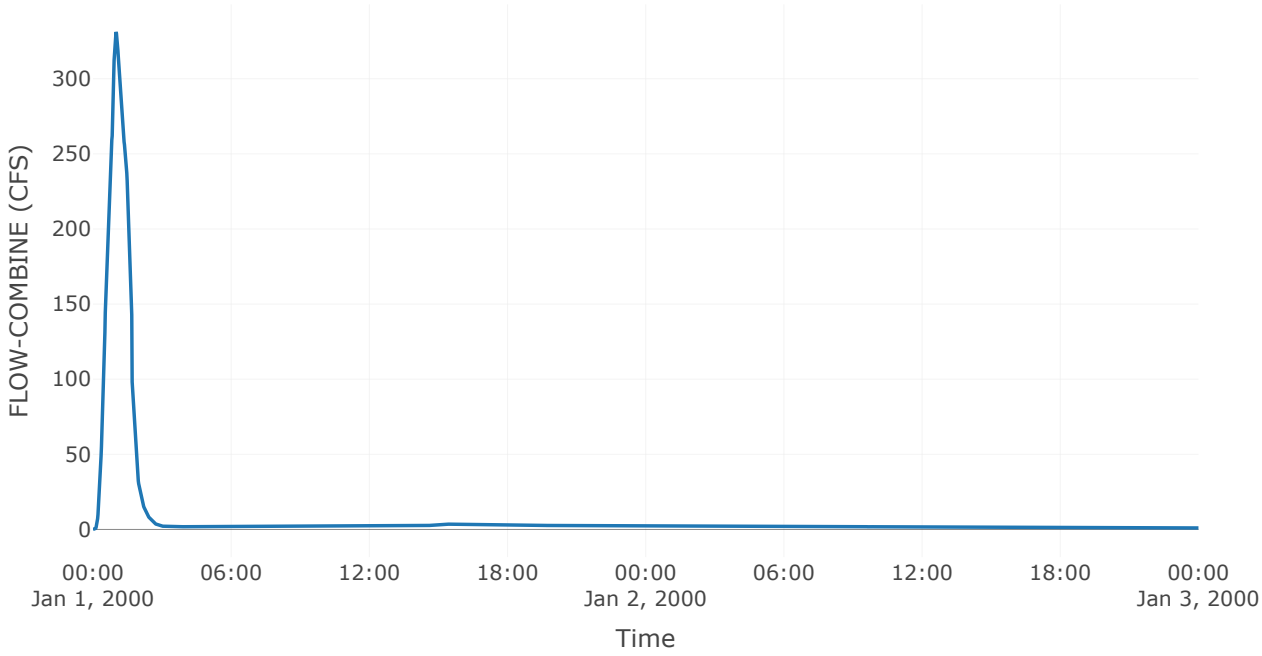
Downstream : Existing Basin C

Results: Storage West of Wolf Road	
Peak Discharge (CFS)	331.51
Time of Peak Discharge	01Jan2000, 01:00
Volume (IN)	2.48
Peak Inflow (CFS)	331.13
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	0.06
Peak Elevation (FT)	660.32
Discharge Volume (AC - FT)	35.55

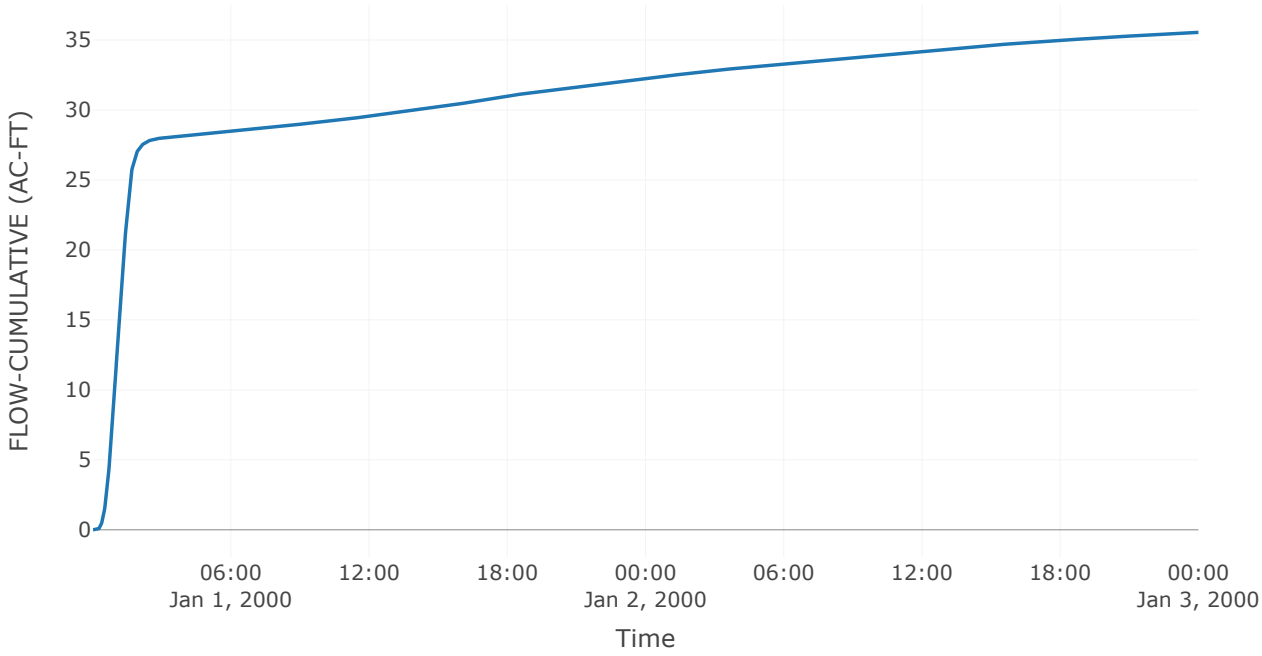
Storage



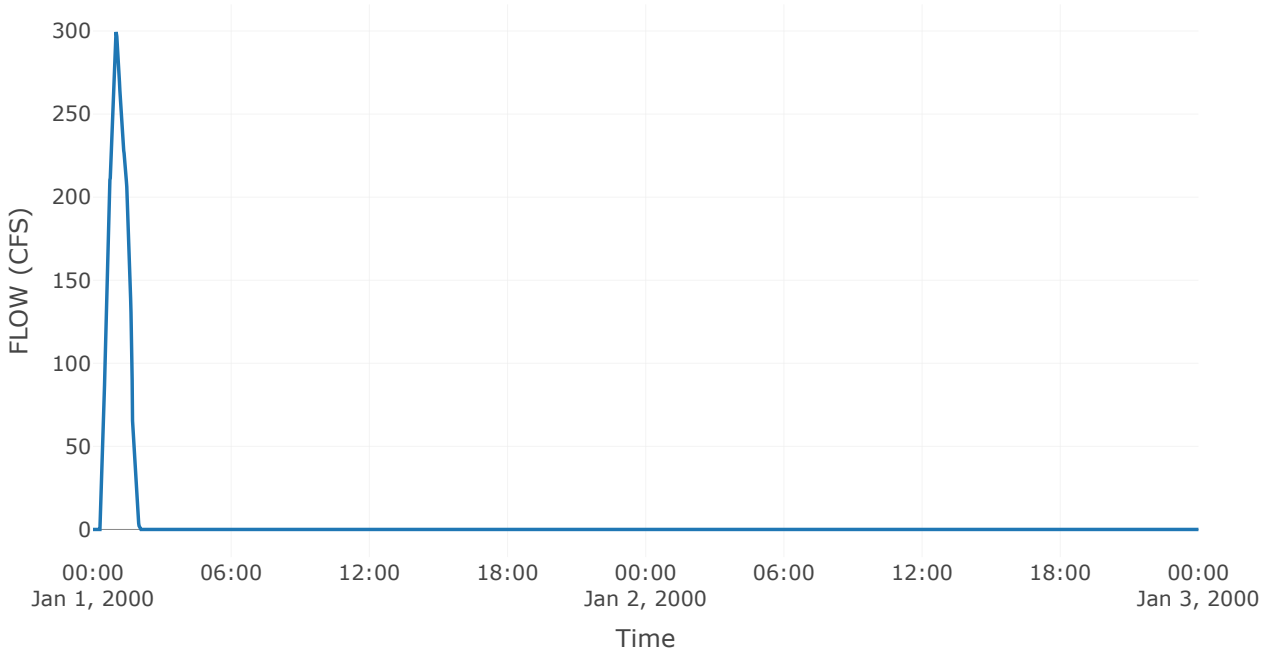
Combined Inflow



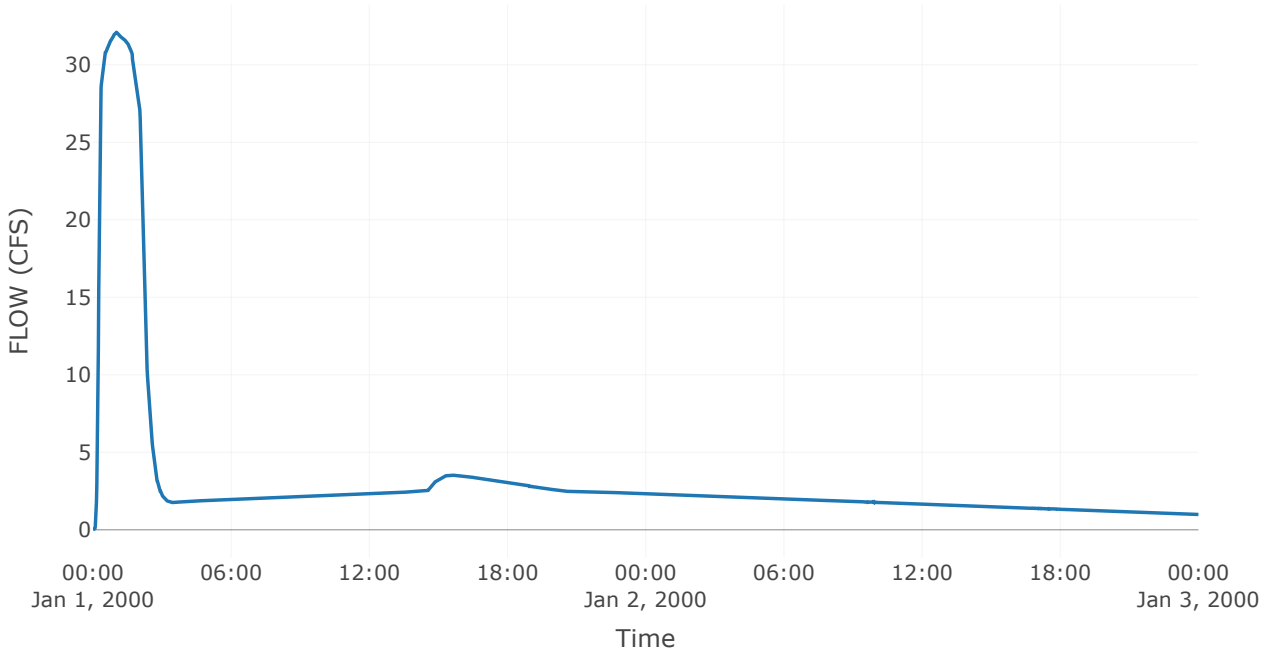
Cumulative Outflow



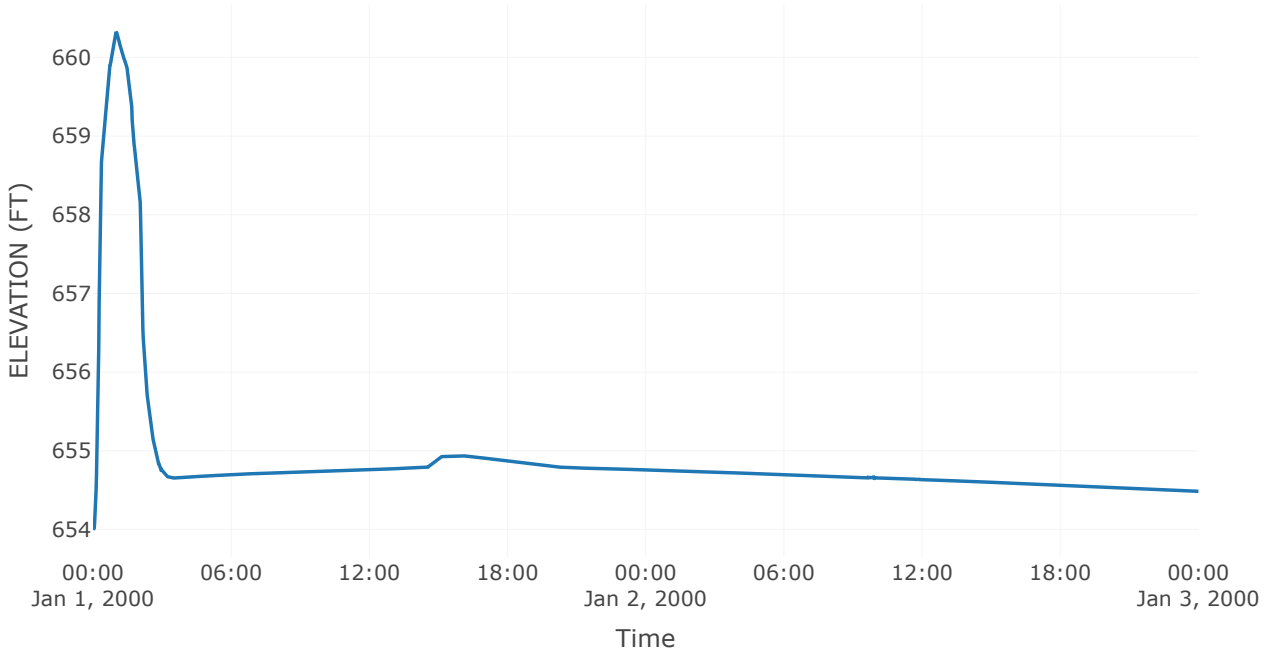
Spillway 1

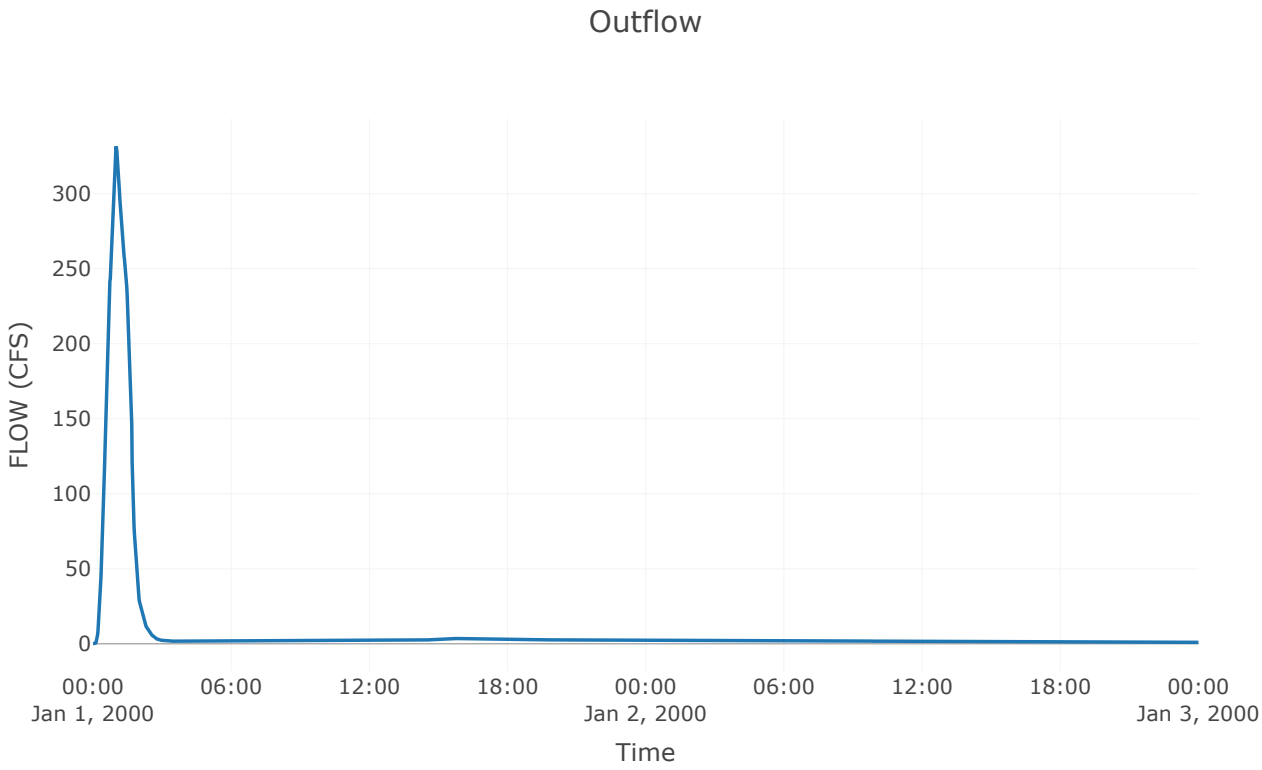


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Existing On-Site

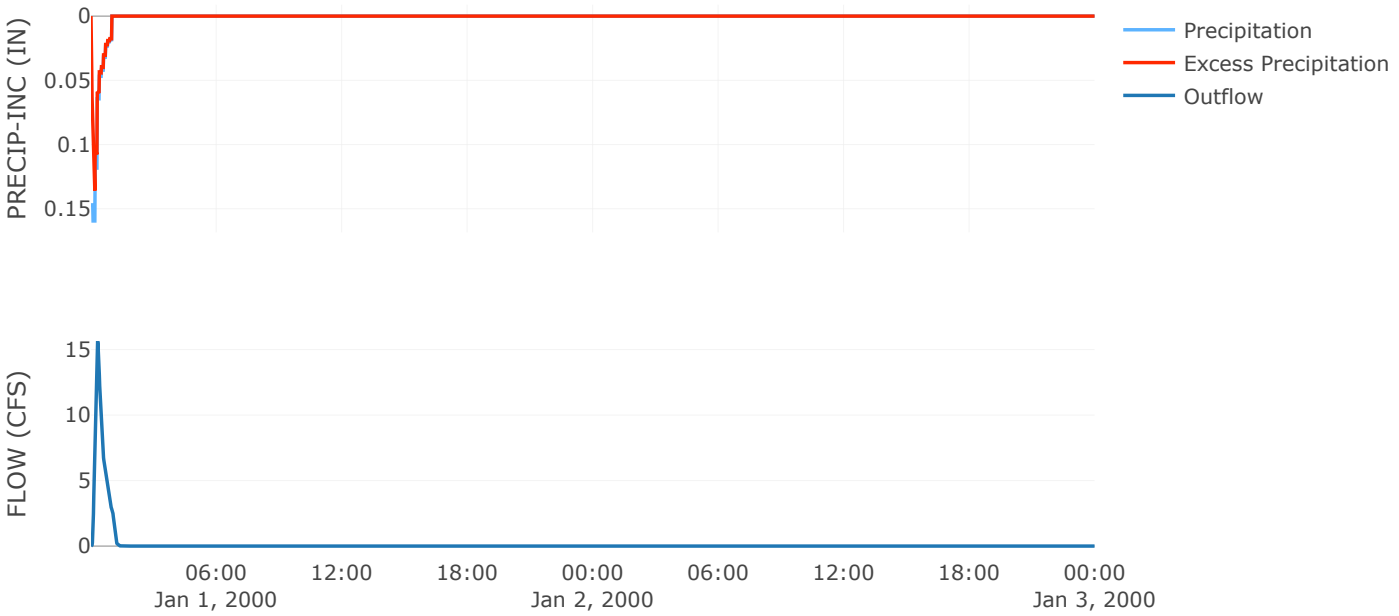
Area (MI2) : 0
Downstream : Existing Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	91.09

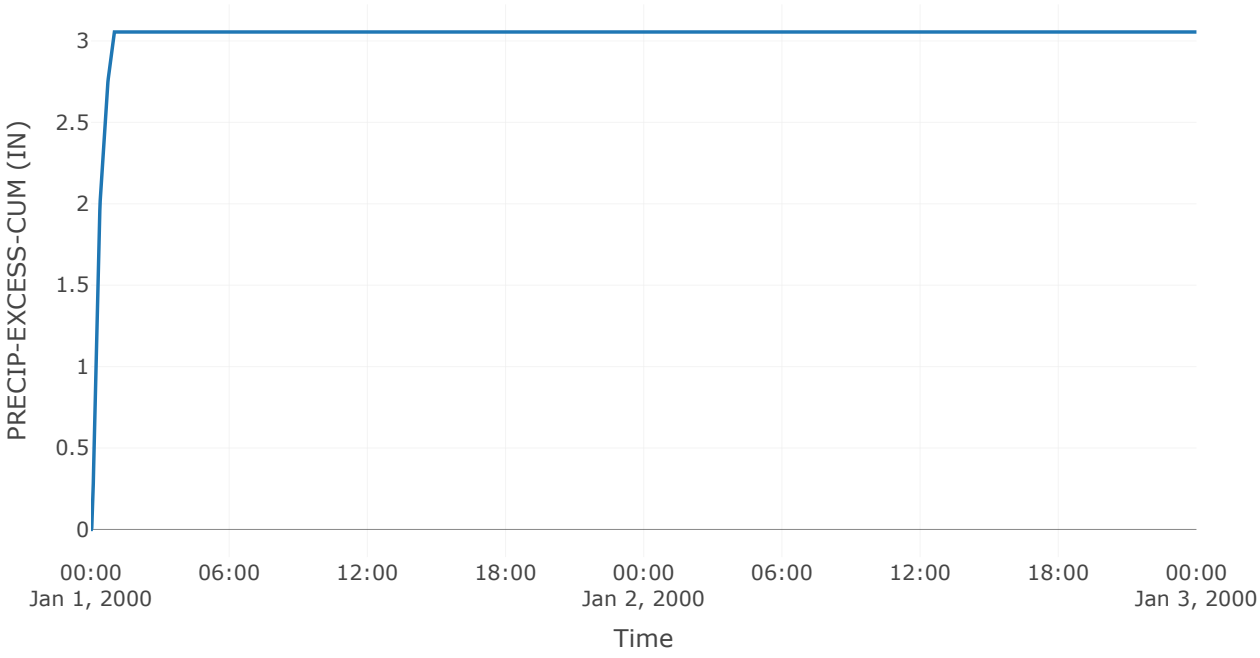
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Existing On-Site	
Peak Discharge (CFS)	15.64
Time of Peak Discharge	01Jan2000, 00:18
Volume (IN)	3.06
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.2
Excess Volume (AC - FT)	0.61
Direct Runoff Volume (AC - FT)	0.61
Baseflow Volume (AC - FT)	0

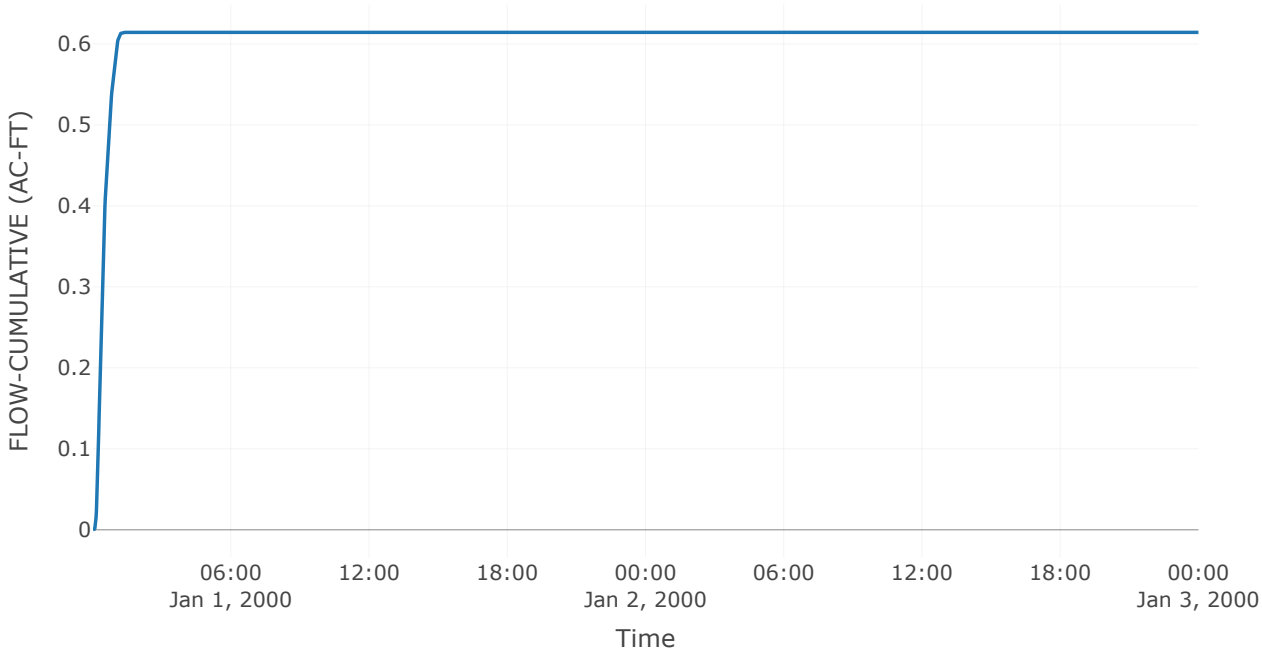
Precipitation and Outflow



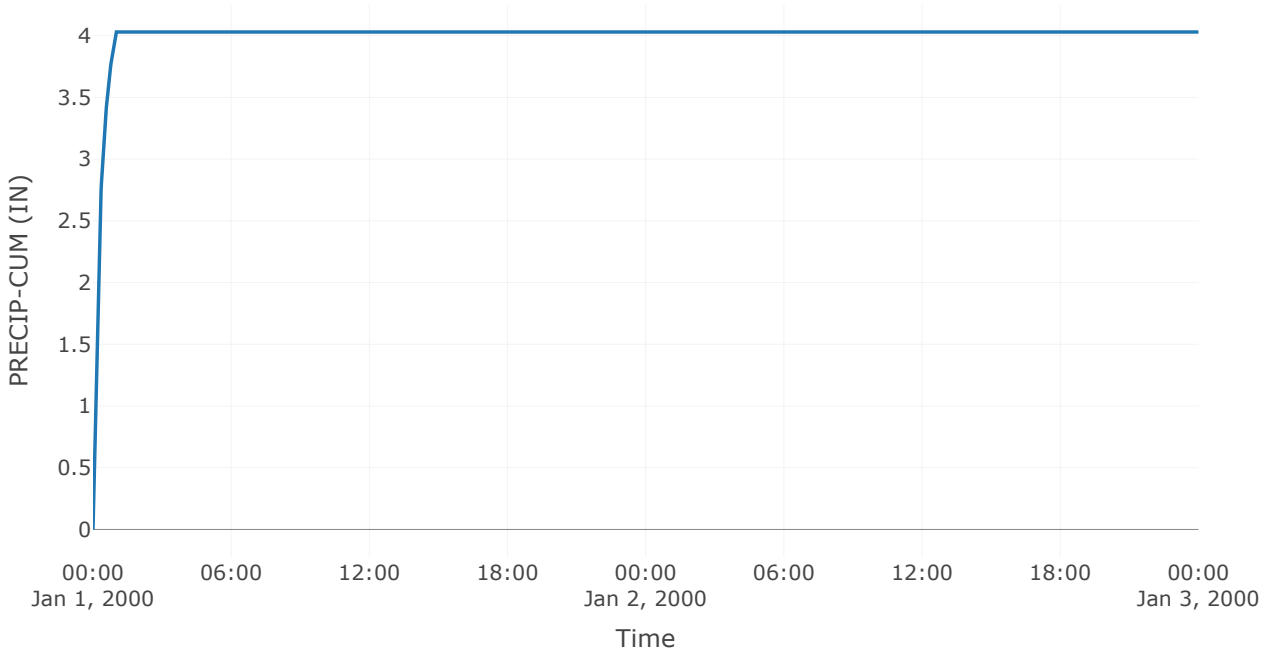
Cumulative Excess Precipitation

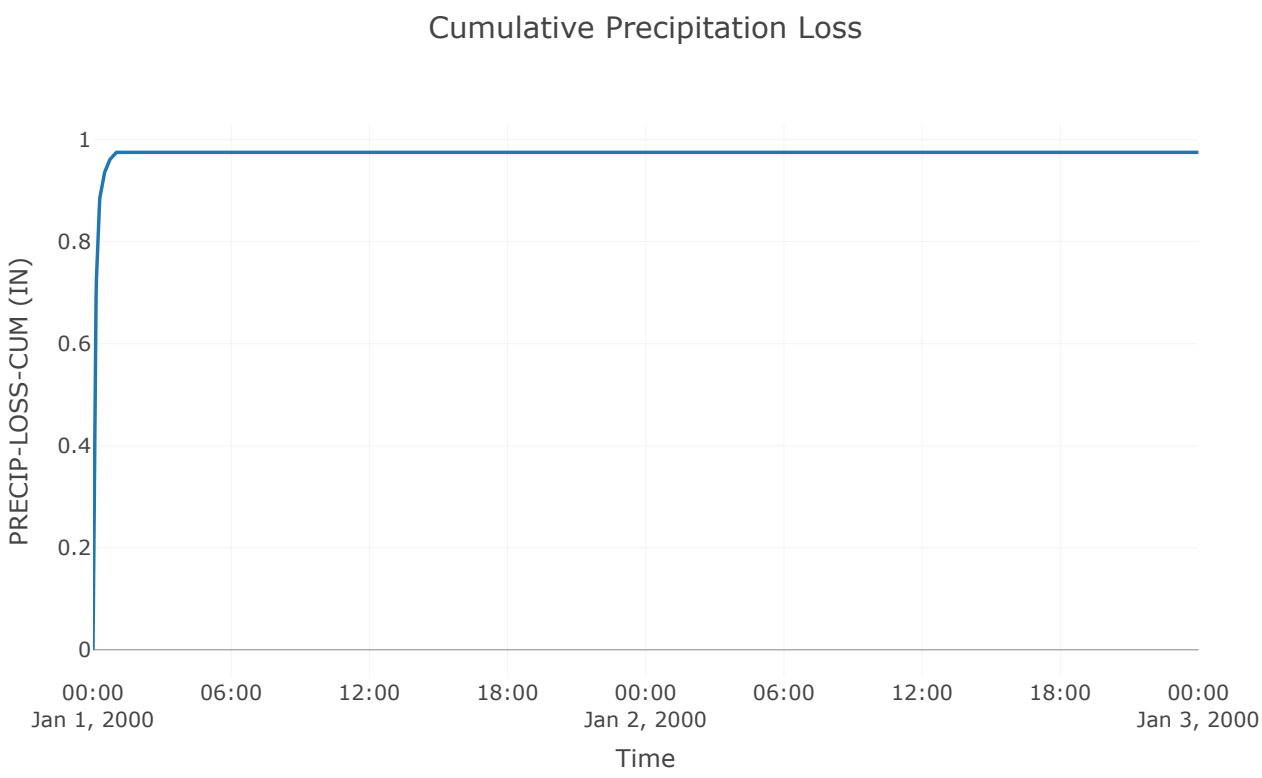


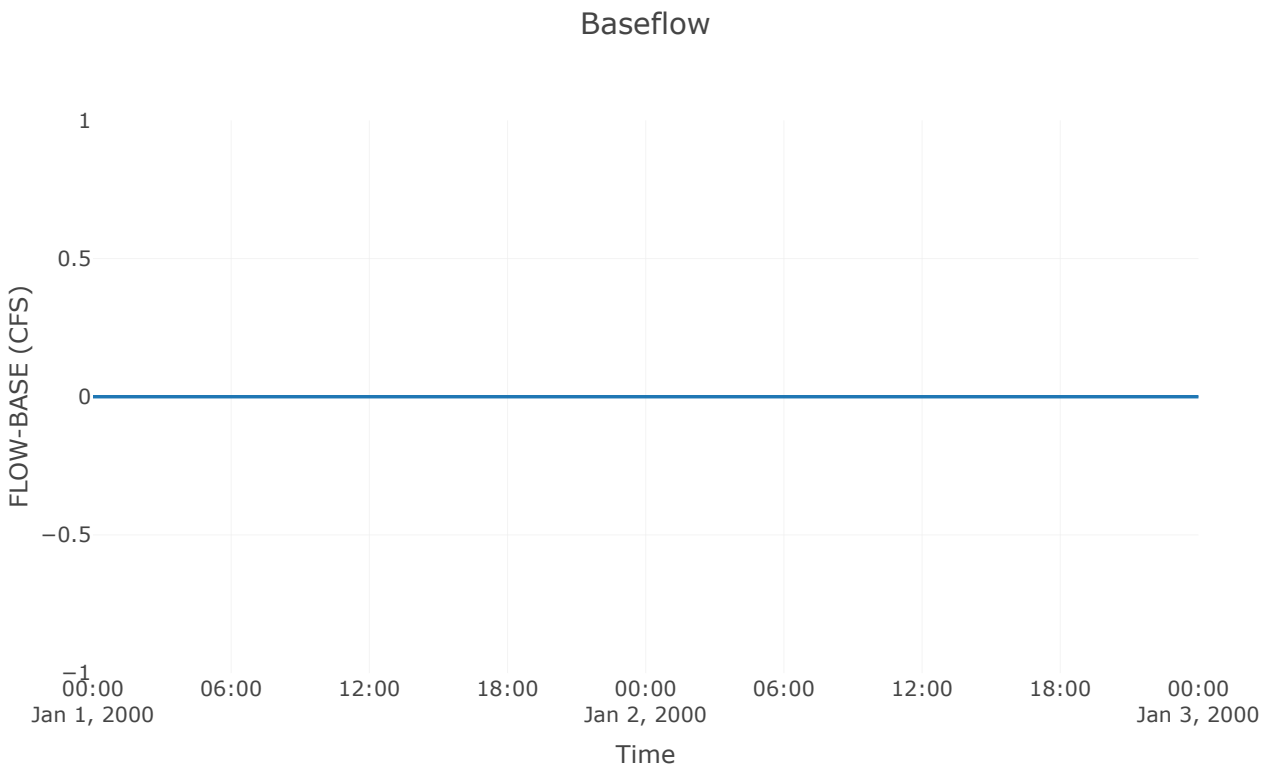
Cumulative Outflow



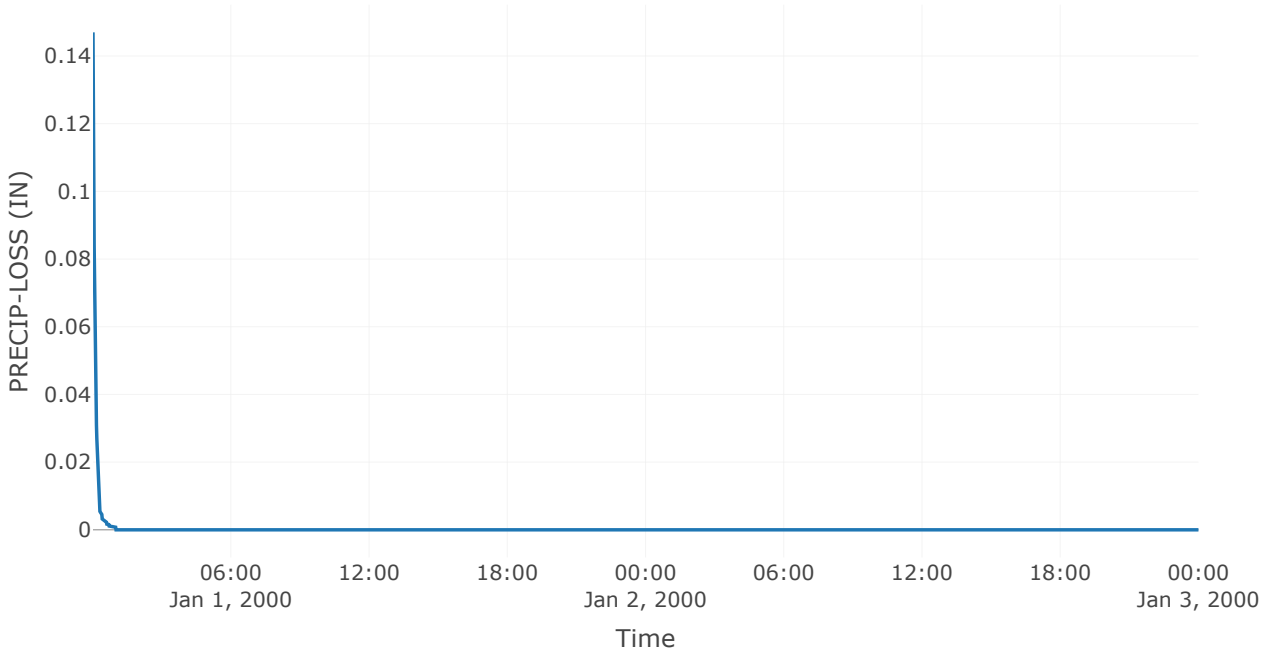
Cumulative Precipitation



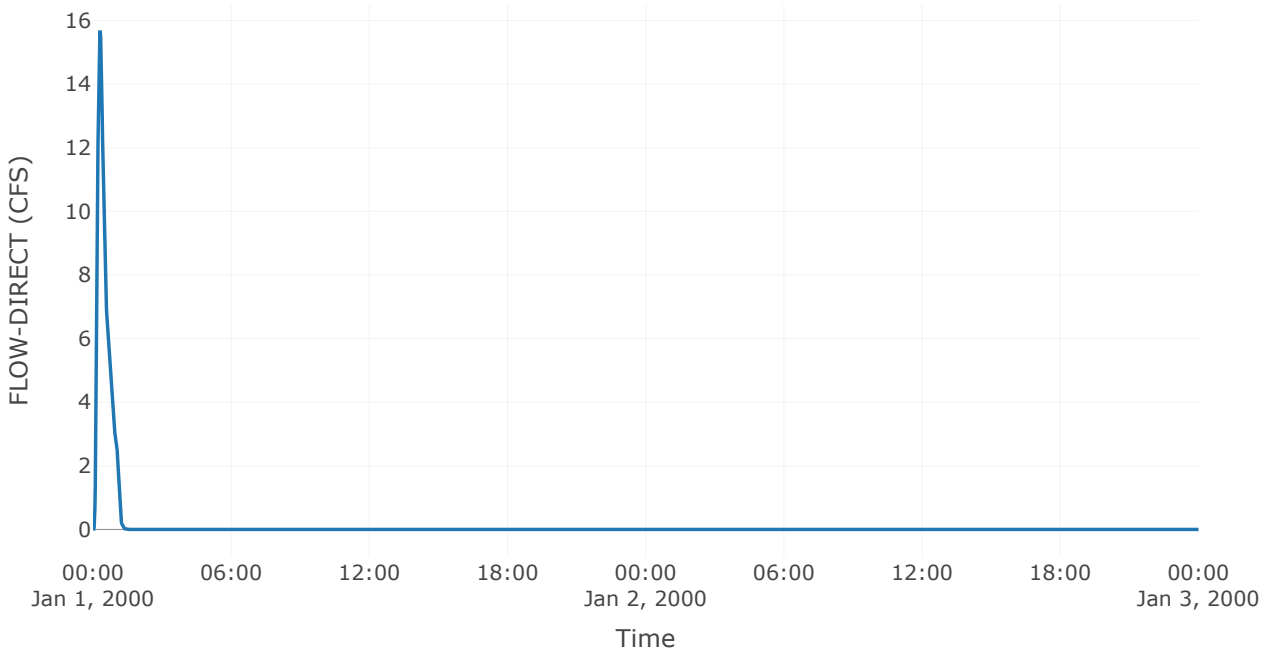

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

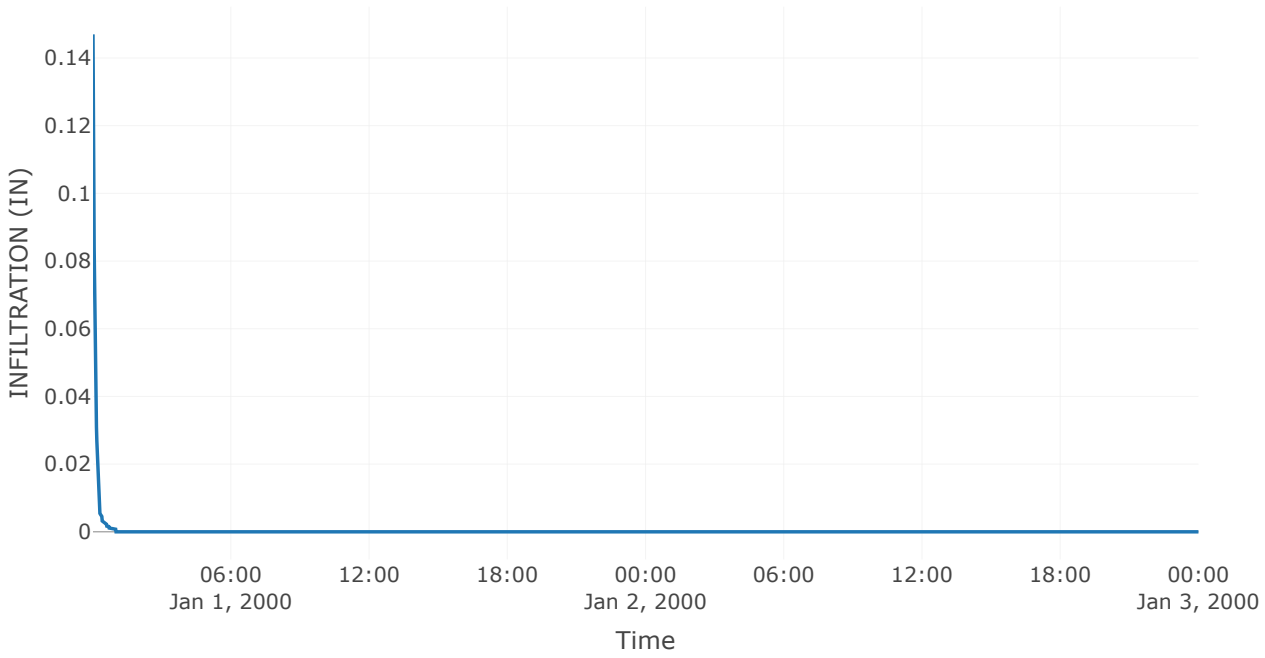

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



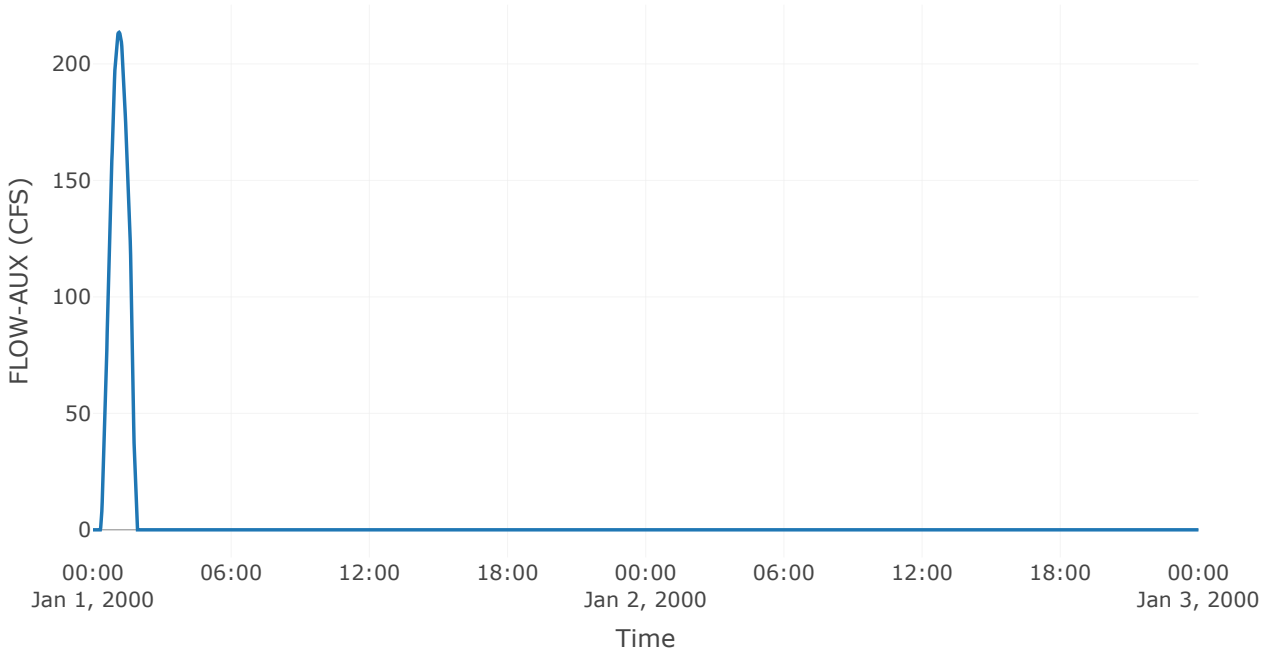

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin C

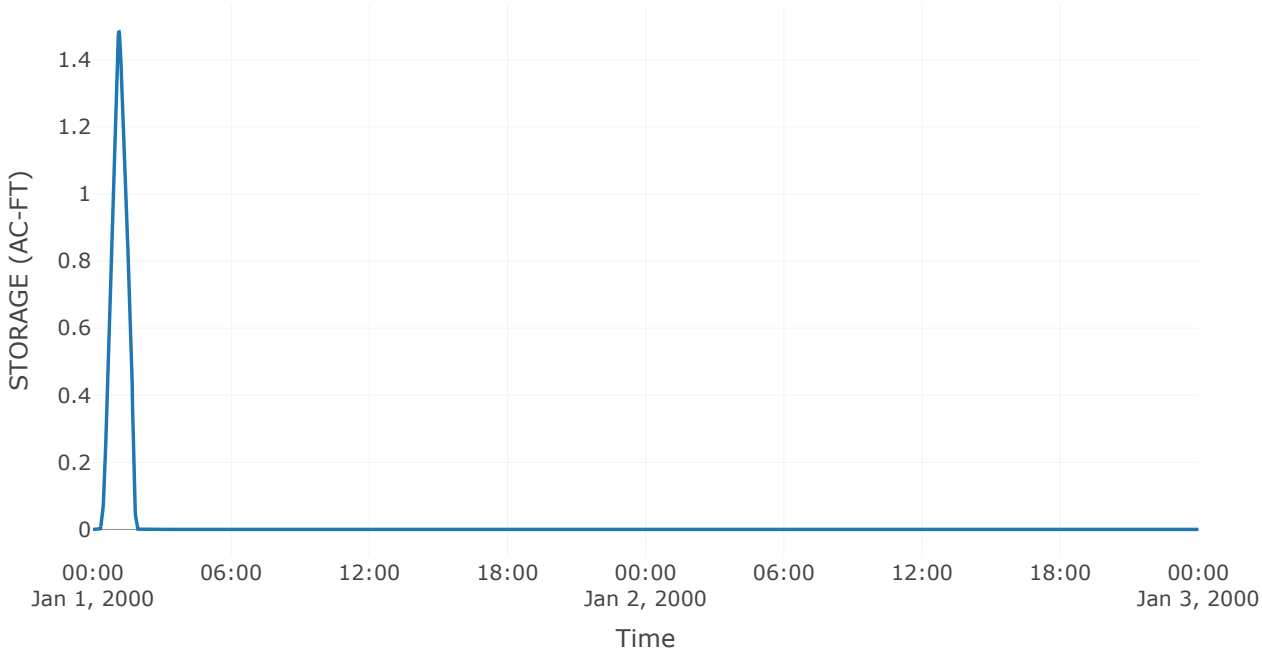
Downstream : Existing Basin A & B

Results: Existing Basin C	
Peak Discharge (CFS)	95.49
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.35
Peak Inflow (CFS)	334.32
Time of Peak Inflow	01Jan2000, 01:00
Inflow Volume (AC - FT)	36.16
Maximum Storage (AC - FT)	1.48
Peak Elevation (FT)	655.16
Discharge Volume (AC - FT)	19.63

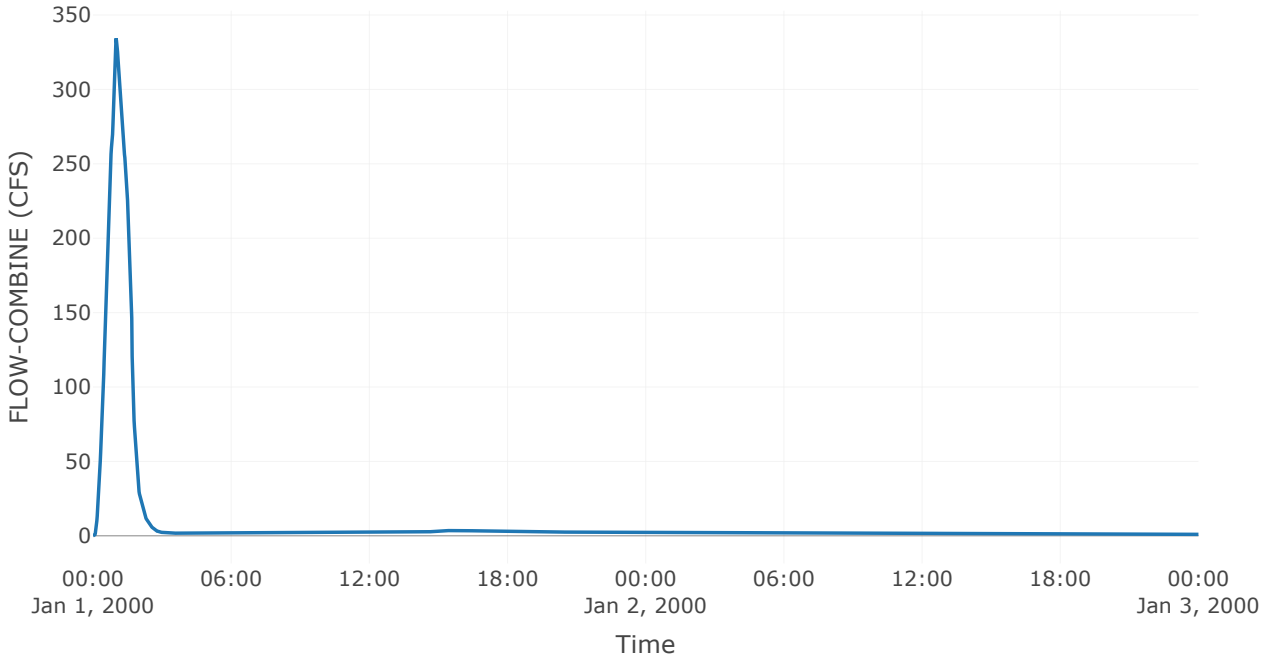
Auxiliary Outflow



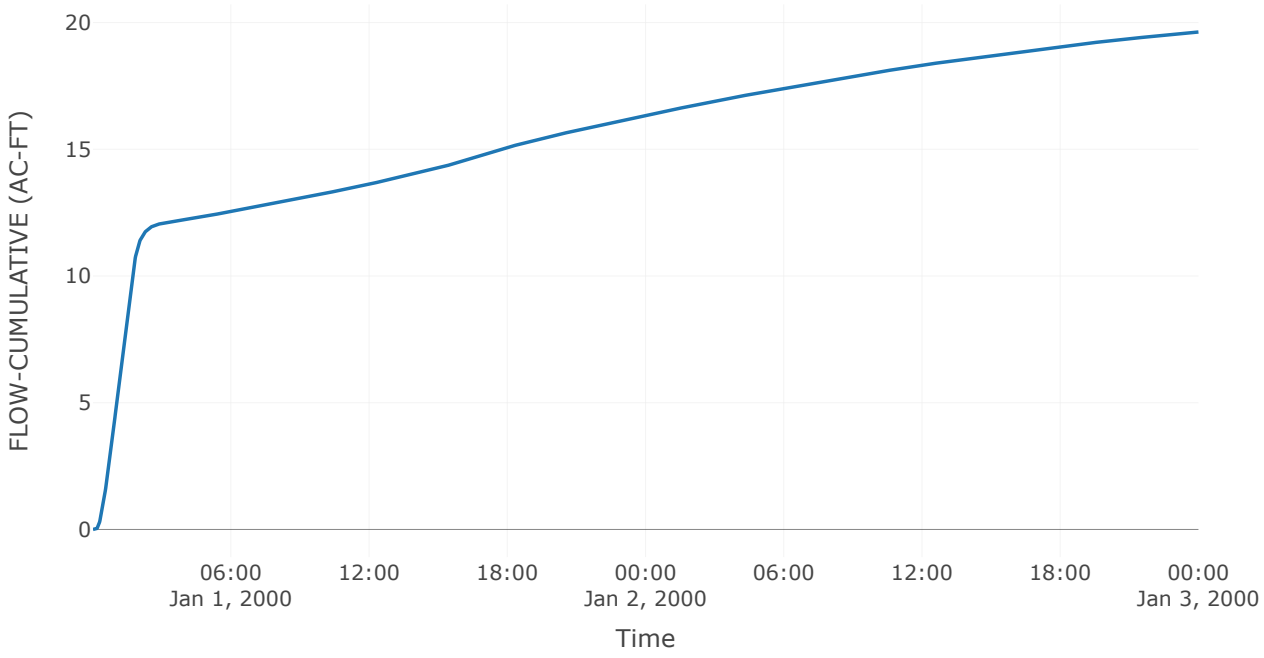
Storage

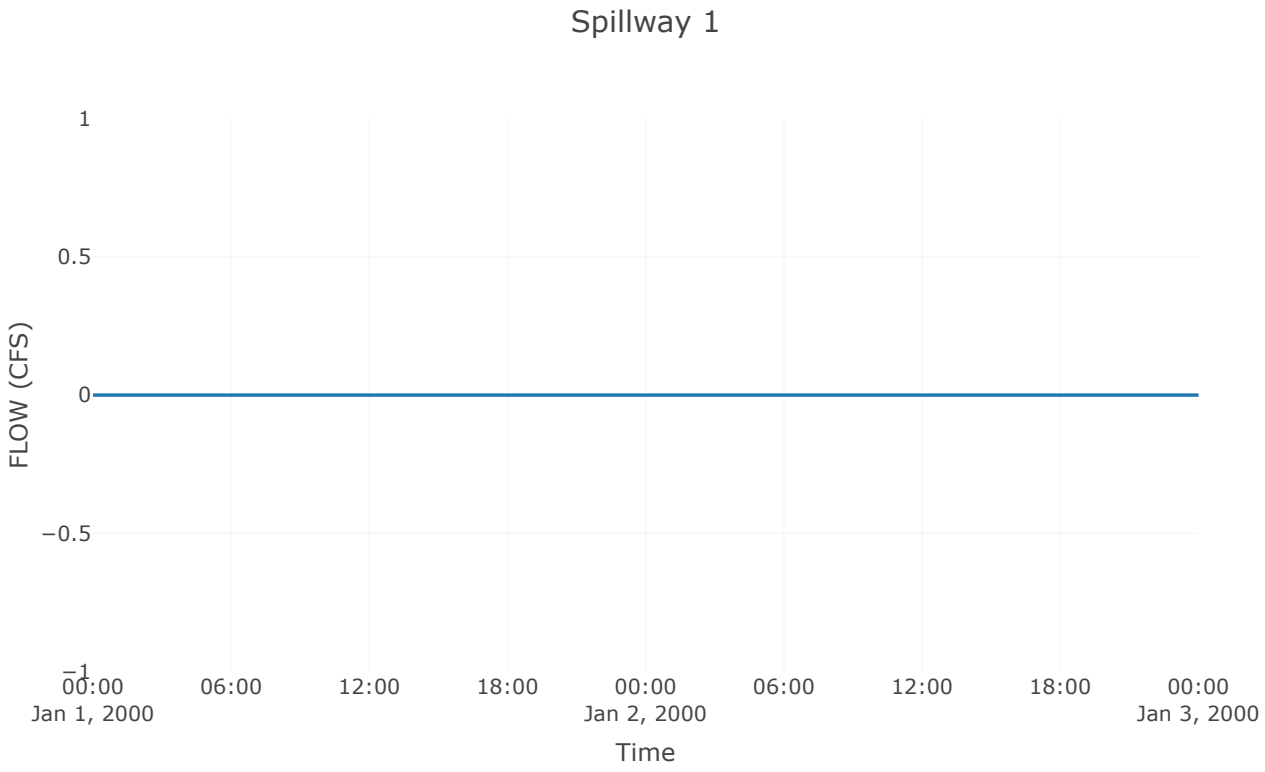


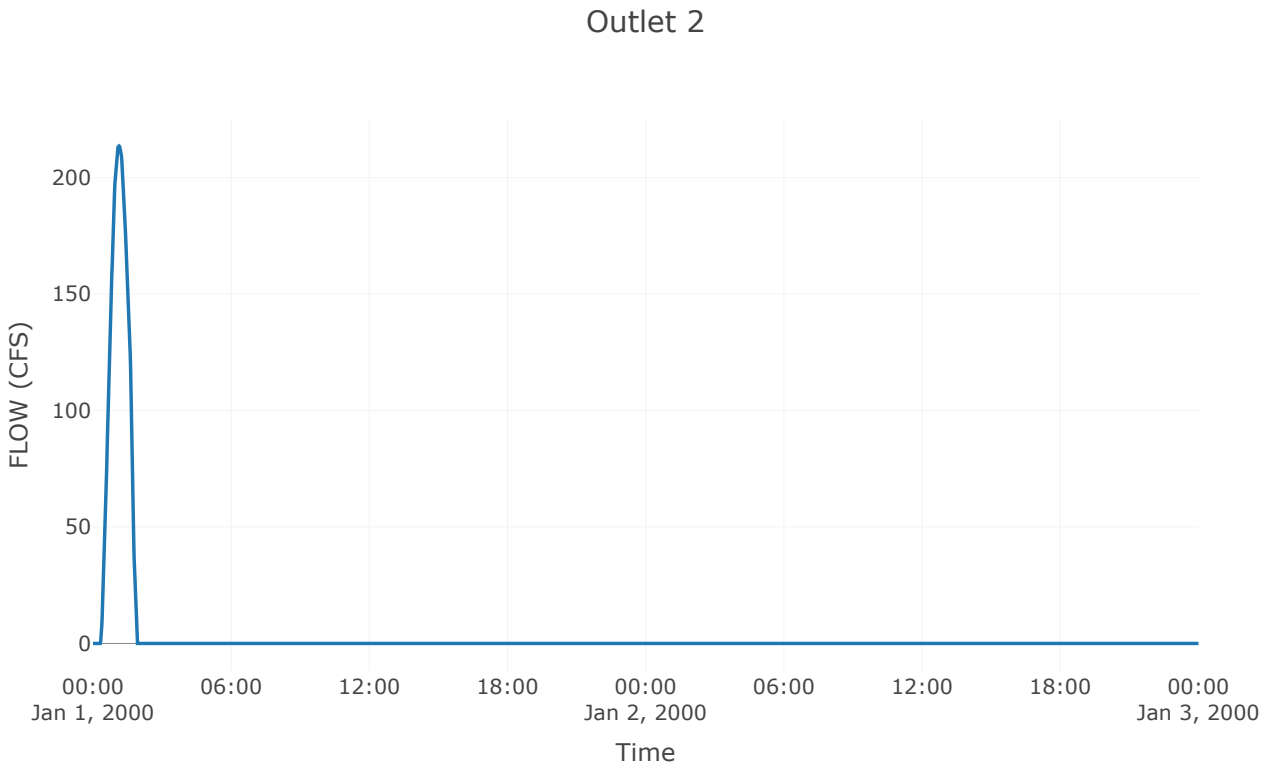
Combined Inflow



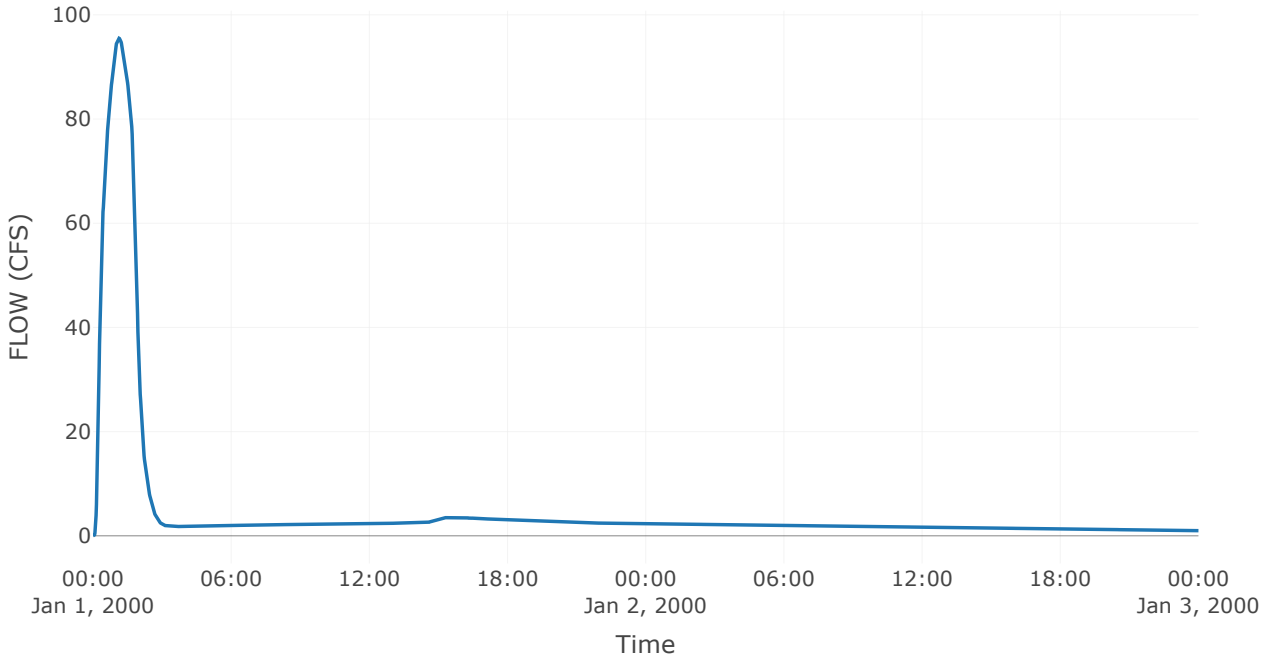
Cumulative Outflow



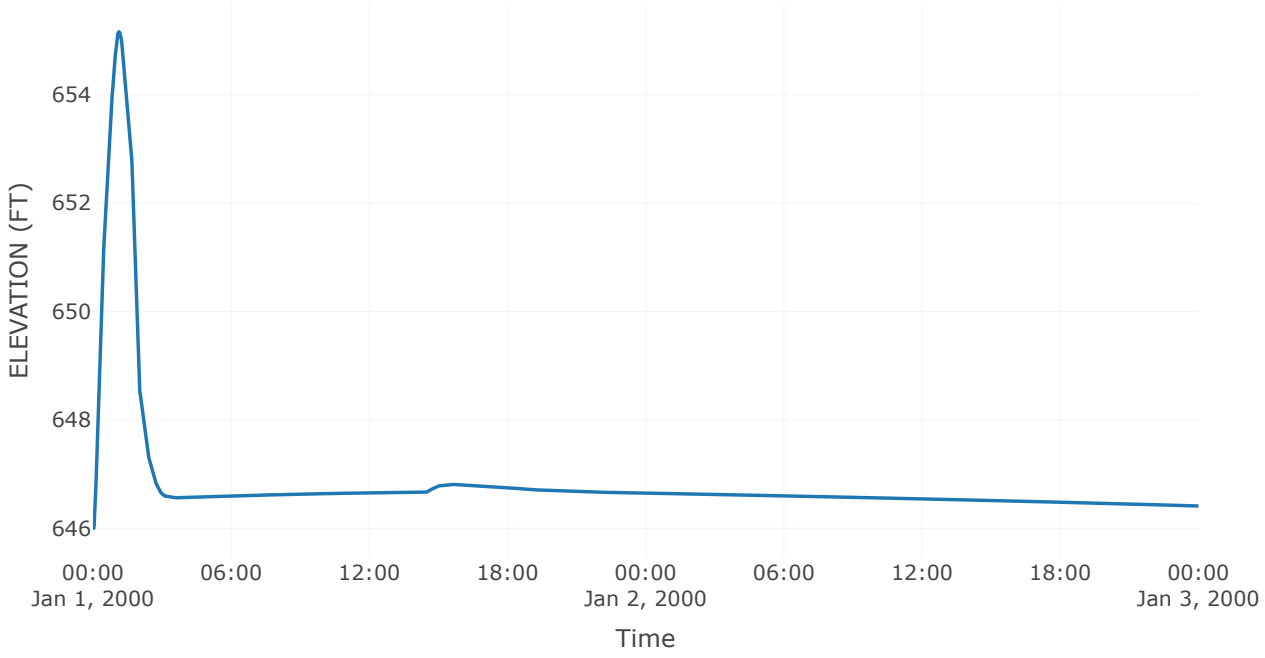

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

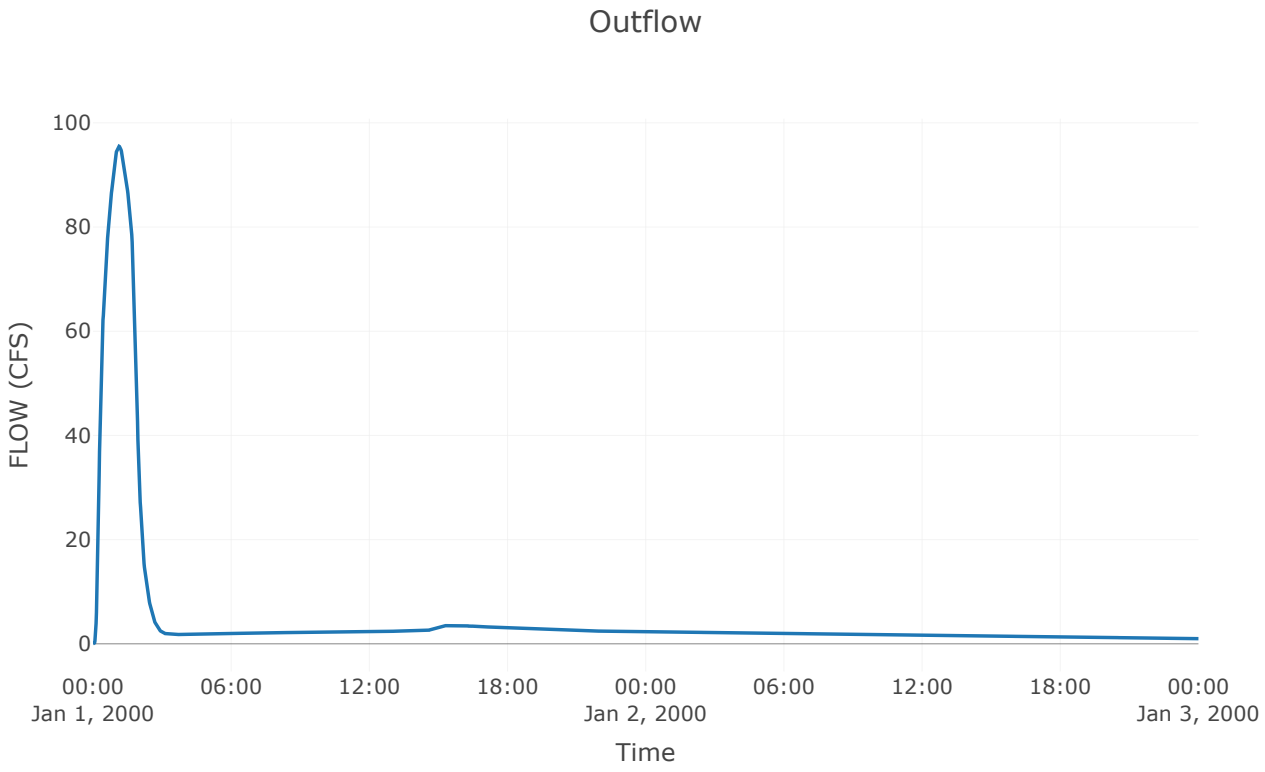

Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

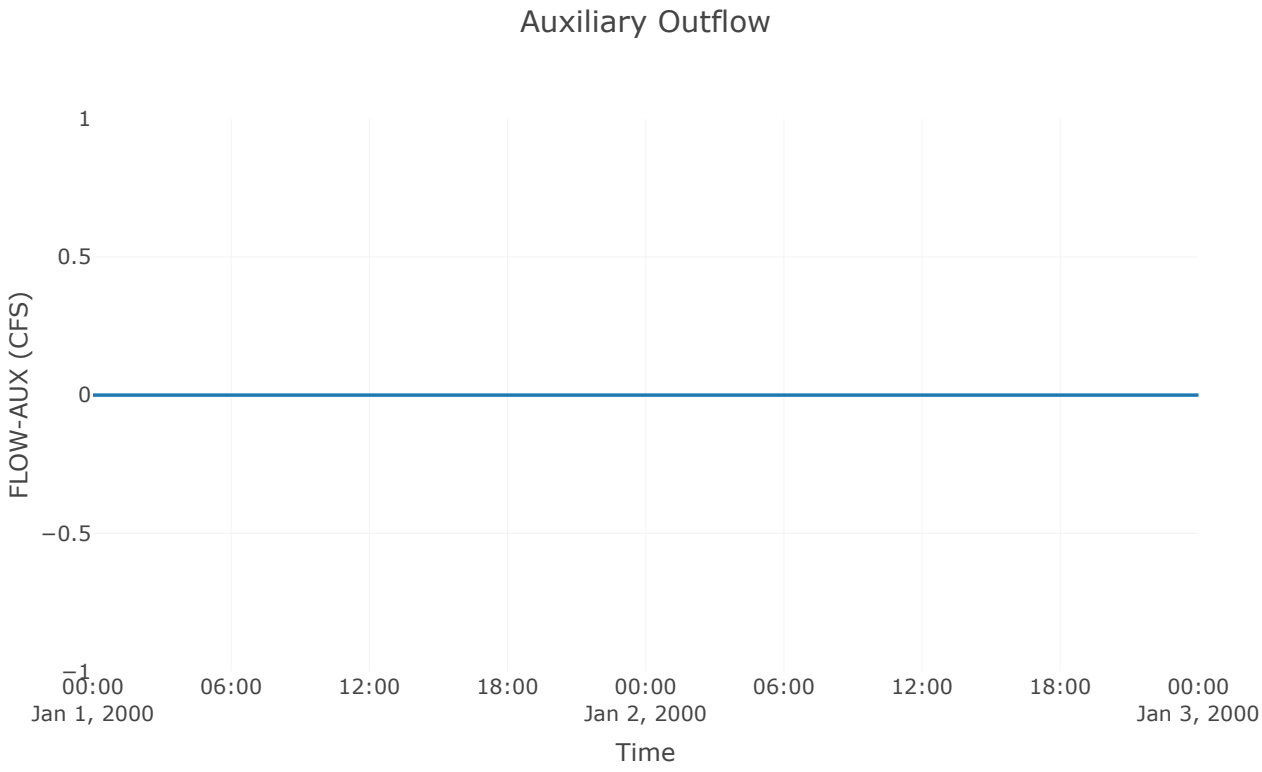


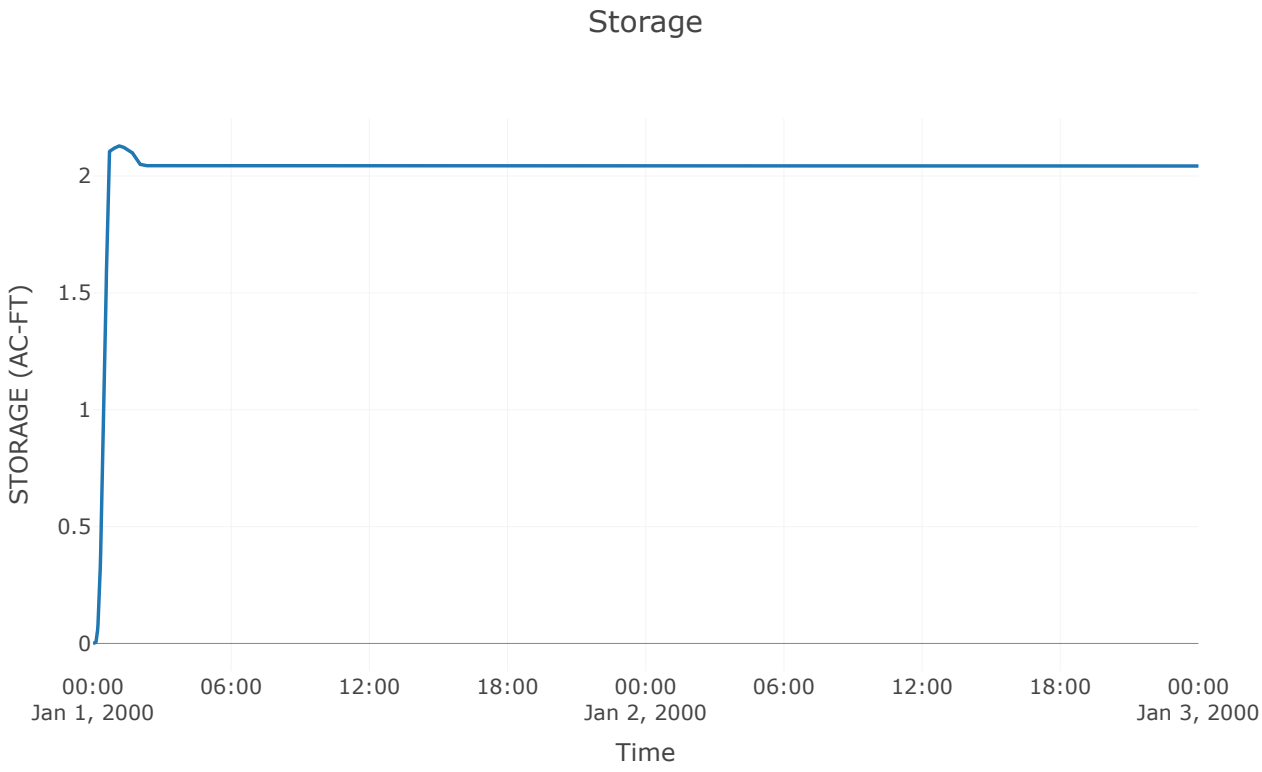

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

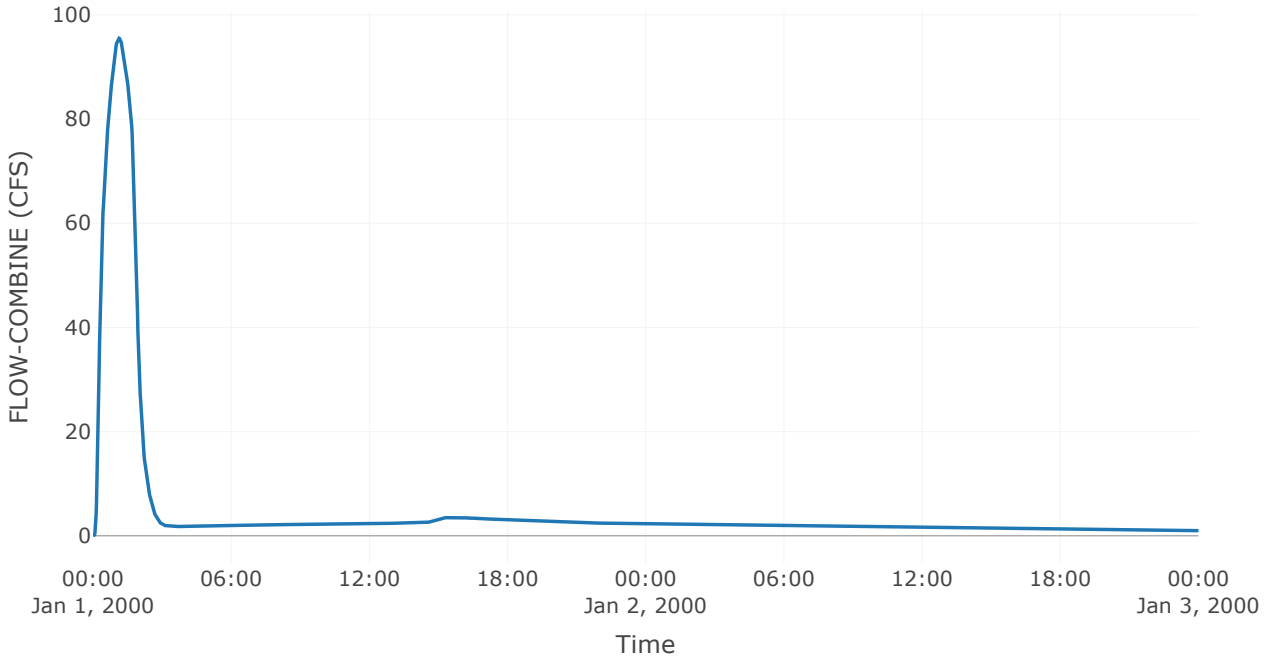
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2
Peak Inflow (CFS)	95.49
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.63
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.42

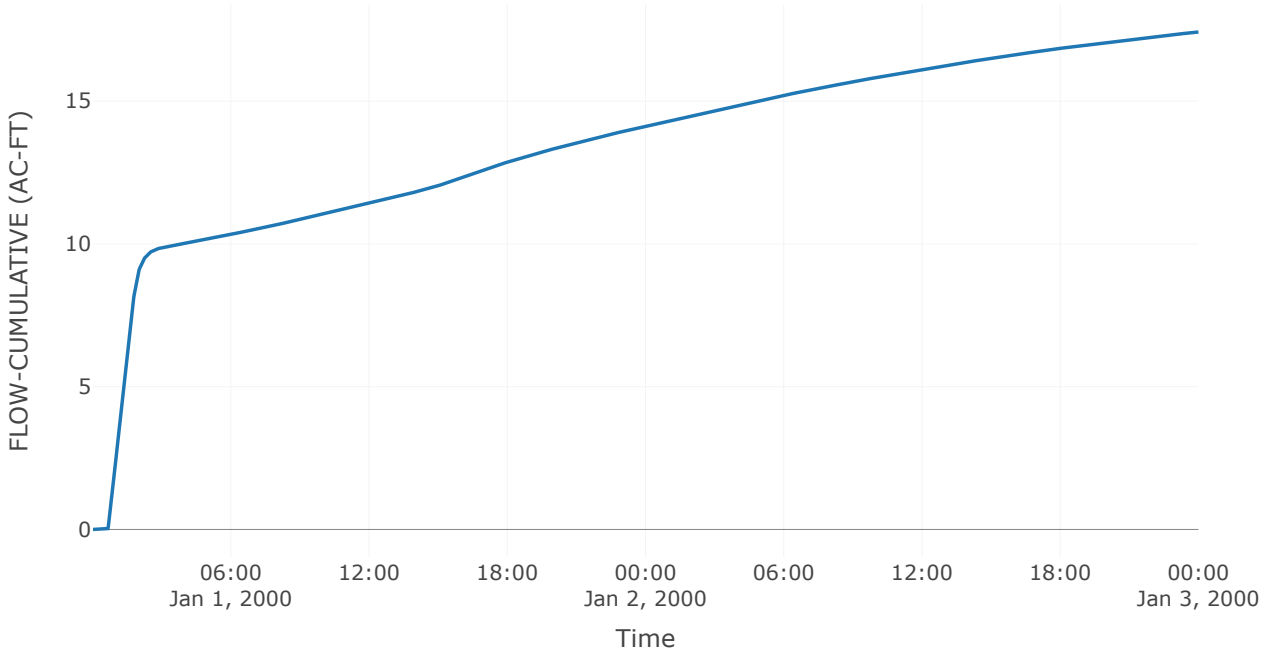

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

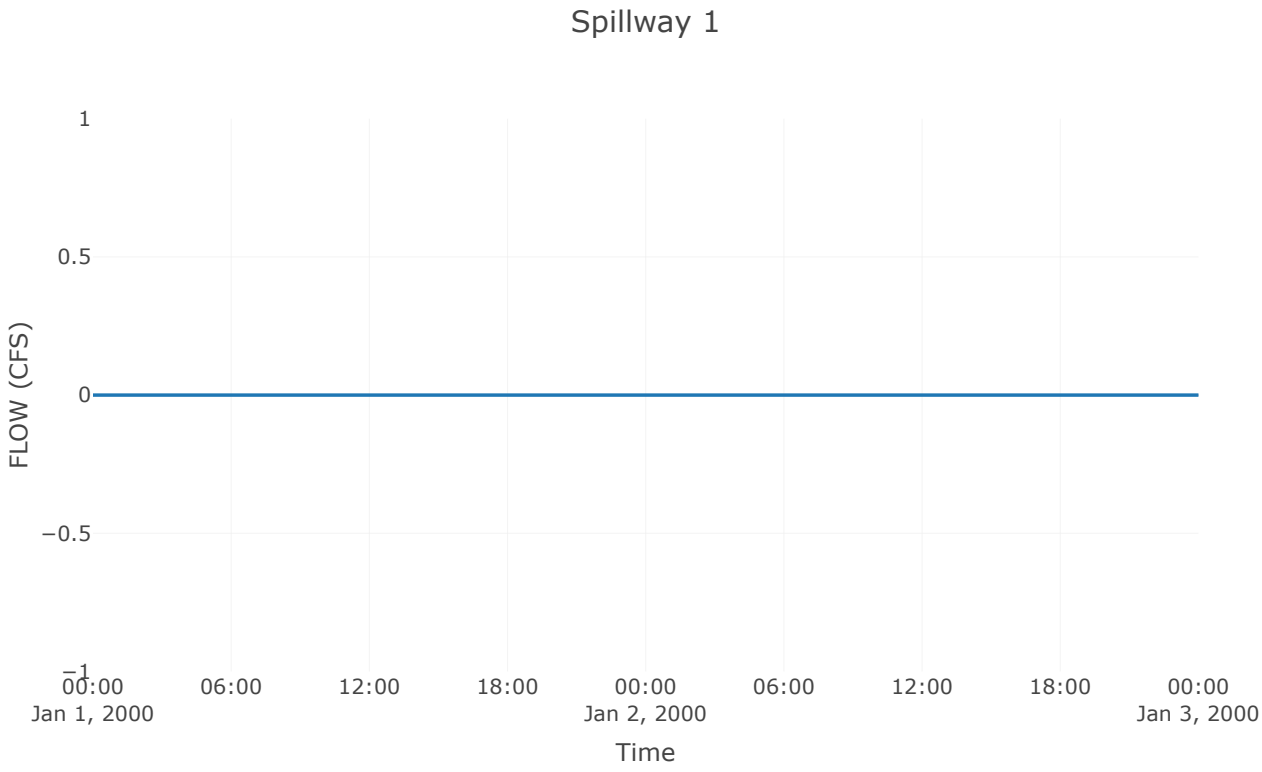

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

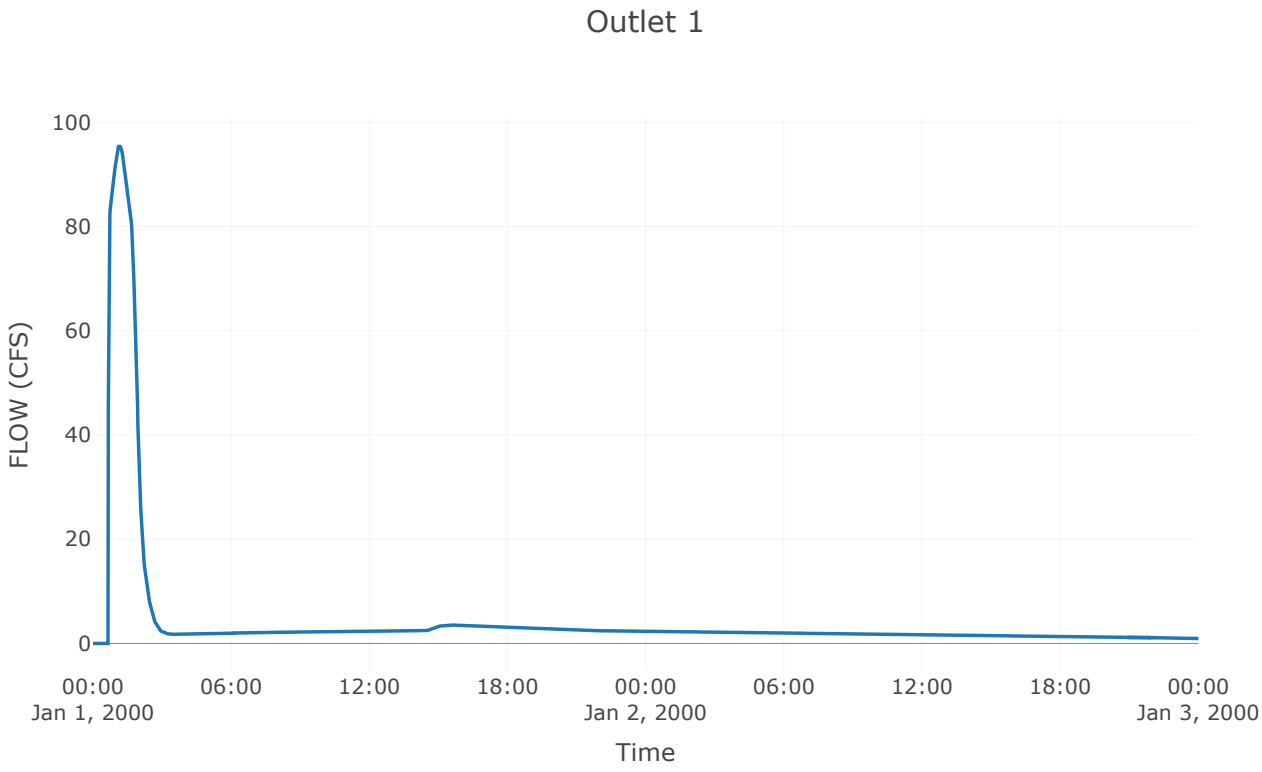
Combined Inflow



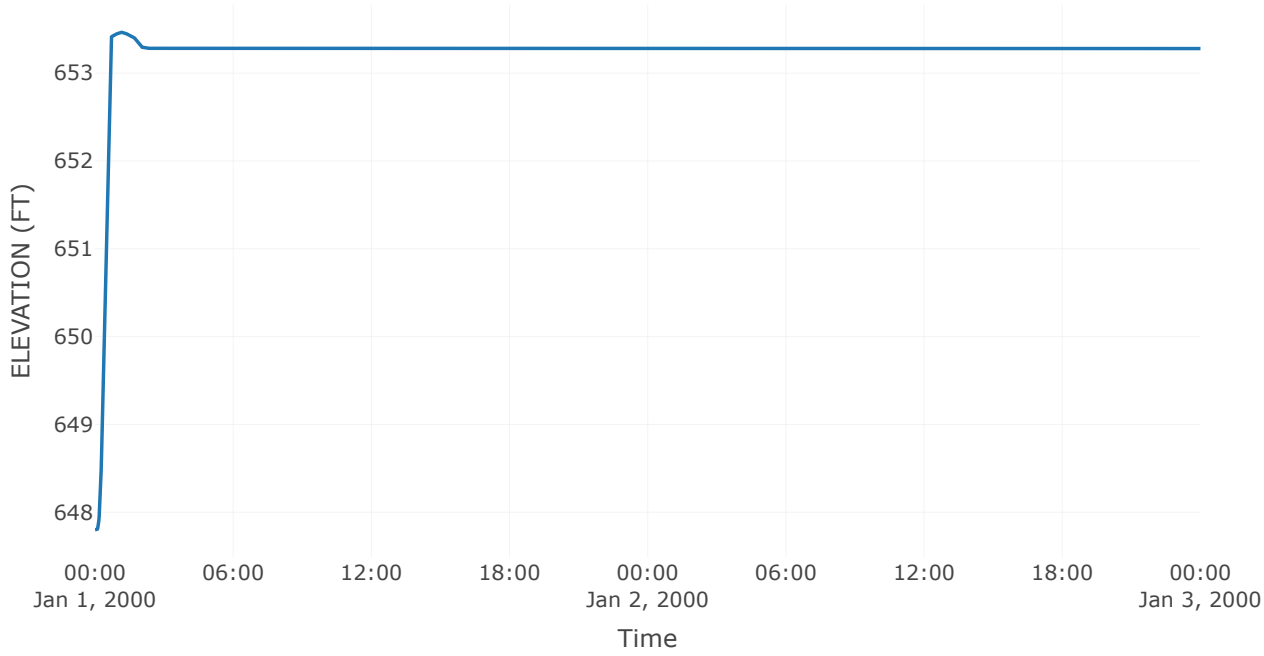
Cumulative Outflow



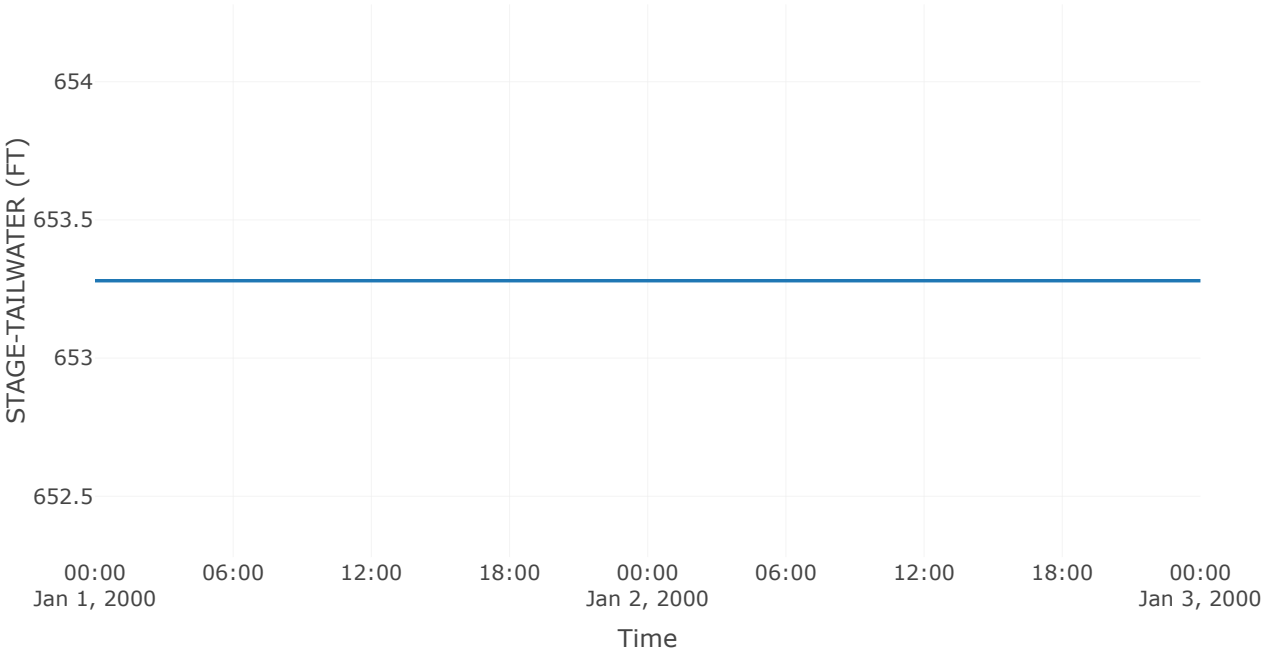

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

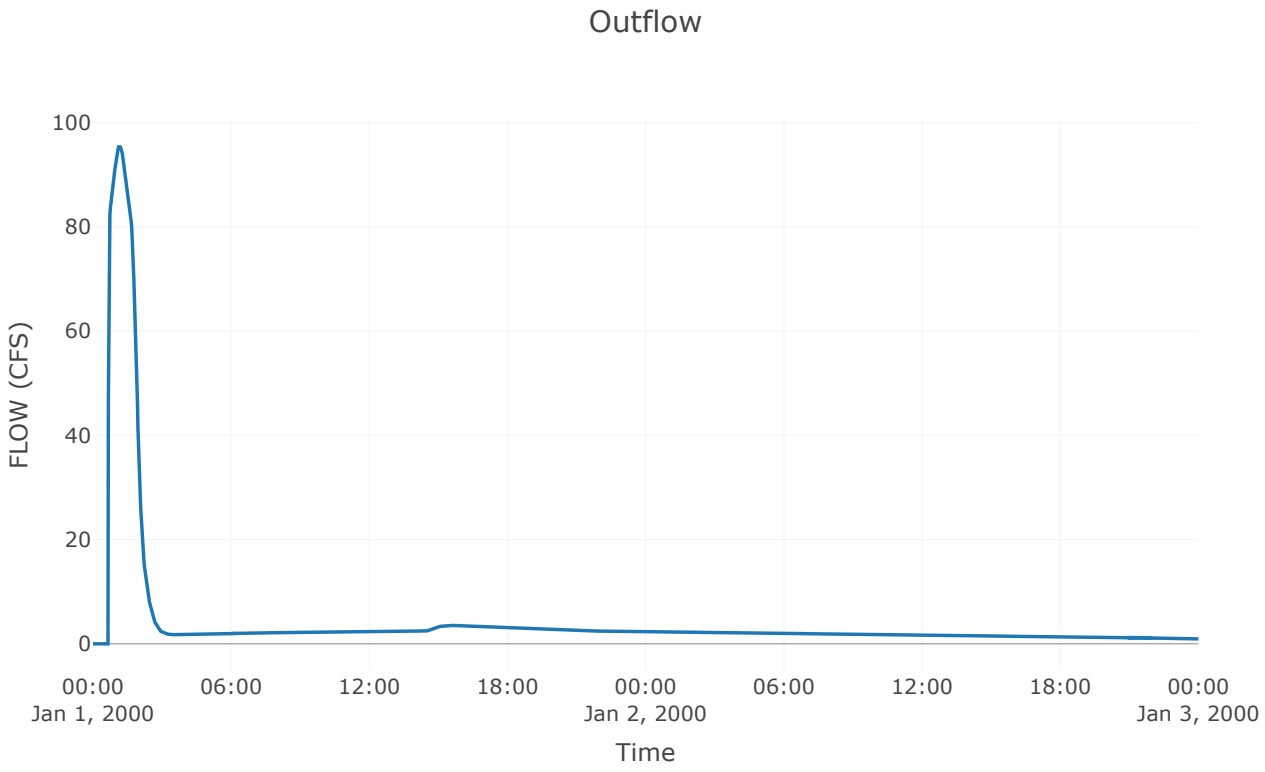

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

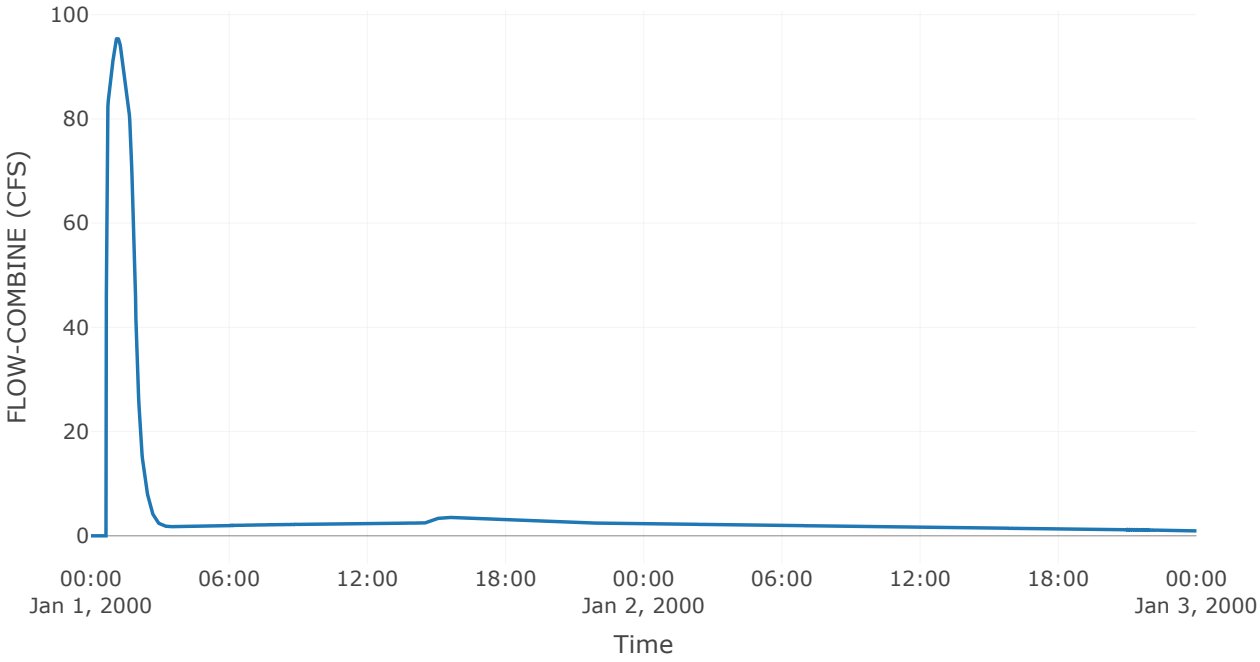



Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

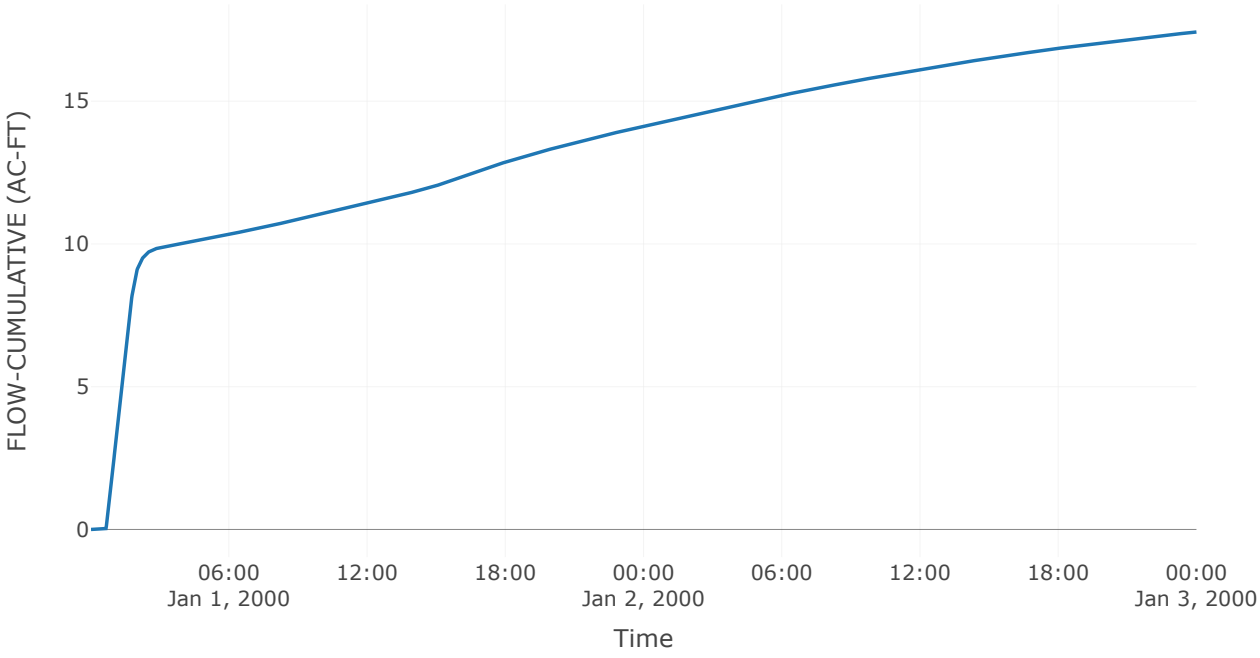
Sink: 55th Street Outlet

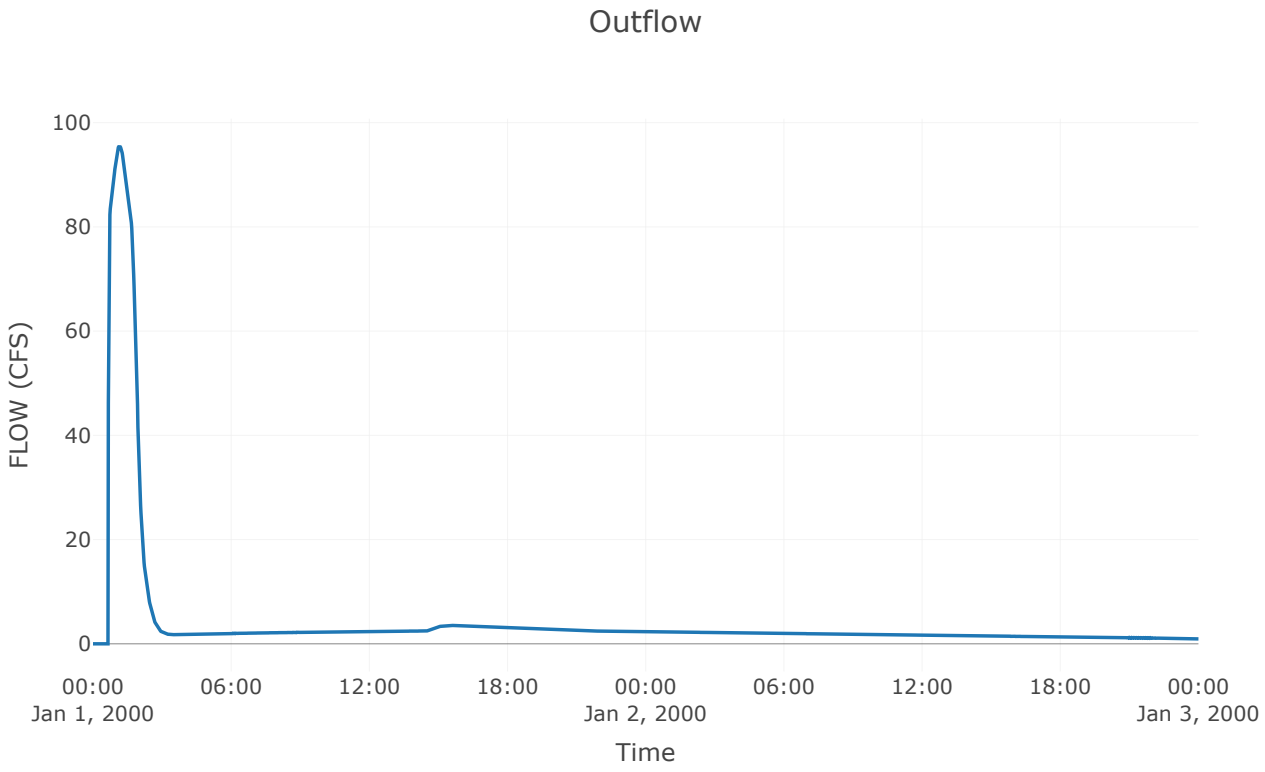
Results: 55th Street Outlet	
Peak Discharge (CFS)	95.45
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.2

Combined Inflow



Cumulative Outflow




Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Stormwater Analysis
Proposed Conditions

Curve Number

Project: Heritage Crossing By: AJS Date: 8/26/2024

Location: NE Corner of Wolf Road and Park Place Chkd: SDS Date: 8/26/2024

Conditions (i.e. Present / Developed): Proposed

Curve Number

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN			Area ☑ acres ☐ mi² ☐ %	Product of CN x Area
C	Lawn, good condition (grass cover > 75%)	74			1.0008	74.06
C	Pavement, Parking, Curb and Gutter	98			0.3374	33.07
C	Carriage Walk	98			0.0644	6.31
C	Driveways	98			0.2829	27.72
C	Stoops & Patios	98			0.0681	6.67
C	Buildings	98			0.6564	64.33
				Totals =	2.4100	212.16

* Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{212.16}{2.4100} = 88.03$; use CN = **88.03**

Heritage Crossing - Western Springs, IL

10/17/2024

Proposed Basin "C" & Adjacent Overland Flow Areas
Critical Duration Storm Event (100yr - 2hr)
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Bottom (36" pipe outlet)	645.98	0				0.0000
			0.49	2	0.000	
	646.47	13				0.0000
			0.53	1,265	0.029	
	647.00	6,848				0.0291
			1.00	7,638	0.175	
	648.00	8,456				0.2044
			1.00	9,320	0.214	
	649.00	10,211				0.4184
			1.00	11,249	0.258	
	650.00	12,320				0.6766
			1.00	12,472	0.286	
	651.00	12,625				0.9629
			1.00	14,786	0.339	
	652.00	17,057				1.3024
			1.00	17,236	0.396	
	653.00	17,416				1.6981
			1.00	17,945	0.412	
	654.00	18,480				2.1100
			0.50	9,549	0.219	
Design HWL	654.50	19,722				2.3292
			0.50	11,415	0.262	
	655.00	26,088				2.5913
			0.70	20,643	0.474	
Overflow at Heritage Ct.	655.70	33,028				3.0652
			0.30	10,424	0.239	
	656.00	36,495				3.3045
			0.10	3,819	0.088	
Top of Existing Wall	656.10	39,907				3.3922

Heritage Crossing - Western Springs, IL

11/4/2024

Proposed Stormwater Storage West Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	654.10	0				0.0000
			0.90	19	0.000	
	655.00	64				0.0004
			1.00	113	0.003	
	656.00	170				0.0030
			1.00	240	0.006	
	657.00	318				0.0085
			1.00	352	0.008	
	658.00	388				0.0166
			1.00	416	0.010	
	659.00	444				0.0262
			0.70	325	0.007	
Overland Weir Flow	659.70	485				0.0336
			0.30	148	0.003	
	660.00	503				0.0370
			1.00	534	0.012	
	661.00	565				0.0493

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Basin "A" & "B" to Overland Flow Elevation
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
NWL (Recent Topo Survey)	647.80	10,543				0.0000
			0.20	2,139	0.049	
	648.00	10,848				0.0491
			1.00	11,883	0.273	
	649.00	12,948				0.3219
			1.00	14,343	0.329	
	650.00	15,785				0.6512
			1.00	16,898	0.388	
	651.00	18,035				1.0391
			1.00	18,593	0.427	
	652.00	19,156				1.4659
			1.00	19,481	0.447	
	653.00	19,808				1.9131
			1.00	20,197	0.464	
	654.00	20,588				2.3768
			0.50	10,516	0.241	
Design HWL	654.50	21,478				2.6182
			0.50	11,816	0.271	
	655.00	25,854				2.8895
			1.00	28,871	0.663	
	656.00	31,998				3.5522
			0.31	10,009	0.230	
Overland Flow Elevation	656.31	32,574				3.7820

Heritage Crossing - Western Springs, IL

8/20/2024

Existing Stormwater Storage East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	13	0.000	
	658.00	191				0.0003
			1.00	368	0.008	
	659.00	579				0.0087
			1.00	910	0.021	
	660.00	1,287				0.0296
			1.00	2,075	0.048	
	661.00	2,980				0.0773
			1.00	4,455	0.102	
	662.00	6,116				0.1795
			1.00	11,247	0.258	
	663.00	17,331				0.4377
			0.50	12,082	0.277	
	663.50	31,716				0.7151
			0.50	19,342	0.444	
	664.00	46,101				1.1591
			0.50	28,167	0.647	
	664.50	67,228				1.8058

Heritage Crossing - Western Springs, IL

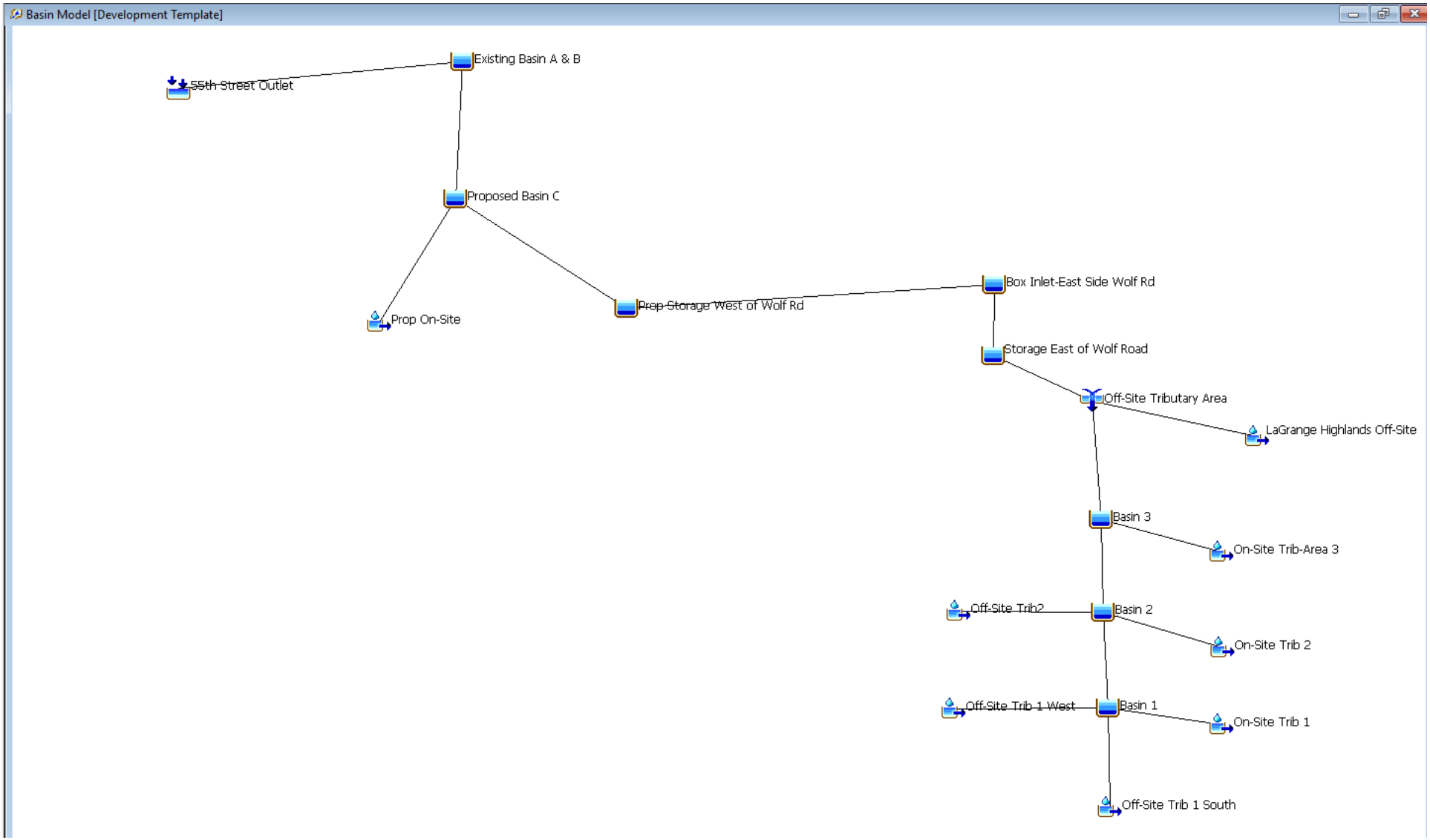
8/20/2024

Existing Stormwater Box Inlet Upstream of Culvert - East Side of Wolf Road
Stage-StorageTables

1) Pond Storage:

STORMWATER VOLUME

Notes	Pond Elevation [feet]	Area [sf]	Depth [feet]	Volume [cubic feet]	Volume [acre feet]	Cumulative Volume [acre feet]
Oulet	657.80	0				0.0000
			0.20	3	0.000	
	658.00	50				0.0001
			1.00	50	0.001	
	659.00	50				0.0012
			1.00	50	0.001	
	660.00	50				0.0024
			1.00	50	0.001	
	661.00	50				0.0035
			1.00	50	0.001	
	662.00	50				0.0047
			1.00	50	0.001	
	663.00	50				0.0058
			0.30	15	0.000	
	663.30	50				0.0062
			0.70	11,123	0.255	
	664.00	46,101				0.2615
			0.50	28,167	0.647	
	664.50	67,228				0.9081


Basin Model [Development Template]
Existing Basin A & B
55th Street Outlet
Proposed Basin C
Prop On-Site
Prop Storage West of Wolf Rd
Box Inlet-East Side Wolf Rd
Storage East of Wolf Road
Off-Site Tributary Area
LaGrange Highlands Off-Site
Basin 3
On-Site Trib-Area 3
Off-Site Trib2
Basin 2
On-Site Trib 2
Off-Site Trib 1 West
Basin 1
On-Site Trib 1
Off-Site Trib 1 South

Project: Development_Template
Simulation Run: 2YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:43

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	11.72	01Jan2000, 00:54	0.8
Off - Site Trib 1 South	0	0.8	01Jan2000, 00:42	0.53
Off - Site Trib 1 West	0	0.81	01Jan2000, 00:45	0.65
Basin 1	0.03	3.6	01Jan2000, 02:13	0.77
On - Site Trib 2	0.02	5.83	01Jan2000, 00:55	0.65
Off - Site Trib2	0.01	2.12	01Jan2000, 00:45	0.65
Basin 2	0.05	3.07	01Jan2000, 03:53	0.72
On - Site Trib - Area 3	0.01	4.24	01Jan2000, 00:56	0.65
LaGrange Highlands Off - Site	0.2	75.41	01Jan2000, 01:05	0.8
Basin 3	0.07	1.48	01Jan2000, 09:37	0.69
Off - Site Tributary Area	0.27	75.98	01Jan2000, 01:05	0.78
Storage East of Wolf Road	0.27	75.01	01Jan2000, 01:10	0.78
Box Inlet - East Side Wolf Rd	0.27	75.02	01Jan2000, 01:09	0.77
Prop Storage West of Wolf Rd	0.27	75.06	01Jan2000, 01:10	0.77
Prop On - Site	0	2.53	01Jan2000, 00:33	0.92
Proposed Basin C	0.27	59.4	01Jan2000, 01:18	0.73
Existing Basin A & B	0.27	59.36	01Jan2000, 01:19	0.58

55th Street Outlet	0.27	59.36	01Jan2000, 01:19	0.58

Subbasin: On-Site Trib 1

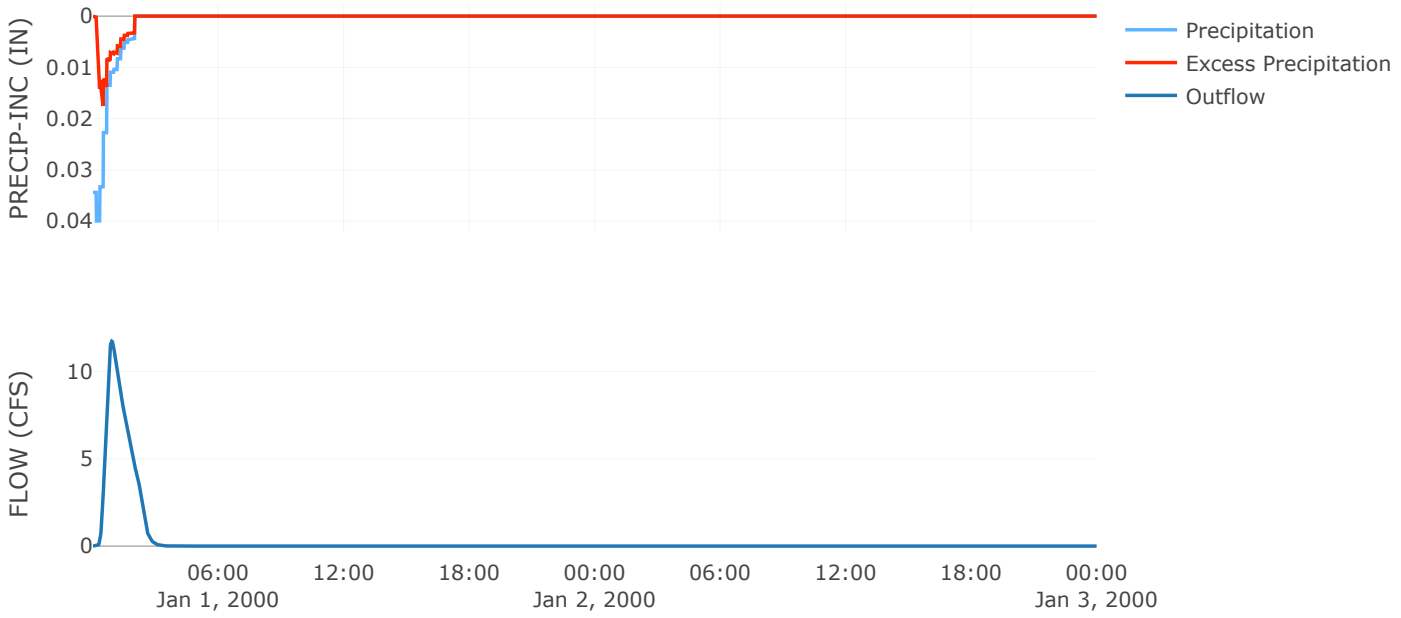
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

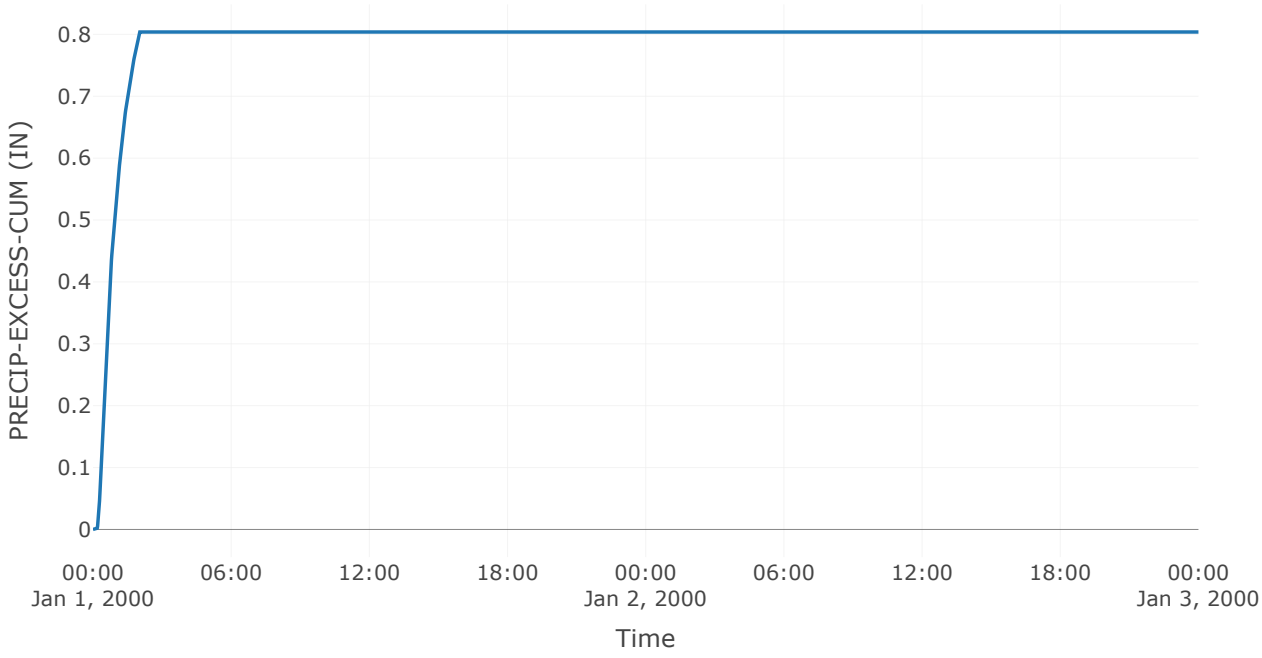
Transform: Scs	
Lag	21
Unitgraph Type	Standard

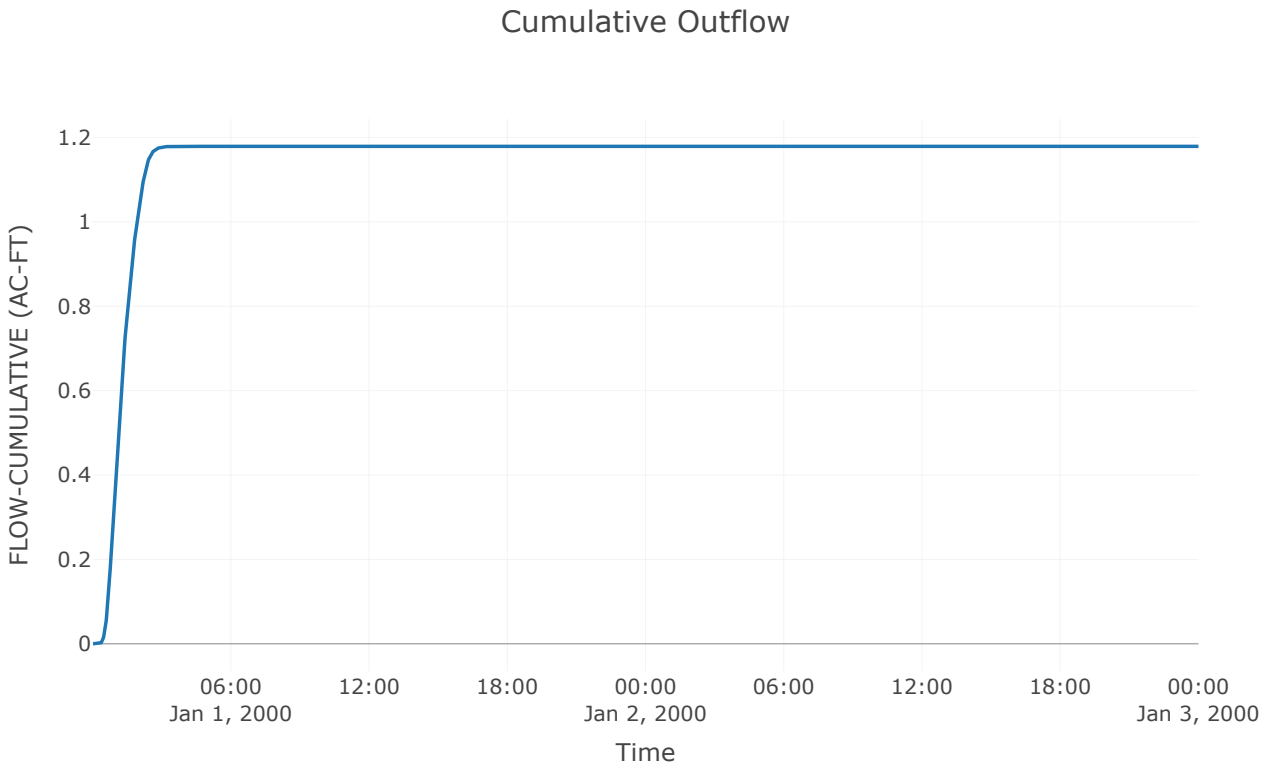
Results: On-Site Trib 1	
Peak Discharge (CFS)	11.72
Time of Peak Discharge	01Jan2000, 00:54
Volume (IN)	0.8
Precipitation Volume (AC - FT)	2.85
Loss Volume (AC - FT)	1.67
Excess Volume (AC - FT)	1.18
Direct Runoff Volume (AC - FT)	1.18
Baseflow Volume (AC - FT)	0

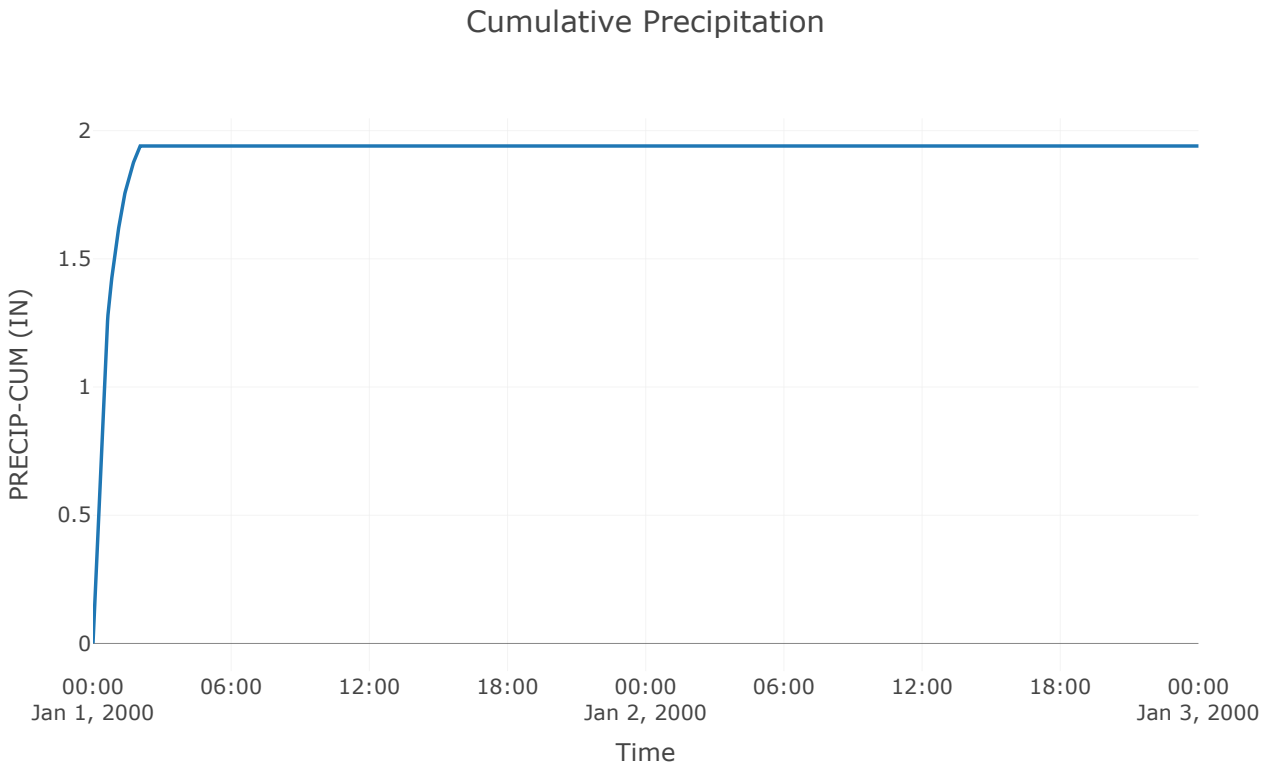
Precipitation and Outflow

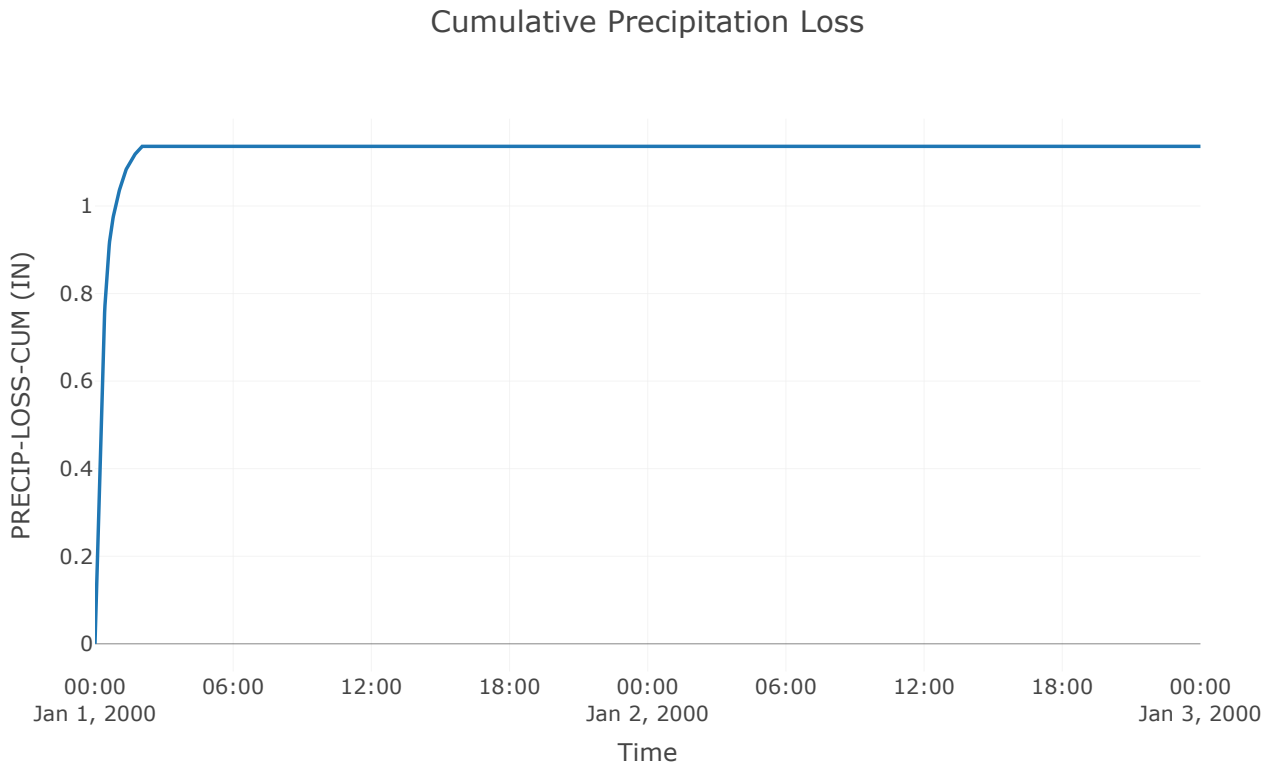


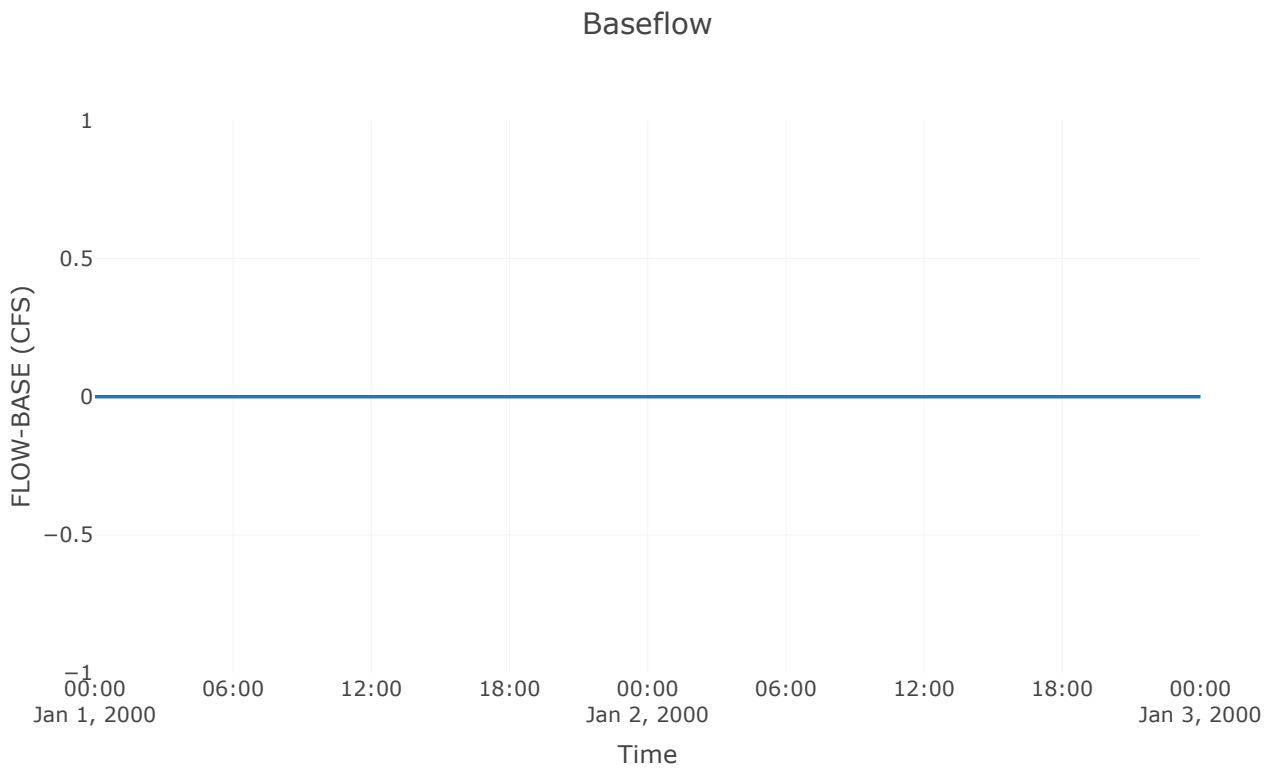
Cumulative Excess Precipitation

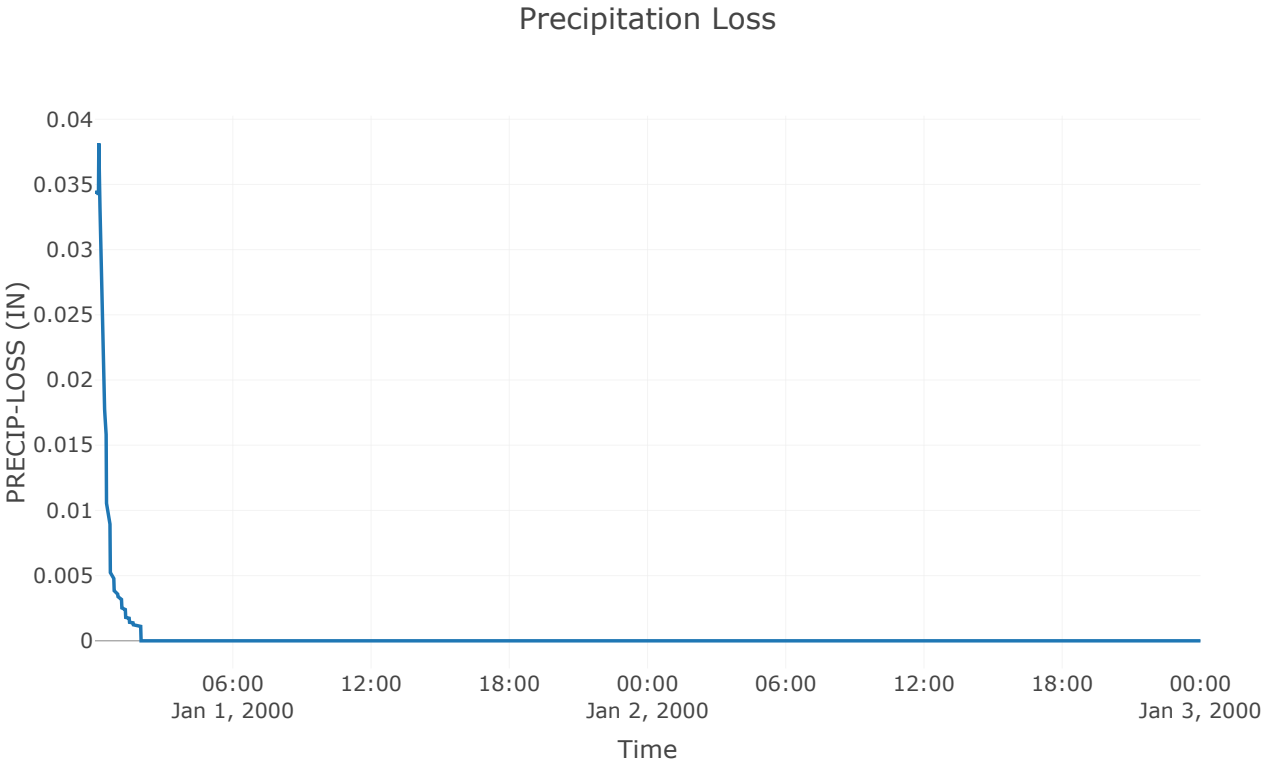


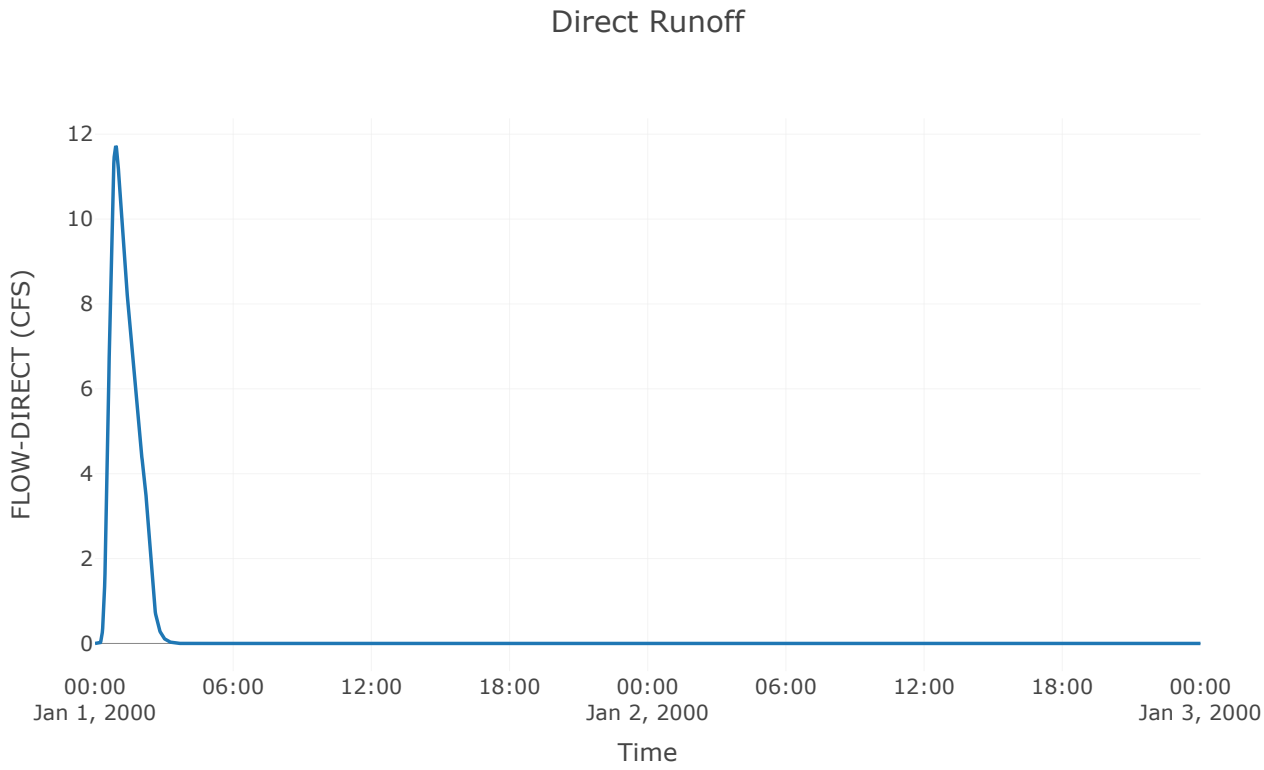

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

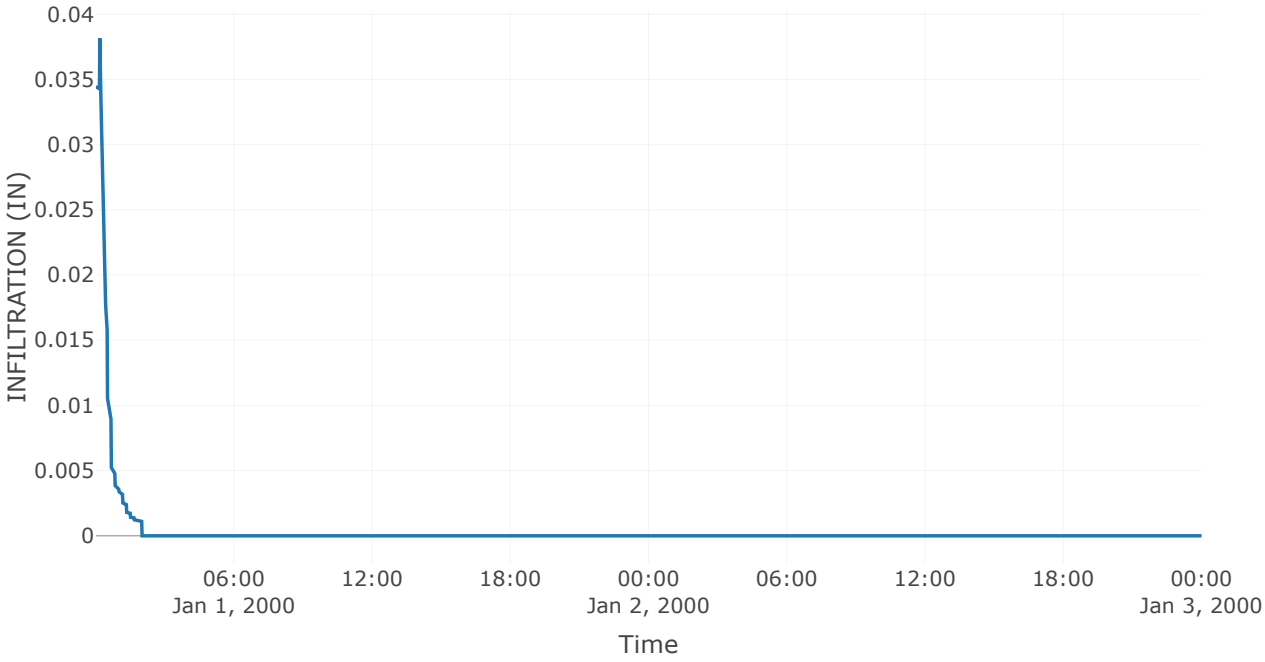

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

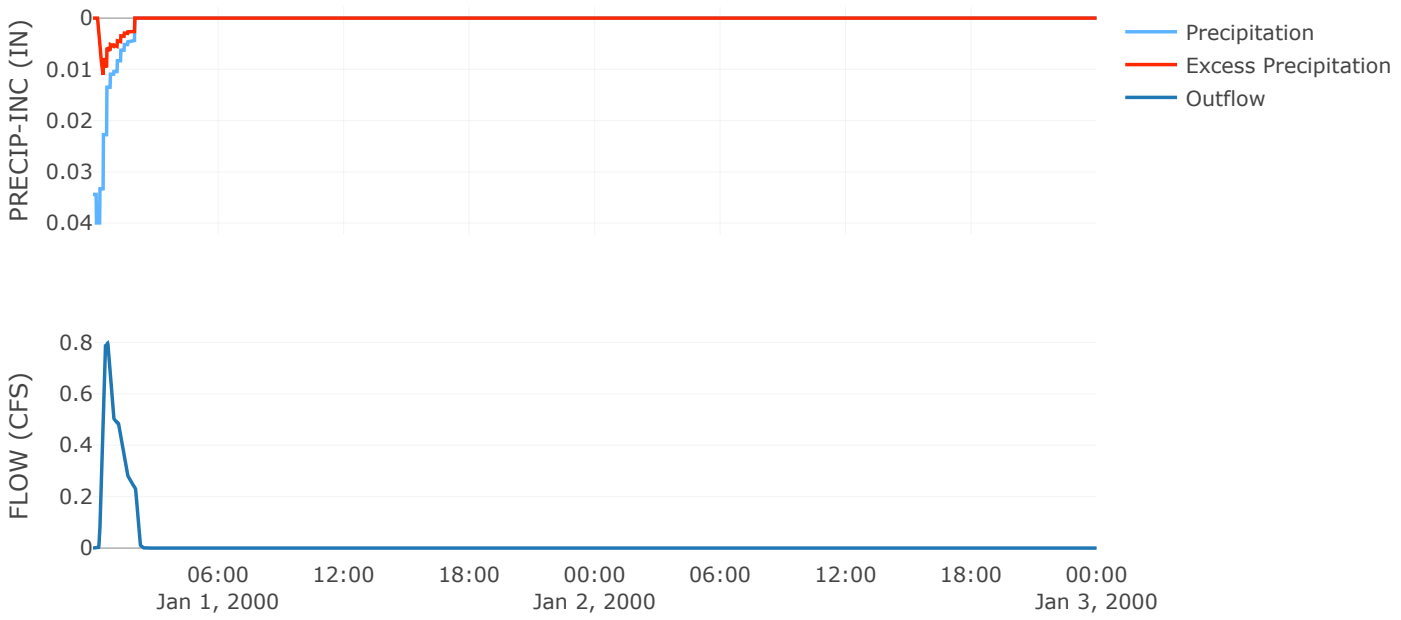
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

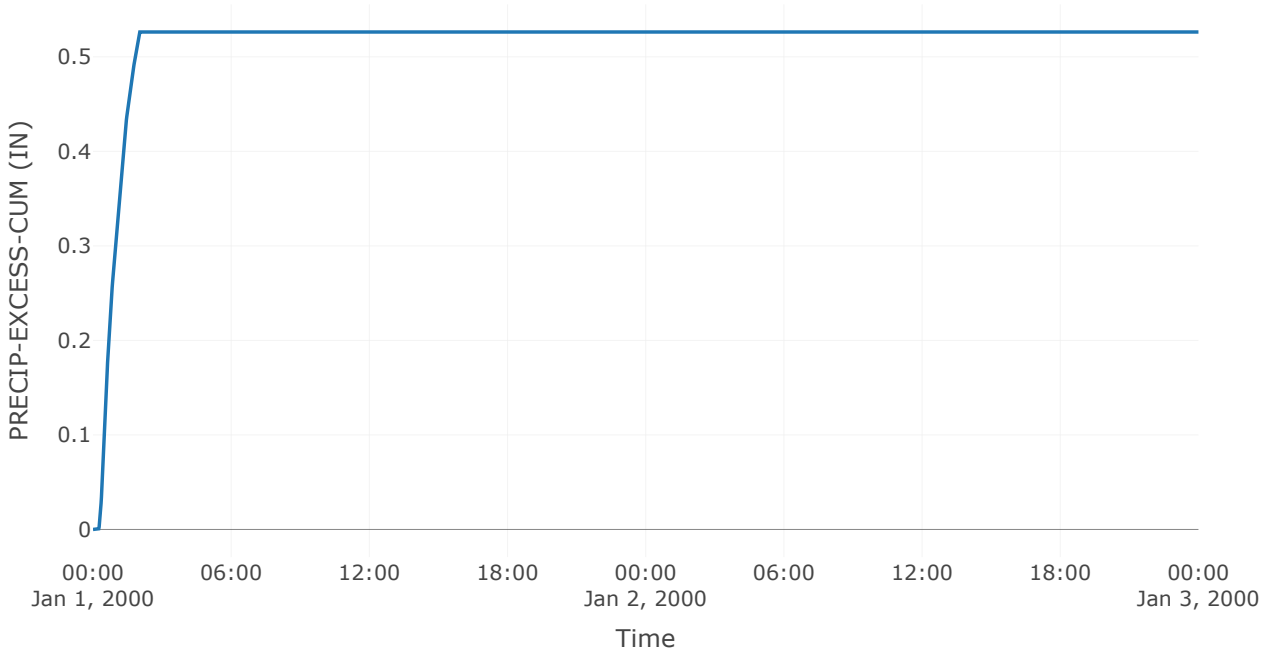
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	0.8
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	0.53
Precipitation Volume (AC - FT)	0.24
Loss Volume (AC - FT)	0.18
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

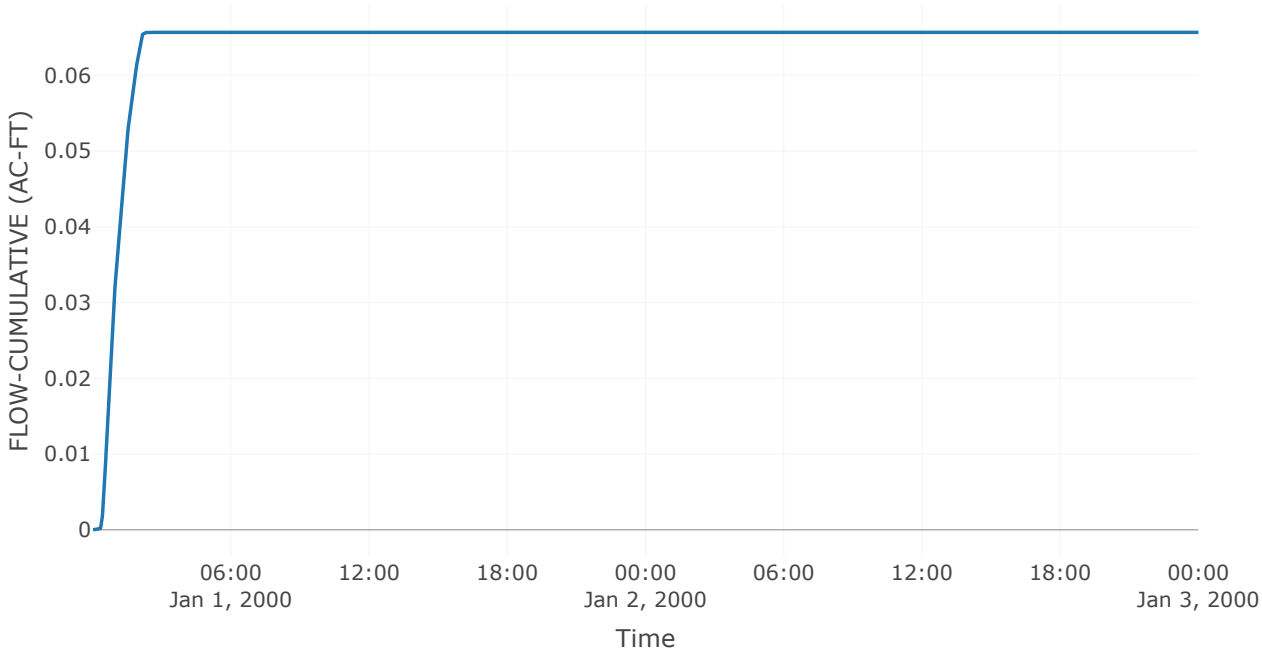
Precipitation and Outflow



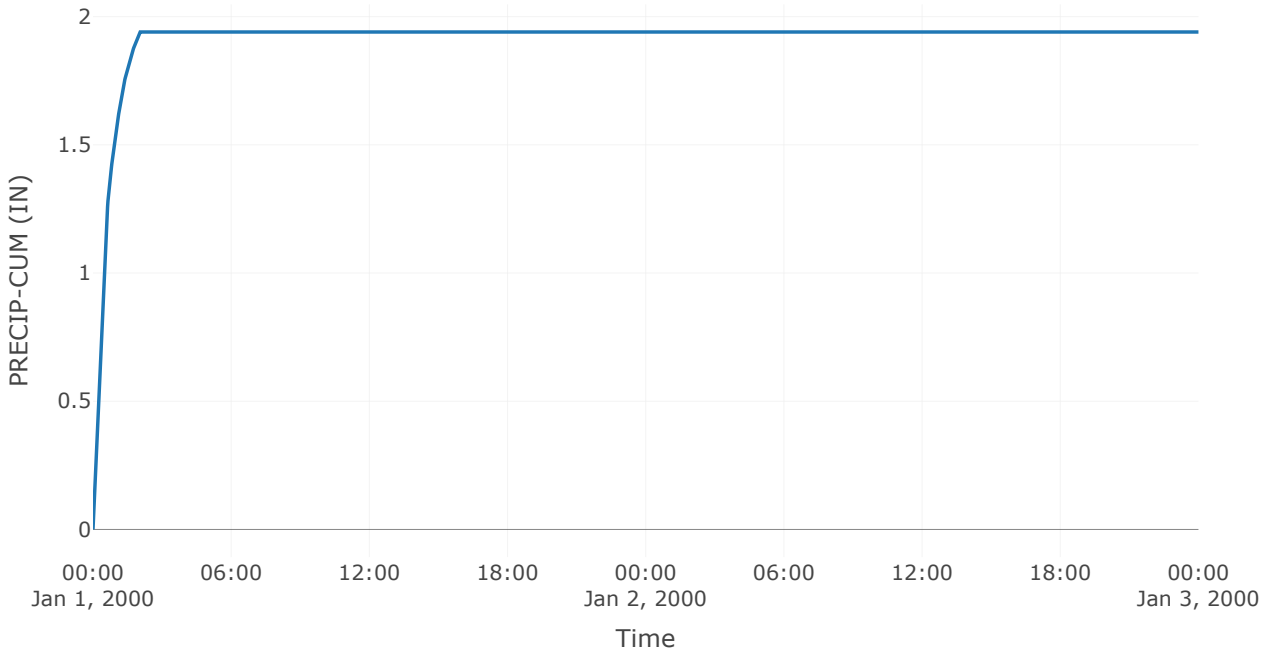
Cumulative Excess Precipitation

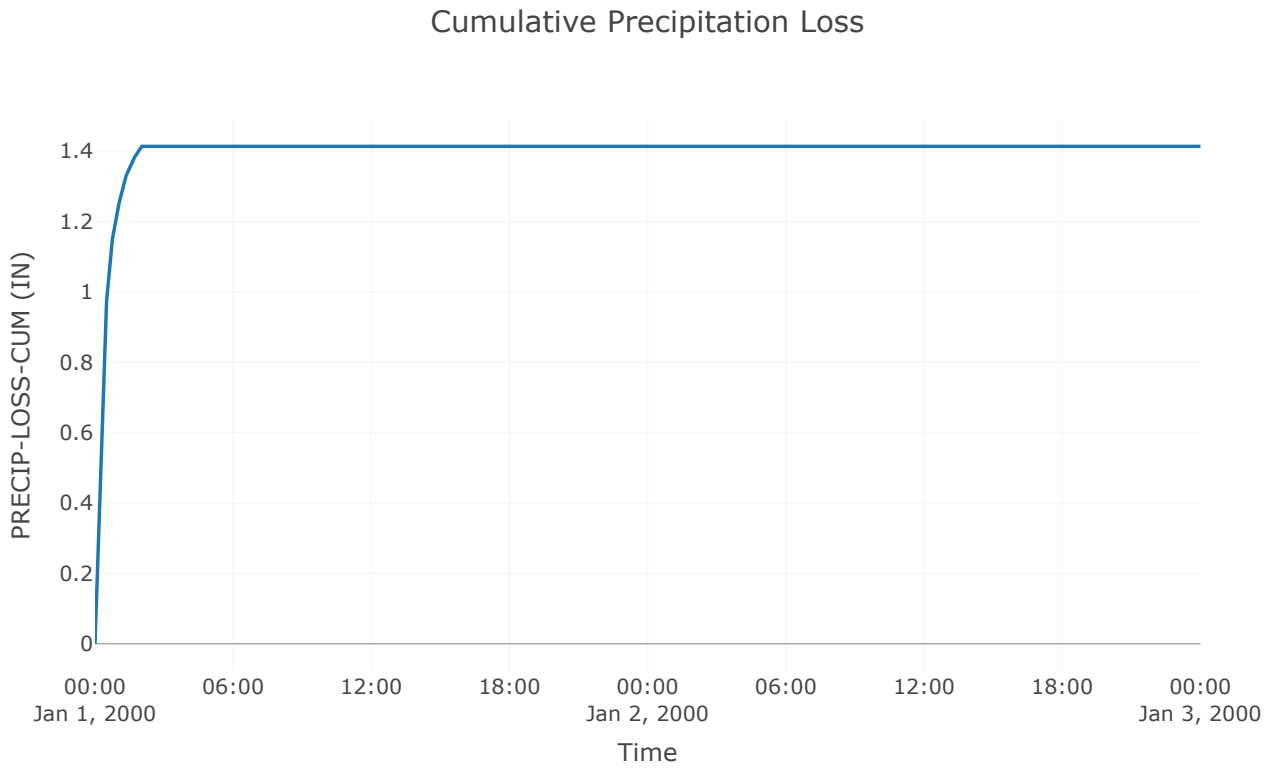


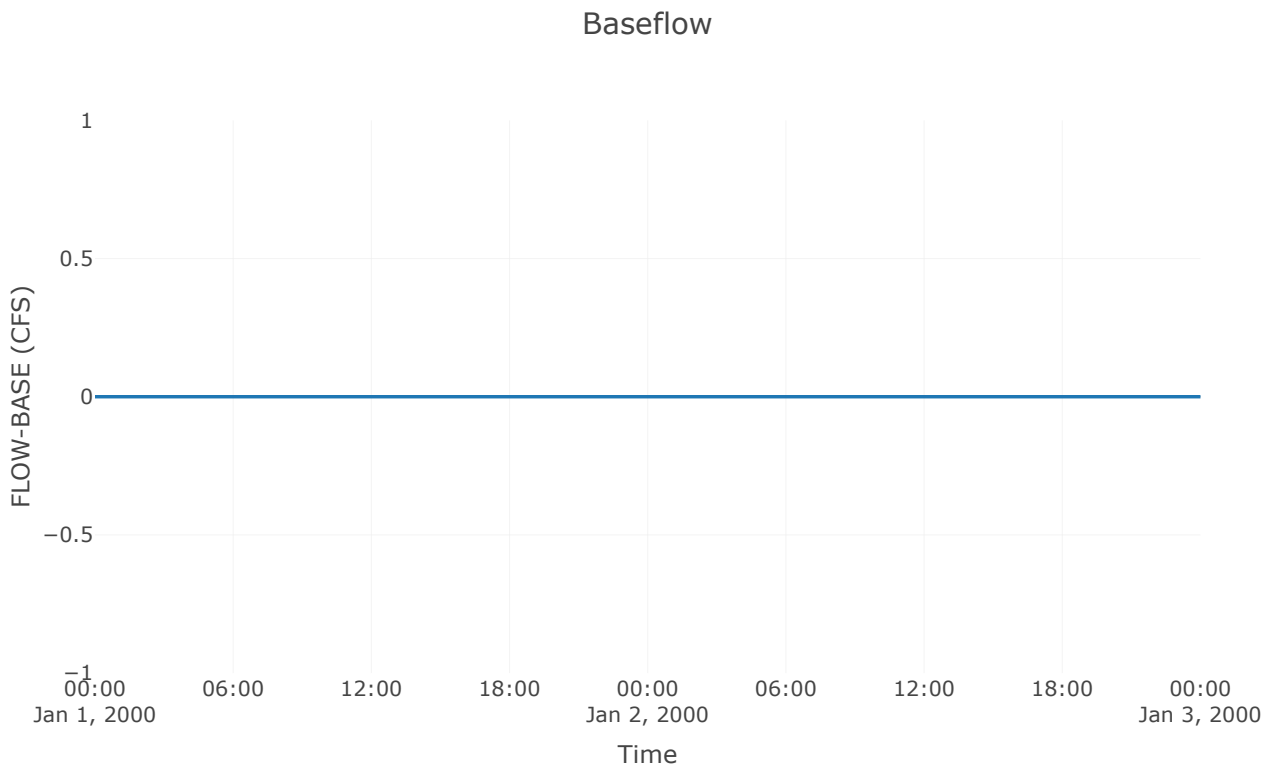
Cumulative Outflow



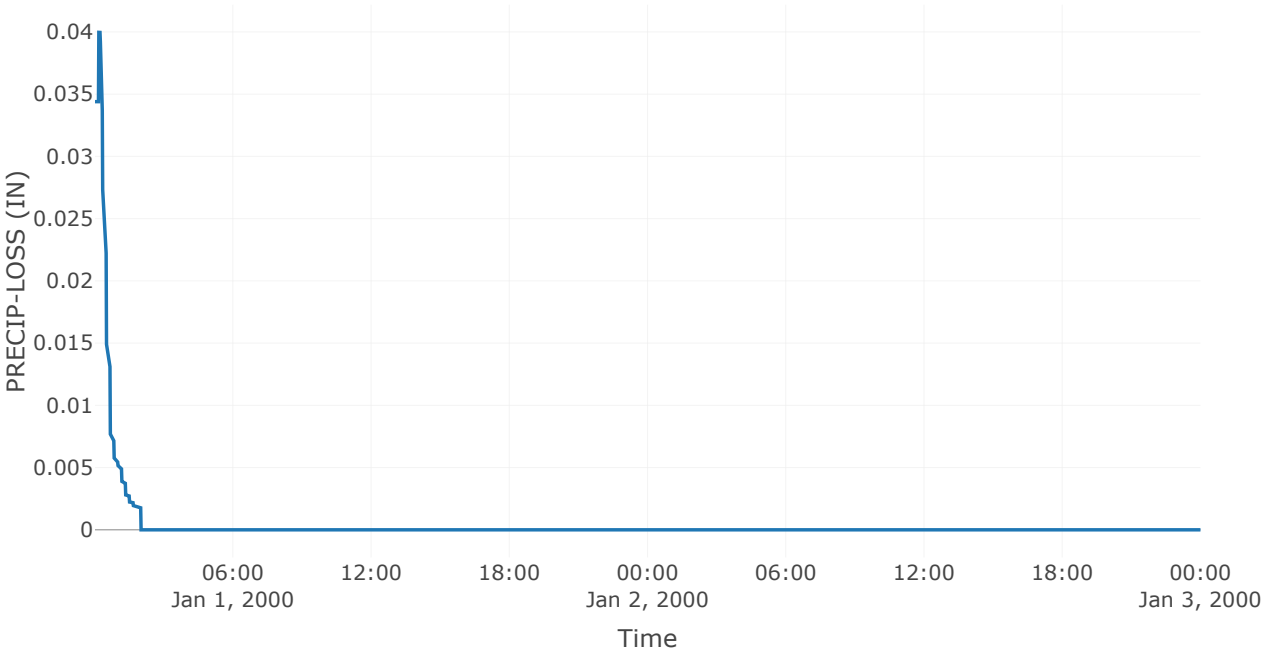
Cumulative Precipitation



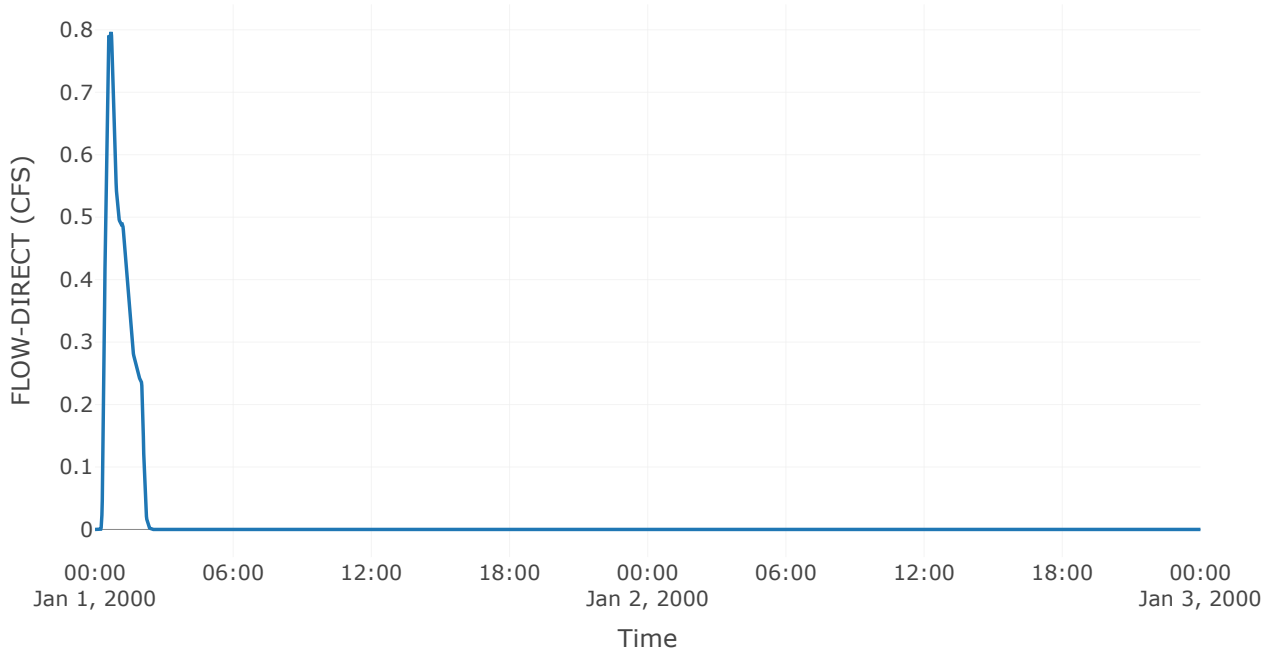

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

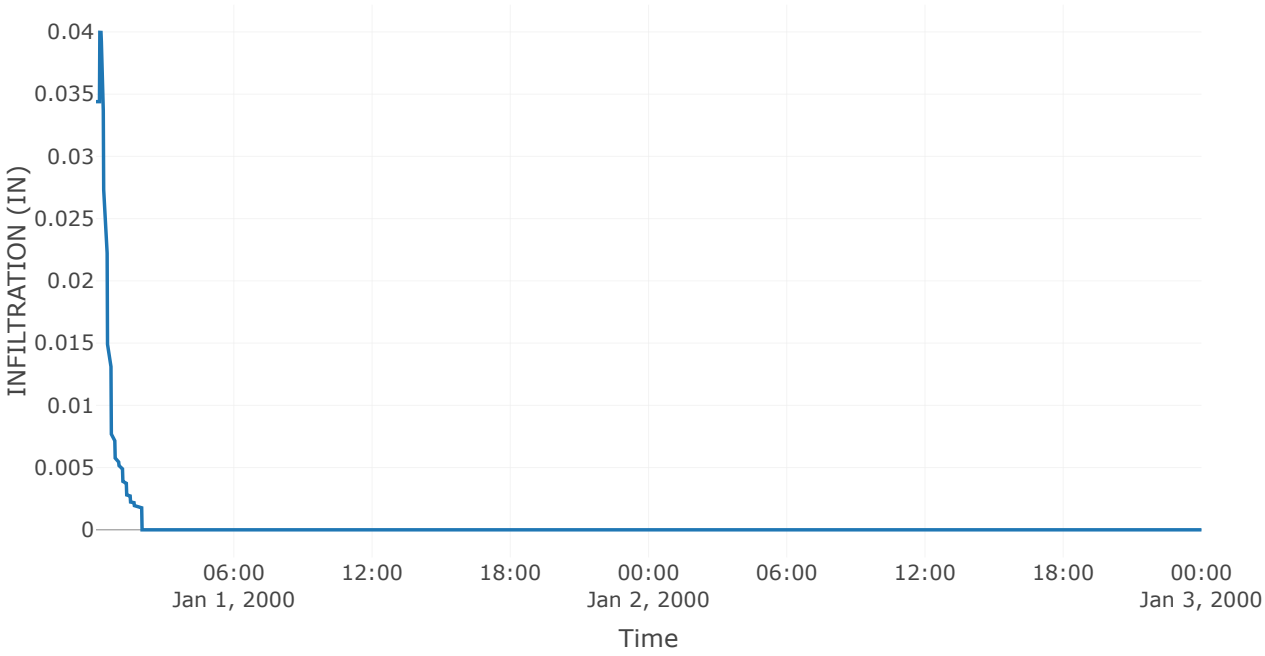

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

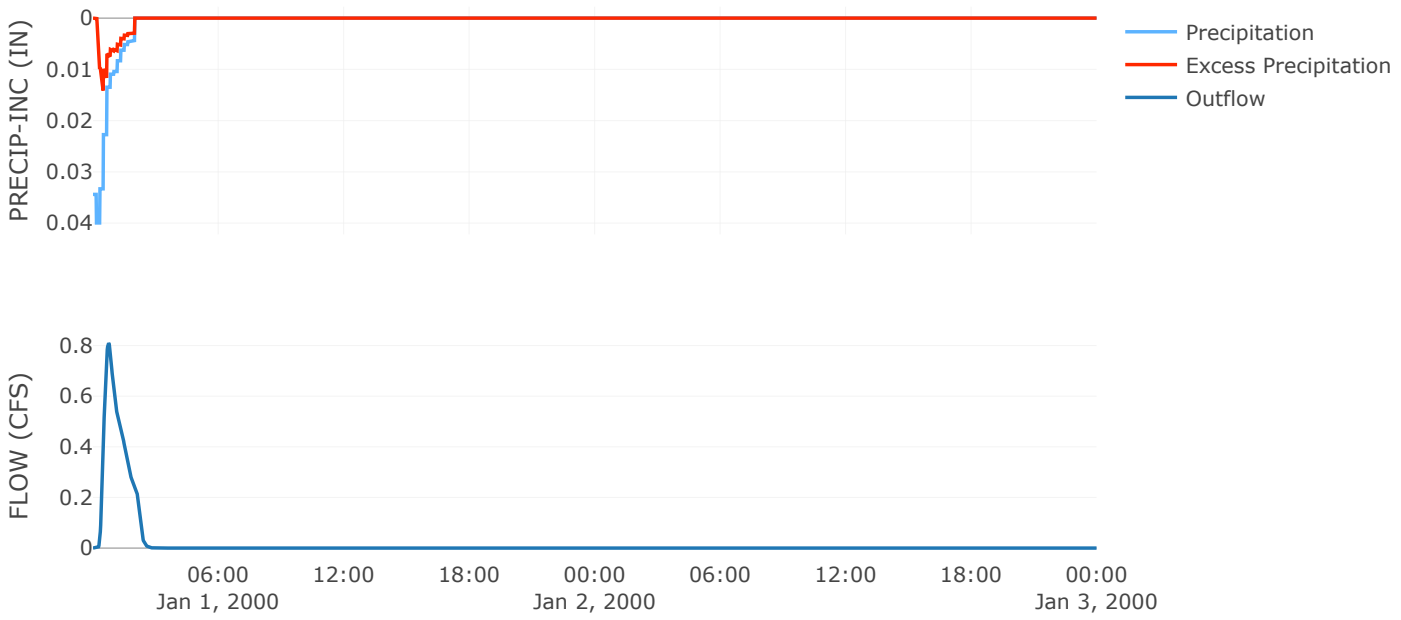
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

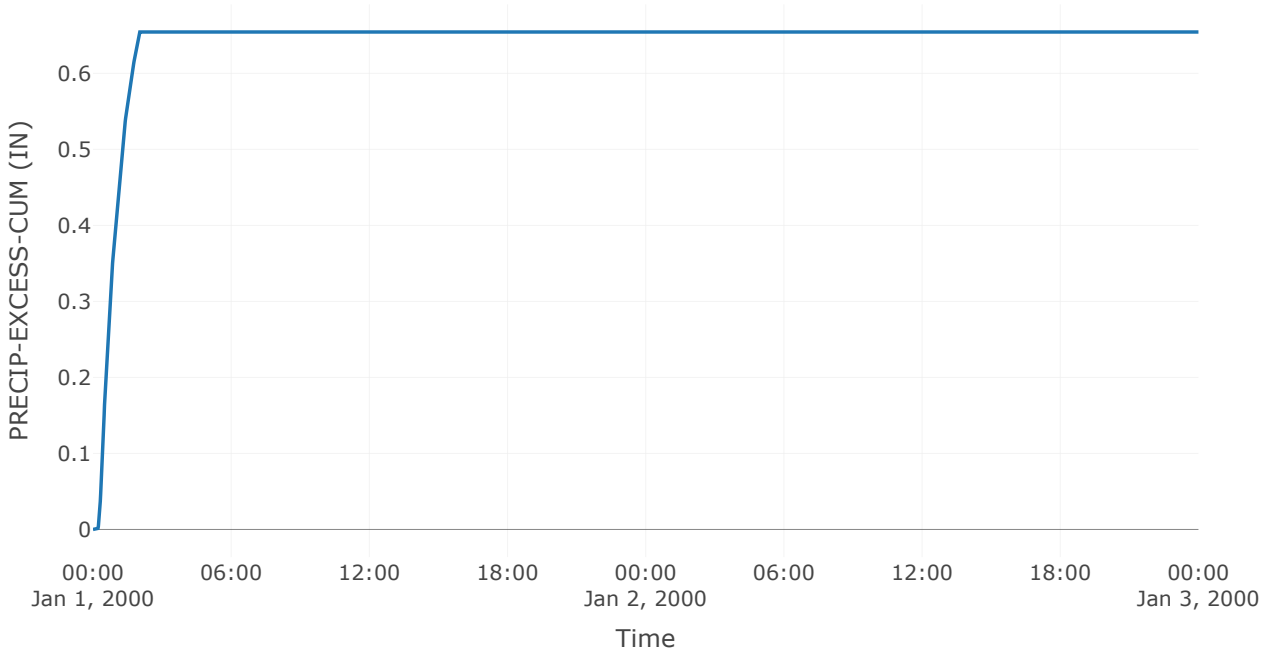
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	0.81
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.21
Loss Volume (AC - FT)	0.14
Excess Volume (AC - FT)	0.07
Direct Runoff Volume (AC - FT)	0.07
Baseflow Volume (AC - FT)	0

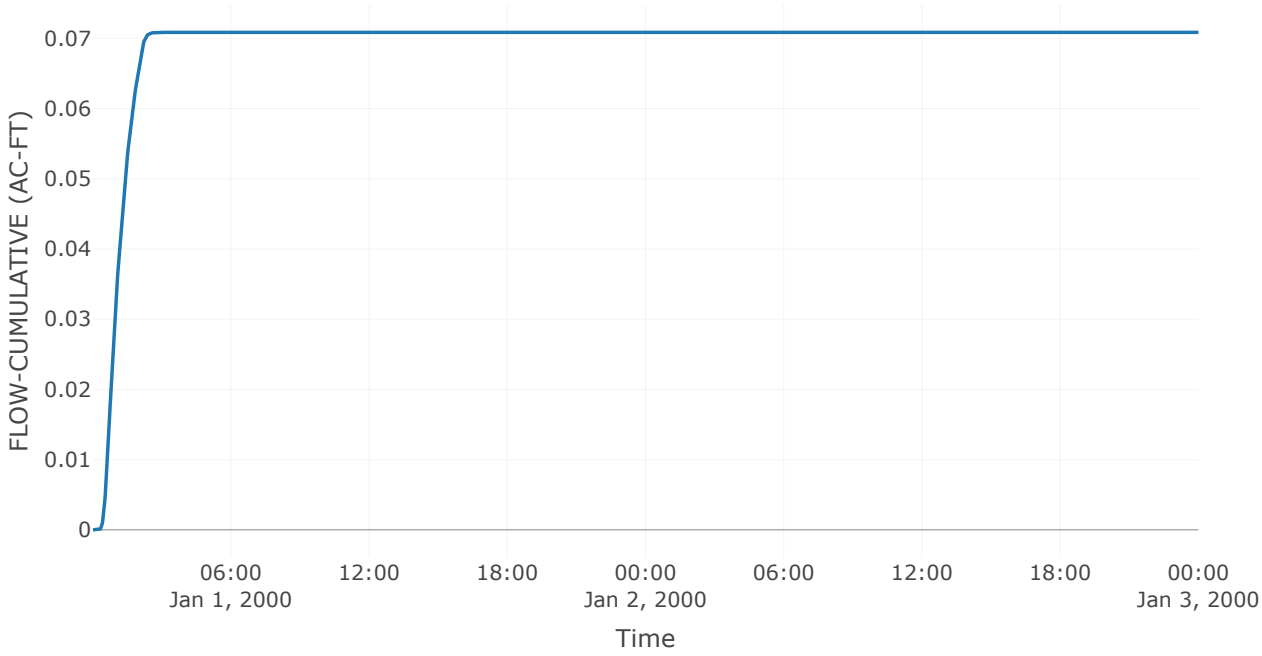
Precipitation and Outflow



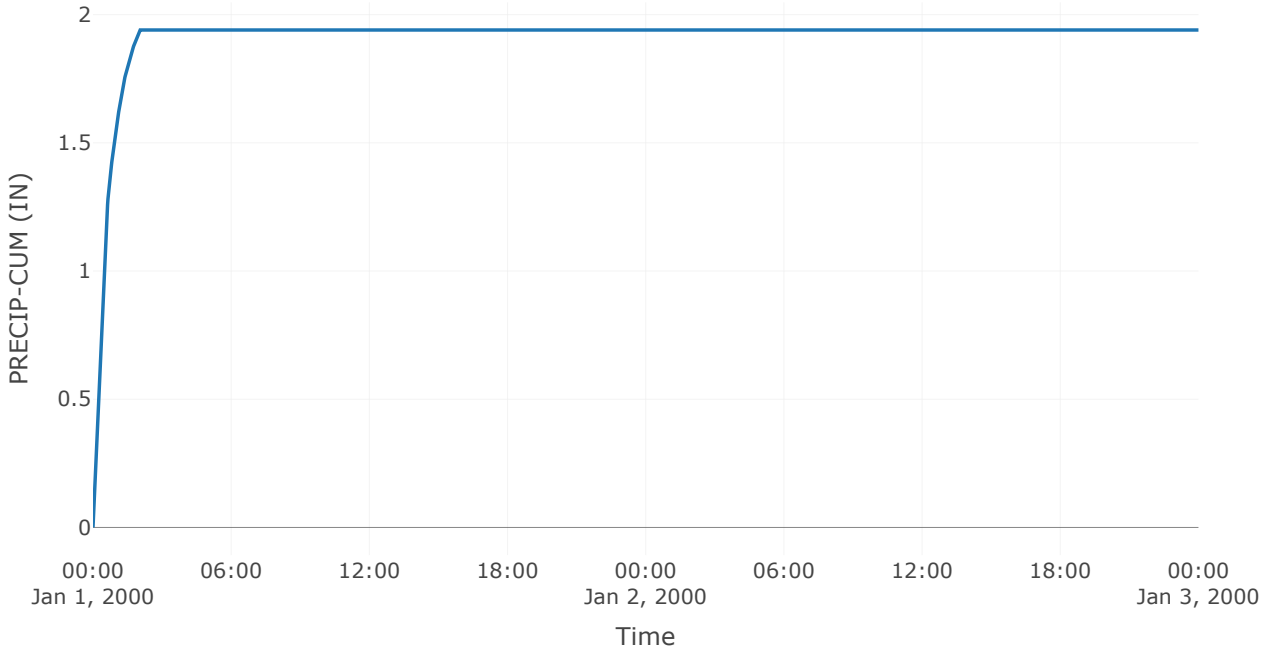
Cumulative Excess Precipitation

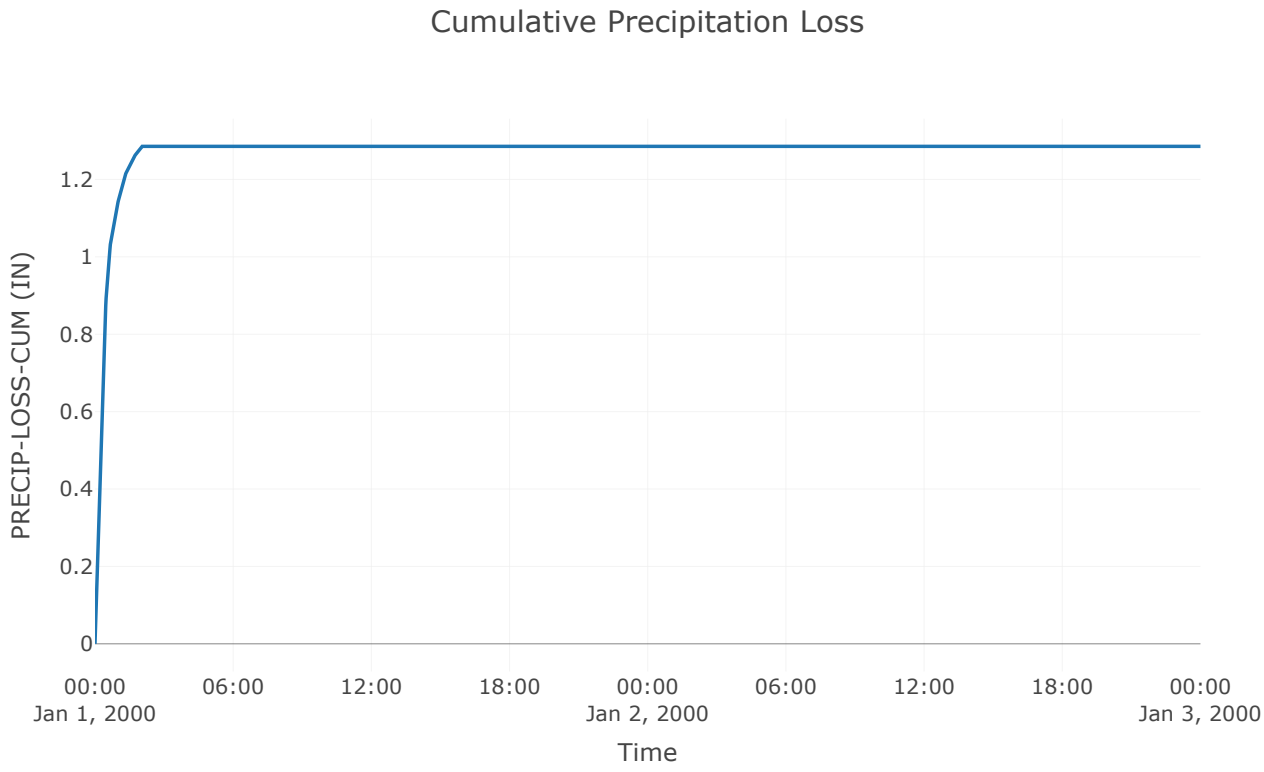


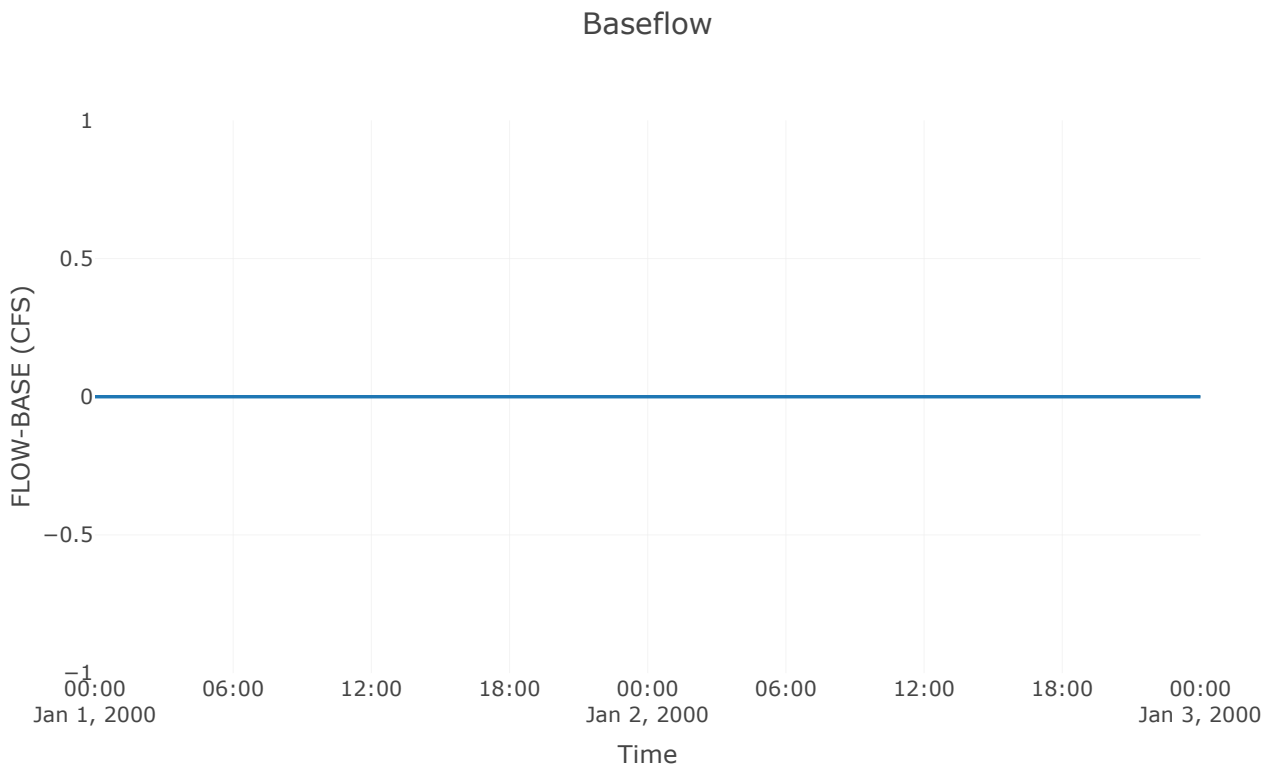
Cumulative Outflow



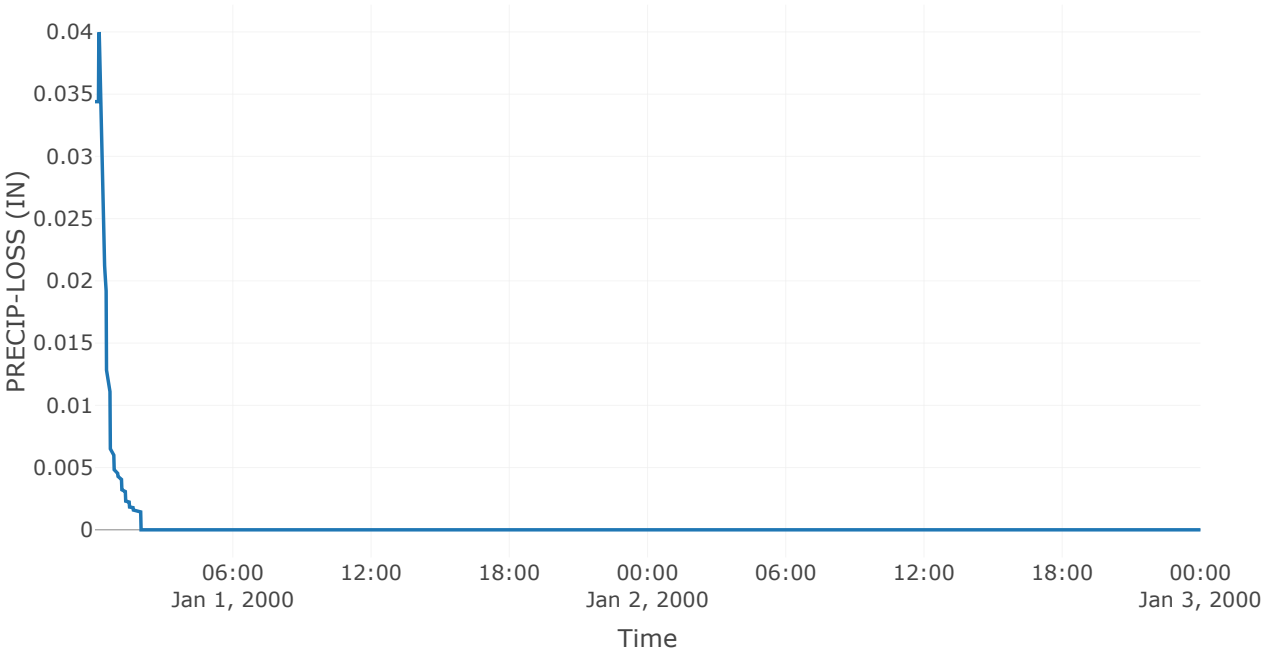
Cumulative Precipitation



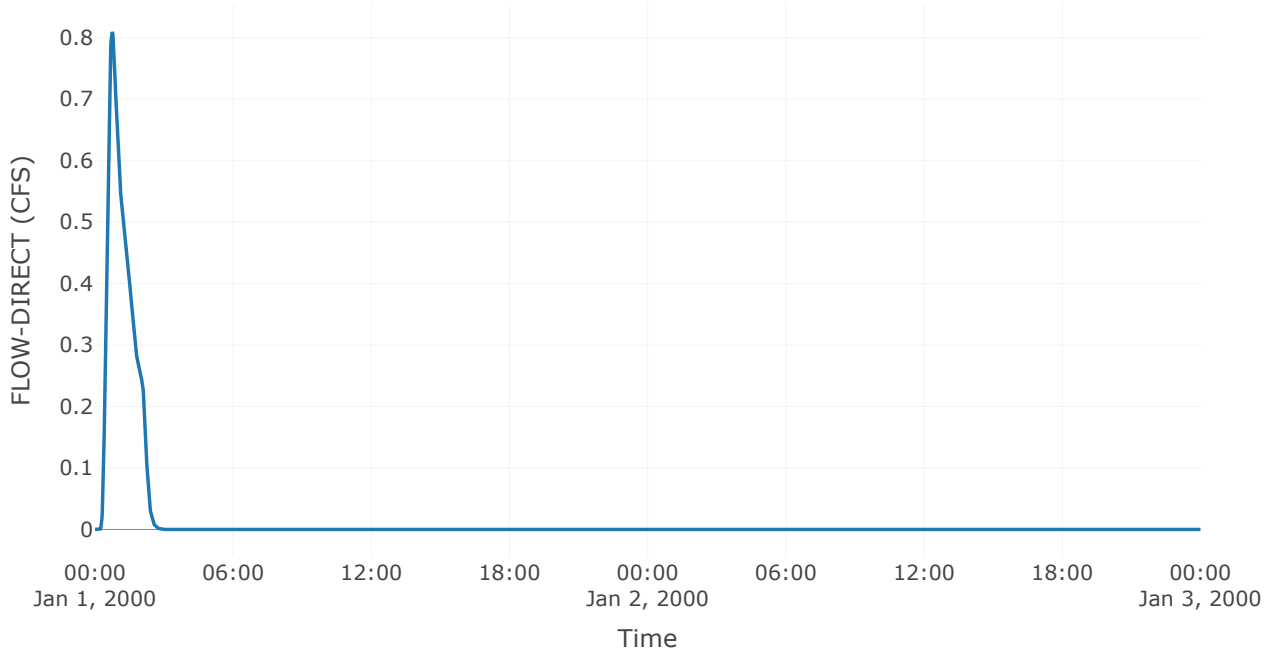

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

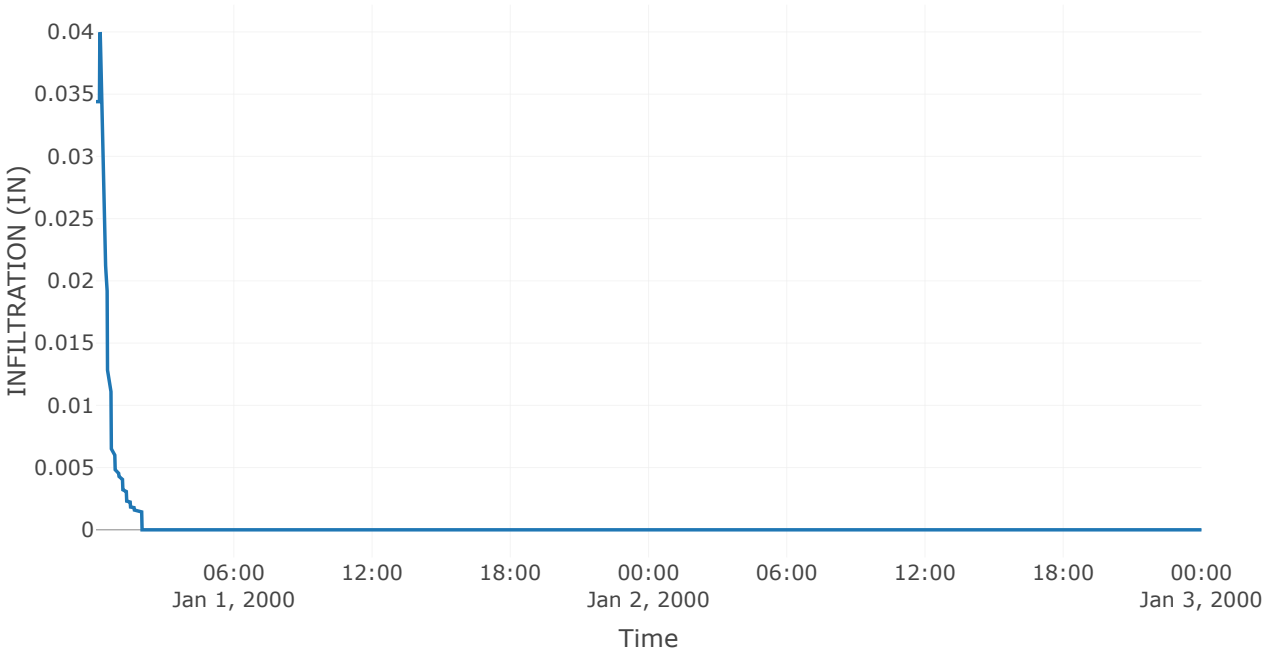

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



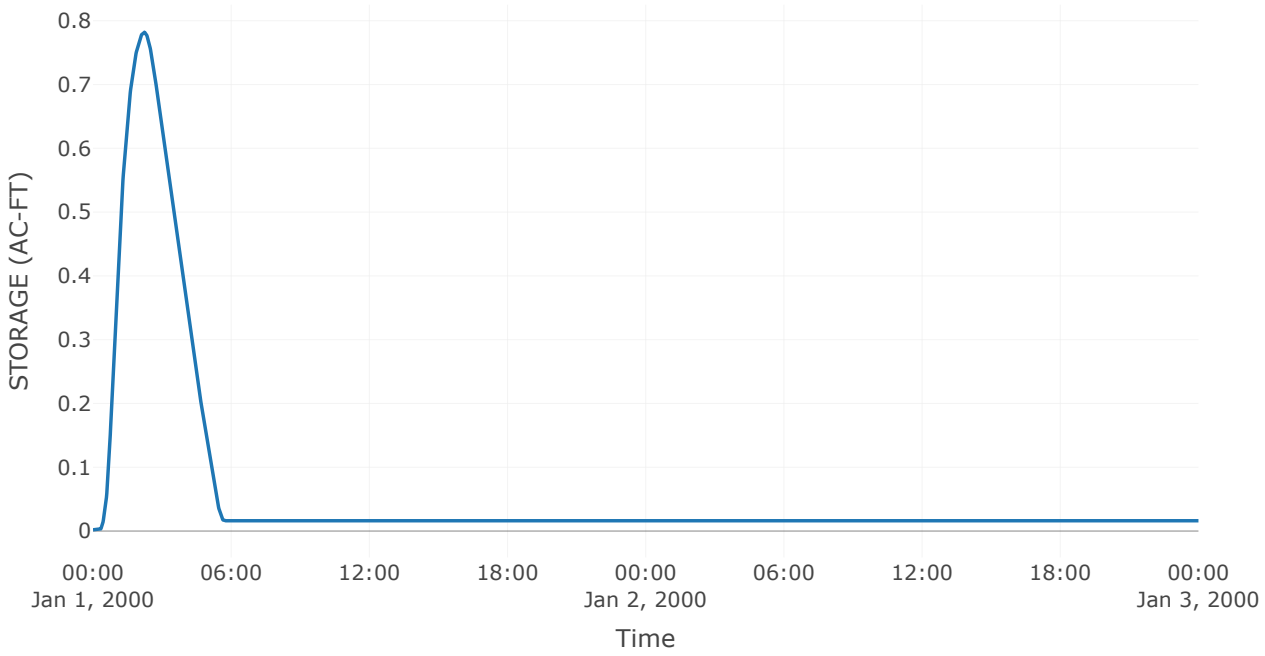

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

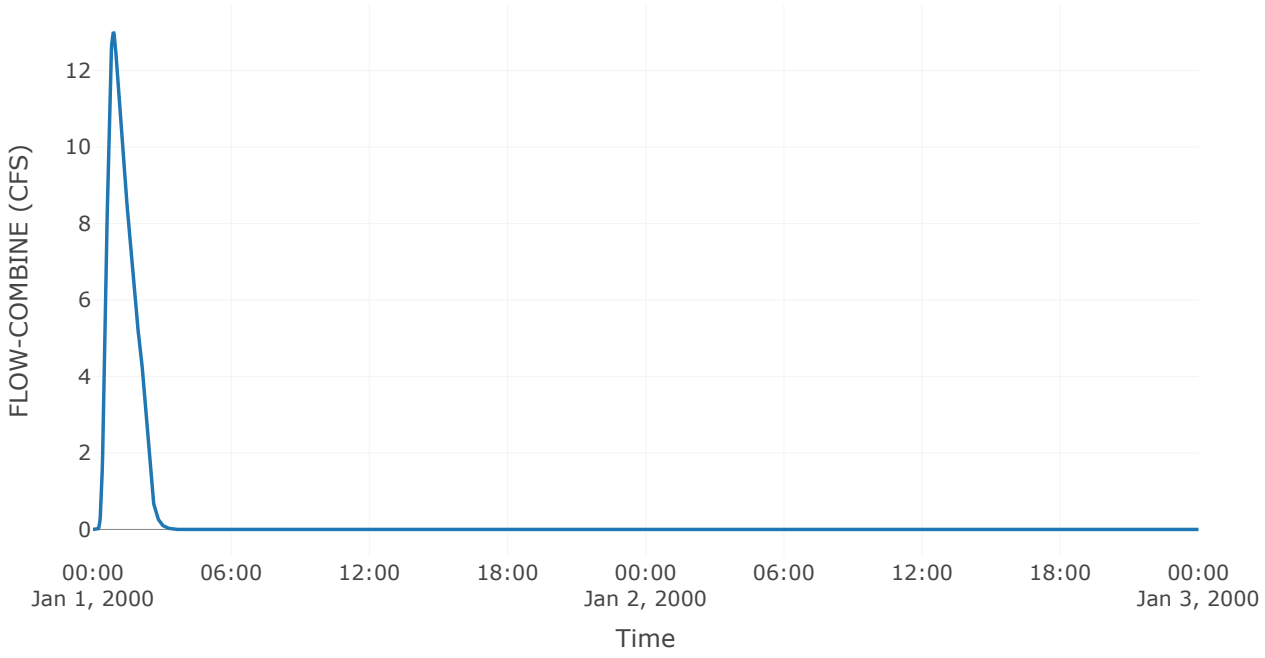
Downstream : Basin 2

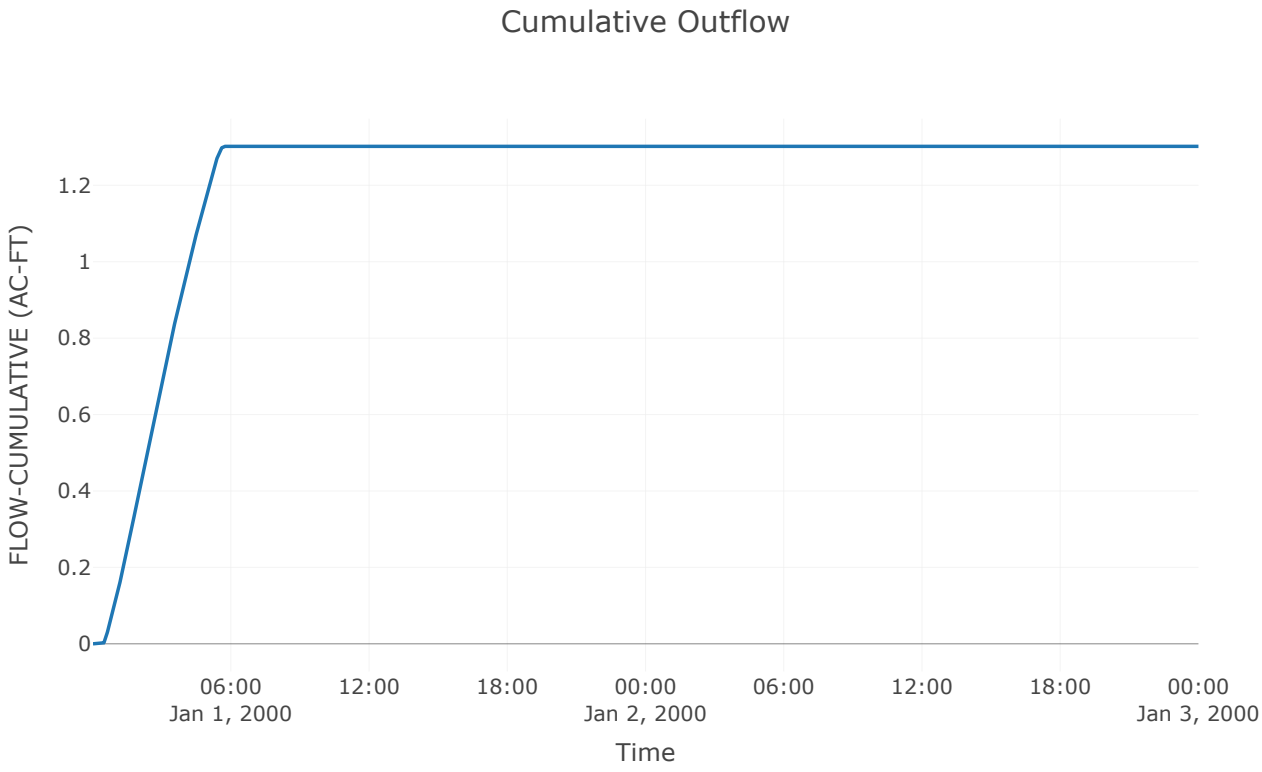
Results: Basin 1	
Peak Discharge (CFS)	3.6
Time of Peak Discharge	01Jan2000, 02:13
Volume (IN)	0.77
Peak Inflow (CFS)	13.01
Time of Peak Inflow	01Jan2000, 00:53
Inflow Volume (AC - FT)	1.32
Maximum Storage (AC - FT)	0.78
Peak Elevation (FT)	695.44
Discharge Volume (AC - FT)	1.3

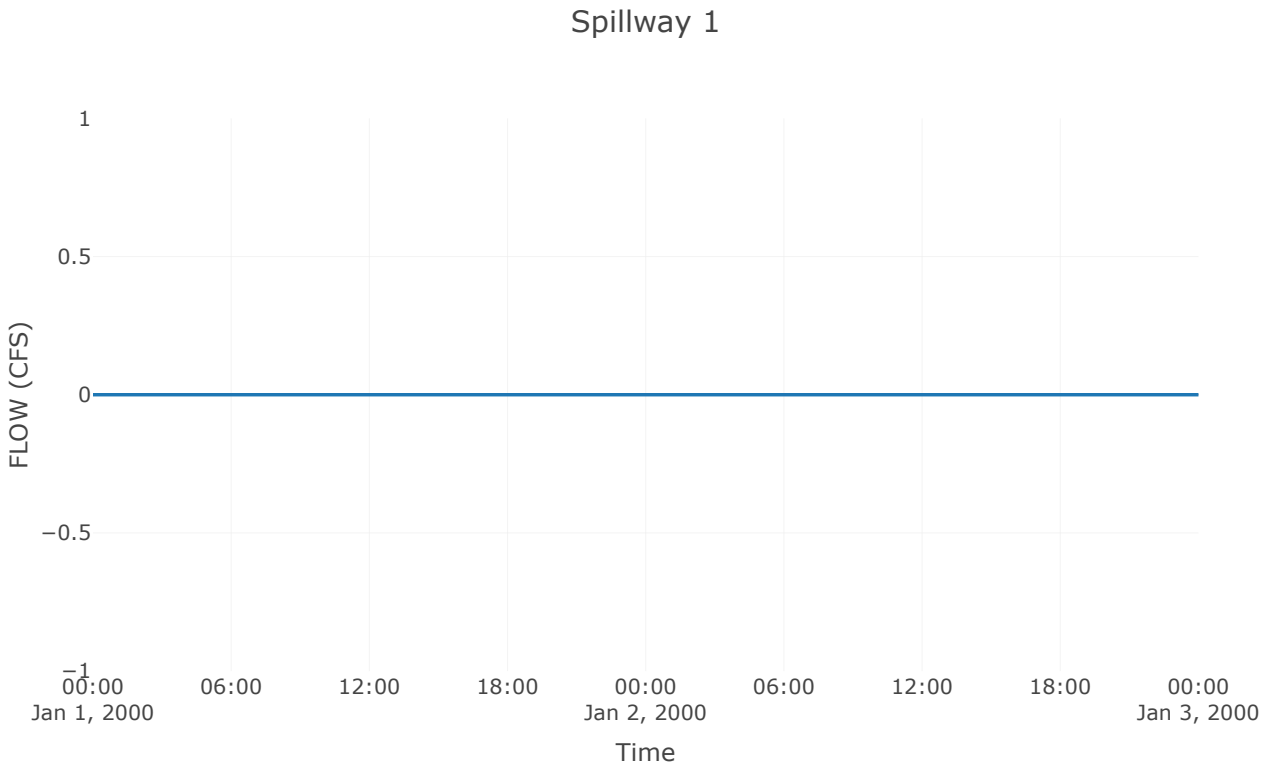
Storage

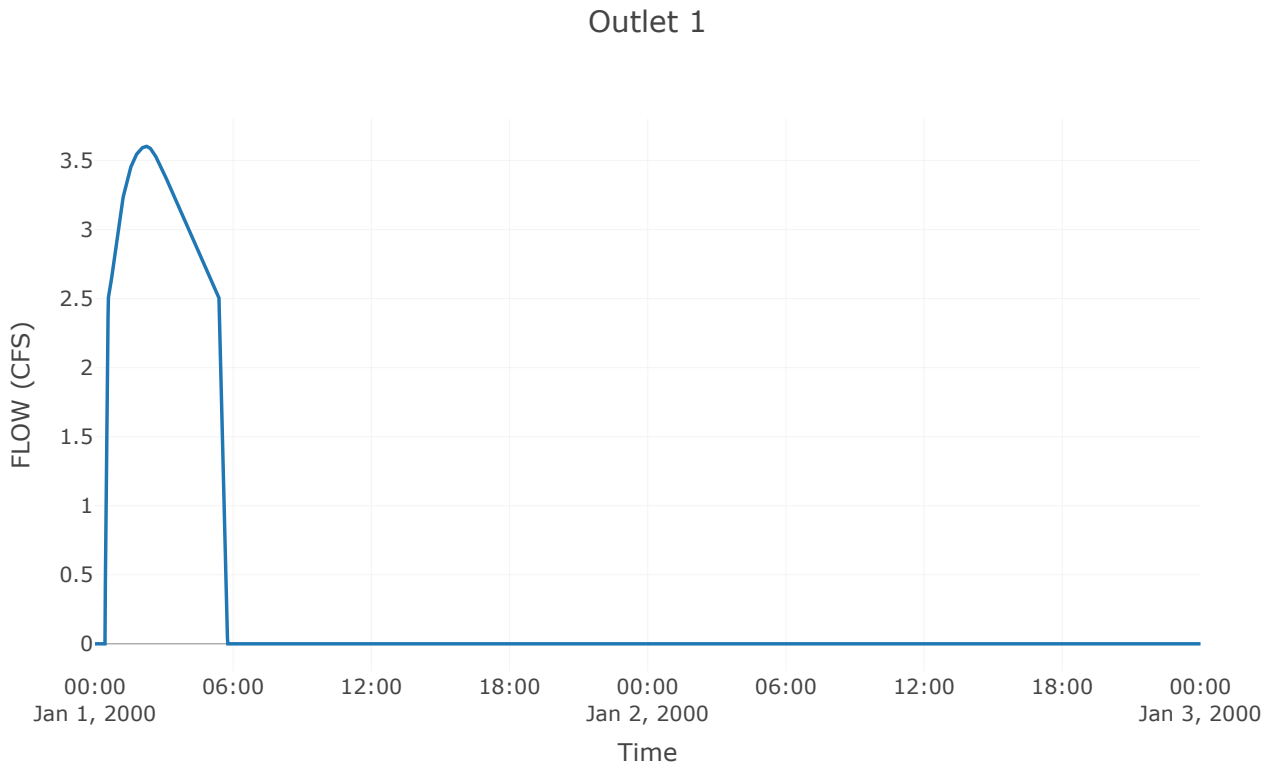


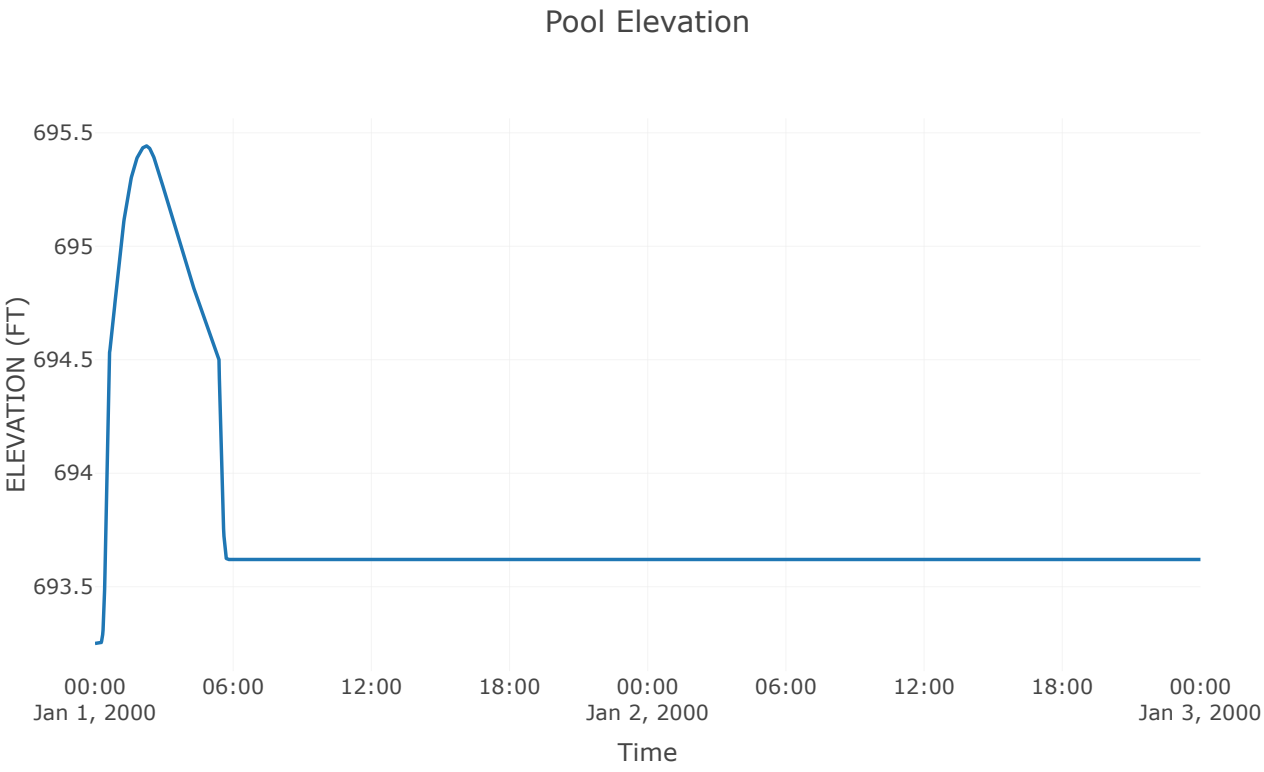
Combined Inflow

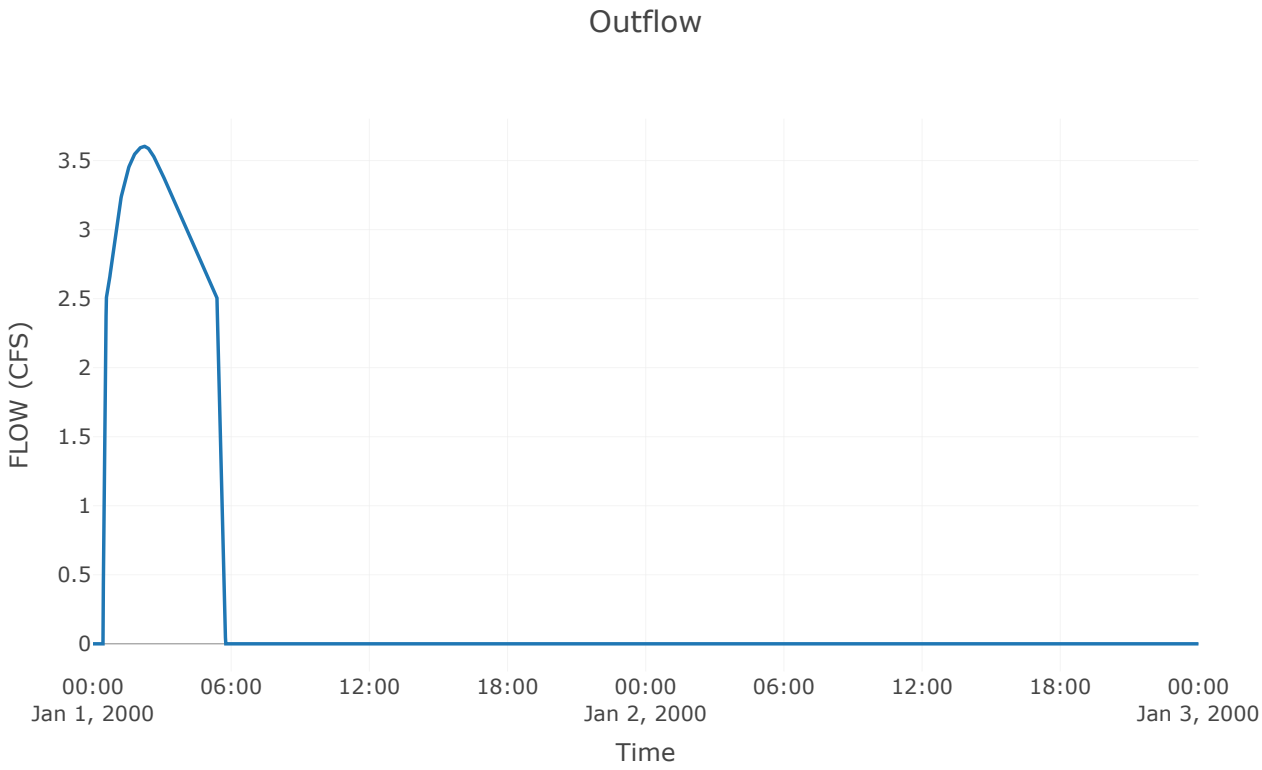



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695.5
695
694.5
694
693.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

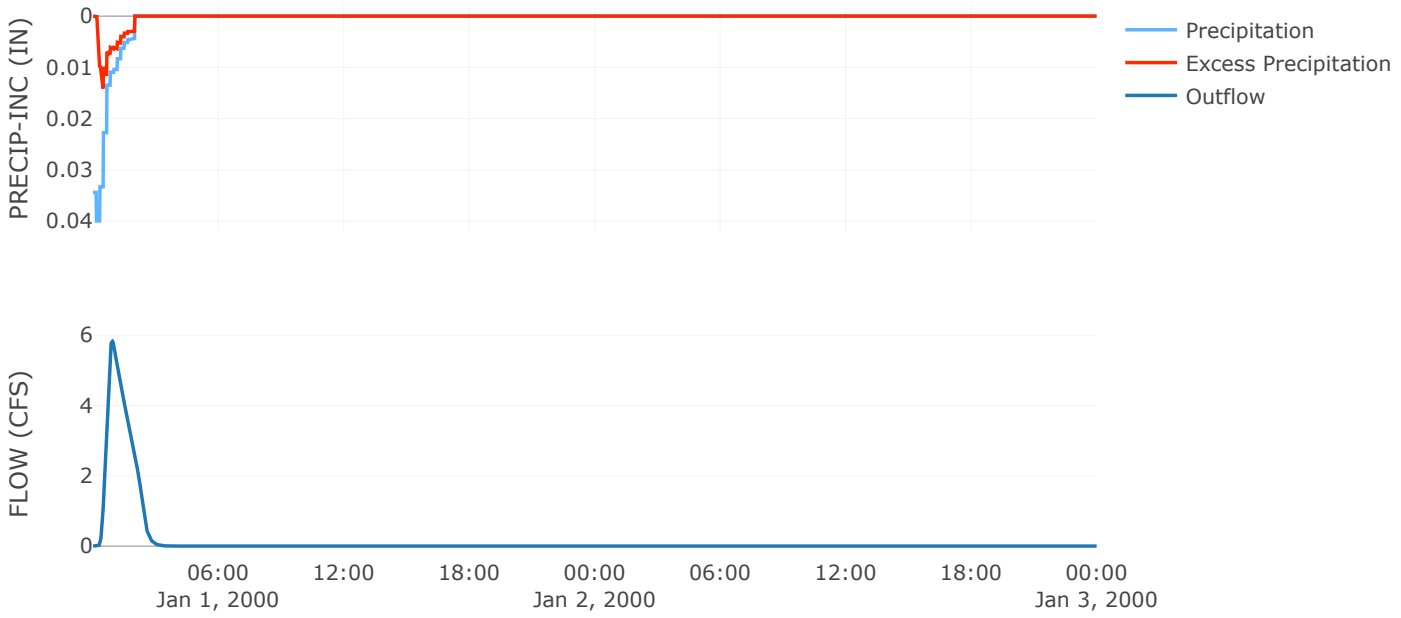
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

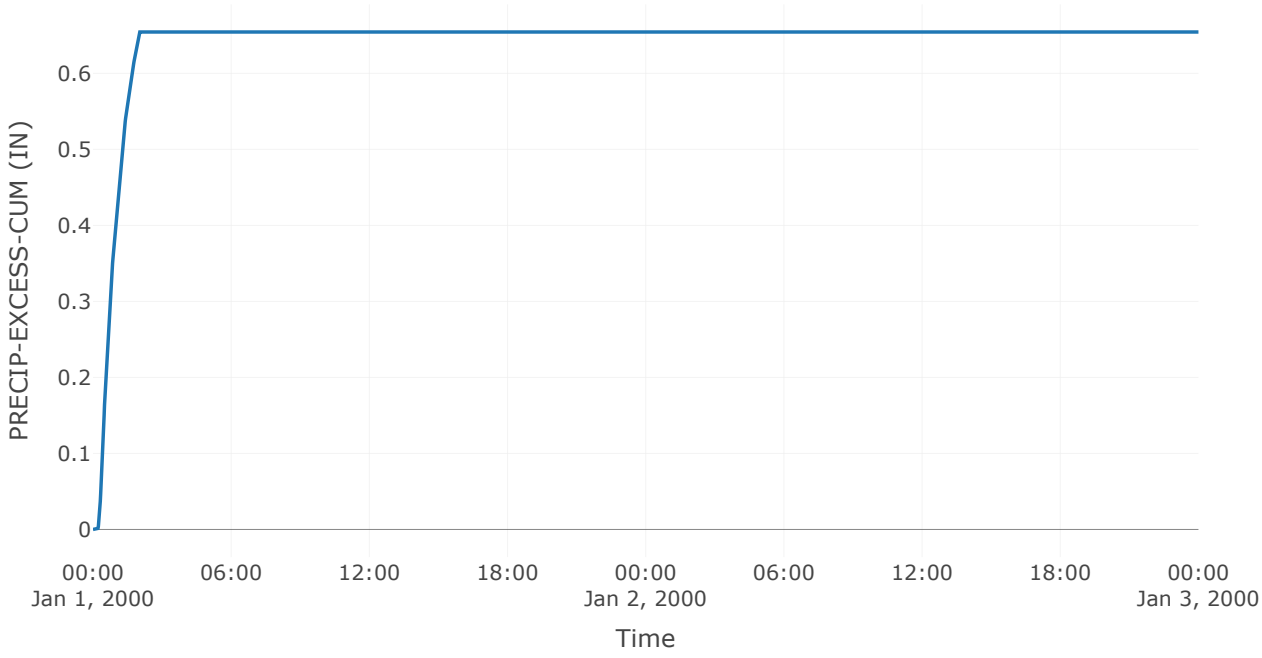
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

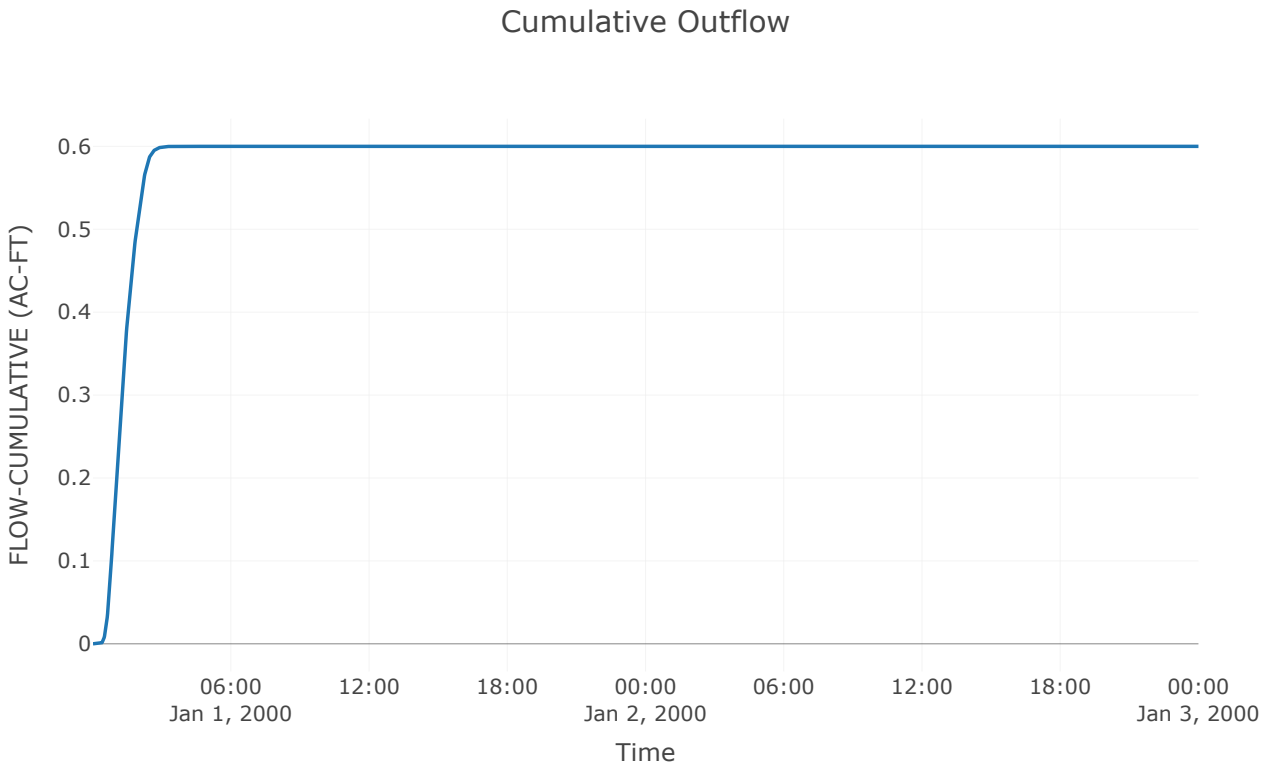
Results: On-Site Trib 2	
Peak Discharge (CFS)	5.83
Time of Peak Discharge	01Jan2000, 00:55
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.78
Loss Volume (AC - FT)	1.18
Excess Volume (AC - FT)	0.6
Direct Runoff Volume (AC - FT)	0.6
Baseflow Volume (AC - FT)	0

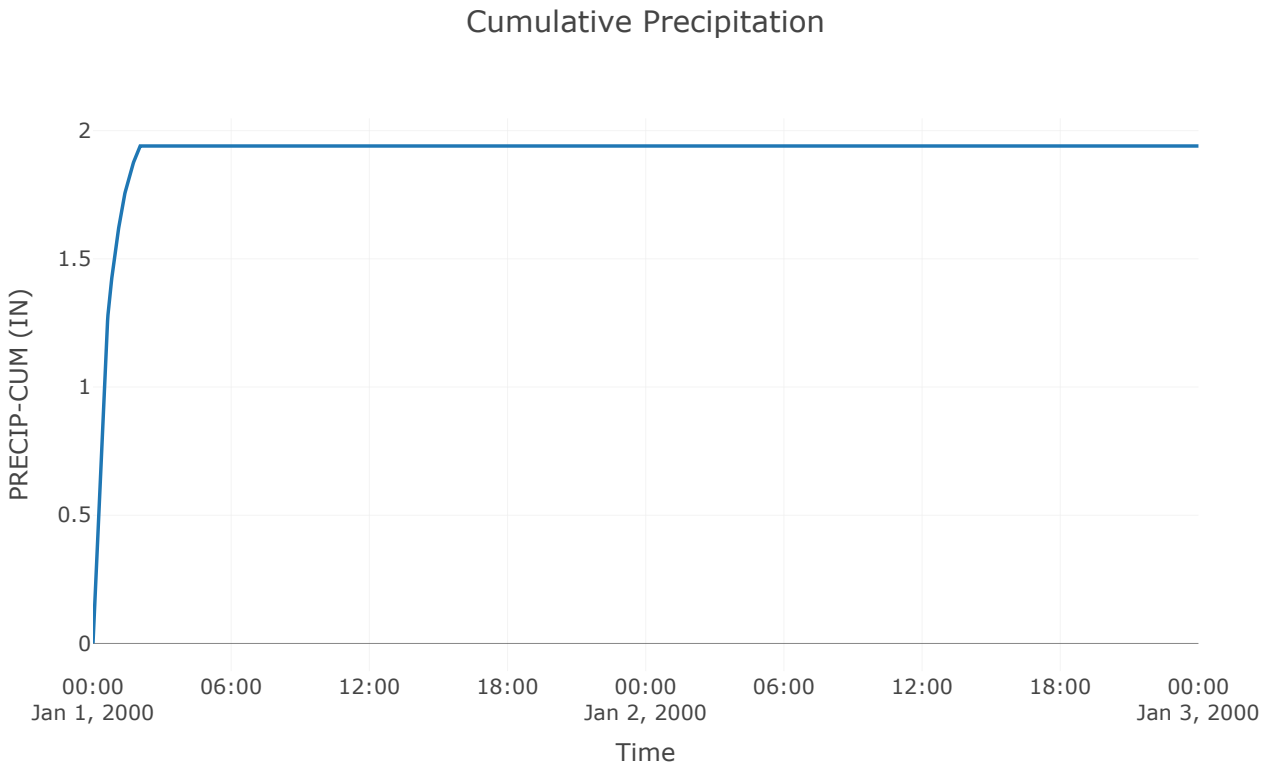
Precipitation and Outflow

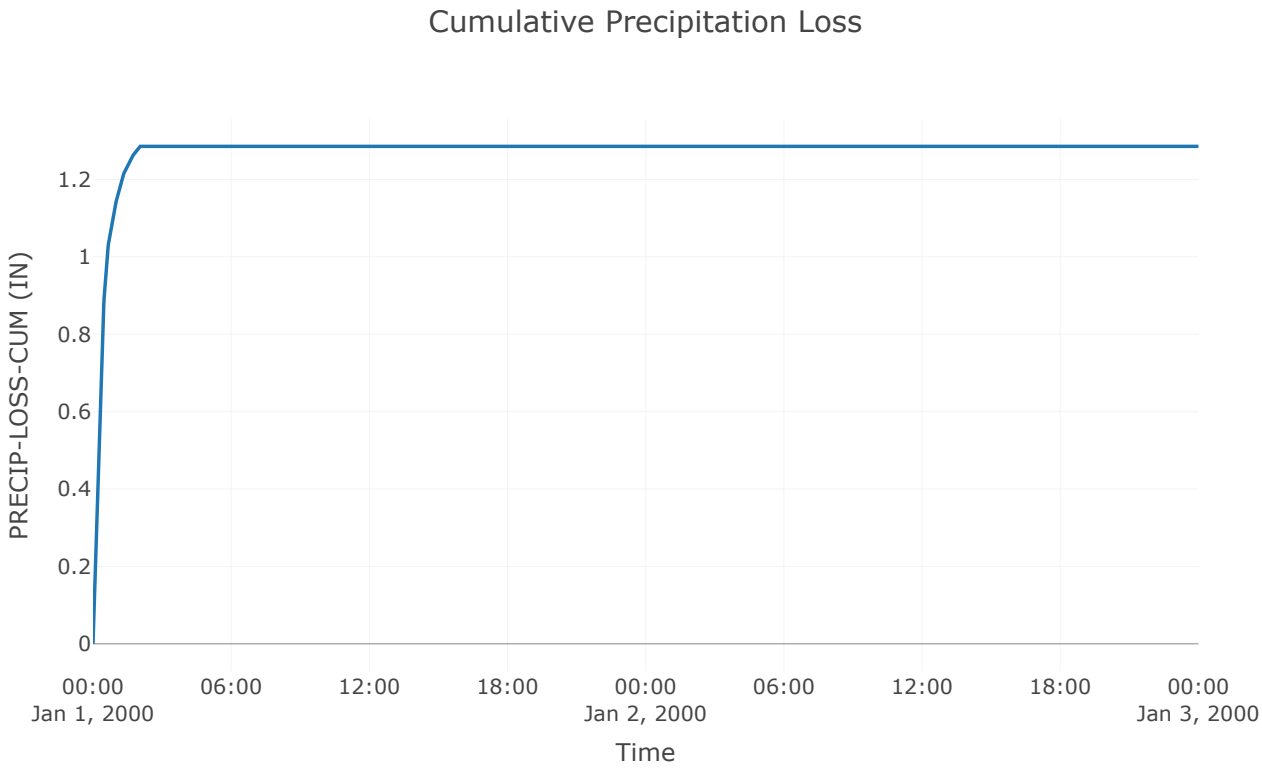


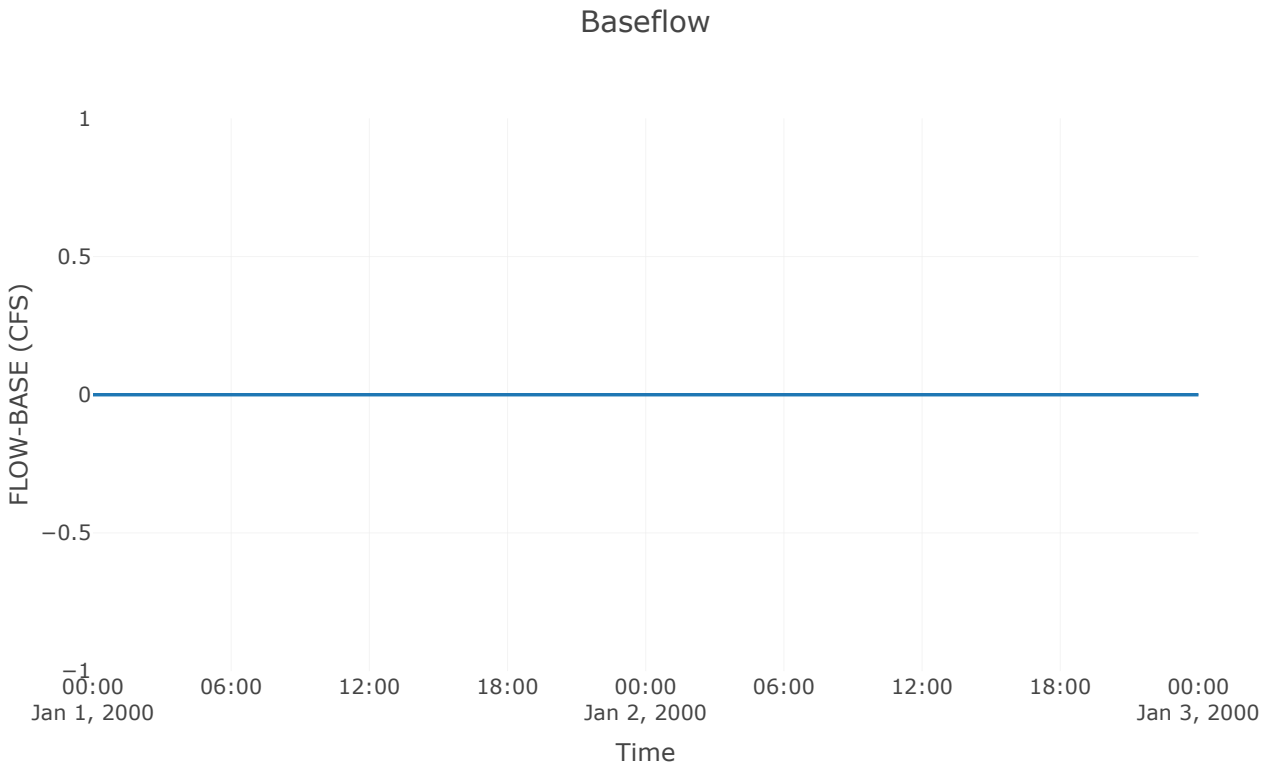
Cumulative Excess Precipitation



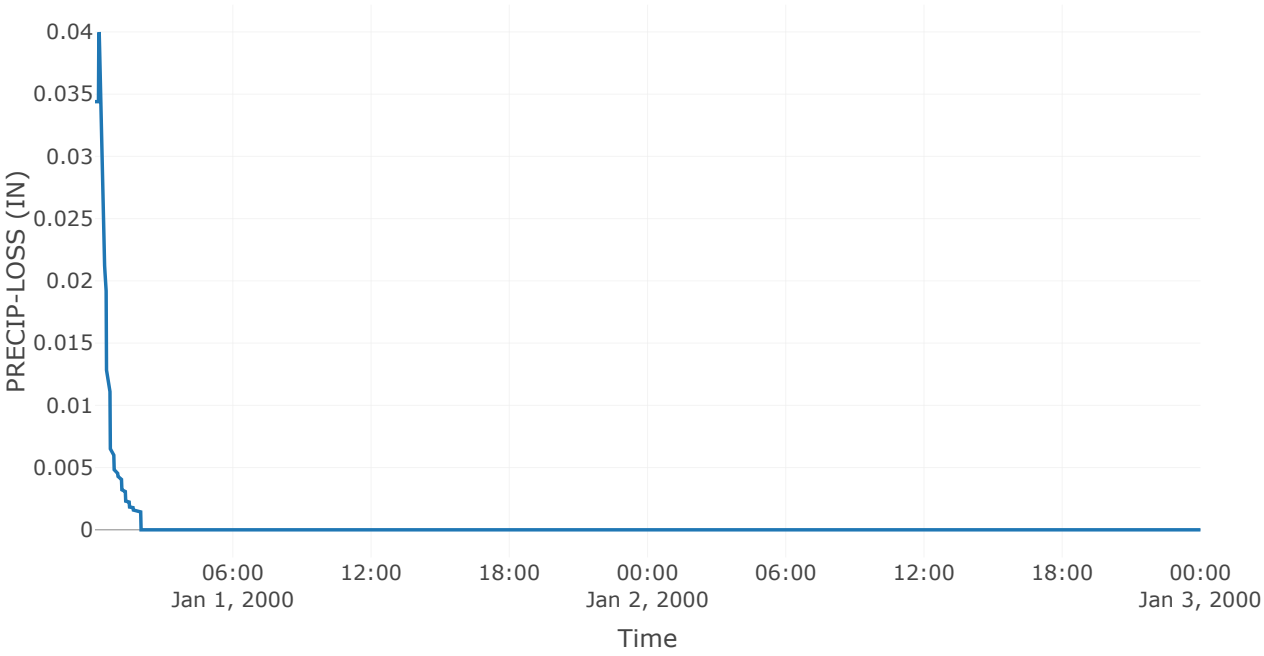

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.6
0.5
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

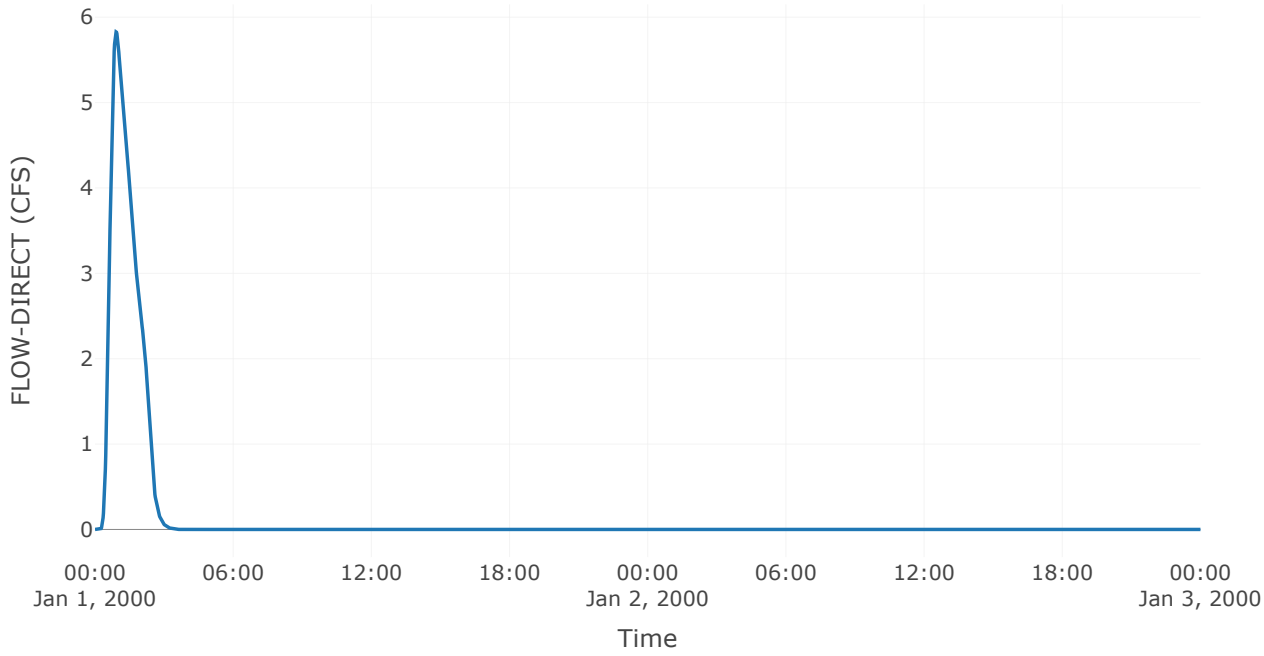

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

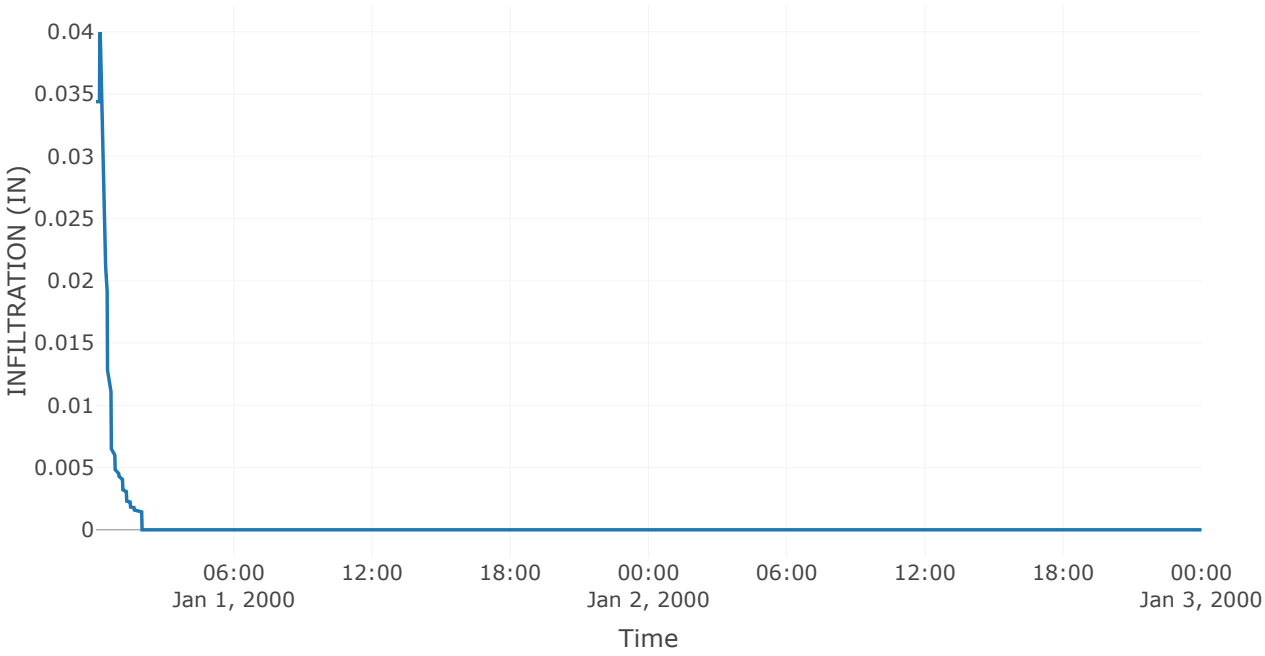

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

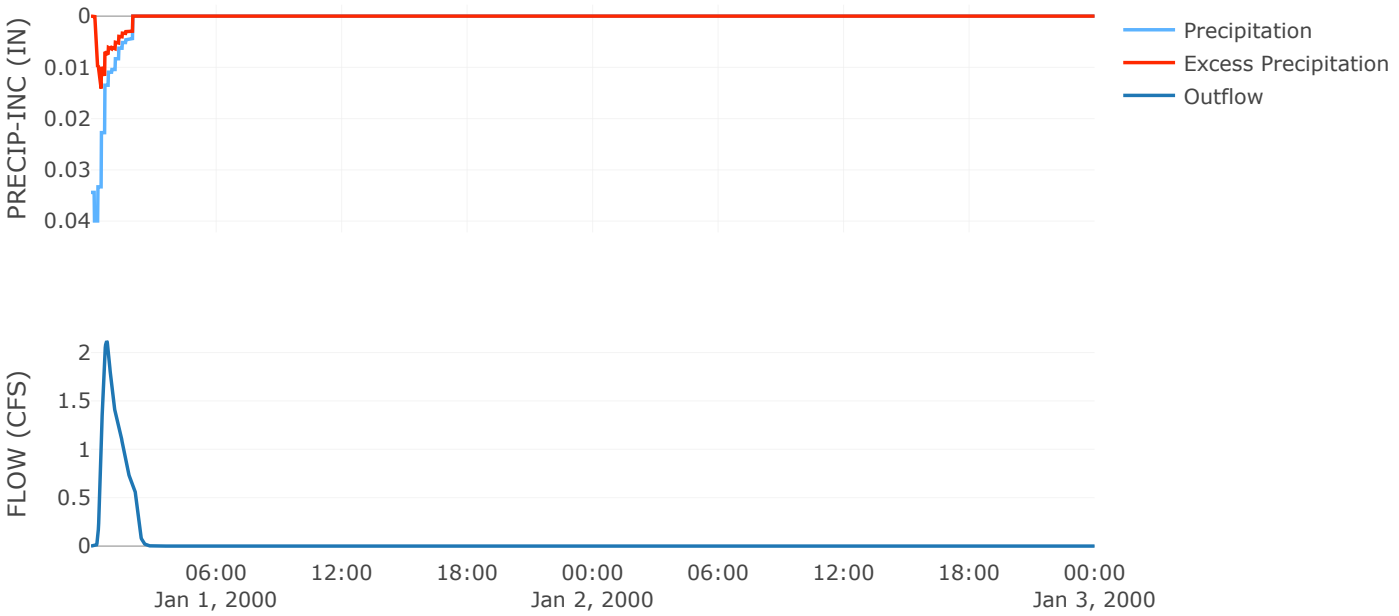
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

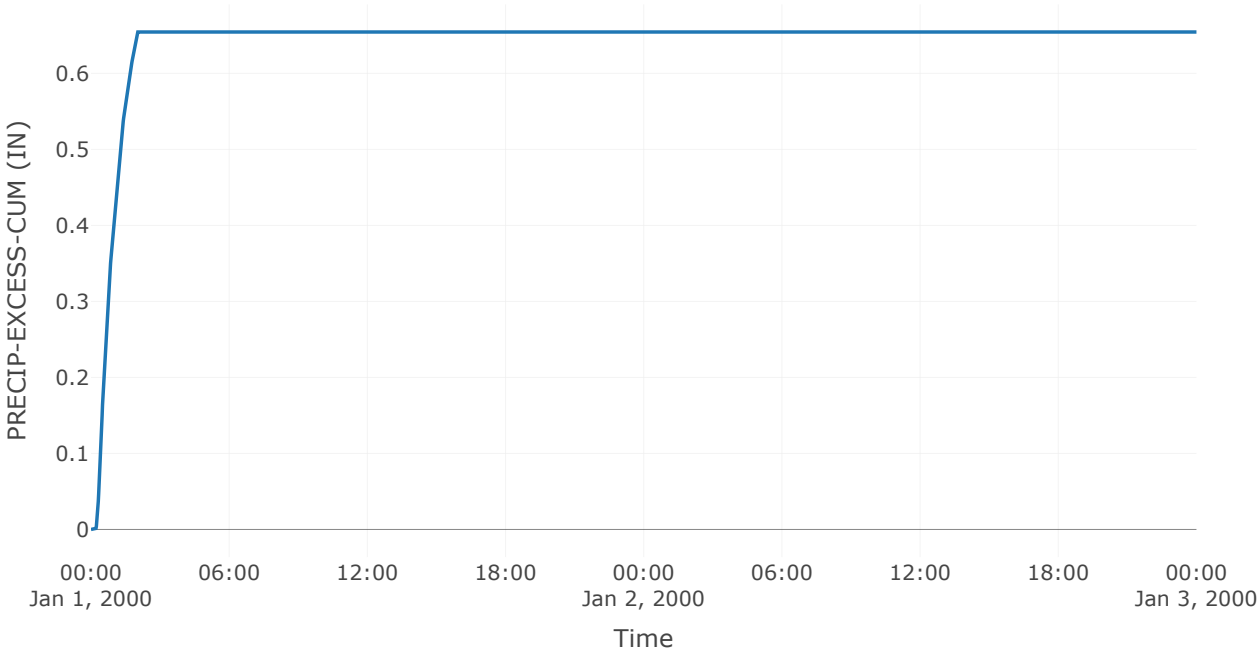
Transform: Scs	
Lag	12
Unitgraph Type	Standard

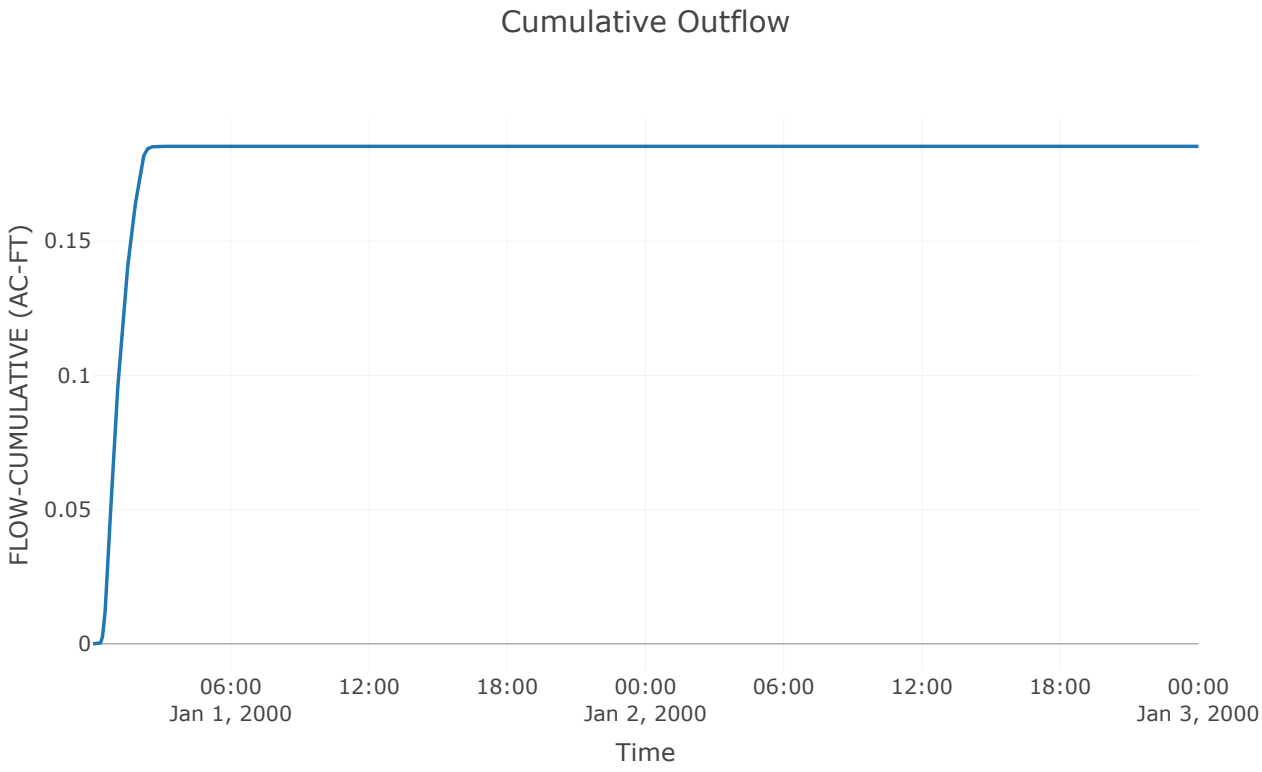
Results: Off-Site Trib2	
Peak Discharge (CFS)	2.12
Time of Peak Discharge	01Jan2000, 00:45
Volume (IN)	0.65
Precipitation Volume (AC - FT)	0.55
Loss Volume (AC - FT)	0.36
Excess Volume (AC - FT)	0.19
Direct Runoff Volume (AC - FT)	0.19
Baseflow Volume (AC - FT)	0

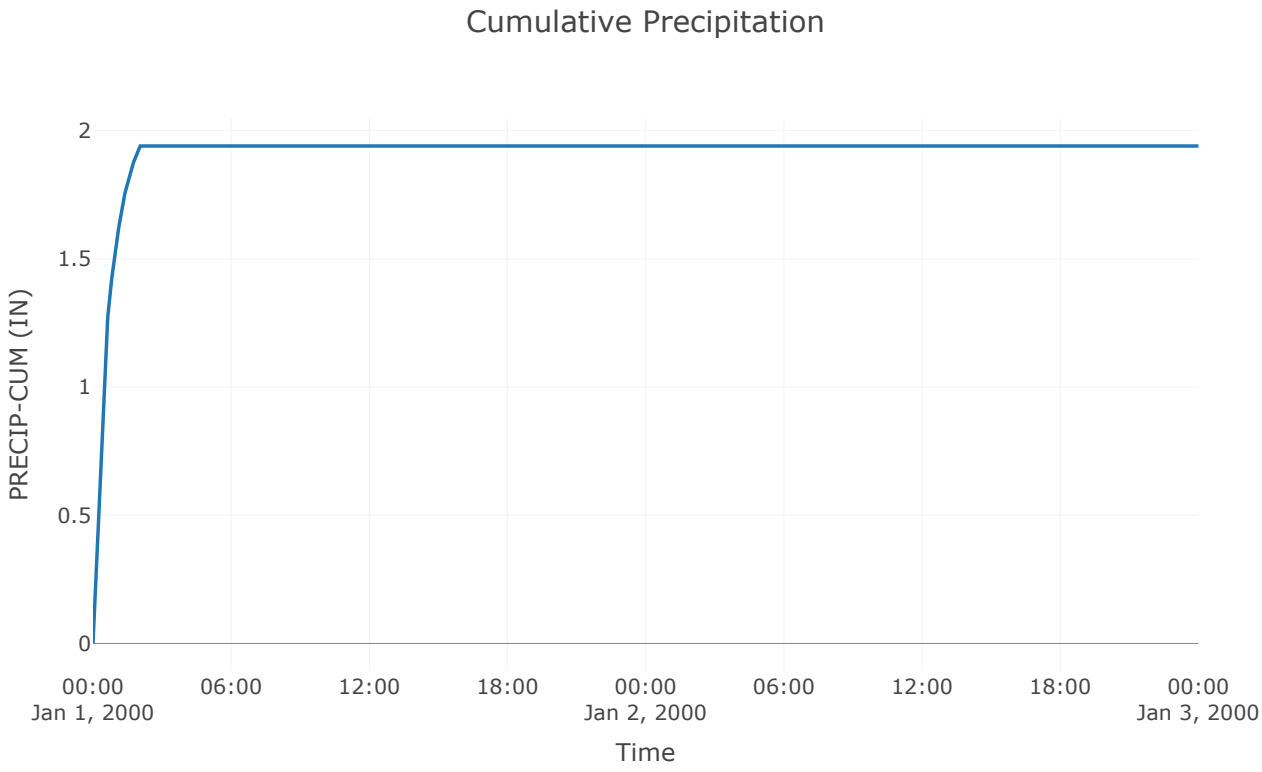
Precipitation and Outflow

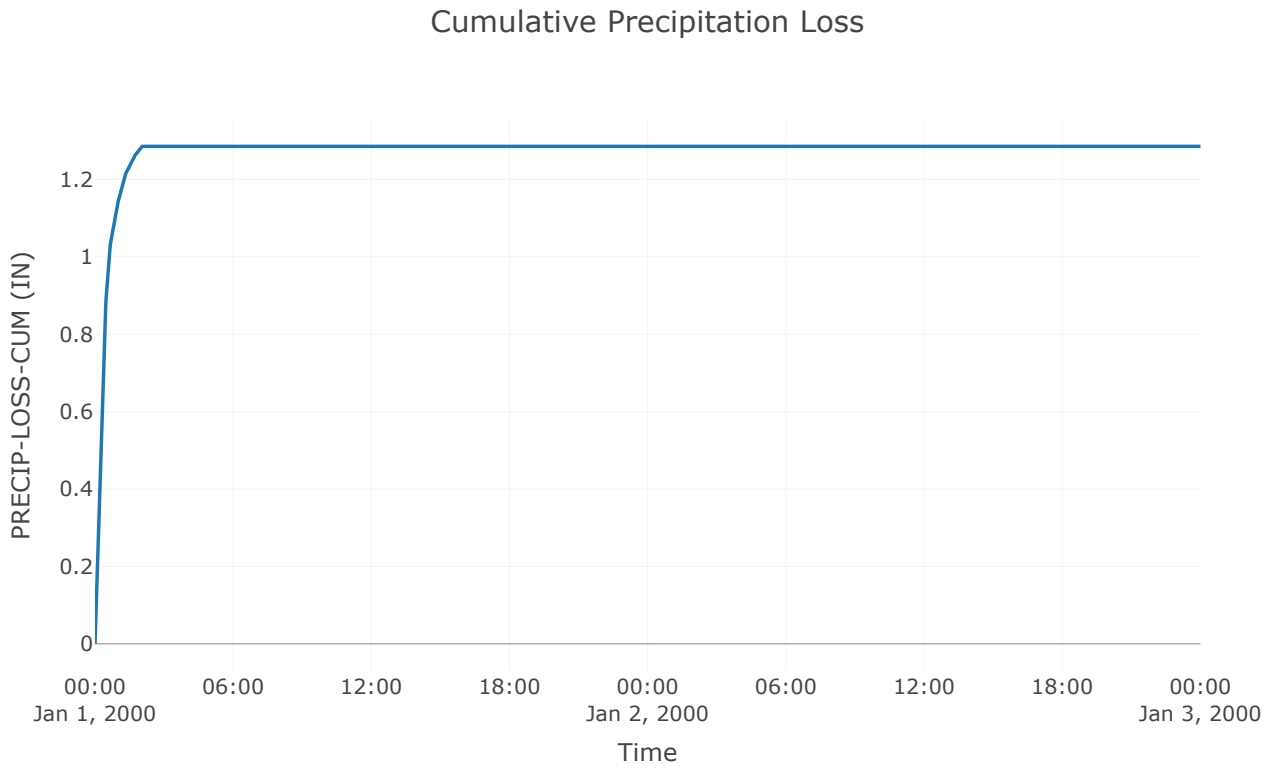


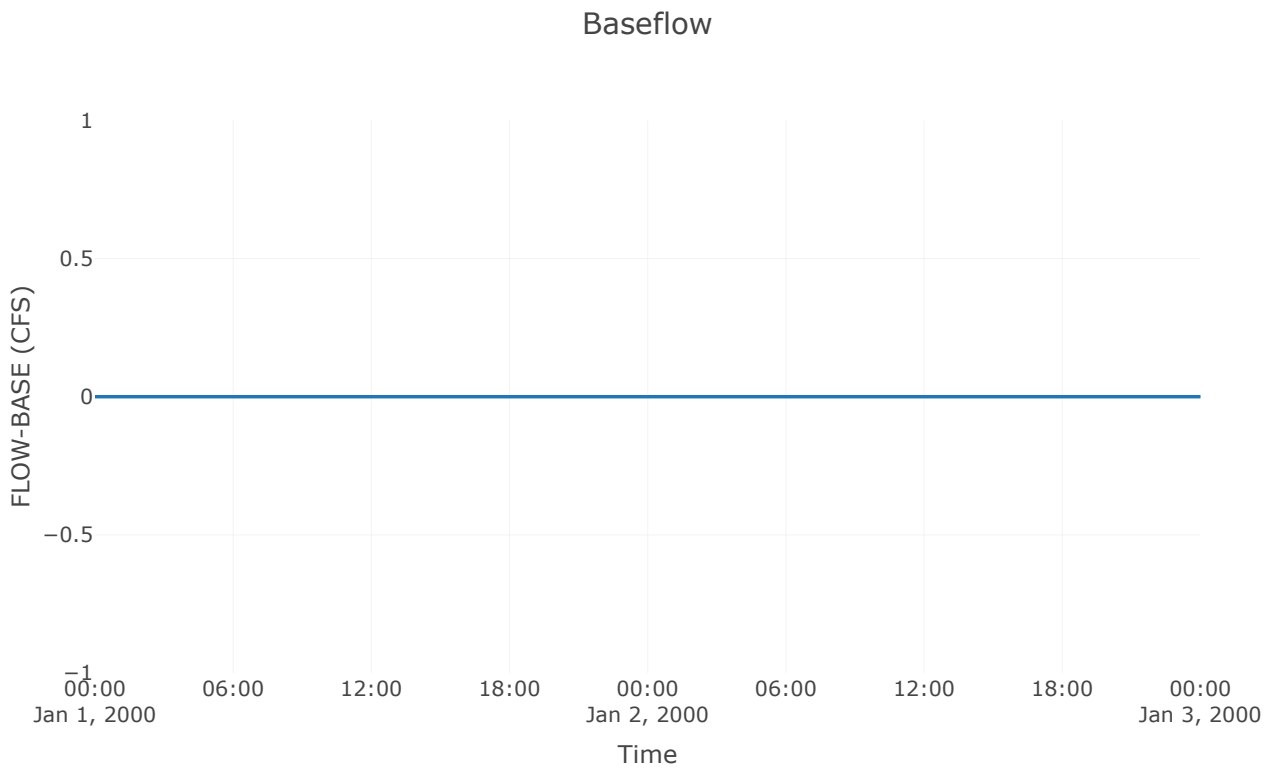
Cumulative Excess Precipitation



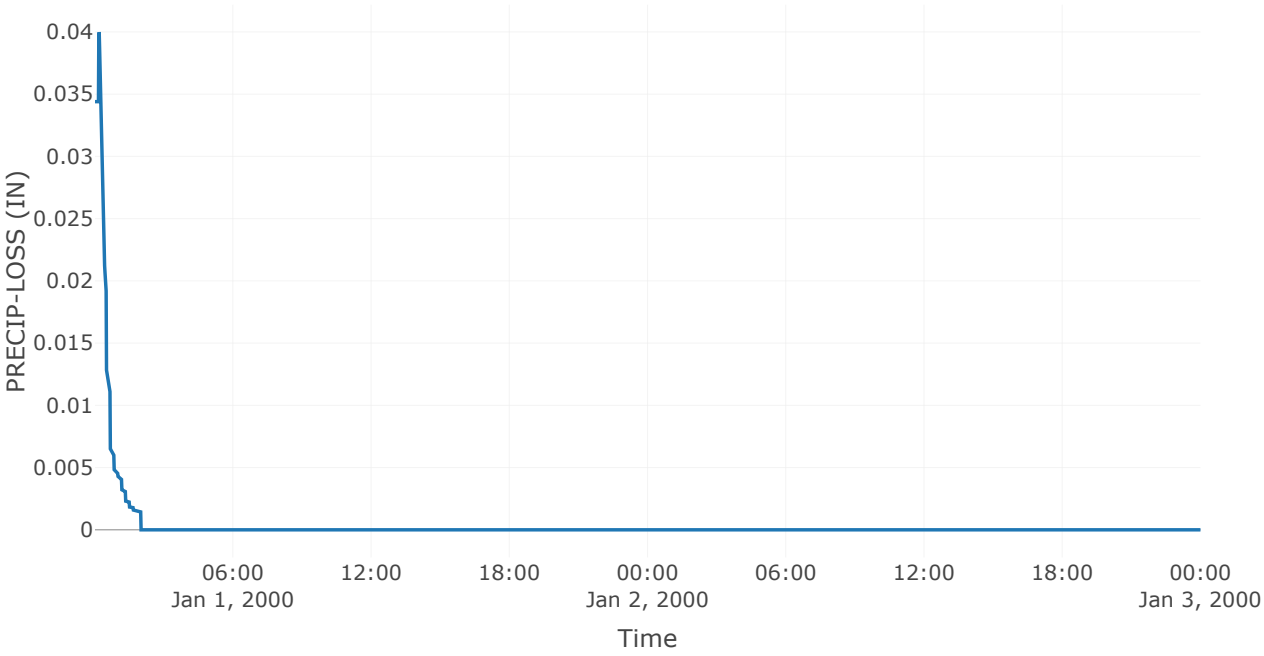

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

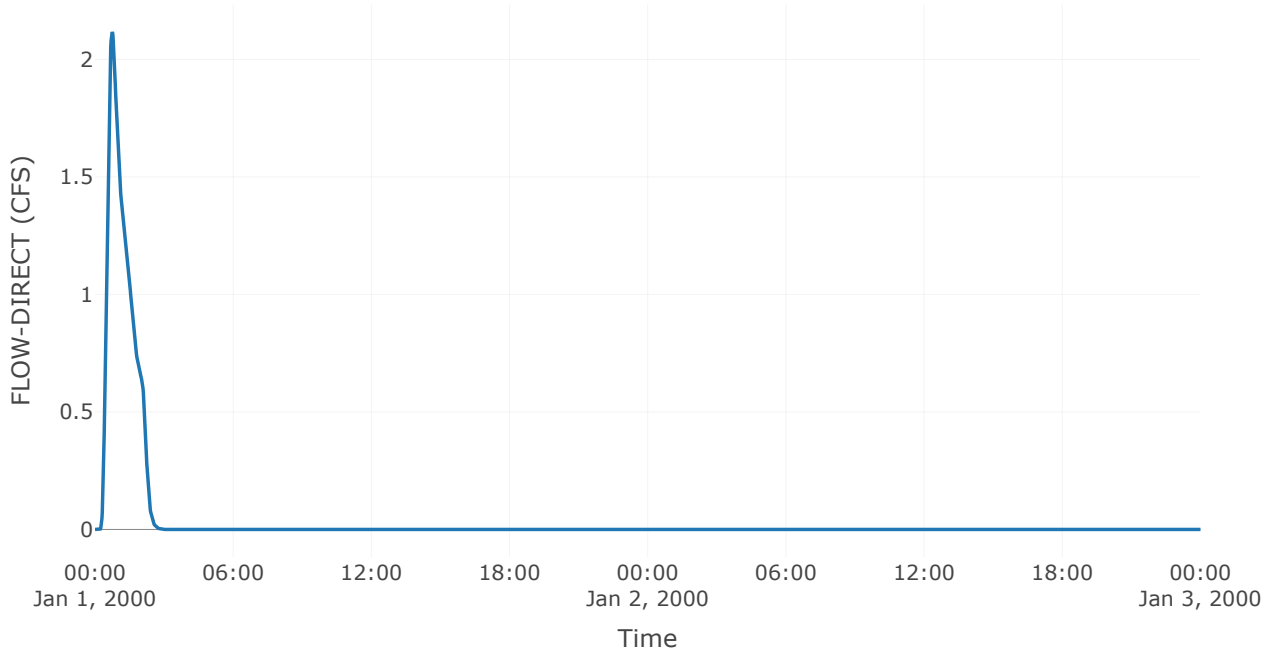

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

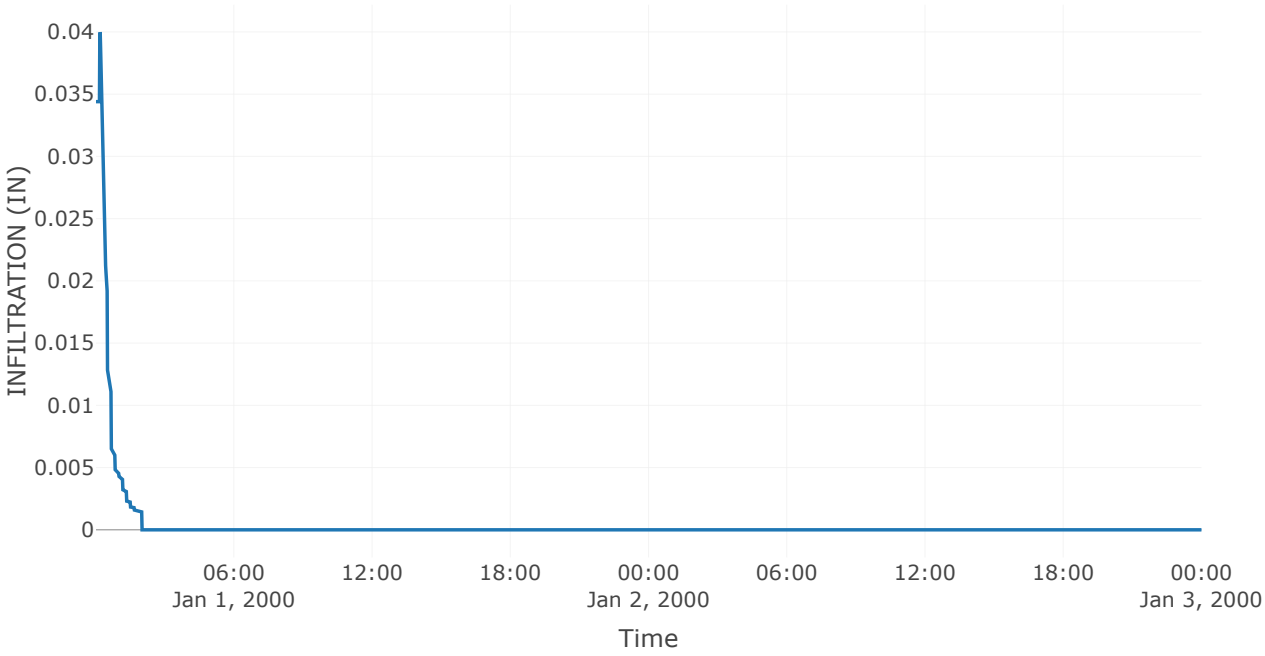

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



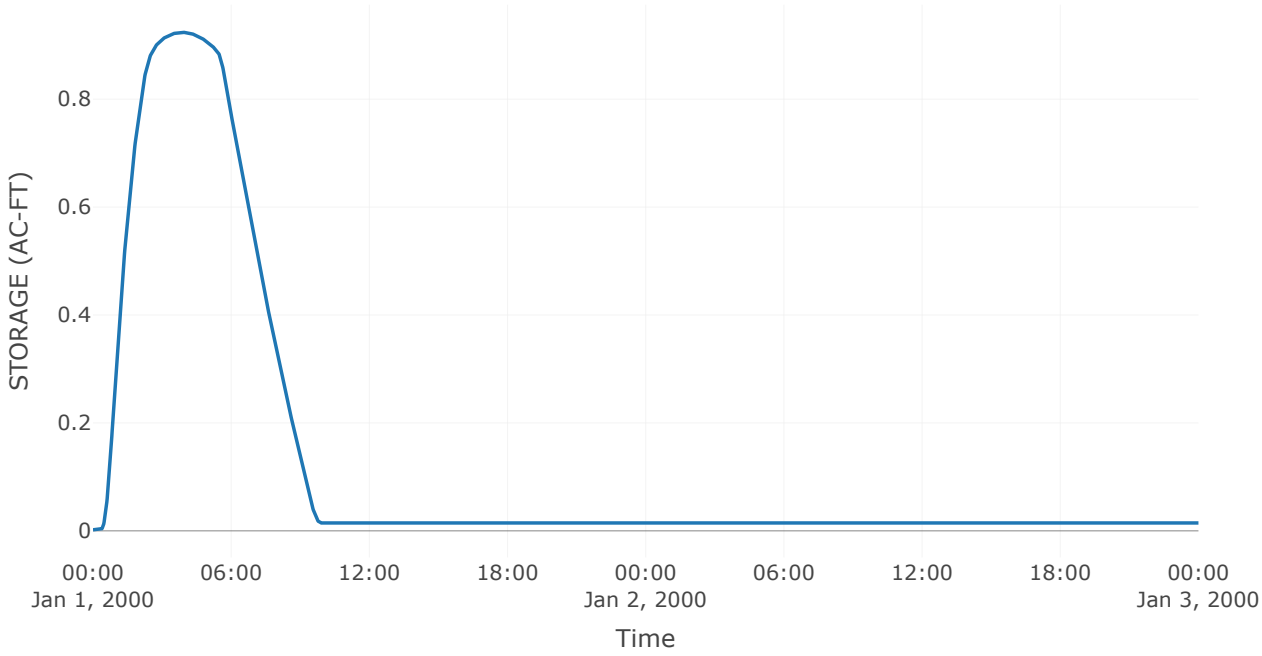

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

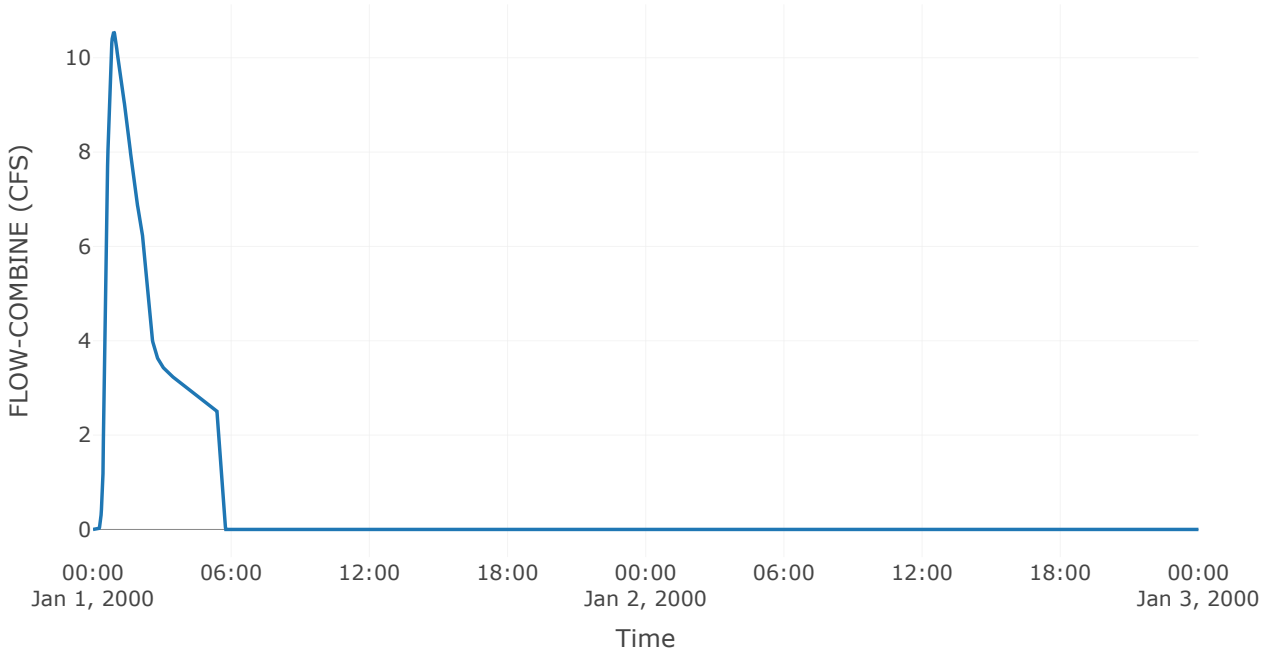
Downstream : Basin 3

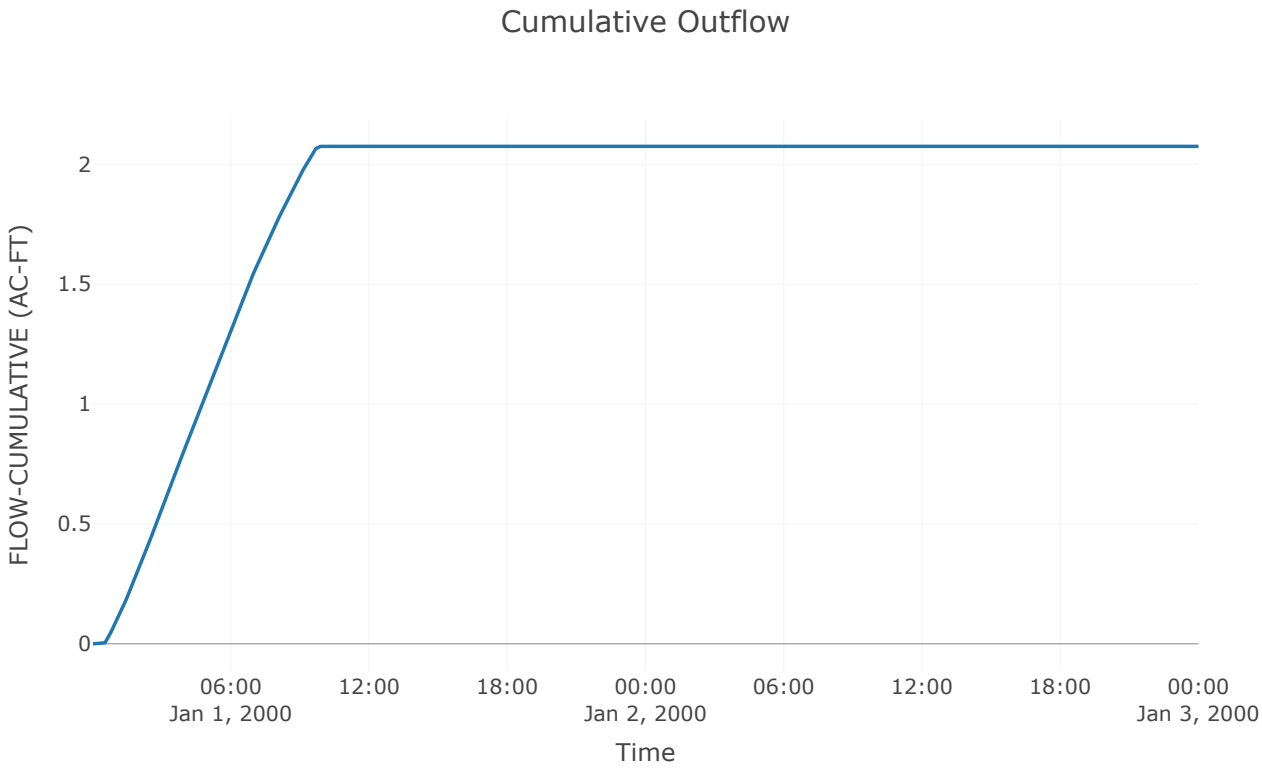
Results: Basin 2	
Peak Discharge (CFS)	3.07
Time of Peak Discharge	01Jan2000, 03:53
Volume (IN)	0.72
Peak Inflow (CFS)	10.55
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	2.09
Maximum Storage (AC - FT)	0.92
Peak Elevation (FT)	692.6
Discharge Volume (AC - FT)	2.07

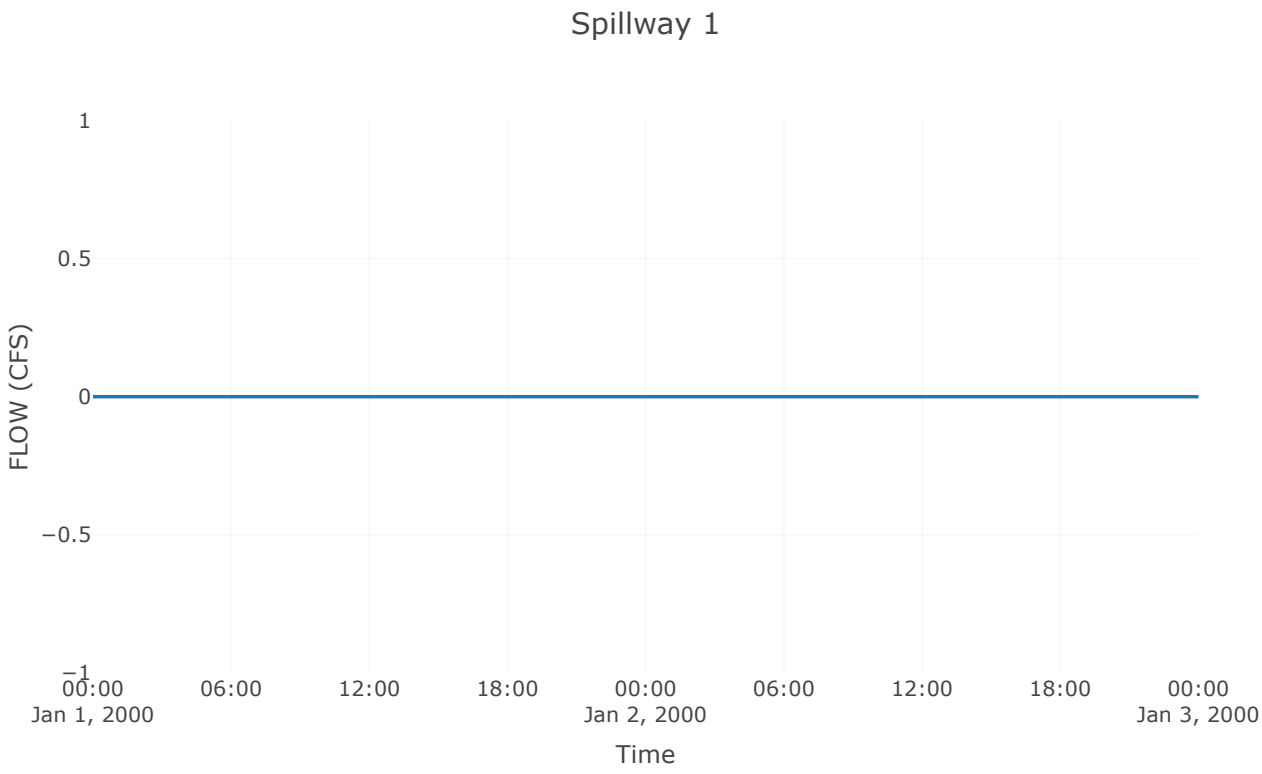
Storage

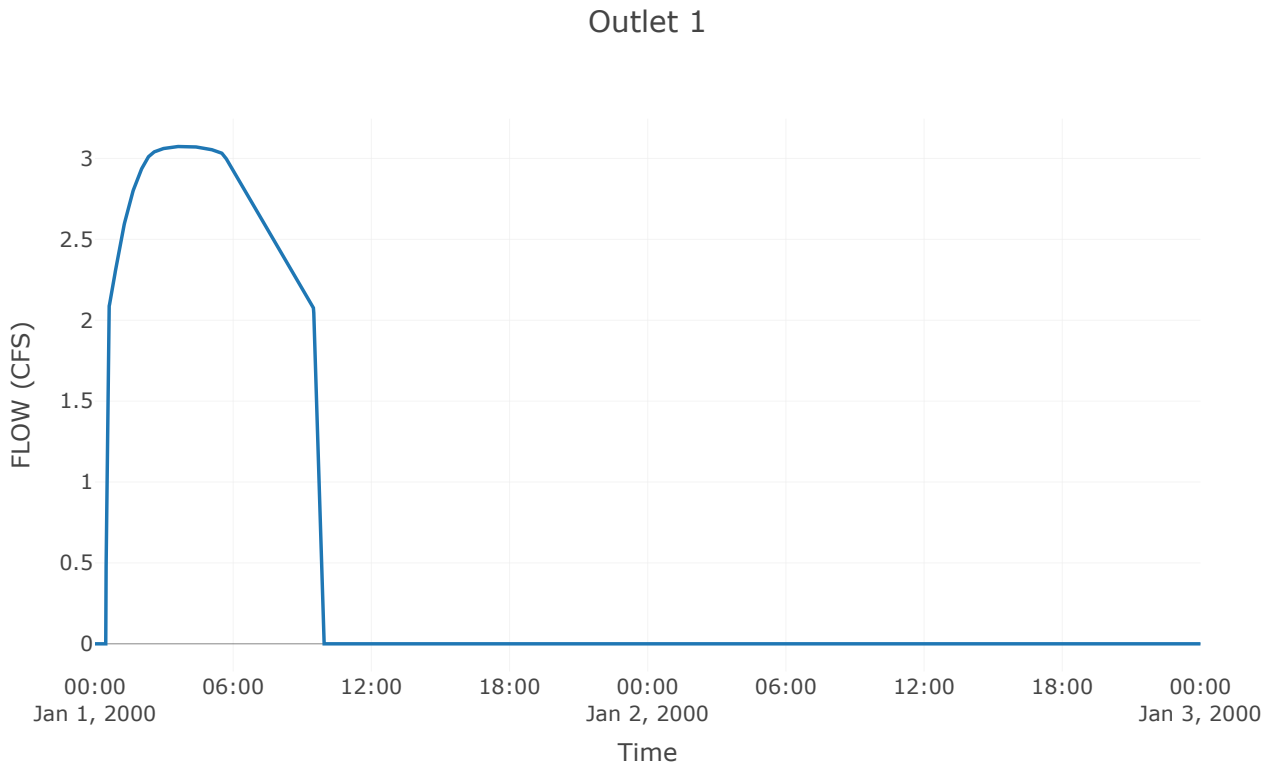


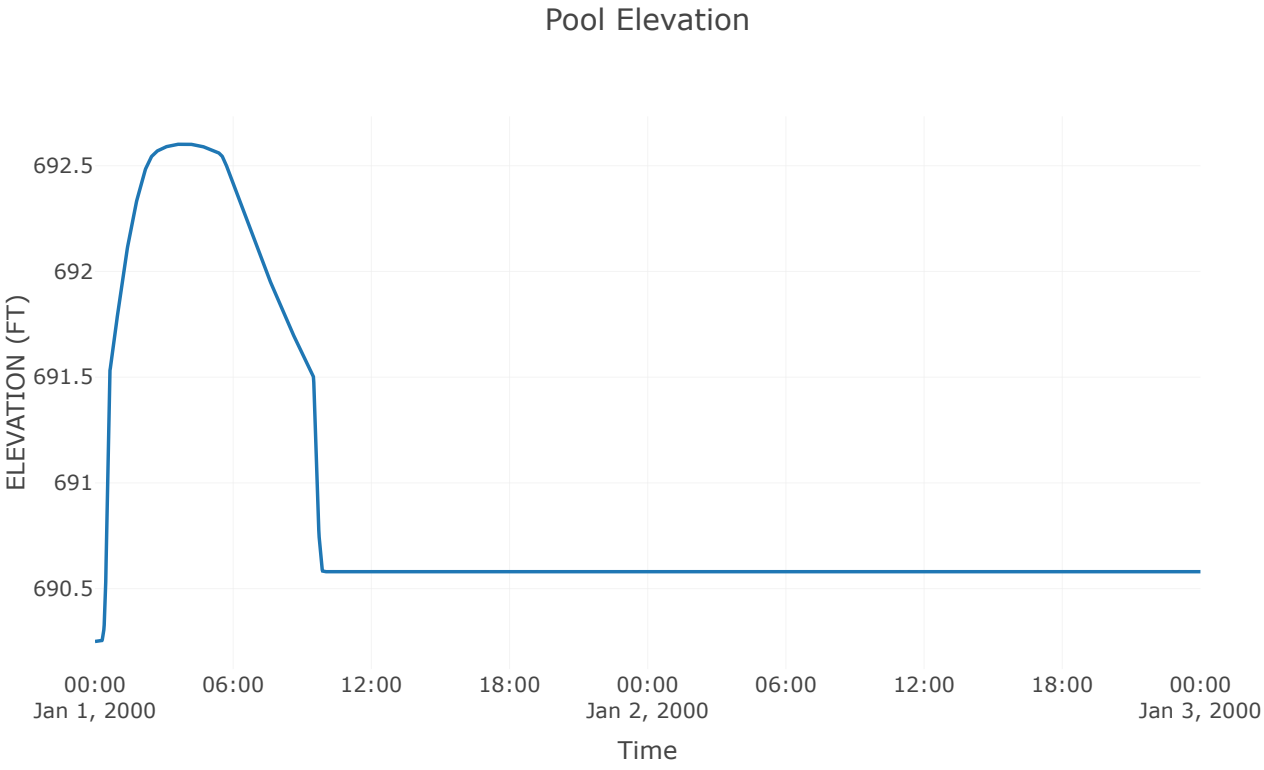
Combined Inflow

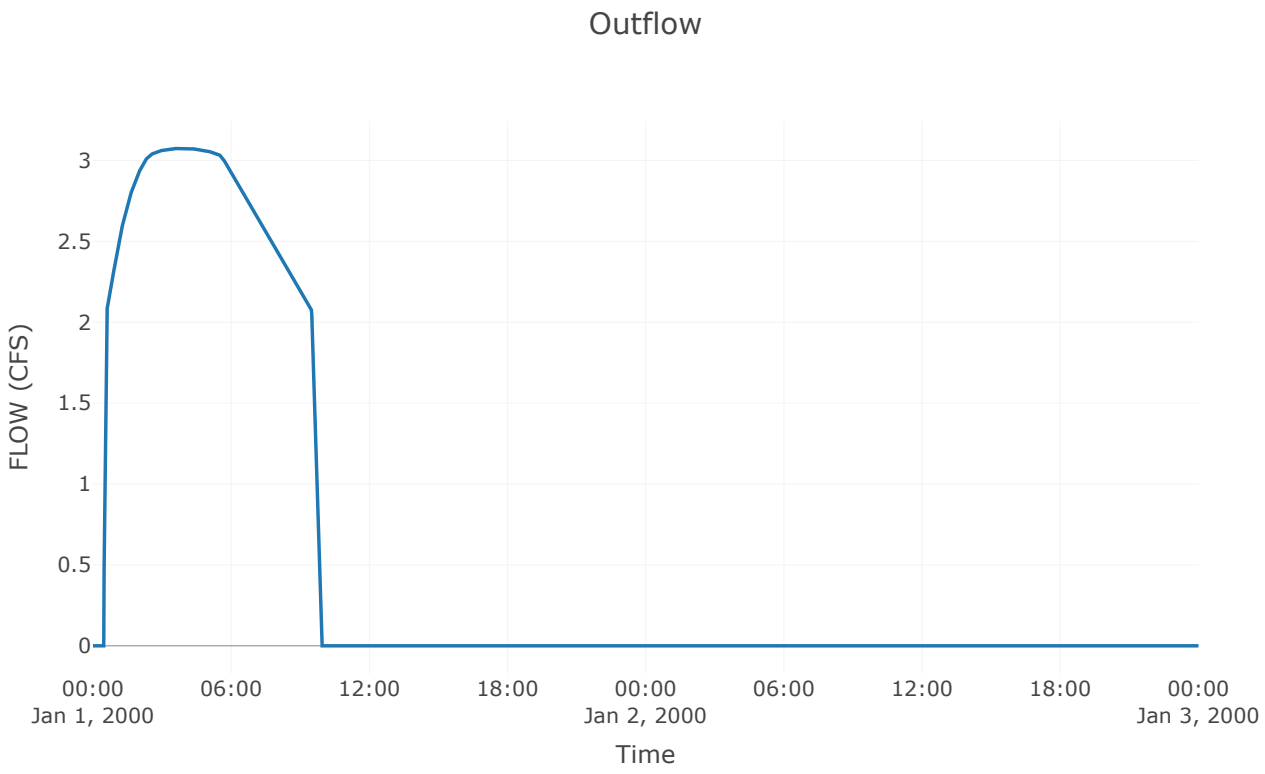



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
692.5
692
691.5
691
690.5
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

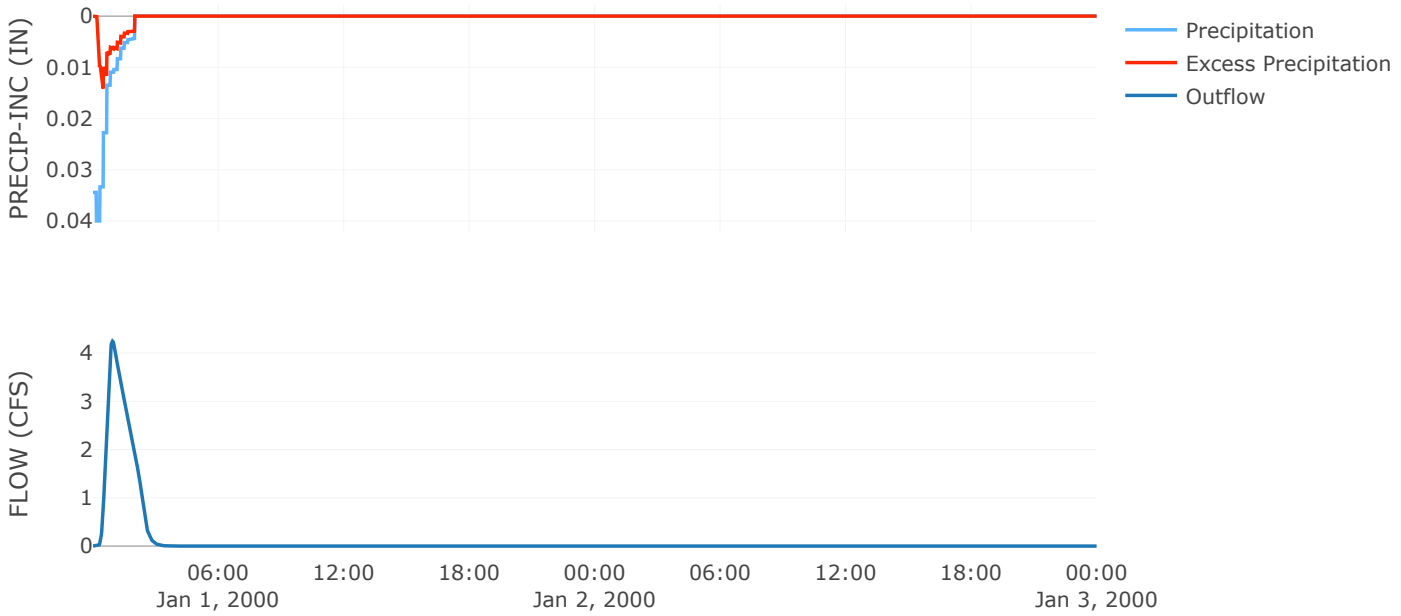
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

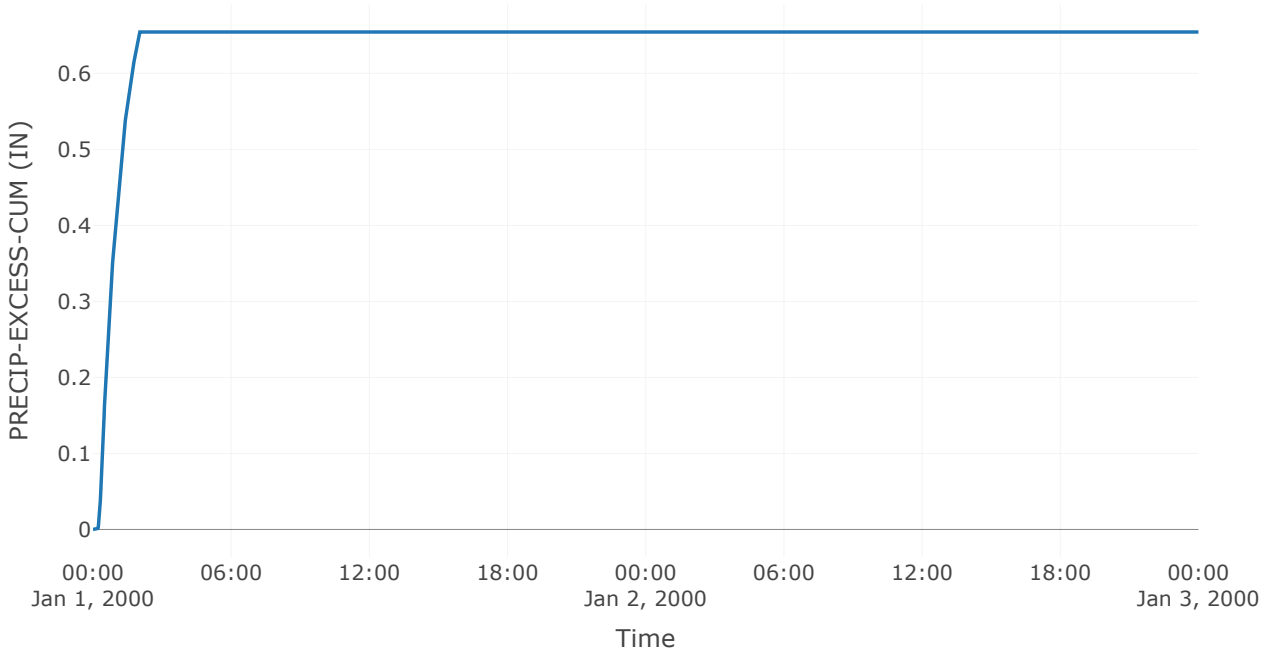
Transform: Scs	
Lag	21
Unitgraph Type	Standard

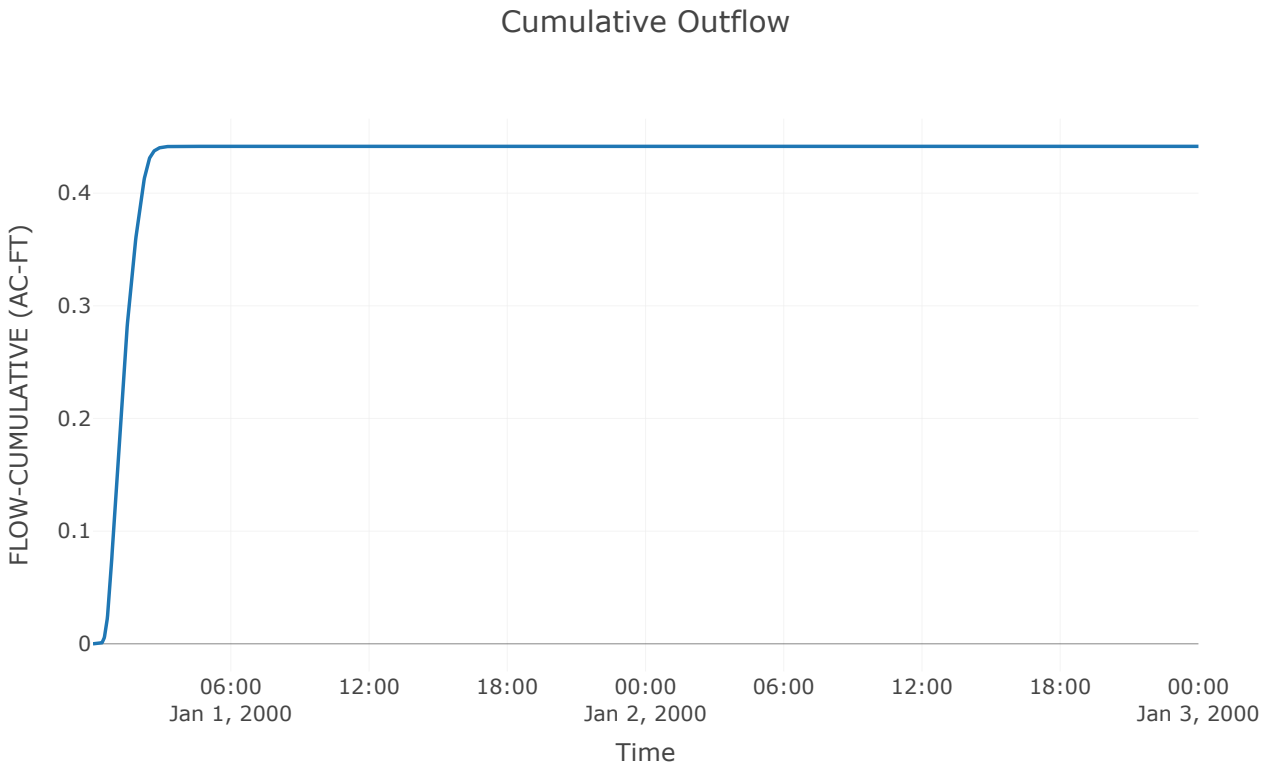
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	4.24
Time of Peak Discharge	01Jan2000, 00:56
Volume (IN)	0.65
Precipitation Volume (AC - FT)	1.31
Loss Volume (AC - FT)	0.87
Excess Volume (AC - FT)	0.44
Direct Runoff Volume (AC - FT)	0.44
Baseflow Volume (AC - FT)	0

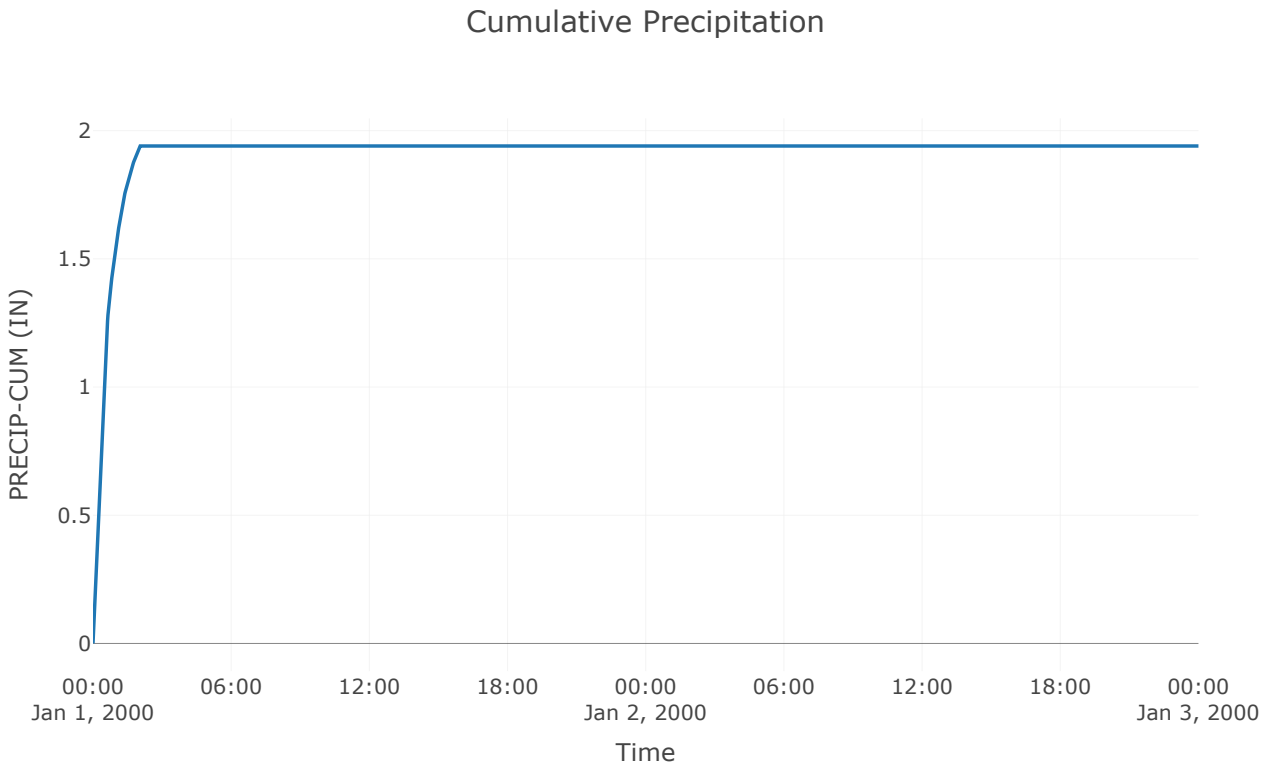
Precipitation and Outflow

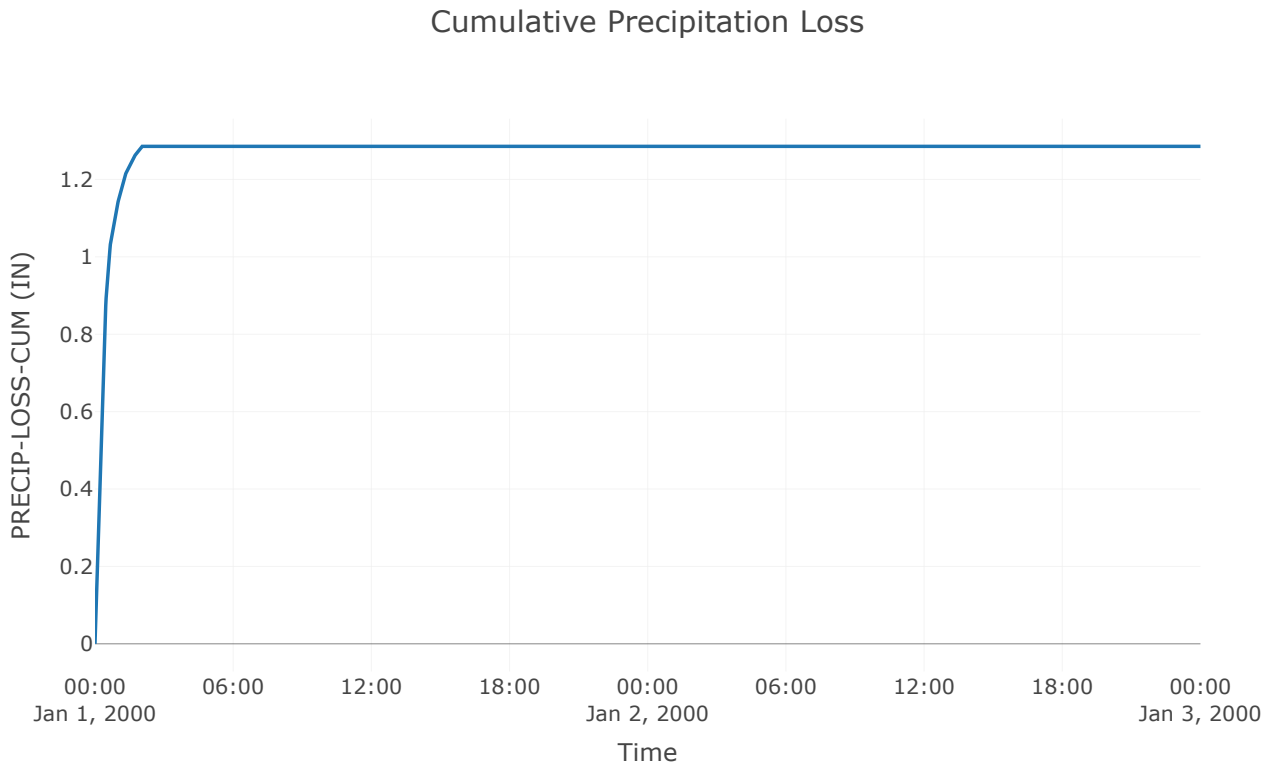


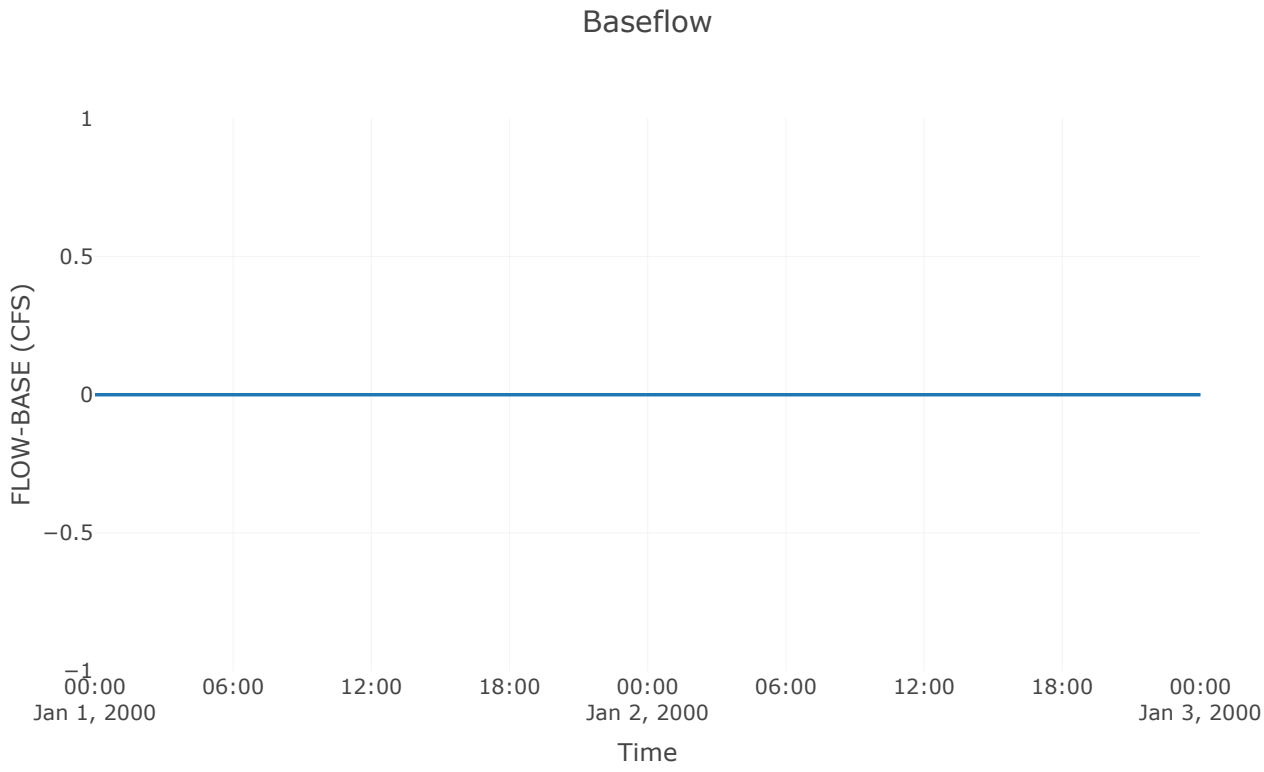
Cumulative Excess Precipitation



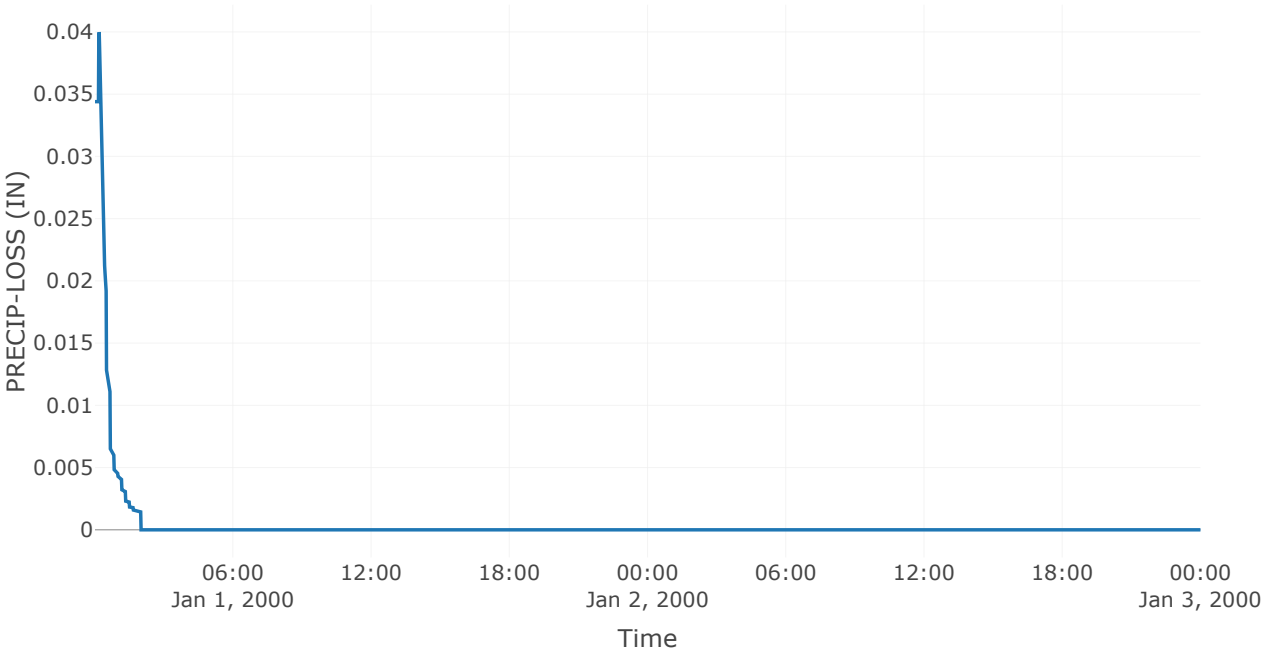

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

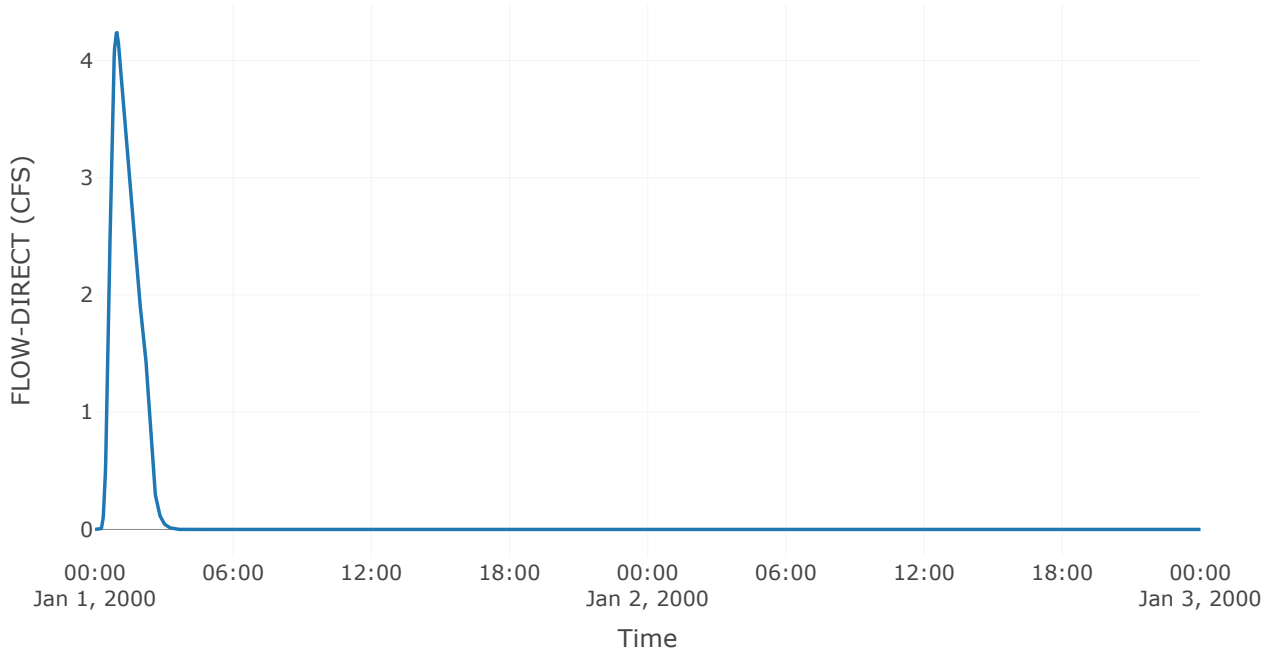

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

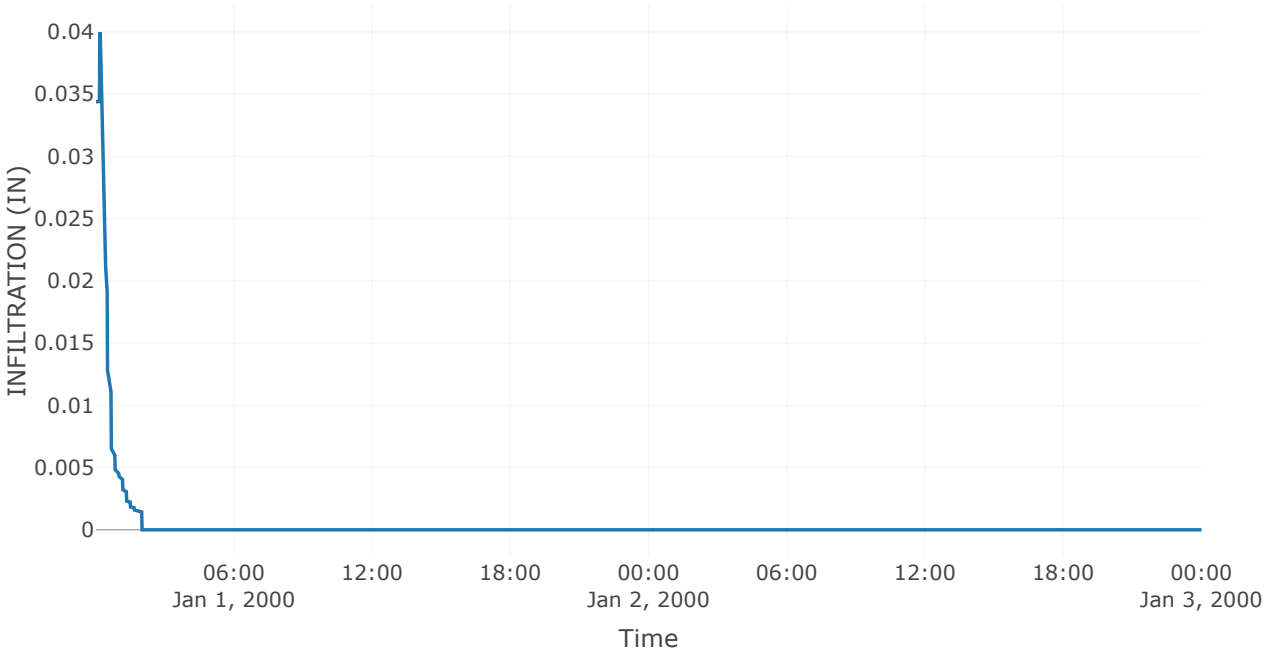

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

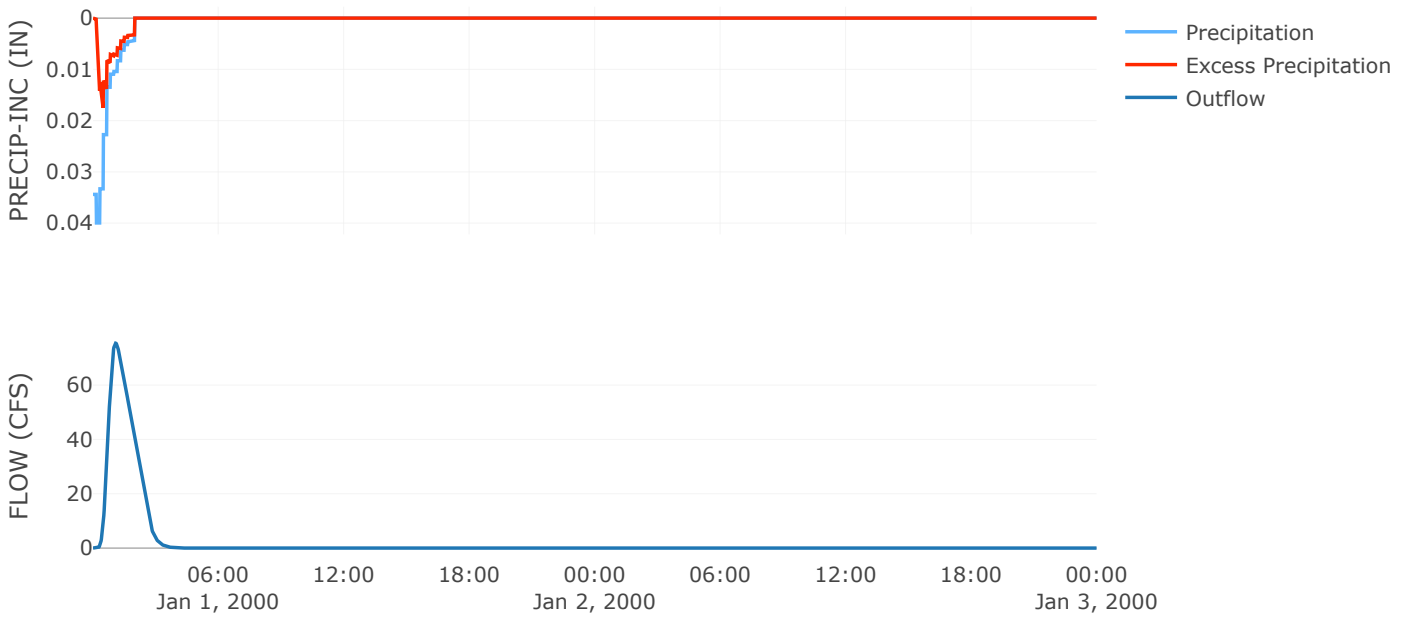
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

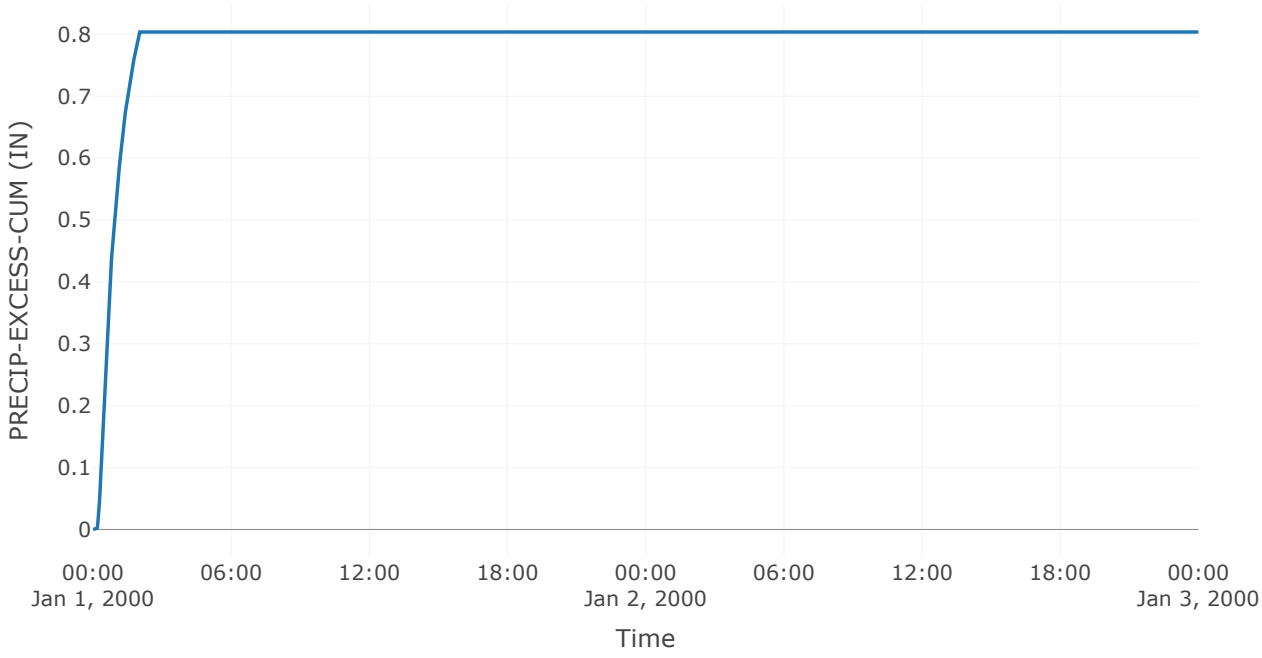
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

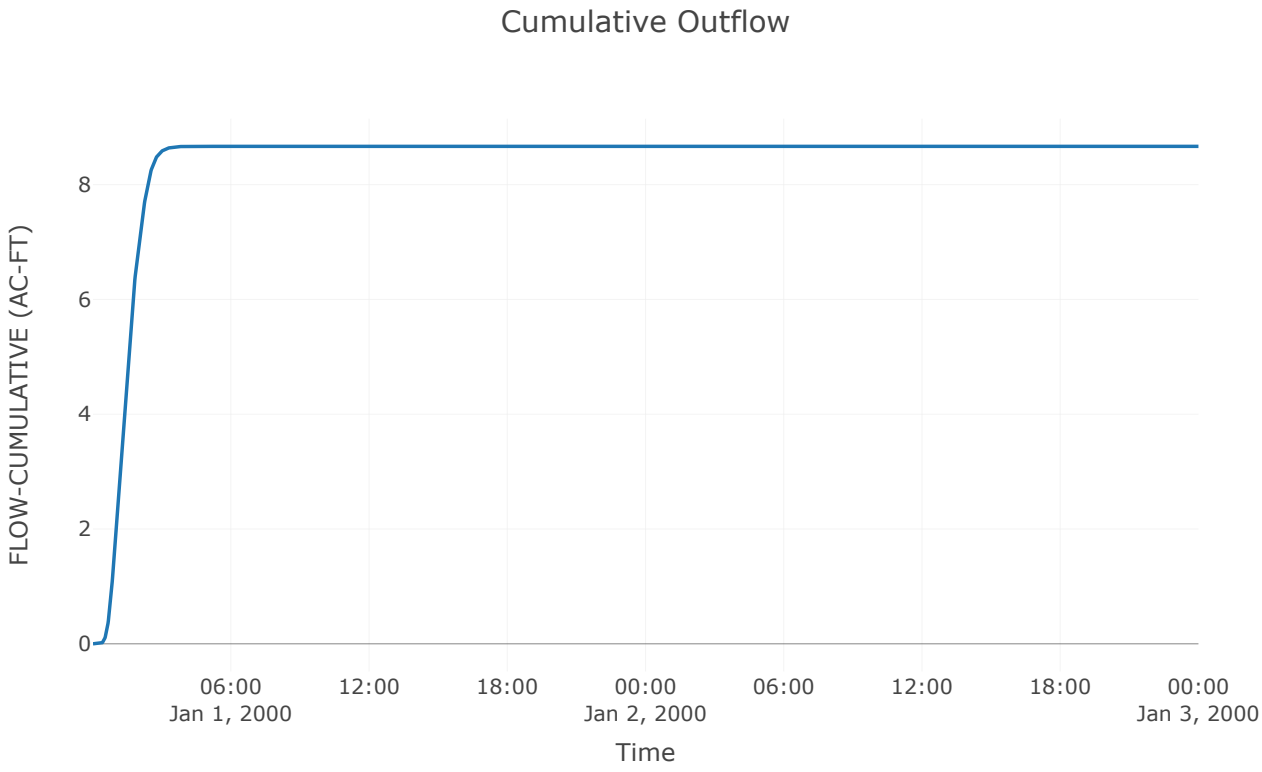
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	75.41
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.8
Precipitation Volume (AC - FT)	20.92
Loss Volume (AC - FT)	12.25
Excess Volume (AC - FT)	8.67
Direct Runoff Volume (AC - FT)	8.67
Baseflow Volume (AC - FT)	0

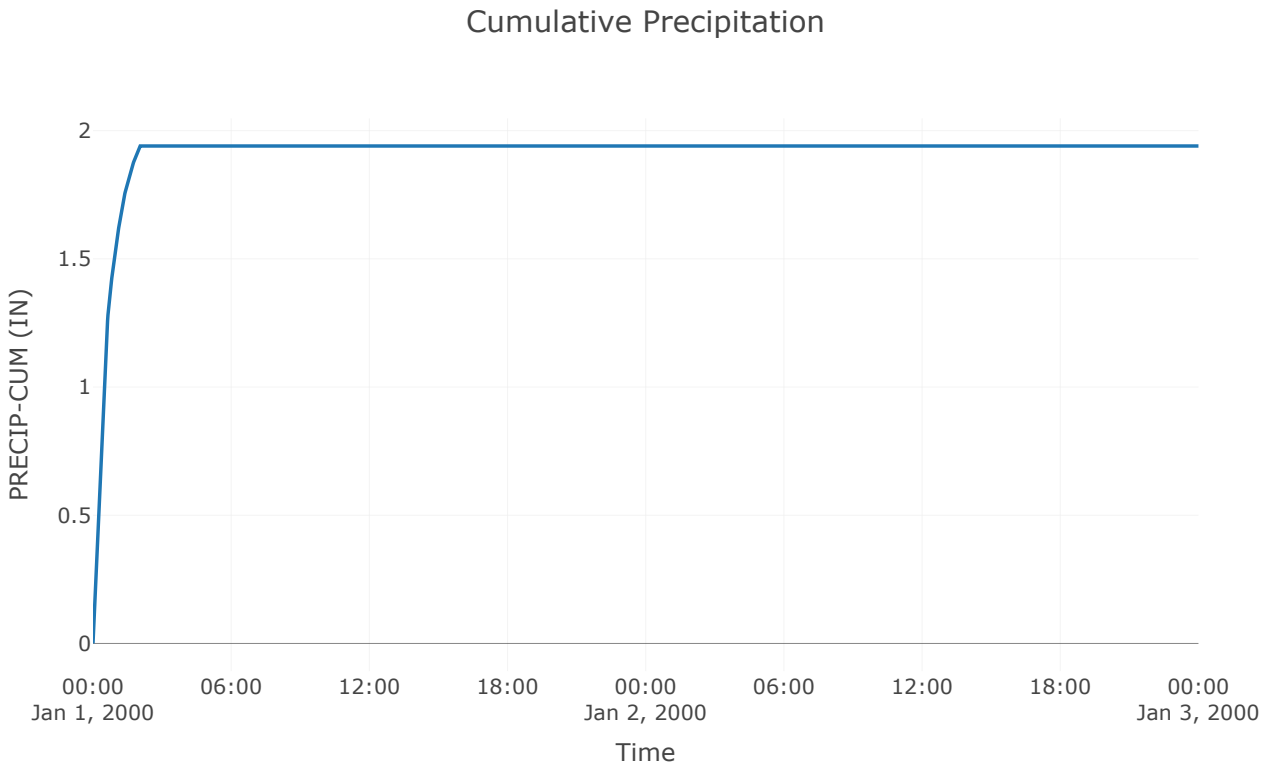
Precipitation and Outflow

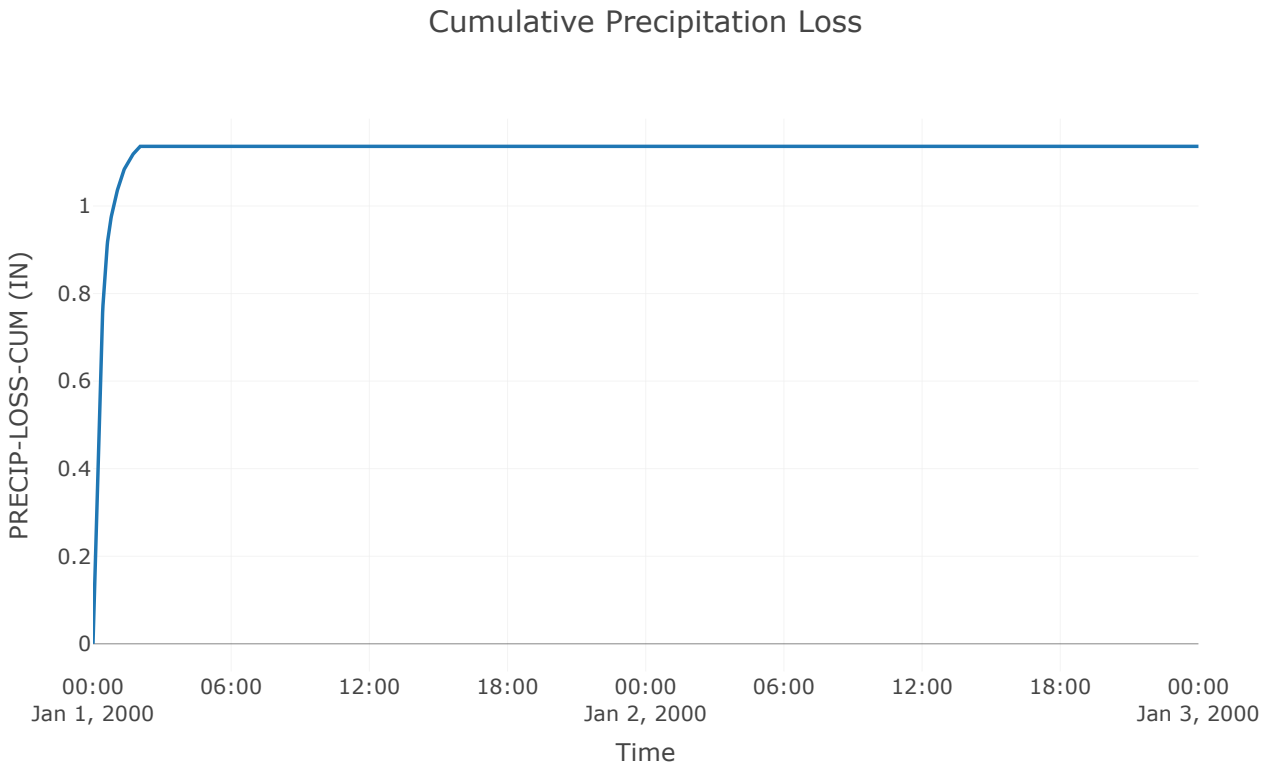


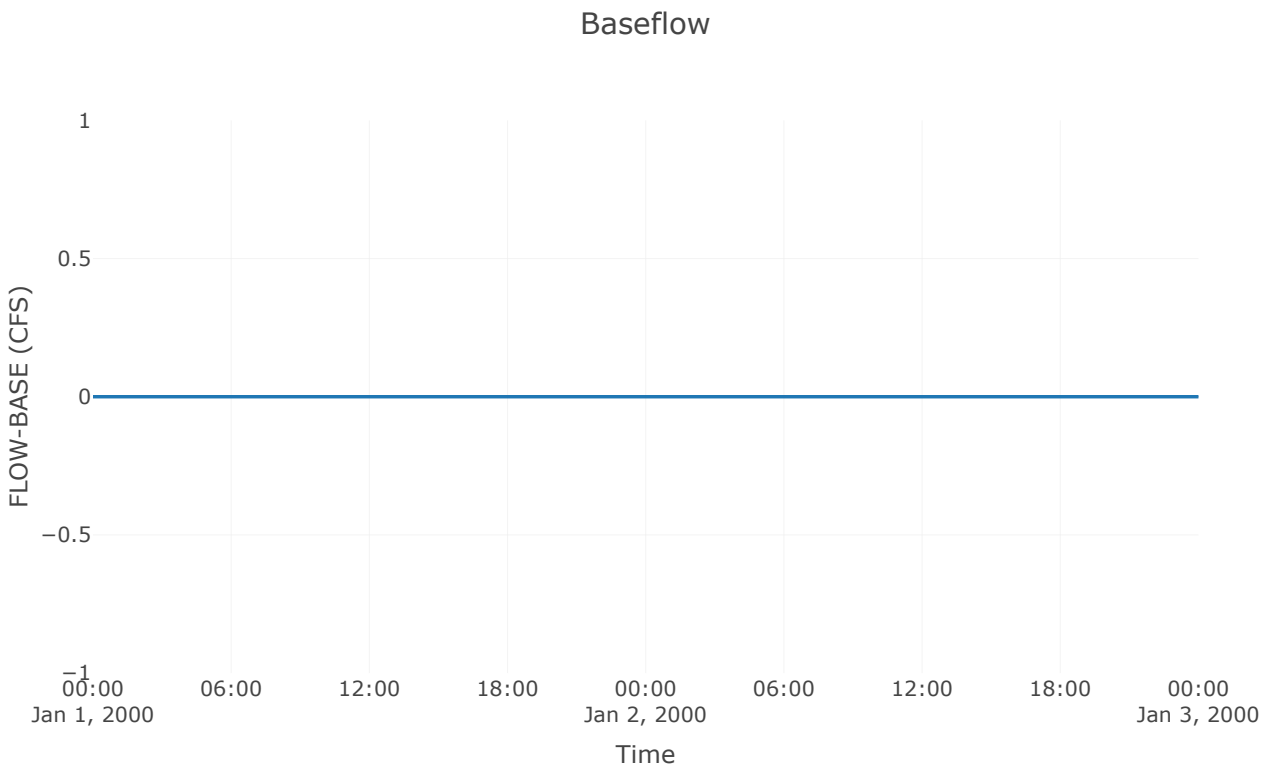
Cumulative Excess Precipitation

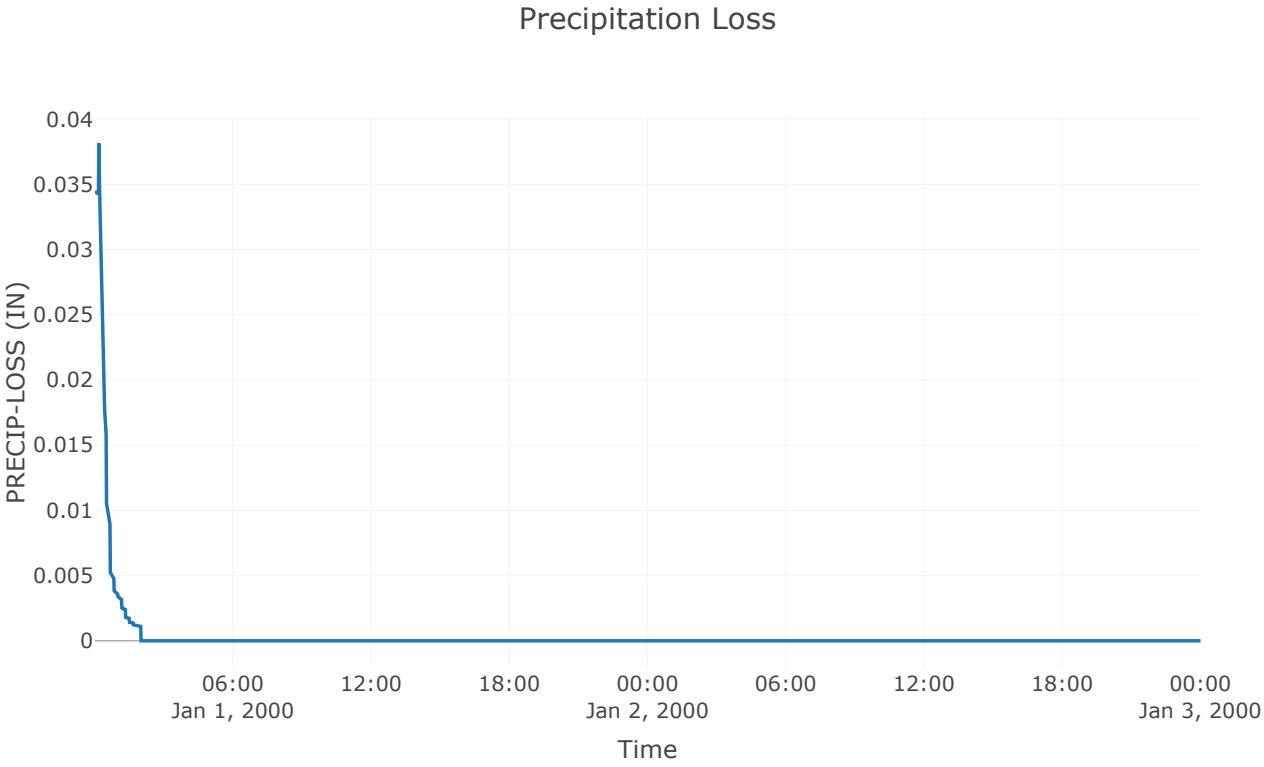


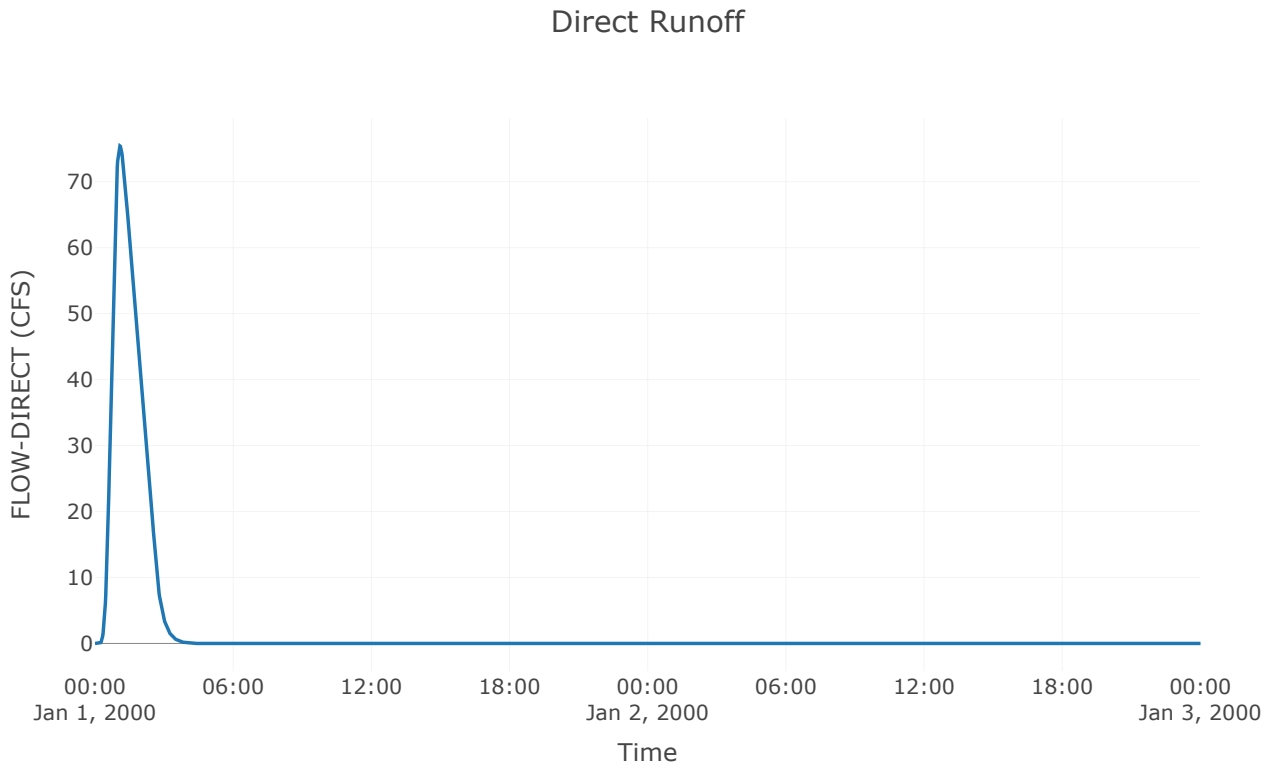

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

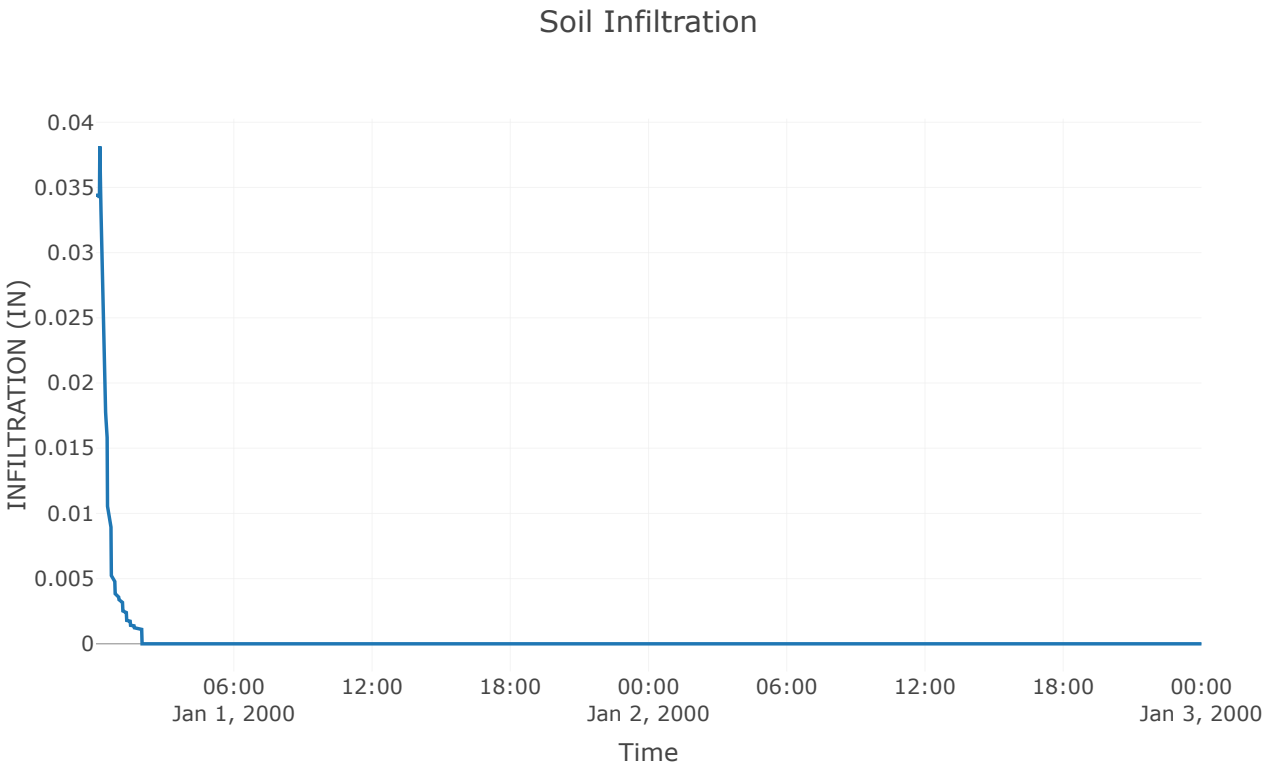

Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

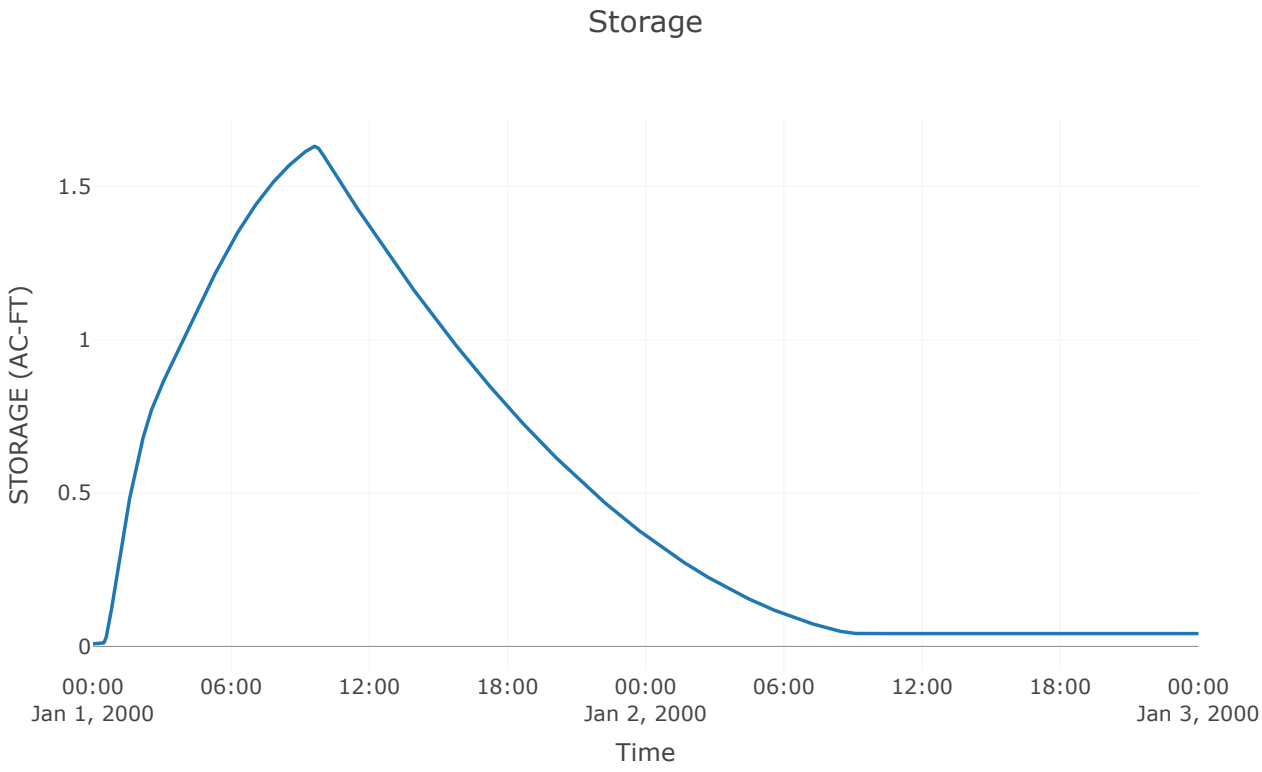

Direct Runoff
FLOW-DIRECT (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

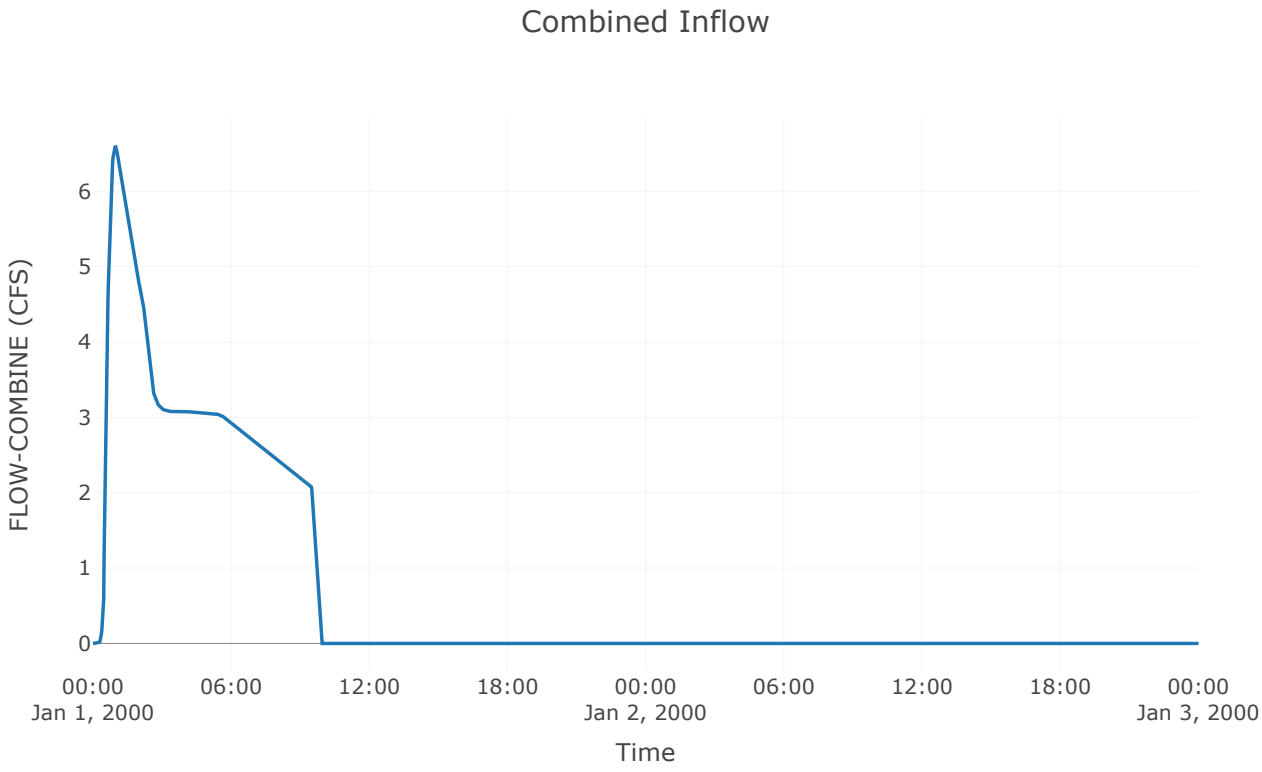

Soil Infiltration
INFILTRATION (IN)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

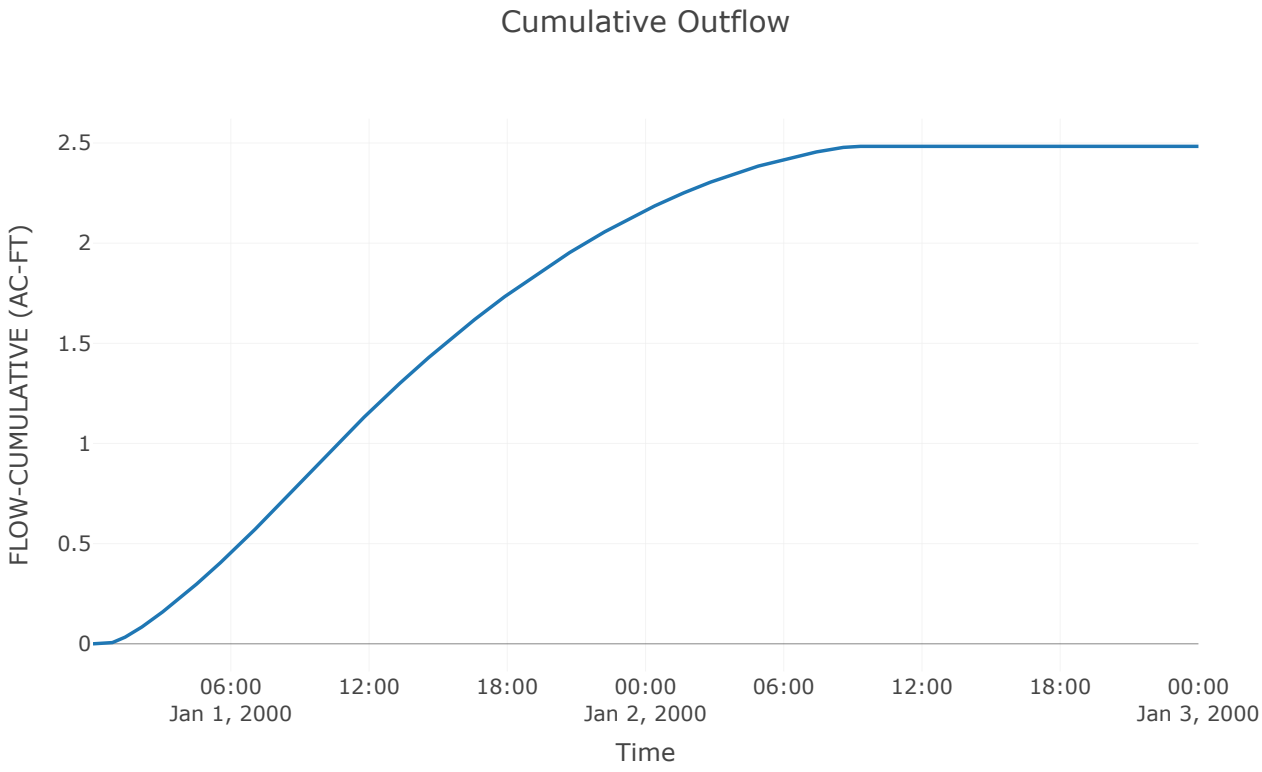
Reservoir: Basin 3

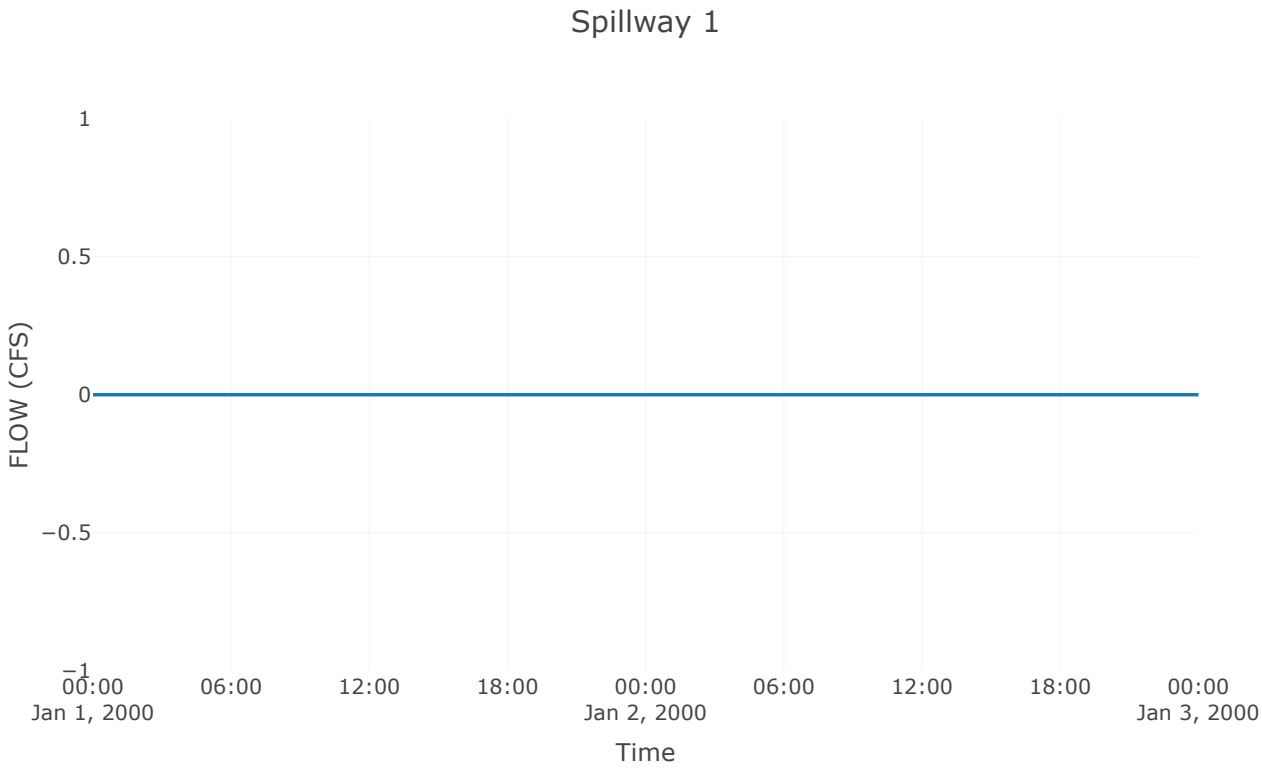
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	1.48
Time of Peak Discharge	01Jan2000, 09:37
Volume (IN)	0.69
Peak Inflow (CFS)	6.6
Time of Peak Inflow	01Jan2000, 00:58
Inflow Volume (AC - FT)	2.52
Maximum Storage (AC - FT)	1.63
Peak Elevation (FT)	690.81
Discharge Volume (AC - FT)	2.48

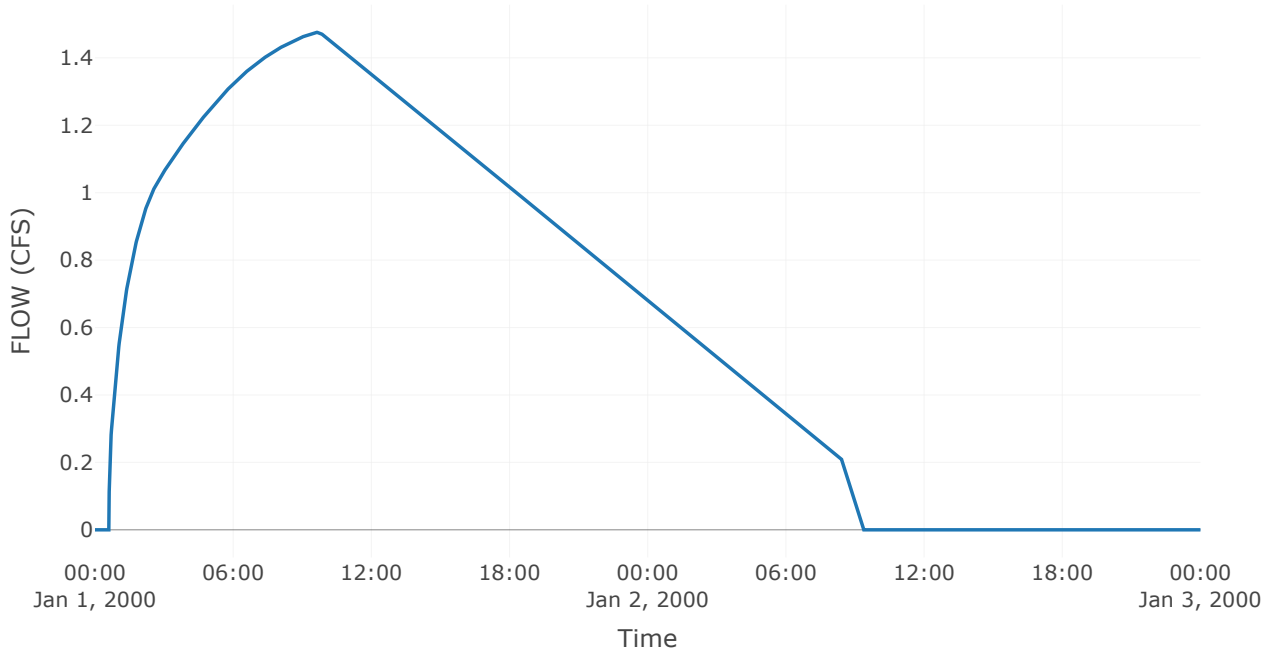

Storage
STORAGE (AC-FT)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

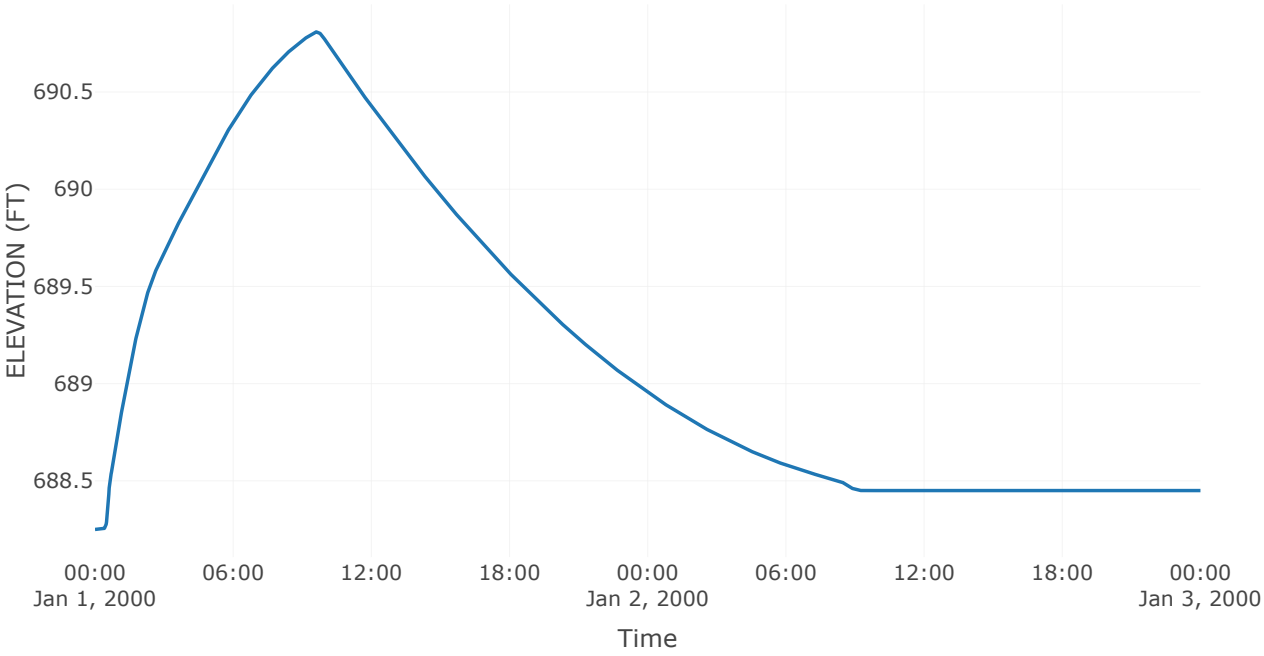

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

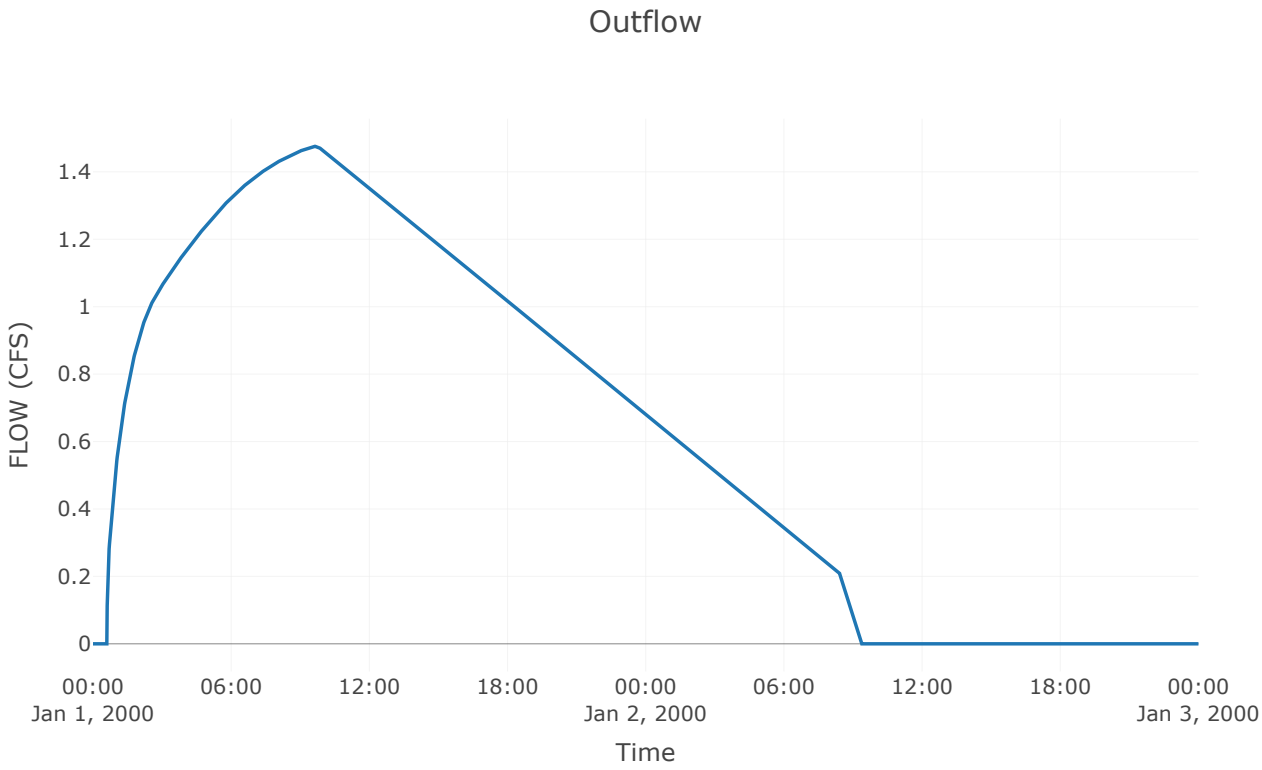

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

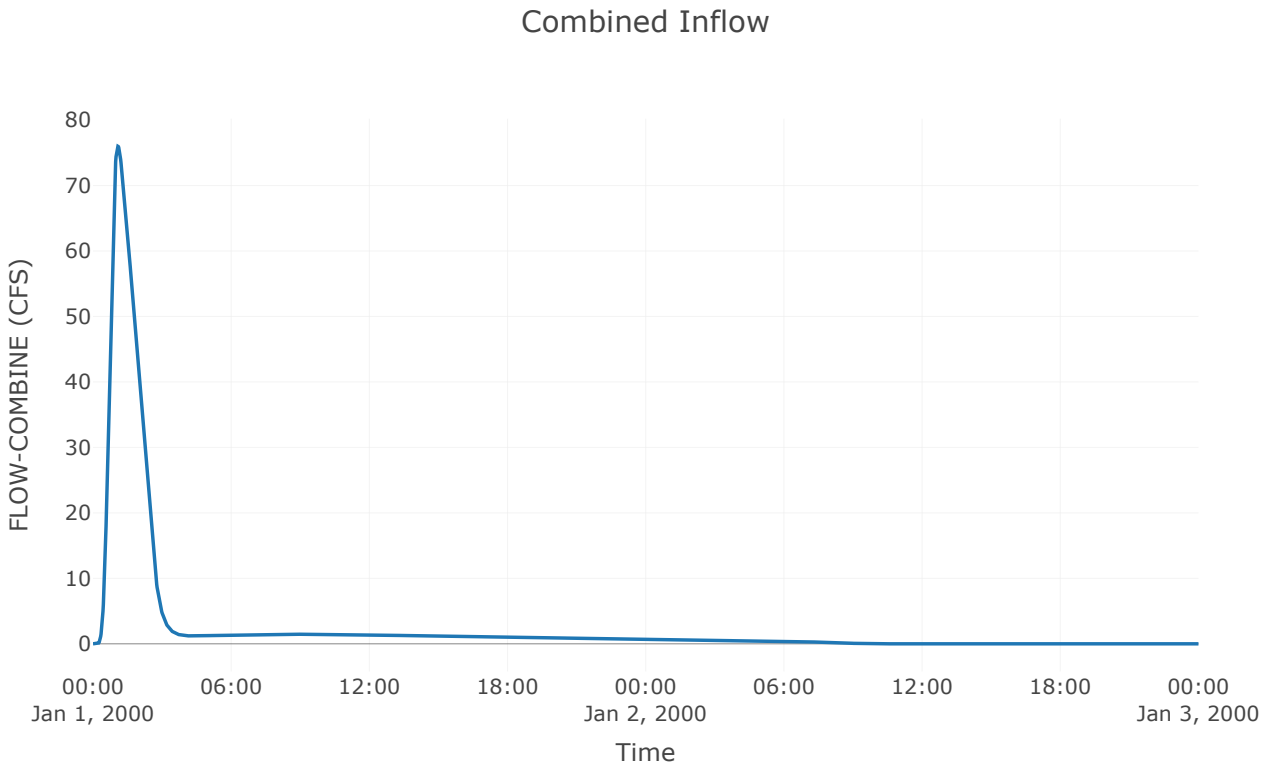


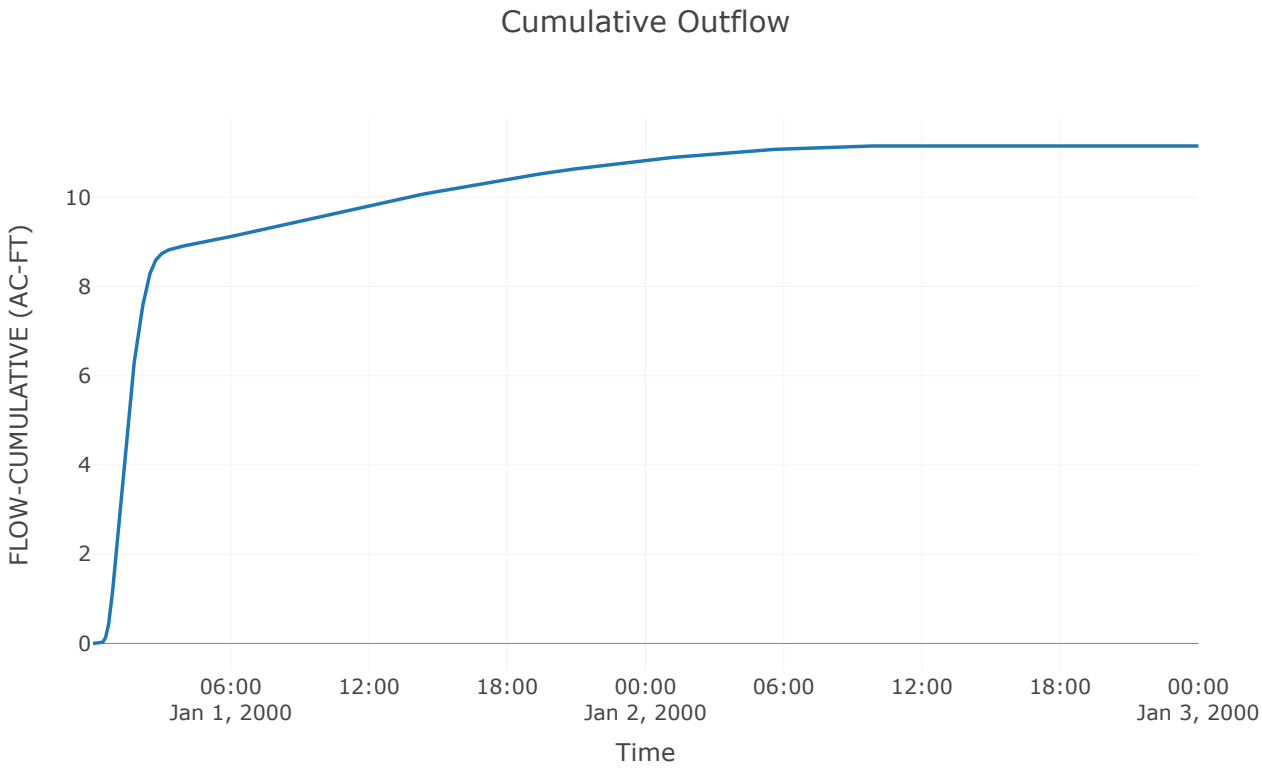

Outflow
FLOW (CFS)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

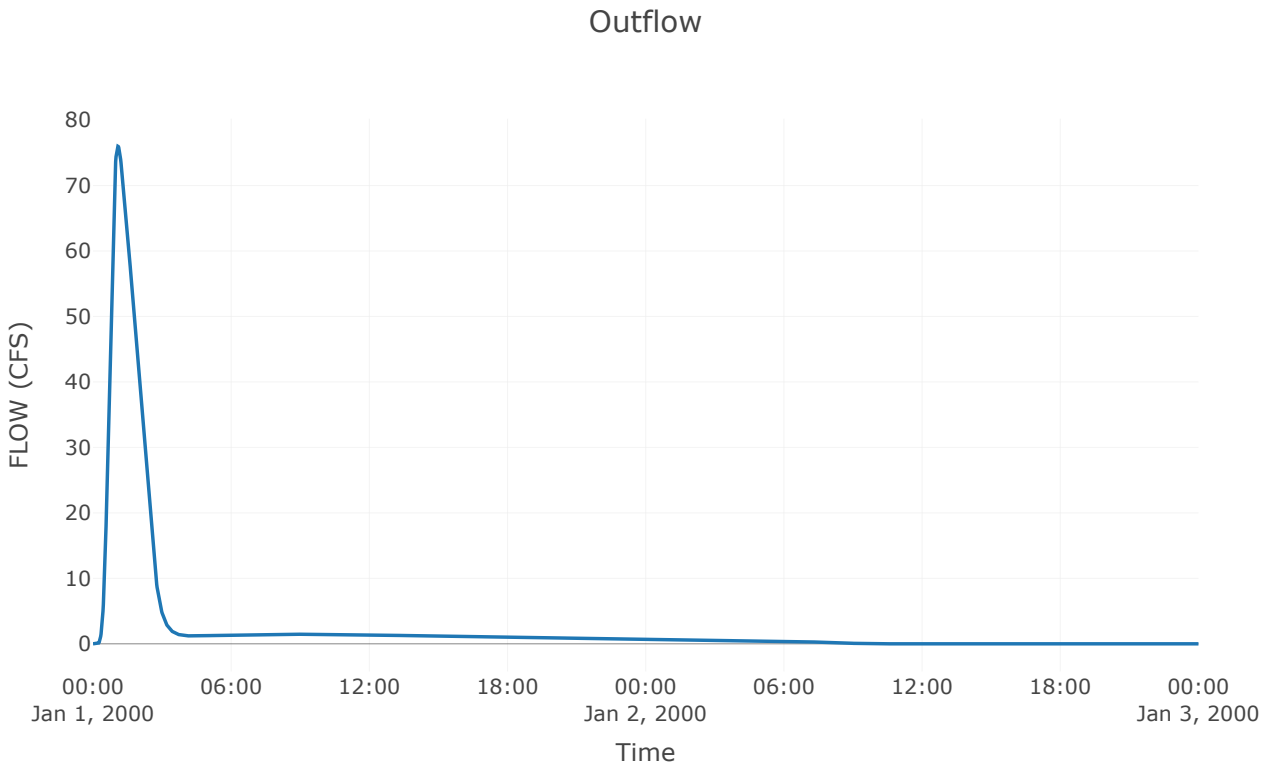
Junction: Off-Site Tributary Area

Downstream : Storage East of Wolf Road

Results: Off-Site Tributary Area	
Peak Discharge (CFS)	75.98
Time of Peak Discharge	01Jan2000, 01:05
Volume (IN)	0.78


Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

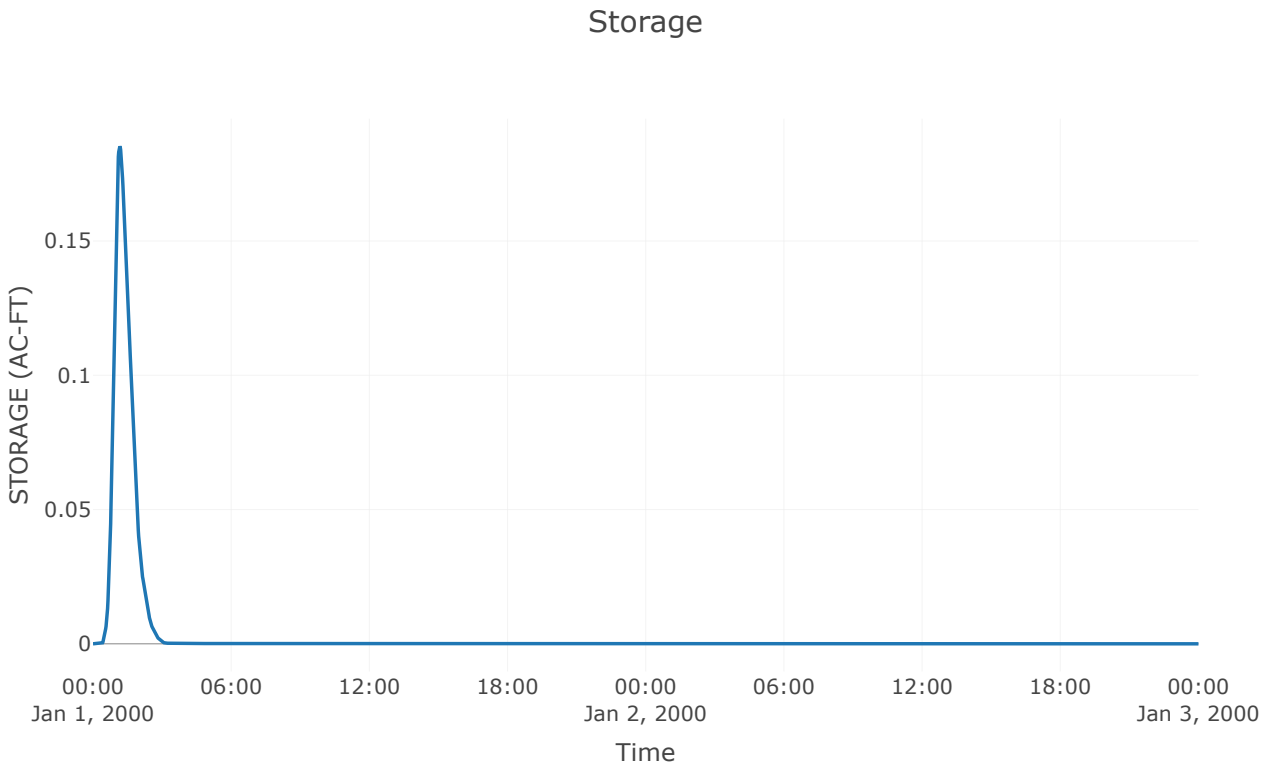

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

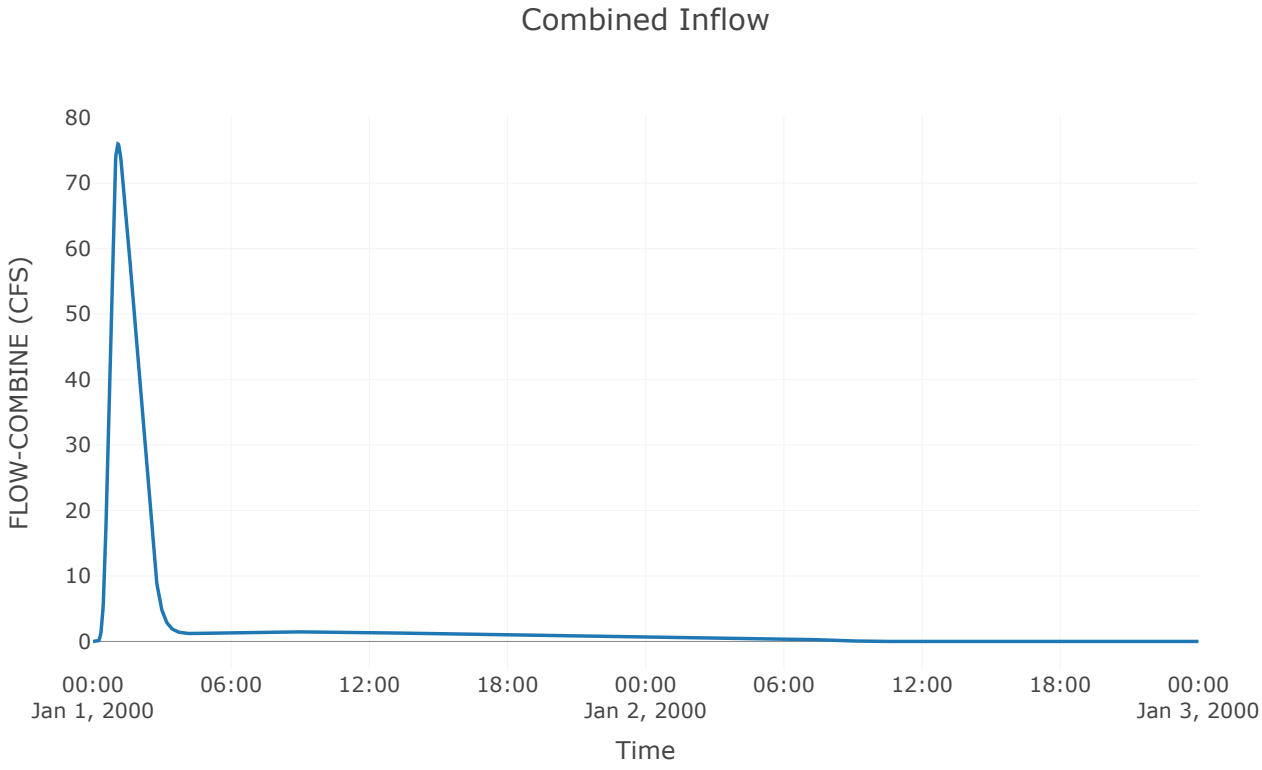

Outflow
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

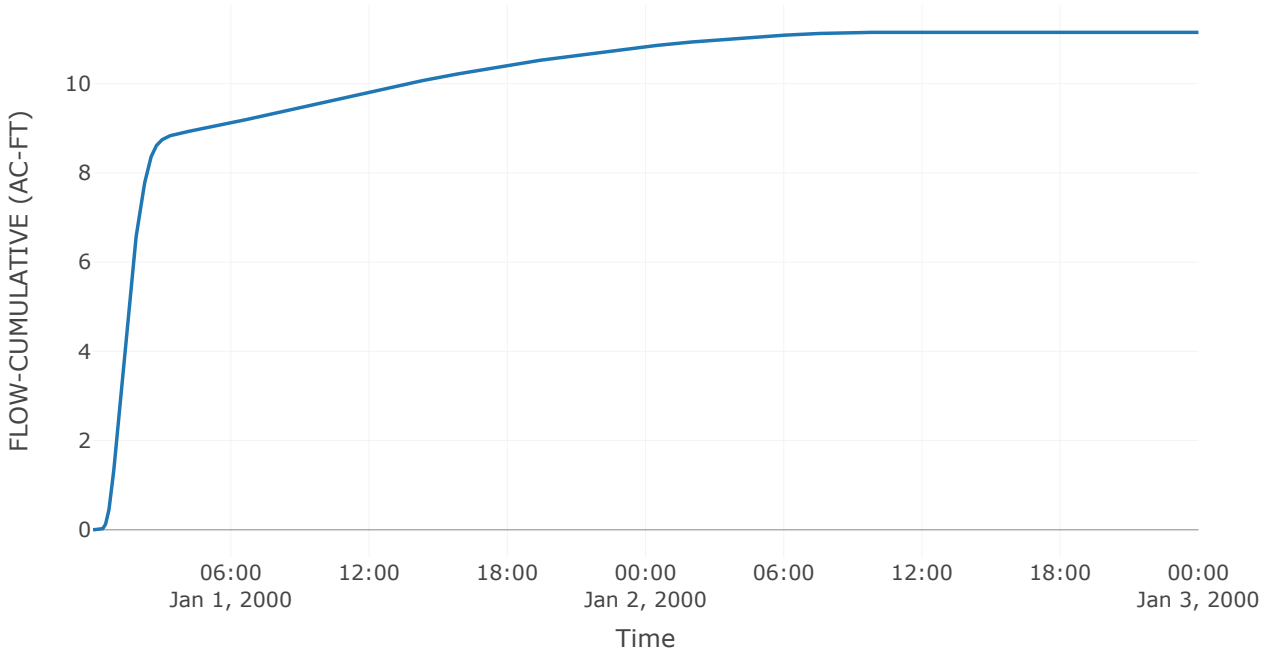
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	75.01
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.78
Peak Inflow (CFS)	75.98
Time of Peak Inflow	01Jan2000, 01:05
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0.19
Peak Elevation (FT)	662.02
Discharge Volume (AC - FT)	11.15

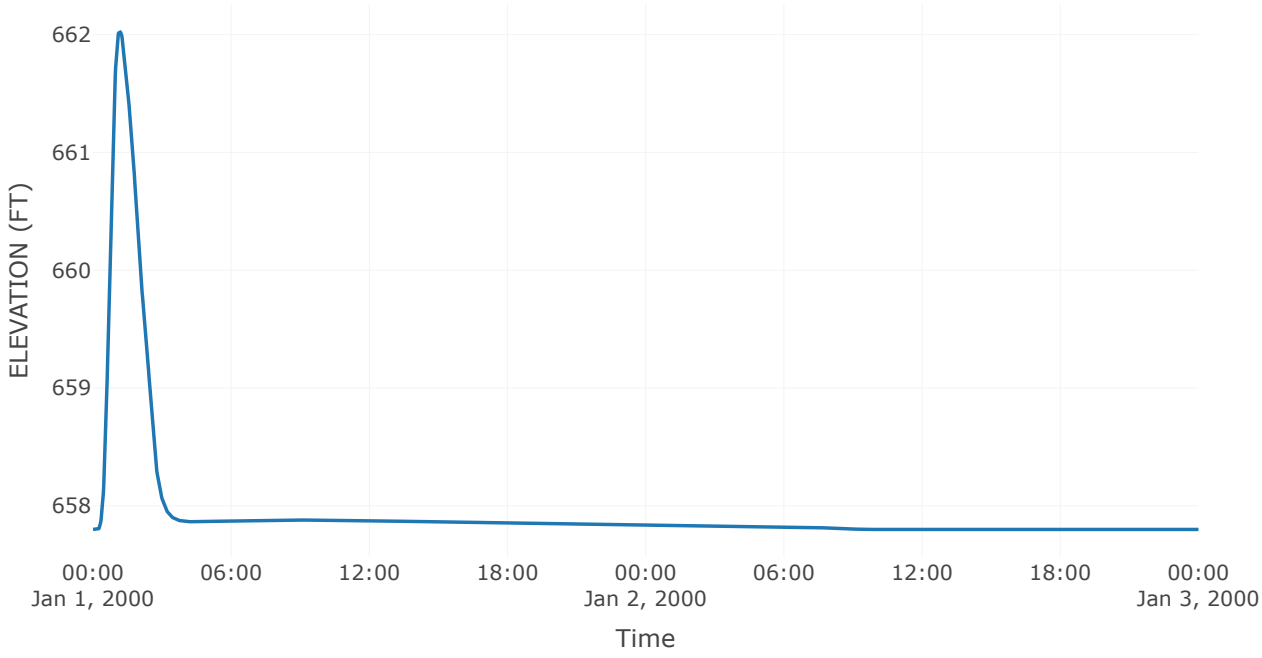

Storage
STORAGE (AC-FT)
0.15
0.1
0.05
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

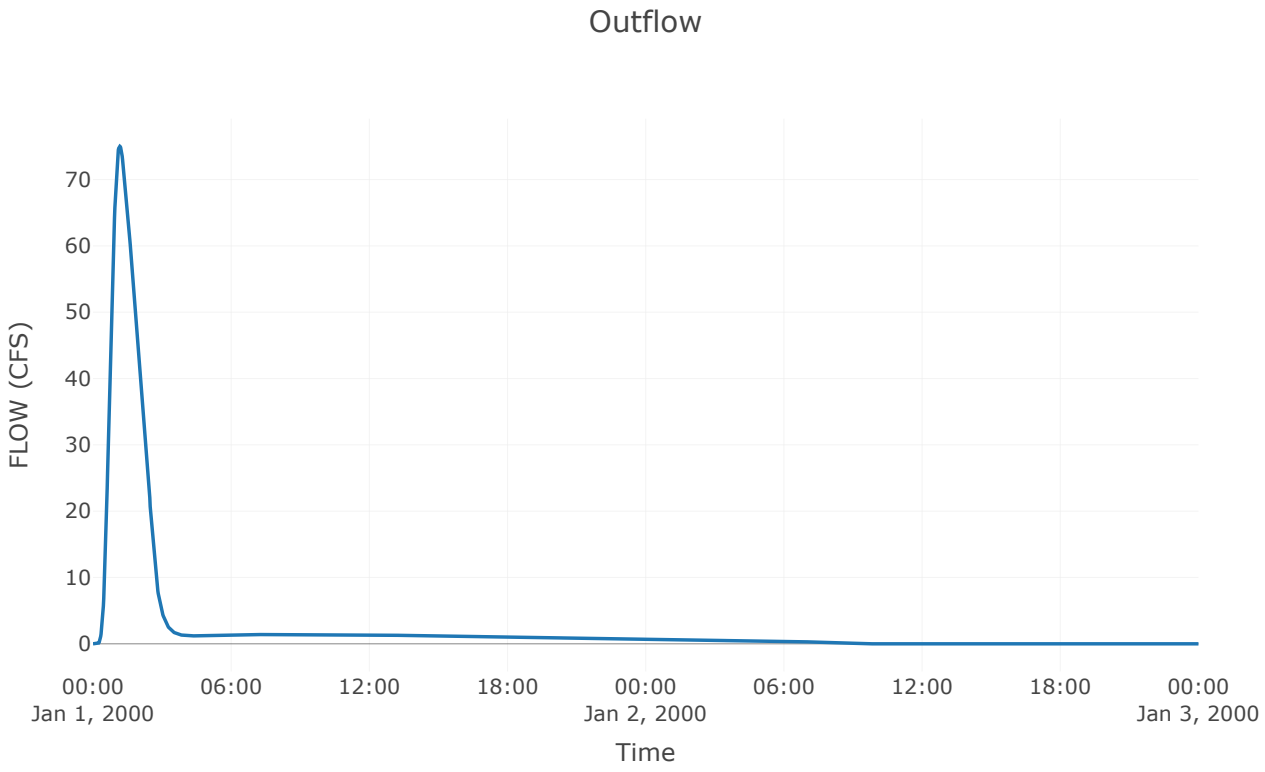

Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Cumulative Outflow



Pool Elevation



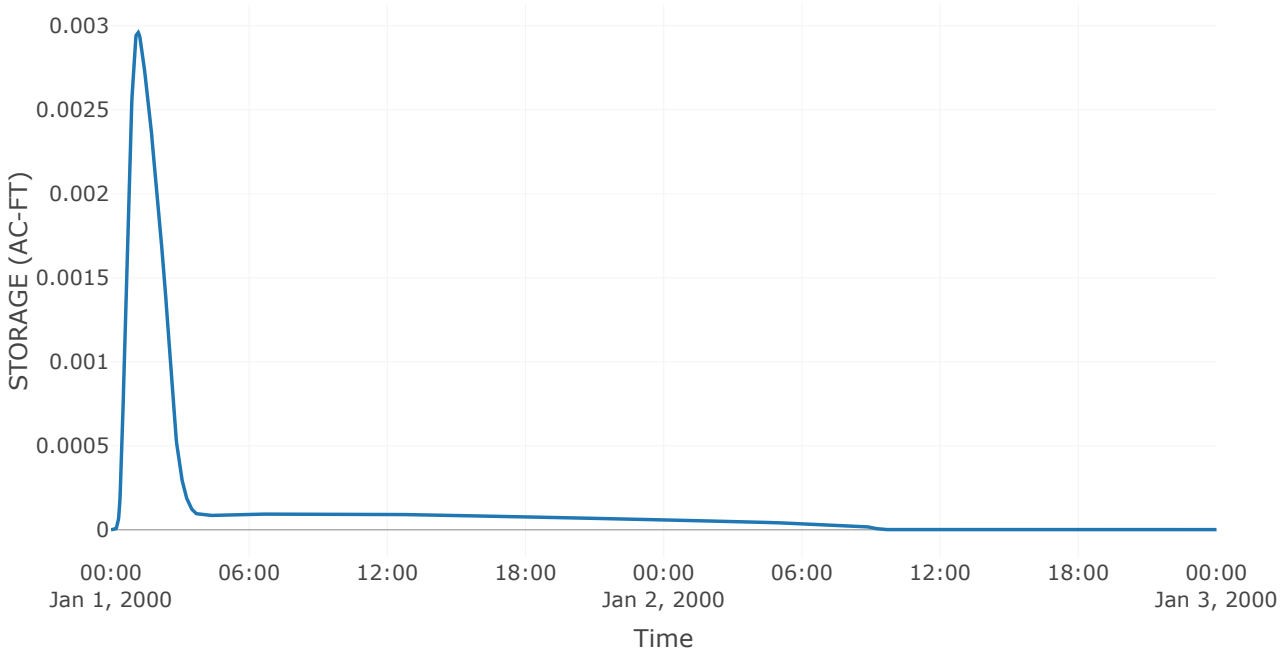

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

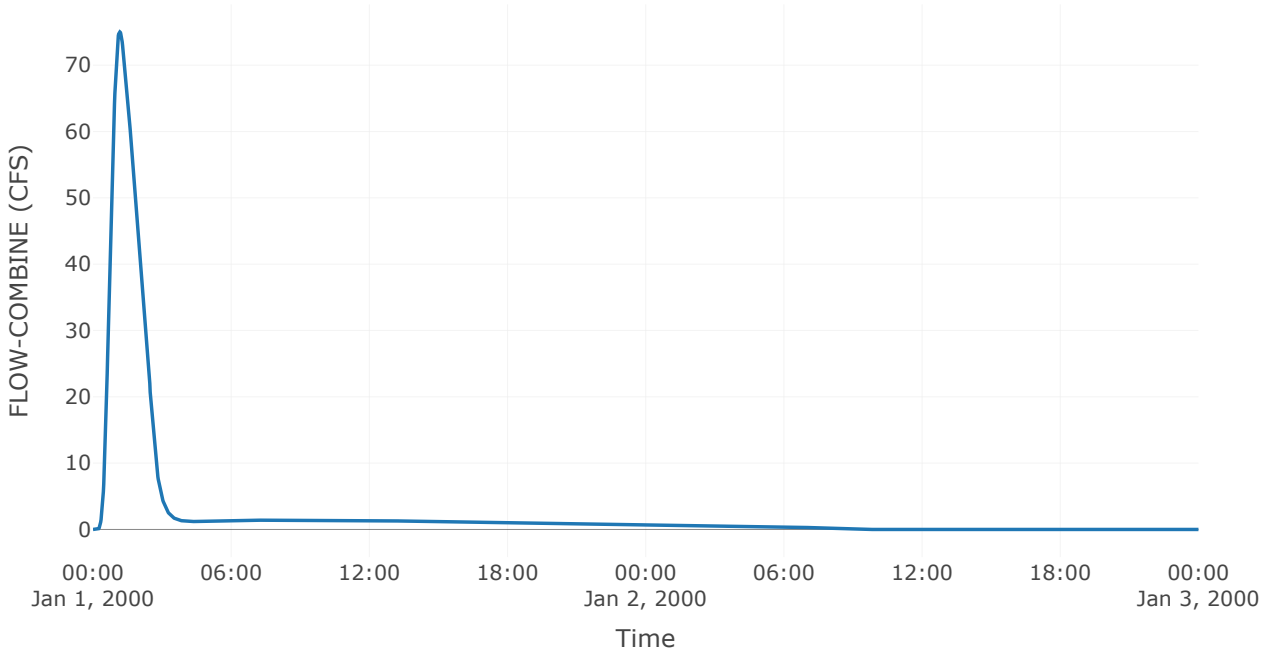
Downstream : Prop Storage West of Wolf Rd

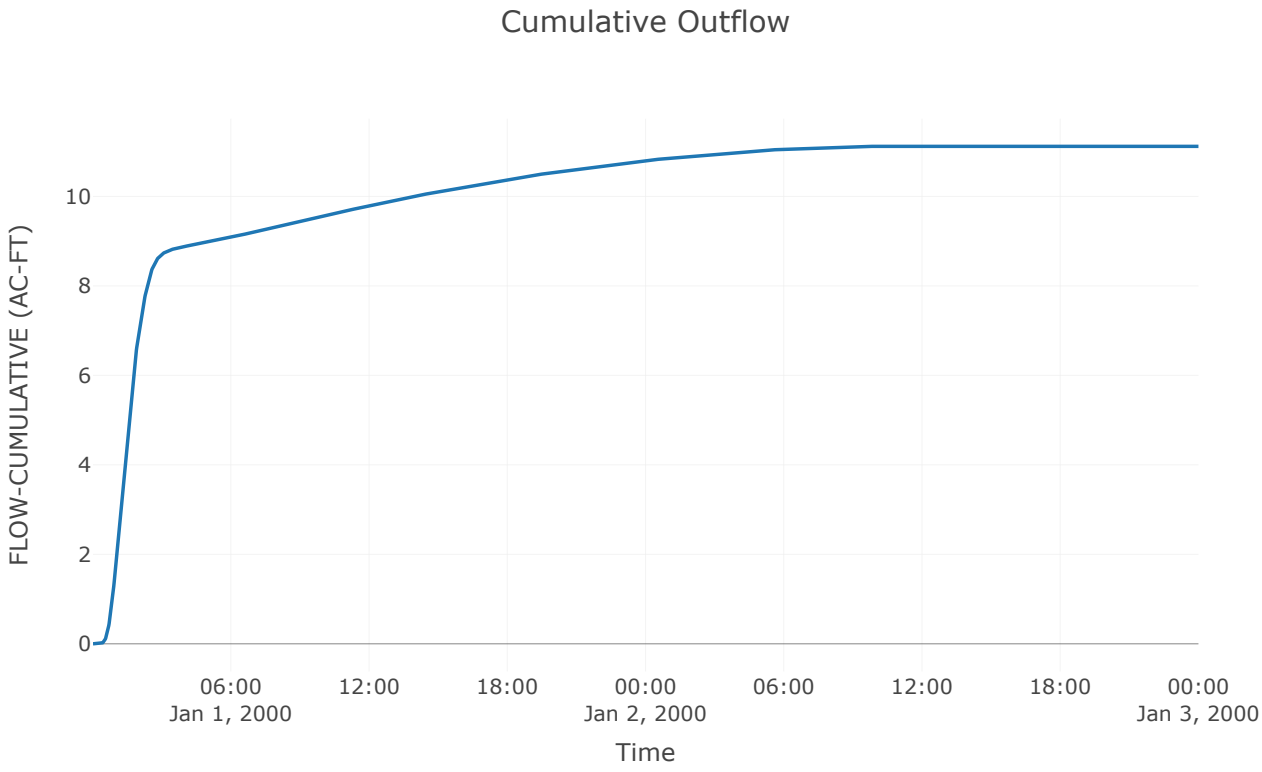
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	75.02
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	0.77
Peak Inflow (CFS)	75.01
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.15
Maximum Storage (AC - FT)	0
Peak Elevation (FT)	660.51
Discharge Volume (AC - FT)	11.12

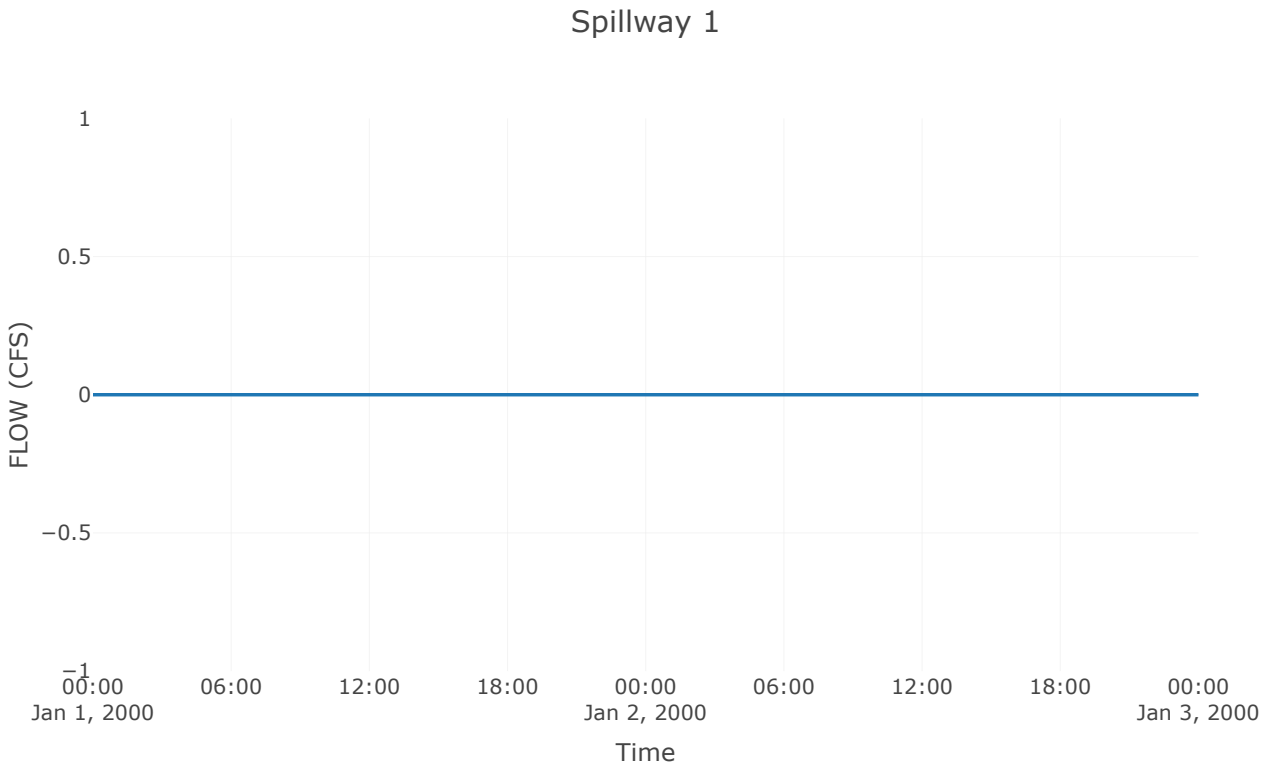
Storage



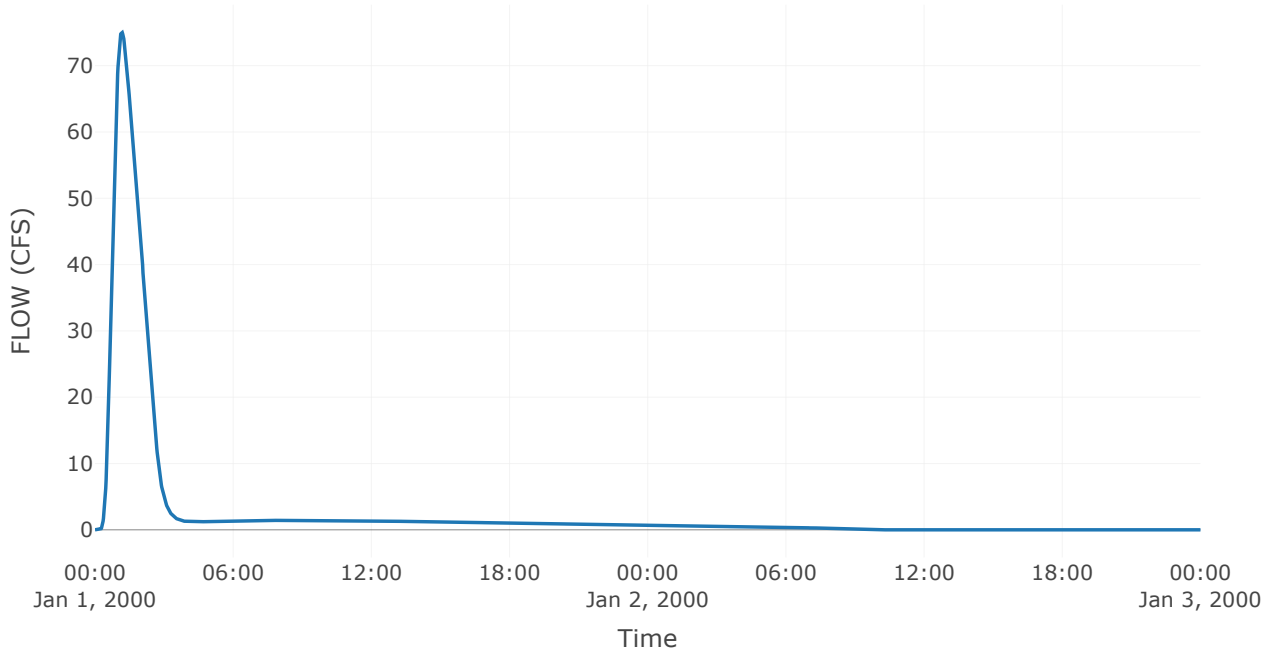
Combined Inflow



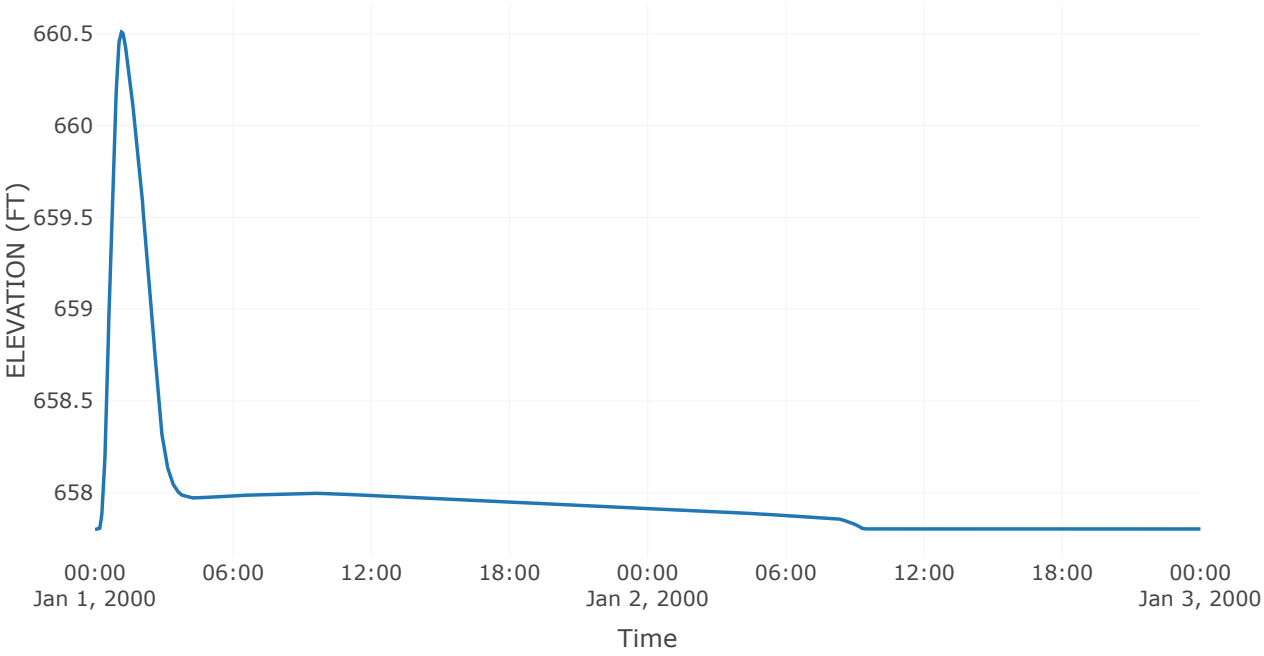

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

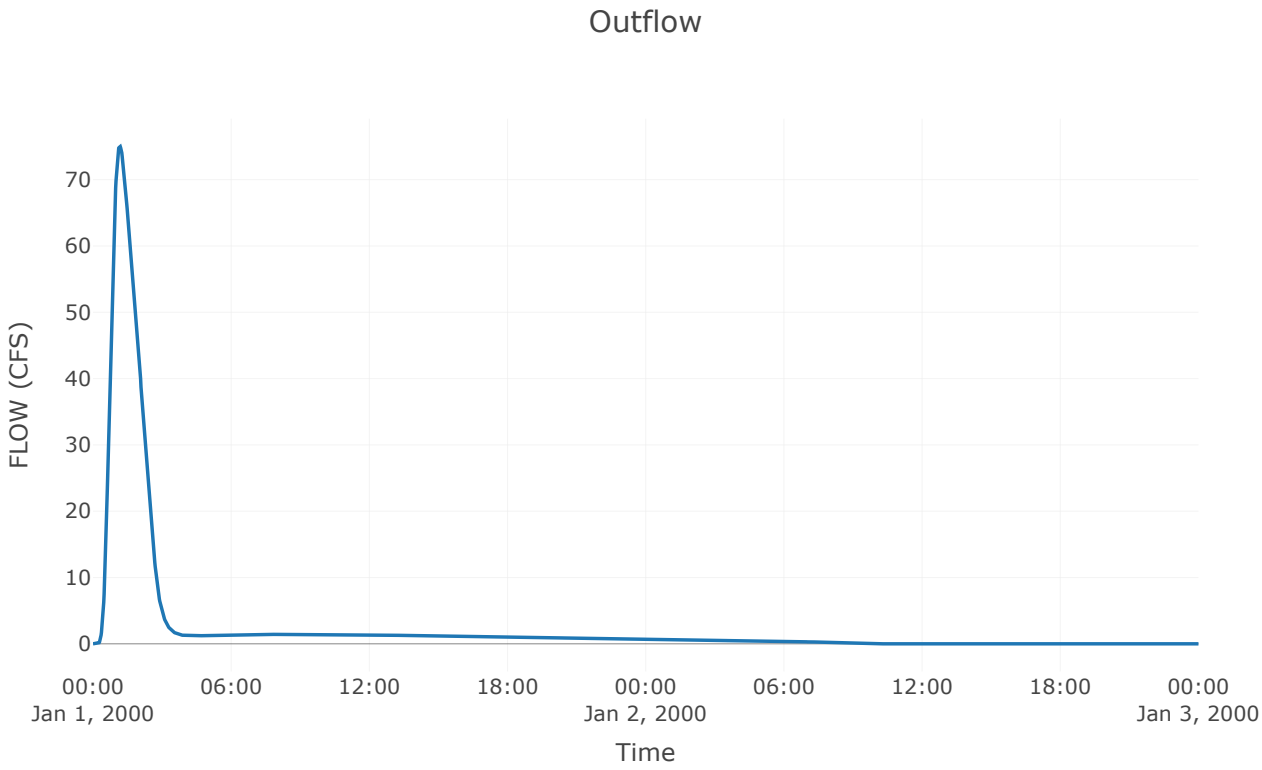

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



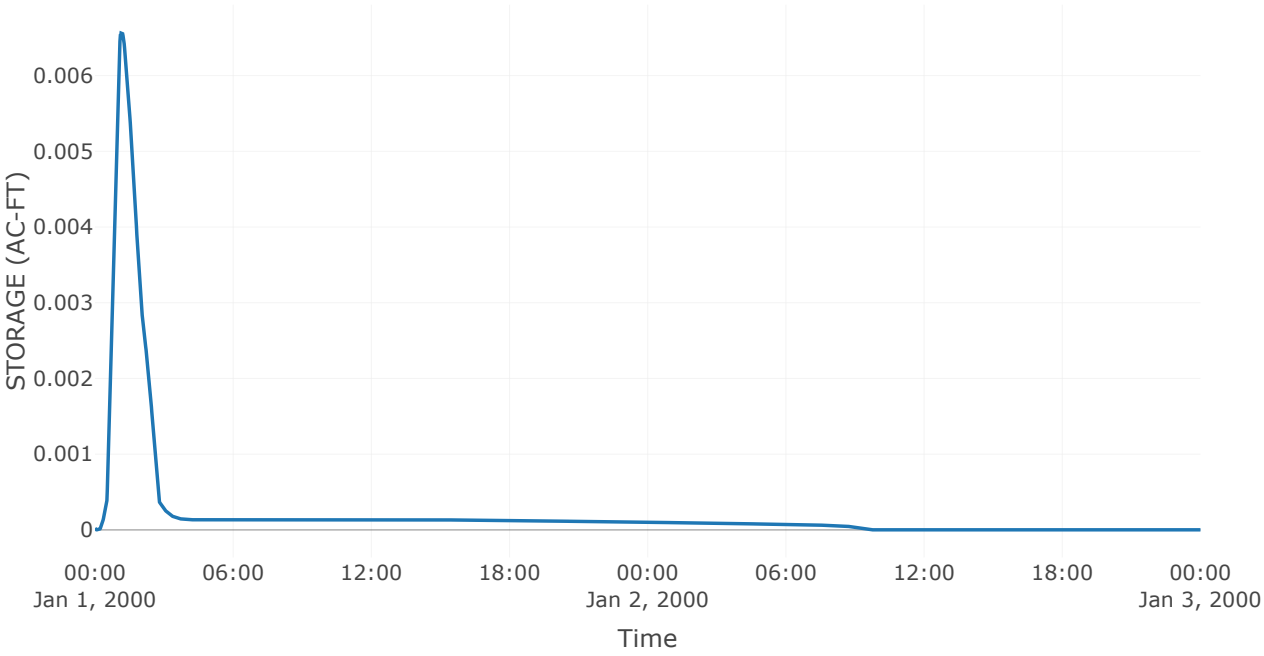

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

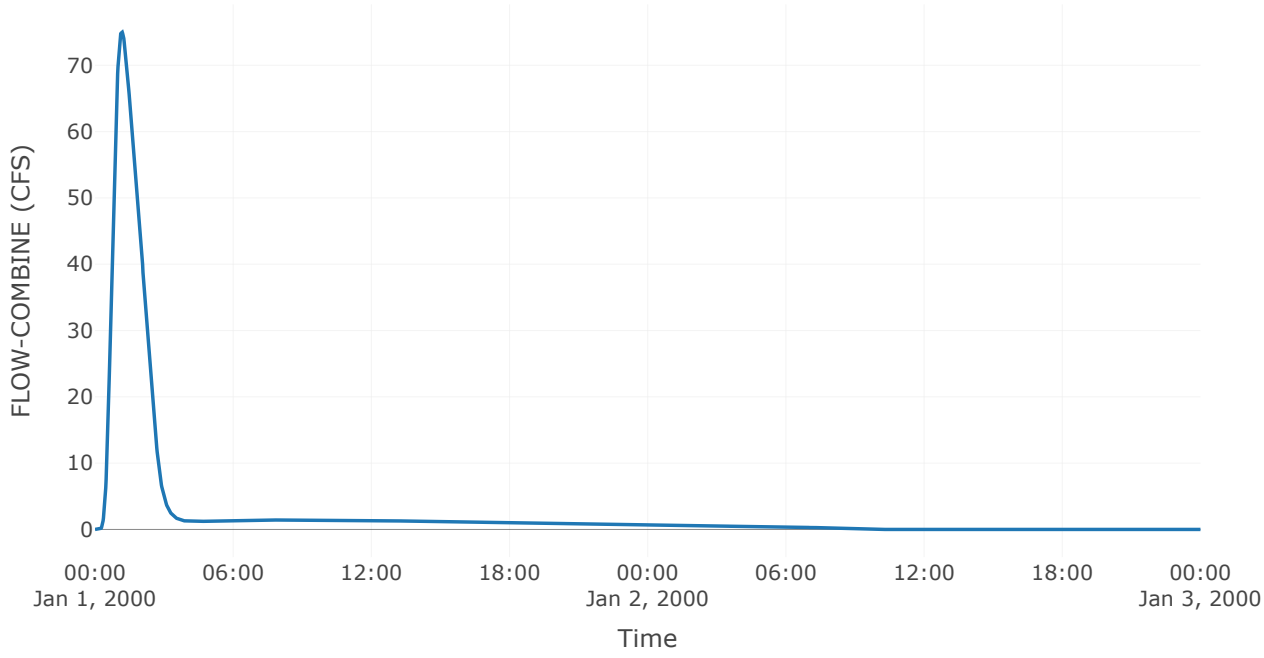
Downstream : Proposed Basin C

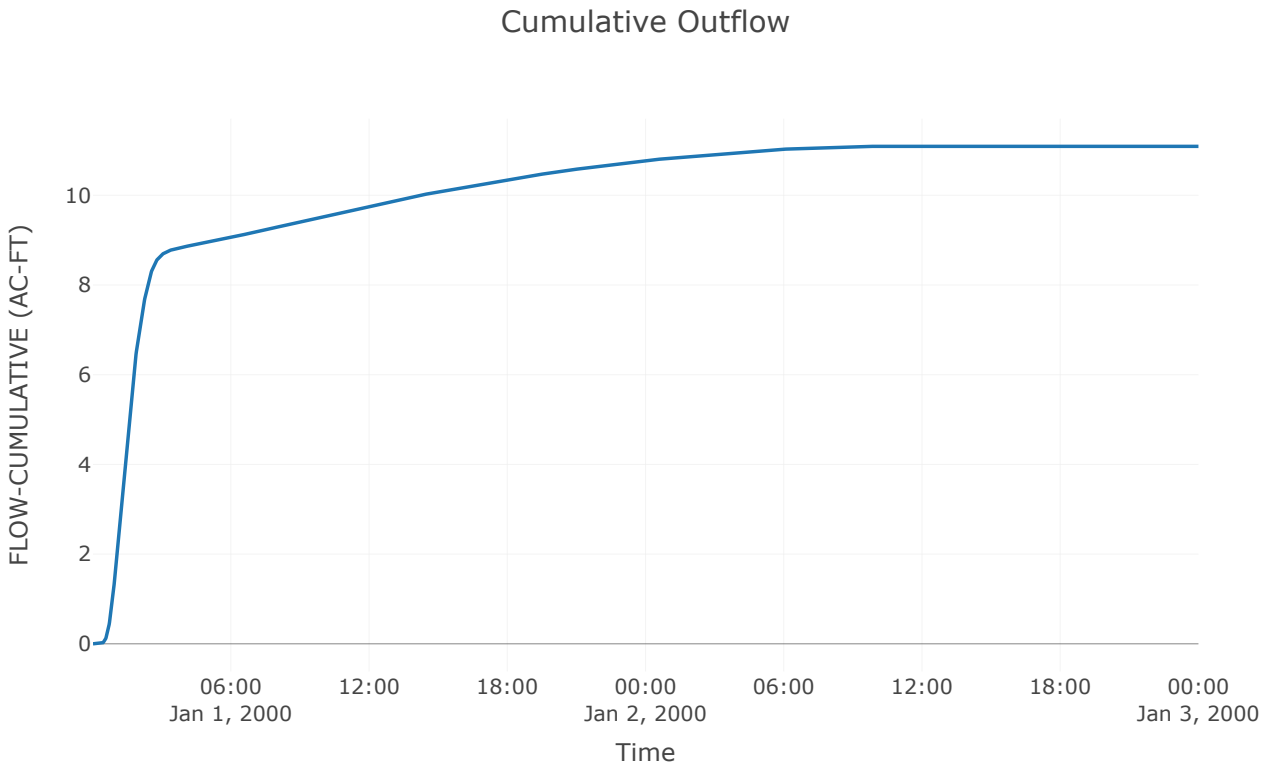
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	75.06
Time of Peak Discharge	01Jan2000, 01:10
Volume (IN)	0.77
Peak Inflow (CFS)	75.02
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	11.12
Maximum Storage (AC - FT)	0.01
Peak Elevation (FT)	656.65
Discharge Volume (AC - FT)	11.09

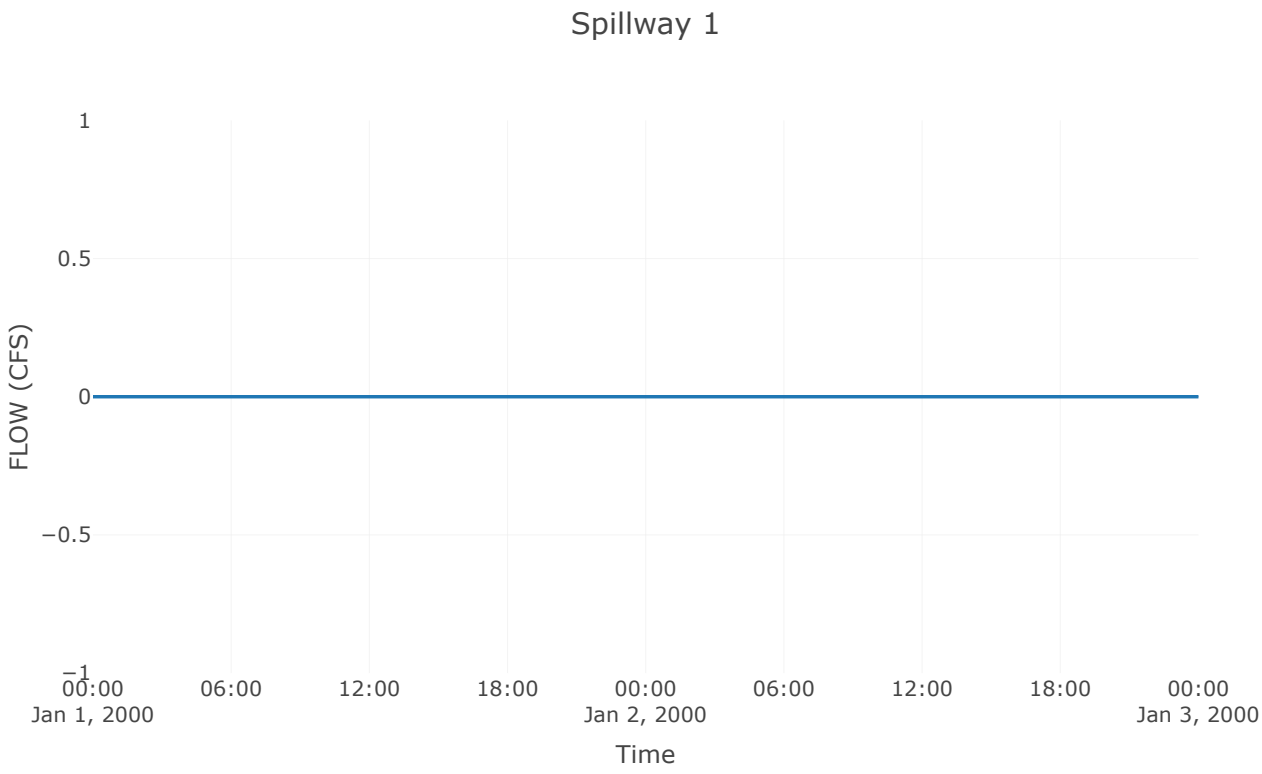
Storage



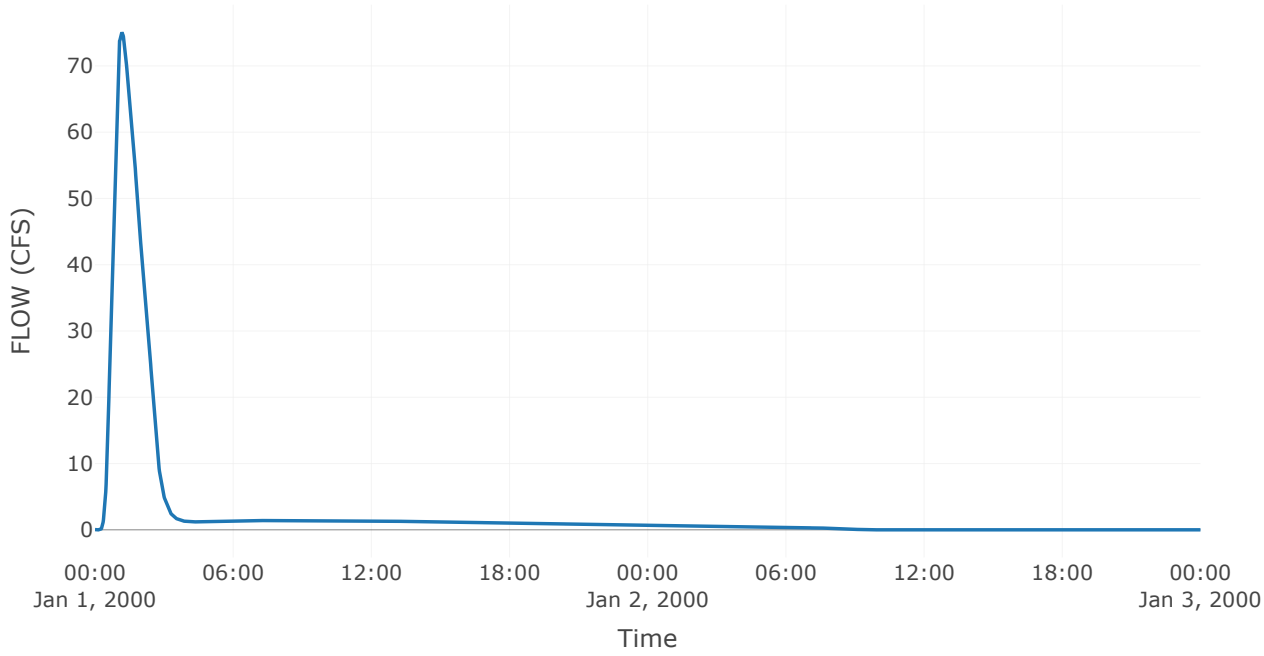
Combined Inflow



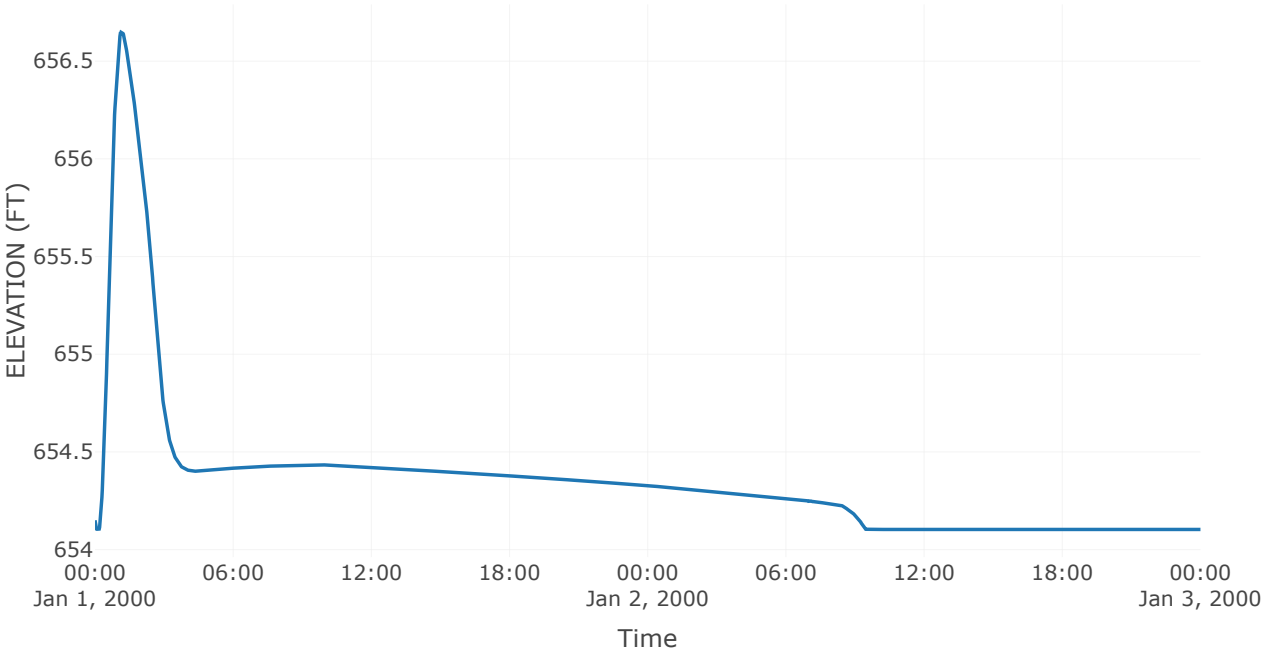

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

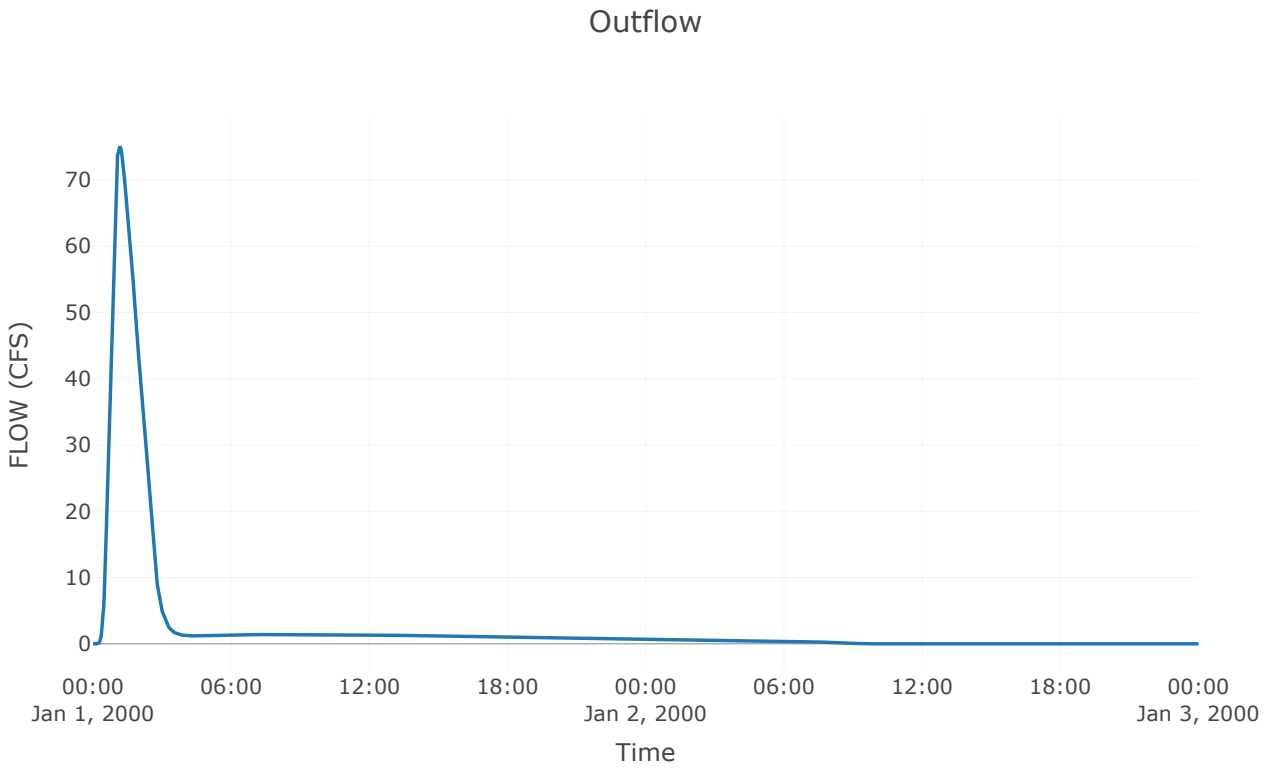

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

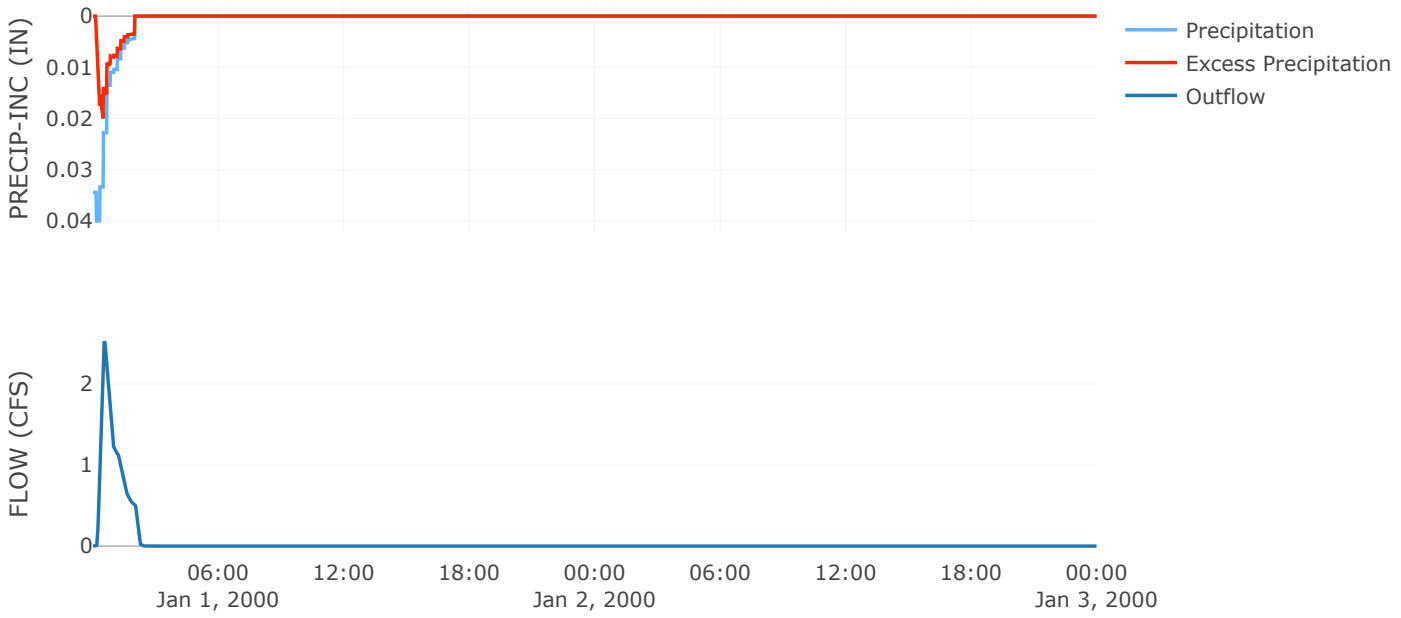
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

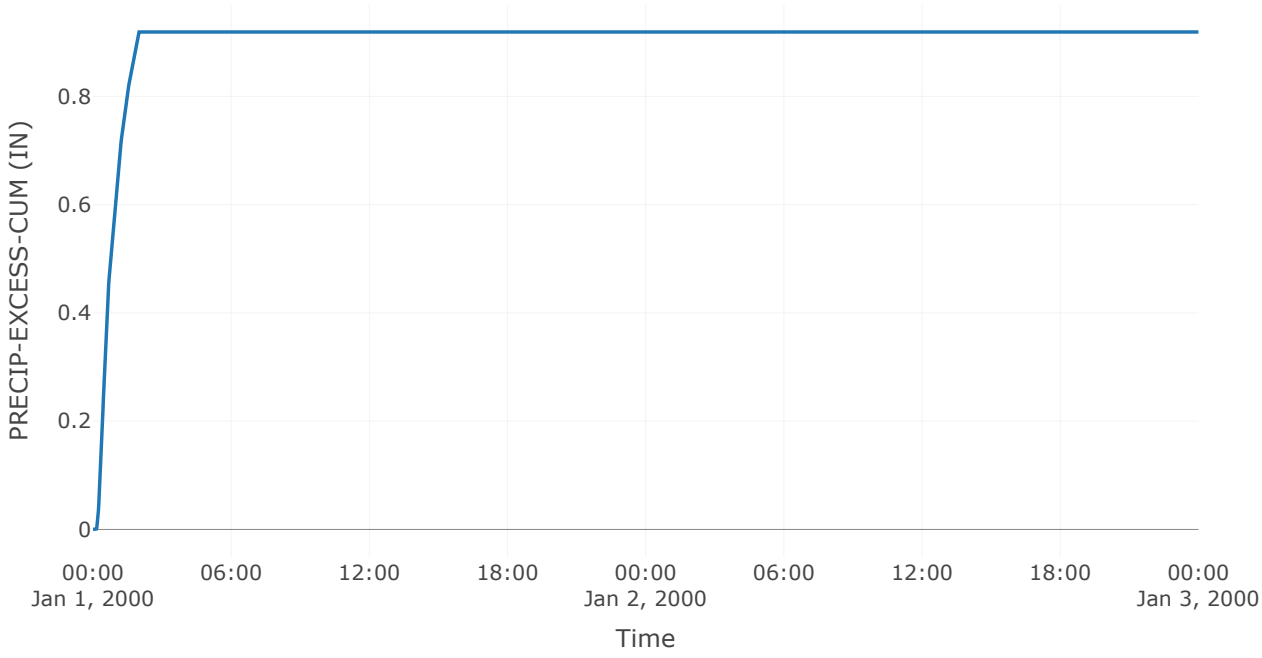
Transform: Scs	
Lag	6
Unitgraph Type	Standard

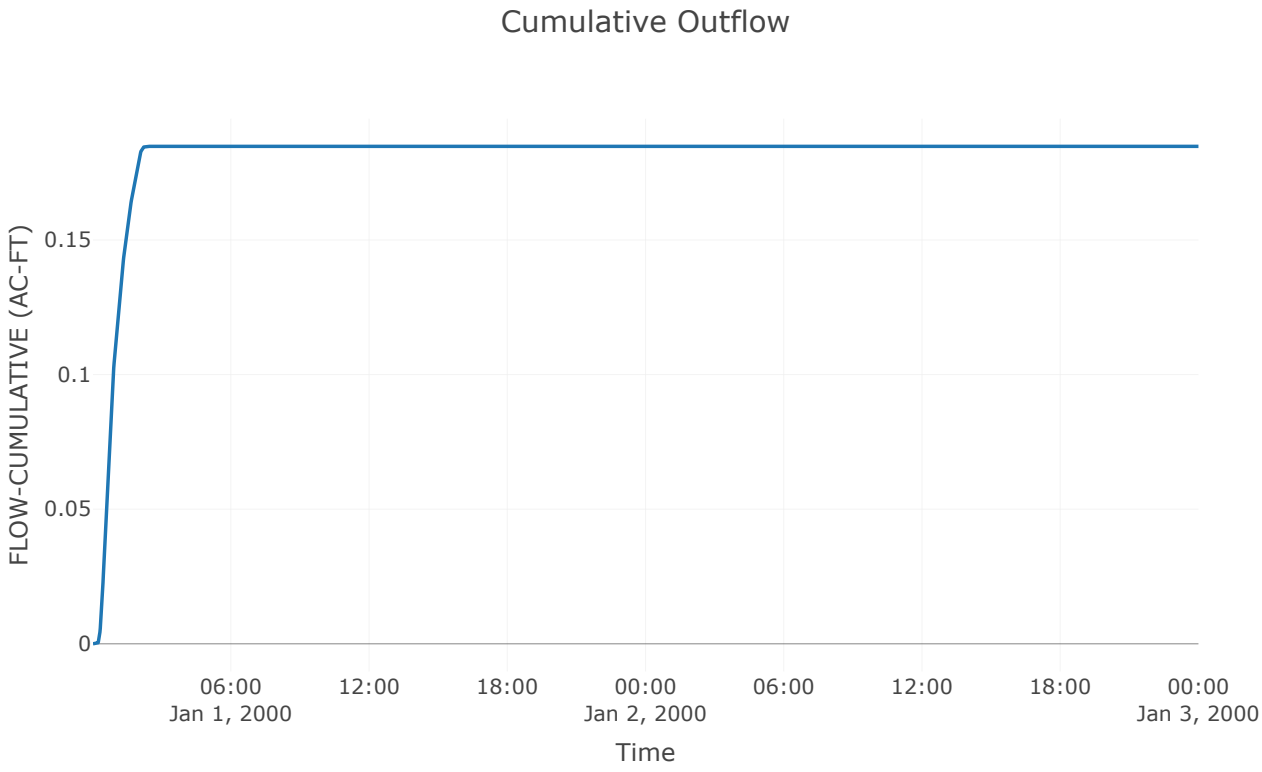
Results: Prop On-Site	
Peak Discharge (CFS)	2.53
Time of Peak Discharge	01Jan2000, 00:33
Volume (IN)	0.92
Precipitation Volume (AC - FT)	0.39
Loss Volume (AC - FT)	0.21
Excess Volume (AC - FT)	0.18
Direct Runoff Volume (AC - FT)	0.18
Baseflow Volume (AC - FT)	0

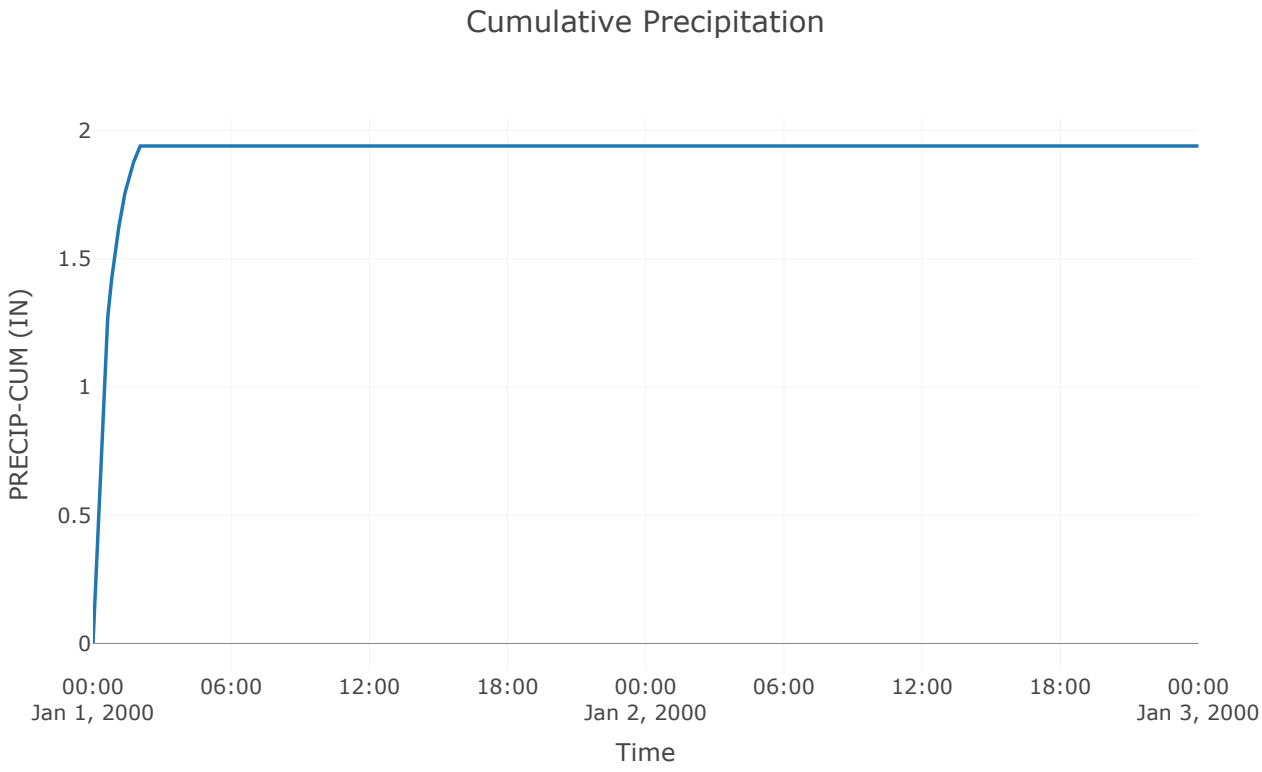
Precipitation and Outflow

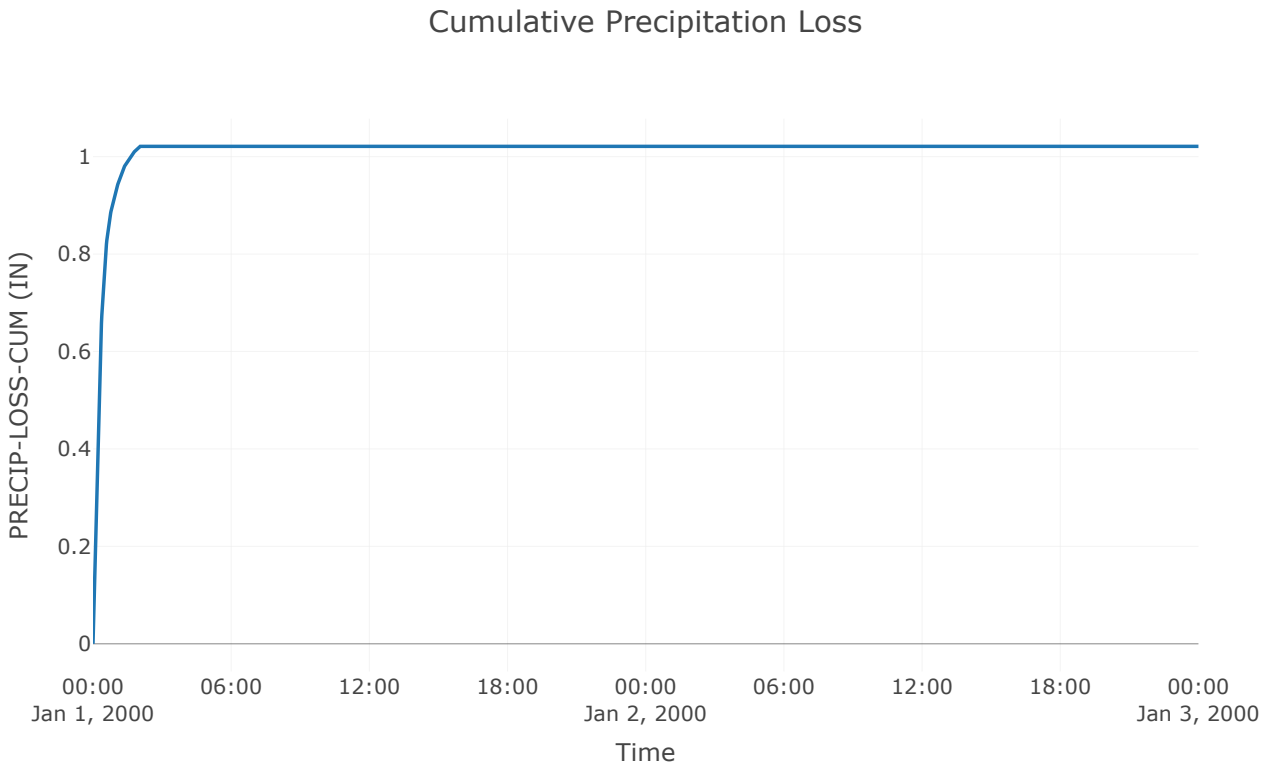


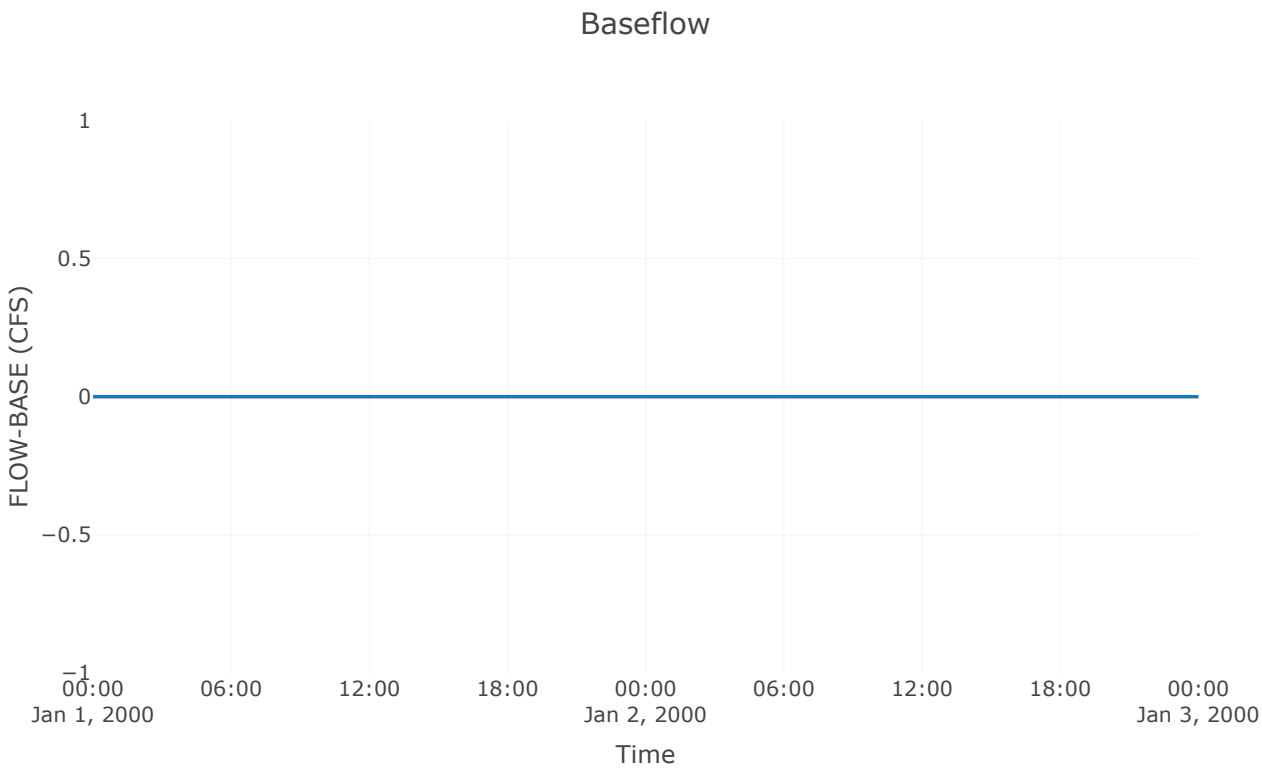
Cumulative Excess Precipitation



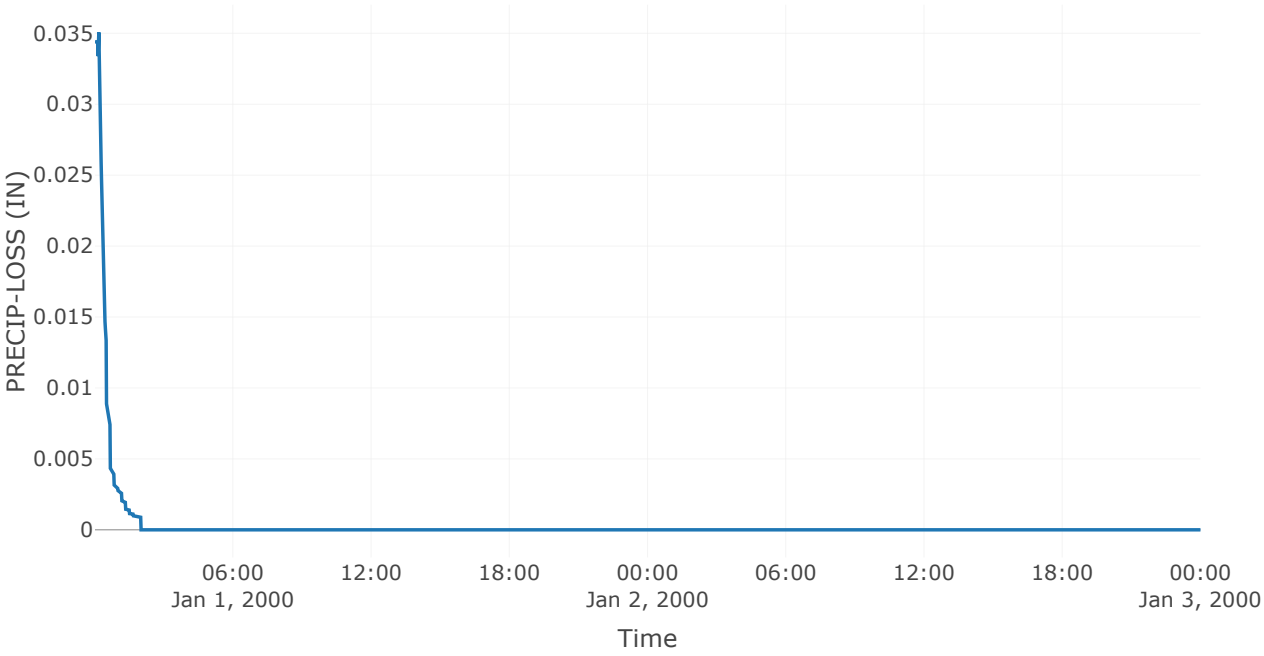

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

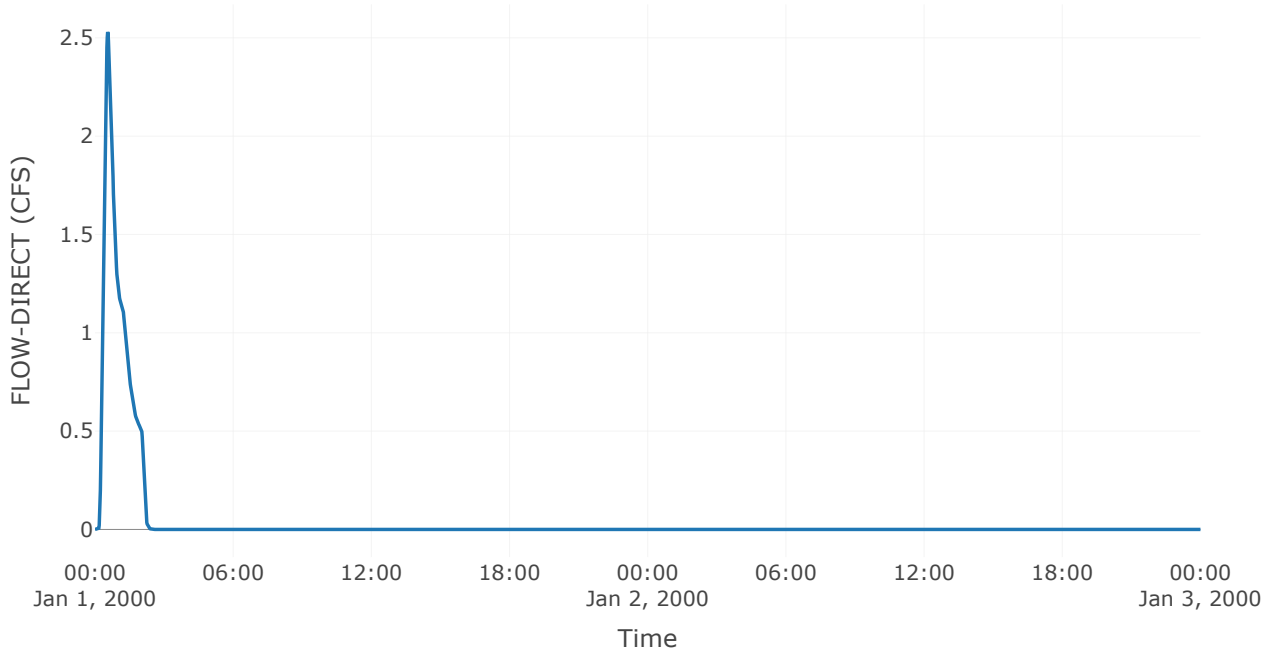

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

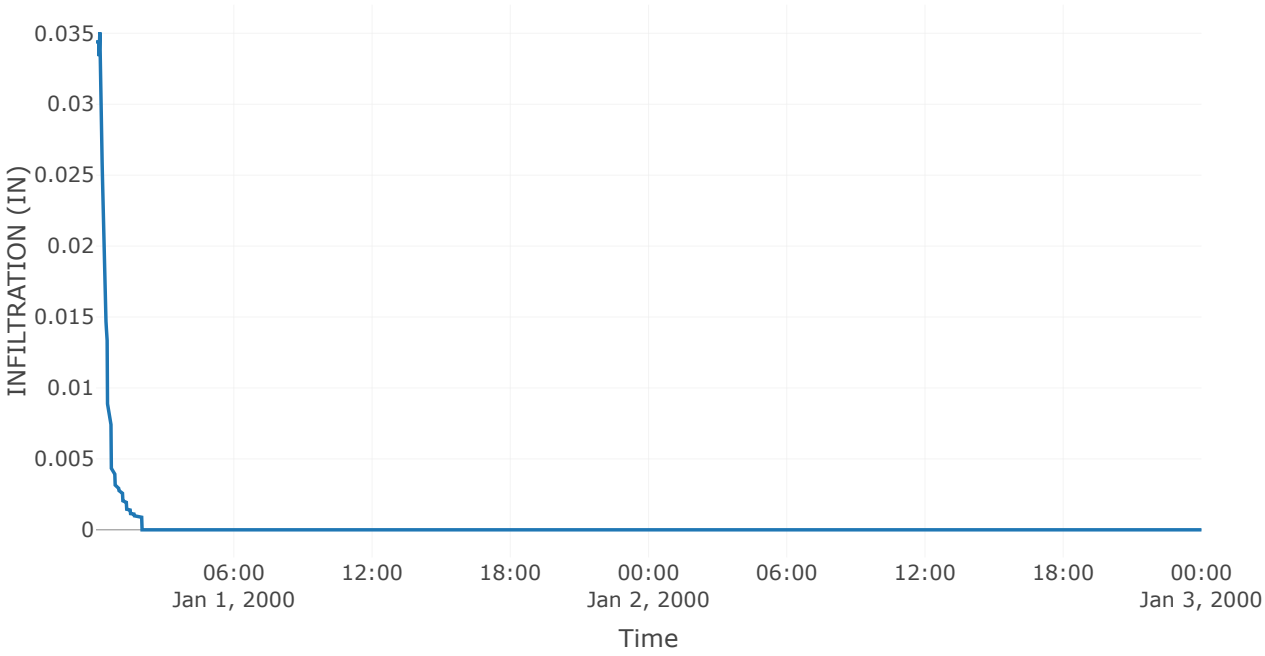

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

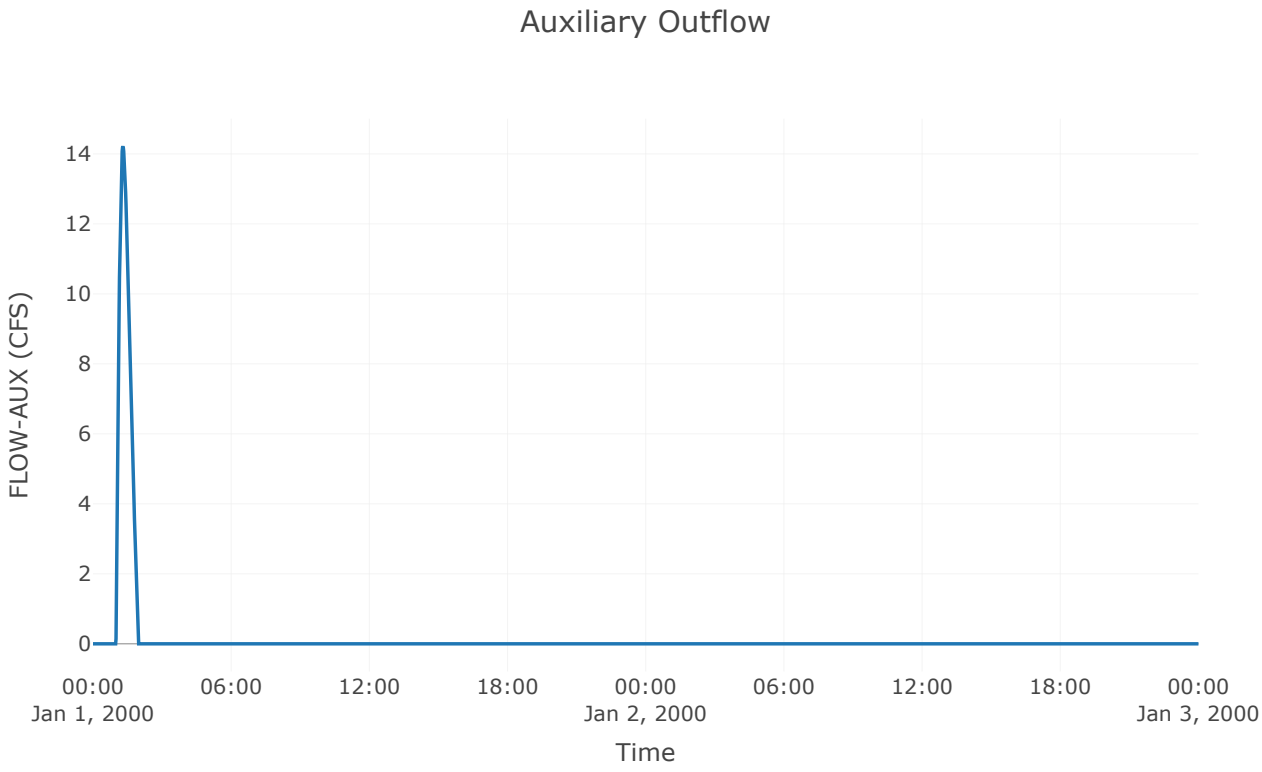


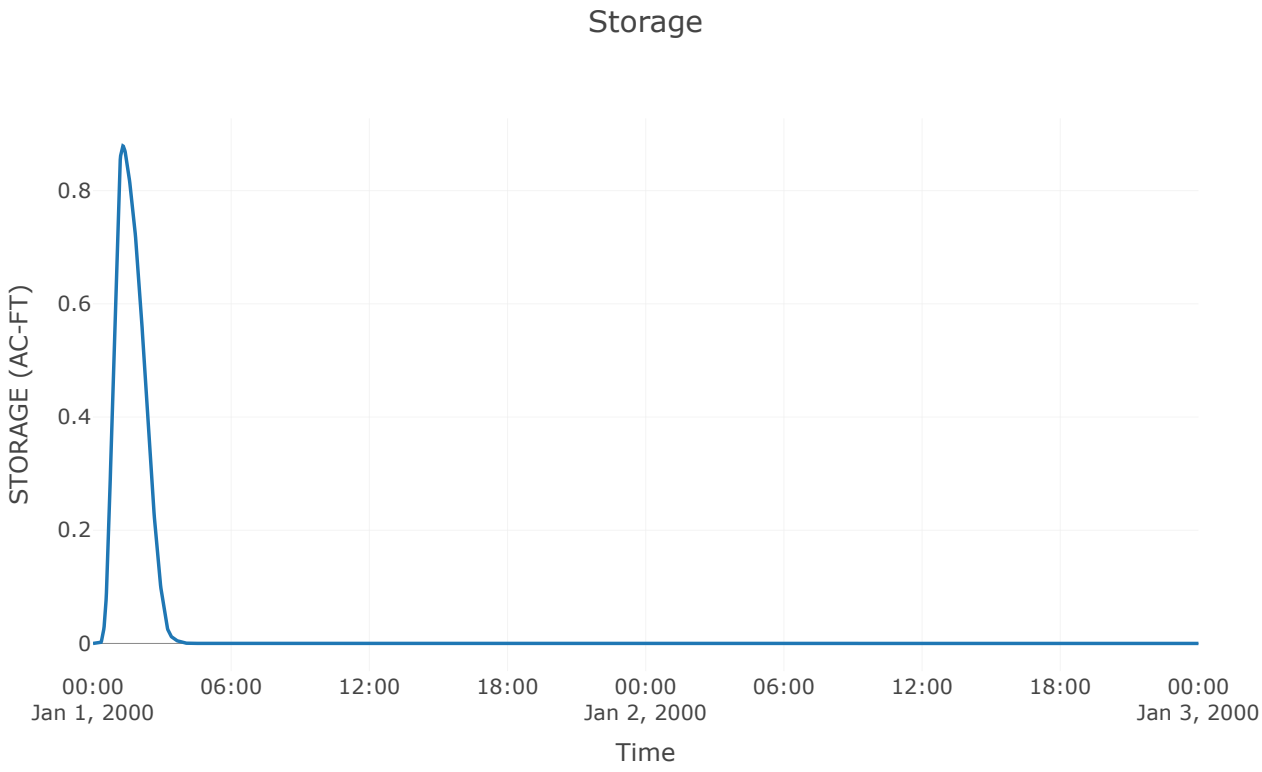

Soil Infiltration
INFILTRATION (IN)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

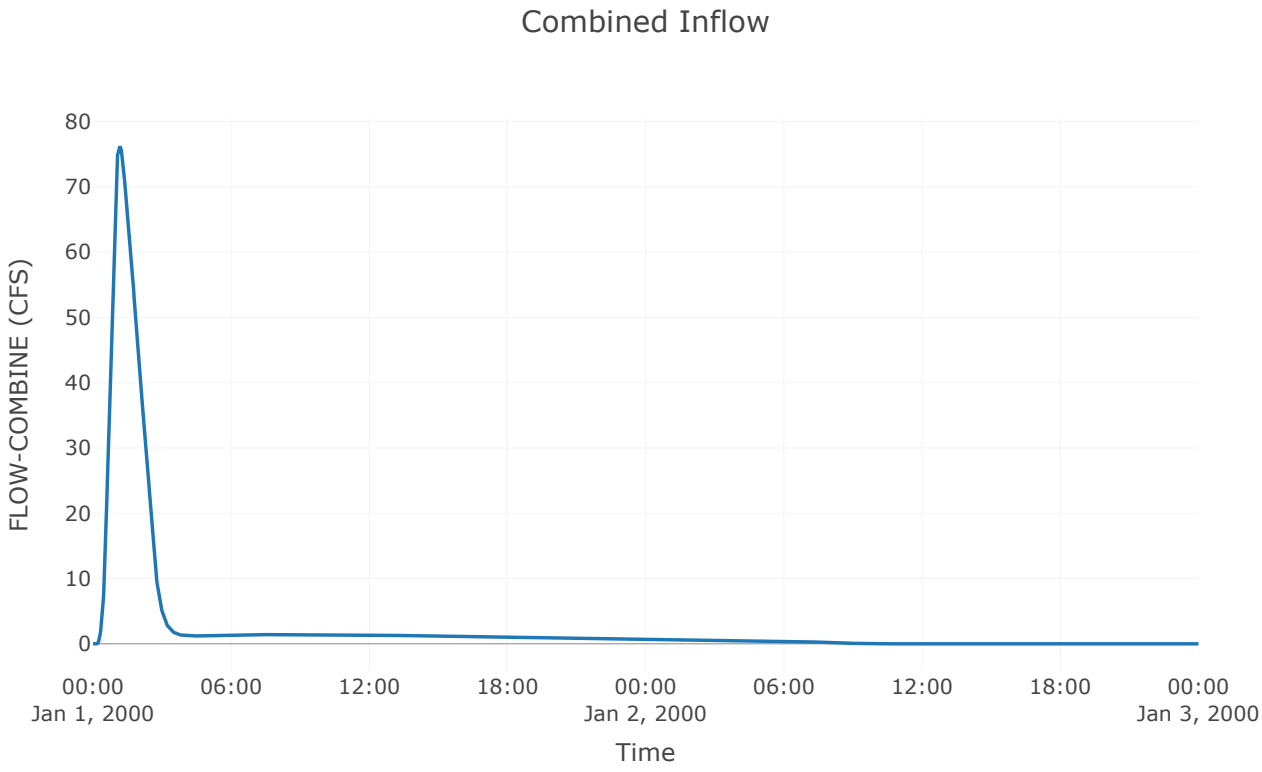
Reservoir: Proposed Basin C

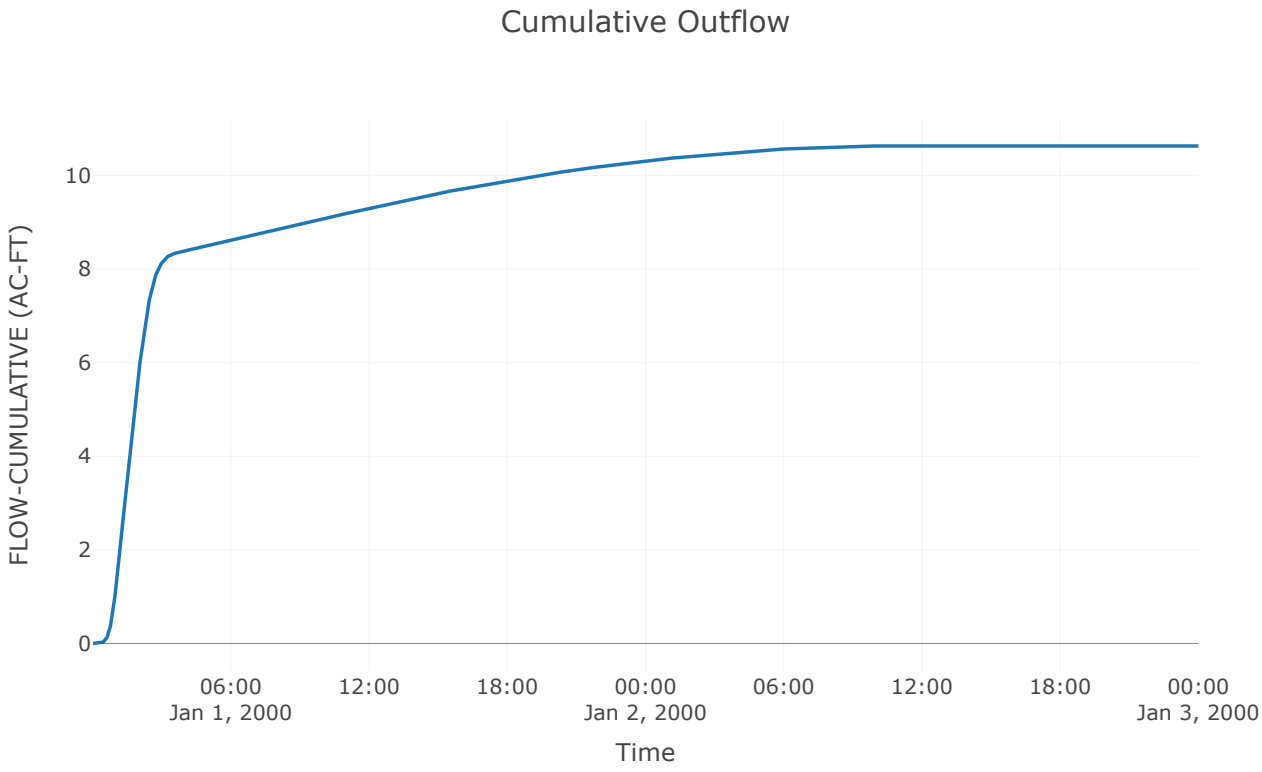
Downstream : Existing Basin A & B

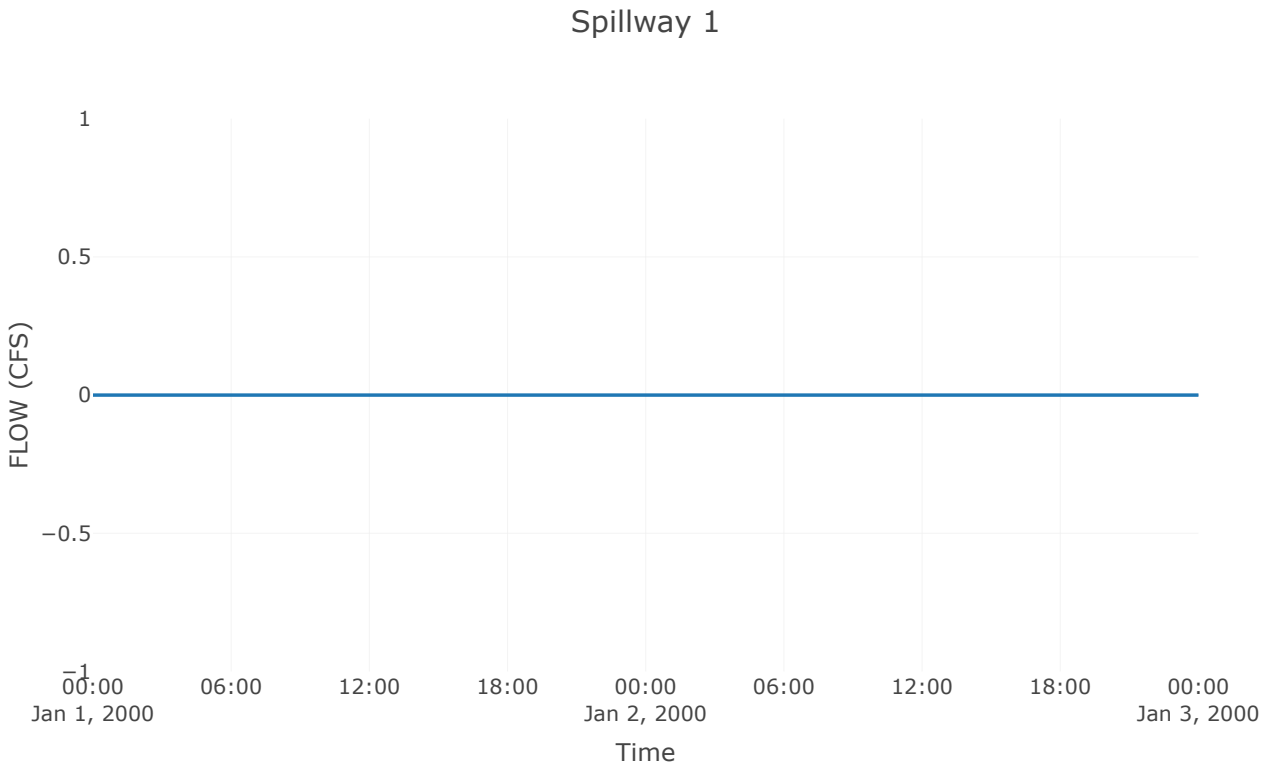
Results: Proposed Basin C	
Peak Discharge (CFS)	59.4
Time of Peak Discharge	01Jan2000, 01:18
Volume (IN)	0.73
Peak Inflow (CFS)	76.2
Time of Peak Inflow	01Jan2000, 01:10
Inflow Volume (AC - FT)	11.28
Maximum Storage (AC - FT)	0.88
Peak Elevation (FT)	650.71
Discharge Volume (AC - FT)	10.63

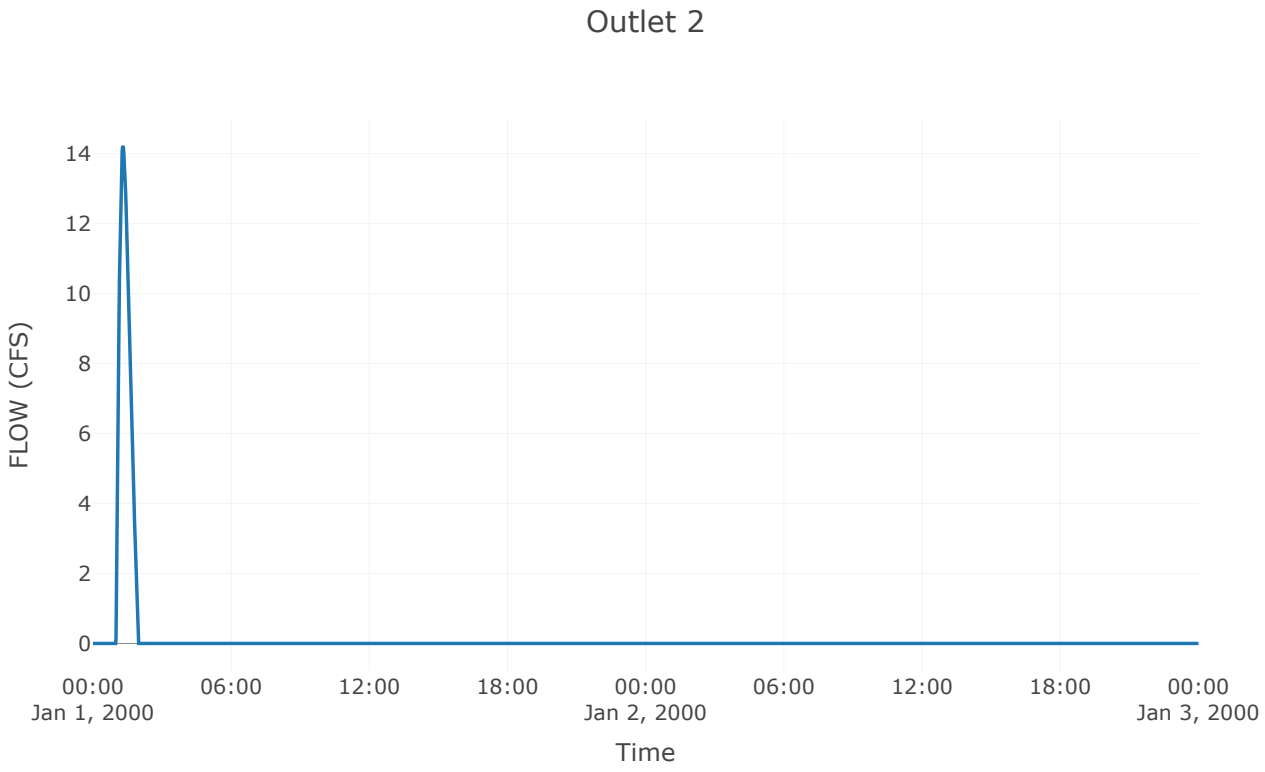

Auxiliary Outflow
FLOW-AUX (CFS)
14
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Storage
STORAGE (AC-FT)
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

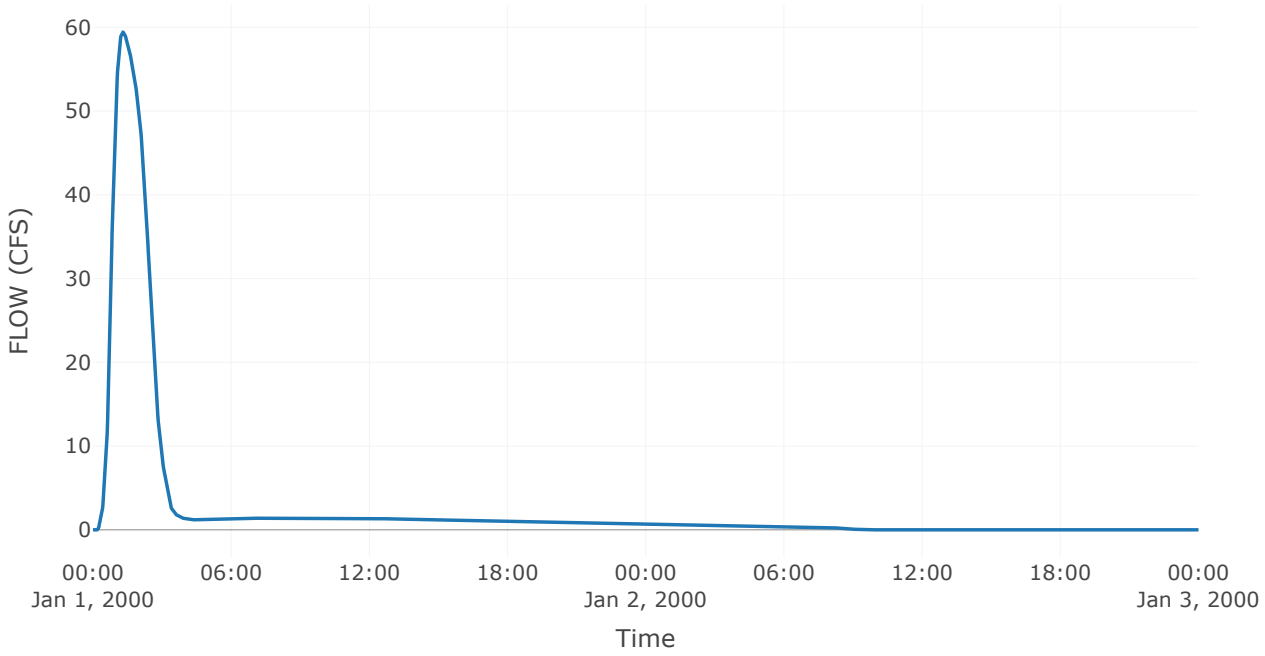

Combined Inflow
FLOW-COMBINE (CFS)
80
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
10
8
6
4
2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

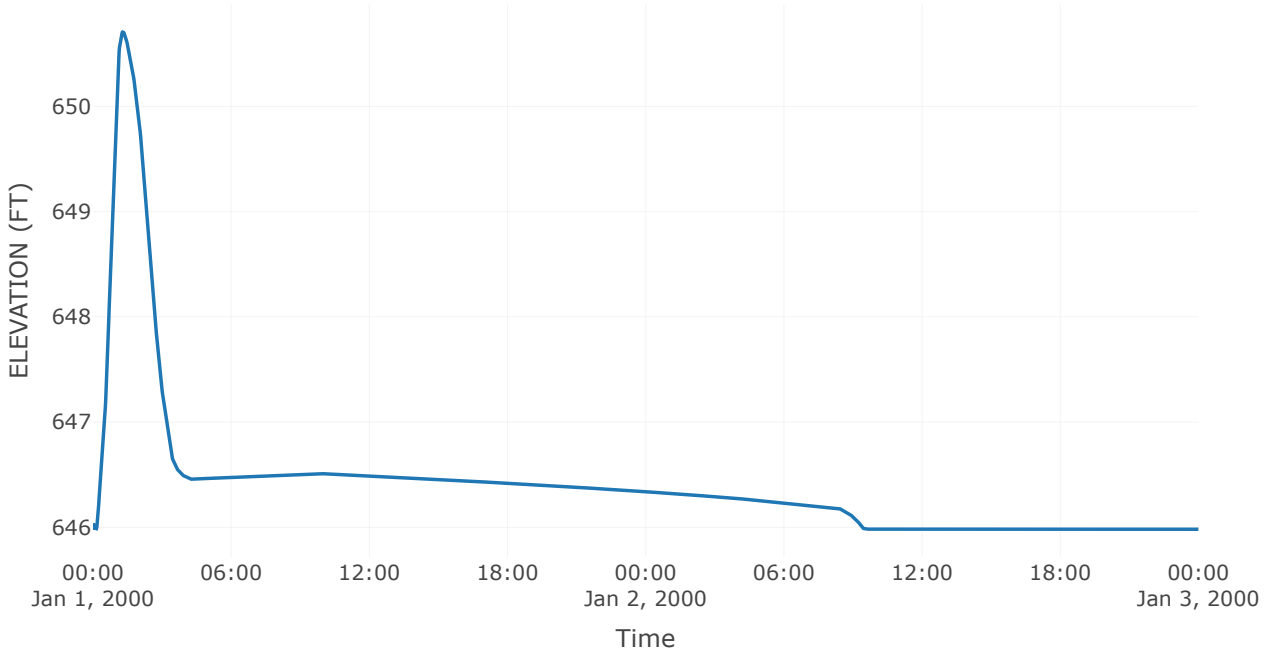

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

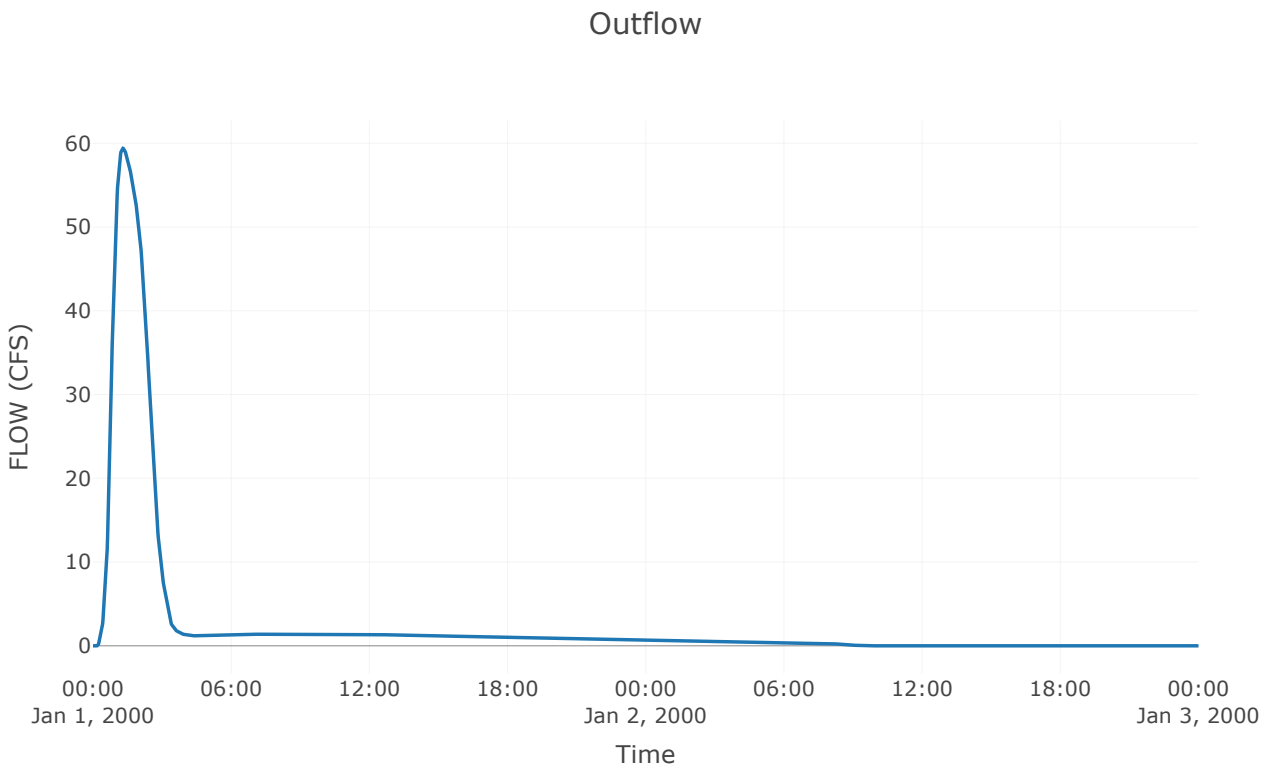

Outlet 2
14
12
10
8
6
4
2
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

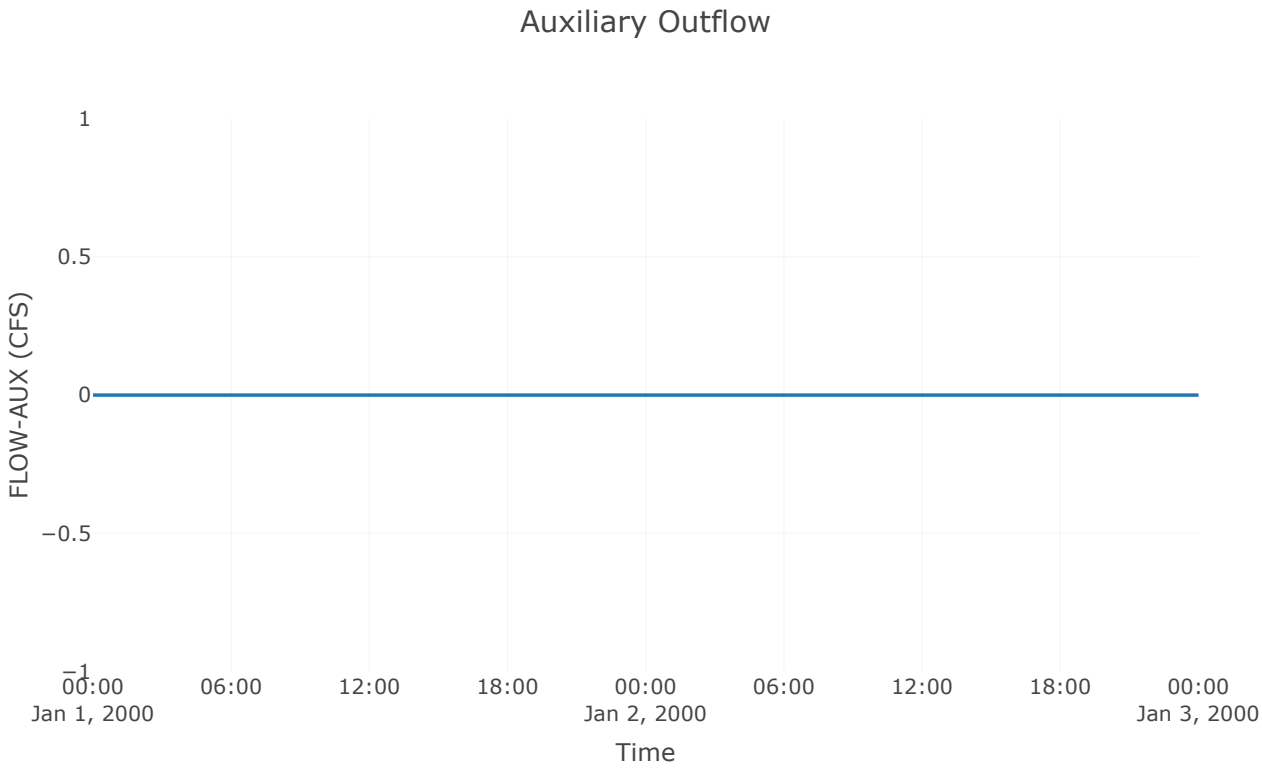


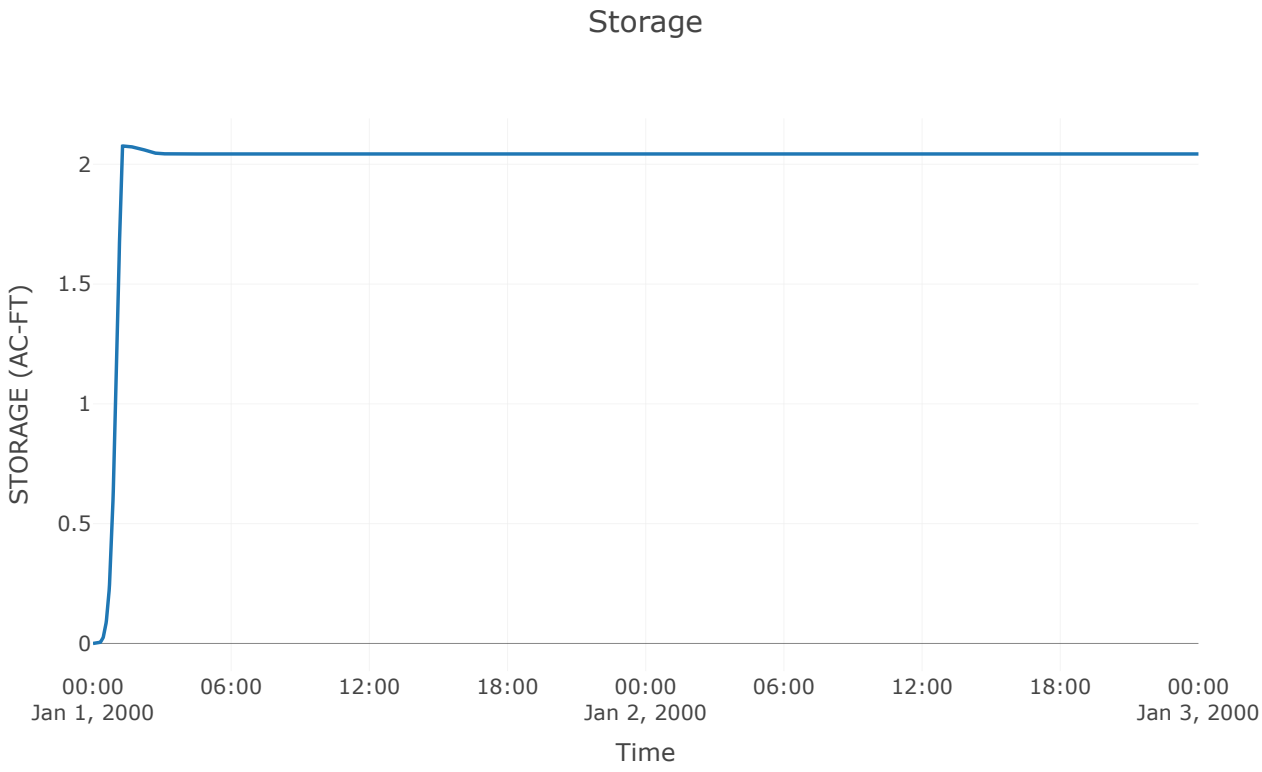

Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

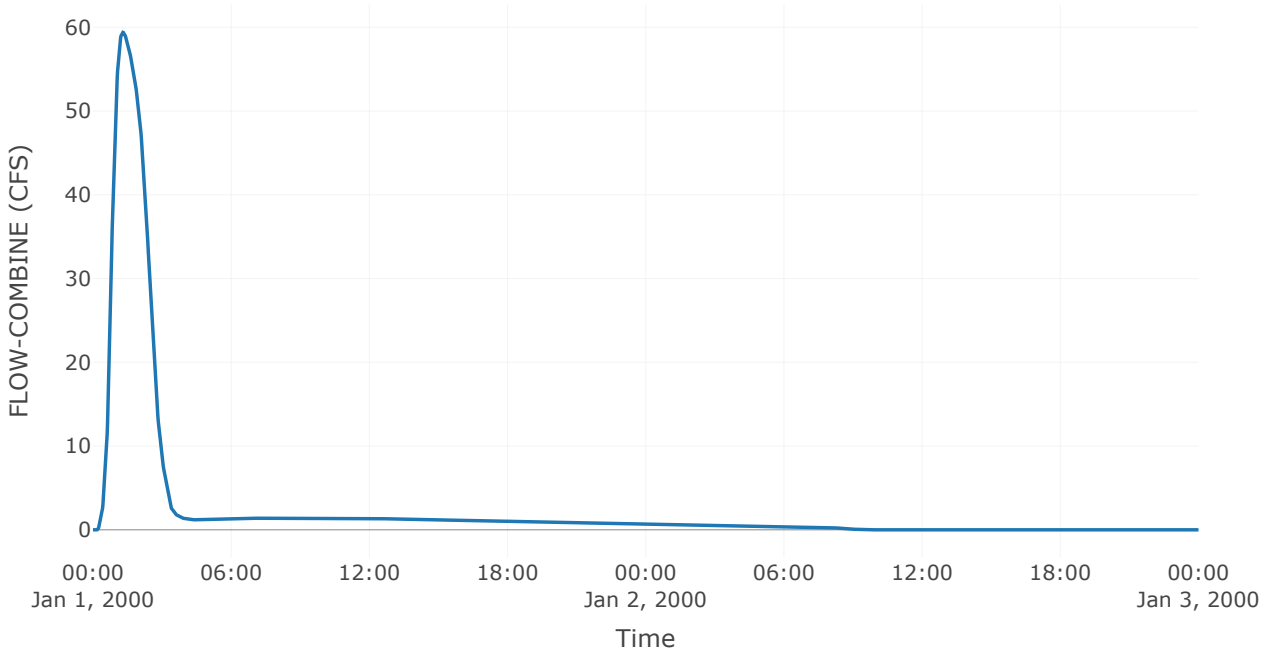
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58
Peak Inflow (CFS)	59.4
Time of Peak Inflow	01Jan2000, 01:18
Inflow Volume (AC - FT)	10.63
Maximum Storage (AC - FT)	2.08
Peak Elevation (FT)	653.35
Discharge Volume (AC - FT)	8.38

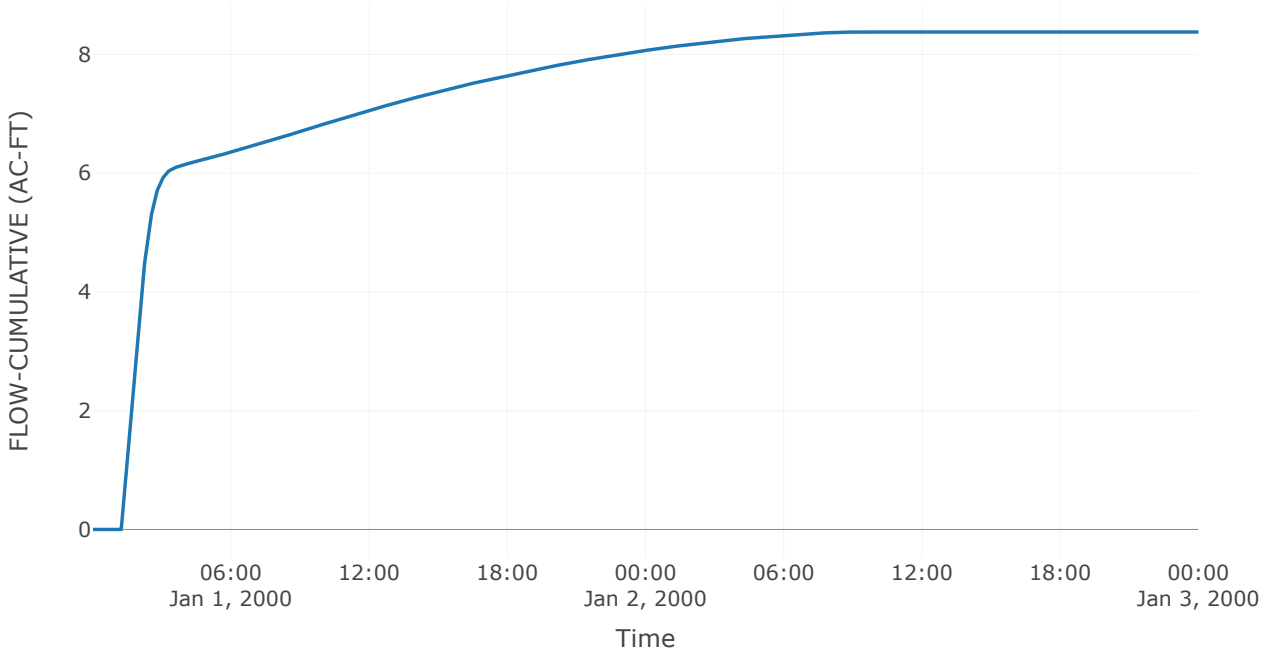

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

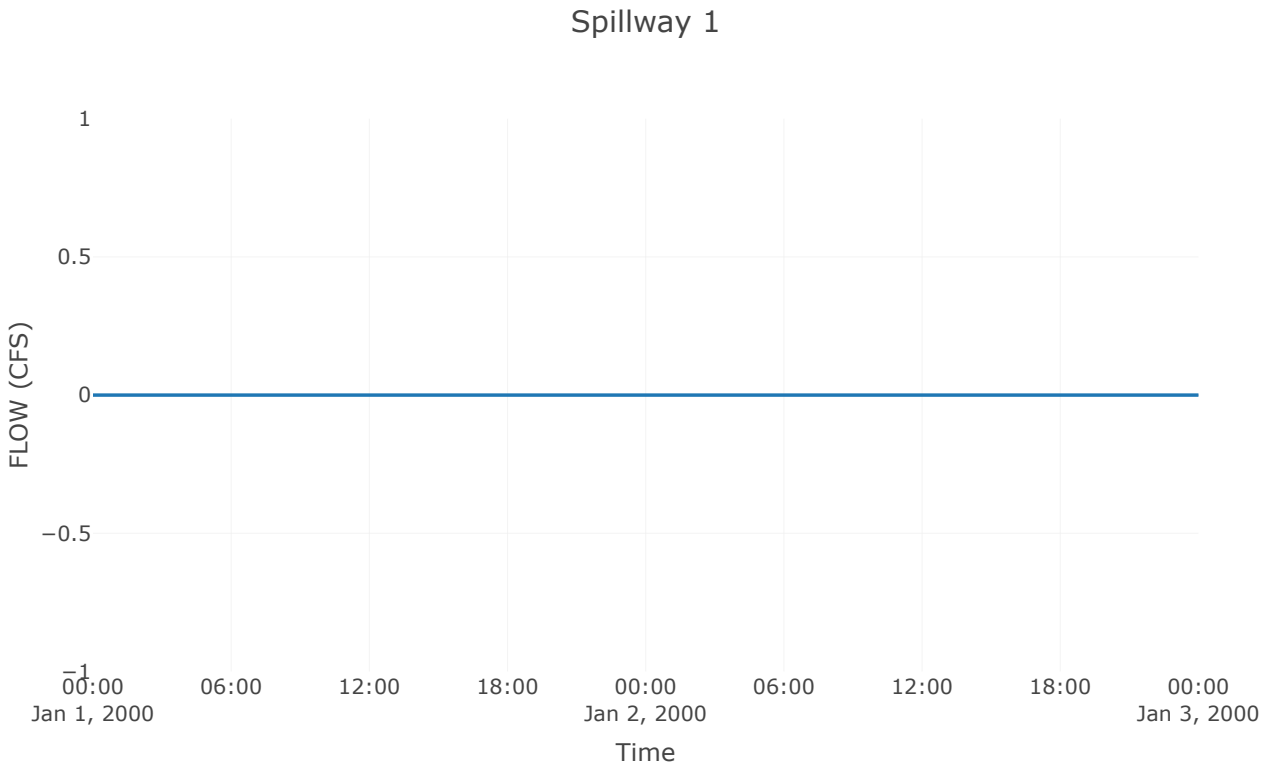

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

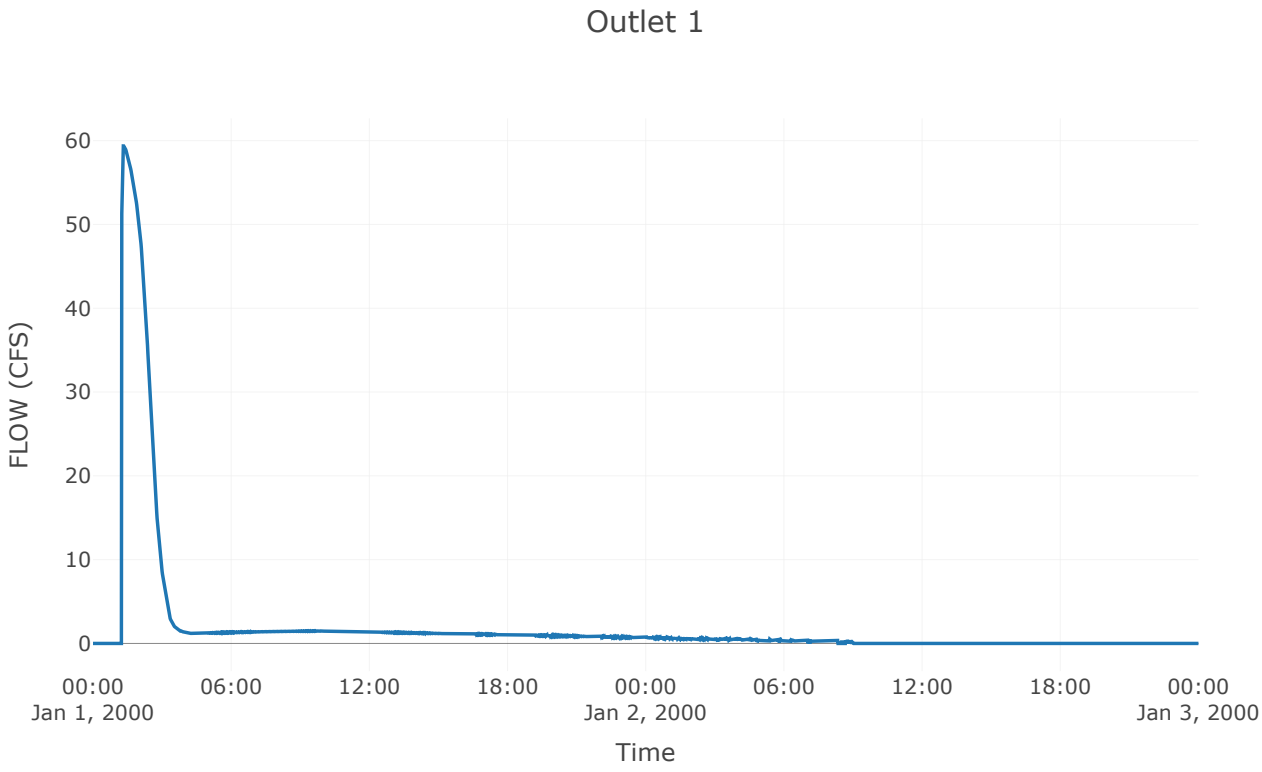
Combined Inflow



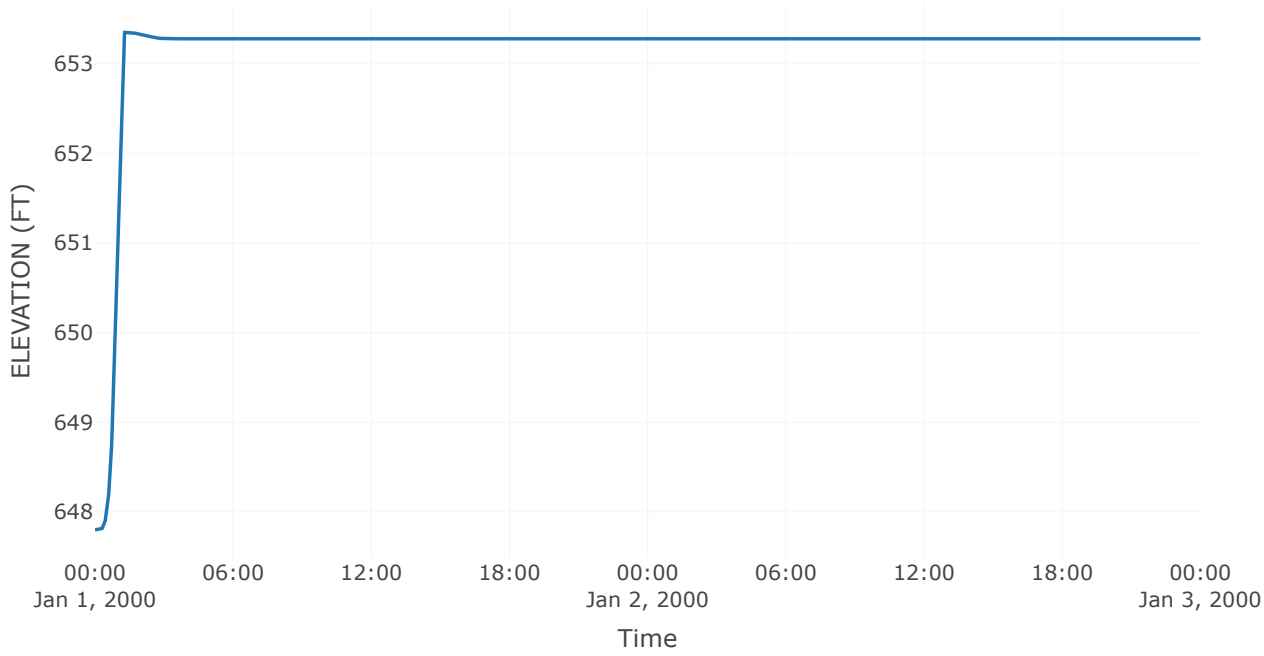
Cumulative Outflow



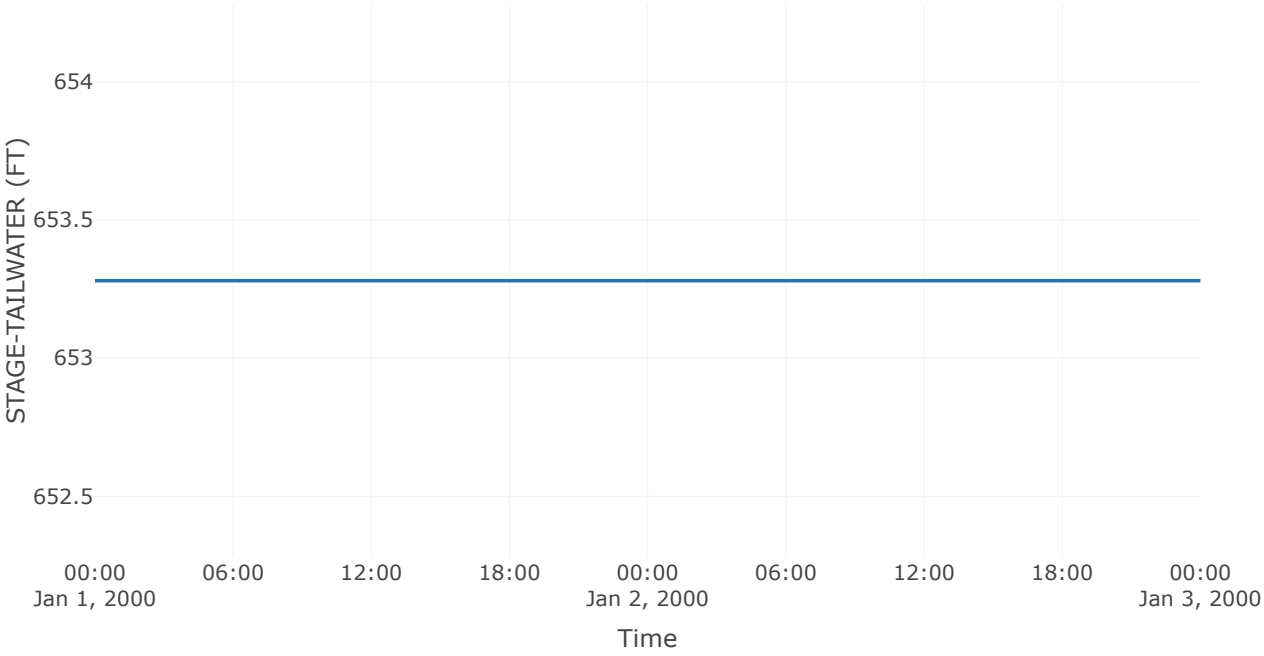

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

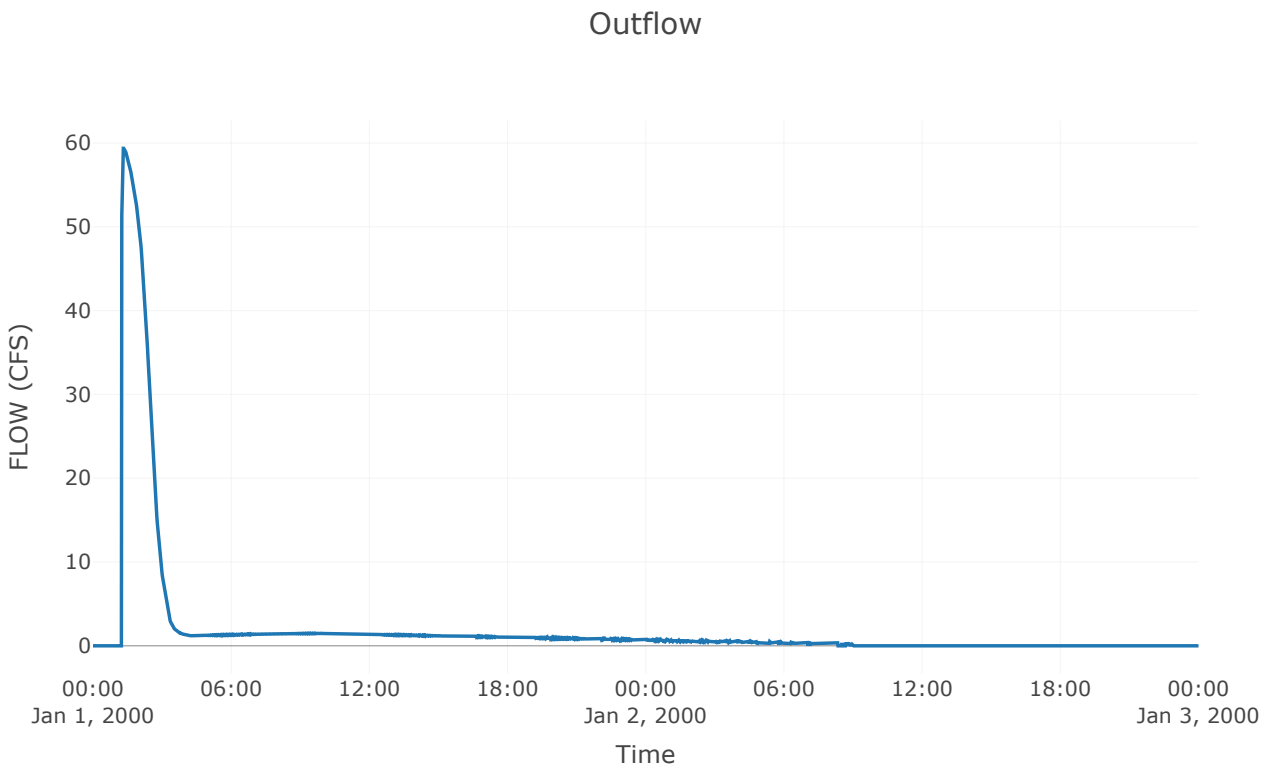

Outlet 1
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

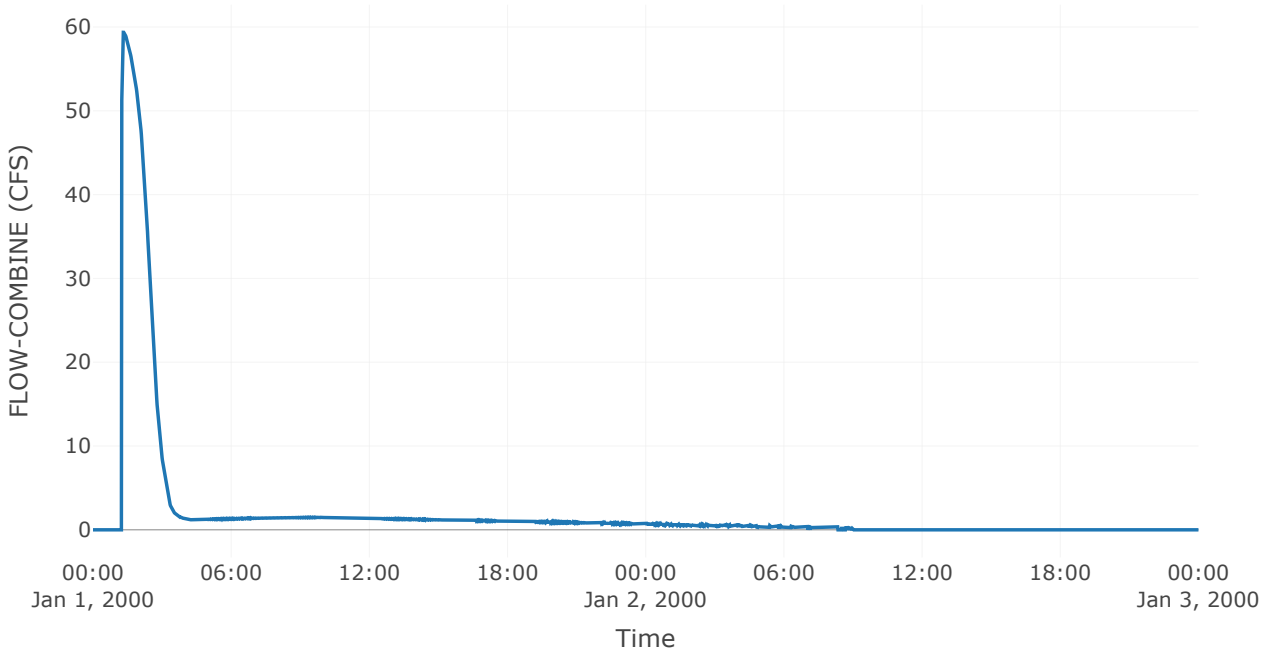



Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

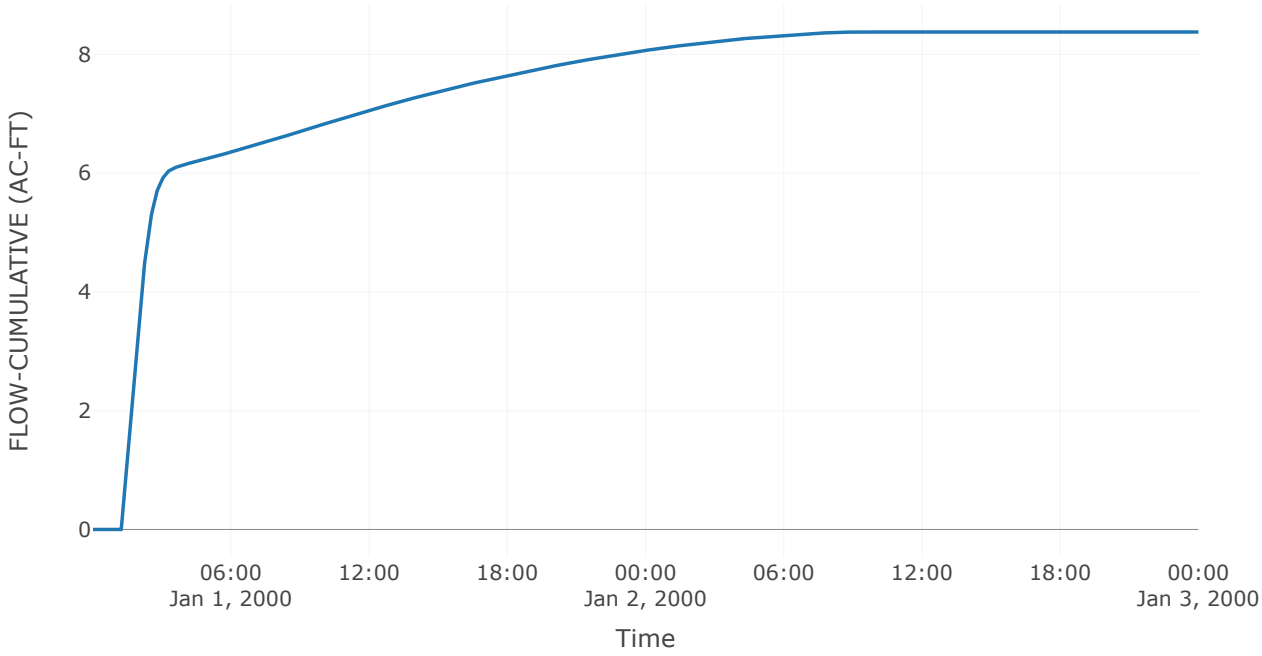
Sink: 55th Street Outlet

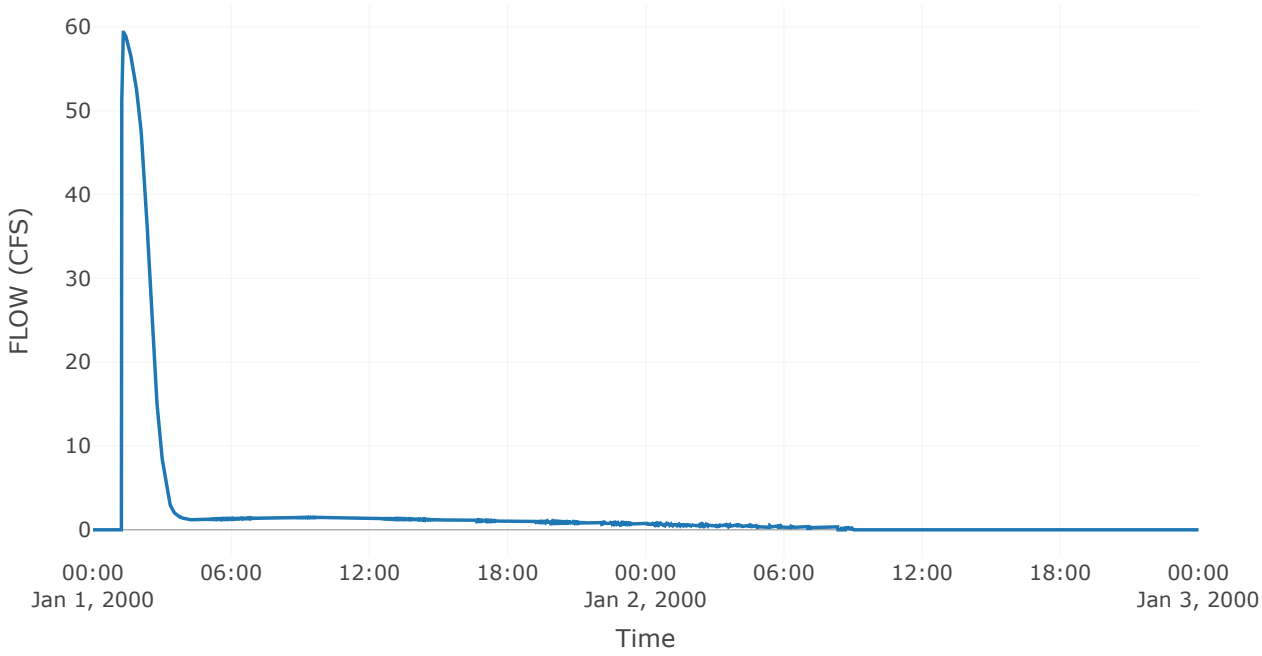
Results: 55th Street Outlet	
Peak Discharge (CFS)	59.36
Time of Peak Discharge	01Jan2000, 01:19
Volume (IN)	0.58

Combined Inflow



Cumulative Outflow




Outflow
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 10YR_2HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:46

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	25.3	01Jan2000, 00:51	1.65
Off - Site Trib 1 South	0	2.07	01Jan2000, 00:34	1.24
Off - Site Trib 1 West	0	1.88	01Jan2000, 00:42	1.44
Basin 1	0.03	4.9	01Jan2000, 02:19	1.6
On - Site Trib 2	0.02	13.59	01Jan2000, 00:52	1.44
Off - Site Trib2	0.01	4.91	01Jan2000, 00:42	1.44
Basin 2	0.05	3.98	01Jan2000, 05:00	1.53
On - Site Trib - Area 3	0.01	9.89	01Jan2000, 00:52	1.44
LaGrange Highlands Off - Site	0.2	161.81	01Jan2000, 01:01	1.65
Basin 3	0.07	2.06	01Jan2000, 16:07	1.49
Off - Site Tributary Area	0.27	162.6	01Jan2000, 01:01	1.61
Storage East of Wolf Road	0.27	162.1	01Jan2000, 01:03	1.61
Box Inlet - East Side Wolf Rd	0.27	157.79	01Jan2000, 01:09	1.61
Prop Storage West of Wolf Rd	0.27	157.76	01Jan2000, 01:09	1.6
Prop On - Site	0	5.14	01Jan2000, 00:32	1.81
Proposed Basin C	0.27	75.77	01Jan2000, 01:15	1.18
Existing Basin A & B	0.27	75.75	01Jan2000, 01:16	1.03

55th Street Outlet	0.27	75.75	01Jan2000, 01:16	1.03

Subbasin: On-Site Trib 1

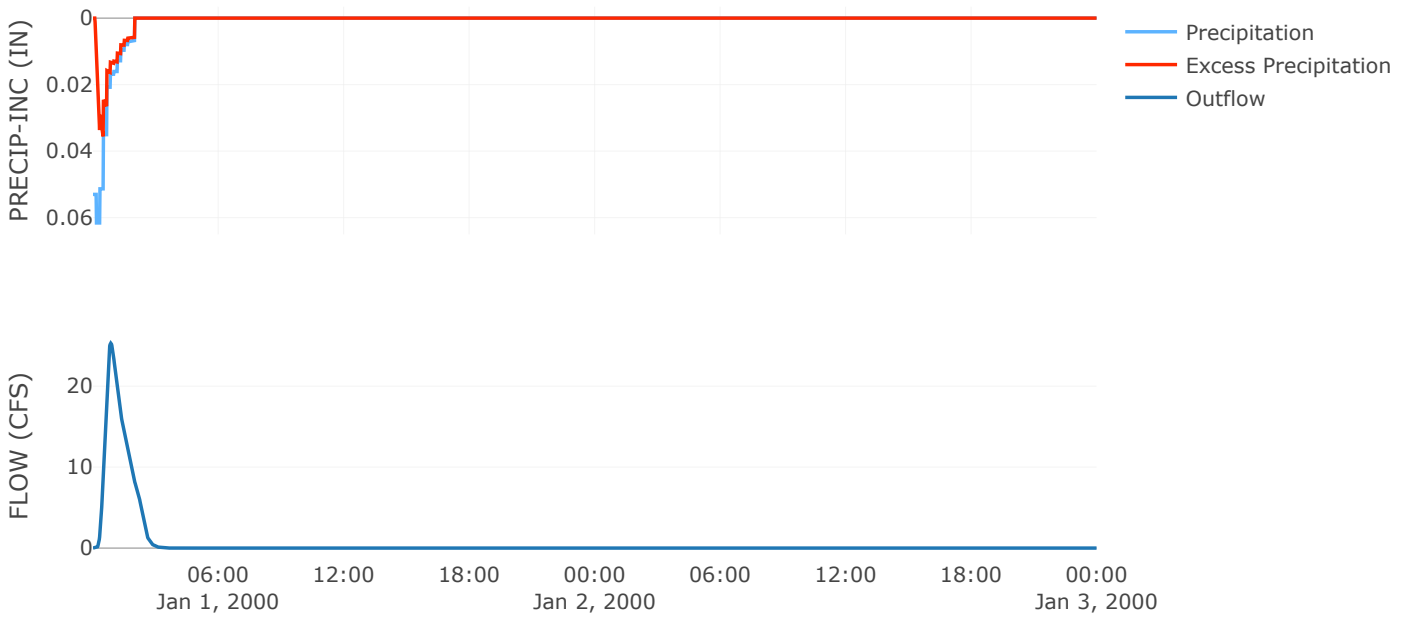
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

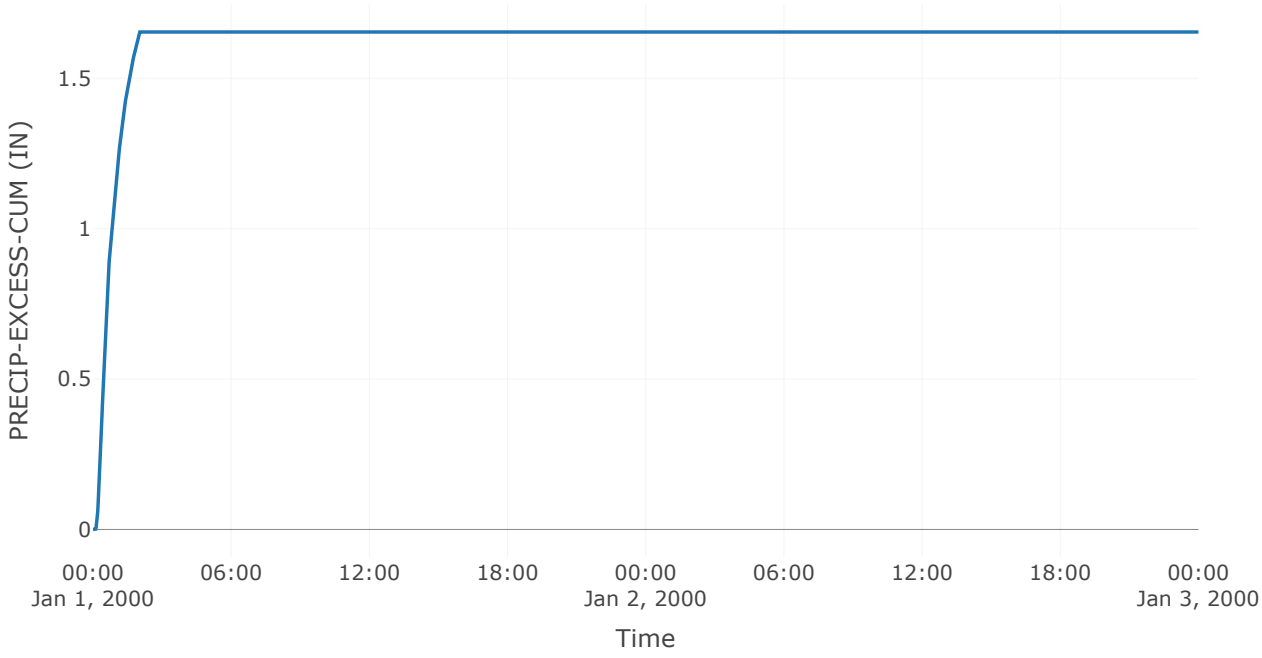
Transform: Scs	
Lag	21
Unitgraph Type	Standard

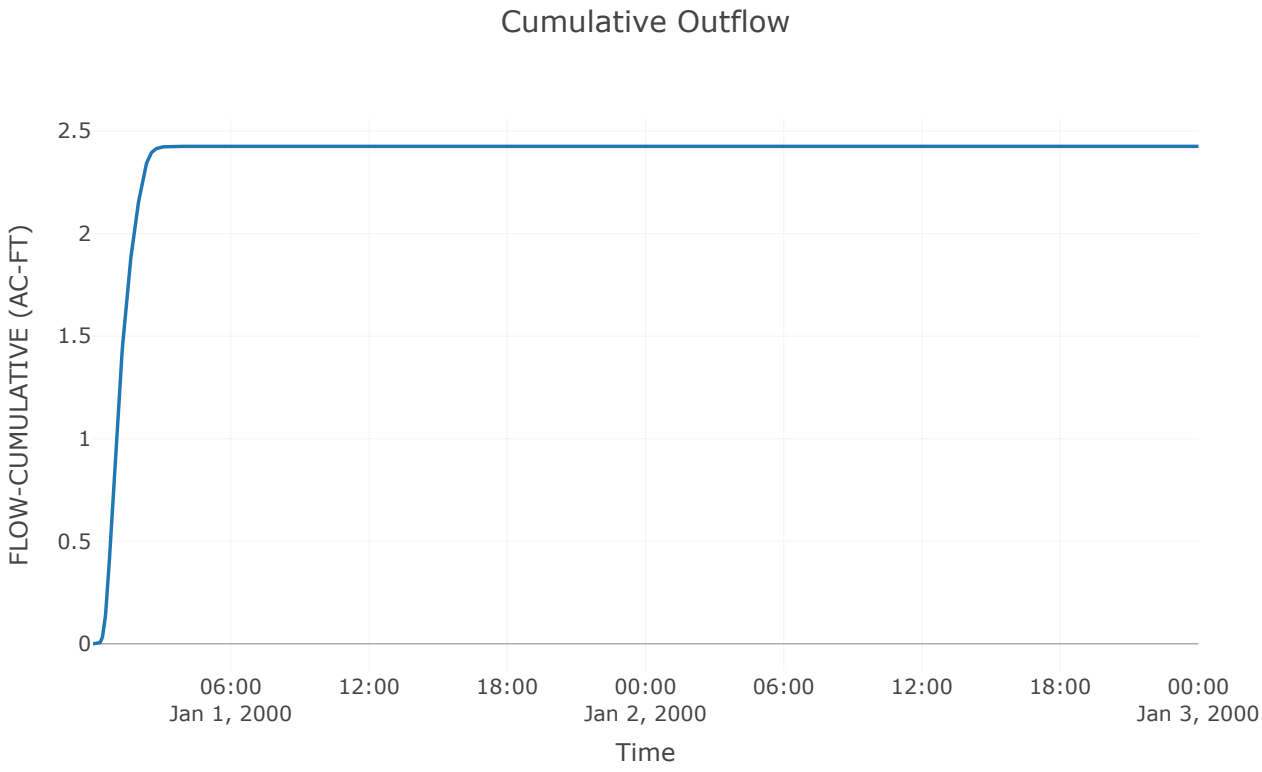
Results: On-Site Trib 1	
Peak Discharge (CFS)	25.3
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	1.65
Precipitation Volume (AC - FT)	4.39
Loss Volume (AC - FT)	1.96
Excess Volume (AC - FT)	2.43
Direct Runoff Volume (AC - FT)	2.43
Baseflow Volume (AC - FT)	0

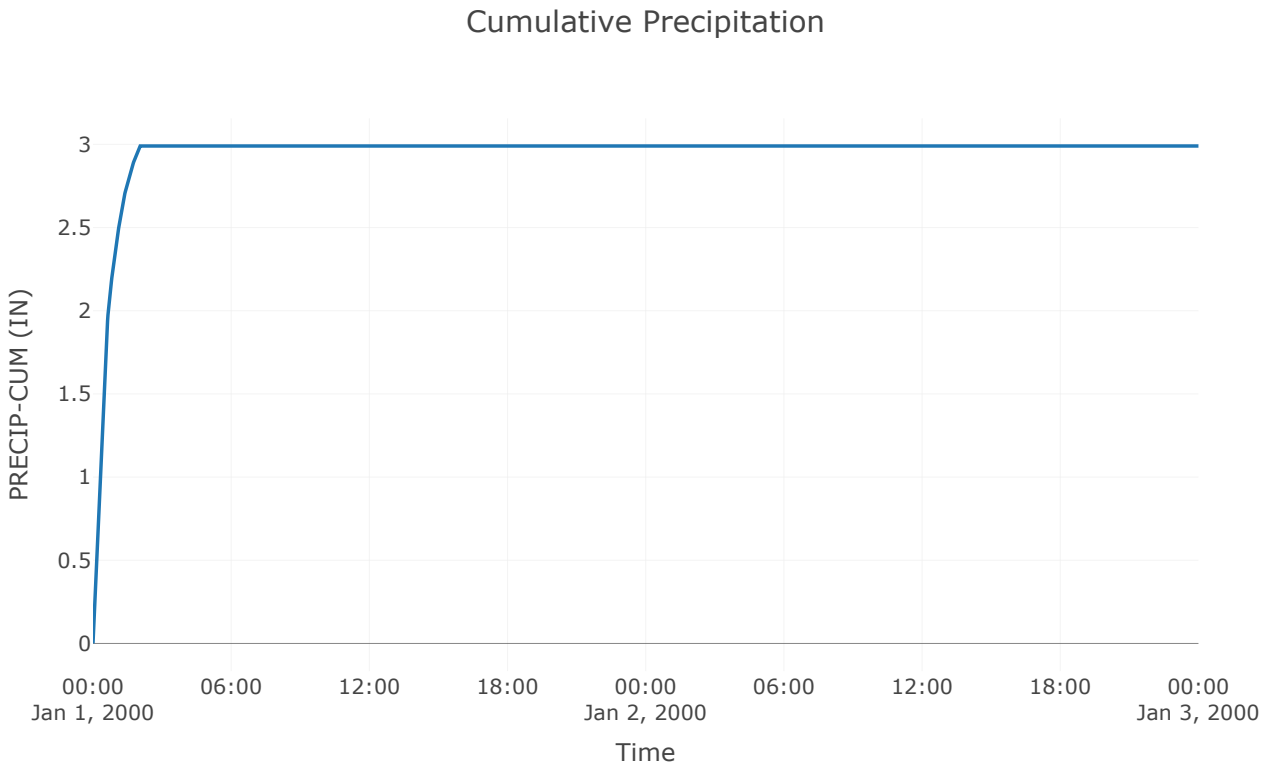
Precipitation and Outflow

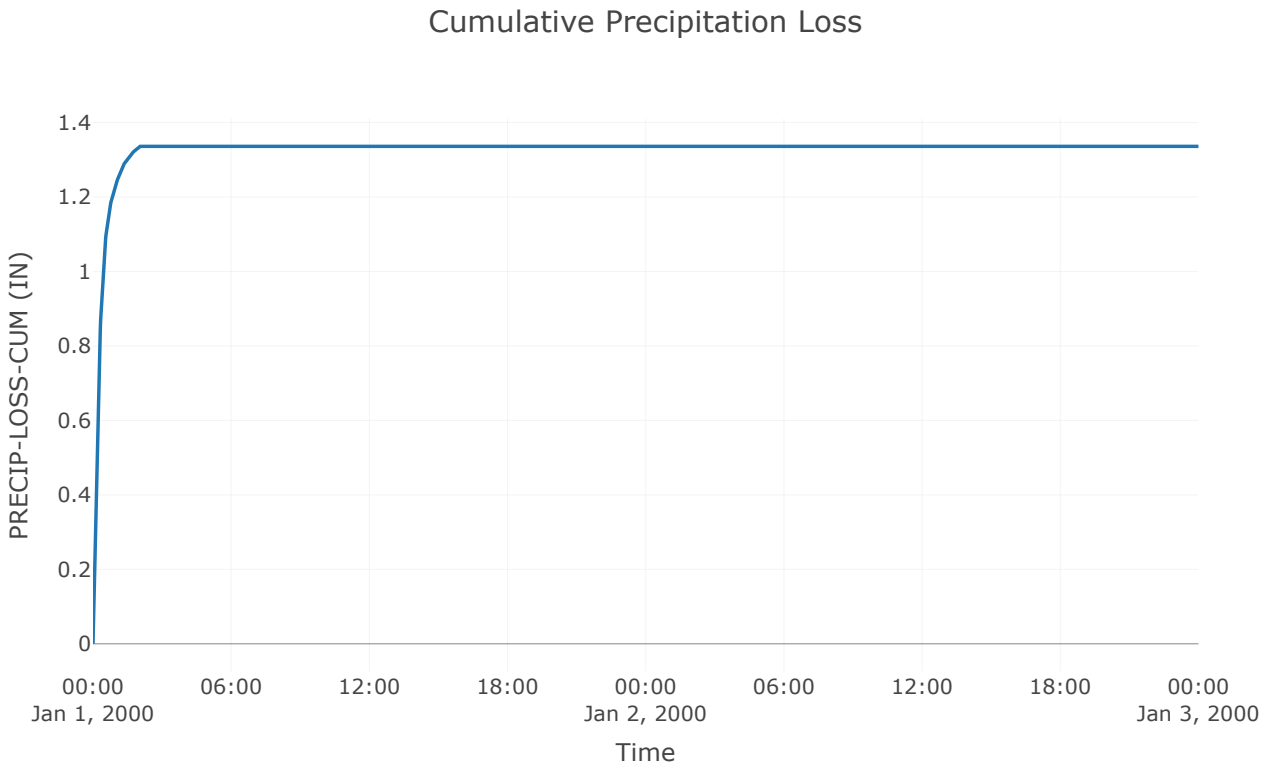


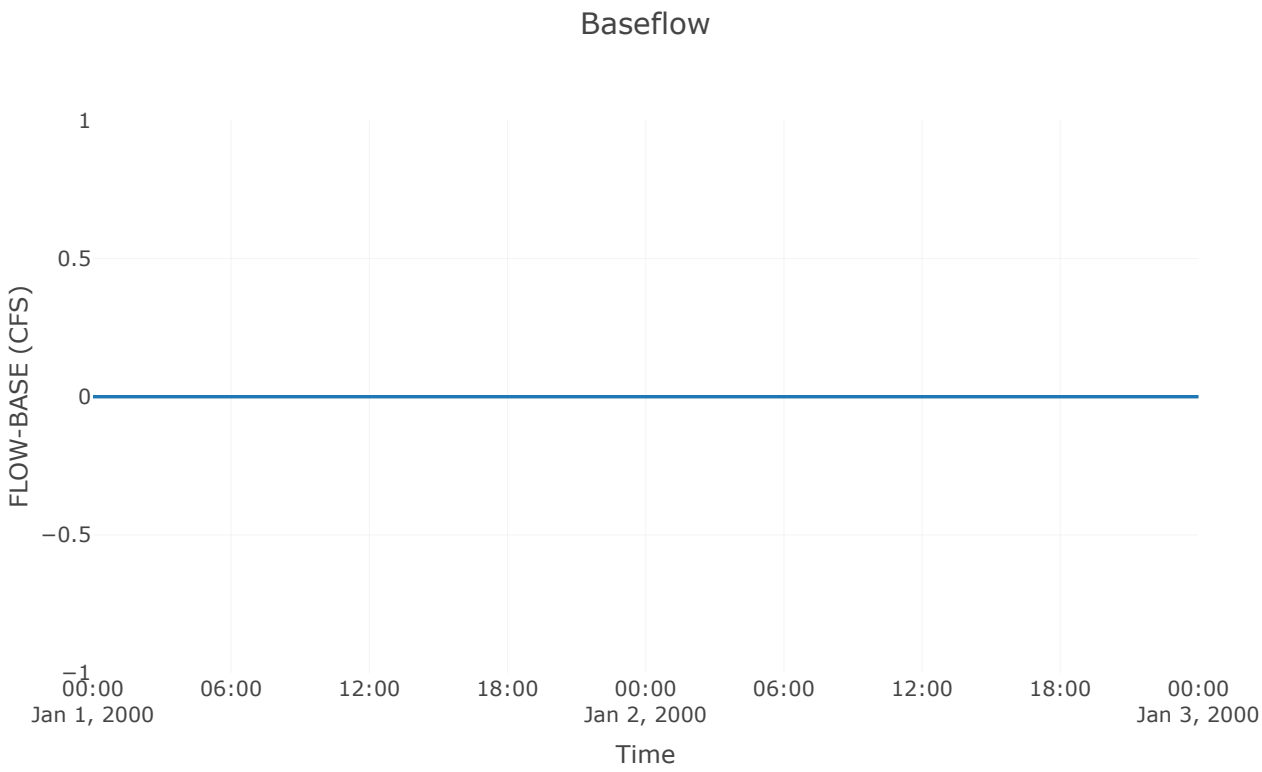
Cumulative Excess Precipitation

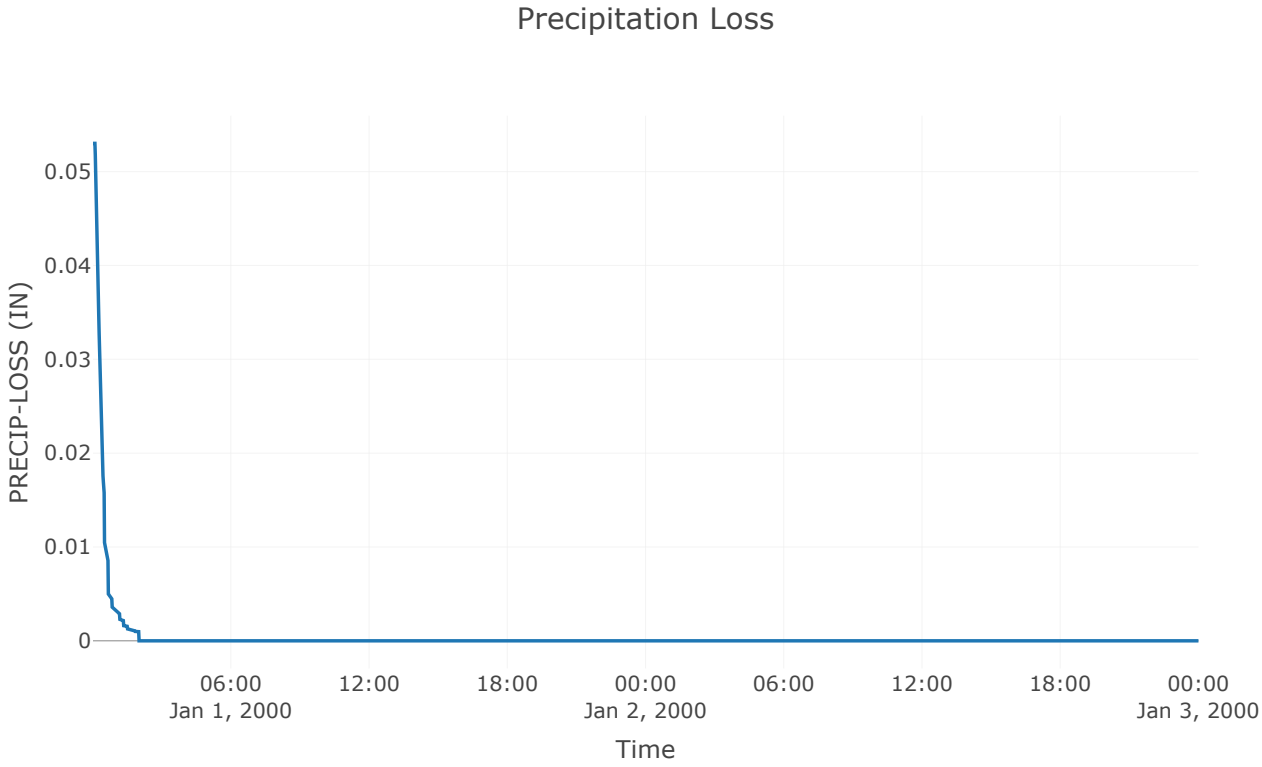


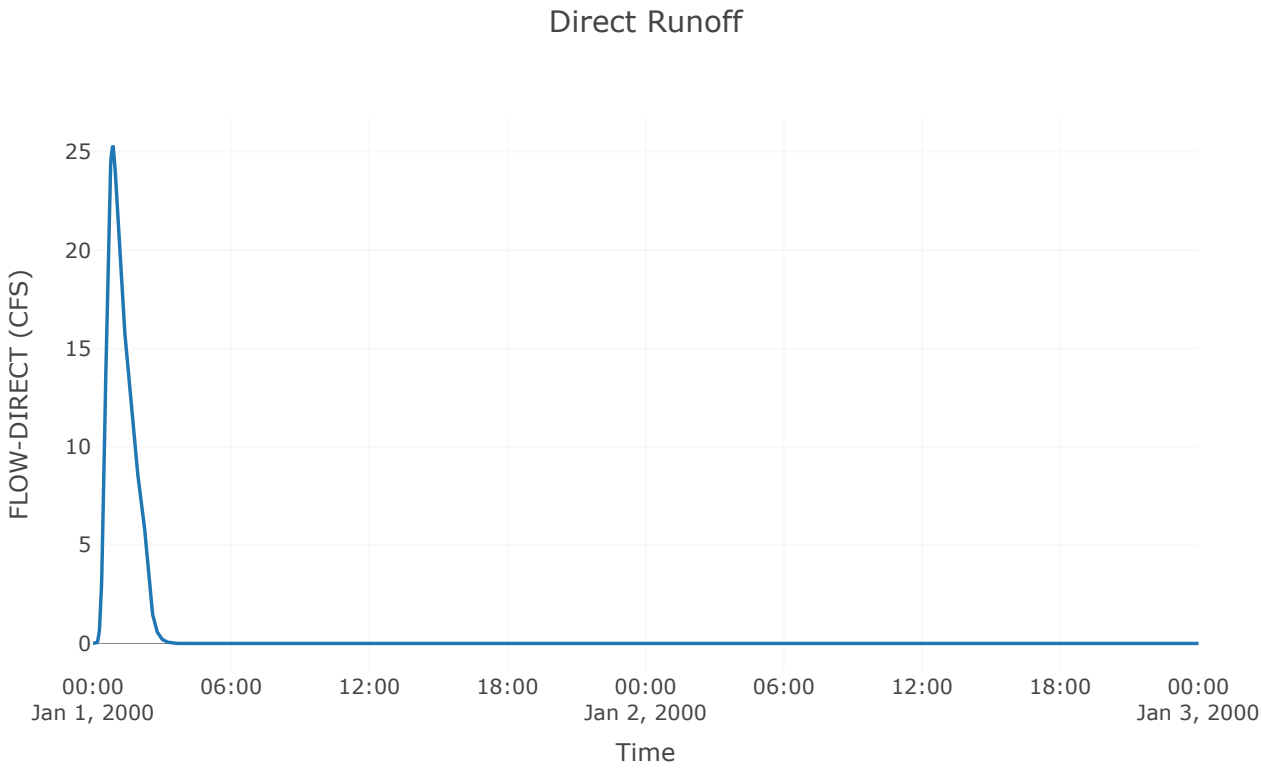

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

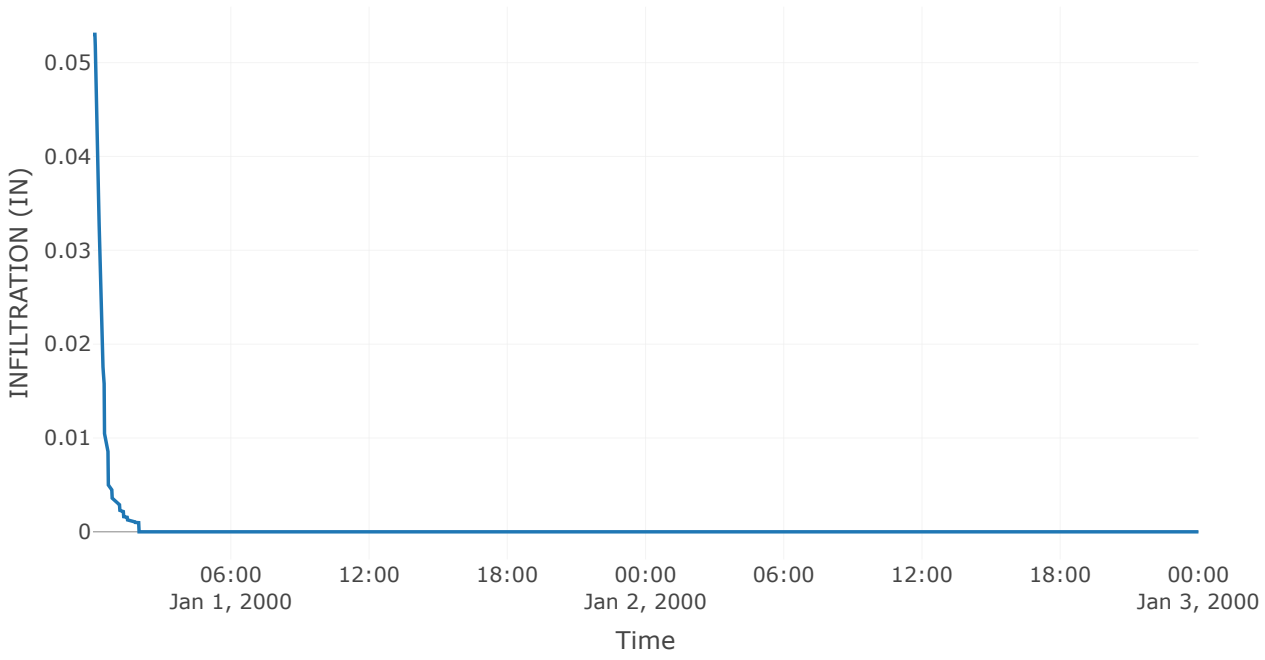

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

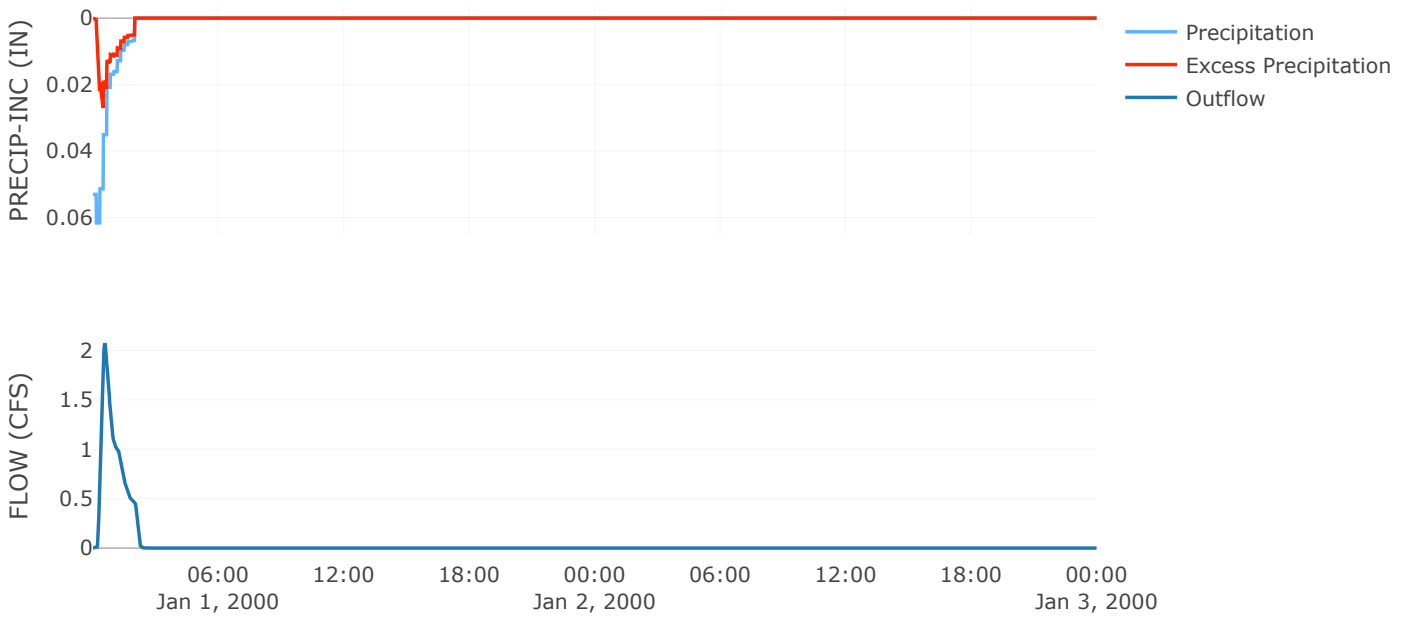
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

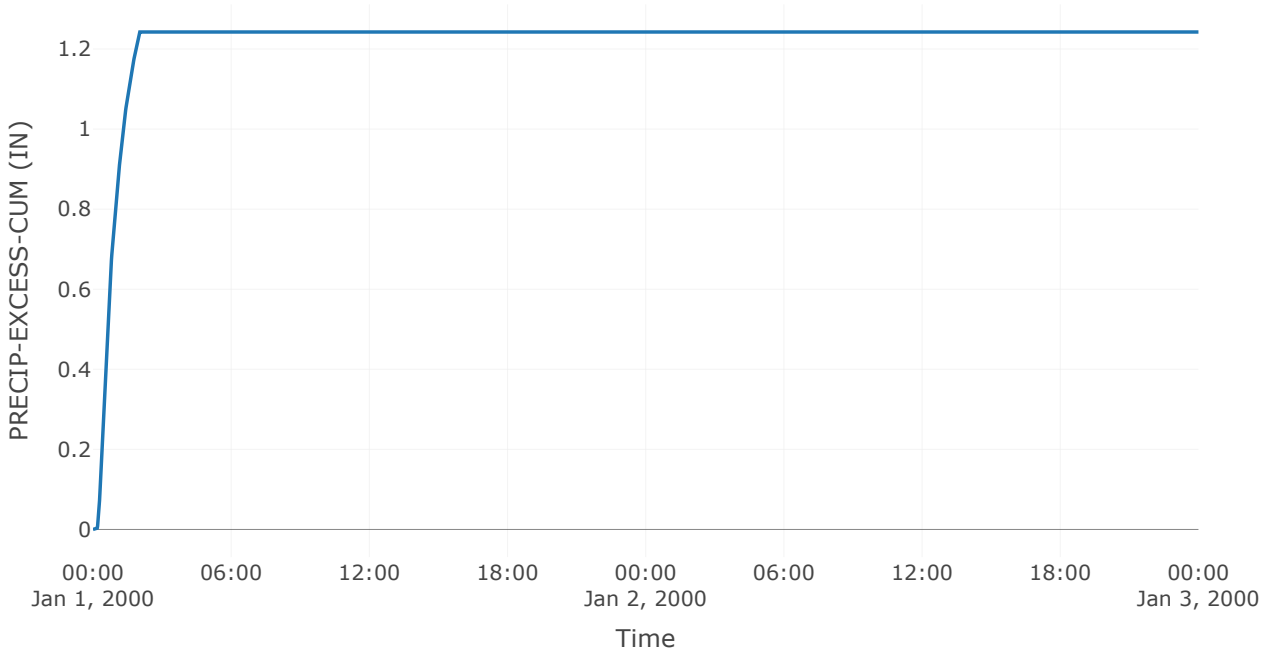
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	2.07
Time of Peak Discharge	01Jan2000, 00:34
Volume (IN)	1.24
Precipitation Volume (AC - FT)	0.37
Loss Volume (AC - FT)	0.22
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

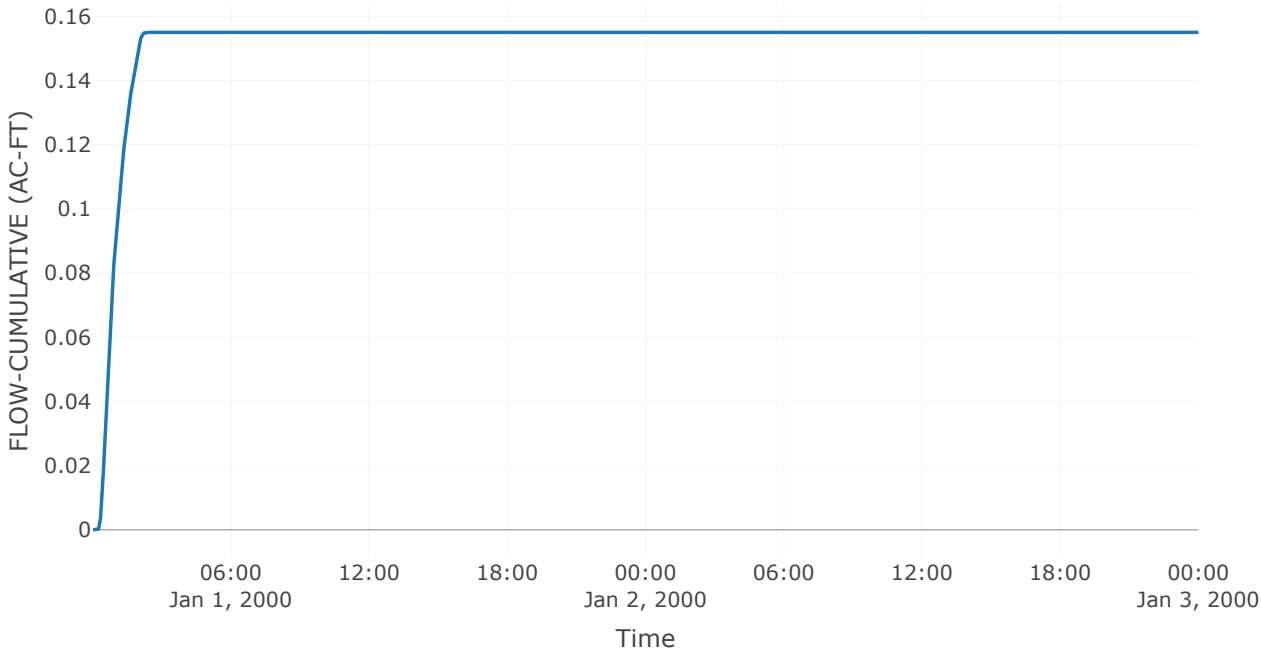
Precipitation and Outflow



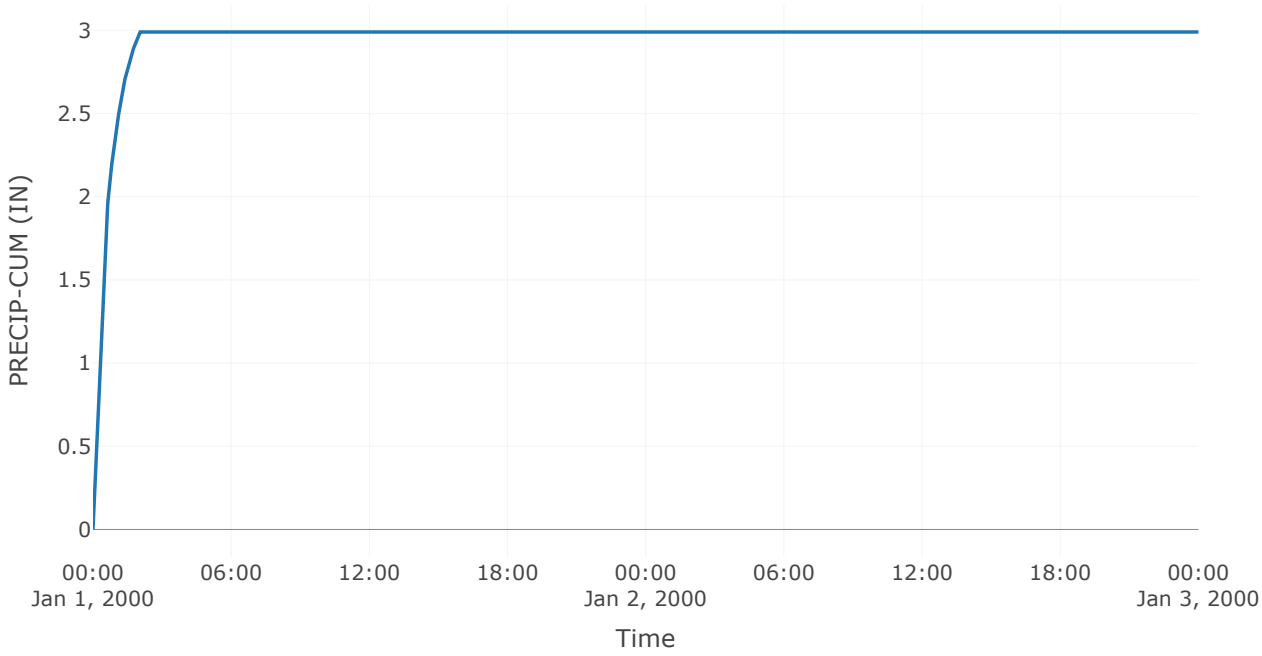
Cumulative Excess Precipitation

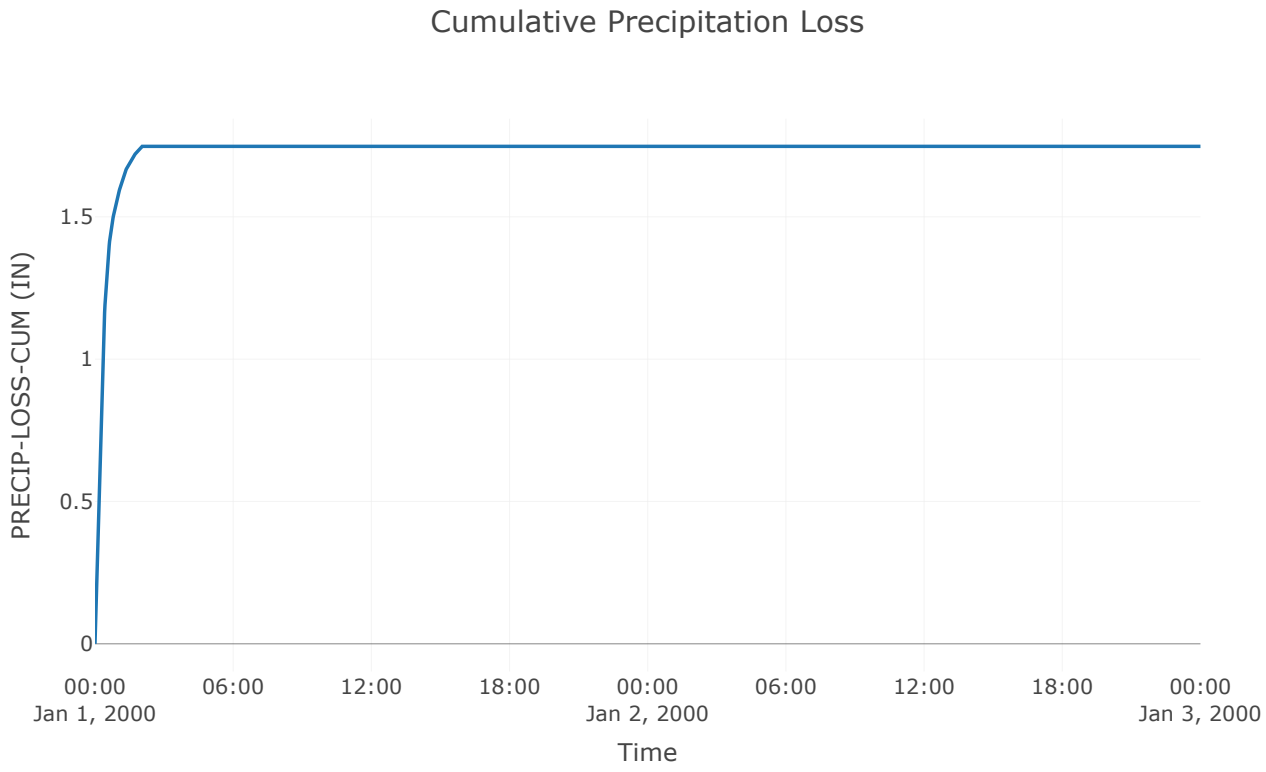


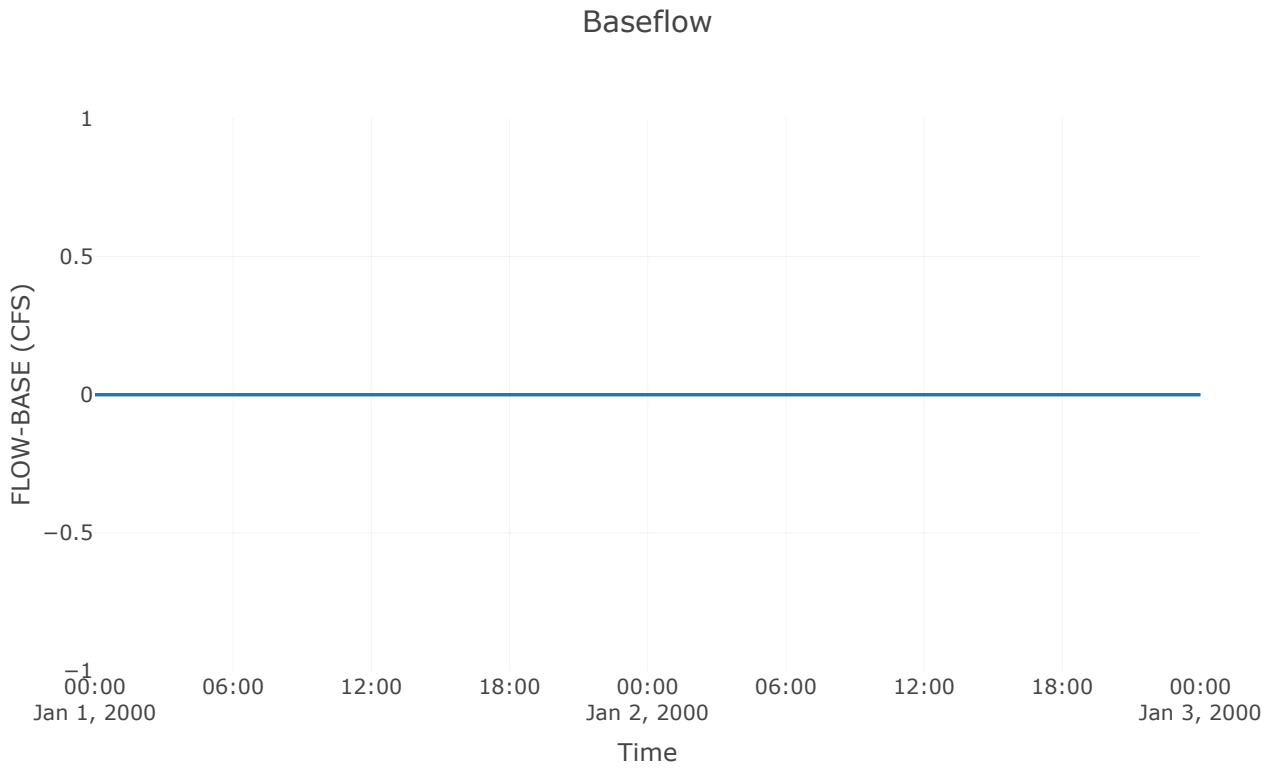
Cumulative Outflow

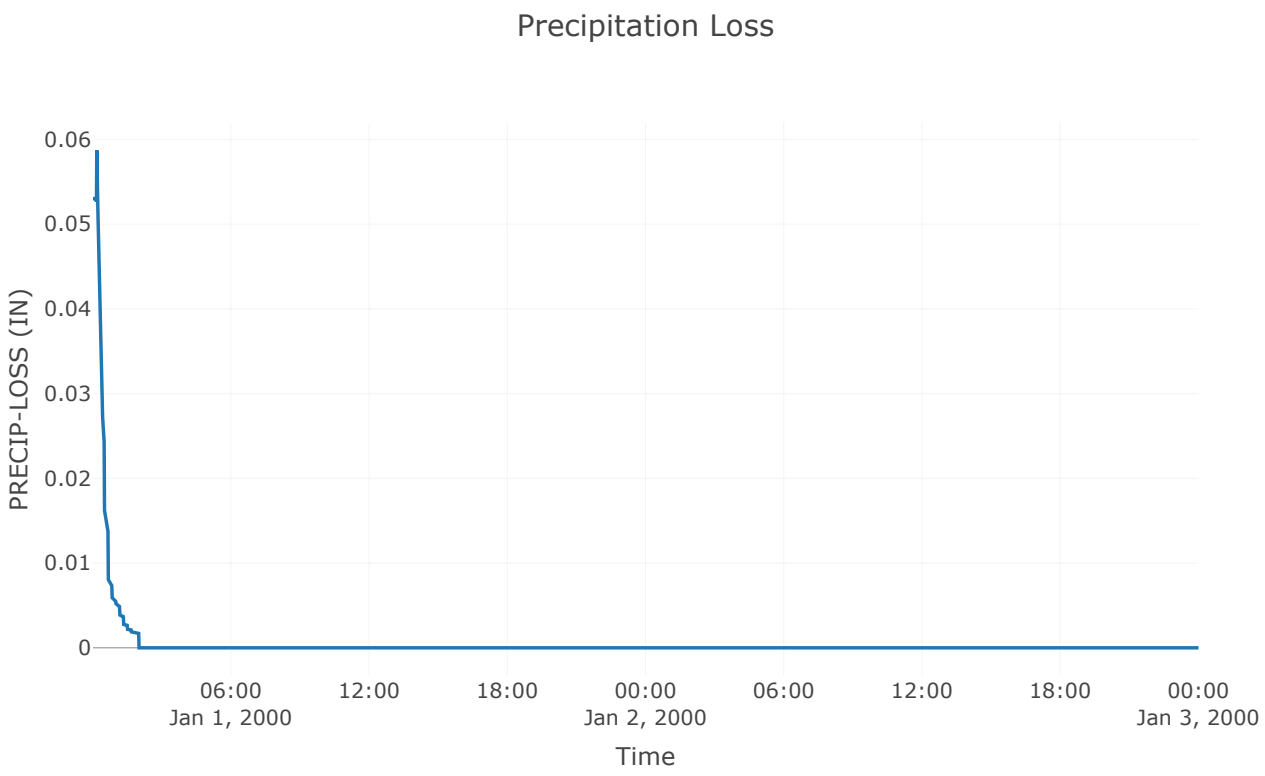


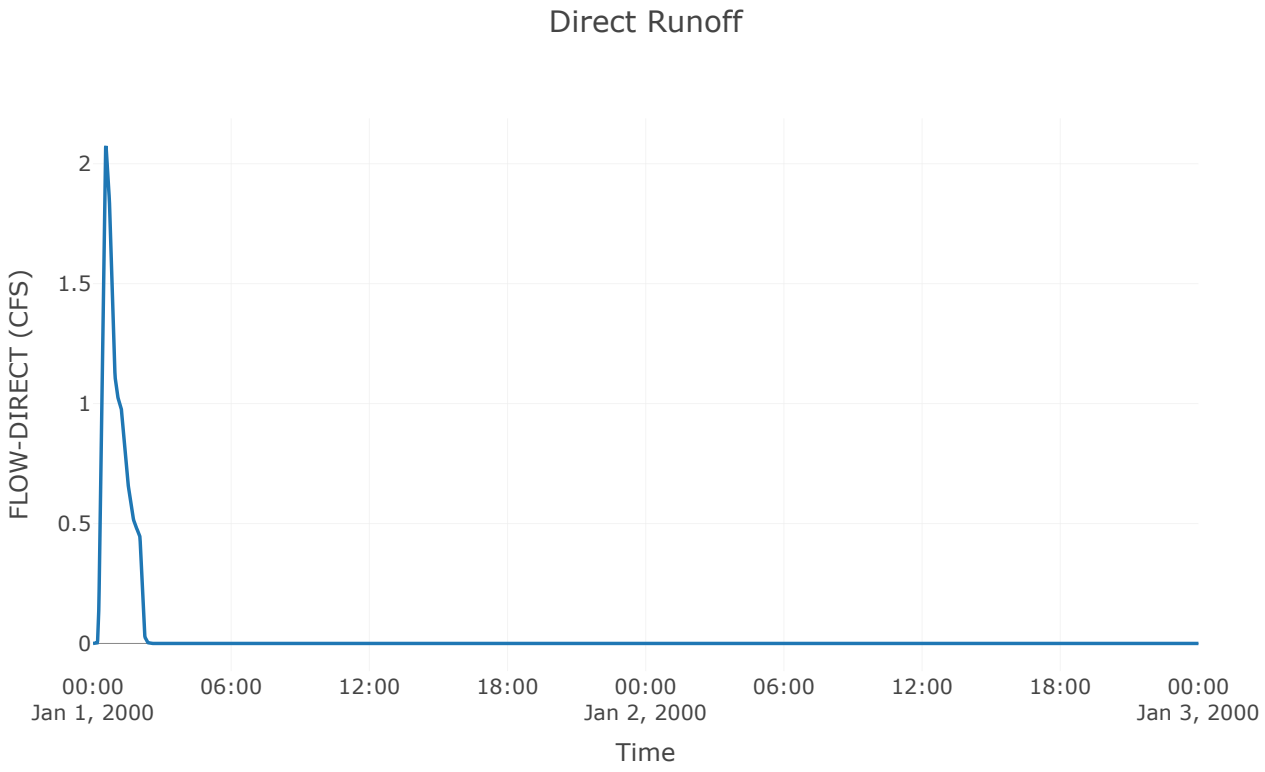
Cumulative Precipitation

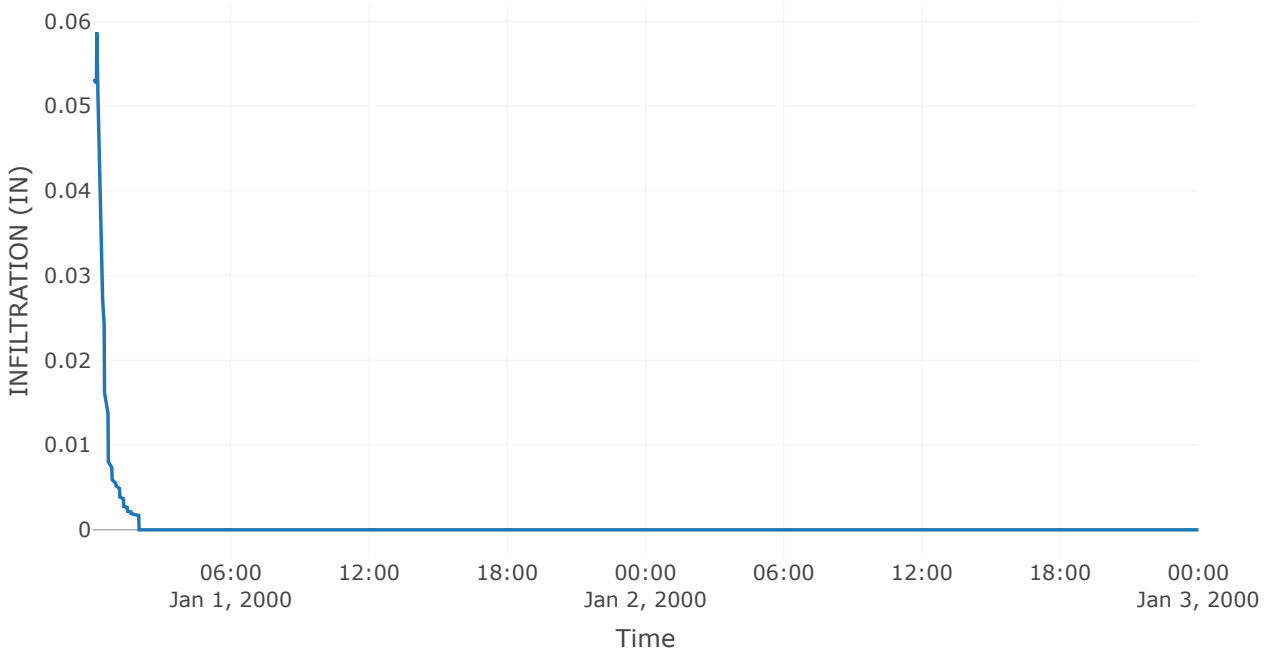



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.06
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

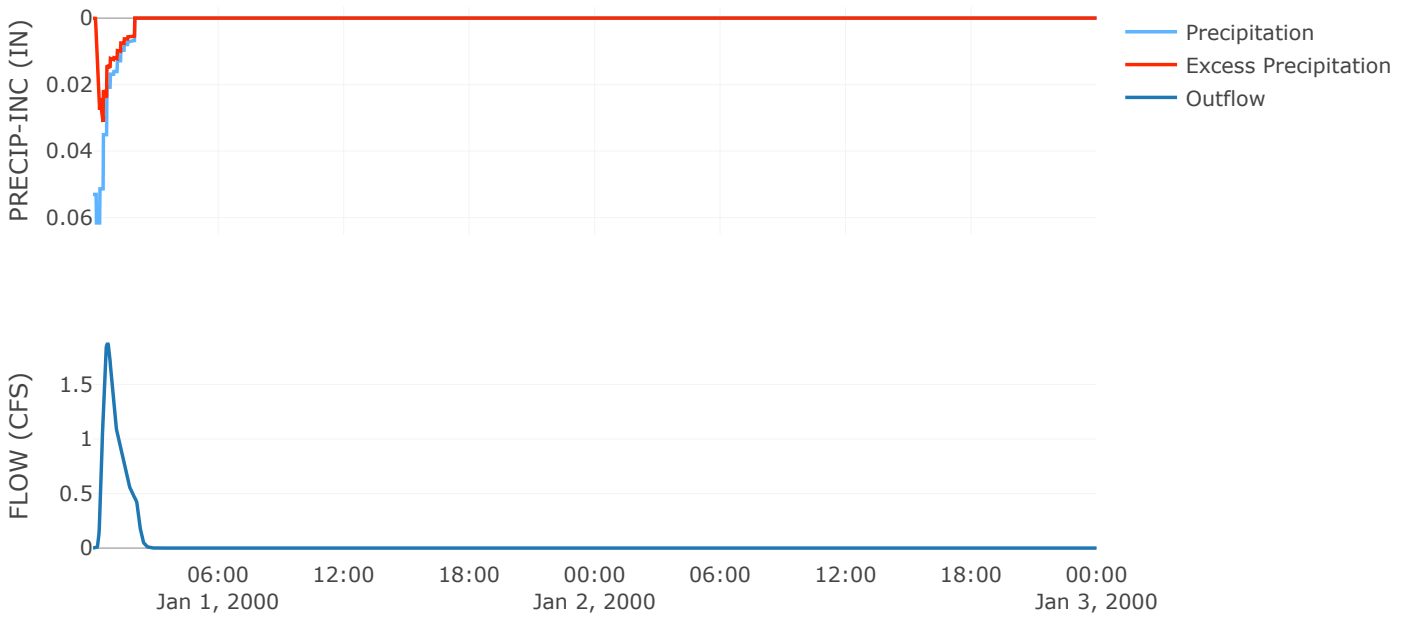
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

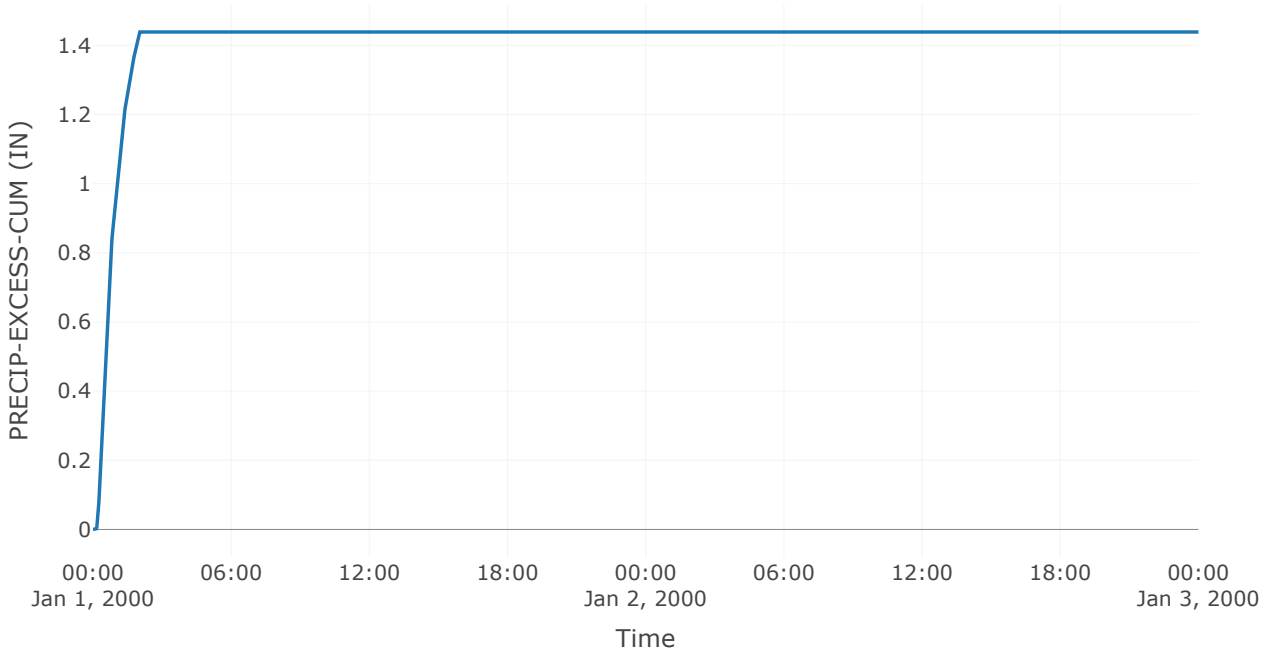
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	1.88
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.32
Loss Volume (AC - FT)	0.17
Excess Volume (AC - FT)	0.16
Direct Runoff Volume (AC - FT)	0.16
Baseflow Volume (AC - FT)	0

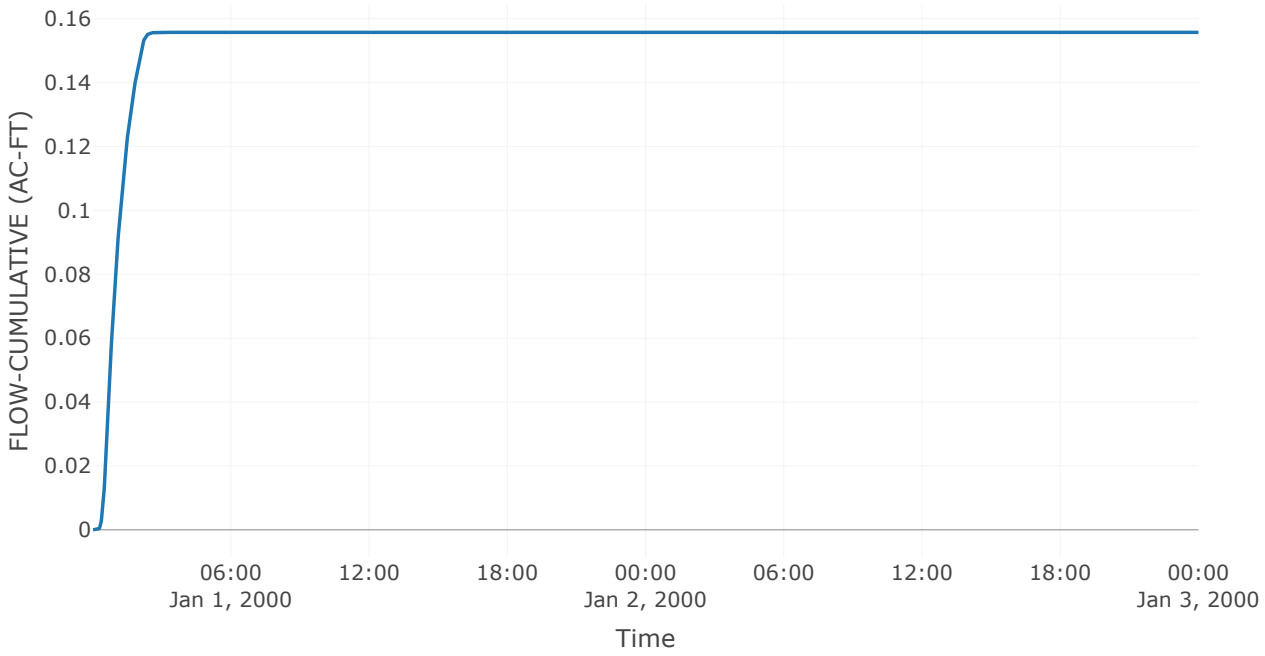
Precipitation and Outflow



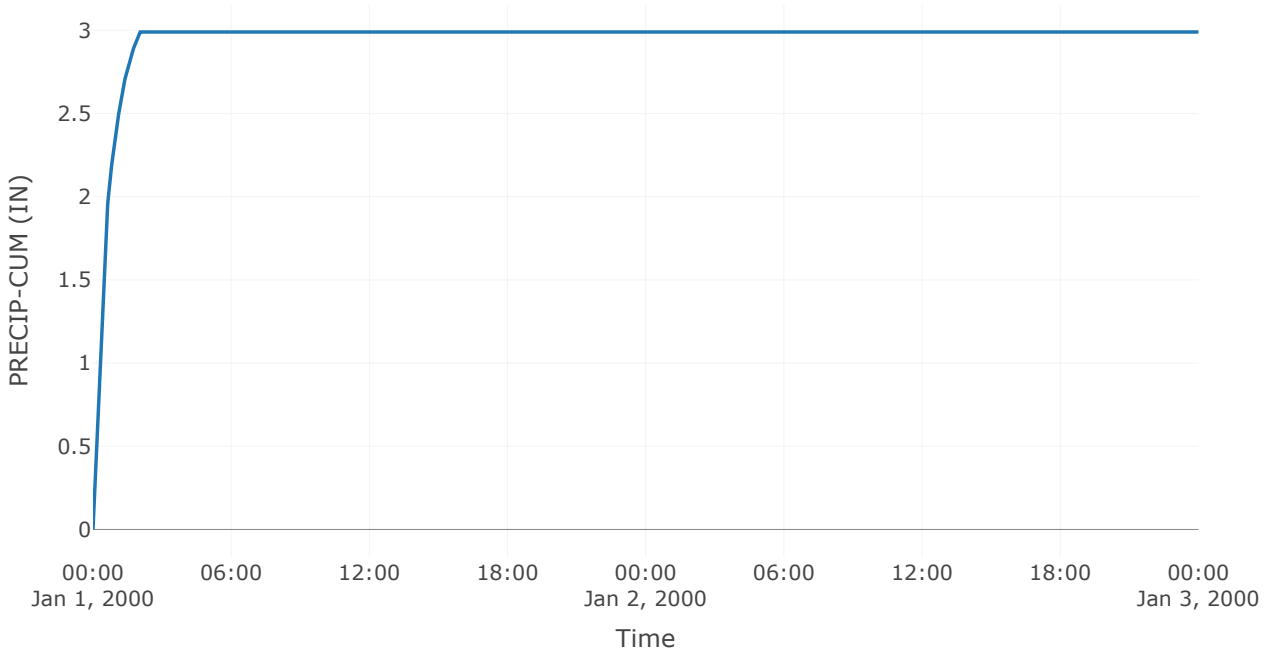
Cumulative Excess Precipitation

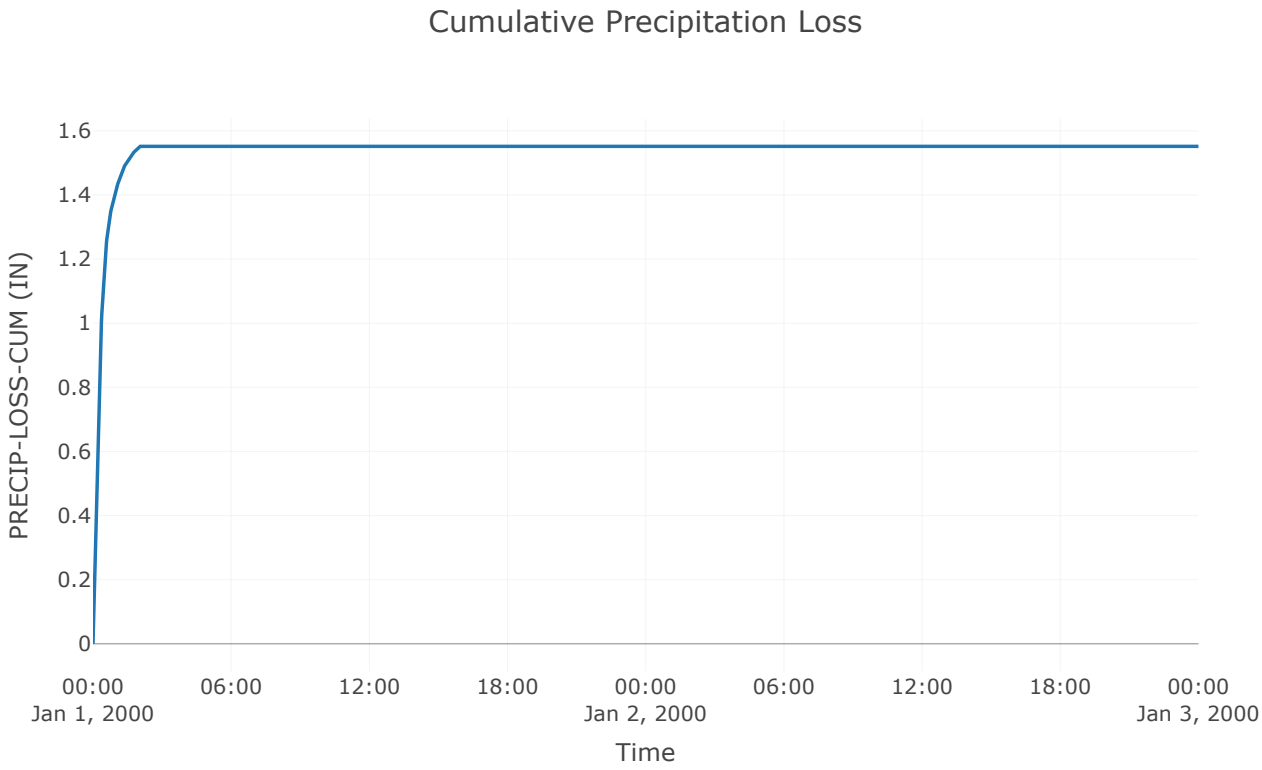


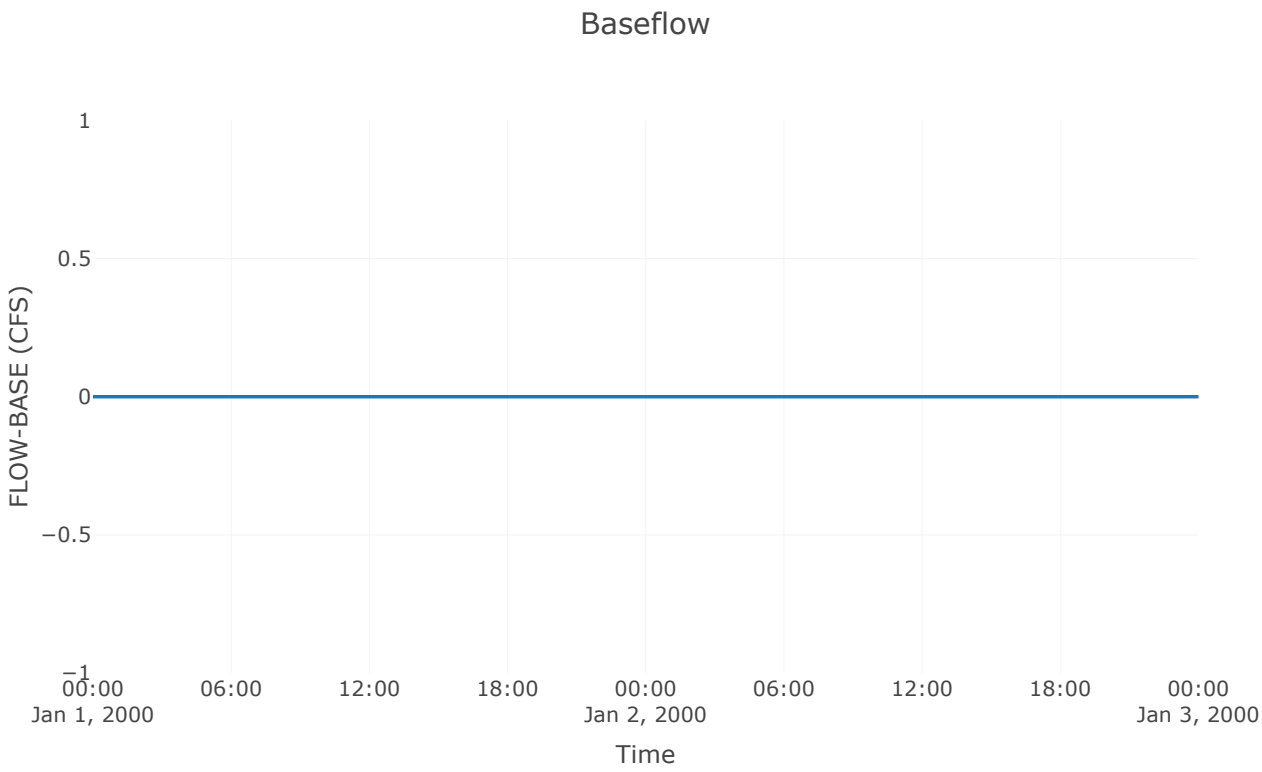
Cumulative Outflow



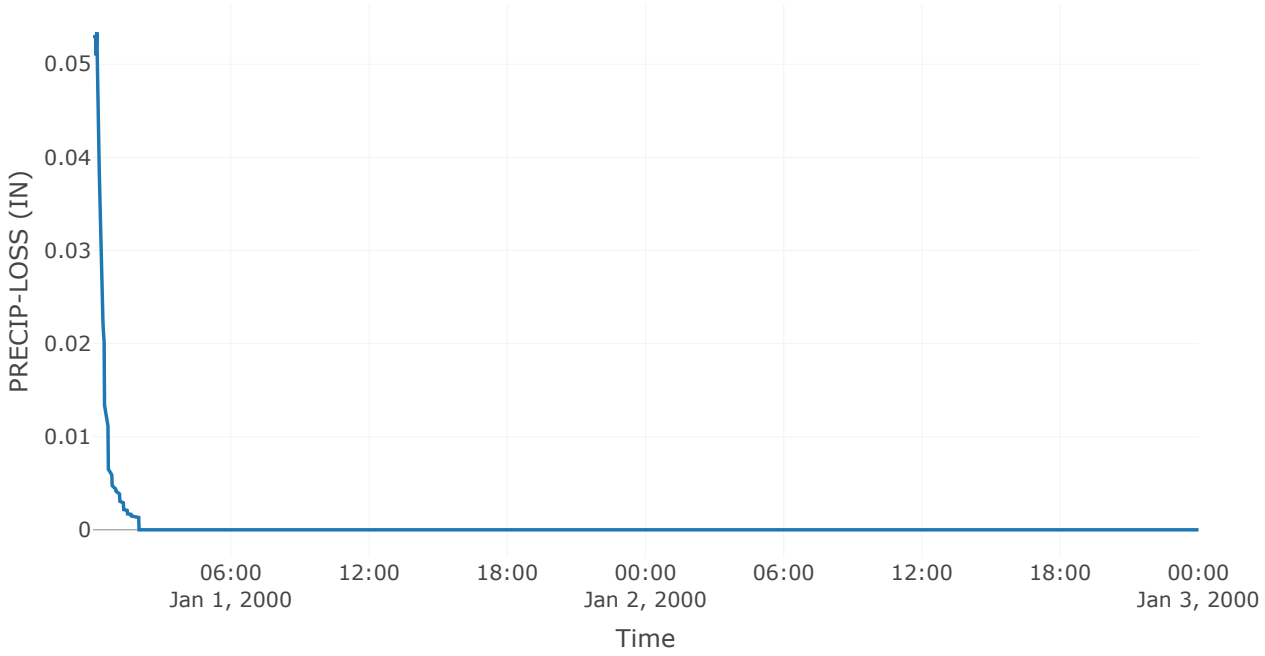
Cumulative Precipitation



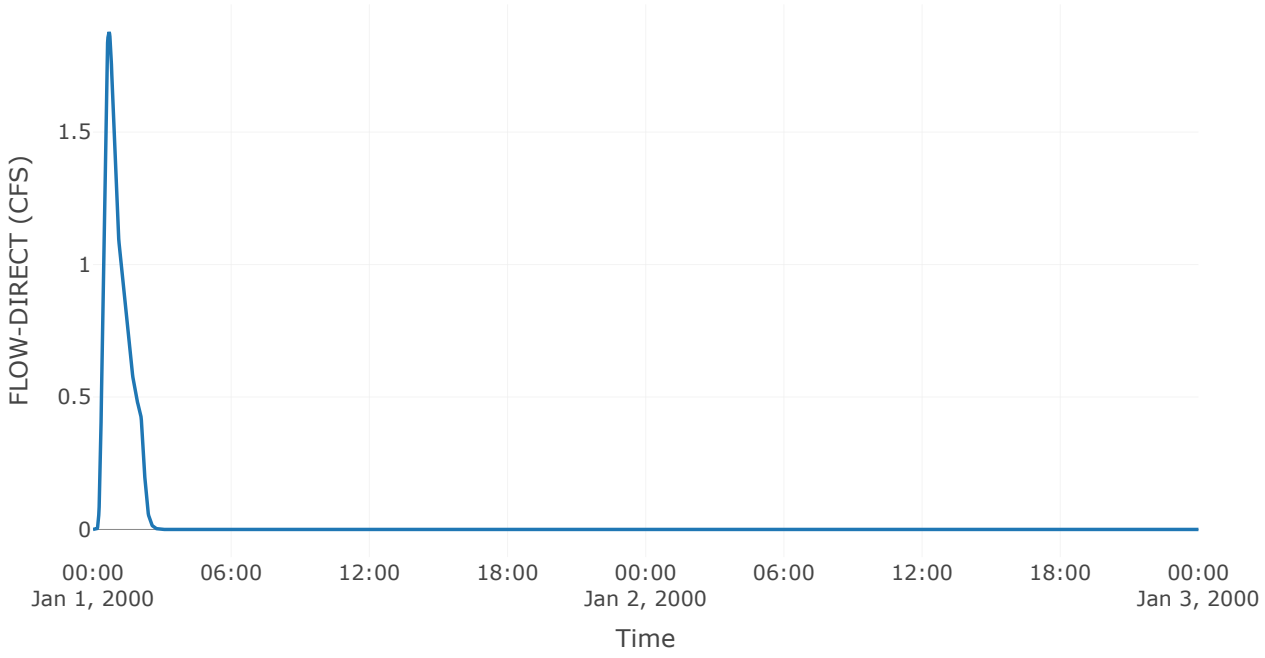

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

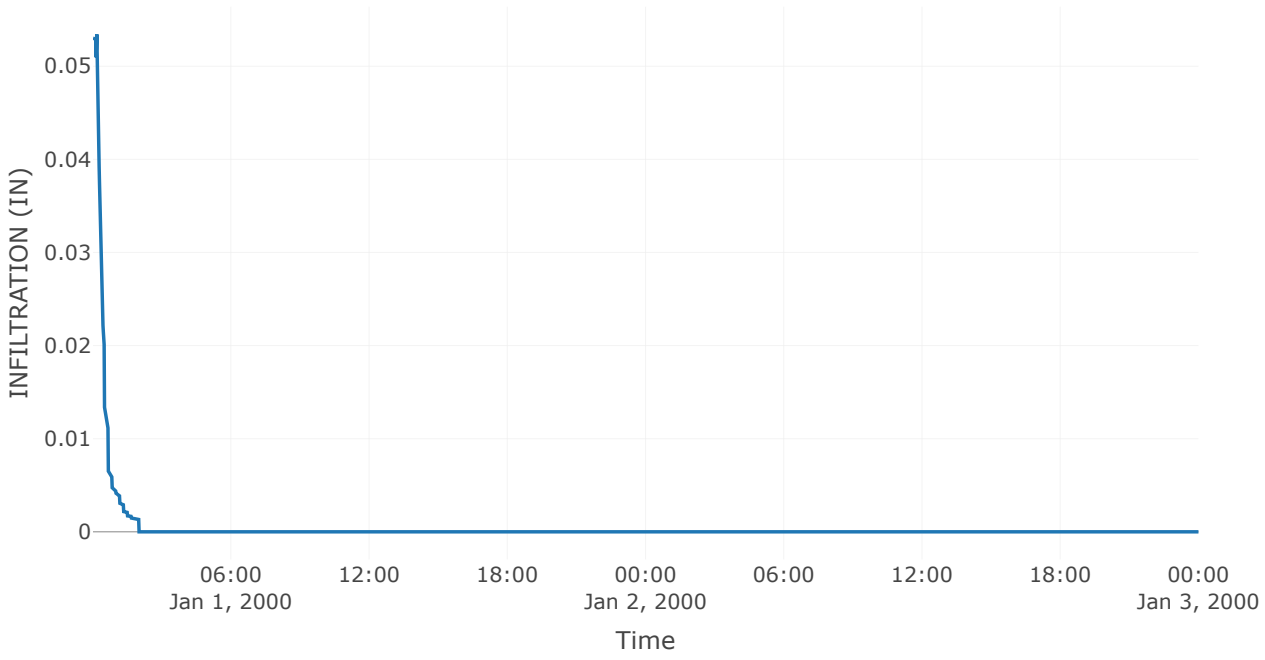

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



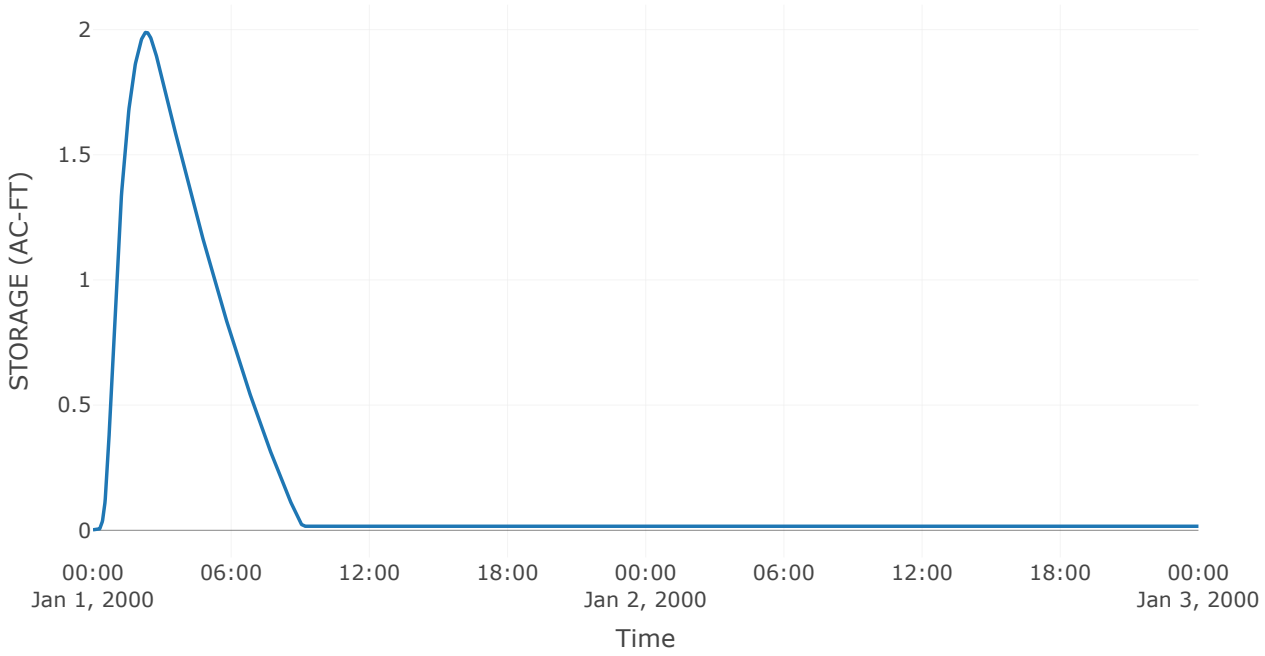

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

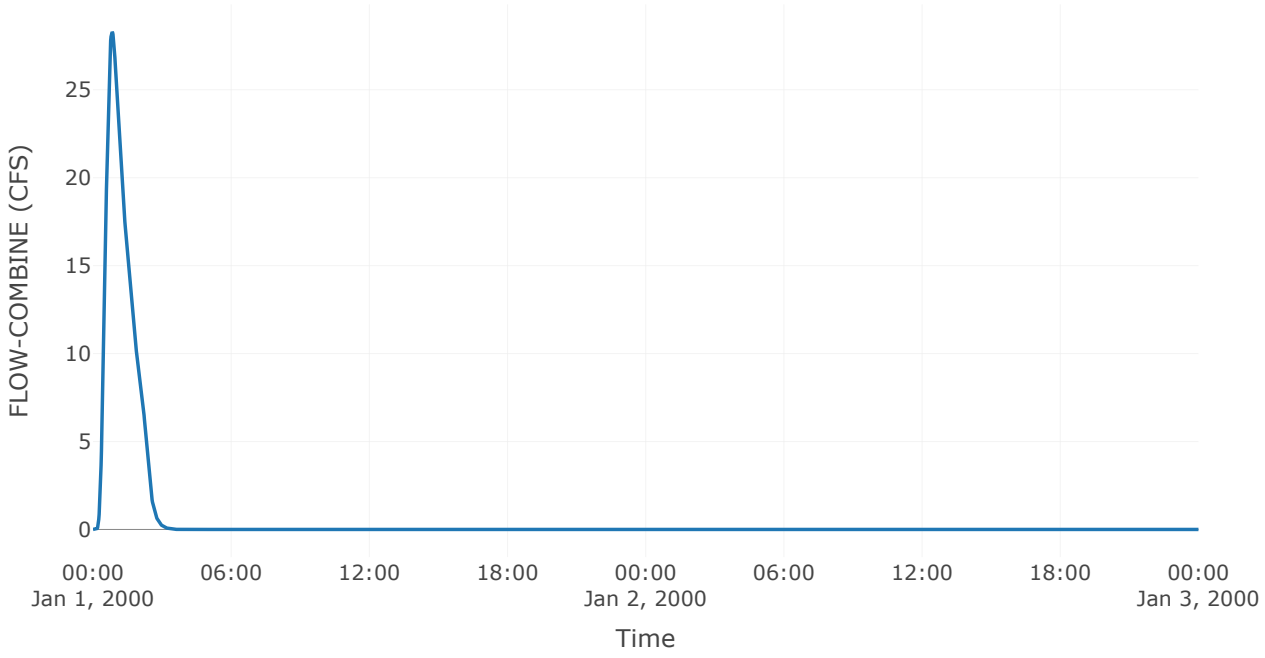
Downstream : Basin 2

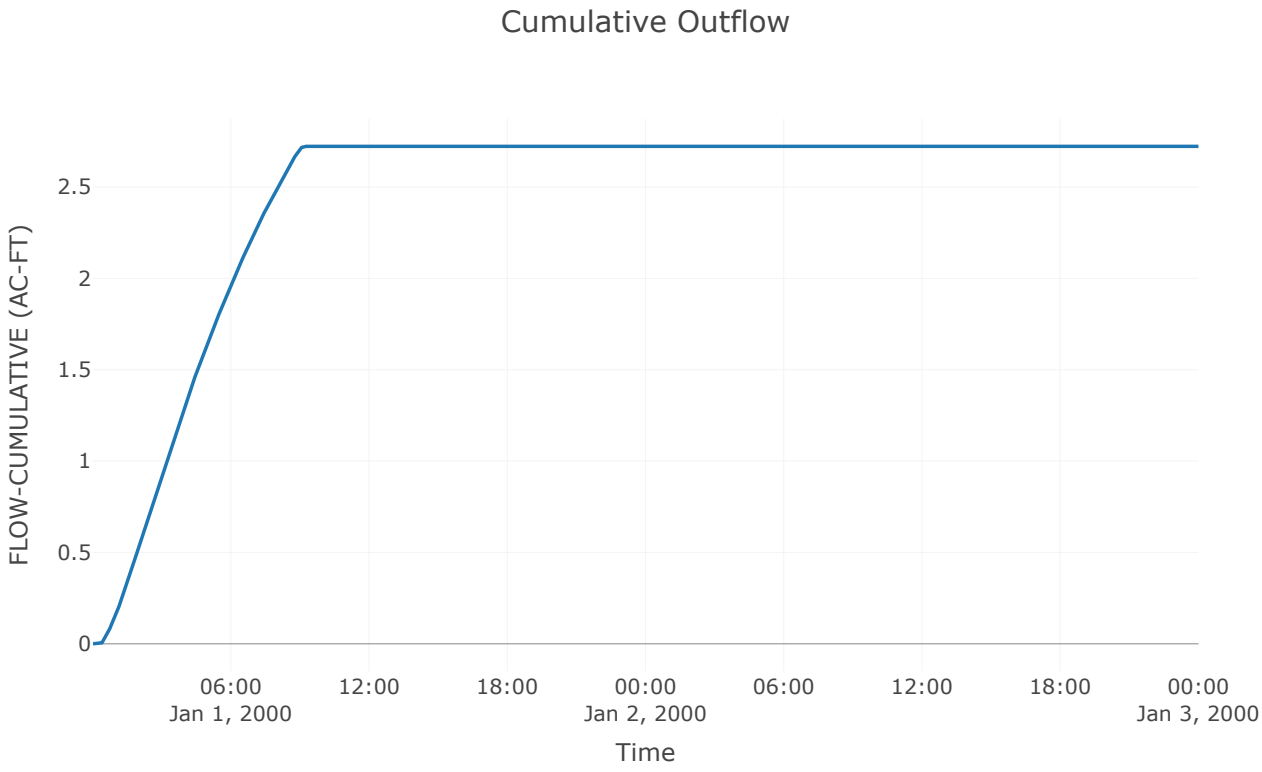
Results: Basin 1	
Peak Discharge (CFS)	4.9
Time of Peak Discharge	01Jan2000, 02:19
Volume (IN)	1.6
Peak Inflow (CFS)	28.28
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	2.74
Maximum Storage (AC - FT)	1.99
Peak Elevation (FT)	697
Discharge Volume (AC - FT)	2.72

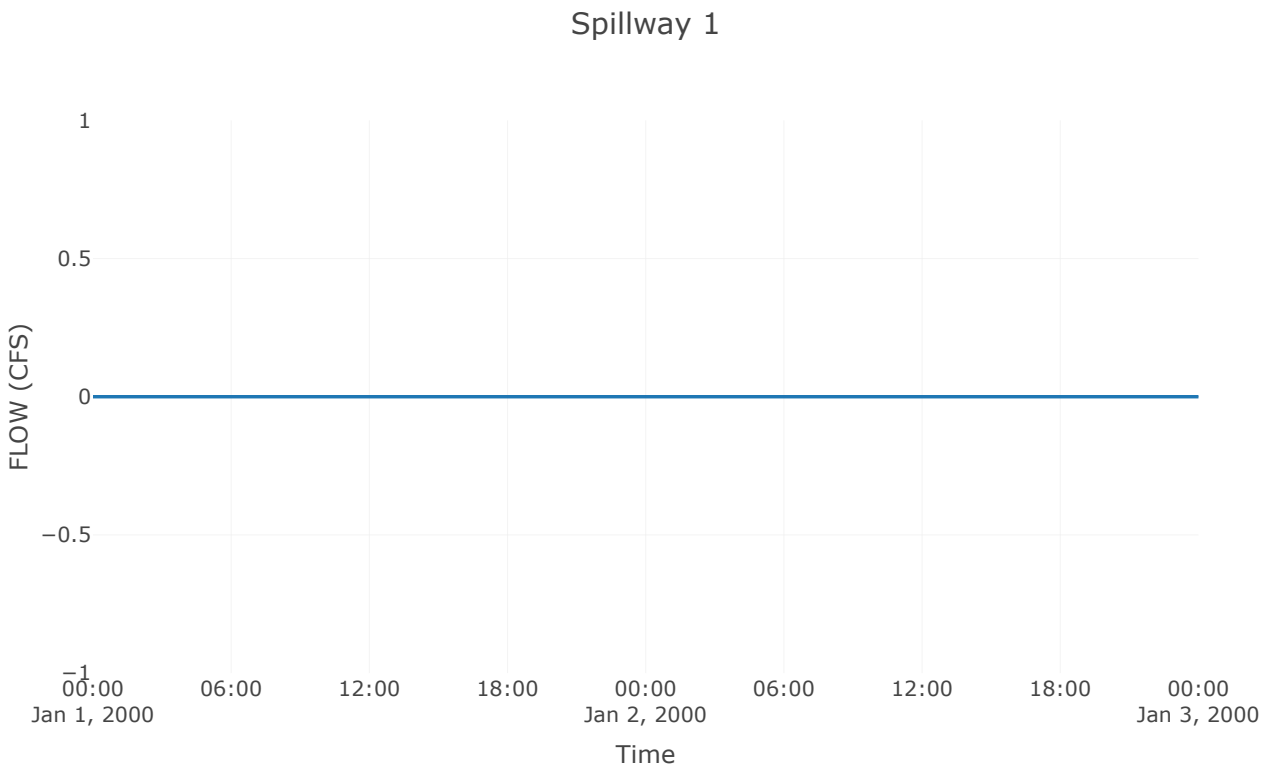
Storage



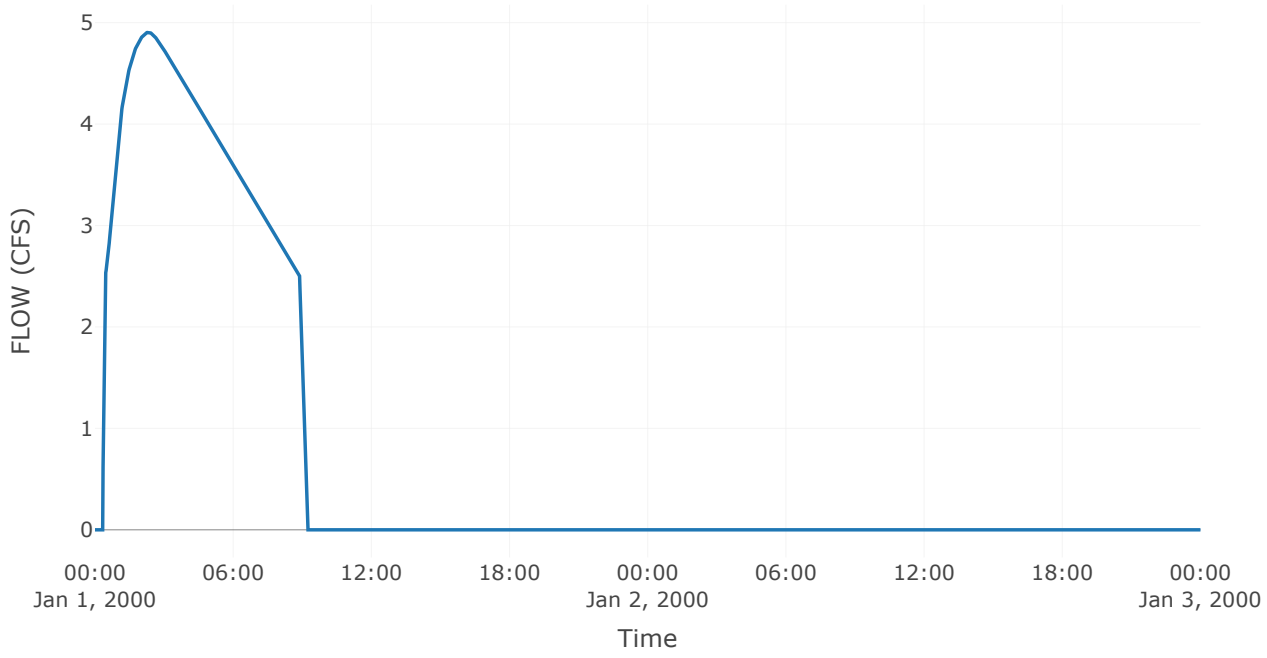
Combined Inflow



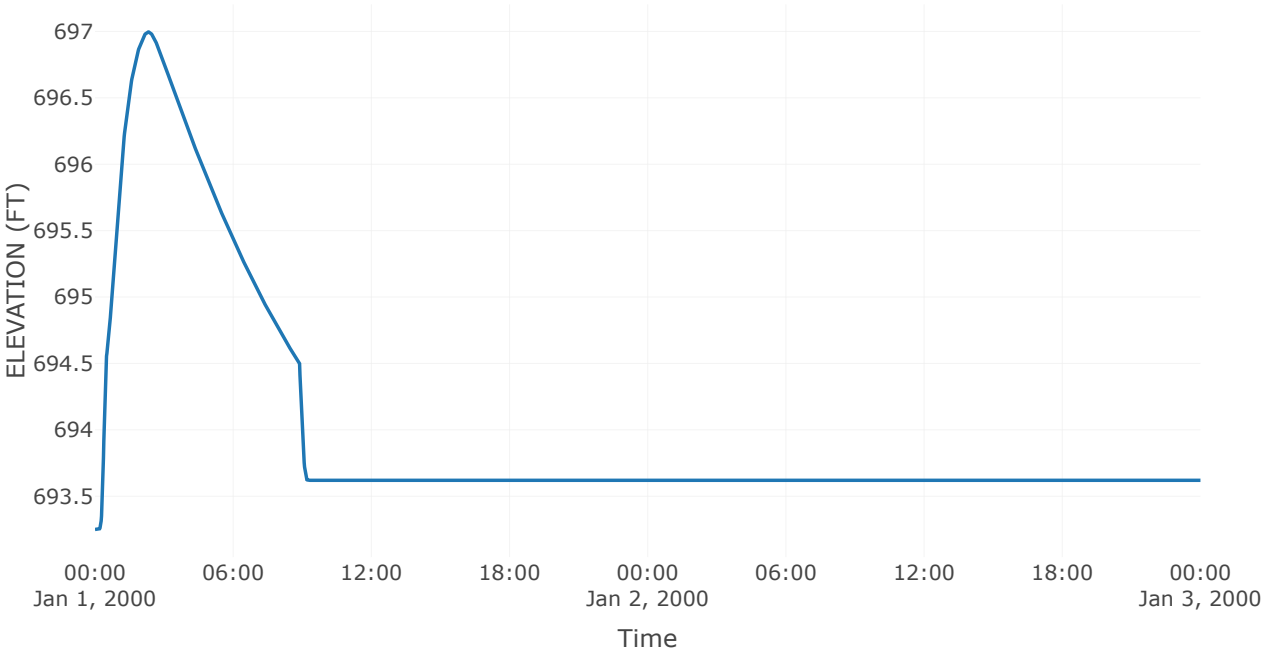

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
2.5
2
1.5
1
0.5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

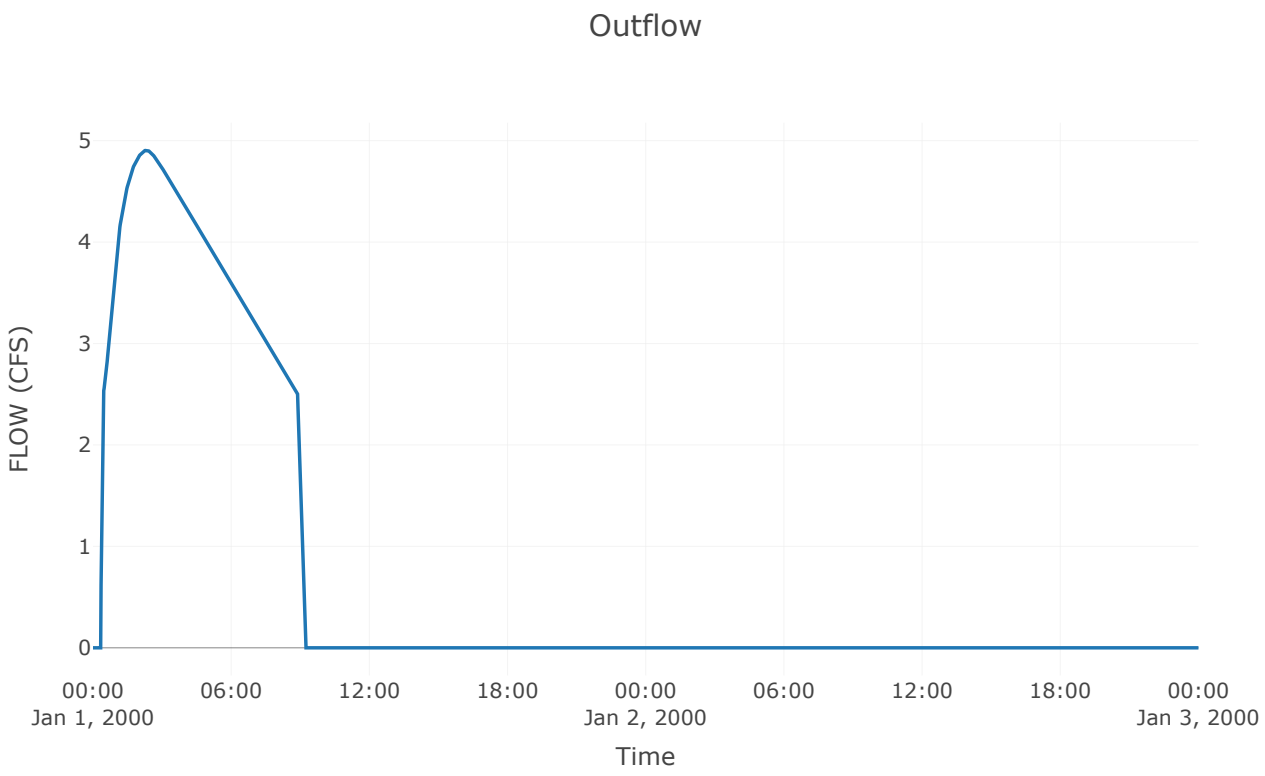

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

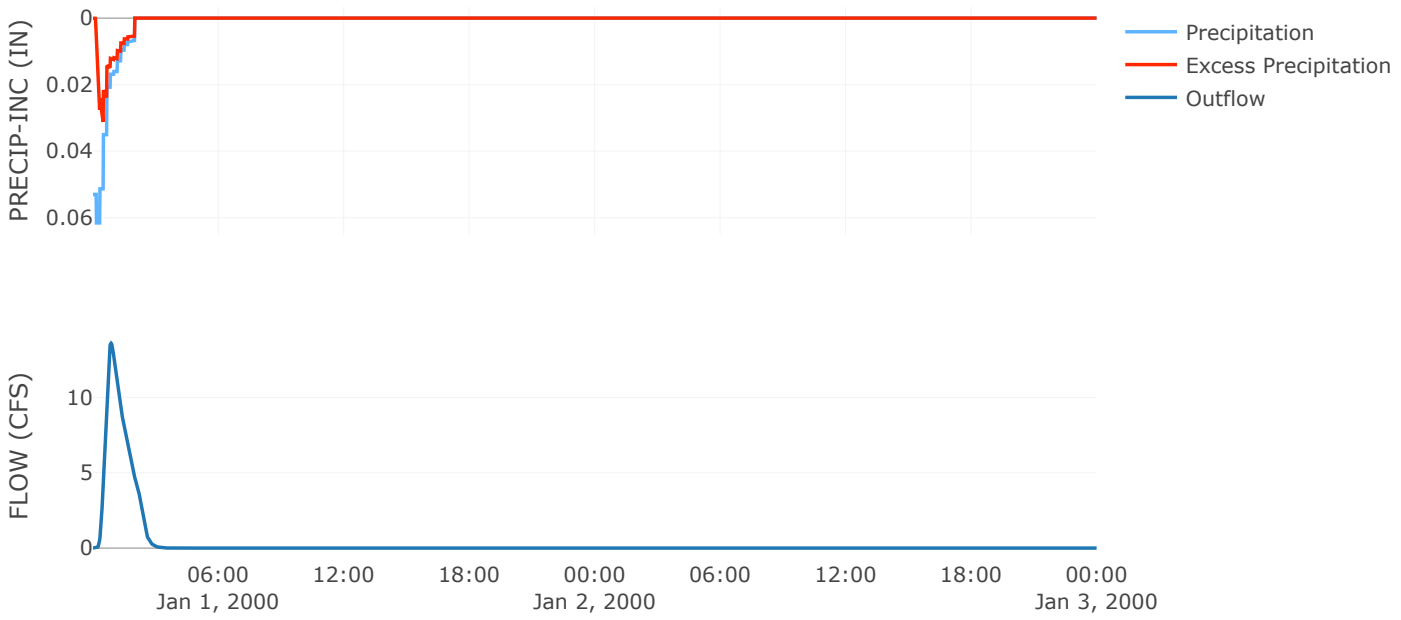
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

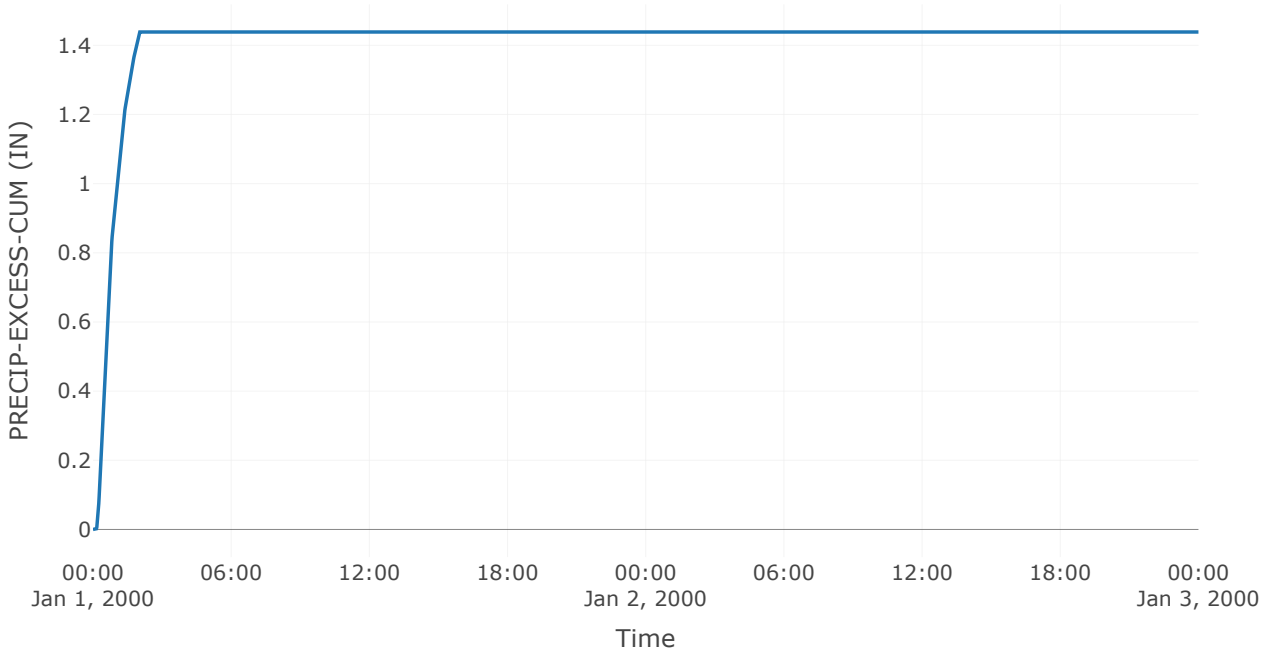
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

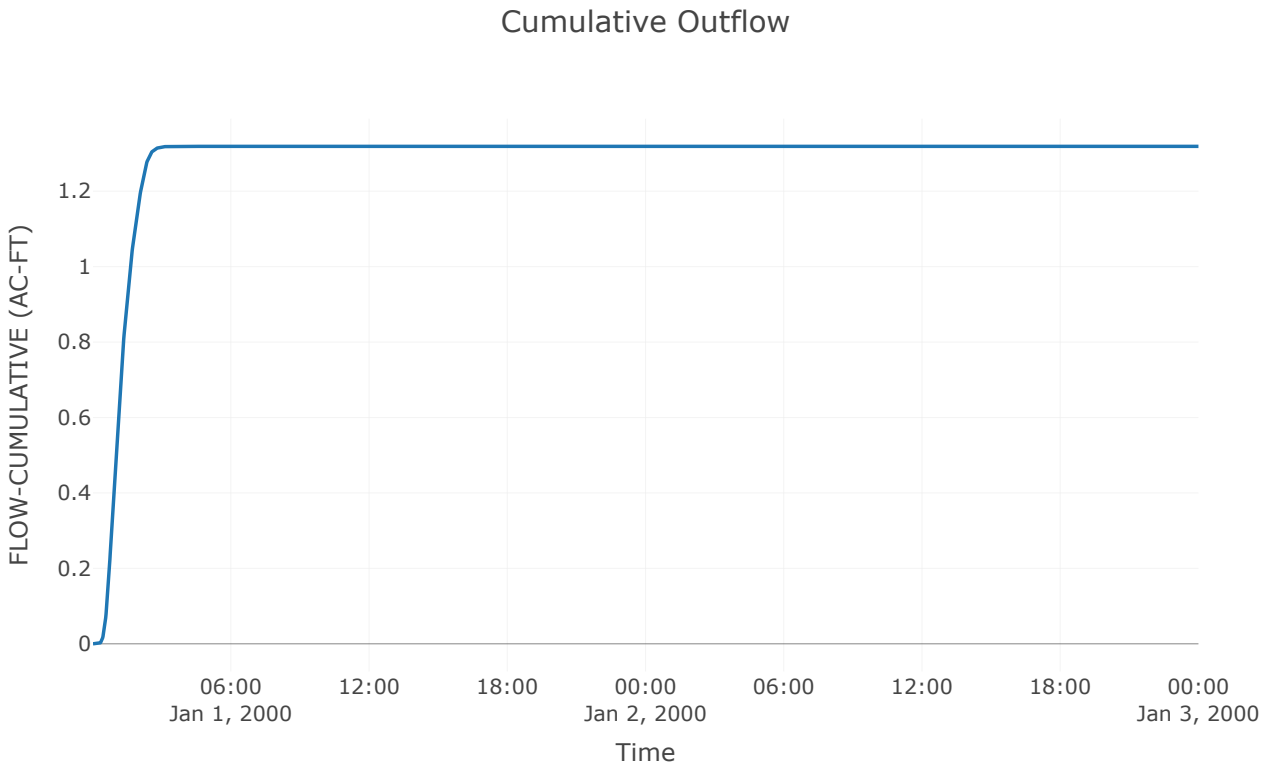
Results: On-Site Trib 2	
Peak Discharge (CFS)	13.59
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.74
Loss Volume (AC - FT)	1.42
Excess Volume (AC - FT)	1.32
Direct Runoff Volume (AC - FT)	1.32
Baseflow Volume (AC - FT)	0

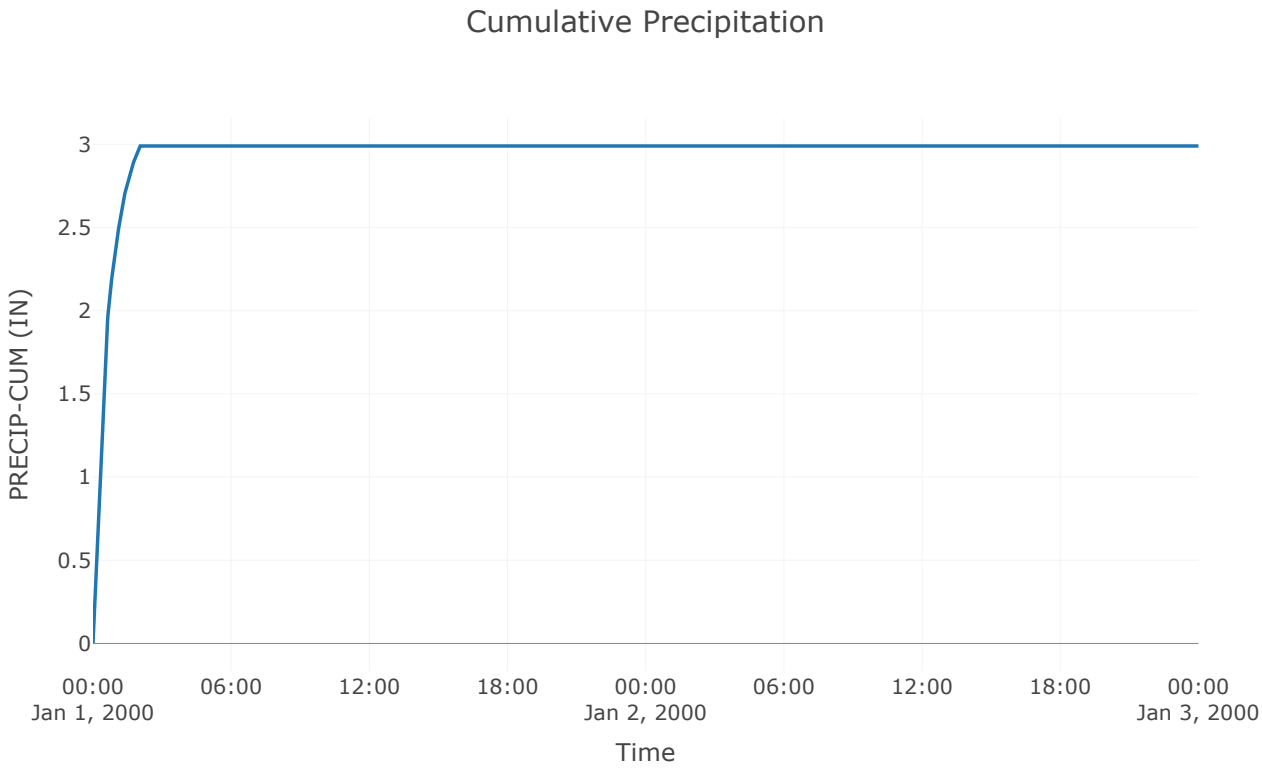
Precipitation and Outflow

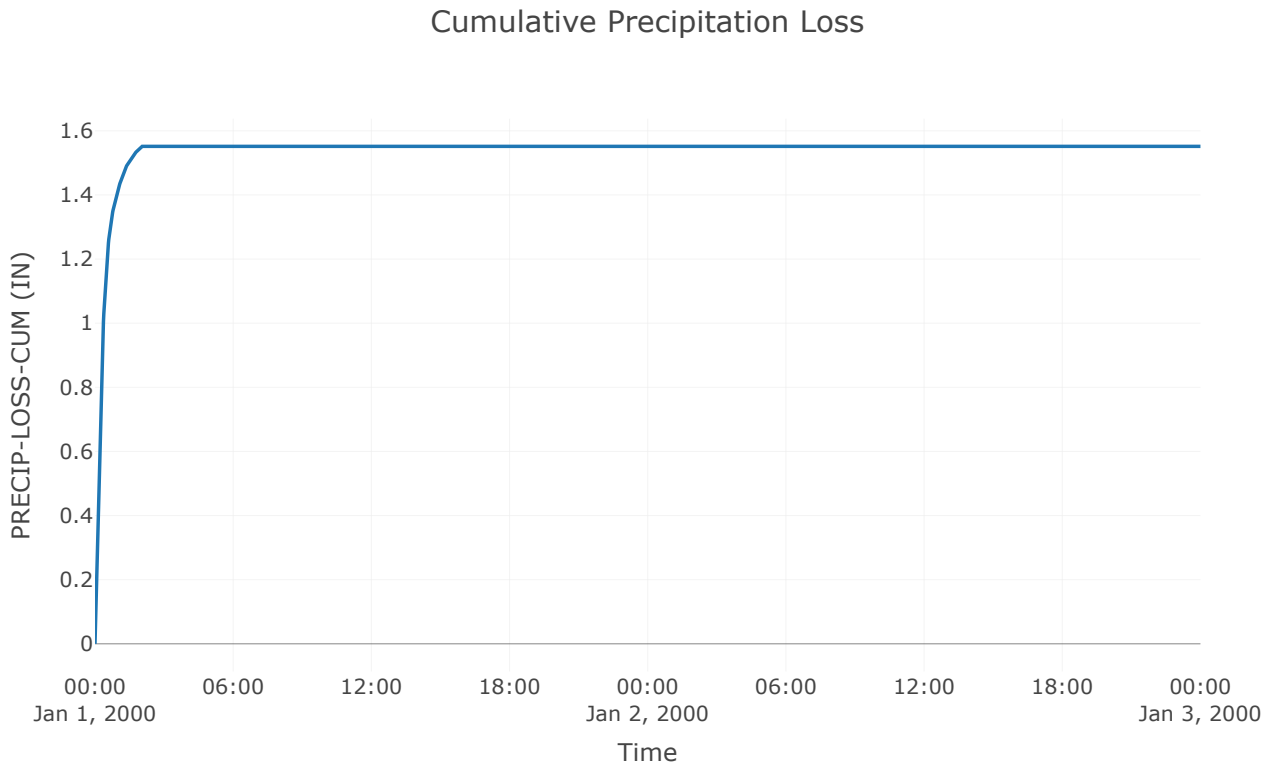


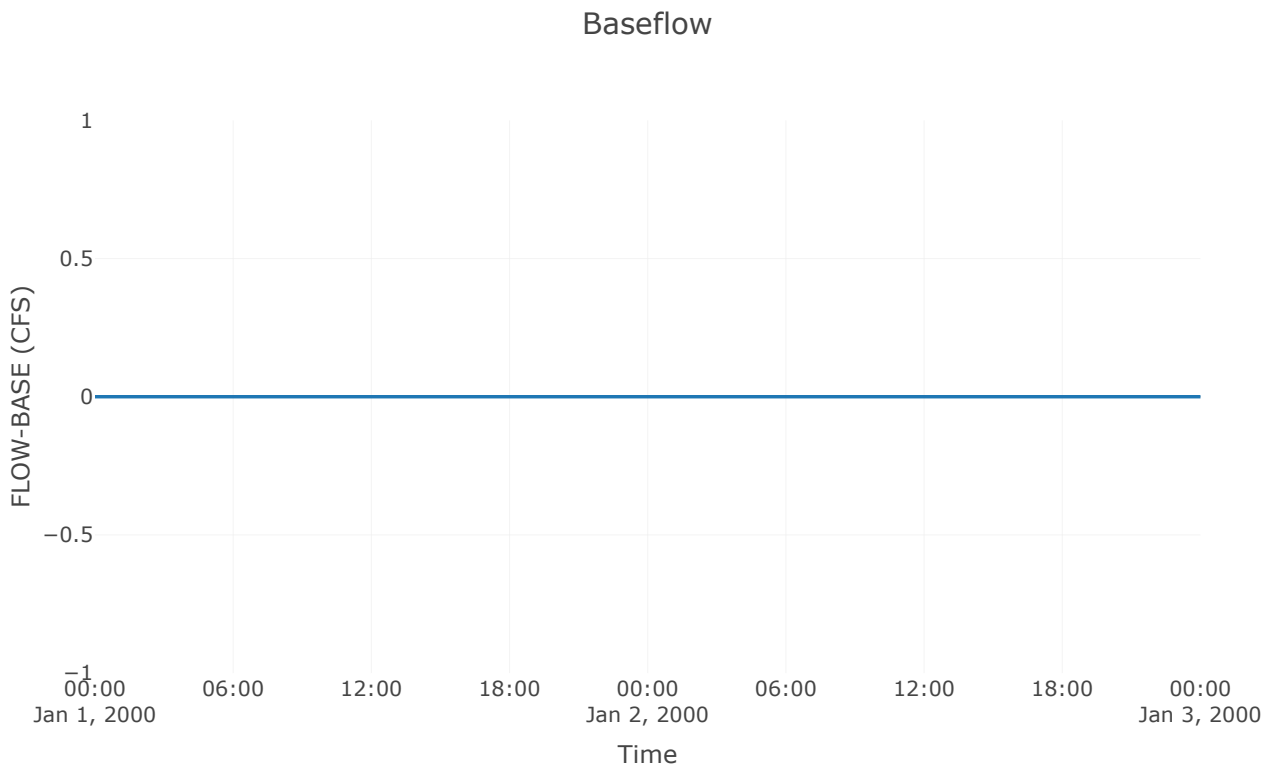
Cumulative Excess Precipitation



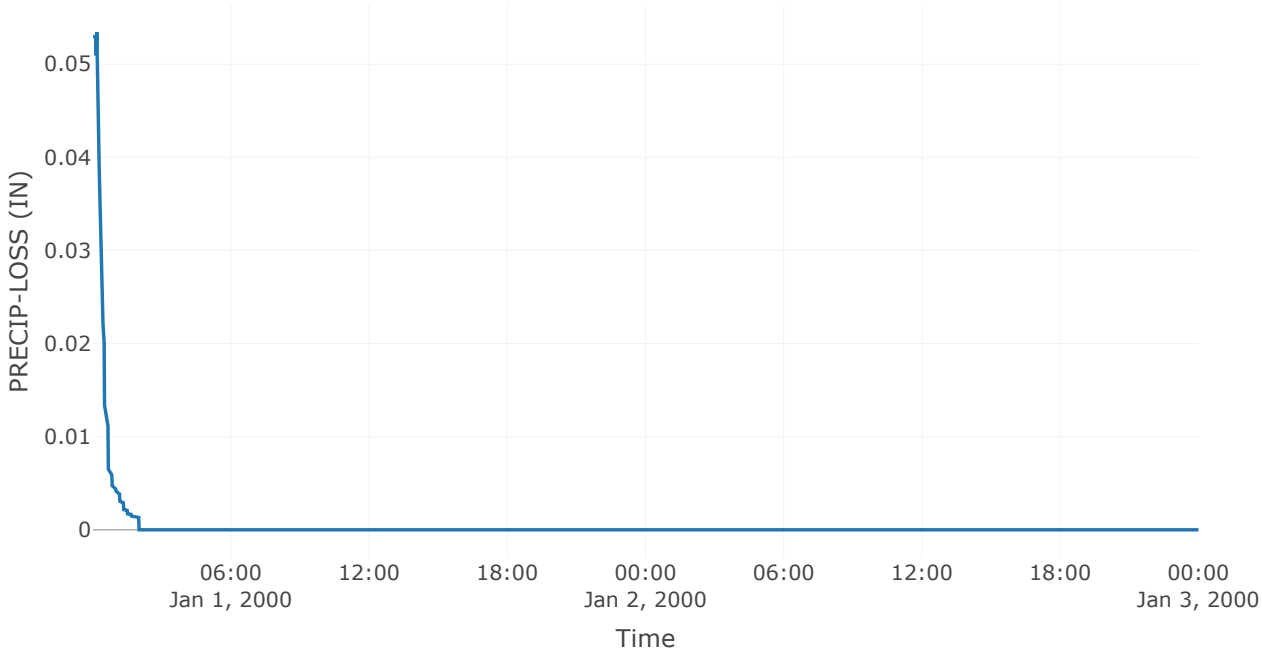

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1.2
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

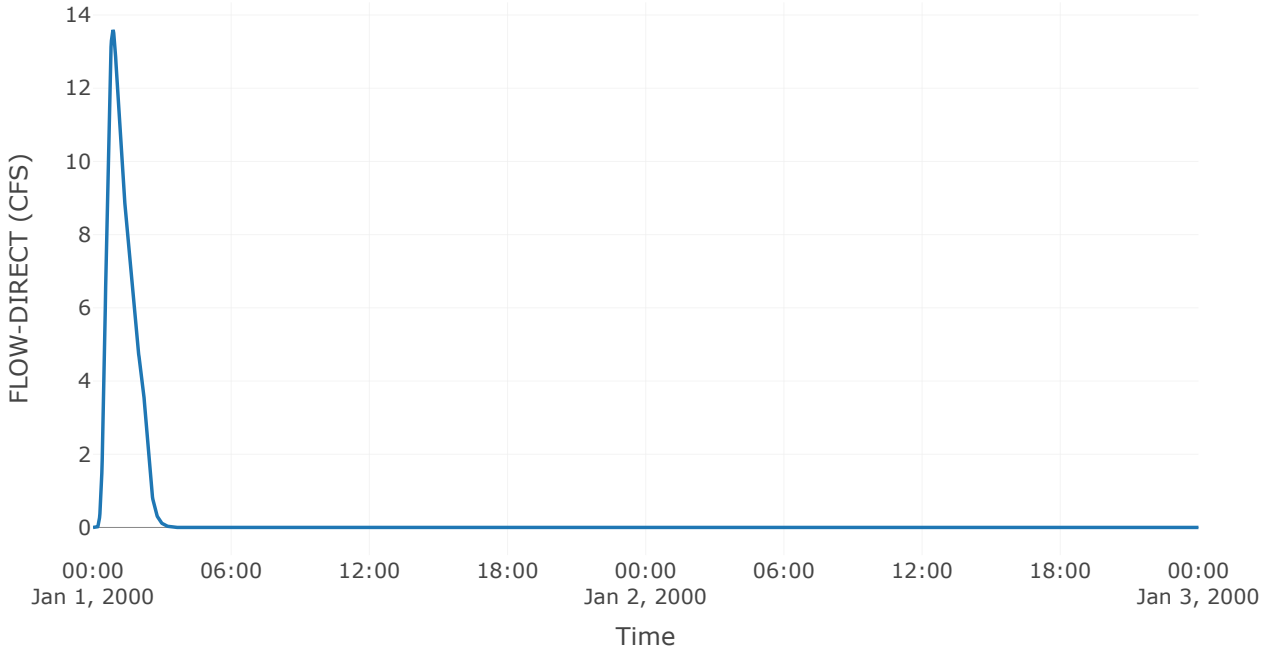

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

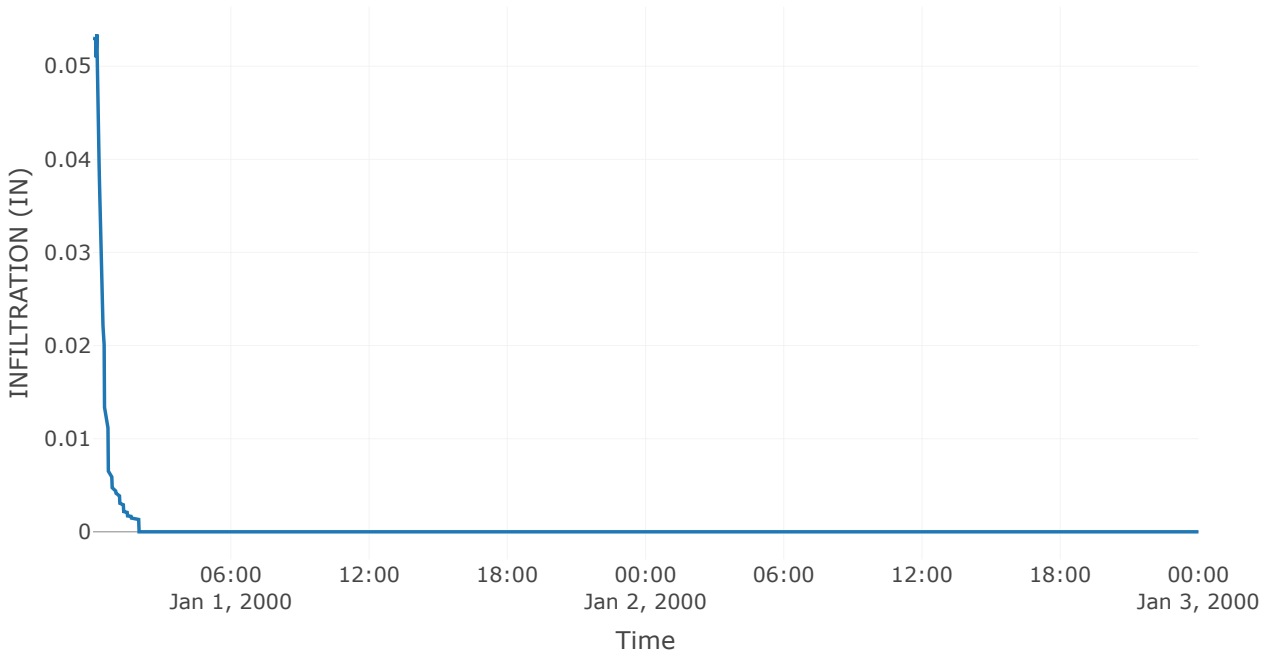

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

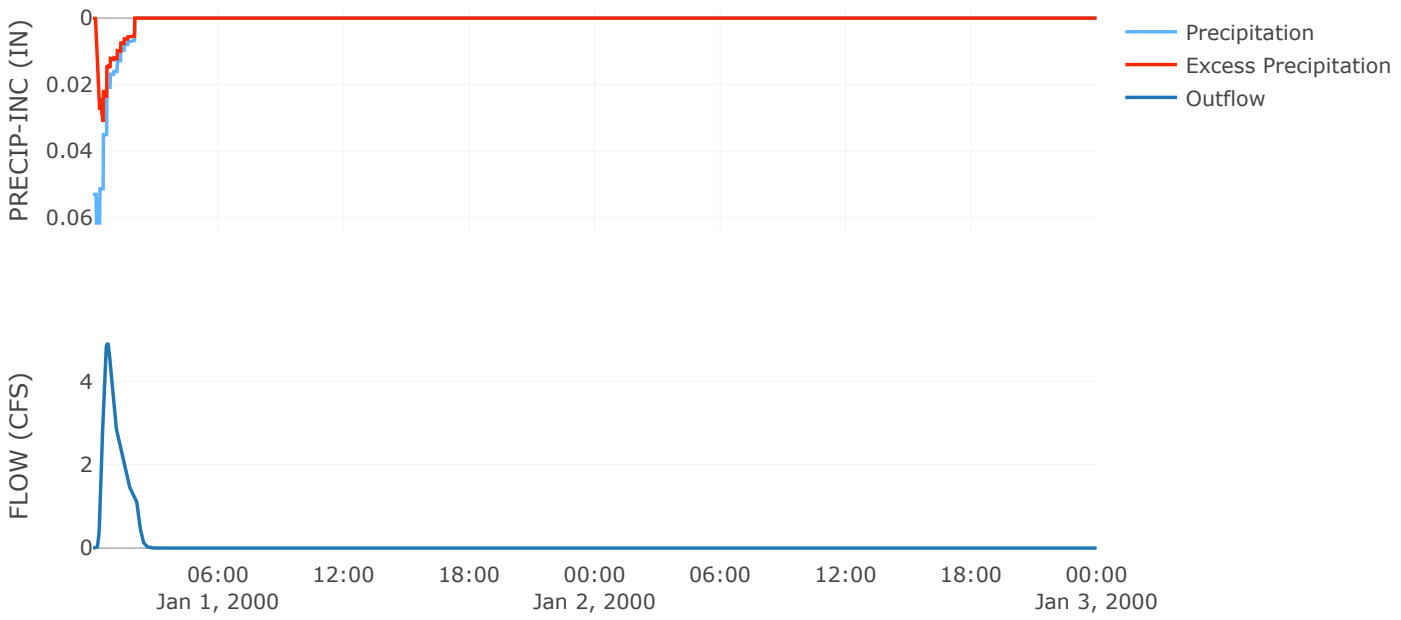
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

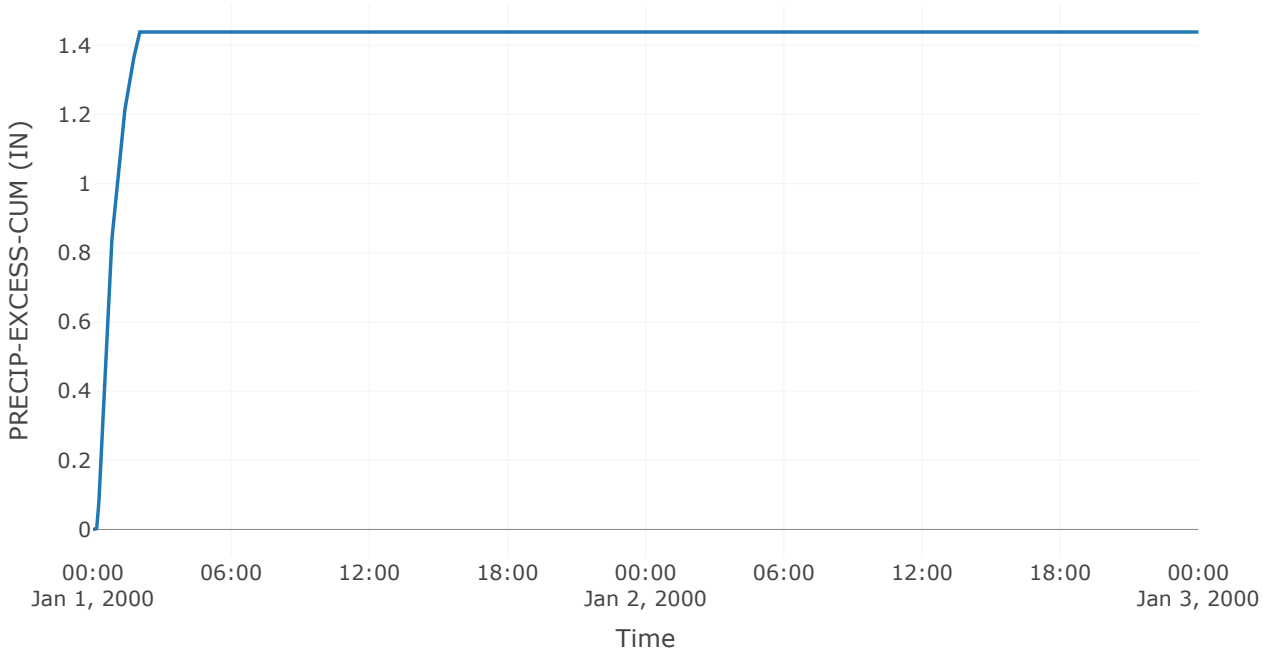
Transform: Scs	
Lag	12
Unitgraph Type	Standard

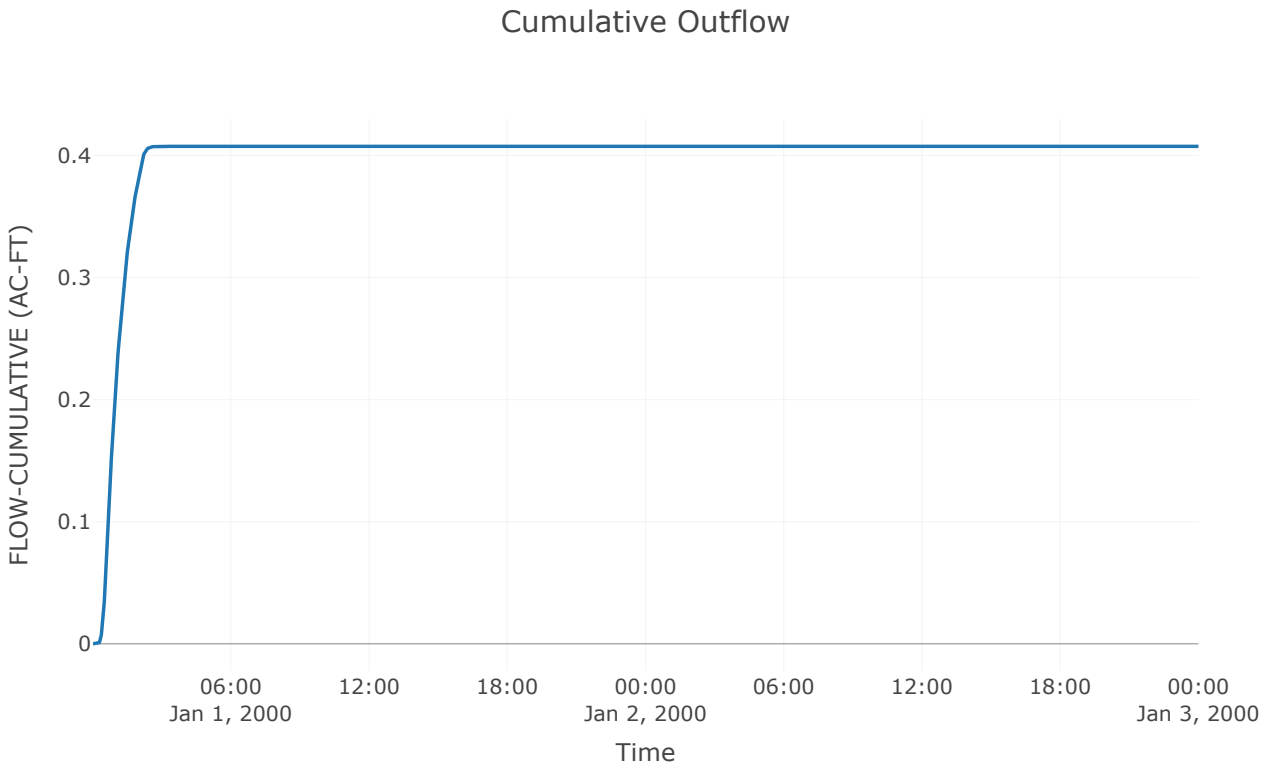
Results: Off-Site Trib2	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:42
Volume (IN)	1.44
Precipitation Volume (AC - FT)	0.85
Loss Volume (AC - FT)	0.44
Excess Volume (AC - FT)	0.41
Direct Runoff Volume (AC - FT)	0.41
Baseflow Volume (AC - FT)	0

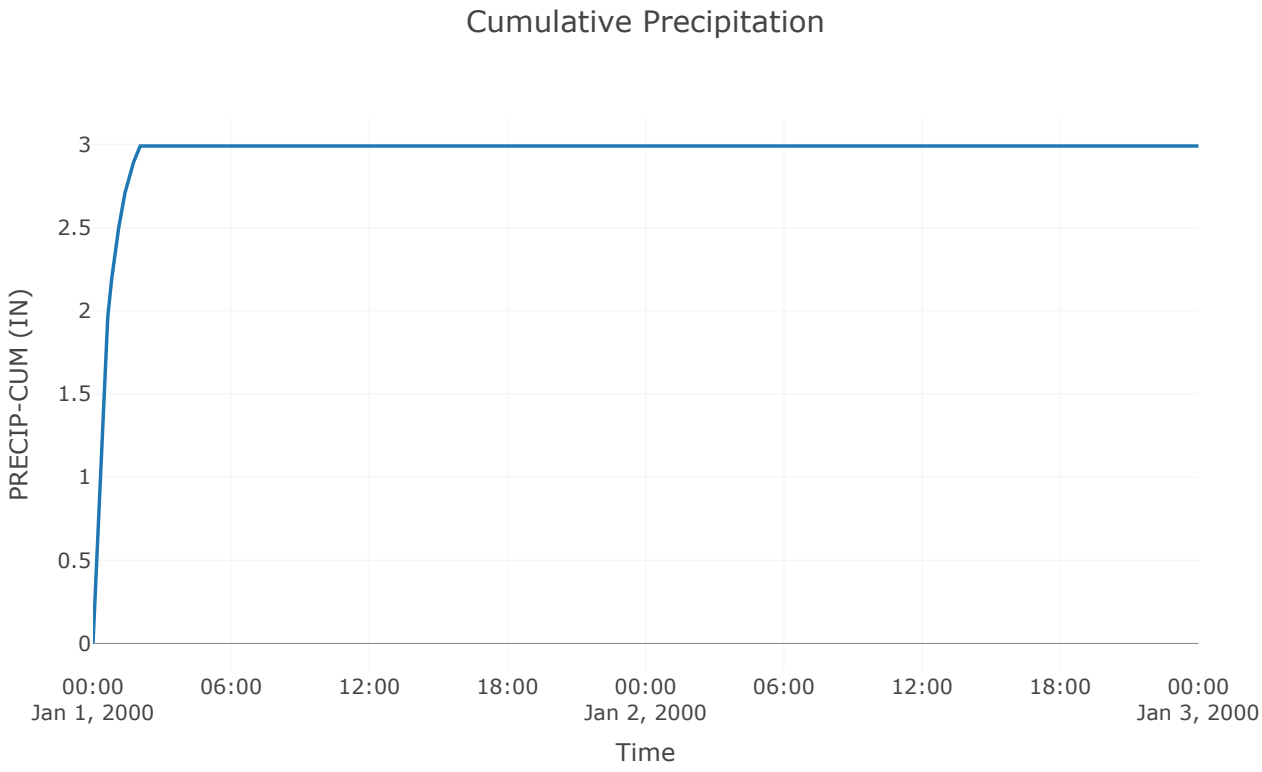
Precipitation and Outflow

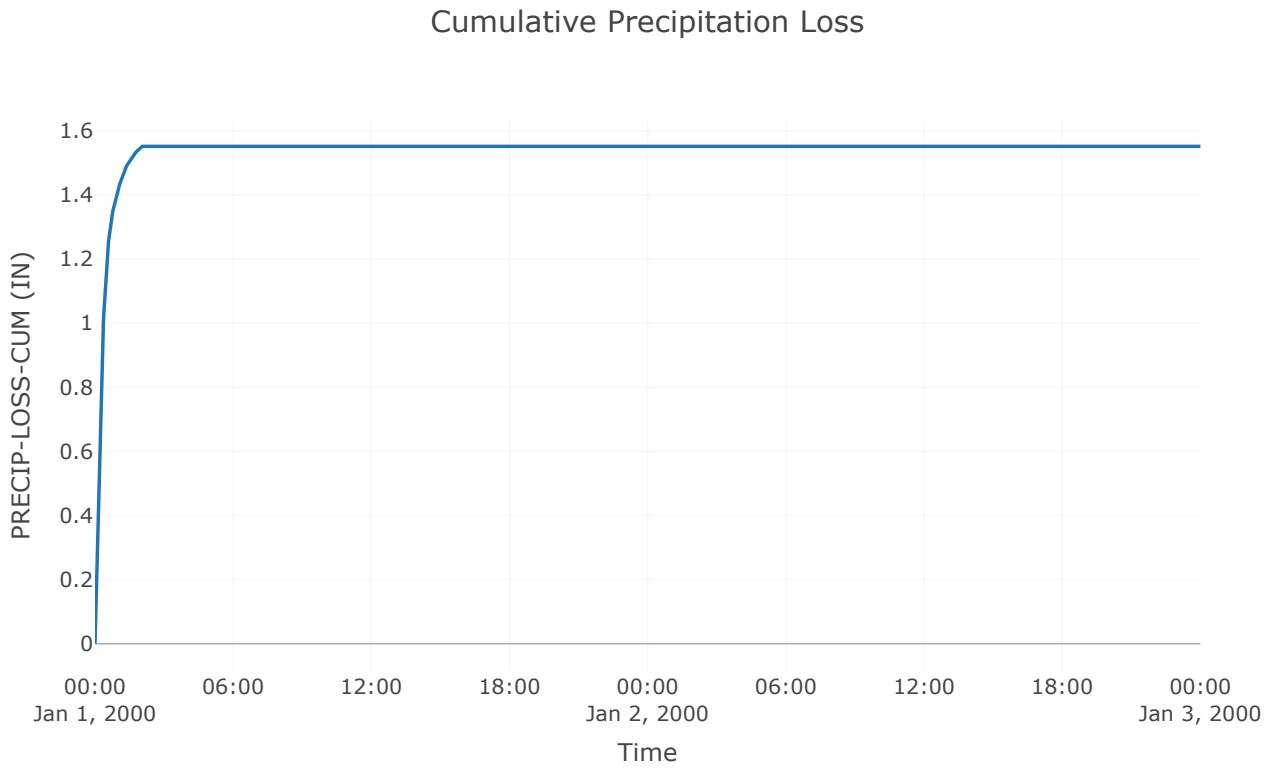


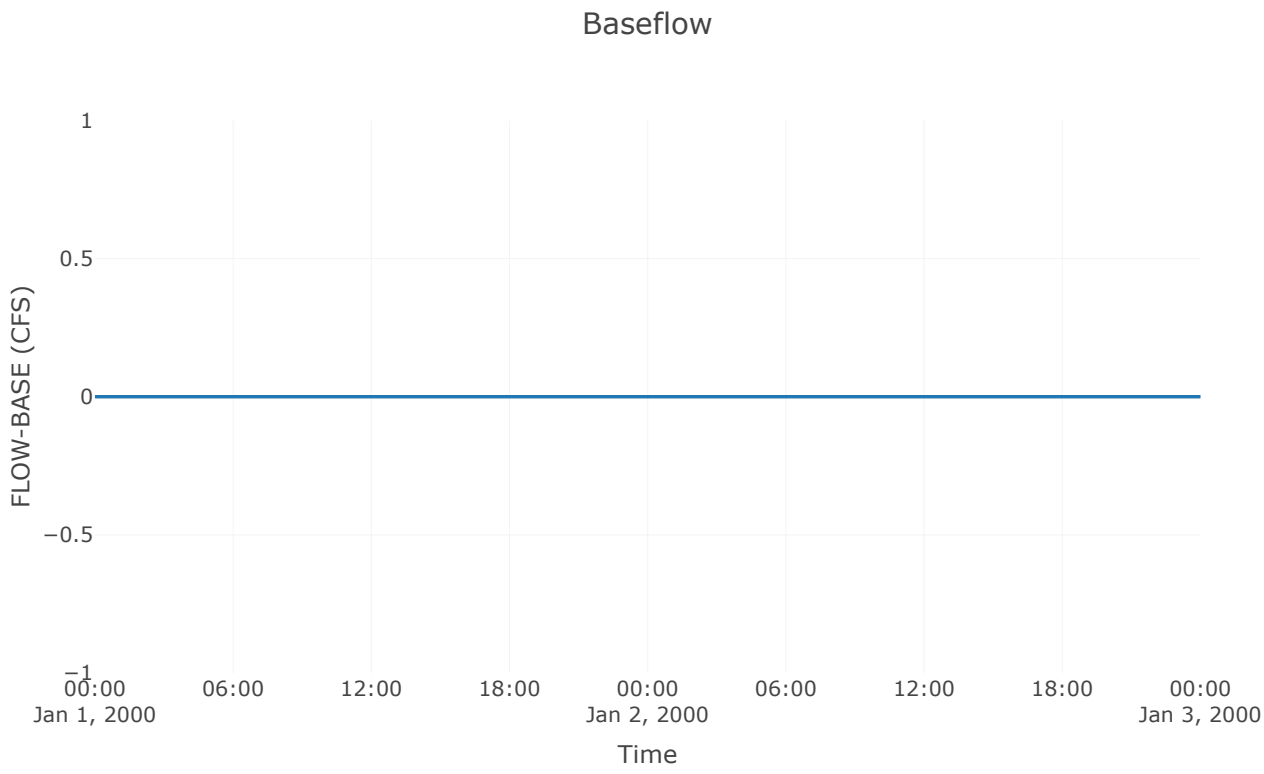
Cumulative Excess Precipitation

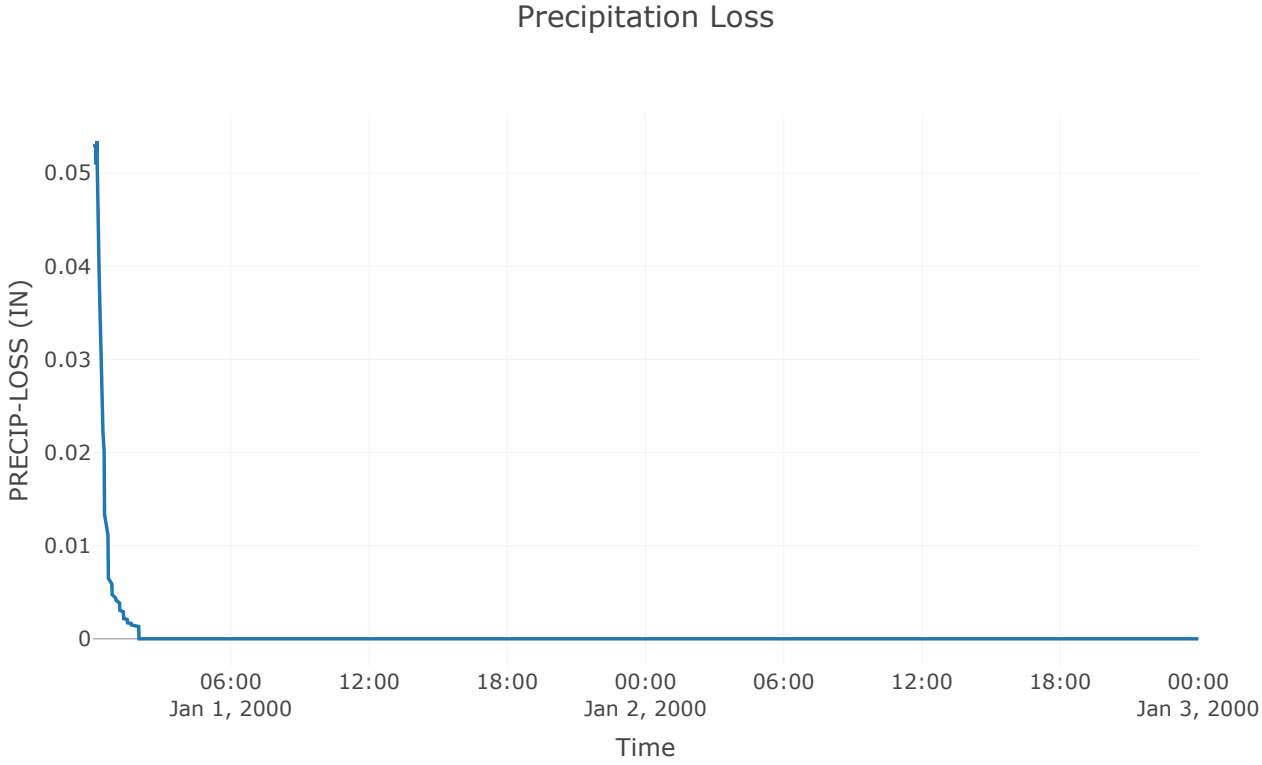


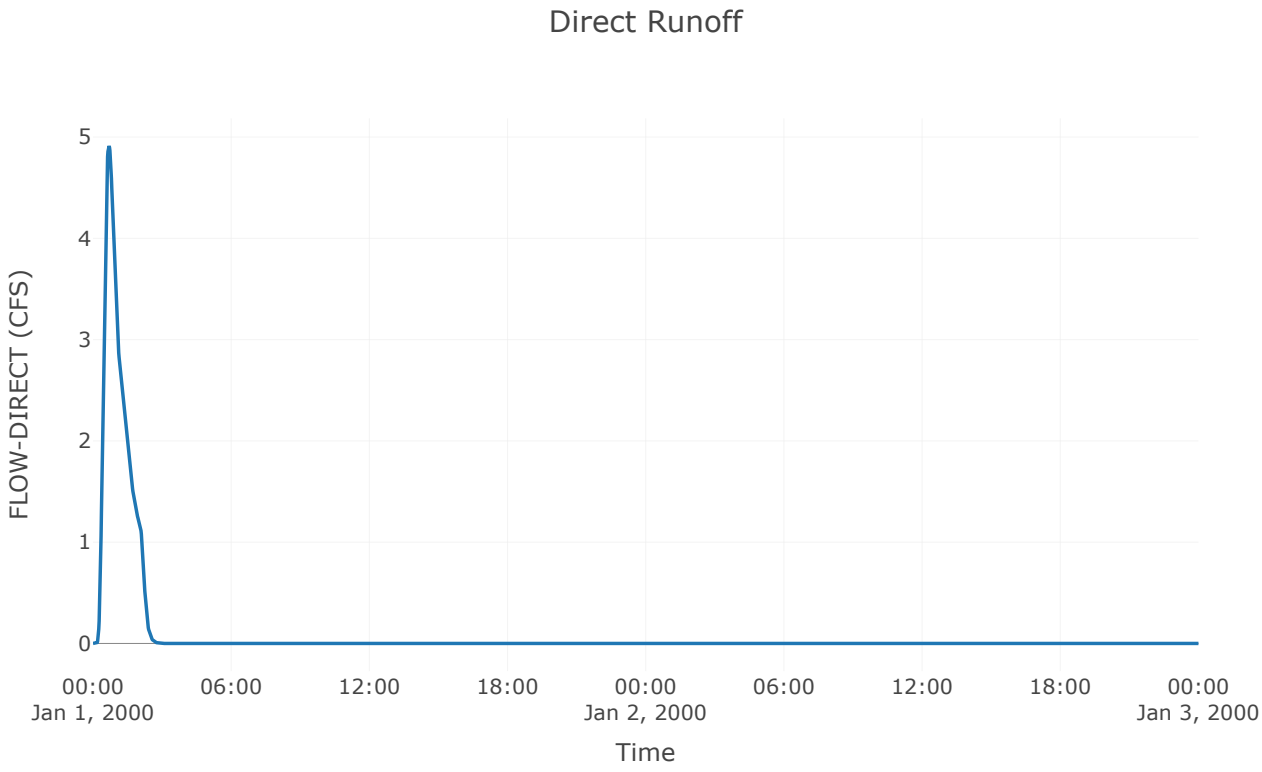

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.4
0.3
0.2
0.1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

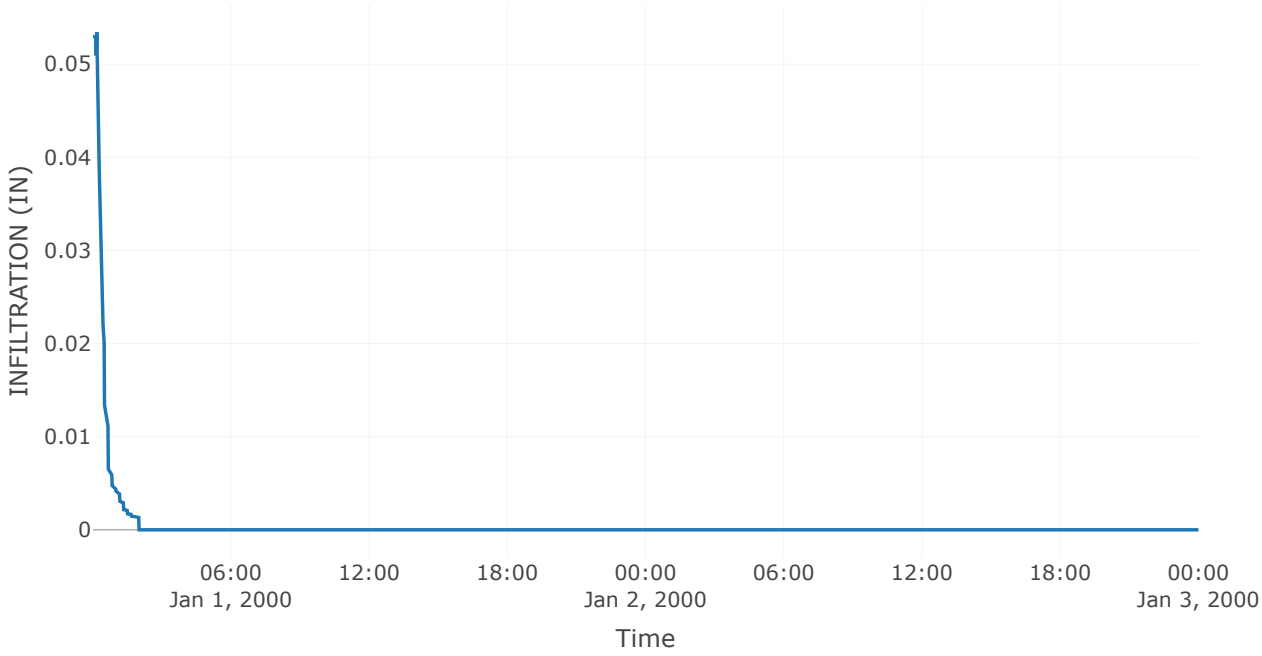

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

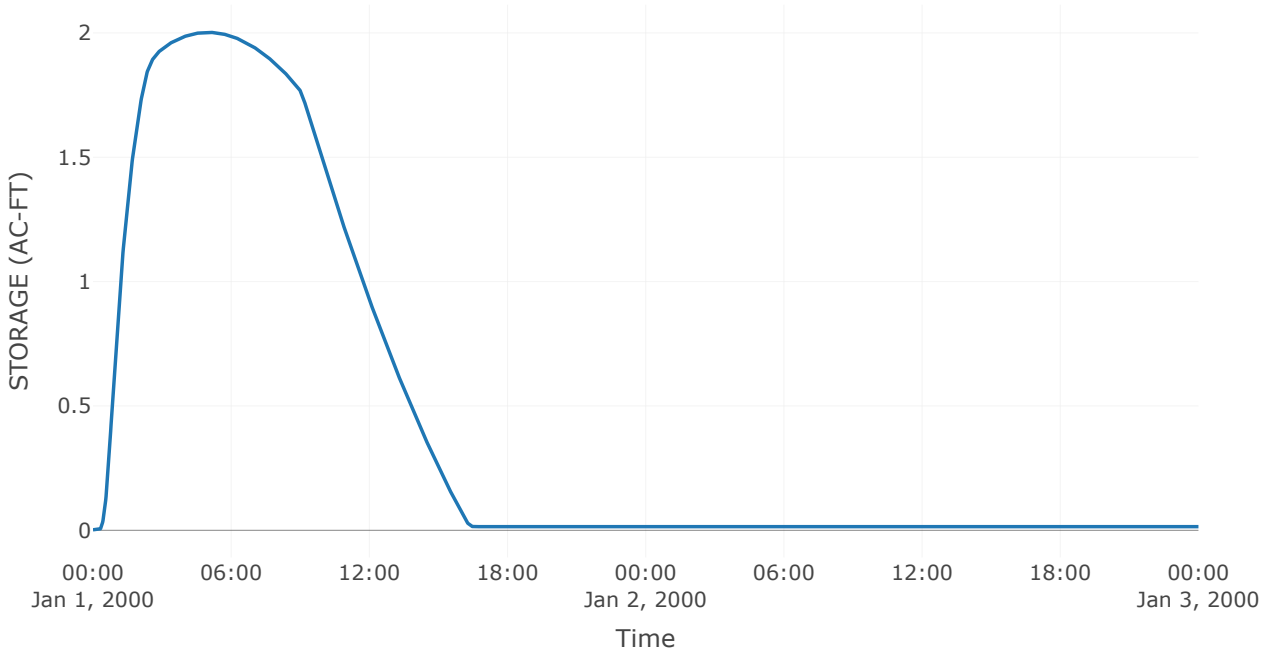

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

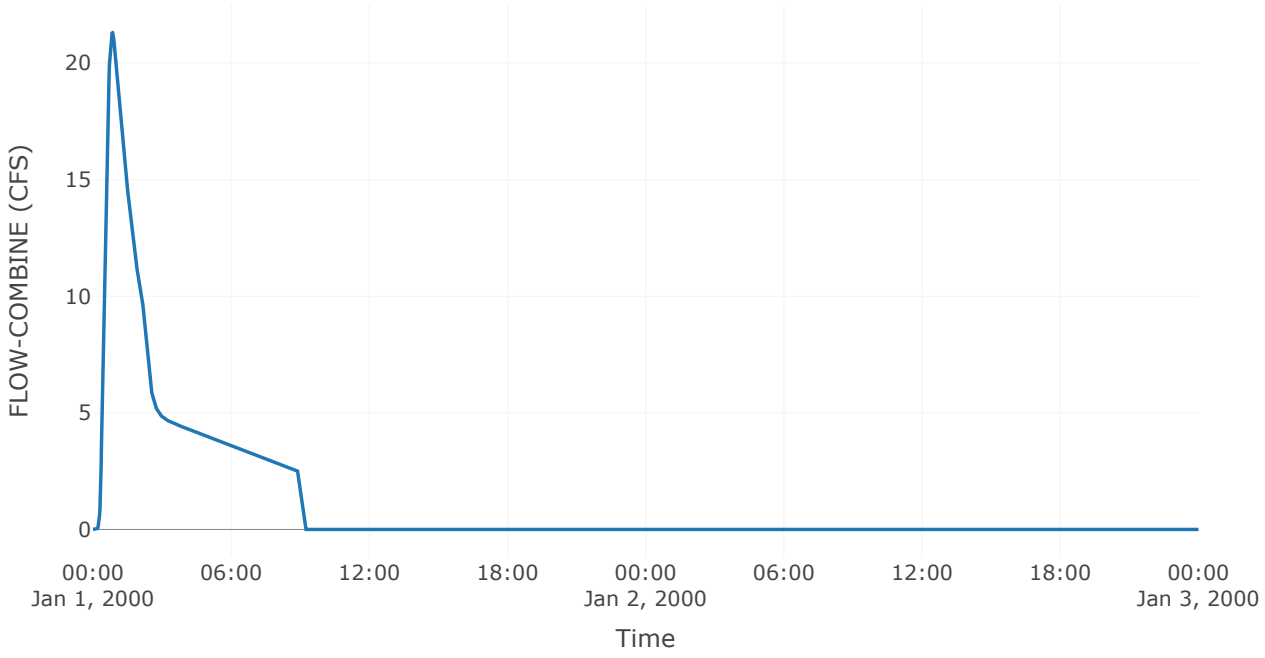
Downstream : Basin 3

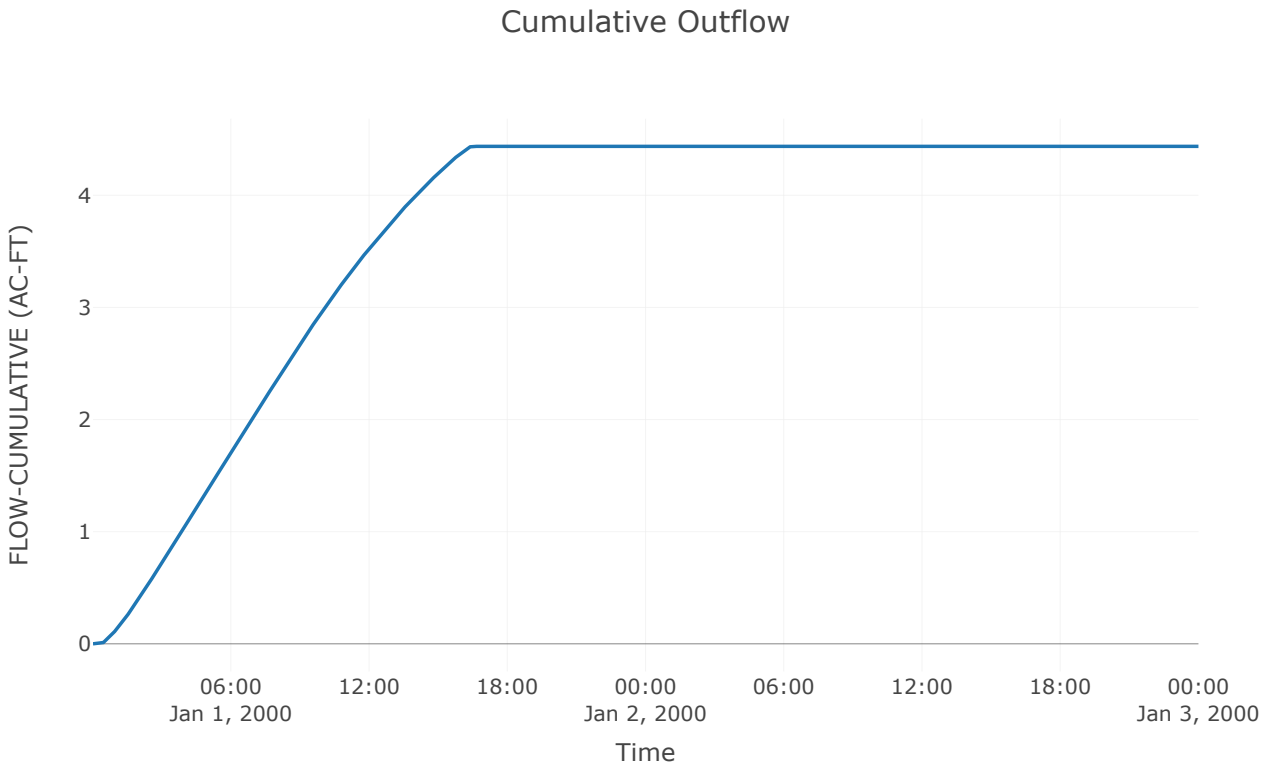
Results: Basin 2	
Peak Discharge (CFS)	3.98
Time of Peak Discharge	01Jan2000, 05:00
Volume (IN)	1.53
Peak Inflow (CFS)	21.34
Time of Peak Inflow	01Jan2000, 00:50
Inflow Volume (AC - FT)	4.45
Maximum Storage (AC - FT)	2
Peak Elevation (FT)	693.96
Discharge Volume (AC - FT)	4.44

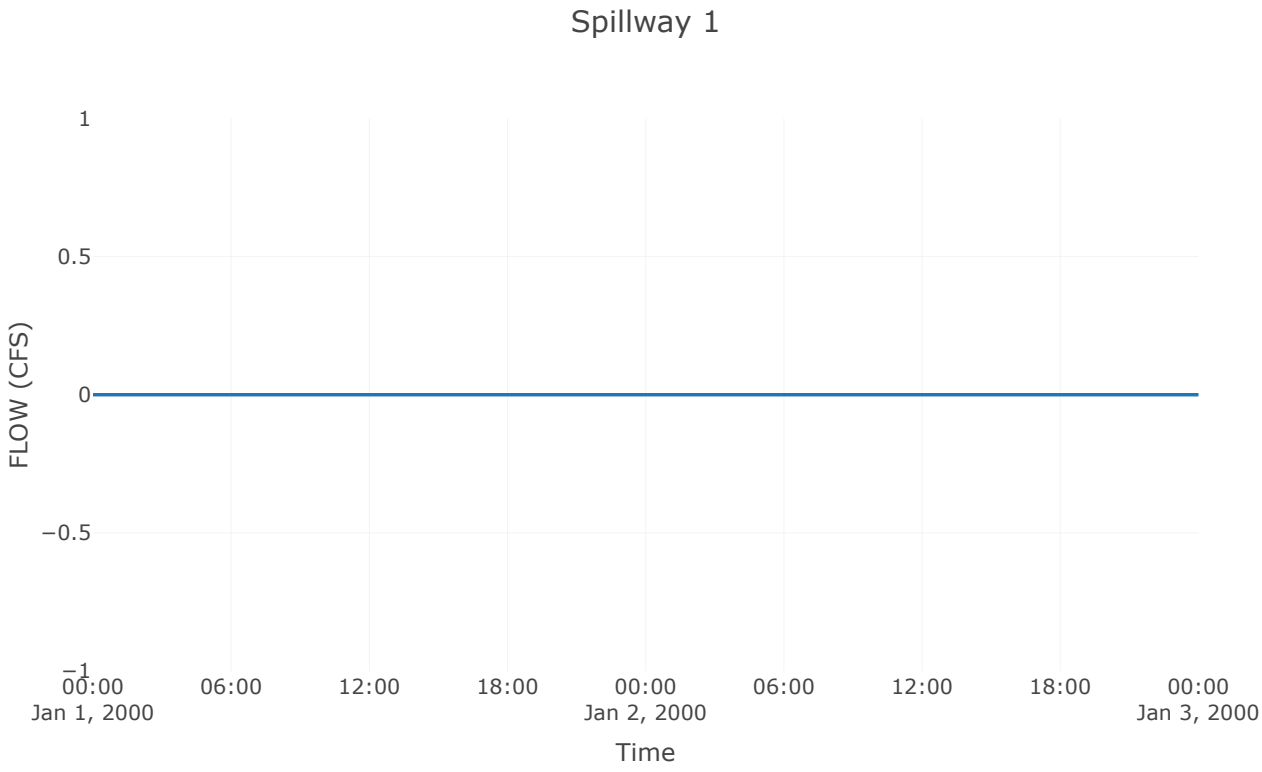
Storage



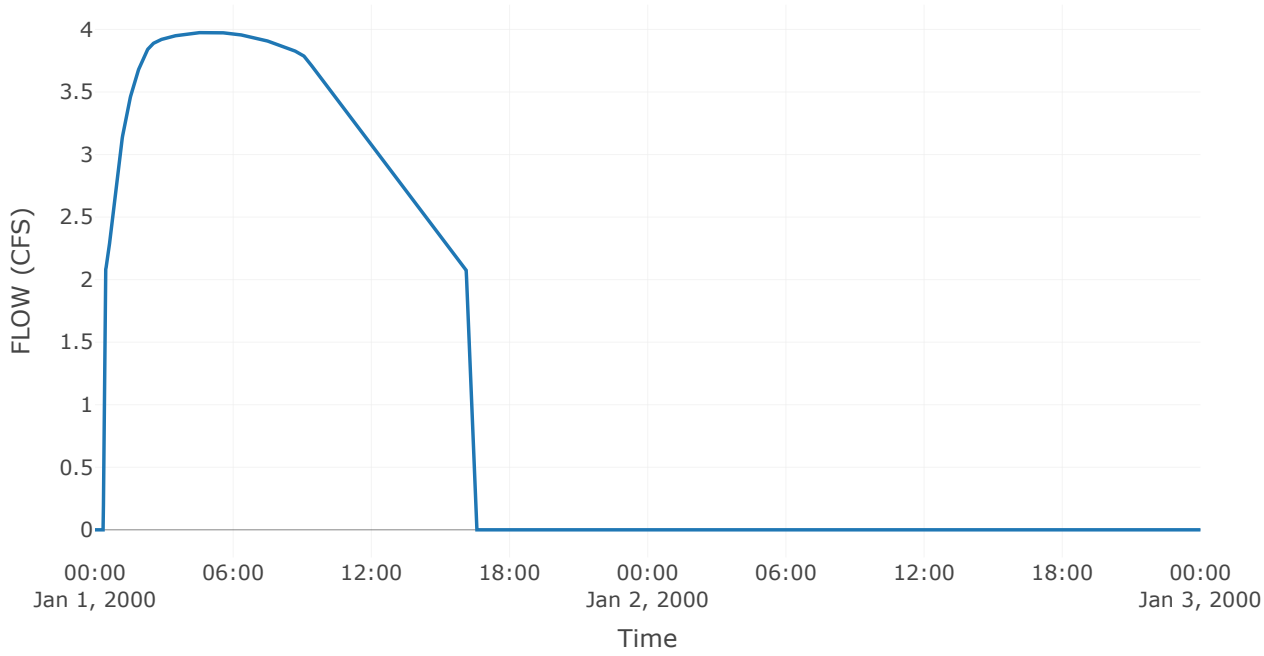
Combined Inflow



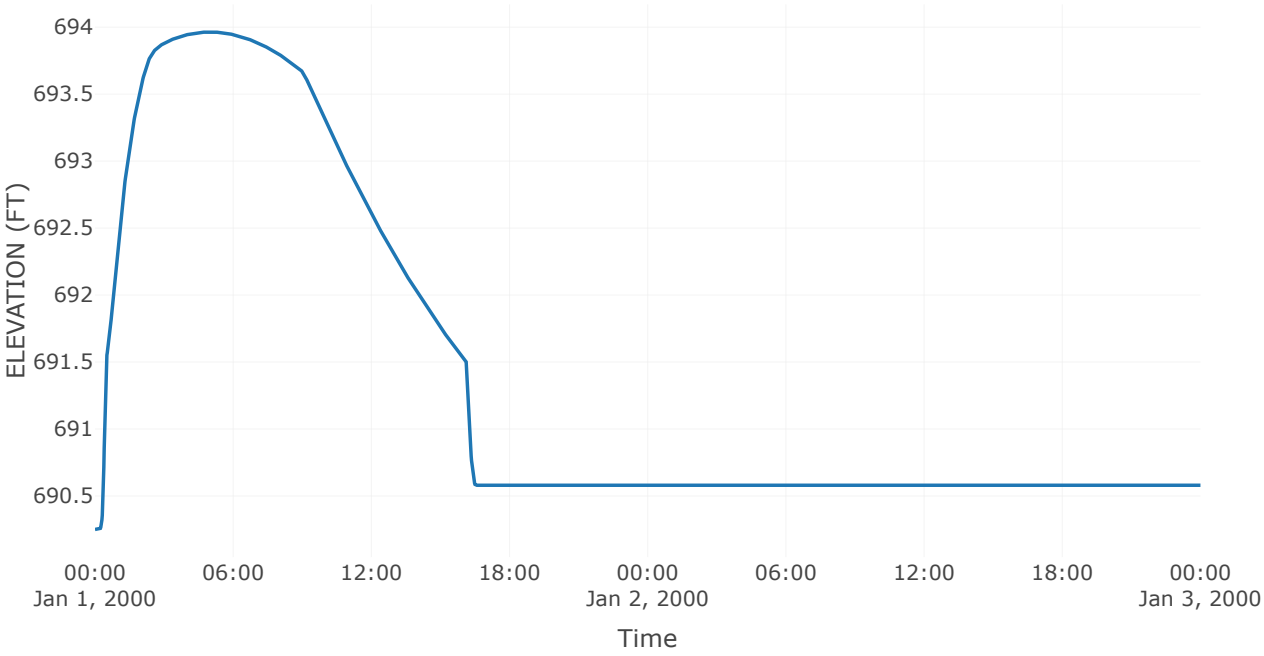

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

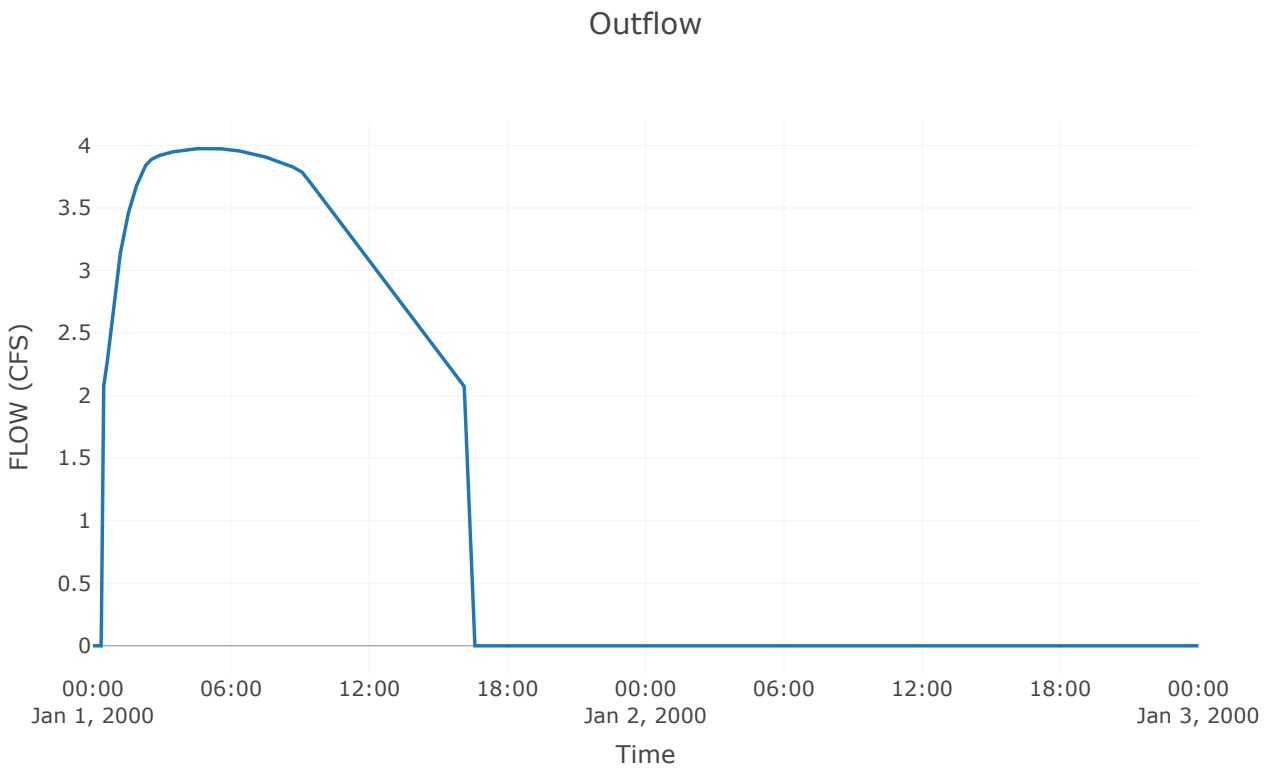

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
4
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib-Area 3

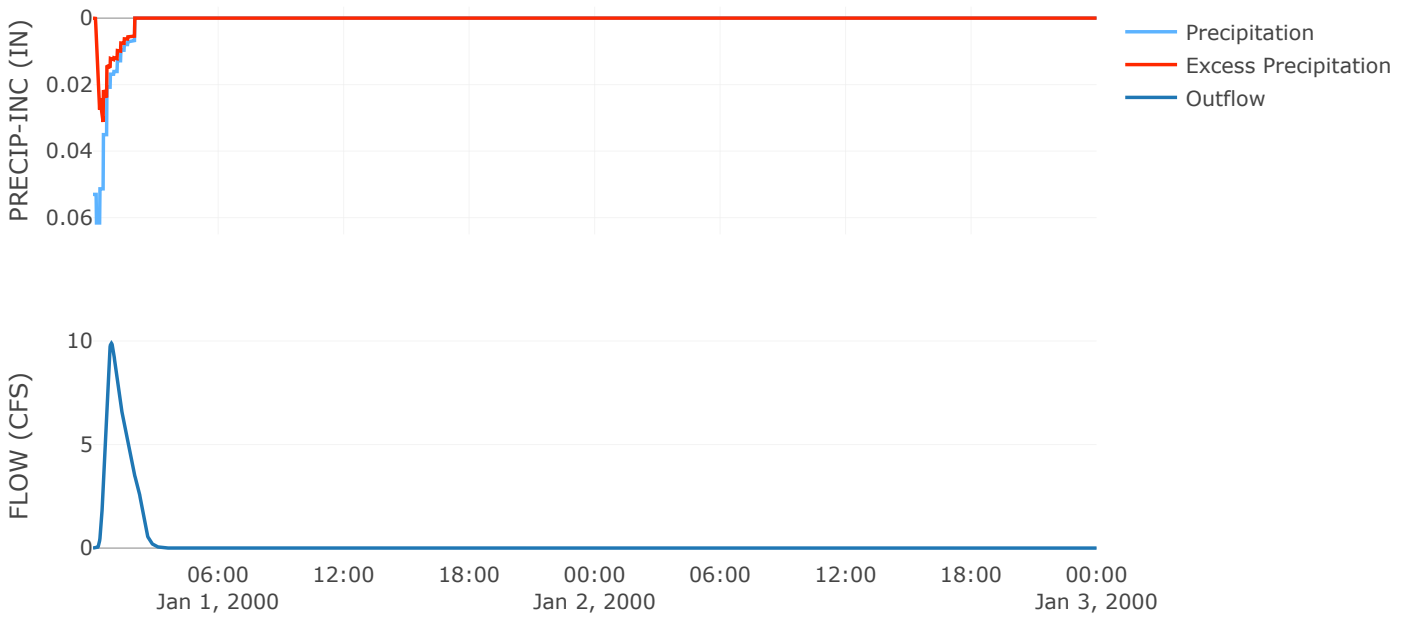
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

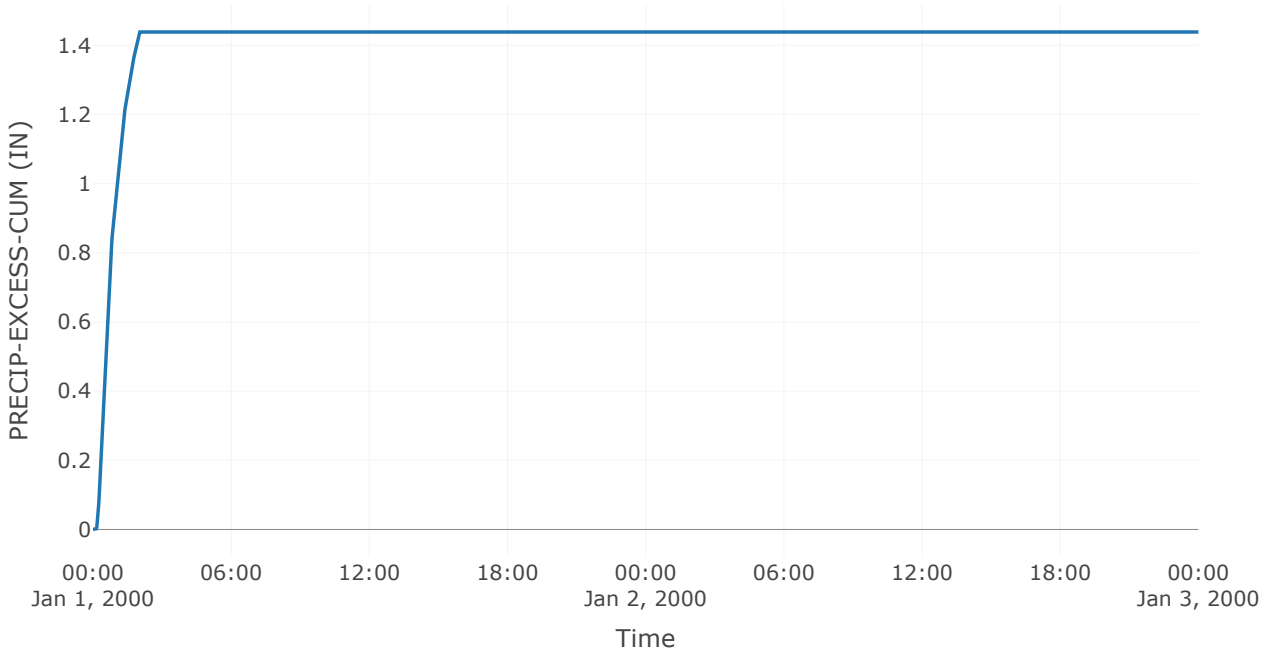
Transform: Scs	
Lag	21
Unitgraph Type	Standard

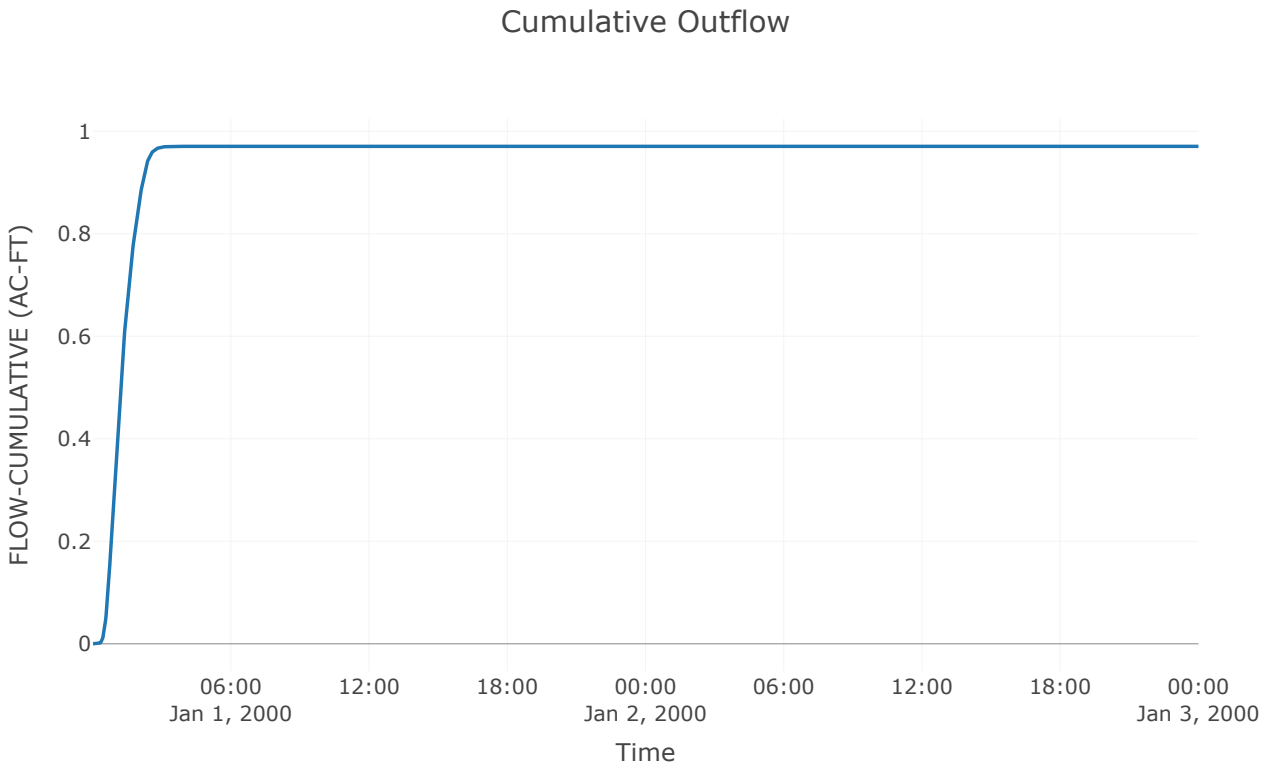
Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	9.89
Time of Peak Discharge	01Jan2000, 00:52
Volume (IN)	1.44
Precipitation Volume (AC - FT)	2.02
Loss Volume (AC - FT)	1.05
Excess Volume (AC - FT)	0.97
Direct Runoff Volume (AC - FT)	0.97
Baseflow Volume (AC - FT)	0

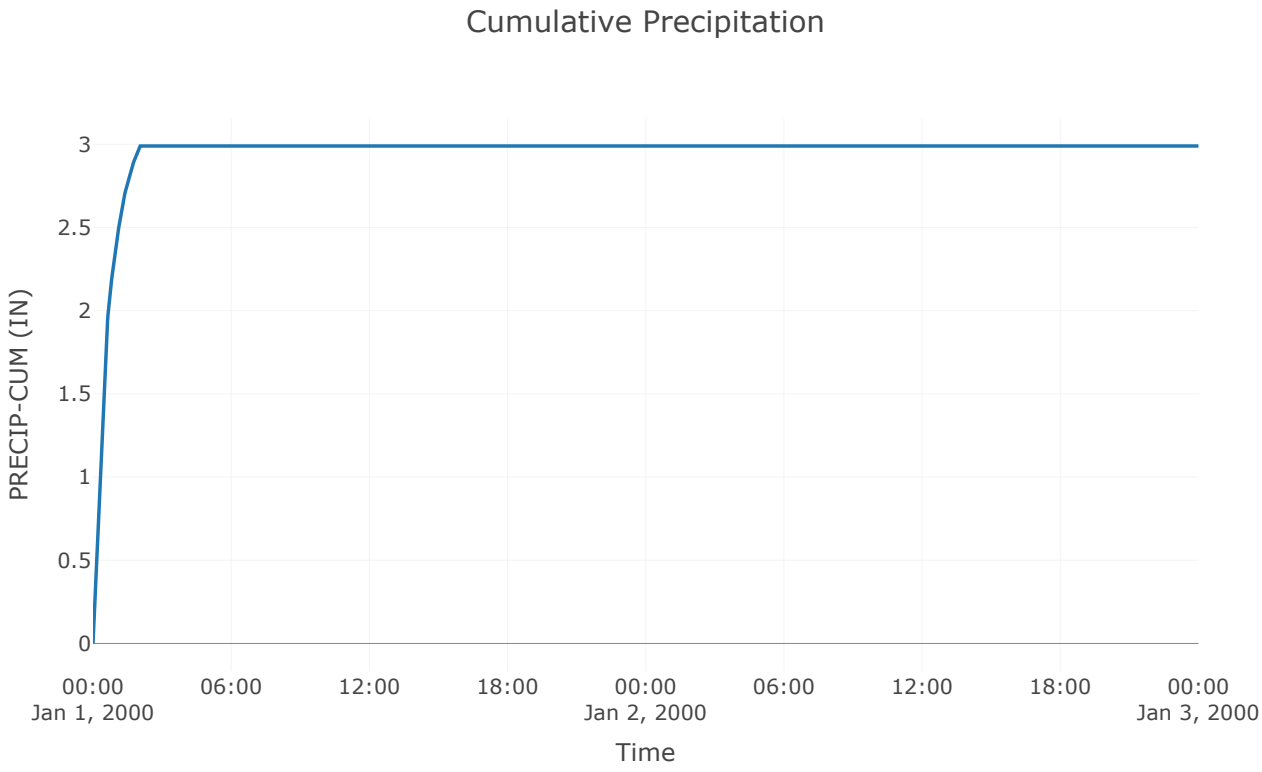
Precipitation and Outflow

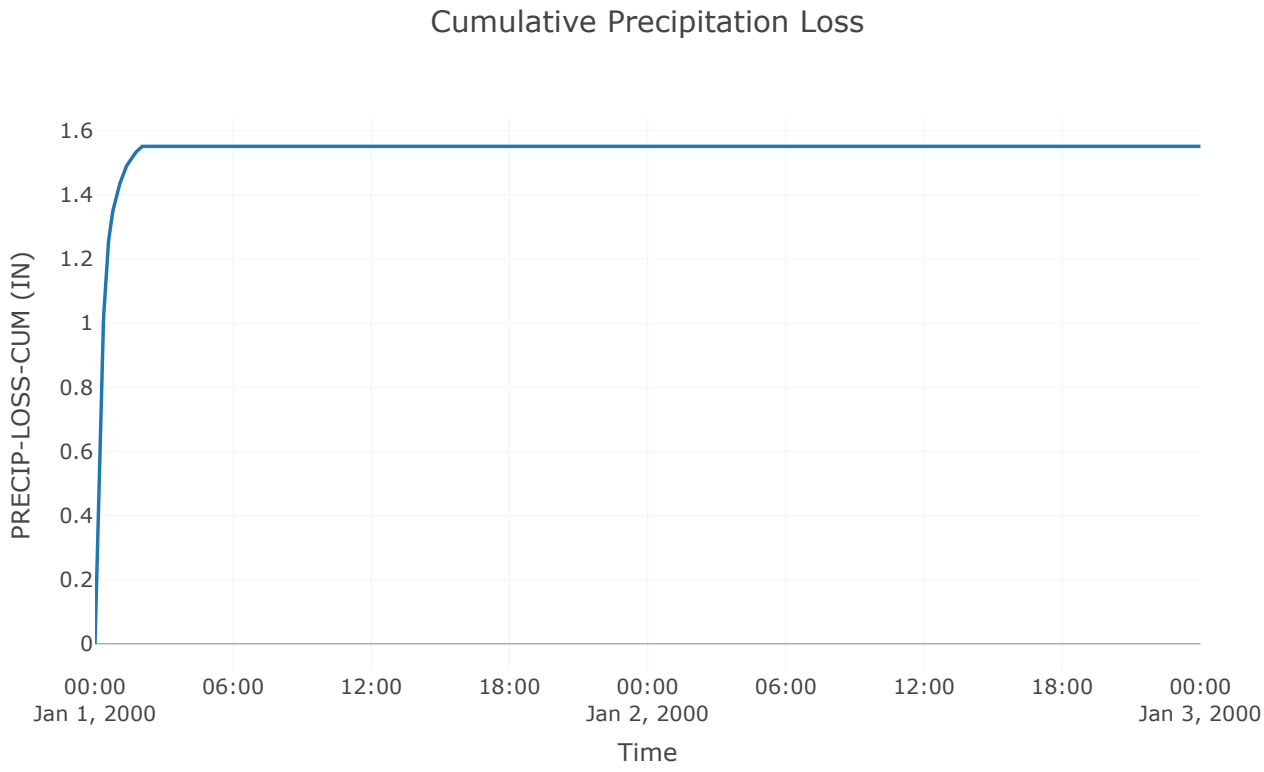


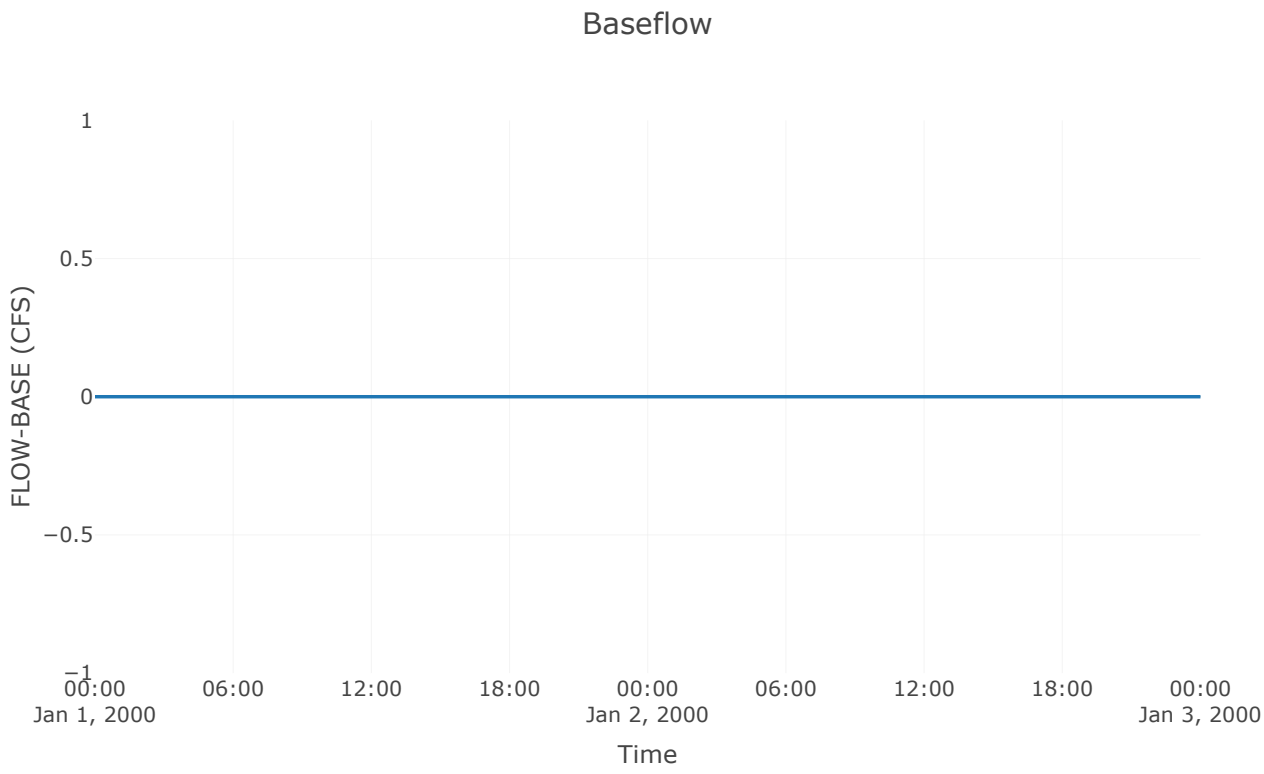
Cumulative Excess Precipitation

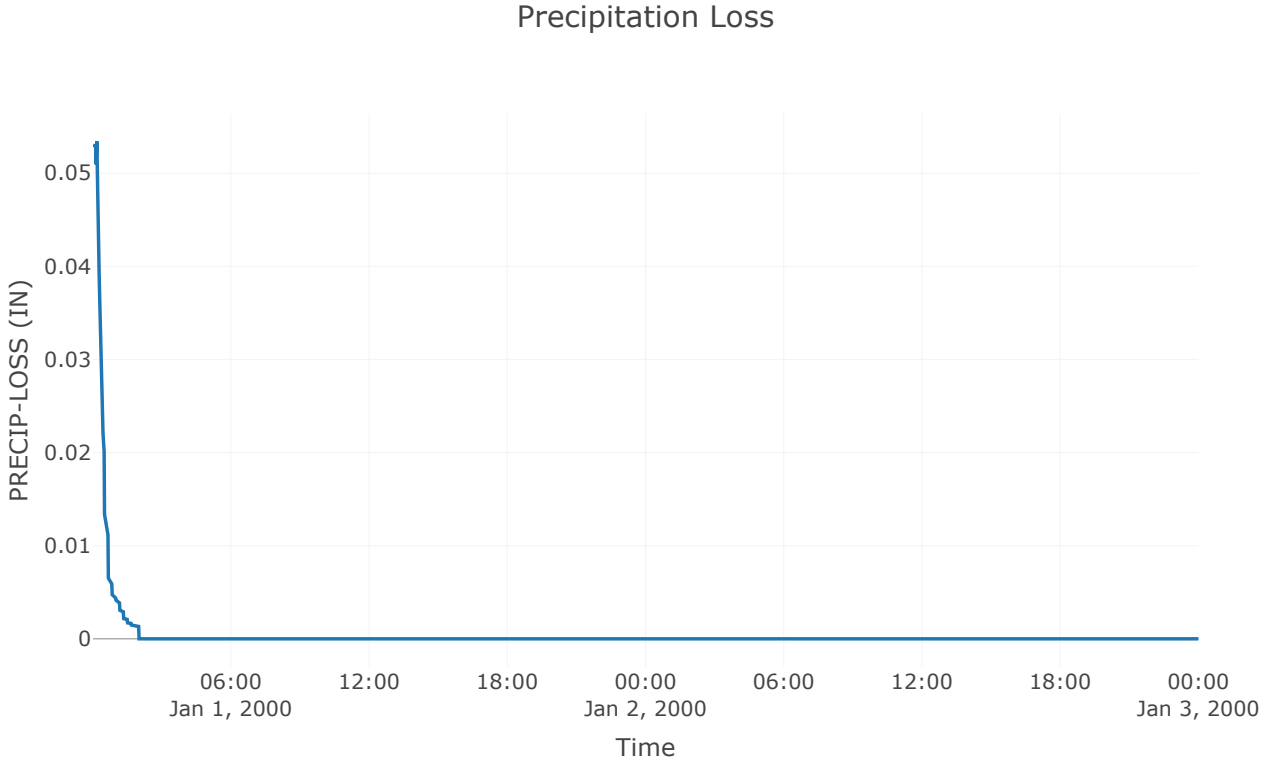


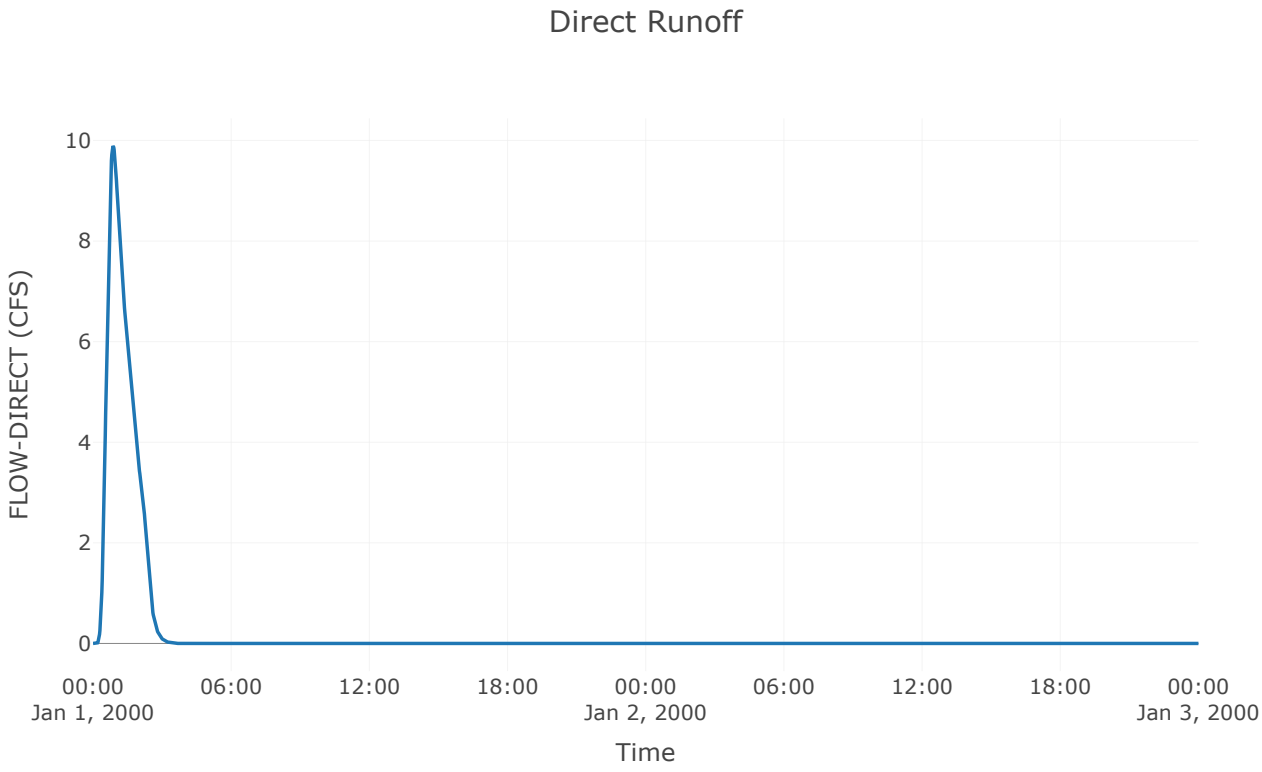

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
1
0.8
0.6
0.4
0.2
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

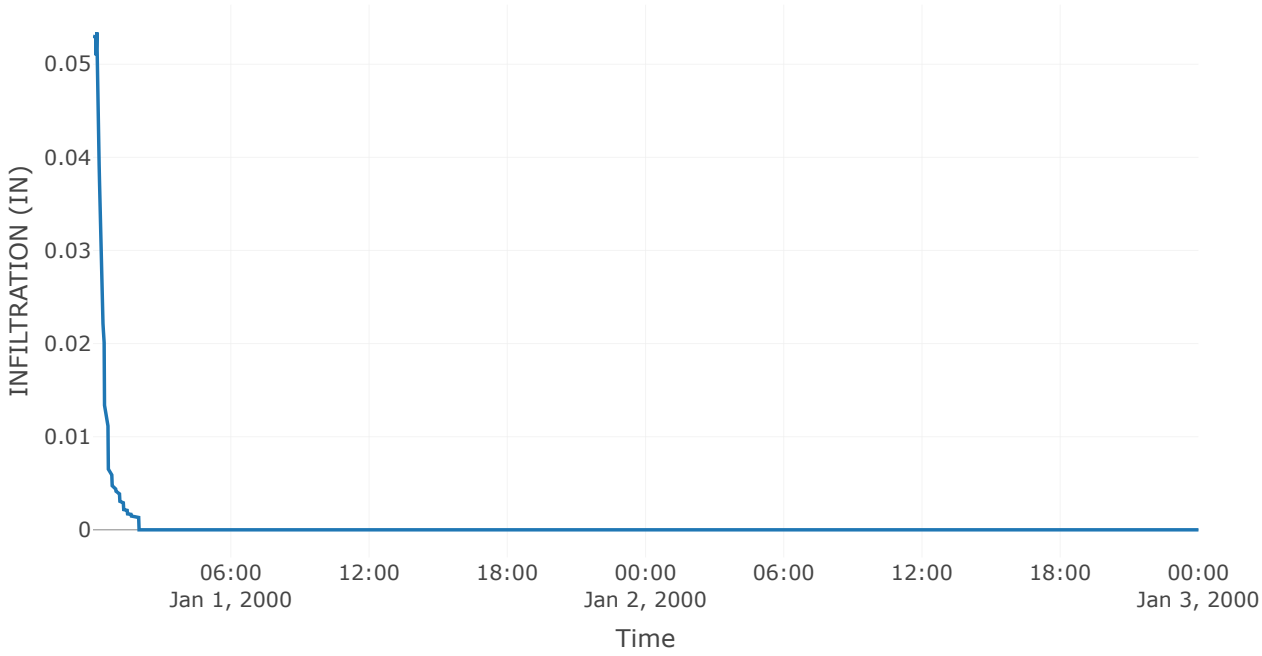

Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

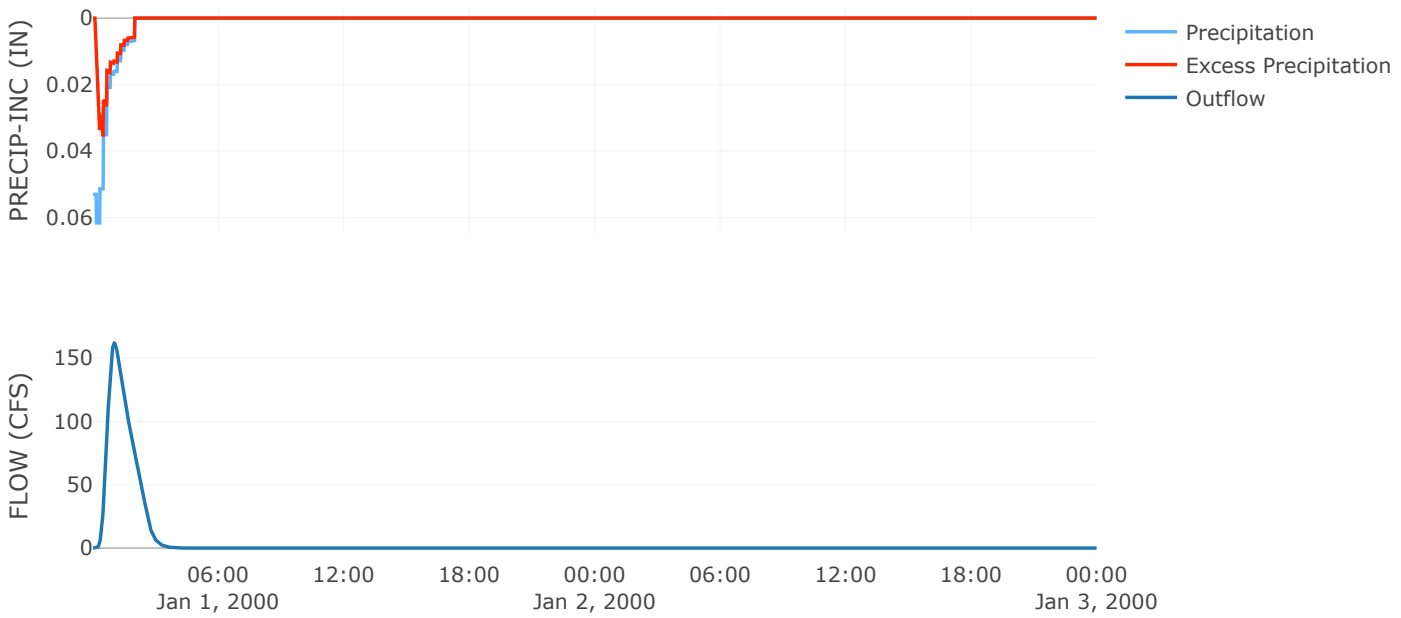
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

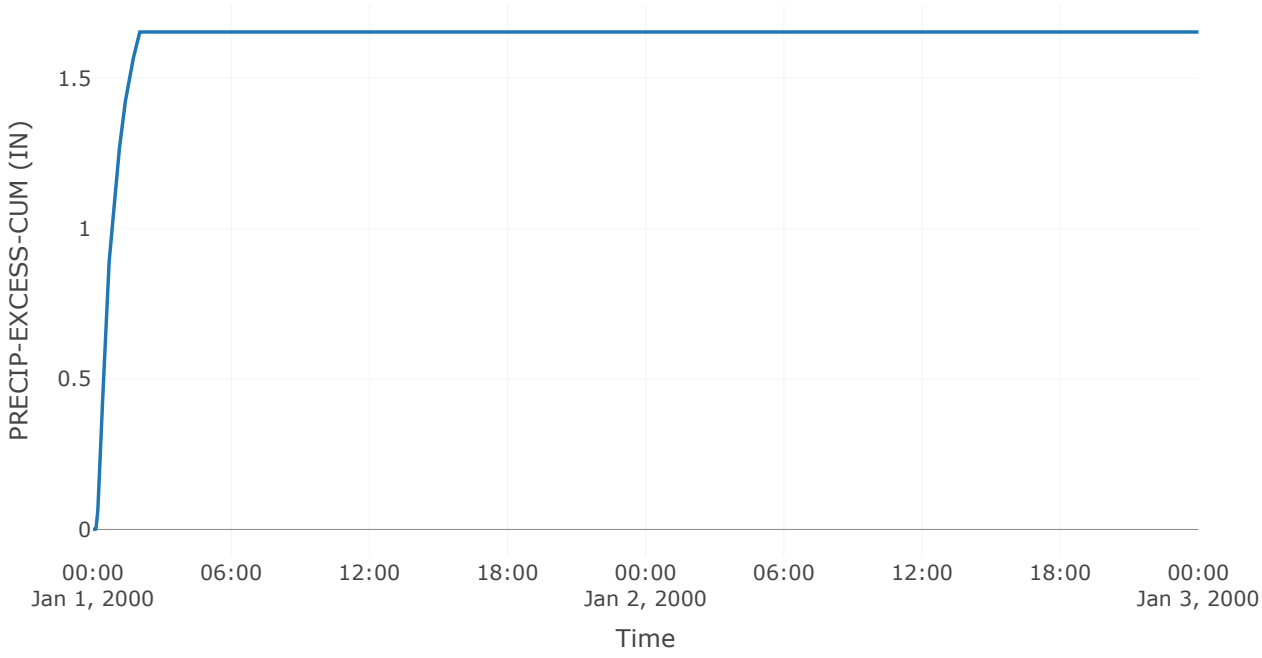
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

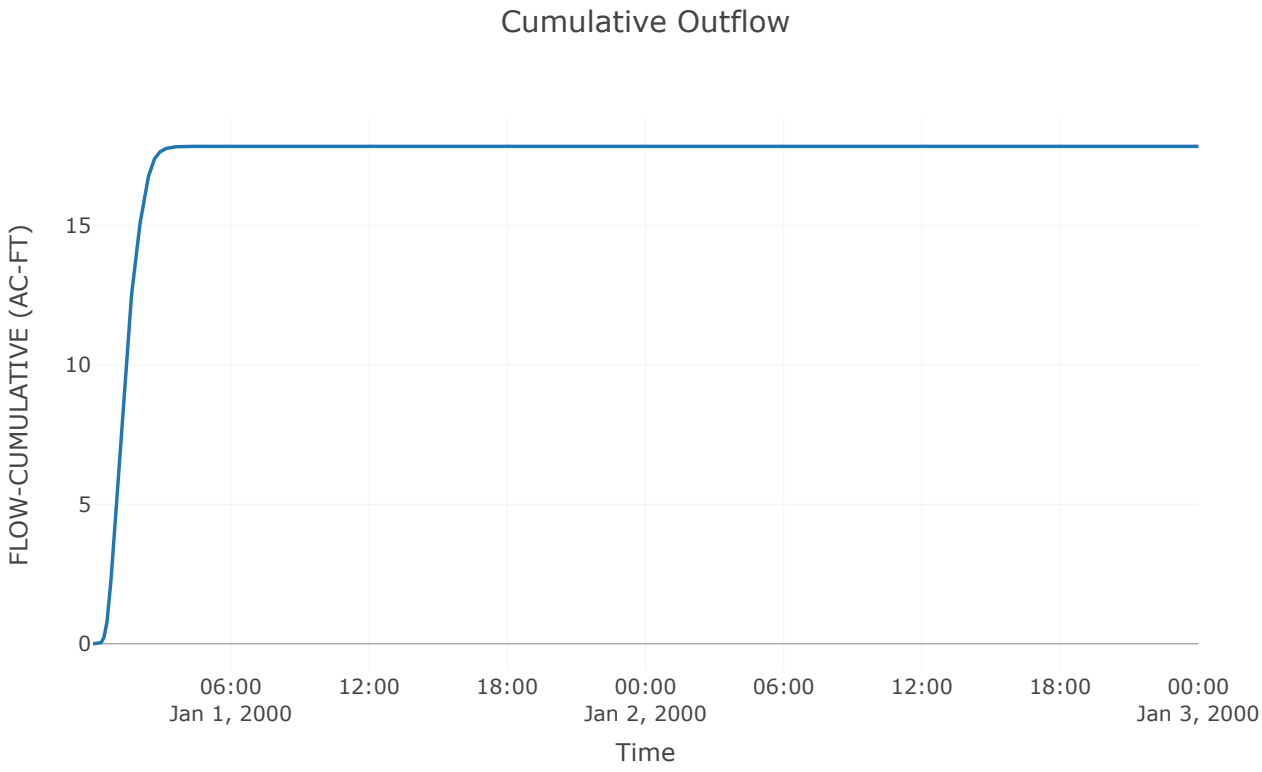
Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	161.81
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.65
Precipitation Volume (AC - FT)	32.24
Loss Volume (AC - FT)	14.4
Excess Volume (AC - FT)	17.83
Direct Runoff Volume (AC - FT)	17.83
Baseflow Volume (AC - FT)	0

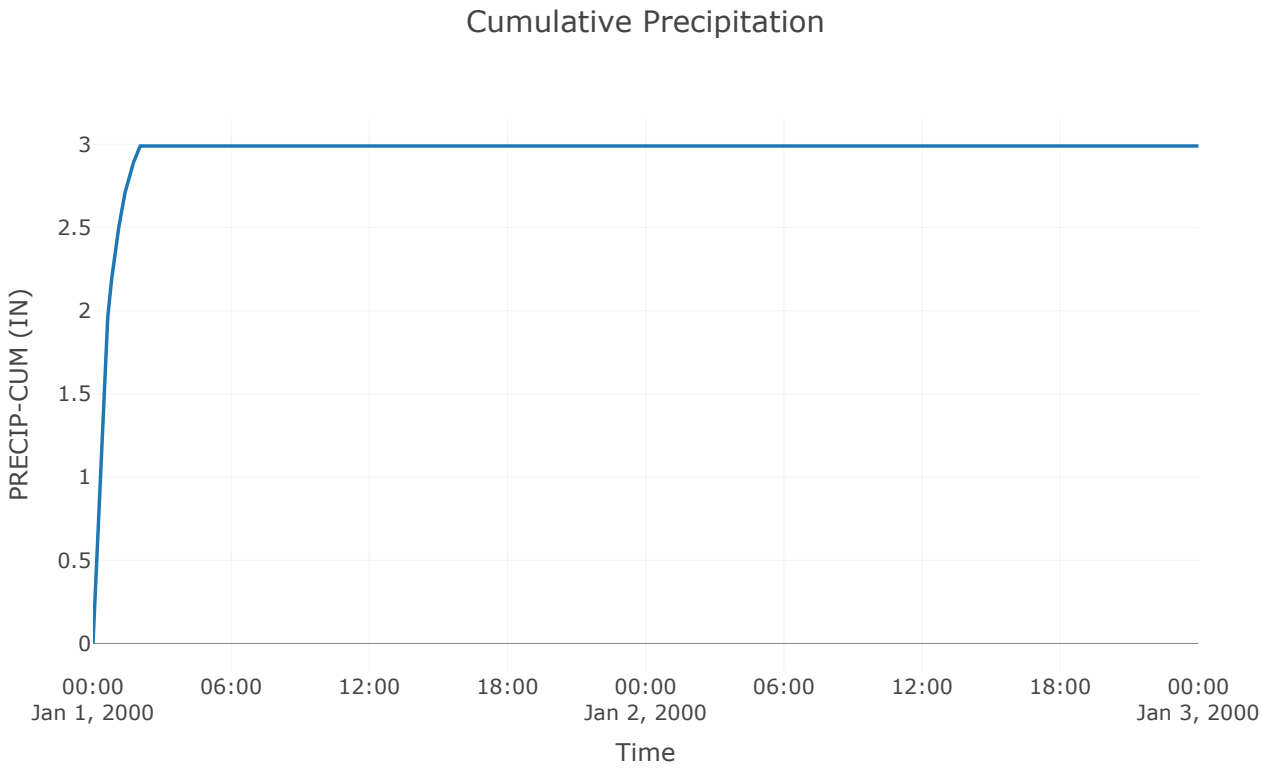
Precipitation and Outflow

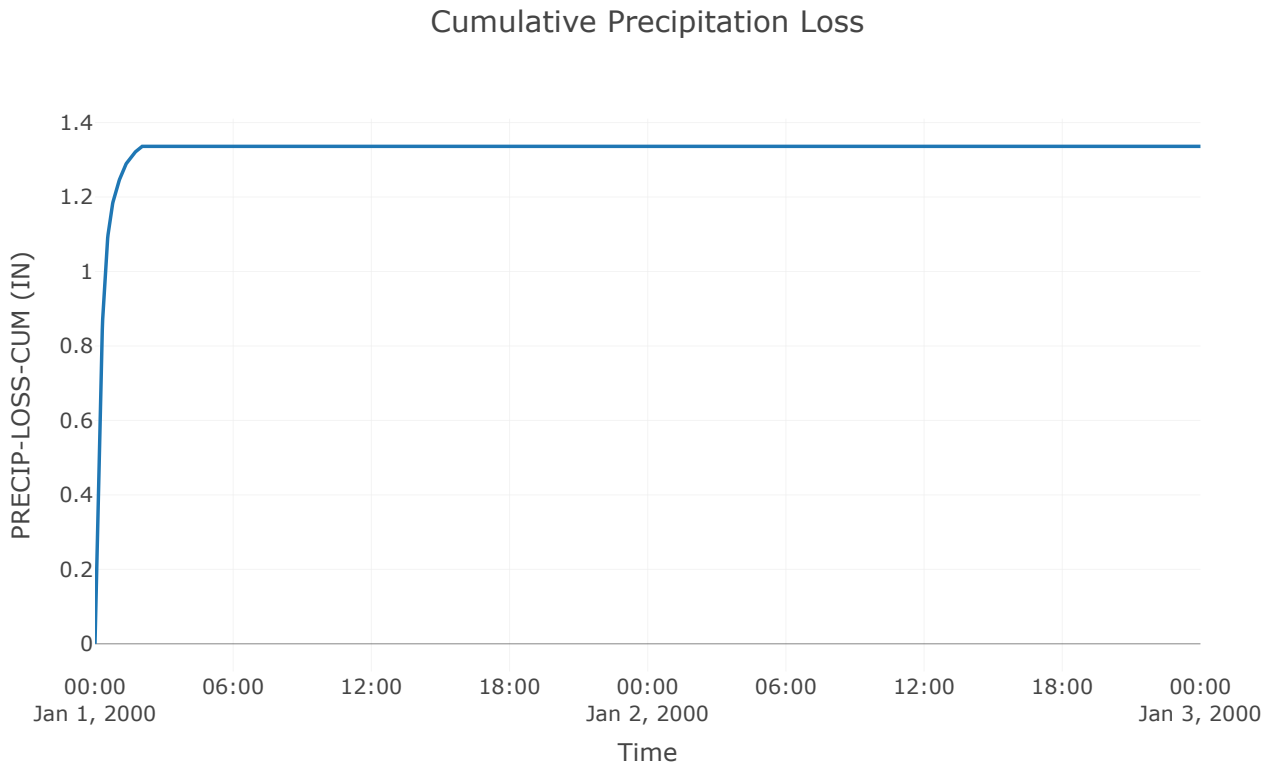


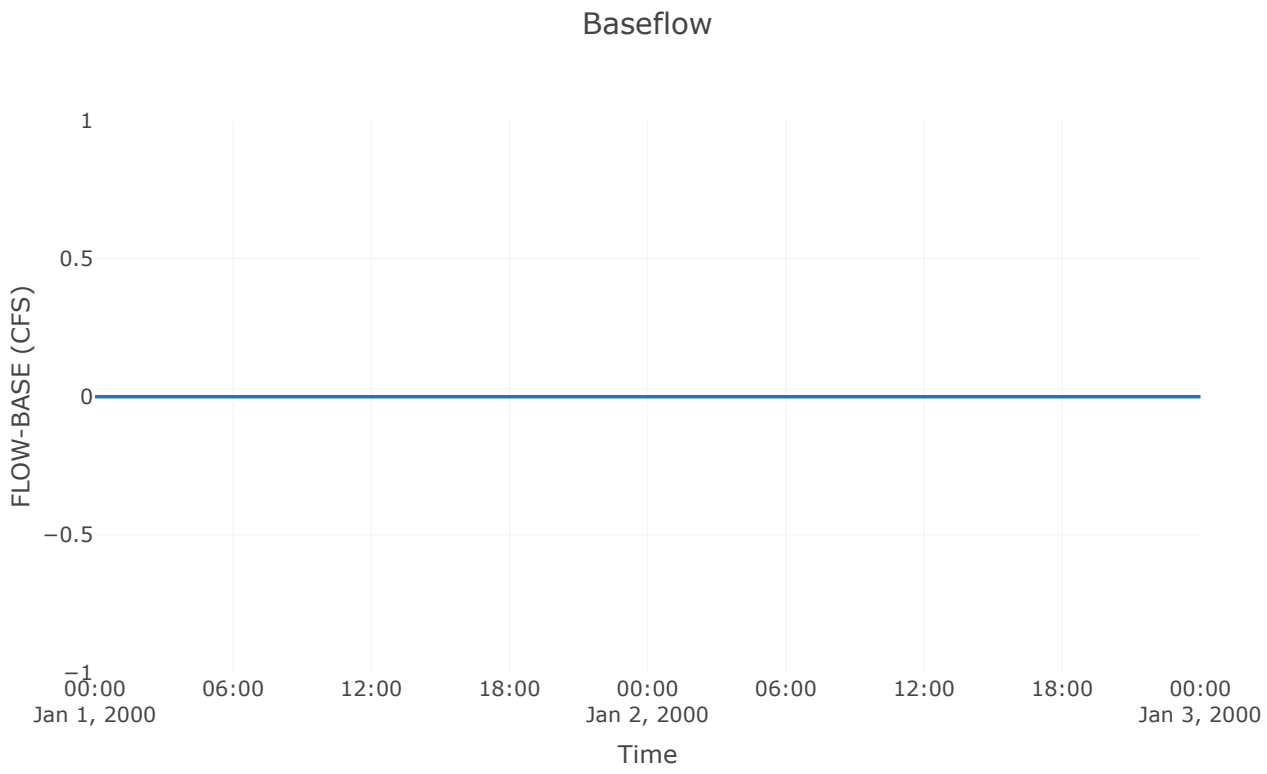
Cumulative Excess Precipitation



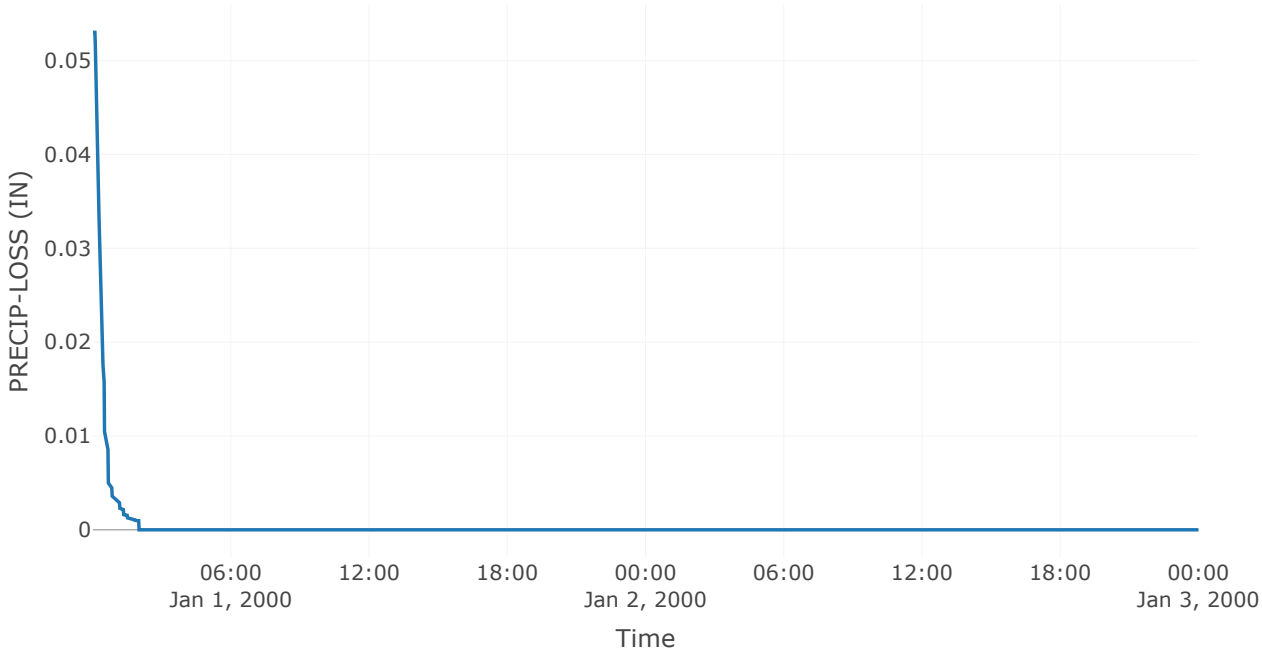

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

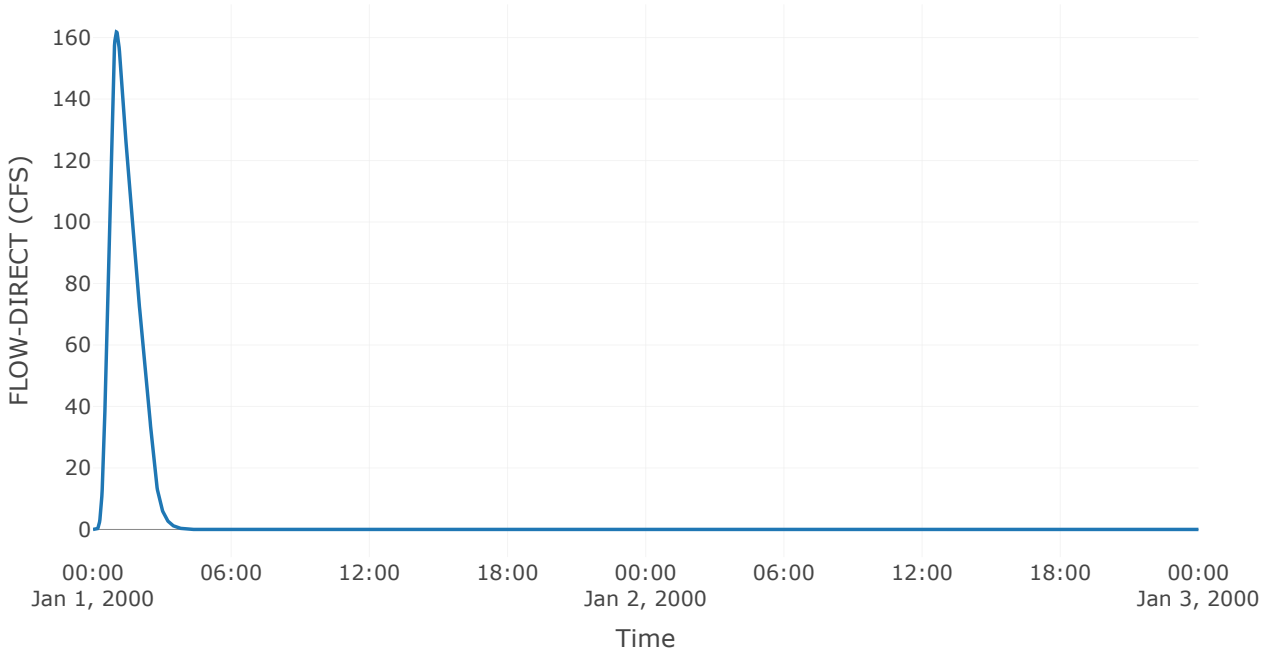

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

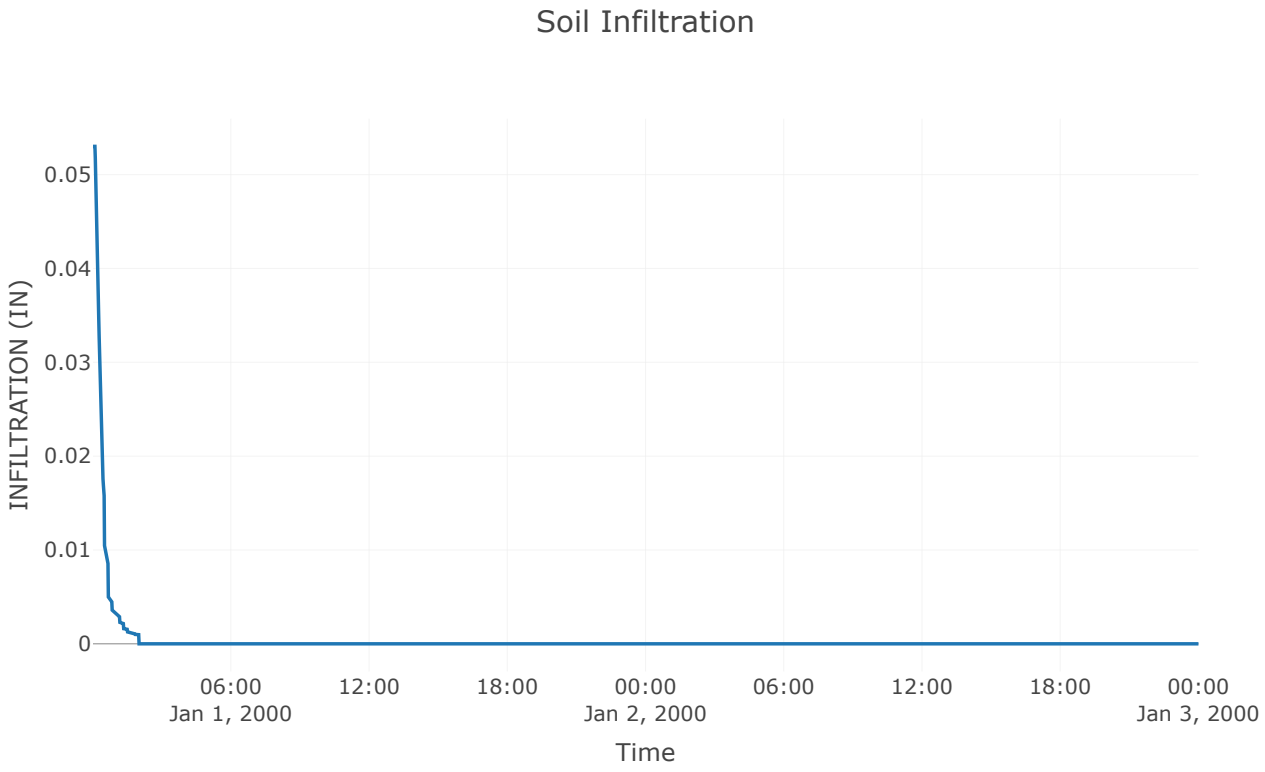

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



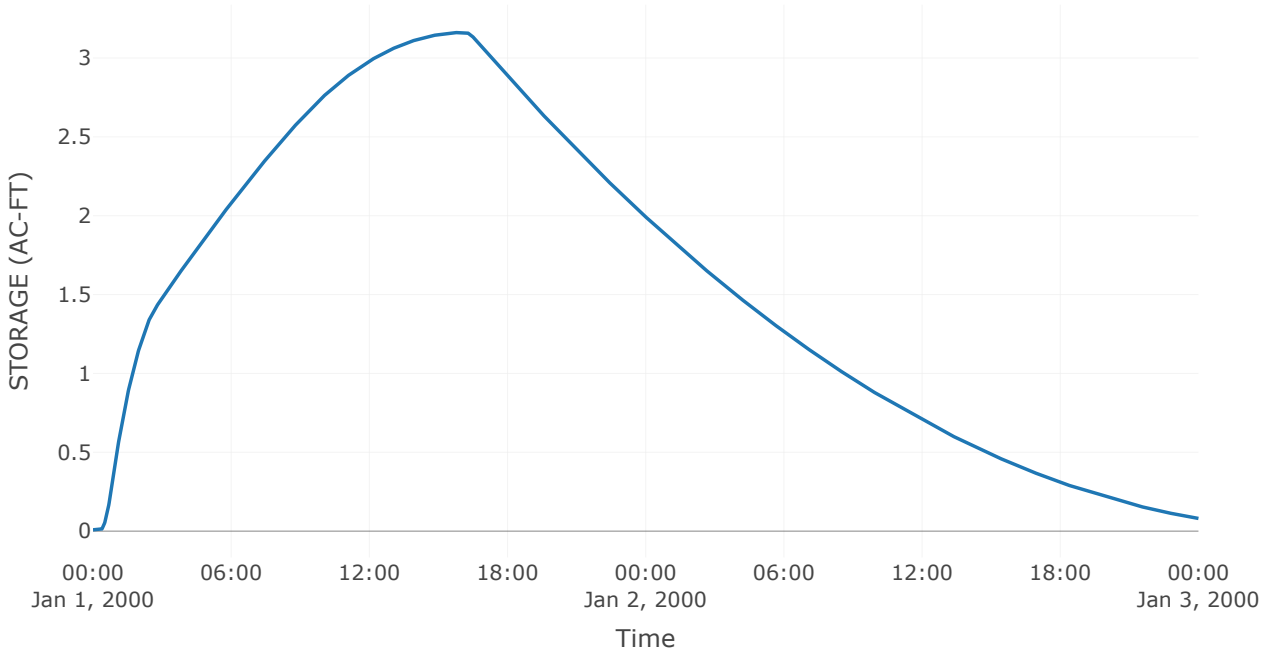

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 3

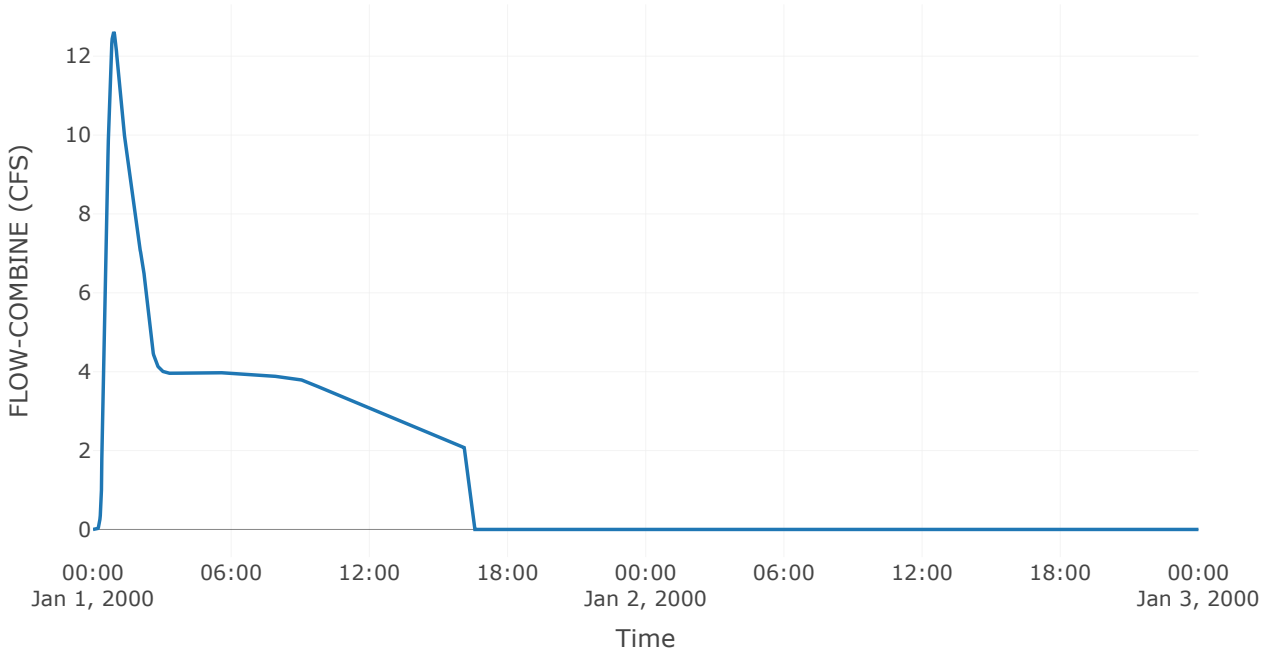
Downstream : Off - Site Tributary Area

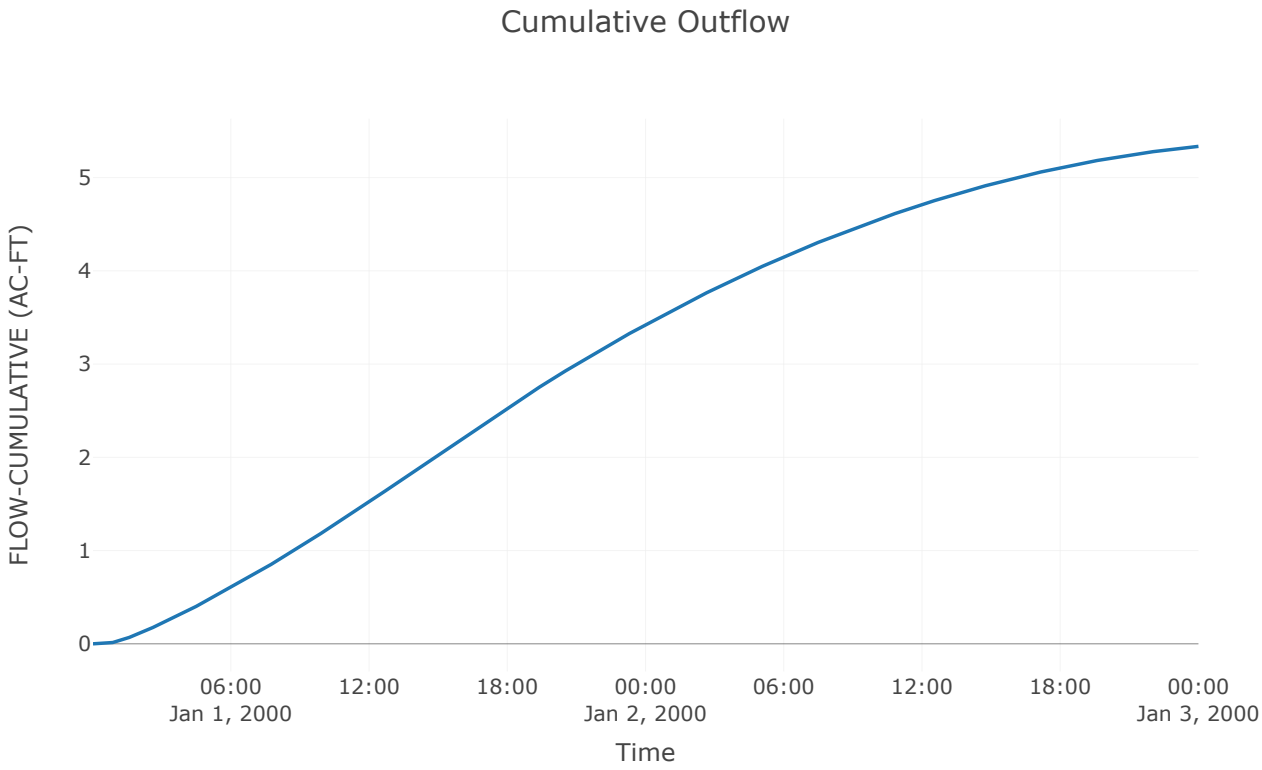
Results: Basin 3	
Peak Discharge (CFS)	2.06
Time of Peak Discharge	01Jan2000, 16:07
Volume (IN)	1.49
Peak Inflow (CFS)	12.61
Time of Peak Inflow	01Jan2000, 00:54
Inflow Volume (AC - FT)	5.41
Maximum Storage (AC - FT)	3.16
Peak Elevation (FT)	693.05
Discharge Volume (AC - FT)	5.33

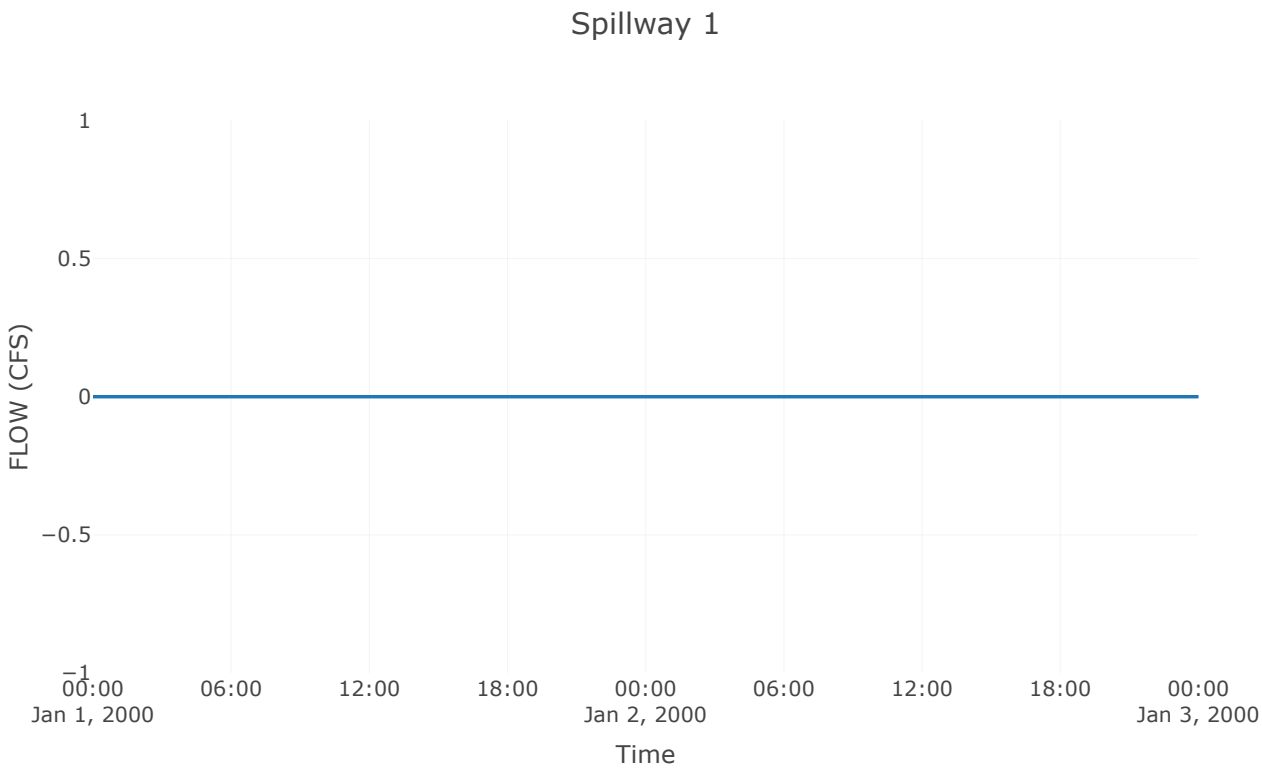
Storage

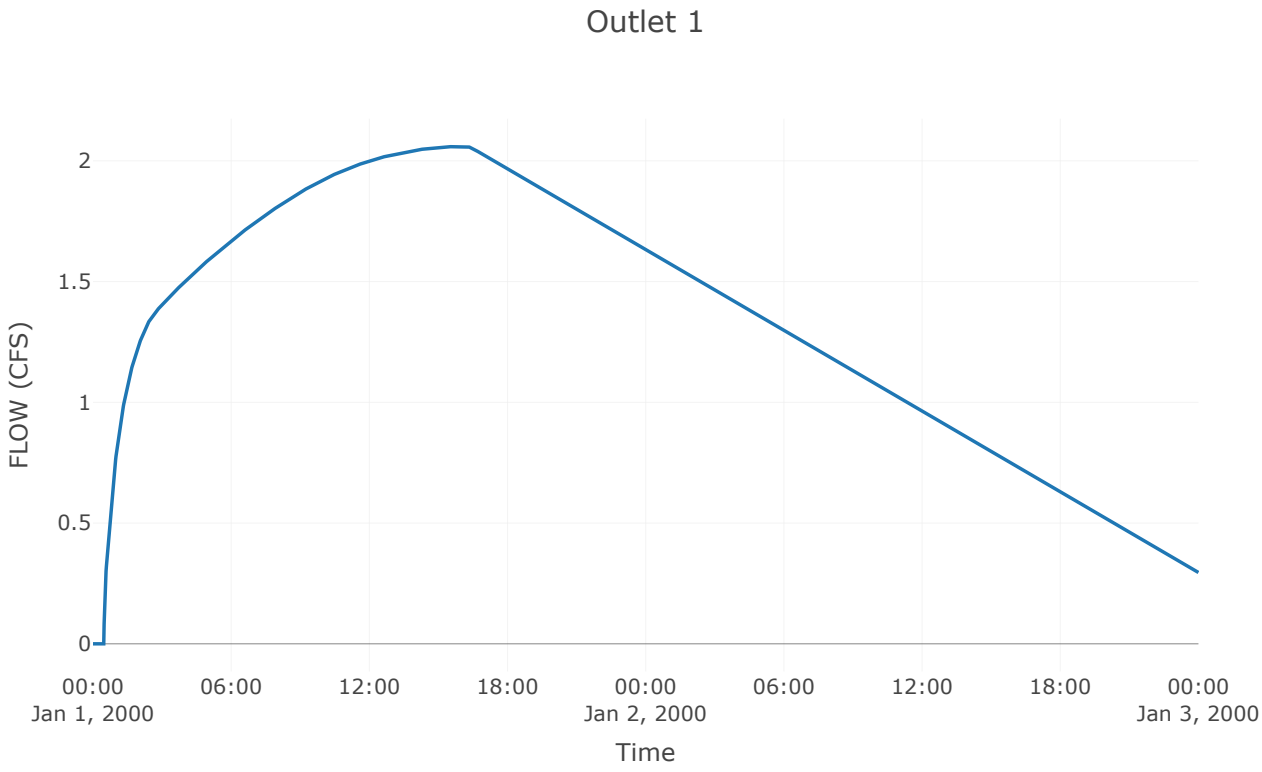


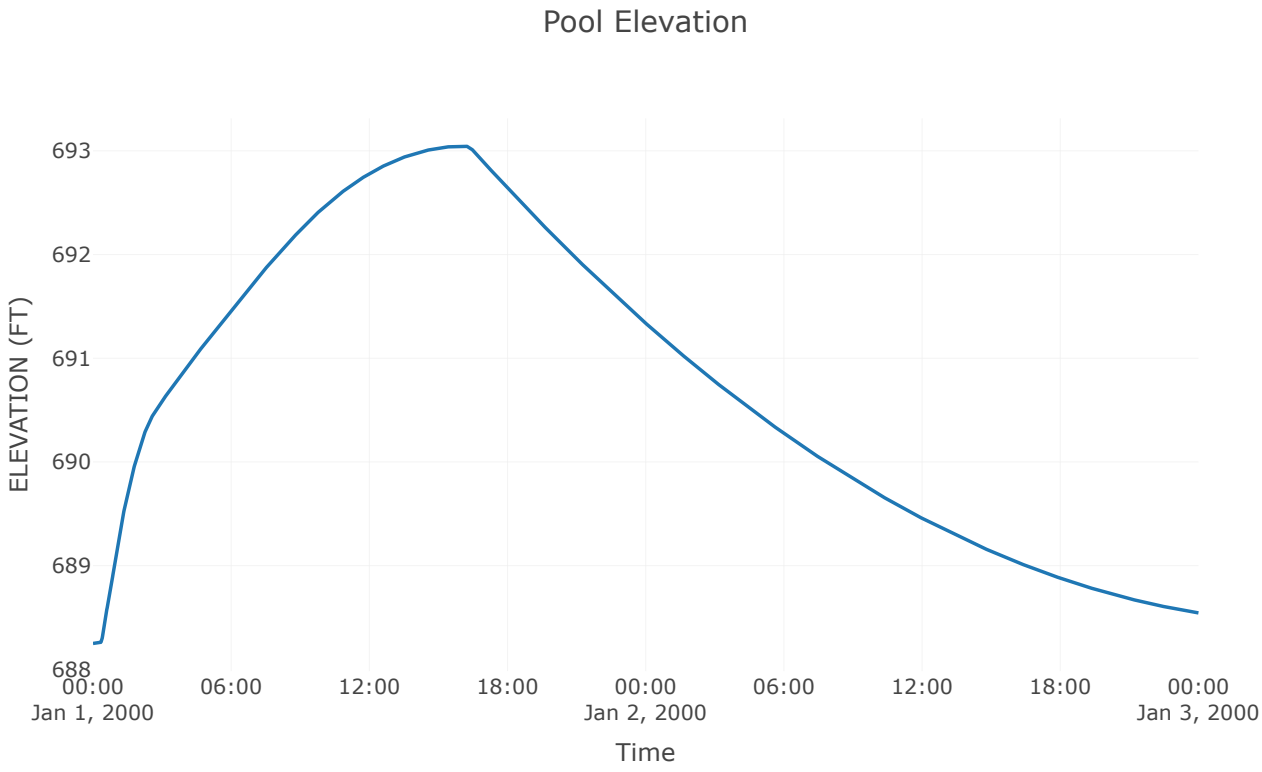
Combined Inflow

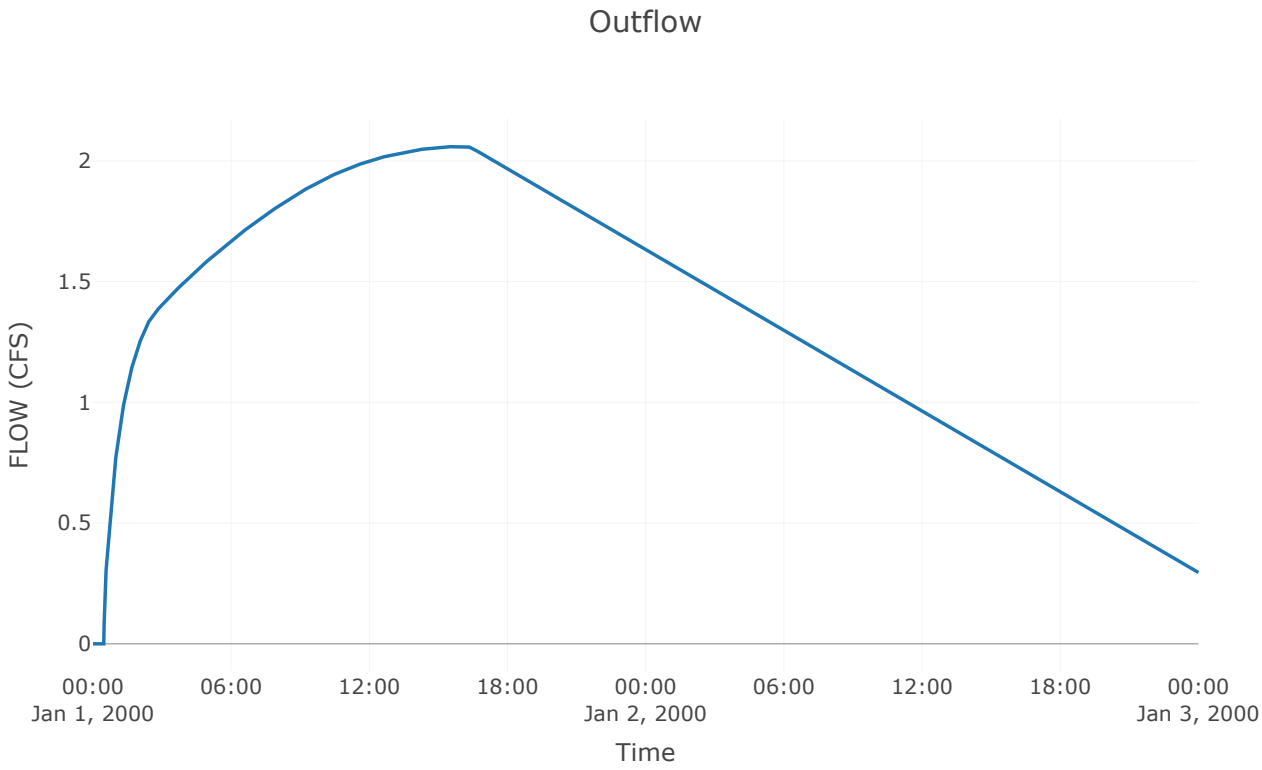



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
693
692
691
690
689
688
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

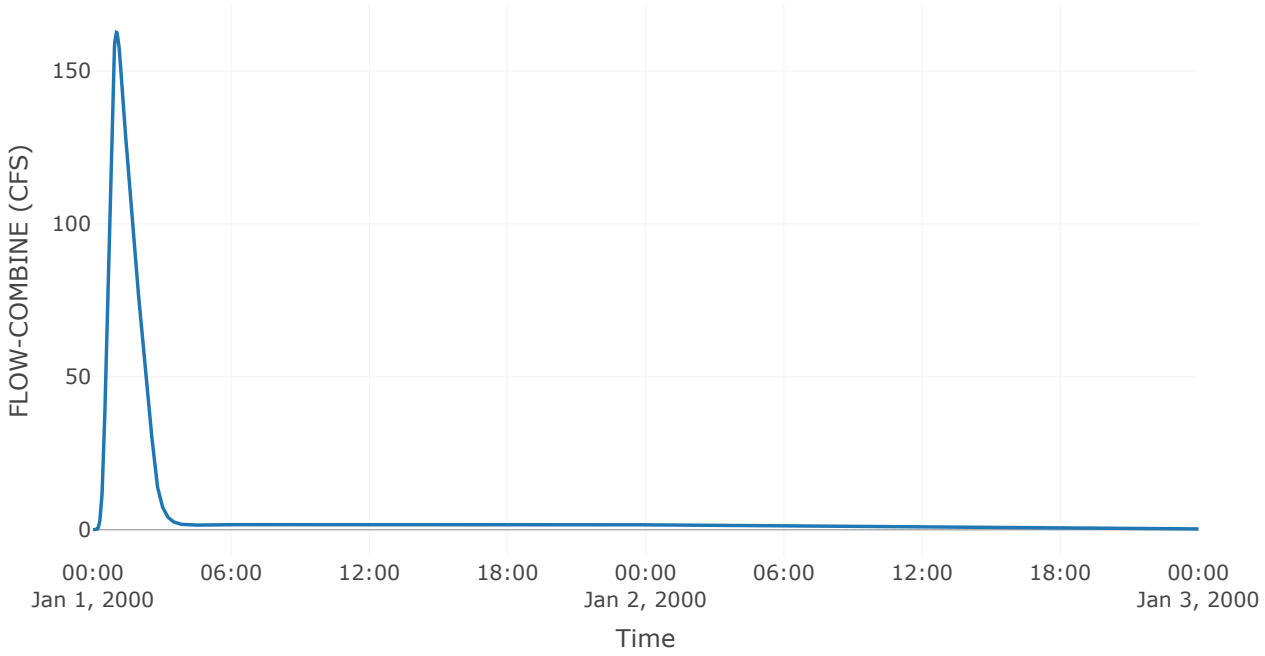

Outflow
FLOW (CFS)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

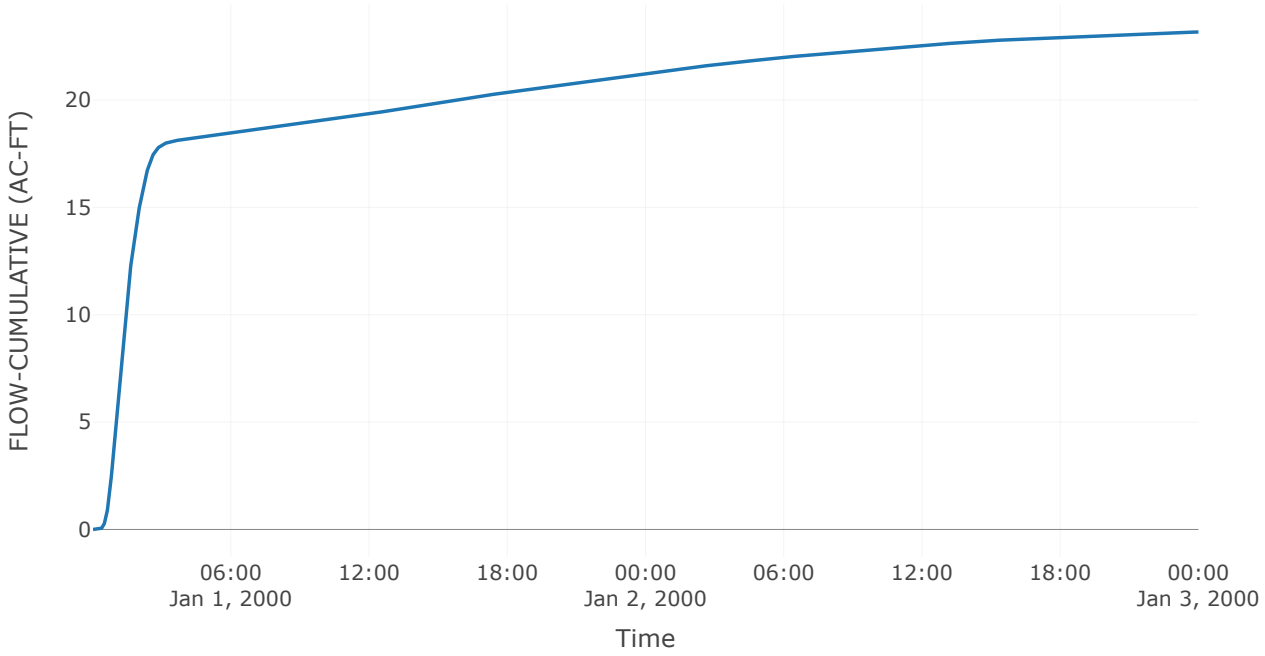
Downstream : Storage East of Wolf Road

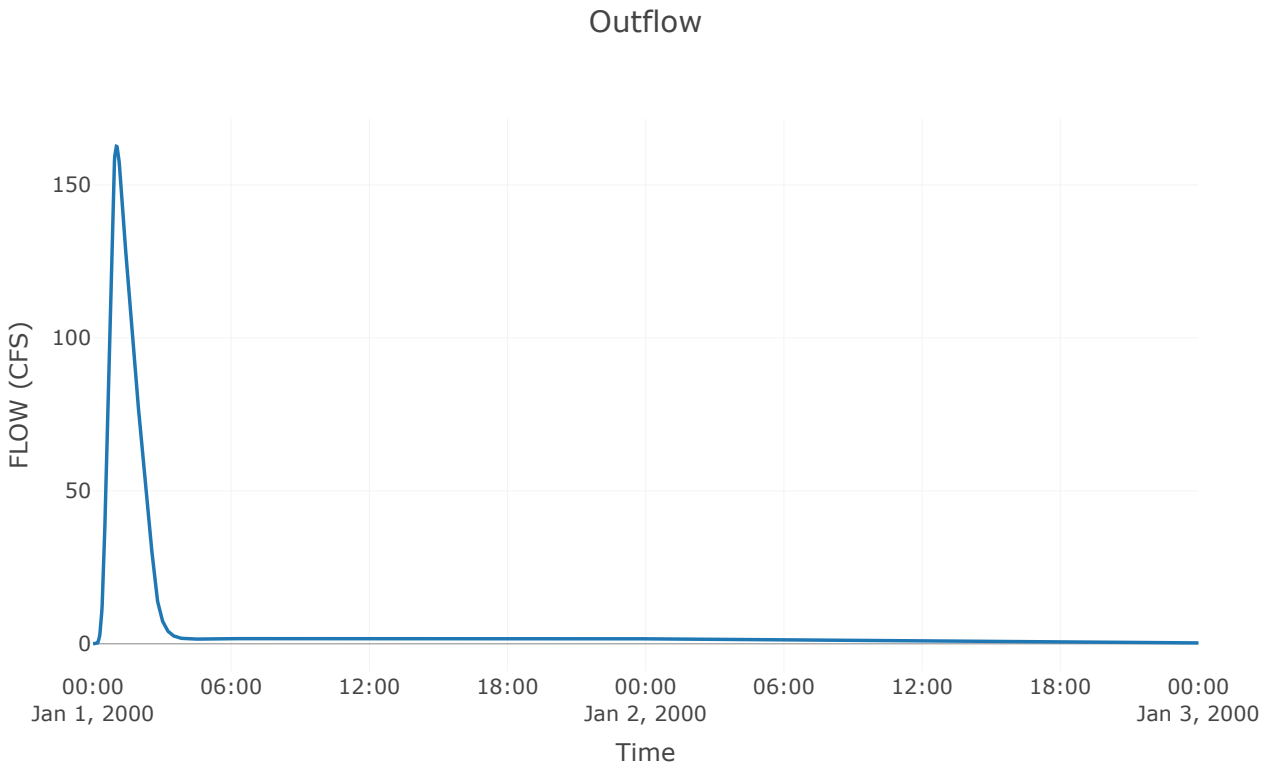
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	162.6
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	1.61

Combined Inflow



Cumulative Outflow



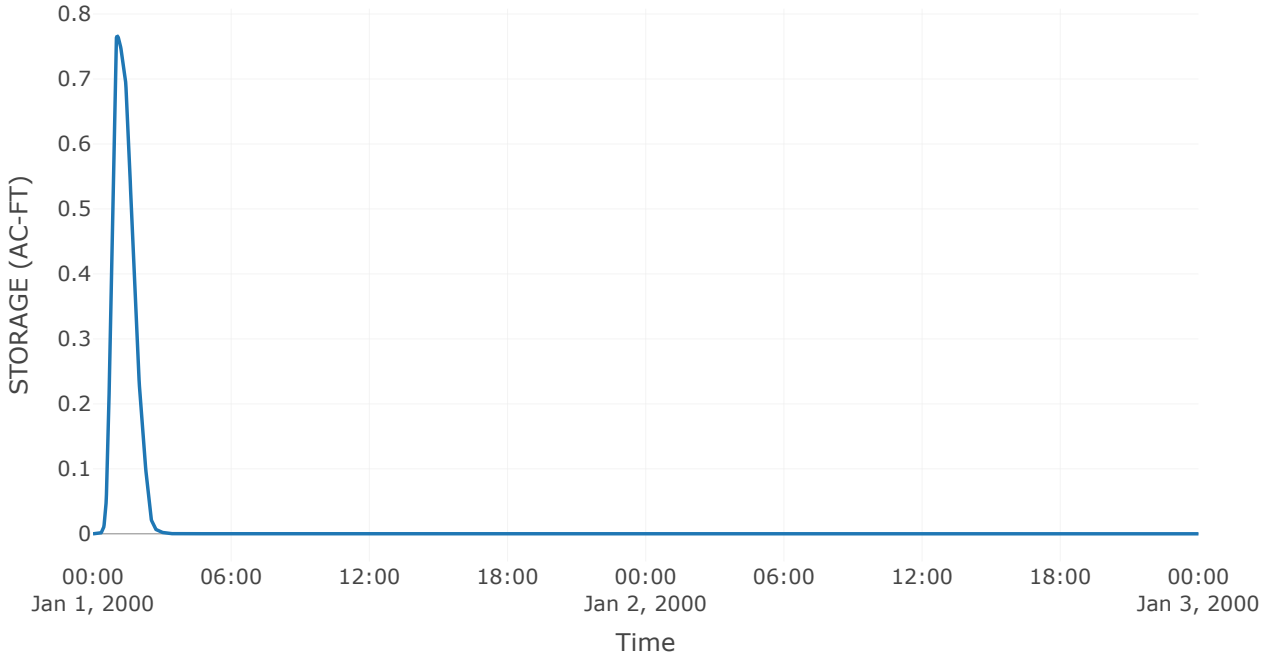

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

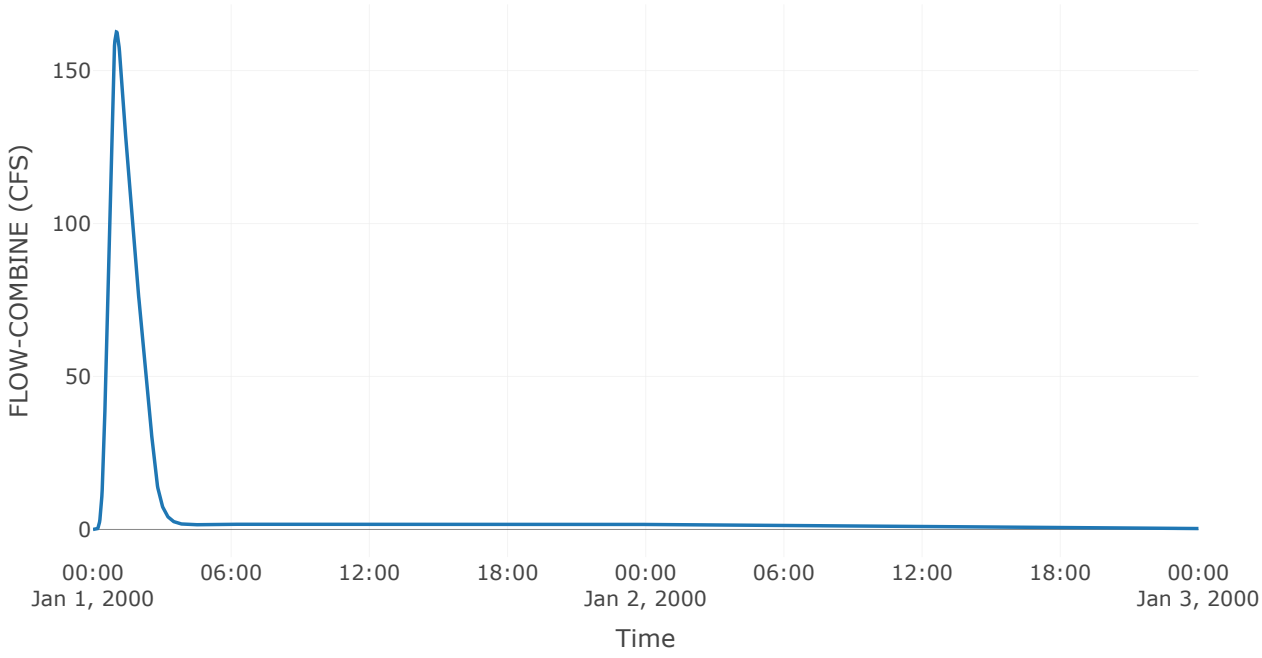
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	162.1
Time of Peak Discharge	01Jan2000, 01:03
Volume (IN)	1.61
Peak Inflow (CFS)	162.6
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.77
Peak Elevation (FT)	663.56
Discharge Volume (AC - FT)	23.17

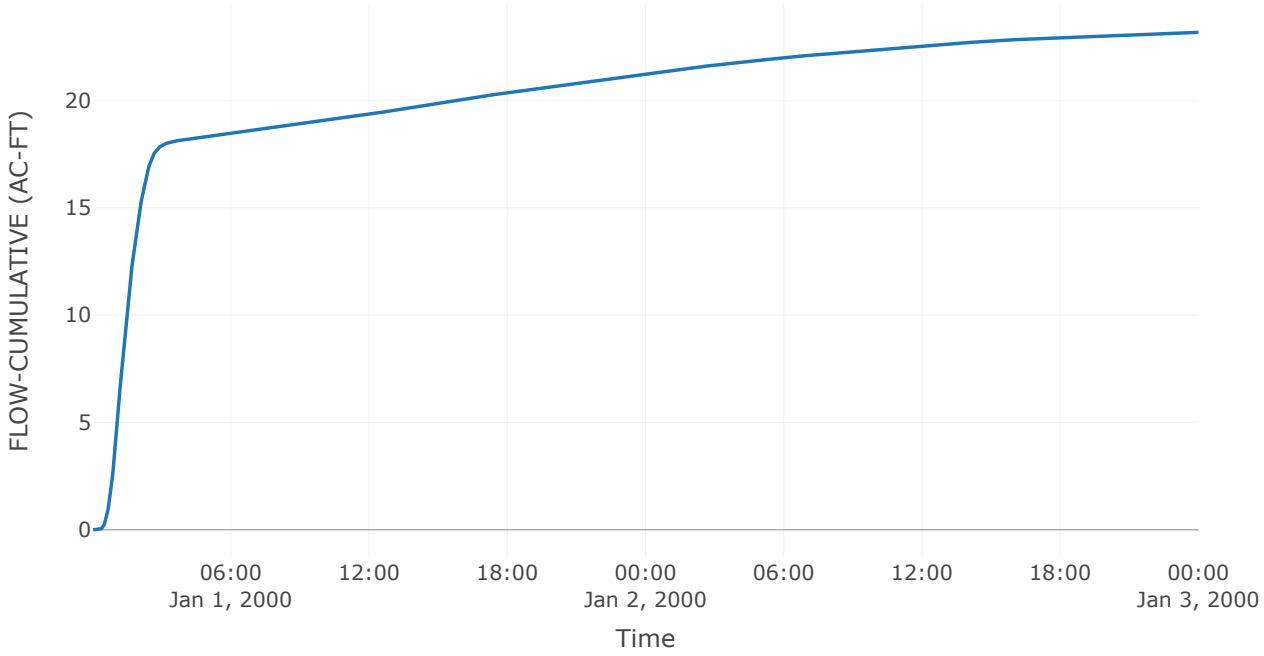
Storage



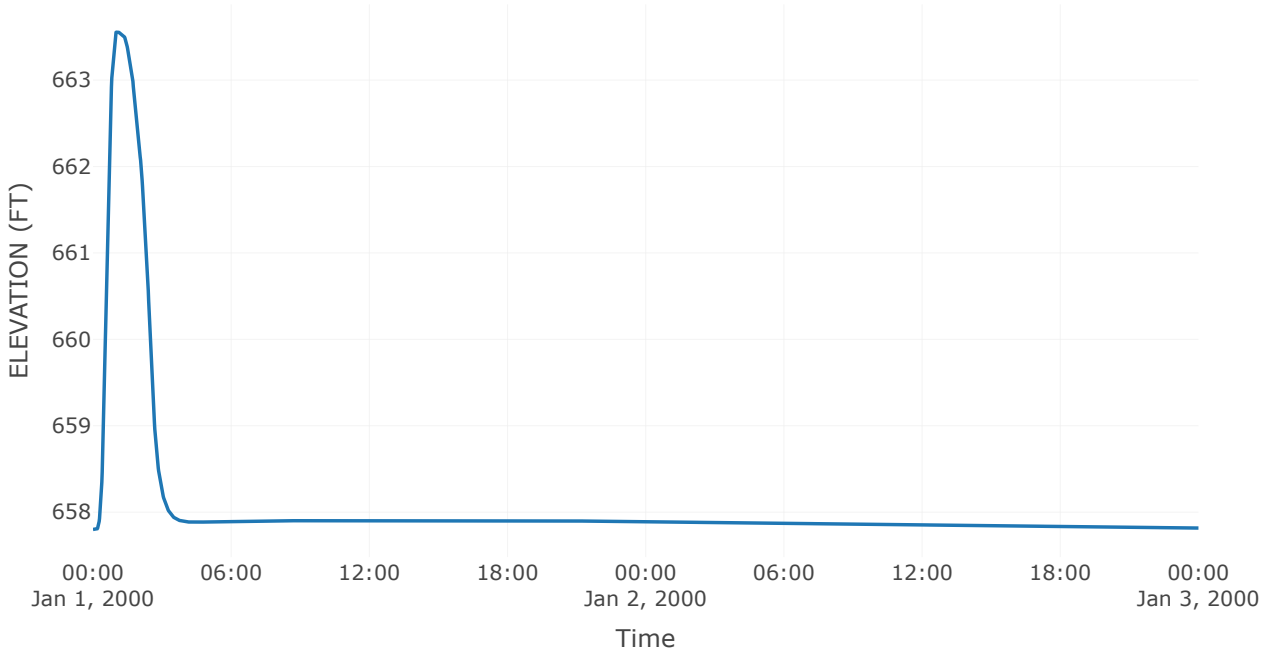
Combined Inflow

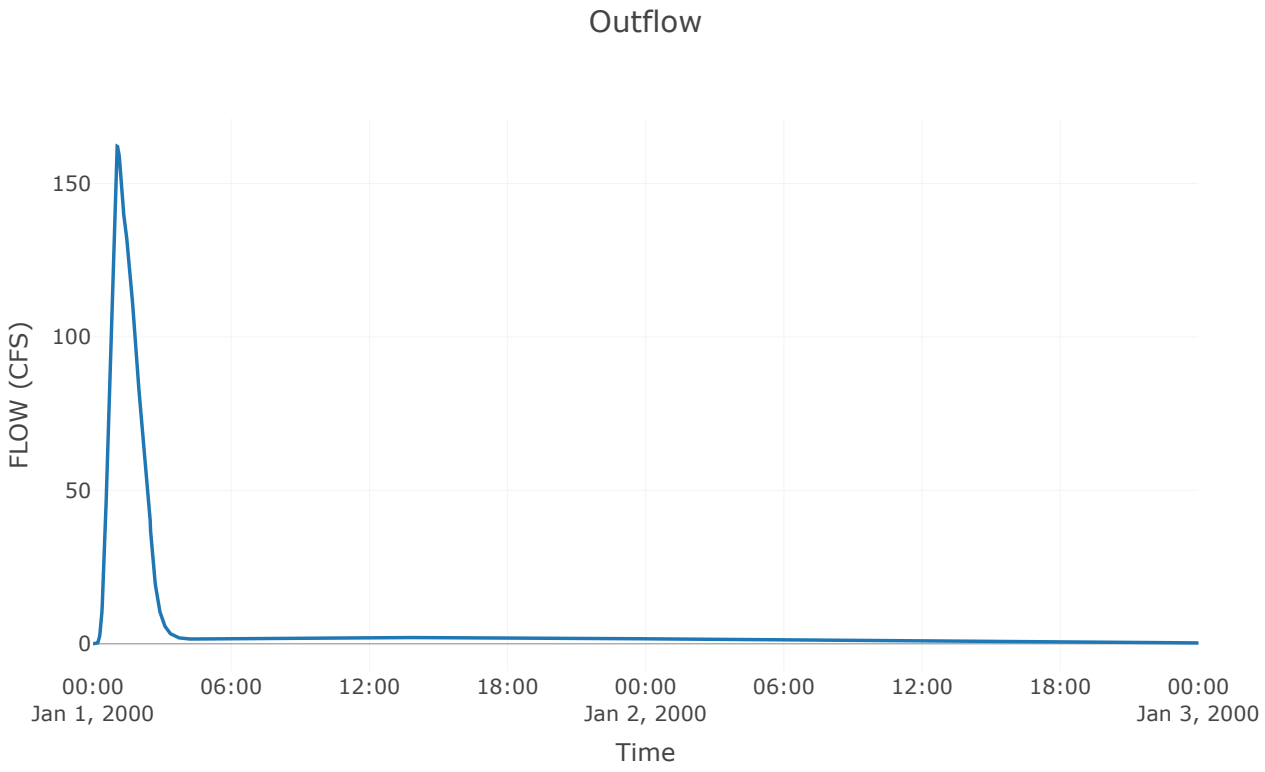


Cumulative Outflow



Pool Elevation



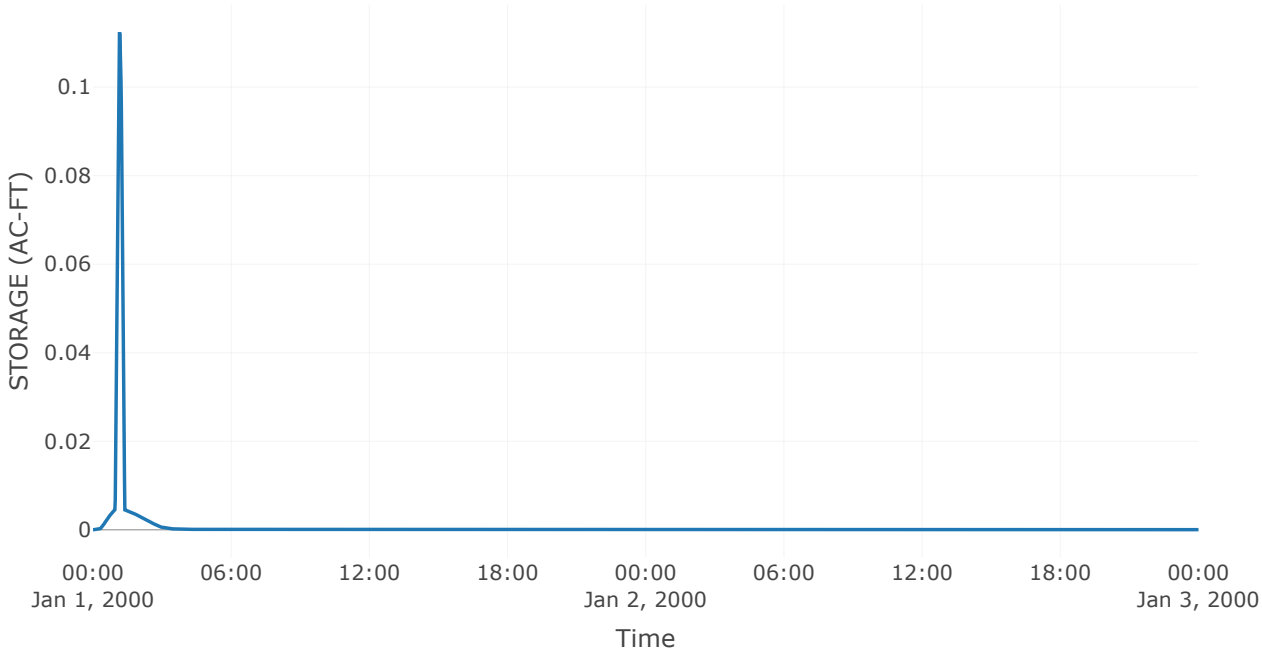

Outflow
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

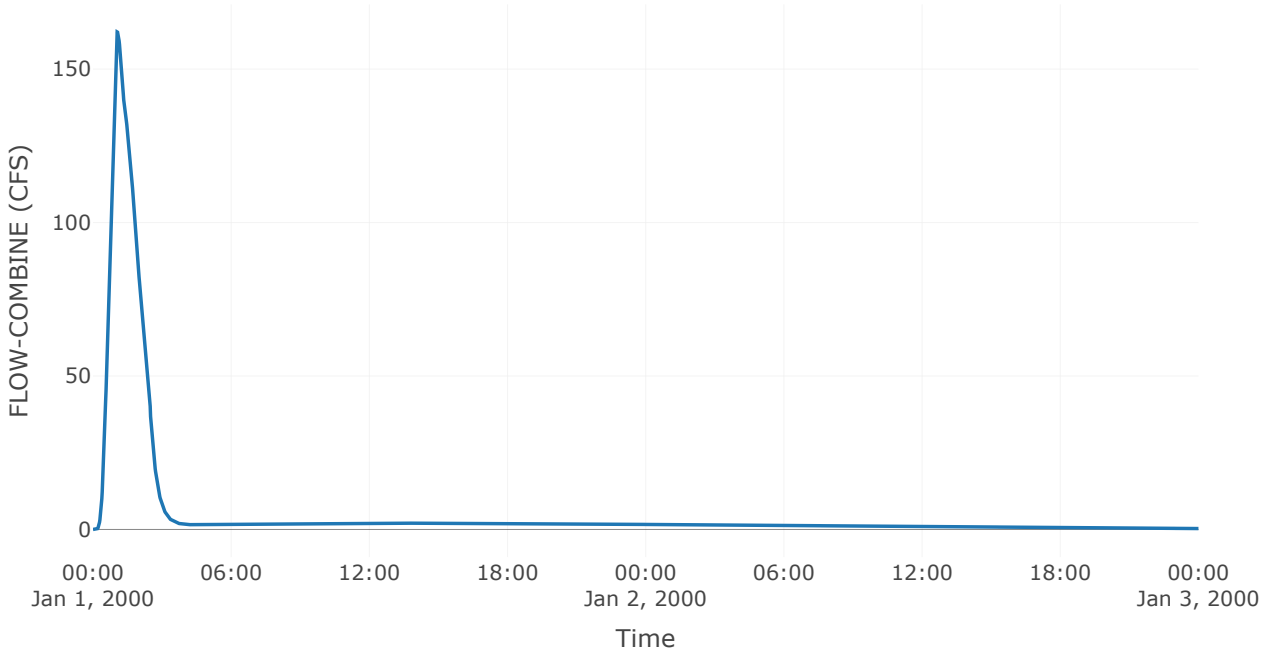
Downstream : Prop Storage West of Wolf Rd

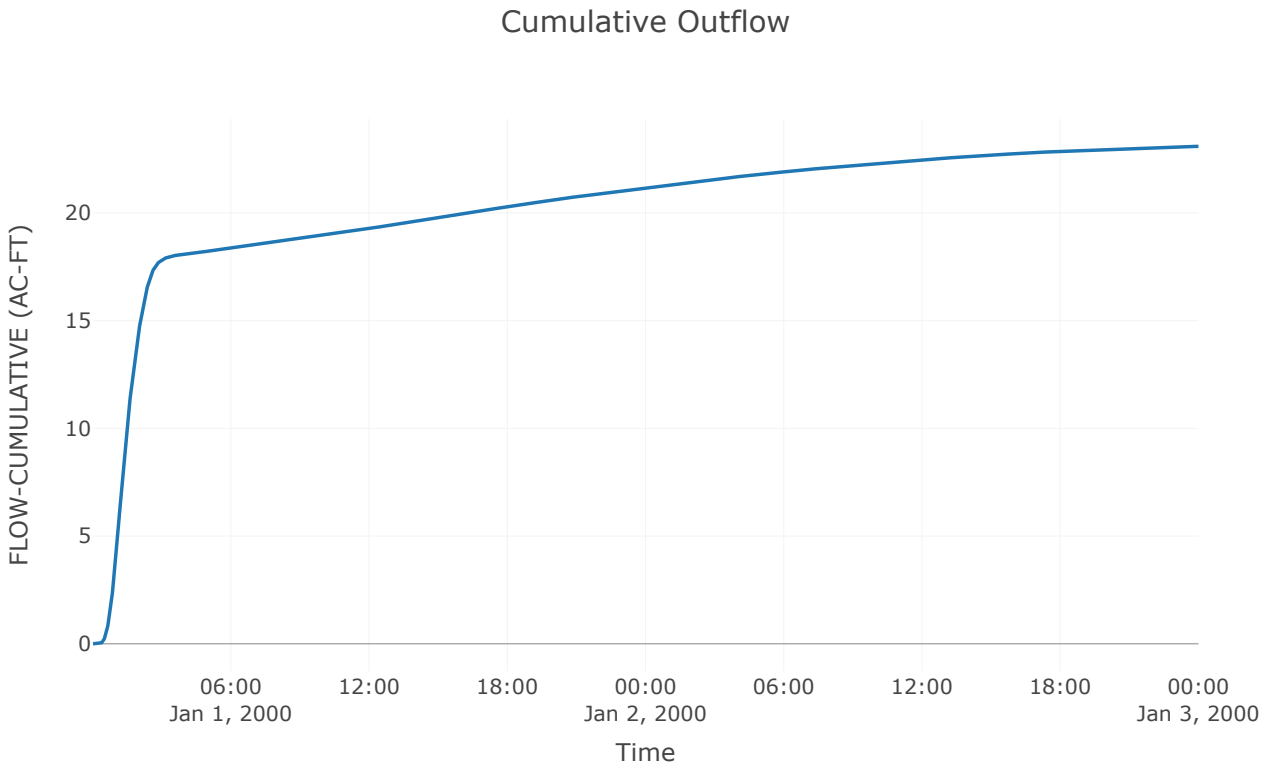
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	157.79
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.61
Peak Inflow (CFS)	162.1
Time of Peak Inflow	01Jan2000, 01:03
Inflow Volume (AC - FT)	23.17
Maximum Storage (AC - FT)	0.11
Peak Elevation (FT)	662.25
Discharge Volume (AC - FT)	23.09

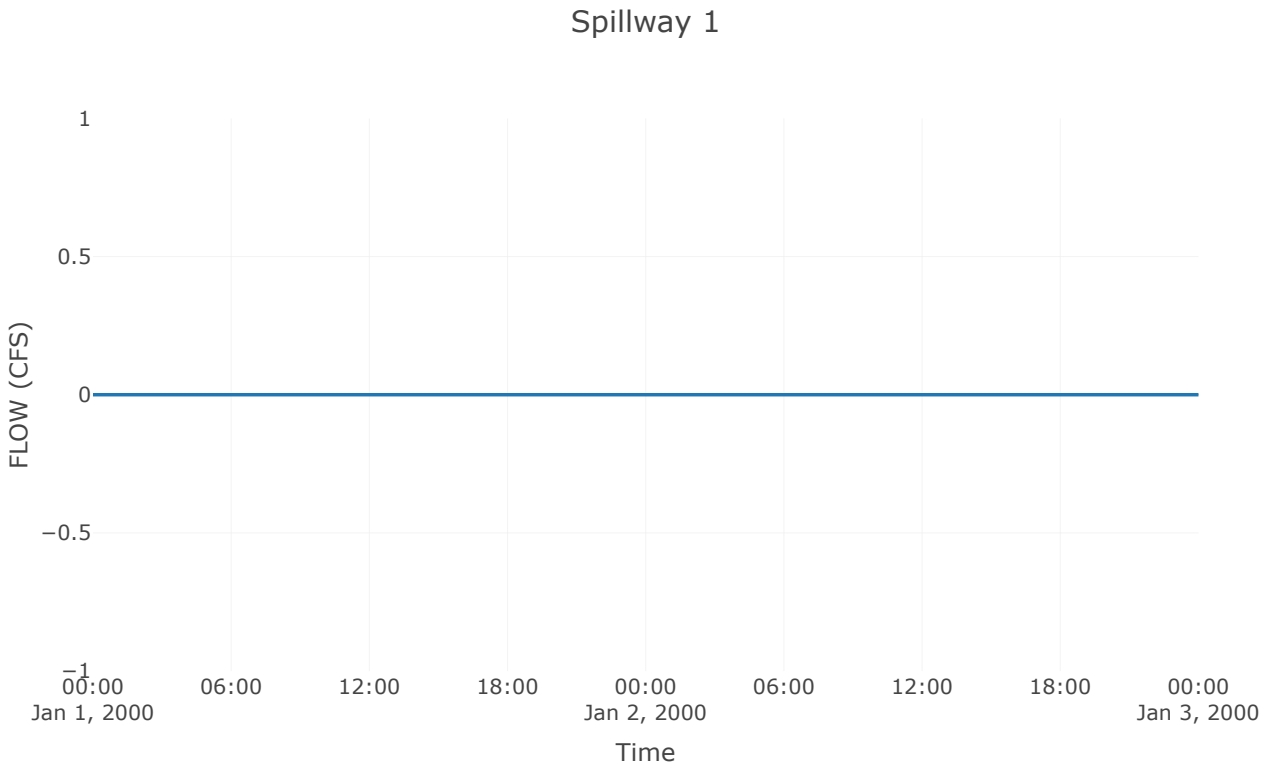
Storage



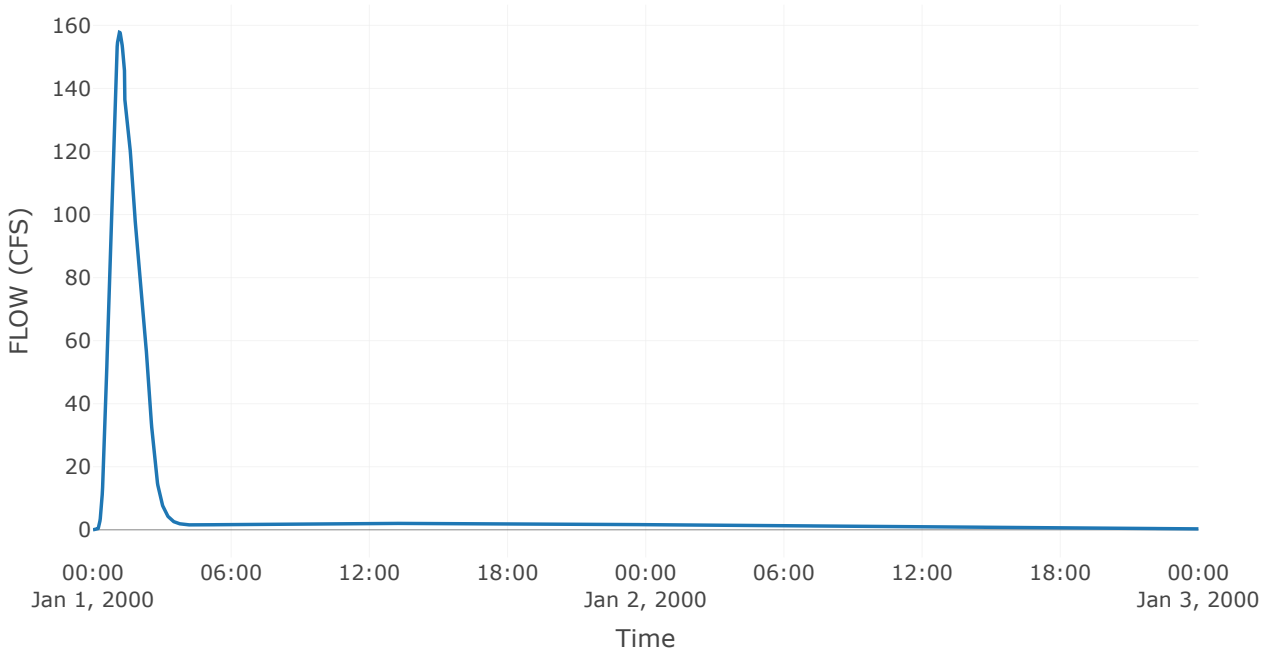
Combined Inflow



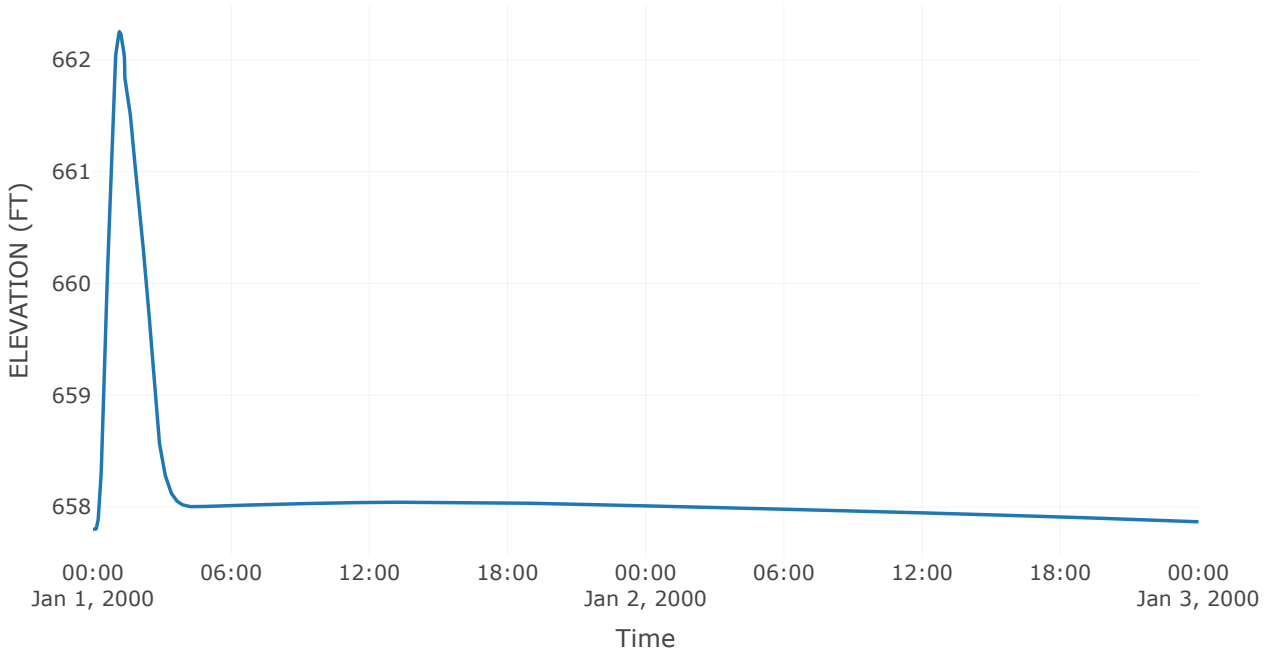

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

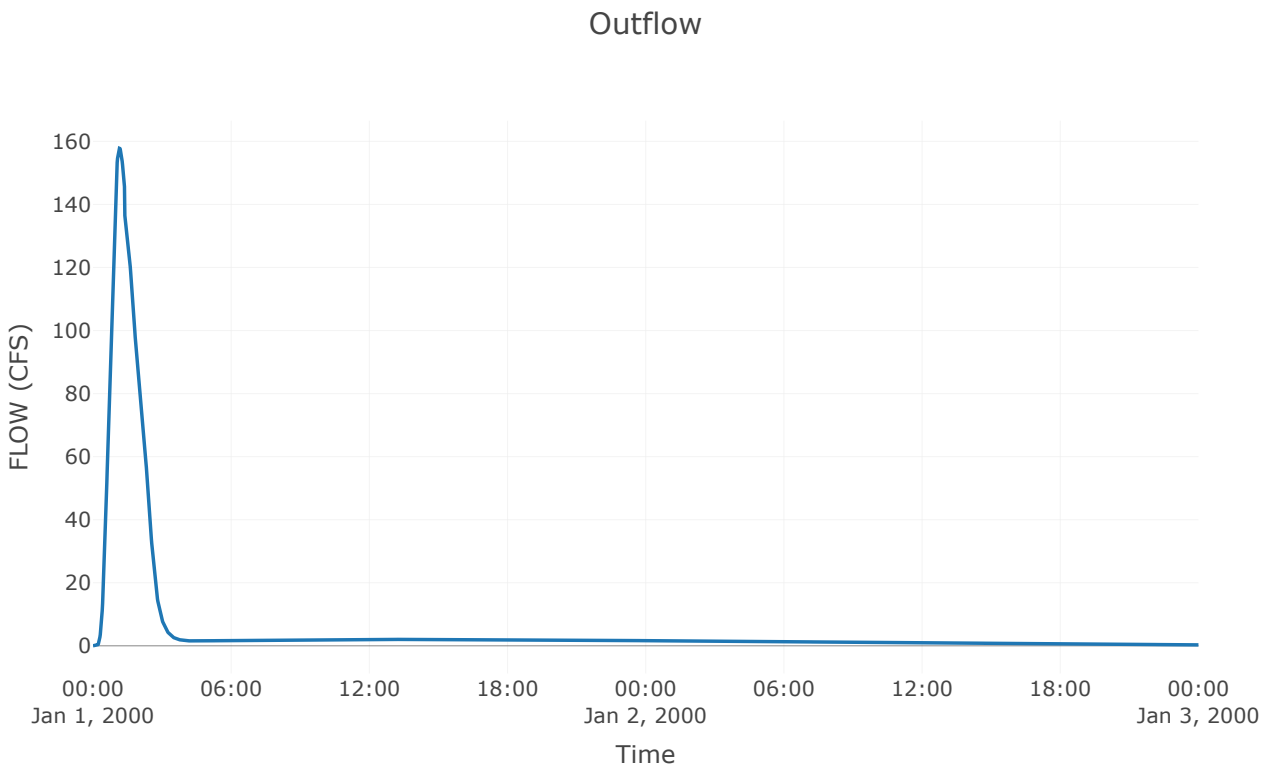

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



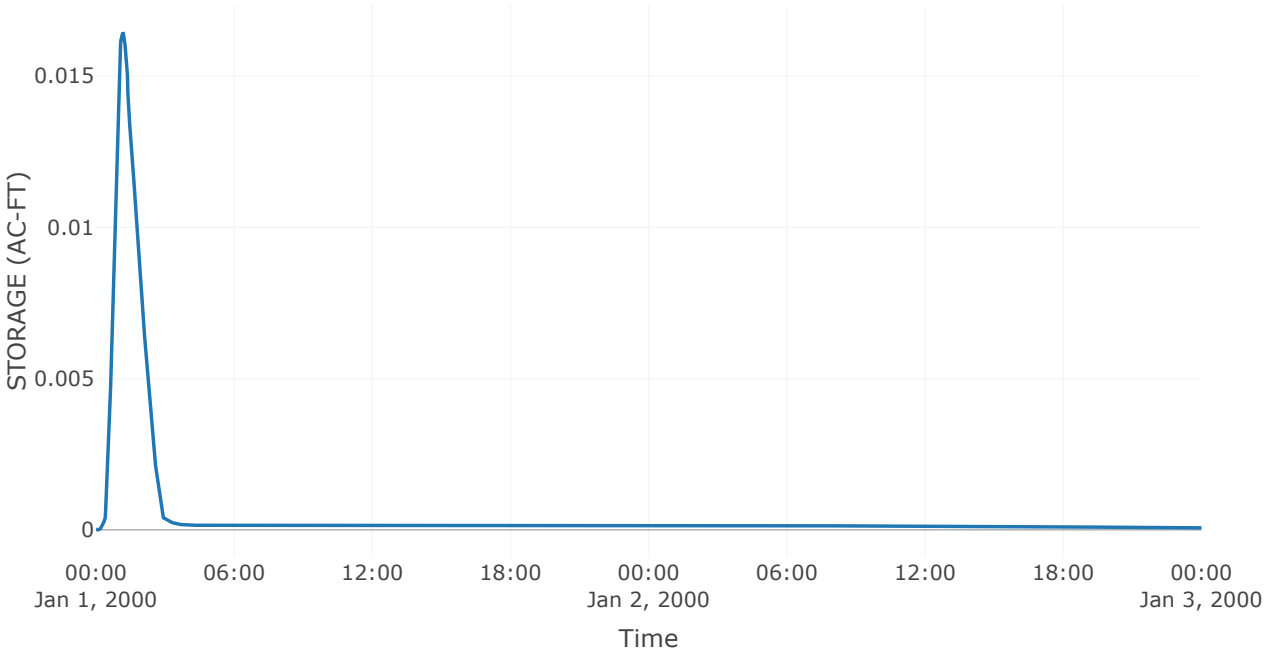

Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

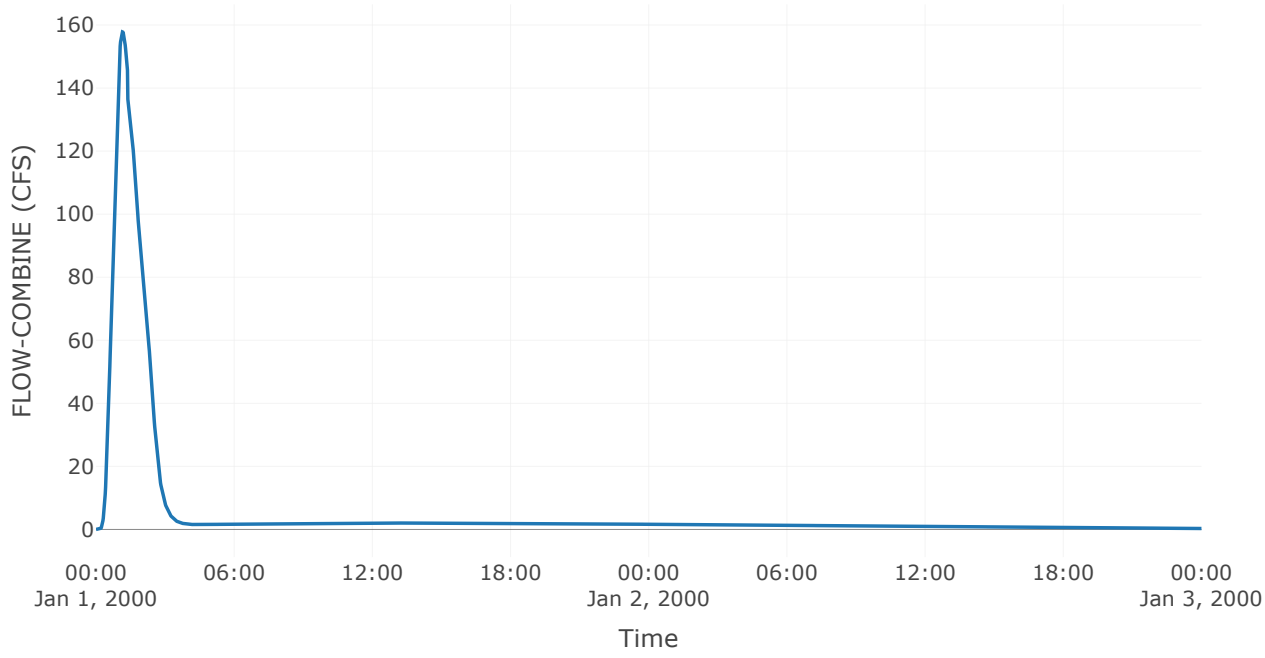
Downstream : Proposed Basin C

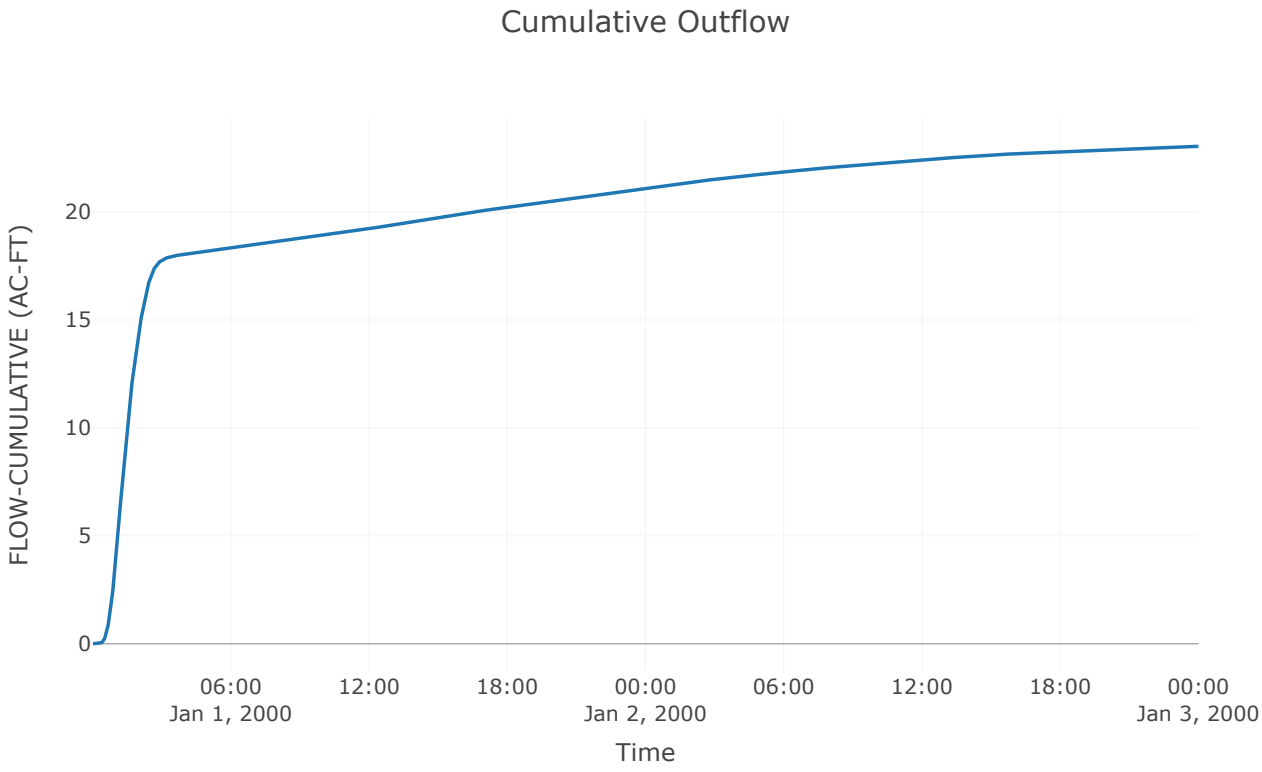
Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	157.76
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.6
Peak Inflow (CFS)	157.79
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.09
Maximum Storage (AC - FT)	0.02
Peak Elevation (FT)	657.98
Discharge Volume (AC - FT)	23.04

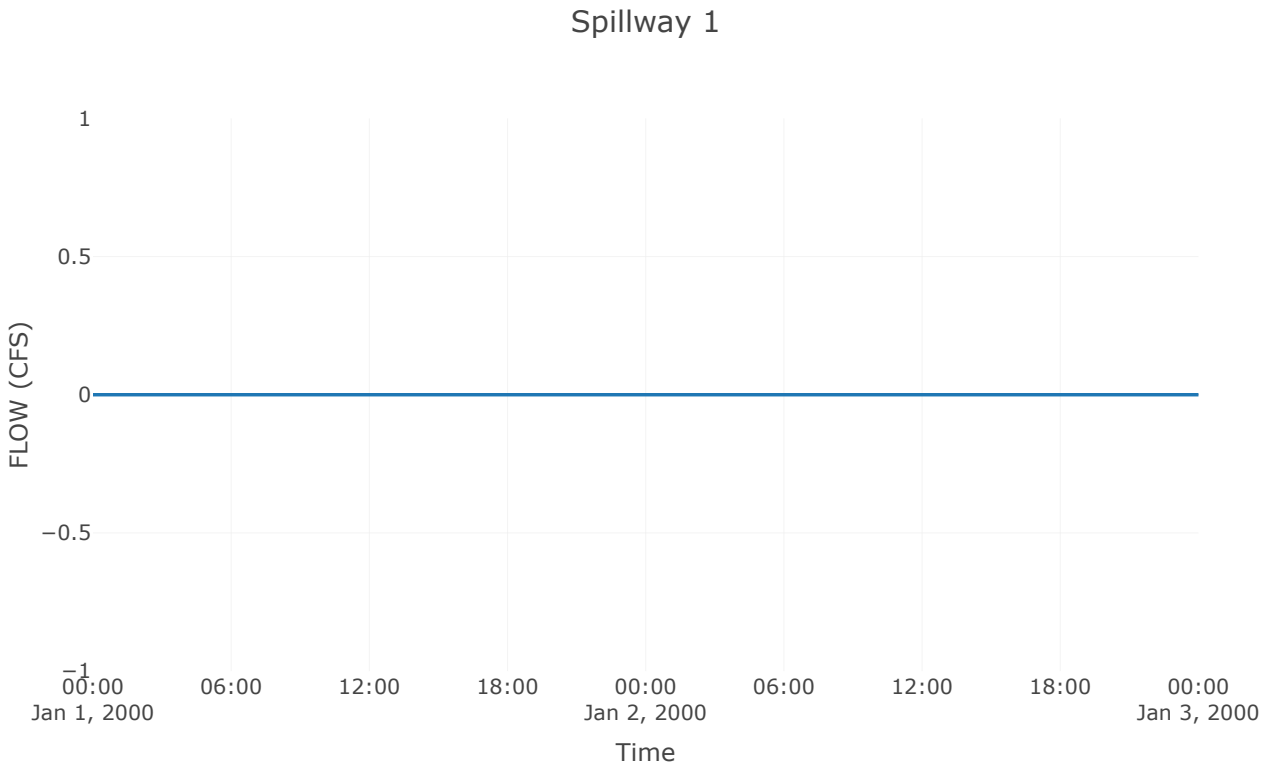
Storage



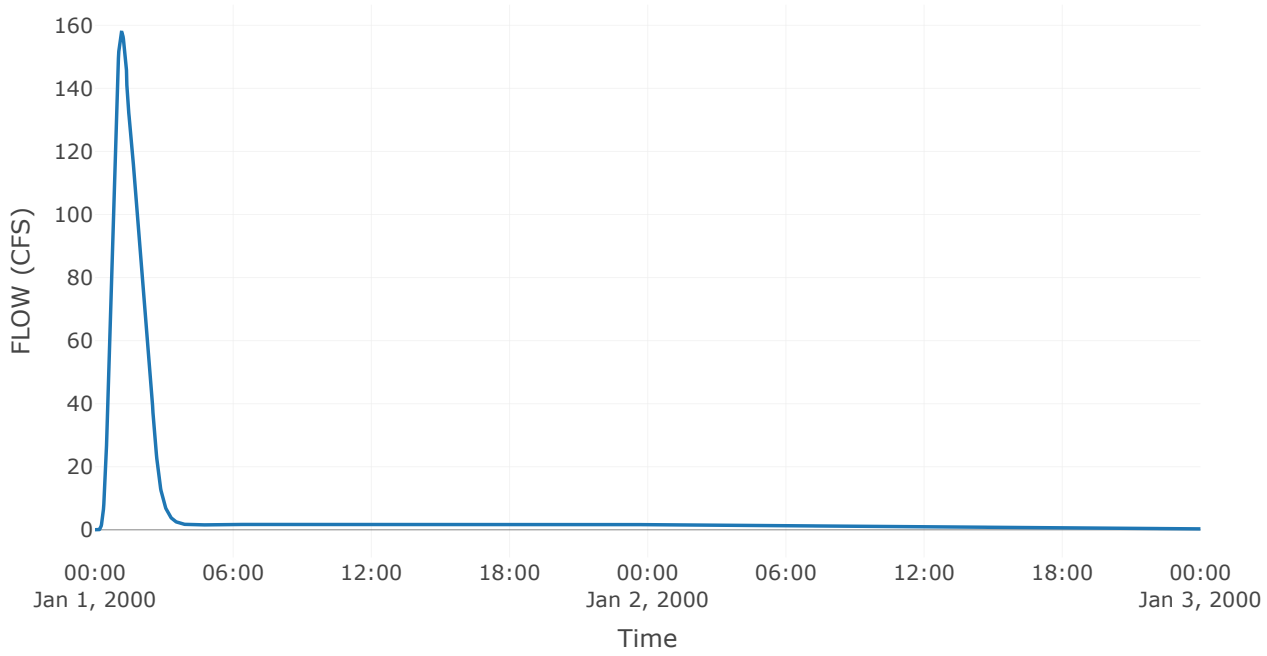
Combined Inflow



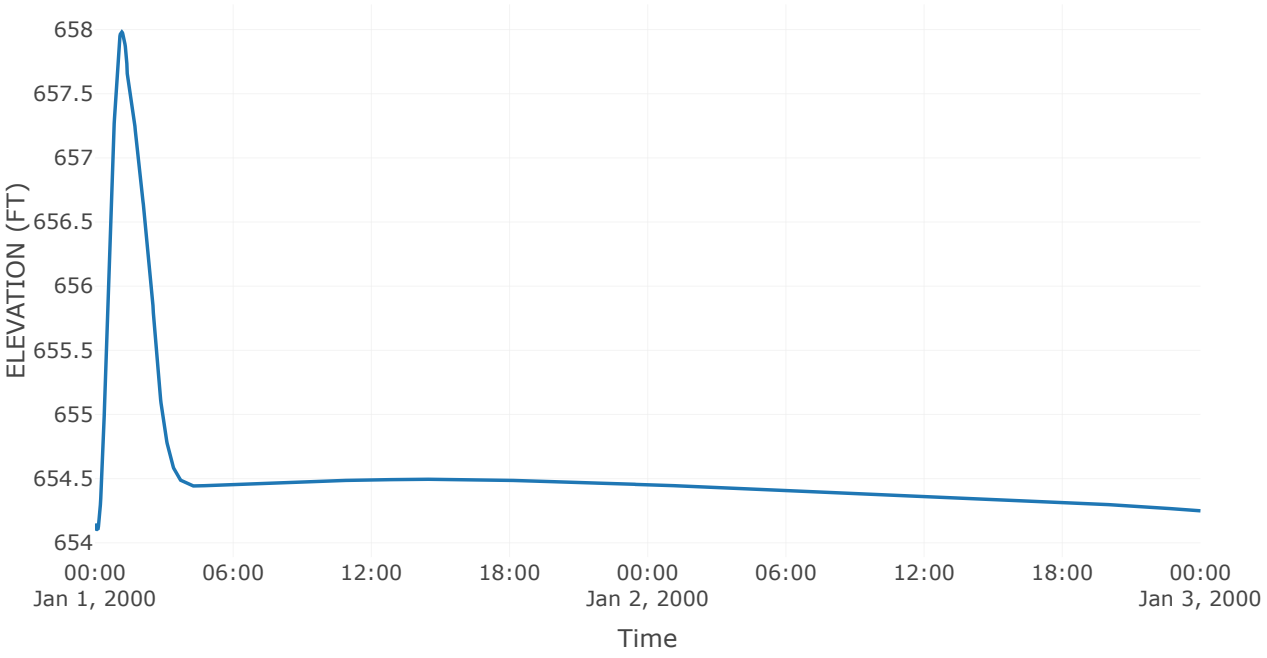

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

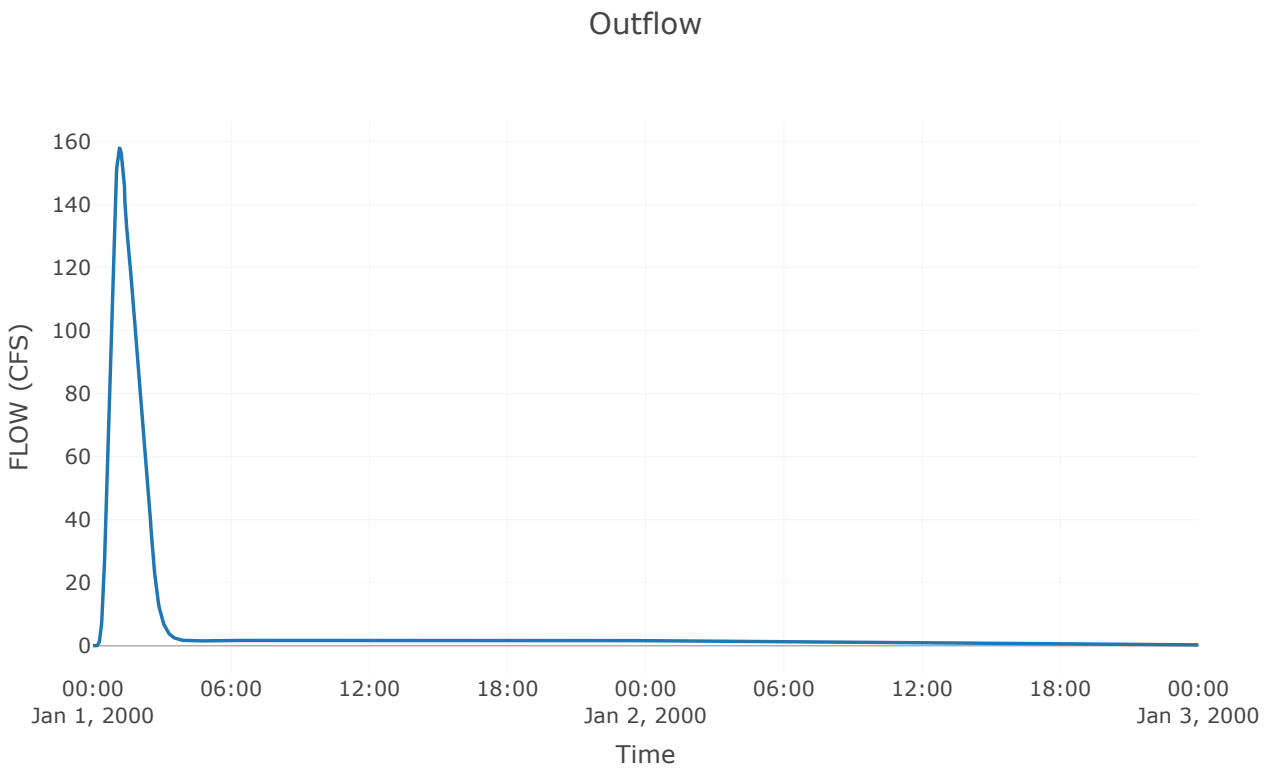

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
160
140
120
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

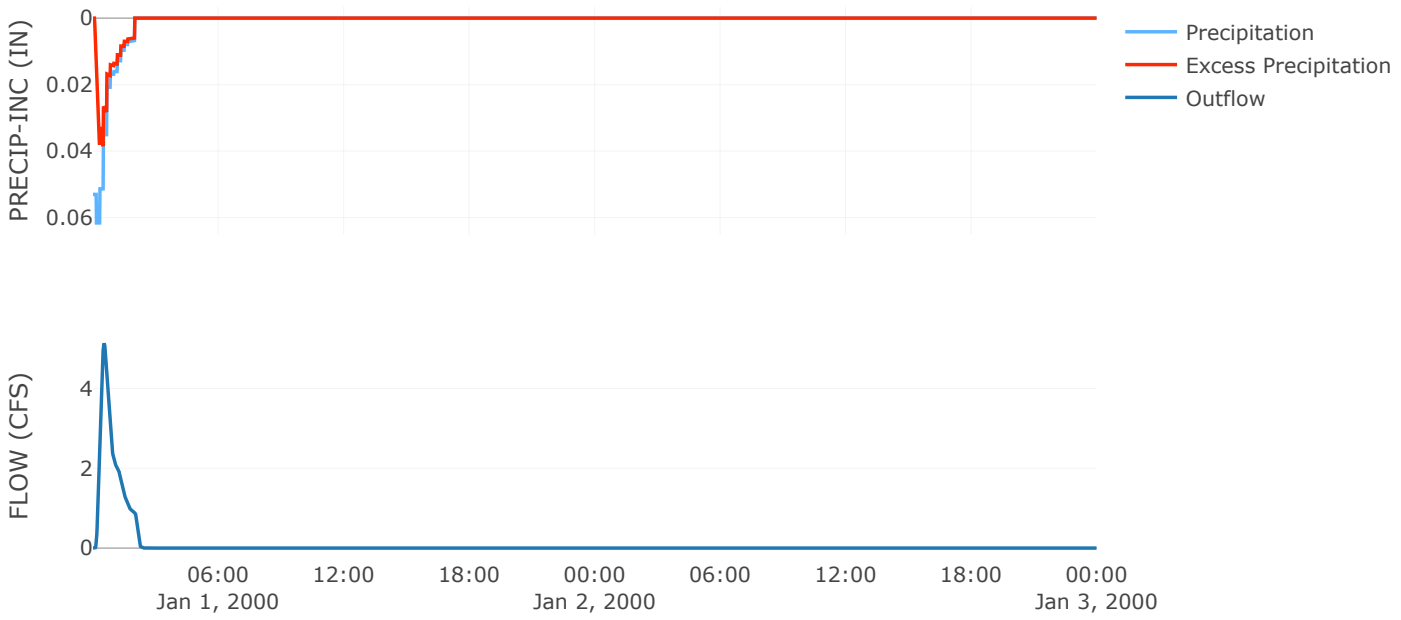
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

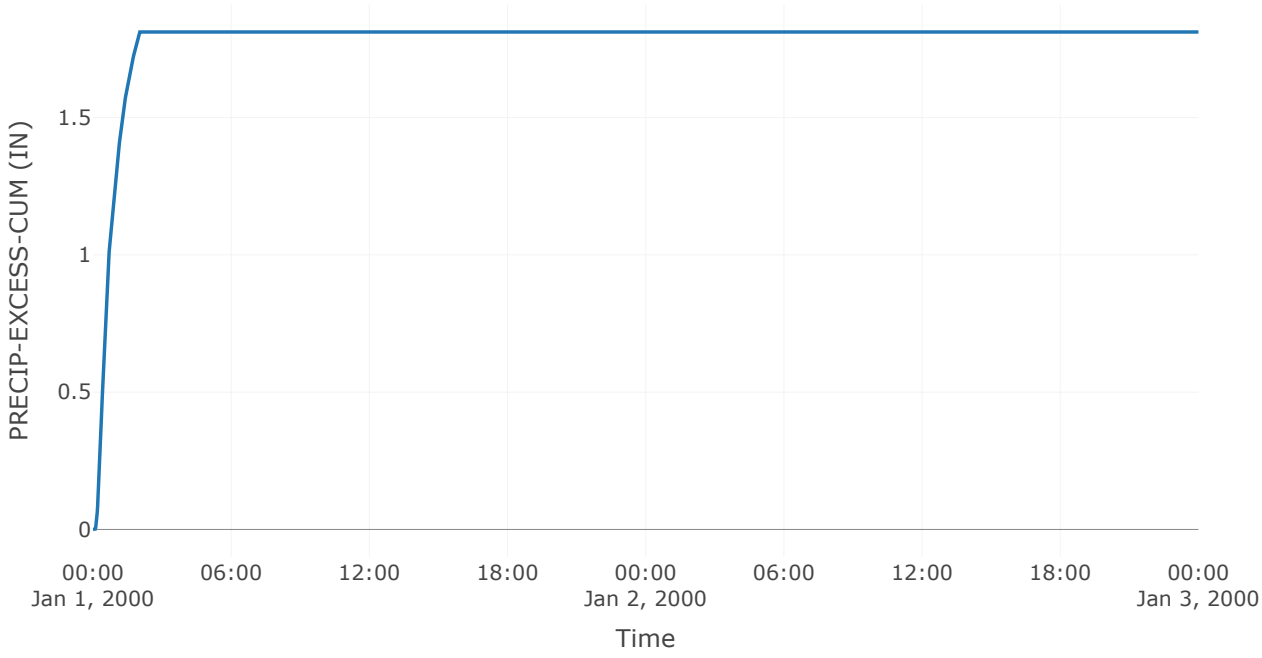
Transform: Scs	
Lag	6
Unitgraph Type	Standard

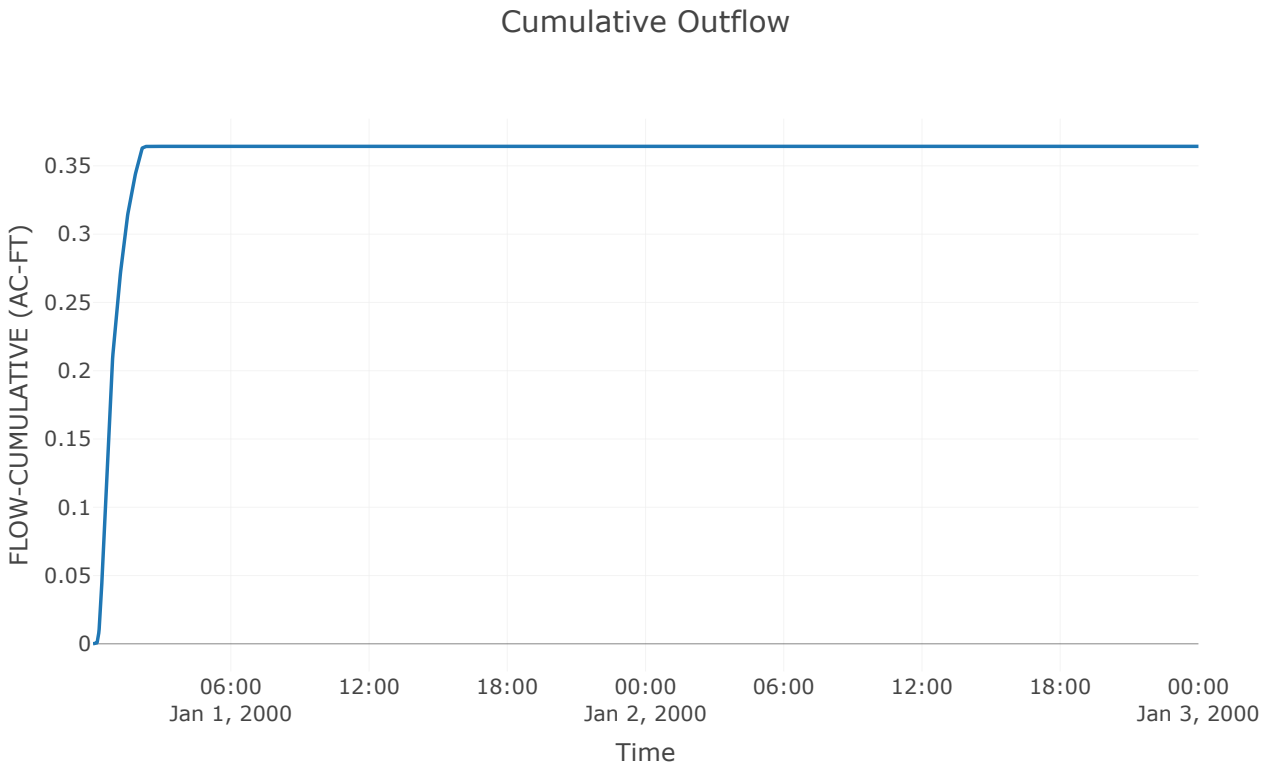
Results: Prop On-Site	
Peak Discharge (CFS)	5.14
Time of Peak Discharge	01Jan2000, 00:32
Volume (IN)	1.81
Precipitation Volume (AC - FT)	0.6
Loss Volume (AC - FT)	0.24
Excess Volume (AC - FT)	0.36
Direct Runoff Volume (AC - FT)	0.36
Baseflow Volume (AC - FT)	0

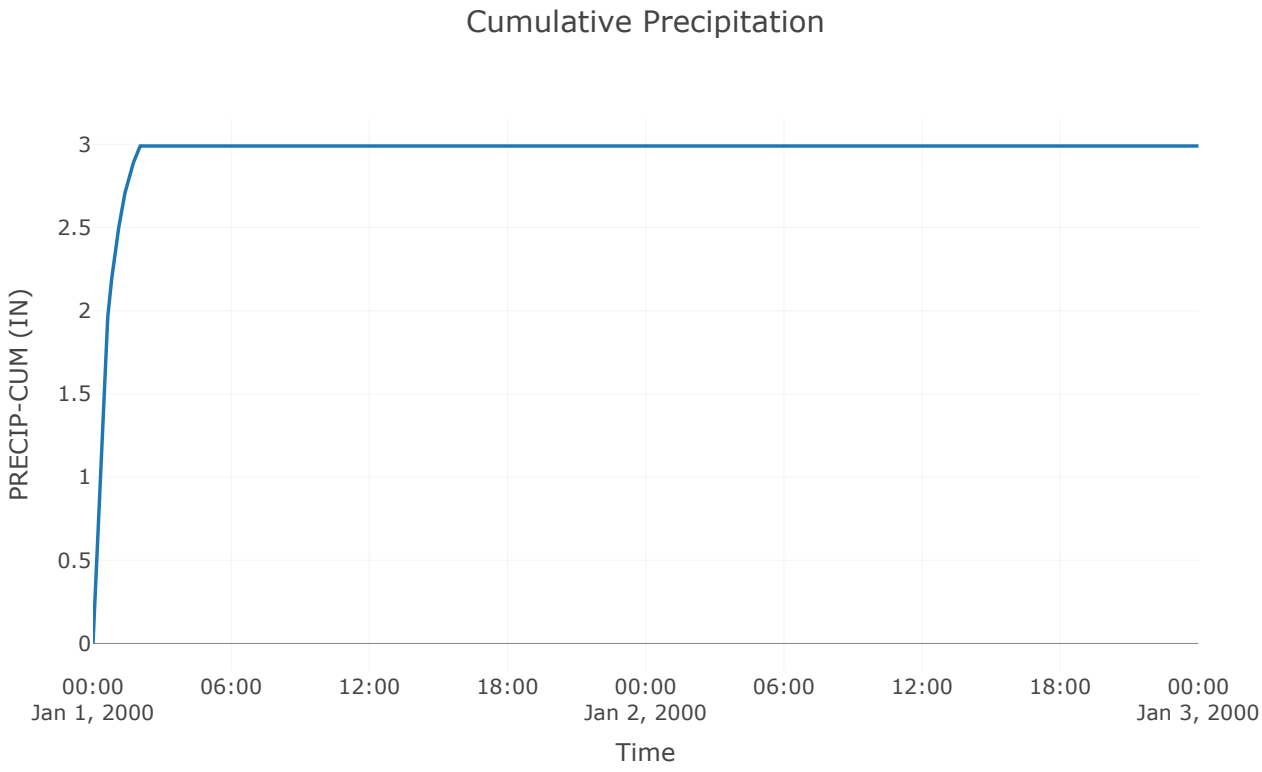
Precipitation and Outflow

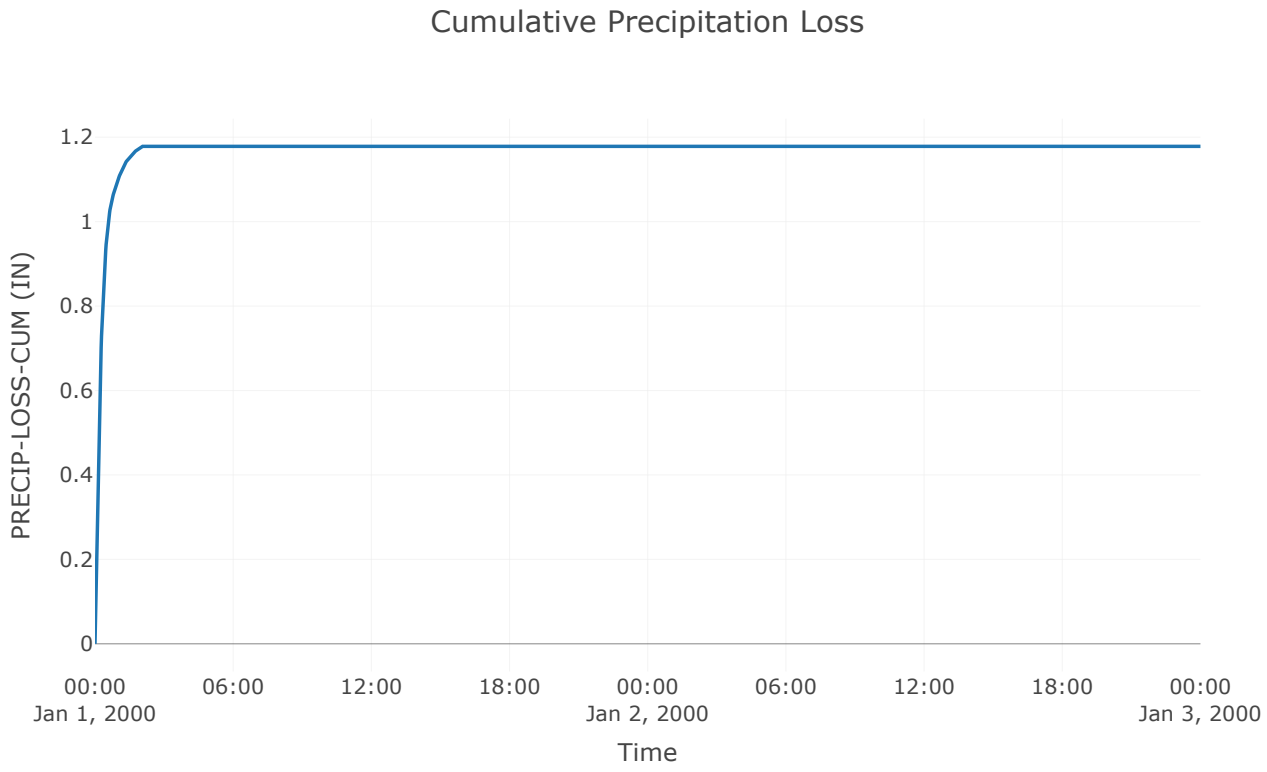


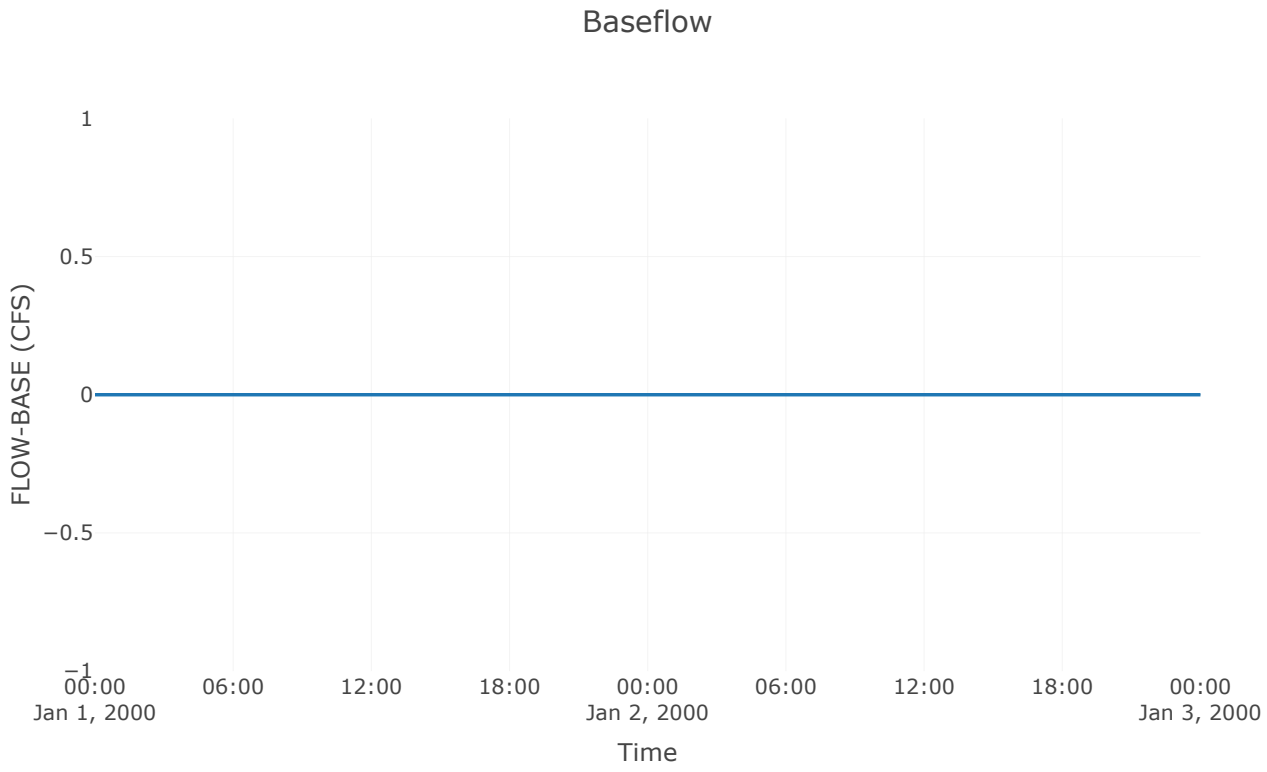
Cumulative Excess Precipitation



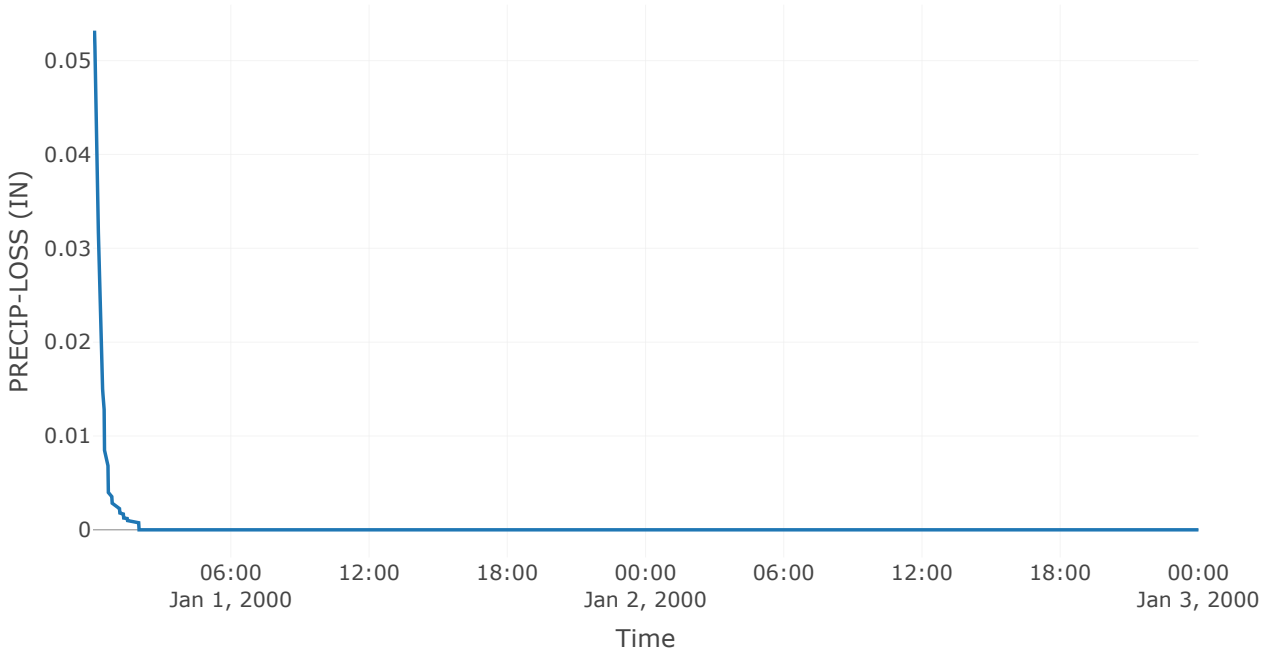

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Precipitation
PRECIP-CUM (IN)
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

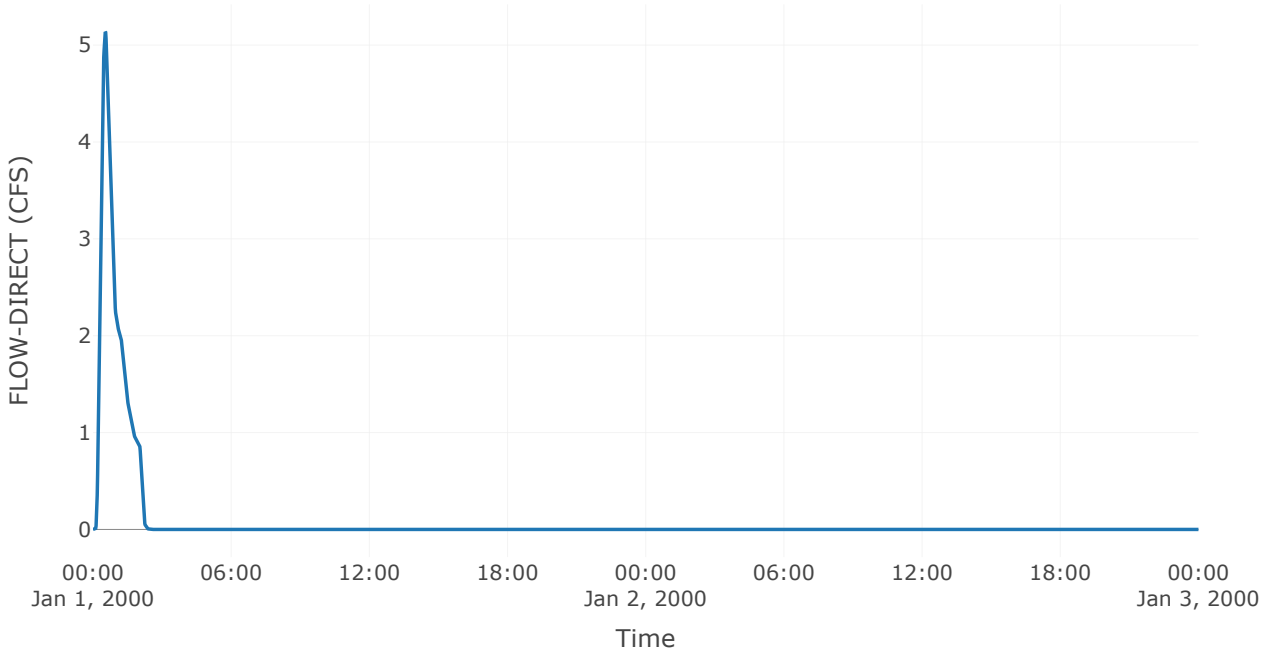

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

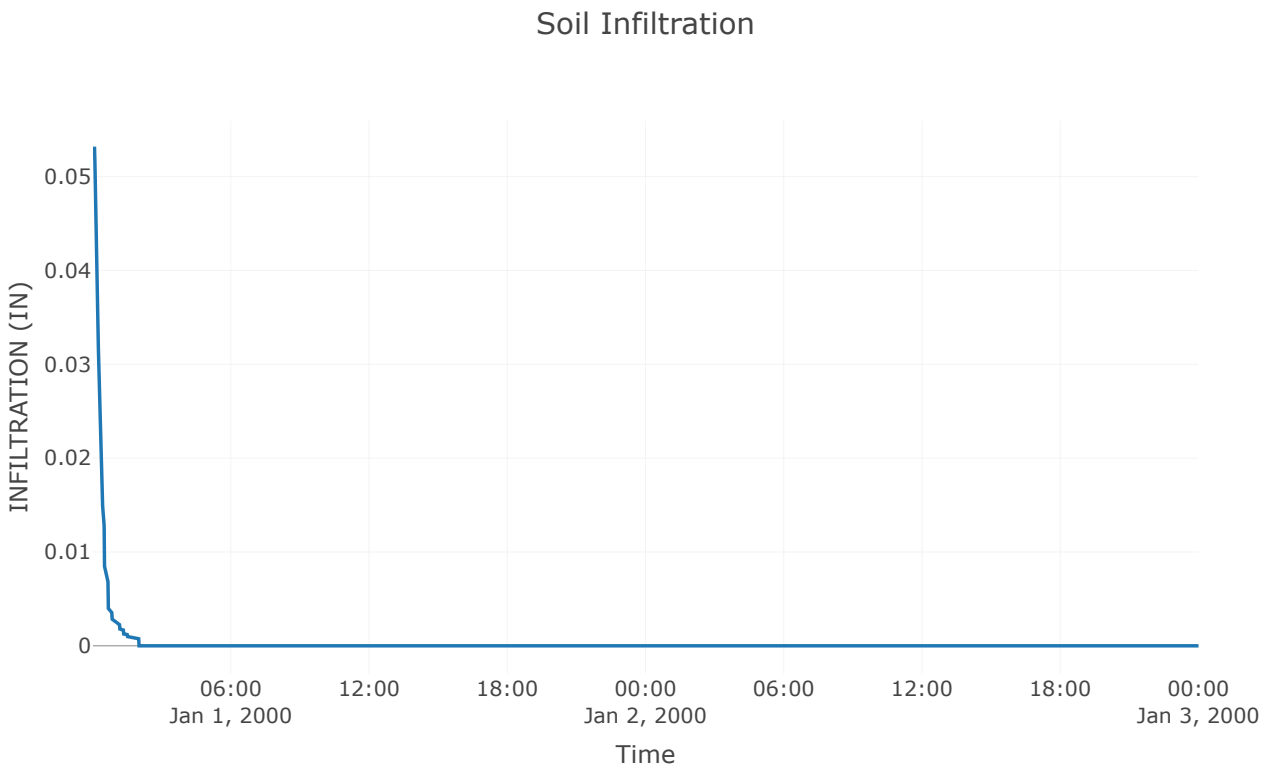

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff



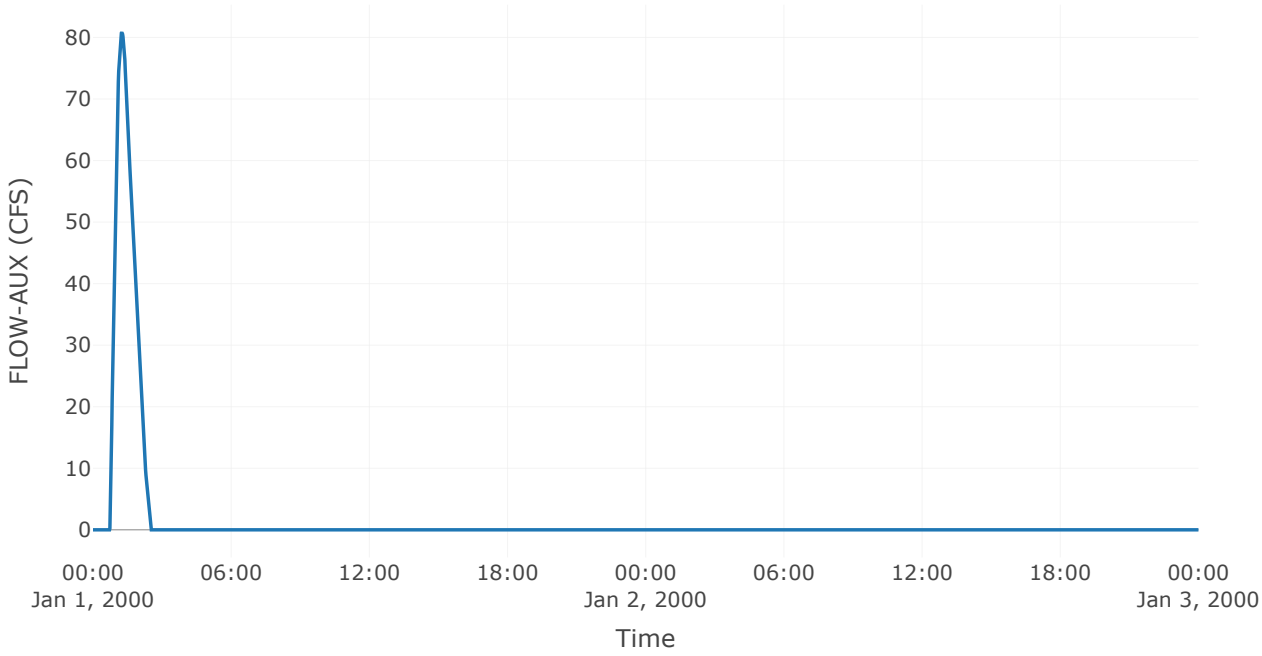

Soil Infiltration
INFILTRATION (IN)
0.05
0.04
0.03
0.02
0.01
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

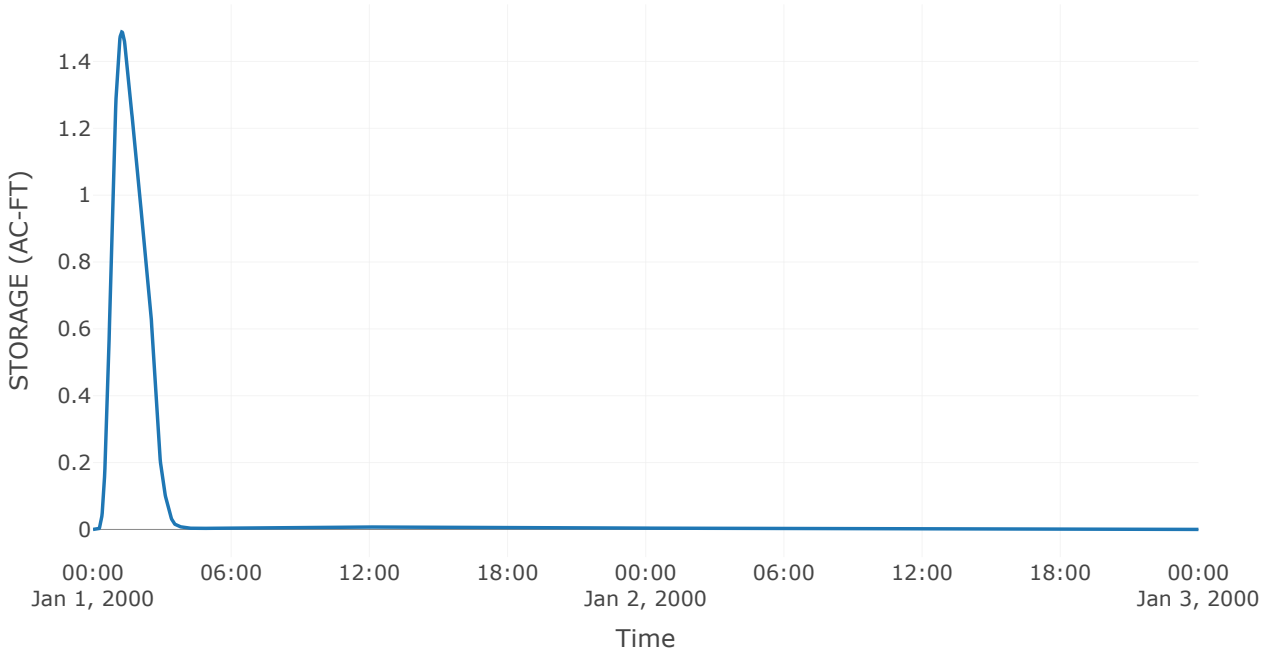
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	75.77
Time of Peak Discharge	01Jan2000, 01:15
Volume (IN)	1.18
Peak Inflow (CFS)	159.8
Time of Peak Inflow	01Jan2000, 01:09
Inflow Volume (AC - FT)	23.4
Maximum Storage (AC - FT)	1.49
Peak Elevation (FT)	652.47
Discharge Volume (AC - FT)	17.24

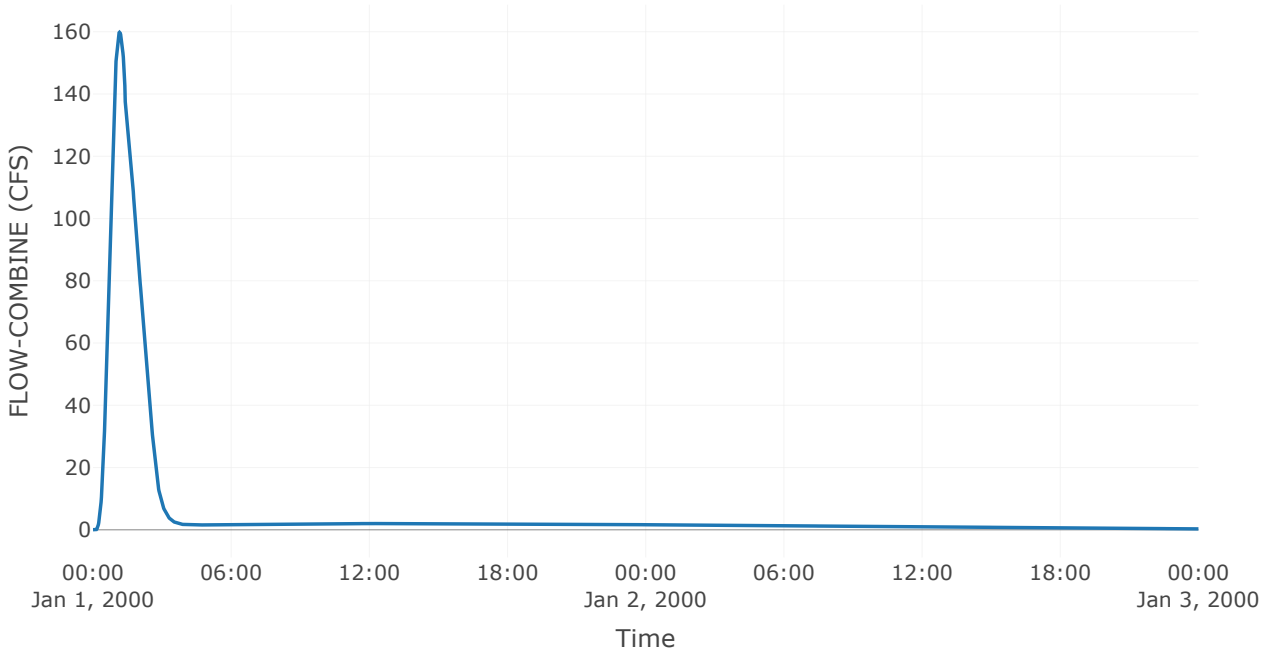
Auxiliary Outflow



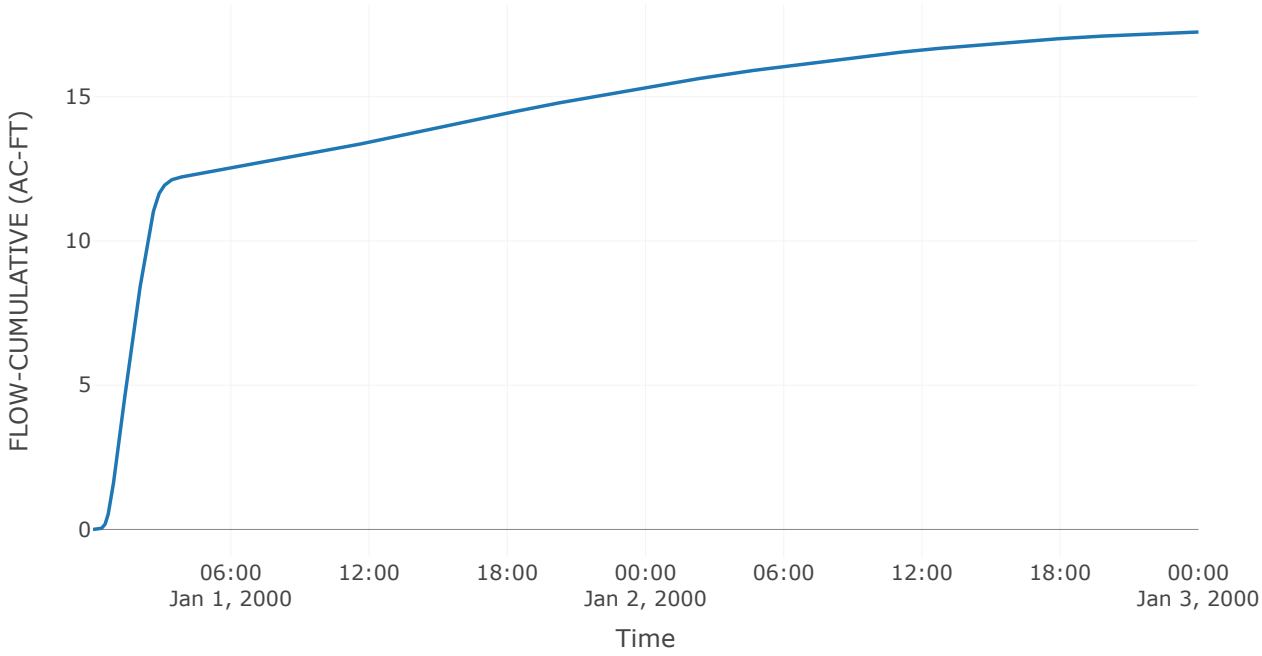
Storage

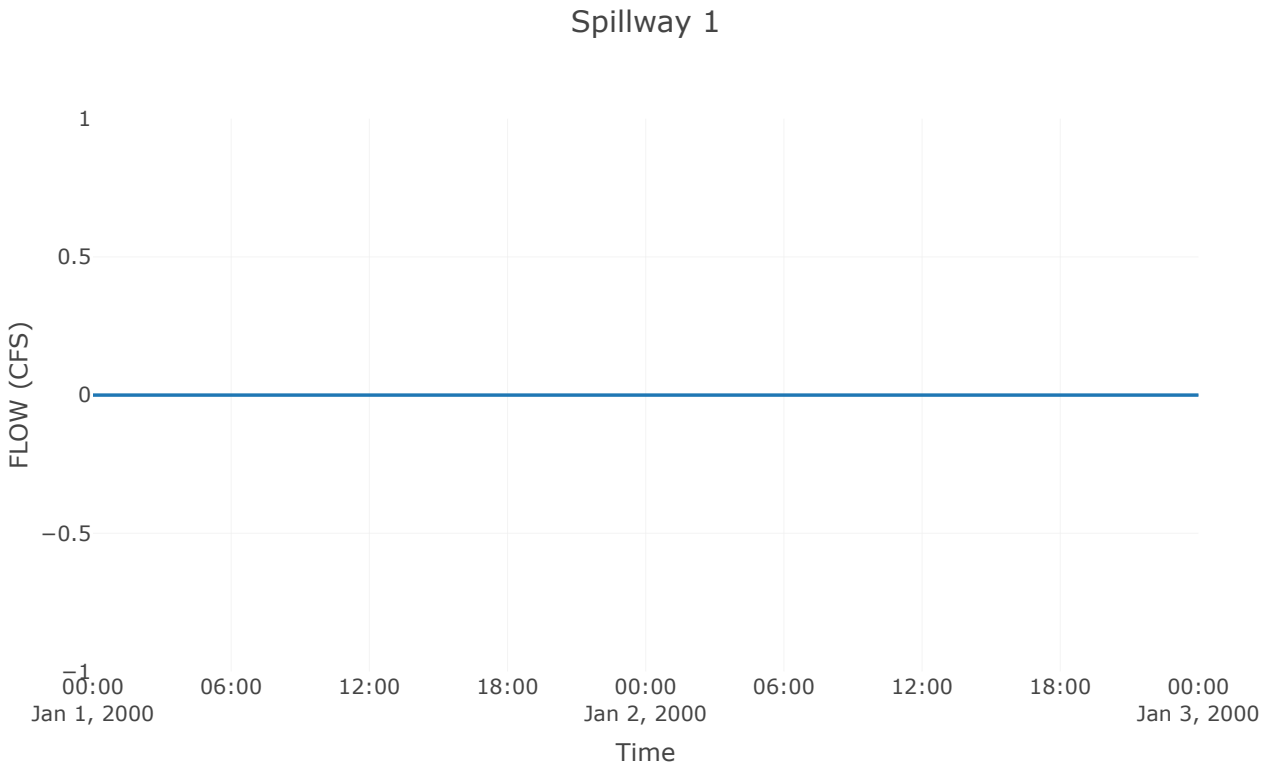


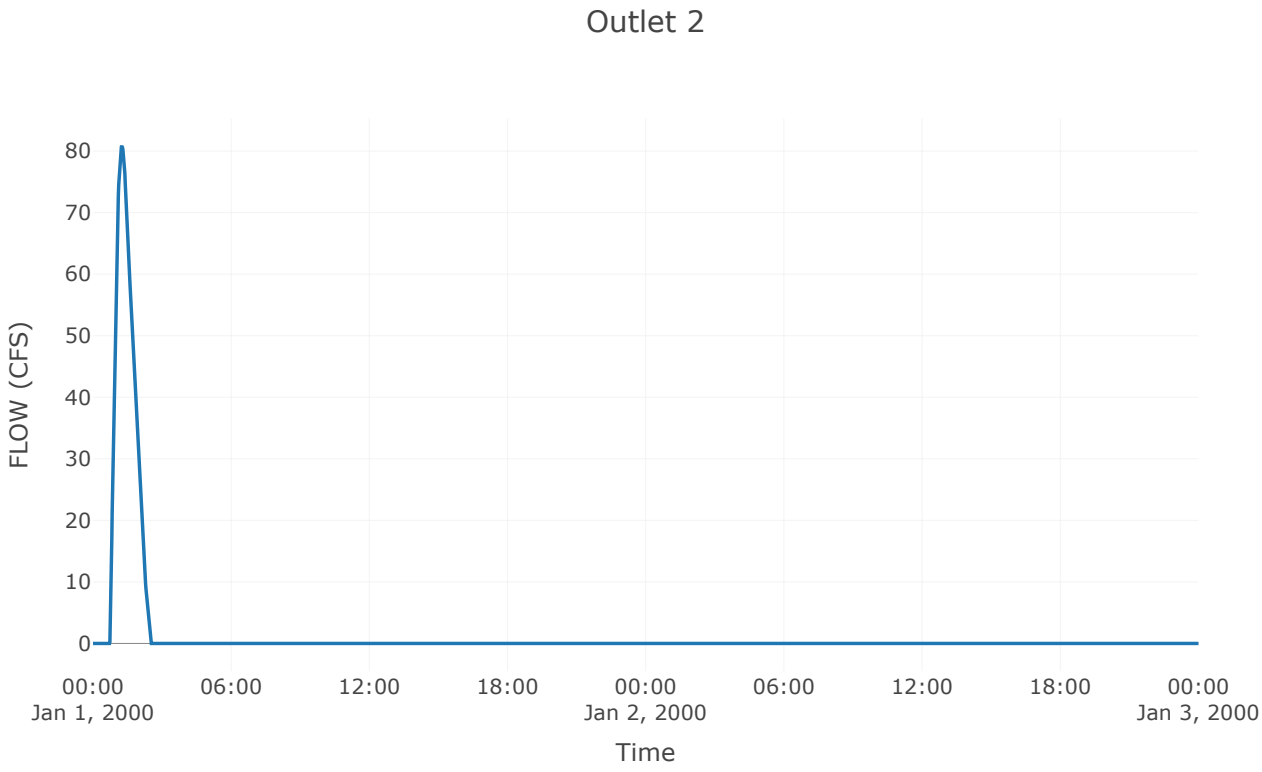
Combined Inflow



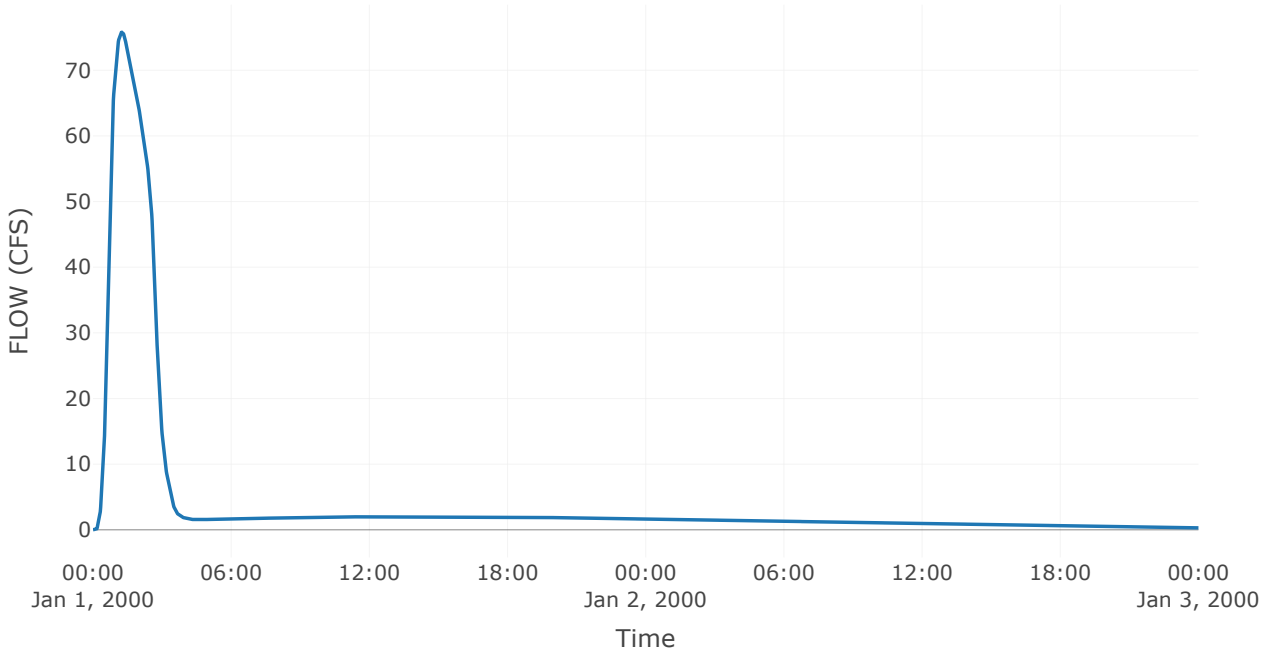
Cumulative Outflow



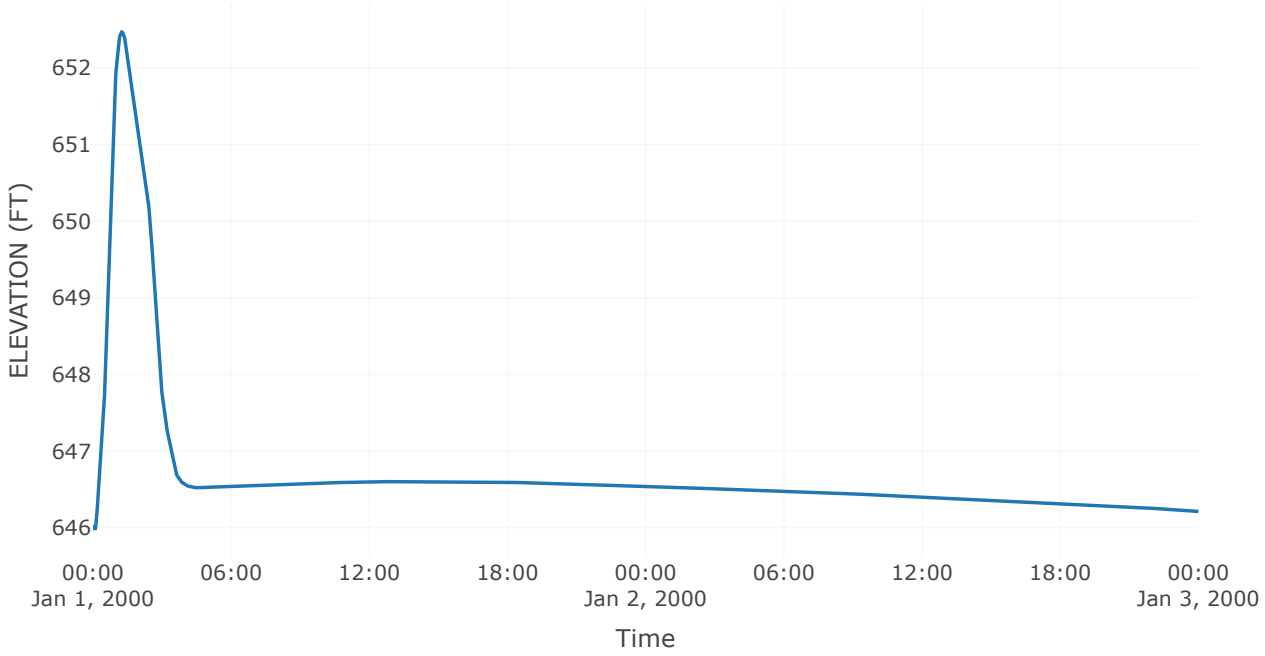

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

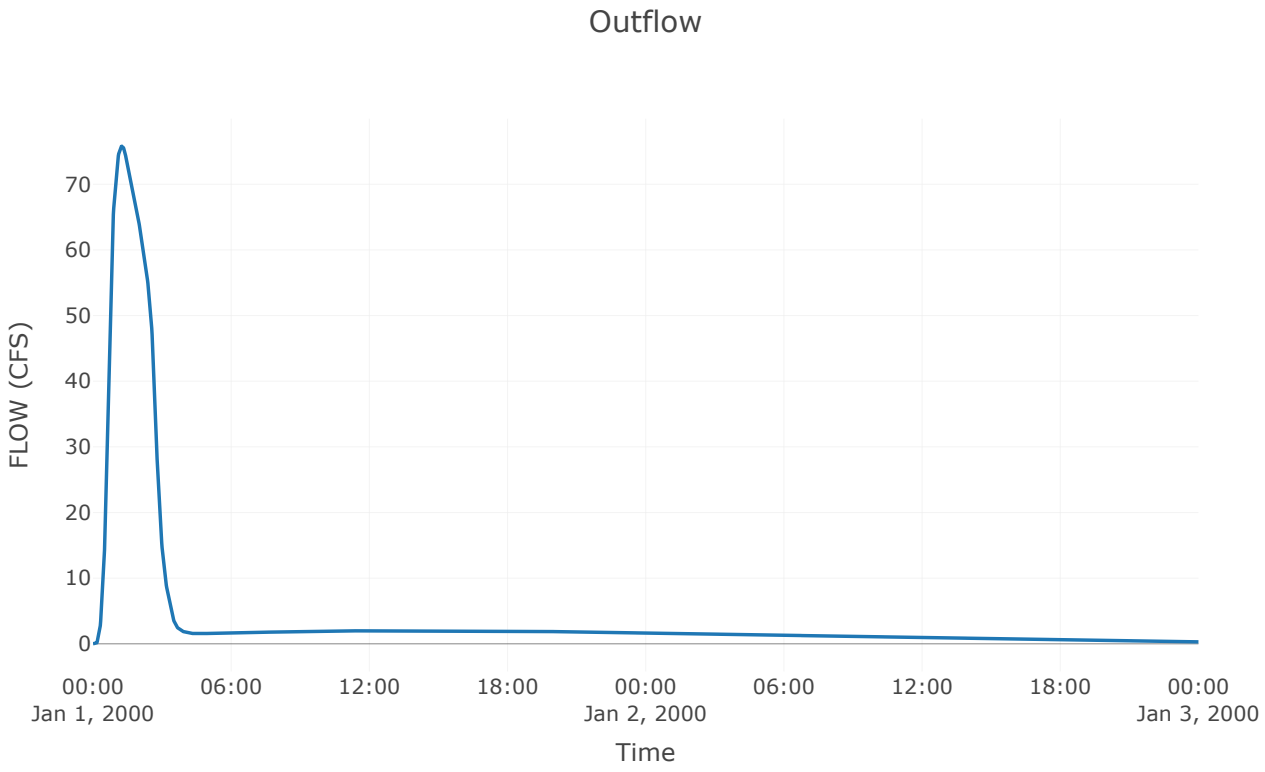

Outlet 2
80
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

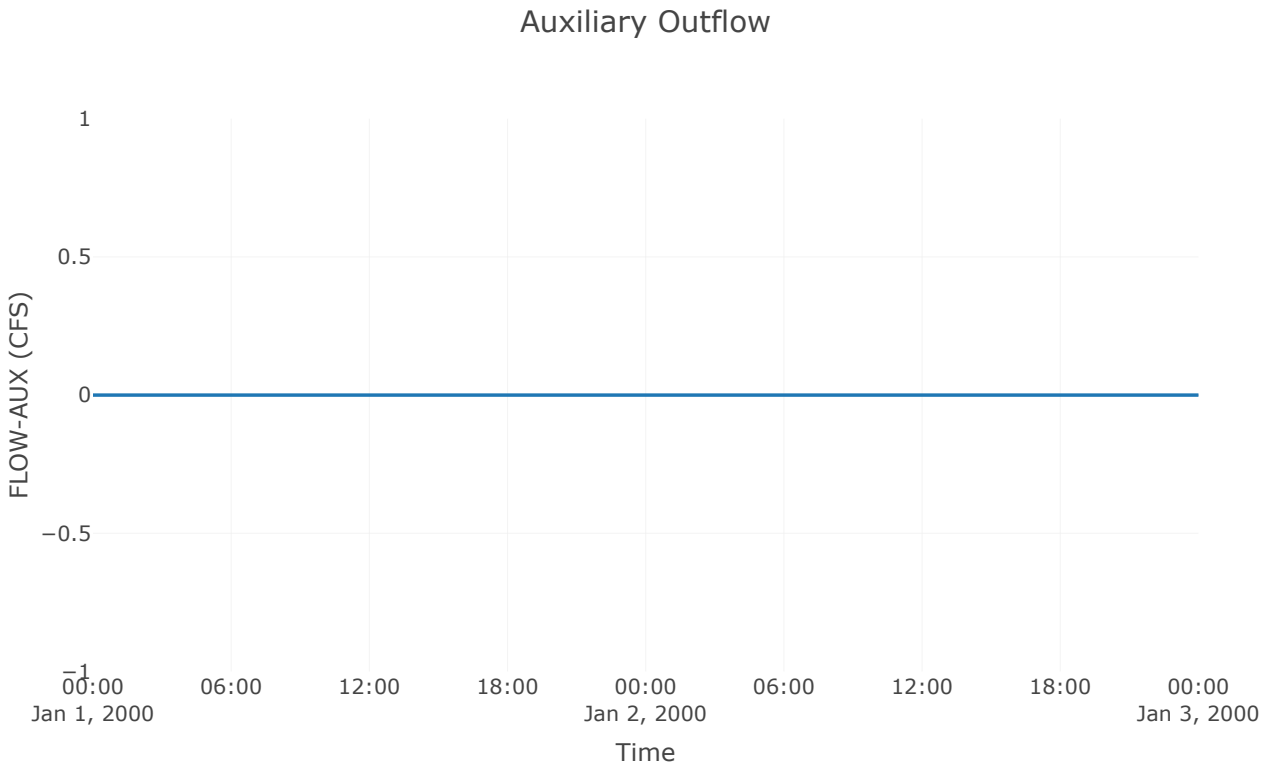


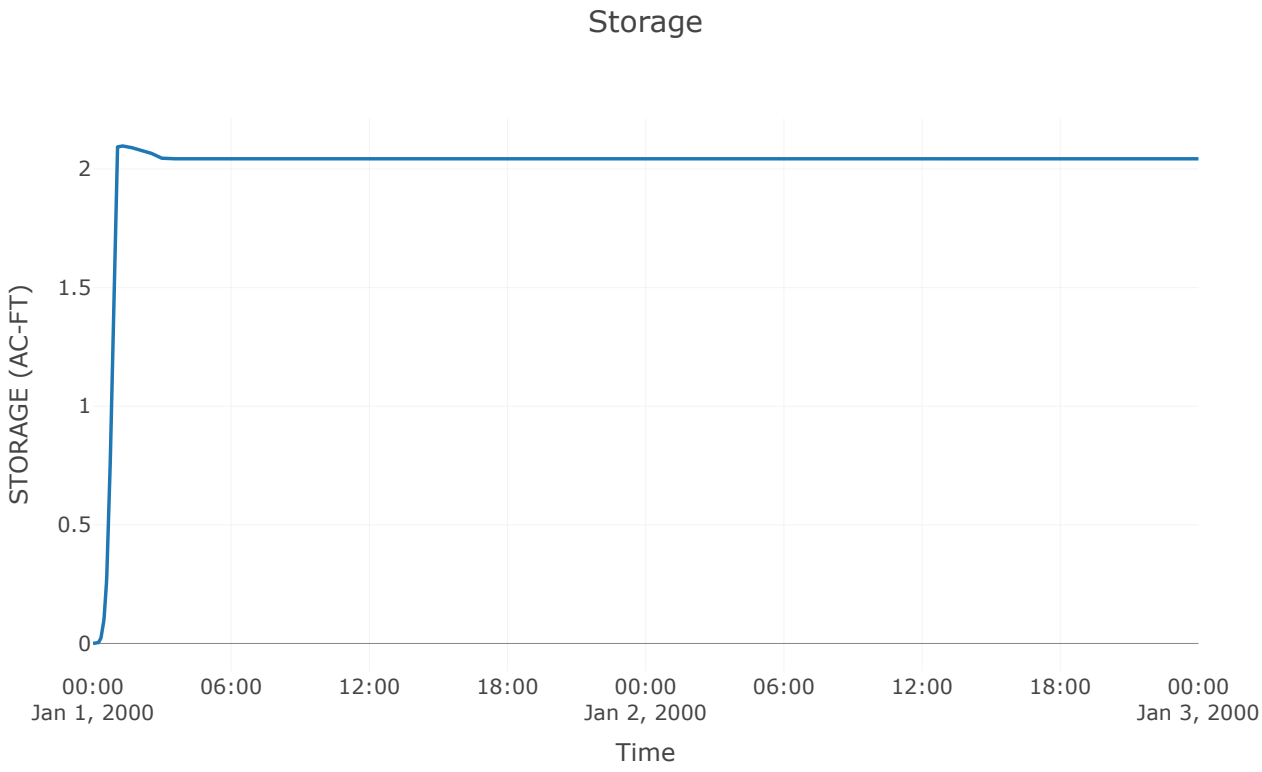

Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

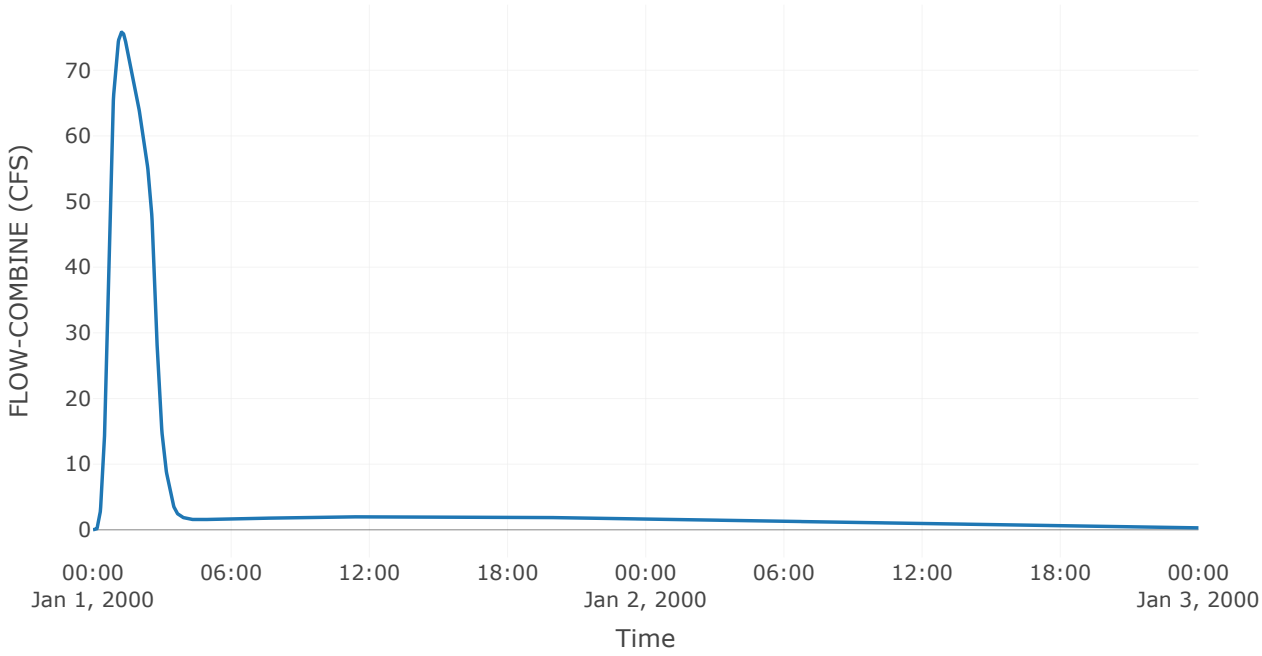
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03
Peak Inflow (CFS)	75.77
Time of Peak Inflow	01Jan2000, 01:15
Inflow Volume (AC - FT)	17.24
Maximum Storage (AC - FT)	2.1
Peak Elevation (FT)	653.4
Discharge Volume (AC - FT)	15.03

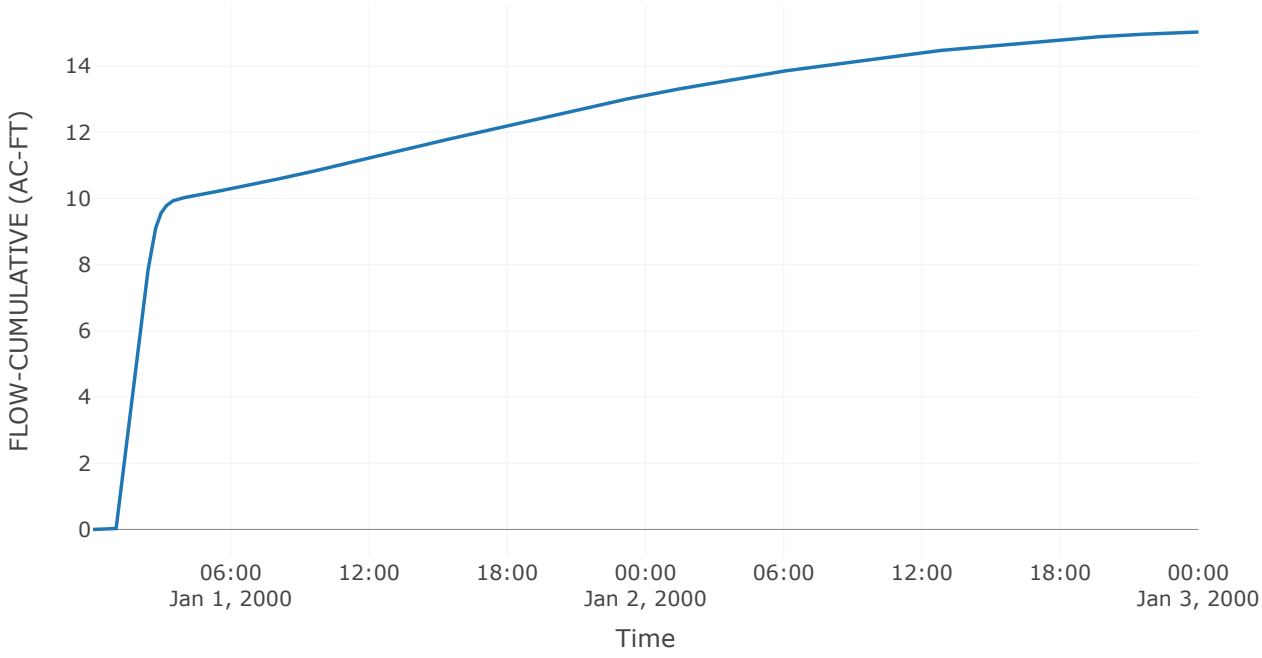

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

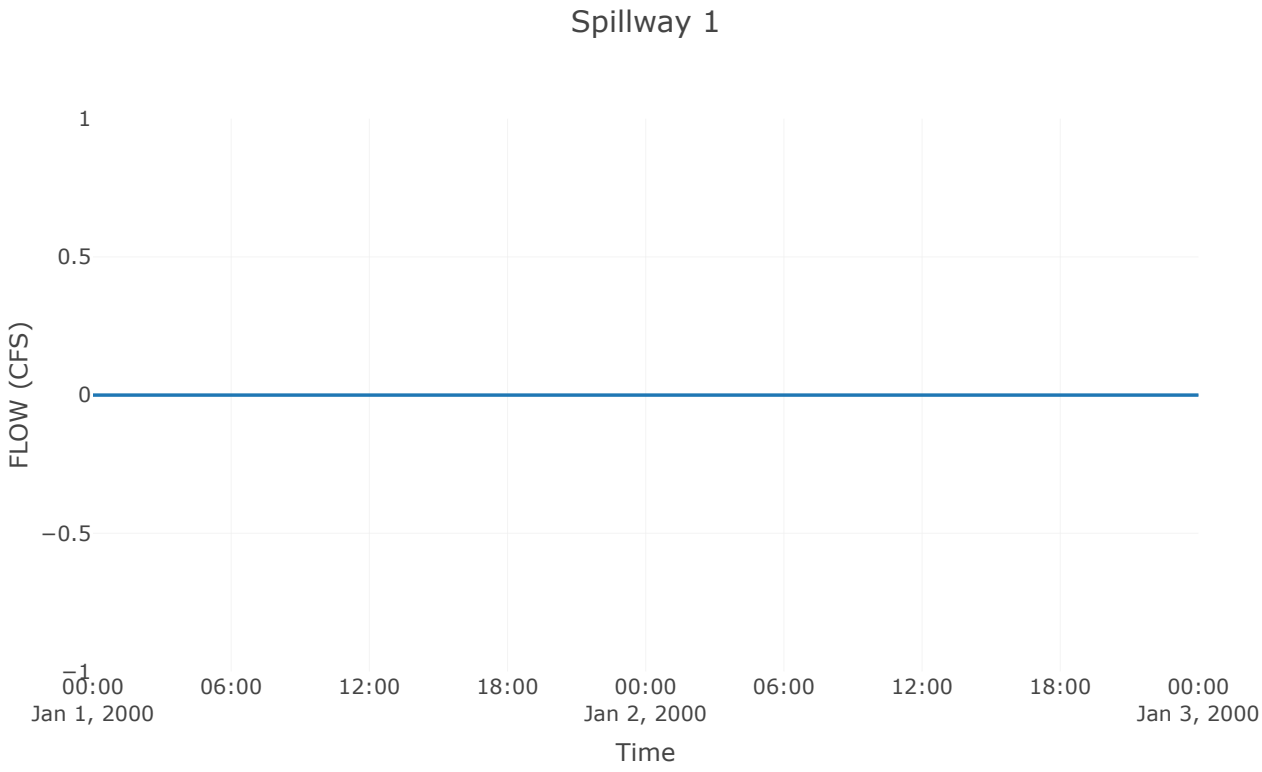

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

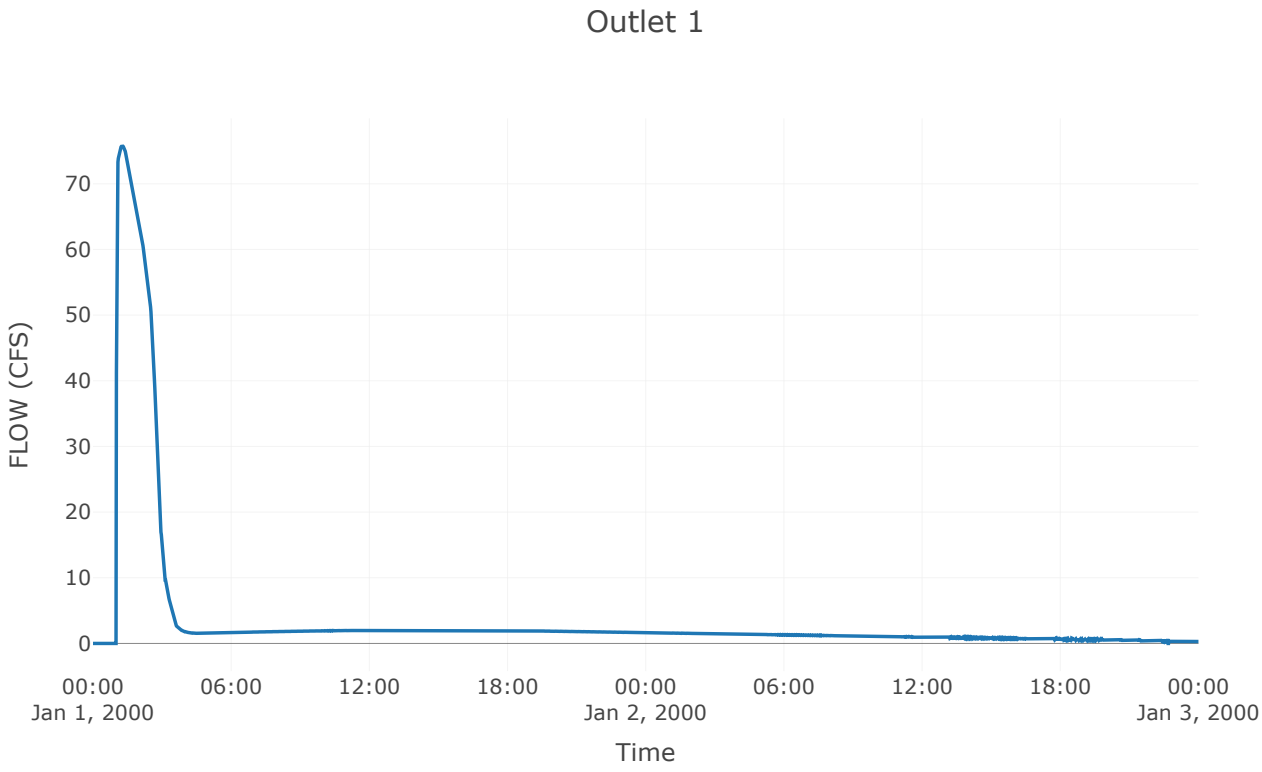
Combined Inflow



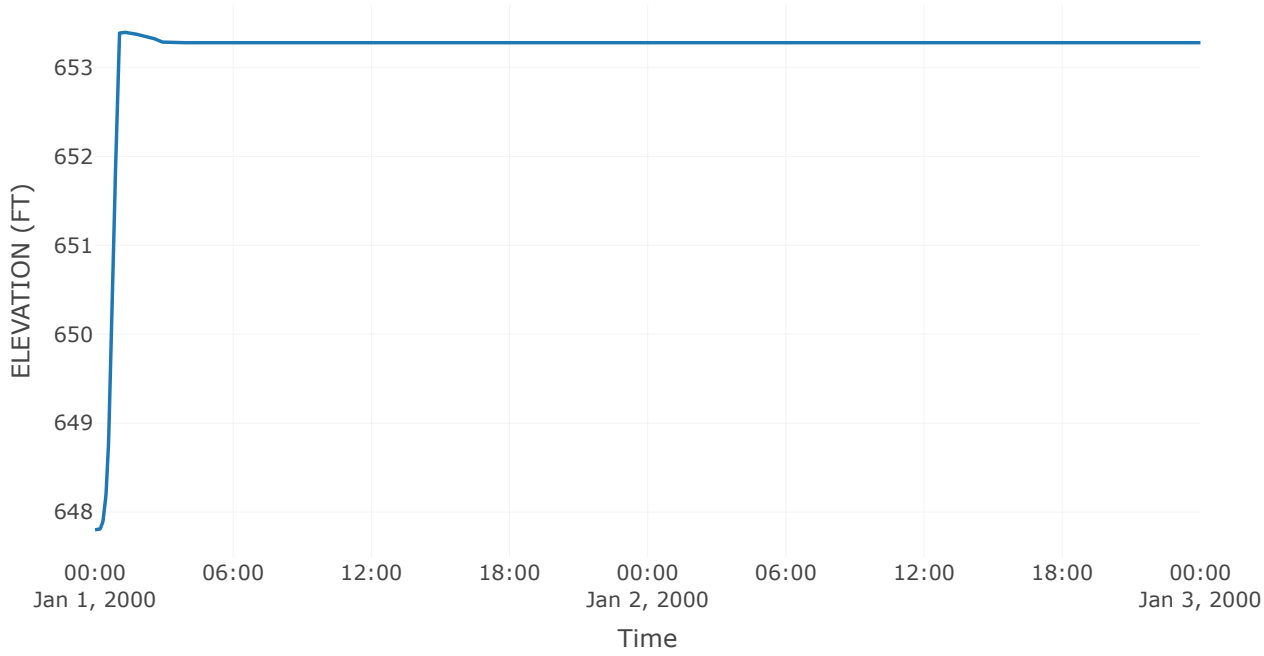
Cumulative Outflow



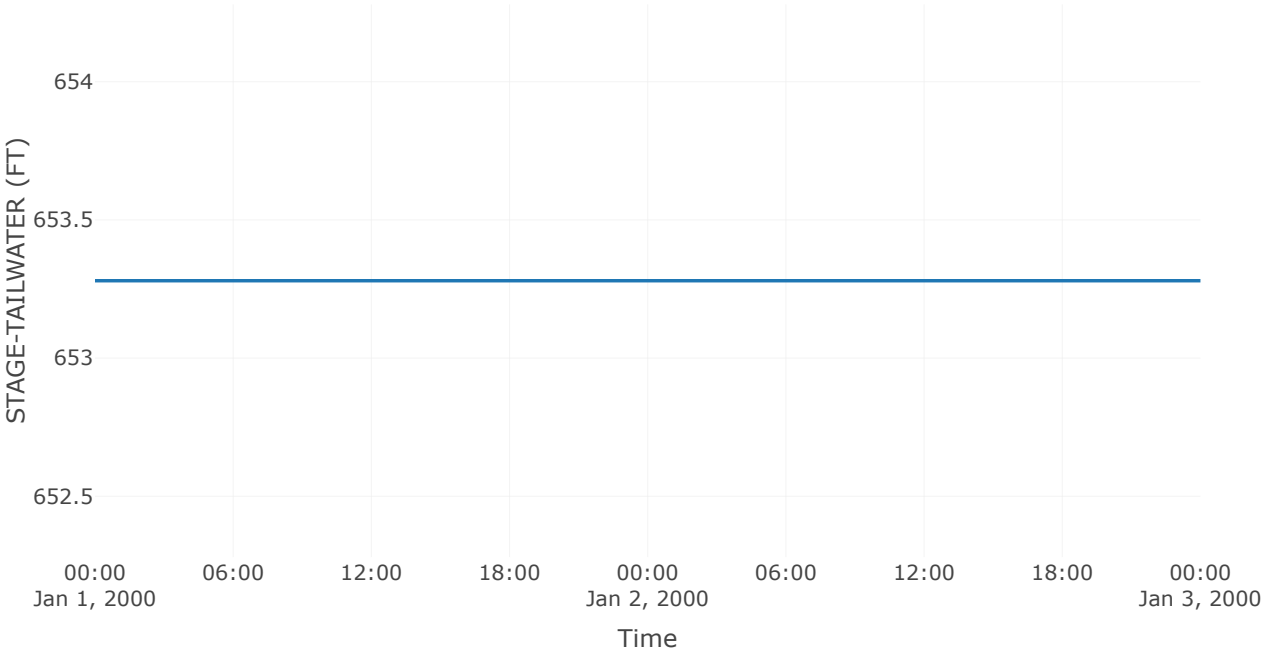

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

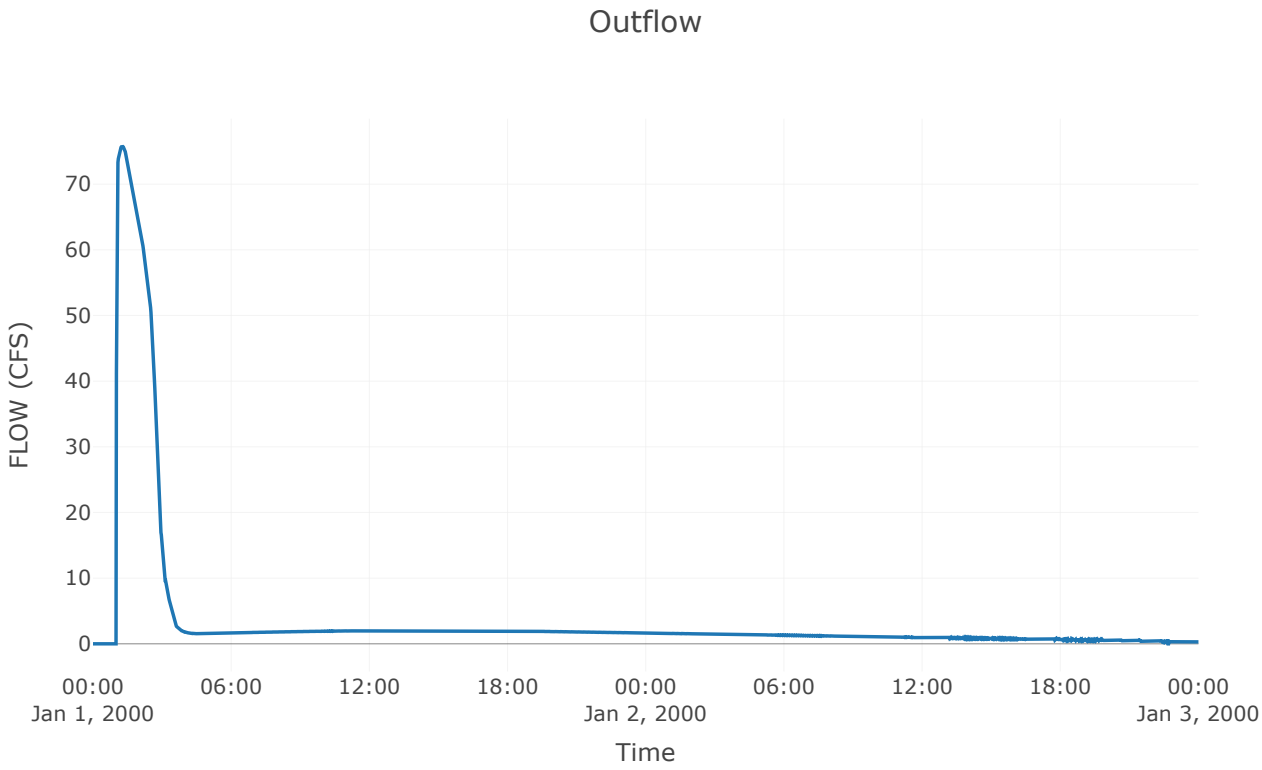

Outlet 1
70
60
50
40
30
20
10
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



Tailwater Stage

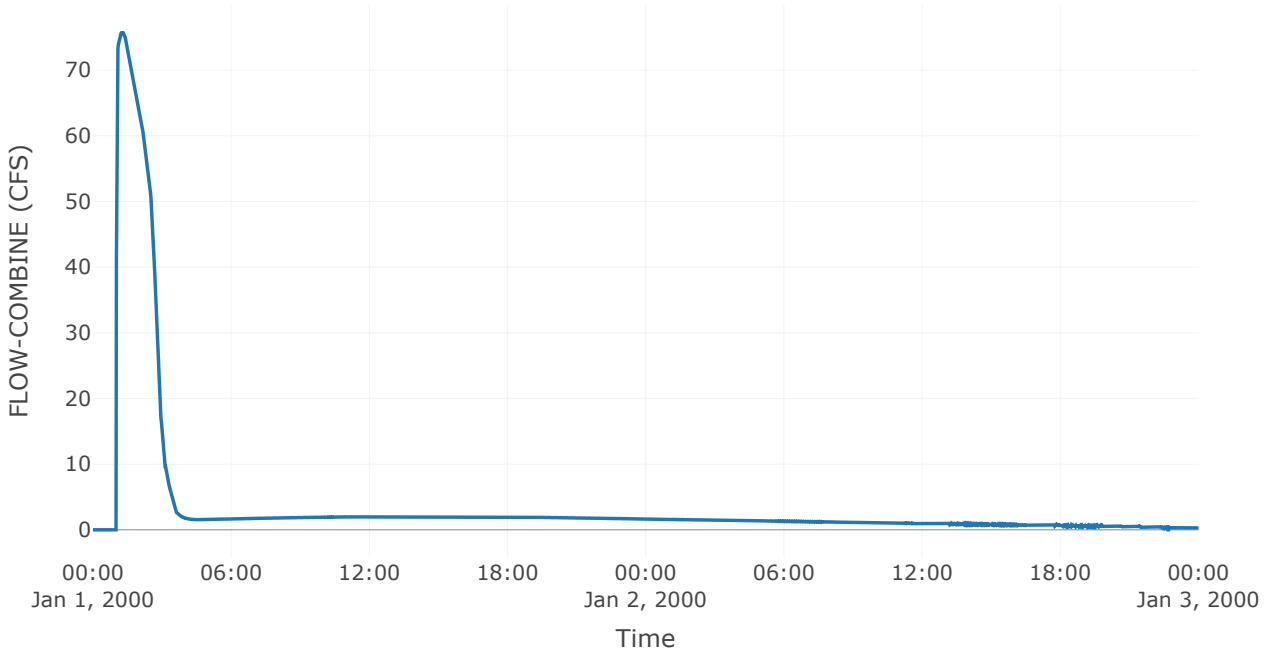



Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

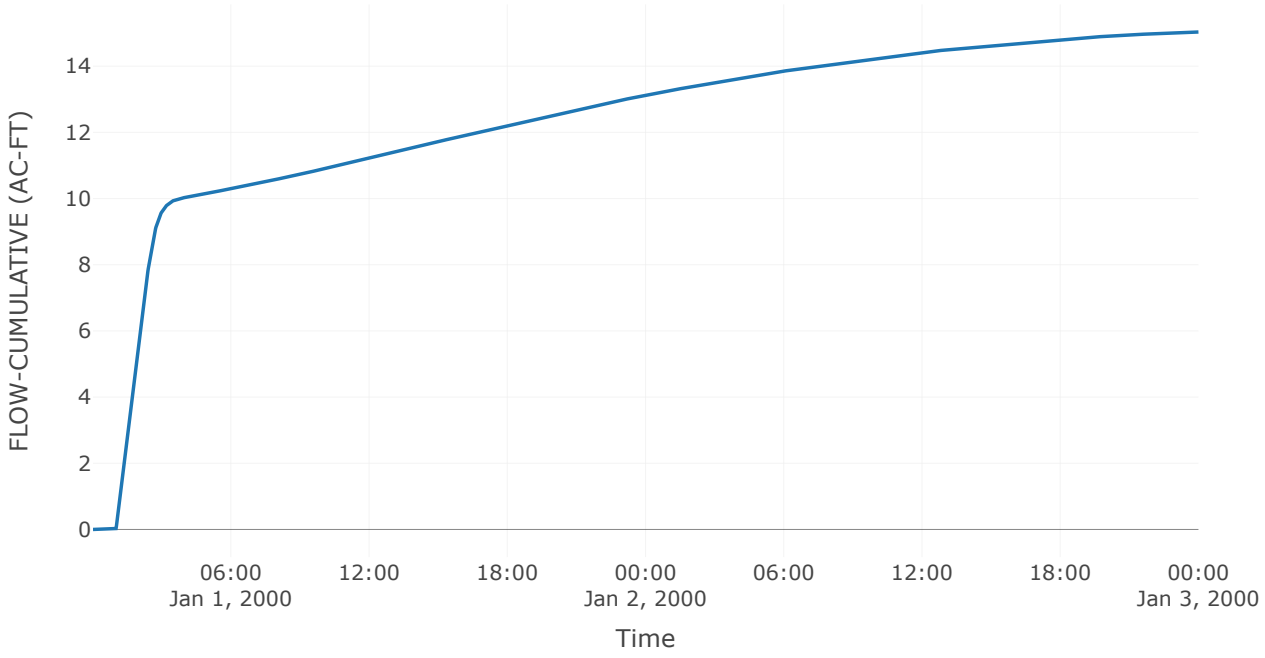
Sink: 55th Street Outlet

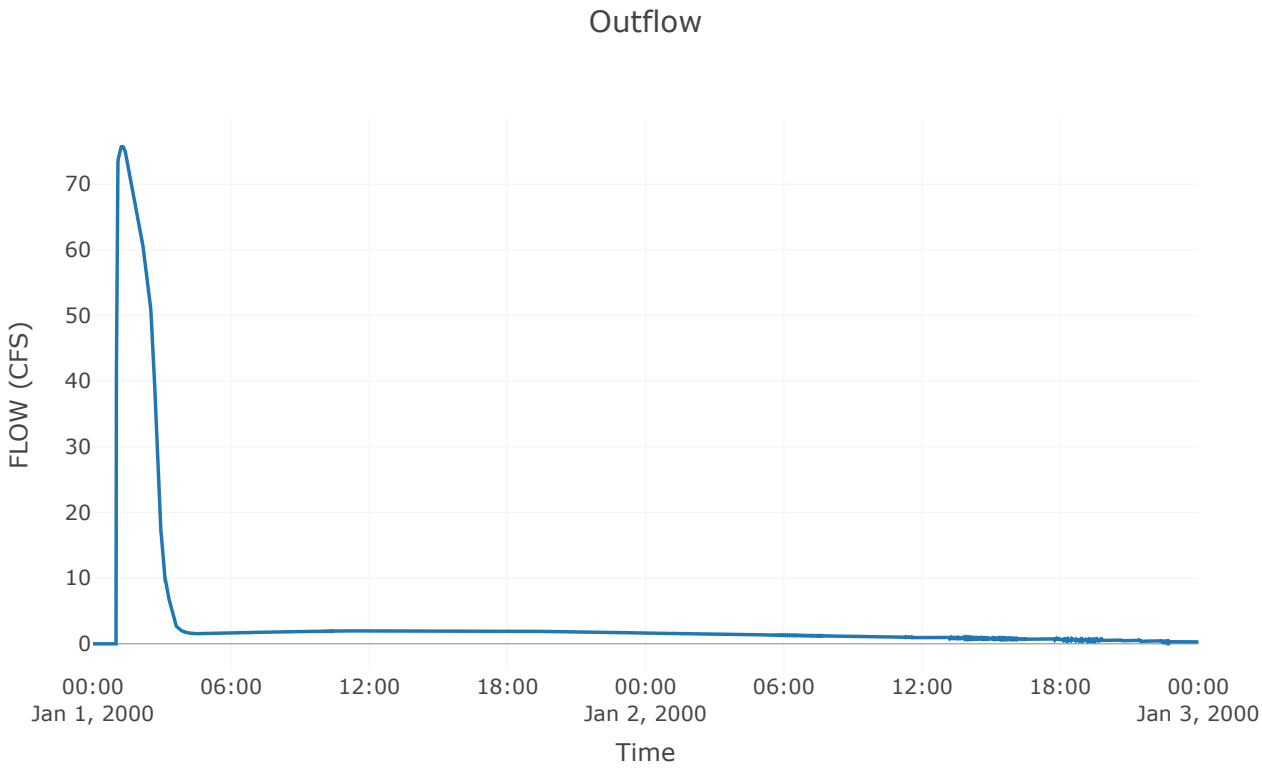
Results: 55th Street Outlet	
Peak Discharge (CFS)	75.75
Time of Peak Discharge	01Jan2000, 01:16
Volume (IN)	1.03

Combined Inflow



Cumulative Outflow




Outflow
FLOW (CFS)
70
60
50
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Project: Development_Template
Simulation Run: 100YR__1HR
Simulation Start: 31 December 1999, 24:00
Simulation End: 2 January 2000, 24:00

HMS Version: 4.12
Executed: 06 November 2024, 21:49

Global Parameter Summary - Subbasin

Area (MI2)

Element Name	Area (MI2)
On - Site Trib 1	0.03
Off - Site Trib 1 South	0
Off - Site Trib 1 West	0
On - Site Trib 2	0.02
Off - Site Trib2	0.01
On - Site Trib - Area 3	0.01
LaGrange Highlands Off - Site	0.2
Prop On - Site	0

Downstream

Element Name	Downstream
On - Site Trib 1	Basin 1
Off - Site Trib 1 South	Basin 1
Off - Site Trib 1 West	Basin 1
On - Site Trib 2	Basin 2
Off - Site Trib2	Basin 2
On - Site Trib - Area 3	Basin 3
LaGrange Highlands Off - Site	Off - Site Tributary Area
Prop On - Site	Proposed Basin C

Loss Rate: Scs

Element Name	Percent Impervious Area	Curve Number
On - Site Trib 1	0	86
Off - Site Trib 1 South	0	80
Off - Site Trib 1 West	0	83
On - Site Trib 2	0	83
Off - Site Trib2	0	83
On - Site Trib - Area 3	0	83
LaGrange Highlands Off - Site	0	86
Prop On - Site	0	88.03

Transform: Scs

Element Name	Lag	Unitgraph Type
On - Site Trib 1	21	Standard
Off - Site Trib 1 South	6	Standard
Off - Site Trib 1 West	12	Standard
On - Site Trib 2	20.4	Standard
Off - Site Trib2	12	Standard
On - Site Trib - Area 3	21	Standard
LaGrange Highlands Off - Site	29.2	Standard
Prop On - Site	6	Standard

Global Results Summary

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
On - Site Trib 1	0.03	58.05	01Jan2000, 00:38	2.57
Off - Site Trib 1 South	0	6.25	01Jan2000, 00:21	2.07
Off - Site Trib 1 West	0	4.91	01Jan2000, 00:27	2.31
Basin 1	0.03	6.25	01Jan2000, 01:34	2.51
On - Site Trib 2	0.02	32.72	01Jan2000, 00:39	2.31
Off - Site Trib2	0.01	12.85	01Jan2000, 00:27	2.31
Basin 2	0.05	4.79	01Jan2000, 05:38	2.42
On - Site Trib - Area 3	0.01	23.74	01Jan2000, 00:39	2.31
LaGrange Highlands Off - Site	0.2	358.51	01Jan2000, 00:49	2.57
Basin 3	0.07	3.52	01Jan2000, 15:36	2.2
Off - Site Tributary Area	0.27	359.61	01Jan2000, 00:49	2.48
Storage East of Wolf Road	0.27	358.74	01Jan2000, 00:51	2.48
Box Inlet - East Side Wolf Rd	0.27	324.8	01Jan2000, 01:01	2.48
Prop Storage West of Wolf Rd	0.27	324.78	01Jan2000, 01:01	2.48
Prop On - Site	0	13.96	01Jan2000, 00:19	2.76
Proposed Basin C	0.27	95.13	01Jan2000, 01:08	1.37
Existing Basin A & B	0.27	95.08	01Jan2000, 01:09	1.21

55th Street Outlet	0.27	95.08	01Jan2000, 01:09	1.21

Subbasin: On-Site Trib 1

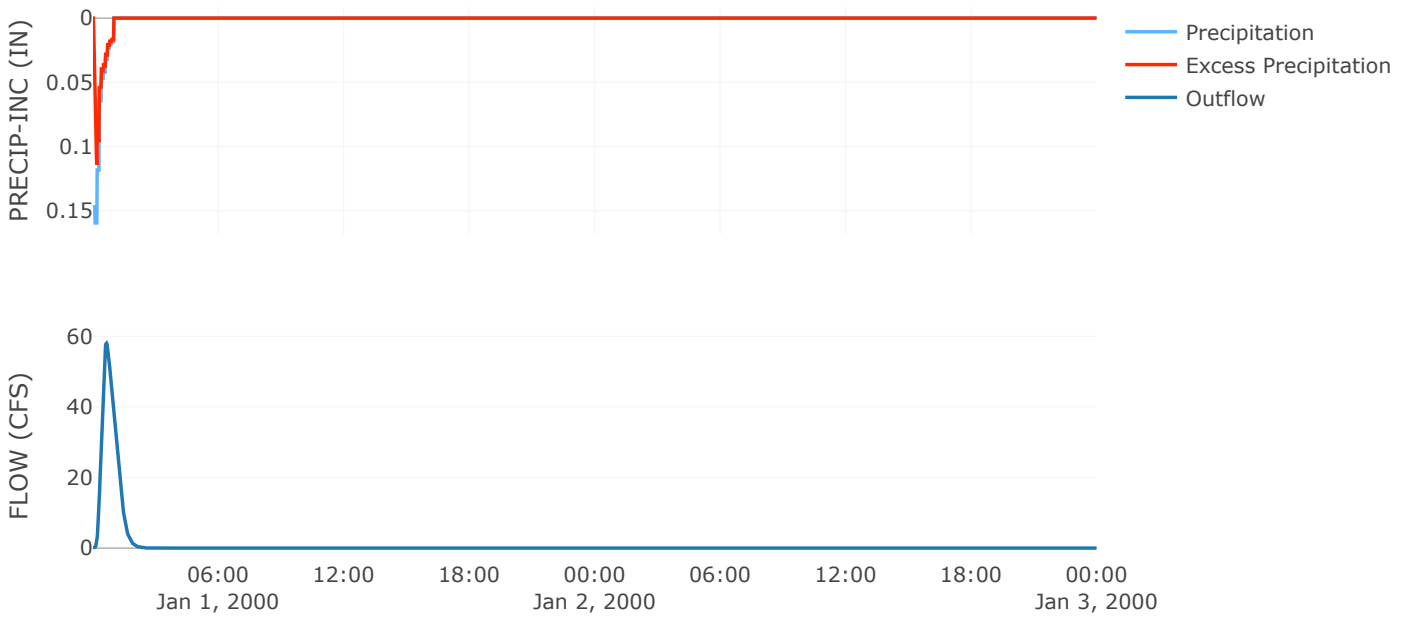
Area (MI2) : 0.03
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

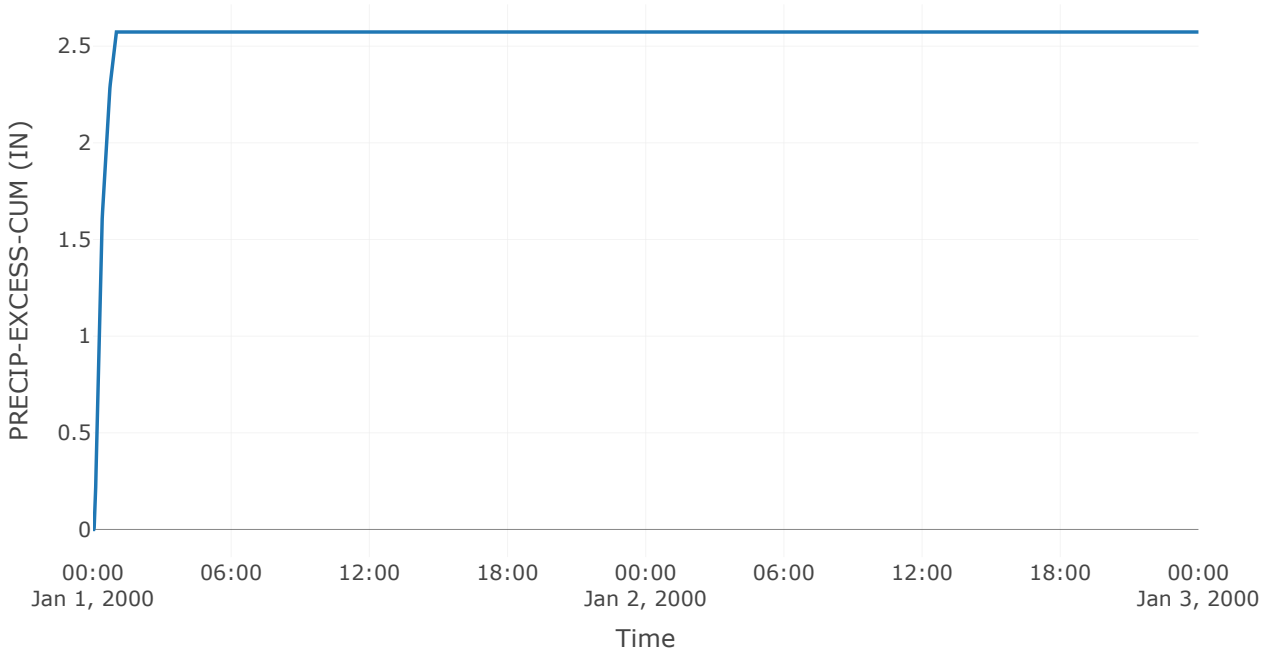
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib 1	
Peak Discharge (CFS)	58.05
Time of Peak Discharge	01Jan2000, 00:38
Volume (IN)	2.57
Precipitation Volume (AC - FT)	5.91
Loss Volume (AC - FT)	2.14
Excess Volume (AC - FT)	3.77
Direct Runoff Volume (AC - FT)	3.77
Baseflow Volume (AC - FT)	0

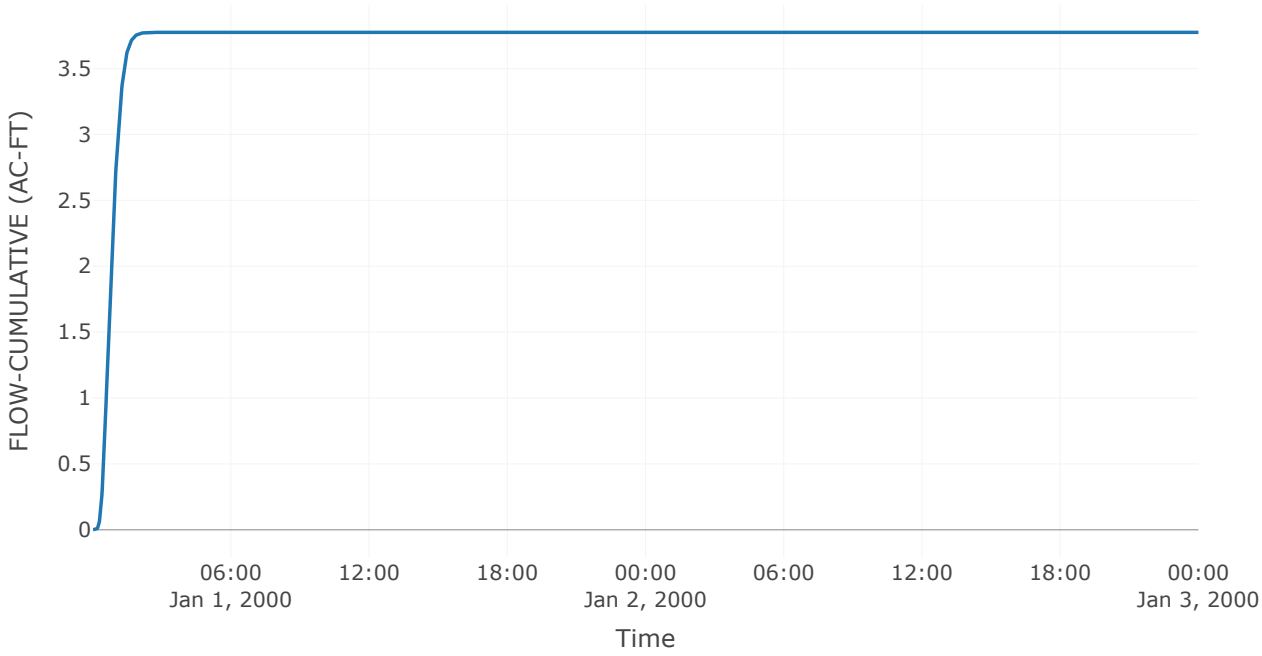
Precipitation and Outflow



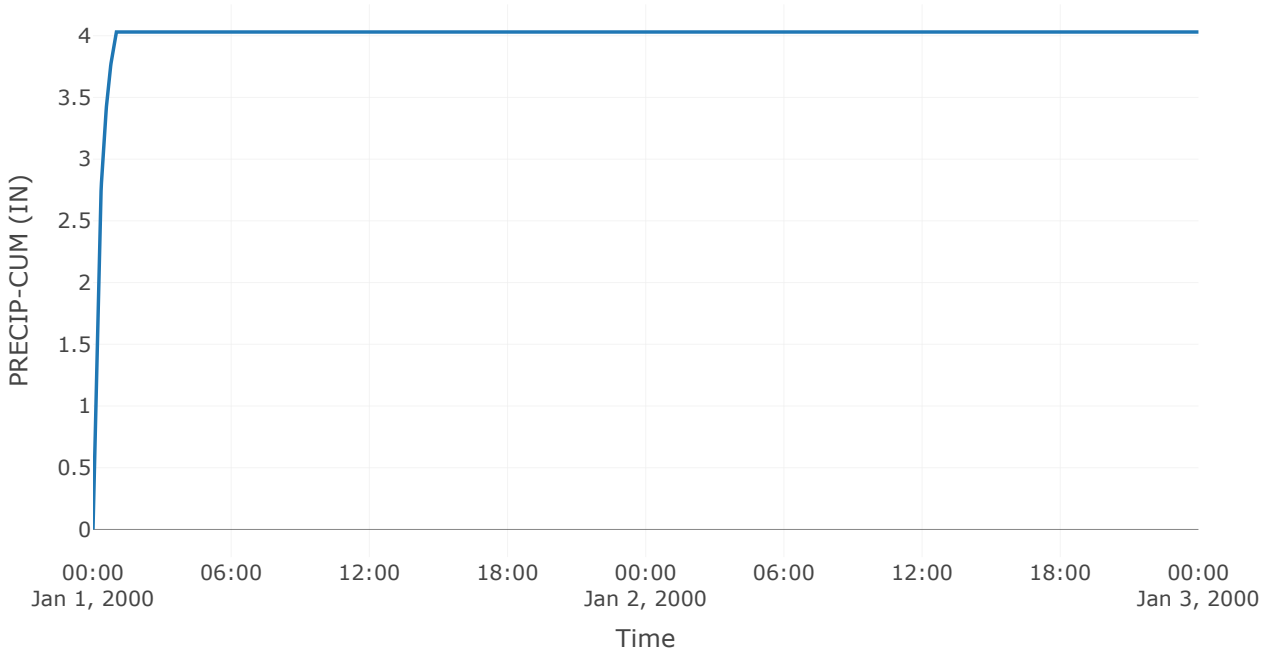
Cumulative Excess Precipitation

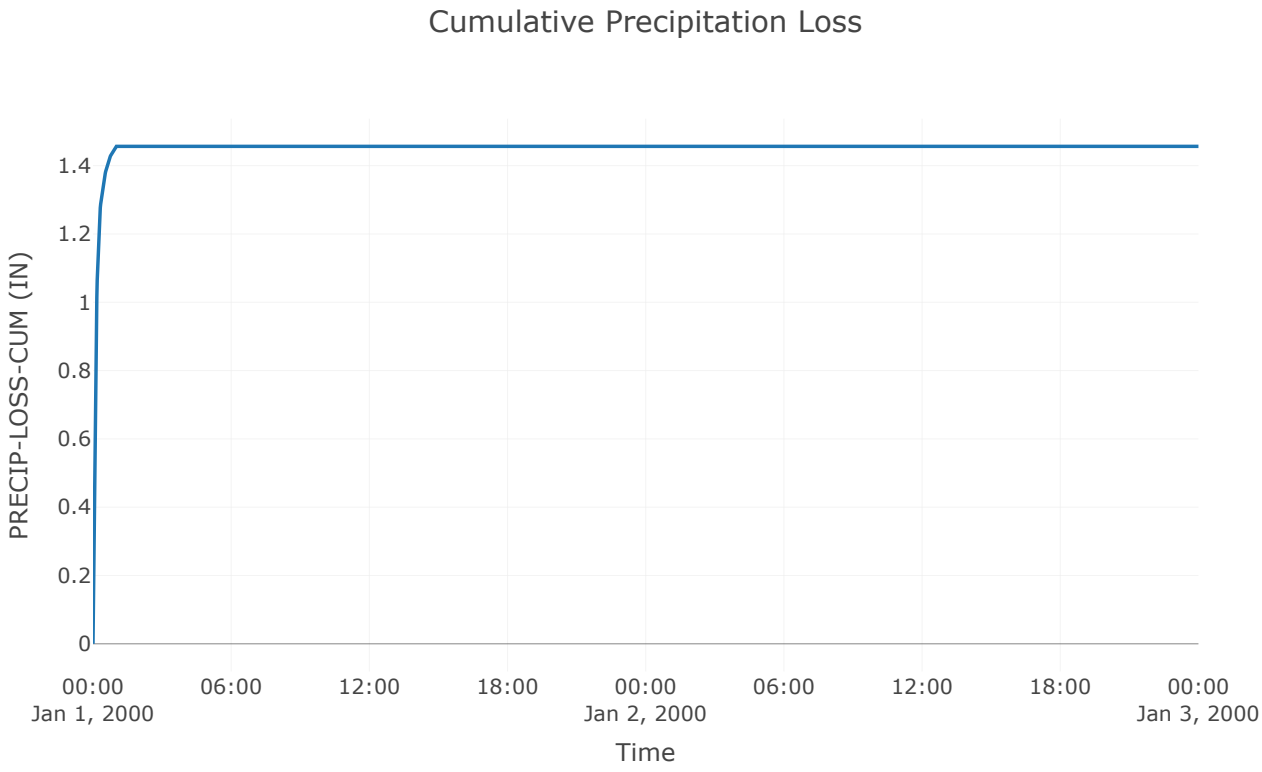


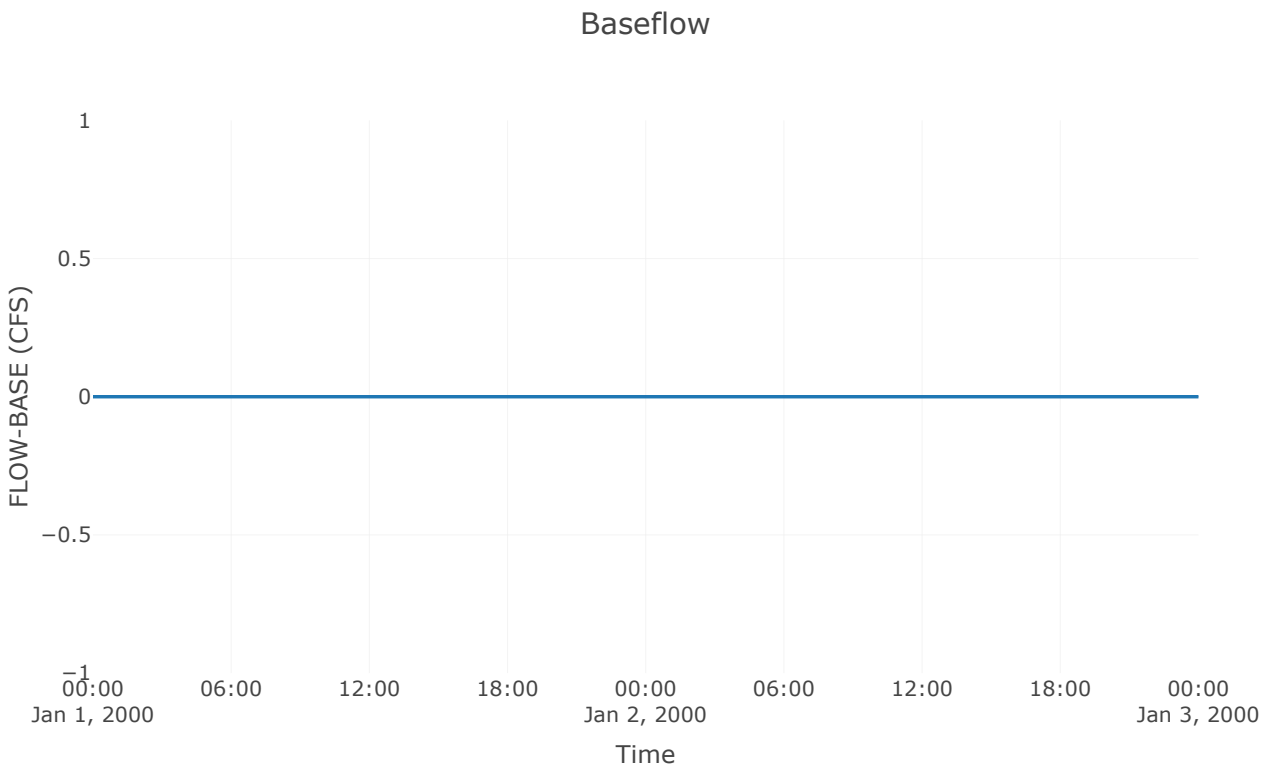
Cumulative Outflow



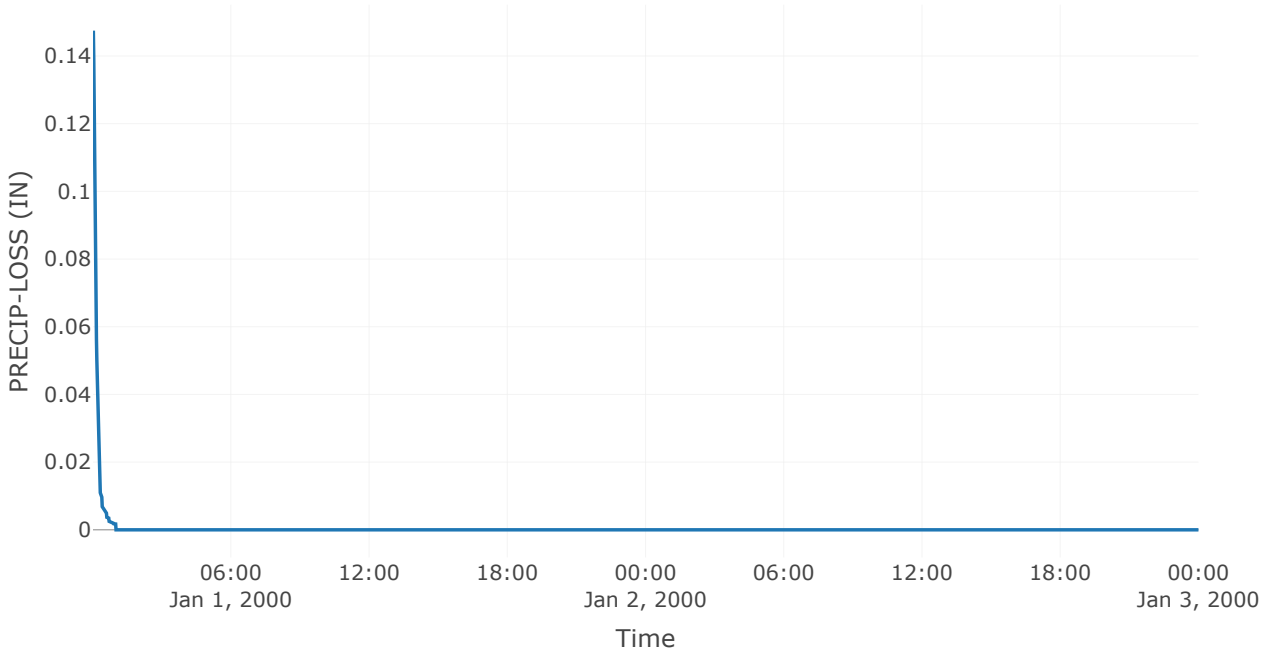
Cumulative Precipitation



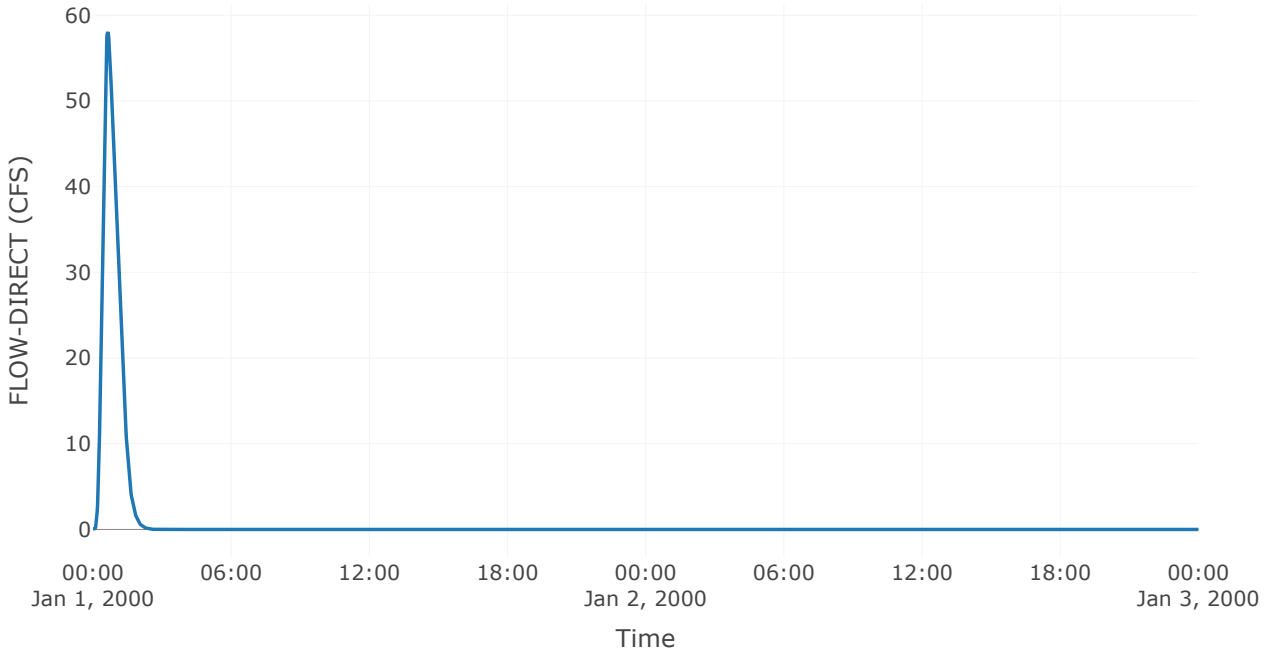

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

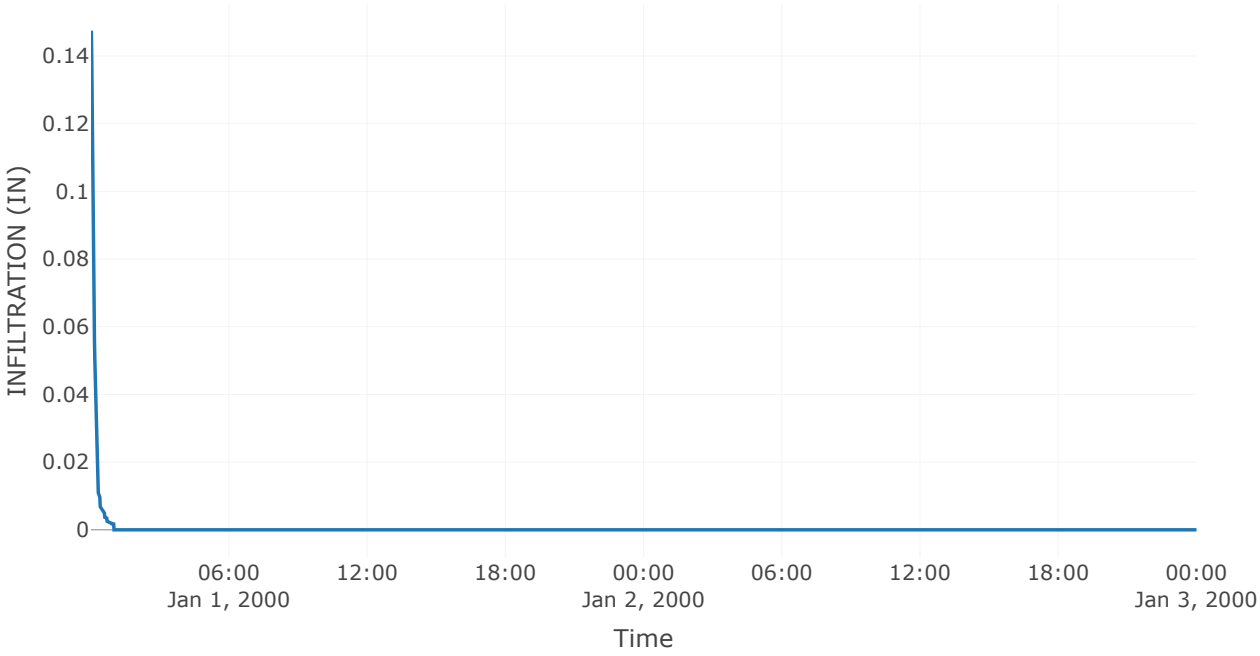

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff




Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 South

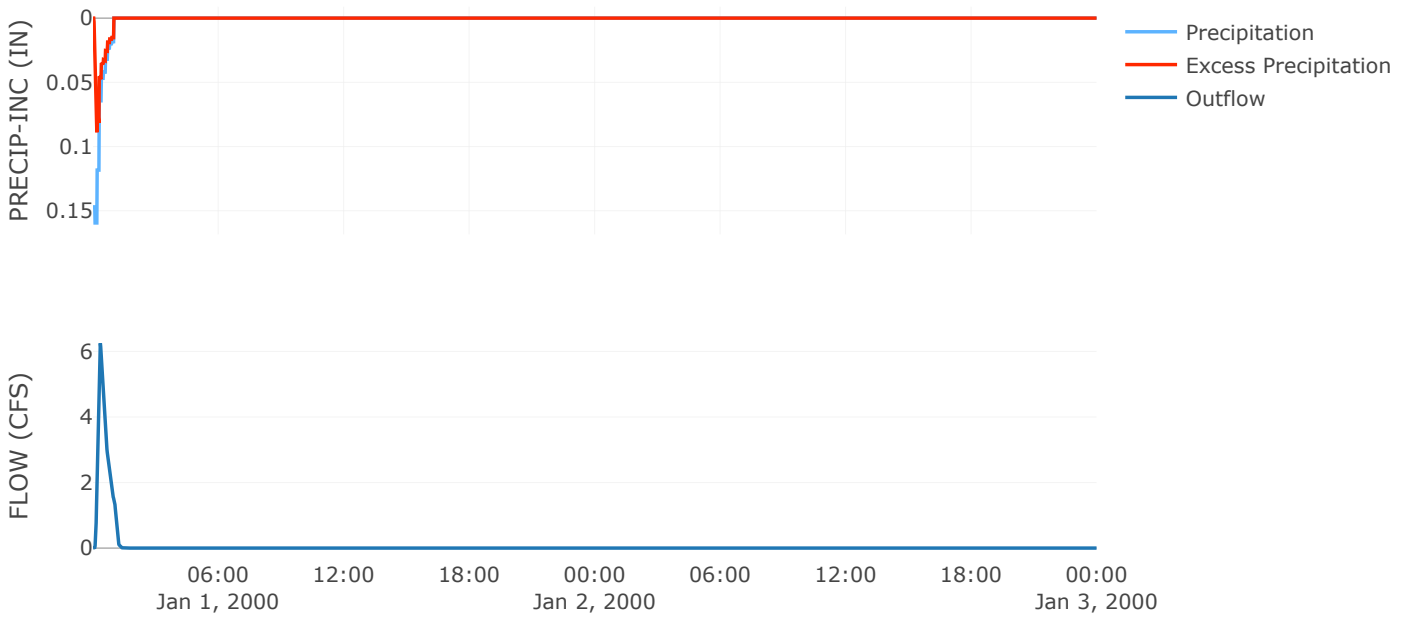
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	80

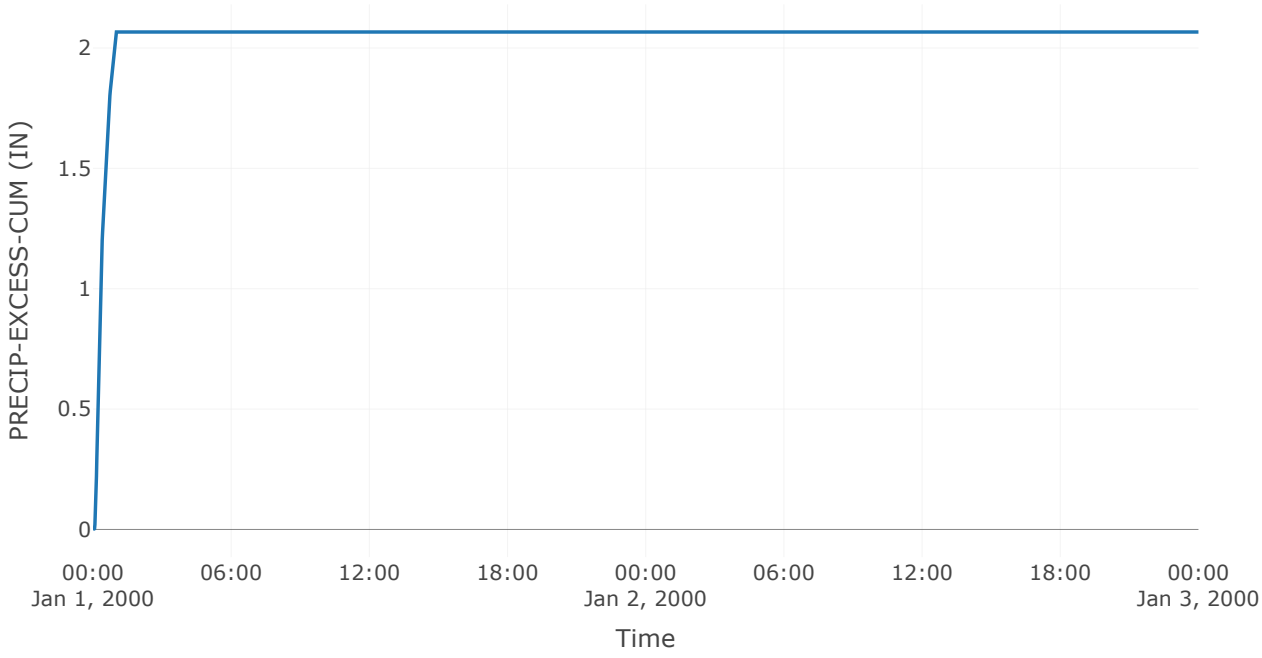
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Off-Site Trib 1 South	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 00:21
Volume (IN)	2.07
Precipitation Volume (AC - FT)	0.5
Loss Volume (AC - FT)	0.25
Excess Volume (AC - FT)	0.26
Direct Runoff Volume (AC - FT)	0.26
Baseflow Volume (AC - FT)	0

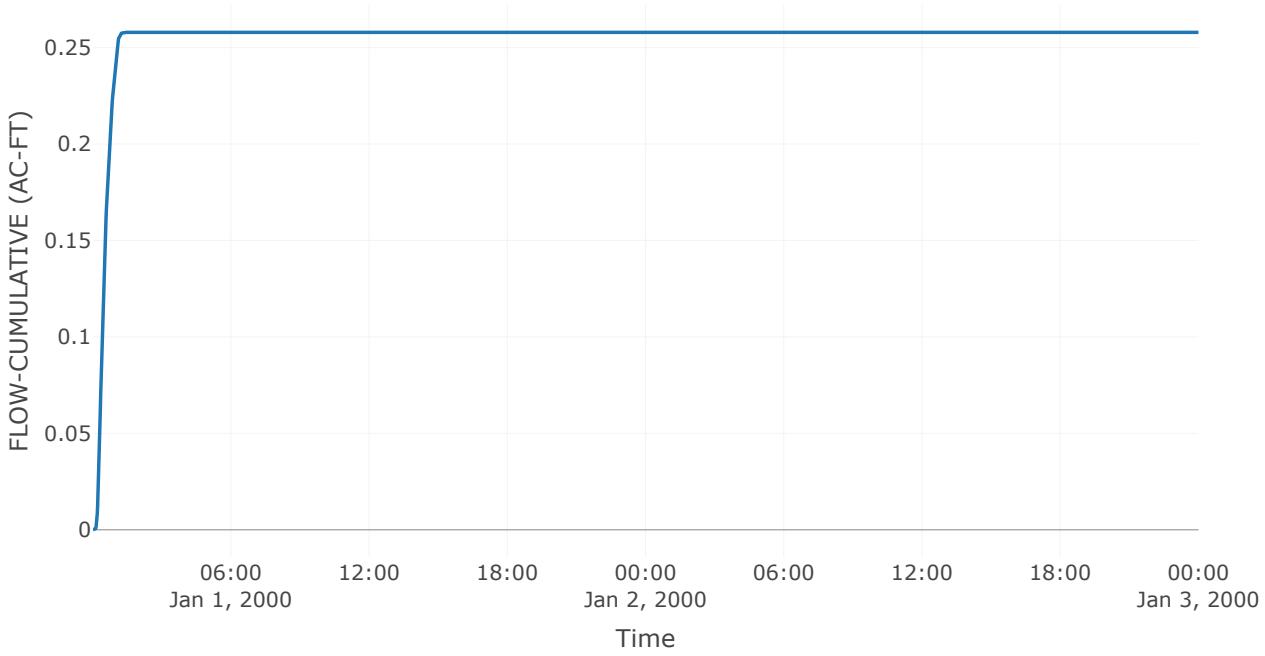
Precipitation and Outflow



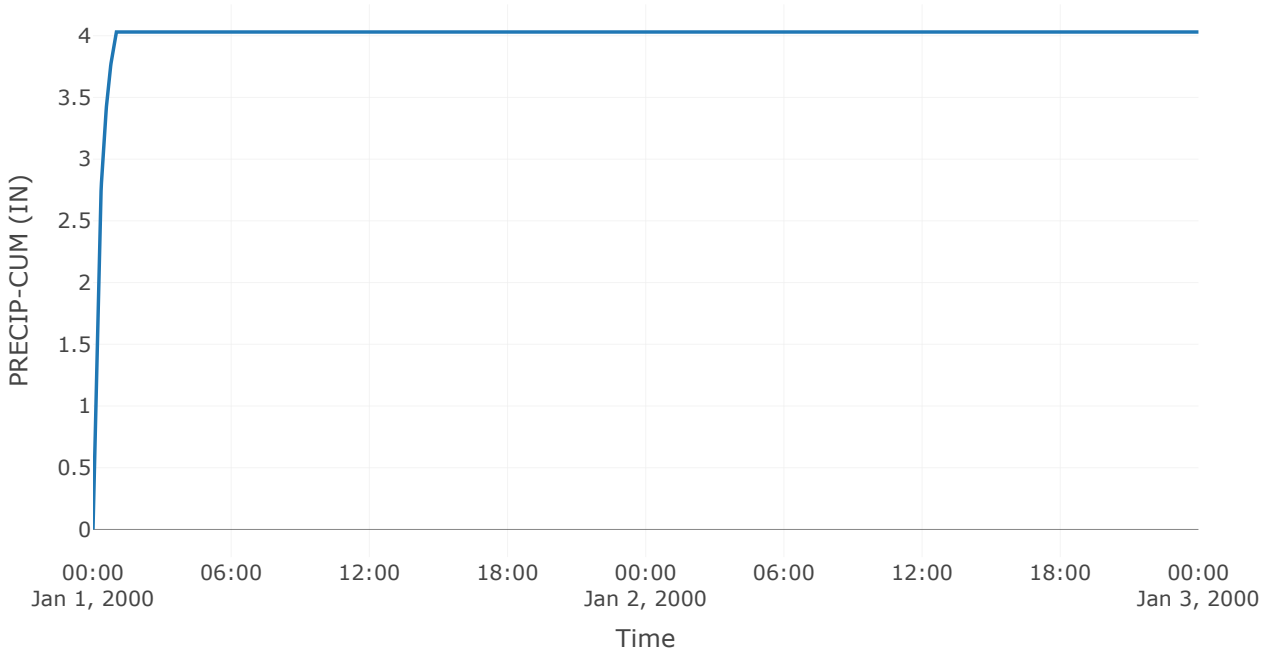
Cumulative Excess Precipitation

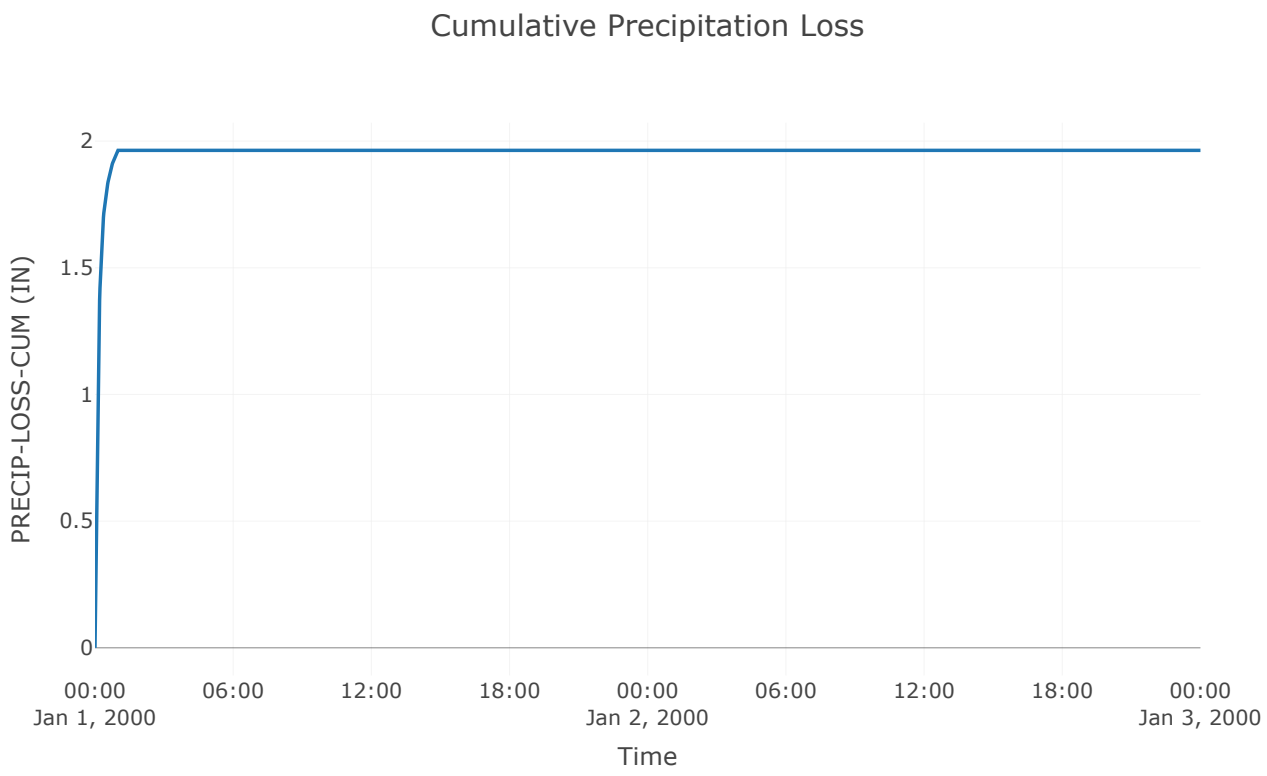


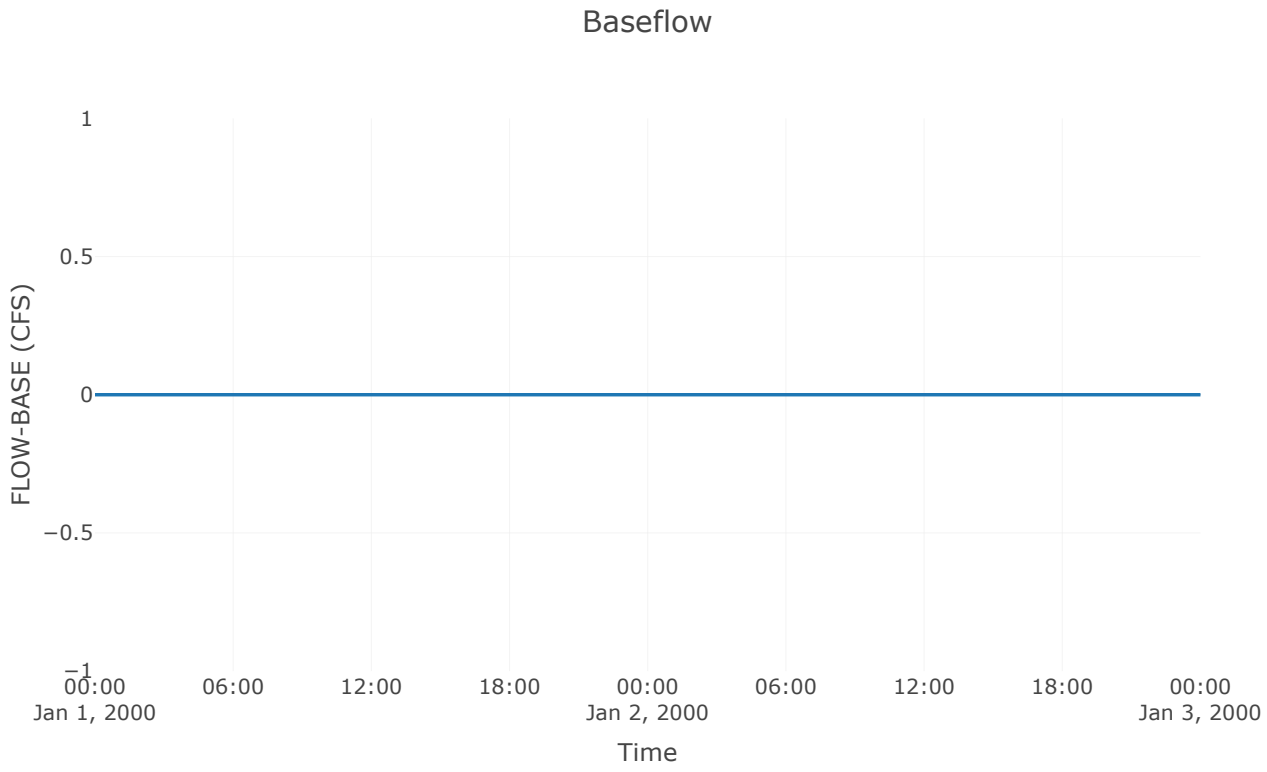
Cumulative Outflow

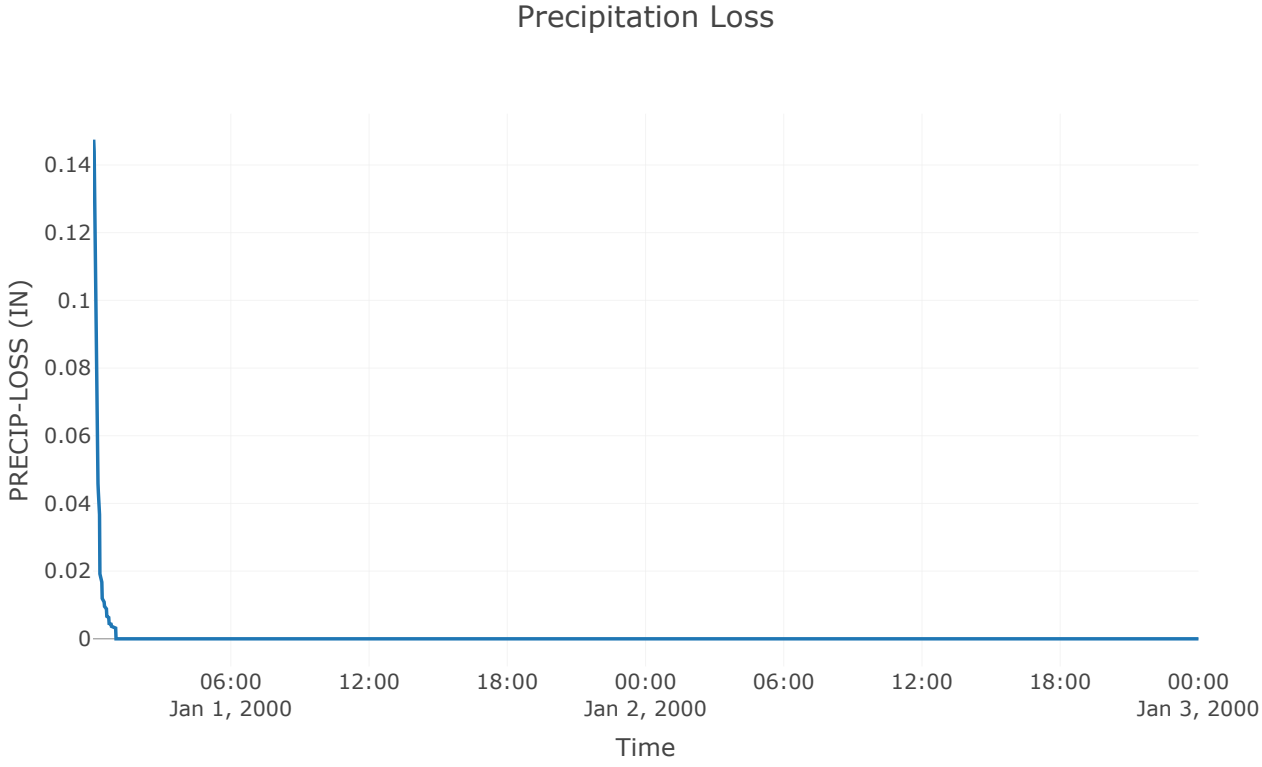


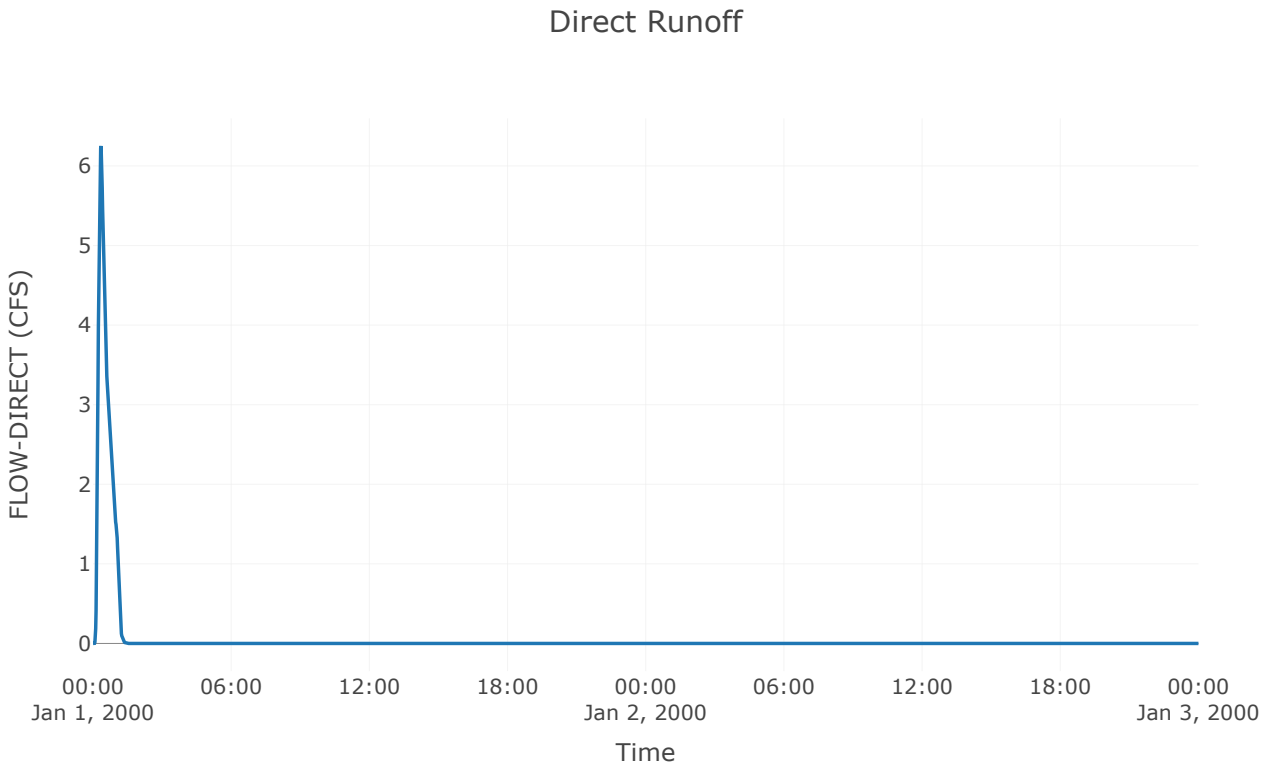
Cumulative Precipitation

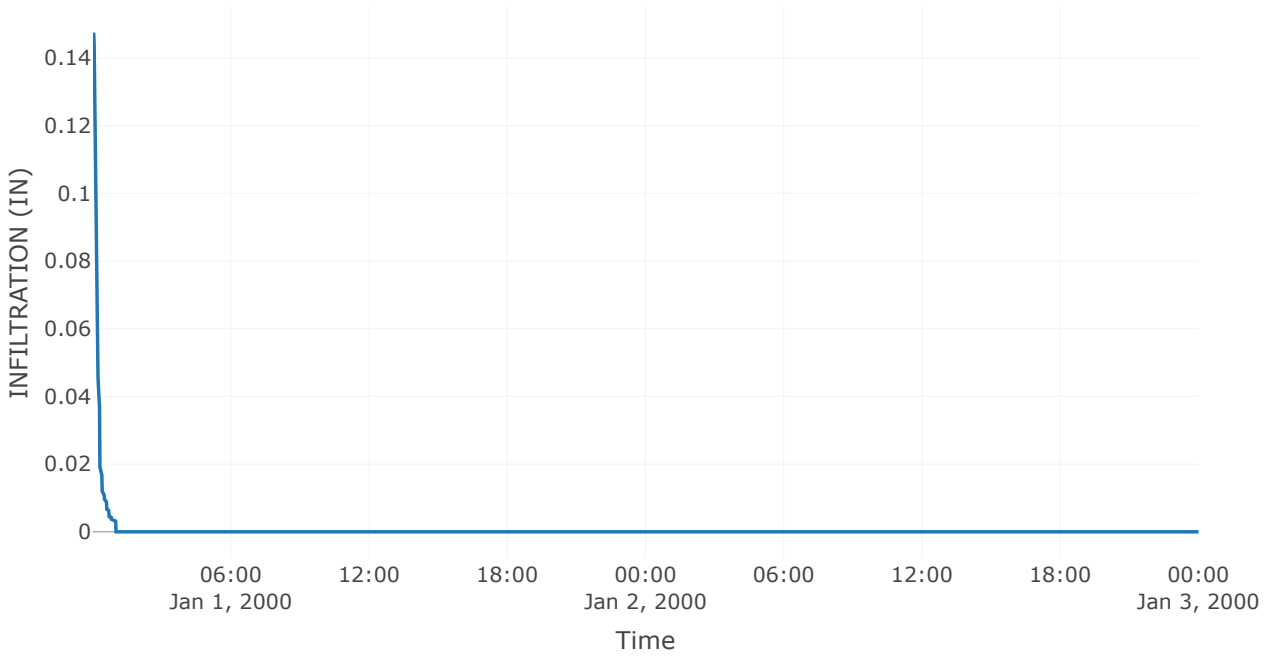



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib 1 West

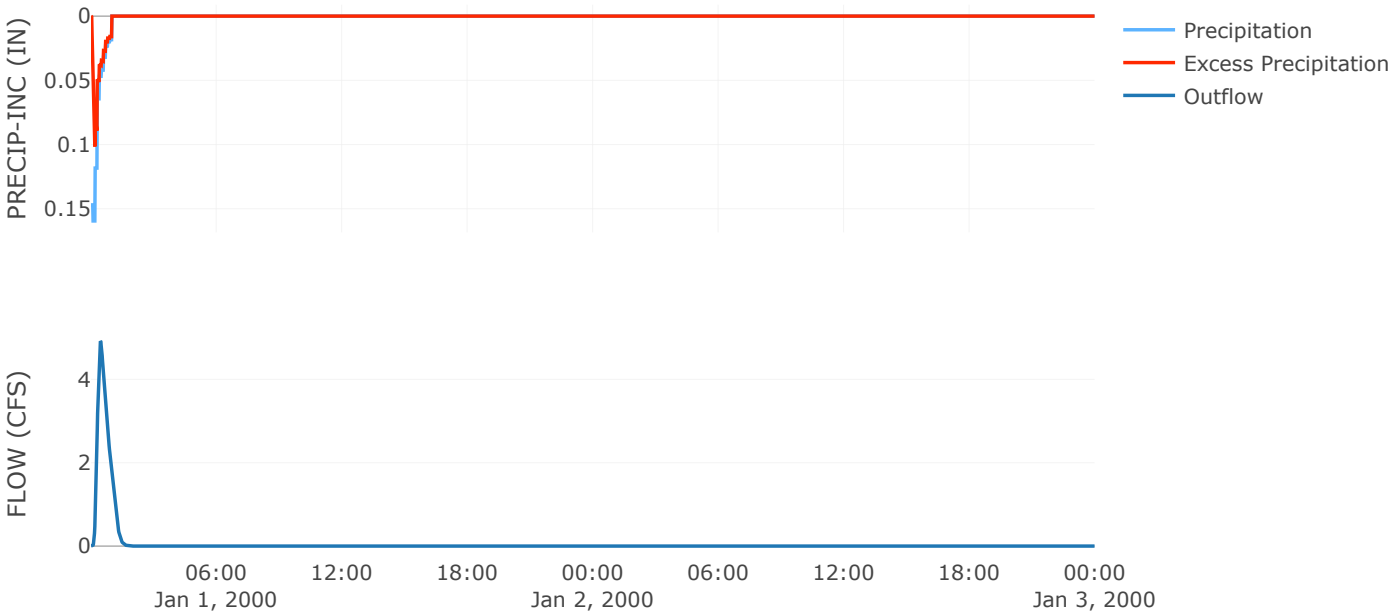
Area (MI2) : 0
Downstream : Basin 1

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

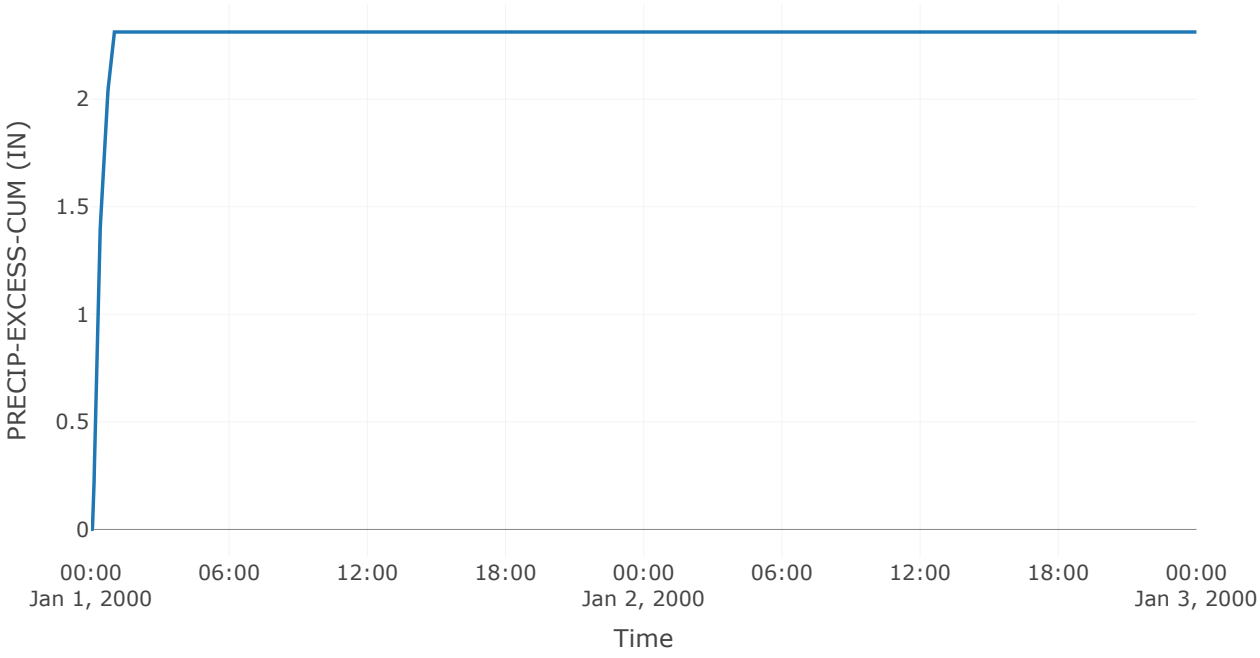
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib 1 West	
Peak Discharge (CFS)	4.91
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	0.44
Loss Volume (AC - FT)	0.19
Excess Volume (AC - FT)	0.25
Direct Runoff Volume (AC - FT)	0.25
Baseflow Volume (AC - FT)	0

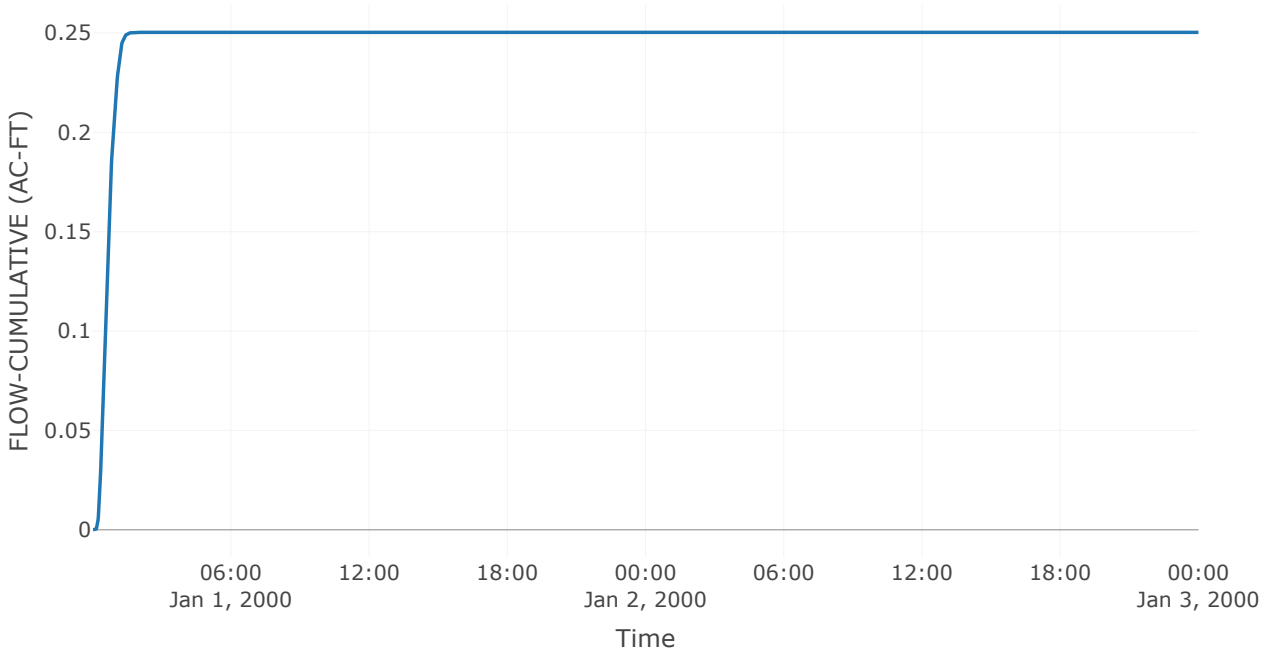
Precipitation and Outflow



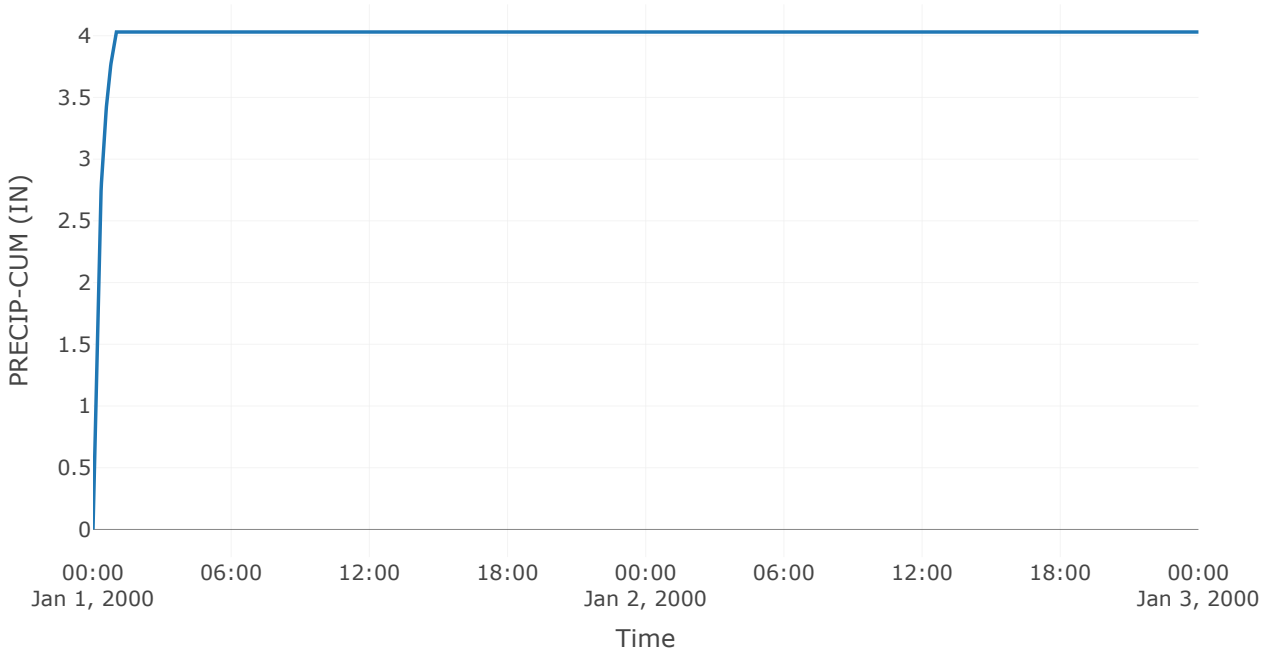
Cumulative Excess Precipitation

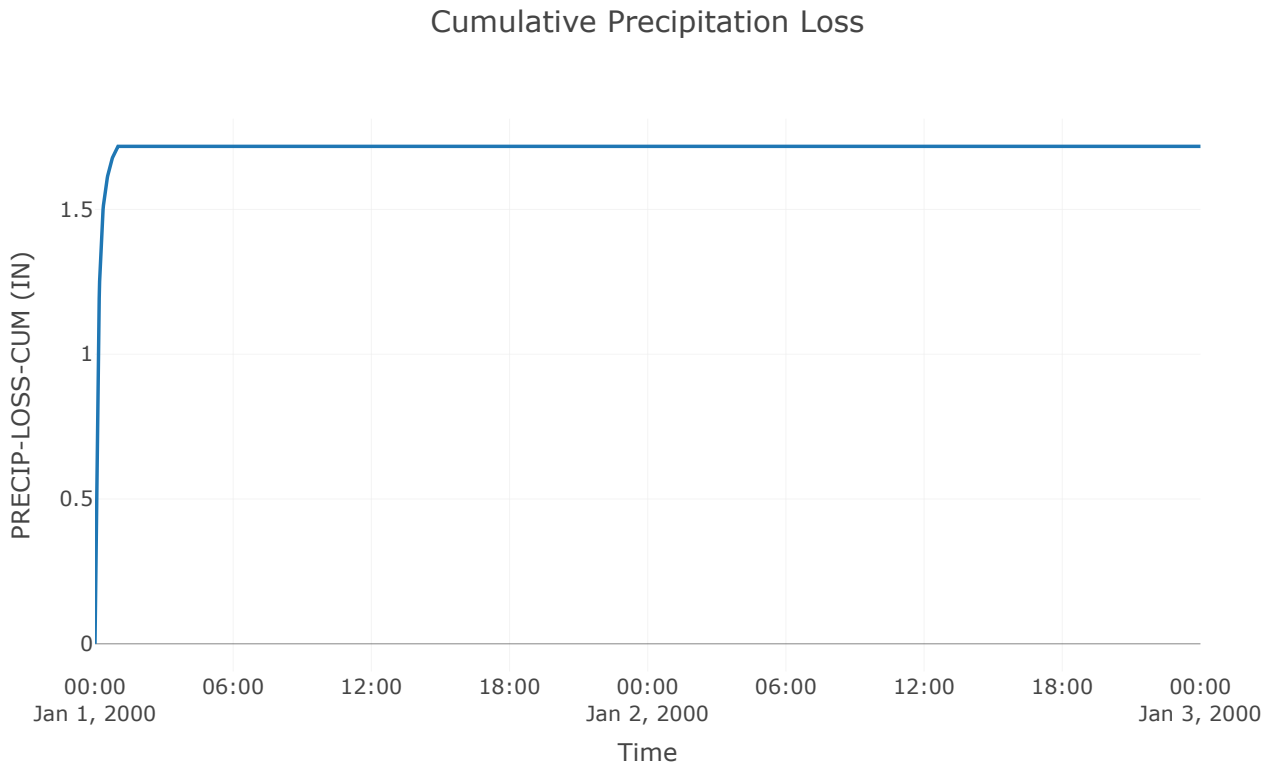


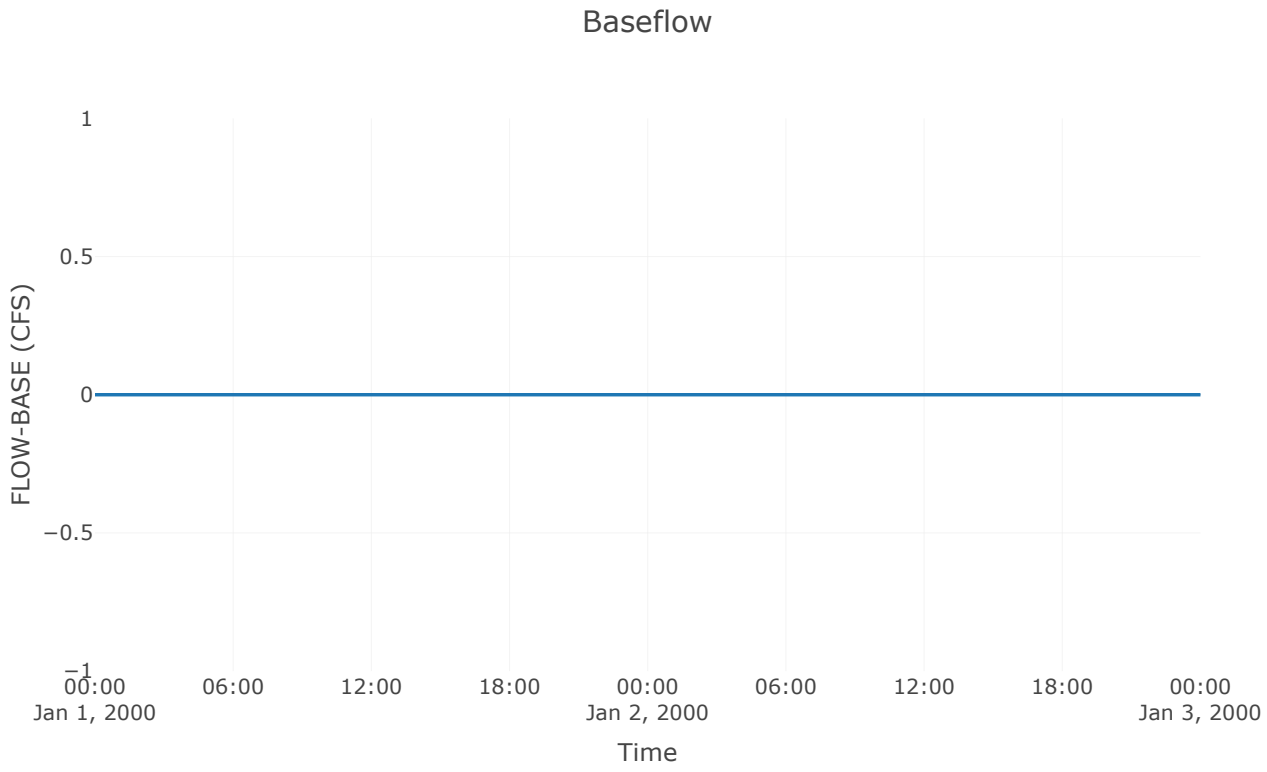
Cumulative Outflow

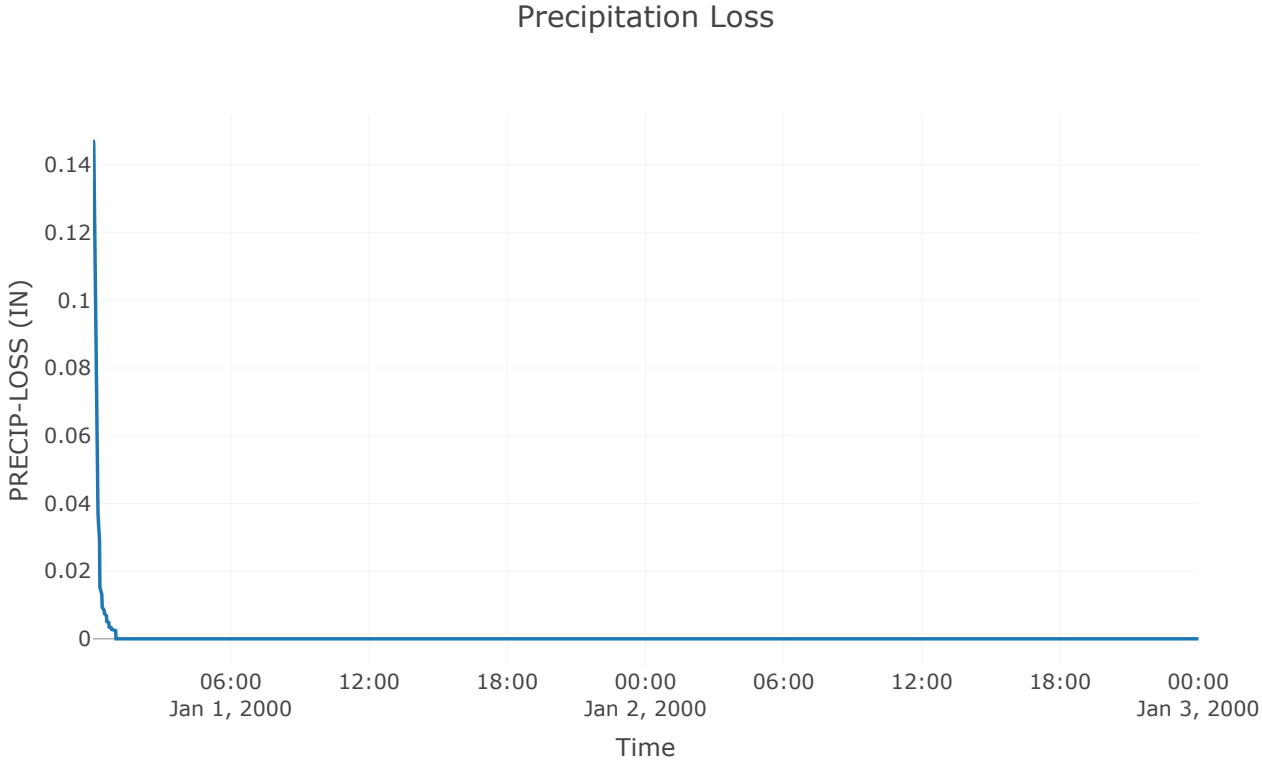


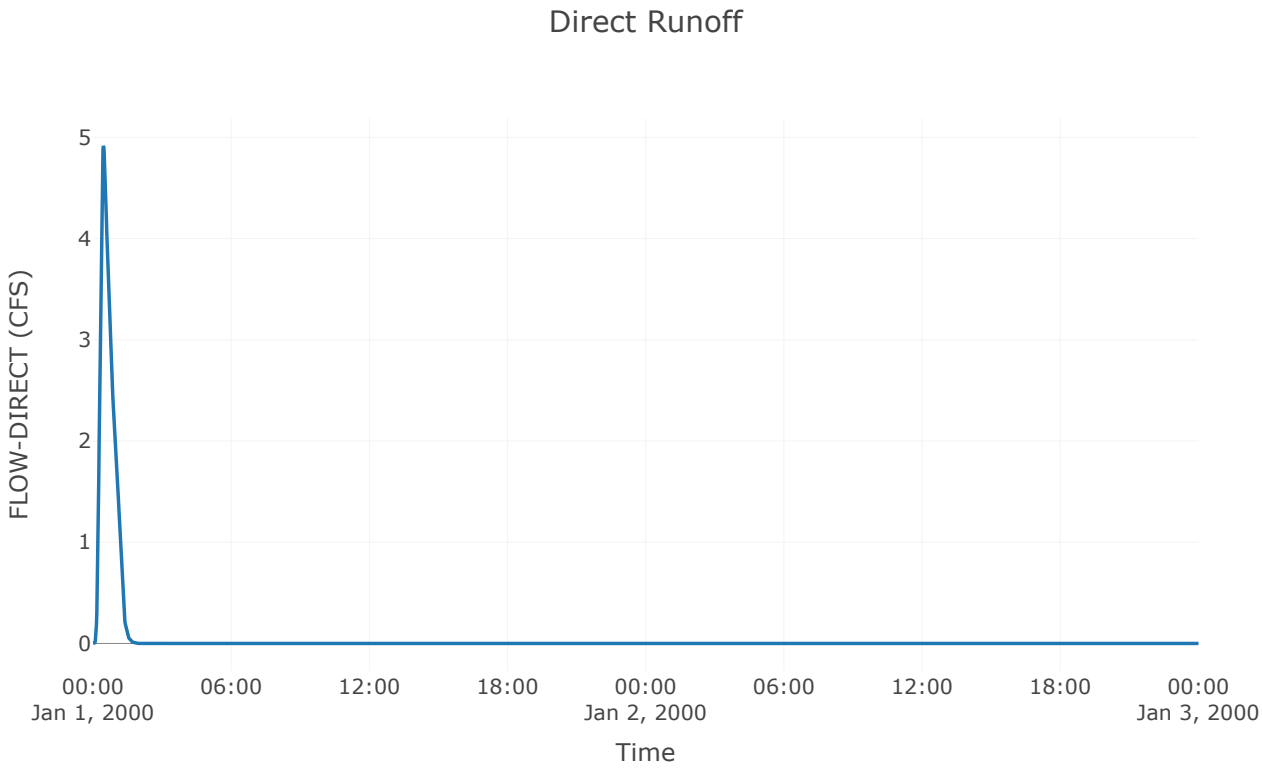
Cumulative Precipitation

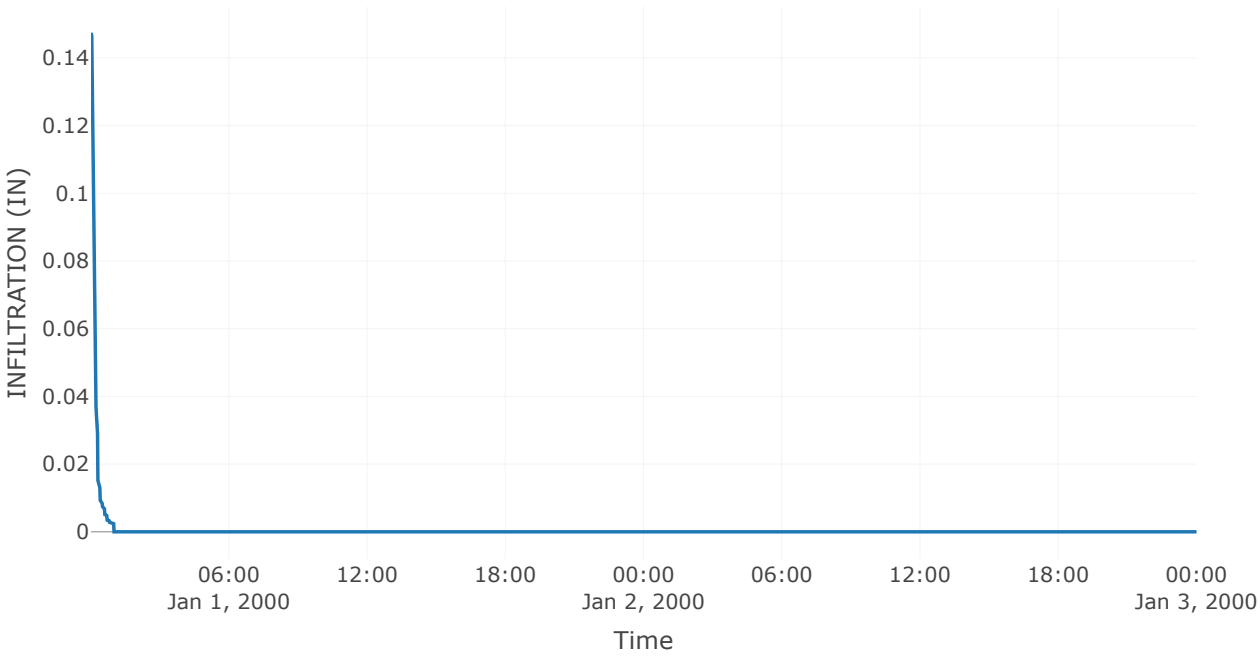



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

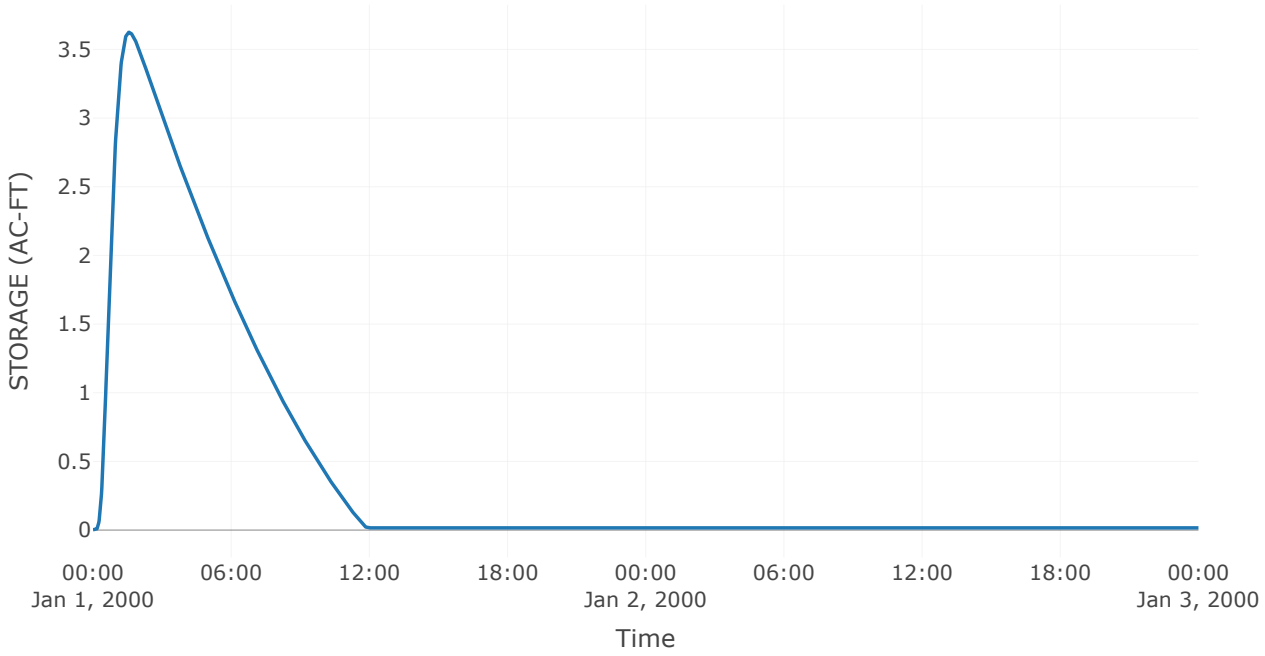

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 1

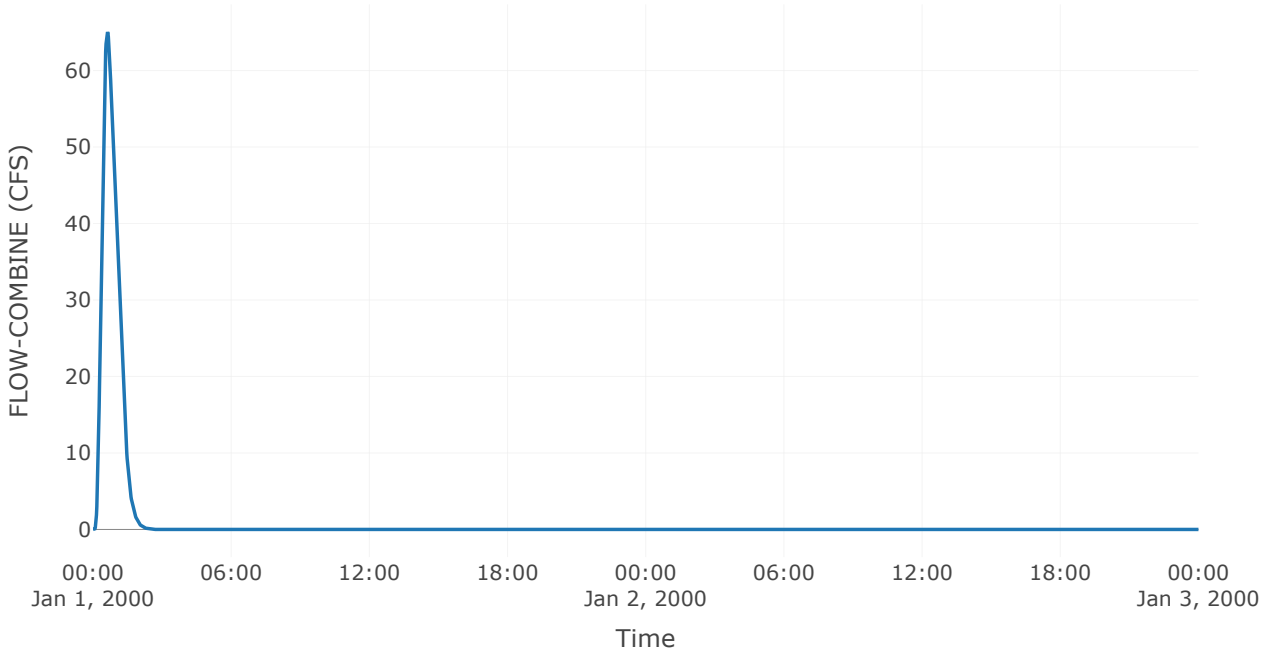
Downstream : Basin 2

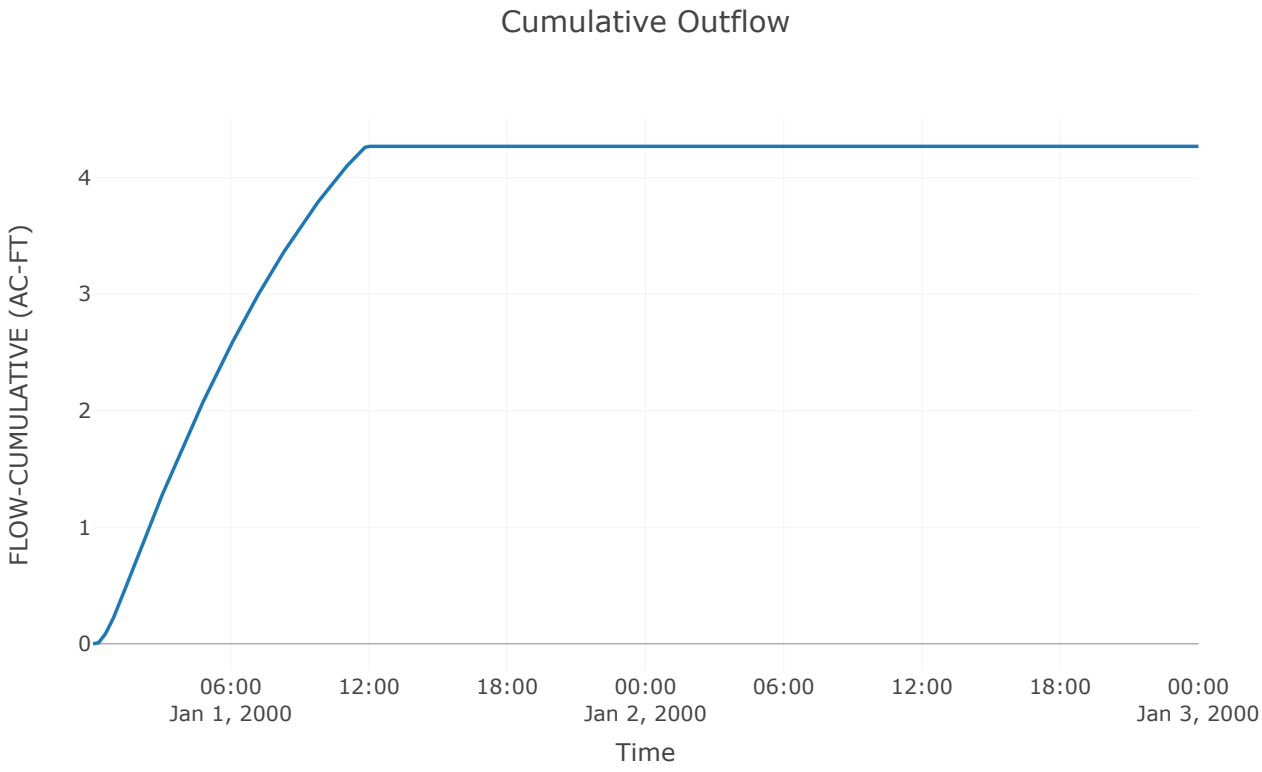
Results: Basin 1	
Peak Discharge (CFS)	6.25
Time of Peak Discharge	01Jan2000, 01:34
Volume (IN)	2.51
Peak Inflow (CFS)	65.04
Time of Peak Inflow	01Jan2000, 00:38
Inflow Volume (AC - FT)	4.28
Maximum Storage (AC - FT)	3.62
Peak Elevation (FT)	699.1
Discharge Volume (AC - FT)	4.27

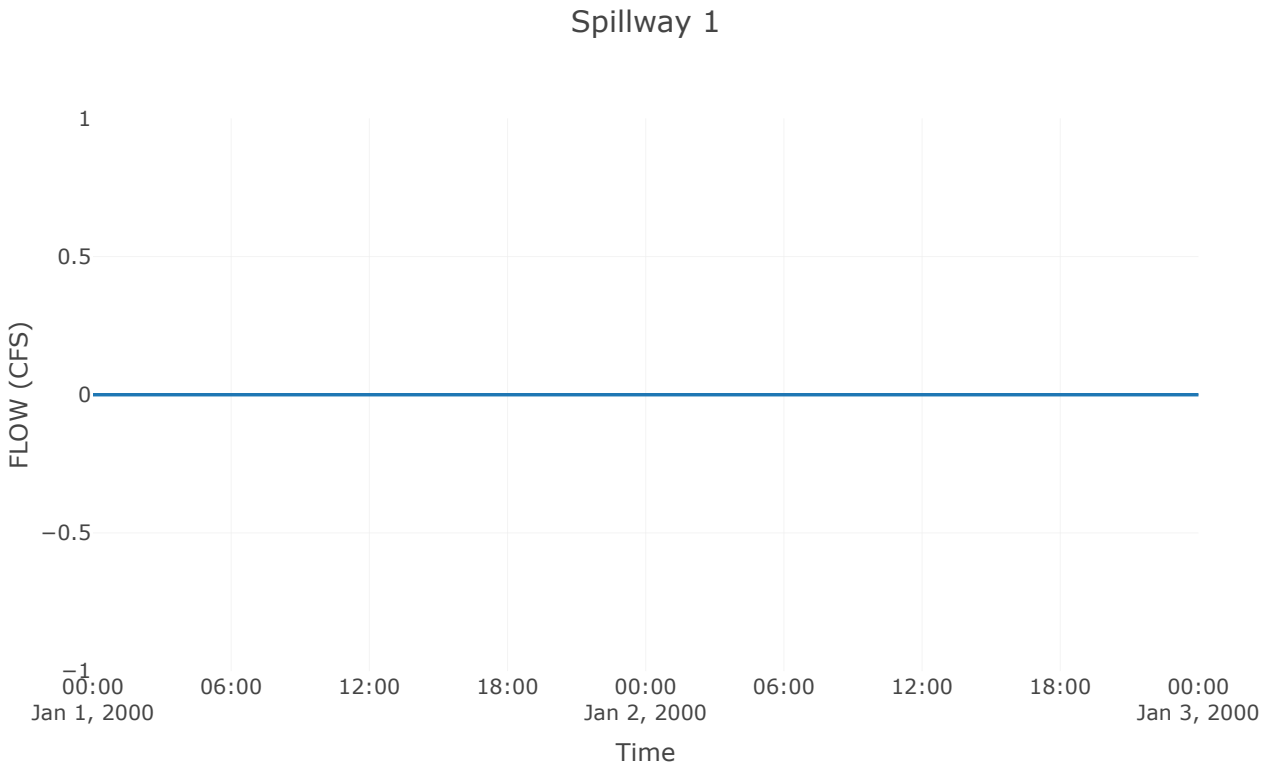
Storage



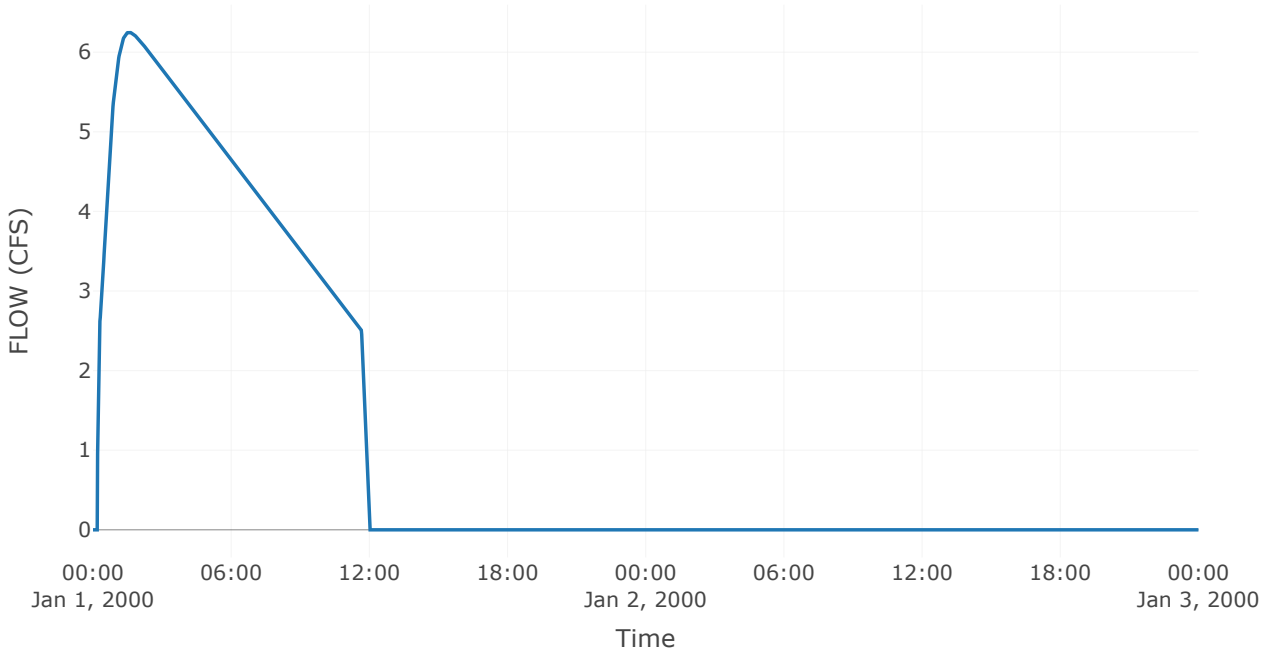
Combined Inflow



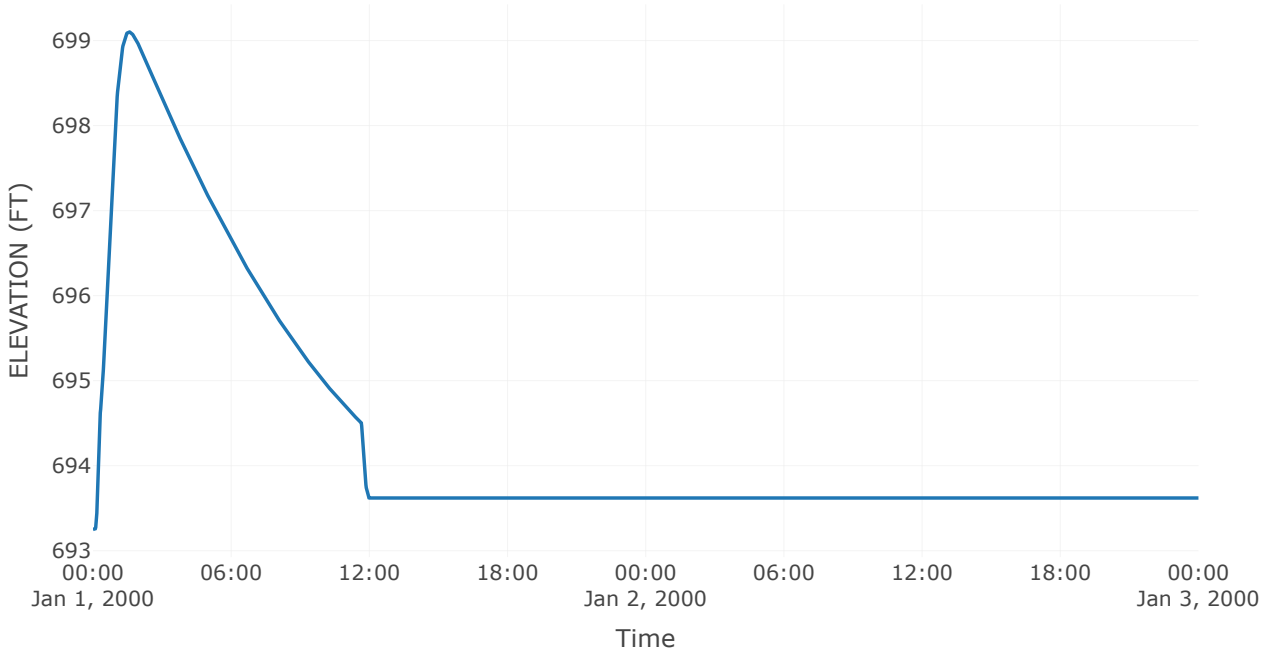

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

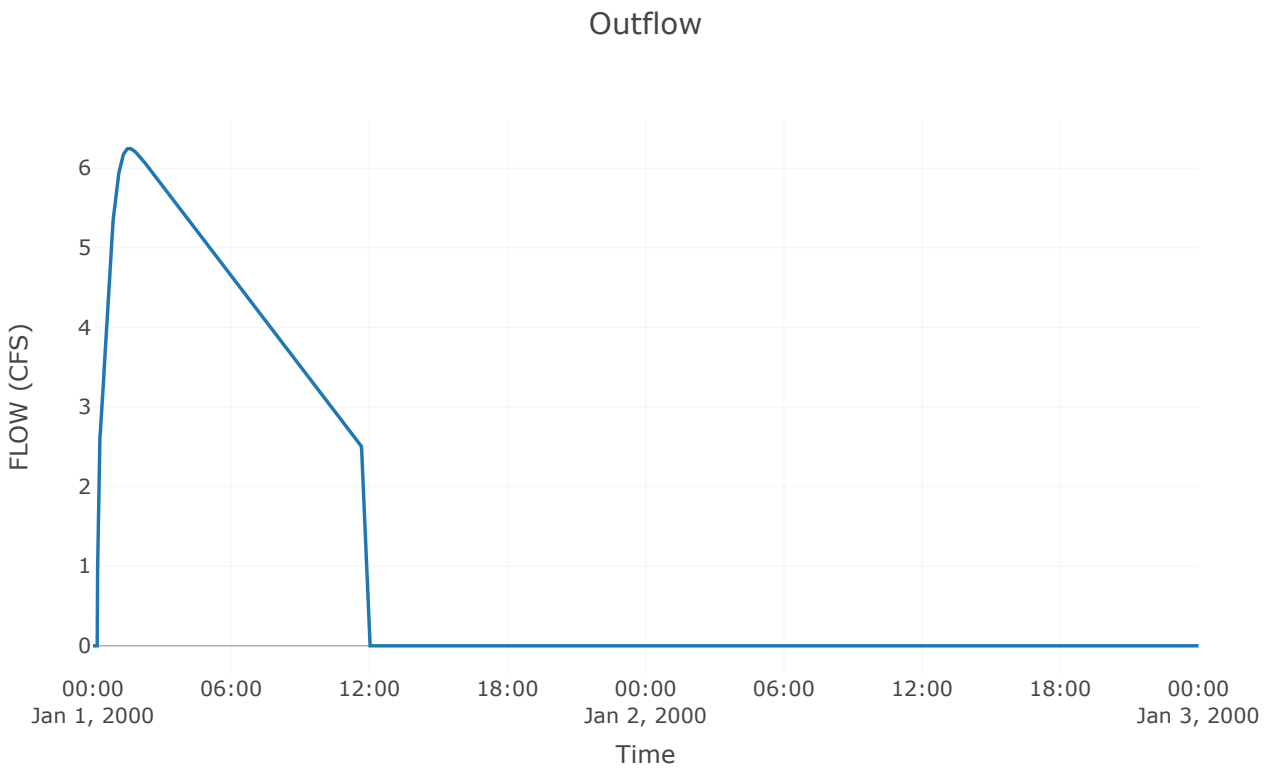

Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
6
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: On-Site Trib 2

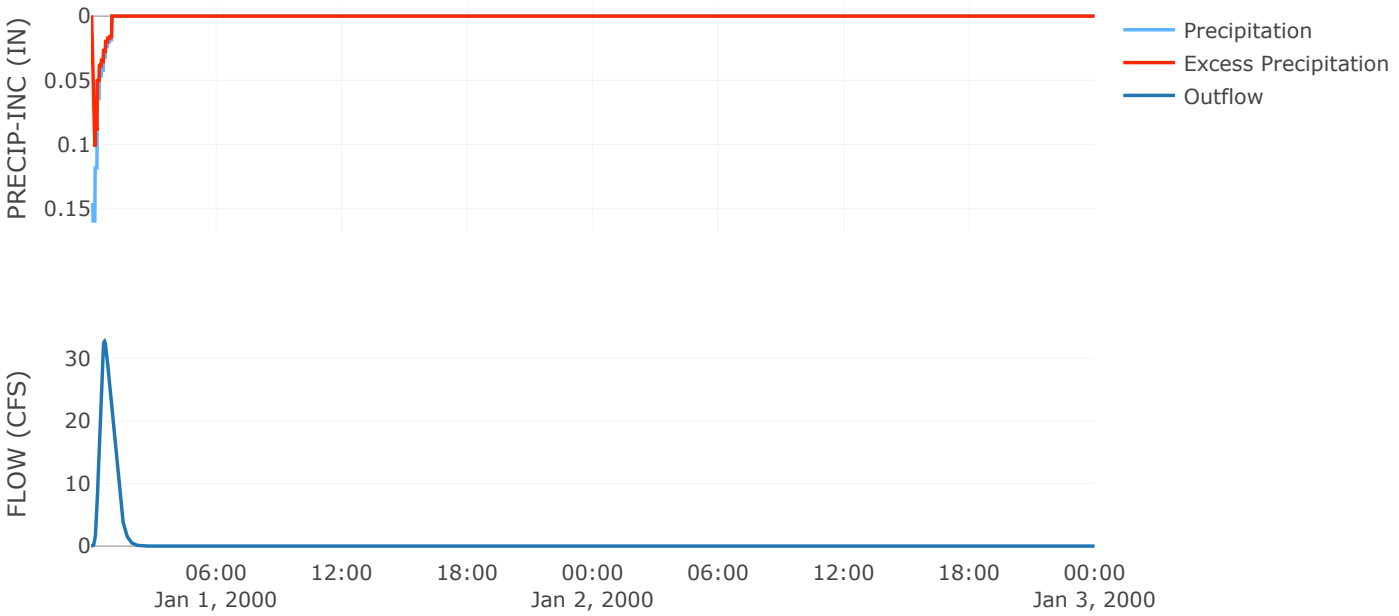
Area (MI2) : 0.02
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

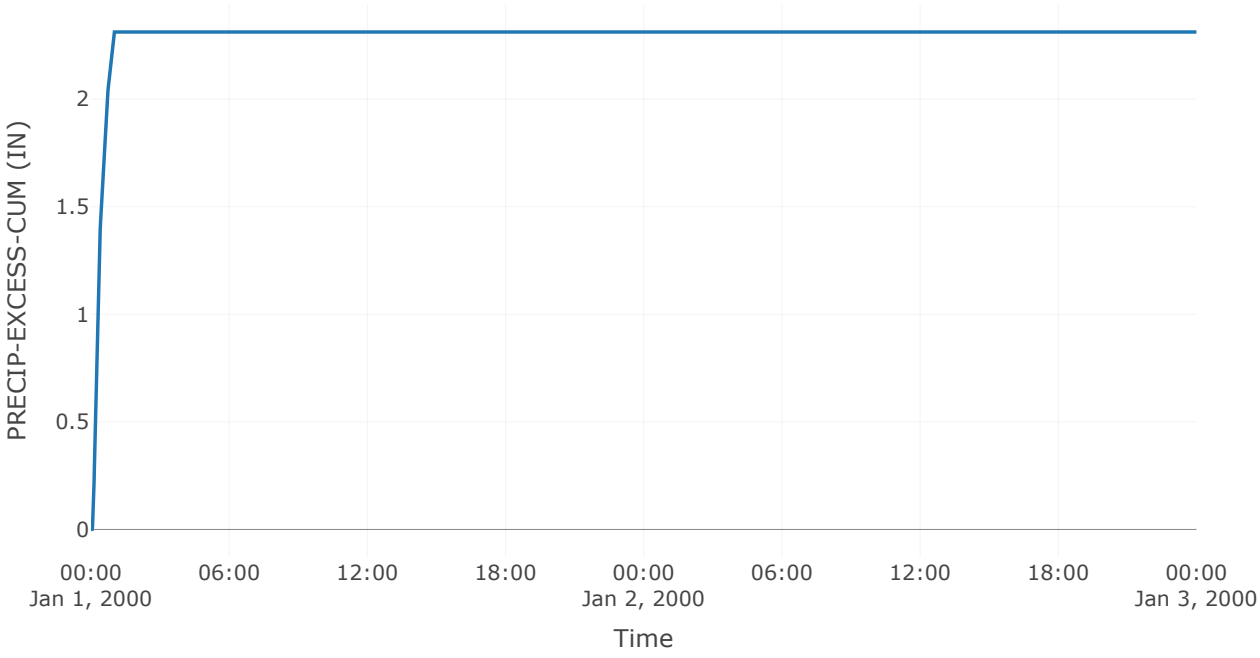
Transform: Scs	
Lag	20.4
Unitgraph Type	Standard

Results: On-Site Trib 2	
Peak Discharge (CFS)	32.72
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	3.69
Loss Volume (AC - FT)	1.57
Excess Volume (AC - FT)	2.12
Direct Runoff Volume (AC - FT)	2.12
Baseflow Volume (AC - FT)	0

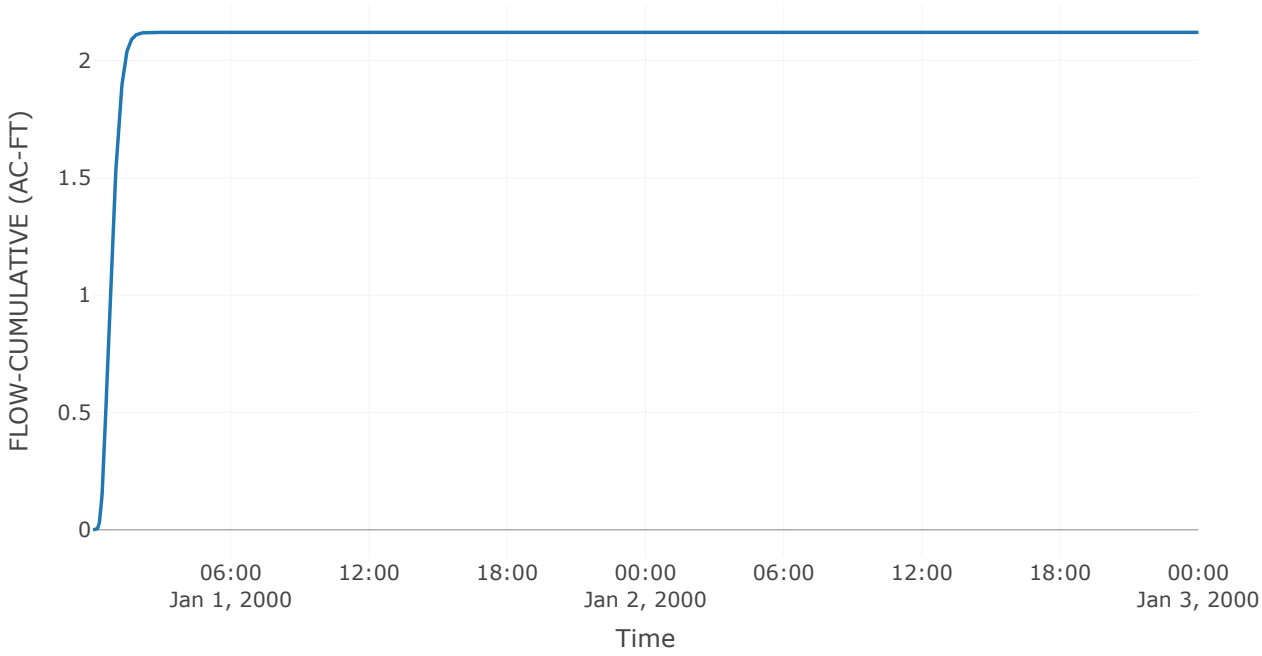
Precipitation and Outflow



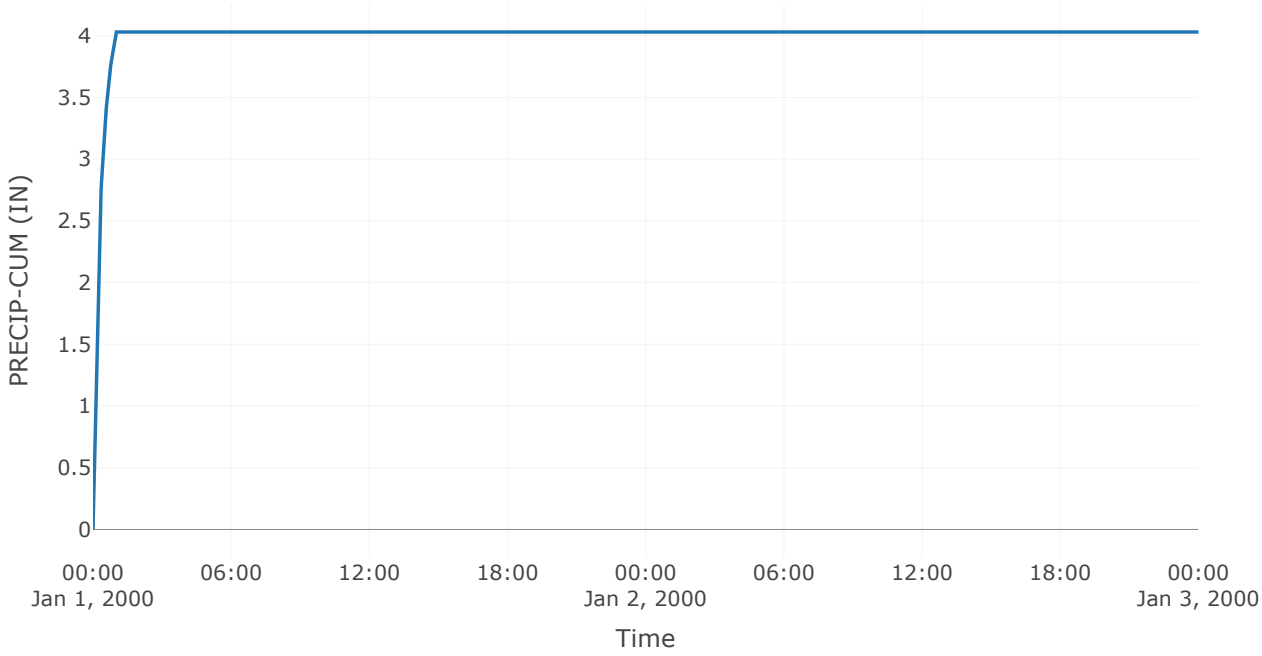
Cumulative Excess Precipitation

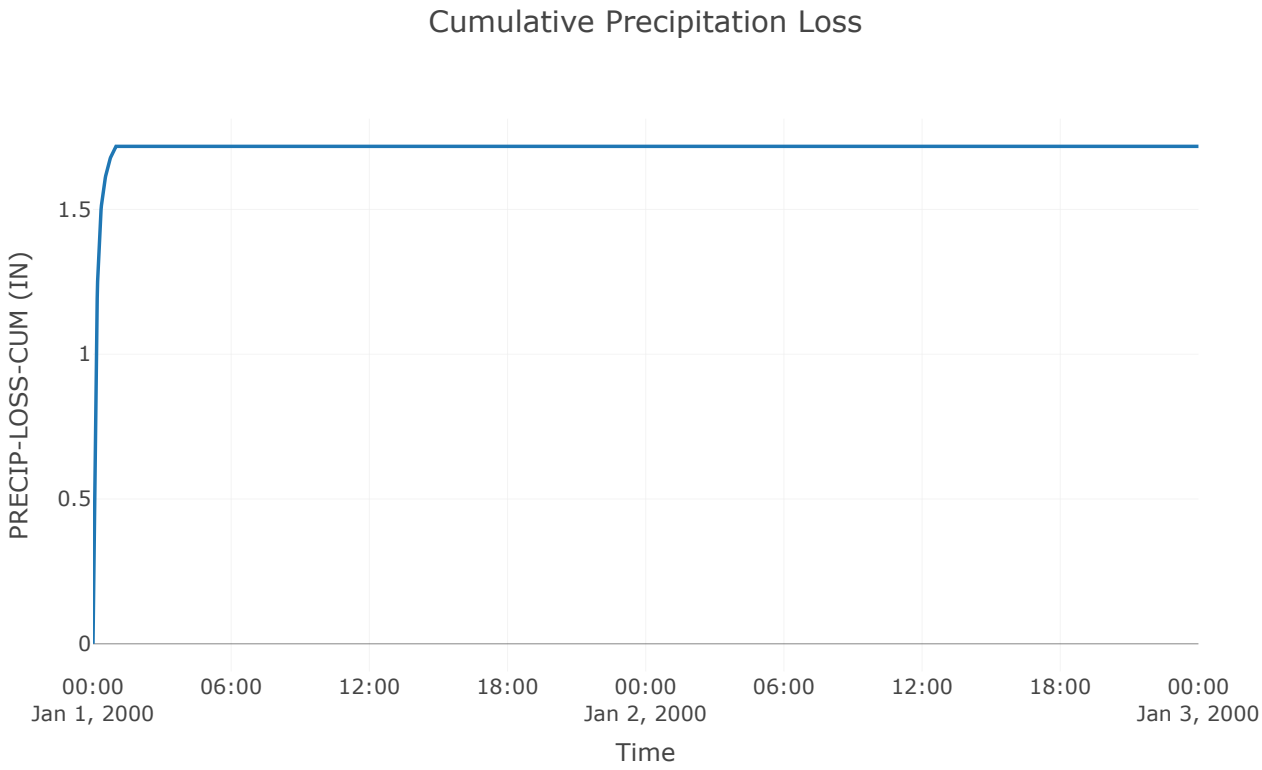


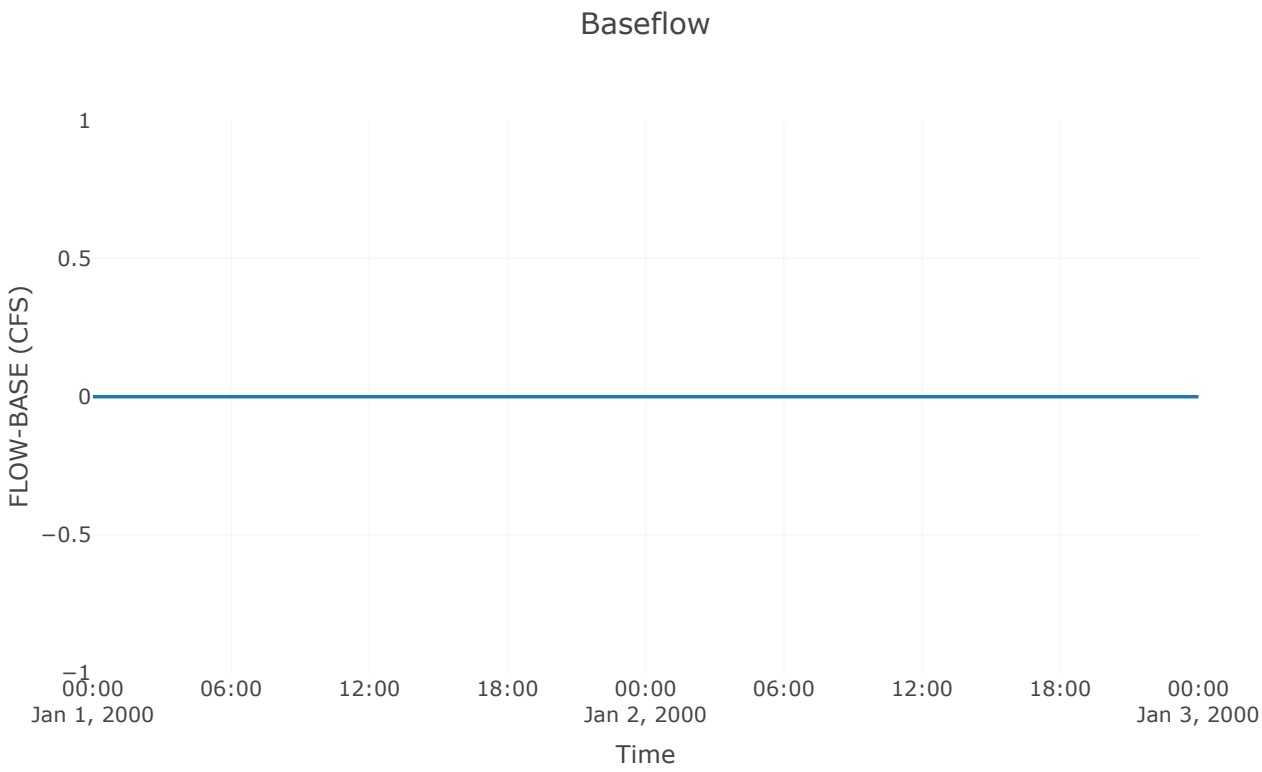
Cumulative Outflow

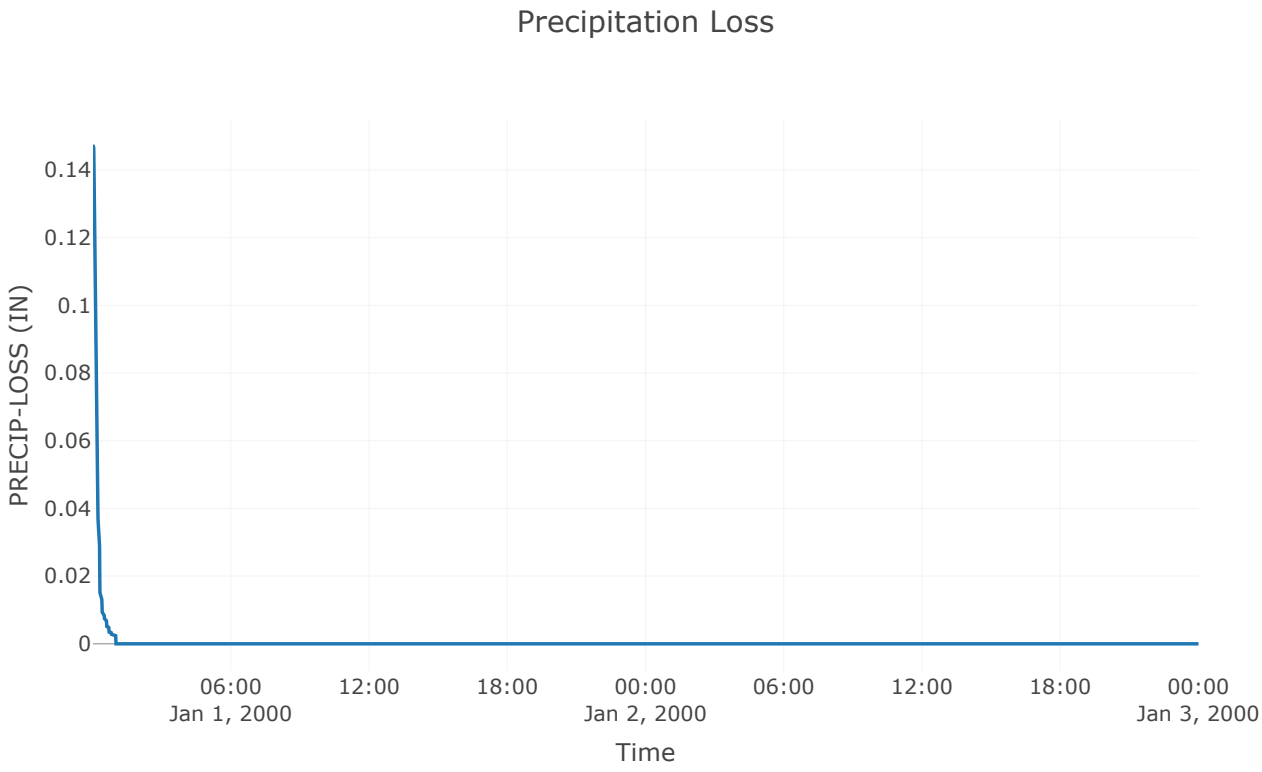


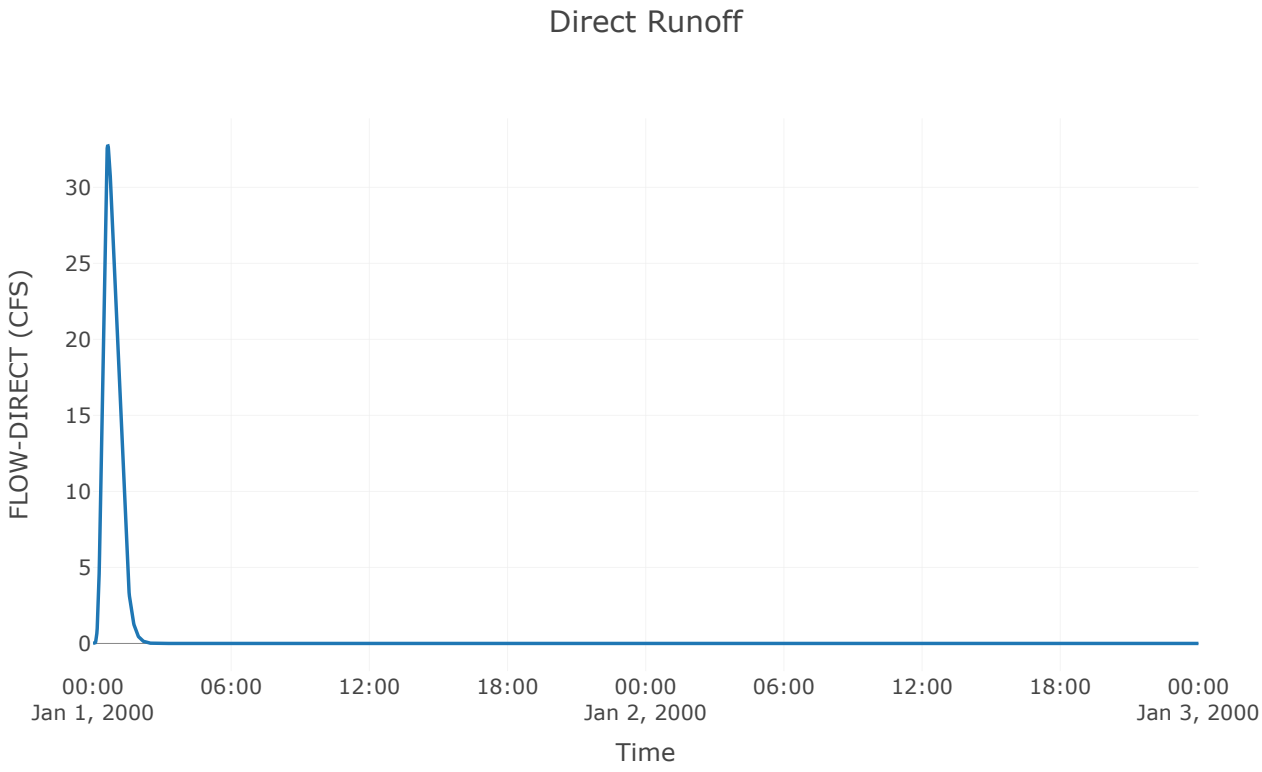
Cumulative Precipitation

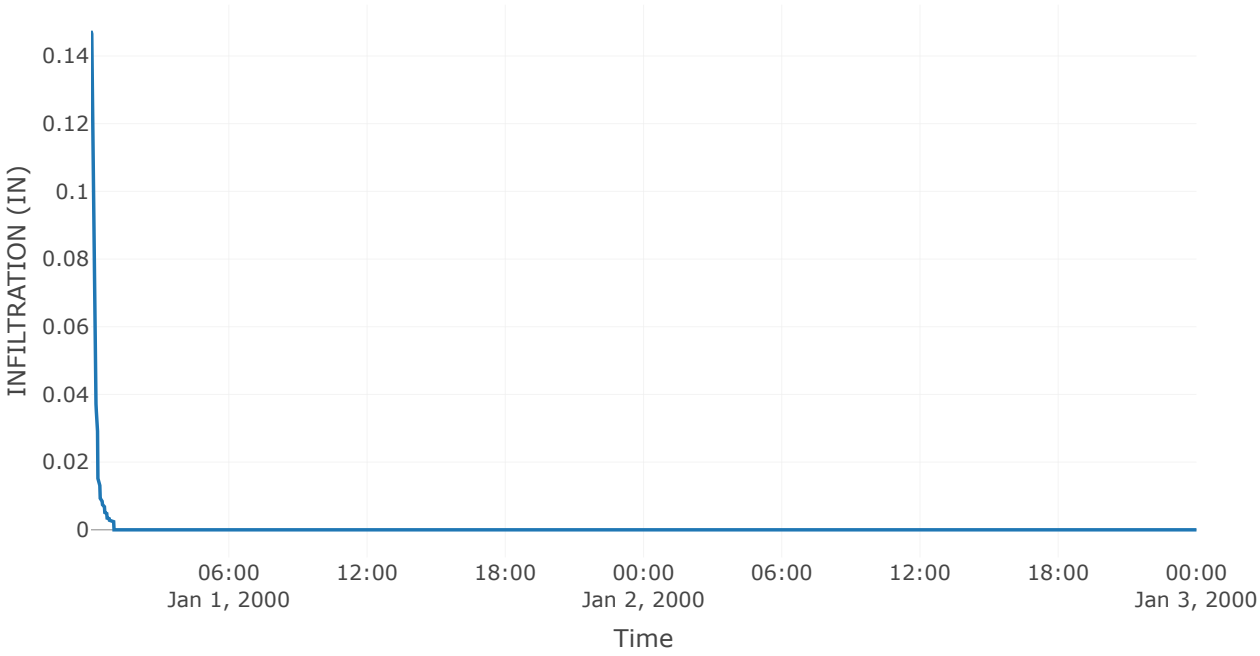



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
30
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Off-Site Trib2

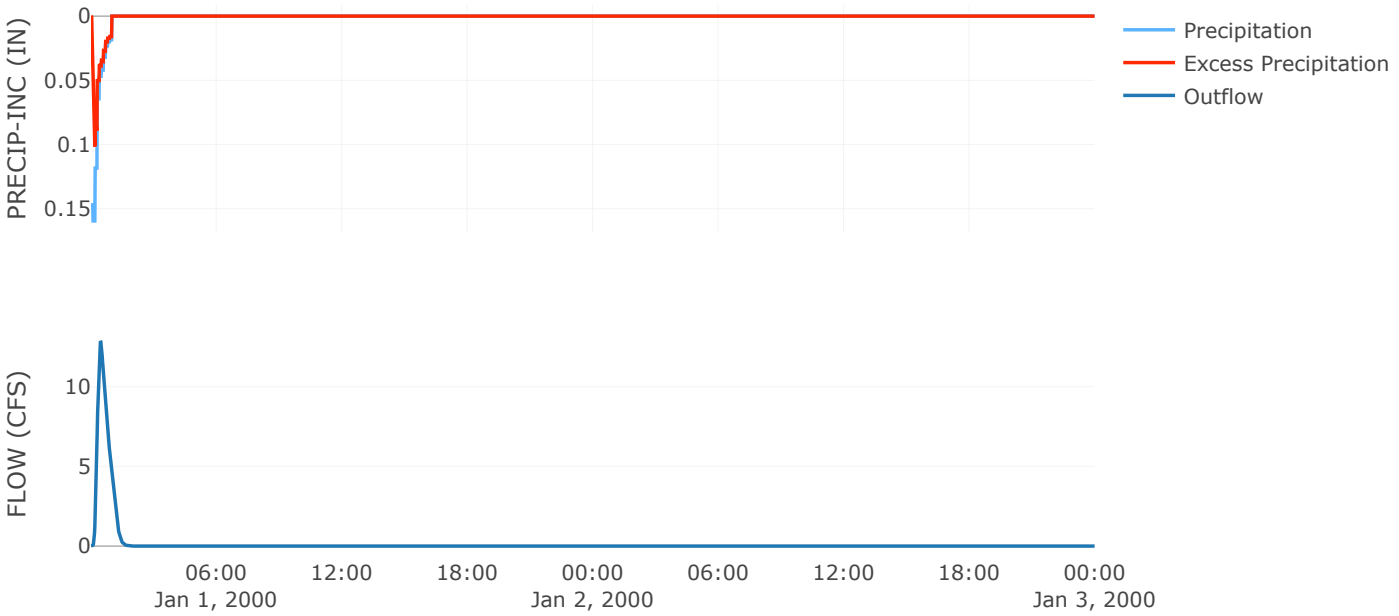
Area (MI2) : 0.01
Downstream : Basin 2

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

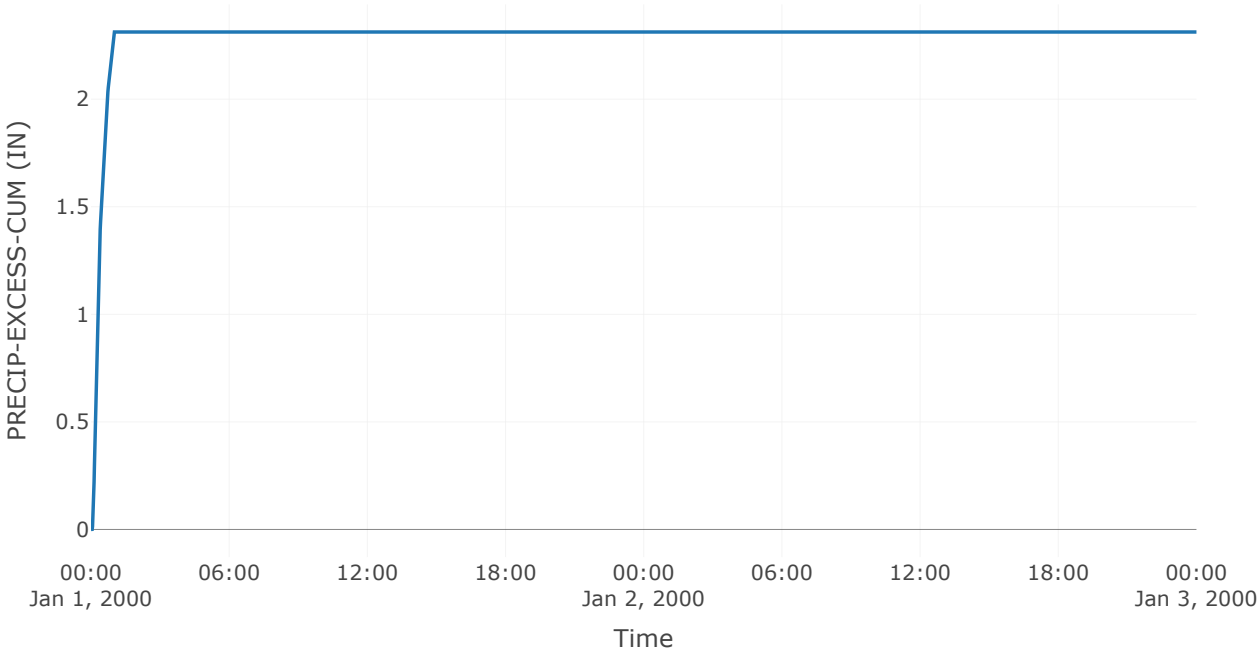
Transform: Scs	
Lag	12
Unitgraph Type	Standard

Results: Off-Site Trib2	
Peak Discharge (CFS)	12.85
Time of Peak Discharge	01Jan2000, 00:27
Volume (IN)	2.31
Precipitation Volume (AC - FT)	1.14
Loss Volume (AC - FT)	0.49
Excess Volume (AC - FT)	0.65
Direct Runoff Volume (AC - FT)	0.65
Baseflow Volume (AC - FT)	0

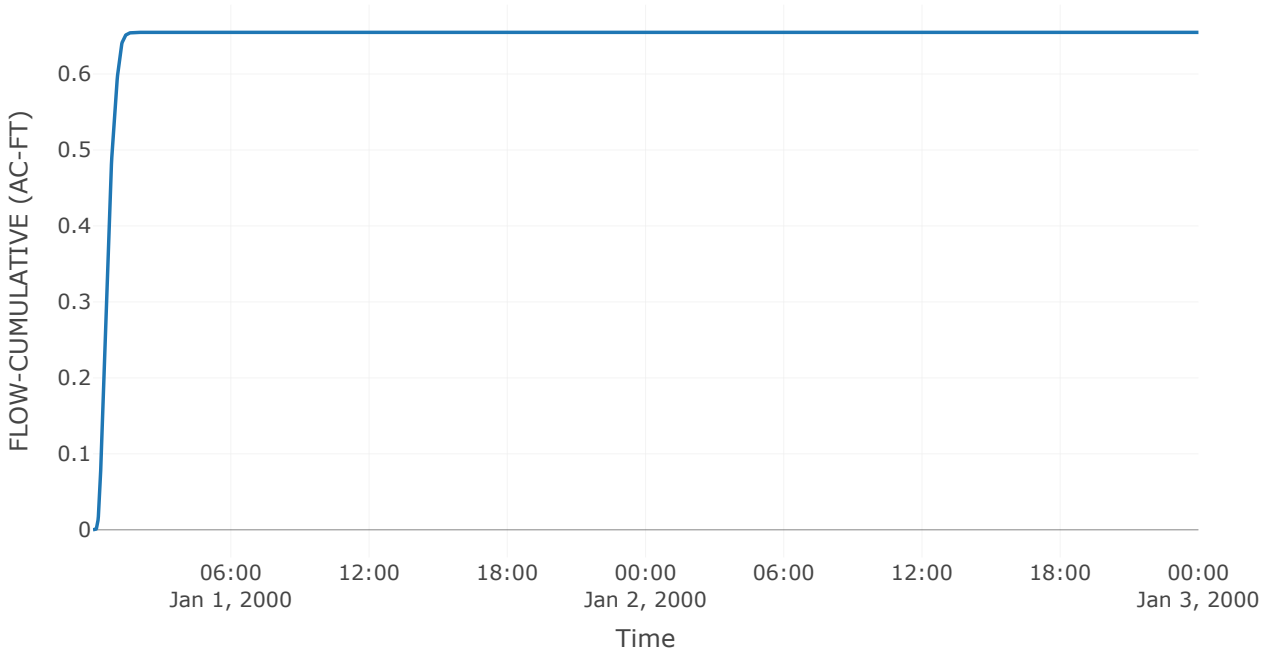
Precipitation and Outflow



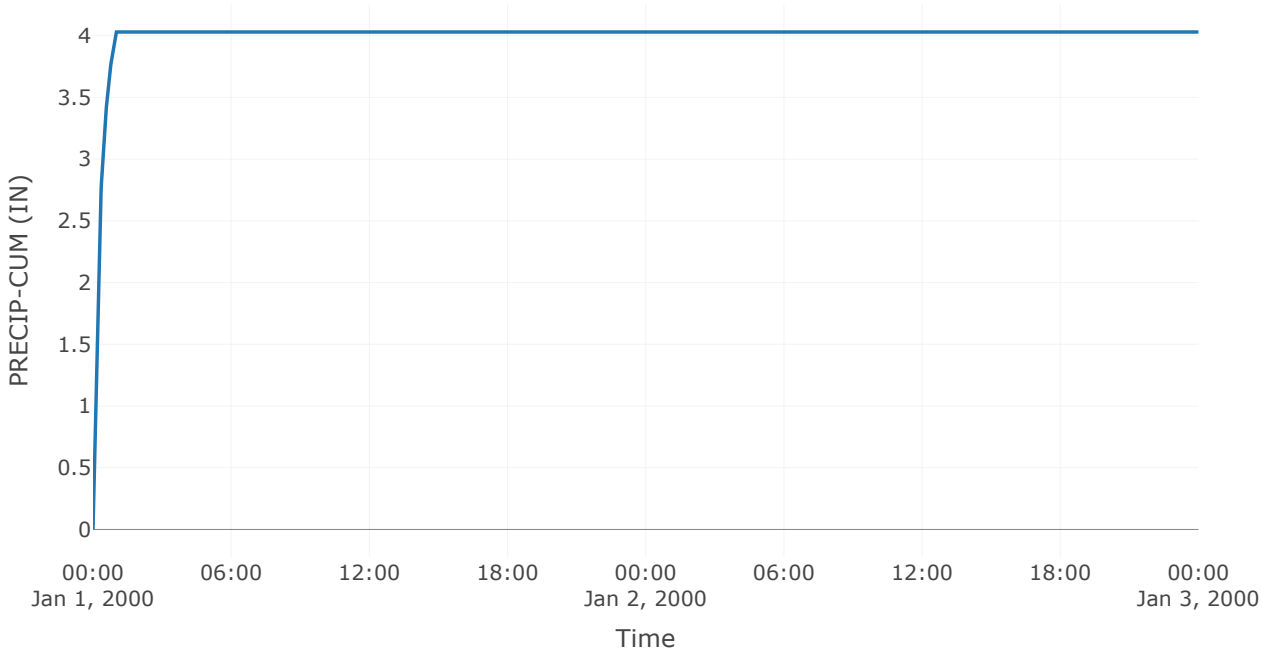
Cumulative Excess Precipitation

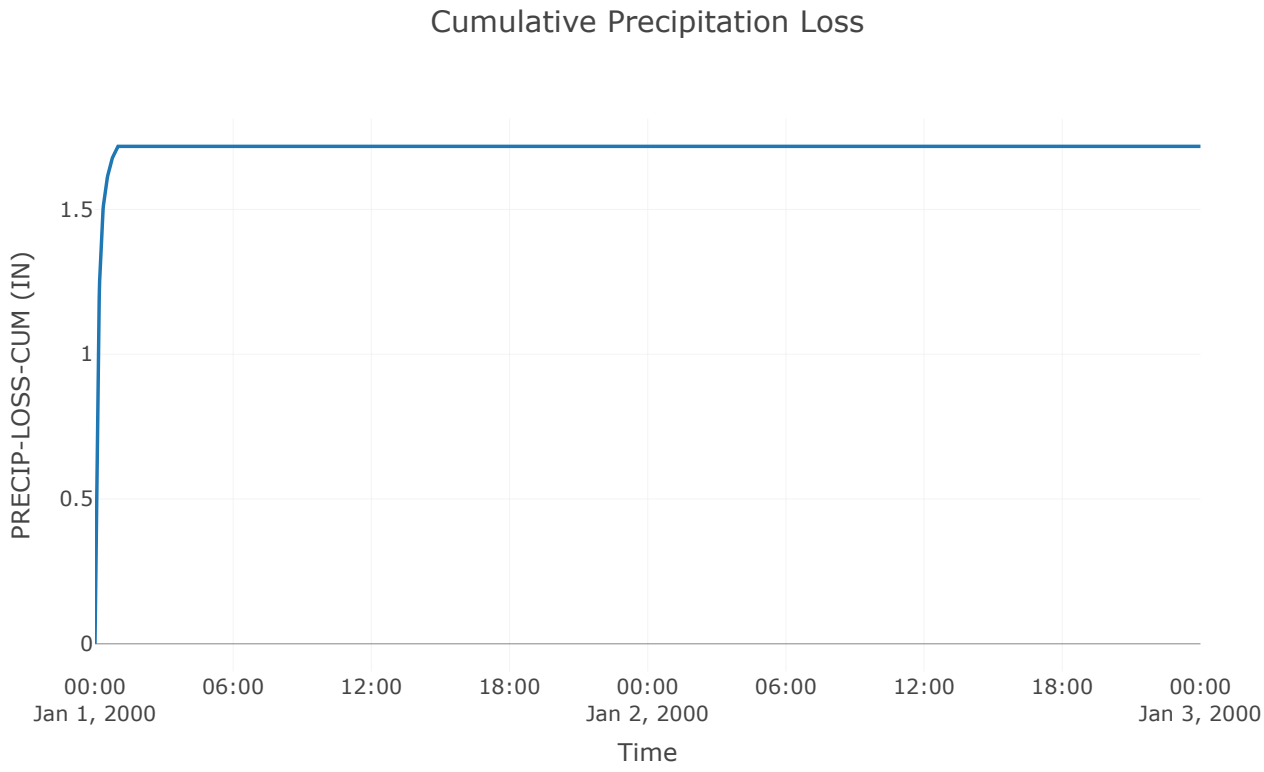


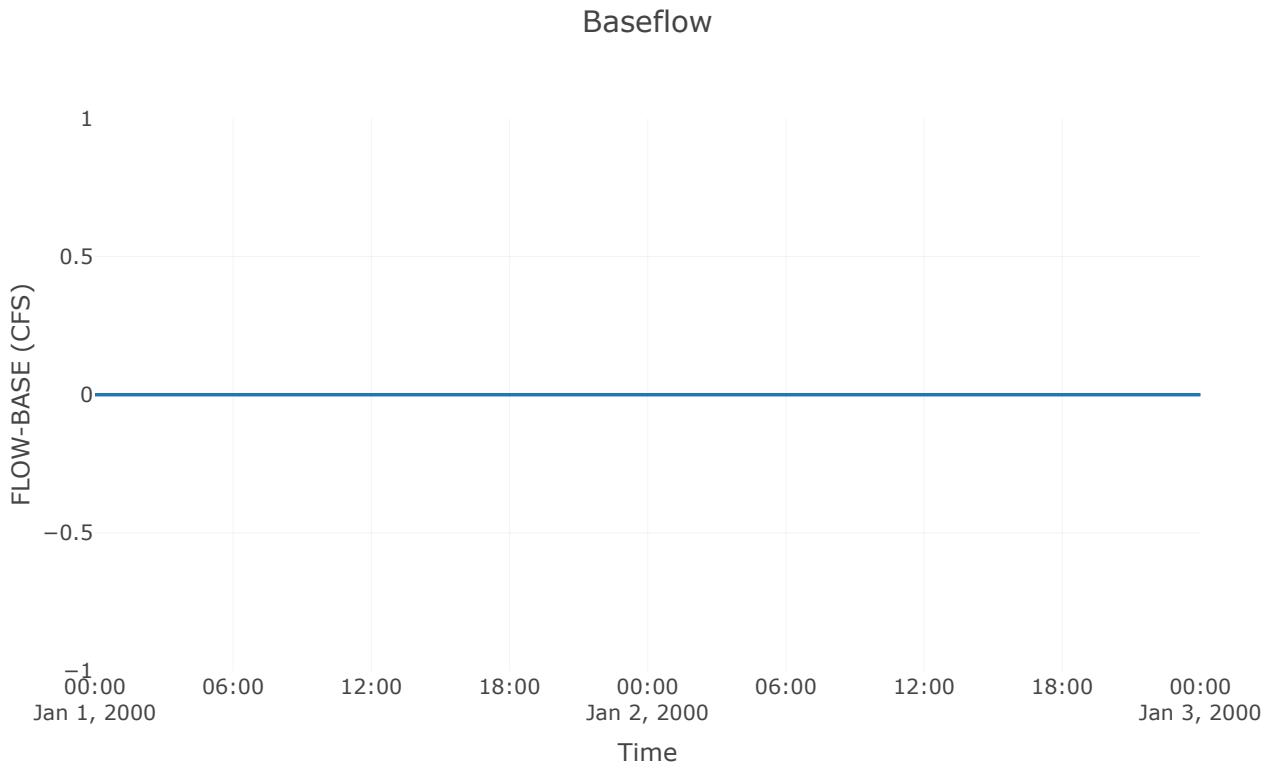
Cumulative Outflow

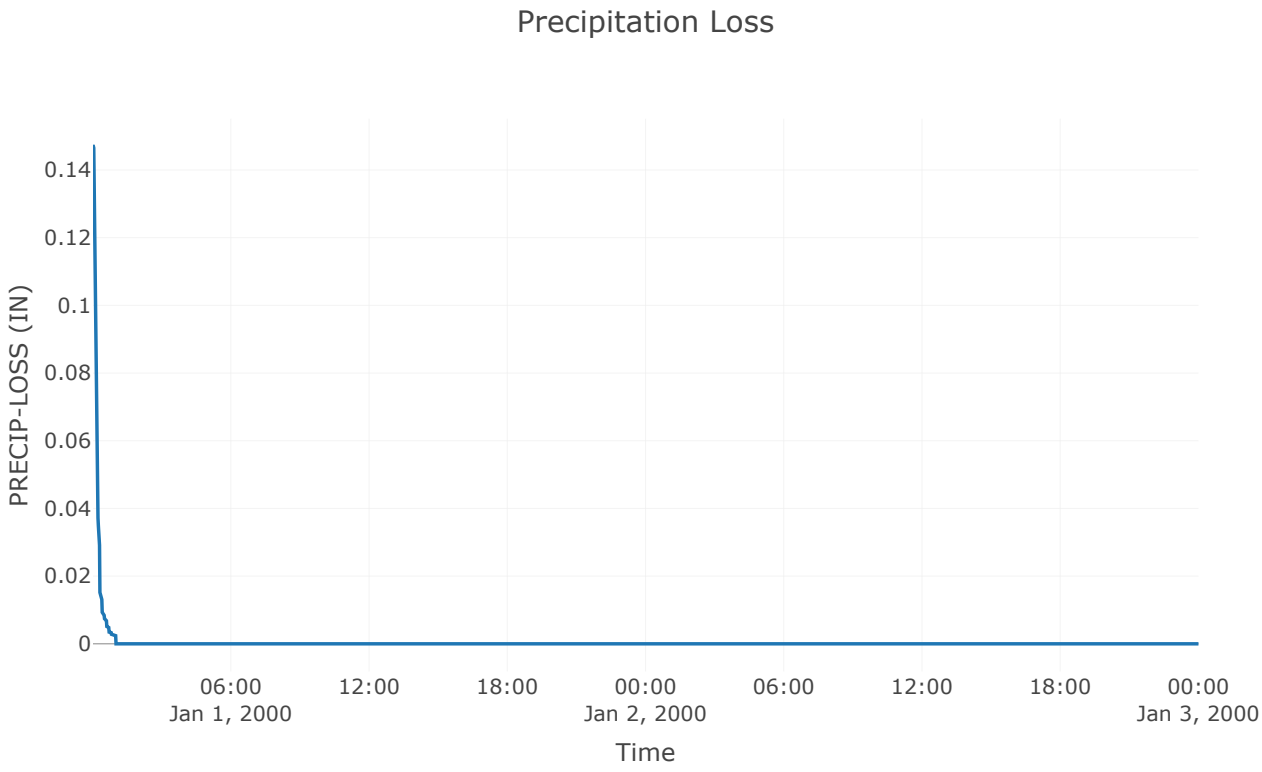


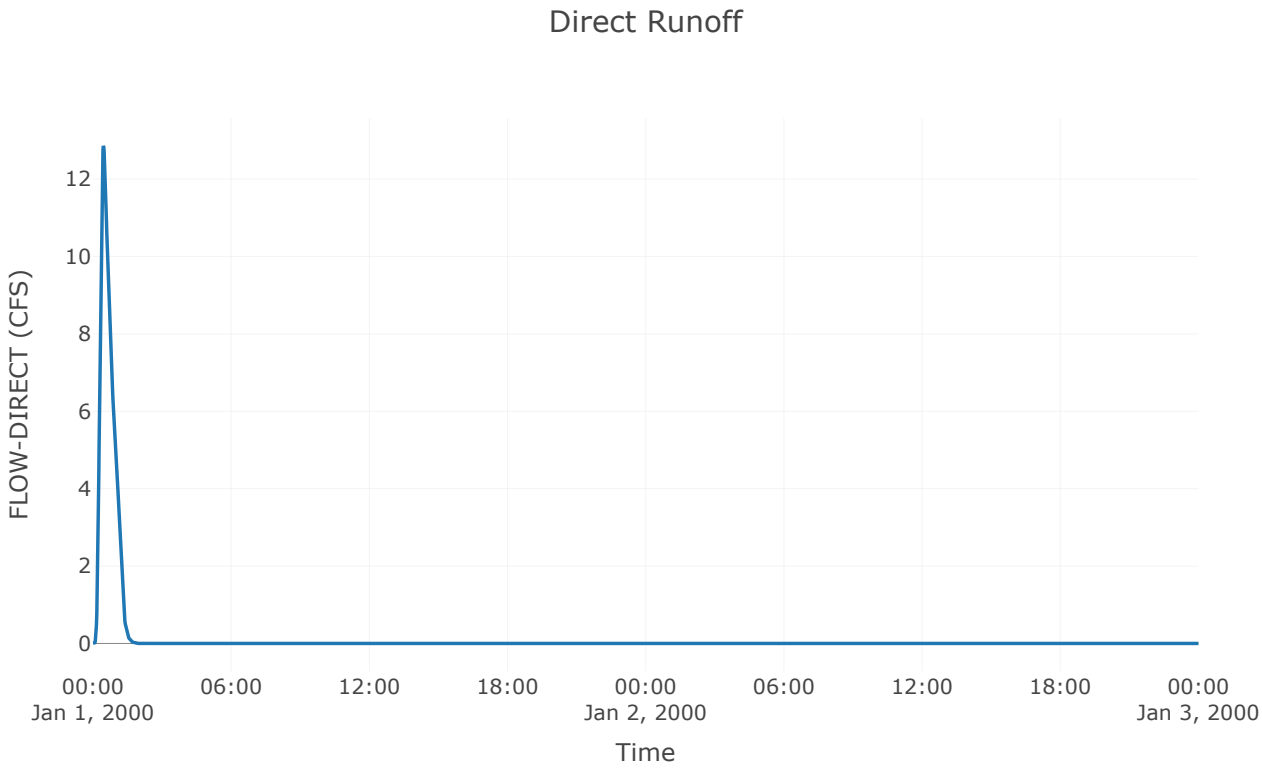
Cumulative Precipitation

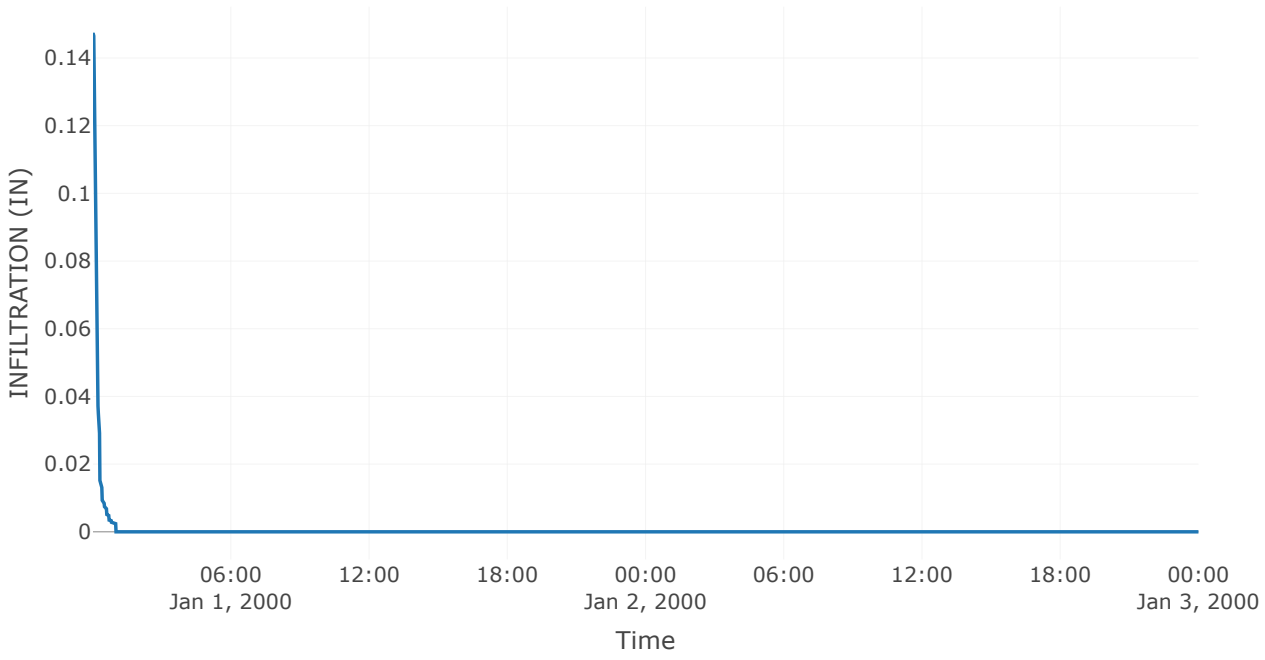



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
12
10
8
6
4
2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

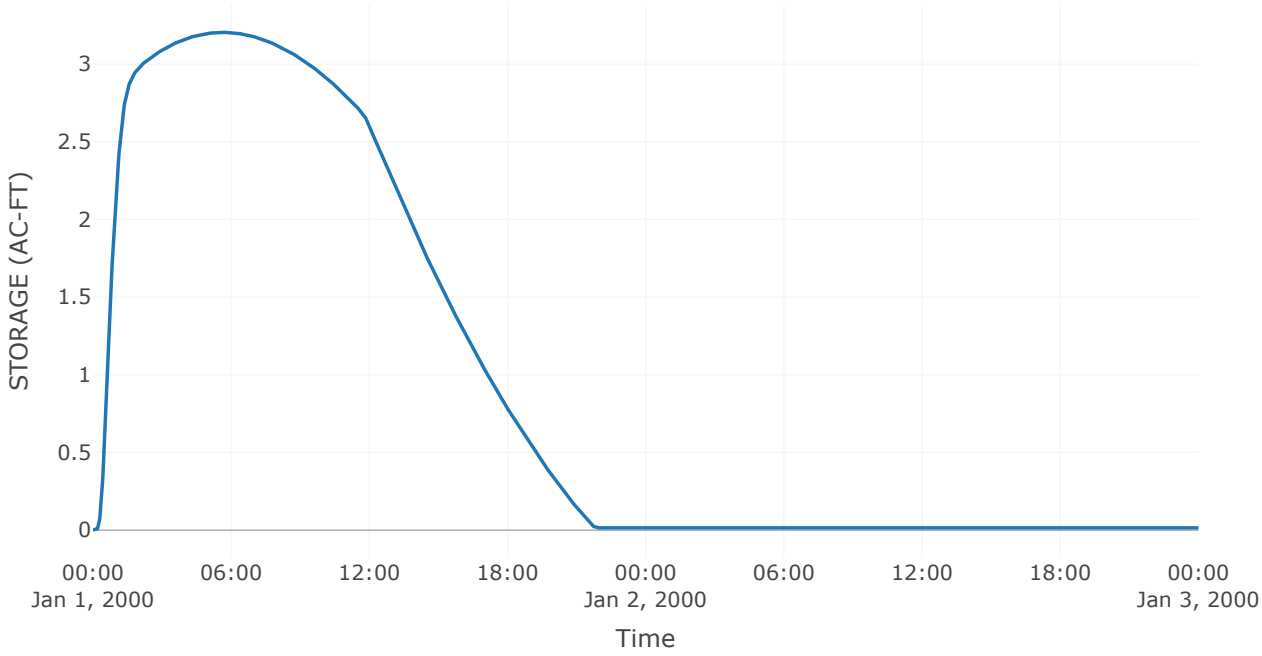

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Basin 2

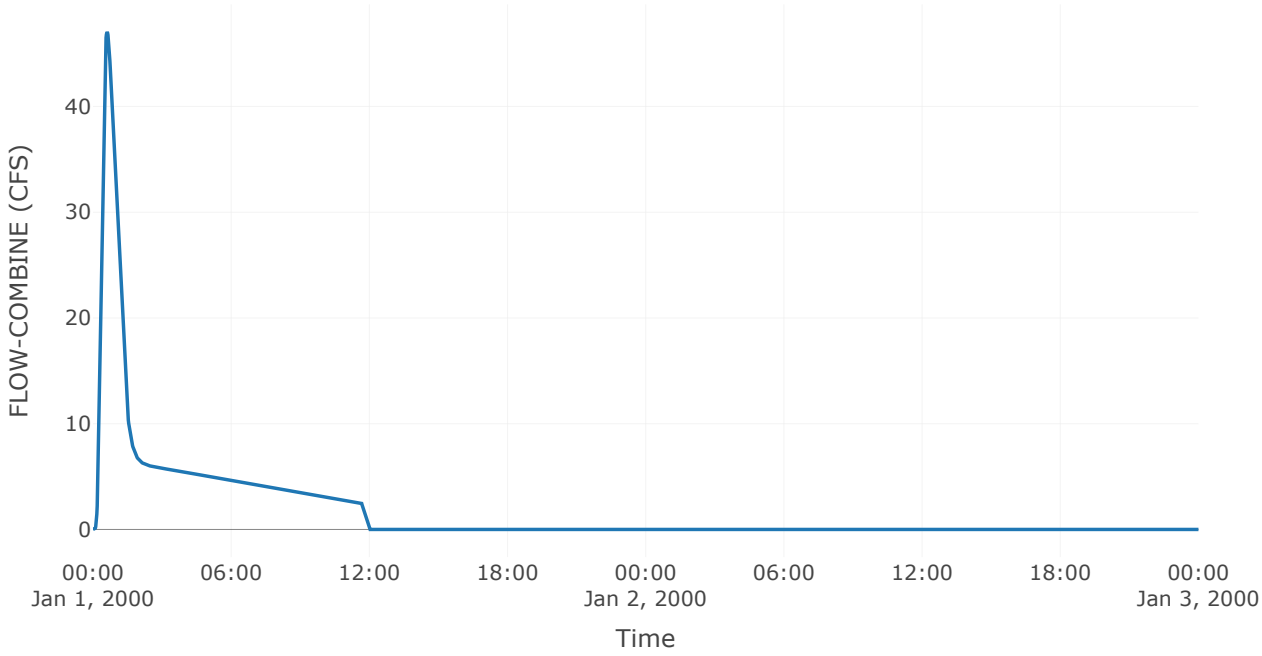
Downstream : Basin 3

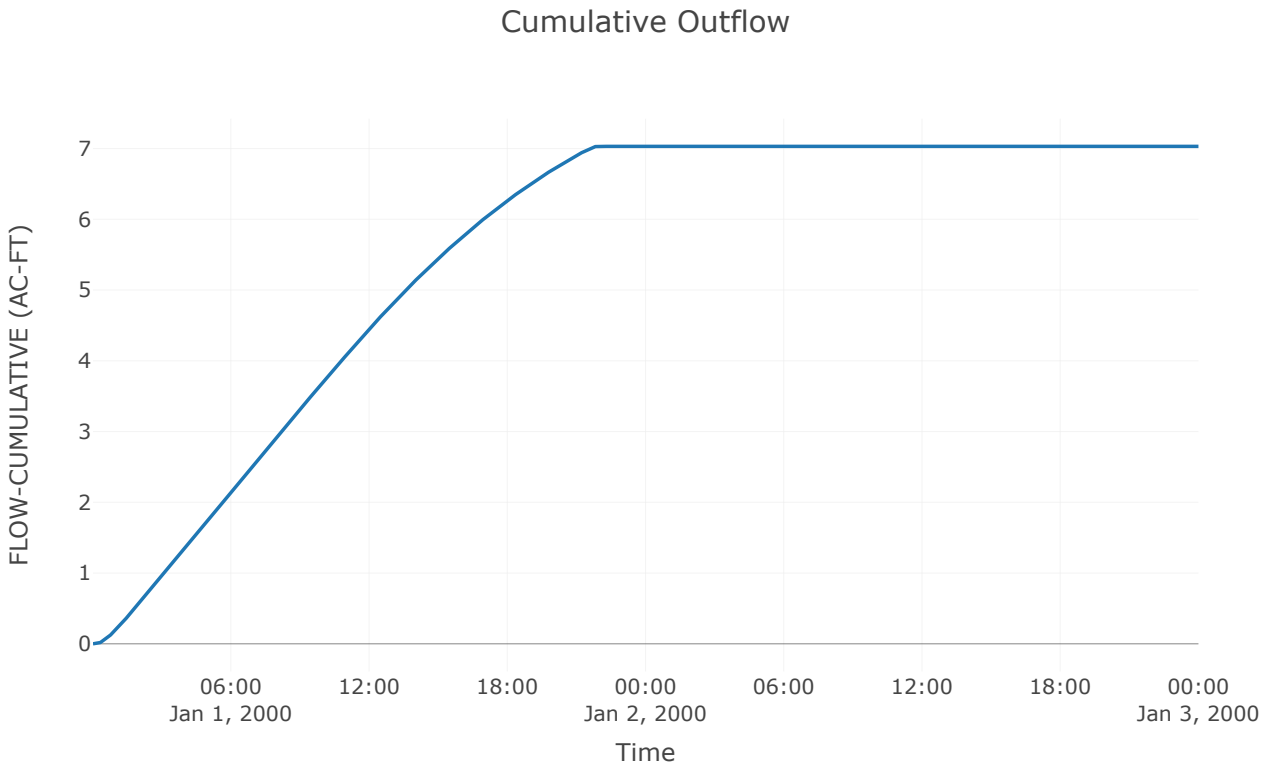
Results: Basin 2	
Peak Discharge (CFS)	4.79
Time of Peak Discharge	01Jan2000, 05:38
Volume (IN)	2.42
Peak Inflow (CFS)	47.05
Time of Peak Inflow	01Jan2000, 00:37
Inflow Volume (AC - FT)	7.04
Maximum Storage (AC - FT)	3.2
Peak Elevation (FT)	695.48
Discharge Volume (AC - FT)	7.03

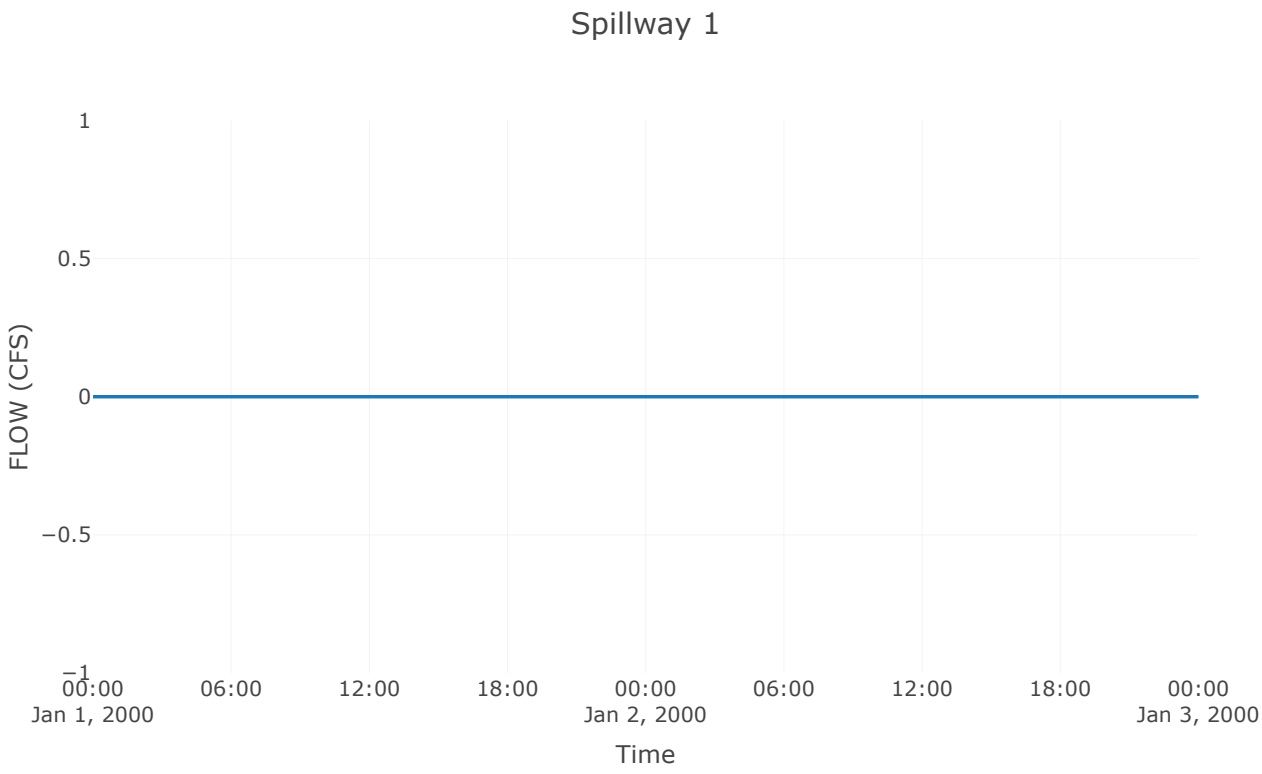
Storage

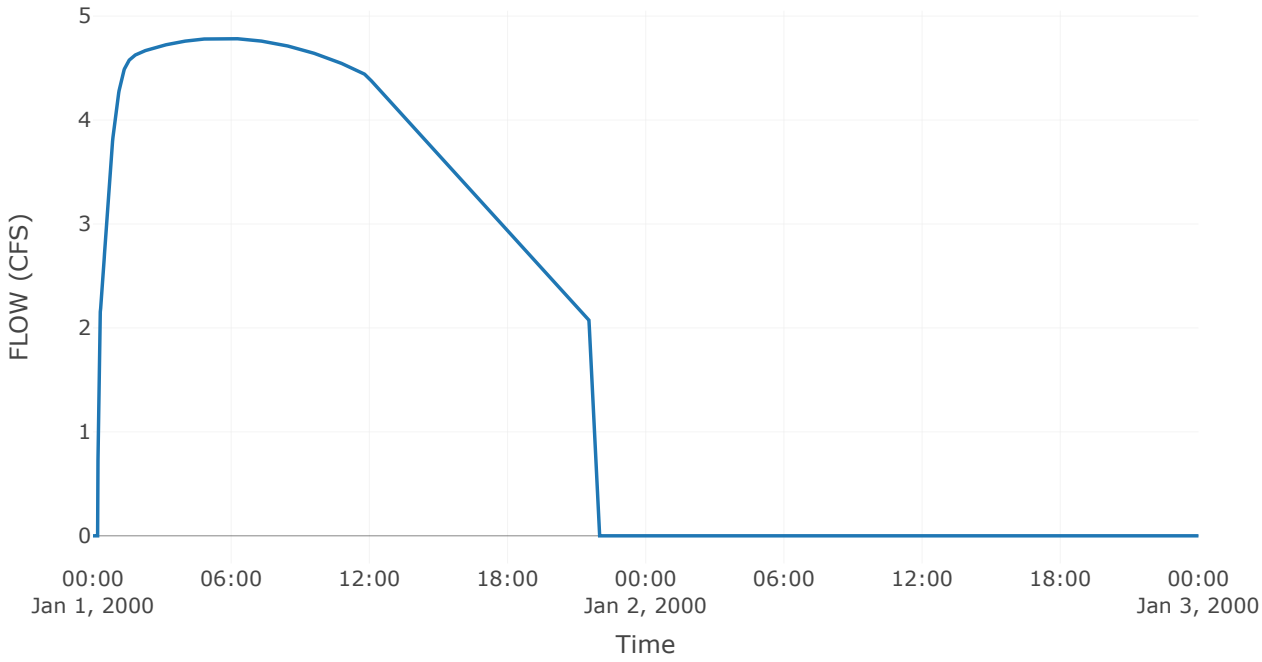


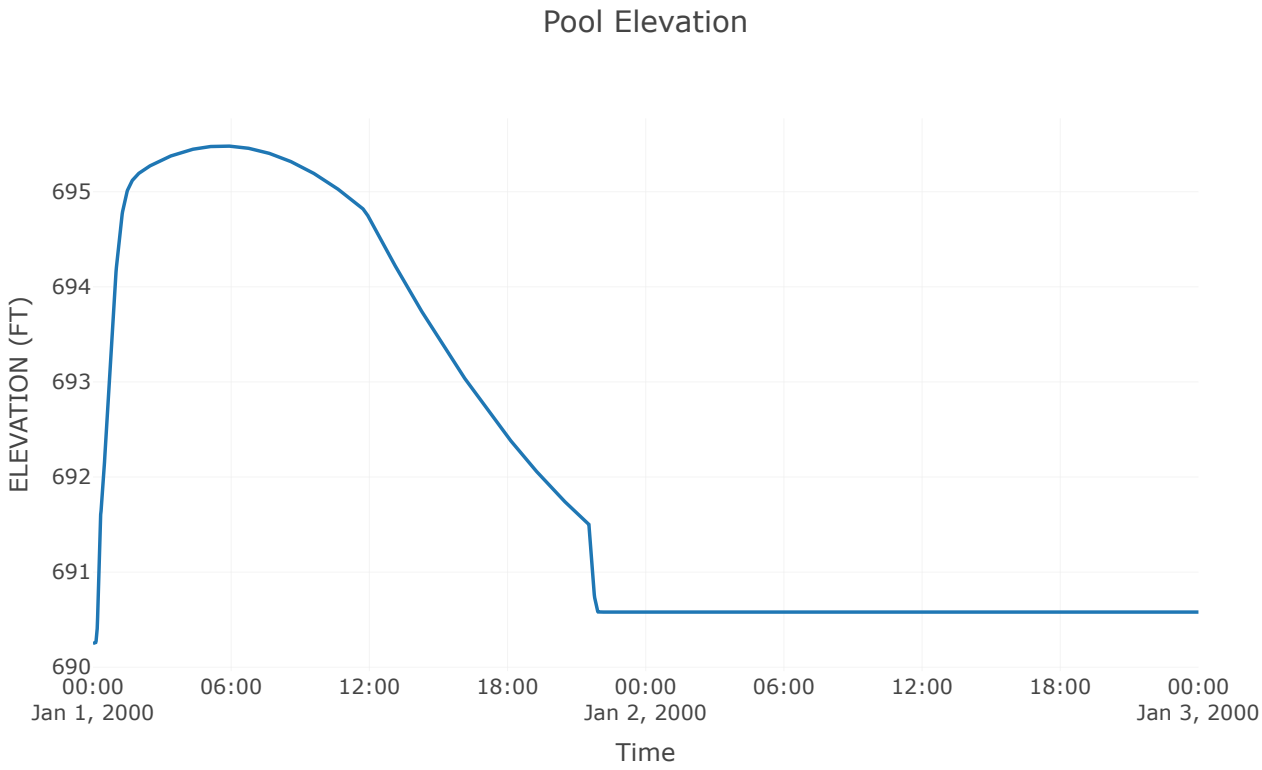
Combined Inflow

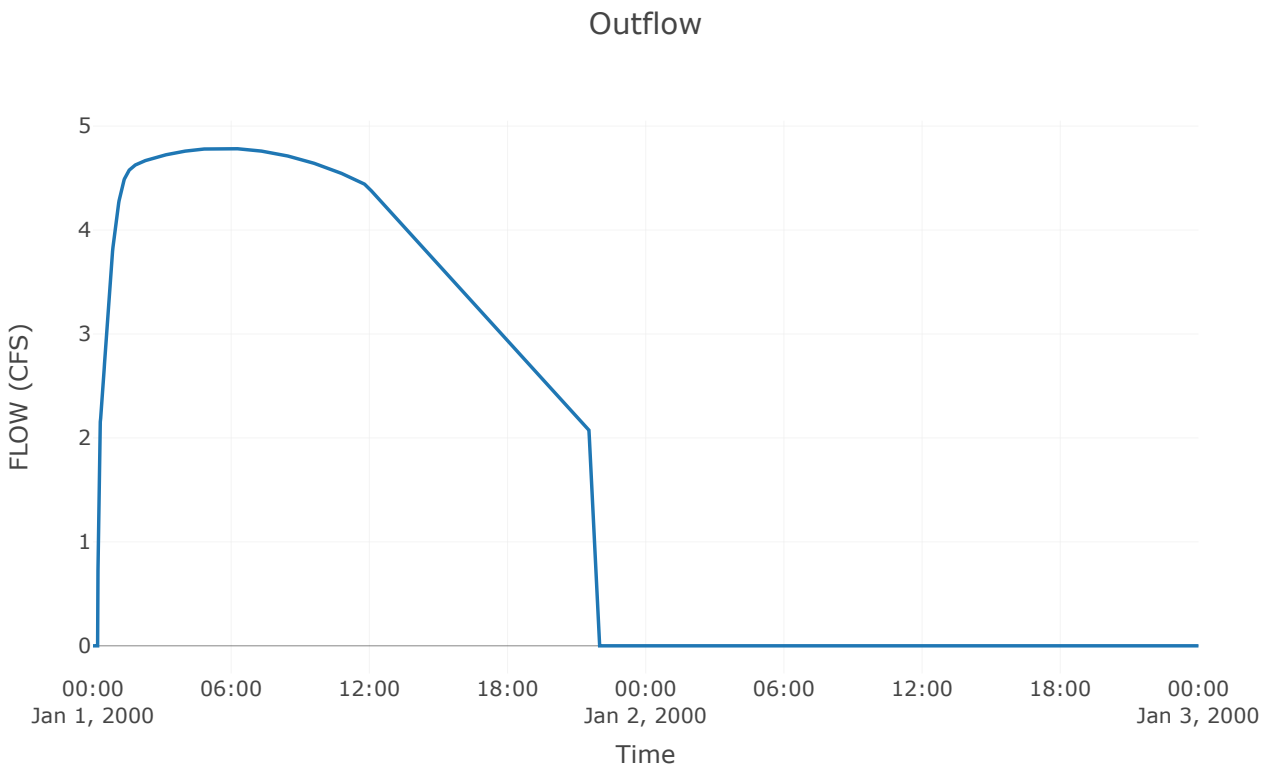



Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Spillway 1
FLOW (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outlet 1
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Pool Elevation
ELEVATION (FT)
695
694
693
692
691
690
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
FLOW (CFS)
5
4
3
2
1
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

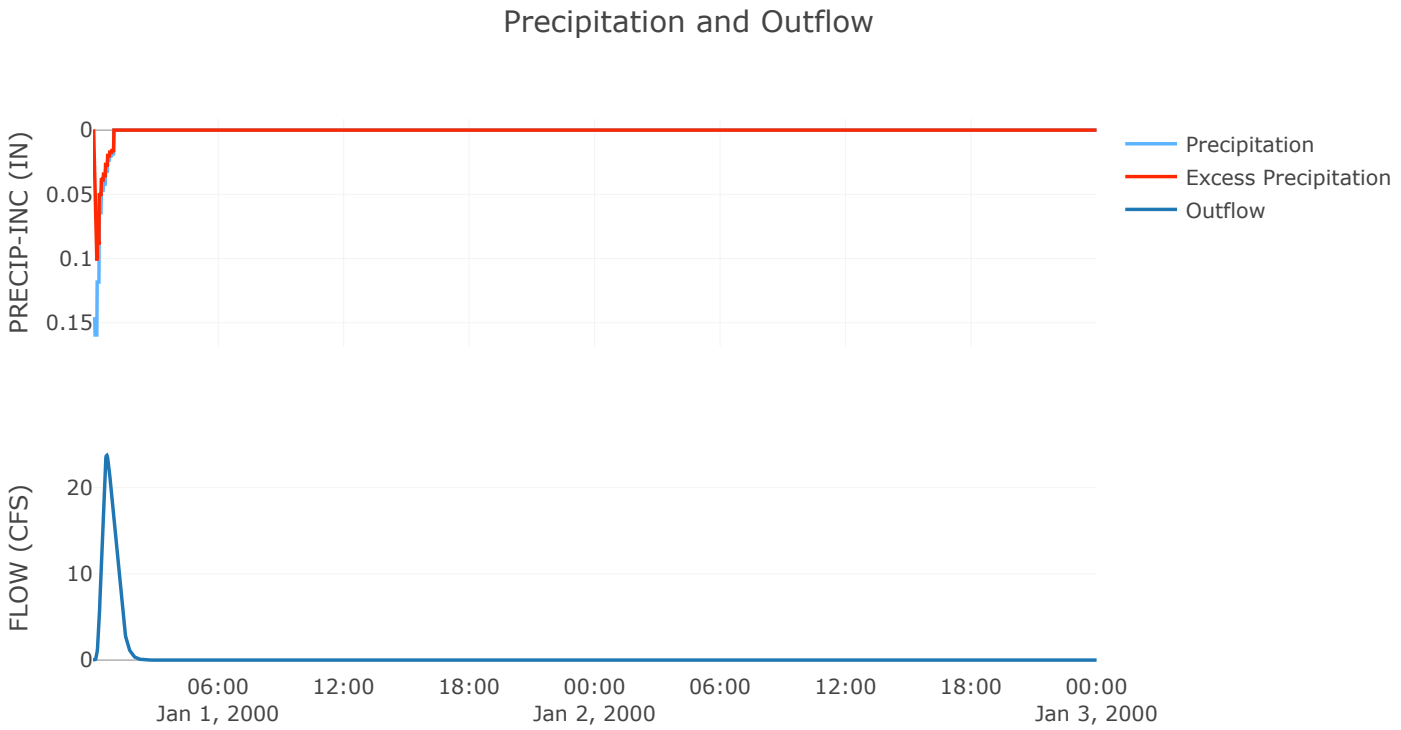
Subbasin: On-Site Trib-Area 3

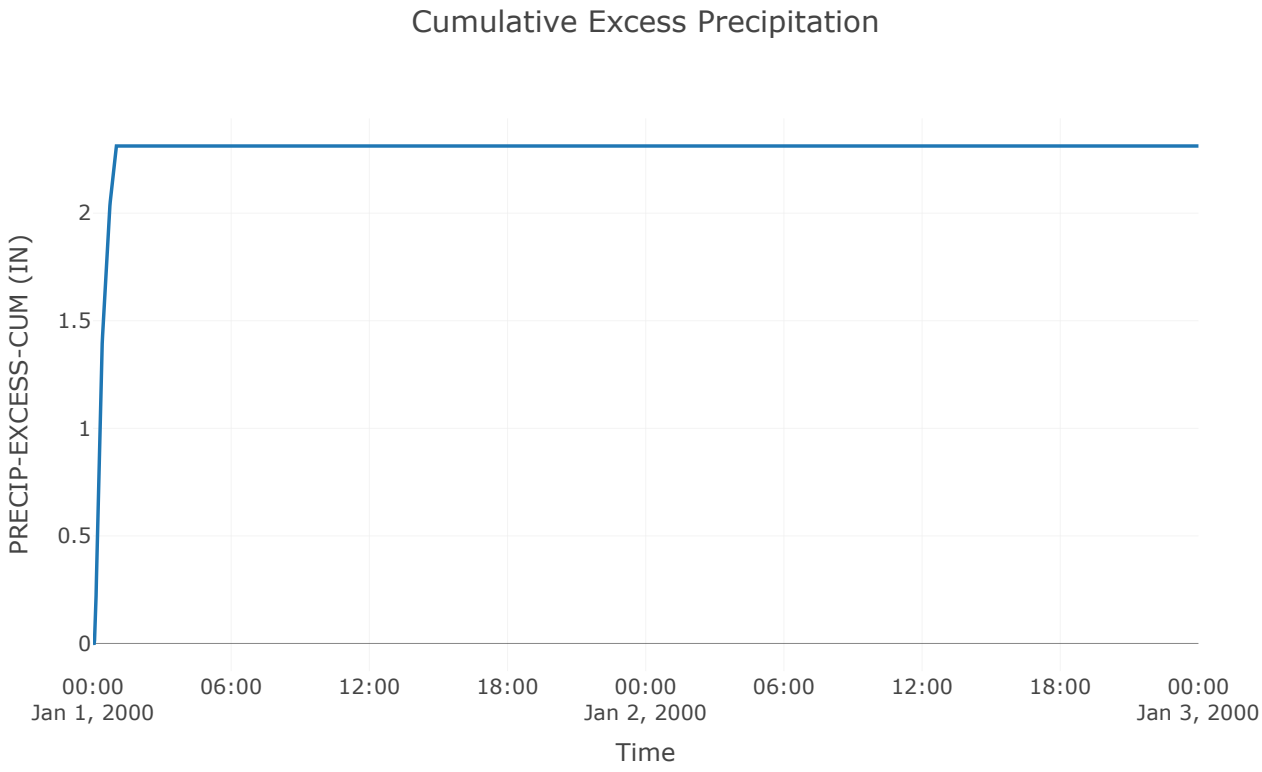
Area (MI2) : 0.01
Downstream : Basin 3

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	83

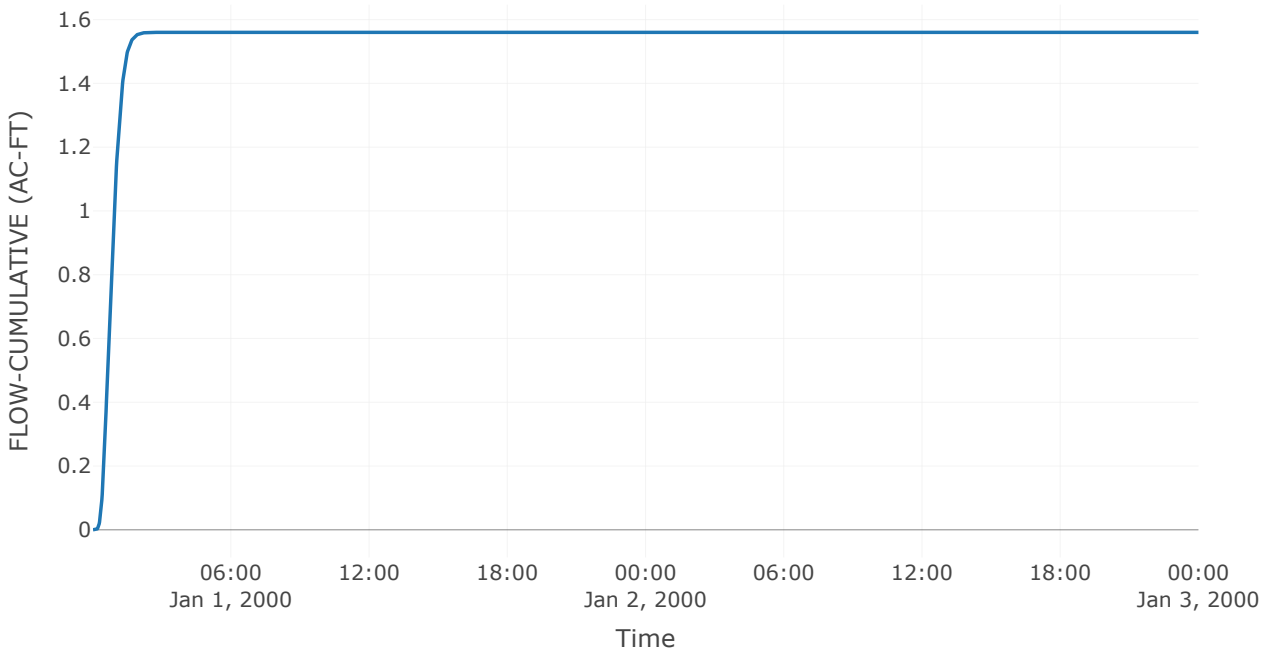
Transform: Scs	
Lag	21
Unitgraph Type	Standard

Results: On-Site Trib-Area 3	
Peak Discharge (CFS)	23.74
Time of Peak Discharge	01Jan2000, 00:39
Volume (IN)	2.31
Precipitation Volume (AC - FT)	2.72
Loss Volume (AC - FT)	1.16
Excess Volume (AC - FT)	1.56
Direct Runoff Volume (AC - FT)	1.56
Baseflow Volume (AC - FT)	0

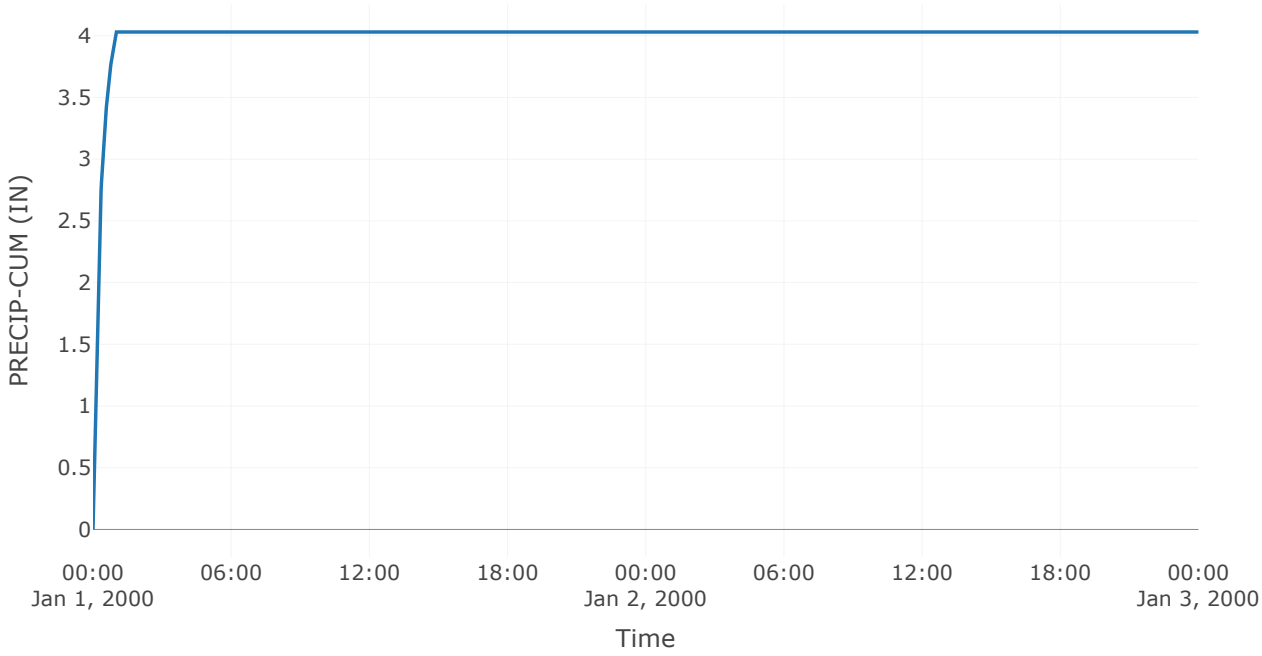

Precipitation and Outflow
PRECIP-INC (IN)
0
0.05
0.1
0.15
Precipitation
Excess Precipitation
Outflow
FLOW (CFS)
20
10
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000

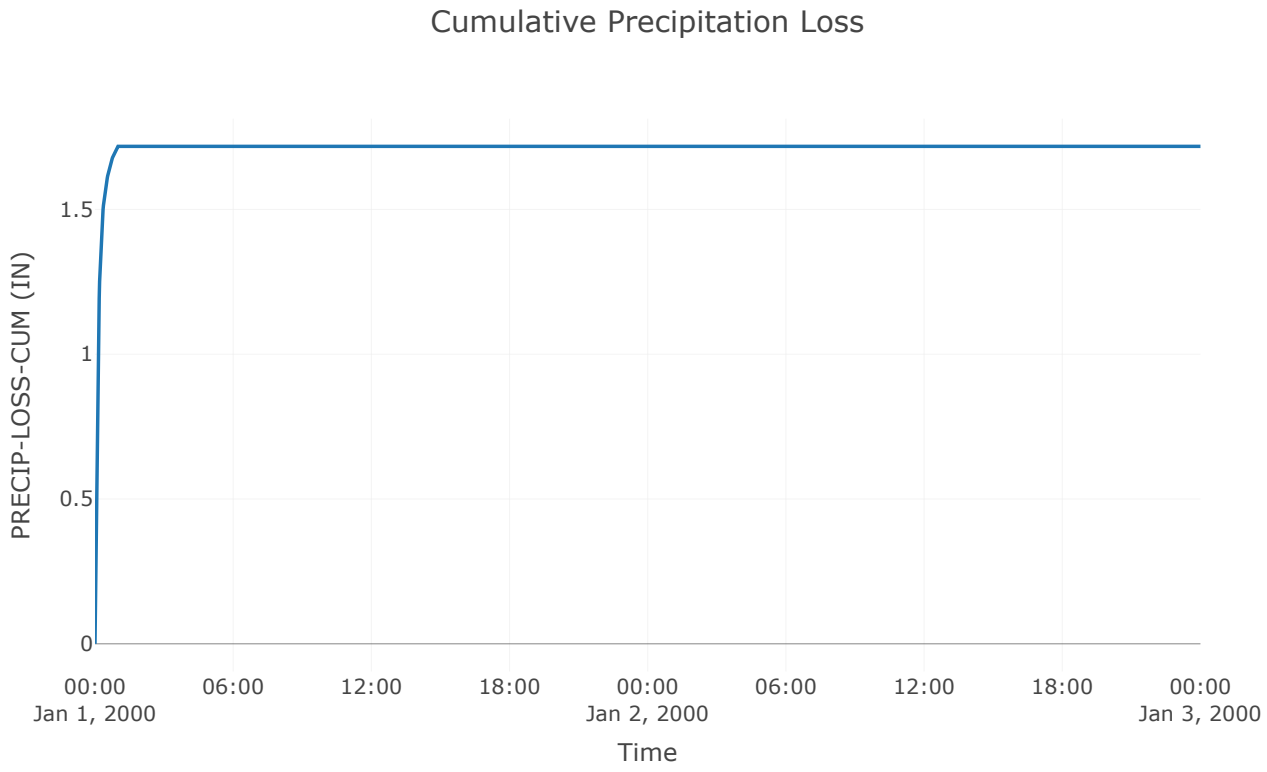

Cumulative Excess Precipitation
PRECIP-EXCESS-CUM (IN)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

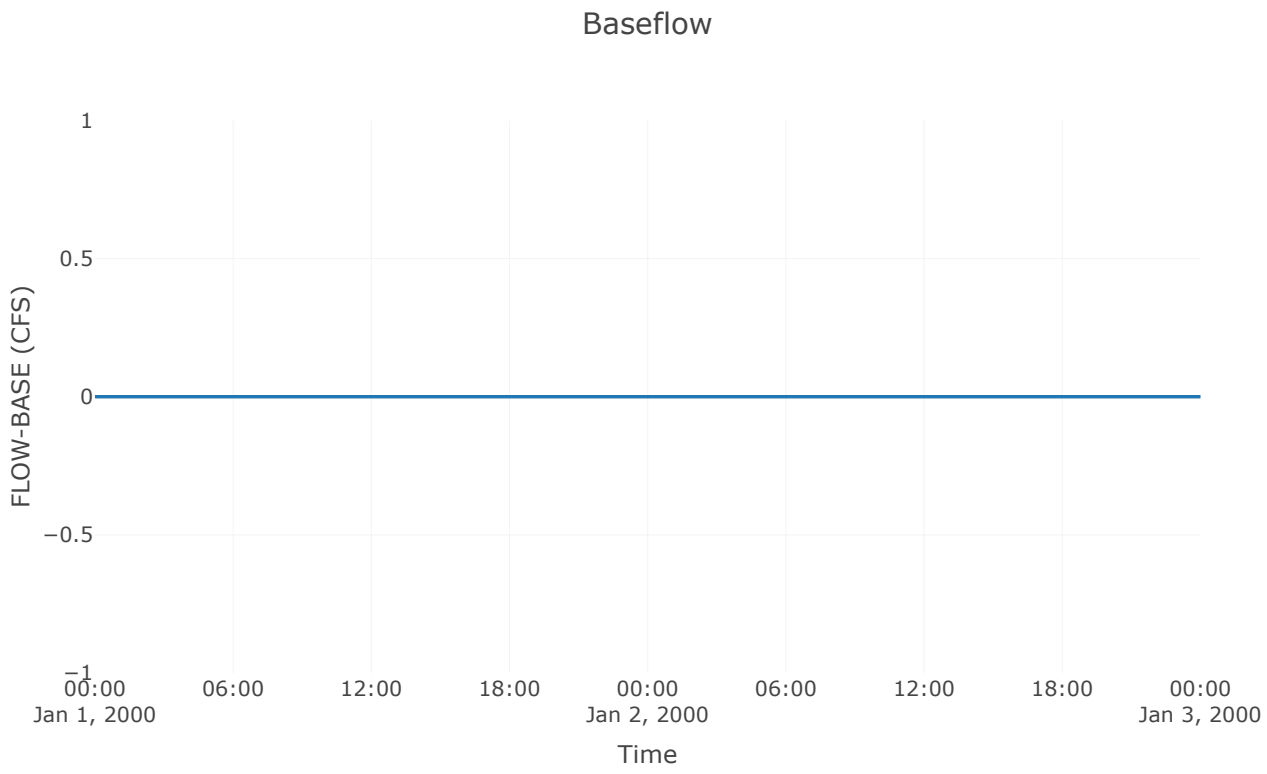
Cumulative Outflow

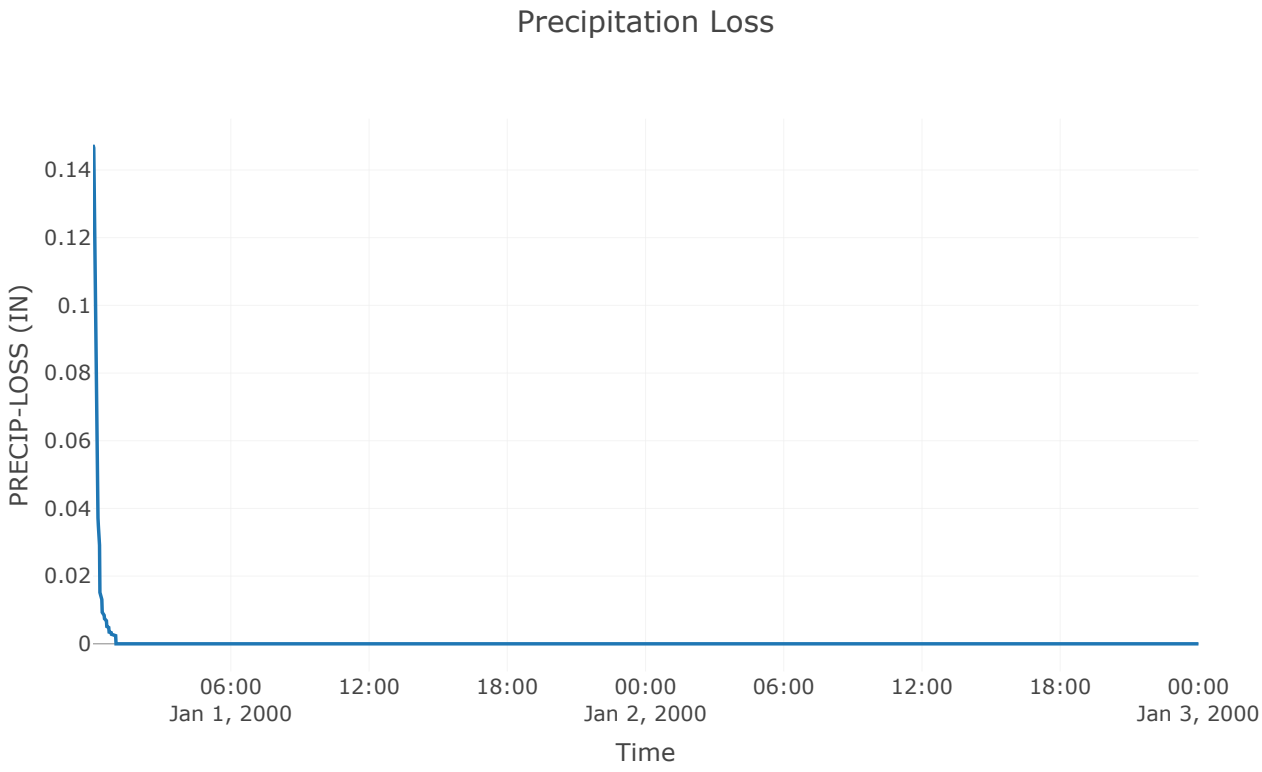


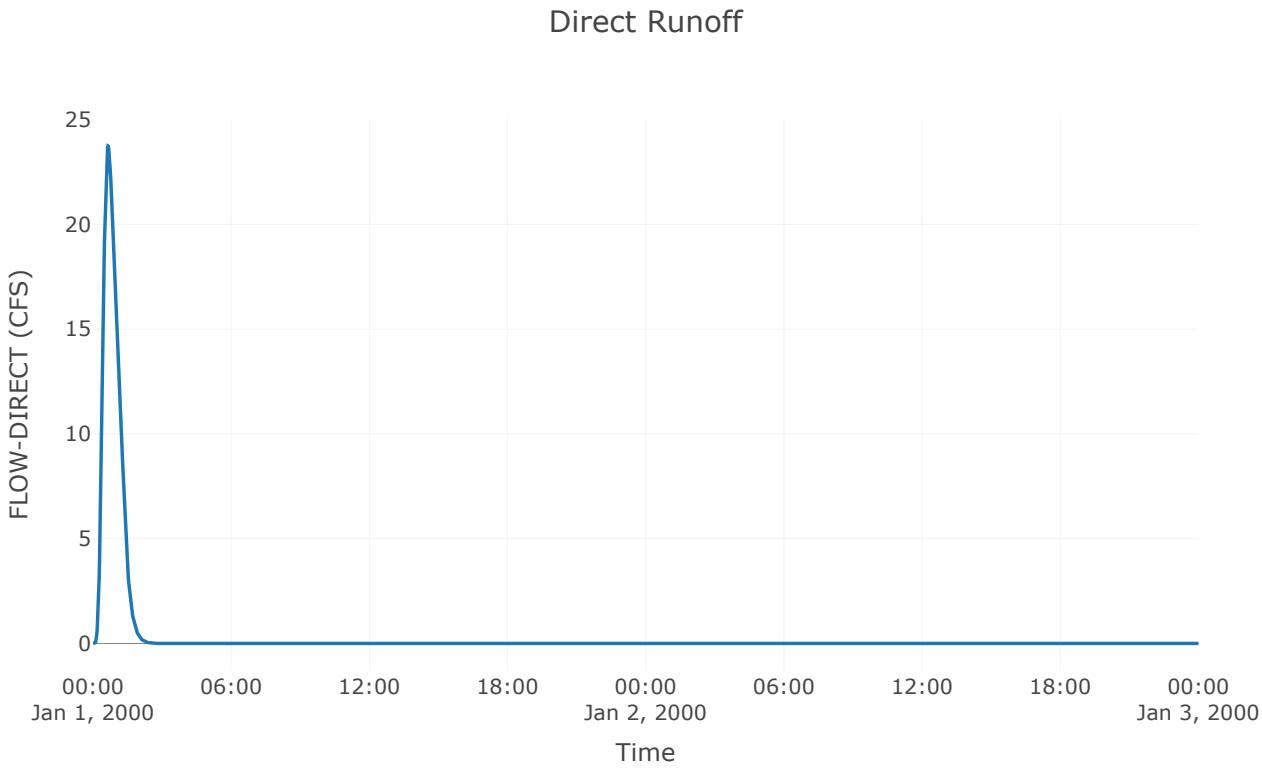
Cumulative Precipitation

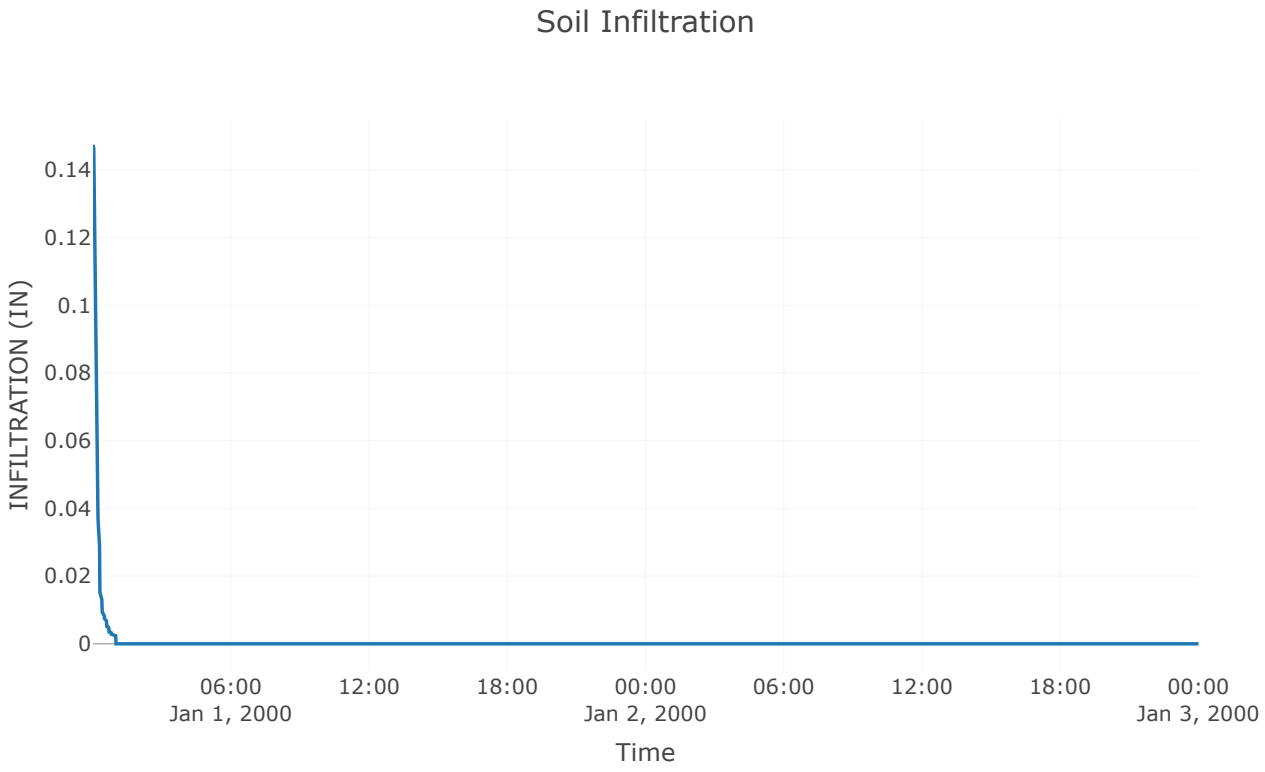



Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Precipitation Loss
PRECIP-LOSS (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Direct Runoff
FLOW-DIRECT (CFS)
25
20
15
10
5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: LaGrange Highlands Off-Site

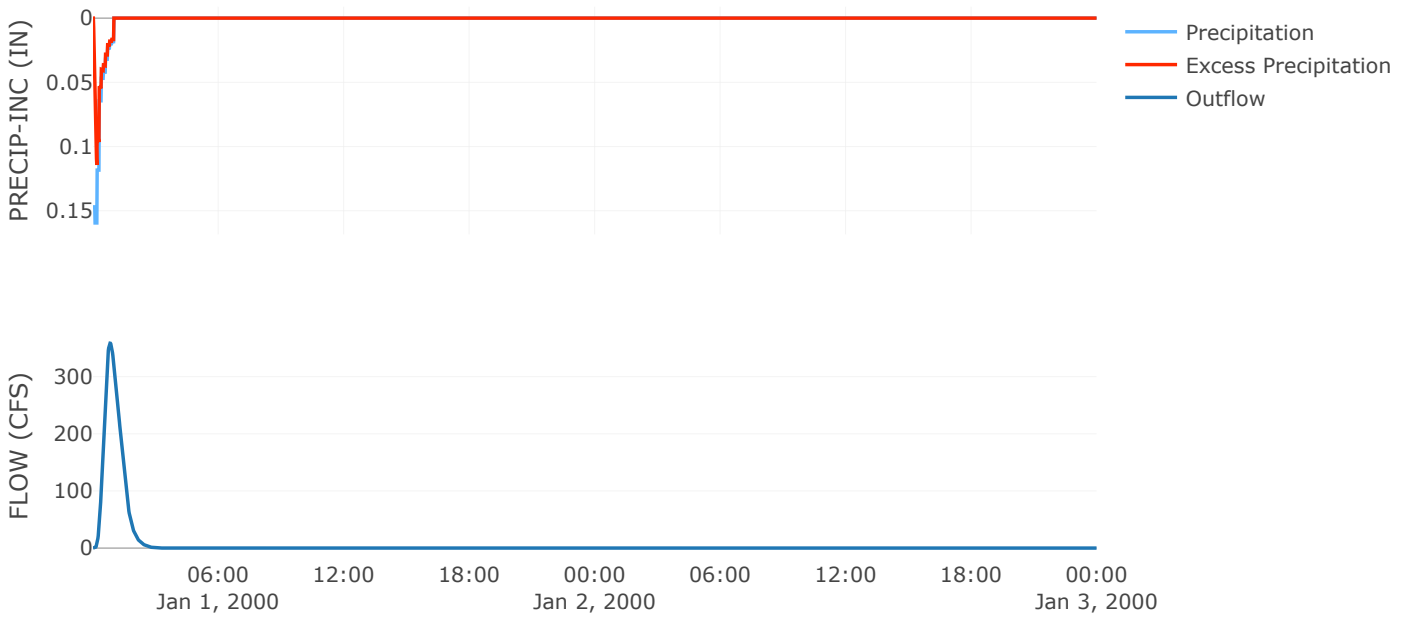
Area (MI2) : 0.2
Downstream : Off - Site Tributary Area

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	86

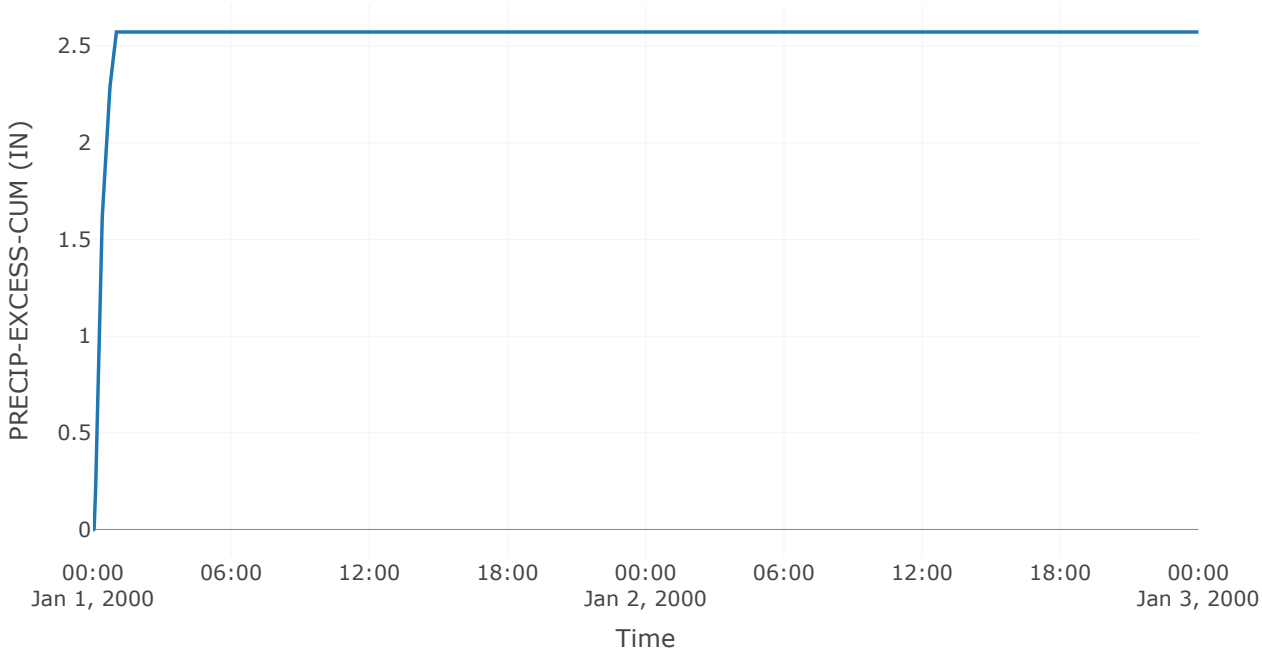
Transform: Scs	
Lag	29.2
Unitgraph Type	Standard

Results: LaGrange Highlands Off-Site	
Peak Discharge (CFS)	358.51
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.57
Precipitation Volume (AC - FT)	43.45
Loss Volume (AC - FT)	15.7
Excess Volume (AC - FT)	27.75
Direct Runoff Volume (AC - FT)	27.75
Baseflow Volume (AC - FT)	0

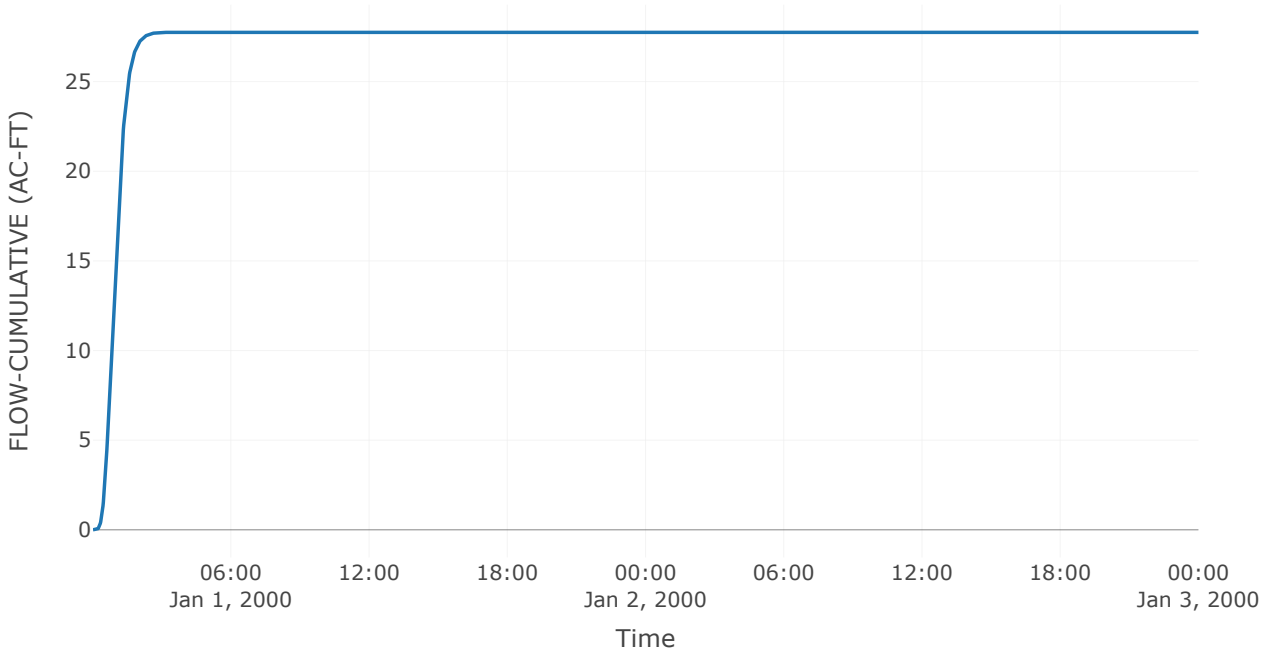
Precipitation and Outflow



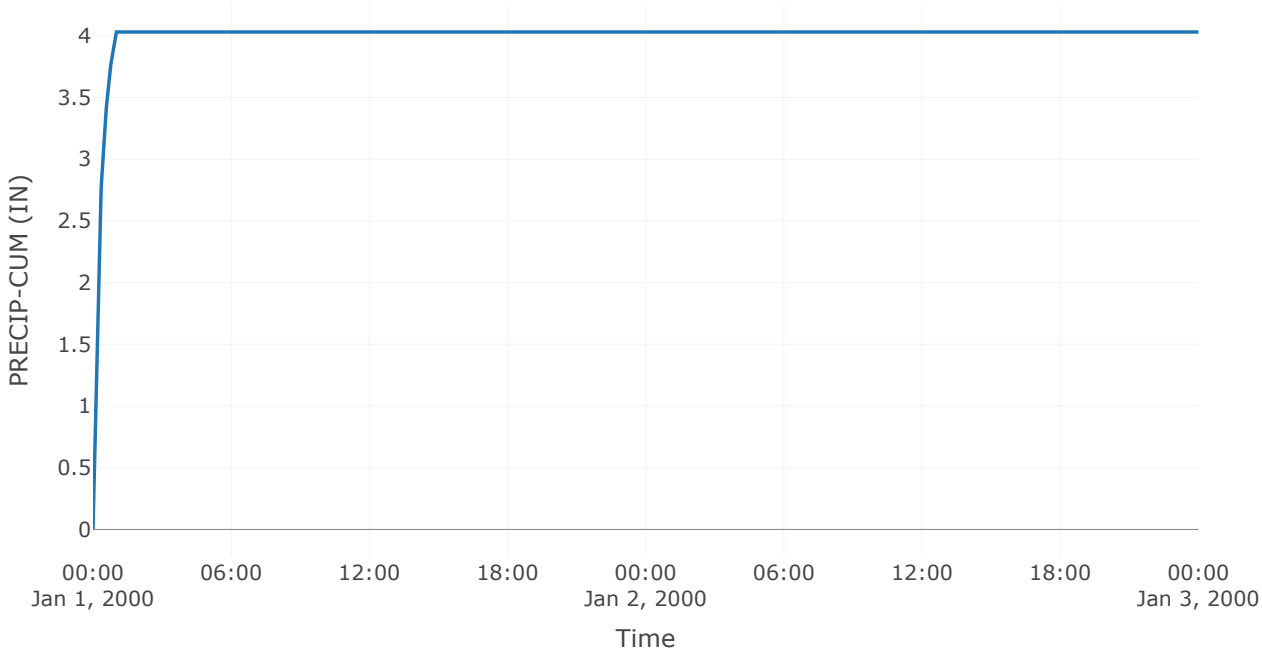
Cumulative Excess Precipitation

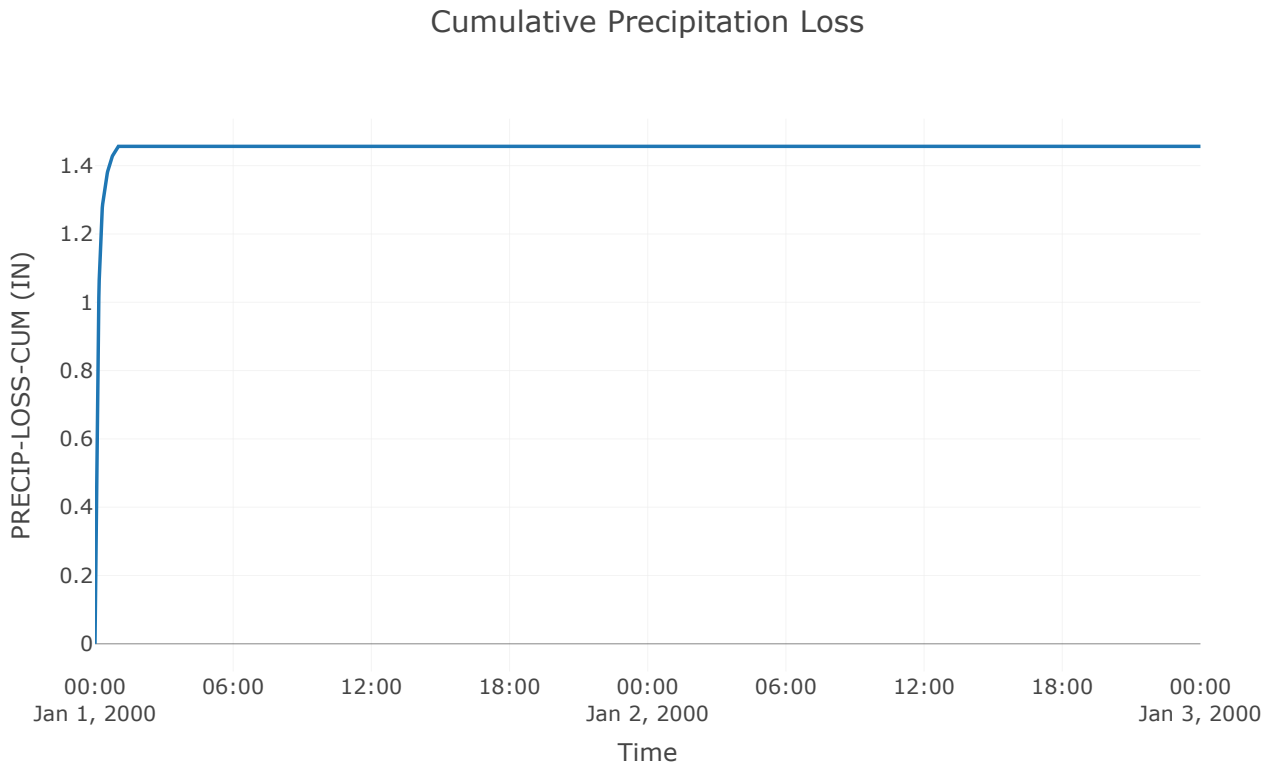


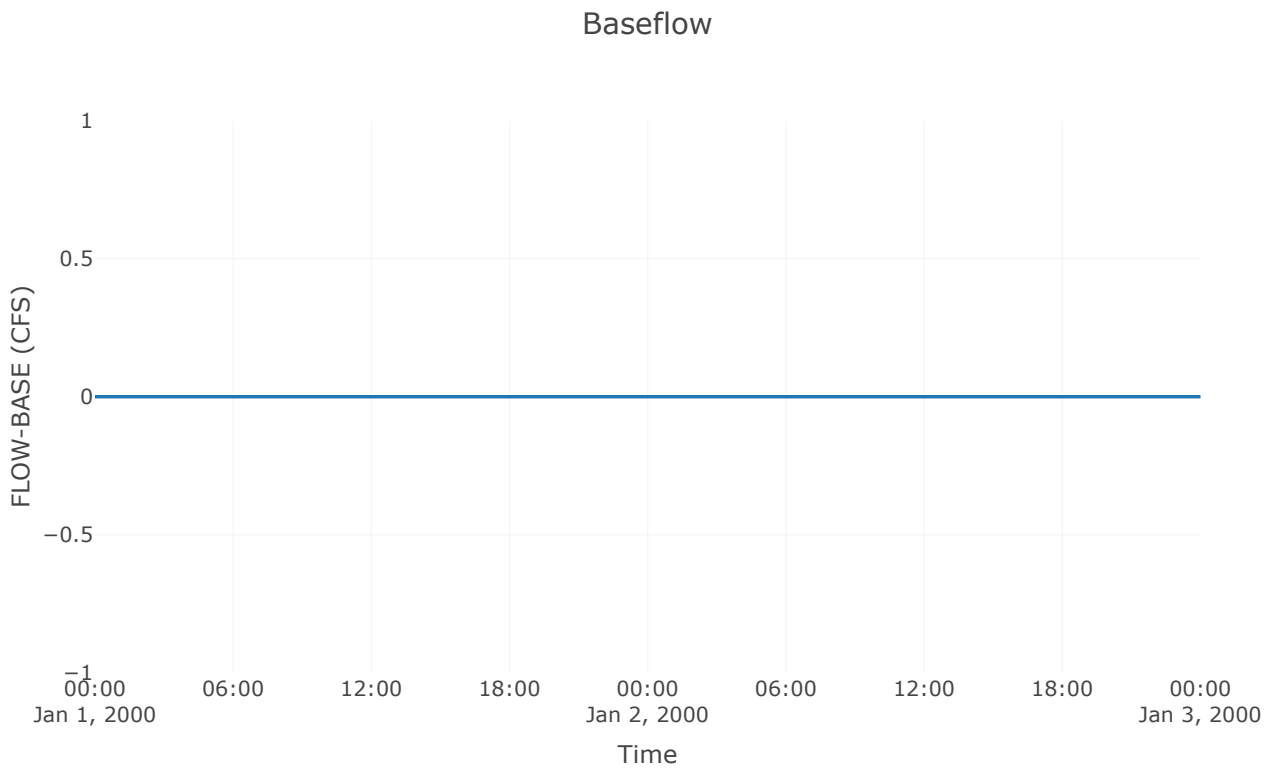
Cumulative Outflow



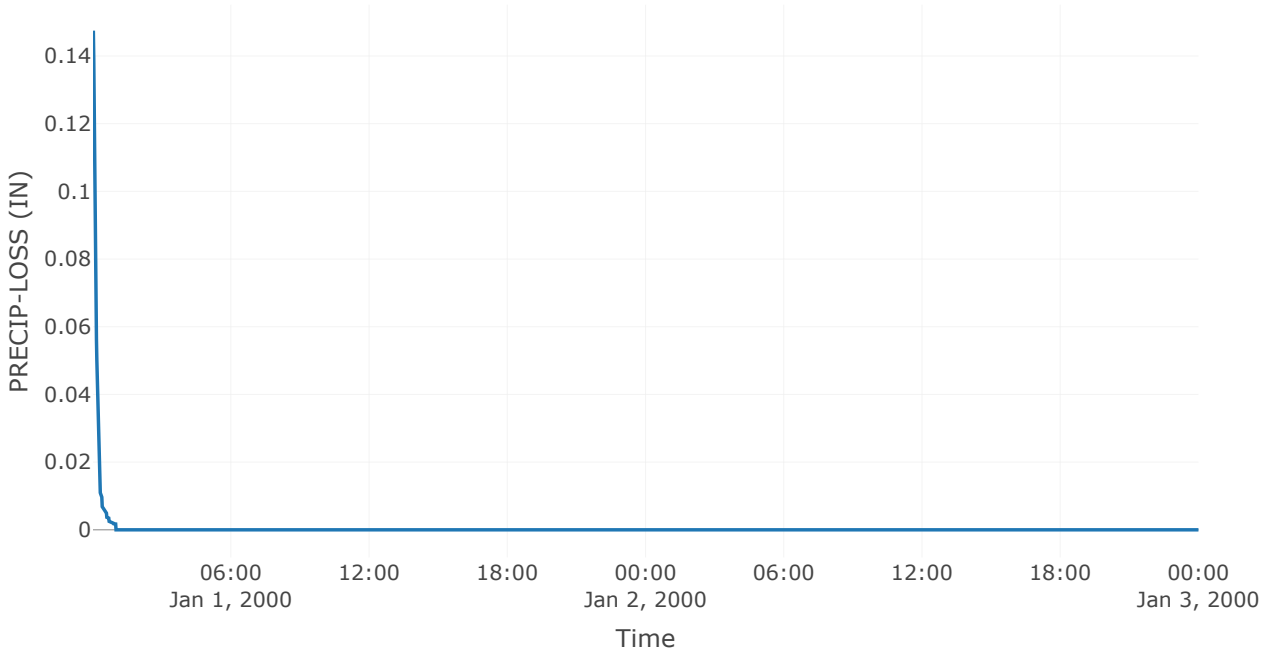
Cumulative Precipitation



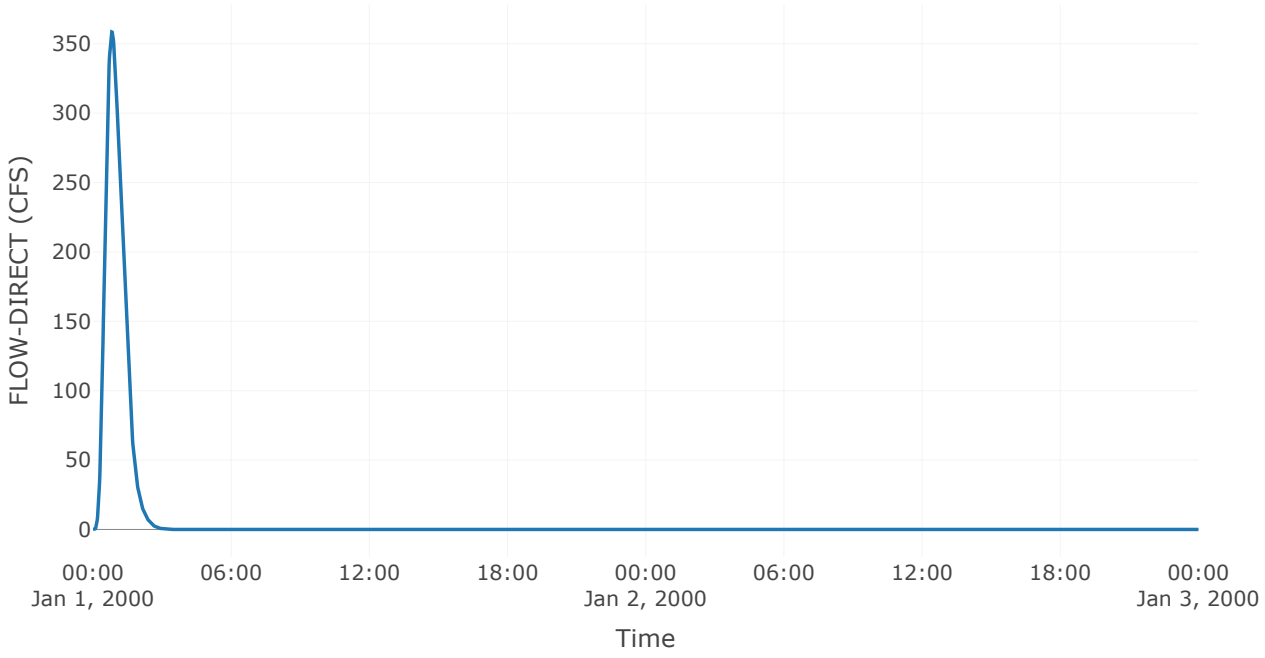

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

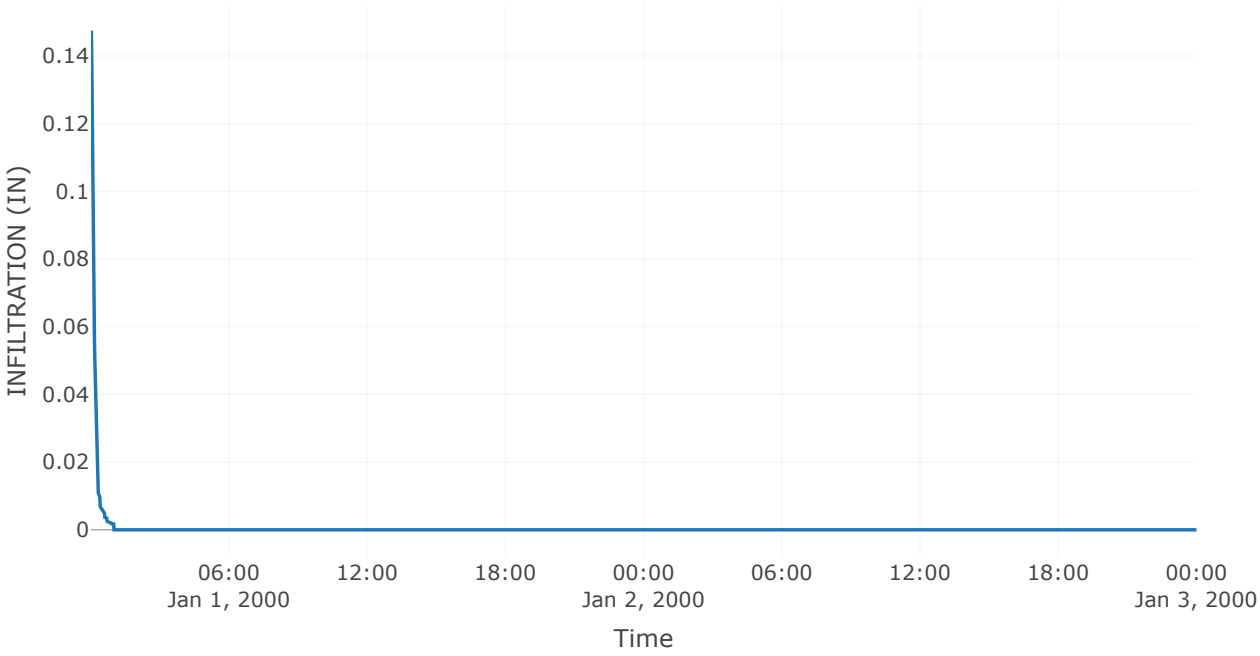

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

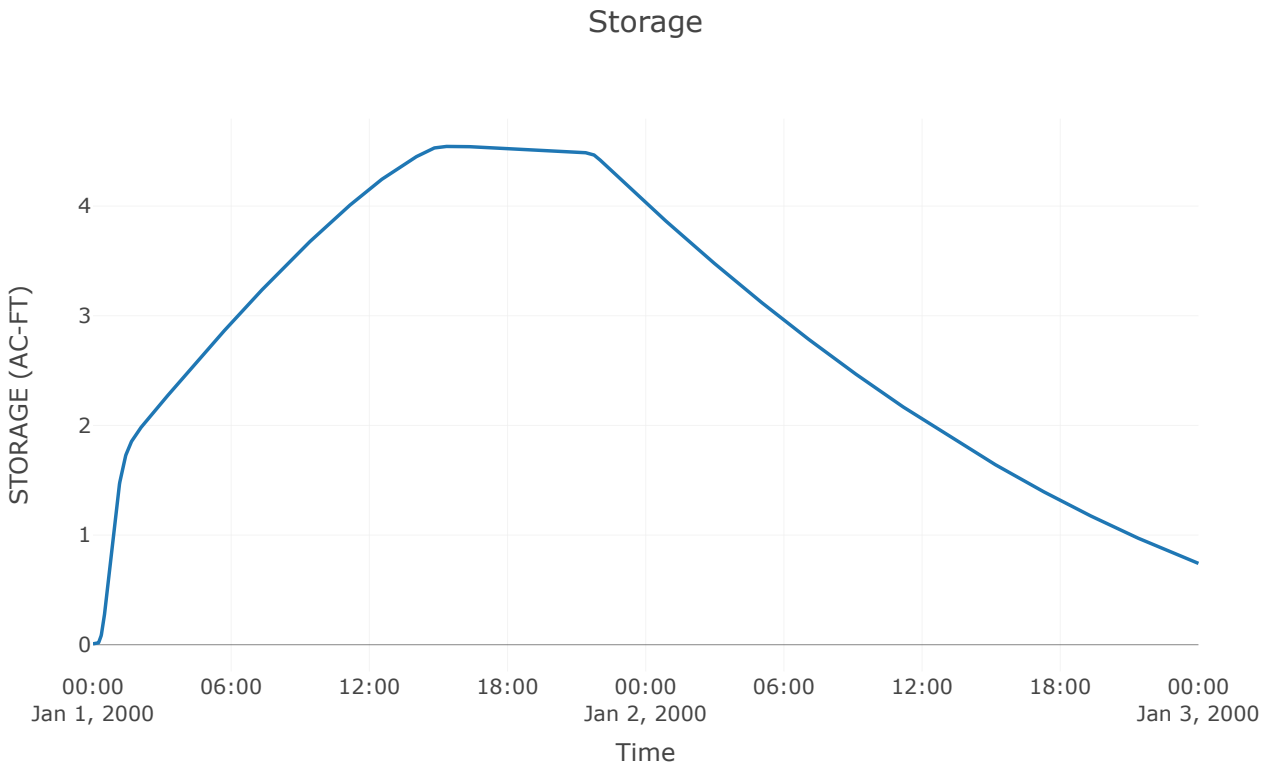


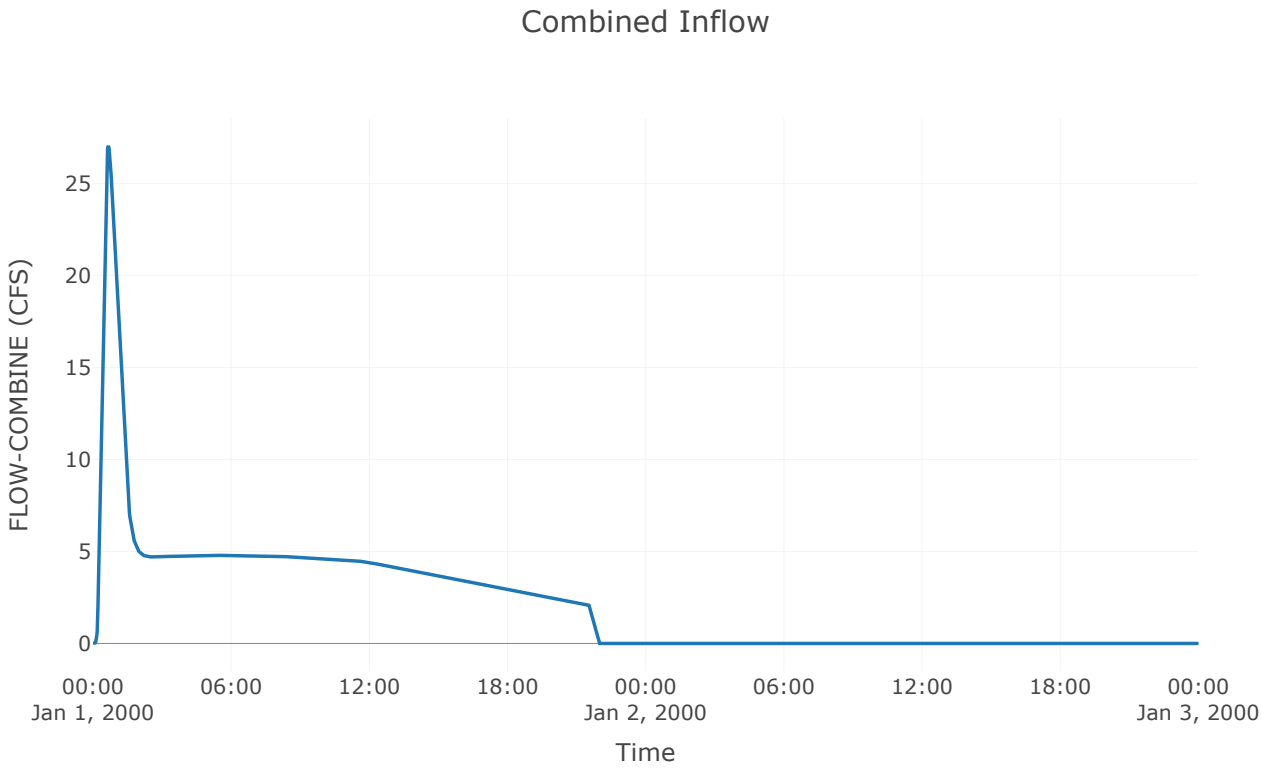

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

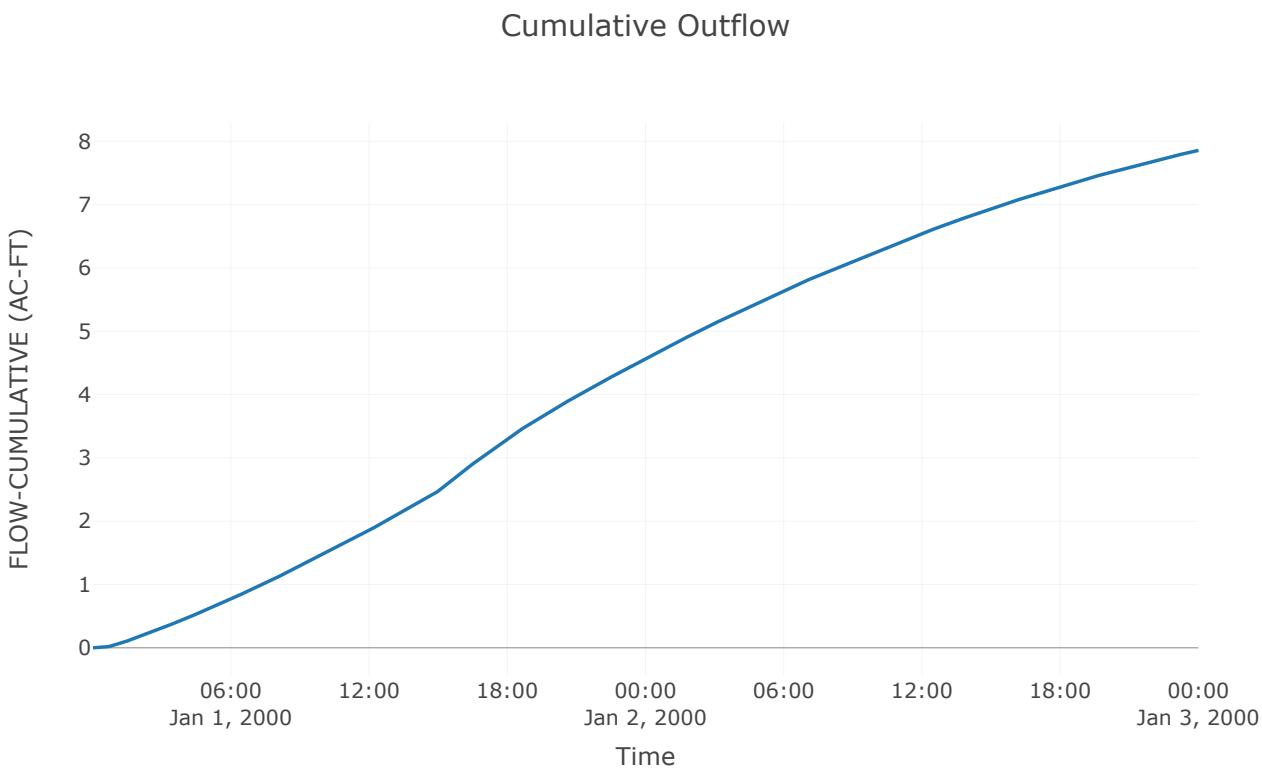
Reservoir: Basin 3

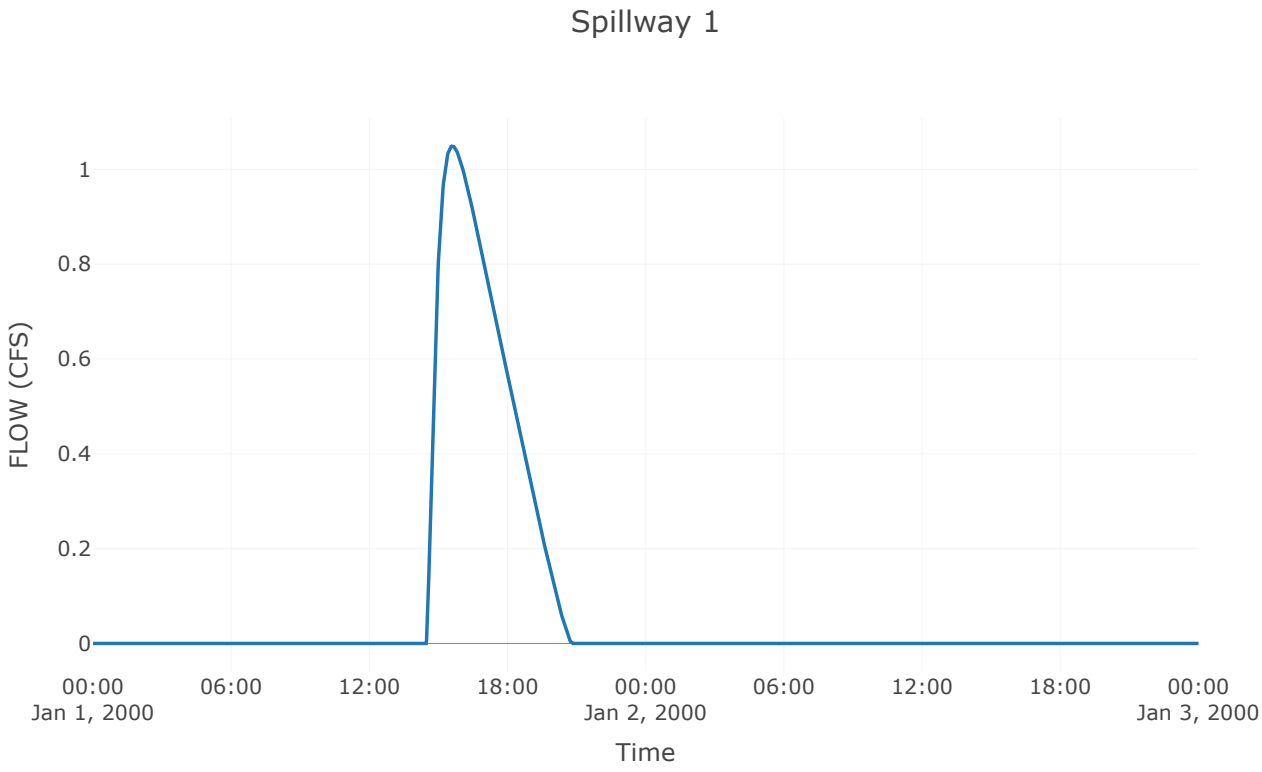
Downstream : Off - Site Tributary Area

Results: Basin 3	
Peak Discharge (CFS)	3.52
Time of Peak Discharge	01Jan2000, 15:36
Volume (IN)	2.2
Peak Inflow (CFS)	27.03
Time of Peak Inflow	01Jan2000, 00:40
Inflow Volume (AC - FT)	8.59
Maximum Storage (AC - FT)	4.54
Peak Elevation (FT)	695.06
Discharge Volume (AC - FT)	7.86

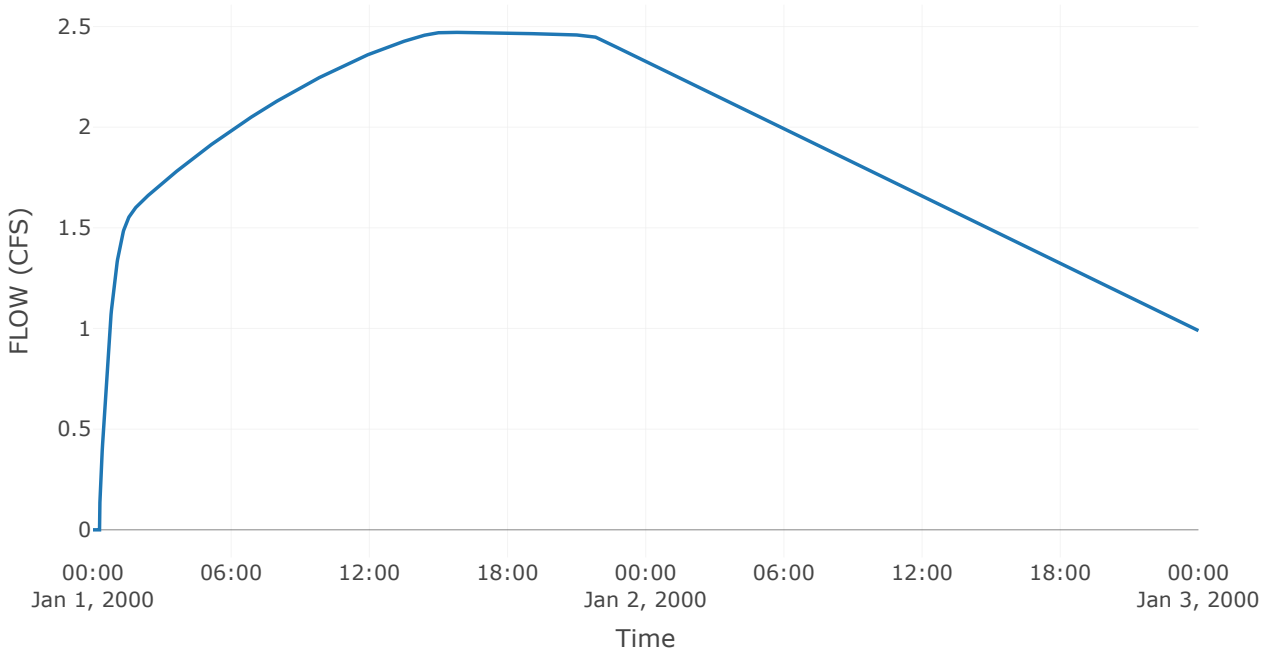

Storage
STORAGE (AC-FT)
0
1
2
3
4
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Combined Inflow
FLOW-COMBINE (CFS)
0
5
10
15
20
25
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

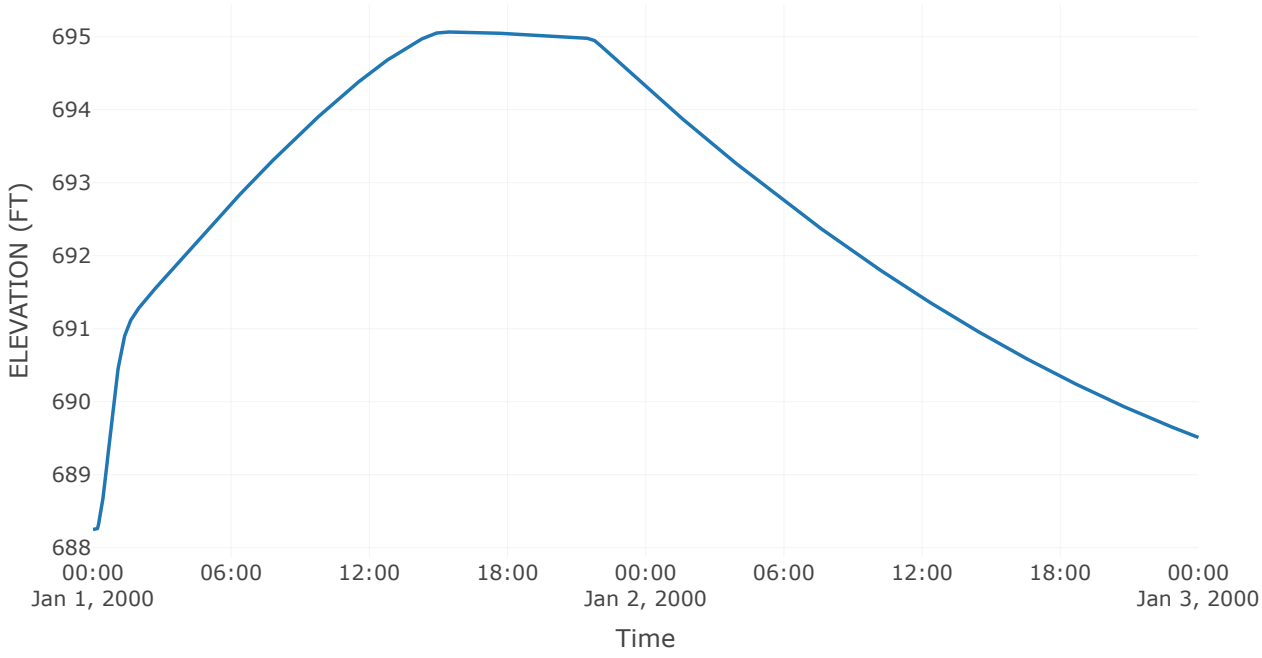

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
8
7
6
5
4
3
2
1
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

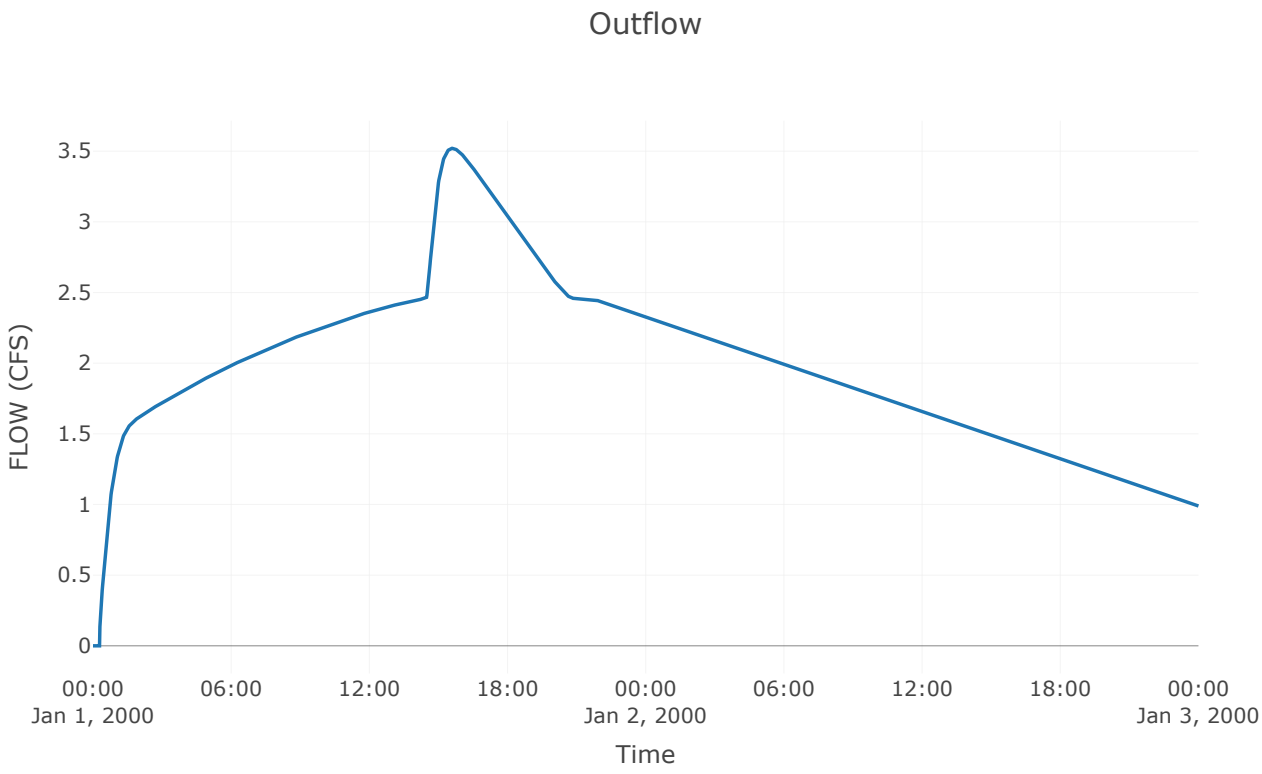

Spillway 1
FLOW (CFS)
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



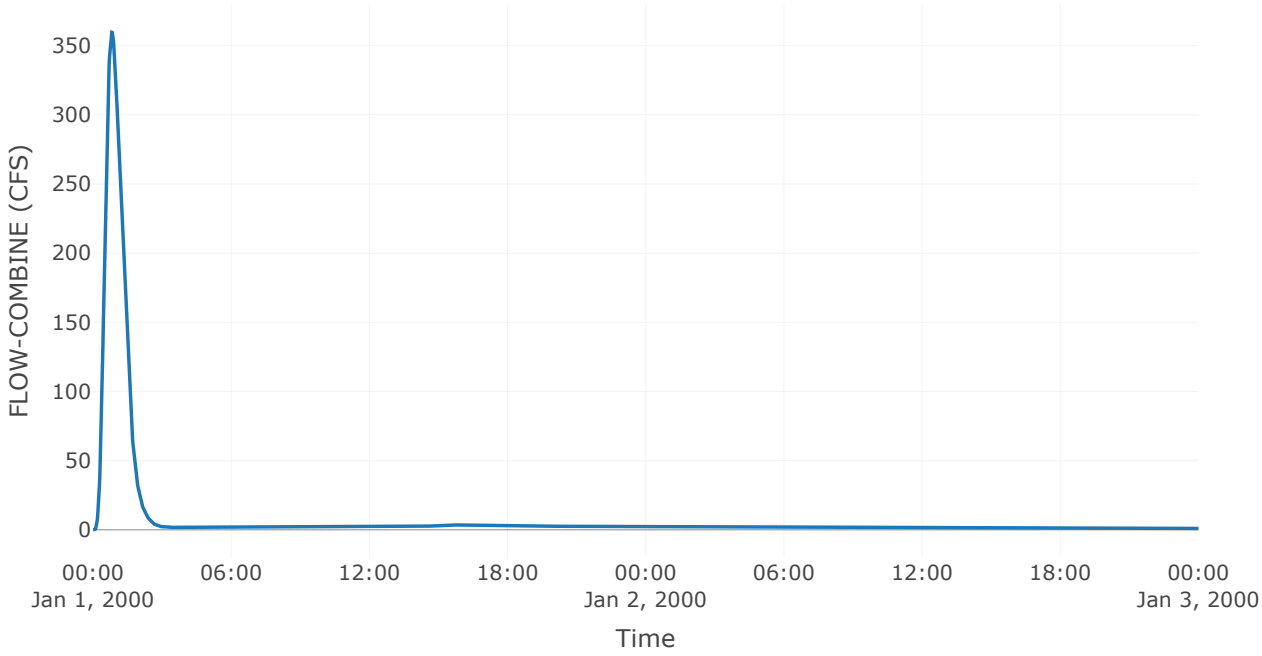

Outflow
FLOW (CFS)
3.5
3
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Junction: Off-Site Tributary Area

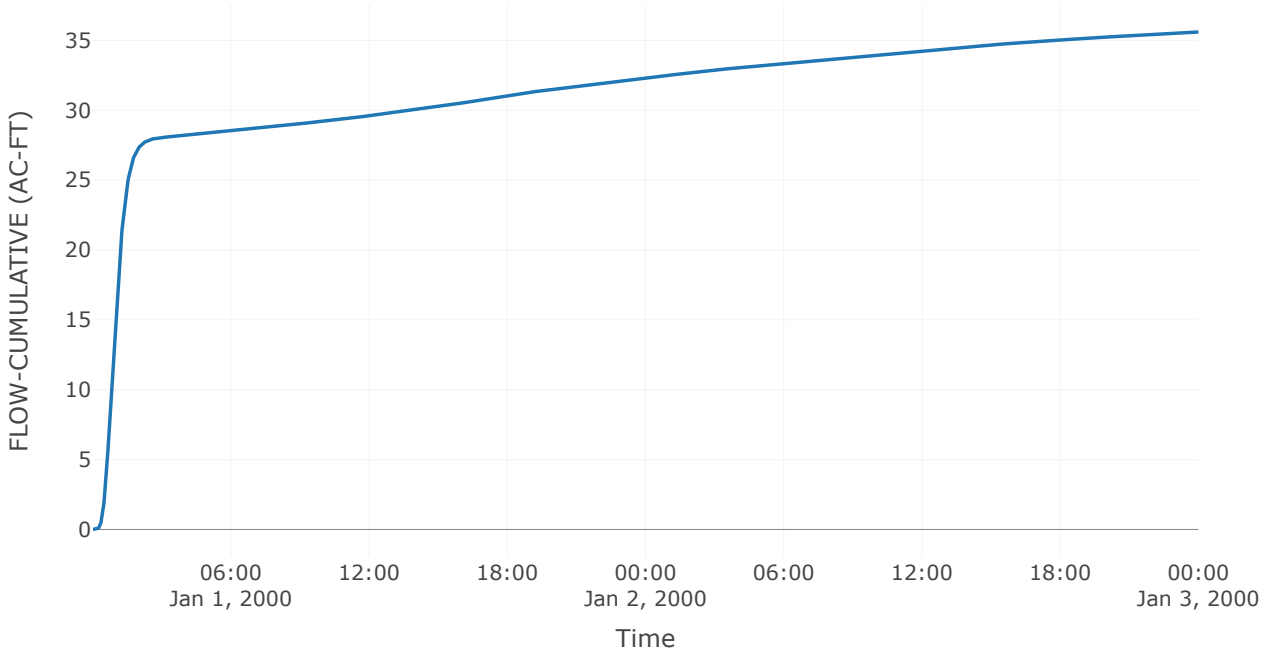
Downstream : Storage East of Wolf Road

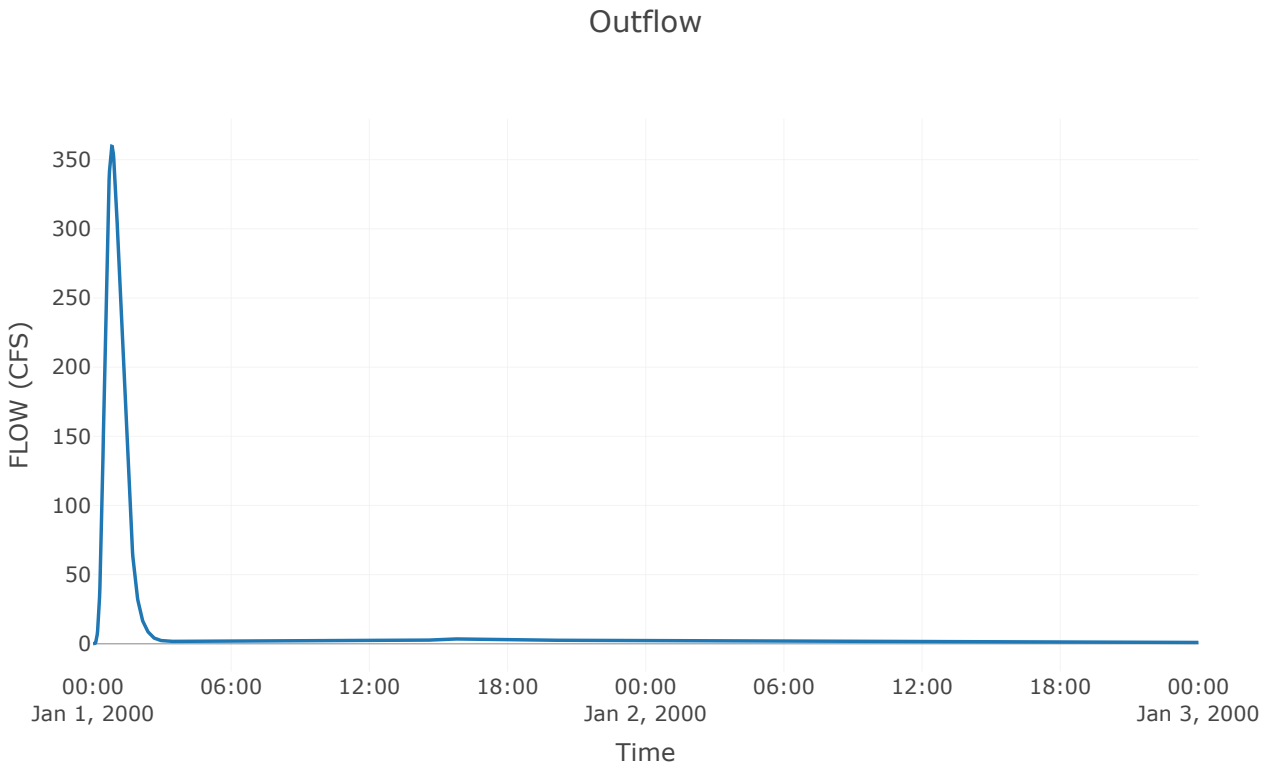
Results: Off-Site Tributary Area	
Peak Discharge (CFS)	359.61
Time of Peak Discharge	01Jan2000, 00:49
Volume (IN)	2.48

Combined Inflow



Cumulative Outflow



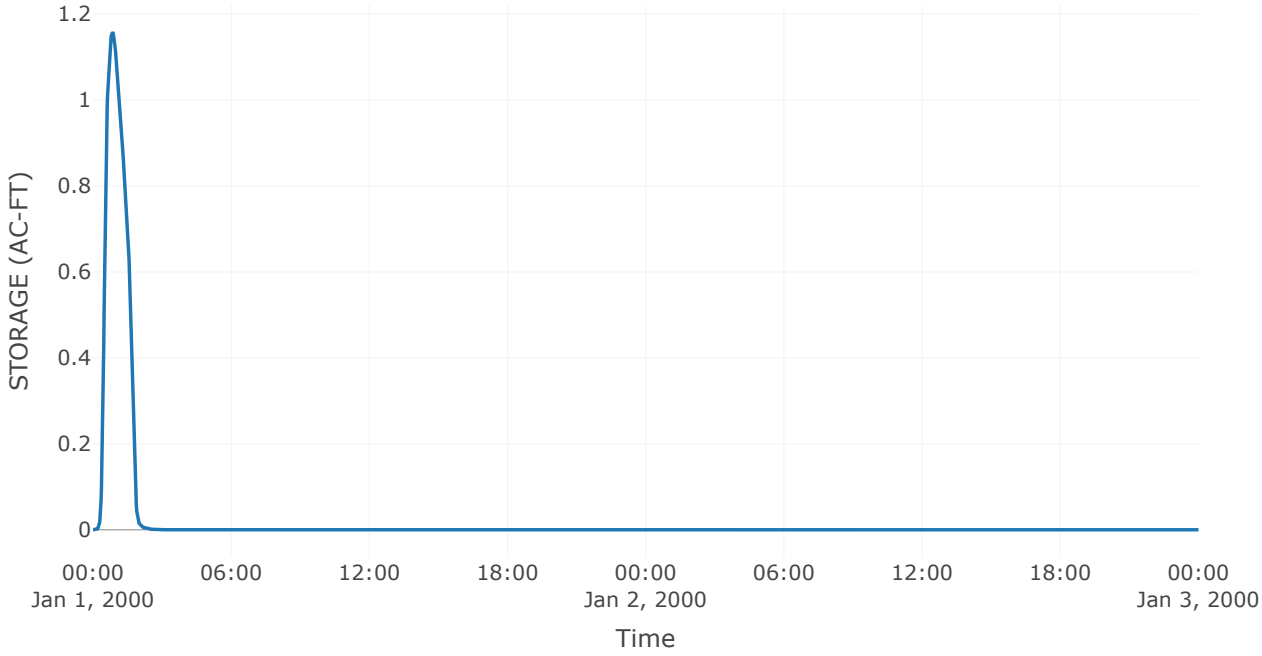

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Storage East of Wolf Road

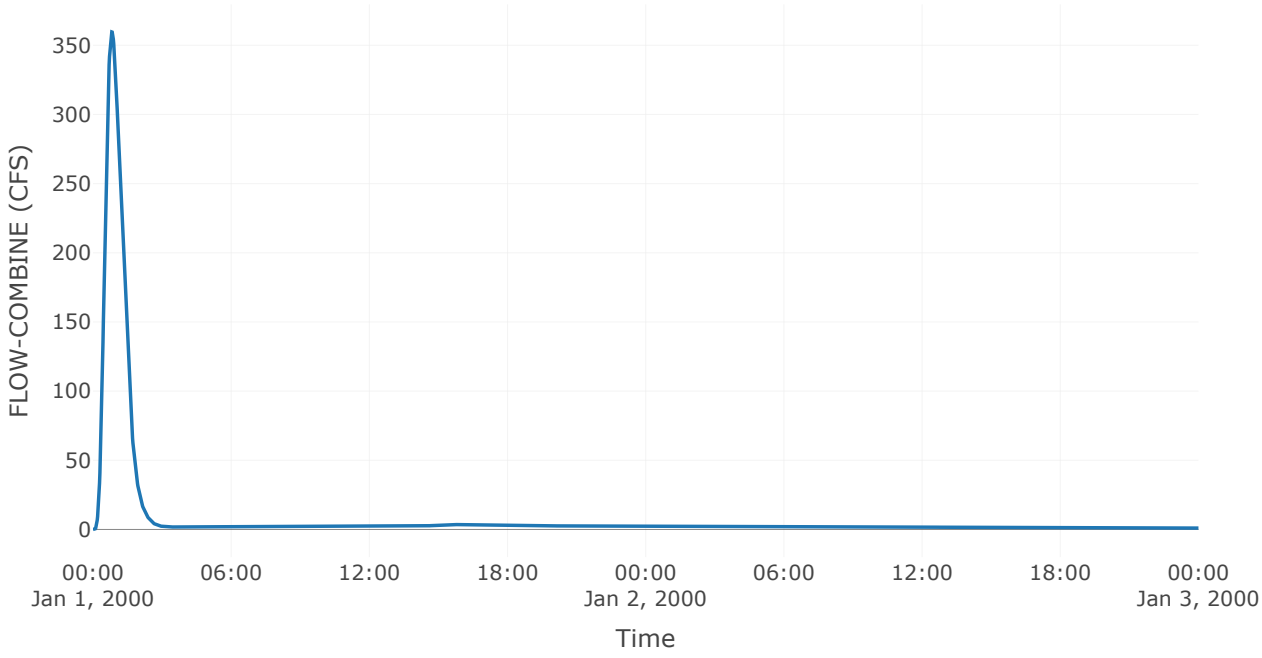
Downstream : Box Inlet - East Side Wolf Rd

Results: Storage East of Wolf Road	
Peak Discharge (CFS)	358.74
Time of Peak Discharge	01Jan2000, 00:51
Volume (IN)	2.48
Peak Inflow (CFS)	359.61
Time of Peak Inflow	01Jan2000, 00:49
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	1.16
Peak Elevation (FT)	664
Discharge Volume (AC - FT)	35.6

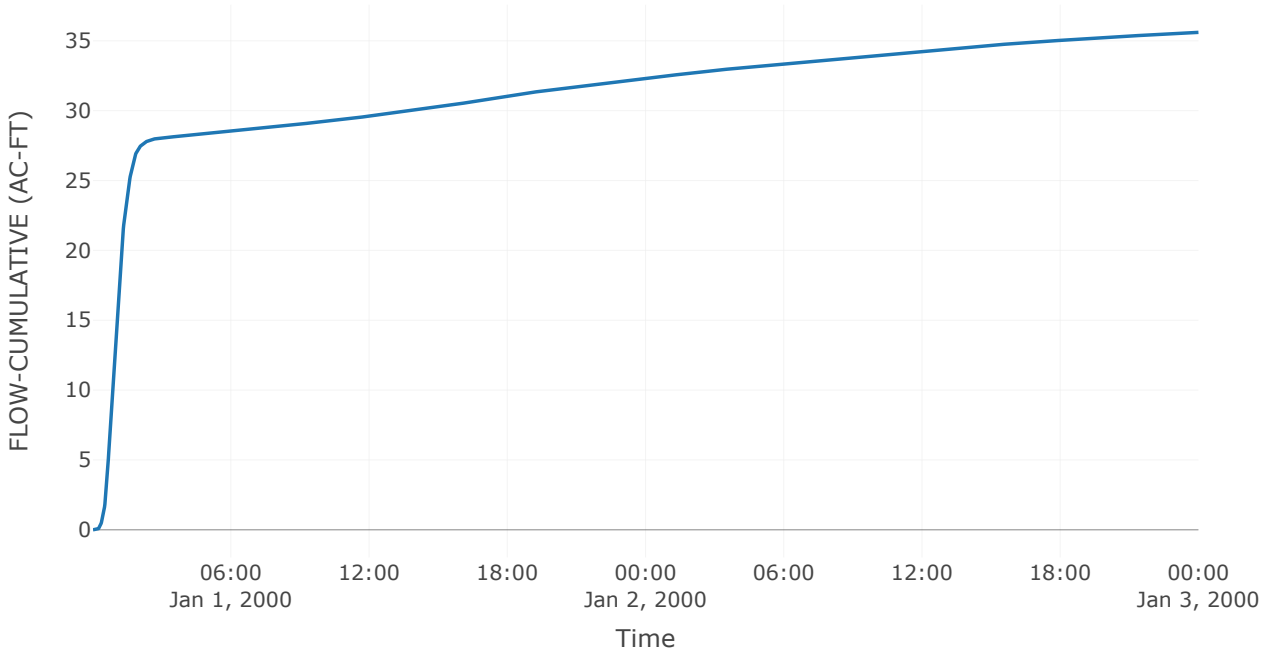
Storage



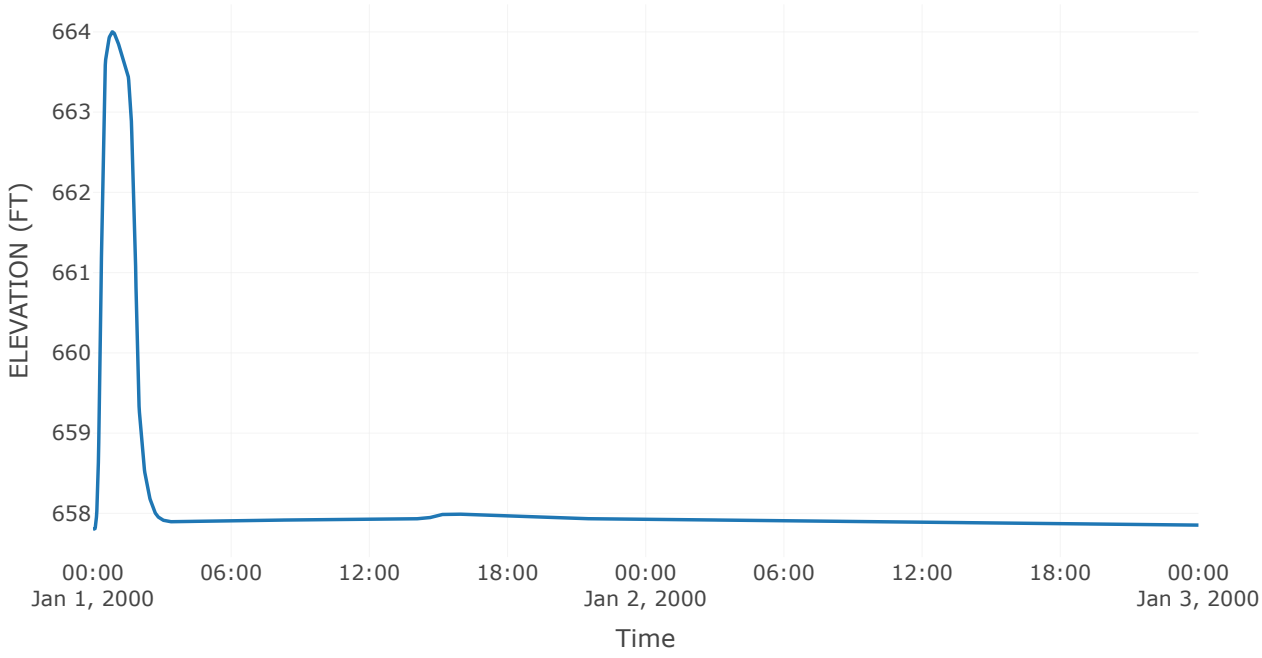
Combined Inflow

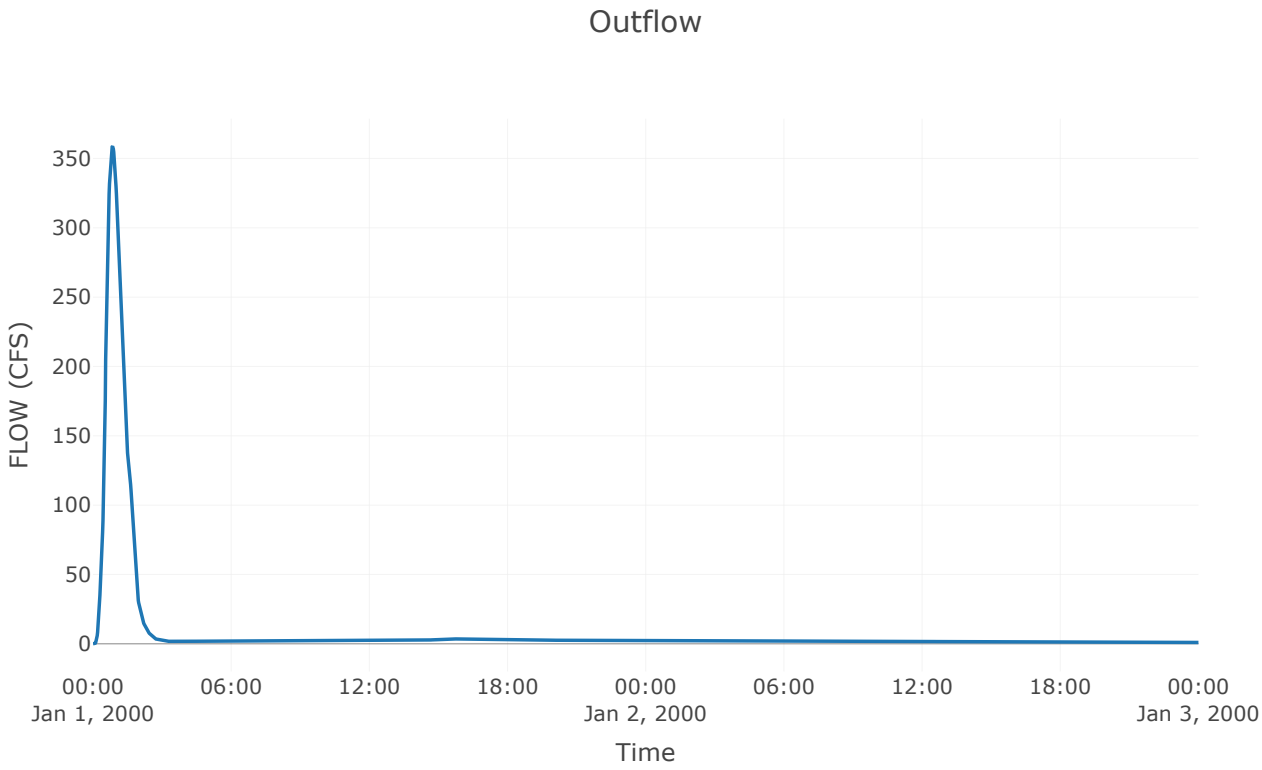


Cumulative Outflow



Pool Elevation



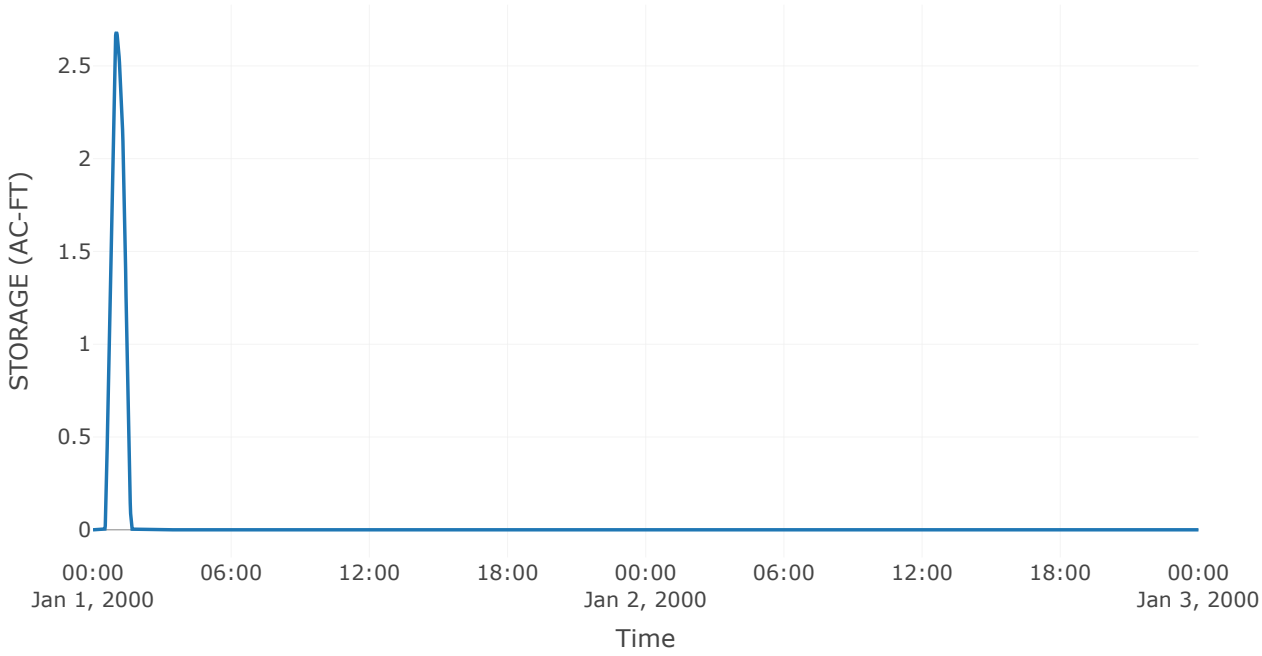

Outflow
350
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Box Inlet-East Side Wolf Rd

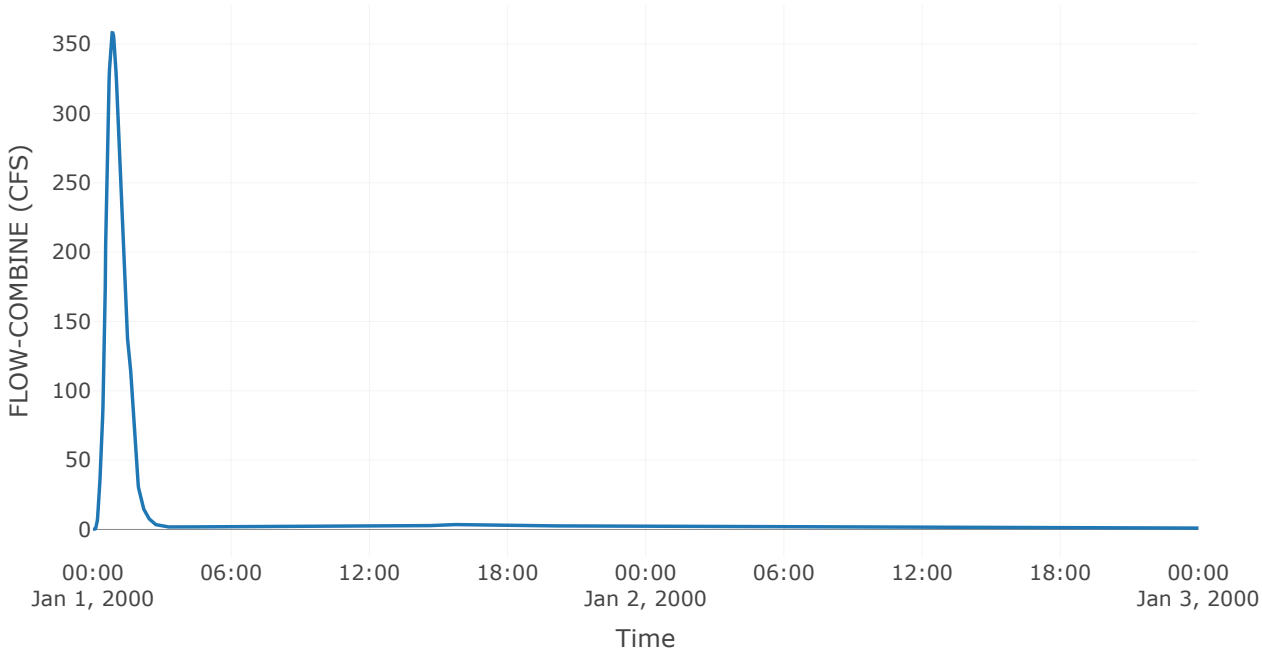
Downstream : Prop Storage West of Wolf Rd

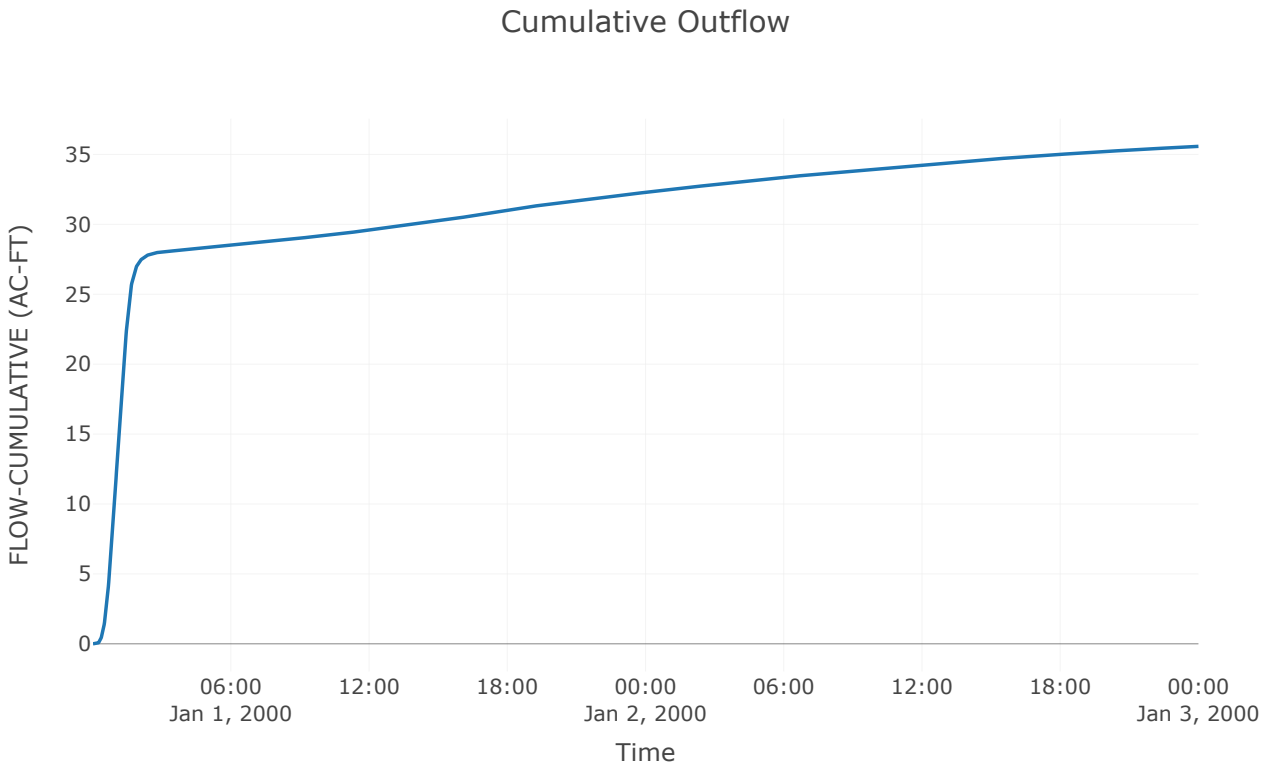
Results: Box Inlet-East Side Wolf Rd	
Peak Discharge (CFS)	324.8
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	358.74
Time of Peak Inflow	01Jan2000, 00:51
Inflow Volume (AC - FT)	35.6
Maximum Storage (AC - FT)	2.68
Peak Elevation (FT)	664.94
Discharge Volume (AC - FT)	35.58

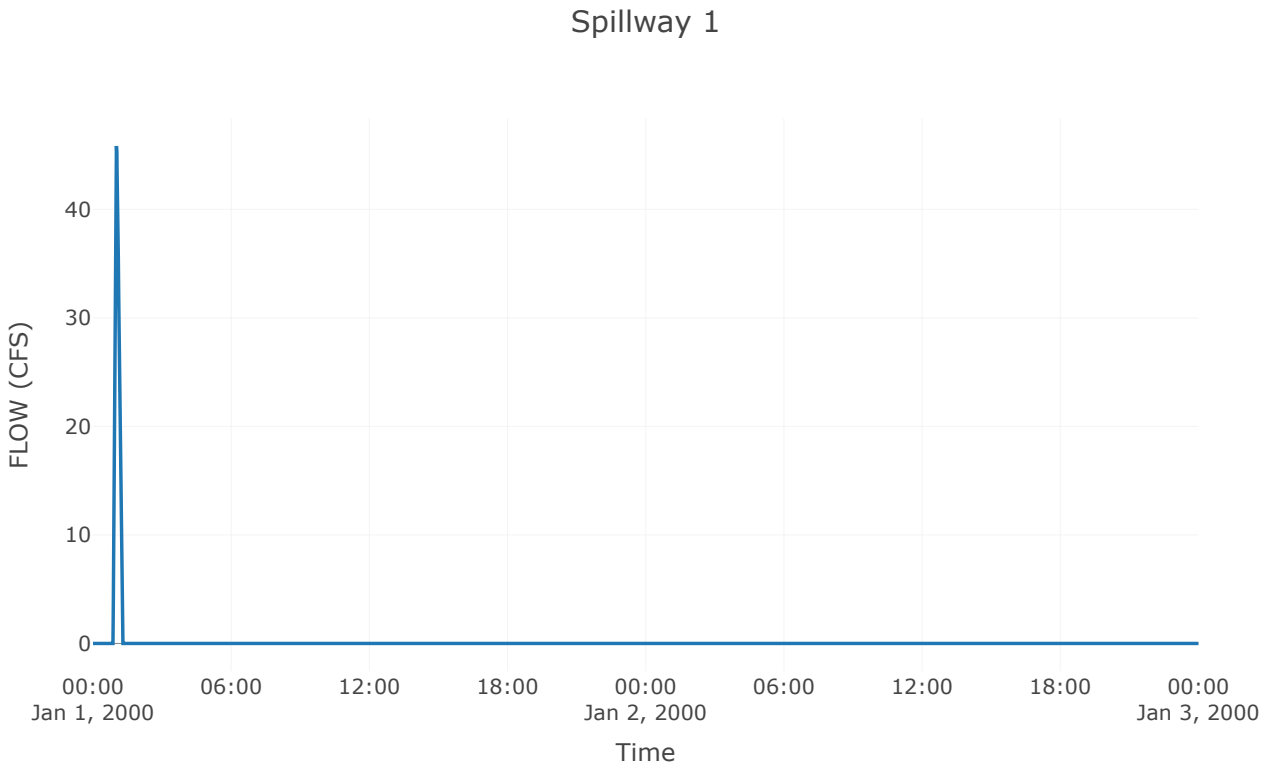
Storage



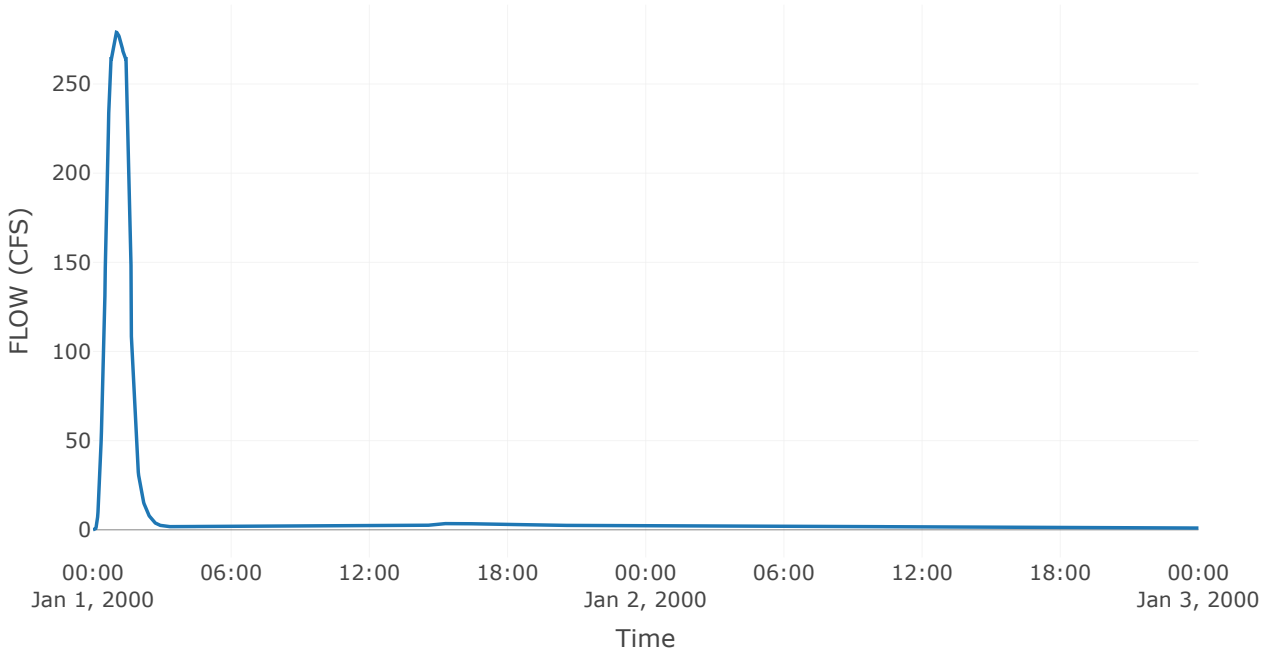
Combined Inflow



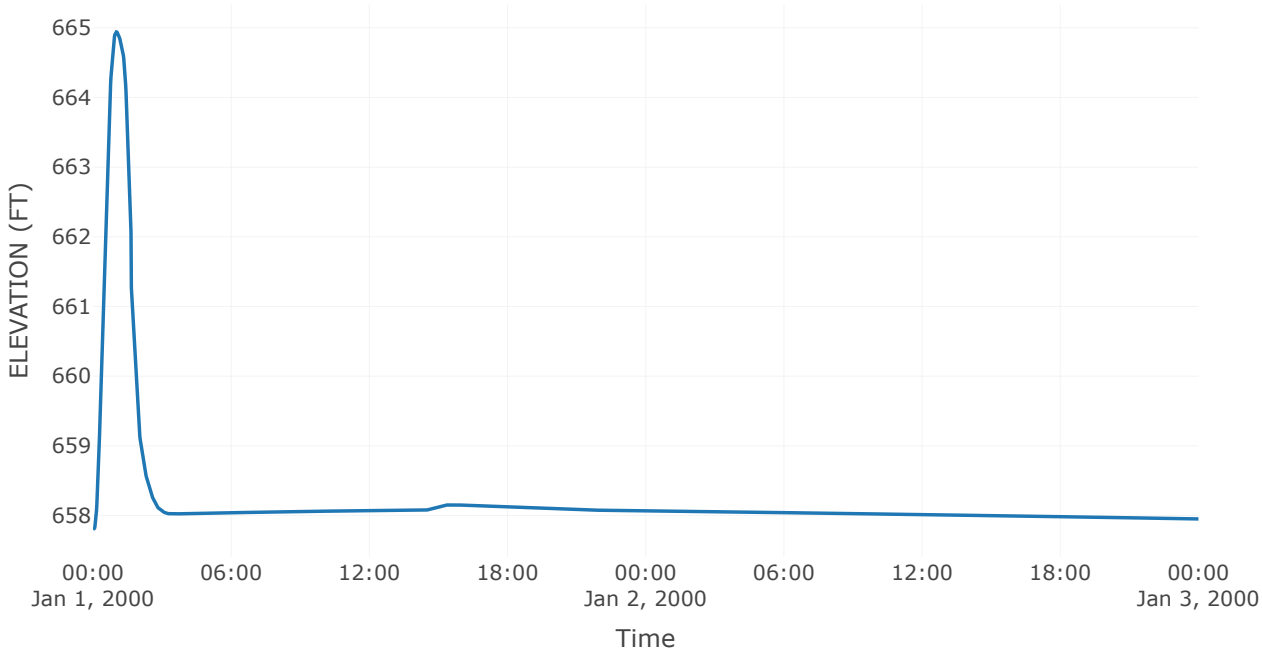

Cumulative Outflow
FLOW-CUMULATIVE (AC-FT)
35
30
25
20
15
10
5
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

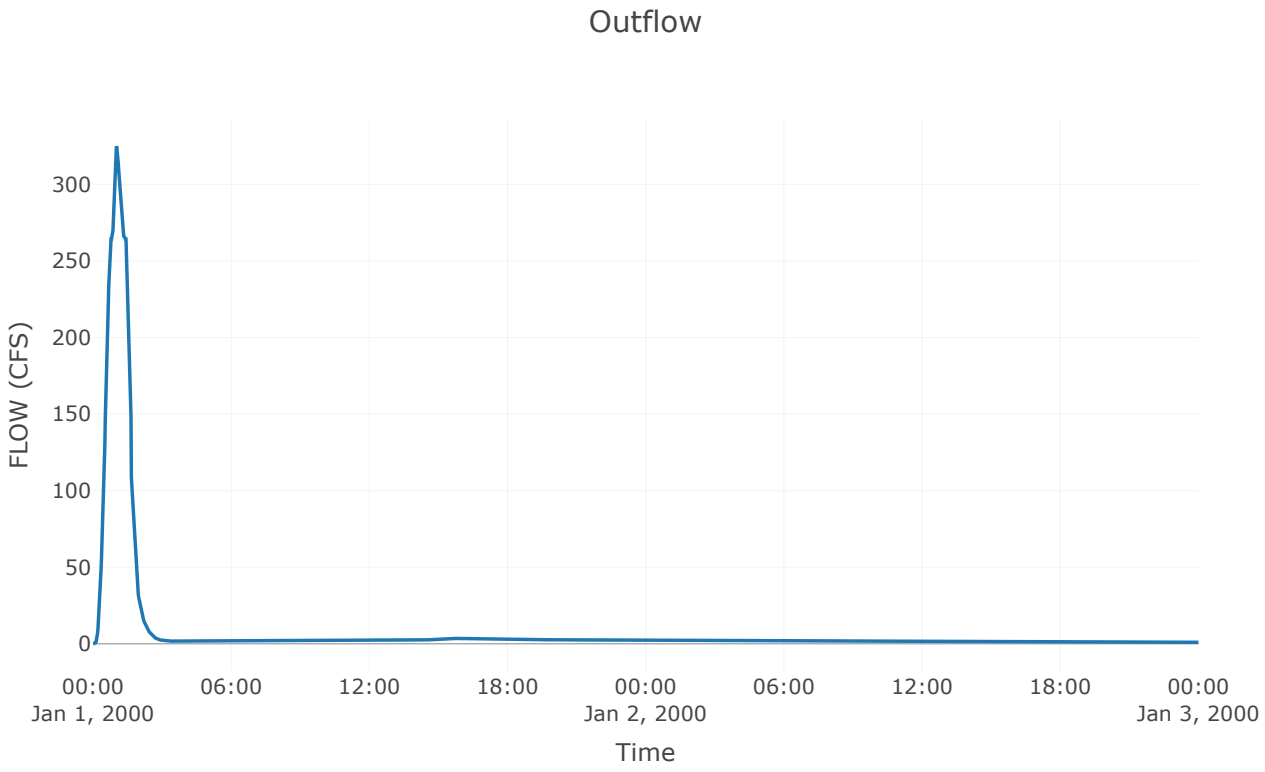

Spillway 1
FLOW (CFS)
40
30
20
10
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation



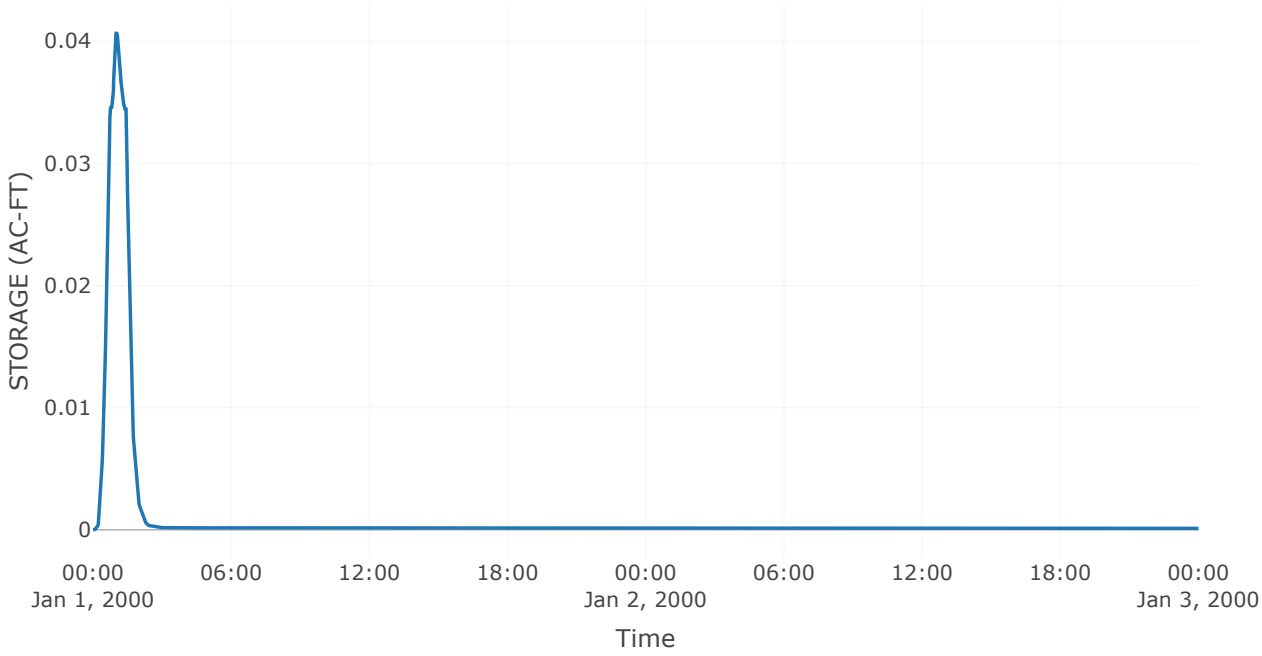

Outflow
300
250
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Prop Storage West of Wolf Rd

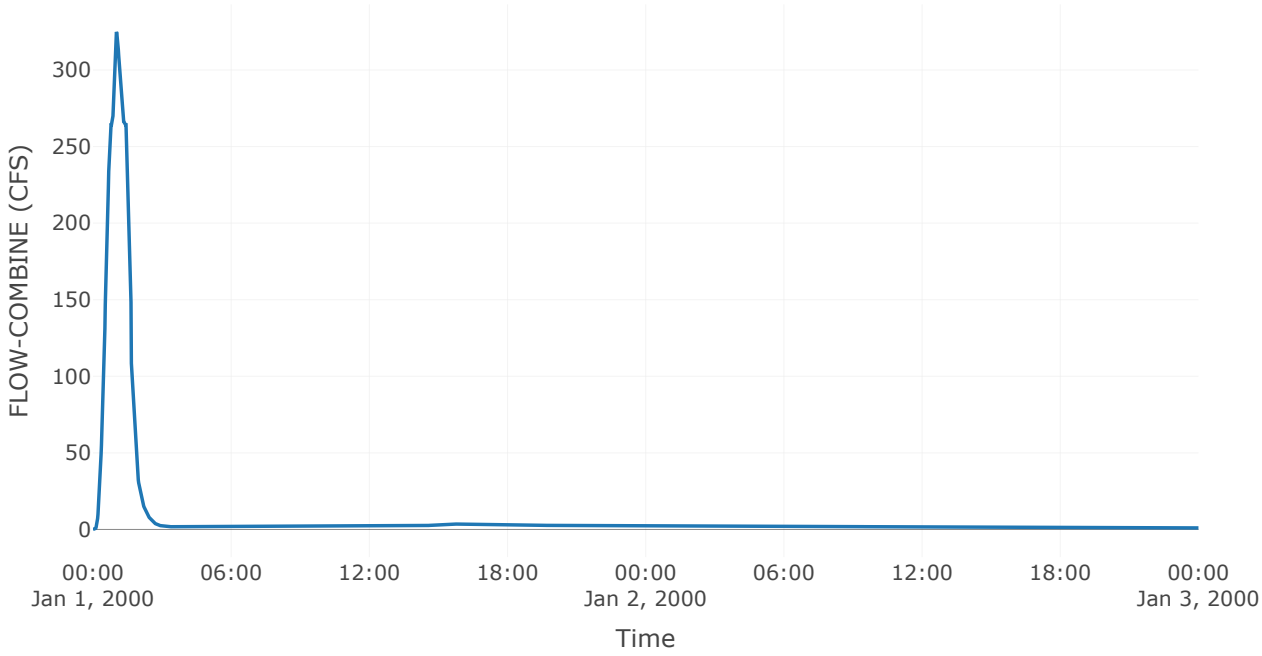
Downstream : Proposed Basin C

Results: Prop Storage West of Wolf Rd	
Peak Discharge (CFS)	324.78
Time of Peak Discharge	01Jan2000, 01:01
Volume (IN)	2.48
Peak Inflow (CFS)	324.8
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	35.58
Maximum Storage (AC - FT)	0.04
Peak Elevation (FT)	660.3
Discharge Volume (AC - FT)	35.57

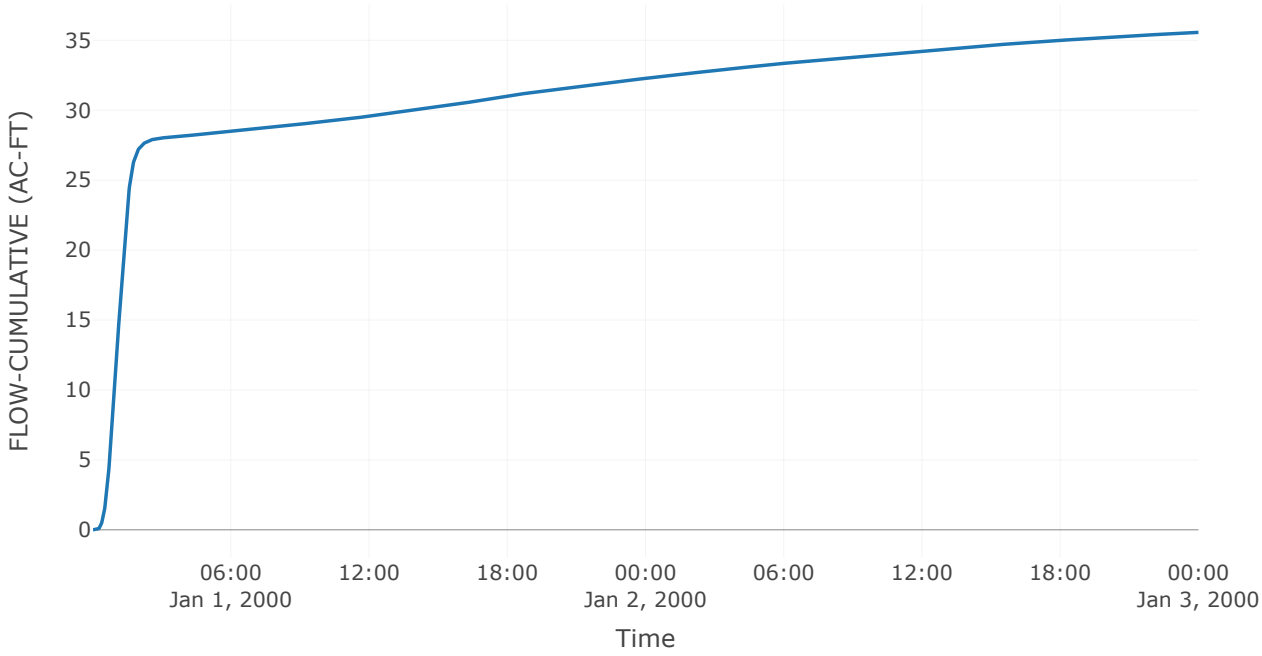
Storage



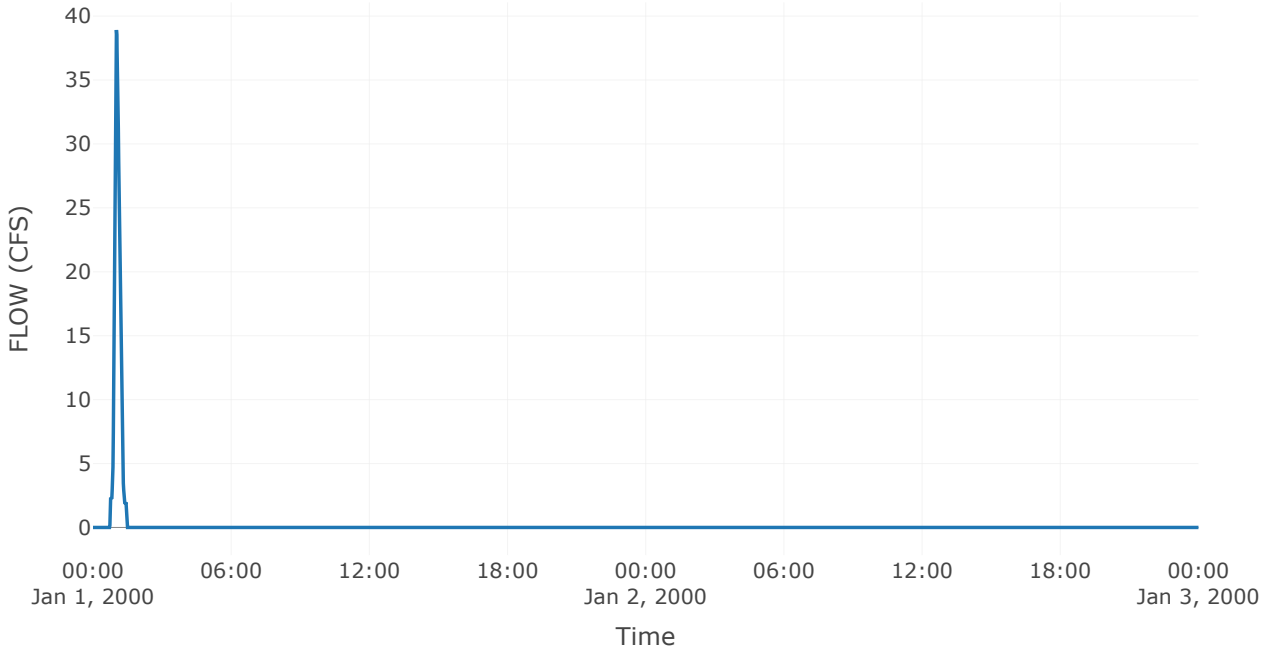
Combined Inflow



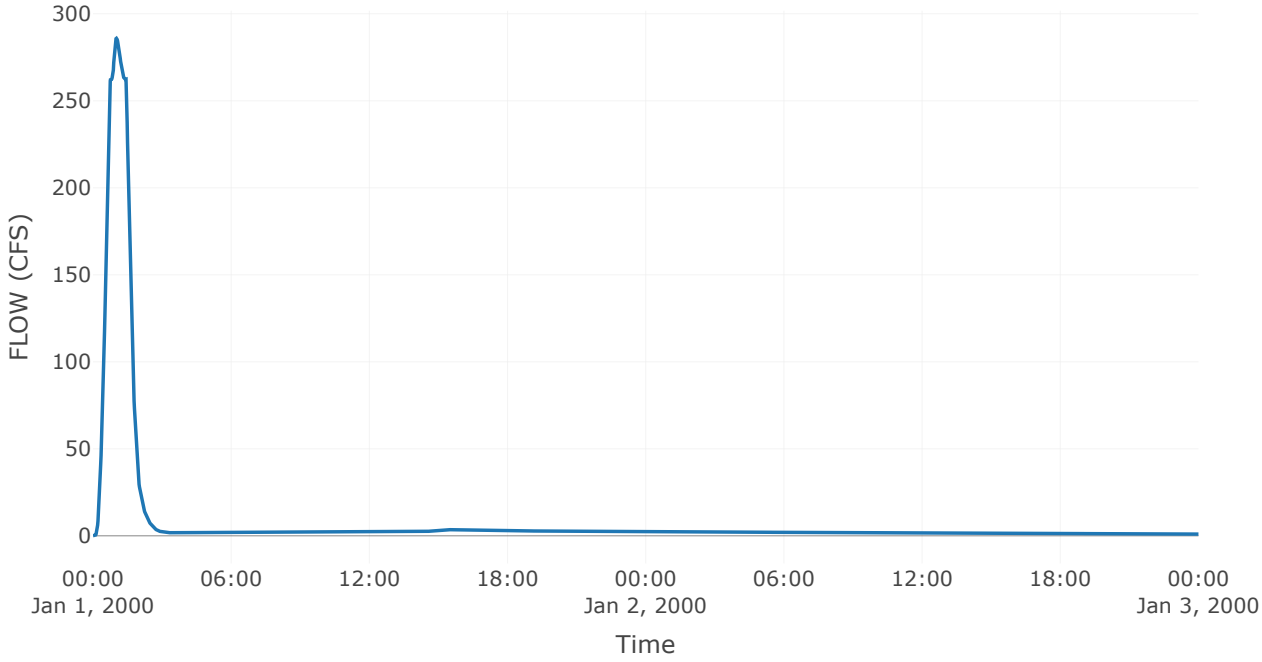
Cumulative Outflow



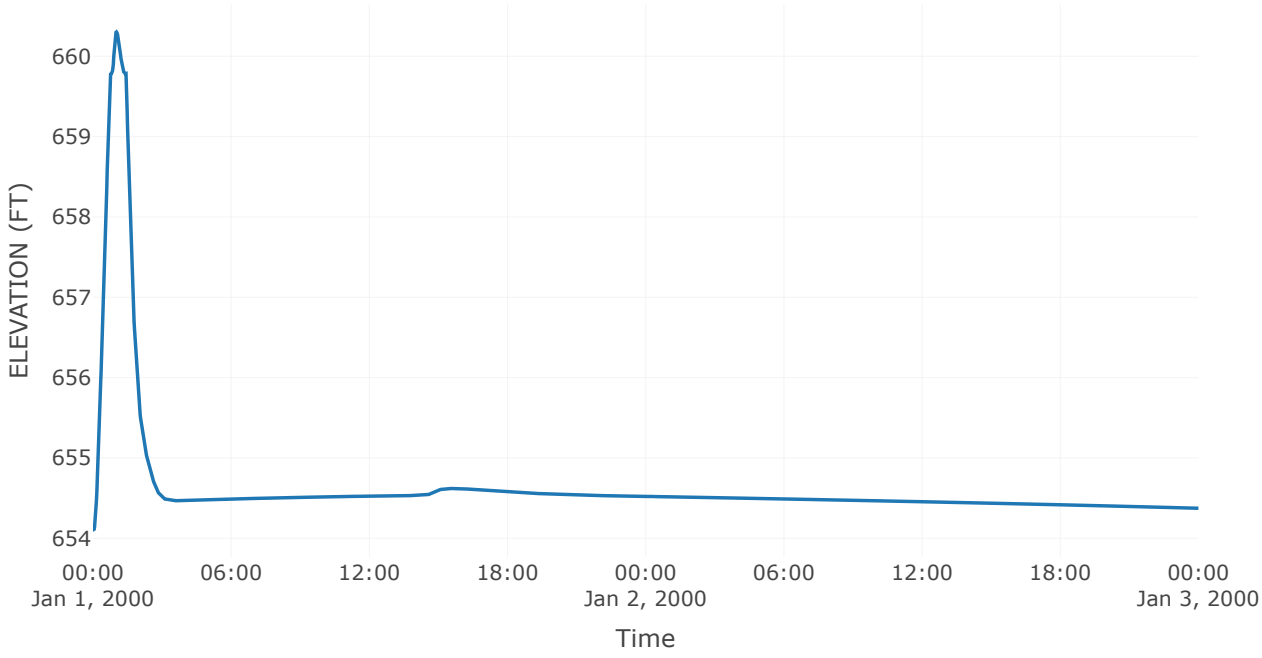
Spillway 1

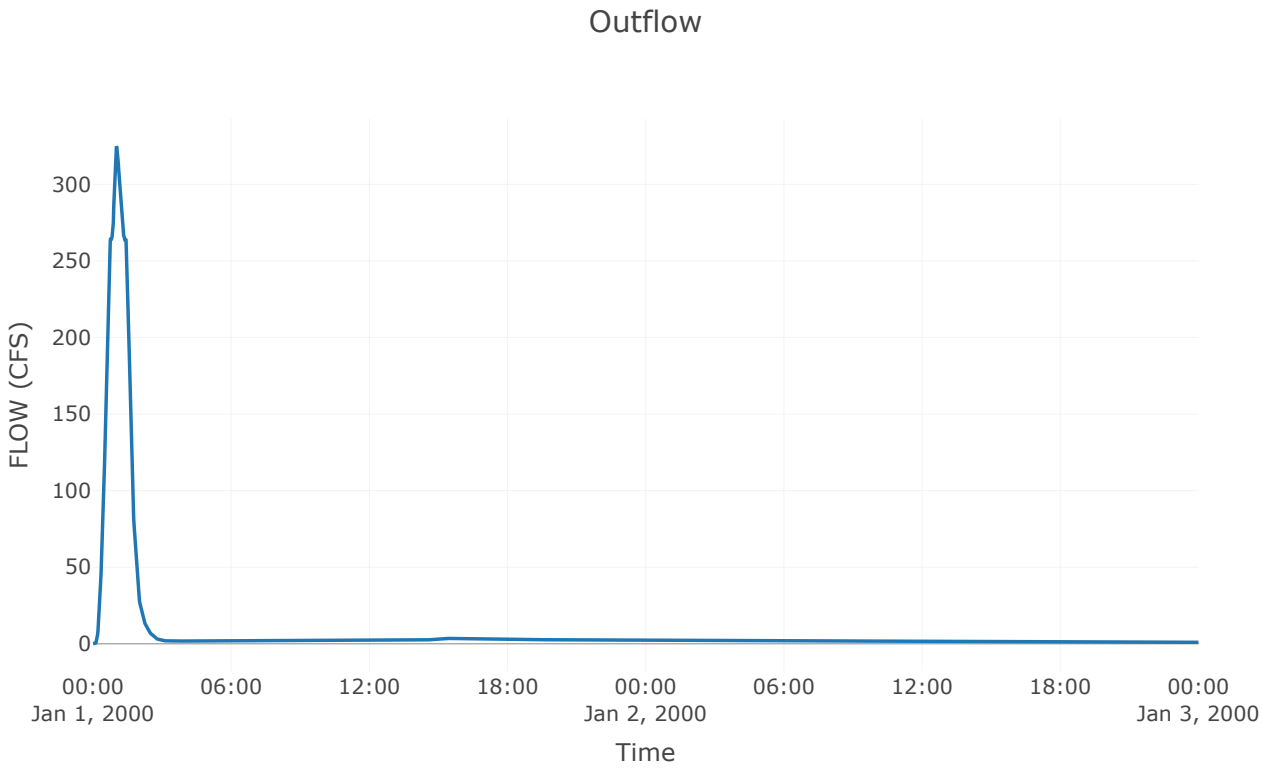


Outlet 1



Pool Elevation




Outflow
FLOW (CFS)
300
250
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Subbasin: Prop On-Site

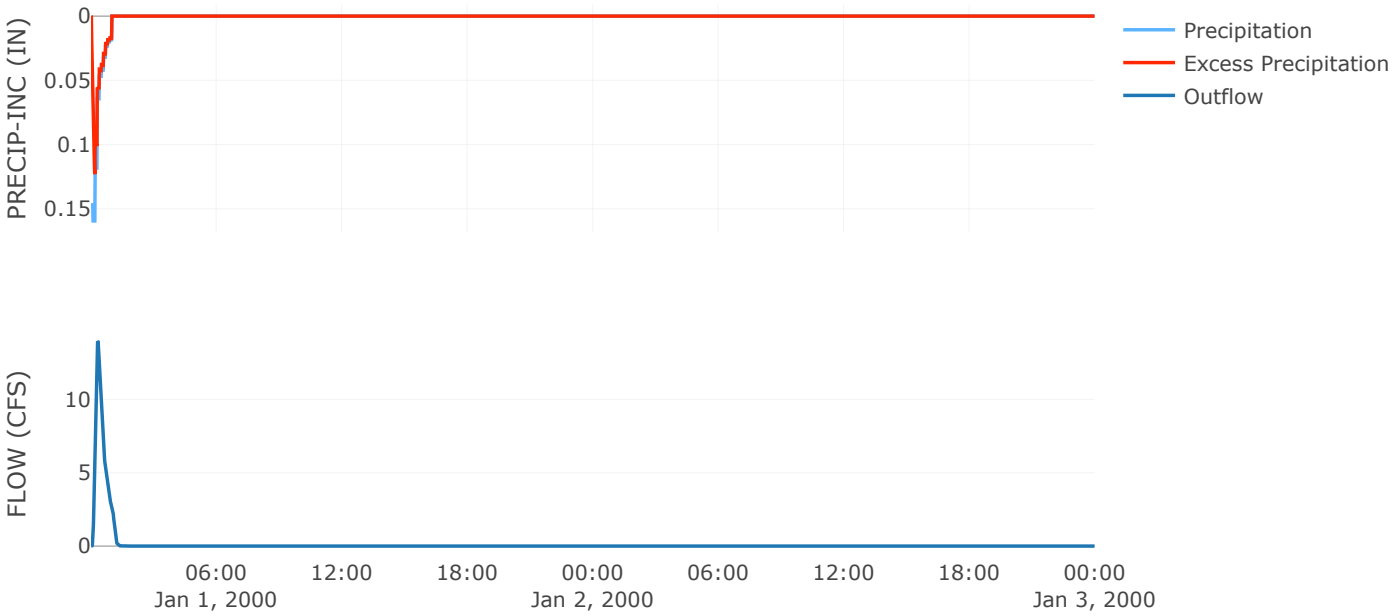
Area (MI2) : 0
Downstream : Proposed Basin C

Loss Rate: Scs	
Percent Impervious Area	0
Curve Number	88.03

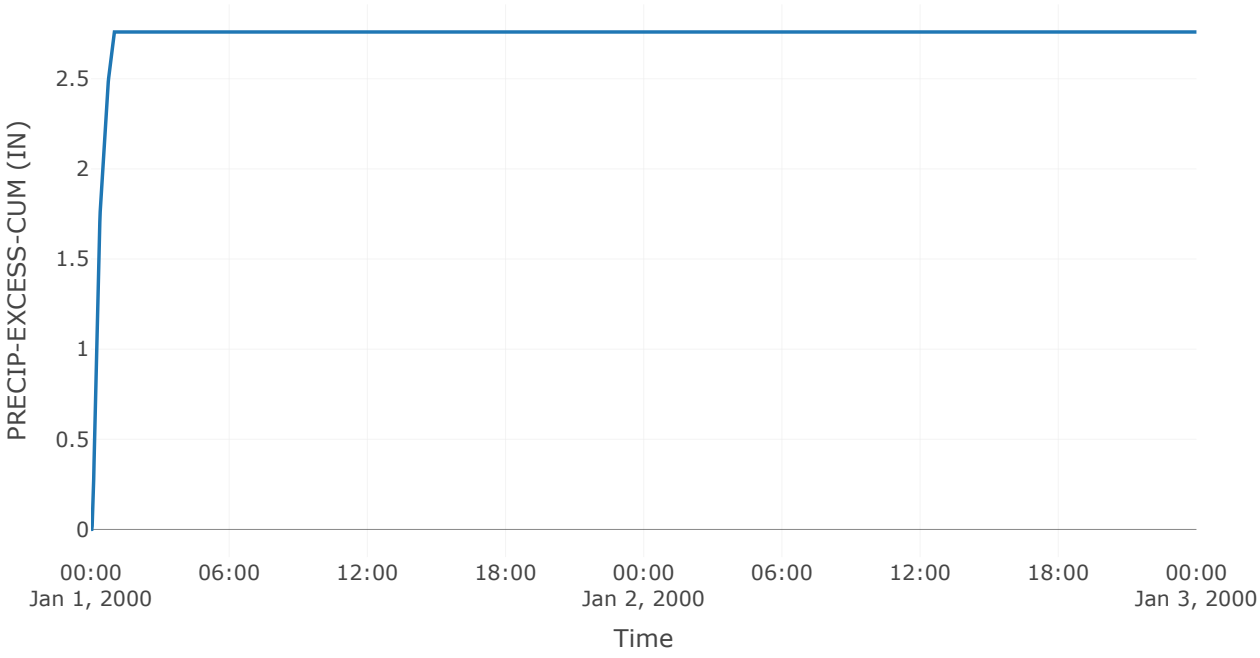
Transform: Scs	
Lag	6
Unitgraph Type	Standard

Results: Prop On-Site	
Peak Discharge (CFS)	13.96
Time of Peak Discharge	01Jan2000, 00:19
Volume (IN)	2.76
Precipitation Volume (AC - FT)	0.81
Loss Volume (AC - FT)	0.26
Excess Volume (AC - FT)	0.55
Direct Runoff Volume (AC - FT)	0.55
Baseflow Volume (AC - FT)	0

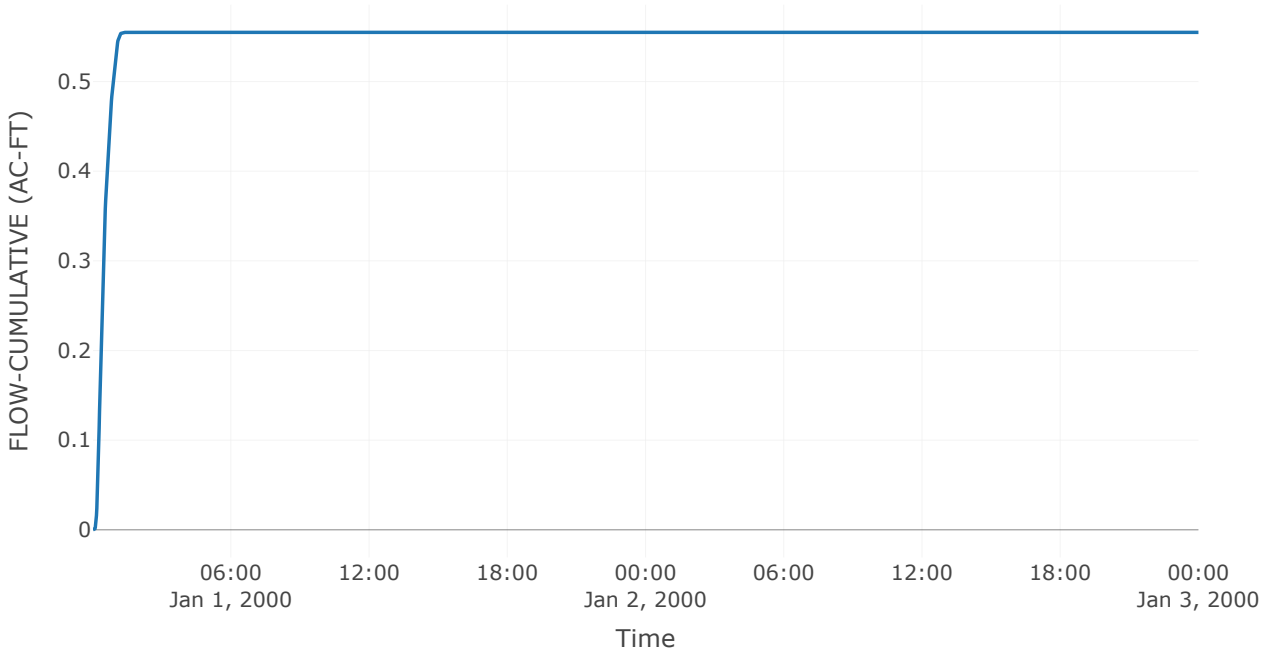
Precipitation and Outflow



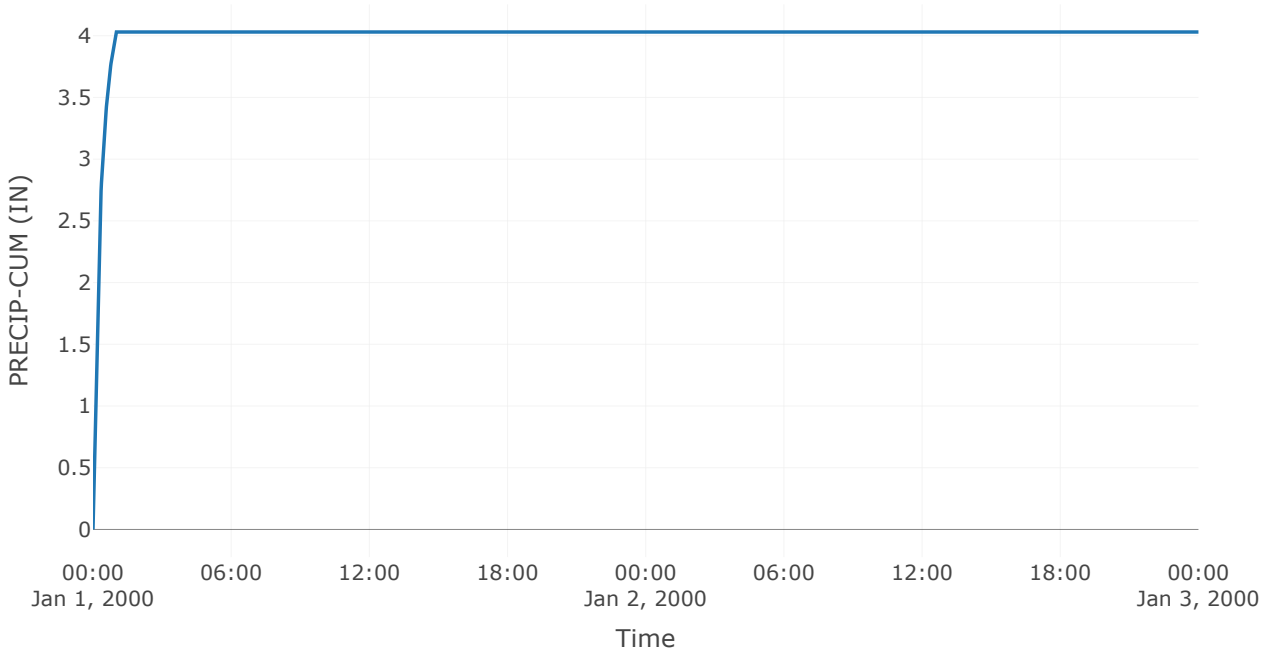
Cumulative Excess Precipitation

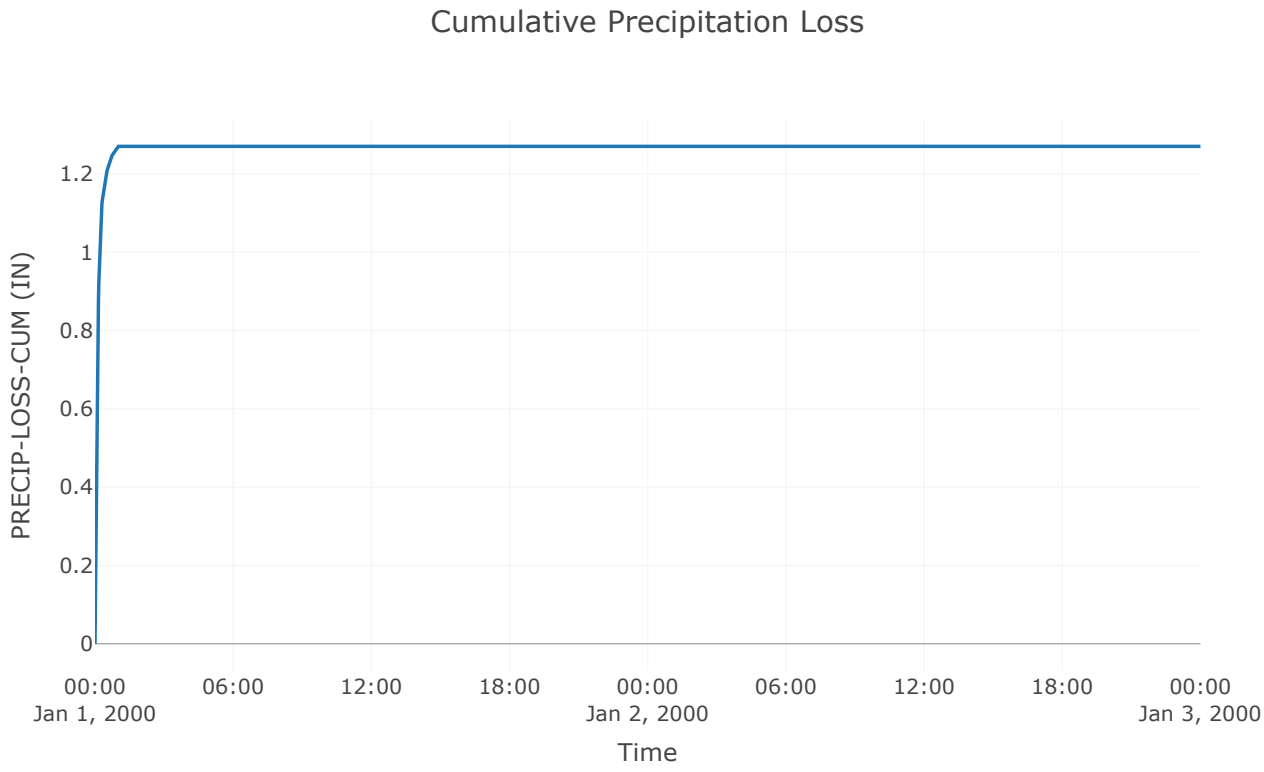


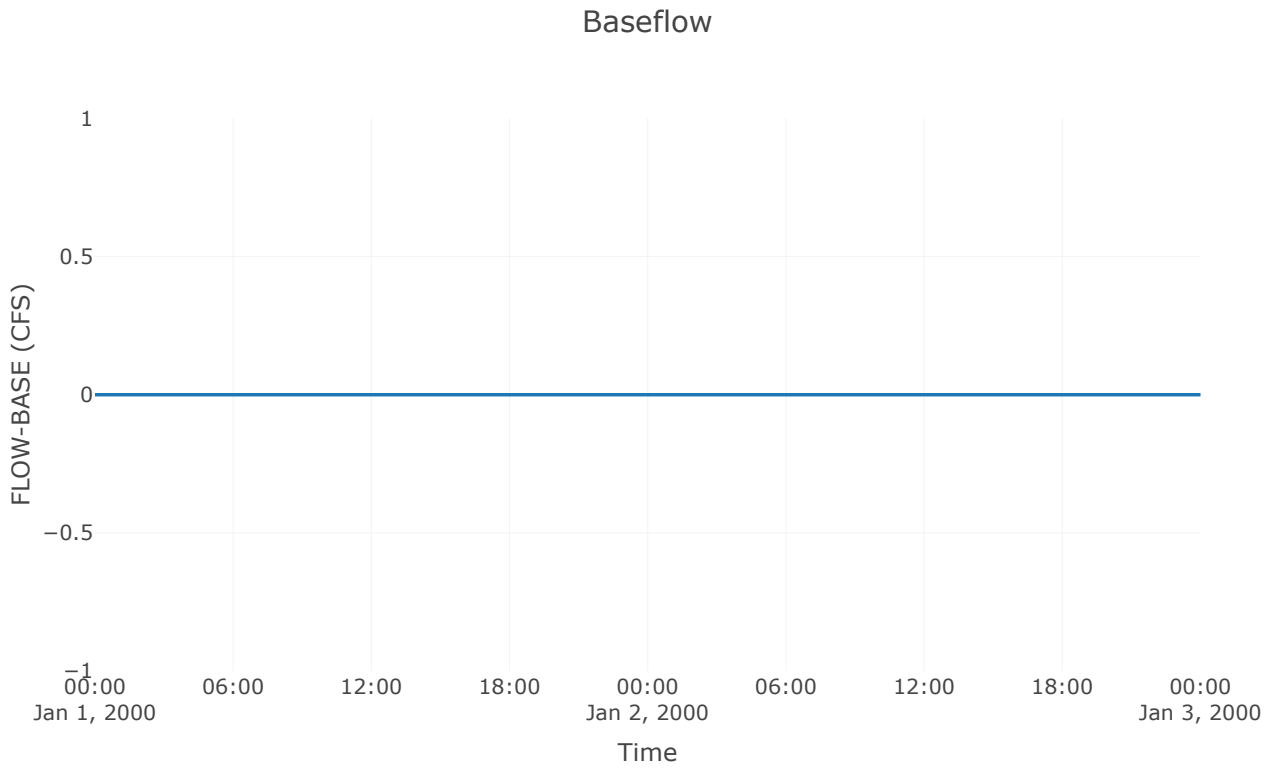
Cumulative Outflow



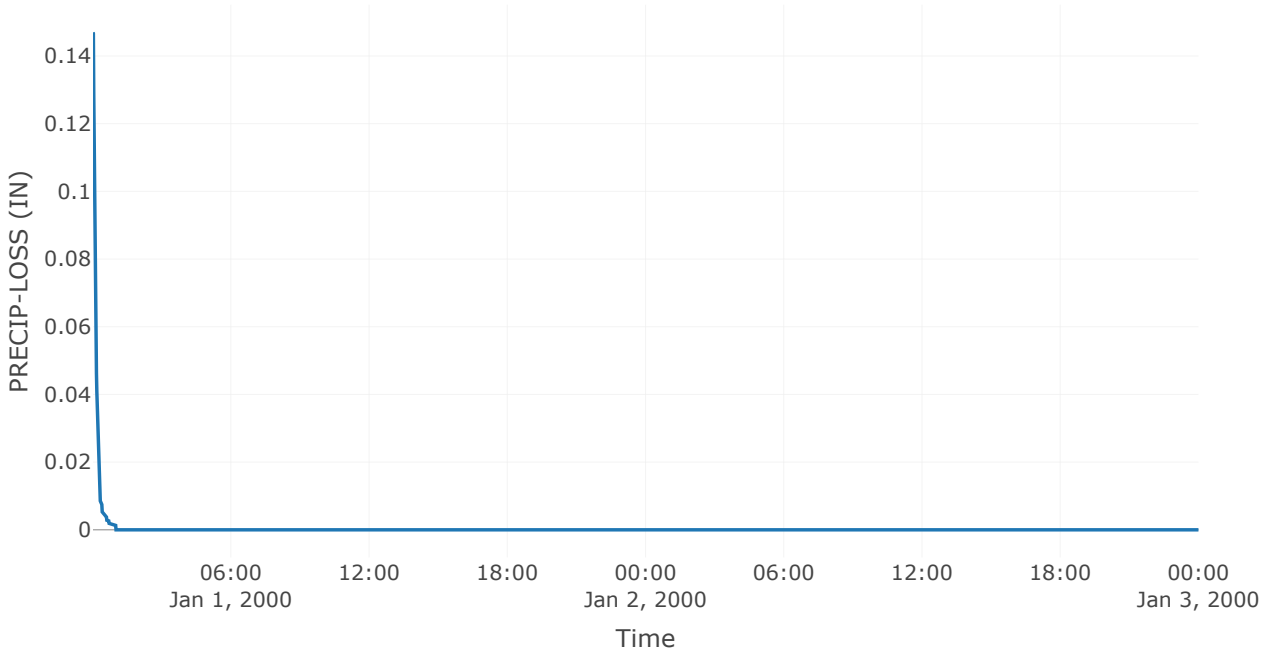
Cumulative Precipitation



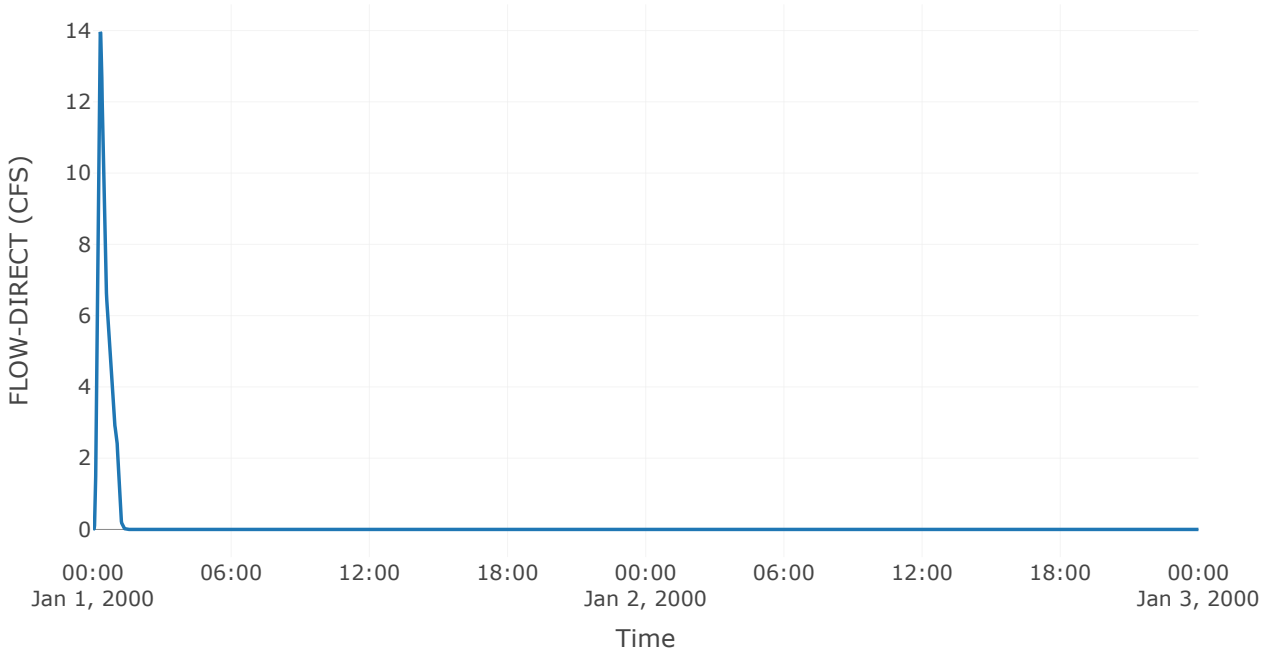

Cumulative Precipitation Loss
PRECIP-LOSS-CUM (IN)
1.2
1
0.8
0.6
0.4
0.2
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

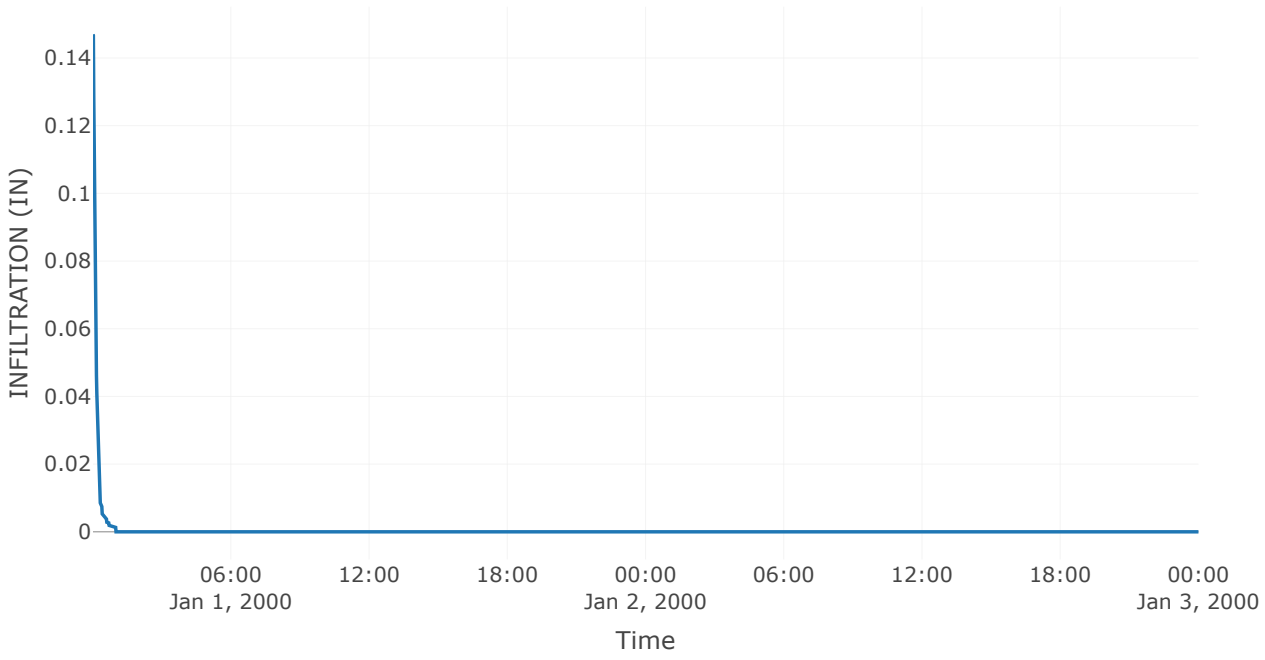

Baseflow
FLOW-BASE (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Precipitation Loss



Direct Runoff

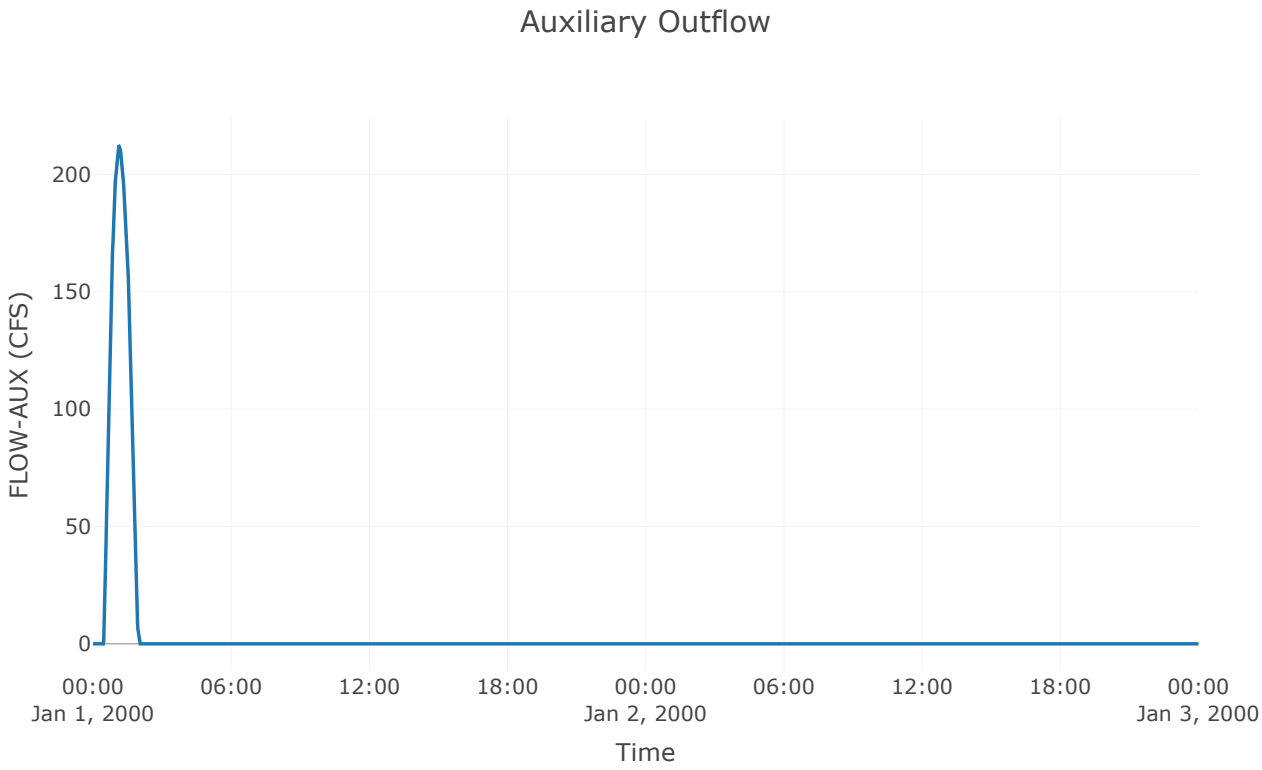


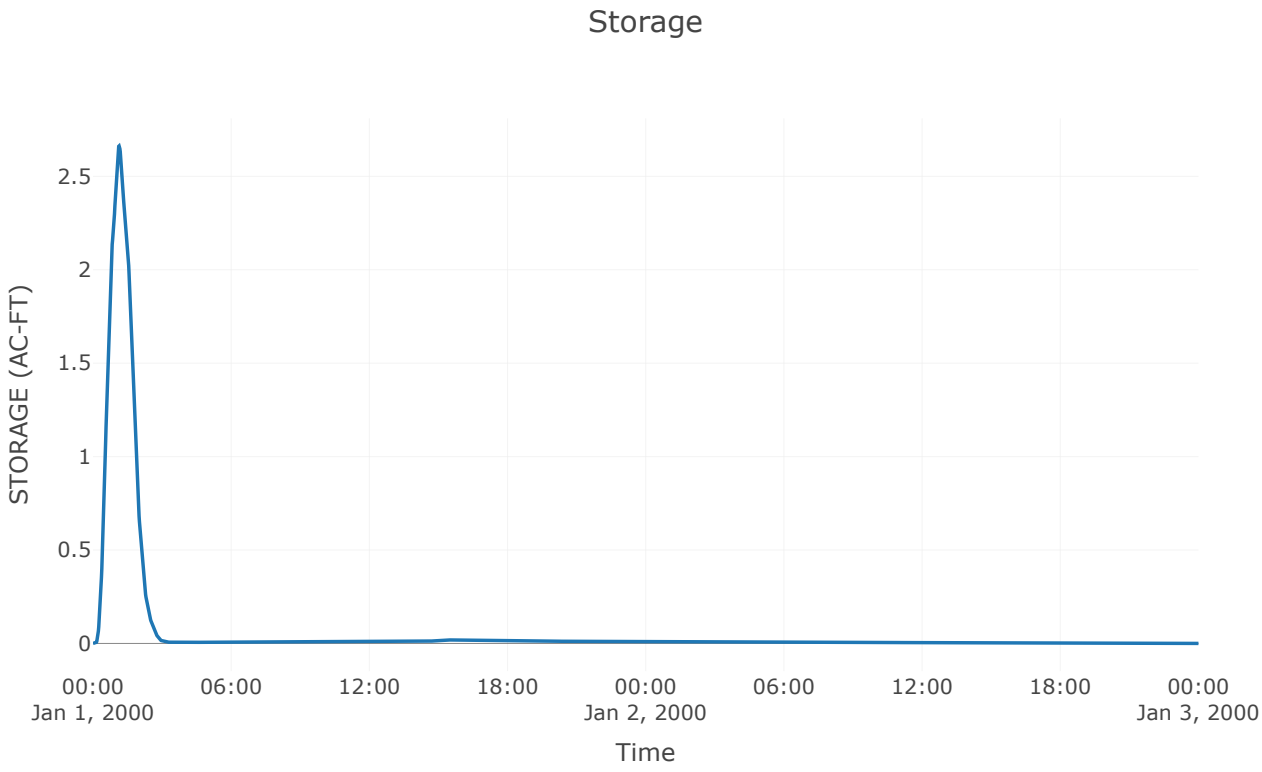

Soil Infiltration
INFILTRATION (IN)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Proposed Basin C

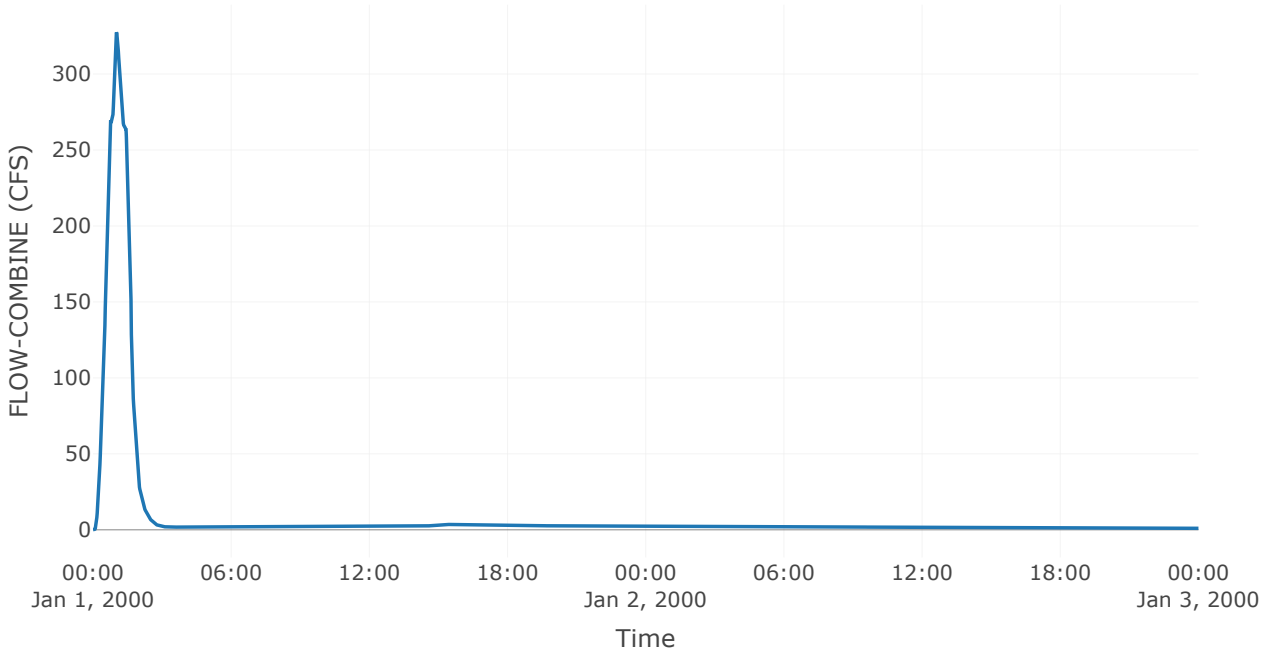
Downstream : Existing Basin A & B

Results: Proposed Basin C	
Peak Discharge (CFS)	95.13
Time of Peak Discharge	01Jan2000, 01:08
Volume (IN)	1.37
Peak Inflow (CFS)	327.44
Time of Peak Inflow	01Jan2000, 01:01
Inflow Volume (AC - FT)	36.13
Maximum Storage (AC - FT)	2.66
Peak Elevation (FT)	655.11
Discharge Volume (AC - FT)	19.89

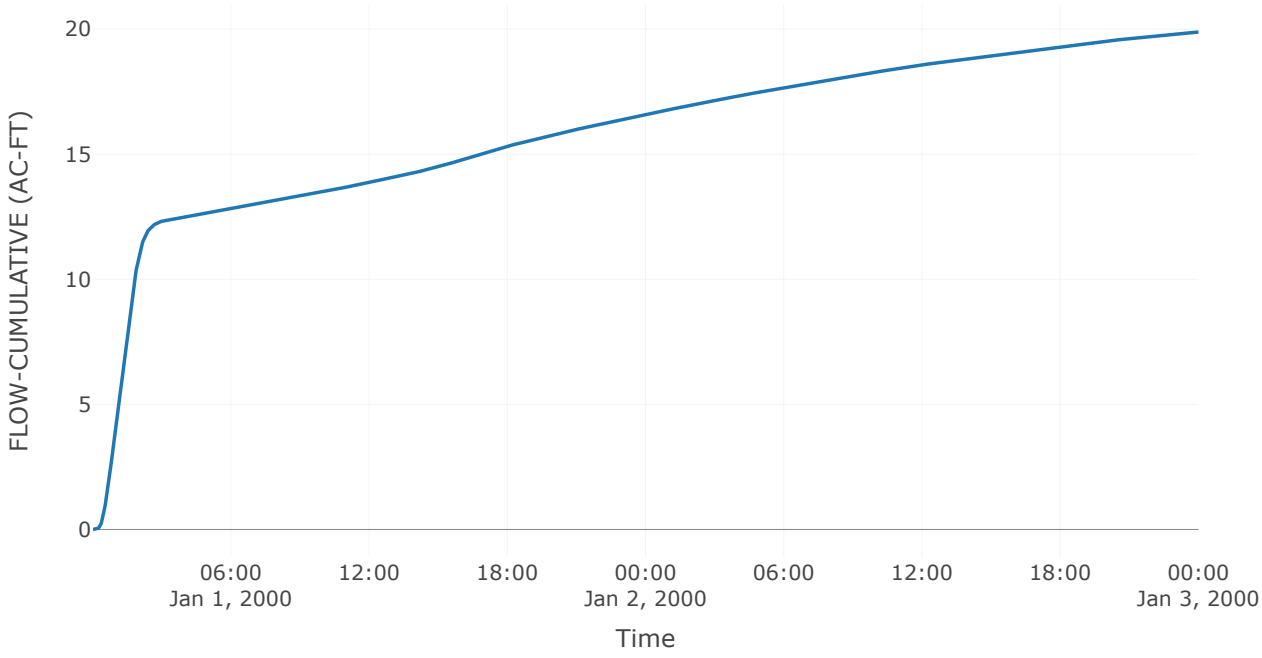

Auxiliary Outflow
FLOW-AUX (CFS)
200
150
100
50
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

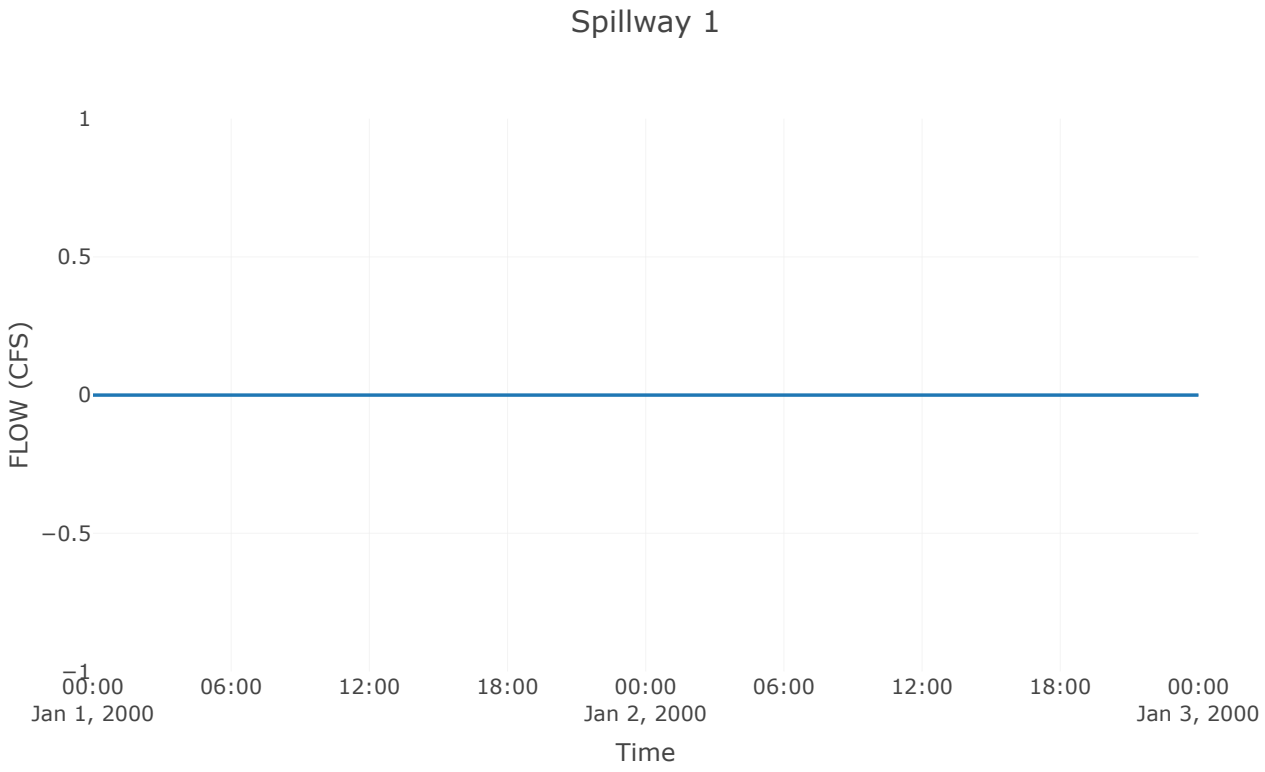

Storage
STORAGE (AC-FT)
2.5
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

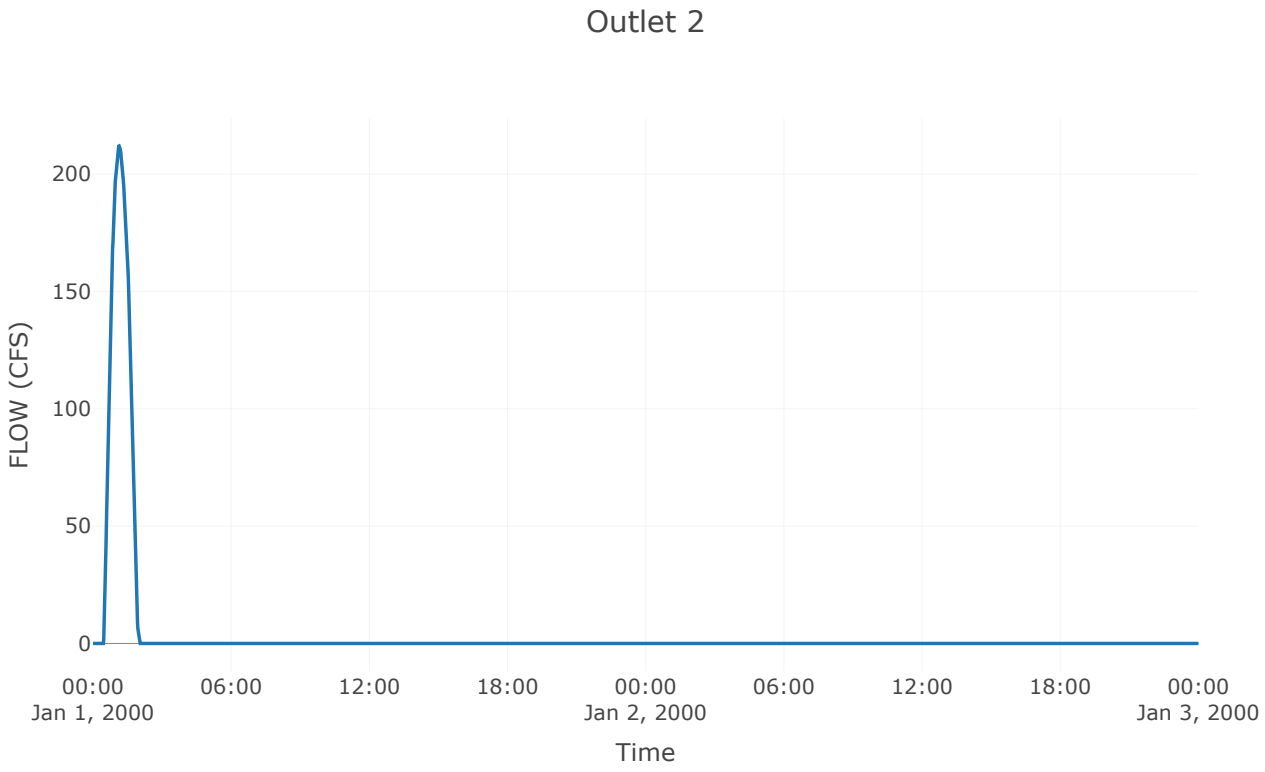
Combined Inflow



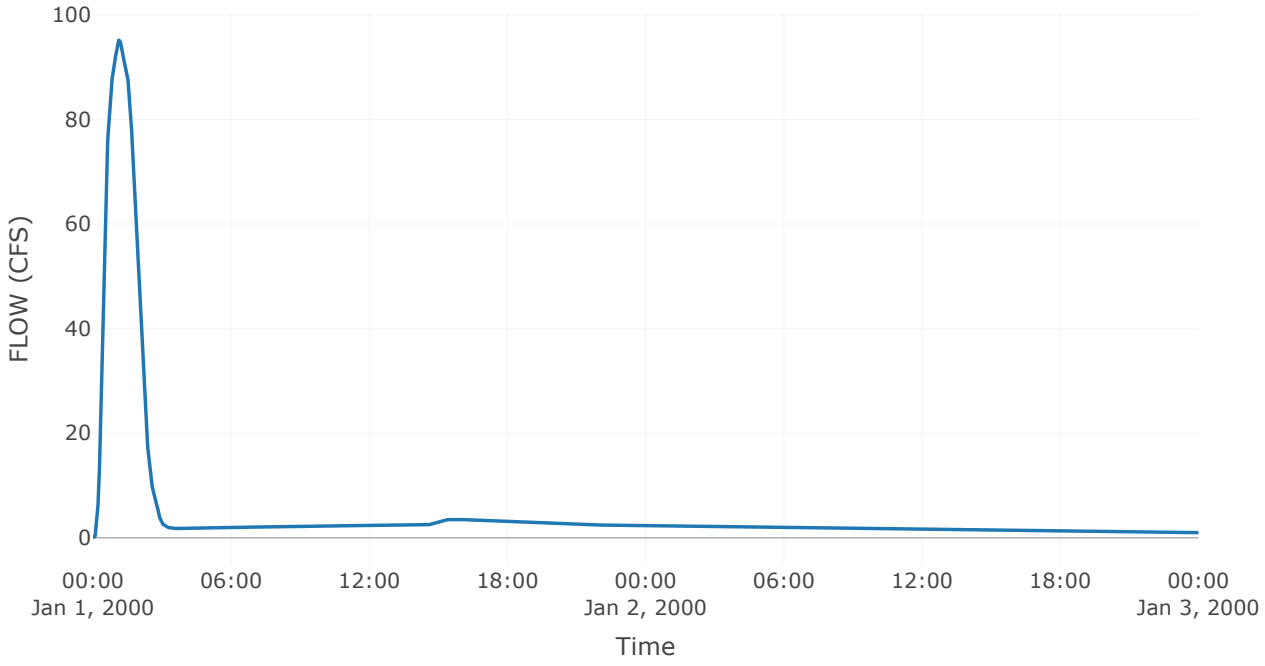
Cumulative Outflow



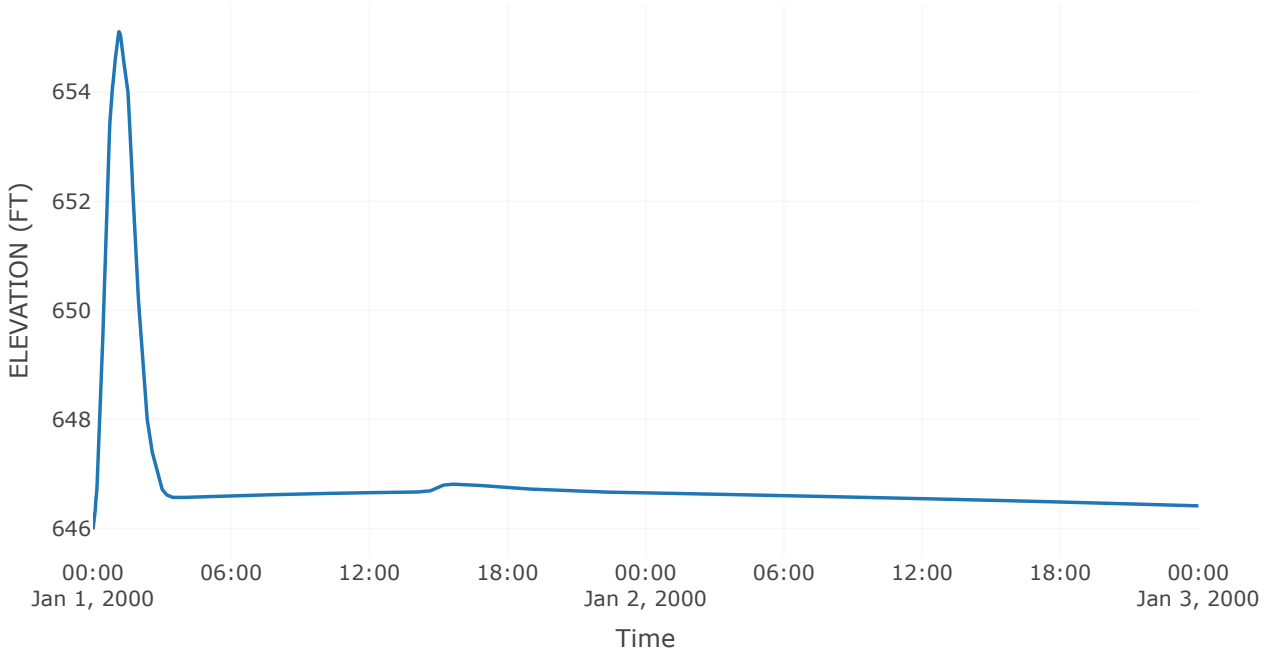

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

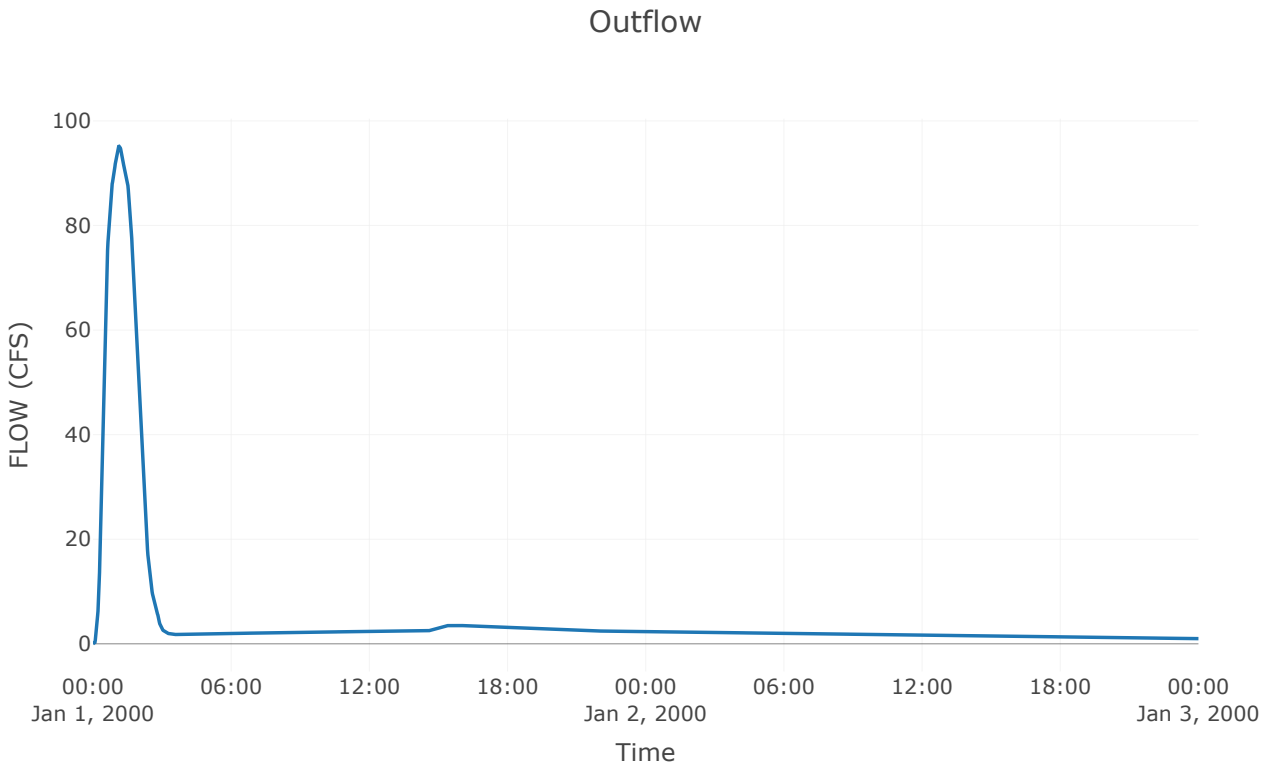

Outlet 2
200
150
100
50
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Outlet 1



Pool Elevation

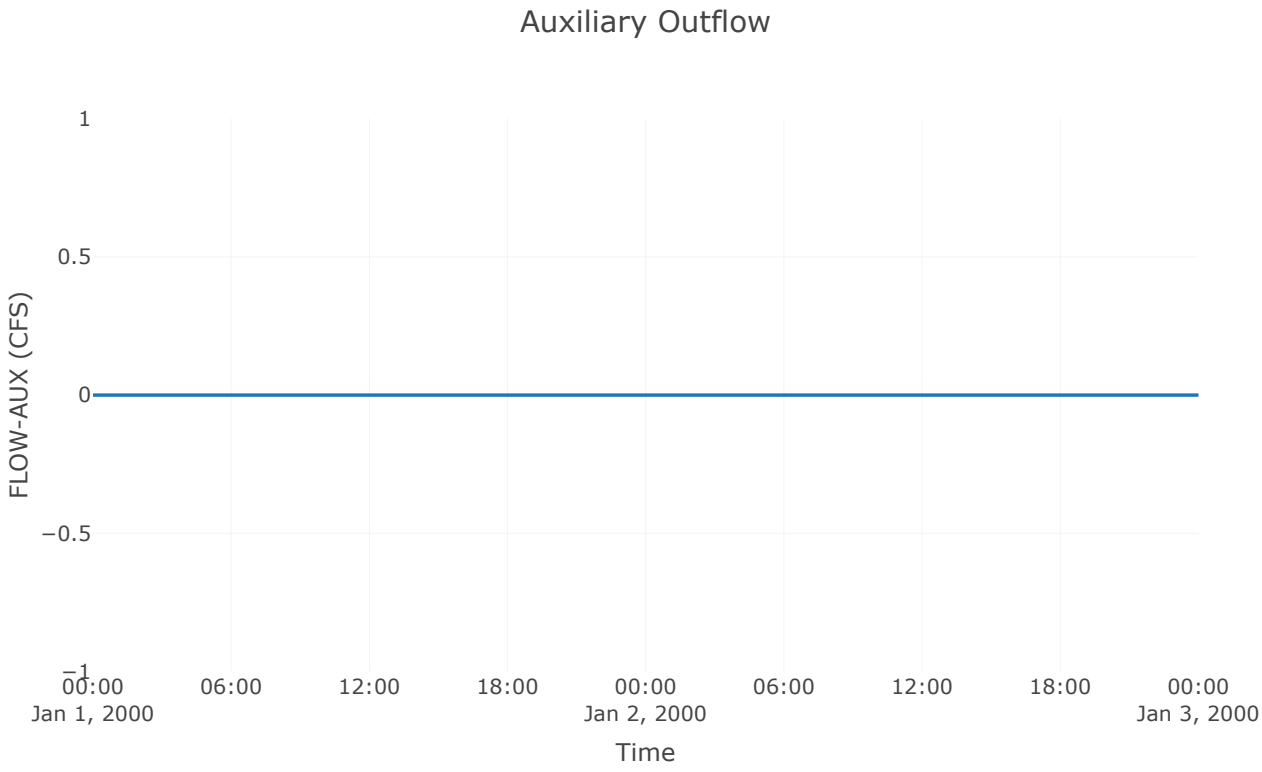


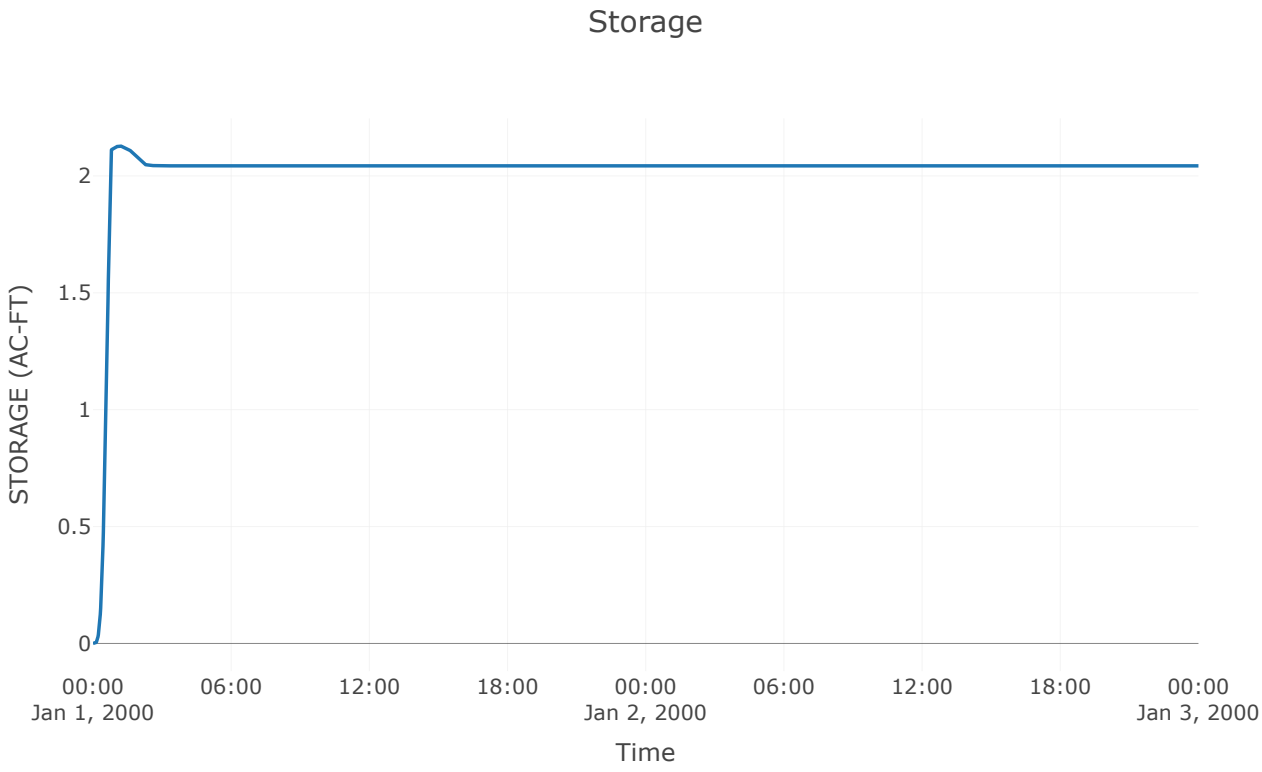

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Reservoir: Existing Basin A & B

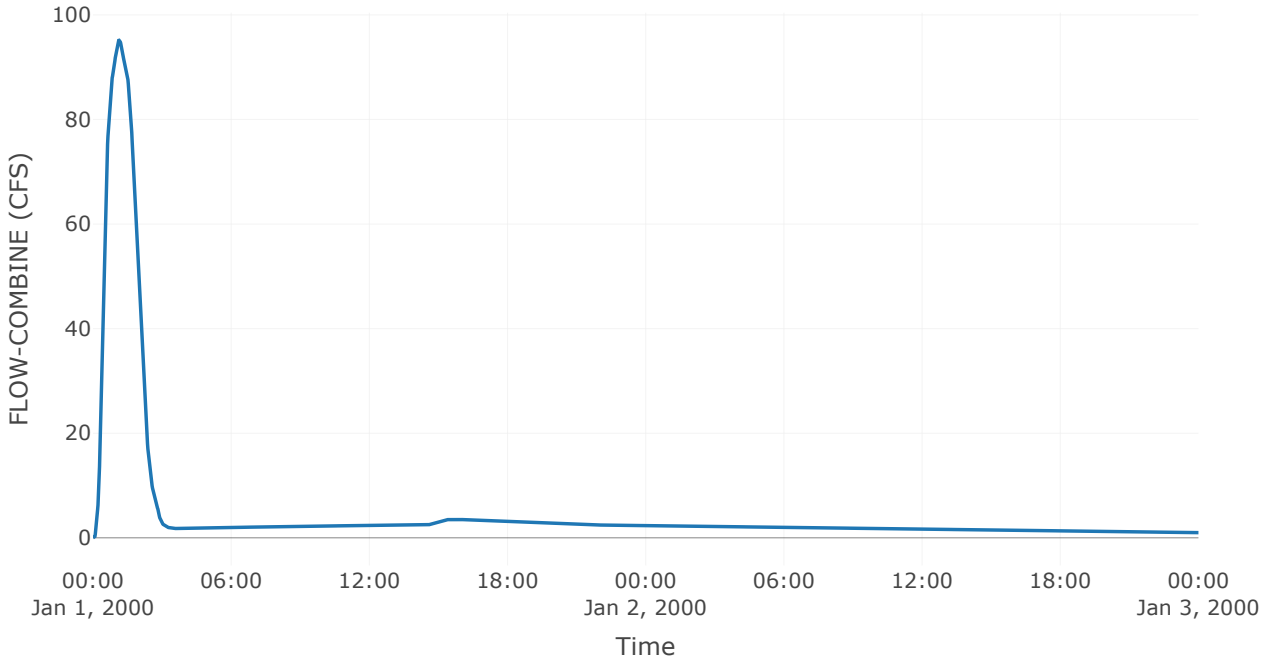
Downstream : 55th Street Outlet

Results: Existing Basin A & B	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21
Peak Inflow (CFS)	95.13
Time of Peak Inflow	01Jan2000, 01:08
Inflow Volume (AC - FT)	19.89
Maximum Storage (AC - FT)	2.13
Peak Elevation (FT)	653.46
Discharge Volume (AC - FT)	17.68

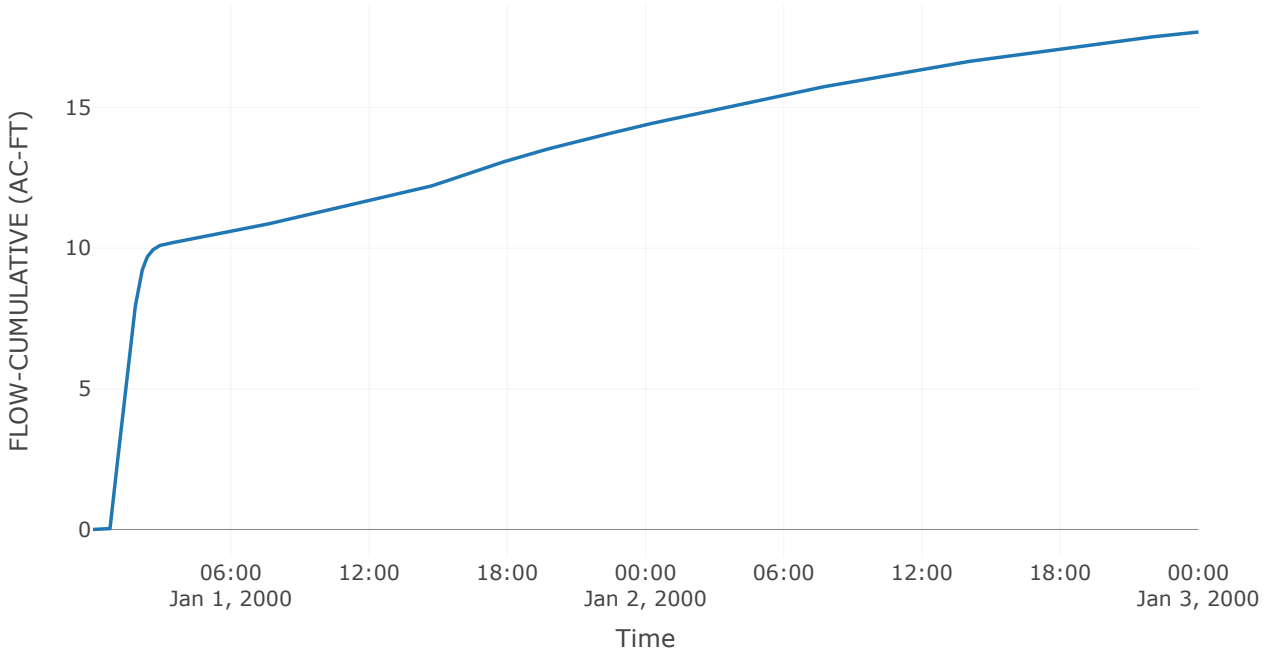

Auxiliary Outflow
FLOW-AUX (CFS)
1
0.5
0
−0.5
−1
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

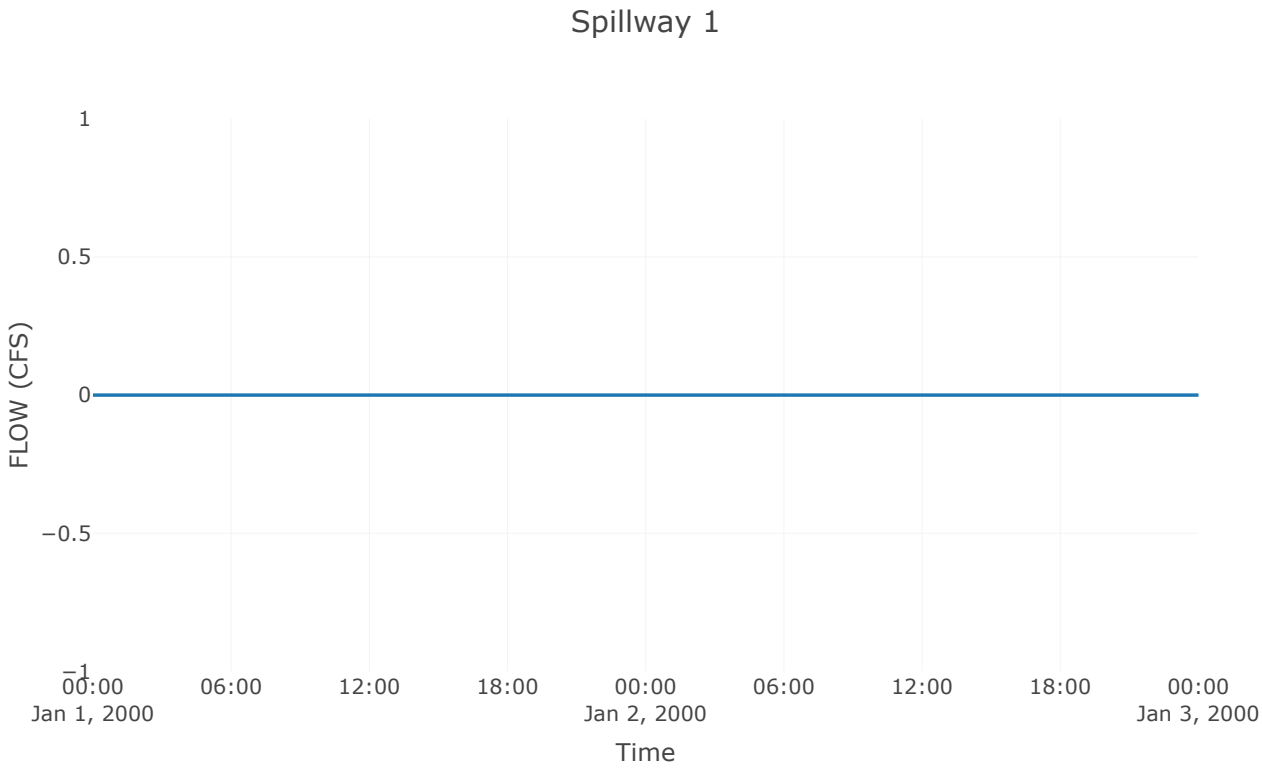

Storage
STORAGE (AC-FT)
2
1.5
1
0.5
0
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

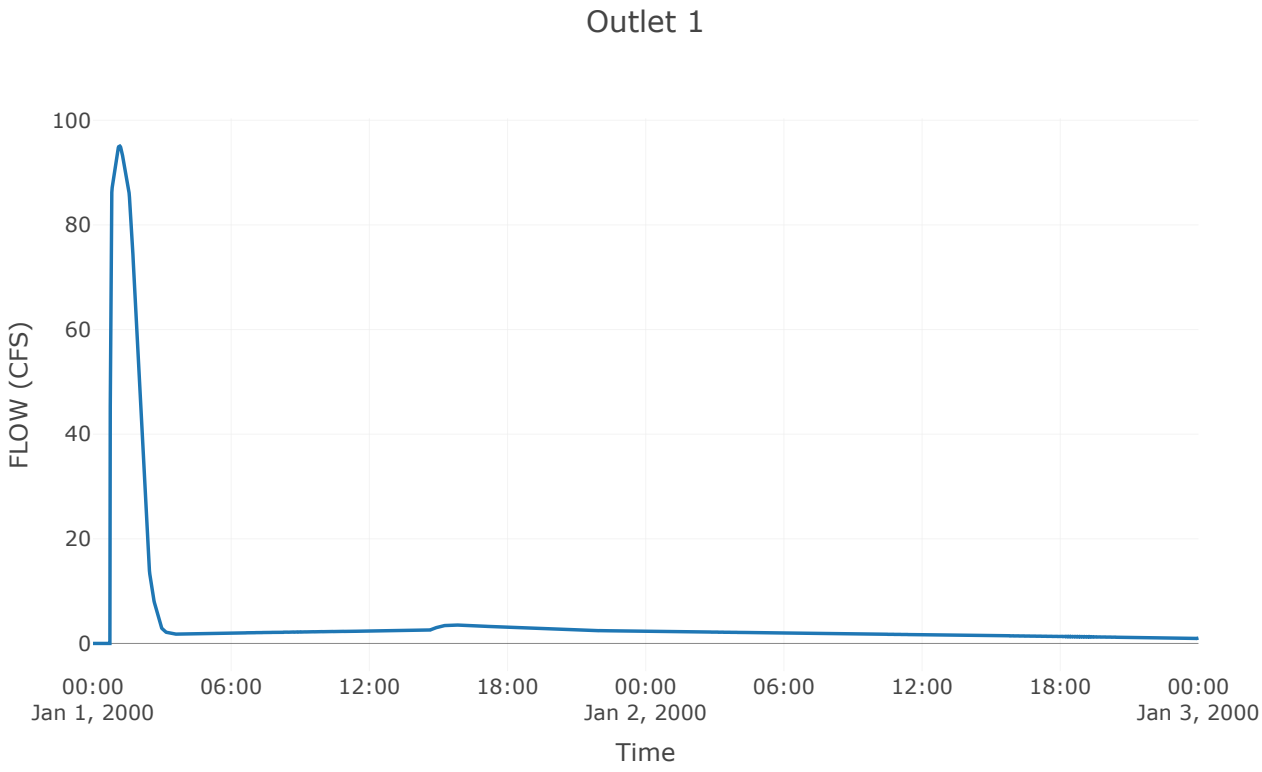
Combined Inflow



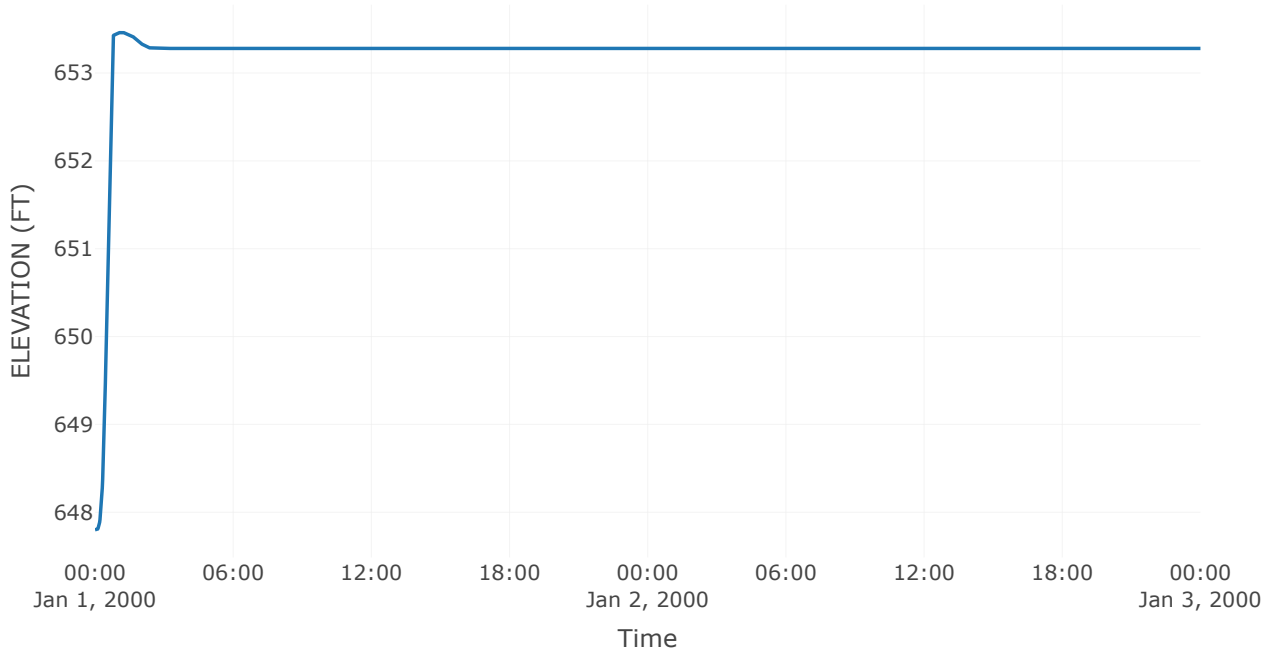
Cumulative Outflow



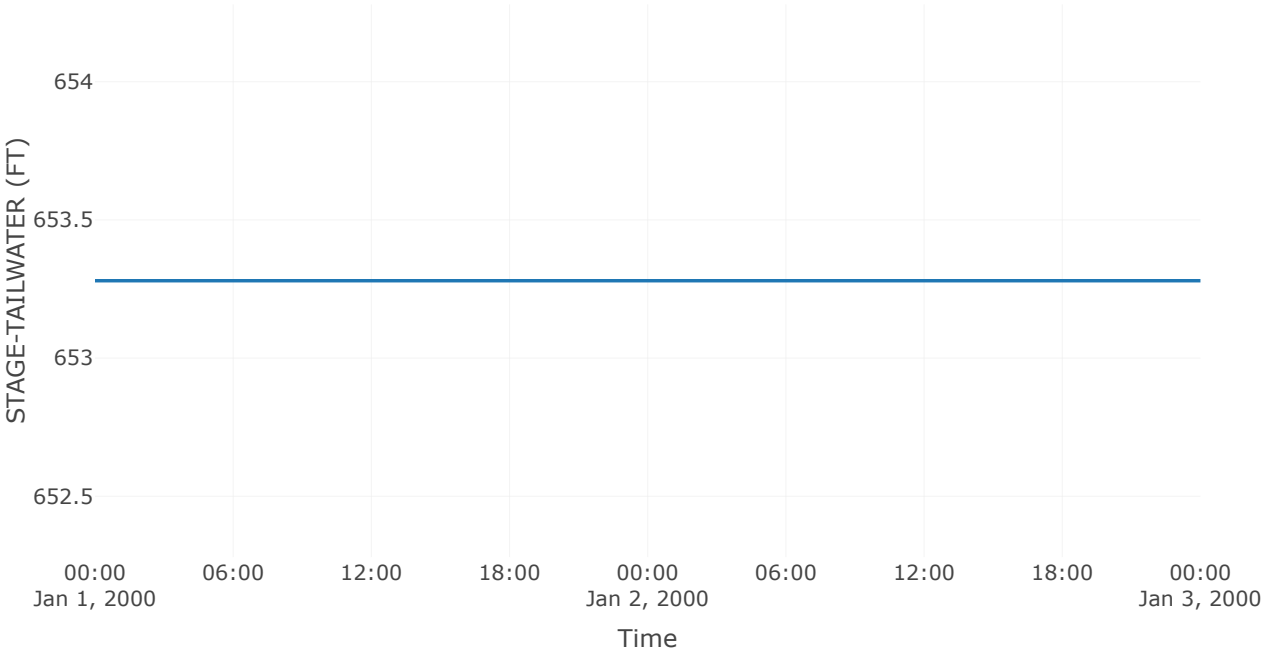

Spillway 1
1
0.5
0
−0.5
−1
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

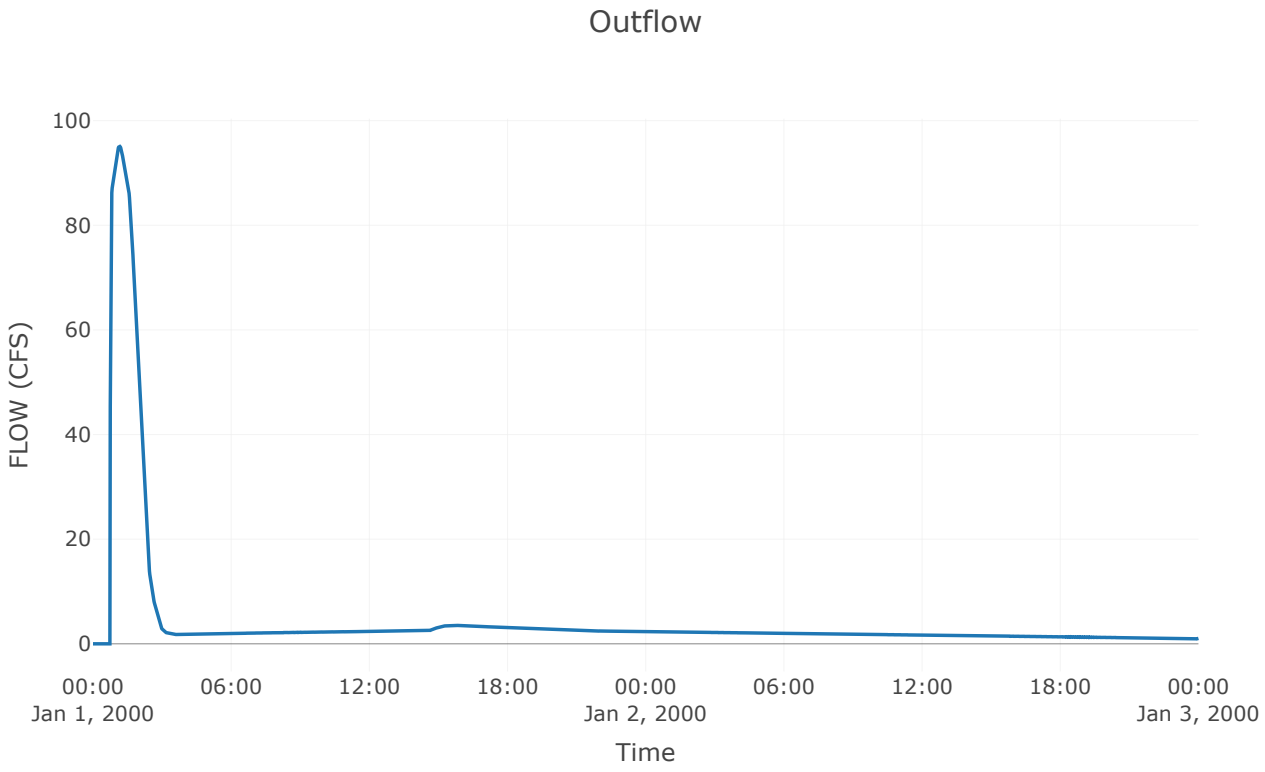

Outlet 1
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Pool Elevation



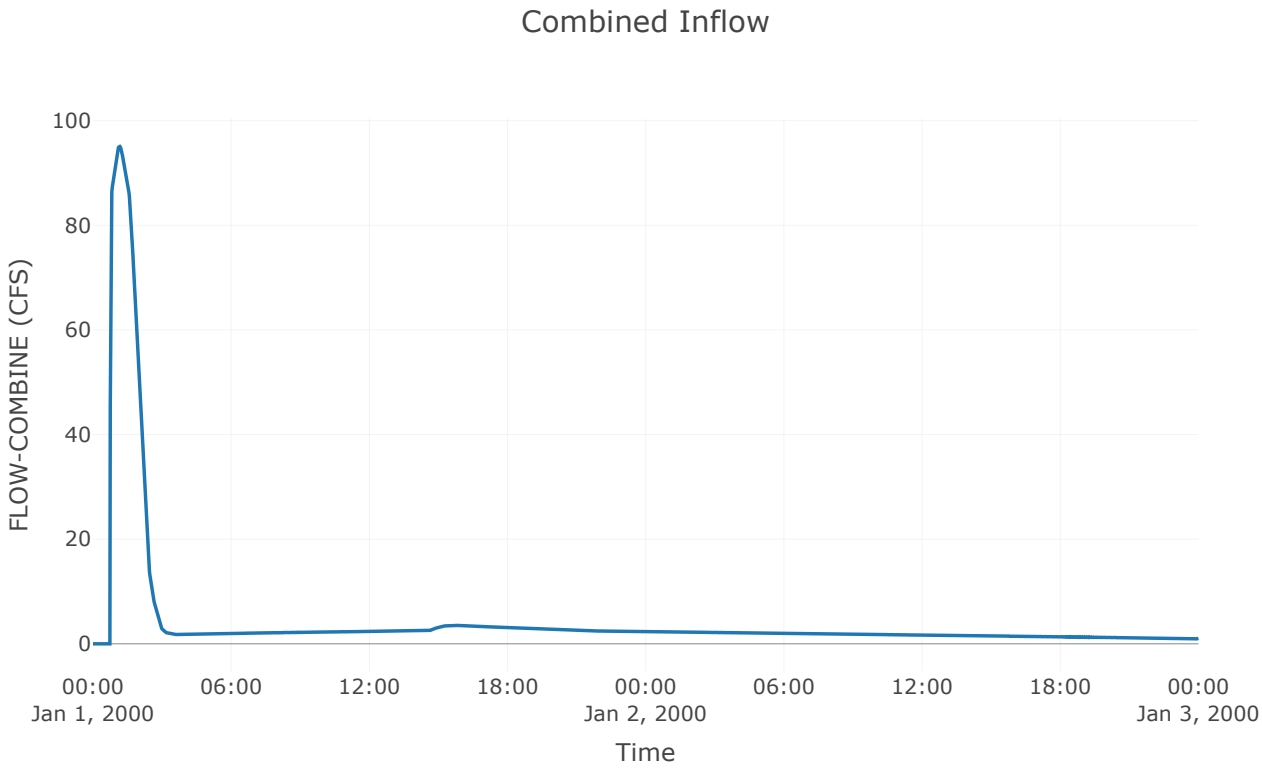
Tailwater Stage

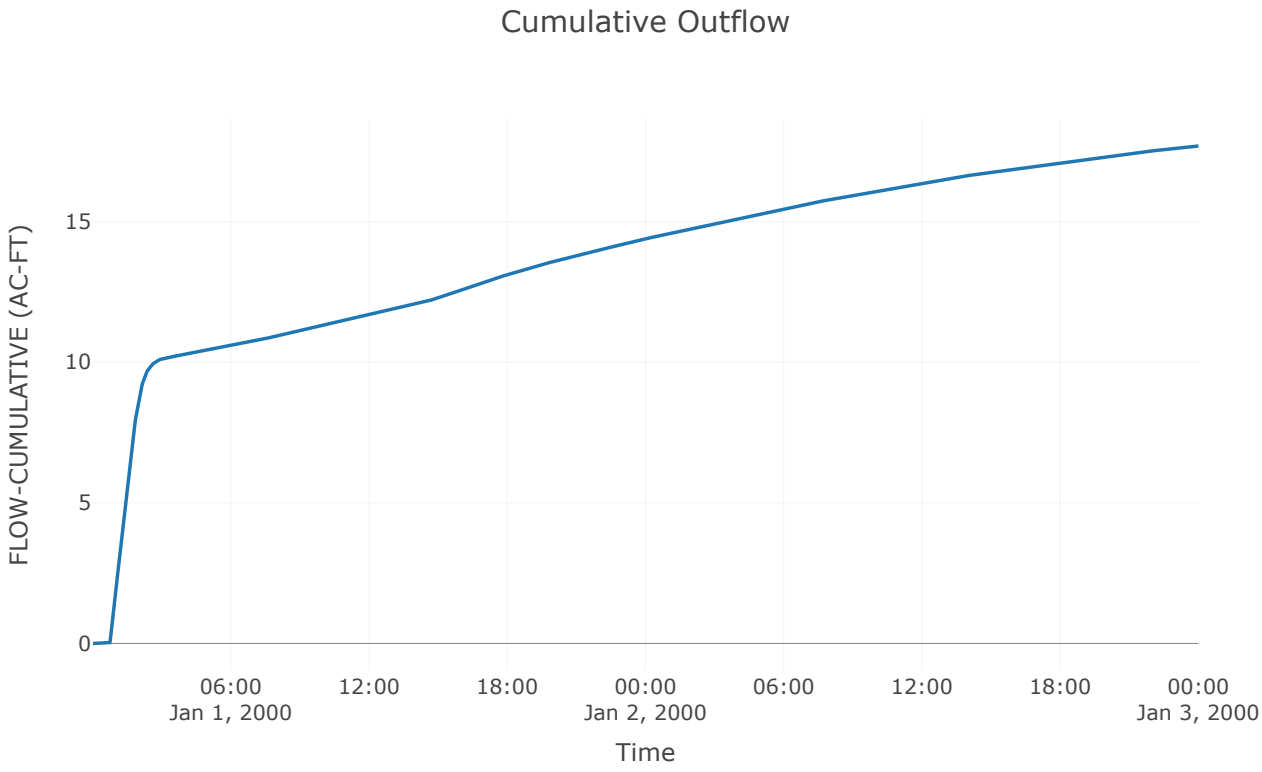


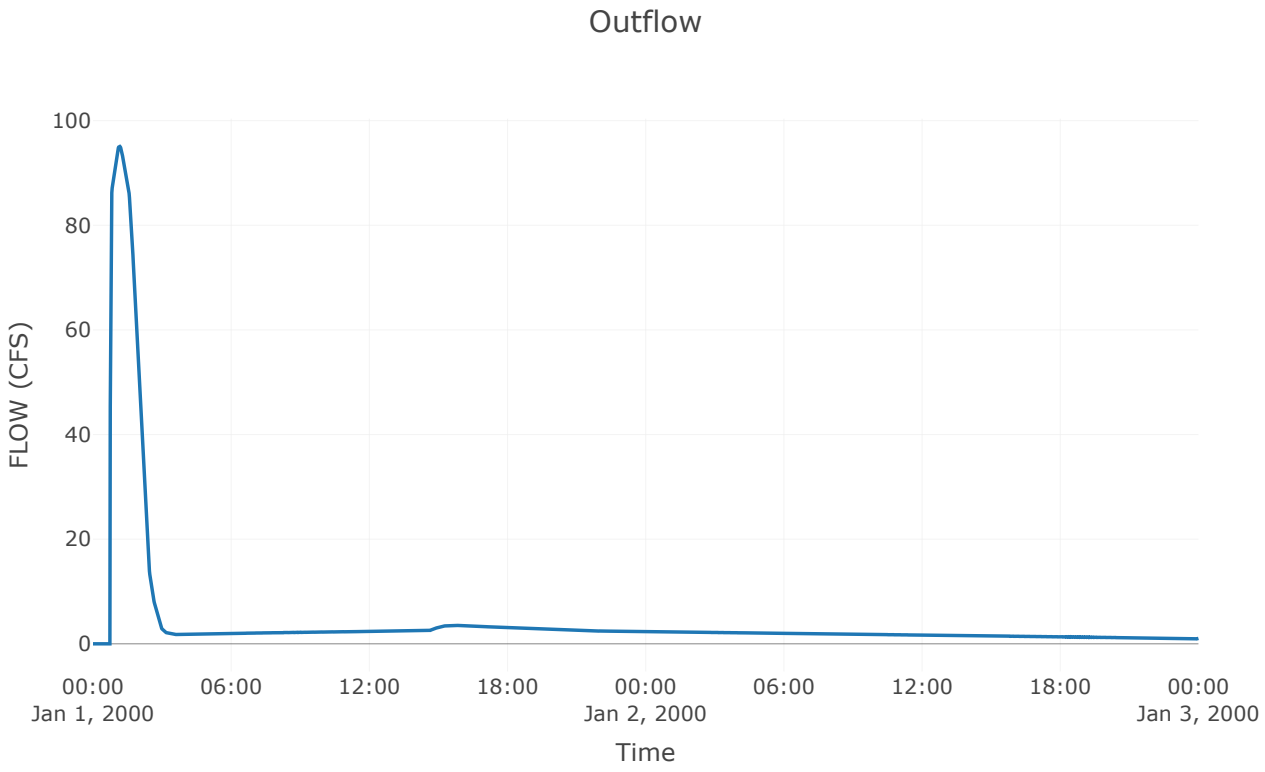

Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Sink: 55th Street Outlet

Results: 55th Street Outlet	
Peak Discharge (CFS)	95.08
Time of Peak Discharge	01Jan2000, 01:09
Volume (IN)	1.21


Combined Inflow
100
80
60
40
20
0
FLOW-COMBINE (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Cumulative Outflow
15
10
5
0
FLOW-CUMULATIVE (AC-FT)
06:00
Jan 1, 2000
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time


Outflow
100
80
60
40
20
0
FLOW (CFS)
00:00
Jan 1, 2000
06:00
12:00
18:00
00:00
Jan 2, 2000
06:00
12:00
18:00
00:00
Jan 3, 2000
Time

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm	Number of lines: 2	Date: 12/17/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	163.13	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.6	0.0	163.1	362.0	12.09	48 x 72 b	1.37	650.50	651.36	652.36	654.20	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	163.1	360.4	9.57	48 x 72 b	1.35	651.36	654.50	654.20	657.34	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm

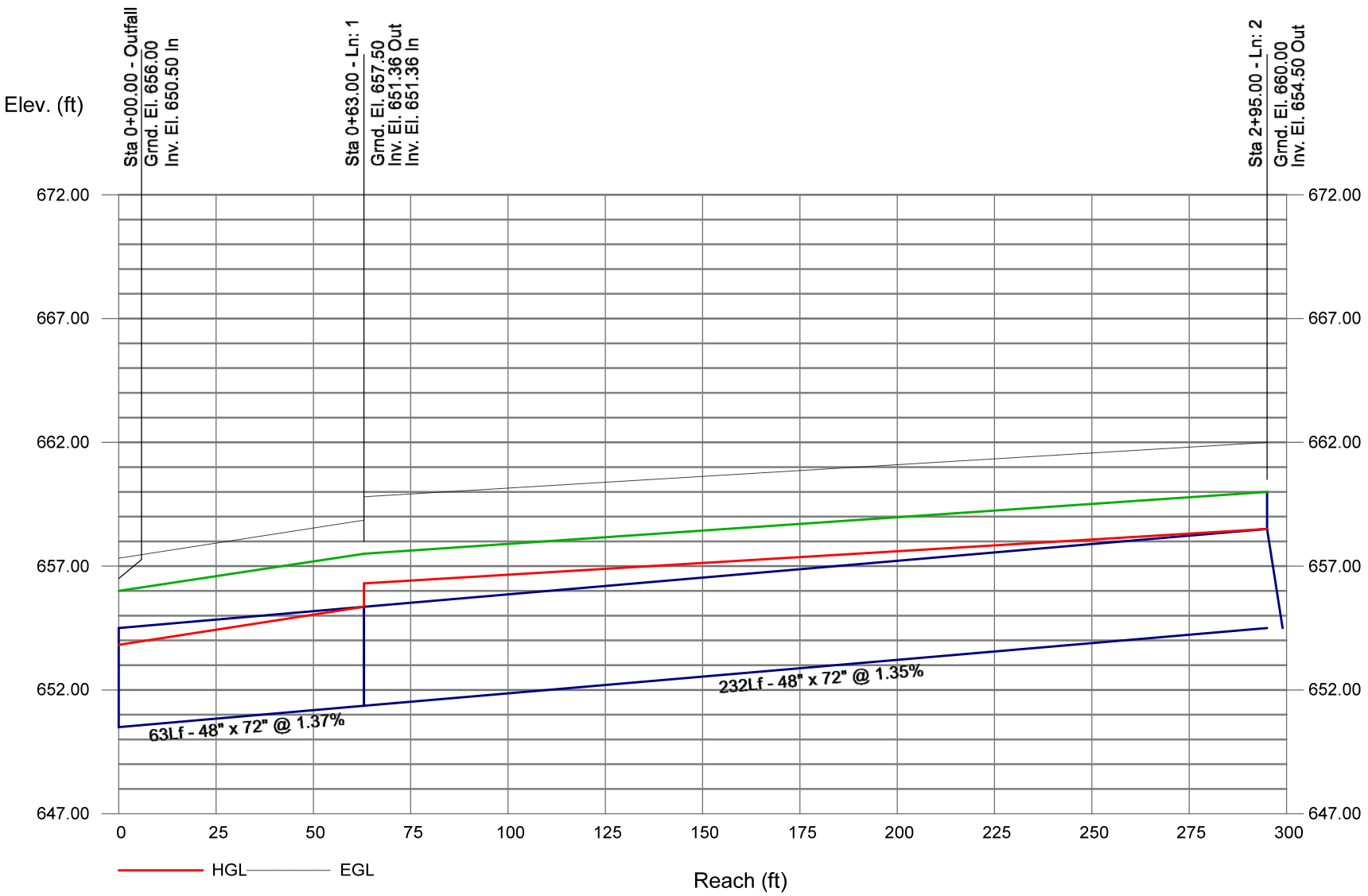
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert.stm



Storm Sewers

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	360.00	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

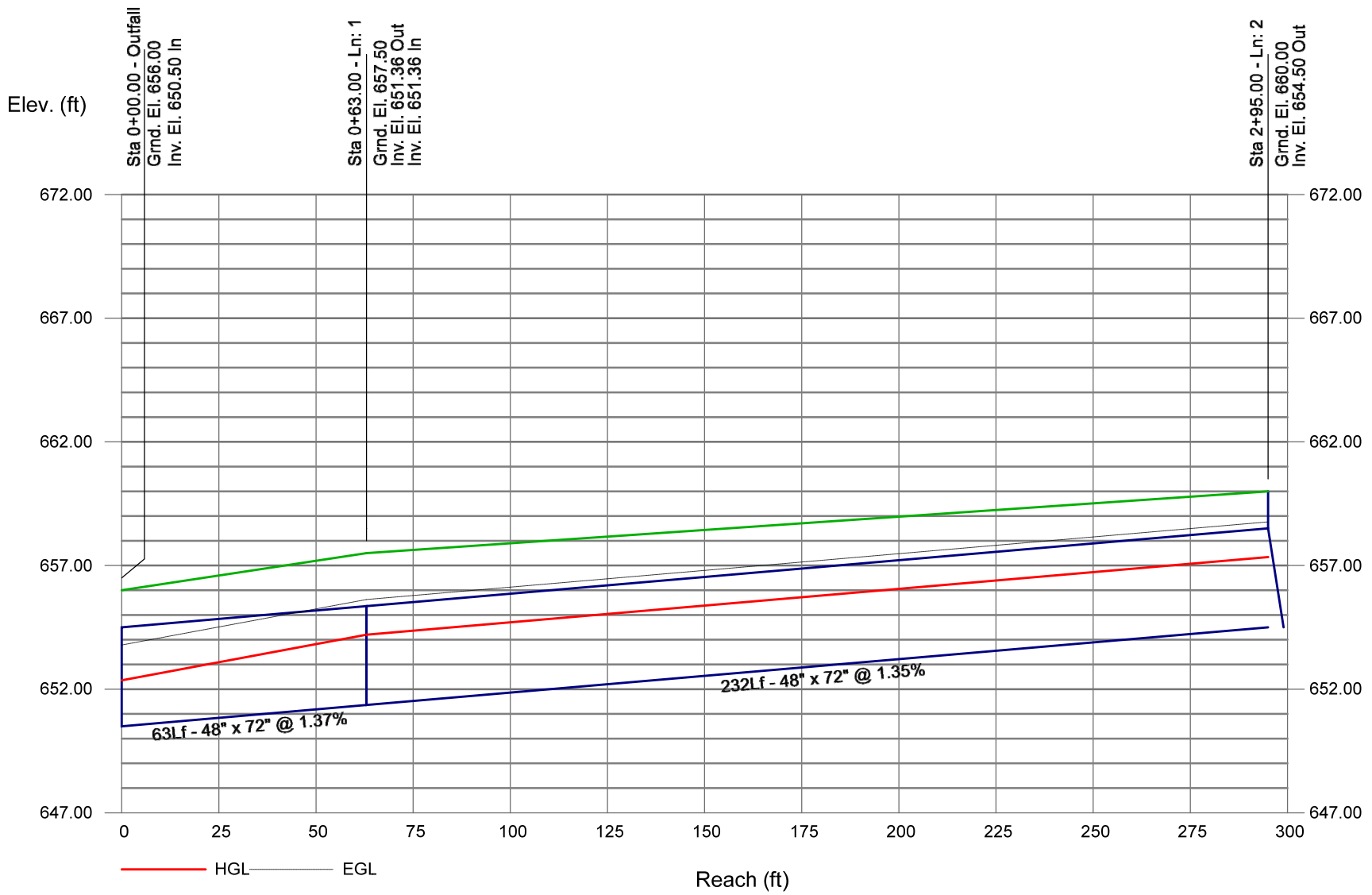
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	0.3	0.0	360.0	362.0	16.54	48 x 72 b	1.37	650.50	651.36	653.82	655.36	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	360.0	360.4	15.00	48 x 72 b	1.35	651.36	654.50	656.30	658.50	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert.stm | Number of lines: 2 | Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 10 year.stm



StormCAD Bentley

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	63	11	None	0.00	0.00	0.00	0.0	650.50	1.37	651.36	48X72	Box	0.013	0.27	657.50	Pipe - (3)
2	1	232	-13	Hdwl	75.98	0.00	0.00	0.0	651.36	1.35	654.50	48X72	Box	0.013	1.00	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

Number of lines: 2

Date: 12/17/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	63	0.00	0.00	0.00	0.00	0.00	0.0	1.2	0.0	75.98	362.0	9.46	48 x 72 b	1.37	650.50	651.36	651.60	653.07	656.00	657.50	Pipe - (3)
2	1	232	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	75.98	360.4	7.42	48 x 72 b	1.35	651.36	654.50	653.07	656.21	657.50	660.00	Pipe - (1)

Project File: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm

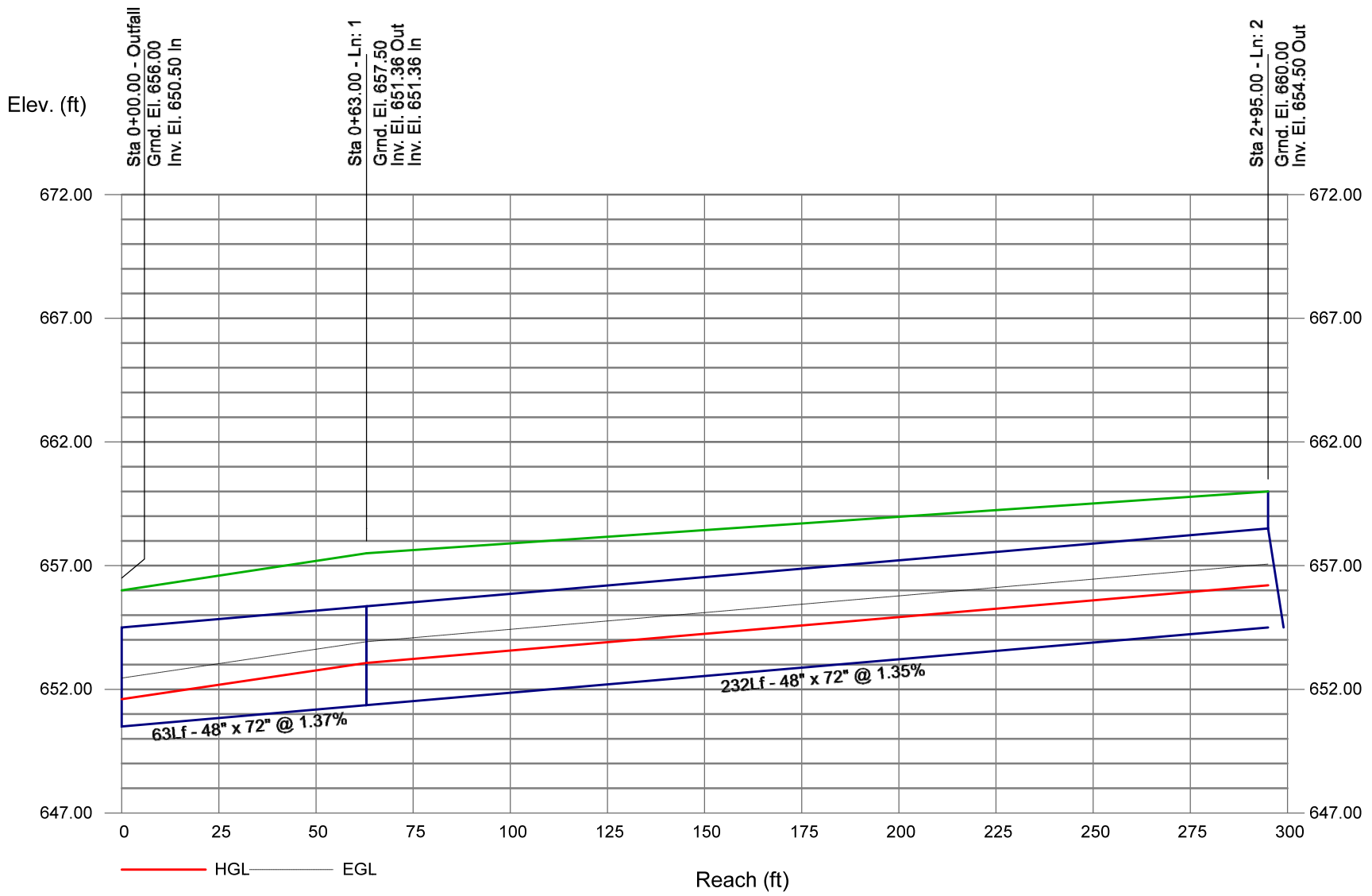
Number of lines: 2

Run Date: 12/17/2024

NOTES:Intensity = 277.62 / (Inlet time + 20.10) ^ 0.97; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Prelim By-Pass Storm Sewer - Box Culvert. 2 year.stm



33 of 34 Users

Channel Report

HERITAGE CROSSING INTERIM SWALE CAPACITY CALCULATION

Trapezoidal

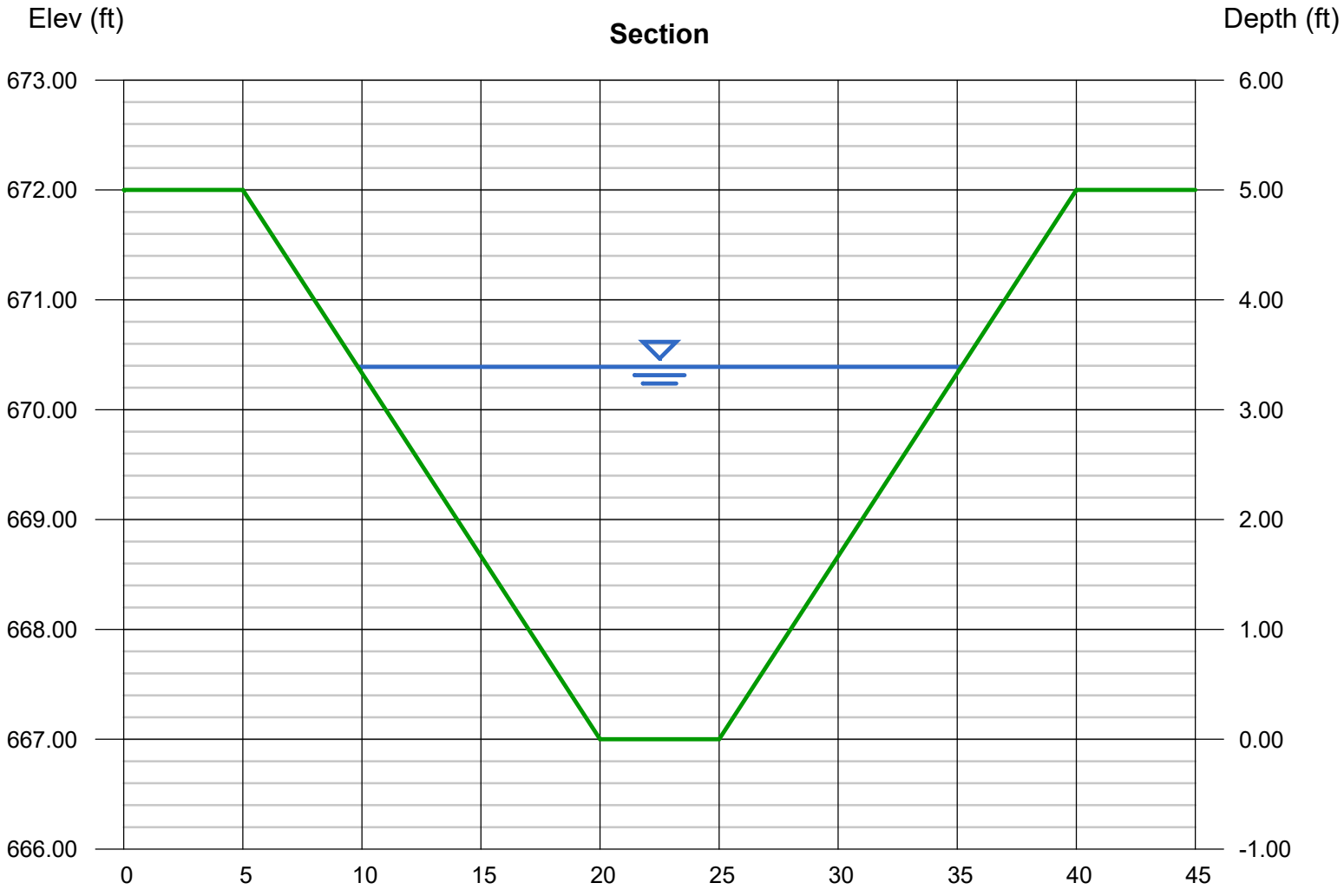
Bottom Width (ft)	= 5.00
Side Slopes (z:1)	= 3.00, 3.00
Total Depth (ft)	= 5.00
Invert Elev (ft)	= 667.00
Slope (%)	= 1.00
N-Value	= 0.033

Calculations

Compute by:	Known Q
Known Q (cfs)	= 360.00

Highlighted

Depth (ft)	= 3.39
Q (cfs)	= 360.00
Area (sqft)	= 51.43
Velocity (ft/s)	= 7.00
Wetted Perim (ft)	= 26.44
Crit Depth, Yc (ft)	= 3.17
Top Width (ft)	= 25.34
EGL (ft)	= 4.15



Date: 11-25-2024
Calculations by: S.D.D.
Checked by: D.M.V.

County: Cook
LPA: Village of Western Springs
Section:
Route:
Location: Proposed Heritage Court

Limits of Analysis:
From:
To:
Length: _____ Feet _____ Miles

Structural Design Traffic: *(Section 44-1.03(c))*
Number of Lanes: 2
ADT: 210
Class of Road or Street: IV *(Section 44-1.01)*

Percent / Count *(Figure 44-1A as needed)*
PV: 88 % / 185
SU: 9 % / 19
MU: 3 % / 6
HCV: 12

Traffic Factor (Show Calculations): *(Figure 44-4A)*
Since the HCV's per day ≤ 48, use a minimum 5 in. HMA pavement.

Traffic Factor: N/A

Pavement Design:
Subgrade Support Rating (SSR): ☐ Poor ☐ Fair ☒ Granular *(Section 44-4.02(c) and Figure 44-6A)*
Working Platform: *(Figure 44-4B)* 9 in. improved granular base course (CA-6)
Selected Design PG Binder *(Figure 44-4C)*
Surface: PG 64-28
Remaining Lifts: PG 64-22

Design Pavement HMA Temp:	*(Figure 44-4E)*	N/A °F
Design HMA Microstrain:	*(Figure 44-4F or 44-4G)*	N/A
Design HMA Modulus (E_{HMA}):	*(Figure 44-4H)*	N/A ksi
Pavement Thickness:	*(Section 44-4.03) (Minimum of 6.0 in.)*	5.0 in.

Comments: Pavement Structure will be 5.0 in. of HMA over a 9 in. aggregate base course, Type A.

Attachments: Location Map / USDA Soil Map (as needed) / Completed Figures (as needed)

FULL-DEPTH HMA PAVEMENT
DESIGN CALCULATIONS FOR LOCAL PUBLIC AGENCIES
Figure 44-4N

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40. Traffic Factor (TF). The total number of 18-kip equivalent, single-axle load applications anticipated in the design lane during the design period, expressed in millions.

41. Untied Shoulder. Any shoulder that does not provide edge support. The shoulder may consist of earth, aggregate, or bituminous stabilized materials. PCC shoulders that are tied with smaller reinforcing steel than the size indicated in the *Illinois Highway Standards* are considered untied for purposes of determining pavement thickness.

44-1.02 Accessibility Requirements

All pavements constructed shall meet the accessibility requirements in Section 41-6 of this manual.

44-1.03 Basic Mechanistic Design Procedures

Mechanistic pavement design procedures use the actual stresses, strains, and deflections experienced by the pavement to determine its expected fatigue life.

44-1.03(a) Mechanistic Design Factors

Factors that are considered in mechanistic designs include:

- design HMA strain;
- design pavement HMA mixture temperature;
- design HMA mixture modulus (E_{HMA});
- subgrade support rating (SSR);
- design reliability;
- degree of PCC edge support;
- degree of PCC base erosion;
- PCC joint spacing; and
- PCC stresses.

44-1.03(b) Design Period

The level of traffic and type of facility to be constructed affect the selection of the design period. Generally, it is desirable to design highway pavements to carry traffic without necessitating the need for major rehabilitation for a period of 15 to 20 years. However, it may be advantageous to design lesser roadways (e.g., frontage roads, alleys, temporary roads) for shorter periods.

For all pavement types, the minimum design period allowed is 20 years for Class I and II roads and streets. For all pavement types, the minimum design period allowed is 15 years for Class III roads and streets. For Class IV roads and streets with 48 or fewer HCV's, pavement thicknesses provided in each Section 44-2, 44-3, 44-4, and 44-5 should be satisfactory for design periods of 15 years or 20 years.

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44-1.03(c) Structural Design Traffic

The structural design traffic is the estimated ADT for the year representing one-half of the design period. For example, when the design period is 20 years, the structural design traffic will be an estimate of the ADT projected to 10 years after the construction date.

1. Estimate ADT of PV, SU, and MU. Vehicular classification and traffic volume projections for structural design traffic are based on available traffic data (i.e., ADT). ADT and vehicular classification data for various roadway classes may be obtained from published IDOT traffic maps. If traffic data is unavailable or if published data is dated or does not appear to reflect known conditions or field observations (e.g., land uses, directional distributions), traffic volume and classification studies may be needed to establish a representative base of existing conditions. Factors that compound annual growth typically are used in traffic projections. It is important to consider any future land development or land use changes that may affect the volume or composition of traffic that will use the facility. If vehicular classification data is not available for Class III or Class IV facilities, use the percentages in Figure 44-1A to estimate the number of PV, SU, and MU vehicles from ADT. Also, consider the potential impacts of heavily loaded vehicles, especially in areas near mines, grain elevators, factories, and river ports. It may be necessary to specifically design for such vehicles.

2. Assign Traffic to the Design Lane. Although the sum of the PV, SU, and MU vehicular volumes determined in Step 1 represents the total ADT that will be carried by the highway facility in the year of the projection, the structural design of the pavement will be based on the lane which carries the greatest number of SU and MU vehicles (i.e., the design lane). The distribution factors in Figure 44-1B have been applied to TF equations contained in this chapter. Use the total two-way ADT for multilane facilities when calculating the structural design traffic as the distribution factors account for directional traffic and the percentage of vehicles in the design lane.

   Note that the design lane distribution factors in Figure 44-1B are based on previous traffic studies under average conditions. Unusual traffic control or design features may influence lane usage (e.g., lane restrictions of commercial vehicles, directional influence of major commercial generator). Adjustments may be necessary. Contact the CBLRS for additional guidance.

Class of Road or Street	Percentage of Structural Design Traffic		
	PV (%)	SU (%)	MU (%)
III	88	7	5
IV	88	9	3

TRAFFIC PERCENTAGE
(Class III and IV)

Figure 44-1A

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PG Binder Grade Selection [1]			
	Traffic Loading Rate (Adjustment)		
Districts 1 – 4	Standard Traffic [2]	Slow Traffic [3]	Standing Traffic [4]
Surface[5]	PG 58-28 [6][7]	PG 64-28 or SBS PG 64-28	SBS PG 70-28
Remaining Lifts[5]	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22	PG 64-22 or PG 58-22
Districts 5 – 9			
Surface[5]	PG 64-22 [6][7]	PG 70-22 or SBS PG 70-22	SBS PG 76-22
Remaining Lifts[5]	PG 64-22	PG 64-22	PG 64-22

Notes:

1. *The binder grades provided in this table are based on the recommendations given in Illinois-Modified AASHTO* MP-2, Table 1, "Binder Selection on the Basis of Traffic Speed and Traffic Level."
2. *Standard traffic is used where the average traffic speed is greater than 43 mph (70 km/h).*
3. *Slow traffic is used where the average traffic speed ranges from 12 to 43 mph (20 to 70 km/h).*
4. *Standing traffic is used where the average traffic speed is less than 12 mph (20 km/h).*
5. *Consideration should be given to increasing the high temperature grade by one grade equivalent when 10 ≤ T.F. ≤ 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*
6. *Surface includes the top 2 in. (50 mm) of HMA. The remaining lifts of HMA may be the same PG binder grade as surface; however, this may increase or decrease the pavement design thickness. If multiple PG Binder grades are used in a HMA design, the predominant PG Binder grade should be used for determining HMA Modulus on Figure 44-4H.*
7. *The high temperature grade should be increased by one grade equivalent when T.F. > 30. For example, if use of a PG 64-22 is specified for standard traffic, a PG 70-22 or a SBS PG 70-22 should be specified.*

PG BINDER GRADE SELECTION FOR FULL-DEPTH HMA PAVEMENTS

Figure 44-4C

44-4.02(e) PG Binder Selection

The PG binder grade may affect the performance of a HMA mixture. The full-depth HMA pavement design procedure assumes that HMA rutting and thermal cracking are adequately considered in the material selection and mixture design process. Selection of the appropriate binder grade can impact the ability of the mix to resist rutting at higher temperatures and thermal cracking at lower temperatures. Both high and low temperature levels need to be considered when selecting the appropriate binder grade for full-depth HMA pavements.

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44-4.03 Thickness Design

The following processes are used to determine the design thickness:

1. Class I, II and III Roads and Streets. The design procedure is as follows:
   - Calculate the TF from the appropriate equation found in Figure 44-4A.
   - Use Figure 44-6A in conjunction with the subgrade soil grain-size analysis to determine the subgrade support rating.
   - Use Figure 44-4C in conjunction with traffic speed and location to determine the PG binder grade.
   - Use Figure 44-4E to determine the HMA pavement mixture temperature. The design mixture temperature should be interpolated to the nearest 0.5°F.

     Note: The design HMA mixture temperatures for conventional flexible and full-depth HMA pavements are not the same. For the same location, the conventional flexible HMA design mixture temperature is lower than the full-depth HMA design mixture temperature, because conventional flexible design time dates occur earlier in the spring.
   - Use Figure 44-4F (TF < 0.5) or Figure 44-4G (TF ≥ 0.5) to determine the design HMA strain.
   - Use Figure 44-4H to determine the design pavement HMA modulus (E_{HMA}).
   - Use Figures 44-4I, 44-4J, or 44-4K, depending on the subgrade support rating, to determine the design HMA thickness. Round the final design thickness to the next highest 0.25 in.
   - The minimum full-depth HMA design thickness is 6 in.
   - A 12 in. improved subgrade is required for Class I and II pavements and is optional for Class III pavements. Class III pavement subgrades must satisfy the requirements of Section 44-7 during construction.
2. Class IV Roads and Streets. The following procedure applies:
   - If HCV's per day ≤ 48, use a minimum 5 in. HMA pavement. A 12 in. improved subgrade layer is optional. Class IV pavement subgrades must satisfy the requirements of Section 44-7 during construction.
   - If HCV's per day > 48, use a Class III TF equation and design procedure.

44-4.04 Typical Sections

Figures 44-4L and 44-4M illustrate typical LPA full-depth HMA pavement designs.

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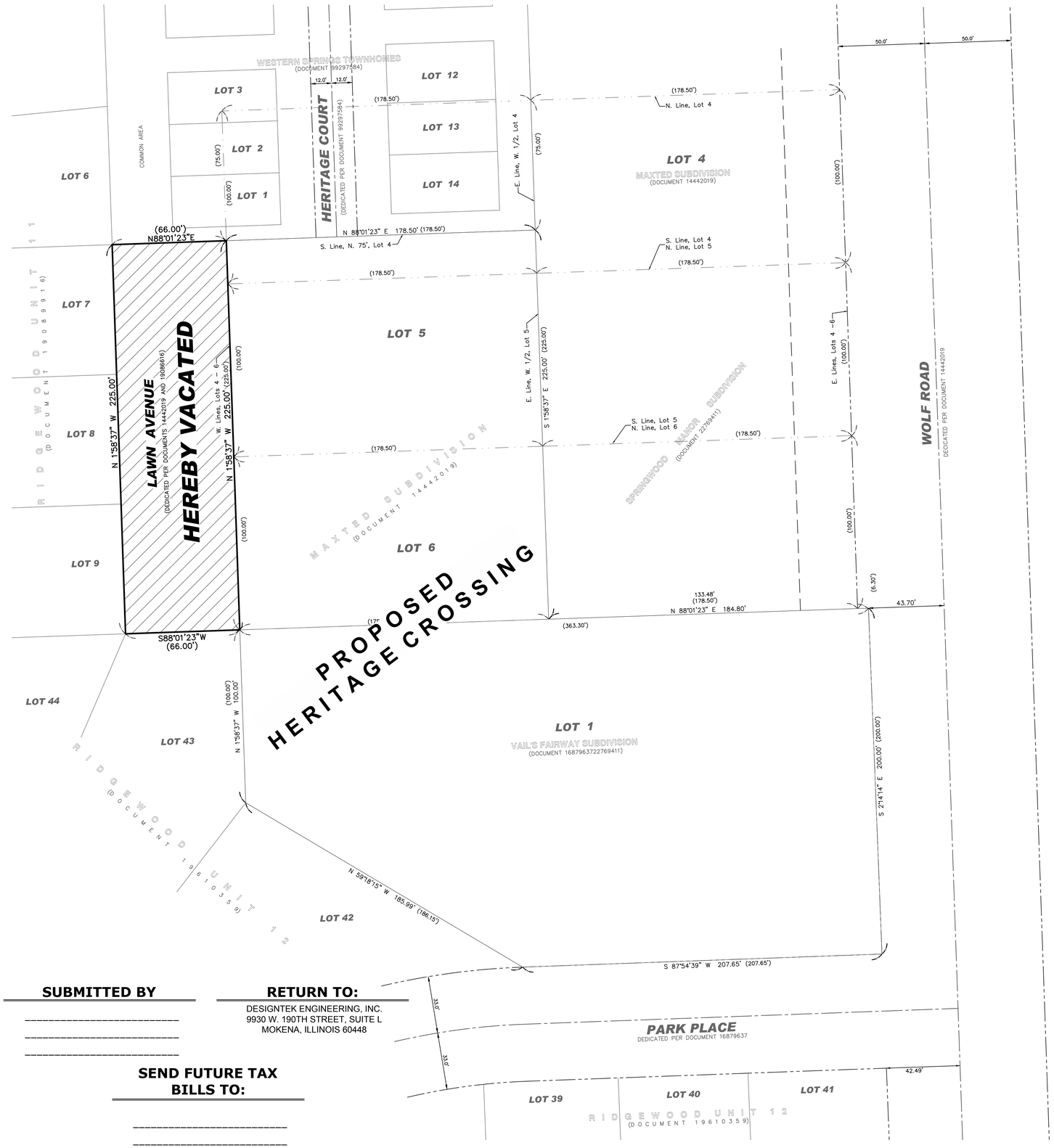
PLAT OF VACATION

OF

PUBLIC RIGHT OF WAY

FOR THE PURPOSE OF VACATING A HERETOFORE DEDICATED RIGHT OF WAY IN THE NORTHEAST FRACTIONAL 1/4 OF SECTION 18, IN TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19610359, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.



GRAPHIC SCALE

30 0 15 30

(IN FEET)

1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

SITE DATA

AREA = 14,850 SQ. FT. OR 0.34 ACRES

PARCEL IDENTIFICATION NUMBER

UNKNOWN

LINE TYPES

- PROPERTY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

- N NORTH
- S SOUTH
- E EAST
- W WEST
- (####) RECORD/DEED
- #### MEASURED

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED ARE THE OWNERS OF THE LAND DESCRIBED IN THE ANNEXED PLAT, AND THAT AS SUCH OWNERS, THEY HAVE CAUSED THE SAME TO BE PLATTED AND VACATED, AS INDICATED THEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, THEY DO HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20___.

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20___.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20___.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF VACATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 10TH DAY OF JULY, A.D., 20 24.

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

SEND FUTURE TAX BILLS TO:

_____
_____
_____

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF VACATION
FOR
LAWN AVENUE
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

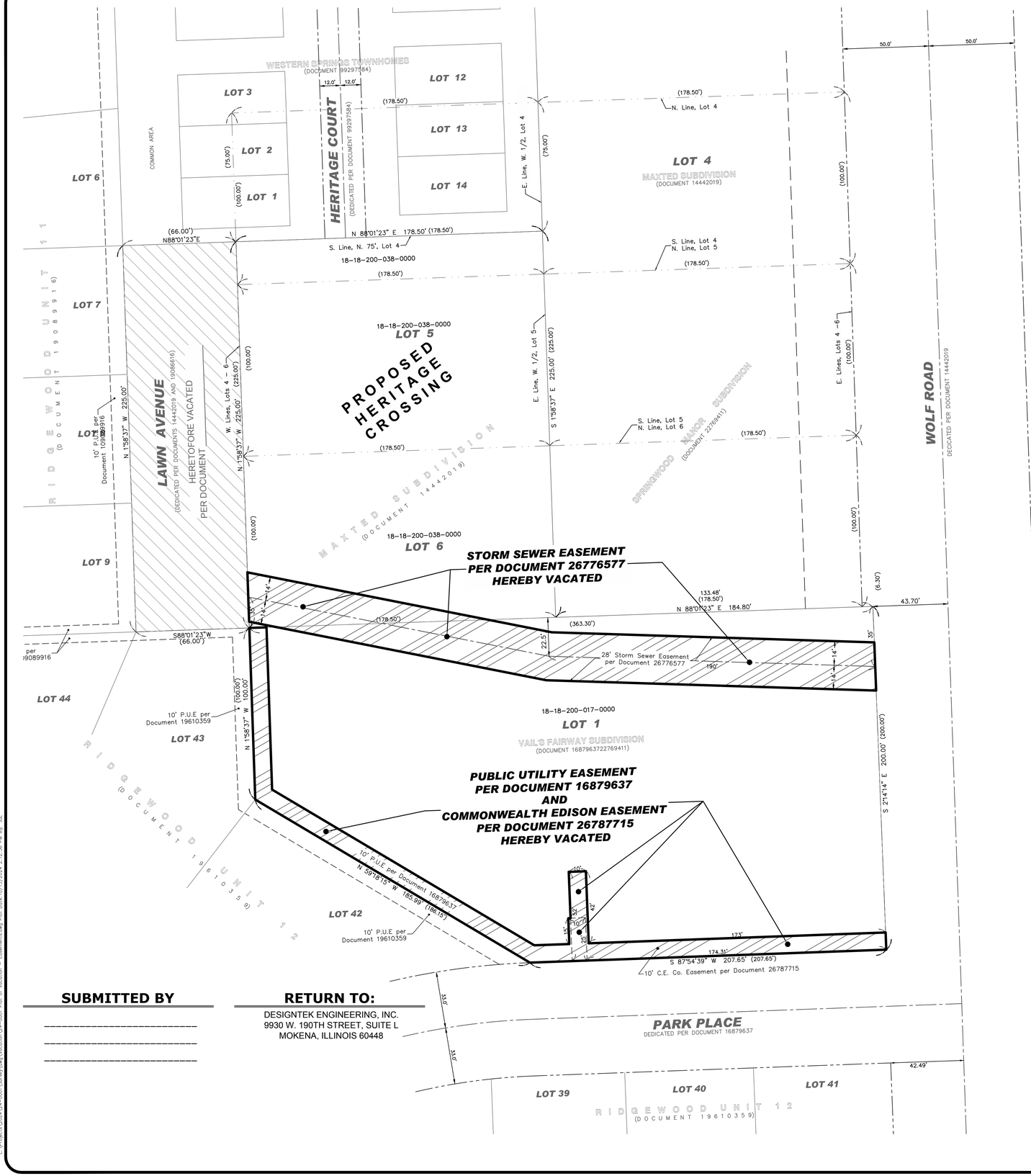
R/W VACATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Lawn Avenue.dwg Plot Date:10/15/2024 2:08:47 PM By: SJL

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

18-18-200-038-0000
18-18-200-017-0000

ADDRESSES

1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES

- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

N	NORTH
S	SOUTH
E	EAST
W	WEST
(####)	RECORD/DEED
####	MEASURED
P.U.E.	PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20____.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION	BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION
FOR
UTILITY & STORM SEWER EASEMENTS
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

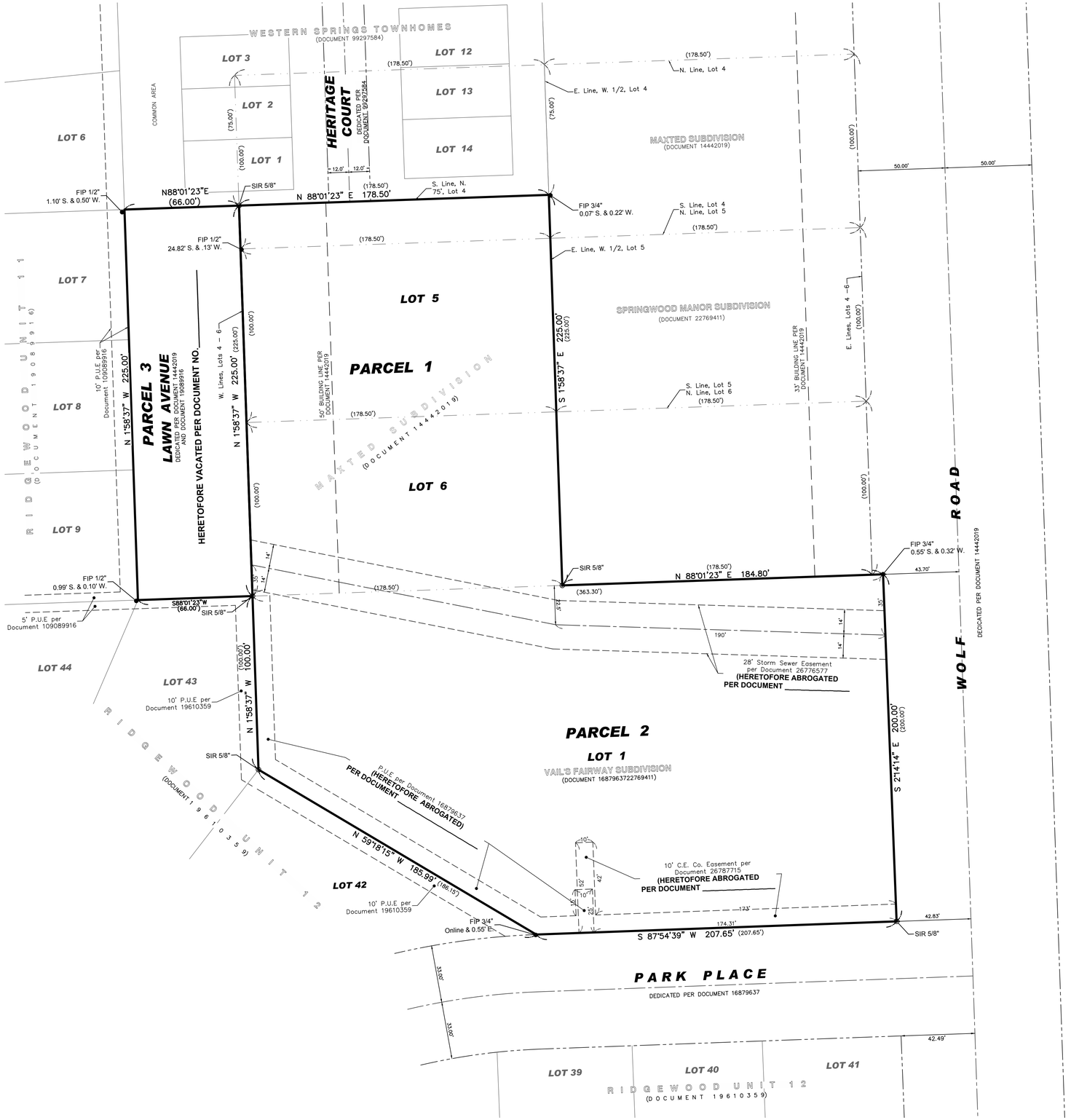
1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

ADDRESSES

PARCEL 1: 1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

PARCEL 2: 5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

EXISTING SITE DATA

AREA (PARCEL 1) =	40,163 SQ. FT. OR 0.92 ACRES
AREA (PARCEL 2) =	64,996 SQ. FT. OR 1.49 ACRES
AREA (PARCEL 3) =	14,850 SQ. FT. OR 0.34 ACRES
GROSS AREA =	120,009 SQ. FT. OR 2.75 ACRES

LEGEND

● FIP	FOUND IRON PIPE
○ SIR	SET 5/8" IRON ROD
———	BOUNDARY LINE
———	LOT LINE
——— - ———	RIGHT-OF-WAY LINE
——— — ———	CENTERLINE
- - - - - -	EXISTING EASEMENT LINE

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		

ALL EXISTING EASEMENT ABROGATIONS WITHIN THE LEGALLY DESCRIBED PROPERTY HEREON, TOGETHER WITH THE LAWN AVENUE VACATION SHALL BE VIA SEPARATE DOCUMENTS

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT COMMENTS	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

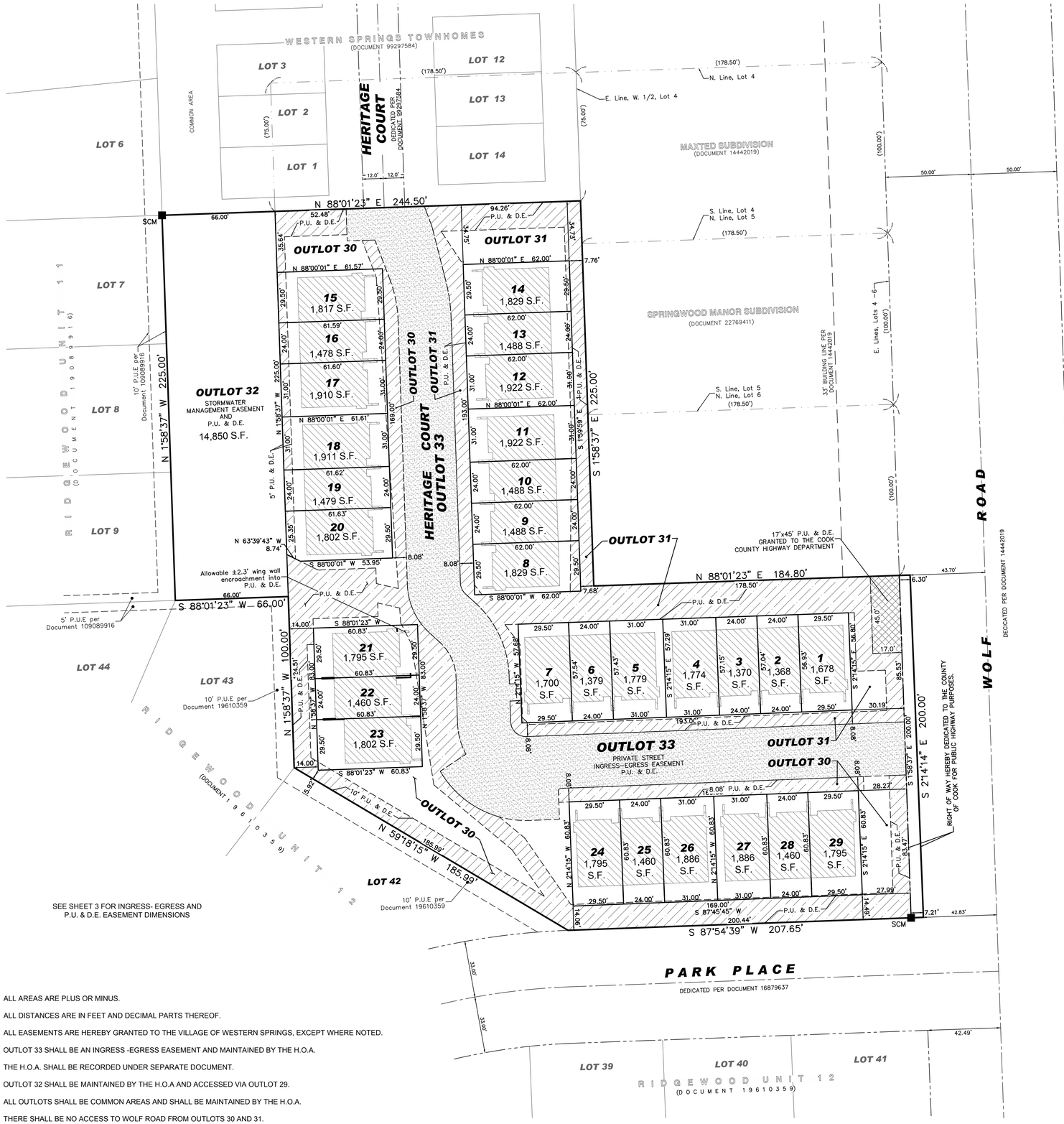
1
OF
4

EXISTING GEOMETRY

L:\Projects\2024\24-0001\Survey\Dwg\Subdivision\24-0001 FP Rev. 3.dwg Plot Date:12/17/2024 5:33:59 AM By: SJL

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



1. ALL AREAS ARE PLUS OR MINUS.
2. ALL DISTANCES ARE IN FEET AND DECIMAL PARTS THEREOF.
3. ALL EASEMENTS ARE HEREBY GRANTED TO THE VILLAGE OF WESTERN SPRINGS, EXCEPT WHERE NOTED.
4. OUTLOT 33 SHALL BE AN INGRESS -EGRESS EASEMENT AND MAINTAINED BY THE H.O.A.
5. THE H.O.A. SHALL BE RECORDED UNDER SEPARATE DOCUMENT.
6. OUTLOT 32 SHALL BE MAINTAINED BY THE H.O.A AND ACCESSED VIA OUTLOT 29.
7. ALL OUTLOTS SHALL BE COMMON AREAS AND SHALL BE MAINTAINED BY THE H.O.A.
8. THERE SHALL BE NO ACCESS TO WOLF ROAD FROM OUTLOTS 30 AND 31.
9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING
THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER
PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

AREA SUMMARY

GROSS AREA:	120,009 SQ. FT. OR 2.75 AC.
BUILDABLE LOTS 1-29:	48,839 SQ. FT OR 1.18 AC.
OUTLOT 30	20,733 SQ. FT. OR 0.40 AC.
OUTLOT 31	14,952 SQ. FT. OR 0.43 AC.
OUTLOT 32	14,850 SQ. FT. OR 0.29 AC
OUTLOT 33:	19,393 SQ. FT. OR 0.34 AC.
WOLF RD. DEDICATION:	1,351 SQ. FT. OR 0.03 AC.

LEGEND

FIP	FOUND IRON PIPE
SIP	SET 1" x 24" IRON PIPE
SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
	P.U. & D.E.
	INGRESS-EGRESS EASEMENT
	COOK COUNTY HWY. DEPT. P.U. & D.E.

ABBREVIATIONS

FD.	FOUND	N	NORTH
(###.##')	RECORD DIMENSION	S	SOUTH
###.##	MEASURED DIMENSION	E	EAST
FIP	FOUND IRON PIPE	W	WEST
P.U.E.	PUBLIC UTILITY EASEMENT		
D.E.	DRAINAGE EASEMENT		
E.T.B.E.	EXCEPTION TO BLANKET EASEMENT		
B.S.L.	BUILDING SETBACK LINE		
SQ. FT.	SQUARE FEET		
L	ARC DIMENSION		
R	RADIUS DIMENSION		
CH	CHORD BEARING/DISTANCE		

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	SJL
2	11/08/24	LOT RECONFIGURATION	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 3264692
IL PROF. LIC. No.: 184-003740

DEI

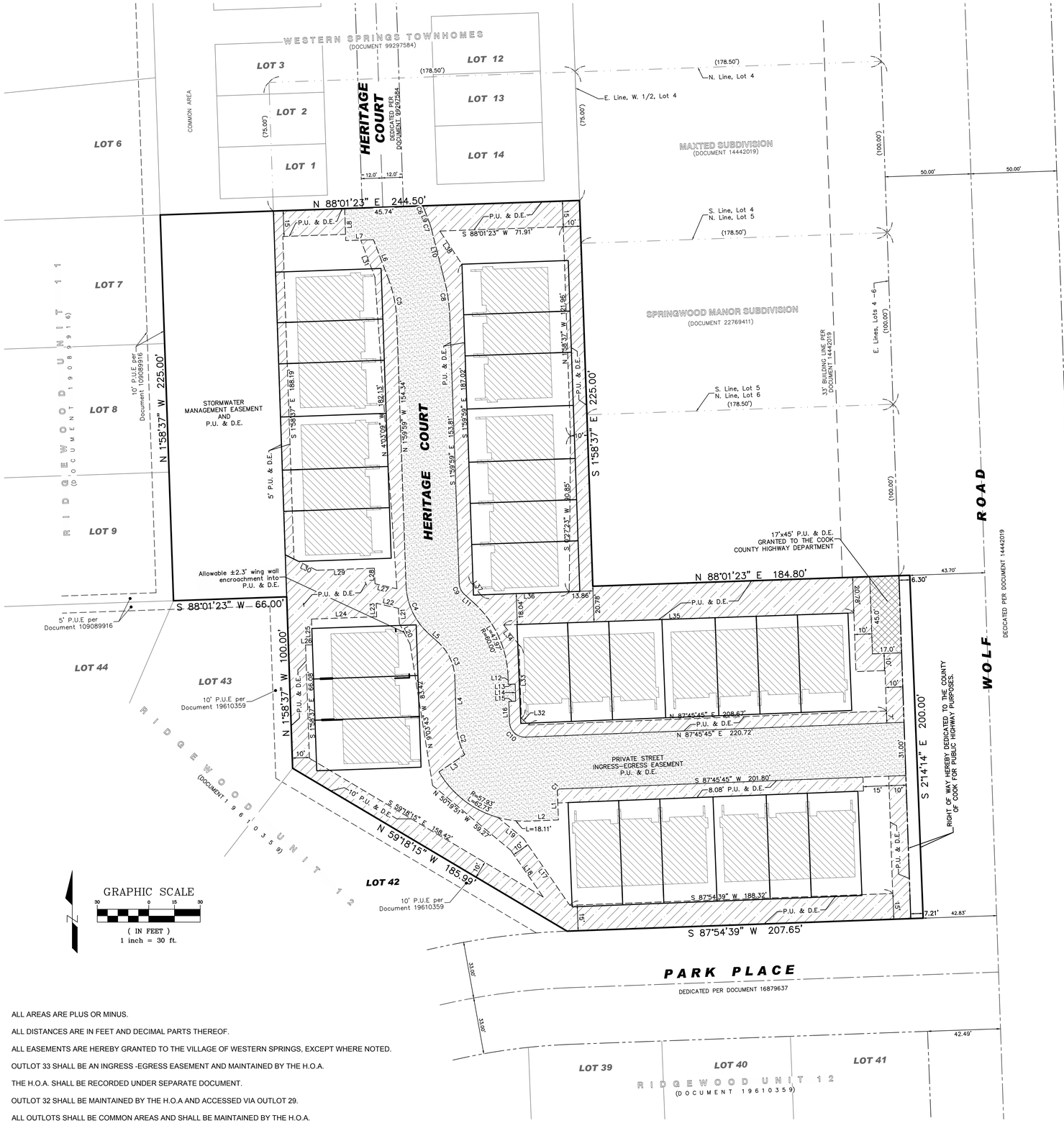
PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: SJL
Checked By: SDD

2 OF 4

PROPOSED GEOMETRY

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.



LEGEND

FIP	FOUND IRON PIPE
SIP	SET 1" x 24" IRON PIPE
SCM	CONCRETE MONUMENT
	BOUNDARY LINE
	LOT LINE
	RIGHT-OF-WAY LINE
	PROPOSED RIGHT-OF-WAY LINE
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	PROPOSED BUILDING
P.U. & D.E.	P.U. & D.E.
INGRESS-EGRESS	INGRESS-EGRESS EASEMENT
COOK COUNTY HWY. DEPT. P.U. & D.E.	COOK COUNTY HWY. DEPT. P.U. & D.E.

Parcel Line Table		
Line #	Length	Direction
L1	16.50	S02° 14' 15"E
L3	18.04	N56° 16' 49"E
L4	26.84	N01° 51' 56"W
L5	8.03	N47° 40' 37"W
L6	24.41	N20° 51' 06"W
L7	16.15	S88° 10' 48"W
L8	18.67	N01° 58' 35"W
L9	7.26	S20° 53' 37"E
L10	27.84	S14° 13' 17"E
L11	8.03	S47° 40' 37"E
L12	4.76	S01° 51' 56"E
L13	4.02	N87° 58' 53"E
L14	10.00	S01° 44' 56"E
L15	4.00	S87° 58' 53"W
L16	12.07	S01° 51' 56"E
L17	47.24	N34° 43' 32"W
L18	33.09	N34° 43' 32"W
L19	19.34	N50° 19' 51"W
L20	13.60	N27° 06' 22"W
L21	8.81	N04° 03' 09"W

Parcel Line Table		
Line #	Length	Direction
L22	13.22	S77° 07' 24"E
L23	7.91	N01° 58' 37"W
L24	38.00	N88° 01' 23"E
L25	15.00	S01° 58' 37"E
L26	4.00	N88° 01' 23"E
L27	13.14	N77° 07' 19"W
L28	9.06	N01° 58' 37"W
L29	33.80	S88° 01' 22"W
L30	14.63	S63° 39' 43"E
L31	23.08	S20° 51' 06"E
L32	5.78	S47° 02' 19"E
L33	42.73	S01° 52' 29"E
L34	14.62	S37° 20' 25"E
L35	204.14	N88° 01' 23"E
L36	51.58	N88° 00' 01"E
L37	7.33	N37° 20' 25"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	2.36	1.50	90.00	S42° 45' 45"W	2.12
C2	18.74	40.00	26.85	N15° 17' 25"W	18.57
C3	23.19	29.00	45.81	N24° 46' 16"W	22.57
C4	31.89	40.00	45.68	N24° 50' 18"W	31.05
C5	24.79	75.50	18.81	N11° 22' 59"W	24.68
C6	3.64	54.81	3.80	S20° 01' 02"E	3.64
C7	3.03	26.00	6.67	S17° 33' 27"E	3.03
C8	26.01	106.50	13.99	S08° 59' 46"E	25.94
C9	7.74	9.10	48.74	S23° 11' 03"E	7.51
C10	14.19	9.04	89.92	S47° 02' 25"E	12.77

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9. THERE SHALL BE NO ACCESS TO PARK PLACE FROM OUTLOT 30.

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT ACCESS GEOMETRY	SJL
2	11/08/24	LOT SECONDARY	SJL
3	12/09/24	VILLAGE COMMENTS	SJL

McNAUGHTON DEVELOPMENT

FINAL PLAT
FOR
HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
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IL PROF. LIC. NO.: 184 - 003740

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PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
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Field Date: 04/17/2024
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Checked By: SDD

3 OF 4

EASEMENT DETAIL

PARCEL IDENTIFICATION NUMBER

PARCEL ONE: 18-18-200-038-0000
PARCEL TWO: 18-18-200-017-0000
PARCEL THREE: UNKNOWN

FINAL PLAT
OF
HERITAGE CROSSING

BEING A RESUBDIVISION OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____IN COOK COUNTY, ILLINOIS.

RESERVED FOR: COOK COUNTY RECORDER

COOK COUNTY CLERK STAMP

OWNER CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT THE UNDERSIGNED IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED, AS SHOWN ON THIS PLAT OF SUBDIVISION, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED:

THE UNDERSIGNED FURTHER CERTIFIES THAT THERE ARE NO UNPAID DEFERRED INSTALLMENTS OF OUTSTANDING UNPAID SPECIAL ASSESSMENTS AFFECTING THE LAND DESCRIBED AND SHOWN ON THIS SUBDIVISION PLAT OR, IF ANY OF SAID INSTALLMENTS ARE NOT PAID, THEN SUCH INSTALLMENTS HAVE BEEN DIVIDED IN ACCORDANCE WITH THE SUBDIVISION AND APPROVED BY THE COURT WHICH CONFIRMED THE SPECIAL ASSESSMENT AND THE PROPER COLLECTOR OF ANY SUCH SPECIAL ASSESSMENT HAS SO CERTIFIED SUCH DIVISION ON THE FACE OF THE SUBDIVISION PLAT.

THIS IS TO CERTIFY THAT THE UNDERSIGNED, IS THE SOLE OWNER OF RECORD OF THE FOLLOWING DESCRIBED LAND, AND HEREBY CERTIFIES THAT THE SUBJECT PROPERTY IS LOCATED WITH THE FOLLOWING SCHOOL DISTRICTS:

ELEMENTARY: 106 (LA GRANGE HIGHLAND) HIGH SCHOOL: 204 (LYONS TOWNSHIP HIGH SCHOOL)

BY: McNAUGHTON DEVELOPMENT LLC, AN ILLINOIS LIMITED LIABILITY COMPANY

BY: _____
MANAGER

ADDRESS: 11S220 JACKSON STREET, SUITE #101, BURR RIDGE, ILLINOIS 60527

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF MCNAUGHTON DEVELOPMENT, LLC, AN ILLINOIS LIMITED LIABILITY COMPANY, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THIS SUBDIVISION PLAT AS OWNER, AS SUCH MANAGER OF McNAUGHTON DEVELOPMENT LLC, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE SIGNED THIS SUBDIVISION PLAT AS HIS FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID COMPANY OR OTHER ENTITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, A.D. 20___.

_____
NOTARY PUBLIC

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, CHAIRMAN OF THE VILLAGE OF WESTERN SPRINGS PLAN COMMISSION, SO CERTIFY THAT

ON THIS _____ DAY OF _____, A.D., 20_____, THIS PLAT OF SUBDIVISION WAS DULY APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF WESTERN SPRINGS.

BY: _____ ATTEST: _____
CHAIRMAN SECRETARY

VILLAGE TREASURER CERTIFICATION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, COLLECTOR FOR THE VILLAGE OF WESTERN SPRINGS, DO HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THERE ARE NO DELINQUENT OR UNPAID CURRENT FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF, THAT HAVE BEEN APPORTIONED AGAINST THE TRACT LAND LAND INCLUDED IN THIS PLAT.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D., 20_____.

_____
VILLAGE TREASURER

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE PRESIDENT AND THE VILLAGE BOARD OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, IN ACCORDANCE WITH SUBDIVISION REGULATIONS AT A MEETING HELD THIS _____ DAY OF _____, A.D. 20_____

BY: _____ ATTEST: _____
VILLAGE PRESIDENT VILLAGE CLERK

IMPROVEMENTS CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE CLERK OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, HEREBY CERTIFY THAT THIS PLAT WAS PRESENTED TO AND BY RESOLUTION DULY APPROVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF SAID VILLAGE AT ITS MEETING HELD ON THE _____ DAY OF _____, A.D. 20_____, AND THAT REQUIRED BOND OR OTHER GUARANTEES HAS BEEN POSTED FOR THE COMPLETION OF THE IMPROVEMENTS REQUIRED BY THE REGULATIONS OF SAID VILLAGE.

BY: _____
VILLAGE CLERK

LAGRANGE HIGHLANDS SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, SUPERVISOR OF THE LAGRANGE HIGHLANDS SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS, OR ANY DEFERRED INSTALLMENTS OF ANY OUTSTANDING UNPAID SPECIAL ASSESSMENTS WHICH HAVE NOT BEEN DIVIDED IN ACCORDANCE WITH THE PROPOSED SUBDIVISION AND DULY APPROVED BY THE COURT THAT CONFIRMED THE SPECIAL ASSESSMENT.

DATED AT _____, COOK COUNTY, ILLINOIS, THIS ___ DAY OF _____, A.D., 20_____.

_____
SUPERVISOR

SURFACE WATER STATEMENT

To the best of our knowledge and belief, the drainage of surface waters will not be changed by the construction of this subdivision or any part thereof, or, if such surface water drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains which the owner has a right to use, and that such surface waters will be planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to the adjoining property because of the construction of this subdivision.

_____ _____
Owner Professional Engineer

_____ _____
Printed Name Printed Name

VILLAGE ENGINEER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, VILLAGE ENGINEER OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, HEREBY CERTIFY THAT THE LAND IMPROVEMENTS DESCRIBED IN THE PLAT, AND THE PLANS AND SPECIFICATIONS THEREFORE, MEET THE MINIMUM REQUIREMENTS OF SAID VILLAGE AND HAVE BEEN APPROVED BY ALL PUBLIC AUTHORITIES HAVING JURISDICTION THEREOF.

DATED AT WESTERN SPRINGS, COOK COUNTY, ILLINOIS THIS _____ DAY OF _____, 20___.

_____
VILLAGE ENGINEER

REGISTRATION NUMBER _____

COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS WITH RESPECT TO ROADWAY ACCESS PURSUANT TO 765 ILCS 205/2. HOWEVER, A HIGHWAY PERMIT, CONFORMING TO THE STANDARDS OF THE COOK COUNTY HIGHWAY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS IS REQUIRED BY THE OWNER OF THE PROPERTY FOR THIS ACCESS.

DATED THIS _____ DAY OF _____, A.D. 20_____.

_____
SUPERINTENDENT OF TRANSPORTATION AND HIGHWAYS COOK COUNTY, ILLINOIS

RESPONSIBILITY OF H.O.A., VILLAGE OF WESTERN SPRINGS AND LAGRANGE HIGHLANDS SANITARY DISTRICT

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all landscaping areas within all Lots and Outlots within the subdivision, together with all improvements within the ingress-egress easement, and all storm sewers and structures. The individual homeowners shall be responsible for all sanitary and water services from the public sanitary service connections and B-Boxes to the constructed buildings. The Village of Western Springs shall be responsible for all watermain and structures attached thereto. The LaGrange Highlands Sanitary District shall maintain the sanitary sewer and all structures attached thereto. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the Village shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

PRIVATE INGRESS - EGRESS PROVISIONS

An easement for ingress and egress over and across the Property for the benefit of the Owner(s) of Subdivision and/or Lots, their heirs, successors, assigns, guests and invitees, as more particularly bounded and described on the Plat. This easement shall be perpetual and shall run with the land.

The Homeowners Association (H.O.A.) shall be responsible for maintenance of all improvements within said ingress and egress areas within the subdivision. The Homeowners Association shall maintain those specified areas and features described above in a manner consistent with the plans approved by the Village of Western Springs (Village) and the standards typical of private property maintenance throughout the community. In the event the Owners fail to properly maintain these areas, the Village shall, upon seventy-two (72) hours prior notice to the H.O.A., have the right, but not the duty, to perform, or have performed on its behalf, any maintenance work to or upon the specified areas and features. In the event of an emergency situation, as determined by the Village, the seventy-two (72) hours prior notice requirement set forth above shall not apply, and the City shall have the right, but not the duty, to proceed without notice to the H.O.A.

In the event the Village shall perform, or have performed on its behalf, any maintenance work of the specified areas or features, the cost of such work shall, upon recordation of Notice of Lien with the Recorder of Deeds of Cook County, Illinois, constitute a lien against the assets of the property owners and against each and every lot within the subdivision. The cost of the work incurred by the Village shall include all expenses and costs associated with the performance of such work including, but not limited to, reasonable engineering, consulting and attorneys' fees related to the planning and actual performance of the work.

STORMWATER MANAGEMENT EASEMENT

Declarant hereby reserves and grants to the Village of Western Springs (Village) easements in, over, under, through, and upon those areas designated on the Plat as 'Stormwater Management Easement,'including but not limited to all outlots (Outlot 30-33 inclusive), and all areas detailed in the Declaration of Covenants Conditions and Restrictions for the Heritage Crossing Townhome Association of Western Springs pertaining to maintenance, repair, and replacement of stormwater management facilities, for purposes of providing adequate stormwater drainage control together with reasonable access thereto. [Continue with the same language currently on the plat in this first paragraph, I don't want to rewrite it all].

In the event the Village shall perform, or have performed on its behalf, removal of any obstruction or alteration to or upon the stormwater facilities drainage easement, as set forth in this easement, The Village shall establish a Special Service Area, pursuant to 35 ILCS 200/27-5 et seq., that includes the entire Premises after the approval of the Planned Development by the Village but prior to the sale and conveyance of title to any Lot to any person by the Developer, which shall govern the Premises for the purpose of ensuring, as and when appropriate, the maintenance, repair and replacement of the SSA Maintained Improvements. The Special Service Area shall be an encumbrance on title to the Premises, including each Lot, Dwelling Unit and Common Areas. The Developer agrees to cooperate with the Village in creating the Special Service Area and agrees not to object to the formation of the Special Service Area, provided the terms of the Special Service Area are consistent with the Development Agreement and this Declaration. In the event the owner of any portion of the Premises (the Developer, the Declarant, the Association, a Dwelling Unit Owner or Owner), at any time, shall fail to maintain, repair or replace the SSA Maintained Improvements, as and when appropriate, and, after receipt of Village notice of such failure and opportunity to cure, the Village shall have the right to levy a special service tax on the parcel(s) where the owner(s) has failed to perform its maintenance, repair or replacement obligations on the Premises, perform such work and receive reimbursement of the costs and expenses it has incurred, including any legal fees and related expenses, engineering fees and related expenses, other consultant fees and related expenses and a reasonable allocation of Village staff and overhead costs. The Village shall not levy a tax in accordance with the Special Service Area unless the applicable owner(s) fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village, as contained in this Agreement and the Declaration. The tax levy by the Village may extend to one owner or a limited number of owners, and not the entire Premises, if such limited tax levy is appropriate. In the event the failure or refusal to fulfill maintenance, repair and replacement obligations or the reimbursement obligation to the Village relates to one or more components of the SSA Maintained Improvements that support or serve the entire Premises or the Development, then the levy shall extend to the Association and each of the property owners of the Development. The maximum tax established for the Special Service Area shall be based on the actual incurred expenses or, if the improvements have not been made yet, the Village Engineer's reasonable, estimated expense for maintenance, repair or replacement of such Improvements. If the Association or a property owner(s) shall fail to pay the Special Service Area Tax, the Village shall be authorized to: (1) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations and shall be entitled to recover its actual incurred legal fees and related expenses from the owner(s) who fails or refuses to fulfill its maintenance, repair and replacement obligations or its reimbursement obligation to the Village; and (2) take all other legal action and legal remedies to recoup the Village's funds spent on the enforcement of the obligations of the Developer hereunder, including such lien foreclosure action authorized by 65 ILCS 5/11-31-1, as amended, or provided for in 65 ILCS 5-11-31-2, as amended, or similar applicable laws to foreclose on the lien and may collect its reasonable attorney's fees and litigation expenses incurred in the enforcement of the obligations.

COMED COMPANY AND AT & T CORPORATION

An easement for serving the subdivision and other property with electric and communication service is hereby reserved for and granted to COMED COMPANY and AT & T CORPORATION, their respective licensees, successors, and assigns, jointly and severally, to construct, operate, repair, maintain, modify, reconstruct, replace, supplement, relocate and remove, from time to time, poles, guys, anchors, wires, cables, conduits, manholes, transformers, pedestals, equipment cabinets or other facilities used in connection with overhead and underground transmission and distribution of electricity, communications, sounds and signals in, over, under, across, along and upon the surface of the property shown within the dashed or dotted lines (or similar designation) on the plat and marked Public Utility & Drainage Easement, or P.U. & D.E." designation), the property designated in the Declaration of Condominium and/or on this plat as 'Common Elements'; and the property designated on the plat as 'common area or areas'; and the property designated on the plat for streets and alleys, whether public or private, together with the rights to install required service connections over or under the surface of each lot and common area or areas to serve improvements thereon, or on adjacent lots, and common area or areas, the right to cut, trim or remove trees, bushes, roots and saplings and to clear obstructions from the surface and subsurface as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. Obstructions shall not be placed over Grantees' facilities or in, upon or over the property within the dashed or dotted lines (or similar designation) marked 'Easement', 'Utility Easement', 'Public Utility Easement', 'P.U.E.' (or similar designation) without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered in a manner so as to interfere with the proper operation and maintenance thereof.

The term 'Common Elements' shall have the meaning set forth for such term in the 'Condominium Property Act', Chapter 765 ILCS 605/2, as amended from time to time.

The term 'common area or areas' is defined as a lot, parcel or area of real property, the beneficial use and enjoyment of which is reserved in whole or as an appurtenance to the separately owned lots, parcels or areas within the planned development, even though such be otherwise designated on the plat by terms such as 'outlots', 'common elements', 'open space', 'open area', 'common ground', 'parking' and 'common area'. The term 'common area or areas', and 'Common Elements' include real property surfaced with interior driveways and walkways, but excludes real property physically occupied by a building, Service Business District or structures such as a pool, retention pond or mechanical equipment. Relocation of facilities will be done by Grantees at cost of the Grantor/Lot Owner, upon written request.

NICOR CORPORATION / NICOR GAS COMPANY PROVISIONS

An easement is hereby reserved for and granted to NICOR GAS COMPANY OF ILLINOIS, its successors and assigns, in all platted 'easement'areas, streets, alleys, other public ways and places shown on this plat, said easement to be for the installation, maintenance, relocation, renewal and removal of gas mains and appurtenances for the purpose of serving all areas shown on this plat as well as other property, whether or not contiguous thereto. No buildings or other structures shall be constructed or erected in any such 'easement' areas, streets, alleys, or other public ways or places nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

A non-exclusive perpetual easement is hereby reserved and granted to the Village of Western Springs (Village), LaGrange Highlands Sanitary District and their successors and assigns over all areas designated "Public Utility and Drainage Easement" and those areas designated "P.U. & D.E." on the plat, to construct, reconstruct, repair, inspect, maintain and operate various transmissions, distribution, and collection systems, including but not limited to water lines, sanitary sewers and storm sewers, together with any and all necessary valve vaults fire hydrants, manholes, catch basins, connections, appliances and other structures and appurtenances as may be deemed necessary by said Village, over, upon, along, under and through the surface of the property shown on the plat, together with the right of access for necessary labor, materials and equipment to do any of the above work.

The right is also granted to cut down, trim or remove, without obligation to restore or replace any obstruction, including but not limited to trees, shrubs, other plants, structures or improvements on the easement that interfere with the operation of such lines and sewers. No permanent buildings or structures shall be placed on said easement, but same may be used for gardens, landscape areas, and other purposes that do not then or later interfere with the aforesaid uses or rights. Where an easement is used for both sewer and other utilities, the other utility installation shall be subject to the ordinance of the Village of Western Springs and to Village approval as to design and location.

Perpetual easements are hereby reserved for and granted to the Village of Western Springs and other governmental authorities having jurisdiction of the land, over the entire easement area for ingress, egress, and the performance of municipal and other governmental services including water, storm and sanitary sewer service and maintenance and emergency and routine police, fire, and other public safety related services.

COMCAST COMMUNICATIONS PROVISIONS

An easement is hereby reserved and granted to COMCAST COMMUNICATIONS CORPORATION, operating within the Village of Western Springs, it's successors and assigns, jointly and severally, for the installation, maintenance, relocation, renewal and removal of communication and broadcast signal systems in, under, across, along and upon the surface of the property shown on the plat and designated as "Public Utility and Drainage Easement" or "P.U. & D.E." and the property designated on the plat for streets and alleys as required to provide the planned unit development and other property, whether or not contiguous thereto, with communication and broadcast TV services, together with the right to install required service connections for each lot. No buildings or other obstructions shall be constructed or erected in any such "Public Utility and Drainage Easement" or P.U. & D.E." areas, without the prior written consent of grantees. Nor shall any other use be made thereof which will interfere with the easements reserved and granted hereby.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, NO. 035-003160, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1: THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISION OF THE EAST 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 2: LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISION OF PART OF THE NORTH EAST 1/4 OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17, 1957 AS DOCUMENT 16879637 IN COOK COUNTY, ILLINOIS.

PARCEL 3: THAT PART OF THE 66 FEET WIDE LAWN AVENUE, LYING SOUTH OF THE NORTH LINE OF WESTERN SPRINGS TOWNHOMES, RECORDED MARCH 29, 1999, AS DOCUMENT NO. 99297584, LYING NORTH OF THE SOUTH LINE OF RIDGEWOOD UNIT 12, RECORDED OCTOBER 6, 1965, AS DOCUMENT NO. 19810036, LYING WEST OF THE EAST LINE OF THE WEST 1/2 OF LOT 4 (EXCEPT THE NORTH 75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION, RECORDED NOVEMBER 13, 1948, AS DOCUMENT NO. 14442019, AND LYING EAST OF THE WEST LINE OF RIDGEWOOD UNIT NO. 11, RECORDED APRIL 3, 1964, AS DOCUMENT NO. 19089916, IN THE EAST HALF OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

AS SHOWN BY THE ANNEXED PLAT WHICH IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, WHICH HAS ADOPTED A MUNICIPAL PLAN AND IS EXERCISING SPECIAL POWERS AUTHORIZED BY ARTICLE 11, DIVISION 12 OF THE ILLINOIS MUNICIPAL CODE, AS NOW AND HEREAFTER AMENDED AND THAT ALL REGULATIONS ENACTED BY THE VILLAGE OF WESTERN SPRINGS RELATIVE TO PLATS AND SUBDIVISIONS HAVE BEEN COMPLIED WITH IN THE PREPARATION OF THIS PLAT.

I FURTHER CERTIFY THAT IRON PIPE 1" X 24" WILL BE SET AT ALL LOT CORNERS, BLOCK CORNERS, POINTS OF CURVE, EXCEPT WHERE CONCRETE MONUMENTS ARE INDICATED, AND THAT THE PLAT HEREON DRAWN CORRECTLY REPRESENTS SAID SURVEY AND SUBDIVISION.

I FURTHER CERTIFY THAT THE SUBJECT PROPERTY LIES WITHIN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) OF THE VILLAGE OF WESTERN SPRINGS, ILLINOIS, MAP NUMBER 17031C0467J, EFFECTIVE DATE ON AUGUST 19, 2008.

DIMENSIONS ARE GIVEN IN FEET AND DECIMAL PARTS THEREOF AND ARE CORRECTED TO A TEMPERATURE OF 68 DEGREES FAHRENHEIT.

ALL CURVE LENGTHS SHOWN ARE ARC DIMENSIONS.

GIVEN UNDER MY HAND AND SEAL AT MOKENA, ILLINOIS, THIS 10th DAY OF JULY A.D., 2024.

STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. #035-003160
LICENSE EXPIRES ON NOVEMBER 30, 2026

PROFESSIONAL LAND SURVEYOR · STEVEN J LAUB · STATE OF ILLINOIS · 035-003160 · MOKENA, IL

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

Send all future tax bills to:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Submitted by:
McNAUGHTON DEVELOPMENT, LLC
11S220 JACKSON STREET, SUITE #101
BURR RIDGE, ILLINOIS 60527

Return the original Mylar to:
DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	10/16/24	LOT/ACCESS GEOMETRY	CJL
2	11/26/24	LOT/ECOMM	CJL
3	12/30/24	VILLAGE COMMENTS	CJL

McNAUGHTON DEVELOPMENT

FINAL PLAT FOR HERITAGE CROSSING WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4692
IL PROF. LIC. No.: 184-003740

DEI

PROJECT INFORMATION

Project No.: 24-0001
Scale: N/A
Date: 07/10/2024
Field Date: 04/17/2024
Drawn By: CJL
Checked By: SDD

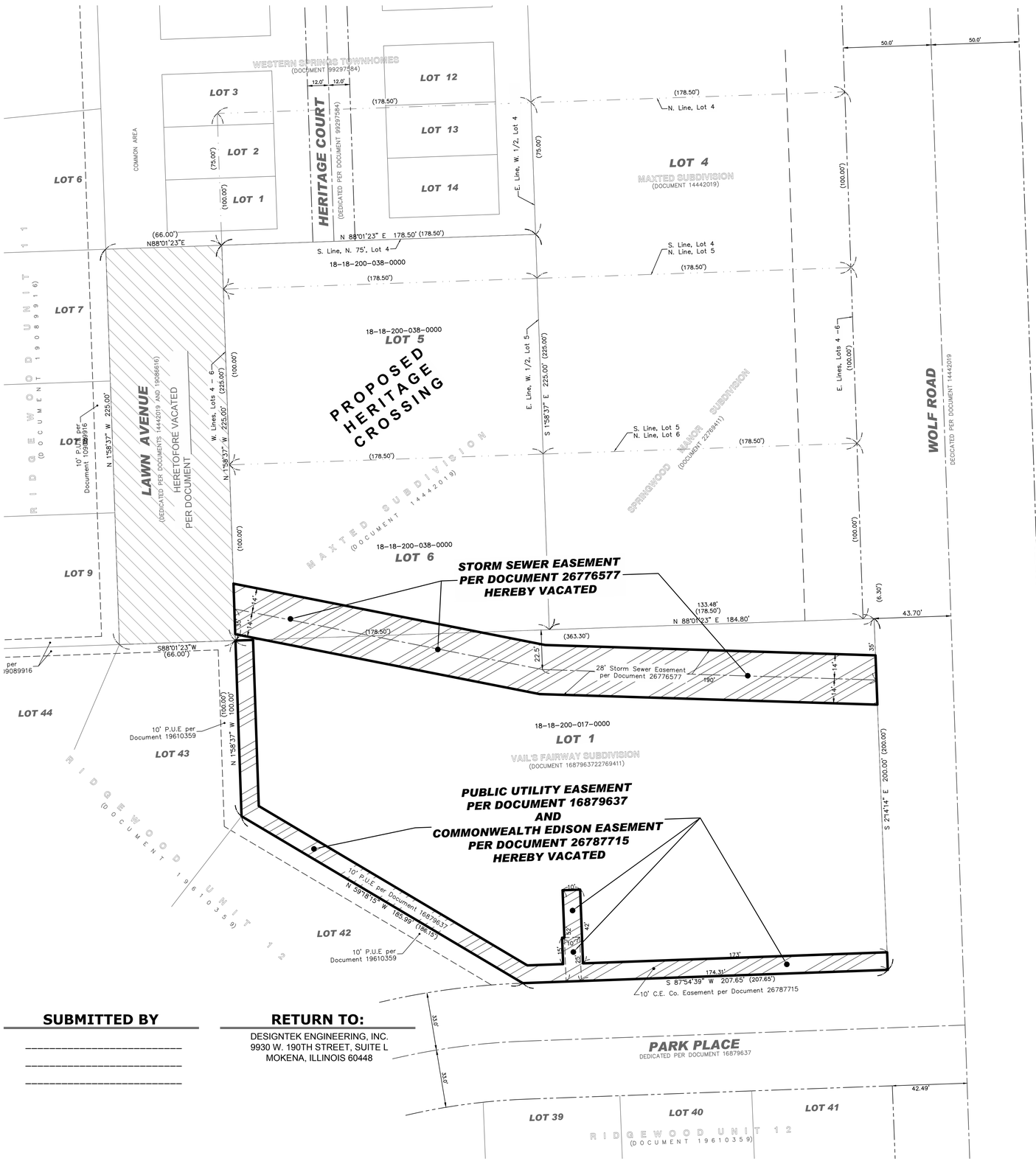
4 OF 4

CERTIFICATIONS

PLAT OF ABROGATION

FOR

STORM SEWER EASEMENT AND PUBLIC UTILITY EASEMENT



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

BASIS OF BEARING

THE WEST LINE OF LOTS 4, 5 AND 6 IN MAXTED SUBDIVISION = N 01°58'37" W (NAVD 88)

PARCEL IDENTIFICATION NUMBER

18-18-200-038-0000
18-18-200-017-0000

ADDRESSES

1023 W. 55TH STREET
WESTERN SPRINGS, IL 60558

5600 WOLF ROAD
WESTERN SPRINGS, IL 60558

LINE TYPES

- EASEMENT BOUNDARY LINE
- EXISTING RIGHT-OF-WAY LINE
- ADJACENT LOT LINE
- CENTERLINE
- BUILDING SETBACK LINE

ABBREVIATIONS

N	NORTH
S	SOUTH
E	EAST
W	WEST
(####)	RECORD/DEED
####	MEASURED
P.U.E.	PUBLIC UTILITY EASEMENT

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT McNAUGHTON DEVELOPMENT IS OWNER OF THE LAND SHOWN ON THIS PLAT OF ABROGATION AND HAS CAUSED THE SAME TO BE CAUSED THE SAME TO BE PLATTED, AS INDICATED HEREON, FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

DATED THIS _____ DAY OF _____, A.D., 20____.

BY: _____ TITLE: _____

NOTARY CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____, PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS SUCH OWNERS, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED THE ANNEXED PLAT AS THEIR OWN FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, A.D., 20____.

_____
NOTARY PUBLIC

VILLAGE BOARD'S CERTIFICATE

STATE Of ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AT A MEETING HELD THIS _____ DAY OF _____, A.D., 20____.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I, STEVEN J. LAUB, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, PREPARED THIS PLAT OF ABROGATION AND THAT SAID PLAT IS A CORRECT AND TRUE REPRESENTATION OF SAID SURVEY. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS THEREOF.

DATED THIS 15TH DAY OF OCTOBER, A.D., 20 24

_____
STEVEN J. LAUB
ILLINOIS PROFESSIONAL LAND SURVEY NO. 035-003160
LICENSE EXPIRES NOVEMBER 30, 2024

PROFESSIONAL LAND SURVEYOR
STEVEN J LAUB
STATE OF ILLINOIS
035-003160
MOKENA, IL

SUBMITTED BY

_____
_____
_____

RETURN TO:

DESIGNTEK ENGINEERING, INC.
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448

REVISIONS		
NO.	DATE	DESCRIPTION
		BY

McNAUGHTON DEVELOPMENT

PLAT OF ABROGATION FOR UTILITY & STORM SEWER EASEMENTS WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326 - 4961
FAX: (708) 326-4692
IL PROF. LIC. NO.: 184 - 003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: 10/15/2024
Field Date: N/A
Drawn By: SJL
Checked By: SDD

1 OF 1

EASEMENT ABROGATION

L:\Projects\2024\24-0001\Survey\dwg\Vacation\24-0001 Plat of Vacation - Easements.dwg Plot Date:10/15/2024 2:12:36 PM By: SJL

Traffic Impact Study
Proposed Residential Development
Western Springs, Illinois



Prepared For:

McNaughton DEVELOPMENT, LLC
YOUR LUXURY HOME BUILDER

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

July 9, 2024 – Revised November 25, 2024

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Western Springs, Illinois. The site, which currently contains a medical office building, is located in the northwest corner of the intersection of Wolf Road (Cook County Highway W22) with Park Place. As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a full-movement access drive off Wolf Road at approximately the same location of the existing access drive serving the medical office building. A gated access will be provided on Heritage Court, only allowing cross-access between the proposed development and the existing Heritage Court townhomes.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

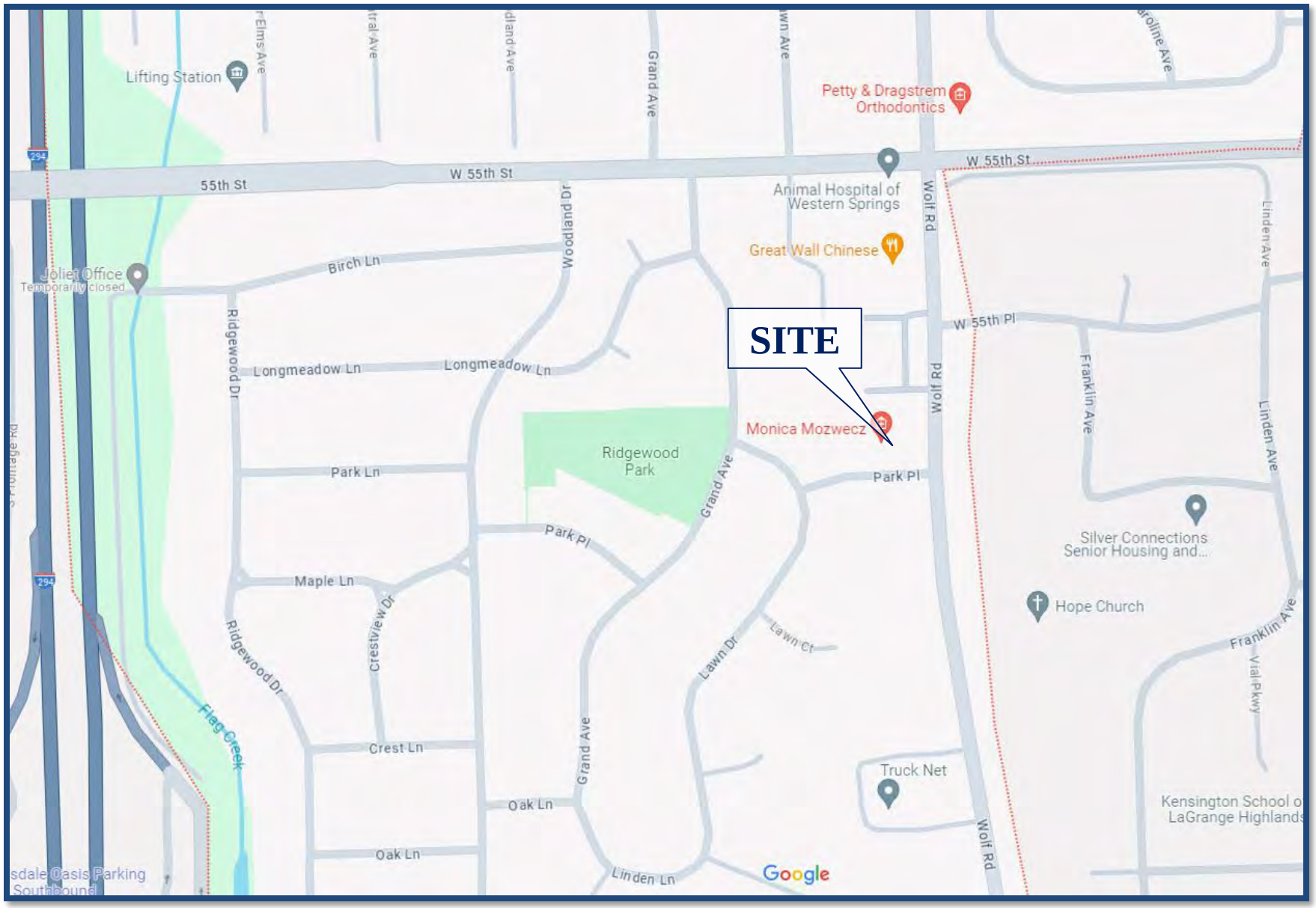
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday afternoon/evening peak hours for the following conditions:

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2030 no-build volumes and the traffic estimated to be generated by the proposed development.



Site Location

Figure 1

Proposed Residential Development
Western Springs, Illinois

Kenig,Lindgren,O'Hara,Aboona,Inc.



Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which currently contains a medical office building, is generally bounded by Springwood Manor condominiums and the Western Springs Heritage Townhomes to the north and single-family homes (Ridgewood of Western Springs) to the west and south. Wolf Road borders the site to the east. Land uses in the vicinity of the site are primarily residential in all directions.

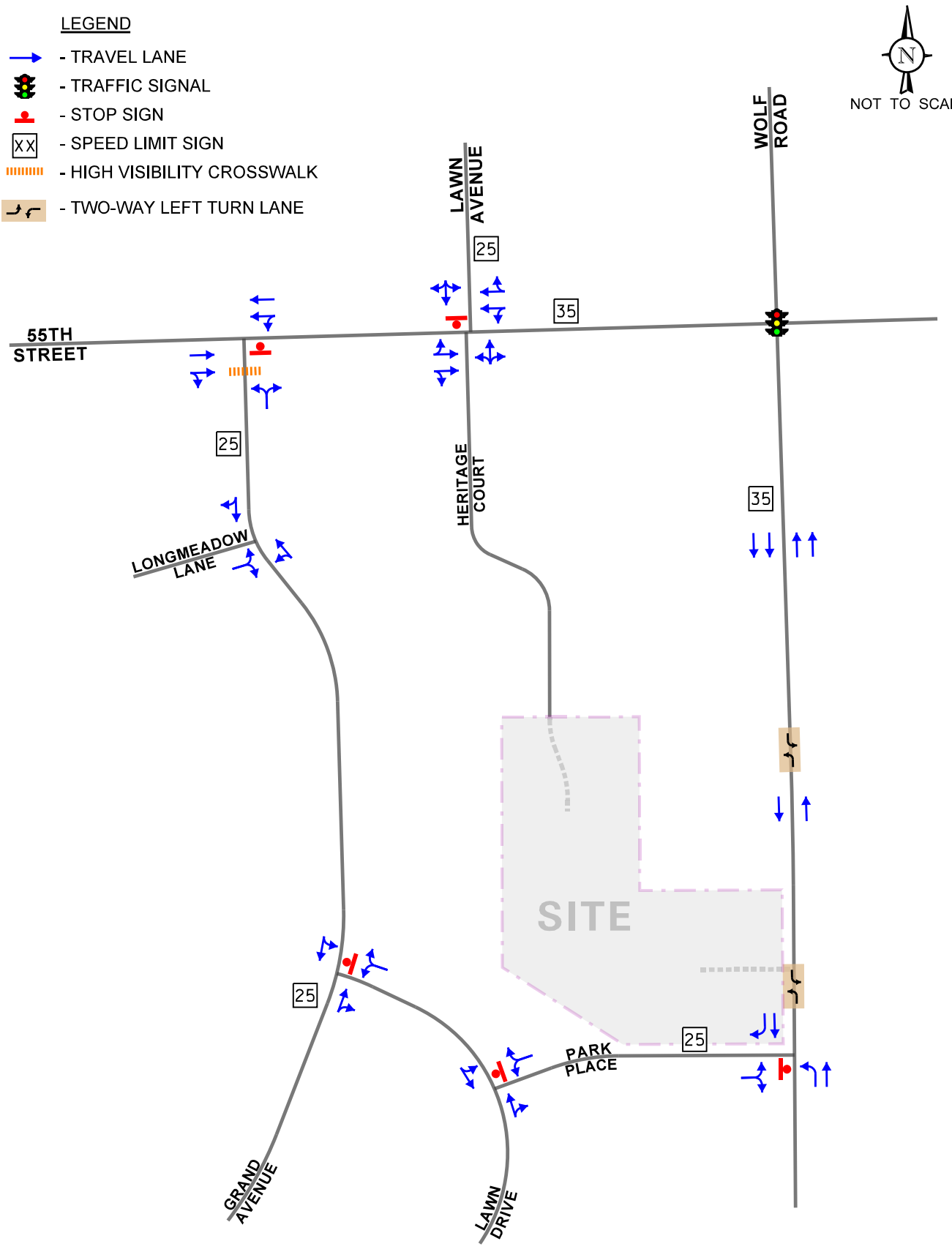
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Wolf Road (Cook County Highway W22) is a north-south minor arterial roadway that provides one lane in each direction divided by a striped median. At its unsignalized intersection with Park Place, Wolf Road provides an exclusive left-turn lane and a through lane on the northbound approach. The southbound approach provides a through lane and an exclusive right-turn lane. Wolf Road is under the jurisdiction of the Cook County Division of Transportation and Highways (CCDOTH), is not designated as a Strategic Regional Arterial (SRA), and has a posted speed limit of 35 miles per hour. According to the Illinois Department of Transportation (IDOT), Wolf Road carries an annual average daily traffic (AADT) volume of 9,150 vehicles (IDOT - 2022).

Park Place is an east-west local roadway that provides one lane in each direction. At its unsignalized intersection with Wolf Road, Park Place is under stop sign control and provides a shared left-turn/right-turn lane on the eastbound approach. At its unsignalized intersection with Lawn Drive, Park Place is under stop sign control and provides a shared left/right-turn lane on the westbound approach. Park Place is under the jurisdiction of the Village of Western Springs and has a posted speed limit of 25 miles per hour.

55th Street is an east-west minor arterial that provides two lanes in each direction divided by a painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Heritage Court/Lawn Avenue. However, it is important to note that eastbound and westbound left-turn movements are accommodated by the painted median. No exclusive turn lanes are provided on 55th Street at its unsignalized intersection with Grand Avenue. 55th Street has a posted speed limit of 35mph, carries an AADT volume of 16,600 vehicles (IDOT – 2022), and is under IDOT's jurisdiction.



Heritage Crossings
Western Springs, Illinois

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 3

Heritage Court is a north-south two-lane private road that serves the Western Springs Heritage townhomes and is aligned opposite Lawn Avenue. At its unsignalized intersection with 55th Street, Heritage Court provides a shared left/right-turn lane under stop sign control.

Grand Avenue is a local north-south two-lane roadway serving the Ridgewood of Western Springs subdivision. At its unsignalized intersection with 55th Street, Grand Avenue provides a shared left/right-turn lane under stop sign control. No exclusive turn lanes are provided at its unsignalized intersection with Lawn Drive. Grand Avenue has a posted speed limit of 25 mph and is under the jurisdiction of the Village of Western Springs.

Longmeadow Lane is an east-west two-lane local roadway. No traffic control is provided at its unsignalized intersection with Grand Avenue. Longmeadow Lane is under the jurisdiction of the Village of Western Springs.

Pedestrian Facilities

Based on our field visits, no sidewalks are provided along Park Place or any of the roads within the Ridgewood of Western Springs subdivision. However, a sidewalk is provided along the west side of Wolf Road. A north-south standard style crosswalk is provided on Park Place at its intersection with Wolf Road. Furthermore, a midblock east-west pedestrian high visibility crosswalk is provided on Wolf Road at its intersection with 59th Street. This mid-block pedestrian also provides rapid flashing beacons with proper signage. Additionally, push buttons are provided at each side of the roadway and advance signage is provided to vehicles to be aware of the upcoming crossing.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

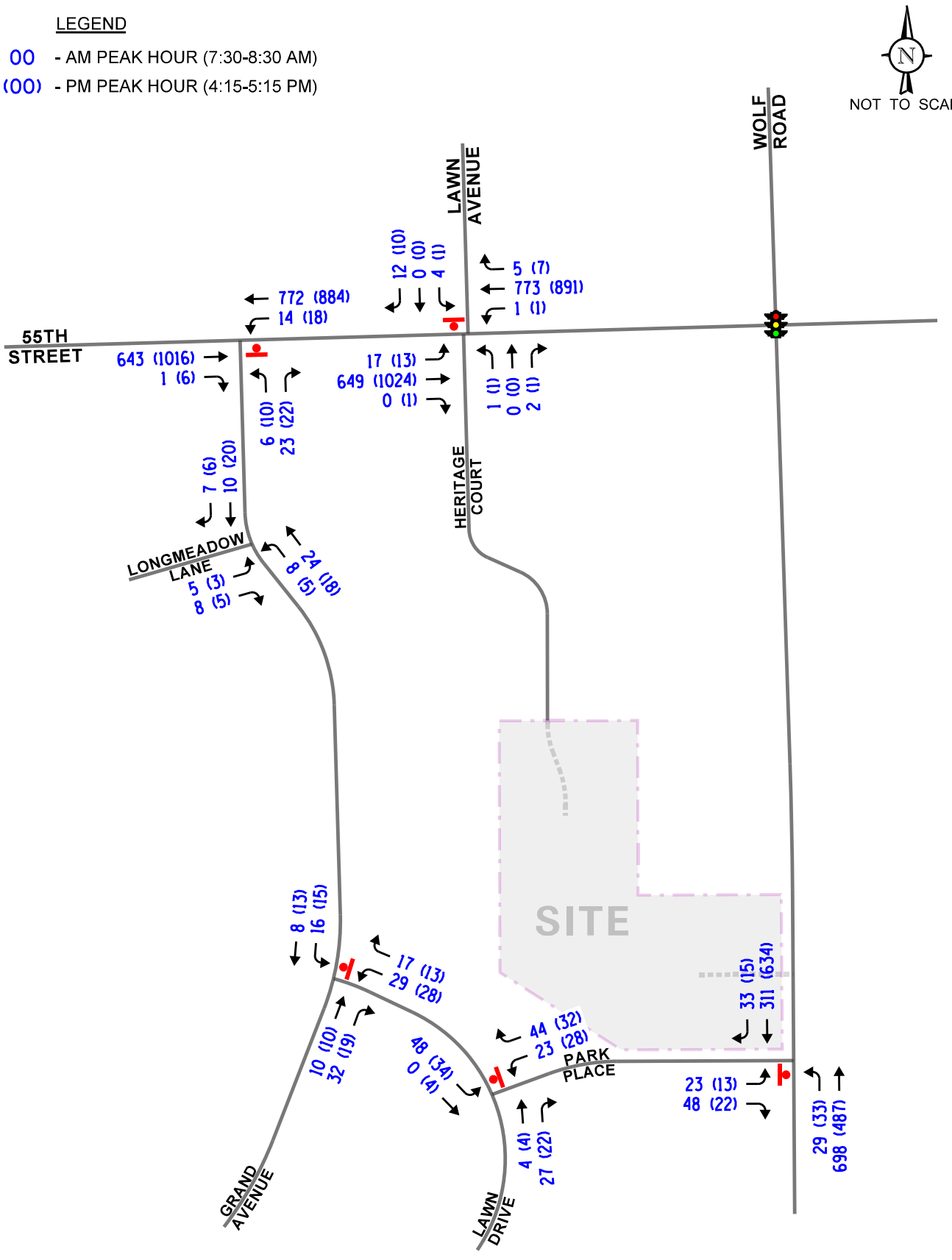
- Wolf Road with Park Place
- Park Place with Lawn Drive
- 55th Street with Heritage Court
- 55th Street with Grand Avenue
- Grand Avenue with Longmeadow Lane
- Grand Avenue with Lawn Drive

The traffic counts were conducted on Thursday, March 21, 2024 and on Tuesday, April 2, 2024, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday afternoon/evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:30 A.M. and 8:30 A.M. during the weekday morning peak period and between 4:15 P.M. and 5:15 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. The existing traffic volumes are illustrated in **Figure 4A**. **Figure 4B** shows the existing pedestrian and bicycle traffic volumes.

It is important to note that LaGrange Highlands Elementary School is located approximately 0.4 miles southeast of the intersection of Wolf Road with Park Place. Based on a review of the District 106 student calendar, all schools were in session when the traffic counts were conducted. Furthermore, the LaGrange Highlands Elementary School arrival is between 8:10 A.M. and 8:20 A.M. with class starting at 8:25 A.M. Upon further review of their website, the school's regular dismissal time is at 3:15 P.M. In order to determine the peak traffic and pedestrian volumes during the dismissal time, an additional traffic count was conducted at the intersection of Wolf Road with Park Place during the 3:00 P.M. to 4:00 P.M. hour.

Furthermore, in September 2024, the Village of Western Springs conducted an additional pedestrian count (walking, bicycle, scooter, etc.) for the west leg of the intersection of Wolf Road with Park Place. These volumes, which yielded a higher pedestrian volume than the March 2024 counts conducted by KLOA, Inc. were utilized for the purposes of this evaluation.

Figure 5A shows the existing school peak traffic volumes while **Figure 5B** shows the existing school peak pedestrian and bicycle traffic volumes.

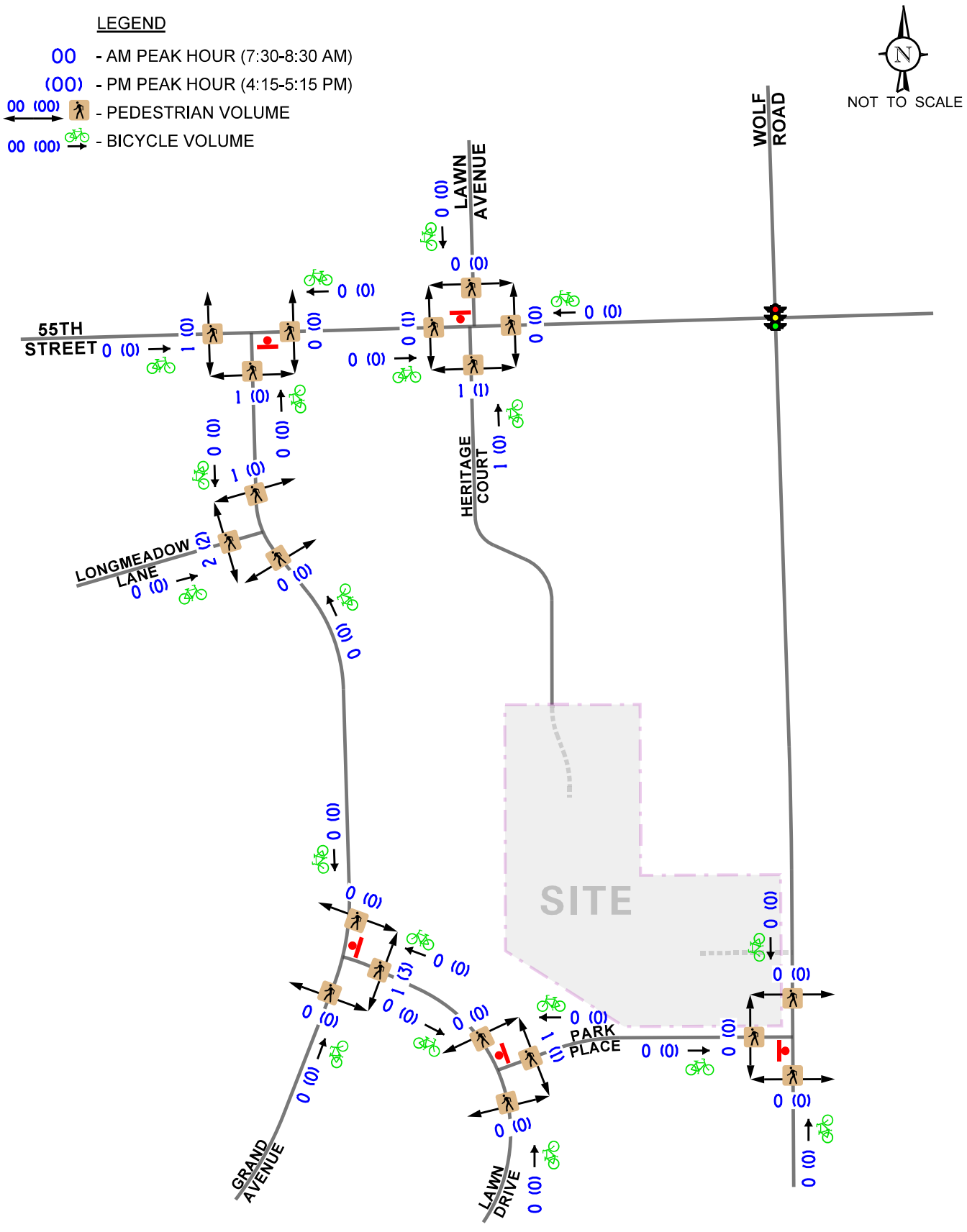


Heritage Crossings
Western Springs, Illinois

Existing Traffic Volumes

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: 4A

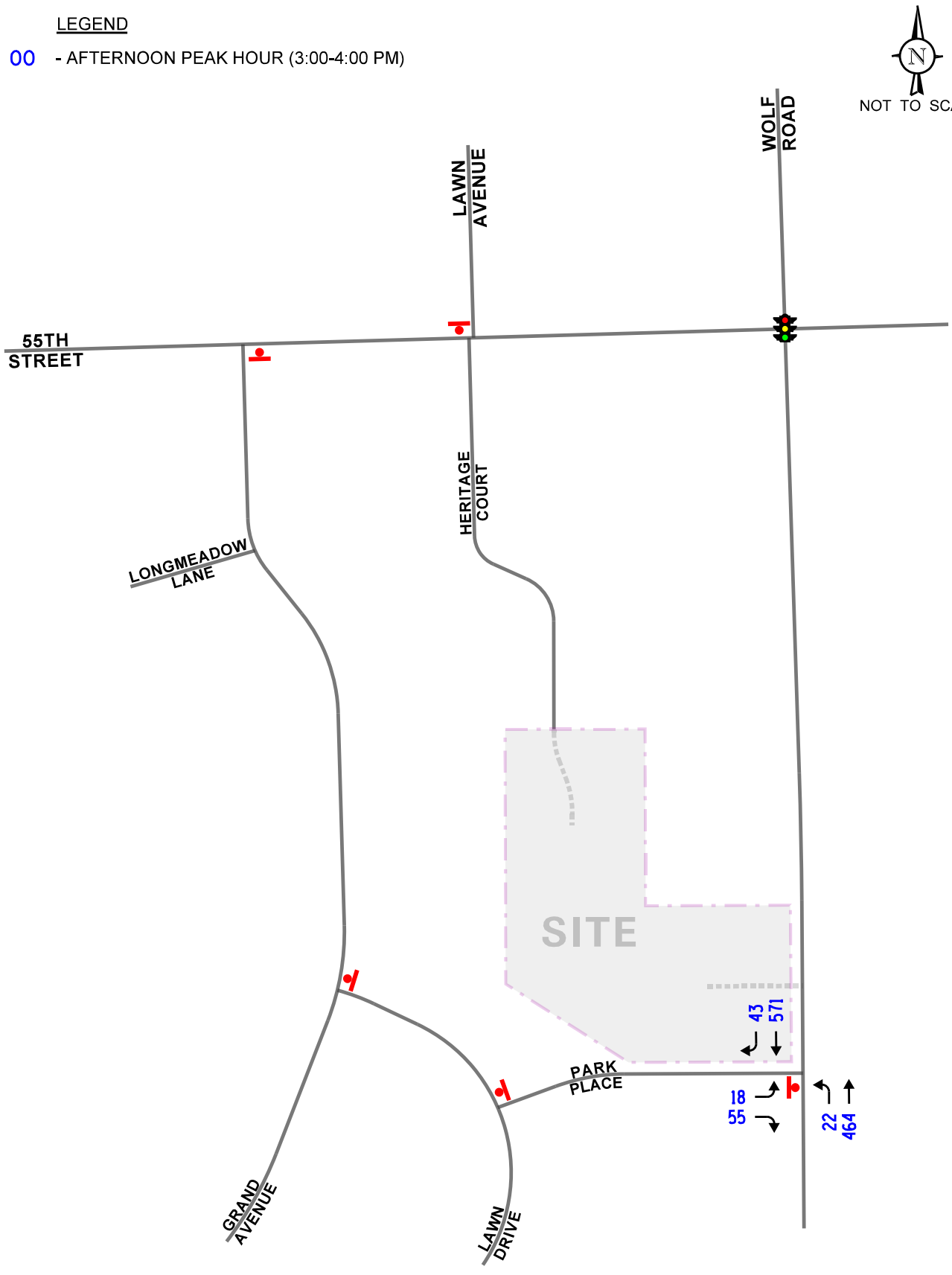


Heritage Crossings
Western Springs, Illinois

Existing Pedestrian and Bicycle Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 4B

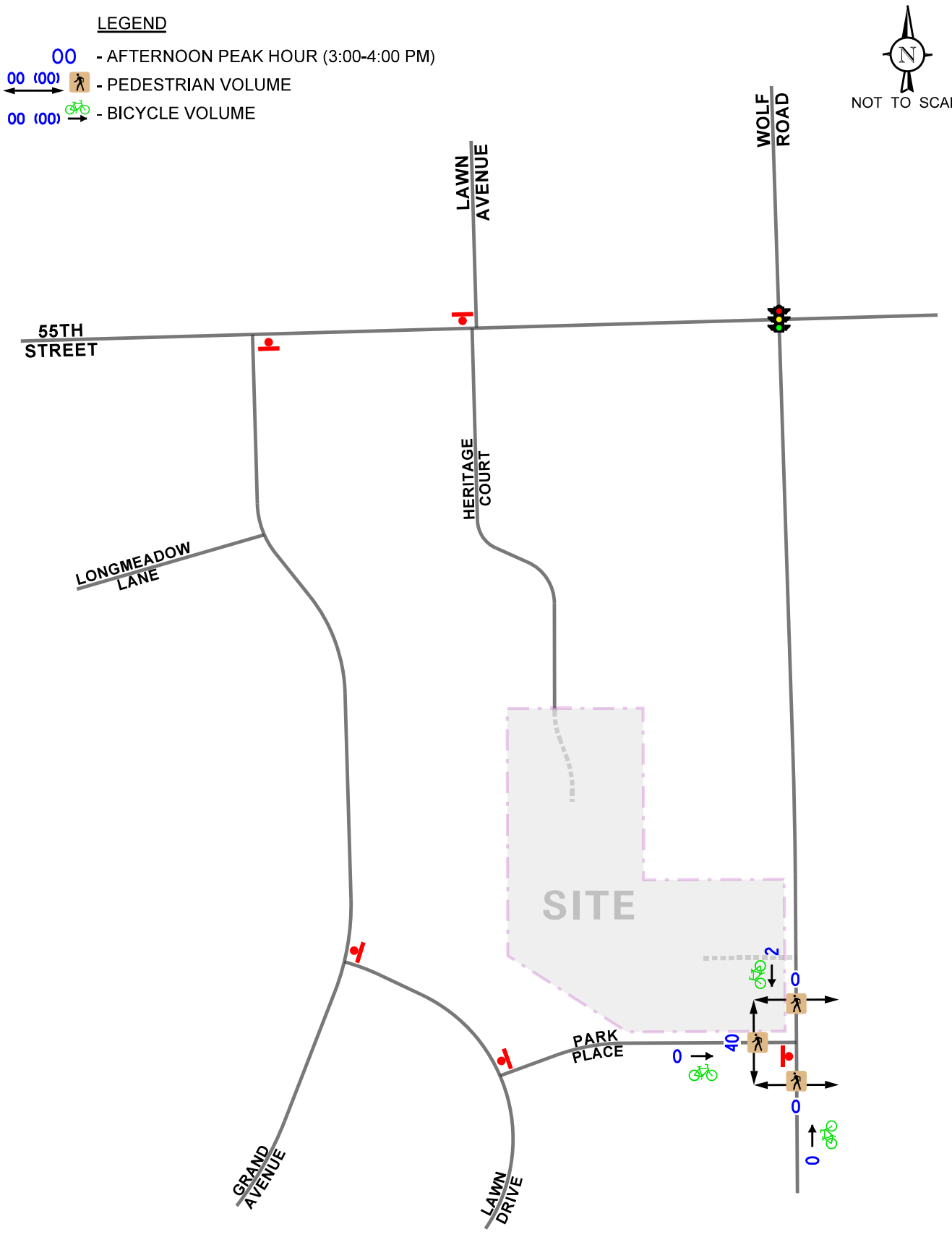


Heritage Crossings
Western Springs, Illinois

Existing Traffic Volumes
(Afternoon Peak Hour)

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: 5A



Heritage Crossings
Western Springs, Illinois

Existing Pedestrian and Bicycle
Traffic Volumes - (Afternoon Peak Hour)

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 5B

Crash Data Summary

KLOA, Inc. obtained accident data for the most recent available past five years (2018 to 2022) for the study area intersections. A summary of the crash data at the intersections of Wolf Road with Park Place and 55th Street with Grand Avenue is shown in **Tables 1** and **2**. No fatalities were reported at any of the studied intersections during the review period.

Table 1
WOLF ROAD WITH PARK PLACE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	0	0	1	0	1
2019	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Average	**0**	**0**	**0**	**0**	**0**	**<1.0**	**0**	**<1.0**

Table 2
55th STREET WITH GRAND AVENUE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2018	0	0	0	2	1	0	0	3
2019	0	0	0	1	0	0	0	1
2020	0	0	0	0	0	1	0	1
2021	0	0	0	1	0	0	0	1
2022	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**4**	**1**	**1**	**0**	**6**
Average	**0**	**0**	**0**	**<1.0**	**<1.0**	**<1.0**	**0**	**1.2**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

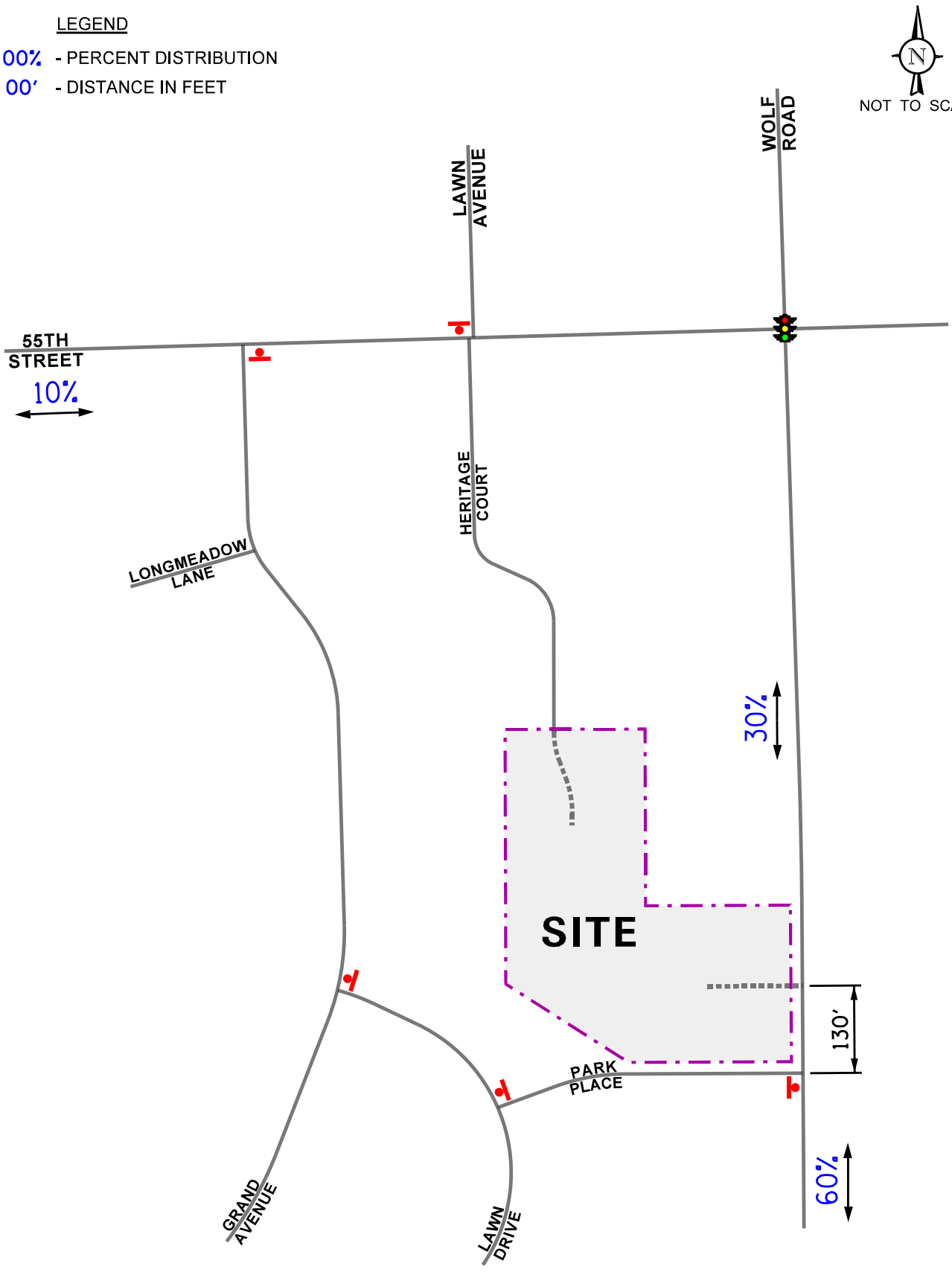
As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units. Access to the development will be provided via a proposed full-movement access drive on Wolf Road to be located at approximately the same location of the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. The existing access drive on Wolf Road will be eliminated. A gated access to the north with Heritage Court will also be provided. This access will only provide accessibility to the proposed development and to the existing Heritage townhomes and will be controlled via a clicker that will be provided to residents of both developments. A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of the development-generated traffic. Figure 6 also shows the distance, in feet, between the existing and proposed access intersections.

Peak Hour Traffic Volumes

The number of peak hour trips (vehicles, bicycles and pedestrians) estimated to be generated by the proposed residential development was based on trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Single-Family Attached Housing" (Land-Use Code 215) rates were used to determine the traffic to be generated by the development. **Table 3** shows the weekday morning, weekday afternoon and weekday evening peak hour traffic, pedestrian, and bicycle trips to be generated by the proposed residential development as well as the daily total traffic volumes. It is important to note that the weekday afternoon peak hour volumes were estimated based on the time-of-day distribution Excel data provided within the *Trip Generation Manual* Appendices. Copies of the trip generation graphs and the hourly distribution Excel sheet are included in the Appendix.



Heritage Crossings
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Directional Distribution

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Job No: 24-068 Figure: 6

Table 3
PROJECTED DEVELOPMENT-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
215	Townhomes (29 Units)	3	11	14	9	5	14	10	7	17	105	105	210
	Pedestrians [1]	1	2	3	3	3	6	3	3	6	N/A	N/A	N/A
	Bikes [1]	--	--	--	--	1	1	--	1	1	N/A	N/A	N/A

1 – Pedestrian and bicycle trip generation was assumed to be the same as during the evening peak hour

Trip Generation Comparison

As previously mentioned, the site currently contains a medical office building. The existing medical office building is approximately 21,536 square feet in size of which only 1,200 square feet are currently being utilized.

Given that the current zoning allows for both medical office and professional office uses, the volume of traffic that was generated by the full occupancy of the building assuming half of it as medical office and the other half as professional office and that of the proposed development during the weekday morning, afternoon, evening peak hours and on a daily basis was estimated based on the following trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition:

- Medical-Dental Office Building (Land-Use Code 720)
- General Office Building (Land-Use Code 710)
- Single-Family Attached Housing (Land-Use Code 215)

Table 4 shows a comparison of what the full occupancy of the medical office building was generating and what the proposed rowhomes would generate.

As can be seen, the proposed development will generate substantially less traffic than what the full occupancy of the previous land use was generating. Therefore, the proposed development will have a lower traffic impact than the previous land use.

Table 4
TRIP GENERATION COMPARISON

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
720	Medical Office Building (10,768 s.f.)	26	6	32	16	18	34	12	29	41	177	178	355
710	General Office Building (10,768 s.f.)	22	3	25	6	7	13	4	22	26	83	84	167
215	Townhomes (29 units)	3	11	14	9	5	14	10	7	17	105	105	210
Difference		**-45**	**+2**	**-43**	**-13**	**-20**	**-33**	**-6**	**-44**	**-50**	**-155**	**-157**	**-312**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). The traffic assignment for the development is illustrated in **Figure 7.** The re-assignment of the Heritage Court townhomes to take into account the proposed connection between the proposed development and the existing townhomes is illustrated in **Figure A** in the Appendix.

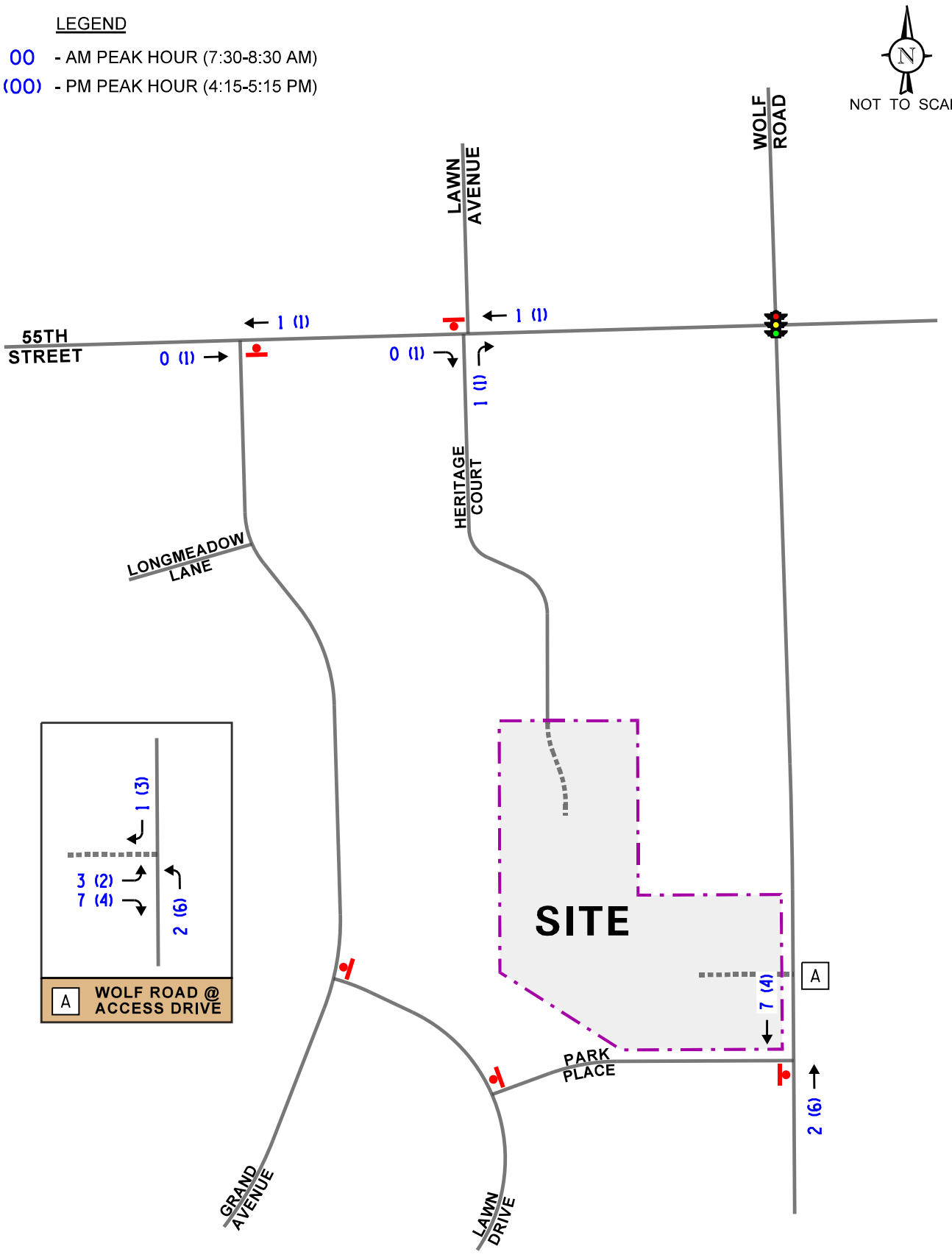
Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.4 percent per year for six years (buildout year plus five years) for a total of approximately 2.5 percent to project Year 2030 background conditions. **Figure 8** illustrates the Year 2030 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2030 no-build traffic volumes (Figure 7) to determine the Year 2030 total projected traffic volumes, shown in **Figure 9.** The Year 2030 total projected traffic volumes for the weekday afternoon peak hour is illustrated in **Figure B** in the Appendix.

The total projected traffic volumes also include the existing turning movements to and from the medical office building and in order to provide a conservative analysis, these vehicles were not removed from the area roadway system or the traffic volumes at other study area intersections.

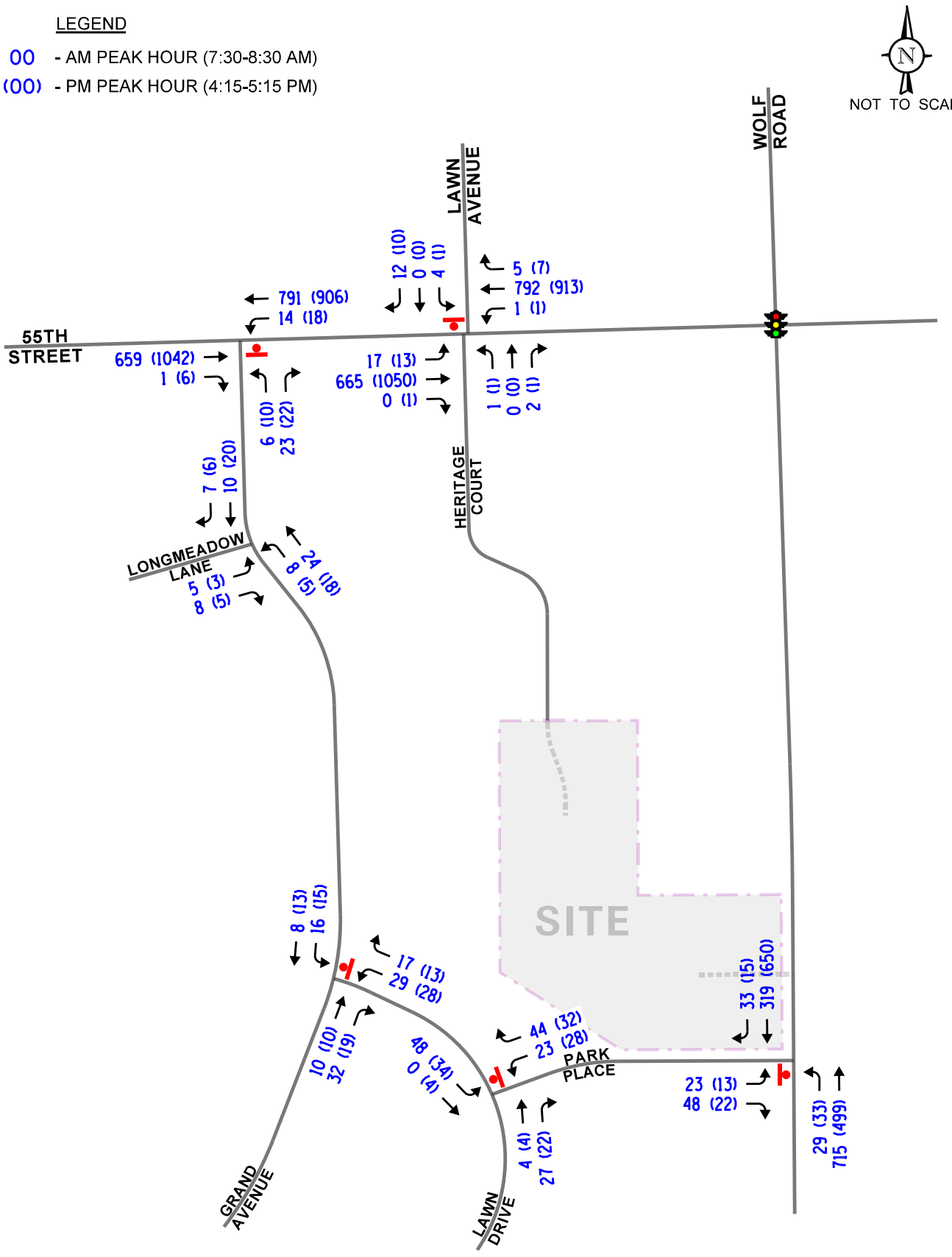


Heritage Crossings
Western Springs, Illinois

Site-Generated Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 7

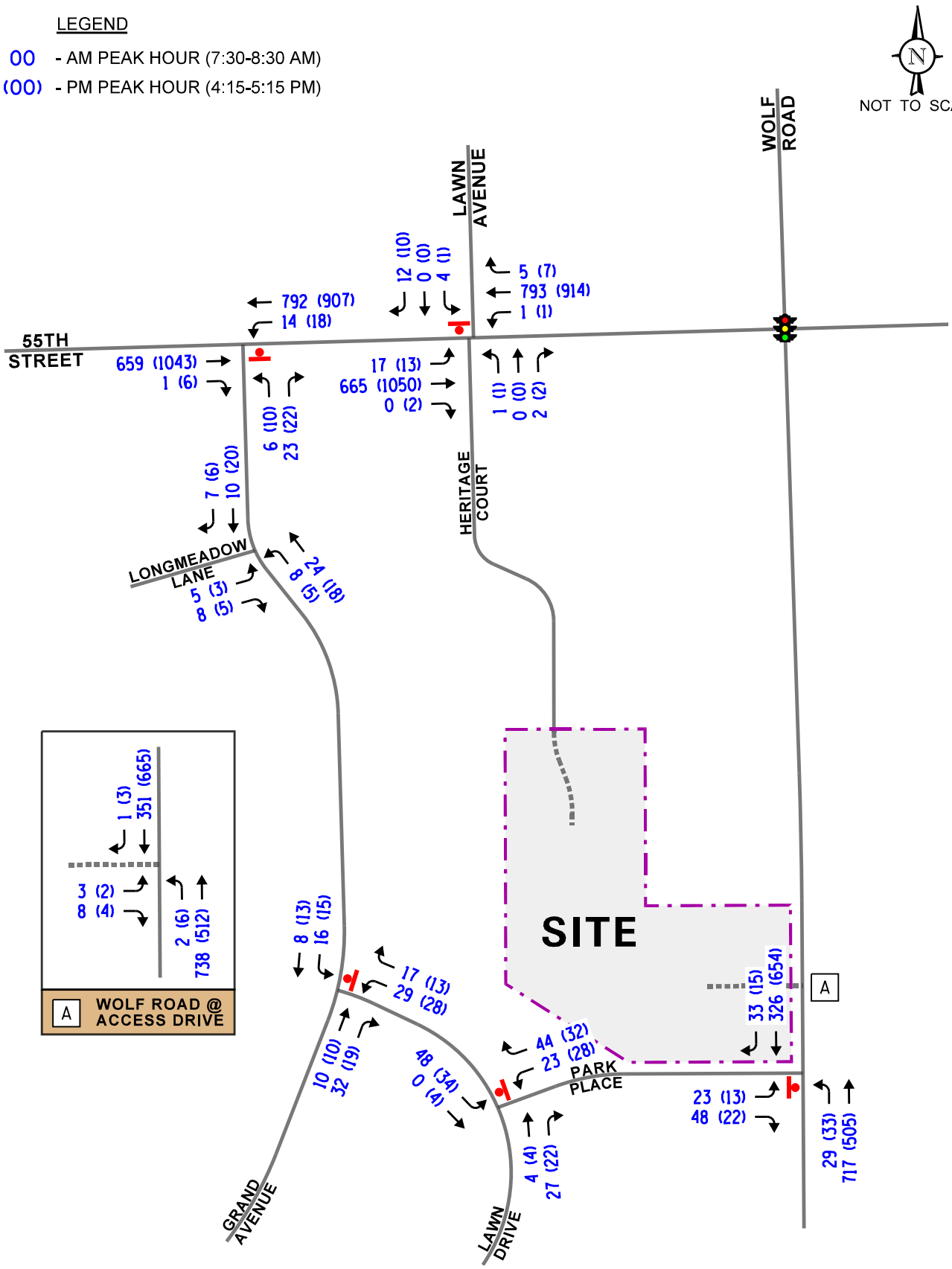


Heritage Crossings
Western Springs, Illinois

Year 2030 No-Build Traffic Volumes

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: 8



Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: 9

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2030 no-build, and Year 2030 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 7th Edition and analyzed using Synchro/SimTraffic 12 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2030 no-build, and Year 2030 total projected conditions are presented in **Tables 5** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	16.7	C	20.6
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.3	B	10.8
• Northbound Approach	B	14.1	D	25.5
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.5	A	8.8
• Westbound Left Turn	A	8.9	B	10.5
• Northbound Approach	B	13.0	B	13.0
• Southbound Approach	B	12.0	B	11.5
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 5A
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	18.8
• Northbound Left Turn	A	9.3

LOS = Level of Service
Delay is Measured in Seconds

Table 6
CAPACITY ANALYSIS RESULTS – 2030 NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.1	C	21.3
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	B	13.3
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3

LOS = Level of Service
Delay is Measured in Seconds

Table 7
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Park Place				
• Eastbound Approach	C	17.3	C	21.5
• Northbound Left Turn	A	8.2	A	9.3
55th Street with Grand Avenue				
• Westbound Left/Through	A	9.4	B	10.9
• Northbound Approach	B	14.4	D	26.8
55th Street with Lawn Avenue/Heritage Court				
• Eastbound Left Turn	A	8.6	A	8.9
• Westbound Left Turn	A	9.0	B	10.7
• Northbound Approach	B	13.3	C	21.6
• Southbound Approach	B	12.3	B	11.7
Grand Avenue with Longmeadow Lane				
• Eastbound Approach	A	8.6	A	8.6
• Northbound Left/Through	A	7.3	A	7.3
Grand Avenue with Lawn Drive				
• Westbound Approach	A	8.9	A	8.9
• Southbound Left/Through	A	7.3	A	7.3
Lawn Drive with Park Place				
• Westbound Approach	A	9.0	A	9.0
• Southbound Left/Through	A	7.3	A	7.3
Wolf Road with Access Drive				
• Eastbound Approach	B	13.5	C	17.0
• Northbound Left Turn	A	8.0	A	9.0

LOS = Level of Service
Delay is Measured in Seconds

Table 7A
CAPACITY ANALYSIS RESULTS – 2030 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Afternoon Peak Hour	
	LOS	Delay
Wolf Road with Park Place		
• Eastbound Approach	C	19.8
• Northbound Left Turn	A	9.4
Wolf Road with Access Drive		
• Eastbound Approach	C	16.8
• Northbound Left Turn	A	8.9

LOS = Level of Service
Delay is Measured in Seconds

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Wolf Road with Park Place

The results of the capacity analyses indicate that the eastbound approach operates at Level of Service (LOS) C during the weekday morning, afternoon and weekday evening peak hours while the northbound left-turn movement operates at LOS A during all three peak hours. Based on the peak hour turning movement counts, Park Place is estimated to carry 1,250 – 1,300 daily trips. As stated in the publication titled *Residential Streets*, 3rd Edition published by the Urban Land Institute (ULI), the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE) and ITE, the average daily traffic volumes for a residential collector are typically greater than 1,500 vehicles. As such the road is operating below its typical design threshold.

Under Year 2030 no-build and total projected conditions, the eastbound approach and the northbound left-turn movement are projected to operate at the same existing levels of service during all three peak hours with increases in delay of less than two seconds. The 95th percentile queue for the eastbound approach is projected to be approximately one to two vehicles and will not extend back to the location of the proposed access drive. The 95th percentile queue for the northbound left-turn movement is projected to be approximately one vehicle and can be accommodated by the existing left-turn lane. As such, Park Place and its intersection with Wolf Road have sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Grand Avenue

The results of the capacity analyses indicate that the westbound left-turn/through movement operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. The northbound approach operates at LOS B during the weekday morning peak hour and LOS D during the weekday evening peak hour.

Under Year 2030 no-build and total projected conditions, all the approaches and their critical movements are projected to operate at the same existing levels of service during both peak hours with increases in delay of less than three seconds. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

55th Street with Heritage Court/Lawn Avenue

The results of the capacity analyses indicate that the northbound and southbound approaches currently operate at LOS B during the weekday morning and weekday evening peak hours. The eastbound and westbound left-turn movements operate at LOS B or better during both peak hours.

Under Year 2030 no-build and total projected conditions, the northbound and southbound approaches will operate at LOS B during the weekday morning and weekday evening peak hours except for the northbound approach that is projected to operate at LOS C during the weekday evening peak hour under projected conditions. The eastbound and westbound left-turn movements are projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than one second. It should be noted that based on the peak hour turning movement counts at this intersection, Heritage Court is estimated to carry approximately 40 to 50 daily trips and is anticipated to carry the same amount of daily traffic given the proposed connection to the south with the proposed development. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Longmeadow Lane

The results of the capacity analyses indicate that the eastbound approach and the northbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Grand Avenue with Lawn Drive

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lawn Drive with Park Place

The results of the capacity analyses indicate that the westbound approach and the southbound left-turn/through movement currently operates at LOS A during the weekday morning and weekday evening peak hours and will continue to do so under Year 2030 no-build and total projected conditions with minimal increases in delay. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Wolf Road with Proposed Access Drive

As proposed, a full-movement access drive will be provided on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. It is important to note that Wolf Road provides a two-way left-turn lane at the location of this access drive. As such, the analysis assumed a short (40-foot) exclusive left-turn lane.

Under Year 2030 total projected conditions, outbound movements from the access drive are projected to operate at LOS B and C during the weekday morning and weekday evening peak hours, respectively. The northbound left-turn movement will operate at LOS A. Furthermore, the 95th percentile queue for the northbound left turn is projected to be one vehicle, which will not interrupt the traffic flow on Wolf Road. As such, the proposed access drive will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

Sight Distance Evaluation

In order to determine if sufficient sight distance is provided along Wolf Road for a vehicle stopped at the access drive, a sight distance study was performed for the intersection of Wolf Road with the existing access drive. While intersection sight distance is desirable, *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) indicates that, at a minimum, the location of a side road or access road must meet the minimum stopping sight distance requirements.

As previously indicated, Wolf Road has a posted speed limit of 35 mph. It is important to note that per the Illinois Department of Transportation (IDOT) Bureau of Design and Environment (BDE) Manual design procedures, the intersection sight distance is obtained by providing clear sight triangles. Furthermore and as stated in the Manual, "The length of leg along the minor road is based on two parts. The first is the location of the driver's eye on the minor road. The distance is not wholly based on the location of the stop bar, but instead through research on how far away from through traffic the stopping motorist feels comfortable, even potentially after a two-stop process (stop at stop bar, then pull up and stop at a safe spot closer to the edge of pavement that maximizes sight lines). This distance is typically assumed to be 14.4 feet from the edge of the major road traveled way, but can be increased due to site specific issues".

The minimum stopping sight distance required along Wolf Road for a posted 35 mph speed limit (design speed of 40 mph) based on IDOT's BDE Manual and the *Bureau of Design and Environment (BDE*) Manual and the *A Policy on Geometric Design of Highways and Streets* (Green Book) published by the American Association of State Highway and Transportation Officials (AASHTO) is 305 feet.

As part of the proposed plans, the culvert will be reworked and the existing chain link fence will be moved further back west (For additional details, please refer to Design Tek Engineering, Inc. engineering plans). Based on Exhibit A (see Appendix), the location of the access drive meets the minimum stopping sight distance requirements for the posted speed limit. While the access drive is within the influence of the southbound right-turn lane taper, it is important to note that this is an existing access drive that was approved in the past and has been operating for many years with higher traffic volumes than what the proposed development will generate.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be redeveloped with a residential development consisting of 29 townhome units.

- Access to the development will be provided via a full-movement access drive on Wolf Road at approximately the same location as the existing full access drive serving the medical office building, approximately 130 feet north of Park Place's centerline. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.

- The existing chain-link fence will be relocated further west and adequate sight distance will be provided at the full access drive's intersection with Wolf Road.

- A gated connection to the north with Heritage Court will be provided. This connection will only provide accessibility to the proposed development and the existing Heritage Townhomes and will be controlled via a clicker that will be provided to residents of both developments.

- The area roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development and no additional roadway improvements or traffic control modifications are required.

- The proposed access system will be adequate in accommodating the traffic projected to be generated by the proposed development and will ensure efficient and flexible access will be provided.

- As part of the proposed plans, the existing chain link fence around the culvert will be moved further back west and as such, the location of the access drive will meet the minimum stopping sight distance requirements for the posted speed limit.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Graphs
Figure A
CMAP Projections Letter
Figure B
Level of Service Table
Capacity Analysis Summary Sheets
Exhibit A – Available Sight Distance

Traffic Count Summary Sheets

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

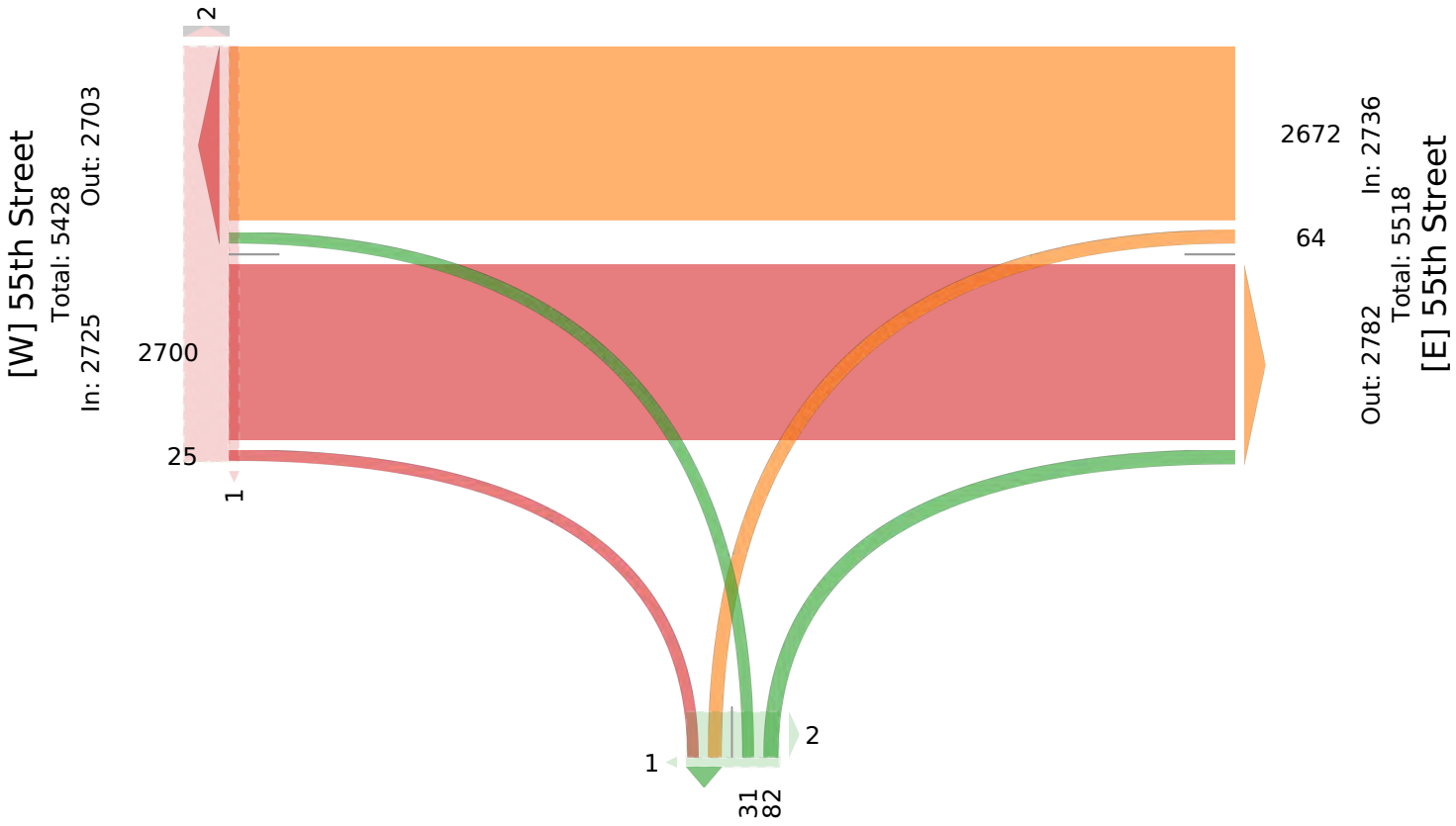
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Hourly Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
8:00AM	122	1	0	**123**	0	3	1	0	**4**	0	2	119	0	**121**	0	**248**
8:15AM	126	3	0	**129**	0	5	2	0	**7**	0	2	117	0	**119**	0	**255**
8:30AM	102	7	0	**109**	0	4	2	0	**6**	0	1	120	0	**121**	0	**236**
8:45AM	121	0	0	**121**	0	7	1	0	**8**	0	0	104	0	**104**	0	**233**
Hourly Total	471	11	0	**482**	0	19	6	0	**25**	0	5	460	0	**465**	0	**972**
4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Hourly Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
5:00PM	171	6	0	**177**	0	1	1	0	**2**	2	1	174	0	**175**	2	**354**
5:15PM	149	7	0	**156**	0	9	3	0	**12**	0	8	154	0	**162**	0	**330**
5:30PM	134	6	0	**140**	0	4	3	0	**7**	0	1	165	0	**166**	0	**313**
5:45PM	124	2	0	**126**	0	4	2	0	**6**	0	3	143	0	**146**	0	**278**
Hourly Total	578	21	0	**599**	0	18	9	0	**27**	2	13	636	0	**649**	2	**1275**
Total	2672	64	0	**2736**	0	82	31	0	**113**	3	25	2700	0	**2725**	3	**5574**
% Approach	97.7%	2.3%	0%	**-**	-	72.6%	27.4%	0%	**-**	-	0.9%	99.1%	0%	**-**	-	-
% Total	47.9%	1.1%	0%	**49.1%**	-	1.5%	0.6%	0%	**2.0%**	-	0.4%	48.4%	0%	**48.9%**	-	-
Lights	2617	63	0	**2680**	-	80	30	0	**110**	-	25	2643	0	**2668**	-	5458
% Lights	97.9%	98.4%	0%	**98.0%**	-	97.6%	96.8%	0%	**97.3%**	-	100%	97.9%	0%	**97.9%**	-	97.9%
Single-Unit Trucks	33	1	0	**34**	-	2	0	0	**2**	-	0	37	0	**37**	-	73
% Single-Unit Trucks	1.2%	1.6%	0%	**1.2%**	-	2.4%	0%	0%	**1.8%**	-	0%	1.4%	0%	**1.4%**	-	1.3%
Articulated Trucks	19	0	0	**19**	-	0	0	0	**0**	-	0	16	0	**16**	-	35
% Articulated Trucks	0.7%	0%	0%	**0.7%**	-	0%	0%	0%	**0%**	-	0%	0.6%	0%	**0.6%**	-	0.6%
Buses	3	0	0	**3**	-	0	0	0	**0**	-	0	4	0	**4**	-	7
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	3.2%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
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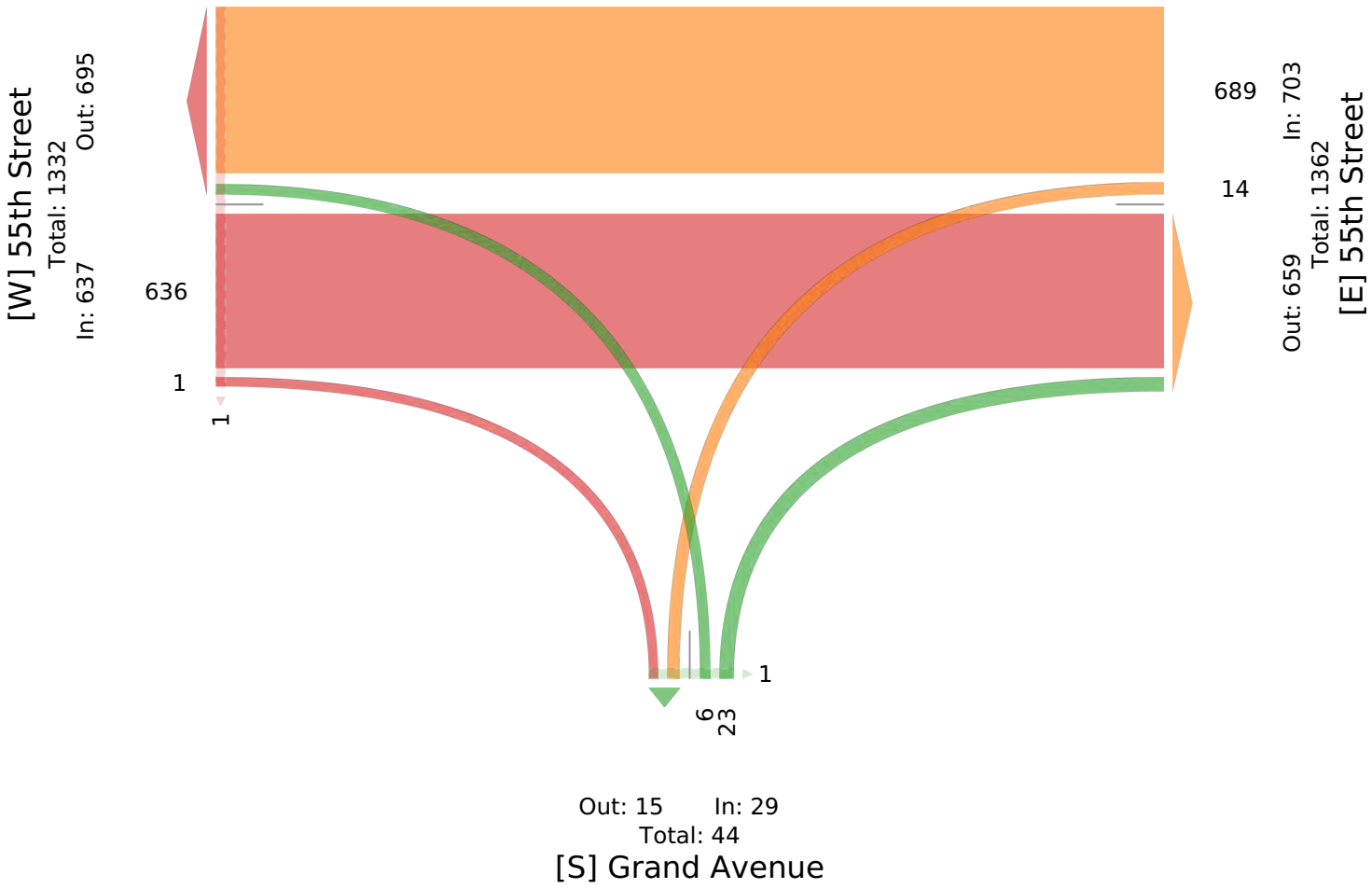
Leg	55th Street					Grand Avenue					55th Street					
Direction	Westbound					Northbound					Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	154	4	0	**158**	0	6	3	0	**9**	0	0	157	0	**157**	0	**324**
7:15AM	188	2	0	**190**	0	5	1	0	**6**	0	0	180	0	**180**	0	**376**
7:30AM	185	6	0	**191**	0	7	1	0	**8**	1	1	164	0	**165**	1	**364**
7:45AM	162	2	0	**164**	0	5	1	0	**6**	0	0	135	0	**135**	0	**305**
Total	689	14	0	**703**	0	23	6	0	**29**	1	1	636	0	**637**	1	**1369**
% Approach	98.0%	2.0%	0%	**-**	-	79.3%	20.7%	0%	**-**	-	0.2%	99.8%	0%	**-**	-	-
% Total	50.3%	1.0%	0%	**51.4%**	-	1.7%	0.4%	0%	**2.1%**	-	0.1%	46.5%	0%	**46.5%**	-	-
PHF	0.916	0.583	-	**0.920**	-	0.821	0.500	-	**0.806**	-	0.250	0.883	-	**0.885**	-	0.910
Lights	659	13	0	**672**	-	23	6	0	**29**	-	1	618	0	**619**	-	1320
% Lights	95.6%	92.9%	0%	**95.6%**	-	100%	100%	0%	**100%**	-	100%	97.2%	0%	**97.2%**	-	96.4%
Single-Unit Trucks	16	1	0	**17**	-	0	0	0	**0**	-	0	11	0	**11**	-	28
% Single-Unit Trucks	2.3%	7.1%	0%	**2.4%**	-	0%	0%	0%	**0%**	-	0%	1.7%	0%	**1.7%**	-	2.0%
Articulated Trucks	13	0	0	**13**	-	0	0	0	**0**	-	0	5	0	**5**	-	18
% Articulated Trucks	1.9%	0%	0%	**1.8%**	-	0%	0%	0%	**0%**	-	0%	0.8%	0%	**0.8%**	-	1.3%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.3%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7 AM - 8 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

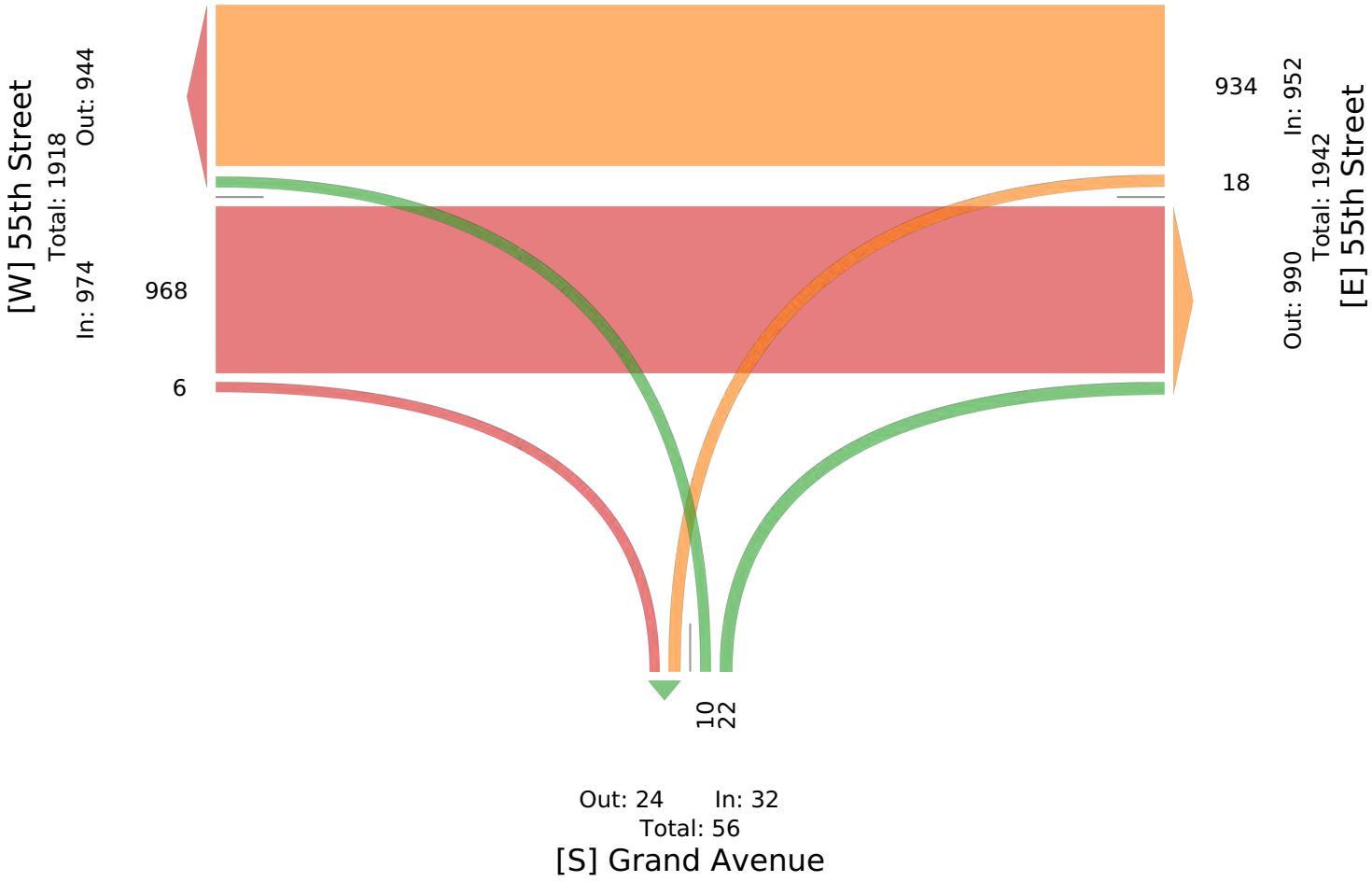
Leg Direction	55th Street Westbound					Grand Avenue Northbound					55th Street Eastbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2024-03-21 4:00PM	212	3	0	**215**	0	8	3	0	**11**	0	3	266	0	**269**	0	**495**
4:15PM	233	6	0	**239**	0	4	3	0	**7**	0	2	277	0	**279**	0	**525**
4:30PM	263	5	0	**268**	0	3	3	0	**6**	0	1	215	0	**216**	0	**490**
4:45PM	226	4	0	**230**	0	7	1	0	**8**	0	0	210	0	**210**	0	**448**
Total	934	18	0	**952**	0	22	10	0	**32**	0	6	968	0	**974**	0	**1958**
% Approach	98.1%	1.9%	0%	**-**	-	68.8%	31.3%	0%	**-**	-	0.6%	99.4%	0%	**-**	-	-
% Total	47.7%	0.9%	0%	**48.6%**	-	1.1%	0.5%	0%	**1.6%**	-	0.3%	49.4%	0%	**49.7%**	-	-
PHF	0.888	0.750	-	**0.888**	-	0.688	0.833	-	**0.727**	-	0.500	0.874	-	**0.873**	-	0.932
Lights	927	18	0	**945**	-	21	10	0	**31**	-	6	950	0	**956**	-	1932
% Lights	99.3%	100%	0%	**99.3%**	-	95.5%	100%	0%	**96.9%**	-	100%	98.1%	0%	**98.2%**	-	98.7%
Single-Unit Trucks	6	0	0	**6**	-	1	0	0	**1**	-	0	6	0	**6**	-	13
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	4.5%	0%	0%	**3.1%**	-	0%	0.6%	0%	**0.6%**	-	0.7%
Articulated Trucks	1	0	0	**1**	-	0	0	0	**0**	-	0	10	0	**10**	-	11
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	1.0%	0%	**1.0%**	-	0.6%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	2	0	**2**	-	2
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Grand Avenue with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165723, Location: 41.789777, -87.900514

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

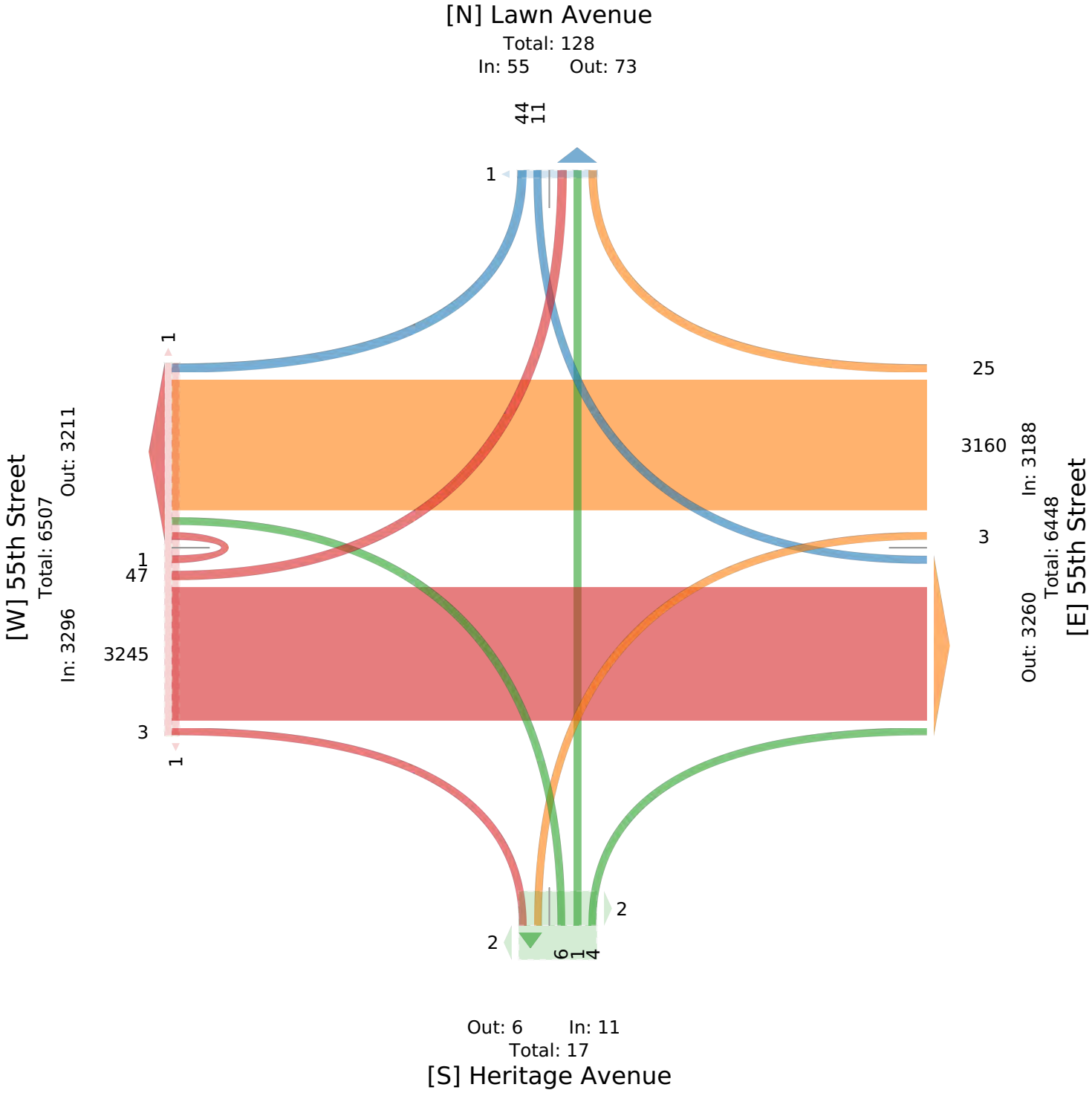
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Lawn Avenue						55th Street						Heritage Avenue						55th Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-03-21 7:00AM	1	0	0	0	**1**	0	2	132	0	0	**134**	0	1	0	1	0	**2**	0	0	125	1	0	**126**	0	**263**
7:15AM	6	0	1	0	**7**	0	3	154	0	0	**157**	0	0	0	1	0	**1**	0	0	187	2	0	**189**	0	**354**
7:30AM	4	0	0	0	**4**	0	0	174	0	0	**174**	0	0	0	2	0	**2**	0	1	185	2	0	**188**	0	**368**
7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
Hourly Total	12	0	2	0	**14**	0	7	685	0	0	**692**	0	3	0	4	0	**7**	0	1	644	8	0	**653**	0	**1366**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
8:45AM	1	0	1	0	**2**	0	2	163	0	0	**165**	0	0	0	0	0	**0**	0	0	139	2	0	**141**	0	**308**
Hourly Total	12	0	4	0	**16**	0	5	711	1	0	**717**	0	0	0	1	0	**1**	1	0	641	16	0	**657**	0	**1391**
4:00PM	5	0	4	0	**9**	0	2	210	1	0	**213**	0	0	0	0	0	**0**	0	1	252	3	0	**256**	0	**478**
4:15PM	1	0	0	0	**1**	0	1	190	0	0	**191**	0	0	1	0	0	**1**	0	0	246	6	0	**252**	1	**445**
4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
Hourly Total	13	0	5	0	**18**	0	6	865	2	0	**873**	0	1	1	0	0	**2**	0	1	976	13	0	**990**	1	**1883**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
5:30PM	2	0	0	0	**2**	0	2	245	0	0	**247**	0	0	0	0	0	**0**	0	0	218	1	0	**219**	0	**468**
5:45PM	2	0	0	0	**2**	1	1	228	0	0	**229**	0	0	0	0	0	**0**	2	0	220	0	0	**220**	0	**451**
Hourly Total	7	0	0	0	**7**	1	7	899	0	0	**906**	0	0	0	1	0	**1**	3	1	984	10	1	**996**	1	**1910**
Total	44	0	11	0	**55**	1	25	3160	3	0	**3188**	0	4	1	6	0	**11**	4	3	3245	47	1	**3296**	2	**6550**
% Approach	80.0%	0%	20.0%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	36.4%	9.1%	54.5%	0%	**-**	-	0.1%	98.5%	1.4%	0%	**-**	-	-
% Total	0.7%	0%	0.2%	0%	**0.8%**	-	0.4%	48.2%	0%	0%	**48.7%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	49.5%	0.7%	0%	**50.3%**	-	-
Lights	44	0	10	0	**54**	-	24	3100	3	0	**3127**	-	4	1	6	0	**11**	-	3	3181	47	1	**3232**	-	6424
% Lights	100%	0%	90.9%	0%	**98.2%**	-	96.0%	98.1%	100%	0%	**98.1%**	-	100%	100%	100%	0%	**100%**	-	100%	98.0%	100%	100%	**98.1%**	-	98.1%
Single-Unit Trucks	0	0	1	0	**1**	-	1	45	0	0	**46**	-	0	0	0	0	**0**	-	0	32	0	0	**32**	-	79
% Single-Unit Trucks	0%	0%	9.1%	0%	**1.8%**	-	4.0%	1.4%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**1.0%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	12	0	0	**12**	-	0	0	0	0	**0**	-	0	26	0	0	**26**	-	38
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	6	0	0	**6**	-	9
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

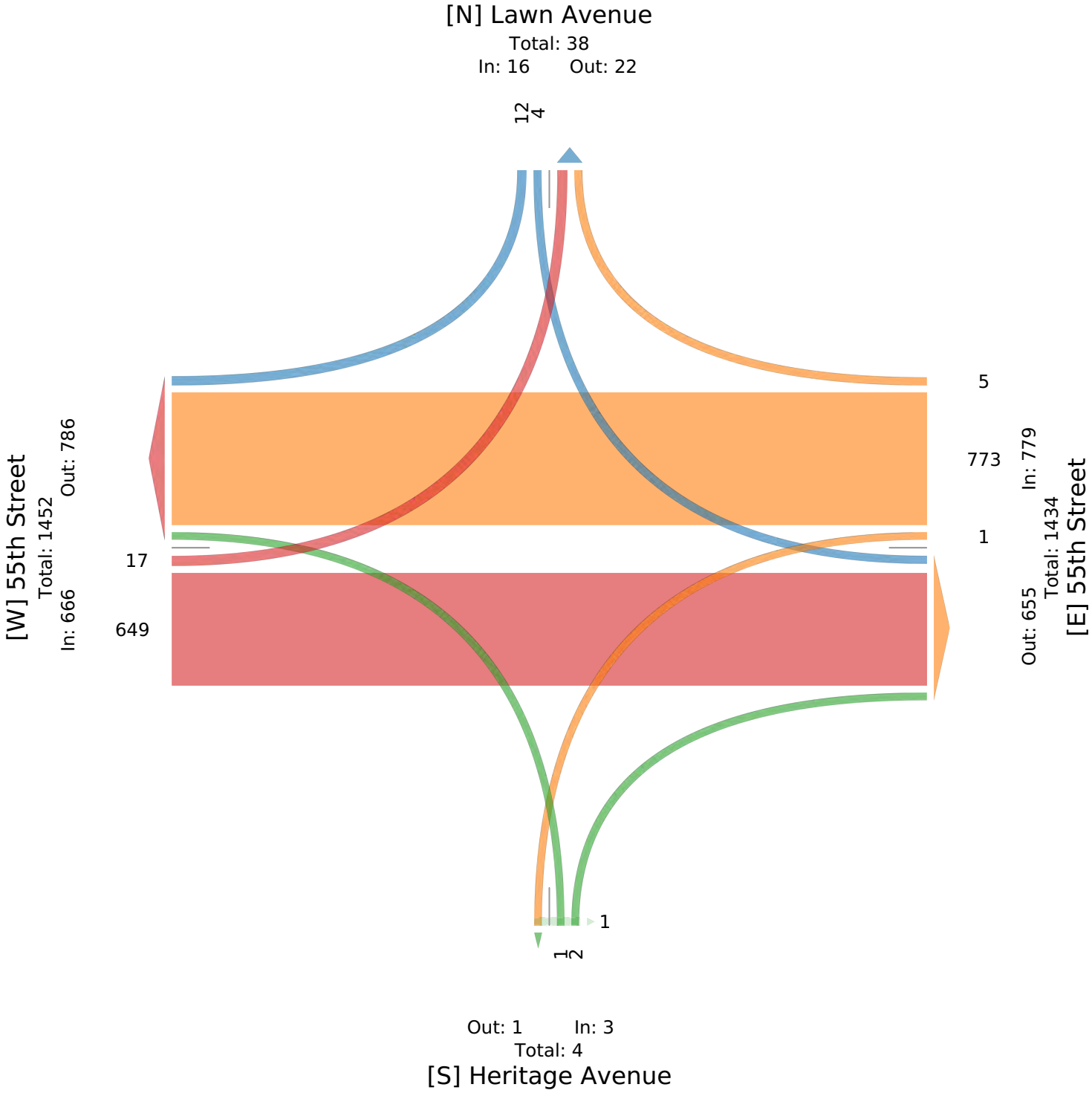
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 7:45AM	1	0	1	0	**2**	0	2	225	0	0	**227**	0	2	0	0	0	**2**	0	0	147	3	0	**150**	0	**381**
8:00AM	2	0	1	0	**3**	0	3	167	1	0	**171**	0	0	0	1	0	**1**	0	0	159	4	0	**163**	0	**338**
8:15AM	4	0	1	0	**5**	0	0	186	0	0	**186**	0	0	0	0	0	**0**	1	0	182	3	0	**185**	0	**376**
8:30AM	5	0	1	0	**6**	0	0	195	0	0	**195**	0	0	0	0	0	**0**	0	0	161	7	0	**168**	0	**369**
Total	12	0	4	0	**16**	0	5	773	1	0	**779**	0	2	0	1	0	**3**	1	0	649	17	0	**666**	0	**1464**
% Approach	75.0%	0%	25.0%	0%	**-**	-	0.6%	99.2%	0.1%	0%	**-**	-	66.7%	0%	33.3%	0%	**-**	-	0%	97.4%	2.6%	0%	**-**	-	-
% Total	0.8%	0%	0.3%	0%	**1.1%**	-	0.3%	52.8%	0.1%	0%	**53.2%**	-	0.1%	0%	0.1%	0%	**0.2%**	-	0%	44.3%	1.2%	0%	**45.5%**	-	-
PHF	0.600	-	1.000	-	**0.667**	-	0.417	0.859	0.250	-	**0.858**	-	0.250	-	0.250	-	**0.375**	-	-	0.891	0.607	-	**0.900**	-	0.961
Lights	12	0	4	0	**16**	-	4	746	1	0	**751**	-	2	0	1	0	**3**	-	0	634	17	0	**651**	-	1421
% Lights	100%	0%	100%	0%	**100%**	-	80.0%	96.5%	100%	0%	**96.4%**	-	100%	0%	100%	0%	**100%**	-	0%	97.7%	100%	0%	**97.7%**	-	97.1%
Single-Unit Trucks	0	0	0	0	**0**	-	1	22	0	0	**23**	-	0	0	0	0	**0**	-	0	9	0	0	**9**	-	32
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	20.0%	2.8%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.4%	0%	0%	**1.4%**	-	2.2%
Articulated Trucks	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	5	0	0	**5**	-	9
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Hertage Court with 55th Street TMC - TMC

Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

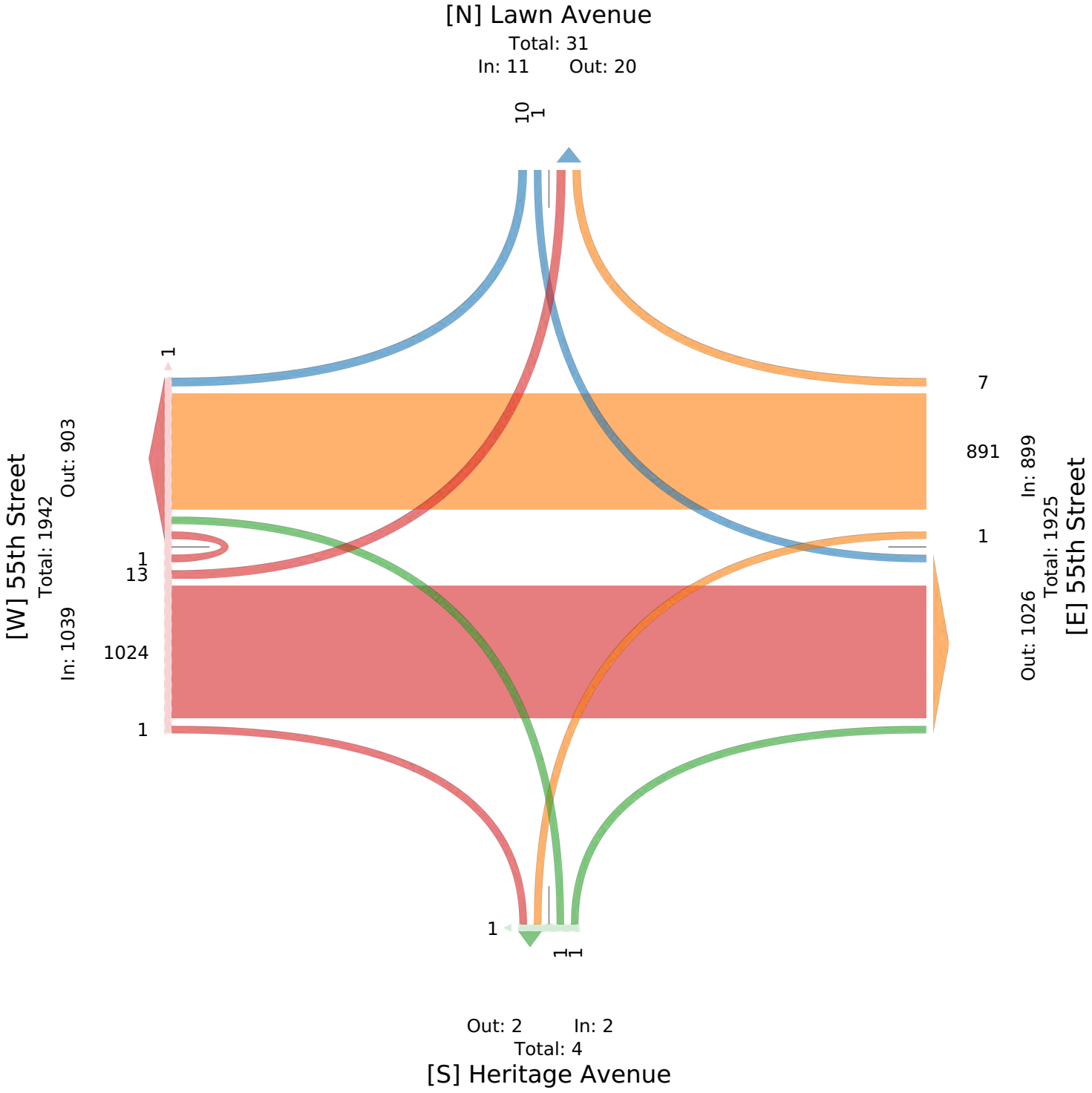
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg / Direction	Lawn Avenue Southbound						55th Street Westbound						Heritage Avenue Northbound						55th Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-03-21 4:30PM	6	0	0	0	**6**	0	2	227	0	0	**229**	0	1	0	0	0	**1**	0	0	235	2	0	**237**	0	**473**
4:45PM	1	0	1	0	**2**	0	1	238	1	0	**240**	0	0	0	0	0	**0**	0	0	243	2	0	**245**	0	**487**
5:00PM	2	0	0	0	**2**	0	2	202	0	0	**204**	0	0	0	1	0	**1**	1	1	268	3	0	**272**	1	**479**
5:15PM	1	0	0	0	**1**	0	2	224	0	0	**226**	0	0	0	0	0	**0**	0	0	278	6	1	**285**	0	**512**
Total	10	0	1	0	**11**	0	7	891	1	0	**899**	0	1	0	1	0	**2**	1	1	1024	13	1	**1039**	1	**1951**
% Approach	90.9%	0%	9.1%	0%	**-**	-	0.8%	99.1%	0.1%	0%	**-**	-	50.0%	0%	50.0%	0%	**-**	-	0.1%	98.6%	1.3%	0.1%	**-**	-	-
% Total	0.5%	0%	0.1%	0%	**0.6%**	-	0.4%	45.7%	0.1%	0%	**46.1%**	-	0.1%	0%	0.1%	0%	**0.1%**	-	0.1%	52.5%	0.7%	0.1%	**53.3%**	-	-
PHF	0.417	-	0.250	-	**0.458**	-	0.875	0.936	0.250	-	**0.936**	-	0.250	-	0.250	-	**0.500**	-	0.250	0.921	0.542	0.250	**0.911**	-	0.953
Lights	10	0	0	0	**10**	-	7	888	1	0	**896**	-	1	0	1	0	**2**	-	1	1002	13	1	**1017**	-	1925
% Lights	100%	0%	0%	0%	**90.9%**	-	100%	99.7%	100%	0%	**99.7%**	-	100%	0%	100%	0%	**100%**	-	100%	97.9%	100%	100%	**97.9%**	-	98.7%
Single-Unit Trucks	0	0	1	0	**1**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	12
% Single-Unit Trucks	0%	0%	100%	0%	**9.1%**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0.6%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	12
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.2%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Hertage Court with 55th Street TMC - TMC
Thu Mar 21, 2024
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165722, Location: 41.789795, -87.899384

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	4	0	0	0	0	0	4	0	0	0	1	9
715	0	1	0	0	0	0	0	10	0	2	0	5	18
730	0	5	0	0	0	0	0	4	1	2	0	1	13
745	2	2	0	0	0	0	0	8	2	1	0	1	16
800	0	2	0	0	0	0	0	3	2	5	0	1	13
815	2	5	0	0	0	0	0	7	3	1	0	1	19
830	3	1	0	0	0	0	0	6	1	1	0	2	14
845	0	2	0	0	0	0	0	3	1	0	0	0	6
1600	2	4	0	0	0	0	0	3	1	1	0	1	12
1615	0	4	0	0	0	0	0	6	4	3	0	0	17
1630	1	5	0	0	0	0	0	0	1	1	0	4	12
1645	1	5	0	0	0	0	0	4	1	1	0	2	14
1700	1	3	0	0	0	0	0	2	2	2	0	0	10
1715	0	9	0	0	0	0	0	8	2	1	0	0	20
1730	4	11	0	0	0	0	0	4	0	1	0	1	21
1745	1	5	0	0	0	0	0	3	2	1	0	1	13
Total	17	68	0	0	0	0	0	75	23	23	0	21	227

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	4	0	4	1	5	0	4	0	9
715	1	0	10	7	15	0	3	0	18
730	5	0	5	3	5	0	7	1	13
745	4	0	10	2	9	0	3	4	16
800	2	0	5	6	4	0	7	2	13
815	7	0	10	2	8	0	6	5	19
830	4	0	7	3	8	0	2	4	14
845	2	0	4	0	3	0	2	1	6
1600	6	0	4	2	4	0	5	3	12
1615	4	0	10	3	6	0	7	4	17
1630	6	0	1	5	4	0	6	2	12
1645	6	0	5	3	6	0	6	2	14
1700	4	0	4	2	2	0	5	3	10
1715	9	0	10	1	8	0	10	2	20
1730	15	0	4	2	5	0	12	4	21
1745	6	0	5	2	4	0	6	3	13
Total	85	0	98	44	96	0	91	40	227

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	16	0	0	0	0	0	16	0	0	0	4	36
715	0	4	0	0	0	0	0	40	0	8	0	20	72
730	0	20	0	0	0	0	0	16	4	8	0	4	52
745	8	8	0	0	0	0	0	32	8	4	0	4	64
800	0	8	0	0	0	0	0	12	8	20	0	4	52
815	8	20	0	0	0	0	0	28	12	4	0	4	76
830	12	4	0	0	0	0	0	24	4	4	0	8	56
845	0	8	0	0	0	0	0	12	4	0	0	0	24
1600	8	16	0	0	0	0	0	12	4	4	0	4	48
1615	0	16	0	0	0	0	0	24	16	12	0	0	68
1630	4	20	0	0	0	0	0	0	4	4	0	16	48
1645	4	20	0	0	0	0	0	16	4	4	0	8	56
1700	4	12	0	0	0	0	0	8	8	8	0	0	40
1715	0	36	0	0	0	0	0	32	8	4	0	0	80
1730	16	44	0	0	0	0	0	16	0	4	0	4	84
1745	4	20	0	0	0	0	0	12	8	4	0	4	52

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	16	0	16	4	20	0	16	0	36
715	4	0	40	28	60	0	12	0	72
730	20	0	20	12	20	0	28	4	52
745	16	0	40	8	36	0	12	16	64
800	8	0	20	24	16	0	28	8	52
815	28	0	40	8	32	0	24	20	76
830	16	0	28	12	32	0	8	16	56
845	8	0	16	0	12	0	8	4	24
1600	24	0	16	8	16	0	20	12	48
1615	16	0	40	12	24	0	28	16	68
1630	24	0	4	20	16	0	24	8	48
1645	24	0	20	12	24	0	24	8	56
1700	16	0	16	8	8	0	20	12	40
1715	36	0	40	4	32	0	40	8	80
1730	60	0	16	8	20	0	48	16	84
1745	24	0	20	8	16	0	24	12	52

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 1 grand/longmeadow

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	2	12	0	0	0	0	0	26	3	5	0	8	56
715	2	10	0	0	0	0	0	25	5	10	0	8	60
730	4	14	0	0	0	0	0	22	8	9	0	4	61
745	7	10	0	0	0	0	0	24	8	8	0	5	62
800	5	10	0	0	0	0	0	19	7	7	0	4	52
815	5	8	0	0	0	0	0	16	5	2	0	3	39*
830	3	3	0	0	0	0	0	9	2	1	0	2	20*
845	0	2	0	0	0	0	0	3	1	0	0	0	6*
1600	4	18	0	0	0	0	0	13	7	6	0	7	55
1615	3	17	0	0	0	0	0	12	8	7	0	6	53
1630	3	22	0	0	0	0	0	14	6	5	0	6	56
1645	6	28	0	0	0	0	0	18	5	5	0	3	65
1700	6	28	0	0	0	0	0	17	6	5	0	2	64
1715	5	25	0	0	0	0	0	15	4	3	0	2	54*
1730	5	16	0	0	0	0	0	7	2	2	0	2	34*
1745	1	5	0	0	0	0	0	3	2	1	0	1	13*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 1 grand/longmeadow

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	14	0	29	13	34	0	17	5	56
715	12	0	30	18	33	0	20	7	60
730	18	0	30	13	26	0	23	12	61
745	17	0	32	13	29	0	18	15	62
800	15	0	26	11	23	0	17	12	52
815	13	0	21	5	19	0	10	10	39*
830	6	0	11	3	11	0	4	5	20*
845	2	0	4	0	3	0	2	1	6*
1600	22	0	20	13	20	0	24	11	55
1615	20	0	20	13	18	0	24	11	53
1630	25	0	20	11	20	0	27	9	56
1645	34	0	23	8	21	0	33	11	65
1700	34	0	23	7	19	0	33	12	64
1715	30	0	19	5	17	0	28	9	54*
1730	21	0	9	4	9	0	18	7	34*
1745	6	0	5	2	4	0	6	3	13*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	2	0	0	1	1	2	0	0	0	0	6
715	0	0	2	2	0	2	4	5	0	0	0	0	15
730	0	3	3	4	0	5	3	2	0	0	0	0	20
745	0	0	3	7	0	4	2	3	0	0	0	0	19
800	0	0	8	3	0	5	17	2	0	0	0	0	35
815	0	5	2	3	0	15	10	3	0	0	0	0	38
830	0	0	2	4	0	1	3	3	0	0	0	0	13
845	0	1	0	2	0	2	2	1	0	0	0	0	8
1600	0	2	4	3	0	4	6	2	0	0	0	0	21
1615	0	1	3	4	0	5	3	1	0	0	0	0	17
1630	0	3	3	3	0	2	4	1	0	0	0	0	16
1645	0	1	5	2	0	4	4	2	0	0	0	0	18
1700	0	2	3	5	0	7	6	1	0	0	0	0	24
1715	0	6	4	4	0	6	3	5	0	0	0	0	28
1730	0	3	5	1	0	7	6	2	0	0	0	0	24
1745	0	2	3	3	0	8	4	2	0	0	0	0	22
Total	0	29	52	50	0	78	78	37	0	0	0	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	2	1	3	0	2	3	1	0	6
715	2	4	9	0	7	6	2	0	15
730	6	9	5	0	6	6	8	0	20
745	3	11	5	0	10	5	4	0	19
800	8	8	19	0	5	25	5	0	35
815	7	18	13	0	6	12	20	0	38
830	2	5	6	0	7	5	1	0	13
845	1	4	3	0	3	2	3	0	8
1600	6	7	8	0	5	10	6	0	21
1615	4	9	4	0	5	6	6	0	17
1630	6	5	5	0	4	7	5	0	16
1645	6	6	6	0	4	9	5	0	18
1700	5	12	7	0	6	9	9	0	24
1715	10	10	8	0	9	7	12	0	28
1730	8	8	8	0	3	11	10	0	24
1745	5	11	6	0	5	7	10	0	22
Total	81	128	115	0	87	130	107	0	324

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	8	0	0	4	4	8	0	0	0	0	24
715	0	0	8	8	0	8	16	20	0	0	0	0	60
730	0	12	12	16	0	20	12	8	0	0	0	0	80
745	0	0	12	28	0	16	8	12	0	0	0	0	76
800	0	0	32	12	0	20	68	8	0	0	0	0	140
815	0	20	8	12	0	60	40	12	0	0	0	0	152
830	0	0	8	16	0	4	12	12	0	0	0	0	52
845	0	4	0	8	0	8	8	4	0	0	0	0	32
1600	0	8	16	12	0	16	24	8	0	0	0	0	84
1615	0	4	12	16	0	20	12	4	0	0	0	0	68
1630	0	12	12	12	0	8	16	4	0	0	0	0	64
1645	0	4	20	8	0	16	16	8	0	0	0	0	72
1700	0	8	12	20	0	28	24	4	0	0	0	0	96
1715	0	24	16	16	0	24	12	20	0	0	0	0	112
1730	0	12	20	4	0	28	24	8	0	0	0	0	96
1745	0	8	12	12	0	32	16	8	0	0	0	0	88

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	8	4	12	0	8	12	4	0	24
715	8	16	36	0	28	24	8	0	60
730	24	36	20	0	24	24	32	0	80
745	12	44	20	0	40	20	16	0	76
800	32	32	76	0	20	100	20	0	140
815	28	72	52	0	24	48	80	0	152
830	8	20	24	0	28	20	4	0	52
845	4	16	12	0	12	8	12	0	32
1600	24	28	32	0	20	40	24	0	84
1615	16	36	16	0	20	24	24	0	68
1630	24	20	20	0	16	28	20	0	64
1645	24	24	24	0	16	36	20	0	72
1700	20	48	28	0	24	36	36	0	96
1715	40	40	32	0	36	28	48	0	112
1730	32	32	32	0	12	44	40	0	96
1745	20	44	24	0	20	28	40	0	88

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 3 lawn/grand

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	3	10	13	0	12	10	12	0	0	0	0	60
715	0	3	16	16	0	16	26	12	0	0	0	0	89
730	0	8	16	17	0	29	32	10	0	0	0	0	112
745	0	5	15	17	0	25	32	11	0	0	0	0	105
800	0	6	12	12	0	23	32	9	0	0	0	0	94
815	0	6	4	9	0	18	15	7	0	0	0	0	59*
830	0	1	2	6	0	3	5	4	0	0	0	0	21*
845	0	1	0	2	0	2	2	1	0	0	0	0	8*
1600	0	7	15	12	0	15	17	6	0	0	0	0	72
1615	0	7	14	14	0	18	17	5	0	0	0	0	75
1630	0	12	15	14	0	19	17	9	0	0	0	0	86
1645	0	12	17	12	0	24	19	10	0	0	0	0	94
1700	0	13	15	13	0	28	19	10	0	0	0	0	98
1715	0	11	12	8	0	21	13	9	0	0	0	0	74*
1730	0	5	8	4	0	15	10	4	0	0	0	0	46*
1745	0	2	3	3	0	8	4	2	0	0	0	0	22*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 3 lawn/grand

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	13	25	22	0	25	20	15	0	60
715	19	32	38	0	28	42	19	0	89
730	24	46	42	0	27	48	37	0	112
745	20	42	43	0	28	47	30	0	105
800	18	35	41	0	21	44	29	0	94
815	10	27	22	0	16	19	24	0	59*
830	3	9	9	0	10	7	4	0	21*
845	1	4	3	0	3	2	3	0	8*
1600	22	27	23	0	18	32	22	0	72
1615	21	32	22	0	19	31	25	0	75
1630	27	33	26	0	23	32	31	0	86
1645	29	36	29	0	22	36	36	0	94
1700	28	41	29	0	23	34	41	0	98
1715	23	29	22	0	17	25	32	0	74*
1730	13	19	14	0	8	18	20	0	46*
1745	5	11	6	0	5	7	10	0	22*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	3	1	0	4	4	0	0	0	0	0	12
715	0	0	5	2	0	2	5	2	0	0	0	0	16
730	0	0	7	9	0	7	3	0	0	0	0	0	26
745	0	0	4	8	0	4	3	2	0	0	0	0	21
800	0	0	25	8	0	5	13	1	0	0	0	0	52
815	0	0	12	19	0	7	8	1	0	0	0	0	47
830	0	1	4	3	0	4	7	2	0	0	0	0	21
845	0	0	2	3	0	4	2	1	0	0	0	0	12
1600	0	1	10	7	0	8	4	0	0	0	0	0	30
1615	0	1	5	8	0	4	5	1	0	0	0	0	24
1630	0	2	5	4	0	3	3	0	0	0	0	0	17
1645	0	1	10	6	0	6	5	0	0	0	0	0	28
1700	0	1	8	10	0	7	4	2	0	0	0	0	32
1715	0	1	6	9	0	8	6	1	0	0	0	0	31
1730	0	1	10	7	0	7	7	1	0	0	0	0	33
1745	0	0	6	10	0	5	3	1	0	0	0	0	25
Total	0	9	122	114	0	85	82	15	0	0	0	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	3	5	4	0	1	7	4	0	12
715	5	4	7	0	4	10	2	0	16
730	7	16	3	0	9	10	7	0	26
745	4	12	5	0	10	7	4	0	21
800	25	13	14	0	9	38	5	0	52
815	12	26	9	0	20	20	7	0	47
830	5	7	9	0	5	11	5	0	21
845	2	7	3	0	4	4	4	0	12
1600	11	15	4	0	7	14	9	0	30
1615	6	12	6	0	9	10	5	0	24
1630	7	7	3	0	4	8	5	0	17
1645	11	12	5	0	6	15	7	0	28
1700	9	17	6	0	12	12	8	0	32
1715	7	17	7	0	10	12	9	0	31
1730	11	14	8	0	8	17	8	0	33
1745	6	15	4	0	11	9	5	0	25
Total	131	199	97	0	129	204	94	0	427

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	12	4	0	16	16	0	0	0	0	0	48
715	0	0	20	8	0	8	20	8	0	0	0	0	64
730	0	0	28	36	0	28	12	0	0	0	0	0	104
745	0	0	16	32	0	16	12	8	0	0	0	0	84
800	0	0	100	32	0	20	52	4	0	0	0	0	208
815	0	0	48	76	0	28	32	4	0	0	0	0	188
830	0	4	16	12	0	16	28	8	0	0	0	0	84
845	0	0	8	12	0	16	8	4	0	0	0	0	48
1600	0	4	40	28	0	32	16	0	0	0	0	0	120
1615	0	4	20	32	0	16	20	4	0	0	0	0	96
1630	0	8	20	16	0	12	12	0	0	0	0	0	68
1645	0	4	40	24	0	24	20	0	0	0	0	0	112
1700	0	4	32	40	0	28	16	8	0	0	0	0	128
1715	0	4	24	36	0	32	24	4	0	0	0	0	124
1730	0	4	40	28	0	28	28	4	0	0	0	0	132
1745	0	0	24	40	0	20	12	4	0	0	0	0	100

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	12	20	16	0	4	28	16	0	48
715	20	16	28	0	16	40	8	0	64
730	28	64	12	0	36	40	28	0	104
745	16	48	20	0	40	28	16	0	84
800	100	52	56	0	36	152	20	0	208
815	48	104	36	0	80	80	28	0	188
830	20	28	36	0	20	44	20	0	84
845	8	28	12	0	16	16	16	0	48
1600	44	60	16	0	28	56	36	0	120
1615	24	48	24	0	36	40	20	0	96
1630	28	28	12	0	16	32	20	0	68
1645	44	48	20	0	24	60	28	0	112
1700	36	68	24	0	48	48	32	0	128
1715	28	68	28	0	40	48	36	0	124
1730	44	56	32	0	32	68	32	0	132
1745	24	60	16	0	44	36	20	0	100

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 2 lawn/parkplace

Begin Time	N-Approach RT	N-Approach TH	N-Approach LT	E-Approach RT	E-Approach TH	E-Approach LT	S-Approach RT	S-Approach TH	S-Approach LT	W-Approach RT	W-Approach TH	W-Approach LT	Int Total
700	0	0	19	20	0	17	15	4	0	0	0	0	75
715	0	0	41	27	0	18	24	5	0	0	0	0	115
730	0	0	48	44	0	23	27	4	0	0	0	0	146
745	0	1	45	38	0	20	31	6	0	0	0	0	141
800	0	1	43	33	0	20	30	5	0	0	0	0	132
815	0	1	18	25	0	15	17	4	0	0	0	0	80*
830	0	1	6	6	0	8	9	3	0	0	0	0	33*
845	0	0	2	3	0	4	2	1	0	0	0	0	12*
1600	0	5	30	25	0	21	17	1	0	0	0	0	99
1615	0	5	28	28	0	20	17	3	0	0	0	0	101
1630	0	5	29	29	0	24	18	3	0	0	0	0	108
1645	0	4	34	32	0	28	22	4	0	0	0	0	124
1700	0	3	30	36	0	27	20	5	0	0	0	0	121
1715	0	2	22	26	0	20	16	3	0	0	0	0	89*
1730	0	1	16	17	0	12	10	2	0	0	0	0	58*
1745	0	0	6	10	0	5	3	1	0	0	0	0	25*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 2 lawn/parkplace

Begin Time	Approach Totals N	Approach Totals E	Approach Totals S	Approach Totals W	Exit Totals N	Exit Totals E	Exit Totals S	Exit Totals W	Int Total
700	19	37	19	0	24	34	17	0	75
715	41	45	29	0	32	65	18	0	115
730	48	67	31	0	48	75	23	0	146
745	46	58	37	0	44	76	21	0	141
800	44	53	35	0	38	73	21	0	132
815	19	40	21	0	29	35	16	0	80*
830	7	14	12	0	9	15	9	0	33*
845	2	7	3	0	4	4	4	0	12*
1600	35	46	18	0	26	47	26	0	99
1615	33	48	20	0	31	45	25	0	101
1630	34	53	21	0	32	47	29	0	108
1645	38	60	26	0	36	56	32	0	124
1700	33	63	25	0	41	50	30	0	121
1715	24	46	19	0	29	38	22	0	89*
1730	17	29	12	0	19	26	13	0	58*
1745	6	15	4	0	11	9	5	0	25*

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - by Mvmt

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	5	102	0	0	0	0	0	151	3	13	0	7	281
1515	22	181	0	0	0	0	0	97	6	5	0	1	312
1530	11	158	0	0	0	0	0	100	9	21	0	5	304
1545	5	130	0	0	0	0	0	116	4	16	0	5	276
Total	43	571	0	0	0	0	0	464	22	55	0	18	1173

TEAPAC[Ver 9.50.02] - 15-Minute Counts: All Vehicles - Totals

Int# 4 wolf/park

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1500	107	0	154	20	158	0	115	8	281
1515	203	0	103	6	98	0	186	28	312
1530	169	0	109	26	105	0	179	20	304
1545	135	0	120	21	121	0	146	9	276
Total	614	0	486	73	482	0	626	65	1173

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: by Movement

Int# 4 wolf/park

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1500	20	408	0	0	0	0	0	604	12	52	0	28	1124
1515	88	724	0	0	0	0	0	388	24	20	0	4	1248
1530	44	632	0	0	0	0	0	400	36	84	0	20	1216
1545	20	520	0	0	0	0	0	464	16	64	0	20	1104

TEAPAC[Ver 9.50.02] - 15-Minute Flow Rates: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	428	0	616	80	632	0	460	32	1124
1515	812	0	412	24	392	0	744	112	1248
1530	676	0	436	104	420	0	716	80	1216
1545	540	0	480	84	484	0	584	36	1104

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: by Movement

Int# 4 wolf/park

Begin Time	N-Approach RT	TH	LT	E-Approach RT	TH	LT	S-Approach RT	TH	LT	W-Approach RT	TH	LT	Int Total
1500	43	571	0	0	0	0	0	464	22	55	0	18	1173
1515	38	469	0	0	0	0	0	313	19	42	0	11	892*
1530	16	288	0	0	0	0	0	216	13	37	0	10	580*
1545	5	130	0	0	0	0	0	116	4	16	0	5	276*

TEAPAC[Ver 9.50.02] - 60-Minute Volumes: Appr/Exit Totals

Int# 4 wolf/park

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
1500	614	0	486	73	482	0	626	65	1173
1515	507	0	332	53	324	0	511	57	892*
1530	304	0	229	47	226	0	325	29	580*
1545	135	0	120	21	121	0	146	9	276*

Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662



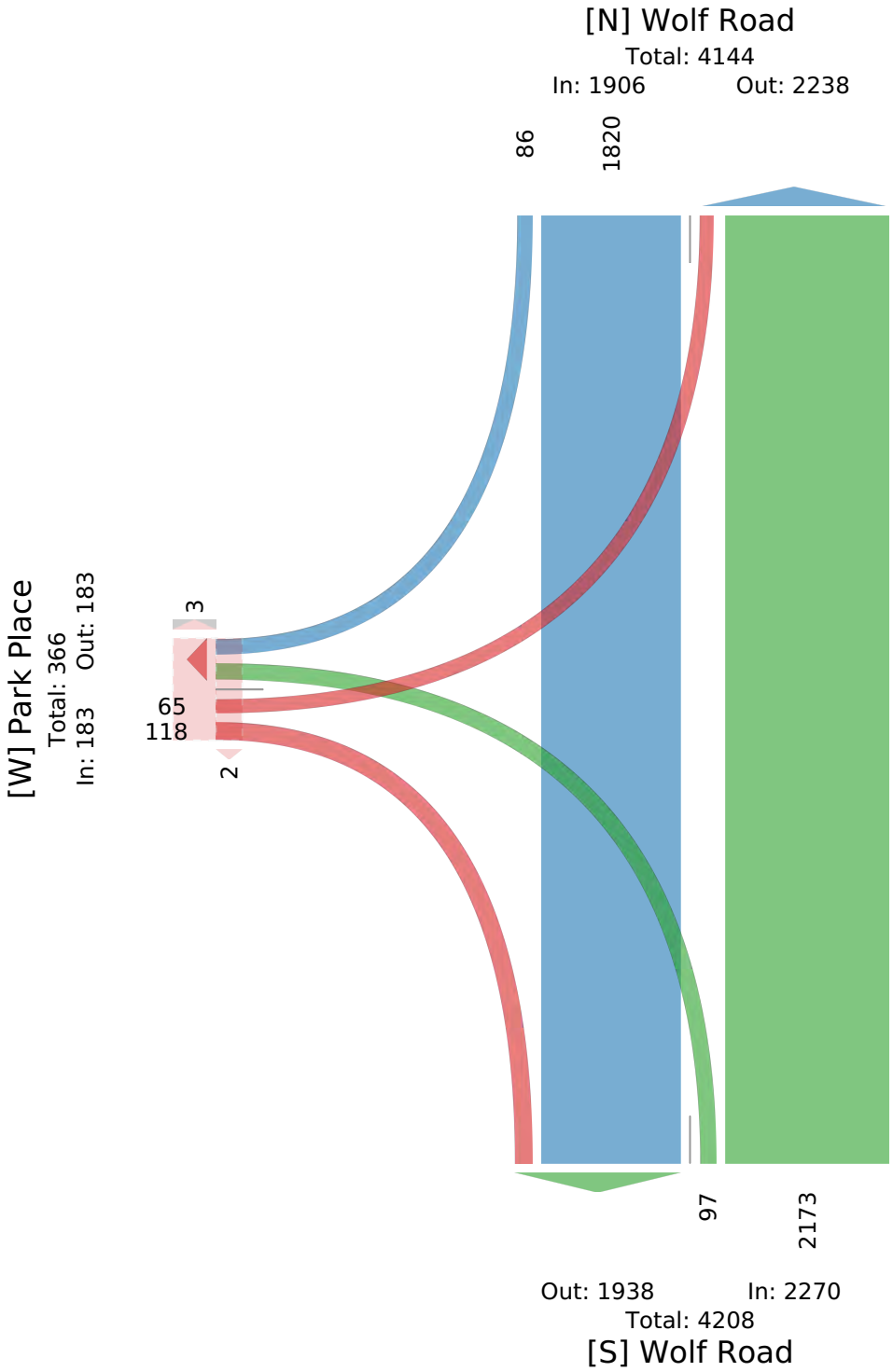
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US

Leg	Wolf Road					Wolf Road					Park Place					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:00AM	0	50	0	**50**	0	118	0	0	**118**	0	4	6	0	**10**	0	**178**
7:15AM	3	69	0	**72**	0	170	4	0	**174**	0	8	7	0	**15**	0	**261**
7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
Hourly Total	20	292	0	**312**	0	658	17	0	**675**	0	26	20	0	**46**	0	**1033**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
8:30AM	7	101	0	**108**	0	145	3	0	**148**	0	5	2	0	**7**	0	**263**
8:45AM	4	78	0	**82**	0	115	2	0	**117**	0	4	1	0	**5**	0	**204**
Hourly Total	27	317	0	**344**	0	588	21	0	**609**	0	43	19	0	**62**	0	**1015**
4:00PM	2	144	0	**146**	0	136	11	0	**147**	0	12	2	0	**14**	0	**307**
4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
Hourly Total	14	566	0	**580**	0	516	35	0	**551**	0	28	12	0	**40**	0	**1171**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
5:15PM	7	164	0	**171**	0	98	4	0	**102**	0	4	6	0	**10**	1	**283**
5:30PM	11	141	0	**152**	0	100	7	0	**107**	0	5	2	0	**7**	2	**266**
5:45PM	4	128	0	**132**	0	106	4	0	**110**	0	6	3	0	**9**	2	**251**
Hourly Total	25	645	0	**670**	0	411	24	0	**435**	0	21	14	0	**35**	5	**1140**
Total	86	1820	0	**1906**	0	2173	97	0	**2270**	0	118	65	0	**183**	5	**4359**
% Approach	4.5%	95.5%	0%	**-**	-	95.7%	4.3%	0%	**-**	-	64.5%	35.5%	0%	**-**	-	**-**
% Total	2.0%	41.8%	0%	**43.7%**	-	49.9%	2.2%	0%	**52.1%**	-	2.7%	1.5%	0%	**4.2%**	-	**-**
Lights	85	1787	0	**1872**	-	2126	94	0	**2220**	-	118	65	0	**183**	-	4275
% Lights	98.8%	98.2%	0%	**98.2%**	-	97.8%	96.9%	0%	**97.8%**	-	100%	100%	0%	**100%**	-	98.1%
Single-Unit Trucks	0	18	0	**18**	-	32	3	0	**35**	-	0	0	0	**0**	-	53
% Single-Unit Trucks	0%	1.0%	0%	**0.9%**	-	1.5%	3.1%	0%	**1.5%**	-	0%	0%	0%	**0%**	-	1.2%
Articulated Trucks	1	4	0	**5**	-	7	0	0	**7**	-	0	0	0	**0**	-	12
% Articulated Trucks	1.2%	0.2%	0%	**0.3%**	-	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.3%
Buses	0	11	0	**11**	-	8	0	0	**8**	-	0	0	0	**0**	-	19
% Buses	0%	0.6%	0%	**0.6%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400,
Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

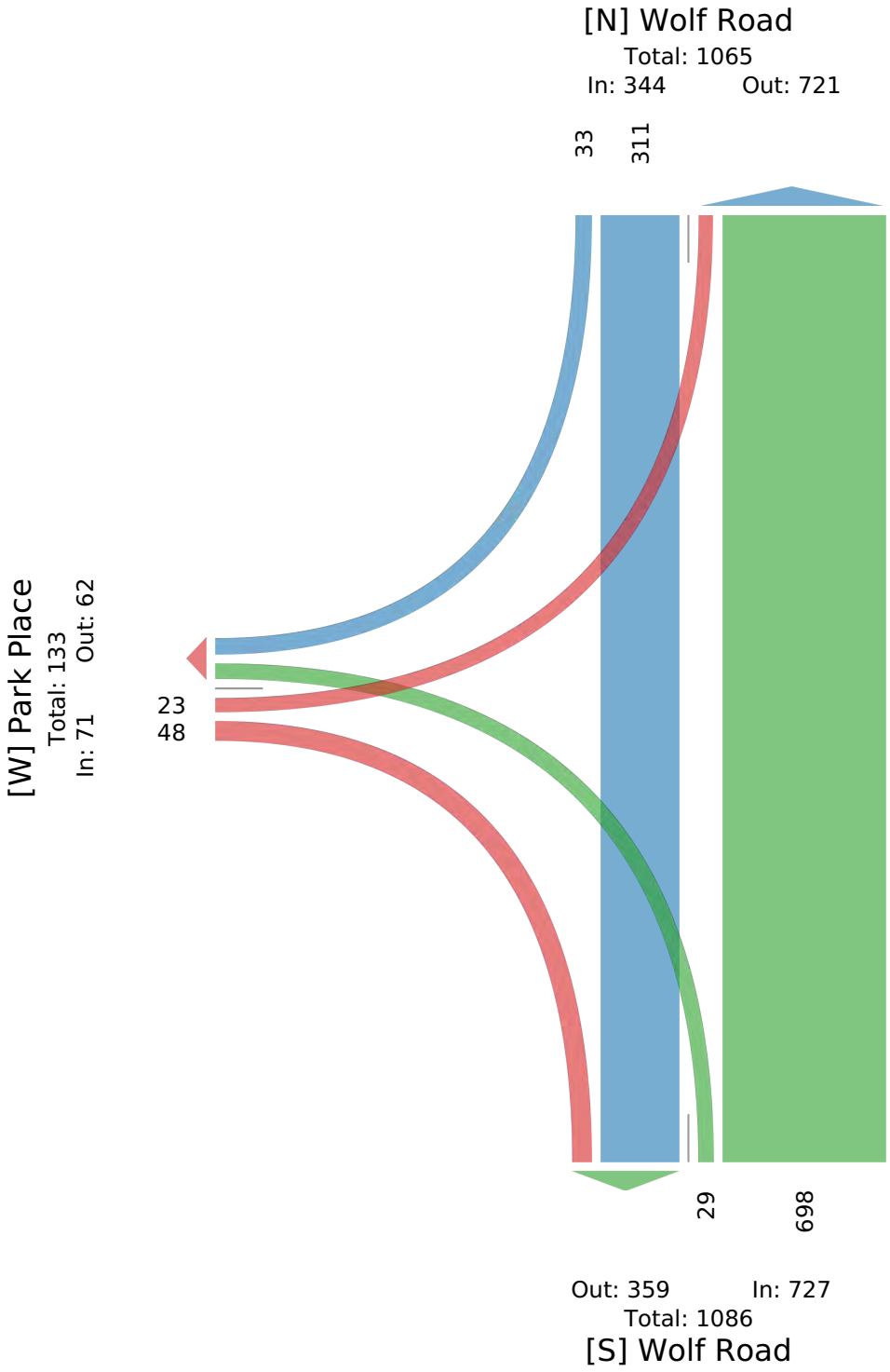
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 7:30AM	8	78	0	**86**	0	217	6	0	**223**	0	8	4	0	**12**	0	**321**
7:45AM	9	95	0	**104**	0	153	7	0	**160**	0	6	3	0	**9**	0	**273**
8:00AM	5	62	0	**67**	0	160	5	0	**165**	0	27	8	0	**35**	0	**267**
8:15AM	11	76	0	**87**	0	168	11	0	**179**	0	7	8	0	**15**	0	**281**
Total	33	311	0	**344**	0	698	29	0	**727**	0	48	23	0	**71**	0	**1142**
% Approach	9.6%	90.4%	0%	**-**	-	96.0%	4.0%	0%	**-**	-	67.6%	32.4%	0%	**-**	-	-
% Total	2.9%	27.2%	0%	**30.1%**	-	61.1%	2.5%	0%	**63.7%**	-	4.2%	2.0%	0%	**6.2%**	-	-
PHF	0.750	0.818	-	**0.827**	-	0.804	0.659	-	**0.815**	-	0.444	0.719	-	**0.507**	-	0.889
Lights	32	308	0	**340**	-	670	28	0	**698**	-	48	23	0	**71**	-	1109
% Lights	97.0%	99.0%	0%	**98.8%**	-	96.0%	96.6%	0%	**96.0%**	-	100%	100%	0%	**100%**	-	97.1%
Single-Unit Trucks	0	2	0	**2**	-	19	1	0	**20**	-	0	0	0	**0**	-	22
% Single-Unit Trucks	0%	0.6%	0%	**0.6%**	-	2.7%	3.4%	0%	**2.8%**	-	0%	0%	0%	**0%**	-	1.9%
Articulated Trucks	1	0	0	**1**	-	6	0	0	**6**	-	0	0	0	**0**	-	7
% Articulated Trucks	3.0%	0%	0%	**0.3%**	-	0.9%	0%	0%	**0.8%**	-	0%	0%	0%	**0%**	-	0.6%
Buses	0	1	0	**1**	-	3	0	0	**3**	-	0	0	0	**0**	-	4
% Buses	0%	0.3%	0%	**0.3%**	-	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0.4%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

Provided by: Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, IL, 60018, US



Wolf Road with Park Place TMC - TMC

Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

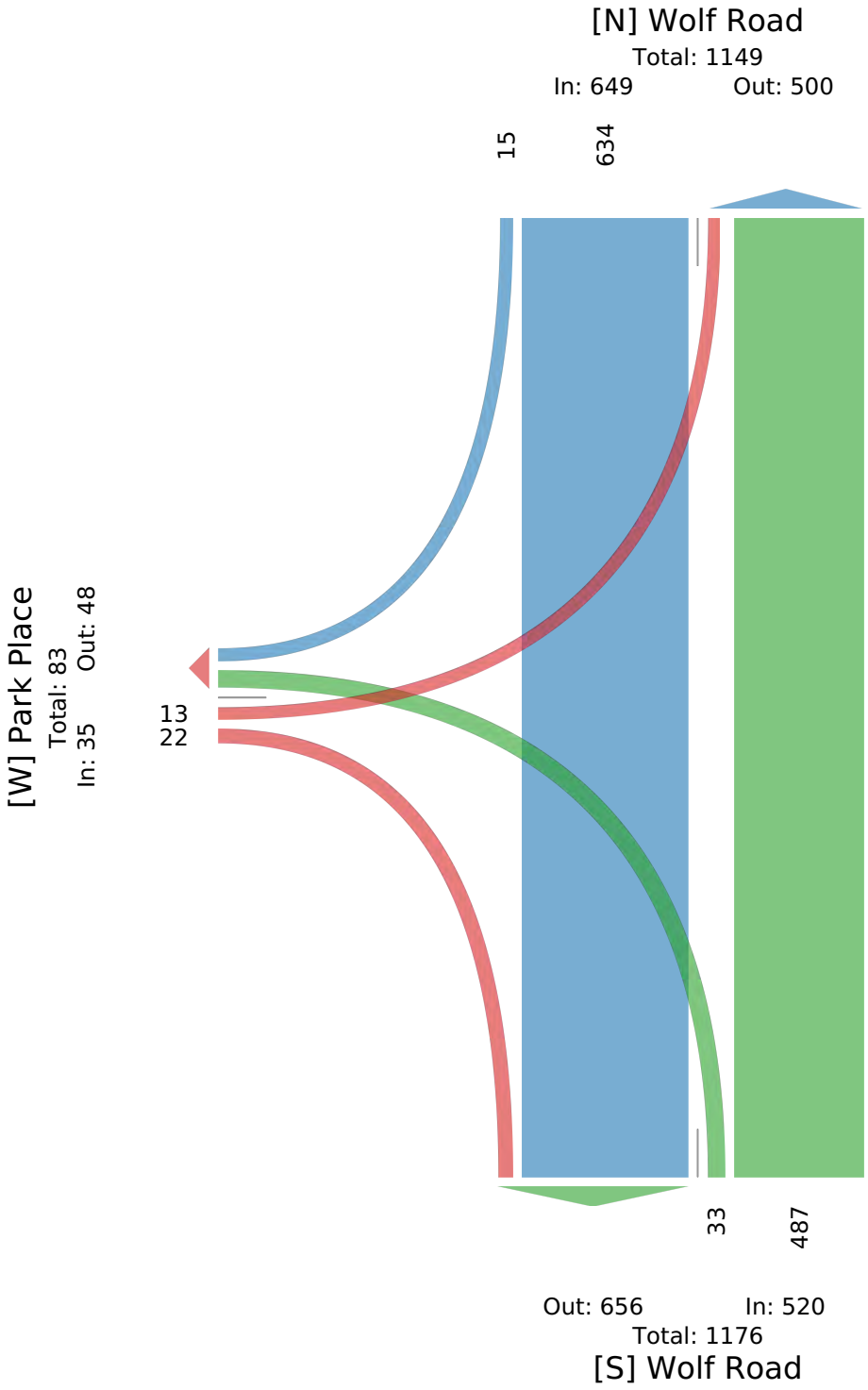
Provided by: Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, IL, 60018, US

Leg Direction	Wolf Road Southbound					Wolf Road Northbound					Park Place Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2024-03-21 4:15PM	1	153	0	**154**	0	125	7	0	**132**	0	5	4	0	**9**	0	**295**
4:30PM	8	140	0	**148**	0	131	4	0	**135**	0	7	5	0	**12**	0	**295**
4:45PM	3	129	0	**132**	0	124	13	0	**137**	0	4	1	0	**5**	0	**274**
5:00PM	3	212	0	**215**	0	107	9	0	**116**	0	6	3	0	**9**	0	**340**
Total	15	634	0	**649**	0	487	33	0	**520**	0	22	13	0	**35**	0	**1204**
% Approach	2.3%	97.7%	0%	**-**	-	93.7%	6.3%	0%	**-**	-	62.9%	37.1%	0%	**-**	-	-
% Total	1.2%	52.7%	0%	**53.9%**	-	40.4%	2.7%	0%	**43.2%**	-	1.8%	1.1%	0%	**2.9%**	-	-
PHF	0.469	0.748	-	**0.755**	-	0.929	0.635	-	**0.949**	-	0.786	0.650	-	**0.729**	-	0.885
Lights	15	615	0	**630**	-	486	33	0	**519**	-	22	13	0	**35**	-	1184
% Lights	100%	97.0%	0%	**97.1%**	-	99.8%	100%	0%	**99.8%**	-	100%	100%	0%	**100%**	-	98.3%
Single-Unit Trucks	0	10	0	**10**	-	1	0	0	**1**	-	0	0	0	**0**	-	11
% Single-Unit Trucks	0%	1.6%	0%	**1.5%**	-	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.9%
Articulated Trucks	0	3	0	**3**	-	0	0	0	**0**	-	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.5%	0%	**0.5%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.2%
Buses	0	6	0	**6**	-	0	0	0	**0**	-	0	0	0	**0**	-	6
% Buses	0%	0.9%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.5%
Bicycles on Road	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

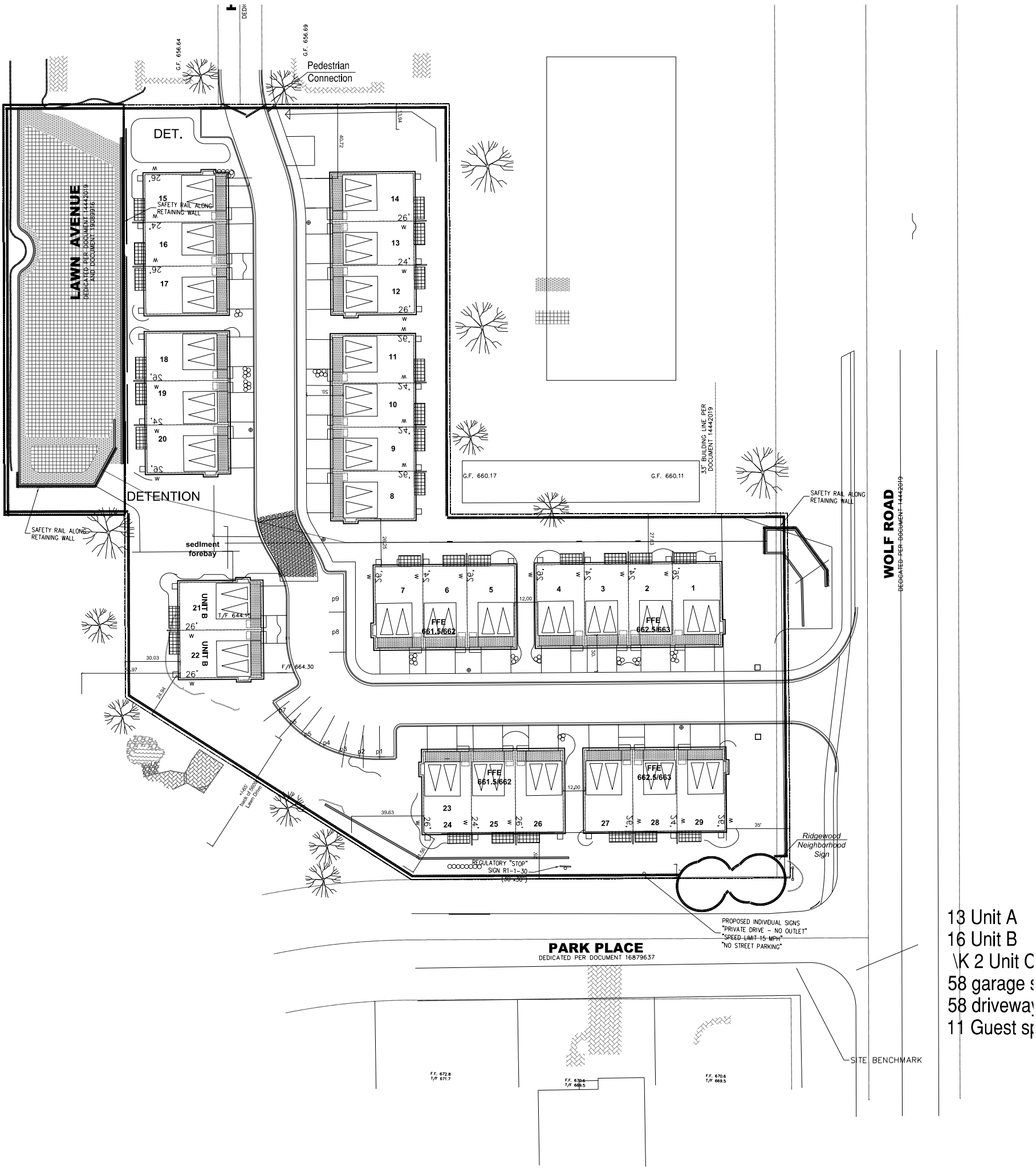
*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road with Park Place TMC - TMC
Thu Mar 21, 2024
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)
All Movements
ID: 1165720, Location: 41.787076, -87.897662

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Rosemont, IL, 60018, US



Site Plan


LAWN AVENUE
DEDICATED PER DOCUMENT 14442019 AND DOCUMENT 1908916
WOLF ROAD
DEDICATED PER DOCUMENT 14442019
PARK PLACE
DEDICATED PER DOCUMENT 16879637
DET.
DETENTION
Pedestrian Connection
G.F. 656.64
G.F. 656.69
G.F. 660.17
G.F. 660.11
33' BUILDING LINE PER DOCUMENT 14442019
SAFETY RAIL ALONG RETAINING WALL
sedlment forebay
UNIT B
T/F 644.15
F/F 664.30
FFE 661.5/662
FFE 662.5/663
REGULATORY "STOP" SIGN R1-1-30 (36"x36")
PROPOSED INDIVIDUAL SIGNS "PRIVATE DRIVE - NO OUTLET" "SPEED LIMIT 15 MPH" "NO STREET PARKING"
Ridgewood Neighborhood Sign
SITE BENCHMARK
F.F. 672.8 T/F 671.7
F.F. 670.6 T/F 669.5
F.F. 670.6 T/F 669.5
13 Unit A
16 Unit B
\K 2 Unit C
58 garage s
58 driveway
11 Guest sp

ITE Trip Generation Graphs

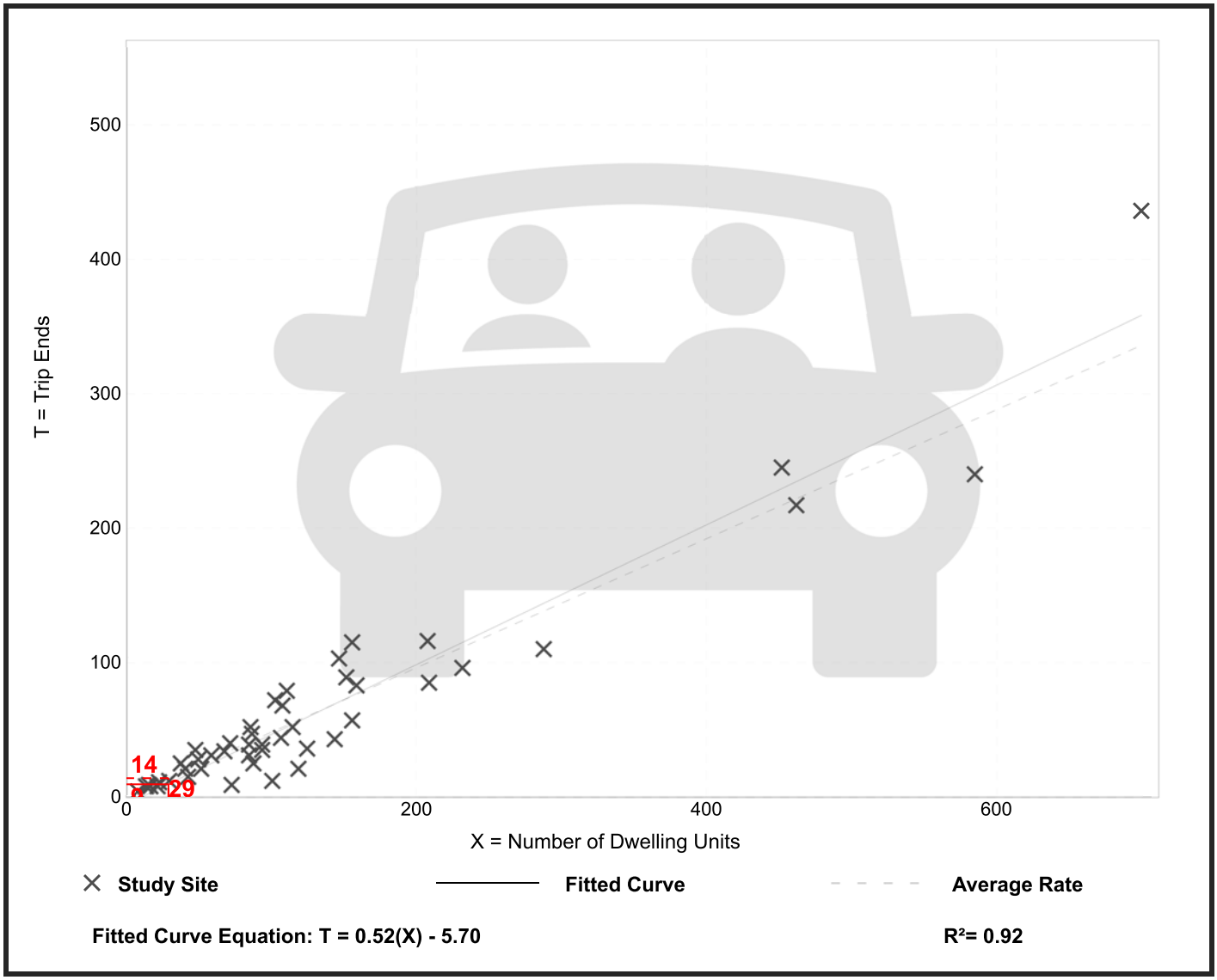
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



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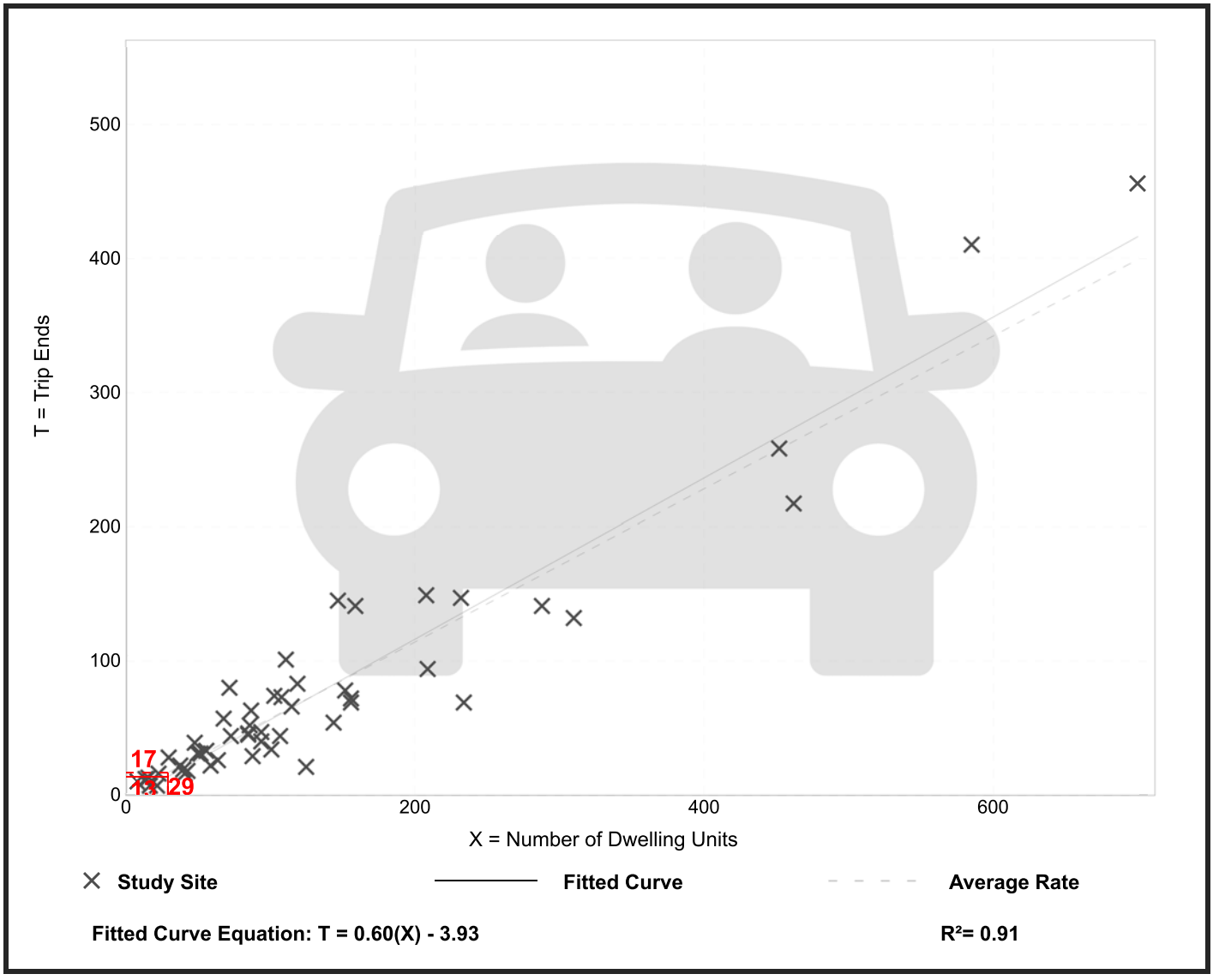
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Single-Family Attached Housing
(215)

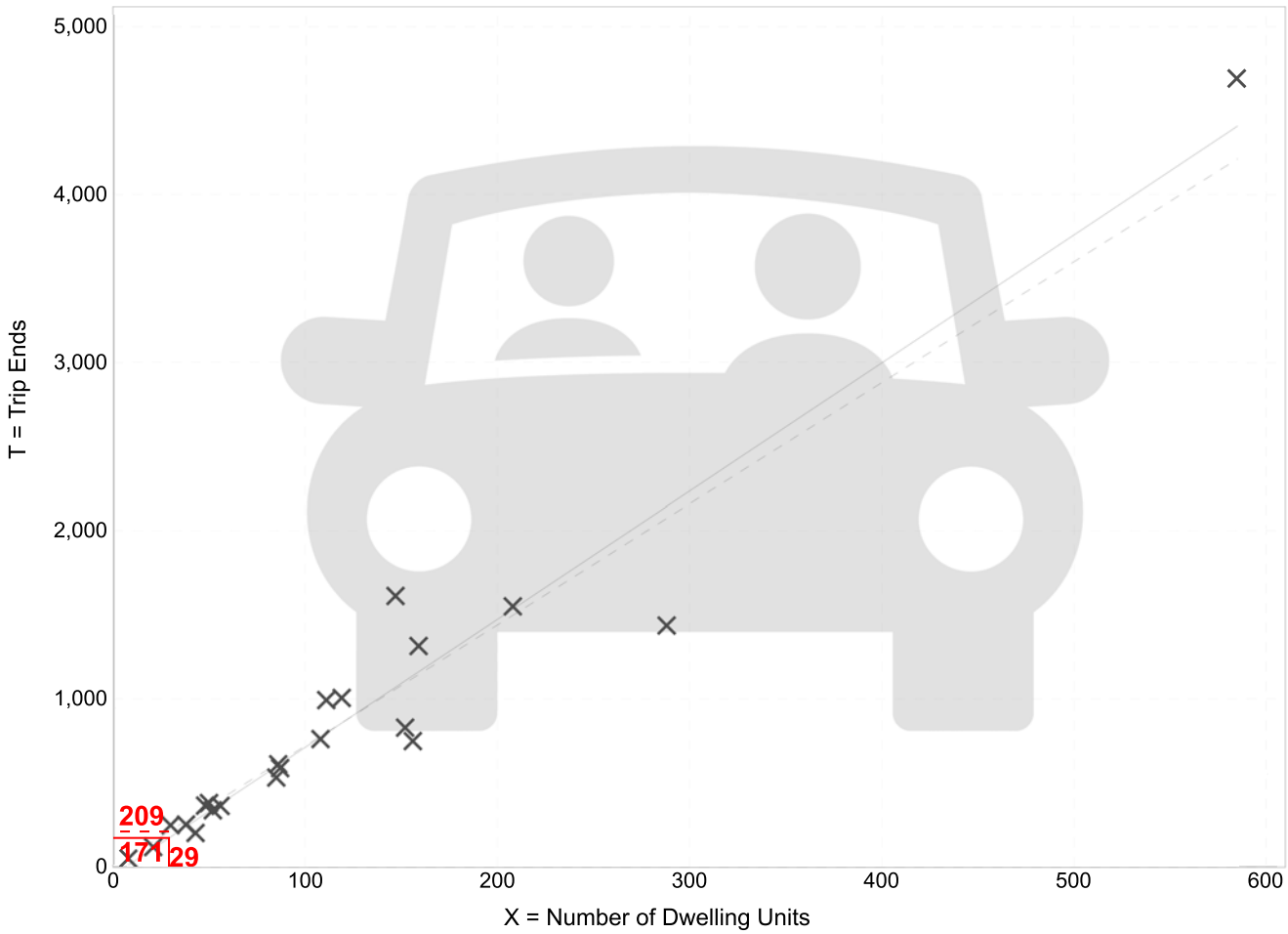
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Fitted Curve Equation: T = 7.62(X) - 50.48

R^2= 0.94

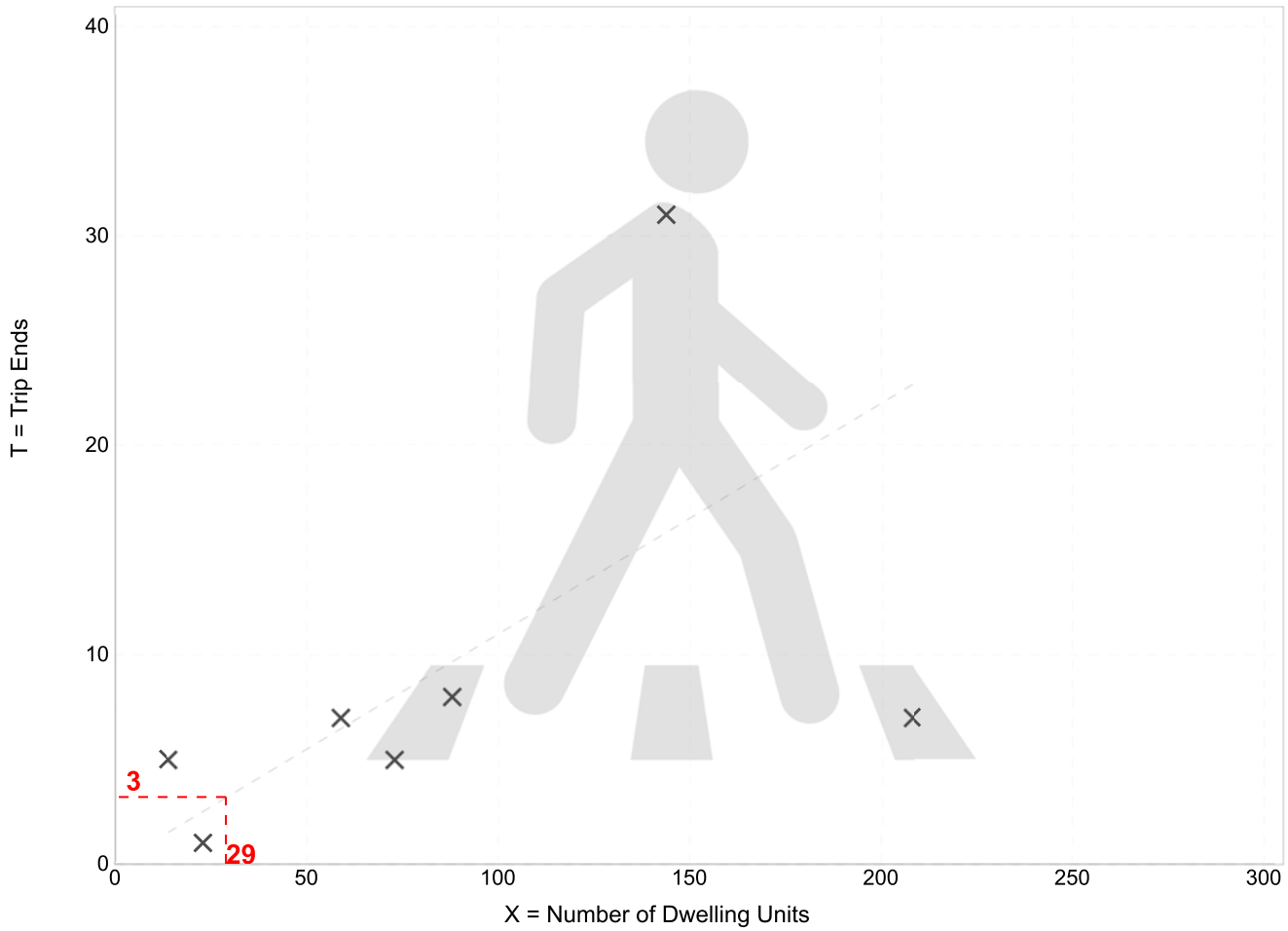
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	21% entering, 79% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.11	0.03 - 0.36	0.09

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

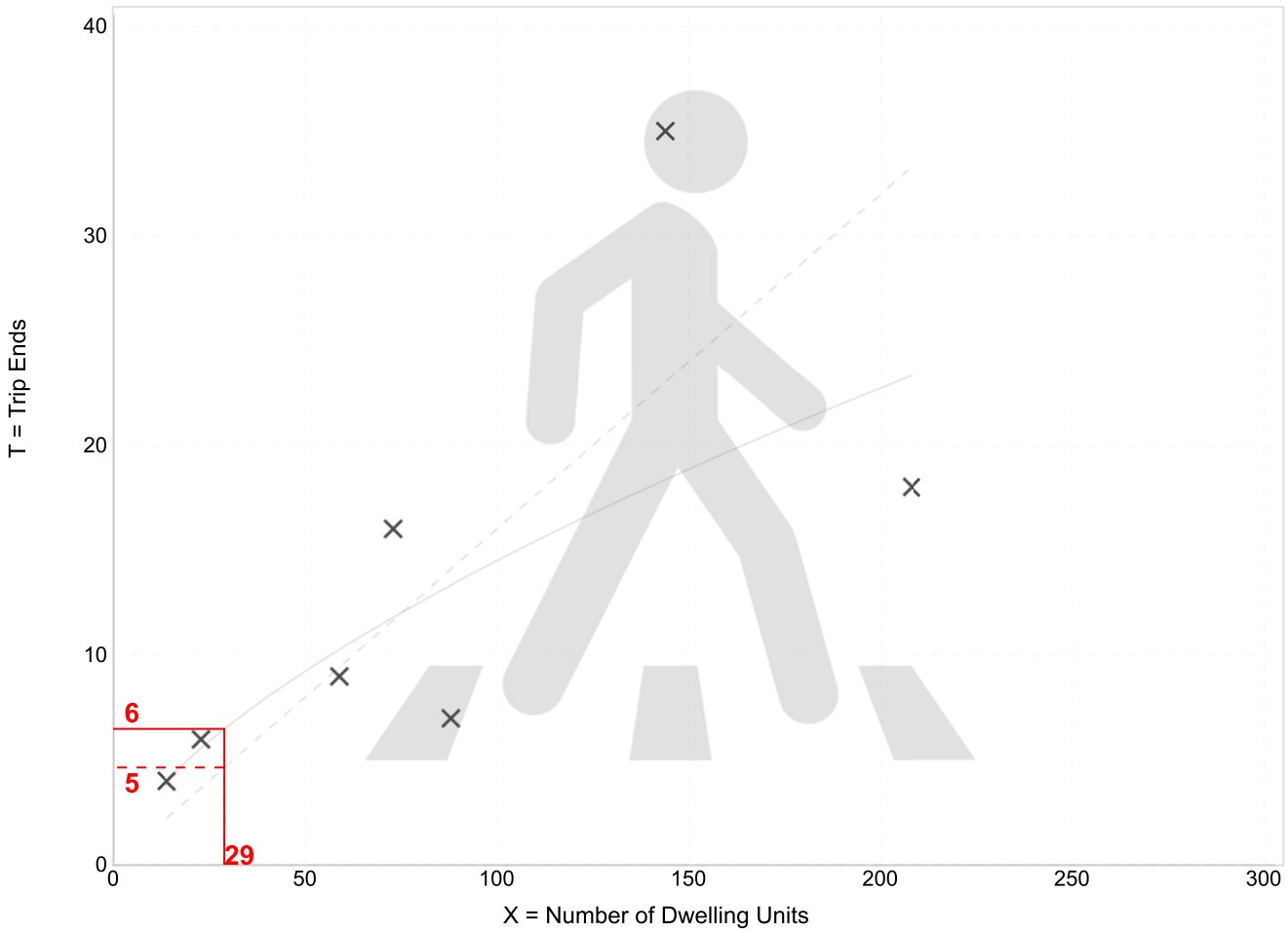
Single-Family Attached Housing
(215)

Walk Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,** **Peak Hour of Adjacent Street Traffic,** **One Hour Between 4 and 6 p.m.**
Setting/Location:	**General Urban/Suburban**
Number of Studies:	7
Avg. Num. of Dwelling Units:	87
Directional Distribution:	53% entering, 47% exiting

Walk Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.16	0.08 - 0.29	0.08

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.65 Ln(X) - 0.32

R^2= 0.70

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use			
Source: ITE *Trip Generation Manual* , 11th Edition			
Land Use Code	215		
Land Use	Single-Family Attached Housing		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	7		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.5%	0.7%	0.3%
1:00 - 2:00 AM	0.2%	0.4%	0.1%
2:00 - 3:00 AM	0.3%	0.2%	0.3%
3:00 - 4:00 AM	0.3%	0.3%	0.4%
4:00 - 5:00 AM	0.7%	0.4%	1.0%
5:00 - 6:00 AM	1.4%	0.1%	2.6%
6:00 - 7:00 AM	3.5%	1.1%	5.8%
7:00 - 8:00 AM	7.9%	2.7%	13.2%
8:00 - 9:00 AM	6.6%	3.8%	9.3%
9:00 - 10:00 AM	5.3%	3.7%	6.9%
10:00 - 11:00 AM	4.1%	4.0%	4.3%
11:00 - 12:00 PM	5.3%	4.8%	5.7%
12:00 - 1:00 PM	5.2%	5.4%	5.1%
1:00 - 2:00 PM	4.7%	4.5%	4.8%
2:00 - 3:00 PM	5.8%	5.5%	6.0%
3:00 - 4:00 PM	6.5%	8.2%	4.8%
4:00 - 5:00 PM	7.5%	9.8%	5.1%
5:00 - 6:00 PM	9.4%	12.1%	6.8%
6:00 - 7:00 PM	8.2%	9.8%	6.6%
7:00 - 8:00 PM	5.9%	7.3%	4.5%
8:00 - 9:00 PM	4.7%	5.9%	3.5%
9:00 - 10:00 PM	3.0%	4.8%	1.3%
10:00 - 11:00 PM	2.0%	3.0%	1.1%
11:00 - 12:00 AM	0.9%	1.5%	0.4%

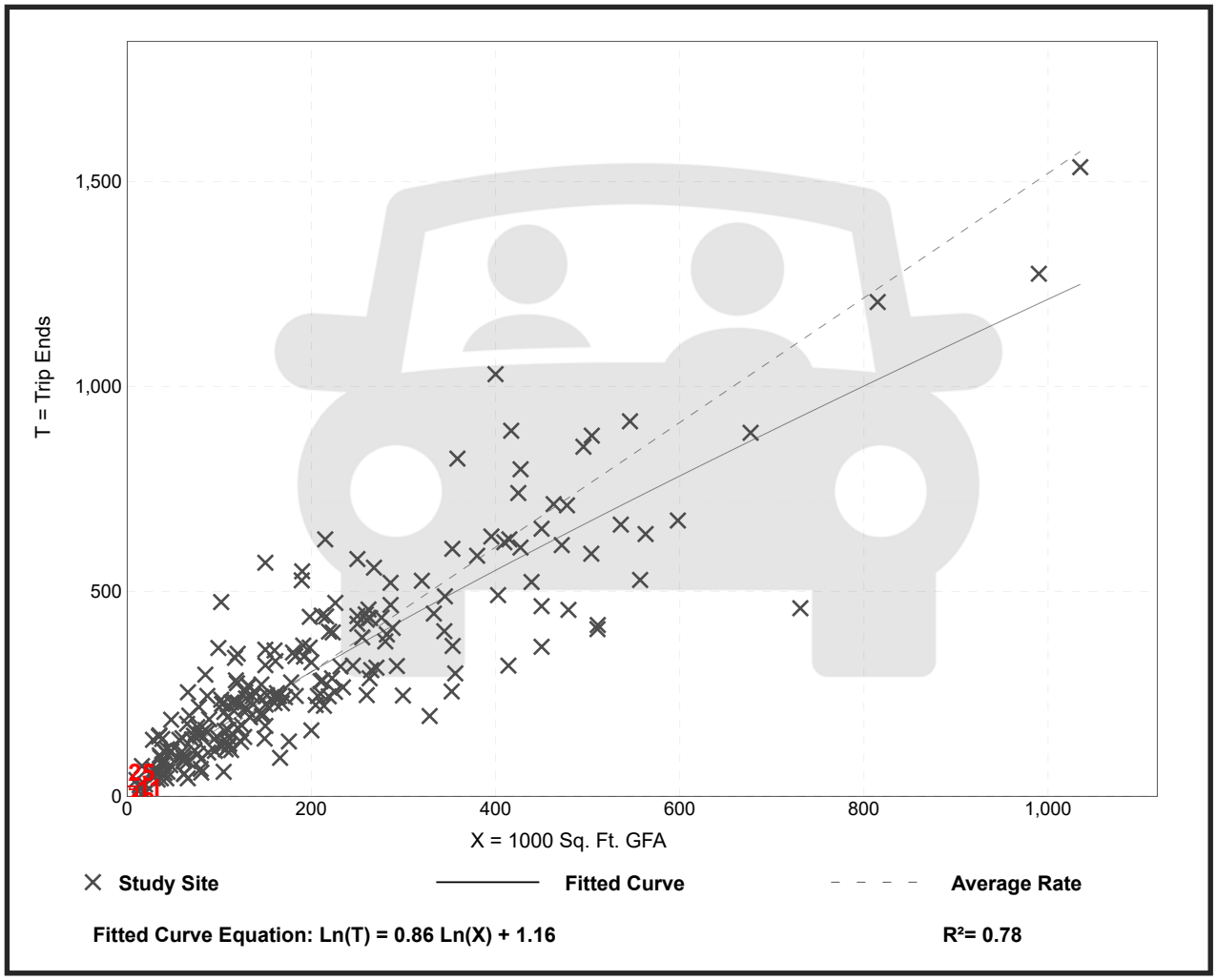
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 221
Avg. 1000 Sq. Ft. GFA: 201
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.52	0.32 - 4.93	0.58

Data Plot and Equation



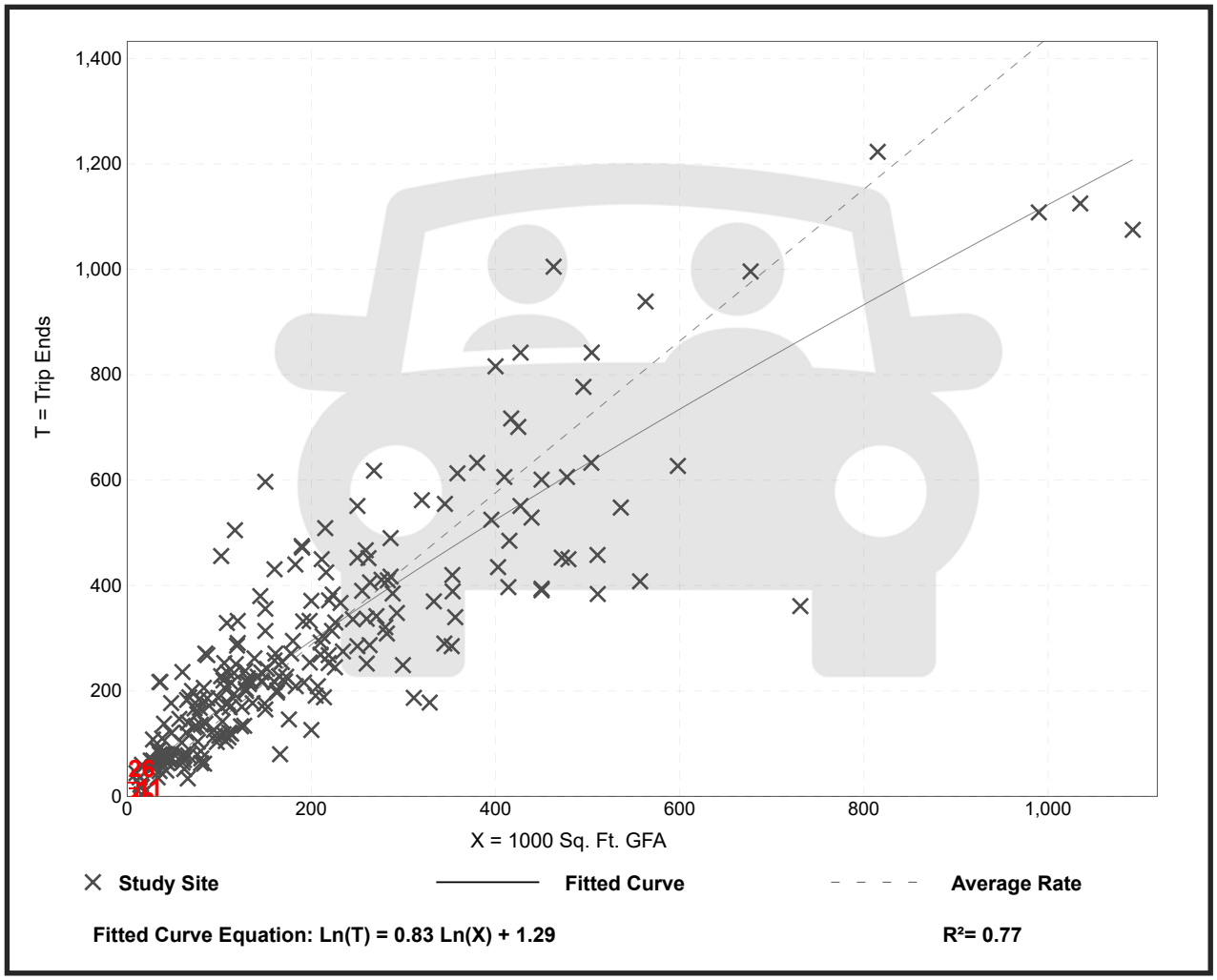
General Office Building
(710)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 232
Avg. 1000 Sq. Ft. GFA: 199
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.44	0.26 - 6.20	0.60

Data Plot and Equation



General Office Building
(710)

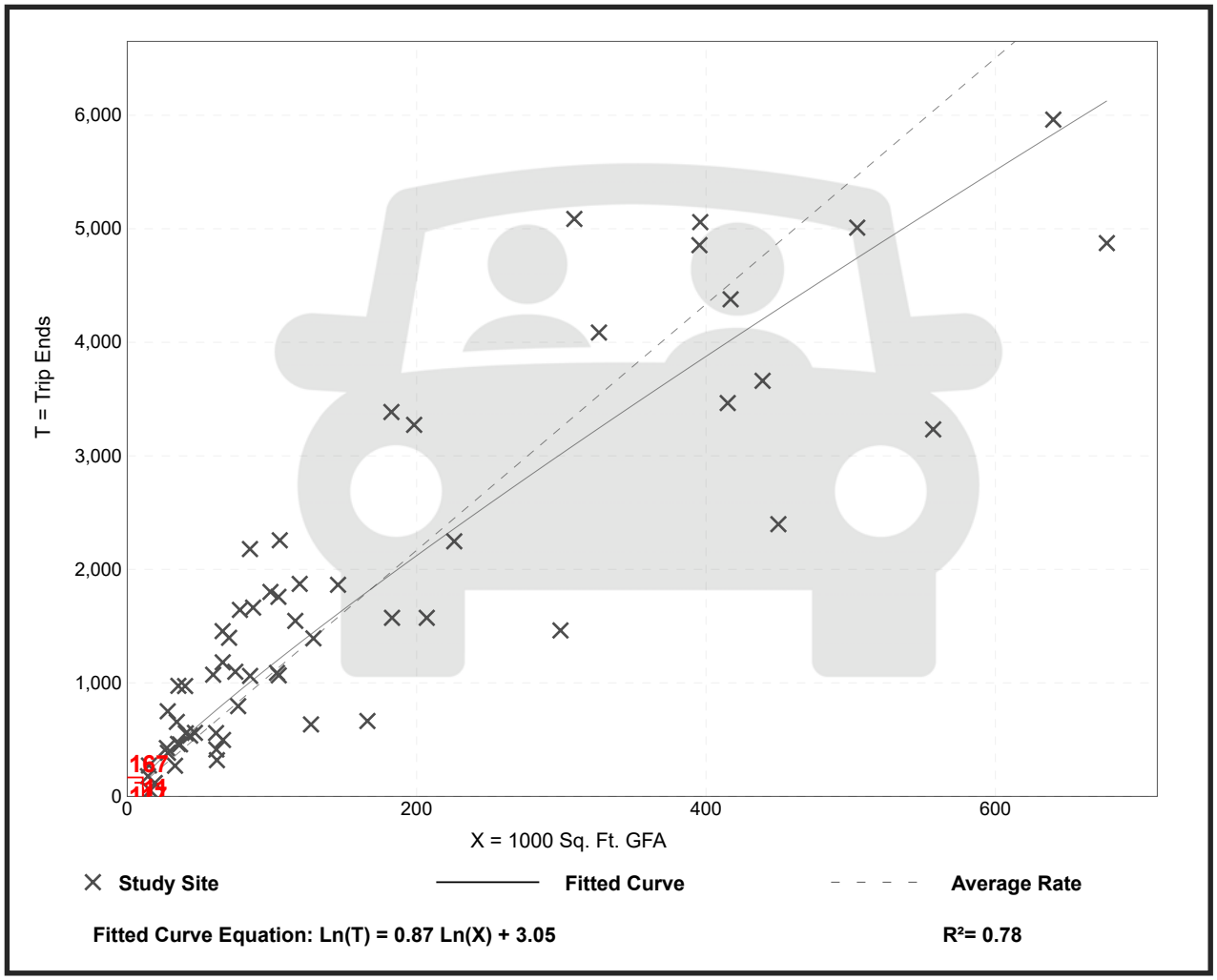
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. 1000 Sq. Ft. GFA: 163
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.84	3.27 - 27.56	4.76

Data Plot and Equation



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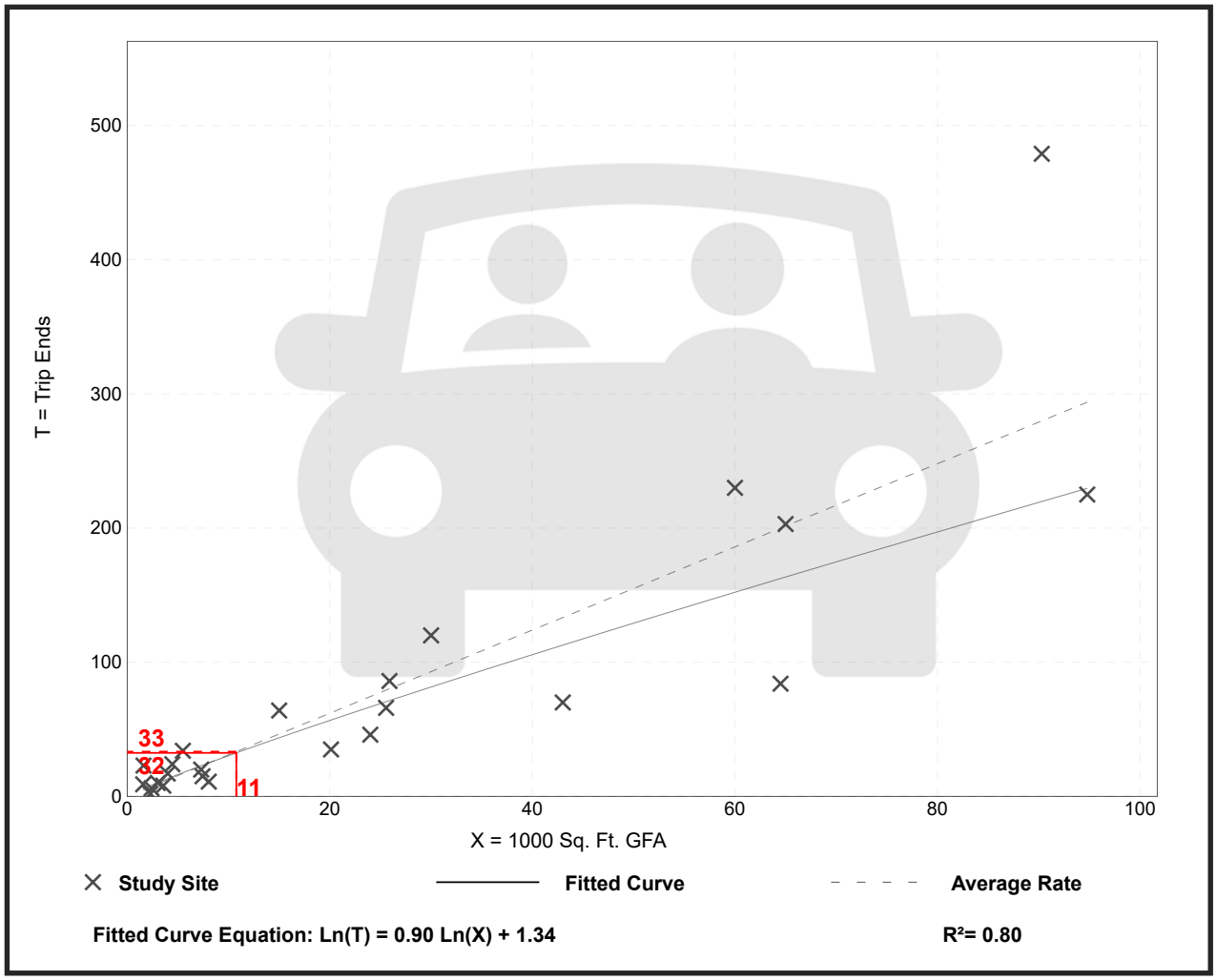
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 24
Avg. 1000 Sq. Ft. GFA: 25
Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



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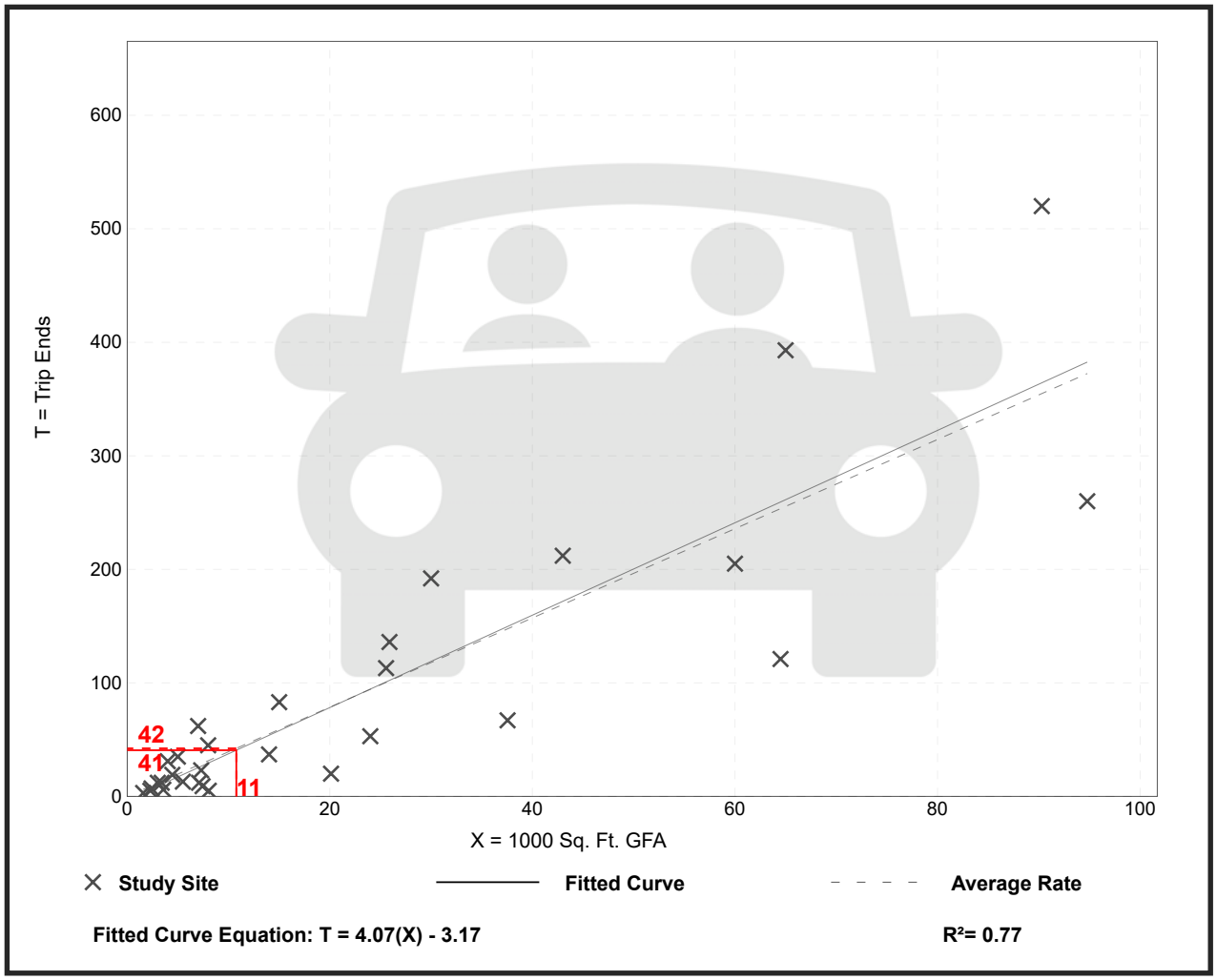
Medical-Dental Office Building - Stand-Alone
(720)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. 1000 Sq. Ft. GFA:	23
Directional Distribution:	30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Medical-Dental Office Building - Stand-Alone
(720)

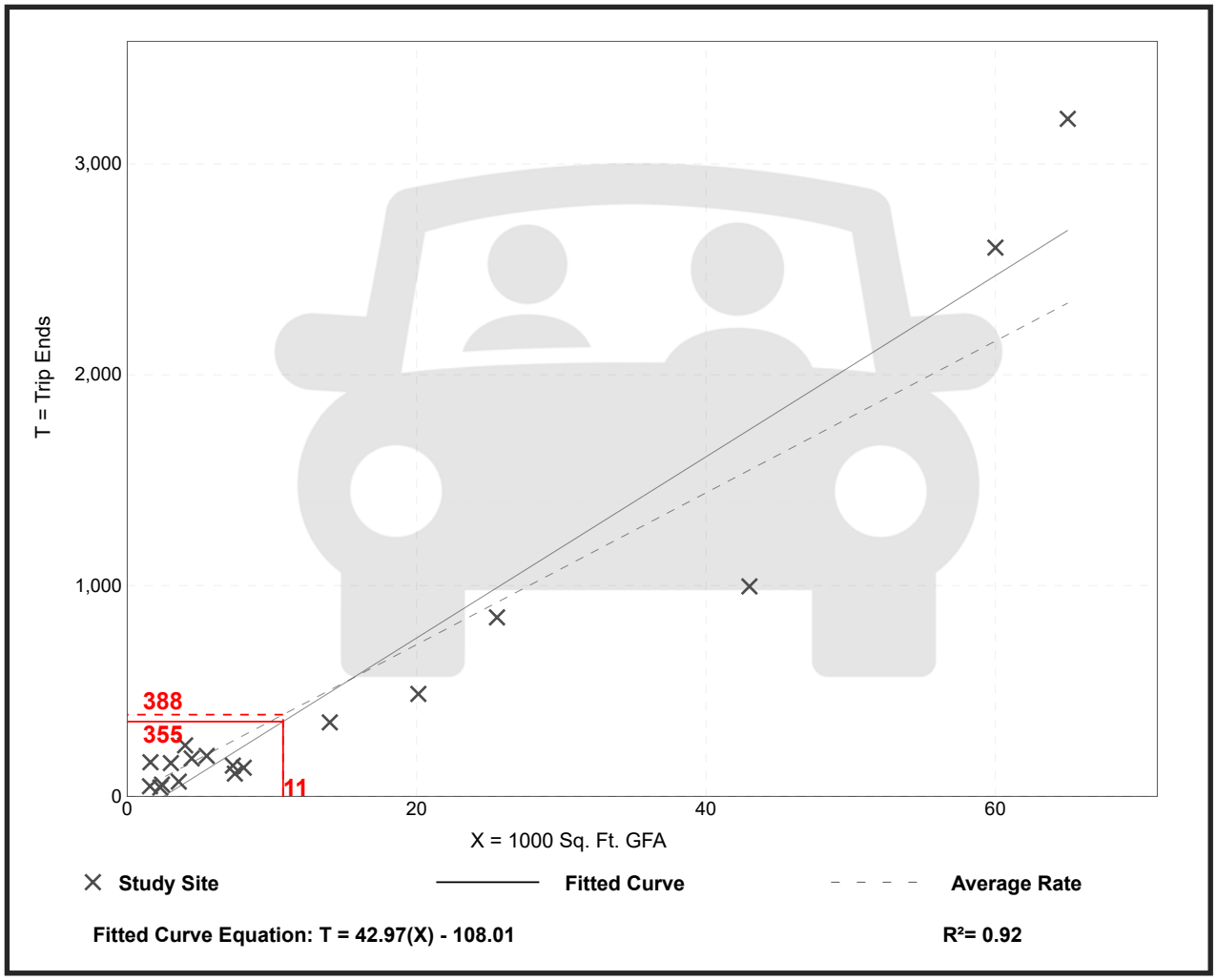
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

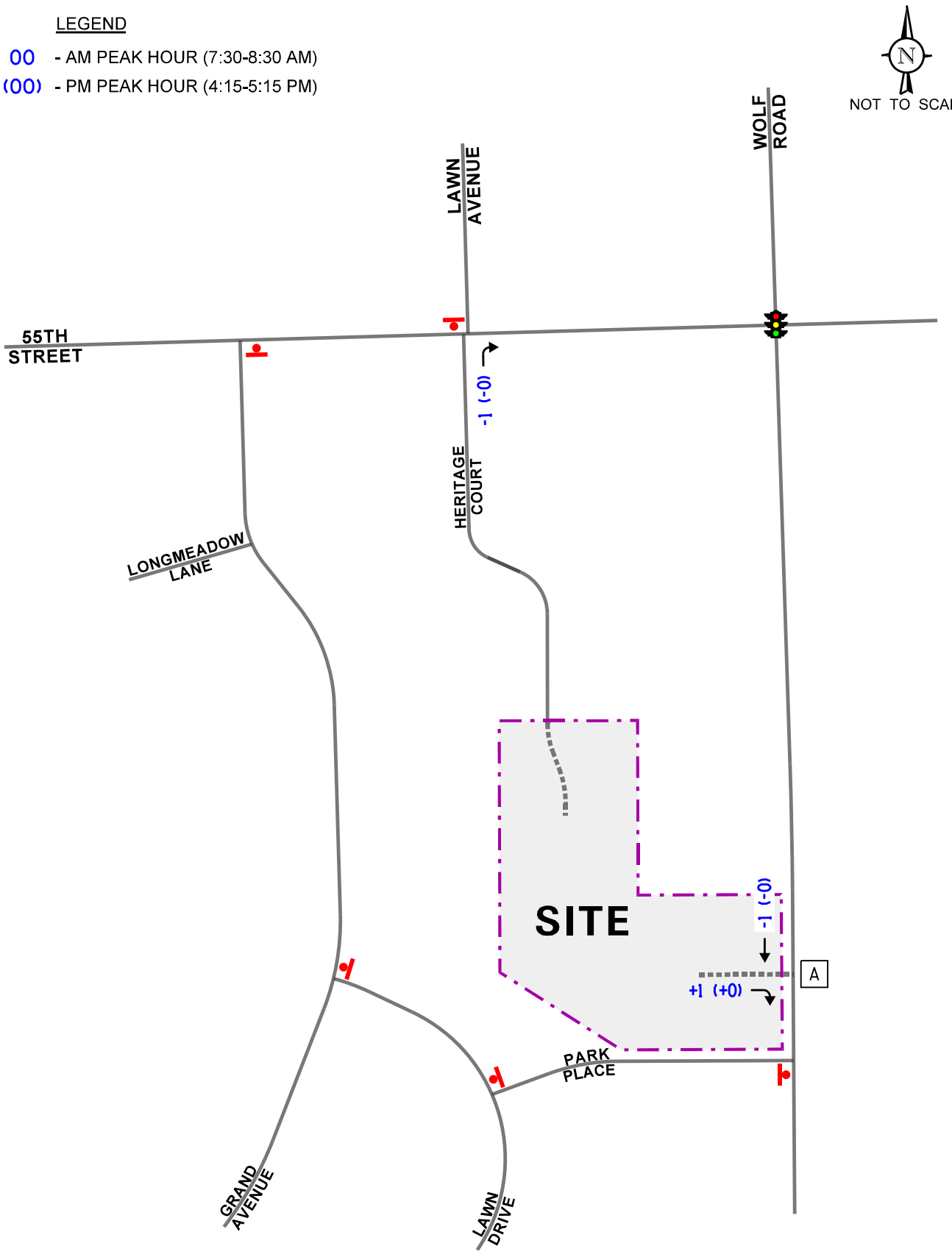
Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



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Figure A



Heritage Crossings
Western Springs, Illinois

Heritage Court Townhomes Reassignment

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-068 Figure: A

CMAP Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

March 6, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 55th Street @ Wolf Road \ Heritage Court \ Grand Avenue
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated March 5, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Wolf Rd, at 55th St	9,150	10,200
55th St, at Wolf Rd	16,600	18,500
Heritage Ct, at 55th St	375	410
Grand Ave, at 55th St	2,800	3,100

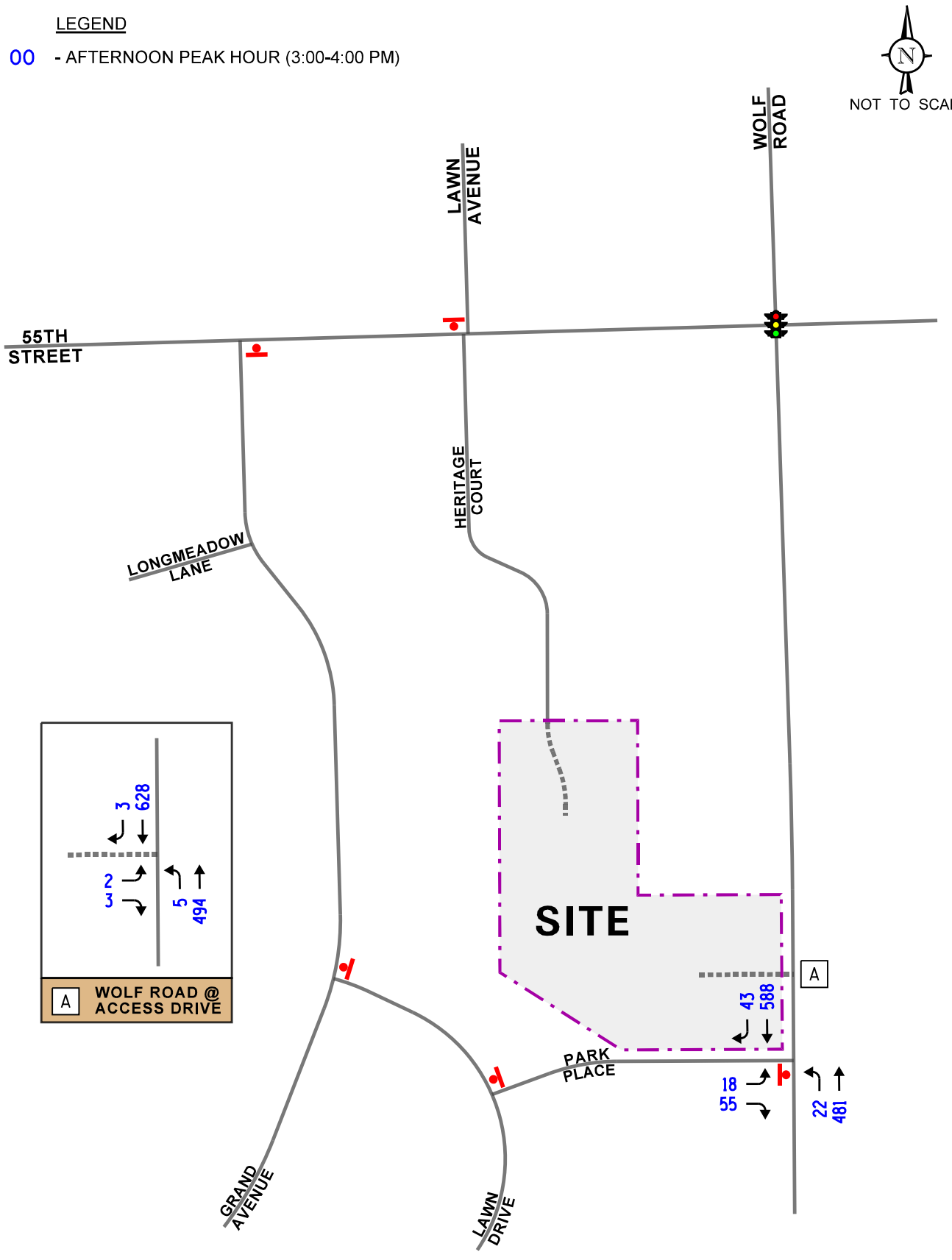
Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2023 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2024_TrafficForecasts\WesternSprings\ck-32-24\ck-32-24.docx

Figure B



Heritage Crossings
Western Springs, Illinois

Year 2030 Total Traffic Volumes
(Afternoon Peak Hour)

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

Job No: 24-068 Figure: B

Level of Service Table

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	643	1	14	772	6	23
Future Vol, veh/h	643	1	14	772	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	707	1	15	848	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	709	0	1164	355
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	456	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	854	-	191	647
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	853	-	186	647
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.37	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	64	-
HCM Lane V/C Ratio	0.075	-	-	0.018	-
HCM Control Delay (s/veh)	14.1	-	-	9.3	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Future Vol, veh/h	17	649	0	1	773	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	676	0	1	805	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	811	0	0	676	0	0	1116	1525	338	1184	1522	406
Stage 1	-	-	-	-	-	-	711	711	-	811	811	-
Stage 2	-	-	-	-	-	-	405	814	-	373	711	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1046	-	-	925	-	-	*287	158	664	249	159	*875
Stage 1	-	-	-	-	-	-	*394	439	-	576	553	-
Stage 2	-	-	-	-	-	-	*825	551	-	625	439	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1045	-	-	925	-	-	*277	154	664	243	155	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*277	154	-	243	155	-
Stage 1	-	-	-	-	-	-	*386	430	-	575	552	-
Stage 2	-	-	-	-	-	-	*812	550	-	610	430	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.01	12.02
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	453	92	-	-	5	-	-	530
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.031
HCM Control Delay (s/veh)	13	8.5	0.2	-	8.9	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	698	311	33
Future Vol, veh/h	23	48	29	698	311	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	784	349	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1199	349	387	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	207	698	1167	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	698	1167	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.68	0.33	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1167	-	388	-	-
HCM Lane V/C Ratio	0.028	-	0.206	-	-
HCM Control Delay (s/veh)	8.2	-	16.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Existing Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1016	6	18	884	10	22
Future Vol, veh/h	1016	6	18	884	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1092	6	19	951	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1099	0	1610	549
Stage 1	-	-	-	-	1096	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	643	-	97	484
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	643	-	93	484
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	548	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.63	25.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	-	-	72	-
HCM Lane V/C Ratio	0.164	-	-	0.03	-
HCM Control Delay (s/veh)	25.5	-	-	10.8	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Future Vol, veh/h	13	1024	1	1	891	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1078	1	1	938	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	945	0	0	1080	0	0	1579	2054	540	1510	2051	474
Stage 1	-	-	-	-	-	-	1107	1107	-	944	944	-
Stage 2	-	-	-	-	-	-	472	947	-	566	1107	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	959	-	-	653	-	-	*120	65	491	140	65	*836
Stage 1	-	-	-	-	-	-	*228	288	-	516	504	-
Stage 2	-	-	-	-	-	-	*789	502	-	481	288	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	959	-	-	653	-	-	*116	63	490	136	64	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*116	63	-	136	64	-
Stage 1	-	-	-	-	-	-	*223	282	-	515	503	-
Stage 2	-	-	-	-	-	-	*776	500	-	470	282	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.28	0.03	24.45	11.45
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	187	45	-	-	4	-	-	570
HCM Lane V/C Ratio	0.011	0.014	-	-	0.002	-	-	0.02
HCM Control Delay (s/veh)	24.4	8.8	0.2	-	10.5	0	-	11.5
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	487	634	15
Future Vol, veh/h	13	22	33	487	634	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	547	712	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1334	712	729	0	-	0
Stage 1	712	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	171	436	884	-	-	-
Stage 1	490	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	164	436	884	-	-	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	20.6	0.59	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	884	-	270	-	-
HCM Lane V/C Ratio	0.042	-	0.146	-	-
HCM Control Delay (s/veh)	9.3	-	20.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	464	571	43
Future Vol, veh/h	18	55	22	464	571	43
Conflicting Peds, #/hr	0	0	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	494	607	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1188	647	693	0	-	0
Stage 1	647	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	210	474	897	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	456	863	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	18.79	0.42	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	863	-	338	-	-
HCM Lane V/C Ratio	0.027	-	0.23	-	-
HCM Control Delay (s/veh)	9.3	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	791	6	23
Future Vol, veh/h	659	1	14	791	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	869	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1192	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.37
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	792	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	825	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	831	0	0	693	0	0	1143	1561	346	1212	1559	416
Stage 1	-	-	-	-	-	-	728	728	-	831	831	-
Stage 2	-	-	-	-	-	-	415	833	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1024	-	-	912	-	-	*272	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	557	539	-
Stage 2	-	-	-	-	-	-	*825	538	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1024	-	-	912	-	-	*262	145	656	229	146	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*262	145	-	229	146	-
Stage 1	-	-	-	-	-	-	*377	422	-	556	538	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.26
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	437	90	-	-	4	-	-	513
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	715	319	33
Future Vol, veh/h	23	48	29	715	319	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	803	358	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1227	358	396	0	-	0
Stage 1	358	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	199	690	1158	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	690	1158	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.11	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1158	-	377	-	-
HCM Lane V/C Ratio	0.028	-	0.212	-	-
HCM Control Delay (s/veh)	8.2	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – No-Build Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1042	6	18	906	10	22
Future Vol, veh/h	1042	6	18	906	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1120	6	19	974	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1127	0	1649	563
Stage 1	-	-	-	-	1124	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	92	474
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	88	474
Mov Cap-2 Maneuver	-	-	-	-	88	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.77
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.172	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Future Vol, veh/h	13	1050	1	1	913	7	1	0	1	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	1	1	961	7	1	0	1	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	968	0	0	1107	0	0	1618	2105	554	1547	2102	485
Stage 1	-	-	-	-	-	-	1134	1134	-	967	967	-
Stage 2	-	-	-	-	-	-	484	971	-	580	1135	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	935	-	-	638	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	496	489	-
Stage 2	-	-	-	-	-	-	*789	487	-	472	280	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	935	-	-	637	-	-	*106	58	481	126	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	126	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	495	488	-
Stage 2	-	-	-	-	-	-	*776	485	-	461	274	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	25.97	11.66
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	174	44	-	-	4	-	-	552
HCM Lane V/C Ratio	0.012	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	26	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	D	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	499	650	15
Future Vol, veh/h	13	22	33	499	650	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	561	730	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1365	730	747	0	-	0
Stage 1	730	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	164	425	870	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	425	870	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.28	0.58	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	260	-	-
HCM Lane V/C Ratio	0.043	-	0.151	-	-
HCM Control Delay (s/veh)	9.3	-	21.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Capacity Analysis Summary Sheets

Weekday Morning Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	659	1	14	792	6	23
Future Vol, veh/h	659	1	14	792	6	23
Conflicting Peds, #/hr	0	1	1	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	0	7	4	0	0
Mvmt Flow	724	1	15	870	7	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1193	364
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	467	-
Critical Hdwy	-	-	4.24	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.27	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	840	-	183	639
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	840	-	178	638
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.38	14.38
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	63	-
HCM Lane V/C Ratio	0.077	-	-	0.018	-
HCM Control Delay (s/veh)	14.4	-	-	9.4	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	8	24	10	7
Future Vol, veh/h	5	8	8	24	10	7
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	9	9	26	11	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	17	20	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	950	1068	1609	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1066	1606	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.6	1.81	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	450	-	1014	-	-
HCM Lane V/C Ratio	0.005	-	0.014	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Future Vol, veh/h	17	665	0	1	793	5	1	0	2	4	0	12
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	3	20	0	0	0	0	0	0
Mvmt Flow	18	693	0	1	826	5	1	0	2	4	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	832	0	0	693	0	0	1143	1562	346	1214	1560	417
Stage 1	-	-	-	-	-	-	728	728	-	832	832	-
Stage 2	-	-	-	-	-	-	415	834	-	382	728	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1023	-	-	912	-	-	*271	148	656	235	149	*875
Stage 1	-	-	-	-	-	-	*385	432	-	556	539	-
Stage 2	-	-	-	-	-	-	*825	537	-	618	432	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	1022	-	-	912	-	-	*261	145	656	228	145	*874
Mov Cap-2 Maneuver	-	-	-	-	-	-	*261	145	-	228	145	-
Stage 1	-	-	-	-	-	-	*377	422	-	555	537	-
Stage 2	-	-	-	-	-	-	*812	536	-	603	422	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.38	0.02	13.31	12.27
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	90	-	-	4	-	-	512
HCM Lane V/C Ratio	0.007	0.017	-	-	0.001	-	-	0.033
HCM Control Delay (s/veh)	13.3	8.6	0.2	-	9	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	48	29	717	326	33
Future Vol, veh/h	23	48	29	717	326	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	26	54	33	806	366	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1237	366	403	0	-	0
Stage 1	366	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	196	683	1150	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	683	1150	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.31	0.32	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	372	-	-
HCM Lane V/C Ratio	0.028	-	0.215	-	-
HCM Control Delay (s/veh)	8.2	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	8	2	738	351	1
Future Vol, veh/h	3	8	2	738	351	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	3	8	2	777	369	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1151	370	371	0	-	0
Stage 1	370	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	221	680	1199	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	680	1199	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.53	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1199	-	434	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s/veh)	8	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	44	4	27	48	0
Future Vol, veh/h	23	44	4	27	48	0
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	25	48	4	29	52	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	20	0	0	35	0
Stage 1	20	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	1064	-	-	1590	-
Stage 1	1008	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1063	-	-	1588	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.98	0	7.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	977	1588	-
HCM Lane V/C Ratio	-	-	0.075	0.033	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	17	10	32	16	8
Future Vol, veh/h	29	17	10	32	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	18	11	35	17	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	28	0	0	46	0
Stage 1	28	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	937	1053	-	-	1575	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1053	-	-	1575	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.91	0	4.87
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	970	1200	-
HCM Lane V/C Ratio	-	-	0.052	0.011	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Capacity Analysis Summary Sheets

Weekday Evening Peak Hour – Projected Conditions

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1043	6	18	907	10	22
Future Vol, veh/h	1043	6	18	907	10	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1122	6	19	975	11	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1128	0	1651	564
Stage 1	-	-	-	-	1125	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	627	-	91	474
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	627	-	87	474
Mov Cap-2 Maneuver	-	-	-	-	87	-
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.65	26.82
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	-	-	70	-
HCM Lane V/C Ratio	0.173	-	-	0.031	-
HCM Control Delay (s/veh)	26.8	-	-	10.9	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	5	18	20	6
Future Vol, veh/h	3	5	5	18	20	6
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	5	20	22	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	27	30	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	955	1054	1596	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1052	1593	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.59	1.58	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	1011	-	-
HCM Lane V/C Ratio	0.003	-	0.009	-	-
HCM Control Delay (s/veh)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Future Vol, veh/h	13	1050	2	1	914	7	1	0	2	1	0	10
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	14	1105	2	1	962	7	1	0	2	1	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	969	0	0	1108	0	0	1619	2106	555	1548	2104	486
Stage 1	-	-	-	-	-	-	1135	1135	-	968	968	-
Stage 2	-	-	-	-	-	-	484	972	-	580	1136	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	934	-	-	637	-	-	*110	59	481	129	59	*836
Stage 1	-	-	-	-	-	-	*219	280	-	495	488	-
Stage 2	-	-	-	-	-	-	*789	486	-	472	279	-
Platoon blocked, %	0	-	-		-	-	0	0		0	0	0
Mov Cap-1 Maneuver	934	-	-	637	-	-	*106	58	480	125	58	*836
Mov Cap-2 Maneuver	-	-	-	-	-	-	*106	58	-	125	58	-
Stage 1	-	-	-	-	-	-	*214	274	-	494	487	-
Stage 2	-	-	-	-	-	-	*776	485	-	460	273	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	0.04	21.57	11.68
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	44	-	-	4	-	-	551
HCM Lane V/C Ratio	0.014	0.015	-	-	0.002	-	-	0.021
HCM Control Delay (s/veh)	21.6	8.9	0.2	-	10.7	0	-	11.7
HCM Lane LOS	C	A	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	33	505	654	15
Future Vol, veh/h	13	22	33	505	654	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	15	25	37	567	735	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1376	735	752	0	-	0
Stage 1	735	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	162	423	867	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	423	867	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	528	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	21.51	0.57	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	867	-	257	-	-
HCM Lane V/C Ratio	0.043	-	0.153	-	-
HCM Control Delay (s/veh)	9.3	-	21.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	6	512	665	3
Future Vol, veh/h	2	4	6	512	665	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	2	4	6	539	700	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1253	702	703	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	192	442	904	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	442	904	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.98	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	904	-	307	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s/veh)	9	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	32	4	22	34	4
Future Vol, veh/h	28	32	4	22	34	4
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	35	4	24	37	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	96	17	0	0	29	0
Stage 1	17	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	909	1067	-	-	1597	-
Stage 1	1011	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	1066	-	-	1595	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.96	0	6.54
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1592	-
HCM Lane V/C Ratio	-	-	0.067	0.023	-
HCM Control Delay (s/veh)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	13	10	19	15	13
Future Vol, veh/h	28	13	10	19	15	13
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	14	11	21	16	14

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	71	24	0	0	35	0
Stage 1	24	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	938	1058	-	-	1590	-
Stage 1	1004	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	926	1055	-	-	1585	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.92	0	3.91
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	964	-
HCM Lane V/C Ratio	-	-	0.046	0.01	-
HCM Control Delay (s/veh)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	55	22	481	588	43
Future Vol, veh/h	18	55	22	481	588	43
Conflicting Peds, #/hr	0	0	46	0	0	46
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	145	-	-	75
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	3	4	1	3
Mvmt Flow	19	59	23	512	626	46

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1230	672	717	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	198	460	879	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	439	841	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	551	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	19.76	0.41	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	841	-	321	-	-
HCM Lane V/C Ratio	0.028	-	0.242	-	-
HCM Control Delay (s/veh)	9.4	-	19.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	5	494	628	3
Future Vol, veh/h	2	3	5	494	628	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	40	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	2	3	5	520	661	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1193	663	664	0	-	0
Stage 1	663	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	208	465	934	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	465	934	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	16.8	0.09	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	934	-	310	-	-
HCM Lane V/C Ratio	0.006	-	0.017	-	-
HCM Control Delay (s/veh)	8.9	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Exhibit A – Available Sight Distance



IDOT BDE MANUAL - CHAPTER 31

$SSD = 1.47\ Vt + 1.075\ \frac{V^2}{a}$

where: SSD = Stopping Sight Distance, ft (m)
V = design speed, mph (km/h)
t = brake time, 2.5 seconds
a = driver deceleration, ft/s^2 (m/s^2)

$305 = 1.47\ 40(2.5) + 1.075\ (\frac{1600}{11.2})$

HERITAGE CROSSING
WESTERN SPRINGS, ILLINOIS

AVAILABLE SIGHT DISTANCE

DRAWN: MD CHECKED: JM
DATE: 07-10-24 REV: 10-16-24
PROJECT #: 24-068
EXHIBIT: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Executive Summary
5/8/2024

Village of Western Springs
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Village	$	1,627,899
Total Costs to Village	$	0
Total (Cost)/Benefit to Village (Year 1 - Year 20)	**$**	**1,627,899**

School District 204
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 204	$	3,549,181
Total Costs to SD 204	$	1,125,605
Total (Cost)/Benefit to SD 204 (Year 1 - Year 20)	**$**	**2,423,575**

School District 106
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to SD 106	$	5,429,840
Total Costs to SD 106	$	3,904,784
Total (Cost)/Benefit to SD 106 (Year 1 - Year 20)	**$**	**1,525,056**

Western Springs Library
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Library District	$	374,627
Total Costs to Library District	$	-
Total (Cost)/Benefit to Library District (Year 1 - Year 20)	**$**	**374,627**

Western Springs Park District
Total in Nominal Dollars (Year 1 - Year 20)

Total Payments to Park District	$	210,634
Total Costs to Park	$	-
Total (Cost)/Benefit to Park District (Year 1 - Year 20)	**$**	**210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Village of Western Springs

Year	Village of Western Springs	Incremental Village Costs	Benefit/(Cost)
Year 1	$ 63,728	$ 0	$ 63,728
Year 2	$ 65,321	$ 0	$ 65,321
Year 3	$ 66,954	$ 0	$ 66,954
Year 4	$ 68,628	$ 0	$ 68,628
Year 5	$ 70,343	$ 0	$ 70,343
Year 6	$ 72,102	$ 0	$ 72,102
Year 7	$ 73,904	$ 0	$ 73,904
Year 8	$ 75,752	$ 0	$ 75,752
Year 9	$ 77,646	$ 0	$ 77,646
Year 10	$ 79,587	$ 0	$ 79,587
Year 11	$ 81,577	$ 0	$ 81,577
Year 12	$ 83,616	$ 0	$ 83,616
Year 13	$ 85,706	$ 0	$ 85,706
Year 14	$ 87,849	$ 0	$ 87,849
Year 15	$ 90,045	$ 0	$ 90,045
Year 16	$ 92,297	$ 0	$ 92,297
Year 17	$ 94,604	$ 0	$ 94,604
Year 18	$ 96,969	$ 0	$ 96,969
Year 19	$ 99,393	$ 0	$ 99,393
Year 20	$ 101,878	$ 0	$ 101,878
Total	**$ 1,627,899**	**$ 0**	**$ 1,627,899**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Library

Year	Library District	Incremental Costs	Benefit/(Cost)
Year 1	$ 14,666	$ 0	$ 14,666
Year 2	$ 15,032	$ 0	$ 15,032
Year 3	$ 15,408	$ 0	$ 15,408
Year 4	$ 15,793	$ 0	$ 15,793
Year 5	$ 16,188	$ 0	$ 16,188
Year 6	$ 16,593	$ 0	$ 16,593
Year 7	$ 17,008	$ 0	$ 17,008
Year 8	$ 17,433	$ 0	$ 17,433
Year 9	$ 17,869	$ 0	$ 17,869
Year 10	$ 18,315	$ 0	$ 18,315
Year 11	$ 18,773	$ 0	$ 18,773
Year 12	$ 19,243	$ 0	$ 19,243
Year 13	$ 19,724	$ 0	$ 19,724
Year 14	$ 20,217	$ 0	$ 20,217
Year 15	$ 20,722	$ 0	$ 20,722
Year 16	$ 21,240	$ 0	$ 21,240
Year 17	$ 21,771	$ 0	$ 21,771
Year 18	$ 22,315	$ 0	$ 22,315
Year 19	$ 22,873	$ 0	$ 22,873
Year 20	$ 23,445	$ 0	$ 23,445
Total	**$ 374,627**	**$ 0**	**$ 374,627**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Western Springs Park District

Year	Western Springs Park District	Incremental Costs	Benefit/(Cost)
Year 1	$ 8,246	$ 0	$ 8,246
Year 2	$ 8,452	$ 0	$ 8,452
Year 3	$ 8,663	$ 0	$ 8,663
Year 4	$ 8,880	$ 0	$ 8,880
Year 5	$ 9,102	$ 0	$ 9,102
Year 6	$ 9,329	$ 0	$ 9,329
Year 7	$ 9,562	$ 0	$ 9,562
Year 8	$ 9,802	$ 0	$ 9,802
Year 9	$ 10,047	$ 0	$ 10,047
Year 10	$ 10,298	$ 0	$ 10,298
Year 11	$ 10,555	$ 0	$ 10,555
Year 12	$ 10,819	$ 0	$ 10,819
Year 13	$ 11,090	$ 0	$ 11,090
Year 14	$ 11,367	$ 0	$ 11,367
Year 15	$ 11,651	$ 0	$ 11,651
Year 16	$ 11,942	$ 0	$ 11,942
Year 17	$ 12,241	$ 0	$ 12,241
Year 18	$ 12,547	$ 0	$ 12,547
Year 19	$ 12,860	$ 0	$ 12,860
Year 20	$ 13,182	$ 0	$ 13,182
Total	**$ 210,634**	**$ 0**	**$ 210,634**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary Lyons 204

Year	School District 204 Property Taxes	Incremental Student Costs	Benefit/(Cost)
Year 1	$ 138,940	$ 37,909	$ 101,031
Year 2	$ 142,414	$ 39,415	$ 102,999
Year 3	$ 145,974	$ 40,980	$ 104,994
Year 4	$ 149,623	$ 42,608	$ 107,015
Year 5	$ 153,364	$ 44,301	$ 109,063
Year 6	$ 157,198	$ 46,060	$ 111,138
Year 7	$ 161,128	$ 47,890	$ 113,238
Year 8	$ 165,156	$ 49,792	$ 115,364
Year 9	$ 169,285	$ 51,770	$ 117,515
Year 10	$ 173,517	$ 53,827	$ 119,691
Year 11	$ 177,855	$ 55,965	$ 121,891
Year 12	$ 182,302	$ 58,188	$ 124,114
Year 13	$ 186,859	$ 60,499	$ 126,360
Year 14	$ 191,531	$ 62,902	$ 128,628
Year 15	$ 196,319	$ 65,401	$ 130,918
Year 16	$ 201,227	$ 67,999	$ 133,228
Year 17	$ 206,258	$ 70,700	$ 135,558
Year 18	$ 211,414	$ 73,508	$ 137,906
Year 19	$ 216,699	$ 76,428	$ 140,271
Year 20	$ 222,117	$ 79,464	$ 142,653
Total	**$ 3,549,181**	**$ 1,125,605**	**$ 2,423,575**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Cost Benefit Summary LaGrange Highlands 106

Year	School District 106 Property Taxes	School District 106 Incremental Student Costs	Benefit/(Cost)
Year 1	$ 212,563	$ 131,508	$ 81,055
Year 2	$ 217,877	$ 136,732	$ 81,145
Year 3	$ 223,324	$ 142,163	$ 81,161
Year 4	$ 228,907	$ 147,810	$ 81,097
Year 5	$ 234,629	$ 153,681	$ 80,948
Year 6	$ 240,495	$ 159,786	$ 80,709
Year 7	$ 246,508	$ 166,133	$ 80,374
Year 8	$ 252,670	$ 172,732	$ 79,938
Year 9	$ 258,987	$ 179,593	$ 79,393
Year 10	$ 265,462	$ 186,727	$ 78,734
Year 11	$ 272,098	$ 194,144	$ 77,954
Year 12	$ 278,901	$ 201,856	$ 77,044
Year 13	$ 285,873	$ 209,874	$ 75,999
Year 14	$ 293,020	$ 218,211	$ 74,809
Year 15	$ 300,345	$ 226,879	$ 73,467
Year 16	$ 307,854	$ 235,891	$ 71,963
Year 17	$ 315,550	$ 245,261	$ 70,289
Year 18	$ 323,439	$ 255,003	$ 68,436
Year 19	$ 331,525	$ 265,133	$ 66,392
Year 20	$ 339,813	$ 275,664	$ 64,149
Total	**$ 5,429,840**	**$ 3,904,784**	**$ 1,525,056**

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Fair Market Value Assumptions

Type of Units	Number of Units	Unit Chunk Price	Discount Factor	Estimated FMV for Purposes of County Assessor	Estimated Taxes Per Unit
End Units	10	$ 850,000	15%	$ 722,500	$ 15,714
Middle & Duplex Units	19	$ 800,000	15%	$ 680,000	$ 14,790
Total Units	29				

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
Tax Assumptions - Tax Year 2022 Tax Rates

Assessment Ratio	10%
Equalization Multiplier	2.9237
Total Tax Rate	7.439%
Lyons School District 204 Tax Rate	2.3590%
LaGrange Highlands District 106 Tax Rate	3.6090%
Village of Western Springs	1.0820%
Western Springs Library	0.2490%
Western Springs Park District	0.1400%
Annual Reassessment Growth Rate	2.50%

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Estiamted Fair Market Value									
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255	$ 8,802,961
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820	$ 15,741,765
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075	$ 24,544,726
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 438,142	$ 449,095	$ 460,323	$ 471,831	$ 483,627	$ 495,717	$ 508,110	$ 520,813	$ 533,833

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18
Estiamted Fair Market Value									
End Units	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692
Middle & Duplex Units	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308
Total Estimated FMV	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Total	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%	7.4390%
Taxes to from the Development	$ 547,179	$ 560,858	$ 574,880	$ 589,252	$ 603,983	$ 619,083	$ 634,560	$ 650,424	$ 666,684

McNaughton Devleopment
Heritage Crossing
Total
Property Tax Projections

	Year 19	Year 20
Estiamted Fair Market Value		
End Units	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%
Equalization Multiplier	2.9237	2.9237
Total	7.4390%	7.4390%
Taxes to from the Development	$ 683,352	$ 700,435

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 63,728	$ 65,321	$ 66,954	$ 68,628	$ 70,343	$ 72,102	$ 73,904	$ 75,752

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 77,646	$ 79,587	$ 81,577	$ 83,616	$ 85,706	$ 87,849

McNaughton Devleopment
Heritage Crossing
Total
Village Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Village Rate	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%	1.0820%
Taxes to from the Development	$ 90,045	$ 92,297	$ 94,604	$ 96,969	$ 99,393	$ 101,878

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 138,940	$ 142,414	$ 145,974	$ 149,623	$ 153,364	$ 157,198	$ 161,128	$ 165,156

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 169,285	$ 173,517	$ 177,855	$ 182,302	$ 186,859	$ 191,531

McNaughton Devleopment
Heritage Crossing
Total
SD 204 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 204	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%	2.3590%
Taxes to from the Development	$ 196,319	$ 201,227	$ 206,258	$ 211,414	$ 216,699	$ 222,117

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 212,563	$ 217,877	$ 223,324	$ 228,907	$ 234,629	$ 240,495	$ 246,508	$ 252,670

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Estiamted Fair Market Value						
End Units	$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742
Middle & Duplex Units	$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363
Total Estimated FMV	$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 258,987	$ 265,462	$ 272,098	$ 278,901	$ 285,873	$ 293,020

McNaughton Devleopment
Heritage Crossing
Total
SD 106 Property Tax Projections

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Estiamted Fair Market Value						
End Units	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
Middle & Duplex Units	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
Total Estimated FMV	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
Assessment Ratio	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
SD 107	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%	3.6090%
Taxes to from the Development	$ 300,345	$ 307,854	$ 315,550	$ 323,439	$ 331,525	$ 339,813

McNaughton Devleopment
Heritage Crossing
Total
Library District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Library District Rate	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
Taxes to from the Development	$ 14,666	$ 15,032	$ 15,408	$ 15,793	$ 16,188	$ 16,593	$ 17,008	$ 17,433

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%	0.2490%
$ 17,869	$ 18,315	$ 18,773	$ 19,243	$ 19,724	$ 20,217	$ 20,722	$ 21,240	$ 21,771	$ 22,315	$ 22,873	$ 23,445

McNaughton Devleopment
Heritage Crossing
Total
Park District Property Tax Projections

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Estiamted Fair Market Value								
End Units	$ 7,225,000	$ 7,405,625	$ 7,590,766	$ 7,780,535	$ 7,975,048	$ 8,174,424	$ 8,378,785	$ 8,588,255
Middle & Duplex Units	$ 12,920,000	$ 13,243,000	$ 13,574,075	$ 13,913,427	$ 14,261,263	$ 14,617,794	$ 14,983,239	$ 15,357,820
Total Estimated FMV	$ 20,145,000	$ 20,648,625	$ 21,164,841	$ 21,693,962	$ 22,236,311	$ 22,792,218	$ 23,362,024	$ 23,946,075
Assessment Ratio	10%	10%	10%	10%	10%	10%	10%	10%
Equalization Multiplier	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
Psrk Rate	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
Taxes to from the Development	$ 8,246	$ 8,452	$ 8,663	$ 8,880	$ 9,102	$ 9,329	$ 9,562	$ 9,802

Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
$ 8,802,961	$ 9,023,035	$ 9,248,611	$ 9,479,826	$ 9,716,822	$ 9,959,742	$ 10,208,736	$ 10,463,954	$ 10,725,553	$ 10,993,692	$ 11,268,534	$ 11,550,248
$ 15,741,765	$ 16,135,310	$ 16,538,692	$ 16,952,160	$ 17,375,964	$ 17,810,363	$ 18,255,622	$ 18,712,012	$ 19,179,813	$ 19,659,308	$ 20,150,791	$ 20,654,560
$ 24,544,726	$ 25,158,345	$ 25,787,303	$ 26,431,986	$ 27,092,785	$ 27,770,105	$ 28,464,358	$ 29,175,967	$ 29,905,366	$ 30,653,000	$ 31,419,325	$ 32,204,808
10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237	2.9237
0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%	0.1400%
$ 10,047	$ 10,298	$ 10,555	$ 10,819	$ 11,090	$ 11,367	$ 11,651	$ 11,942	$ 12,241	$ 12,547	$ 12,860	$ 13,182

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School Children

Single-Family Attached Townhomes

Grades K-8

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0.000	0%	0.000	0.000
End Unit 3-Bed	10	0.292	0%	0.292	2.920
Middle & Duplex Unit 3-Bed	19	0.292	0%	0.292	5.548
4-Bedroom	0	0.000	0%	0.000	0.000
Total K-8 Children Produced					8.468

Grades 9-12

Type of Unit	Number of Units	Standard Ratio of Children/Uni	Adjustment Factor for Geriatric Home Design	Adjusted Ratio	Total Children
1-Bedroom	0	0	0%	0.000	0.000
End Unit Master Down 3-Bed	10	0.059	0%	0.059	0.590
Middle Unit Master Down 3-Bed	19	0.059	0%	0.059	1.121
4-Bedroom	0	0.000	0%	0.000	0.000
Total 9-12 Children Produced					1.711

Total Children Produced **10.179**

Population Figures Based on Illinois School Consulting Services - Associated Municipal Consultants, Inc. Naperville, Illinois Copyright 1996

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204 Cost
Cost Assumptions

Operational Cost Per Student $ 22,156
2023

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%

Five-Year Average 3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106 Cost
Cost Assumptions

Operational Cost Per Student	$	15,530

Annual Inflationary Index

2018	251.11	
2019	255.66	1.81%
2020	258.81	1.23%
2021	270.97	4.70%
2022	292.66	8.00%
2023	304.7	4.11%

Five-Year Average 3.97%

Consumer Price Index Data from 1913 to 2024 (usinflationcalculator.com)

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 22,156	$ 23,036	$ 23,951	$ 24,903	$ 25,892	$ 26,920	$ 27,989	$ 29,101
Total Incremental Costs of Students to SD 204 from Development	$ 37,909	$ 39,415	$ 40,980	$ 42,608	$ 44,301	$ 46,060	$ 47,890	$ 49,792

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 30,257	$ 31,459	$ 32,709	$ 34,008	$ 35,359	$ 36,763
Total Incremental Costs of Students to SD 204 from Development	$ 51,770	$ 53,827	$ 55,965	$ 58,188	$ 60,499	$ 62,902

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 204
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	1.71	1.71	1.71	1.71	1.71	1.71
Total Operational Cost Per Student	$ 38,224	$ 39,742	$ 41,321	$ 42,962	$ 44,669	$ 46,443
Total Incremental Costs of Students to SD 204 from Development	$ 65,401	$ 67,999	$ 70,700	$ 73,508	$ 76,428	$ 79,464

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 15,530	$ 16,147	$ 16,788	$ 17,455	$ 18,148	$ 18,869	$ 19,619	$ 20,398
Total Incremental Costs of Students to SD 106 from Development	$ 131,508	$ 136,732	$ 142,163	$ 147,810	$ 153,681	$ 159,786	$ 166,133	$ 172,732

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 21,208	$ 22,051	$ 22,927	$ 23,838	$ 24,784	$ 25,769
Total Incremental Costs of Students to SD 106 from Development	$ 179,593	$ 186,727	$ 194,144	$ 201,856	$ 209,874	$ 218,211

McNaughton Devleopment
Heritage Crossing
Fiscal Impact Analysis
School District 106
Cost Per Student Projection

	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Total Annual Number of Students	8.47	8.47	8.47	8.47	8.47	8.47
Total Operational Cost Per Student	$ 26,793	$ 27,857	$ 28,963	$ 30,114	$ 31,310	$ 32,554
Total Incremental Costs of Students to SD 106 from Development	$ 226,879	$ 235,891	$ 245,261	$ 255,003	$ 265,133	$ 275,664

Heritage Crossing
Western Springs
Construction Schedule, Routing & Phasing
October 11, 2024

Construction Schedule

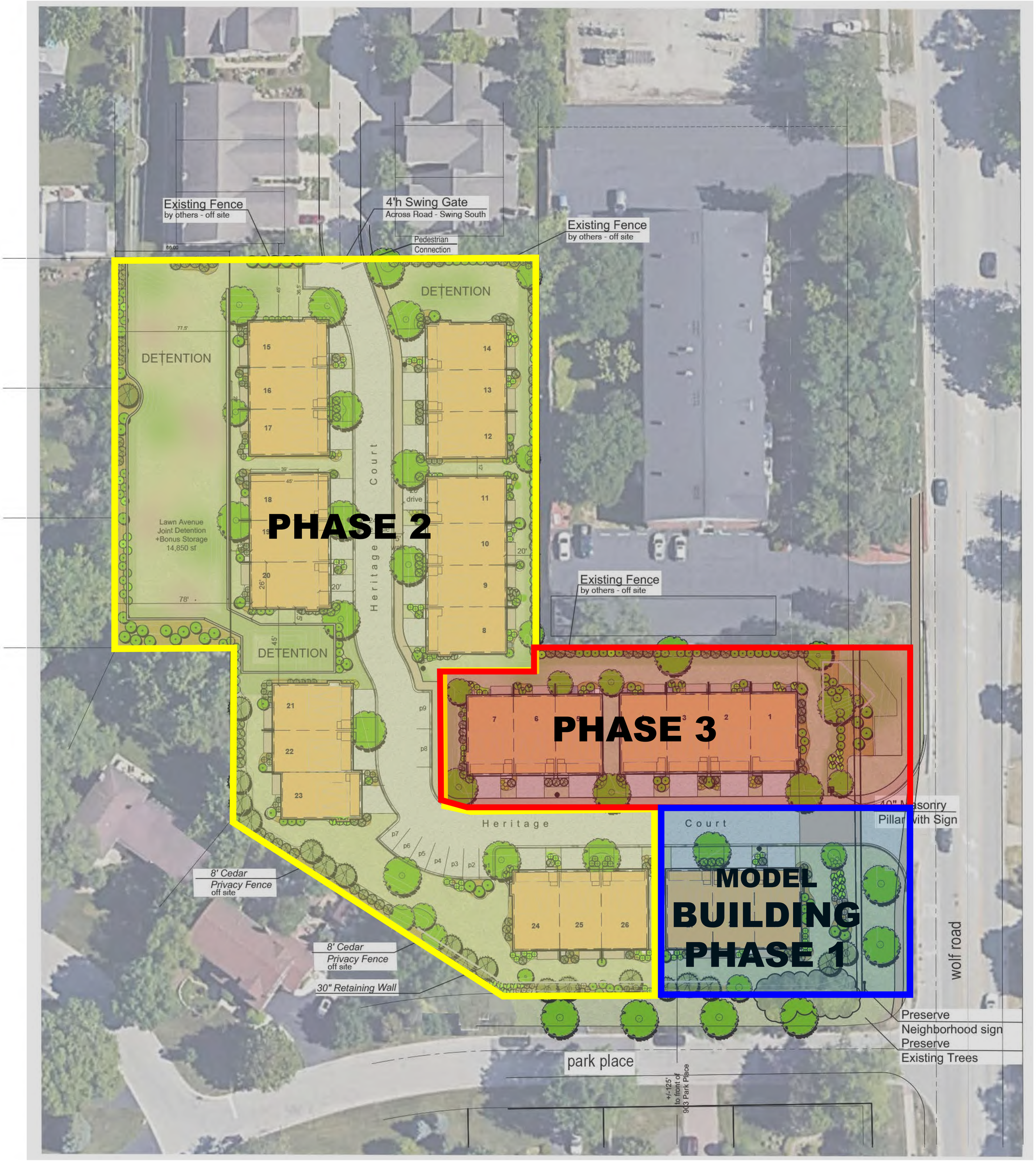
- Building demolition & site clearing of parking lot **– 1/13/025 – 2/7/2025**
- Site development work - **2/9/2025 – 4/18/2025**
    - Removal of existing storm sewer
    - Pond excavation and site grading
    - Commence construction on model home building Units #26 - # 28
    - Installation of new underground utilities – sanitary sewer, storm sewer and water main
    - Retaining wall construction
    - Site grading
    - Paving
- Commence construction on Units # 8 thru # 20 - **4/21/2025**
- Landscape – **5/5/2025 – 6/20/2025**
    - Native planting pond bottom / trees and shrubs
    - Fence replacement neighbors southwest of the site
    - Entryway landscaping
    - Installation of access gate at the existing Heritage Court
    - Common area landscaping to be complete with surrounding rowhome units
- Model Grand Opening - **9/5/2025**
- Commence construction on Units # 1 thru # 7 & # 21 thru #25 **– 1/5/2026**
- Close out sales - **12/31/2026**

Routing

All construction traffic will access and leave the property via the subdivision entrance at Wolf Road. Access to and from 55th Street via the existing Heritage Court is prohibited.

Phasing

- All development work shall be completed in a single phase of work
- To promote an orderly development of the site construction of the units will be completed in three phases according to the dates reference above
    - Model Building Units #26 - # 28
    - Northern Buildings Units # 8 thru # 20
    - Southern Buildings Units # 1 thru # 7 & # 21 thru #25



North

0 30 60 120

McNaughton DEVELOPMENT, INC.
YOUR LUXURY HOME BUILDER

SITE PLAN
Heritage Crossing
Western Springs, Illinois

Revised: November 5, 2024

BSB DESIGN
BSBDESIGN.COM

L0.01
Site Plan

The drawings presented are illustrative of character and design intent only, and are subject to change based upon final design considerations (i.e. applicable codes, structural, and MEP design requirements, unit plan / floor plan changes, etc.)

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Exhibit "E"

Construction Schedule

(attached)

Group Exhibit "F"

Confidential Developer Letter of funding sources for completion of the Development and Supporting Submittals and Developer's Lender's Financing Commitment Letter issued by _____ Bank and dated _____, 2025

(not attached; on file with the Village Clerk's Office)

Exhibit "G"

Operations and Maintenance Manual and Specifications and Maintenance Schedule for Stormwater Conveyance System

(attached)

Exhibit "H"

Forms of Letters of Credit

(attached)

R**EQUIRED FORM OF PERFORMANCE LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT NO.**
AMOUNT: $
EXPIRATION DATE: Two years after issuance
DATE OF ISSUE: _____202___.

[Name of Bank]
[Address]

TO: Village of Western Springs (Beneficiary)
740 Hillgrove Avenue
Western Springs, Illinois 60558
Attention: Village Manager

_____ BANK HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the UP TO AN AGGREGATE AMOUNT OF _____ United States Dollars ($_____) for account of [Developer], a _____limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words:

Drawn under _____.
Credit No. Dated: _____202___.

Drafts may be for all or any portion of the amount of this Letter of Credit, and shall be generally in the form of the sample draft attached hereto as Exhibit "1," and shall be accompanied by one of the following documents executed by the Western Springs Village Manager:

(a) A written statement on the form attached hereto as Exhibit "2" stating that, conditioned upon proper notice to the Western Springs Village Manager, Letter of Credit No. ___will expire within thirty (30) calendar days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No. ___; or

(b) A written statement on the form attached hereto as Exhibit "3" stating that all or any part of the Infrastructure as defined in and required to be constructed by the Customer / [Developer] pursuant to "An Agreement _____ (the "Development Agreement") have not been constructed in accordance with the Development Agreement and any cure period has expired; or

(c) A written statement on the form attached hereto as Exhibit "4" stating that all or any part of the costs, payments, permit fees, or other fees required to be paid to the Village of Western Springs by the Customer / [Developer] pursuant to the Development Agreement have not been paid in accordance with the Development Agreement and any cure period has expired; or

(e) A written statement on the form attached hereto as Exhibit "5" stating that all or any portion of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement has not been performed in accordance with the Development Agreement and any cure period has expired.

(f) A written statement on the form attached hereto as Exhibit "6" stating that the aggregate amount of the Letter of Credit may be reduced under Subsection __ of the Development Agreement in a certain amount.

_____[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated Expiration Date or presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on or before that date. Further, one or more drafts may be presented at [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, litigation and court costs, and other expenses incurred by the Village of Western Springs in enforcing the terms of this Letter of Credit.

3. This Letter of Credit shall expire on _____, 20___, (two (2) years from issuance) as stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice).

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager as provided in Paragraph (f) above stating that the aggregate amount of this Letter of Credit may be reduced in a specified amount as provided in Subsection ___ of the Development Agreement.

6. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term “banking day” means any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed, and a day on which payments can be effected on the Fedwire Network.

[Signature of Bank Officer] [Signature of Bank Officer]
[Officer’s Title] [Officer’s Title]

EXHIBIT “1” TO FORM OF IRREVOCABLE LETTER OF CREDIT

DRAFT (sample) , 20___ $

(place) (date) (amount in figures USD)

PAY TO THE ORDER OF: US DOLLARS (amount in words) for value received and charge to the account of:

(Letter of Credit applicant name and address)

TO:

(name of Drawee Bank)

(address)

By: _____

EXHIBIT "2" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ------
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that Letter of Credit No. _____ dated _____, 20___ in the amount of $_____will expire within thirty (30) days or less and that the Customer / [Developer] has failed to deliver to the Western Springs Village Manager evidence of a renewal of Letter of Credit No.____.

The Funds of this LOC that are be are being drawn upon by the Village of Western Springs as a consequence of the failure of the Customer / [Developer] to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC relative to above-referenced Project that are defined in more detail in the LOC.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to timely renew the LOC, arrange for the extension of the LOC or provide for an acceptable replacement LOC, in an amount agreed upon by the Beneficiary and the Customer [Developer], at least thirty (30) days prior to the Expiration Date of the LOC.

2. [Bank] has not delivered to the Village by registered letter, return receipt requested, or other courier service addressed to the attention of the Village President, any notice of expiration of the LOC as required under the SPECIAL CONDITIONS at Page 2 of the LOC.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT "3" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the Infrastructure required to be constructed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and [Developer] has not been constructed in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT "4" TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. _____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____, 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the "Beneficiary" under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to pay all or any part of the costs, payments, permit fees, or other fees required to be paid by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and [Developer] in accordance with the Development Agreement and any cure period has expired.

Amount of Draft: _____Dollars ($_____).

Immediately Payable to: Village of Western Springs.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT “5” TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Draw Under Letter of Credit No. ____
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Funds of the LOC that are due and payable to the Village of Western Springs are being drawn upon as a consequence of the failure of the Customer / [Developer] to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated _____ , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

As the Village Manager of the Village of Western Springs (the “Beneficiary” under the LOC), I certify and state under oath that:

1. The Customer / [Developer] has failed to complete all or any part of the maintenance, repair, or restoration required to be performed by the Customer / [Developer] pursuant to the Development Agreement dated , 20___ by and between the Village of Western Springs and such work has not been performed by the [Developer] in accordance with the Development Agreement and any cure period has expired.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

EXHIBIT “6” TO FORM OF IRREVOCABLE LETTER OF CREDIT

To: [BANK]

Attn: Bank Officer

Re: Reduction of Dollar Amount of Letter of Credit No.
Project: [Insert Project Description]
Customer / [Developer]

To Whom It May Concern:

This is to advise you that the Customer / [Developer] has satisfactorily completed and the Village of Western Springs has accepted certain Infrastructure work and, under Subsection __ of the Development Agreement, the aggregate amount of the Letter of Credit may be reduced in the following amount to reimburse the Developer for payment of that work: $_____.

If you have any questions regarding this letter, please contact me.

Sincerely,

Western Springs Village Manager

cc. President and Board of Trustees
Deputy Village Manager
Finance Director
Community Development Director
Village Engineer
Village Attorney

REQUIRED FORM OF GUARANTY LETTER OF CREDIT IRREVOCABLE LETTER OF CREDIT NO.

AMOUNT:
EXPIRATION DATE: Two years from issuance
DATE OF ISSUE:
[Name of Bank]
[Address]

TO: Village of Western Springs (Beneficiary)
740 Hillgrove Avenue
Western Springs, Illinois 60558
Attention: Village Manager

[BANK] HEREBY AUTHORIZES YOU TO DRAW AT SIGHT on the _____ UP TO AN AGGREGATE AMOUNT OF _____United States Dollars ($ _____) for account of [Developer], a _____limited liability company ("Customer").

Drafts under this Letter of Credit shall bear upon their face the words: Drawn under Credit No. ____ Dated: _____, 202___.

Drafts may be for all or any portion of the amount of this Letter of Credit and shall be accompanied by one of the following documents executed by the Western Springs Village Manager on the form attached hereto as Exhibit "A" stating that all or any portion of the maintenance, repair, or restoration required to be performed related to Public Infrastructure pursuant to the Development Agreement in accordance with the Development Agreement has not been properly performed.

[BANK] HEREBY AGREES with the beneficiary Village of Western Springs that:

1. Drafts drawn under and in compliance with this Letter of Credit shall be duly honored immediately upon presentation to [BANK] if presented on or before the above-stated expiration date or presented at the [BANK] office located at [ADDRESS] together with the original of this Letter of Credit on or before that date. Further, one or more drafts may be presented at the [BANK] office on or before the Expiration Date.

2. If, within three (3) banking days after any draft drawn under this Letter of Credit is presented to [BANK] in conformance with the terms of this Letter of Credit, [BANK] fails to honor same, [BANK] agrees to pay all attorneys' fees, courts costs, and other expenses incurred by the Village of Western Springs in enforcing the terms hereof.

3. This Letter of Credit shall expire on _____, 20___, (two (2) years from issuance) as stated hereinabove; provided, however, this Letter of Credit shall only expire after [BANK] sends a written notice to the Western Springs Village Manager by certified mail, return receipt requested, or hand-delivered courier at least thirty (30) calendar days prior to the Expiration Date or such extended Expiration Date, that informs the Village that this Letter of Credit is about to expire (the "30-Day Expiration Notice).

4. In no event will this Letter of Credit or the obligations contained herein expire except after the 30-Day Expiration Notice required herein is delivered to the Western Springs Village Manager, it being expressly agreed that the above Expiration Date shall be extended by the number of calendar days as is required to comply with the 30-Day Expiration Notice delivery requirement.

5. No consent, acknowledgment, or approval of any kind from the Customer / [Developer] shall be necessary or required prior to honoring any draft presented in conformance with the terms of this Letter of Credit.

6. The aggregate amount of this Letter of Credit may be reduced only upon receipt by [BANK] of a document executed by the Western Springs Village Manager stating that the aggregate amount may be reduced in a certain amount because the guarantee period for certain maintenance, repair, or restoration amount has expired.

7. This Letter of Credit is irrevocable.

This Letter of Credit shall be governed by and construed in accordance with the Uniform Customs and Practices for ISP 98 of the International Chamber of Commerce (the "Uniform Customs"). In the event of a conflict between this Letter of Credit and the Uniform Customs, this Letter of Credit shall control. This Letter of Credit shall be deemed to be a contract made under the laws of the State of Illinois, including without limitation Article 5 of the Uniform Commercial Code as in effect in the State of Illinois and shall, as to matters not governed by the Uniform Customs, be governed by and construed in accordance with the Laws of the State of Illinois, without regard to principles of conflicts of law.

As used herein, the term "banking day" means (a) any day other than a Saturday, Sunday, or a day on which banks in the State of Illinois are authorized or required to be closed and (b) any day on which payments can be effected on the Fedwire Network.

[Signature of Bank Officer] [Signature of Bank Officer]
[Officer's Title] [Officer's Title]

Exhibit "I"

Written Consent and Waiver Of Casey Gaik And Fran Gaik To Allow McNaughton Development, LLC To Enter Into A Redevelopment And Maintenance Agreement And Other Related Documents Regarding The Proposed Heritage Crossing Subdivision Located At 5600 South Wolf Road In The Village Of Western Springs, Cook County, Illinois

(attached)

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that the attached document is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION AUTHORIZING THE APPROVAL AND EXECUTION OF A REDEVELOPMENT AND MAINTENANCE AGREEMENT BY AND BETWEEN THE VILLAGE OF WESTERN SPRINGS, ILLINOIS AND MCNAUGHTON DEVELOPMENT, LLC FOR THE HERITAGE CROSSING RESIDENTIAL TOWNHOME DEVELOPMENT (5600 South Wolf Road, Western Springs, Illinois)

which was passed by a roll call vote of the Village President and Board of Trustees of the Village of Western Springs at a Regular Meeting thereof, held on the __ day of _____, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the ___ day of _____, 2025.

I further certify that the vote on the question of the passage of the Resolution by the Village President and Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Village President and Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs this ___ day of _____, 2025.

_____
Edward Tymick, Village Clerk

ORDINANCE NO. 25-_____
VOTE:
AYES:
NAYS:
ABSENT:
ABSTAIN:
DATE: _____, 2025.
OTHER: Published in Pamphlet Form.

AN ORDINANCE APPROVING A MINOR AMENDMENT TO THE CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT ISSUED FOR THE WESTERN SPRINGS TOWNHOMES SUBDIVISION (THE "HERITAGE SPRINGS SUBDIVISION") LOCATED SOUTH OF 55TH STREET AND WEST OF WOLF ROAD IN WESTERN SPRINGS, ILLINOIS RELATIVE TO CONSTRUCTION OF ON-STREET PARKING SPACES WITHIN HERITAGE COURT.

WHEREAS, the Heritage Springs Owners Association (the "HS Association") is the current owner of the Common Area (defined below) within the Western Springs Townhomes Subdivision (the "Heritage Springs Subdivision"), which is located south of 55th Street immediately adjacent to the vacated Lawn Avenue right-of-way and west of Wolf Road in Western Springs, Illinois. The Subdivision consists of fourteen (14) single-family townhome units and the Common Area developed by former owner / developer Gammonley Group, which are shown on the "Final Plat of Subdivision Western Springs Townhomes" (the "Subdivision Plat"), a copy of which is incorporated herein by reference. The Subdivision Plat was filed on March 29, 1999, with the Cook County Recorder of Deeds Office and marked with Recording Number 99297584. The legal description of the Common Area is described as follows:

> Common Area shown in the Western Springs Townhomes Subdivision, being a subdivision of the East ½ of the Northeast ¼ of Section 18, Township 38 North, Range 12 East of the Third Principal Meridian, according to the plat thereof recorded March 29, 1999, as Document No. 99297584 in Cook County, Illinois.
>
> PIN: 18-18-200-059-0000.
>
> Common address: 5500 Heritage Court, Western Springs, Illinois; and

WHEREAS, pursuant to the Village-approved Final Plans and Subdivision Plat, the HS Association, or the Gammonley Group, completed certain improvements to the Common Area that support the townhomes, including the installation of a sanitary sewer main and sanitary sewer services to each of the townhomes, a storm sewer system and detention system, a private street (named "Heritage Court"), a parking area, including curb and gutter and pavement markings and a vehicle turnaround, street lights, a sidewalk system, driveway aprons, a water main and water service lines to each of the townhomes, a fire hydrant system, and all fencing and retaining wall systems (the "Improvements"); and

WHEREAS, on March 24, 2014, with the passage of Ordinance No. 14-2747, the President and Board of Trustees of the Village (the "Corporate Authorities") accepted title to and ownership and maintenance responsibility only for certain Improvements located in the Common Area, consisting of the water main, streetlights and fire hydrant system (the "Accepted Public Improvements") in accordance with the applicable provisions of Section 10-10-19 (Land Dedications and Completion, Maintenance and Acceptance of Improvements) of the Development Control Ordinance of the Western Springs Municipal Code ("DCO"). The Accepted Public Improvements are further described and depicted in the "Bill of Sale for the Accepted Public Improvements in the Western Springs Townhomes Subdivision," and are further shown on the Utility and Grading As-Built Plan (Heritage Springs Townhomes, Western Springs, Illinois

dated September 29, 2007, as amended by James J. Benes & Associates, Inc. dated January 28, 2014) (the "As-Built Plan"), copies of which are attached as Exhibits to Ordinance No. 14-2747; and

WHEREAS, with the passage of Resolution No. 14-2747, the Corporate Authorities of the Village also approved and entered into a document with the HS Association titled "Cost Sharing Maintenance Agreement for the Private Street (Heritage Court) Located in the Western Springs Townhomes Subdivision". Under this Agreement, Heritage Court remained a private street, with continued ownership and maintenance responsibility remaining with the HS Association, but, at the request of the HS Association, the Village agreed to include any street resurfacing work or replacement work in regard to Heritage Court in a Village street repair bidding process and agreed to have the selected contractor perform such work to Heritage Court, provided that the HS Association pays to the Village ninety percent (90%) of the costs to complete such work. The Village agreed to pay ten percent (10%) of the costs to complete the work to Heritage Court in recognition that there is public use of Heritage Court. Based on traffic data provided by the Village staff and the Village Engineer, the President and Board of Trustees of the Village determined that Heritage Court is used for public traffic ten percent (10%) of the time. Heritage Court is shown on the As-Built Plan; and

WHEREAS, McNaughton Development, LLC (the "Developer"), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The Property is immediately adjacent to and south of the Heritage Springs Subdivision. The application and proposed site plan have been processed as a planned development. After the required public hearing was conducted by the Western Springs Plan Commission, the Plan Commission issued Recommendation No. 24-02, which favorably recommended Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development; and

WHEREAS, on **February 10, 2025, with the passage of Ordinance No. 25-_____,** the Corporate Authorities of the Village approved the application and zoning relief and granted a conditional use permit for a planned development to allow the Developer to construct the Development, subject to a number of development conditions, including the construction of an extension of existing Heritage Court right-of-way by the Developer from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately owned street and will be maintained by the homeowners association of the Heritage Crossing Subdivision ("HC Association"). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the Developer and maintained by the HC Association, and access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights; and

WHEREAS, as part of the proposed Development application, the Developer has entered into an "*Agreement for Certain Improvements within Heritage Springs and to Heritage Court*" with the HS Association for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of three (3) on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision. The Developer, with the consent of the HS Association, has requested a minor amendment to the Conditional Use Permit for Planned

Development issued for the Heritage Springs Subdivision to construct the above-mentioned parking spaces (the "Minor Amendment") as part of its amended Application for the Development filed with the Village on May 23, 2024. Copies of the "*Agreement for Certain Improvements within Heritage Springs and to Heritage Court" and* the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated January 27, 2025 and prepared by Design Tek Engineering, Inc. are attached as **Group Exhibit "A"** and made a part hereof; and

WHEREAS, Village Manager Ellen Baer has issued a recommendation dated December 26, 2024 in support of an approval by the Corporate Authorities of the Village of the Minor Amendment ("Village Manager Recommendation"), a copy of which is attached hereto as **Exhibit "B"** and made a part hereof; and

WHEREAS, at open public meetings held on **January 9, 2025 and January 16, 2025** the Village's Planning and Zoning Committee ("Committee") reviewed and discussed the Minor Amendment and the Village Manager Recommendation, and received input from the Village staff on the matter, and provided an opportunity for public input on the matter. At its January 16, 2025 meeting, the Committee recommended that the Corporate Authorities of Village **consider** the Minor Amendment; and

WHEREAS, at open public meetings held on **January 13, 2025, January 27, 2025 and February 10, 2025,** the Corporate Authorities of Village reviewed and discussed the Committee's recommendation and the Village Manager Recommendation regarding the Minor Amendment, and received input from the Village staff on the matter and provided an opportunity for input from the public on the matter. At its _____, 2025 meeting, the Corporate Authorities of the Village accepted the Committee's Recommendation and the Village Manager Recommendation regarding approval of the Minor Amendment, finding that:

A. A minor modification of the Conditional Use Permit / Planned Development is not a major modification that will alter or change the essential character or operation of the Conditional Use Permit / Planned Development, as approved and/or amended, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO. While this zoning relief does not require approval of the Village Board, **it does require approval of the Village Manager, and the Village Manager has expressed her support for the zoning relief, provided the Village Board approves the zoning relief as well**; and

B. A minor change to the Final Plan of the Conditional Use Permit / Planned Development is not a major change because the changes to the final plan will not alter the concept or intent, increase the density, increase building coverage, decrease the separation between buildings beyond the required setbacks, change the uses of the site, increase building height, reduce open space, change by more than fifteen percent (15%) the proportion of housing types, change road standards or locations, change sewer, water or electrical utilities, change proposed drainage, change the final governing agreements of the planned development, or change the development schedule by more than six (6) months, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO. **This zoning relief requires approval of the Village Board**; and

WHEREAS, in accordance with the authority granted by Sections 11-13-1 and 11-13-1.1 of the Illinois Municipal Code (65 ILCS 5/11-13-1 and 11-13-1.1) and the applicable provisions of the DCO, the Village President and Board of Trustees of the Village of Western Springs approve the Minor Amendment, as requested by the Developer, subject to the conditions contained in Section 3 below of this Ordinance, and find that the approvals set forth in this Ordinance are protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public.

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1. Incorporation. The above recitals are incorporated by reference into Section 1 of this Ordinance as material terms and provisions.

SECTION 2. Approval of Zoning Relief. The President and Board of Trustees of the Village of Western Springs find just cause to approve the Zoning Relief relative to the Property, subject to the conditions set forth in Section 3 below:

1. Approval and issuance of a minor amendment to the Conditional Use Permit / Planned Development to allow the construction of three (3) on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision as set forth in the Application in accordance with Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO and Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO.

SECTION 3. Conditions of Zoning Relief. The above zoning relief and development approvals are SUBJECT TO THE FOLLOWING CONDITIONS:

A. The Improvements are conditioned upon and subject to compliance with the Village Chief Code Officer's zoning and plan review recommendations and requirements.

B. Each of the conditions set forth in all prior Village Ordinances approved relative to the Western Springs Townhomes Subdivision and the Conditional Use Permit for Planned Development and any other Village-approved zoning relief for the Western Springs Townhomes Subdivision remain in effect, unless expressly superseded by the approvals, provisions and conditions of this Ordinance or a prior Village-approved Ordinance.

SECTION 4. Severability. The sections, terms, provisions and conditions of this Ordinance shall be severable, and if any section, term, provision or condition is found to be invalid or unenforceable for any reason by a court of competent, final jurisdiction, the remaining sections, terms, provisions and conditions shall remain in full force and effect.

SECTION 5. Repealer. Any ordinance, or portion thereof, in conflict with this Ordinance is repealed to the extent of such conflict. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only by mutual agreement of the Applicant and the Village or unless amended by an ordinance approved by the Village Board after the required public hearing.

SECTION 6. Termination of Ordinance for Failure of Developer to Acquire Title to the Property. This validity of this Ordinance is subject to the Developer purchasing the Property from the Property Owner. In the event the Developer does not purchase the Property from the Property Owner, upon written notice delivered to the Village Manager of the termination of the real estate purchase contract entered into between the Property Owner and the Developer, this Ordinance shall automatically terminate without further action by the Corporate Authorities of the Village and shall be void and unenforceable. If the Developer does not purchase the Property, the Developer agrees to waive all claims, causes of action and damages of any kind that the Developer could file against the Village arising out of or related to the termination of this Ordinance. If the Developer does not purchase the Property, the Heritage Springs Owners Association agrees to waive all claims, causes of action and damages of any kind that the Heritage Springs Owners Association could file against the Village arising out of or related to the termination of this Ordinance based on the Developer not purchasing the Property. The Developer is required to provide written notice to the Village within five (5) calendar days of the termination of the real estate purchase contract.

SECTION 7. Recording; Covenants That Run With The Land. Upon approval by the President and Board of Trustees of the Village of Western Springs, a certified copy of this Ordinance shall be filed with the Cook County Clerk's Office, Recording Division ("CCCORD") by the Village, at the Applicant's cost. The Village shall provide the Applicant with a file stamped copy of this Ordinance after it is filed with the County Clerk. The terms, provisions and conditions set forth in this Ordinance, including those incorporated herein by reference, are covenants that run with the land and shall be released or amended only upon the written consent of the President and Board of Trustees of the Village of Western Springs.

SECTION 7. Effective Date. This Ordinance shall be in full force and effect from and after its adoption, approval and publication as provided by law.

PASSED by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the ____ day of _____, 2025, and approved by me as President on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

This Ordinance was published by me in pamphlet form on ___ day of _____, 2025.

_____
Edward Tymick, Village Clerk

Group Exhibit "A"

"*Cross-Access Agreement*" dated February 5, 2025 by and between Heritage Springs Owners Association and McNaughton Development, LLC

and

Amended Site Plan for Heritage Court Parking Spaces Within the Heritage Springs Subdivision dated January 27, 2025 and prepared by Design Tek Engineering, Inc.

(attached)

THIS DOCUMENT PREPARED BY
AND AFTER RECORDING MAIL TO:

Olguin Law LLC
Attention: James E. Olguin
16101 108th Ave., First Floor
Orland Park, IL 604671

CROSS-ACCESS AGREEMENT

This Cross-Access Agreement (the "Agreement") is entered into as of February 5th, 2025, by and between Heritage Crossing Homeowners Association, [an Illinois not-for-profit corporation (to be formed] (the "Heritage Crossing"), McNaughton Development, LLC, an Illinois limited liability company ("McNaughton"), and Heritage Springs Owners Association, an Illinois not-for-profit corporation ("Heritage Springs"), collectively referred to as the "Parties."

RECITALS

WHEREAS, Heritage Springs is a subdivision containing fourteen (14) residential townhome units located south of 55th Street immediately adjacent to the vacated Lawn Avenue right-of-way and west of Wolf Road in Western Springs, Illinois, and is served by a private street known as Heritage Court;

WHEREAS, McNaughton is the developer of the Heritage Crossing development;

WHEREAS, Heritage Crossing is a subdivision that shall contain twenty-nine (29) residential townhome units, located at 5600 South Wolf Road, Western Springs, Illinois, south of and adjacent to Heritage Springs;

WHEREAS, as part of the Heritage Crossing development, McNaughton shall extend the private street known as Heritage Court from its south terminus in the Heritage Springs development through the Heritage Crossing development to its connection point at Wolf Road, with such new portion of Heritage Court to remain privately owned and maintained by Heritage Crossing;

WHEREAS, vehicle access on Heritage Court between Heritage Springs and Heritage Crossing will be controlled by a swing gate and gate access, which will be installed by McNaughton and maintained by Heritage Crossing, with access granted only to residents of both

Heritage Springs and Heritage Crossing with clicker access and Village of Western Springs emergency service vehicles.

WHEREAS, the Parties acknowledge that cross-access between the Heritage Crossing development and the Heritage Spring development via Heritage Court is in the best interest of both communities and is essential to ensure accessibility and cooperation;

WHEREAS, the Parties own and/or manage separate properties, as identified in this Agreement, which benefit from and are subject to the provisions set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. Recitals. The foregoing Recitals are incorporated herein as though fully set forth in this Paragraph 1.

2. Identification of Properties

2.1 **Heritage Crossing Property**: The property hereinafter referred to as the "Heritage Crossing Property" is currently owned by the McNaughton. The common area, including the future extension of Heritage Court from the Heritage Springs unto the Heritage Crossing Property, will be conveyed to the Heritage Crossing after the completion of the Heritage Crossing development at the McNaughton's discretion. The Heritage Crossing Property is legally described on attached "Exhibit A."

2.2 **Heritage Springs Property**: Heritage Springs owns the property located in the Heritage Springs development, hereinafter referred to as "Heritage Springs Property," including the existing portion of Heritage Court. The Heritage Springs Property is legally described on attached "Exhibit B."

3. Grant of Cross-Access Rights

3.1 Heritage Crossing hereby grants to Heritage Springs, and to its owners, members, residents, successors, heirs, assigns, contractors and invitees forever, a perpetual, non-exclusive right to access and use Heritage Court located on the Heritage Crossing Property for vehicular and pedestrian ingress and egress purposes.

3.2 Heritage Springs hereby grants to Heritage Crossing, and to its owners, members, residents, successors, heirs, assigns, contractor and invitees forever, a perpetual, non-exclusive right to access and use Heritage Court located on the Heritage Springs Property for vehicular and pedestrian ingress and egress purposes.

3.3 Both Parties agree, that during the term of this Agreement, no walls, fences or barriers of any sort or kind whatsoever that prevent or impair the use of Heritage Court, or the exercise or performance of any of the purposes stated herein, will be constructed, maintained, or permitted on Heritage Court, or any portion thereof, by Heritage Crossing or Heritage Springs.

4. Development Improvements

4.1 McNaughton, at its sole cost and expense, shall be solely responsible to obtain and procure all permits and any other items needed to make the following improvements (the "Development Improvements"):

(a) Install an automated swing or slide gate with a wrought iron appearance (the "Gate") on Heritage Court at the approximate location of the existing terminus on the Heritage Springs Property. For the avoidance of doubt, the Gate will be located on the Heritage Crossing Property.

(b) Ensure the Gate opens onto the Heritage Crossing Property if a swing gate is utilized.

(c) Provide remote operation devices for the Gate, or other secure means access, to all members of Heritage Crossing and Heritage Springs.

(d) Ensure no construction traffic shall utilize Heritage Court north of the Gate on the Heritage Springs Property, employing reasonable measures such as signage, temporary fencing, or other barriers.

(e) Install signage along 55th Street on the Heritage Springs Property indicating "No Outlet / Private Street."

(f) Install signage on the Heritage Springs Property as necessary to conform with the parking enforcement agreement with the Village of Western Springs and street striping.

4.2 Upon the completion of the Development Improvements identified above, McNaughton's obligations under this Agreement shall terminate, and repair and maintenance of the Development Improvements shall be the sole responsibility of Heritage Crossing. Heritage Springs shall bear no obligation or financial responsibility for the Development Improvements, including but not limited to maintenance, repair, or restoration of the Development Improvements. Notwithstanding the foregoing, the Heritage Crossing may charge any member of either Heritage Crossing or Heritage Springs the reasonable replacement cost of any additional, lost, or broken remote operating devices requested by said member.

4.3 McNaughton agrees to indemnify and defend Heritage Springs against any and all claims, actions, or demands, judgments, awards, costs or expenses, including reasonable attorney's fees, arising out of or in any way connected to any activities of McNaughton in relation to the Development Improvements.

5. Snow Removal and Maintenance Cooperation

5.1 Heritage Crossing and Heritage Springs shall jointly hire a snow removal service for Heritage Court. Costs of snow removal and maintenance shall be shared as follows:

(a) Heritage Crossing shall pay 65% of the cost of snow removal.

(b) Heritage Springs shall pay 35% of the cost of snow removal.

(c) Driveway clearing shall remain the individual responsibility of the members of each of Heritage Crossing and Heritage Springs in accordance with their respective declarations, as may be amended, from time to time.

5.2 Any changes to the Gate or the shared snow removal arrangement shall be subject to the mutual approval of both Heritage Crossing and Heritage Springs.

6. Approvals and Compliance

6.1 The Parties acknowledge that the final designs for the Development Improvements and any signage are subject to the approval of the Village of Western Springs.

6.2 Each party shall comply with all laws, ordinances and regulations of any governmental authority.

7. Term and Termination

This Agreement shall remain in effect unless terminated by mutual written agreement of the Parties.

8. Authority and Binding Effect

8.1 **Authority of the Parties**: Each Party represents and warrants that it has taken all necessary actions, including obtaining any required approvals from its members or boards, to enter into this Agreement and to make it binding upon the current and future members of their respective associations.

8.2 **Binding on Members**: This Agreement shall be binding upon and enforceable against the current and future members, residents, and successors of Heritage Crossing and Heritage Springs.

8.3 **Further Actions**: The Parties agree to execute and deliver such additional documents and take such further actions as may be reasonably necessary to fully effectuate the terms and intent of this Agreement.

9. Miscellaneous

9.1 **Amendments**: This Agreement may only be amended in writing signed by authorized representatives of both Parties.

9.2 **Governing Law**: This Agreement shall be governed by the laws of the State of Illinois, without regard to conflict of law principles.

9.3 **Entire Agreement**: This Agreement constitutes the entire understanding of the Parties and supersedes all prior agreements, whether written or oral.

9.4 **Notice:** Any notices required or permitted under this Agreement shall be in writing and shall be delivered to the parties at their respective addresses as may be updated from time to time. Notices may be delivered personally or sent via certified mail

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

Heritage Crossing Homeowners Association

By: _____
Name: Paul P. McNaughton
Title: President

Heritage Springs Owners Association

By: _____
Name: John Latiker
Title: President HSA HOA

McNaughton Development, LLC

By: _____
Name: Paul P. McNaughton
Title: Manager

EXHIBIT A

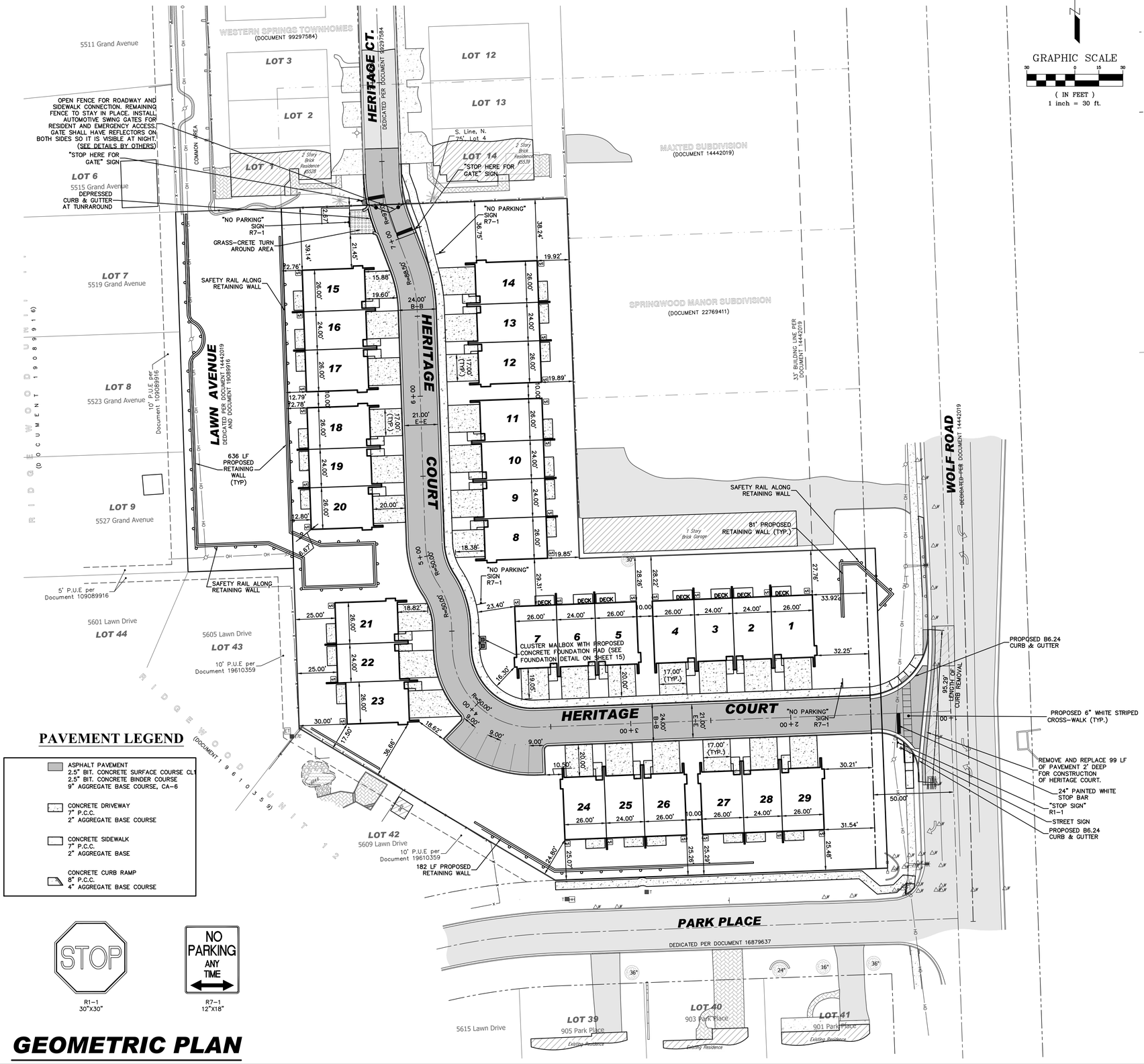
HERITAGE CROSSING

BEING A RESUBDIVISIONOF THE WEST ½ OF LOT 4 (EXCEPT THE NORTH75 FEET THEREOF), LOTS 5 AND 6 IN MAXTED SUBDIVISION BEING A SUBDIVISIONOF THE 473 FEET OF THE NORTH 775.5 FEET (EXCEPT THE EAST 145.2 FEET OF THE WEST 178.2 FEET OF THE NORTH 350 FEET THEREOF) AND LOT 1 IN VIAL'S FAIRWAY, A SUBDIVISIONOF PART OF THE NORTHEAST ¼ OF SECTION18 TOWNSHIP 38 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED APRIL 17 1957 AS DOCUMENT 16879637 AND THAT PART OF LAWN AVENUE VACATED PER DOCUMENT _____ IN COOK COUNY, ILLINOIS.

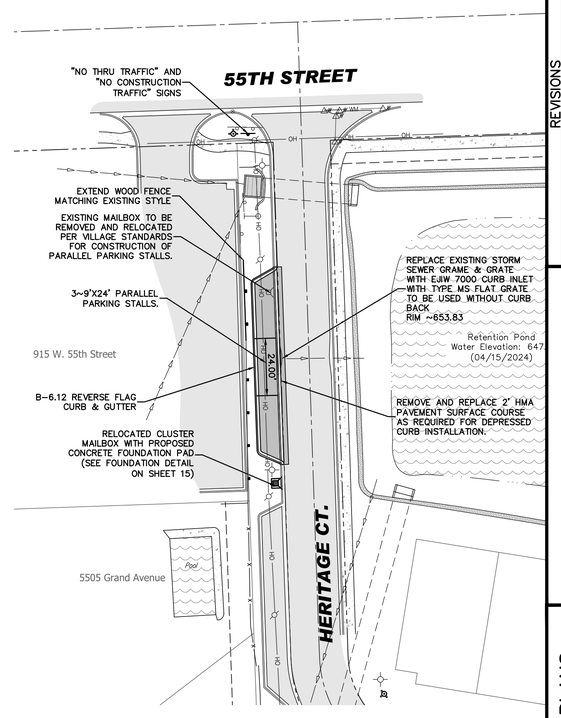
EXHIBIT B

HERITAGE SPRINGS

LOTS 1 TO 14 IN WESTERN SPRINGS TOWNHOME SUBDIVISION, BEING A SUBDIVISION OF THE EAST ½ OF THE NORTHEAST ¼ OF SECTION 18, TOWNSHIP 38 NORTH, RANGE 12, ACCORDING TO THE PLAT THEREOF RECORDED MARCH 29, 1999 AS DOCUMENT NO. 99297584, ALL IN COOK COUNTY, ILLINOIS.



GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.



OFFSITE PARKING PLAN

NOTES:

1. ANY ENCROACHMENT INTO EXISTING MAINLINE PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER SHALL REQUIRE THAT THE PAVEMENT BE MILLED 4 INCHES AND RESURFACED PURSUANT TO IDOT DISTRICT 1 MIX CHART REQUIREMENTS FOR ONE FULL LANE WIDTH AND A MINIMUM LENGTH OF 6 FEET.

SITE DATA

LOT AREA:	105,159	S.F.
	(2.41	AC)
EXISTING COVERAGE:		
2 STORY BRICK BLDG:	20,030	S.F.
PARKING LOT (INCL. CURB):	45,730	S.F.
CONCRETE WALKS:	1,125	S.F.
LOADING DOCK DRIVE:	1,372	S.F.
ASPHALT WALK:	1,465	S.F.
RIP-RAP SWALES:	3,077	S.F.
TOTAL EXISTING IMPERVIOUS	= 72,799	S.F.
	(1.67	AC)
PROPOSED:		
HERITAGE COURT (INCL. CURB):	15,902	S.F.
SIDEWALK:	3,530	S.F.
MAILBOX PEDESTALS:	32	S.F.
G.C. TURN AROUND:	207	S.F.
FOUNDATIONS:	29,549	S.F.
FRONT PORCHES:	290	S.F.
FRONT WALKS & STEPS:	1,888	S.F.
REAR PATIOS:	2,316	S.F.
REAR DECKS:	504	S.F.
DRIVEWAYS:	11,123	S.F.
TOTAL PROPOSED IMPERVIOUS	= 65,341	S.F.
	(1.50	AC)

PAVEMENT LEGEND

- ASPHALT PAVEMENT: 2.5" BIT. CONCRETE SURFACE COURSE CL1; 2.5" BIT. CONCRETE BINDER COURSE; 9" AGGREGATE BASE COURSE, CA-6
- CONCRETE DRIVEWAY: 7" P.C.C.; 2" AGGREGATE BASE COURSE
- CONCRETE SIDEWALK: 7" P.C.C.; 2" AGGREGATE BASE
- CONCRETE CURB RAMP: 8" P.C.C.; 4" AGGREGATE BASE COURSE

R1-1
30"X30"

R7-1
12"X18"

GEOMETRIC PLAN

REVIEW SET
NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	06-17-24	PER LAGRANGE HIGHLANDS SD	DMV
2	10-17-24	PER WSFD FIRE REVIEW	SDD
3	10-17-24	PER VILLAGE REVIEW	SDD
4	11-04-24	PER CDDOTH REVIEW	DMV
5	12-12-24	PER VILLAGE REVIEW	DMV
6	01-27-25	PER REVISED GEOMETRY	DMV

McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste. 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

FINAL ENGINEERING PLANS
FOR
HERITAGE CROSSING
5600 SOUTH WOLF ROAD
WESTERN SPRINGS, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184-003740

DEI

PROJECT INFORMATION
Project No.: 24-0001
Scale: 1" = 30'
Date: MAY 22, 2024
Design By: SDD
Drawn By: DEI
Checked By: SDD

7
OF
20

GEOMETRIC PLAN

L:\Projects\2024\24-0001\Engineering\DWG\Final\24-0001 FE.dwg Plot Date:1/27/2025 2:45:05 PM By:dvanh

Exhibit "B"

Village Manager Ellen Baer Recommendation dated December 26, 2024 in Support of Request for Minor Amendment to the Conditional Use Permit for a Planned Development Issued for the Heritage Springs Subdivision Located South of 55th Street and West of Wolf Road in Western Springs, Illinois Relative to the Construction of On-Street Parking Spaces Within Heritage Court (Requestors: Heritage Springs Owners Association and McNaughton Development, LLC)

(attached)

VILLAGE OF WESTERN SPRINGS
740 Hillgrove Avenue • Western Springs, IL 60558 • 708.246.1800
wsprings.com

VILLAGE PRESIDENT
Heidi Rudolph

VILLAGE TRUSTEES
James Tyrrell
Nicole Chen
Alan Fink
Scott Lewis
Amy Avakian
Philip Nawrocki

VILLAGE CLERK
Edward Tymick

VILLAGE MANAGER
Ellen Baer

DEPUTY MANAGER
Casey Biernacki

DIRECTORS
Patrick Schramm
Matthew Supert
Aleks Briedis
Jeff Koza
John Mastandona
Sean Gilhooley
Heather Valone
Brian Scott

To: **President Heidi Rudolph and the Board of Trustees**
From: **Ellen Baer, Village Manager**
Subject: **Heritage Crossing Townhome Development, 5600 South Wolf Road: Recommendation Regarding Request for Waiver of Planned Development Submittal Requirements**
Date: **December 26, 2024**
CC: **Heather Valone, Director of Community Development**

McNaughton Development, LLC (the "Developer"), the contract purchaser / proposed developer of the 5600 South Wolf Road property (the "Property"), has submitted an application and site plan for the rezoning, subdivision approval, conditional use permit / planned development approval and certain variation approvals to redevelop the Property with twenty-nine (29) unit residential townhomes known as the Heritage Crossing Townhome Development (the "Development"). The Property is immediately adjacent to and south of the Western Springs Townhomes ("Heritage Springs") Subdivision. The application and proposed site plan have been processed as a planned development. The Village's Plan Commission has held and completed the required public hearing (conducted on August 13, 2024, September 24, 2024 and November 18, 2024) and has issued Recommendation No. 24-02, which favorably recommends Village Board approval of the application and the request for zoning and development relief to allow the Developer to construct the Development, subject to a number of development conditions, including the construction of an extension of the existing Heritage Court right-of-way by the Developer from its south terminus in the Heritage Springs Subdivision through the Heritage Crossing Subdivision to its connection point at Wolf Road. The new portion of Heritage Court will remain a privately owned street and will be maintained by the homeowners association of the Heritage Crossing Subdivision ("HC Association"). Vehicle access between the adjacent subdivisions will be controlled by a swing gate and gate access, which will be installed by the Developer and maintained by the HC Association, and access will only be granted to residents of both subdivisions with clicker-access and Village emergency service vehicles. The swing gate will be improved with an Opticom system that will give Village emergency service vehicles access similar to the systems on streetlights.

As part of the proposed Development application, the Developer has entered into an "Development Agreement" with the HS Association for purposes of agreeing to make certain improvements within the Heritage Springs Subdivision, including the construction of on-street parking spaces within privately owned Heritage Court that serves the Heritage Springs Subdivision, as shown on the Amended Site Plan for Heritage Court Parking Spaces Within the Heritage Springs Subdivision ("HS Association") dated December __, 2024 and prepared by DesignTek Engineering, Inc. The Developer, with the consent of the HS Association, has requested a minor amendment to the Conditional Use Permit for Planned Development issued for the Heritage Springs Subdivision to construct the above-mentioned parking spaces (the "Minor Amendment") as part of its amended Application for the Development filed with the Village on May 23, 2024. Copies of the "Development Agreement" and the Amended Site Plan for Heritage Court Parking Spaces within the Heritage Springs Subdivision dated December 26, 2024 and prepared by DesignTek

Engineering, Inc. are attached to this Memo. The Application and its supporting documents are on file with the Community Development Department.

Subject to approval by the Corporate Authorities of the Village, I approve the Minor Amendment, finding that:

A. A minor modification of the Conditional Use Permit / Planned Development is not a major modification that will alter or change the essential character or operation of the Conditional Use Permit / Planned Development, as approved and/or amended, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-3-14(M) (Conditional Uses; Modification Or Intensification) of the DCO. **While this zoning relief does not require approval of the Village Board, it does require approval of the Village Manager and, as the Village Manager, I support the zoning relief, provided the Village Board approves the zoning relief as well**; and

B. A minor change to the Final Plan of the Conditional Use Permit / Planned Development is not a major change because the changes to the final plan will not alter the concept or intent, increase the density, increase building coverage, decrease the separation between buildings beyond the required setbacks, change the uses of the site, increase building height, reduce open space, change by more than fifteen percent (15%) the proportion of housing types, change road standards or locations, change sewer, water or electrical utilities, change proposed drainage, change the final governing agreements of the planned development, or change the development schedule by more than six (6) months, and, therefore, a new Conditional Use Permit / Planned Development is not required. See, Subsection 10-8-5(D)(2) (Changes In The Planned Development: Conditional Uses; Minor Changes In A Final Plan) of the DCO. **This zoning relief requires approval of the Village Board.**

In a separate memo provided in the Village Board packet, Director Heather Valone has provided site plan details that illustrate the Developer's request.

If you have any questions regarding this matter, please feel free to contact Director Valone or me.

ACKNOWLEDGMENT AND CONSENT TO COMPLY WITH THE TERMS, CONDITIONS, OBLIGATIONS AND PROVISIONS SET FORTH IN WESTERN SPRINGS ORDINANCE NO. 25-_____

I, _____, the Board President and Authorized Officer of the Heritage Springs Owners Association, have read and understand each of the above terms, conditions, obligations and provisions contained in this Ordinance, and Heritage Springs Owners Association agrees to be bound by the same.

By:_____

Name:_____
Title: Board President and Authorized Officer of the Heritage Springs Owners Association

Date:_____, 2025.

ATTEST:

By:_____
Notary Public

Date:_____, 2025.

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

CLERK'S CERTIFICATE

I, Edward Tymick, Clerk of the Village of Western Springs, in the County of Cook and State of Illinois, certify that the attached is a true and correct copy of that certain Ordinance now on file in my office, entitled:

ORDINANCE NO. 25-_____

AN ORDINANCE APPROVING A MINOR AMENDMENT TO THE CONDITIONAL USE PERMIT FOR A PLANNED DEVELOPMENT ISSUED FOR THE WESTERN SPRINGS TOWNHOMES SUBDIVISION (THE "HERITAGE SPRINGS SUBDIVISION") LOCATED SOUTH OF 55TH STREET AND WEST OF WOLF ROAD IN WESTERN SPRINGS, ILLINOIS RELATIVE TO CONSTRUCTION OF ON-STREET PARKING SPACES WITHIN HERITAGE COURT

which Ordinance was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting thereof, held on the ____ day of _____, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the ___ day of _____, 2025.

I further certify that the vote on the question of the passage of said Ordinance by the Board of Trustees of the Village of Western Springs was taken by Ayes and Nays and recorded in the minutes of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Ordinance, of which the foregoing is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ____ day of _____, 2025

_____
Edward Tymick, Village Clerk

[SEAL]

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.A.

To: Board of Trustees
From: Jeff Koza, Director of Engineering Services
CC: Ellen Baer, Village Manager
RE: [Project Previously Approved] Updated Agreement Attachment: 2025 MFT Street Resurfacing Program Engineering Agreement with Christopher B. Burke Engineering, Ltd.- IDOT Form (Omnibus Item)

Recommendation

The Public Works and Water Committee reviewed this item at their meeting on February 4, 2025 and recommended the approval of the 2025 MFT Resurfacing Program Engineering Services Agreement Form BLR 05530 with Christopher B Burke Engineering, Ltd.

Summary

This item was previously approved by the Village Board at the September 23, 2024 Board Meeting under Resolution 24-2838. However, inadvertently, the IDOT BLR 05530 Agreement form was omitted from the original document. This IDOT agreement form is required because the Village is using Motor Fuel Tax ("MFT") funds to pay for this engineering work. In order to be compliant with IDOT MFT rules, Staff is recommending the re-approval of the agreement with the BLR 05530 form added to the approved agreement document. The agreement total fee and scope of work is unchanged from the previously approved agreement. The work involves the preparation of design plans and specifications as well as construction observation services for the upcoming 2025 MFT Asphalt Resurfacing Program. Staff is recommending the Board approve the updated agreement document to ensure IDOT and MFT procedures are followed properly.

Financial Impact

There is no change in cost associated with this approval. The fee for the work is included in the 2025 budget.

Recommended Motion

I move to approve the 2025 MFT Resurfacing Program Engineering Services Agreement Form BLR 05530 with Christopher B. Burke Engineering, Ltd.

Strategic Plan Alignment

N/A

File Attachments

1. blr-05530 2025 MFT Program Engineering
2. Resolution No. 25- __ re IDOT Local Public Agency Engineering Services Agreement (IDOT form BLR) - PSA with CBBEL for 2025 MFT A

Illinois Department of Transportation

Local Public Agency
Engineering Services Agreement

Using Federal Funds? ☐ Yes ☒ No

Agreement For: MFT PE-CE

Agreement Type: Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
Western Springs	Cook	25-00106-00-RS	

Project Number	Contact Name	Phone Number	Email
	Jeff Koza, PE	(708) 246-1800	jkoza@wsprings.com

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Various Locations		0.5 mi	

Location Termini: Various

Add Location / Remove Location

Project Description:

Design Engineering, Construction Engineering and Construction of street improvements consisting of HMA surface removal, pavement patching, HMA surface and binder course, driveway R&R, sidewalk R&R, curb and gutter R&R, parkway restoration and other miscellaneous items of work.

Engineering Funding: ☒ MFT/TBP ☐ State ☒ Other — Local

Anticipated Construction Funding: ☐ Federal ☒ MFT/TBP ☐ State ☒ Other — Local

AGREEMENT FOR

☐ Phase I - Preliminary Engineering ☒ Phase II - Design Engineering ☒ Phase III - Construction Engineering

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
Christopher B. Burke Eng., Ltd.	Bryan Welch, PE	(815) 770-2850	bwelch@cbbel.com

Address	City	State	Zip Code
16221 W. 159th Street, Suite 201	Lockport	IL	60441

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

Regional Engineer	Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation
Resident Construction Supervisor	Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT
In Responsible Charge	A full time LPA employee authorized to administer inherently governmental PROJECT activities
Contractor	Company or Companies to which the construction contract was awarded

AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

- [x] EXHIBIT A: Scope of Services
- [x] EXHIBIT B: Project Schedule
- [x] EXHIBIT C: Qualification Based Selection (QBS) Checklist
- [ ] EXHIBIT D: Cost Estimate of Consultant Services (CECS) Worksheets (BLR 05513 or BLR 05514)
- [x] EXHIBIT E : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)
- [x] EXHIBIT F: Specific Fee Rate Calculation
- [ ] _____
- [ ] _____

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA:

   (a) For Preliminary and/or Design Engineering: The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.

   (b) For Construction Engineering: The ENGINEER shall submit invoices, based on the ENGINEER's progress reports, to the LPA employee In Responsible Charge, no more than once a month for partial payment on account for the ENGINEER's work to date. Such invoices shall represent the value, to the LPA of the partially completed work, based on the sum of the actual costs incurred, plus a percentage (equal to the percentage of the construction engineering completed) of the fixed fee for the fully completed work.
7. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of US Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
8. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
9. For Preliminary Engineering Contracts:

   (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARMENT, as defined in Exhibit A (Scope of Services).

   (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affixed the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the DEPARTMENT.

   (c) That the ENGINEER is qualified technically and is thoroughly conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated in Exhibit A (Scope of Services).
10. For Construction Engineering Contracts:

    (a) For Quality Assurance services, provide personnel who have completed the appropriate STATE Bureau of Materials QC/QA trained technical classes.

    (b) For all projects where testing is required, the ENGINEER shall obtain samples according to the STATE Bureau of Materials "Manual of Test Procedures for Materials," submit STATE Bureau of Materials inspection reports; and verify compliance with contract specifications.
11. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COSTS tab in BLR 05513 or BLR 05514).

II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the Professional Services Selection Act (50 ILCS 510) (Exhibit C).
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.
3. For Construction Engineering Contracts:

   (a) To furnish a full time LPA employee to be In Responsible Charge authorized to administer inherently governmental PROJECT activities.

   (b) To submit approved forms BC 775 and BC 776 to the DEPARTMENT when federal funds are utilized.
4. To pay the ENGINEER:

   (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.

   (b) Final Payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

   (c) For Non-Federal County Projects - (605 ILCS 5/5-409)

   (1) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER. Such payments to be equal to the value of the partially completed work in all previous partial payments made to the ENGINEER.

   (2) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in the AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
5. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

   Method of Compensation

   ☐ Percent

   ☐ Lump Sum

   ☒ Specific Rate $84,850.00 (Maximum Fee $150,000)

   ☐ Cost plus Fixed Fee:

   Total Compensation = DL + DC + OH + FF

   Where:
   DL is the total Direct Labor,
   DC is the total Direct Cost,
   OH is the firm's overhead rate applied to their DL and
   FF is the Fixed Fee.

   Where FF = (0.33 + R) DL + %SubDL, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.
   The Fixed Fee cannot exceed 15% of the DL + OH.

   Field Office Overhead Rates: Field rates must be used for construction engineering projects expected to exceed one year in duration or if the construction engineering contract exceeds $1,000,000 for any project duration.
6. The recipient shall not discriminate on the basis of race, color, national original or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C 3801 et seq.).

III. IT IS MUTUALLY AGREED,

1. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General, and the DEPARTMENT; the FHWA or any authorized representative of the federal government, and to provide full access to all relevant materials.

Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.

2. The the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARTMENT, and their officers, agents and employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy. The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.
3. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such materials becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.
4. In the event that the DEPARTMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.
5. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.
6. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
7. The ENGINEER and LPA certify that their respective firm or agency:

   (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,

   (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or

   (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.

   (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,

   (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.

   (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (e) and

   (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.
8. Where the ENGINEER or LPA is unable to certify to any of the above statements in this clarification, an explanation shall be attached to this AGREEMENT.
9. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes included but are not limited to: acts of God or a public enemy; acts of the LPA, DEPARTMENT or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

   If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.
10. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace.

    False certification or violation of the certification may result in sanctions including, but not limited to suspension of contract or

grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or those entity with twenty-five (25) or more employees at the time of issuing the grant or a department, division or other unit thereof, directly responsible for the specific performance under contract or grant of $5,000 or more from the DEPARTMENT, as defined the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

(a) Publishing a statement:

(1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.

(2) Specifying the actions that will be taken against employees for violations of such prohibition.

(3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

(a) abide by the terms of the statement; and

(b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's or contractor's policy to maintain a drug free workplace;

(3) Any available drug counseling, rehabilitation and employee assistance program; and

(4) The penalties that may be imposed upon an employee for drug violations.

(c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(d) Notifying the contracting or granting agency within ten (10) days after receiving notice under part (b) paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.

(e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the DEPARTMENT agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future project. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

11. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).

12. For Preliminary Engineering Contracts:

(a) That tracing, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LPA and that basic survey notes, sketches, charts, CADD files, related electronic files, and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request to the LPA or to the DEPARTMENT, without restriction or limitation as to their use. Any re-use of these documents without the ENGINEER involvement shall be at the LPA's sole risk and will not impose liability upon the ENGINEER.

(b) That all reports, plans, estimates and special provisions furnished by the ENGINEER shall conform to the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Manual or any other applicable requirements of the DEPARTMENT, it being understood that all such furnished documents shall be approved by the LPA and the DEPARTMENT before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

13. For Construction Engineering Contracts:

(a) That all services are to be furnished as required by construction progress and as determined by the LPA employee In Responsible Charge. The ENGINEER shall complete all services herein within a time considered reasonable to the LPA, after the CONTRACTOR has completed the construction contract.

(b) That all field notes, test records and reports shall be turned over to and become the property of the LPA and that during the performance of the engineering services herein provide for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

(c) That any differences between the ENGINEER and the LPA concerning the interpretation of the provisions of this AGREEMENT shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LPA, and a third member appointed by the two other members for

shall have the right to supplement the engineering and inspection force or to replace the engineers or inspectors employed on such work at the expense of the LPA.

(e) Inspection of all materials when inspection is not provided at the sources by the STATE Central Bureau of Materials, and submit inspection reports to the LPA and STATE in accordance with the STATE Central Bureau of Materials "Project Procedures Guide" and the policies of the STATE.

AGREEMENT SUMMARY

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
Christopher B. Burke Eng., Ltd.	36-3468939	$75,436.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Seeco Consultants Inc.	36-3458492	$9,414.00
	Subconsultant Total	$9,414.00
	Prime Consultant Total	$75,436.00
	Total for all work	$84,850.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Local Public Agency Type: Village of Local Public Agency: Western Springs

By (Signature & Date)

By (Signature & Date)

Local Public Agency: Western Springs

Local Public Agency Type: Village Clerk

Title: Village President

(SEAL)

Executed by the ENGINEER:

Attest: Prime Consultant (Firm) Name: Christopher B. Burke Eng., Ltd.

By (Signature & Date): Sherry Sporina Digitally signed by Sherry Sporina Date: 2025.01.30 10:44:29 -06'00'

By (Signature & Date): Michael Kerr Digitally signed by Michael Kerr Date: 2025.01.30 10:44:10 -06'00'

Title: Vice President

Title: President

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Western Springs	Christopher B. Burke Eng., Ltd.	Cook	25-00106-00-RS

EXHIBIT A
SCOPE OF SERVICES

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

Attached.

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Western Springs	Christopher B. Burke Eng., Ltd.	Cook	25-00106-00-RS

EXHIBIT B
PROJECT SCHEDULE

Engineering Contract Approved by Village Board: September 2024
Bid Opening: February 2025
Construction Start: April 2025
Construction End: July 2025

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Western Springs	Christopher B. Burke Eng., Ltd.	Cook	25-00106-00-RS

Exhibit C
Qualification Based Selection (QBS) Checklist

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

☐ Form Not Applicable (engineering services less than the threshold)

Items 1-13 are required when using federal funds and QBS process is applicable. Items 14-16 are required when using State funds and the QBS process is applicable.

		No	Yes
1	Do the written QBS policies and procedures discuss the initial administration (procurement, management and administration) concerning engineering and design related consultant services?	☐	☐
2	Do the written QBS policies and procedures follow the requirements as outlined in Section 5-5 and specifically Section 5-5.06 (e) of the BLRS Manual?	☐	☐
3	Was the scope of services for this project clearly defined?	☐	☐
4	Was public notice given for this project?	☐	☐
5	Do the written QBS policies and procedures cover conflicts of interest?	☐	☐
6	Do the written QBS policies and procedures use covered methods of verification for suspension and debarment?	☐	☐
7	Do the written QBS policies and procedures discuss the methods of evaluation?	☐	☐

Project Criteria	Weighting

8	Do the written QBS policies and procedures discuss the method of selection?	☐	☐

Selection committee (titles) for this project

Top three consultants ranked for this project in order	
1	
2	
3	

9	Was an estimated cost of engineering for this project developed in-house prior to contract negotiation?	☐	☐
10	Were negotiations for this project performed in accordance with federal requirements.	☐	☐
11	Were acceptable costs for this project verified?	☐	☐
12	Do the written QBS policies and procedures cover review and approving for payment, before forwarding the request for reimbursement to IDOT for further review and approval?	☐	☐
13	Do the written QBS policies and procedures cover ongoing and finalizing administration of the project (monitoring, evaluation, closing-out a contract, records retention, responsibility, remedies to violations or breaches to a contract, and resolution of disputes)?	☐	☐
14	QBS according to State requirements used?	☒	☐
15	Existing relationship used in lieu of QBS process?	☐	☒
16	LPA is a home rule community (Exempt from QBS).	☒	☐

CHRISTOPHER B. BURKE ENGINEERING, LTD.
16221 W. 159th Street Suite 201 Lockport, Illinois 60441 TEL (815) 770-2850

August 28, 2024

Village of Western Springs
740 Hillgrove
Western Springs, IL 60558

Attention: Inga Cebelis – Staff Engineer

Subject: Professional Engineering Services Proposal
Design and Construction Engineering
2025 Roadway Resurfacing Project
Western Springs, Illinois

Dear Ms. Cebelis:

Christopher B. Burke Engineering, Ltd. (CBBEL) is pleased to present this proposal for professional design and construction engineering services related to the 2025 Roadway Resurfacing project in the Village of Western Springs. Included in this proposal are our Understanding of the Assignment, Scope of Work and Estimated Fee.

UNDERSTANDING OF THE ASSIGNMENT

We understand the scope of this proposal will include design and construction engineering services related to the resurfacing of the following streets:

MFT-Funded

- 45th Street (Wolf Road to Gilbert Avenue)
  - Intersections at Wolf Road, Johnson Avenue, and Franklin Avenue are concrete and will be excluded from the project

Total project length is estimated to be approximately 2,600 feet.

We understand that Motor Fuel Tax (MFT) funds will be used for construction so the plans must be approved by IDOT Local Roads, and construction documentation and material testing must be in accordance with IDOT requirements.

The scope of the resurfacing work is anticipated to include HMA grind and overlay, pavement patching, undercuts, curb and gutter, sidewalk and driveway removal and replacement, structure adjustments and bringing intersection curb ramps up to compliance with current ADA regulations.

The scope of this proposal includes pavement cores and CCDD analysis, engineering design, preparation of construction plans and specification and Engineer's Opinion of Probable Cost, processing through IDOT, bidding assistance, preconstruction activities, construction observation, materials testing and project closeout.

We understand that the Village would like to bid this project in January 2025 with construction in Spring 2025.

SCOPE OF WORK

DESIGN ENGINEERING

Task 1 – Field Reconnaissance and Base Sheet Preparation: CBBEL will perform a field reconnaissance of the streets included in the street program. The purpose of the field reconnaissance will be to verify the method of rehabilitation and determine the limits and estimate the quantity of drainage structure removal and replacement. During the field reconnaissance effort, all drainage, sanitary sewer and valve vault structures shall be opened and inspected to identify any deficiencies that should be corrected as part of the project.

The results of the field reconnaissance will be red-lined, CAD-drawn on the existing conditions base plan and utilized when preparing plans, specifications and estimates. The results of the field reconnaissance will be coordinated with the Village and compared to previous estimates to determine their impact on the estimated construction cost.

Task 2 – Pavement Cores and CCDD Analysis: CBBEL's subconsultant, Seeco Consultants (Seeco), will obtain three (3) pavement cores to determine the existing cross-section of the pavements and subgrade conditions within the project area. Seeco will prepare a report describing existing conditions and make recommendations for remediation. The report will be performed by a geotechnical engineer and reviewed by CBBEL.

The soil will also be tested for potential contaminants. Seeco will perform investigation and testing work necessary to substantiate completion of IEPA Form LPC-662. This work will include collection/preservation of soil samples and conducting a search to identify any Potentially Impacted Properties (PIPs). If PIPs are not present, Seeco will perform the requisite pH test and provide the Village with the documentation necessary to sign Form LPC-662. If PIPs are identified, we will seek Village approval to have Seeco perform additional required testing and provide signed LPC-663 forms to the Village for use during construction as an additional service.

Task 3 – Pre-Final Plans, Specifications and Estimates (75%): CBBEL will prepare pre-final Plans, Specifications and Estimates for the Resurfacing Program utilizing the information described in the above tasks. We will utilize base plans provided by the Village, aerial plans and information from the field reconnaissance.

Sheet Name	Sheet No.
Title Sheet	1
General Notes	2
Summary of Quantities	3
Key Plan	4
Typical Sections	5
Roadway Plans (1"=50')	6-8
Construction Details	9
IDOT Details	10-14

In addition, CBBEL will develop special provisions and estimates of cost and working days. The special provisions will be based on IDOT Standard Pay Items and Specifications. Plans will be submitted to the Village for review and comment.

Task 4 – Final Plans, Specifications and Estimate (100%): CBBEL will make final revisions to the pre-final submittal based on the Village's review comments. The requested number of copies of plans and specifications will be submitted to the Village. A final estimate of cost and estimate of required working days will also be submitted. In addition to printed copies, we will provide the plans, specifications and estimate to the Village in hard copy and electronic format.

CBBEL will prepare the Notice to Bidders, advertise in the IDOT Local Roads bulletin and facilitate Contractor pickup of electronic drawings through our website. CBBEL will review and tabulate the bids and make a recommendation of award.

Task 5 – Project Coordination and Meetings: CBBEL will coordinate the contract documents with IDOT to obtain and address their comments and obtain approval prior to bidding the project.

CBBEL will coordinate with the Village and project stakeholders throughout the design and permitting of the project. In addition to phone conversations and written and electronic coordination, it is anticipated that one (1) virtual meeting will be held with Village Staff. Board meeting attendance is not anticipated to be required.

CBBEL will prepare agendas, presentations and meeting exhibits as requested by the Village. Following attendance at each meeting, CBBEL will prepare meeting summaries. This proposal assumes that no public involvement will be required during the final design of this project.

CONSTRUCTION ENGINEERING

Task 1 – Preconstruction Services: CBBEL will provide preconstruction services, including the following:

- Attend a pre-construction conference with the contractor, Village, and other parties to discuss goals, objectives, and issues of the project. CBBEL shall prepare a project contact list, including 24-hour emergency numbers, for distribution with the meeting minutes.

- Obtain from the contractor a list of proposed suppliers and subcontractors. Make recommendations to the Village regarding the suitability of the subcontractors for the proposed work. If we have not previously worked with a proposed sub-contractor, we will make every effort to check references.
- Review the construction schedule submitted by the contractor for compliance with the contract. CBBEL will review it in relation to any milestone dates in the specifications. CBBEL will review the constructability of their plan to ensure that the work is being completed in a logical sequence.
- CBBEL shall document all existing conditions with videotapes to ensure that all disrupted areas have been restored per the plan or existing conditions.
- Review the Inspector's Checklists provided through IDOT for contract line items including Erosion Control, Hot-Mix Asphalt, Concrete Pavement and Storm Sewers.

Task 2 – Construction Observation: CBBEL will provide full-time construction observation services. Per discussion with Village staff, **the estimated effort for this project assumes twenty-five (25) working days (nine hours per day) and staffing by a CBBEL Engineer I/II.**

- Observe the progress and quality of the executed work. Determine if the work is proceeding in accordance with the Contract Documents. CBBEL shall keep the Village informed of the progress of the work, guard the Village against defects and deficiencies in the work, and advise the Village of all observed deficiencies of the work and disapprove or reject all work failing to conform to the Contract Documents.
- Provide full-time on-site observations of the work in progress and field checks of materials and equipment through a Resident Engineer or Inspector, who shall:
    - Serve as the Village's liaison with the contractor working principally through the contractor's field superintendent.
    - Be present whenever the contractor is performing work on-site, associated with the project.
    - Attend all construction conferences. Arrange a schedule of progress meetings and other job conferences as required. Maintain and circulate copies of records of the meetings.
    - Review contractor's progress on a regularly scheduled basis (weekly or other appropriate interval) and update the progress schedule. Compare actual progress to the contractor's approved schedule. If the project falls behind schedule, work with the contractor to determine the appropriate course of action to get back on schedule. If the contractor falls behind by 14 calendar days, he is required to submit a revised schedule showing how the completion dates will be met. No further payments will be made until a revised schedule is submitted.
    - Maintain orderly files of correspondence, reports of job meetings, shop drawings and other submissions, reproductions or original contract documents including all addenda, change orders and additional drawings issued subsequent to the award of the contract.
    - Record names, addresses and telephone numbers of all contractors, subcontractors, and major material suppliers.
    - Carry and utilize a cell phone during contractor's working hours (usually 7 a.m. to 5 p.m.).

- Determine if the project has been completed in accordance with the contract documents and if the contractor has fulfilled all obligations.
- Except upon written instructions of the Village, the Resident Engineer or Inspector shall not authorize any deviation from the Contract Documents.
- Alert the Contractor's field superintendent when materials or equipment are being installed before approval of shop drawings or samples, where such are required, and advise the Village when it is necessary to disapprove work as failing to conform to the Contract Documents.
- Discuss the truck routes with the Contractor and monitor that the identified routes are being used.

Please note that for any of the observation tasks with CBBEL may be performing, the Contractor(s) shall be informed that neither the presence of CBBEL field staff nor the observation and testing (if any) by our firm or subconsultant of our firm shall excuse the Contractor in any way for defects discovered in the work. It should be understood that CBBEL will not be responsible for any job and site safety on this project; job and site safety shall be the sole responsibility of the Contractor(s). CBBEL does not have the right to stop work and will not advise nor supervise the Contractor(s) means and methods of their work.

Construction Documentation

- Keep an inspector's daily report book in IDOT's format for MFT projects, recording hours on the job site, weather conditions, general and specific observations, daily activities, quantities placed, inspections, decisions, and list of visiting officials.
- Prepare payment requisitions and change orders. Review applications for payment with the Contractor for compliance with established submission procedure and forward them with recommendations to the Village.
- All documentation will follow IDOT guidelines for MFT projects.

Task 3 – Materials Testing: CBBEL will provide material inspection services through our sub-consultant Seeco Consultants (Seeco). Seeco will complete the Quality Assurance (QA) material testing as required at the site and QA testing at the plants. CBBEL will enforce QA testing frequency as stated in the IDOT Policy Procedures Guide (PPG).

This task assumes that this project will require the same level of materials testing effort that has been required of past Village MFT projects. Should IDOT dictate that Quality Control for Performance (QCP) materials testing procedures are required for this project as outlined in the IDOT Standard Specifications, a substantial additional effort is anticipated to be required related to materials testing. Additional work necessary to comply with QCP procedures can be provided under a separate agreement.

Task 4 – Project Closeout:

- Prior to final inspection, submit to the Contractor a list of observed items requiring correction and verify that each correction has been made.
- Conduct final inspection with the Village and prepare a final list of items to be corrected.
- Verify that all items on the final list have been corrected and make recommendations to the Village concerning project acceptance.
- Prepare final pay estimate and change order for the Village's approval.

Illinois Department of Transportation

Direct Costs Check Sheet

Prime Consultant Name	PTB Number	State Job Number(s)
Christopher B. Burke Engineering, Ltd		

☒ Prime ☐ Supplement Date _____

Consultant

Christopher B. Burke Engineering, Ltd

Item	Allowable	Utilize W.O. Only	Quantity J.S. Only	Contract Rate	Total
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	☐			
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)	☐			
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost	☐			
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval	☐			
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	☒	200	$0.65	$130.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day	☒	25	$65.00	$1,625.00
Vehicle Rental	Actual cost (Up to $55/day)	☐			
Rental Vehicle Fuel	Actual cost (Submit supporting documentation)	☐			
Tolls	Actual cost	☒	136	$1.00	$136.00
Parking	Actual cost	☐			
Overtime	Premium portion (Submit supporting documentation)	☐			
Shift Differential	Actual cost (Based on firm's policy)	☐			
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)	☐			
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)	☐			
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)	☐			
Project Specific Insurance	Actual cost	☐			
Monuments (Permanent)	Actual cost	☐			
Photo Processing	Actual cost	☐			
2-Way Radio (Survey or Phase III Only)	Actual cost	☐			
Telephone Usage (Traffic System Monitoring Only)	Actual cost	☐			

Item	Allowable	Utilize W.O. Only	Quantity J.S. Only	Contract Rate	Total
CADD	Actual cost (Max $15/hour)	☐			
Website	Actual cost (Submit supporting documentation)	☐			
Advertisements	Actual cost (Submit supporting documentation)	☐			
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)	☐			
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)	☐			
Recording Fees	Actual cost	☐			
Transcriptions (specific to project)	Actual cost	☐			
Courthouse Fees	Actual cost	☐			
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)	☐			
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)	☐			
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)	☐			
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)	☐			
Testing of Soil Samples*	Actual cost (Provide breakdown of costs to the Department for approval)	☐			
Lab Services*	Actual cost (Provide breakdown of cost for each lab service to the Department's PM for approval)	☐			
Equipment and/or Specialized Equipment Rental*	Actual cost (Rental - 2-3 quotes needed / Owned - provide depreciated value for IDOT approval)	☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
		☐			
				Total Direct Cost	$1,891.00

*If other allowable costs are needed and not listed, please add in the above spaces provided.

LEGEND

W.O. = Work Order

J.S. = Job Specific

FEE SUMMARY

Village of Western Springs
2025 Roadway Resurfacing
Detailed Cost Breakdown
August 27, 2024

TASK	Engineer VI	Engineer IV	Engineer I/II	Eng Tech IV	Survey V	Survey IV	Survey III	Survey II	Survey I	CAD Manager	By Others	BUDGET Hours	BUDGET Dollars
DESIGN ENGINEERING													
Task 1 – Field Reconnaissance and Base Sheet Preparation		4	24	16								44	$7,560.00
Task 2 – Pavement Cores and LPC-662/663 CCDD Analysis		1									$ 3,980.00	1	$4,180.00
Task 3 – Pre-Final Plans, Specifications and Estimate (75%)		16	36									52	$8,780.00
Task 4 – Final Plans, Specifications and Estimate (100%)		6	20									26	$4,300.00
Task 5 – Project Coordination and Meetings	2	14										16	$3,350.00
Direct Costs													$200.00
CONSTRUCTION ENGINEERING													
Task 1 – Preconstruction Services			32									32	$4,960.00
Task 2 – Construction Observation			225	24								249	$39,435.00
Task 3 – Materials QA Testing											$ 5,434.00	0	$5,434.00
Task 4 – Project Closeout			32									32	$4,960.00
Direct Costs													$1,691.00
Total Hours per Classification	2	41	369	40	0	0	0	0	0	0	$ 9,414.00		
Average Hourly Rate (2024)	$275.00	$200.00	$155.00	$190.00	$240.00	$220.00	$200.00	$160.00	$135.00	$210.00			
Total Cost Per Job Category	$550.00	$8,200.00	$57,195.00	$7,600.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		452	$84,850.00

Direct Costs	
Total Cost	$84,850.00

Draft 2.6.2025
RESOLUTION NO. 25-????
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: February 10, 2025.
OTHER: None.

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A LOCAL PUBLIC AGENCY ENGINEERING SERVICES AGREEMENT (IDOT FORM BLR 05530) BETWEEN THE VILLAGE OF WESTERN SPRINGS AND CHRISTOPHER B. BURKE ENGINEERING, LTD. FOR THE PERFORMANCE OF PHASE II DESIGN AND PHASE III CONSTRUCTION ENGINEERING SERVICES RELATING TO THE 2025 MOTOR FUEL TAX (MFT) ASPHALT ROADWAY RESURFACING PROJECT (45TH STREET BETWEEN GILBERT AVENUE AND WOLF ROAD) (NOT-TO-EXCEED ENGINEER'S FEE: $84,850.00)

WHEREAS, the President and Board of Trustees of the Village of Western Springs ("Village Board" or "Village") desire to resurface approximately 0.5 miles of 45th Street between Gilbert Avenue and Wolf Road in the Village's Ridgeacres Subdivision, which will include asphalt pavement milling, structure frame and grate adjustments, removal and replacement of damaged concrete curb and gutters, intersection sidewalk ramp upgrades for ADA compliance, and new asphalt surface overlay, as well as annual asphalt street patching of various roadways throughout the Village as part of the 2025 Motor Fuel Tax (MFT) Asphalt Roadway Resurfacing Project (the "Project"); and

WHEREAS, with the passage of Resolution No. 24-2838 on September 23, 2024, the Village Board approved and entered into a Professional Services Agreement (the "Village PSA") and its Rider with Christopher B. Burke Engineering (the "Engineer") to have the Engineer perform Phase II Design and Phase III Construction Engineering Services (the "Services") relating to the Project. The Engineer's fee to perform the Services is a "not-to-exceed" fee of $84,850.00 (the "Engineer's Fee"). The Engineer's Fee will be paid from the Village's MFT funds, the Village's General Fund and/or monies from other lawful sources; and

WHEREAS, in order to be fully compliant with the requirements of the State of Illinois Department of Transportation ("IDOT") related to the use of the MFT funds that have been allocated to the Project, the Village, the IDOT and the Engineer must execute an IDOT-approved form BLR-5530, entitled "Local Public Agency Engineering Services Agreement", a copy of which is attached hereto as **Exhibit "A**" and made a part hereof (the "IDOT PSA"); and

WHEREAS, under the IDOT PSA, the Engineer will still be paid the same Engineer's Fee, as stated in the Village PSA, to perform the same Services as required by the Village PSA, which includes a subconsultant fee of $9,414.00 for Seeco Consultants, Inc. The Engineer shall be paid a one-time Engineer's Fee of "not-to-exceed" fee of $84,850.00 for the completion of the Services; and

WHEREAS, at a February 4, 2025 public meeting, the Village's Public Works and Water Committee ("Committee") reviewed and discussed the Project and the IDOT PSA and received input and a recommendation from the Village staff to approve the IDOT PSA and provided an opportunity for public input on the matter. At its February 4, 2025 meeting, the Committee recommended that the Village Board approve the IDOT PSA in order to complete the Project; and

WHEREAS, at an open public meeting held on February 10, 2025, the President and Board of

Trustees of the Village reviewed and discussed the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the matter. At its February 10, 2025 Regular Village Board Meeting, the President and Board of Trustees of the Village accepted the Committee's recommendation to approve the IDOT PSA in order to comply with IDOT requirements to complete the Project; and

WHEREAS, pursuant to the applicable statutory authority and intergovernmental cooperation powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, as well as the Illinois Intergovernmental Cooperation Act (5 ILCS 220/), and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/8-1-7), the President and Board of Trustees of the Village of Western Springs are authorized to approve and enter into the attached IDOT PSA, and find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the attached IDOT PSA.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of IDOT PSA. The President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the IDOT PSA, substantially in the form attached hereto as **Exhibit "A"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney. The Board of Trustees further authorize and direct the Village President and the Village Clerk, or their designees, to execute such other documents as are necessary to fulfill the Village's obligations under the IDOT PSA.

SECTION 3: Appropriation and Authorization of Expenditure of Village Funds. The President and Board of Trustees further approve and authorize the expenditure of Village Motor Fuel Tax funds, General Fund funds and/or other available Village funds to pay all budgeted and appropriated costs that are necessary to fulfill the Village's obligations under the IDOT PSA, and also authorize and direct the Village Manager and the Village Attorney, or their designees, to take all necessary actions to comply with the Village's obligations under the attached IDOT PSA.

SECTION 4: Delivery of Signed Documents. After approval and execution of this Resolution and the PSA by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and an executed version of the attached IDOT PSA to IDOT and the Engineer, and such other persons and governmental agencies with oversight jurisdiction of the Project, for submittal and record retention purposes.

SECTION 5: Effective Date. This Resolution shall be in full force and effect from and after its approval and adoption in the manner provided by law.

PASSED by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President on the same day, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

Local Public Agency Engineering Services Agreement
(IDOT Form BLR-3550)
Between The Village Of Western Springs And Christopher B. Burke Engineering, Ltd.
For The Performance Of Phase II Design and Phase III Construction Engineering Services
For The MFT Asphalt Patching Project

(attached)

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A LOCAL PUBLIC AGENCY ENGINEERING SERVICES AGREEMENT (IDOT FORM BLR 05530) BETWEEN THE VILLAGE OF WESTERN SPRINGS AND CHRISTOPHER B. BURKE ENGINEERING, LTD. FOR THE PERFORMANCE OF PHASE II DESIGN AND PHASE III CONSTRUCTION ENGINEERING SERVICES RELATING TO THE 2025 MOTOR FUEL TAX (MFT) ASPHALT ROADWAY RESURFACING PROJECT (45TH STREET BETWEEN GILBERT AVENUE AND WOLF ROAD) (NOT-TO-EXCEED ENGINEER'S FEE: $84,850.00)

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ____ day of February, 2025.

_____
Edward Tymick, Village Clerk

SEAL

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.B.

To: Board of Trustees
From: Jeff Koza, Director of Engineering Services
CC: Ellen Baer, Village Manager
RE: [Project Previously Approved] - Updated Agreement Attachment: Gilbert Avenue Resurfacing Preliminary Engineering Professional Services Agreement with Baxter & Woodman Form BLR 05530 (Omnibus Item)

Recommendation

Consider a recommendation to approve the Gilbert Avenue Resurfacing Preliminary Engineering Professional Services Agreement Form BLR 05530 with Baxter & Woodman Consulting Engineers.

Summary

This item was previously approved by the Village Board at the 1/27/2025 Board Meeting. However, inadvertently, the IDOT BLR 05530 Agreement form was omitted from the approved agreement paperwork. This IDOT agreement form is required because the Village is using Motor Fuel Tax funds to pay for a portion of this engineering work. In order to be compliant with IDOT MFT rules staff is recommending the re-approval of the agreement with the BLR 05530 form added to the approved agreement document. The agreement total fee and scope of work is unchanged from the previously approved agreement. The work involves the completion of preliminary engineering services for the upcoming Gilbert Avenue Resurfacing Project. Staff is recommending the Board approve the updated agreement document to ensure IDOT and MFT procedures are followed properly.

Financial Impact

The total cost of the work remains the same as previously approved which is $110,000. The Village will use MFT funds to pay for the work completed and then seek reimbursement from Cook County's Invest in Cook grant program and the Village of La Grange. The net cost to the Village is $27,500.

Recommended Motion

I move to recommend to the Village Board the approval of the Gilbert Avenue Resurfacing Preliminary Engineering Professional Services Agreement Form BLR 05530 with Baxter & Woodman Consulting Engineers.

Strategic Plan Alignment

N/A

File Attachments

1. BLR-05530_Gilbert Avenue Design Engineering Agreement
2. IDOT Form BLR-05530 Local Public Agency Engineering Services Agreement with Baxter & Woodman, Inc. for Phase I Design Engineerin
3. Resolution No. 2025- __ re IDOT Local Public Agency Engineering Services Agreement (IDOT form BLR -5530) - PSA with Baxter and W

Illinois Department of Transportation

Local Public Agency
Engineering Services Agreement

Using Federal Funds? ☐ Yes ☒ No

Agreement For: MFT PE

Agreement Type: Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
Village of Western Springs	Cook		

Project Number	Contact Name	Phone Number	Email
	Jeff Koza	(708) 246-1800	jkoza@wsprings.com

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Gilbert Avenue	9-2697	1.02 miles	N/A

Location Termini: 47th Street and Ogden Avenue

Add Location | Remove Location

Project Description: HMA resurfacing, HMA patching, curb & gutter spot repairs, intersection ADA improvements, pavement markings, and other miscellaneous items of work.

Engineering Funding: ☒ MFT/TBP ☐ State ☐ Other — MFT Funds

Anticipated Construction Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other

AGREEMENT FOR

☒ Phase I - Preliminary Engineering ☒ Phase II - Design Engineering

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
Baxter & Woodman	Jon Trent	(815) 444-3302	jtrent@bxaterwoodman.com

Address	City	State	Zip Code
8430 W Bryn Mawr Ave, Suite 400	Chicago	IL	60631

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

Regional Engineer	Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation
Resident Construction Supervisor	Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT
In Responsible Charge	A full time LPA employee authorized to administer inherently governmental PROJECT activities
Contractor	Company or Companies to which the construction contract was awarded

AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

☒ EXHIBIT A: Scope of Services

☒ EXHIBIT B: Project Schedule

☒ EXHIBIT C: Qualification Based Selection (QBS) Checklist

☐ EXHIBIT D: Cost Estimate of Consultant Services (BLR 05513 or BLR 05514)

☐ EXHIBIT ___ : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)

☒ EXHIBIT E: Hours, Budget, & Compensation

☐ _____

☐ _____

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA, The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of US Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
8. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
9. For Preliminary Engineering Contracts:
   (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARTMENT, as defined in Exhibit A (Scope of Services).
   (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affixed the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the DEPARTMENT.
   (c) That the ENGINEER is qualified technically and is thoroughly conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated in Exhibit A (Scope of Services).
10. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the Professional Services Selection Act (50 ILCS 510) (Exhibit C).
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.
3. To pay the ENGINEER:
   (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
   (b) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER

shall be due and payable to the ENGINEER.

(c) For Non-Federal County Projects - (605 ILCS 5/5-409)

(1) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER. Such payments to be equal to the value of the partially completed work in all previous partial payments made to the ENGINEER.

(2) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in the AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

Method of Compensation:

☐ Percent

☐ Lump Sum

☒ Specific Rate $110,000.00 (Maximum Fee $150,000)

☐ Cost plus Fixed Fee: Fixed

Total Compensation = DL + DC + OH + FF

Where:
DL is the total Direct Labor,
DC is the total Direct Cost,
OH is the firm's overhead rate applied to their DL and
FF is the Fixed Fee.

Where FF = (0.33 + R) DL + %SubDL, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.

The Fixed Fee cannot exceed 15% of the DL + OH.

5. The recipient shall not discriminate on the basis of race, color, national original or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C 3801 et seq.).

III. IT IS MUTUALLY AGREED,

1. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General, and the DEPARTMENT; the Federal Highways Administration (FHWA) or any authorized representative of the federal government, and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.

2. That the ENGINEER shall be responsible for any all damages to property or persons out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARTMENT, and their officers, agents and employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

   The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.

3. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such materials becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.

4. In the event that the DEPARTMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.

5. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.

6. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

7. The ENGINEER and LPA certify that their respective firm or agency:

   (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
   (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
   (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
   (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
   (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.
   (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph and
   (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.

   Where the ENGINEER or LPA is unable to certify to any of the above statements in this clarification, an explanation shall be attached to this AGREEMENT.

8. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes included but are not limited to: acts of God or a public enemy; acts of the LPA, DEPARTMENT, or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

   If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.

9. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to suspension of contract on grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

   For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or an entity with twenty-five (25) or more employees at the time of issuing the grant or a department, division or other unit thereof, directly responsible for the specific performance under contract or grant of $5,000 or more from the DEPARTMENT, as defined the Act.

   The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

   (a) Publishing a statement:
      (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
      (2) Specifying actions that will be taken against employees for violations of such prohibition.
      (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
         (a) abide by the terms of the statement; and
         (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than (5) days after such conviction.
   (b) Establishing a drug free awareness program to inform employees about:
      (1) The dangers of drug abuse in the workplace;

(2) The grantee's or contractor's policy to maintain a drug free workplace;
(3) Any available drug counseling, rehabilitation and employee assistance program; and
(4) The penalties that may be imposed upon an employee for drug violations.

(c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(d) Notifying the contracting, or granting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) above from an employee or otherwise, receiving actual notice of such conviction.

(e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the Department agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future projects. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

10. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).

11. For Preliminary Engineering Contracts:

(a) That tracing, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LPA and that basic survey notes, sketches, charts, CADD files, related electronic files, and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request to the LPA or to the DEPARTMENT, without restriction or limitation as to their use. Any re-use of these documents without the ENGINEER involvement shall be at the LPA's sole risk and will not impose liability upon the ENGINEER.

(b) That all reports, plans, estimates and special provisions furnished by the ENGINEER shall conform to the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Manual or any other applicable requirements of the DEPARTMENT, it being understood that all such furnished documents shall be approved by the LPA and the DEPARTMENT before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

AGREEMENT SUMMARY

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
Baxter & Woodman	38-2845242	$104,000.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Soil and Material Consultants, Inc.	36-3094075	$6,000.00
	Subconsultant Total	$6,000.00
	Prime Consultant Total	$104,000.00
	Total for all work	$110,000.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Village (Local Public Agency Type) of Village of Western Springs (Local Public Agency)

By (Signature & Date)

By (Signature & Date)

Local Public Agency: Village of Western Springs

Local Public Agency Type: Village

Clerk

Title

(SEAL)

Executed by the ENGINEER:

Attest:

Prime Consultant (Firm) Name: Baxter & Woodman

By (Signature & Date): Julie M. Crayton 2/3/25

Title: Deputy Secretary

By (Signature & Date): 2/3/25

Title: Associate Vice President

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

EXHIBIT A
SCOPE OF SERVICES

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

EARLY COORDINATION AND DATA COLLECTION
1.1 Data Collection: Obtain, review, and evaluate the following information provided by the Village for use in design:

A. Utility Atlases
B. Existing Roadway Plans
C. GIS Shape files surrounding the project limits
D. Aerial Photography
E. Maintenance and flooding records
F. ROW, GIS, and property data

1.2 Structure Evaluation: Visually inspect accessible manholes/catch basins/inlets (structure) from the surface and complete an inspection record for each structure. Document the material type and condition of each component of the structure, potential I/I sources, and details of all pipes connected to the manhole.

1.3 Field evaluation: Perform a field evaluation of the condition of existing pavements, drainage structures, sidewalk ramps, and curb and gutter. Estimate quantities of pavement repair. Observe and photograph the project area and immediate surroundings.

1.4 Agency Coordination: Prepare and maintain the Project Program Information (PPI) and Project Update forms, and coordinate the status of the Project with the Central Council of Mayors.

1.5 Utility Locates & Coordination: Contact JULIE to identify utilities that have facilities along the project limits. Request utility atlas maps and plot locations and sizes of existing utilities in electronic drawings. Submit preliminary and final plans to utility companies so conflicts and relocation efforts can be identified. Provide ongoing reviews of permitting and utility relocation efforts as requested by the Village. Prepare "Status of Utilities to be Adjusted" special provision in accordance with IDOT District 1 requirements, which provides the contractor with the duration of utility relocation work, status of utilities to be watched and protected within the project limits, and pertinent information for the contractor to develop a work schedule to meet the requirements for the project.

2. GEOTECHNICAL INVESTIGATION
2.1 Pavement Cores and Soil Borings:
A. Utilize Soil and Material Consultants, Inc. to take pavement cores of the surface and base material for determining the composition of the existing pavement material within the project limits. Provide analysis and recommendations, including subgrade, in a soils report in accordance with IDOT guidelines. Baxter & Woodman will provide a boring and core location map prior to this work. (12 cores estimated).

2.2 Clean Construction or Demolition Debris (CCDD):
A. Clean Construction or Demolition Debris (CCDD): Based on the findings of the Special Waste Screening, collect soil samples from the pavement cores to test for pH levels in accordance with IEPA Form 662 requirements. Facilitate completion of IEPA Form 662 to assist with estimating disposal costs. IEPA Form 663 is not included in the scope of this Project.

3. ENVIRONMENTAL COORDINATION AND PERMITTING
3.1 Environmental Survey: Prepare Cultural Screening form and submit to IDOT. Environmental Survey Request is not anticipated and not included in the scope of this Project.

3.2 Special Waste Screening: Conduct Special Waste Screening as outlined in Section 20-12.03(b) of the IDOT Bureau of Local Roads and Streets Manual. Screening will include Environmental Regulatory Records Review and a site visit. Based on Environmental Screening results and site visit determine if further action is required and prepare a summary of the findings. It is anticipated that Special Waste will be risk managed due to small amounts of excavation. Prepare and submit a letter to IDOT regarding plan to risk manage Special Waste. Preliminary Environmental Site Assessment (PESA) and Preliminary Site Investigation (PSI) are not anticipated and not included in the scope of this project.

3.3 MWRD: Obtain NRI permit if needed depending on utility repair work.

3.4 Fees: Agency review fees are not included in this agreement and shall be paid for separately by the Village.

4. PROJECT DEVELOPMENT REPORT - Prepare a Local Project Development Report BLR 46300 (LAFO) for State Approved Categorical Exclusion and submit the report to IDOT-BLRS for review and approval. Preliminary, Pre-final, and Final submittals are anticipated. Maintain an updated PPI form with CMAP and the Central Council of Mayors.

5. PLAN PREPARATION
5.1 Estimate of Cost and Time: Prepare summary of quantities, estimate of time, schedules of materials and an engineer's estimate of cost.

5.2 Specifications: Prepare special provisions in accordance with Village guidelines to specify items not covered by the Standard Specifications for Road and Bridge Construction.

5.3 Detailed Drawings: Complete required plan sheets required for pre-final and final IDOT submittals including: Cover, General Notes, Summary of Quantities, Typical Sections, Schematic Plan (no topographic survey), Pavement Markings and Signing, Detector Loops, and Design Details.

6. QA/QC - Perform in-house peer and milestone reviews by senior staff during project initiation, conceptual review, preliminary, pre-final, and final submittals. Provide ongoing reviews of permitting and utility coordination efforts. Conduct milestone reviews of subconsultants and provide feedback throughout the progress of work.

7. ASSIST BIDDING - This project utilizes federal STP funds and will be included on a State Letting. Provide design assistance and clarification for bid documents. Assist the Village with coordination and scheduling during the bid process.

8. PROJECT MEETINGS
8.1 Project Meetings: The following meetings are anticipated for this project:
A. Village (2 total) (Kickoff, Pre-final) (joint meetings with both the Village Western Springs and the Village of La Grange)
  o Monthly check-in meetings as needed
B. IDOT (1) (Phase I/II Kickoff)

8.2 Public Outreach:
A. Public Meetings: No public involvement is anticipated for this project.

9. PROJECT MANAGEMENT - Plan, schedule, and control the activities that must be performed to complete the project including budget, schedule, and scope. Coordinate with Village and project team to ensure the goals of the project are achieved. Prepare and submit monthly invoices, coordinate invoices

from sub-consultants, and provide a monthly status report via email describing tasks completed the previous month and outlining goals for the subsequent month.

Deliverables: The following is a list of anticipated final deliverables to the Village for this project:
1. Electronic DGN, Digital Photos, and GIS files used in project development including Plans, and Exhibits.

2. Electronic Record of Design files including agency correspondence, Project Development Report content, Estimates, Exhibits, and related electronic submittals (pdf or as appropriate). Baxter & Woodman utilizes an electronic filing system in lieu of hard copies.

Not Included: The following items are not included within the scope of this project, but can be provided as additional services to the contract:
1. Permit Review fees
2. ROW Acquisition services including title commitments, Plats, Legals, Appraisals, Negotiations
3. Environmental Studies (PESA, PSI, etc.)
4. Floodway or wetland permitting
5. Topographic survey
6. Public Involvement

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

EXHIBIT B
PROJECT SCHEDULE

- Pre-Final PS&E Village Submittal – December 2025
- Pre-Final PS&E IDOT Submittal – July 2026
- Final PS&E IDOT Submittal – September 2026
- IDOT Letting – January 2027

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

Exhibit C
Qualification Based Selection (QBS) Checklist

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

☒ Form Not Applicable (engineering services less than the threshold)

BAXTER & WOODMAN Consulting Engineers

Exhibit E: Hours, Budget, & Compensation

Plan Name: WSPRV Gilbert Ave STP Resurfacing

Deliverable	Planned Hrs	Planned Labor Billing	Billing Expenses	Billing Consultants	Total Compensation
Totals	**638.00**	*$103,500.00*	*$500.00*	*$6,000.00*	**$110,000.00**
001 - Early Coordination and Data Collection	110.00	$19,110.00	$500.00		
002 - Geotechnical Investigation	16.00	$2,520.00		$6,000.00	
003 - Environmental Coord. and Permitting	21.00	$3,195.00			
004 - Project Development Report	139.00	$20,985.00			
005 - Plan Preparation	240.00	$36,180.00			
006 - QA/QC	18.00	$3,780.00			
007 - Assist Bidding	18.00	$2,790.00			
008 - Project Meetings	36.00	$6,690.00			
009 - Project Management	40.00	$8,250.00			

Illinois Department of Transportation

Local Public Agency
Engineering Services Agreement

Using Federal Funds? ☐ Yes ☒ No

Agreement For: MFT PE

Agreement Type: Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
Village of Western Springs	Cook		

Project Number	Contact Name	Phone Number	Email
	Jeff Koza	(708) 246-1800	jkoza@wsprings.com

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Gilbert Avenue	9-2697	1.02 miles	N/A

Location Termini: 47th Street and Ogden Avenue

Add Location | Remove Location

Project Description: HMA resurfacing, HMA patching, curb & gutter spot repairs, intersection ADA improvements, pavement markings, and other miscellaneous items of work.

Engineering Funding: ☒ MFT/TBP ☐ State ☐ Other — MFT Funds

Anticipated Construction Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other

AGREEMENT FOR

☒ Phase I - Preliminary Engineering ☒ Phase II - Design Engineering

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
Baxter & Woodman	Jon Trent	(815) 444-3302	jtrent@bxaterwoodman.com

Address	City	State	Zip Code
8430 W Bryn Mawr Ave, Suite 400	Chicago	IL	60631

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

Regional Engineer	Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation
Resident Construction Supervisor	Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT
In Responsible Charge	A full time LPA employee authorized to administer inherently governmental PROJECT activities
Contractor	Company or Companies to which the construction contract was awarded

AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

☒ EXHIBIT A: Scope of Services

☒ EXHIBIT B: Project Schedule

☒ EXHIBIT C: Qualification Based Selection (QBS) Checklist

☐ EXHIBIT D: Cost Estimate of Consultant Services (BLR 05513 or BLR 05514)

☐ EXHIBIT ___ : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)

☒ EXHIBIT E: Hours, Budget, & Compensation

☐ _____

☐ _____

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA, The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of US Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
8. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
9. For Preliminary Engineering Contracts:
   (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARTMENT, as defined in Exhibit A (Scope of Services).
   (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affixed the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the DEPARTMENT.
   (c) That the ENGINEER is qualified technically and is thoroughly conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated in Exhibit A (Scope of Services).
10. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the Professional Services Selection Act (50 ILCS 510) (Exhibit C).
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.
3. To pay the ENGINEER:
   (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
   (b) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER

shall be due and payable to the ENGINEER.

(c) For Non-Federal County Projects - (605 ILCS 5/5-409)

(1) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER. Such payments to be equal to the value of the partially completed work in all previous partial payments made to the ENGINEER.

(2) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in the AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

Method of Compensation:

☐ Percent

☐ Lump Sum

☒ Specific Rate $110,000.00 (Maximum Fee $150,000)

☐ Cost plus Fixed Fee: Fixed

Total Compensation = DL + DC + OH + FF

Where:
DL is the total Direct Labor,
DC is the total Direct Cost,
OH is the firm's overhead rate applied to their DL and
FF is the Fixed Fee.

Where FF = (0.33 + R) DL + %SubDL, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.

The Fixed Fee cannot exceed 15% of the DL + OH.

5. The recipient shall not discriminate on the basis of race, color, national original or sex in the award and performance of any US DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C 3801 et seq.).

III. IT IS MUTUALLY AGREED,

1. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General, and the DEPARTMENT; the Federal Highways Administration (FHWA) or any authorized representative of the federal government, and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.

2. That the ENGINEER shall be responsible for any all damages to property or persons out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARTMENT, and their officers, agents and employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

   The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.

3. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such materials becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.

4. In the event that the DEPARTMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.

5. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.

6. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

7. The ENGINEER and LPA certify that their respective firm or agency:

   (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
   (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
   (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
   (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
   (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.
   (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph and
   (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.

   Where the ENGINEER or LPA is unable to certify to any of the above statements in this clarification, an explanation shall be attached to this AGREEMENT.

8. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes included but are not limited to: acts of God or a public enemy; acts of the LPA, DEPARTMENT, or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

   If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.

9. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to suspension of contract on grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

   For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or an entity with twenty-five (25) or more employees at the time of issuing the grant or a department, division or other unit thereof, directly responsible for the specific performance under contract or grant of $5,000 or more from the DEPARTMENT, as defined the Act.

   The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

   (a) Publishing a statement:
      (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
      (2) Specifying actions that will be taken against employees for violations of such prohibition.
      (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
         (a) abide by the terms of the statement; and
         (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than (5) days after such conviction.
   (b) Establishing a drug free awareness program to inform employees about:
      (1) The dangers of drug abuse in the workplace;

(2) The grantee's or contractor's policy to maintain a drug free workplace;
(3) Any available drug counseling, rehabilitation and employee assistance program; and
(4) The penalties that may be imposed upon an employee for drug violations.

(c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(d) Notifying the contracting, or granting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) above from an employee or otherwise, receiving actual notice of such conviction.

(e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the Department agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future projects. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

10. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).

11. For Preliminary Engineering Contracts:

(a) That tracing, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LPA and that basic survey notes, sketches, charts, CADD files, related electronic files, and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request to the LPA or to the DEPARTMENT, without restriction or limitation as to their use. Any re-use of these documents without the ENGINEER involvement shall be at the LPA's sole risk and will not impose liability upon the ENGINEER.

(b) That all reports, plans, estimates and special provisions furnished by the ENGINEER shall conform to the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Manual or any other applicable requirements of the DEPARTMENT, it being understood that all such furnished documents shall be approved by the LPA and the DEPARTMENT before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

AGREEMENT SUMMARY

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
Baxter & Woodman	38-2845242	$104,000.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Soil and Material Consultants, Inc.	36-3094075	$6,000.00
	Subconsultant Total	$6,000.00
	Prime Consultant Total	$104,000.00
	Total for all work	$110,000.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Village (Local Public Agency Type) of Village of Western Springs (Local Public Agency)

By (Signature & Date)

By (Signature & Date)

Local Public Agency: Village of Western Springs

Local Public Agency Type: Village

Clerk

Title

(SEAL)

Executed by the ENGINEER:

Attest:

Prime Consultant (Firm) Name: Baxter & Woodman

By (Signature & Date): Julie M. Crayton 2/3/25

Title: Deputy Secretary

By (Signature & Date): 2/3/25

Title: Associate Vice President

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

EXHIBIT A
SCOPE OF SERVICES

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

EARLY COORDINATION AND DATA COLLECTION
1.1 Data Collection: Obtain, review, and evaluate the following information provided by the Village for use in design:

A. Utility Atlases
B. Existing Roadway Plans
C. GIS Shape files surrounding the project limits
D. Aerial Photography
E. Maintenance and flooding records
F. ROW, GIS, and property data

1.2 Structure Evaluation: Visually inspect accessible manholes/catch basins/inlets (structure) from the surface and complete an inspection record for each structure. Document the material type and condition of each component of the structure, potential I/I sources, and details of all pipes connected to the manhole.

1.3 Field evaluation: Perform a field evaluation of the condition of existing pavements, drainage structures, sidewalk ramps, and curb and gutter. Estimate quantities of pavement repair. Observe and photograph the project area and immediate surroundings.

1.4 Agency Coordination: Prepare and maintain the Project Program Information (PPI) and Project Update forms, and coordinate the status of the Project with the Central Council of Mayors.

1.5 Utility Locates & Coordination: Contact JULIE to identify utilities that have facilities along the project limits. Request utility atlas maps and plot locations and sizes of existing utilities in electronic drawings. Submit preliminary and final plans to utility companies so conflicts and relocation efforts can be identified. Provide ongoing reviews of permitting and utility relocation efforts as requested by the Village. Prepare "Status of Utilities to be Adjusted" special provision in accordance with IDOT District 1 requirements, which provides the contractor with the duration of utility relocation work, status of utilities to be watched and protected within the project limits, and pertinent information for the contractor to develop a work schedule to meet the requirements for the project.

2. GEOTECHNICAL INVESTIGATION
2.1 Pavement Cores and Soil Borings:
A. Utilize Soil and Material Consultants, Inc. to take pavement cores of the surface and base material for determining the composition of the existing pavement material within the project limits. Provide analysis and recommendations, including subgrade, in a soils report in accordance with IDOT guidelines. Baxter & Woodman will provide a boring and core location map prior to this work. (12 cores estimated).

2.2 Clean Construction or Demolition Debris (CCDD):
A. Clean Construction or Demolition Debris (CCDD): Based on the findings of the Special Waste Screening, collect soil samples from the pavement cores to test for pH levels in accordance with IEPA Form 662 requirements. Facilitate completion of IEPA Form 662 to assist with estimating disposal costs. IEPA Form 663 is not included in the scope of this Project.

3. ENVIRONMENTAL COORDINATION AND PERMITTING
3.1 Environmental Survey: Prepare Cultural Screening form and submit to IDOT. Environmental Survey Request is not anticipated and not included in the scope of this Project.

3.2 Special Waste Screening: Conduct Special Waste Screening as outlined in Section 20-12.03(b) of the IDOT Bureau of Local Roads and Streets Manual. Screening will include Environmental Regulatory Records Review and a site visit. Based on Environmental Screening results and site visit determine if further action is required and prepare a summary of the findings. It is anticipated that Special Waste will be risk managed due to small amounts of excavation. Prepare and submit a letter to IDOT regarding plan to risk manage Special Waste. Preliminary Environmental Site Assessment (PESA) and Preliminary Site Investigation (PSI) are not anticipated and not included in the scope of this project.

3.3 MWRD: Obtain NRI permit if needed depending on utility repair work.

3.4 Fees: Agency review fees are not included in this agreement and shall be paid for separately by the Village.

4. PROJECT DEVELOPMENT REPORT - Prepare a Local Project Development Report BLR 46300 (LAFO) for State Approved Categorical Exclusion and submit the report to IDOT-BLRS for review and approval. Preliminary, Pre-final, and Final submittals are anticipated. Maintain an updated PPI form with CMAP and the Central Council of Mayors.

5. PLAN PREPARATION
5.1 Estimate of Cost and Time: Prepare summary of quantities, estimate of time, schedules of materials and an engineer's estimate of cost.

5.2 Specifications: Prepare special provisions in accordance with Village guidelines to specify items not covered by the Standard Specifications for Road and Bridge Construction.

5.3 Detailed Drawings: Complete required plan sheets required for pre-final and final IDOT submittals including: Cover, General Notes, Summary of Quantities, Typical Sections, Schematic Plan (no topographic survey), Pavement Markings and Signing, Detector Loops, and Design Details.

6. QA/QC - Perform in-house peer and milestone reviews by senior staff during project initiation, conceptual review, preliminary, pre-final, and final submittals. Provide ongoing reviews of permitting and utility coordination efforts. Conduct milestone reviews of subconsultants and provide feedback throughout the progress of work.

7. ASSIST BIDDING - This project utilizes federal STP funds and will be included on a State Letting. Provide design assistance and clarification for bid documents. Assist the Village with coordination and scheduling during the bid process.

8. PROJECT MEETINGS
8.1 Project Meetings: The following meetings are anticipated for this project:
A. Village (2 total) (Kickoff, Pre-final) (joint meetings with both the Village Western Springs and the Village of La Grange)
  o Monthly check-in meetings as needed
B. IDOT (1) (Phase I/II Kickoff)

8.2 Public Outreach:
A. Public Meetings: No public involvement is anticipated for this project.

9. PROJECT MANAGEMENT - Plan, schedule, and control the activities that must be performed to complete the project including budget, schedule, and scope. Coordinate with Village and project team to ensure the goals of the project are achieved. Prepare and submit monthly invoices, coordinate invoices

from sub-consultants, and provide a monthly status report via email describing tasks completed the previous month and outlining goals for the subsequent month.

Deliverables: The following is a list of anticipated final deliverables to the Village for this project:
1. Electronic DGN, Digital Photos, and GIS files used in project development including Plans, and Exhibits.

2. Electronic Record of Design files including agency correspondence, Project Development Report content, Estimates, Exhibits, and related electronic submittals (pdf or as appropriate). Baxter & Woodman utilizes an electronic filing system in lieu of hard copies.

Not Included: The following items are not included within the scope of this project, but can be provided as additional services to the contract:
1. Permit Review fees
2. ROW Acquisition services including title commitments, Plats, Legals, Appraisals, Negotiations
3. Environmental Studies (PESA, PSI, etc.)
4. Floodway or wetland permitting
5. Topographic survey
6. Public Involvement

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

EXHIBIT B
PROJECT SCHEDULE

- Pre-Final PS&E Village Submittal – December 2025
- Pre-Final PS&E IDOT Submittal – July 2026
- Final PS&E IDOT Submittal – September 2026
- IDOT Letting – January 2027

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Village of Western Springs	Baxter & Woodman	Cook	

Exhibit C
Qualification Based Selection (QBS) Checklist

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

☒ Form Not Applicable (engineering services less than the threshold)

BAXTER & WOODMAN Consulting Engineers

Exhibit E: Hours, Budget, & Compensation

Plan Name: WSPRV Gilbert Ave STP Resurfacing

Deliverable	Planned Hrs	Planned Labor Billing	Billing Expenses	Billing Consultants	Total Compensation
Totals	**638.00**	*$103,500.00*	*$500.00*	*$6,000.00*	**$110,000.00**
001 - Early Coordination and Data Collection	110.00	$19,110.00	$500.00		
002 - Geotechnical Investigation	16.00	$2,520.00		$6,000.00	
003 - Environmental Coord. and Permitting	21.00	$3,195.00			
004 - Project Development Report	139.00	$20,985.00			
005 - Plan Preparation	240.00	$36,180.00			
006 - QA/QC	18.00	$3,780.00			
007 - Assist Bidding	18.00	$2,790.00			
008 - Project Meetings	36.00	$6,690.00			
009 - Project Management	40.00	$8,250.00			

Draft 2.6.2025
RESOLUTION NO. 25-????
VOTE: _____
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: February 10, 2025.
OTHER: None.

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A LOCAL PUBLIC AGENCY ENGINEERING SERVICES AGREEMENT (IDOT FORM BLR 05530) BETWEEN THE VILLAGE OF WESTERN SPRINGS AND BAXTER AND WOODMAN LTD. FOR THE PERFORMANCE OF PHASE I DESIGN ENGINEERING SERVICES RELATING TO THE GILBERT AVENUE RESURFACING PROJECT (NOT-TO-EXCEED ENGINEER'S FEE: $110,000)

WHEREAS, the President and Board of Trustees of the Village of Western Springs ("Village Board" or "Village") desire to resurface approximately 1.02 miles of Gilbert Avenue between 47th Street and Ogden Avenue as part of the Gilbert Avenue Resurfacing Project (the "Project"); and

WHEREAS, with the passage of Resolution No. 25-2875 on January 27, 2025, the Village Board approved and entered into a Professional Services Agreement (the "Village PSA") and its Rider with Baxter and Woodman, Inc. (the "Engineer") to have the Engineer perform Phase I Design Engineering Services relating to the Project. The Engineer's fee to perform the Services is a "not to exceed" fee of $110,000.00 (the "Engineer's Fee"). The Engineer's Fee will be paid from the Village's MFT funds, the Village's General Fund and/or monies from other lawful sources; and

WHEREAS, in order to be fully compliant with the requirements of the State of Illinois Department of Transportation ("IDOT") related to the use of MFT Funds that have been allocated to the Project, the Village, the IDOT and the Engineer must execute an IDOT approved form BLR-5530, entitled "Local Public Agency Engineering Services Agreement", a copy of which is attached hereto as **Exhibit "A"** and made a part hereof (the "IDOT PSA"); and

WHEREAS, under the IDOT PSA, the Engineer will still be paid the same Engineer's Fee as stated in the Village's PSA to perform the same Services as required by the Village PSA, which includes a subconsultant fee of $6,000 for Soil and Material Consultants, Inc. The Engineer shall be paid a one-time Engineer's Fee of "not-to-exceed" $110,000.00 for the completion of the Services; and

WHEREAS, at a February 4, 2025 public meeting, the Village's Public Works and Water Committee ("Committee") reviewed and discussed the Project and the IDOT PSA and received input and a recommendation from the Village staff to approve the IDOT PSA and provided an opportunity for public input on the matter. At its February 4, 2025 meeting, the Committee recommended that the Village Board approve the IDOT PSA in order to complete the Project; and

WHEREAS, at an open public meeting held on February 10, 2025, the President and Board of Trustees of the Village reviewed and discussed the Committee's recommendation, and received input from the Village staff and provided an opportunity for public input on the matter. At its February 10, 2025 Regular Village Board Meeting, the President and Board of Trustees of the Village accepted the Committee's recommendation to approve the IDOT PSA in order to comply with IDOT requirements to complete the Project; and

WHEREAS, pursuant to the applicable statutory authority and intergovernmental cooperation

powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Constitution of the State of Illinois of 1970, as well as the Illinois Intergovernmental Cooperation Act (5 ILCS 220/), and the applicable provisions of the Illinois Municipal Code (65 ILCS 5/8-1-7), the President and Board of Trustees of the Village of Western Springs are authorized to approve and enter into the attached IDOT PSA, and find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to approve and enter into the attached IDOT PSA.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Execution of IDOT PSA. The President and Board of Trustees of the Village of Western Springs approve and authorize the execution of the IDOT PSA, substantially in the form attached hereto as **Exhibit "A"**, which may contain certain non-substantive and non-financial modifications that are approved by the Village Attorney. The Board of Trustees further authorize and direct the Village President and the Village Clerk, or their designees, to execute such other documents as are necessary to fulfill the Village's obligations under the IDOT PSA.

SECTION 3: Appropriation and Authorization of Expenditure of Village Funds. The President and Board of Trustees further approve and authorize the expenditure of Village Motor Fuel Tax funds, General Fund funds and/or other available Village funds to pay all budgeted and appropriated costs that are necessary to fulfill the Village's obligations under the IDOT PSA, and also authorize and direct the Village Manager and the Village Attorney, or their designees, to take all necessary actions to comply with the Village's obligations under the attached IDOT PSA.

SECTION 4: Delivery of Signed Documents. After approval and execution of this Resolution and the PSA by the Village President and Village Clerk, or their designees, the Village Clerk's Office shall arrange for the delivery of certified copies of this Resolution and an executed version of the attached IDOT PSA to IDOT and the Engineer, and such other persons and governmental agencies with oversight jurisdiction of the Project, for submittal and record retention purposes.

SECTION 5: Effective Date. This Resolution shall be in full force and effect from and after its approval and adoption in the manner provided by law.

PASSED by a roll call vote of the Board of Trustees of the Village of Western Springs, Cook County, Illinois, at a Regular Meeting thereof, held on the 10th day of February, 2025, and approved by me as Village President on the same day, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

Local Public Agency Engineering Services Agreement
(IDOT Form BLR-3550)
Between The Village Of Western Springs And Baxter and Woodman, Inc.
For The Performance Of Phase I Design Engineering Services
For The Gilbert Avenue Resurfacing Project

(attached)

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, the Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-_____

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A LOCAL PUBLIC AGENCY ENGINEERING SERVICES AGREEMENT (IDOT FORM BLR 05530) BETWEEN THE VILLAGE OF WESTERN SPRINGS AND BAXTER AND WOODMAN LTD. FOR THE PERFORMANCE OF PHASE I DESIGN ENGINEERING SERVICES RELATING TO THE GILBERT AVENUE RESURFACING PROJECT (NOT-TO-EXCEED ENGINEER'S FEE: $110,000)

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the 10th day of February, 2025, at which meeting a quorum was present, and approved by the Village President of the Village of Western Springs on the 10th day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ____ day of February, 2025.

_____
Edward Tymick, Village Clerk

SEAL

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.C.

To: Board of Trustees
From: Jeff Koza, Director of Engineering Services
CC: Ellen Baer, Village Manager
RE: [Project Previously Approved] Updated Agreement Attachment: Gilbert Avenue Resurfacing Design Engineering - MFT Resolution Form BLR 09110 (Omnibus Item)

Recommendation

Consider a recommendation to approve Resolution form BLR 09110 authorizing the use of MFT funds to complete Preliminary Engineering Services for the Gilbert Avenue Resurfacing Project.

Summary

The Village Board must approve a resolution using IDOT Form BLR 09110 indicating the intent to use Motor Fuel Tax ("MFT") funds Funds to pay for the preliminary engineering services costs for the Gilbert Avenue resurfacing project. An agreement with Baxter & Woodman Consulting Engineers for the work was approved at the 1/27/2025 Board of Trustees Meeting.

Financial Impact

The total cost of the work remains the same as previously approved which is $110,000. The Village will use MFT funds to pay for the work completed and then seek reimbursement from Cook County's Invest in Cook grant program and the Village of La Grange. The net cost to the Village is $27,500.

Recommended Motion

I move to recommend to the Village Board the approval of a resolution, IDOT Form BLR 09110, authorizing the use of Motor Fuel Tax ("MFT") funds to pay for the preliminary engineering services costs for the Gilbert Avenue resurfacing project.

Strategic Plan Alignment

N/A

File Attachments

1. blr-09110 Gilbert Resurfacing Prelim Engineering Resolution

Illinois Department of Transportation

Resolution for Improvement Under the Illinois Highway Code

Is this project a bondable capital improvement?

☐ Yes ☒ No

Resolution Type	Resolution Number	Section Number
Original		

BE IT RESOLVED, by the President and Board of Trustees (Governing Body Type) of the Village (Local Public Agency Type)

of Western Springs (Name of Local Public Agency) Illinois that the following described street(s)/road(s)/structure be improved under the Illinois Highway Code. Work shall be done by Contract (Contract or Day Labor).

For Roadway/Street Improvements:

Name of Street(s)/Road(s)	Length (miles)	Route	From	To
Gilbert Avenue	1.03		US 34 Ogden Ave	47th Street

For Structures:

Name of Street(s)/Road(s)	Existing Structure No.	Route	Location	Feature Crossed

BE IT FURTHER RESOLVED,

1. That the proposed improvement shall consist of

Preliminary Engineering Services for the subject roadway improvement

2. That there is hereby appropriated the sum of one hundred ten thousand _____ Dollars ($110,000.00) for the improvement of said section from the Local Public Agency's allotment of Motor Fuel Tax funds.

BE IT FURTHER RESOLVED, that the Clerk is hereby directed to transmit four (4) certified originals of this resolution to the district office of the Department of Transportation.

I, Edward Tymick (Name of Clerk) Village (Local Public Agency Type) Clerk in and for said Village (Local Public Agency Type)

of Western Springs (Name of Local Public Agency) in the State aforesaid, and keeper of the records and files thereof, as provided by statute, do hereby certify the foregoing to be a true, perfect and complete original of a resolution adopted by

President and Board of Trustees (Governing Body Type) of Western Springs (Name of Local Public Agency) at a meeting held on February 10, 2025 (Date).

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this _____ (Day) day of _____ (Month, Year).

(SEAL, if required by the LPA)

Clerk Signature & Date

Approved

Regional Engineer Signature & Date
Department of Transportation

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.D.

To: Board of Trustees
From: Matthew Supert, Director of Municipal Services
CC: Ellen Baer, Village Manager
RE: 2025 IDOT Motor Fuel Tax Authorization for Maintenance Items (Report only)

Recommendation

The Public Works and Water Committee reviewed this item at their meeting on February 4, 2025 and recommended the approval of the 2025 IDOT Motor Fuel Tax (MFT) Resolution for Maintenance Items (BLR 14220 and 14222) for the sidewalk replacement program, and the purchase of roadway salt for fiscal year 2025 in an amount not to exceed $155,000.

Summary

The Illinois Department of Transportation (IDOT) allows municipalities to utilize motor fuel tax (MFT) funds for various infrastructure maintenance items. The Village needs to annually submit the following forms to IDOT for authorization of those funds for local use. Attached are draft IDOT resolutions BLR 14220 and BLR 14222. The Village is requesting $155,000 in MFT funds to be split between the sidewalk replacement program, and the purchase of roadway salt for 2025.

Financial Impact

Account 4102370
Fund 53010 (Sidewalk Replacement)
2025 Budget $110,000
Project Cost As required

Account 4102370
Fund 55115 (Salt)
2025 Budget $45,000
Project Cost As required

Recommended Motion

I move to recommend to the Village Board the approval of the IDOT Motor Fuel Tax (MFT) Resolution for Maintenance Items (BLR 14220 and 14222) for the sidewalk replacement program and the purchase of roadway salt for fiscal year 2025 in an amount not to exceed $155,000.

Strategic Plan Alignment

Capital Maintenance

File Attachments

1. 2025 - blr-14220 - IDOT MFT Salt and Sidewalk
2. 2025 - blr-14222 - IDOT MFT Salt and Sidewalk

Illinois Department of Transportation

Resolution for Maintenance Under the Illinois Highway Code

District	County	Resolution Number	Resolution Type	Section Number
1	Cook		Original	

BE IT RESOLVED, by the President and Board of Trustees (Governing Body Type) of the Village (Local Public Agency Type) of Western Springs (Name of Local Public Agency) Illinois that there is hereby appropriated the sum of

Three hundred and five thousand dollars Dollars ($155,000.00)

of Motor Fuel Tax funds for the purpose of maintaining streets and highways under the applicable provisions of Illinois Highway Code from

01/01/25 (Beginning Date) to 12/31/25 (Ending Date).

BE IT FURTHER RESOLVED, that only those operations as listed and described on the approved Estimate of Maintenance Costs, including supplemental or revised estimates approved in connection with this resolution, are eligible for maintenance with Motor Fuel Tax funds during the period as specified above.

BE IT FURTHER RESOLVED, that Village (Local Public Agency Type) of Western Springs (Name of Local Public Agency) shall submit within three months after the end of the maintenance period as stated above, to the Department of Transportation, on forms available from the Department, a certified statement showing expenditures and the balances remaining in the funds authorized for expenditure by the Department under this appropriation, and

BE IT FURTHER RESOLVED, that the Clerk is hereby directed to transmit four (4) certified originals of this resolution to the district office of the Department of Transportation.

I Ed Tymick (Name of Clerk) Village (Local Public Agency Type) Clerk in and for said Village (Local Public Agency Type) of Western Springs (Name of Local Public Agency) in the State of Illinois, and keeper of the records and files thereof, as provided by statute, do hereby certify the foregoing to be a true, perfect and complete copy of a resolution adopted by the President and Board of Trustees (Governing Body Type) of Western Springs (Name of Local Public Agency) at a meeting held on _____ (Date).

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal this _____ (Day) day of _____ (Month, Year).

(SEAL, if required by the LPA)

Clerk Signature & Date

APPROVED

Regional Engineer Signature & Date
Department of Transportation

Instructions for BLR 14220

This form shall be used when a Local Public Agency (LPA) wants to perform maintenance operations using Motor Fuel Tax (MFT) funds. Refer to Chapter 14 of the Bureau of Local Roads and Streets Manual (BLRS Manual) for more detailed information. This form is to be used by a Municipality or a County. Road Districts will use BLR 14221. For signature requirements refer to Chapter 2, Section 3.05(b) of the BLRS Manual.

When filling out this form electronically, once a field is initially completed, fields requiring the same information will be auto-populated.

Resolution Number	Insert the resolution number as assigned by the LPA, if applicable.
Resolution Type	From the drop down box, choose the type of resolution: -Original would be used when passing a resolution for the first time for this project. -Supplemental would be used when passing a resolution increasing appropriation above previously passed resolutions. -Amended would be used when a previously passed resolution is being amended.
Section Number	Insert the section number of the improvement covered by the resolution.
Governing Body Type	From the drop down box choose the type of administrative body. Choose Board for County; Council or President and Board of Trustees for a City, Village or Town.
LPA Type	From the drop down box choose the LPA body type; County, City, Town or Village.
Name of LPA	Insert the name of the LPA.
Resolution Amount	Insert the dollar value of the resolution for maintenance to be paid for with MFT funds in words, followed by the same amount in numerical format in the ().
Beginning Date	Insert the beginning date of the maintenance period. Maintenance periods must be a 12 or 24 month consecutive period.
Ending Date	Insert the ending date of the maintenance period.
LPA Type	From the drop down box choose the LPA body type; County, City, Town or Village.
Name of LPA	Insert the name of the LPA.
Name of Clerk	Insert the name of the LPA Clerk.
LPA Type	From the drop down box choose the LPA body type; County, City, Town or Village.
LPA Type	From the drop down box choose the LPA body type; County, City, Town or Village.
Name of LPA	Insert the name of the LPA.
Governing Body Type	From the drop down box choose the type of administrative body. Choose Board for County; Council or President and Board of Trustees for a City, Village or Town.
Name of LPA	Insert the name of the LPA.
Date	Insert the date of the meeting.
Day	Insert the day the Clerk signed the document.
Month, Year	Insert the month and year of the clerk's signature.
Clerk Signature	Clerk shall sign here.
Seal	The Clerk shall seal the document here, if required. If a seal is required, electronic signatures should not be used.
Approved	The Department of Transportation representative shall sign and date here upon approval.

A minimum of three (3) certified signed originals must be submitted to the Regional Engineer's District office OR email PDF completed form with electronic signatures to your local District LRS office.

Following IDOT's approval, distribution will be as follows:

Local Public Agency Clerk
Engineer (Municipal, Consultant or County)

Illinois Department of Transportation

Local Public Agency General Maintenance

Estimate of Maintenance Costs

Submittal Type: Original

District: 1

Estimate of Cost For: Municipality

Local Public Agency	County	Section Number	Maintenance Period Beginning	Ending
Village of Western Springs	Cook	17-00000-00	01/01/25	12/31/25

Maintenance Items

Maintenance Operation	Maint Eng Category	Insp. Req.	Material Categories/ Point of Delivery or Work Performed by an Outside Contractor	Unit	Quantity	Unit Cost	Cost	Total Maintenance Operation Cost
Sidewalk Replacement	IV	No	Concrete 5", R&R	SQFT	5,000	$21.50	$107,500.00	$110,000.00
Snow and Ice Control	I	No	Salt	Ton	600	$64.53	$38,718.00	$45,000.00
	IIB	No						
							Total Operation Cost	$155,000.00

Estimate of Maintenance Costs Summary

Maintenance	MFT Funds	RBI Funds	Other Funds	Estimated Costs
Local Public Agency Labor				
Local Public Agency Equipment				
Materials/Contracts(Non Bid Items)				
Materials/Deliver & Install/Materials Quotations (Bid Items)				
Formal Contract (Bid Items)				
Maintenance Total				

Estimated Maintenance Eng Costs Summary

Maintenance Engineering	MFT Funds	RBI Funds	Other Funds	Total Est Costs
Preliminary Engineering				
Engineering Inspection				
Material Testing				
Advertising				
Bridge Inspection Engineering				
Maintenance Engineering Total				
Total Estimated Maintenance				

Remarks

SUBMITTED

Local Public Agency Official Signature & Date

Title

County Engineer/Superintendent of Highways Signature & Date

APPROVED

Regional Engineer Signature & Date
Department of Transportation

Estimate of Maintenance Costs

Submittal Type: Original

Local Public Agency	County	Section	Maintenance Period Beginning	Ending
Village of Western Springs	Cook	17-00000-00	01/01/25	12/31/25

IDOT Department Use Only

Received Location	Received Date	Additional Location?
		☐

WMFT Entry By	Entry Date

NOTE: Form instructions should not be included when the form is submitted

This form is used by all Local Public Agencies (LPAs) to submit their maintenance program and also submit their maintenance expenditure statements. A resolution (BLR 14220) must be submitted and approved by the Illinois Department of Transportation (IDOT) prior to incurring any expenditures. For items required to be bid the estimate of cost must be submitted prior to submittal of required bidding documents. Authorizations will be made based on the resolution and/or the approved contract/acceptance/material quotations documents.

The maintenance expenditure statement must be submitted within 3 months of the end of the maintenance period. Maintenance resolutions and estimates submitted for future maintenance periods after that date will not be processed until the delinquent maintenance expenditure statement has been submitted. Only one form needs to be completed per maintenance period, combine all operations on one form.

For additional information refer to the Bureau of Local Roads Manual (BLRS), Chapter 14. For signature requirements refer to Chapter 2, section 3.05(b) of the BLRS Manual.

For items being completed for the estimate all materials, equipment, labor and contract amounts are considered estimates. For estimates where LPA equipment is completed, an Equipment Rental Schedule (BLR 12110) must also be submitted for approval. When completing the form for the Maintenance Expenditure all items must be actual amounts spent.

Maintenance — From the drop down choose which type of document is being submitted. Choose Estimate of Cost if an estimate is being submitted, choose Maintenance Expenditure Statement if a maintenance expenditure statement is being submitted

Submittal — Choose the type of submittal, if this is the first submittal choose original, if revising a previous submittal choose, revised. If adding to a previous submittal choose supplemental.

Estimate of Cost For — Select the type of LPA submitting this form from the drop down. Types to choose are County, Municipality, or Road District/Township.

Local Public Agency — Insert the name of the Local Public Agency.

County — Insert the County in which the Local Public Agency is located.

Maintenance Period

Beginning — Insert the beginning date of the maintenance period.

Ending — Insert the ending date of the maintenance period.

Section — Insert the section number assigned to this project. The letters at the end of the section number will always be a "GM".

Maintenance Operations — List each maintenance operation separately

Maintenance Eng. Category — From the drop down choose the maintenance engineering category as it applies to the operation listed to the left. The definitions of the categories can be found in the BLRS Manual Chapter 14, section 14-2.04

Maintenance Engineering Categories are:

Category I — Services purchased without a proposal such as electric energy or materials purchased from Central Management Services' Joint Purchasing Program or another joint purchasing program that has been approved by the District BLRS or CBLRS.

Category II-A — Maintenance items that are not included in Maintenance Engineering Category I or do not require competitive sealed bids according to Section 12-1.02(a) or a local ordinance/resolution.

Category II-B — Routine maintenance items that require competitive sealed bids according to Section12-1.02(a) or a local ordinance/ resolution. Routine maintenance includes all items in the following work categories: snow removal, street sweeping, lighting and traffic signal maintenance, cleaning ditches or drainage structures, tree trimming or removal, mowing, crack sealing, pavement marking, shoulder maintenance limited amounts of concrete curb and gutter repair, scour mitigation, pavement patching, and minor drainage repairs.

Category III — Maintenance items that are not covered by Maintenance Engineering Category I or Category II-B and require competitive bidding with a material proposal, a deliver and install proposal or material quotation.

Category IV — Maintenance items that are not covered by Maintenance Engineering Category I or Category II-B and require competitive bidding with a formal contract proposal.

The instructions listed below only apply to the maintenance estimate of cost. For LPA's using Local Public Agency Labor and/or Local Public Agency Equipment Rental, the estimated amounts are only listed on those specific lines and are not to be included with each operation on the estimate of cost.

Insp Req — From the drop down choose No or Yes as it applies to the maintenance operation listed to the left. Items requiring no engineering inspection should be no.

Material Categories/Point of Delivery or Work Performed by an Outside Contractor — List the items for each operation on a separate line, grouping items for the same operation together, for the operation listed to the left. If work being done as a contract list work by contractor.

Unit — Insert the unit of measure for the material listed to the left, if applicable.

Quantity — Insert the quantity for the material listed to the left, if applicable.

Unit Cost — Insert the unit cost of the material listed to the left, if applicable.

Cost — No entry necessary, this is a calculated field. This is the quantity times the unit cost.

Total Maintenance Operation Cost — Insert the total of the Maintenance Operation Cost, for items done by a contract insert the estimated contract amount.

Maintenance

Estimate of Maintenance Costs Summary — Under each item listed below, list the amount of estimated MFT funds, Rebuild Illinois (RBI) funds and local funds to be expended, if applicable. The total Estimated cost is a calculated field.

Local Public Agency Labor — Insert the estimated amount for LPA labor for all maintenance operations, if applicable.

Local Public Agency Equipment Rental — Insert the estimated amount for LPA equipment rental for all maintenance operations, if applicable.

Materials/Contracts (Non Bid Items) — Insert the estimated amount for materials and/or contracts for items the LPA is not required to bid, if applicable.

Materials/Deliver & Install, Material Quotations — For the operation listed to the left insert the estimate amount to be expended using a bidding process for material/deliver & install proposal and/or material quotations, if applicable.

Formal Contracts — Insert the total amount estimated to be expended on formal contracts. This will be for items required to be bid.

Total Estimated Cost — This is a calculated field and will be automatically filled in for each type. This is the sum of all funding for the item.

Total Maintenance Operation Cost — This is a calculated field, no entry is necessary. This is the sum of all items estimated to be expended on this operation.

Total Maintenance Cost — This is a calculated field, no entry is necessary. This is the sum of all maintenance operation costs.

Maintenance Engineering Cost Summary — For each item listed below, list under the funding type what the estimated amount to be expended for each item.

Preliminary Engineering Fee — Insert the amount of funds estimated to be expended for Preliminary Engineering, if applicable.

Engineering Inspection Fee — Insert the amount of funds estimated to be expended for Engineering Inspection, if applicable.

Material Testing Costs — Insert the dollar amount of funds estimated to be expended on material testing costs, if applicable.

Advertising Costs — Insert the amount of funds estimated to be expended on advertising costs, if applicable.

Bridge Inspection Costs — Insert the amount of funds estimated to be expended on bridge inspection costs, if applicable.

Total Maintenance Engineering — This is a calculated field, no entry is necessary. This is the sum of all maintenance engineering costs listed above.

Totals — This is a calculated field. It is the total of the estimated maintenance cost plus the estimated maintenance engineering cost.

These instructions apply to the Maintenance Expenditure Statement.

Maintenance Operation — Type in the name of the maintenance operation for which the amounts to the right will be completed. For a form that was completed as an Estimate of Cost and is now being changed to a Maintenance Expenditure Statement, this field will be completed from the estimate.

Maint Eng Category — From the drop down select the Maintenance Engineering Category that applies to the operation listed to the left.

LPA Labor — For the operation listed to the left insert the amount expended for LPA labor, if applicable.

LPA Equipment Rental — For the operation listed to the left insert the amount expended on LPA equipment rental if applicable.

Materials/Contracts (Non-Bid) — For the operation listed to the left insert the amount expended for materials and/or contracts that was not required to be bid, if applicable.

Materials/Deliver & Install/Material Quotations (Bid Items) — Insert the total amount expended on Materials Proposals, Deliver and Install proposals, Materials Quotations (Bid Items). This will be for items that were required to be bid.

Formal Contract — For the operation listed to the left insert the amount expended for items bid using the formal contract process, if applicable.

Total Operation Cost — This is a calculated field, it will sum the amounts expended for the operation listed to the left.

Operation Engineering Inspection Fee — For the operation listed to the left insert the amount of engineering inspection charged for this operation, if applicable.

Total Maintenance — This is a calculated field, no entry necessary. It is the sum of all maintenance operations.

Maintenance Engineering Cost Summary Preliminary Engineering Fee — Insert the dollar amount of funds spent on preliminary engineering for this maintenance section.

Engineering Inspection Fee — Insert the amount of funds expended for Engineering Inspection, if applicable.

Material Testing Costs — Insert the dollar amount of funds spent on material testing costs, if applicable.

Advertising Costs — Insert the dollar amount of funds spent on advertising costs, if applicable.

Bridge Inspection Costs — Insert the dollar amount of funds spent on bridge inspection costs, if applicable.

Total Maintenance Engineering — This is a calculated field, no entry is necessary. This is the sum of all maintenance engineering costs listed above.

Total Maintenance Program Costs — Insert the total cost of the Maintenance and Maint. Engineering. The maintenance amount will be the amount from the Total Cost from the Maintenance Items table. The Maint. Eng will be the Maintenance Engineering Total from above.

Contributions, Refunds, Paid with Other Funds — Enter the dollar amount of contributions, refunds or amounts paid with other funds for this maintenance section, if applicable, for both maintenance and maintenance engineering.

Total Motor Fuel Tax/Rebuild Illinois Portion — These are calculated fields, no entry is necessary. This is the sum of the total cost minus the amount paid with local funds.

Motor Fuel Tax Portion — Insert the amount of the total cost that was paid for with Motor Fuel Tax funds for Maintenance and Maint. Engineering, as applicable.

Motor Fuel Tax Funds Authorized — Insert the net amount of Motor Fuel Tax Funds authorized for each type.

Motor Fuel Tax Surplus/Deficit — These are calculated fields, no entry is necessary. This is the sum of the Total Motor Fuel Tax funds expended minus the amount of Motor Fuel Tax funds authorized. A positive number will result in a credit to the unobligated fund of the Motor Fuel Tax fund. A negative number means more funds were spent than authorized. If the negative number has a resolution to cover the overage, the item(s) that resulted in the overage have been approved by IDOT, and are covered in the overrun policy, this amount will be authorized. If these conditions are not met you must contact your District office for guidance.

Rebuild Illinois Portion — Insert the amount of the total cost that was paid for with Rebuild Illinois funds for Maintenance and Maint. Engineering, as applicable.

Rebuild Illinois Funds Authorized — Insert the net amount of Rebuild Illinois Funds authorized for each type.

Rebuild Illinois Surplus/Deficit — These are calculated fields, no entry is necessary. This is the sum of the Total Rebuild Illinois funds expended minus the amount of Rebuild Illinois funds authorized. A positive number will result in a credit to the unobligated fund of the Motor Fuel Tax fund. A negative number means more funds were spent than authorized. If the negative number has a resolution to cover the overage, the item(s) that resulted in the overage have been approved by IDOT, and are covered in the overrun policy, this amount will be authorized. If these conditions are not met you must contact your District office for guidance.

Difference — No entry necessary, this field is automatically calculated. It is the difference between Total Motor Fuel Tax/Rebuild Illinois Portion for Maintenance and Maint. Engineering. The fields must equal zero; if not, review the amounts inserted under Motor Fuel Tax and Rebuild Illinois need to be corrected.

Remarks — Enter remarks as applicable covering the items entered.

Certification — Upon submittal of this form as the maintenance expenditure statement the LPA official shall check this box as certification.

End of instructions for Maintenance Expenditure Statement

Submitted

Local Public Agency Official — The proper official shall sign, insert their title and date here. For Estimates of Cost covering a Township/Road District the road commissioner shall sign and date as Local Public Agency Official. For Municipalities the municipal official shall sign and date here.

County Engineer/Superintendent of Highways — For County project and/or Township/Road District projects the county engineer/superintendent of highways shall sign here.

Approved — Upon approval the Regional Engineer shall sign and date here. This approval is subject to change based upon a documentation review by the Department.

When submitting the form via USPS mail, submit a minimum of three (3) signed original must be submitted to the Regional Engineer's District office. This form may be submitted electronically with electronic signatures.
Following the Regional Engineer's approval, distribution will be as follows:

Local Public Agency Clerk
Engineer (Consultant or County Engineer)
District File

IDOT Department Use Only The Following fields are for IDOT use only.

Received

Location Enter the location received from the drop down.

Date Enter the date the document was received.

WMFT Entry

By Enter the name of the person entering the information into the WMFT system.

Date Enter the date on which the information was entered.

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.E.

To: Board of Trustees
From: Matthew Supert, Director of Municipal Services
CC: Ellen Baer, Village Manager
RE: Lead Service Line Replacement - Phase 2 CY25-26 - Funding Nomination Form for Loan Assistance (Report only)

Recommendation

The Public Works and Water Committee reviewed this item at their meeting on February 4th, 2025 and recommended the approval of of the Funding Nomination Form for the CY25-26 State of Illinois State Revolving Loan Fund.

Summary

Every year the Illinois Environmental Protection Agency (IEPA) requires municipalities, seeking State Revolving Fund (SRF) loans, to submit a Funding Nomination Form for consideration in the State of Illinois' fiscal year funding.

The Village of Western Springs is requesting funding for Phase 2 Design, Construction, and Construction Engineering for the replacement of 45 lead service lines. This request is for the July 1st, 2025 through June 30, 2026, fiscal year.

The Village anticipates receiving notice if it is awarded funding from the IEPA in July/August 2025. Phase II Engineering for the project, which was approved by the Village Board in December 2024, is anticipated to begin this spring and is reimbursable if funding is granted.

Financial Impact

None.

Recommended Motion

I move to approve the Funding Nomination Form for the CY25-26 State of Illinois State Revolving Loan Fund.

Strategic Plan Alignment

Infrastructure Improvements

File Attachments

1. lslr-funding-nomination-form-instructions

Illinois Environmental Protection Agency
1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217)782-2027

PUBLIC WATER SUPPLY PROGRAM (PWSLP)
LEAD SERVICE LINE REPLACEMENT (LSLR) PROJECTS
INSTRUCTIONS FOR FUNDING NOMINATION FORMS FOR LOAN ASSISTANCE

Funding Nomination Forms (FNFs) must be received by the Agency on or before March 31st preceding the fiscal year for which assistance is requested. To appear on the Agency's Project Priority List, a loan applicant must submit a Funding Nomination Form each year prior to **March 31st**. To be eligible for the annual Intended Funding List, a Project Plan must be **approved by March 31st**. A separate form is needed for each loan. If funding is being sought for multiple years' worth of funding, separate FNF's should be submitted for each annual phase of work.

Mail completed forms to: IFAS, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276.
Forms for ongoing funding requests may also be emailed to the assigned project manager.

1. Legal name of the loan applicant that will own, operate and maintain the facilities to be constructed.

2. Provide the mailing address of the loan applicant.

3. Check the box that describes your organization. Units of Local Government include cities, villages, towns, townships, water districts, etc. Choose OTHER for a type of organization that is not listed.

4. The county and legislative districts should be consistent with the mailing address. The Public Water Supply Identification Number is a unique 7-digit number which identifies the water system.

5. The authorized representative must be the person or officer within the loan applicant's organization that will be responsible to execute loan documents.

6. The name of the architectural/engineering consultant or other individual that will be responsible for the facility planning, design and construction of the loan project.

7. Provide a brief description of the proposed project along with the total estimated cost for the fiscal year that funding is requested. If funding is being sought for multiple years' worth of funding, separate FNF's should be submitted for each annual phase of work. Unless the loan is only funding a portion of the project, the cost should include construction, planning, design, legal services, construction oversight, and a 10% contingency. If the loan is only financing a portion of total project costs, do not include costs which will be paid by other funding sources or local funds. For example, if IEPA is only funding construction, insert the estimated cost of construction plus a 10% contingency and provide an explanation of the other funding sources.

8. Provide the total service population of the loan applicant. If the loan applicant serves multiple municipalities, include the service population for each. If the loan applicant serves unincorporated areas, include the service population for those areas as well. Service population is not service connections or billed units: it is the number of people served by the water system.

9. Provide the schedule including the estimated month and year that the following project activities will occur:

   a. Obtaining project planning approval. Please note, planning approval is effective for 5 years.
   b. Advertising the project for bids
   c. Start of construction
   d. Completion of construction

   Please note that because IEPA loan program funding is limited, potential projects are scored and prioritized to determine which will have available funds reserved for them during the next fiscal year. The State of Illinois fiscal year starts July 1st and ends June 30th. During the first six months of the fiscal year, starting every July 1st, funding is only available for projects with approved planning that have been scored and are on the intended funding list

(IFL). During the second half of the fiscal year, starting every January 1st, IFL projects that are not adhering to their schedule and making progress to meet the requirements of Section 663.350 will be bypassed and the unused money will become available for projects that are ready to proceed. A proposed project must have planning approved by March 31st of the calendar year to be scored and possibly be included in the IFL and have funding reserved for the next fiscal year that starts July 1st. If you have questions on funding availability and scheduling, please contact the IEPA loan program project manager assigned to the project.

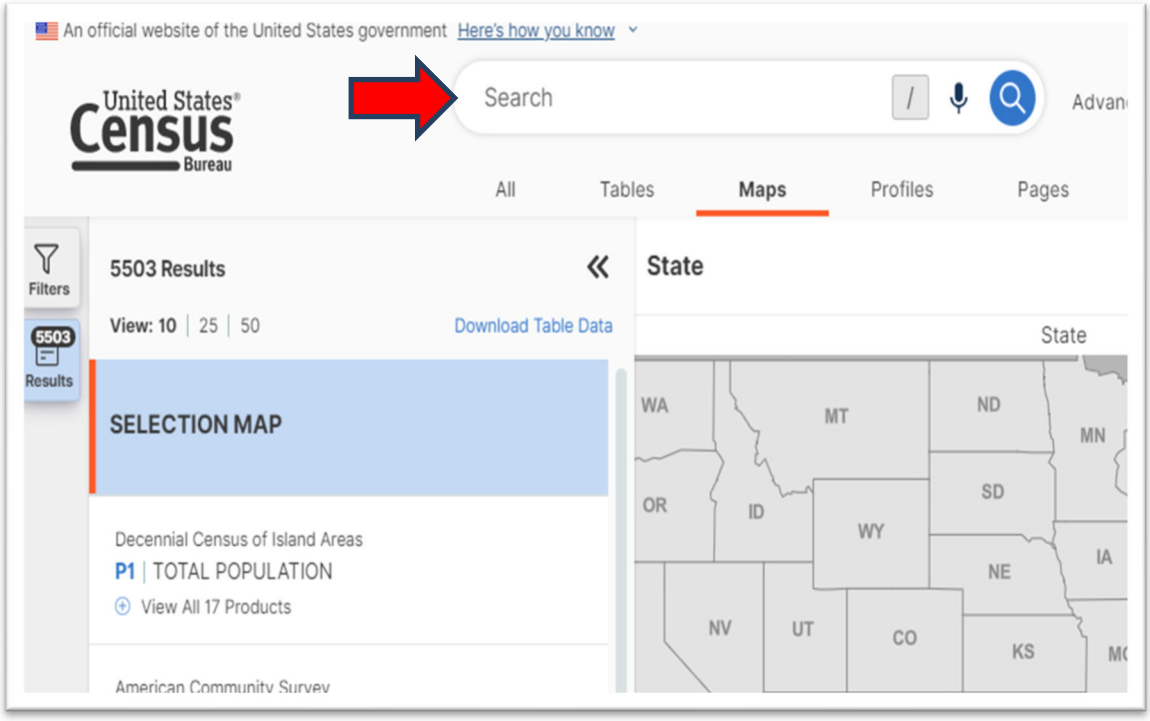
10. Information about project location.

a. Instructions for navigating the Census Bureau website to identify census tracts for the project area:

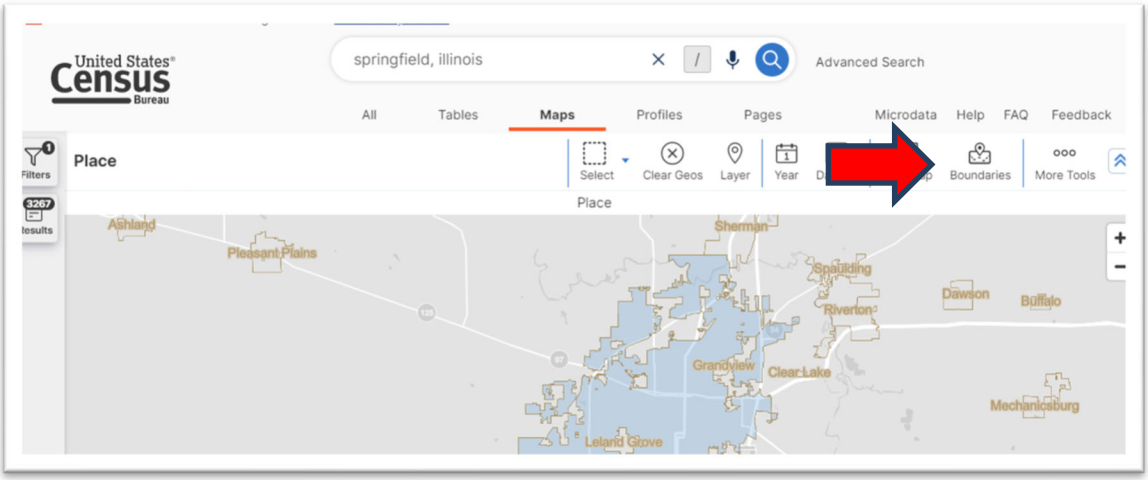
i. Go to website: Census Bureau Data

ii. Top right of the webpage Select “Maps”

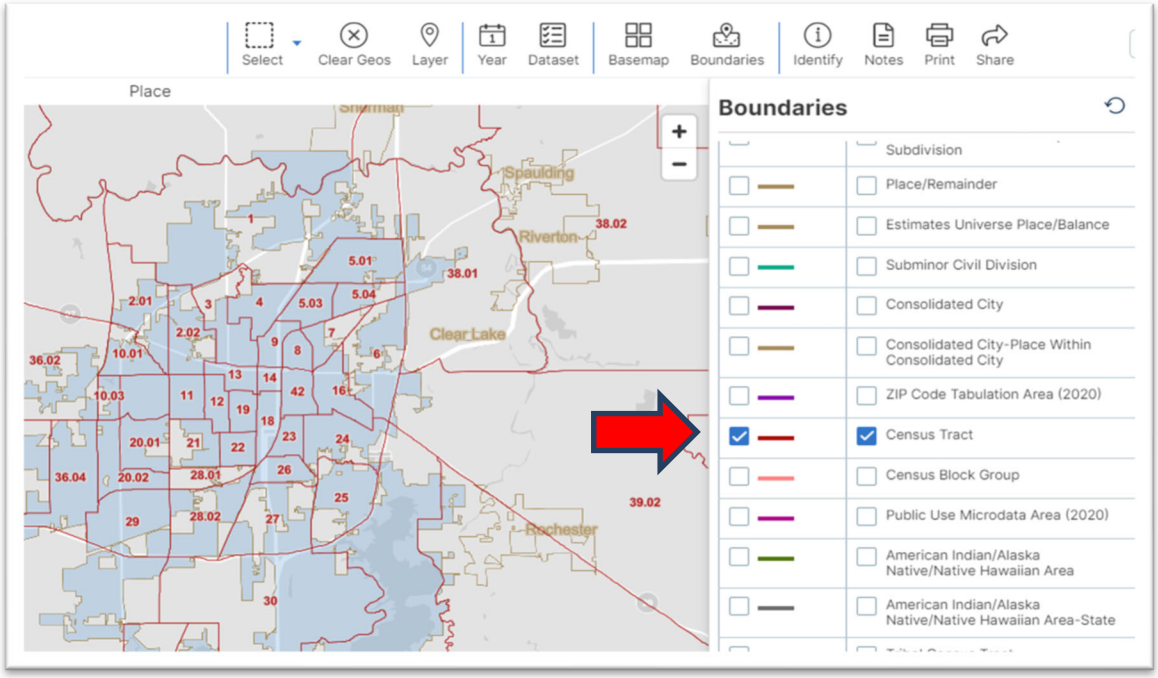
iii. In the Search Bar, type in the name of the municipality followed by “, IL” (for example Chatham, IL).



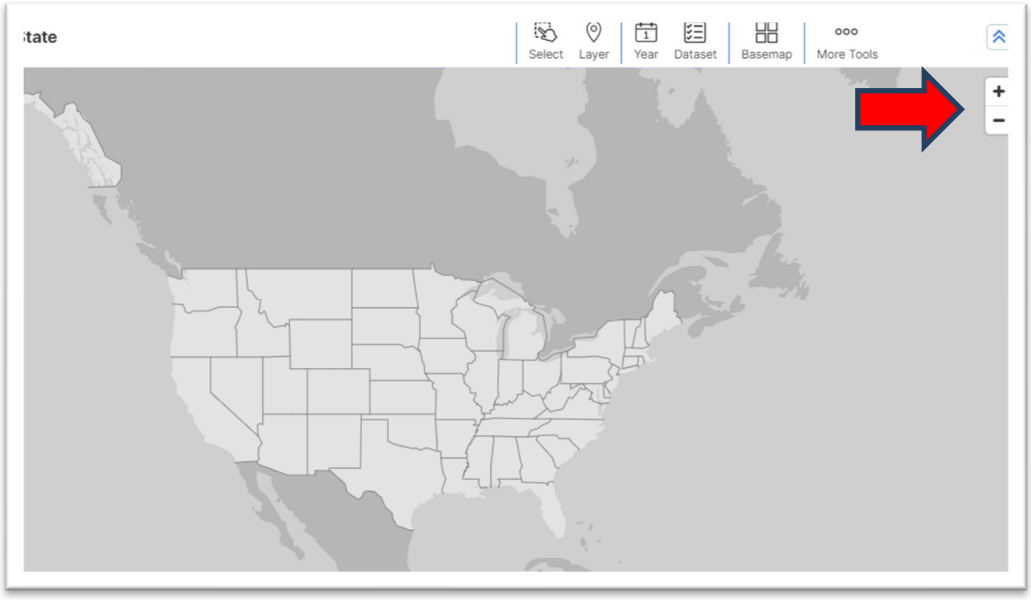
iv. Once the map is displayed, Select “Boundaries” from the options above the map. If the option for “Boundaries” is not visible, Click on “More Tools” to view all options.



v. Scroll down the Boundaries list and Click on both boxes associated with “Census Tract”.



vi. The map is now displayed with both municipal boundaries and census tracts. Periodically the map will position over a different state. To find Illinois, click in the map and use the zoom out buttons provided. You can then use the mouse pan over to Illinois. Once Illinois is visible on the map, you can begin to zoom into the area of interest. As you continue to zoom in, more tract numbers will become visible and then street names as you continue to zoom.



vii. **<u>Census tract information provided on the Funding Nomination Form needs to include the county name and the tract number.</u>** Click within the census tract on the map to find the county name and tract number.

b. <u>Provide the outermost street names outlining the project area corresponding with the previously mentioned census tracts. Think of this as the streets that are framing the project area. This is to help IEPA staff to double check and ensure the appropriate census tracts are being scored for the project.</u>

RESET FORM

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217)782-2027

82 Pb Lead 207.2

FUNDING NOMINATION FORM FOR PUBLIC WATER SUPPLY LOAN PROGRAM LEAD SERVICE LINE REPLACEMENT PROJECTS

Annual Filing Deadline: March 31st

FOR AGENCY USE ONLY

LOAN NUMBER: L17 3761 ☐ Check here if NEW project without a loan number

1. LEGAL NAME OF APPLICANT: Village of Western Springs

2. ADDRESS OF APPLICANT: 740 Hillgrove Avenue
Western Springs, IL 60558

3. ORGANIZATIONAL TYPE:
- ☑ Unit of Local Government
- ☐ Investor-Owned Water Utility
- ☐ Not for Profit Water Corporation
- ☐ Mutually or Cooperatively Owned Water System
- ☐ Other:

4. LOCATION INFORMATION:
- **a.** County: Cook
- **b.** U.S. Congressional District #: 3
- **c.** IL House District #: 8
- **d.** IL Senate District #: 4
- **e.** Public Water Supply ID #: IL0313180

5. AUTHORIZED REPRESENTATIVE:
- Name: Heidi Rudolph
- Title: Acting Village President
- Phone: 708-246-1800
- Email: hrudolph@wsprings.com

6. ENGINEER:
- Name: Ravi S. Jayaraman, PE
- Firm: HR Green, Inc.
- Phone: 815-759-8312
- Email: rjayaraman@hrgreen.com
- Address: 1391 Corporate Drive Suite 203
McHenry, IL 60050

7. BRIEF PROJECT DESCIPTION – CURRENT FISCAL YEAR ONLY ESTIMATED COST: **$ 1,035,000.00**

(Description must identify the number of lead service lines that you are seeking funding for in the current fiscal year)

The Village of Western Springs is requesting funding for the Phase 2 Design, Construction, and Construction Engineering for replacement of 45 lead service lines. This request is for the July 1st, 2025 through June 30, 2026 fiscal year.

8. POPULATION SERVED BY THE LOAN APPLICANT: **13,629**

(Provide the entire service population of the applicant, not just the service population of the project area)

9. PROPOSED PROJECT SCHEDULE:
- **a.** Project Plan Approval Date: 08/22/2023
- **b.** Advertise for Bids: 01/15/2026
- **c.** Construction Start Date: 03/02/2026
- **d.** Completion of Construction: 07/31/2026

10. Additional Questions regarding this Project:

a. In the space below, provide the census tract(s) of the project area from the U.S. Department of Commerce, Bureau of Census of where the project described in #7 will take place:

(Find your census tract information here: Census Bureau Data)

Census Tract:	8190	County:	Cook
Census Tract:	8199	County:	Cook
Census Tract:	8198.01	County:	Cook
Census Tract:		County:	
Census Tract:		County:	
Census Tract:		County:	
Census Tract:		County:	
Census Tract:		County:	

**If your project includes more census tracts than the space provided above, provide the additional census tract and corresponding county on a supplemental attachment. **

b. Provide the outermost street names outlining the project area of the above-mentioned census tracts:

Ogden Avenue, I-294, Hillgrove Avenue, Wolf Road

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____

DATE: _____

DISCLAIMER:

1. *In accordance with 35 Illinois Administrative Code Part 663, the priority scoring of lead service line replacement projects will occur during April and May of each year. Scoring will be based on the data from the US Department of Commerce, Bureau of Census' most recent American Community Survey 5-year estimate. Census data as of March 31 of each year to be utilized for scoring, will be posted on the Agency website.*

2. *Community water supply systems which have not completed their service line inventory in accordance with Section 17.12(d) of the Act are not eligible to be considered a Disadvantaged Community per 35 Illinois Administrative Code Part 663. Therefore, they are considered ineligible to receive additional subsidization (commonly known as principal forgiveness) funding for lead service line replacement through 35 Illinois Administrative Code Part 663.*

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 9.F.

To: Board of Trustees
From: Ronald Derengowski, Water Plant Superintendent
CC: Matthew Supert, Director of Municipal Services, Ellen Baer, Village Manager
RE: Water System Update

Recommendation

This update is for informational purposes only.

Summary

Phase 1 Lead Service Line Replacement

On January 30, 2025, the Village posted and published the request for bids for the Phase 1 lead service line replacements. The IEPA requires the length of the notification to be active for 45 days. The opening of packets will occur on Thursday, March 20, 2025 at 10:00 AM. The Municipal Services department will seek Board approval and award the contract in April. Construction and replacement of the 42 lead services will begin in late April or May. The following addresses will have the services replaced in this project:

3967 Western Avenue	3834 Central Avenue	3829 Woodland Avenue	3832 Lawn Avenue
4065 Western Avenue	3839 Central Avenue	3834 Woodland Avenue	3923 Lawn Avenue
4073 Western Avenue	3908 Central Avenue	3842 Woodland Avenue	4124 Lawn Avenue
4084 Western Avenue	3929 Central Avenue	3901 Woodland Avenue	4137 Lawn Avenue
4147 Western Avenue	4020 Central Avenue	3903 Woodland Avenue	4140 Lawn Avenue
4234 Western Avenue	4030 Central Avenue	3904 Woodland Avenue	4145 Lawn Avenue
4238 Western Avenue	4051 Central Avenue	3917 Woodland Avenue	4215 Lawn Avenue
4245 Western Avenue	4057 Central Avenue	4032 Woodland Avenue	4344 Lawn Avenue
4307 Western Avenue	4066 Central Avenue	4038 Woodland Avenue	
	4071 Central Avenue	4044 Woodland	

		Avenue	
	4203 Central Avenue	4143 Woodland Avenue	
	4308 Central Avenue	4302 Woodland Avenue	
		4369 Woodland Avenue	

Water Main Repairs

This January, Western Springs has completed 11 water main repairs throughout the Village. Most of these repairs were due to cold temperatures. The cold air causes the soil to freeze resulting in the dirt around it to expand, putting more pressure on the pipes. This pressure can lead to cracking and breaking of the mains. The Public Works department will be purchasing a walk behind saw this month. As the majority of water mains are located under the roadway, this purchase will reduce costs with external contractors for saw cutting services and assist in street patching and curb repair.

53rd Street between Fair Elms Avenue and Commonwealth Avenue

Municipal Services has discovered a need for a water main repair and replacement that is located beneath the creek on 53rd Street between Fair Elms Avenue and Commonwealth Avenue. This 8" water main is estimated to have an installation date back in the 1960's. Municipal Services is recommending a replacement and installation of a new water main, two fire hydrants, and two new valve installations (one on Commonwealth Avenue and the other on Fair Elms Avenue). The Village has consulted with V3 for recommendations and design. The cost estimate for the project is expected to be at or near $170,000.00. Unfortunately, this project was not anticipated in the 2025 budget. We are anticipating that V3 will provide the Village with the final design specifications and costs early February. This replacement project will be an agenda item at the Infrastructure Committee on February 20, 2025. Pending committee recommendation, Municipal Services will seek approval from the Board in March or April.

Financial Impact

None.

Recommended Motion

None.

Strategic Plan Alignment

None.

File Attachments

None

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 10.A.

To: Board of Trustees
From: Diana Puga, Municipal Services Coordinator
CC: Ellen Baer, Village Manager, Matthew Supert, Director of Municipal Services, William Tomczyk
RE: Village Hall HVAC Controls RFB Recommendation (Report only)

Recommendation

The Properties and Recreation Committee reviewed this item at their meeting on February 4, 2025 and recommended the approval of the award for the 2025 HVAC Controls replacement to the lowest bidder, Air Comfort, LLC for an amount not to exceed $88,750.00.

Summary

The Village HVAC controls system is more than twenty years old and currently operates on a Windows XP computer system, which presents potential network and security risks to the Village's infrastructure and internal computer network. Additionally, some components of the HVAC system date back more than twenty years. In 2024, the Village Board approved an architectural design contract with 845 Design Group and Novaspace to review and design bid specifications for a replacement system.

On December 5, 2024, the Village issued a Request for Bids (RFB) for the replacement of Village Hall's HVAC Controls. An optional walkthrough was held on December 13, in which interested bidders were provided an overview of the contract document and were encouraged to ask questions. On December 19, the Village received a total of 3 bids.

The results of the base bids are summarized as follows:

Air Comfort, LLC	$84,900.00
Interactive Building Solutions	$167,100.00
Building Automation Solutions	$207,280.00

The bid tab, including all alternates, is attached to this report.

The Municipal Services and IT Departments reviewed the project and proposals, and after careful consideration of the alternates, staff recommends adding the following alternates to the base bid pricing:

1. Alternate #2: Electric radiant heat to operate in conjunction with VAV-25

This alternate would integrate the Police Departments' women's locker room into the controls system. It is currently on its own stand-alone thermostat.

2. Alternate #3: Electric radiant heat to operate in conjunction with VAV-9
This alternate would integrate the Police Departments' men's locker room into the controls system. It is currently on its own stand-alone thermostat.

3. Alternate #5: Stand-Alone EF's on BAS
This alternate would allow for the exhaust fans to be turned off while the building is not occupied, reducing energy. The exhaust fans currently run 24 hours a day.

The recommended alternate pricing combined is summarized as follows:

Air Comfort, LLC	$3,850.00
Interactive Building Solutions	$10,100.00
Building Automation Solutions	$15,200.00

The total recommended bid amount with additional alternates would be $88,750.00. Attached for the Board's review is the Air Comfort, LLC bid, the bid tabulation, and a letter of recommendation from 845 Design Group. The Public Works & Water Committee met on February 4th and recommended to advance the proposal with the three alternates to the Village Board for review and consideration.

The Village budgeted $37,000 for this project in the 2025 budget. During the initial design of the bid specifications, it was anticipated that the existing HVAC controls could remain in place and the components of the system, including the software, could be replaced/upgraded. It was discovered, however, that HVAC control systems have changed significantly since the system was last modified approximately twenty years ago. Any new controls system would require an entirely new controller and new components, along with the associated programming to be made operable. The Municipal Services Department presented a budget amendment request to the Finance Committee in the amount of $51,750.00 which was also recommended. The Finance Committee met on February 6th and recommended approval of the proposed budget amendment.

Financial Impact

The HVAC Controls Project is funded through the Capital Fund as listed below. The 2025 budget includes $37,000.00 for this project. A budget amendment of $51,750 will be required to fund the entire project.

Account	4104310 60020
Fund	Capital Fund
2025 Budget	$ 37,000.00
Project Cost	$ 88,750.00

Recommended Motion

I move to approve the award for the 2025 Grand Avenue Community Center Flooring Replacement to the lowest bidder, Air Comfort, LLC for an amount not to exceed $88,750.00.

Strategic Plan Alignment

Infrastructure Improvements

File Attachments

1. Letter of recommendation 01.17.2025
2. 2024 HVAC Controls - Air Comfort Bid
3. Bid Tabulation (1)

106 Calendar Court, No. 131
La Grange, Illinois 60525
t: 708.872.4146 | f: 708.407.9008
www.845designgroup.com

JANUARY 17, 2025

Matthew Supert, Director of Municipal Services
Village of Western Springs
740 Hillgrove
Western Springs, IL. 60558

Re: The Village of Western Springs, Village Hall, Temperature Control System Upgrades

Dear Matt,

This project was bid twice due to low bidder turnout. In the most recent bid process a pre-bid walk through was held at the site on December 13, 2024. One Contractor attended, and three Contractors provided bids for the project. The bids varied from $88,750.00 (accepting three alternates) to $207,280.00. Air Comfort was the low bidder with a bid of $88,750.00. The references provided by Air Comfort were verified; all four references were reached. The feedback was very positive and each recommendation stated that they have or will work with Air Comfort in the future. All references stated that Air Comfort has a good technical team and is qualified to complete the work. I spoke with the Steve Strnic, a Project Executive at Air Comfort, and verified the scope of the project and confirmed that the bid was based on prevailing wage numbers.

Based on the references provided, the work went well and all references stated Air Comfort is a very capable Contractor and will continue to work with them. I am comfortable with recommending Air Comfort for the Village Hall Temperature Controls System Upgrades. Please let me know if you have any questions or require further information.

Best Regards,



Jamie Zaura, AIA, LEED AP BD+C
Principal, 845 Design Group P.C.

AIR COMFORT
Providing the Right Climate for Business Since 1935

BUILDING AUTOMATION GROUP

Temperature Control Proposal

TO: **Village of Western Springs**

DATE: **December 17, 2024**
PROJECT: **Village of Western Springs Village Hall – Temperature Control System Upgrades**

We propose to furnish the materials and/or perform the work described below for the net price of:
Base Bid: $84,900.00
Alternate #1 New boiler controls…..$9,450.00
Alternate #2 Electric radiant heat to operate in conjunction with VAV-25…..$1,150.00
Alternate #3 Electric radiant heat to operate in conjunction with VAV-9…..$1,150.00
Alternate #4 Stand-Alone CUH & UH on BAS…..$8,550.00
Alternate #5 Stand-Alone EF's on BAS…..$1,550.00

For the above Base Bid price this proposal includes:

- Furnish and install open protocol Temperature Controls System work per the project plans & specifications dated 12/5/2024 and all associated addenda.

Lower Level

- Furnish and install (7) new thermostats for electric duct re-heat control
- Furnish and install (2) new thermostats for VAV and associated re-heat control
- Provide Johnson Controls, Inc Facility Explorer BAS Network, Supervisory Controller (FX90), programming, and commissioning. Provide and install new server to aggregate information. The new system will integrate with the existing BAS
- Integrate TEKMAR boiler controller into new building automation system
- Existing VFD's to remain
- Existing electrical panel for reheats to remain

First Floor

- Furnish and install (19) new thermostats for VAV and associated re-heat control

Our Base Bid proposal includes:

- Provide BAS training
- Provide union electrical labor & installation materials as specified. All exposed or concealed-inaccessible wiring shall be installed in EMT conduit. All concealed accessible wiring (above drop ceilings, etc.) shall be properly supported open plenum cable

o: 708.345.1900
f: 708.345.2730
2550 Braga Drive
Broadview, IL 60155
aircomfort.com

AIR COMFORT
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- Engineering, project management, owner training, commissioning agent assistance and (2) year warranty on items we provide

Our Base Bid proposal does not include:

- Providing Variable Frequency Drives
- Test & Balance scope of work (we will assist the T&B Contractor as required)
- Furnishing or wiring of Fire & Smoke Dampers/Actuators, & AHU Duct Smoke Detectors
- Painting & patching. Ceiling removals and/or replacements
- Any work shown on the Electrical Drawings. Power wiring to any mechanical equipment.
- Overtime Labor

(IMPORTANT: This proposal incorporates by reference the terms and conditions on the reverse side hereof).

This proposal and alternates listed below are hereby accepted and Applied Controls is authorized to proceed with the work.

This proposal is valid until:

December 31, 2024

_____
Purchaser - Company Name

AIR COMFORT, LLC

Signature

Signature

Name: _____
Title: _____
Date: _____

Name: Kevin Kisala
Title: Vice President

AIR COMFORT
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STANDARD EXCLUSIONS & CLARIFICATIONS

1. All work to be completed on straight time during normal working hours 7:00 a.m. – 3:30 p.m. Monday through Friday, excluding holidays, unless otherwise indicated.
2. Adequate access and entry into site and work area(s) is required.
3. Any work found necessary other than what is outlined and approved within this proposal will be completed on a time and material or quoted basis and invoiced accordingly.
4. Permits, permit drawings, PSM or engineered drawings and engineering fees are not included unless otherwise indicated.
5. Structural engineering is not included.
6. Asbestos abatement or testing of any kind is not included.
7. Painting or patching or drywall repair is not included.
8. Project change orders or additional work outside of original scope must be agreed to in writing prior to proceeding or acceptance.
9. Air Comfort reserves the right to invoice for materials ordered but not installed due to installation or repair delays which are a result of customer scheduling, access to equipment, delays created by other trades not under contract with Air Comfort or overall project delays which fall outside of our immediate control.
10. Warranty Terms:
    a. Standard warranty for service repairs is one (1) year from date of completion if the repaired systems/equipment is maintained on a regular PM schedule by Air Comfort certified technicians.
    b. Equipment which is not maintained by Air Comfort. by others is subject to a 90-day warranty, material, and workmanship.
    c. Warranty exclusions other than those noted above or extended warranties where applicable will be noted within the proposal if repair or replacement of proposed equipment warranty would deviate from standard options.
    d. Seal repair or replacement carry a standard manufacturer 90-day warranty.
    e. Equipment or materials supplied by customers and installed by Air Comfort maintain a workmanship warranty.
11. All applicable sales tax has been included unless otherwise indicated.
12. This proposal shall remain valid for 30 days.
13. Payment terms are net 30 days.
14. Credit card payments will incur a 5% processing fee per transaction unless otherwise agreed upon prior to purchase.

AIR COMFORT
Providing the Right Climate for Business Since 1935

BUILDING AUTOMATION GROUP

Temperature Control Proposal

TO: **Village of Western Springs**

DATE: **December 17, 2024**
PROJECT: **Village of Western Springs Village Hall – Temperature Control System Upgrades**

We propose to furnish the materials and/or perform the work described below for the net price of:
Base Bid: $84,900.00
Alternate #1 New boiler controls…..$9,450.00
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- Existing electrical panel for reheats to remain

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Our Base Bid proposal includes:

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- Provide union electrical labor & installation materials as specified. All exposed or concealed-inaccessible wiring shall be installed in EMT conduit. All concealed accessible wiring (above drop ceilings, etc.) shall be properly supported open plenum cable

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- Engineering, project management, owner training, commissioning agent assistance and (2) year warranty on items we provide

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- Test & Balance scope of work (we will assist the T&B Contractor as required)
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- Painting & patching. Ceiling removals and/or replacements
- Any work shown on the Electrical Drawings. Power wiring to any mechanical equipment.
- Overtime Labor

(IMPORTANT: This proposal incorporates by reference the terms and conditions on the reverse side hereof).

This proposal and alternates listed below are hereby accepted and Applied Controls is authorized to proceed with the work.

This proposal is valid until:

December 31, 2024

_____
Purchaser - Company Name

AIR COMFORT, LLC

Signature

Signature

Name: _____
Title: _____
Date: _____

Name: Kevin Kisala
Title: Vice President

AIR COMFORT
Providing the Right Climate for Business Since 1935

STANDARD EXCLUSIONS & CLARIFICATIONS

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2. Adequate access and entry into site and work area(s) is required.
3. Any work found necessary other than what is outlined and approved within this proposal will be completed on a time and material or quoted basis and invoiced accordingly.
4. Permits, permit drawings, PSM or engineered drawings and engineering fees are not included unless otherwise indicated.
5. Structural engineering is not included.
6. Asbestos abatement or testing of any kind is not included.
7. Painting or patching or drywall repair is not included.
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10. Warranty Terms:
    a. Standard warranty for service repairs is one (1) year from date of completion if the repaired systems/equipment is maintained on a regular PM schedule by Air Comfort certified technicians.
    b. Equipment which is not maintained by Air Comfort. by others is subject to a 90-day warranty, material, and workmanship.
    c. Warranty exclusions other than those noted above or extended warranties where applicable will be noted within the proposal if repair or replacement of proposed equipment warranty would deviate from standard options.
    d. Seal repair or replacement carry a standard manufacturer 90-day warranty.
    e. Equipment or materials supplied by customers and installed by Air Comfort maintain a workmanship warranty.
11. All applicable sales tax has been included unless otherwise indicated.
12. This proposal shall remain valid for 30 days.
13. Payment terms are net 30 days.
14. Credit card payments will incur a 5% processing fee per transaction unless otherwise agreed upon prior to purchase.

I. Legal Notice

VILLAGE OF WESTERN SPRINGS, VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

The Village of Western Springs, Cook County, Illinois, does hereby invite sealed bids for the following: Village of Western Springs

Bids will be received until **9:00 am**. Prevailing Local Time on **Thursday, December 19, 2024** by mail or delivered by hand to the drop box located outside the front entrance of Village Hall, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois, 60558-0528 immediately after which time and at such place all bids will be publicly opened. A walk through of the Village Hall (meet in the lobby) located at 740 Hillgrove Avenue, Western Springs, IL 60558 shall be held on **Friday, December 13, 2024 at 9:00 am.**

Those desiring to bid may obtain copies of the contract, specifications and other bidding documents online at wsprings.com/bids.

As evidence of good faith, each bid shall be accompanied by a bid bond, bank draft or certified check and made payable to the Village of Western Springs, Illinois, in the amount of five hundred dollars ($500) or 10% of the bid price, whichever is greater, which shall be submitted to secure the Village against loss occasioned by failure of the bidder to abide by and comply with the terms of his bid.

The successful bidder shall be required to furnish payment and performance bonds in the full amount of the bid or proposal, at the time a contract is awarded, to the Village of Western Springs by a surety company authorized to do business in the State of Illinois and approved by the Village. Failure to produce acceptable bonds will constitute default and the bid bond will be forfeited. No bid shall be withdrawn after the opening of bids without the consent of the Village for a period of sixty (60) days after the scheduled time of closing bids.

Bidders will be required to comply with all laws including those related to employment of labor and the payment of local prevailing wage rates. Each bidder shall satisfy the Village as to his ability, financial and otherwise, to perform the work specified.

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

VILLAGE OF WESTERN SPRINGS
By Edward Tymick, Village Clerk

Published in the Sun-Times Newspaper on December 5, 2024
cc: Ellen Baer, Village Manager

II. Instructions to Bidders

VILLAGE OF WESTERN SPRINGS
DUE DATE: December 19, 2024

Proposals to be entitled to consideration must be made in accordance with the following instructions:

Proposals shall be submitted in an opaque, sealed envelope plainly marked with the words:

VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

and shall be delivered by hand to a drop box or mailed in time for delivery to the Office of Village Clerk, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois by **9:00 A.M.** Prevailing Local Time on **Thursday, December 19, 2024**, after which time and at such place all bids will be publicly opened and read aloud. A walk through of the Village Hall located at 740 Hillgrove Avenue, Western Springs, IL 60558 shall be held on **Friday, December 13, 2024 at 9:00 am.**

Proposals received after the time for opening will not be considered.

Proposals must be signed by an authorized official of the contractor's organization, and the name of the official and his title typed below the signature. If the bidder is a corporation, the corporate seal must be affixed.

Bid security in the form of a bid bond, bank draft or certified check made payable to the Village of Western Springs, in the amount of FIVE HUNDRED DOLLARS ($500) or 10% of the bid (whichever is more), shall be submitted with each bid. The proceeds of any bid security shall become the property of the Village if, for any reason, a bidder, within FORTY-FIVE (45) days after the opening of bids withdraws his bid without the consent of the Village, or if on notice of award refuses or is unable to execute the approved contract and obtain the required performance and payment bonds. Bid deposits may be held for a period not exceeding FOURTY FIVE (45) days. (NOTE: For those projects which will not require the performance bonds, consideration should be given to holding the bid security until delivery is made.)

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

The successful bidder will be required to furnish and pay for satisfactory Performance and Labor and Material Payment Bonds in the amount of one hundred percent (100%) of the contact sum. Execution of the Contract by the Village is contingent upon receipt of acceptable Performance and Payment Bonds and Insurance Certificates.

The Village reserves the right to require of any bidder, such information necessary to satisfy the Village of the bidder's qualifications and to withhold formal signing of the contract until such information is received.

The successful bidder will be required to execute a contract in the form prescribed by the Village and must certify that the bidder is eligible to enter into public contracts under the Illinois Criminal Code, has a written sexual harassment policy and complies with Illinois Department of Revenue policies regarding taxes by executing the Certification attached hereto as **"Exhibit A"** and made a part hereof.

Bidders will be required to comply with all applicable laws including those relating to the employment of labor and the Illinois Prevailing Wage Act and payment of the applicable prevailing wage.

This contract will be awarded without discrimination in compliance with all applicable local state and federal laws.

Responsibility of the bidders will be determined by factors in addition to financial responsibility, such as past records of its or other entities' transactions with the Village of Western Springs, experience, ability to work cooperatively with the Village and its Administration, adequacy of equipment, ability to complete performance within necessary time limits, and other pertinent considerations, such as, but not limited to, reliability, reputation, competency, skill, efficiency, facilities and resources.

III. Proposal

TO: Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

RE: VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES

1. The specifications and directions for the proposed service are those prepared by the Village of Western Springs and designated as Special Provisions and which cover the work described in said document and the "Agreement."

2. In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal as principals are those named herein; and that the proposal is made without collusion with any other person, firm, or corporation.

3. The undersigned further understands and agrees that if this proposal is accepted, the undersigned is to furnish and provide all necessary equipment, machinery, tools, apparatus and other means of maintenance, and to do all of the work and perform all the services, and to furnish all of the materials specified in the bid documents in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth.

4. The undersigned further agrees to execute an Agreement for this work and present the same to the Village within seven (7) days after the date of notice of the award of the Agreement to the Contractor.

5. The undersigned further agrees that he and his surety will execute and present within seven (7) days after the date of notice of the award of Agreement the performance and labor and materials payment bonds in a form satisfactory to the Village of Western Springs, in the amount of one hundred percent (100%) of the contract sum guaranteeing the faithful performance of the work in accordance with the terms of the bid documents.

6. The undersigned further agrees to be available to begin work by **February 2025**, as provided for in the Agreement, unless otherwise agreed to by the Village, and to prosecute the work in such manner and with sufficient materials, equipment, and labor as will insure the providing of specified service within the time limit specified herein, it being understood and agreed that the providing of the specified service within the time limit and according to the maintenance schedule is an essential part of the Agreement.

7. This proposal is accompanied by a bid bond, bank draft or certified check complying with the requirements of the specifications and directions, made payable to the "Village of Western Springs, Illinois". The amount of the bid security is Five Hundred ($500.00) Dollars of 10% of the bid (whichever is more). If this proposal is accepted

and the undersigned shall fail to execute an Agreement and said security as required herein, it is hereby agreed that the amount of the bid bonds shall become the property of the Village, and shall be considered as payment of damages due to delay and other causes suffered by the Village because of failure to execute said Agreement or provide the required performance and payment bonds; otherwise said bid security shall be returned to the undersigned pursuant to the bid documents.

ATTACH BID SECURITY HERE

8. The undersigned submits herewith a schedule of prices covering the work to be performed under this Agreement; the undersigned must show in the schedule the prices for which the undersigned proposed to perform.

9. The undersigned further declares to have carefully examined this proposal, the specifications and directions, the Agreement, the legal notice, and special provisions (if any), and to have inspected in detail the site of the proposed work and is familiar with all of the local conditions affecting the Agreement and the detailed requirements of service and understands that in making this proposal waives all right to plead any misunderstanding regarding the same.

12/17/2024
Date

Proposed Contractor (Bidder)

Carrie Cooke

Witness

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Air Comfort LLC
2550 Braga Drive
Broadview, IL 60155

SURETY:
(Name, legal status and principal place of business)
Berkshire Hathaway Specialty Insurance Company
1314 Douglas Street, Suite 1400
Omaha, NE 68102

OWNER:
(Name, legal status and address)
Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

BOND AMOUNT: $ Ten Percent (10%) of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
Village of Western Springs Village Hall – Temperature Control System Upgrades

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Bid Bond

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

Init.
/
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User Notes: (1362455416)

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 19th day of December , 2024

Carrie Ceske	Air Comfort LLC
(Witness)	*(Contractor as Principal)* *(Seal)*
	Vice President
	(Title)
	Berkshire Hathaway Specialty Insurance Company
	(Surety) *(Seal)*
Laura A Benevento	
(Witness) Laura A. Benevento	*(Title) Evelyn A. Benevento, Attorney-in-Fact*

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User Notes: (1362455416)

Additions and Deletions Report for
AIA® Document A310™ – 2010

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 17:32:12 ET on 12/11/2024.

PAGE 1

Air Comfort LLC
2550 Braga Drive
Broadview, IL 60155

Berkshire Hathaway Specialty
Insurance Company
1314 Douglas Street, Suite 1400
Omaha, NE 68102

...

Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

...

BOND AMOUNT: $ Ten Percent (10%) of Amount Bid

...

Village of Western Springs Village Hall – Temperature Control System Upgrades
PAGE 2

Signed and sealed this 19th day of December , 2024

Air Comfort LLC

...

Berkshire Hathaway Specialty Insurance Company

...

(Witness) Laura A. Benevento

(Title) Evelyn A. Benevento, Attorney-in-Fact

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User Notes: (1362455416)

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Evelyn A. Benevento, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 17:32:12 ET on 12/11/2024 under Order No. 3104238759 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A310™ – 2010, Bid Bond, other than those additions and deletions shown in the associated Additions and Deletions Report.

Evelyn A Benevento Jr

(Signed)

Attorney - In - Fact

(Title)

December 19, 2024

(Dated)

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Berkshire Hathaway Specialty Insurance

Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at One Lincoln Street, 23rd Floor, Boston, Massachusetts 02111, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131 and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Evelyn A. Benevento, Kimberly Miles, Tammy Selbe, Katelyn Williams, Nicole Moon, 3190 Fairview Park Drive, Suite 400 of the city of Falls Church, State of Virginia,** their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. **This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.**

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of August 24, 2023. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. **The following seals of the Companies and signatures by an authorized officer of the Company may be affixed by facsimile or digital format, which shall be deemed the equivalent of and constitute the written signature of such officer of the Companies and original seals of the Companies for all purposes regarding this Power of Attorney, including satisfaction of any signature and seal requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.**

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY,

By: _____
David Fields, Executive Vice President

NATIONAL INDEMNITY COMPANY, NATIONAL LIABILITY & FIRE INSURANCE COMPANY,

By: _____
David Fields, Vice President

NOTARY
State of Massachusetts, County of Suffolk, ss:
On this 24th day of August, 2023, before me appeared David Fields, Executive Vice President of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY and Vice President of NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.
[Notary Seal]

JOHN C. SKINNER
Notary Public, Commonwealth of Massachusetts
My Commission Expires January 22, 2027

_____
Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, see hereunto affixed the seals of said Companies this December 19, 2024.

_____
Ralph Tortorella, Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, One Lincoln Street, 23rd Floor Boston, MA 02111 | (770) 625-2516 or by email at Jennifer.Porter@bhspecialty.com *THIS POWER OF ATTORNEY IS VOID IF ALTERED*

To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

. . . .

EXECUTION OF DOCUMENTS:

. . . .

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

(1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and

(2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

IV. Bid Schedule

Contact Information

All questions concerning this Request for Bids shall be directed to jamiez@845designgroup.com at (708) 872-4146. Proposals must be submitted in a sealed envelope clearly marked with the title, and opening date on the outside of the envelope, VILLAGE OF WESTERN SPRINGS VILLAGE HALL – TEMPERATURE CONTROL SYSTEM UPGRADES and Bidder's name as follows: Village of Western Springs, Western Springs, IL 60558.

Schedule of Bid Prices

THE UNDERSIGNED SUBMITS HEREWITH THIS SCHEDULE OF PRICES COVERING THE WORK TO BE PERFORMED UNDER THIS CONTRACT

Bidder, in submitting this proposal, hereby agrees to comply with all provisions and requirements of the specifications and contract documents attached hereto. This proposal shall remain in force and effect for a twelve (12) month period from start date.

BASE BID

Name of Bidder: Air Comfort, LLC

Address: 2550 Braga Dr. Broadview, IL 60155

Telephone No. 708-345-1900 Fax No. N/A

Signature: Kevin Kisala

Name and Title: (Please Print) Kevin Kisala, Vice President

Date: 12/17/2024

References

Name of Organization: Lyons Township High School

Year of Contract: 2024

Contact Name: Tim Chromzack

Telephone No: 708-579-6574

Email Address: tchromzack@d204.lths.net

Name of Organization: Nokia

Year of Contract: 2024

Contact Name: Craig Morgan

Telephone No: 331-529-2084

Email Address: craig.morgan.ext@nokia.com

Name of Organization: Cicero School District 99

Year of Contract: 2024

Contact Name: Travis Couch

Telephone No:

Email Address: tcouch@cicd99.edu

Name of Organization: Allstate Insurance Corp

Year of Contract: 2024

Contact Name: Steve Thunberg

Telephone No:

Email Address: sthunber@allstate.com

Name of Organization:

Year of Contract:

Contact Name:

Telephone No:

Email Address:

V. Pre-Qualification Process (N/A)

REQUIRED DOCUMENTATION

- **OVERVIEW OF THE COMPANY**
- **THREE YEARS CLEANING GOVERNMENT OR COMMERCIAL ACCOUNTS**
- **FIVE (5) GOVERNMENT OR COMMERCIAL REFERENCES**
- **QUALITY CONTROL/QUALITY ASSURANCE PLAN**
- **INSURANCE DOCUMENTATION**

PRE-QUALIFICATION INFORMATION (N/A)

This will be a Performance Based Contract. This is a one-year contract with four, one-year extension options. The extension option is for a one-year period and is effective if approved by the Village Board.

BASIS OF AWARD (N/A)

The evaluation process for the award of this contract is a **two-step** process consisting of a Request for Qualifications, narrowing the field down to appropriate candidates, and then a Request for Proposals outlining the costs and terms of service.

VI. Contract Provisions

Location

This project is located at the Village Hall located at 740 Hillgrove Avenue, Western Springs,

IL 60558.

These specifications are not to be construed as exclusive. It is intended that the services provided by the Contractor include all functions normally considered a part of workmanlike, satisfactory work, whether or not specifically listed herein.

Term

The term of this contract shall be a one calendar year period and ending 365 days after the notice to proceed date, unless the contract is terminated pursuant to the terms herein.

VII. General Specifications

Acceptability of Work

The Village of Western Springs will be sole and final judge of the acceptability of the work to be performed and the services to be rendered under the terms of the Agreement.

Applicable Laws and Regulations

The Vendor agrees to comply with the following laws and to assist the Village in complying with the following laws: the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) and all rules and regulations issued pursuant to the Act. All applicable provisions of Federal, State and local laws, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Vendor agrees to comply with all applicable Federal laws and State laws and regulations including, but not limited to, the Illinois Prevailing Wage Act and such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Vendor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and Federal and State statutes, and the Vendor further agrees to make all required withholdings and deposits therefor. Such requirements shall be included by the Vendor in all its contracts and agreements with any of its subcontractors. The Parties agree that the most recent of such State and Federal requirements will govern the administration of this Contract at any particular time. Likewise, new State and Federal laws, regulations, policies and administrative practices may be established after the date that this Contract has been executed and may apply to this Contract. The Vendor agrees to maintain full compliance with changing government requirements that govern or apply to its operation. Any complaint of such discrimination received by the Vendor shall be immediately forwarded to the Village. Further, the Vendor certifies that:

A. The Vendor is the only person/entity interested in the above Contract as the sole principal named herein and that no other person/entity than herein mentioned has any interest in the Contract to be entered into; that this Contract is made without connection with any other person, company or parties submitting qualification information; and that it is in all respects fair and in good faith without collusion or fraud.
B. The Vendor is not delinquent in the payment of any tax administered by the Illinois Department of Revenue nor is delinquent in the payment of any money owed to the Village.
C. The Vendor is not barred from contracting with any unit of the State of Illinois or local government, such as the Village, as a result of violating Section 33E-3 or 33E-4 of the Illinois Criminal Code.
D. The Vendor complies with the Illinois Drug Free Work Place Act.
E. The Vendor complies with the Equal Employment Opportunity Clause of the Illinois Human Rights Act and the Rules and Regulations of the Illinois Department of Human Rights.
F. The Vendor complies with the Americans with Disabilities Act.

G. The Vendor states that any work to be performed by it or its contractors on Village-owned property shall be in a good and workmanlike manner and in accordance with all applicable Federal, State and county laws and regulations and the Village codes, ordinances and regulations, including but not limited to all local zoning ordinances and regulations, and other applicable codes.
H. The Vendor also agrees to require any subcontractor doing work under this Contract to agree to adhere to the requirements of this Contract.

Assignment

The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of any award or any or all of its rights, title, or interest therein, without the prior written consent of the Village of Western Springs.

Authority

The Village, as a non-home rule Illinois Municipal Corporation, has the authority to enter into this Contract pursuant to the statutory authority and contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution and the Illinois Intergovernmental Cooperation Act (5 ILCS 220/) and the Illinois Municipal Code (65 ILCS 5/).

Bidder Investigations

Before submitting a bid, each bidder shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village of Western Springs upon which the bidder will rely. If the bidder receives an award as a result of its bid submission, failure to have made such investigations and examinations will in no way relieve the bidder from its obligation to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

Bonds

If required, Bonds required to guarantee performance and payment for labor and material for the Work shall be in a form acceptable to the Village and shall provide that they shall not terminate on completion of the Work, but shall be reduced to ten percent (10%) of the contract sum upon the date of final payment by the Village for a period of one (1) year to cover a warranty and maintenance period which Vendor agrees shall apply to all material and workmanship for one (1) year from the date of issuance of the final payment by the Village.

Change in Scope of Work

The Village of Western Springs may order changes in the work consisting of additions, deletions, or other revisions within the general scope of the contract. No claims may be made by the Contractor that the scope of the work or of the Contractor's services has been changed, requiring changes to the amount of compensation to the Contractor or other adjustments to

the contract, unless such changes or adjustments have been made by written amendment to the contract approved by the Village Board and the Contractor.

If the Contractor believes that any particular work is not within the scope of contract, is a material change, or will otherwise require more compensation to the Contractor, the Contractor must immediately notify the Village Manager in writing of this belief. If the Village Manager believes that the particular work is within the scope of the contract as written, the Contractor will be ordered to and shall continue with the work as changed and at the cost stated for the work within the scope.

Where change orders, or a series of change orders, authorize or necessitate an increase or decrease in either the cost of the work totaling $10,000 or more, or the time of completion of the work by thirty (30) days or more, a written determination must be approved by the Village Board and signed by the Village President or his designee stating that the circumstances necessitating the changes in performance were not reasonably foreseeable at the time the Contract was signed or, the change is germane to the Contract or the change order is in the best interests of the Village.

Collusion among Bidders

Each bidder, by submitting a bid, certifies that it is not a party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any or all bids shall be rejected if there is any reason for believing that collusion exists among the bidders. The Village of Western Springs may or may not, at its discretion, accept future bids for the same work from participants in such collusion.

More than one bid from an individual, firm, partnership, corporation, or association under the same or different names may be rejected. Reasonable grounds for believing that a bidder has interest in more than one bid for the work being bid may result in rejection of all bids in which the bidder is believed to have interest.

Nothing in this clause shall preclude a firm acting as a subcontractor to be included as a subcontractor for two or more primary Contractors submitting a bid for the work.

Compliance with Freedom Of Information Act Requests

Section 7(2) of the Illinois Freedom of Information Act (FOIA) (5 ILCS 120/7(2)) requires certain records that qualify as "public records," which have been prepared by and are in the possession of a party who has contracted with the Village, be turned over to the Village so that a FOIA requestor can inspect and photocopy the non-exempt portions of the public records pursuant to a FOIA request. The Village has a very short period of time from receipt of a FOIA request to comply with the request, and it requires sufficient time to review the records to decide what information is or is not exempt from disclosure. The Contractor/Consultant acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village for public records (as that term is defined by Section 2(c) of FOIA) in the Contractor/Consultant's possession and to provide the requested public records to the Village within two (2) business days of the request being made by the Village.

The Contractor/Consultant agrees to indemnify and hold harmless the Village from all claims, costs, penalties, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the Village under this Agreement.

The Contractor/Consultant acknowledges that certified payroll records submitted to a public body under Section 5(a)(2) of the Prevailing Wage Act are public records subject to inspection and copying in accordance with the provisions of this Act (See 5 ILCS 140/2.10)."

Compliance with Laws; Employment Discrimination

In the performance of its obligations pursuant to this Agreement, the Contractor shall comply with all applicable provisions of federal, state and local law, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation, Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Contractor agrees to comply with all applicable federal laws, state laws and regulations including, but not limited to, such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Contractor also agrees to require any contractor doing work or performing professional or consulting services in connection with its program or this Agreement to agree to adhere to the requirements of this Section. The Contractor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and federal and state statutes, including the Illinois Prevailing Wage Act, and the Contractor further agrees to make all required withholdings and deposits therefore. Such requirements shall be included by the Contractor in all its contracts and agreements with contractors and subcontractors for this program. The parties agree that the most recent of such state and federal requirements will govern the administration of this Agreement at any particular time. Likewise, new state and federal laws, regulations, policies and administrative practices may be established after the date of the Agreement has been executed and may apply to this Agreement. The Contractor agrees to maintain full compliance with changing government requirements that govern or apply to its operation." In addition, the Contractor agrees to comply with the Americans with Disability Act (42 U.S.C. 12101 et seq.), and all rules and regulations issued pursuant to the Act, there shall be no discrimination on the basis of disabilities (as defined in the Act) in the operation of the services and programs provided by the Contractor hereunder. Any complaint of such discrimination received by the Contractor shall be immediately forwarded to the Village Manager.

The Contractor shall comply with all applicable provisions of the Illinois Human Rights Act including the requirement that the Contractor have on file a written sexual harassment policy.

Contractor Personnel

The Village Manager shall, throughout the life of the contract, have the right of reasonable rejection and approval of employees or subcontractors assigned to the work by the Contractor. If the Village of Western Springs reasonably rejects employees or subcontractors, the

Contractor must provide replacement staff or subcontractors satisfactory to the Village in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees and subcontractors is the responsibility solely of the Contractor.

Debarment

By submitting a bid, the bidder certifies that it is not currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois and that it is not an agent of a person or entity that is currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois.

Default Clause

A default shall occur under this contract if the Contractor or Village shall not comply with the terms of this contract. The following list is presented as an example only and does not include a listing of all events of default. Omission of an event does not indicate an intent to excuse such an event as an event of default. Examples are, if the Contractor fails to begin work on the date set forth in the contract (unless the Contractor and Village shall agree in writing to a delay in the start of performance), if the Contractor fails to diligently and consistently perform the work once the contract has started (including but limited to, failing to provide enough properly skilled workers; to supply proper material; to make proper payments to subcontractors, or for materials or labor), or otherwise is guilty of a substantial violation of the contract or specifications, then the Village may declare that a default exists under the contract. The Village shall specify the nature of the default in a written notice mailed to the Contractor or delivered to its employee or agent. Upon receipt of said notice, the Contractor shall be liable and shall pay the Village the amount shown in the following schedule of deductions, not as a penalty but as liquidated damages, for each day until the default is corrected. The liquidated damages for default are approximate, due to the impracticality of calculating and proving actual delay costs. This schedule of deductions establishes the cost of delay to account for administration, engineering, inspection, and supervision during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by the Village during extended and delayed performance by the Contractor of the work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of the Contractor. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work off the contract even though the work may be substantially complete. The Village will deduct these liquidated damages from any monies due or to become due to the Contractor from the Village.

Schedule of Deductions for Each Day of Default Original Contract Amount from more than	to and including	calendar day
$0	$25,000	$300
$25,000	$100,000	$375
$100,000	$500,000	$550
$500,000	$1,000,000	$725

$1,000,000	$2,000,000	$900
$2,000,000	$3,000,000	$1,100
$3,000,000	$5,000,000	$1,300
$5,000,000	$7,500,000	$1,450
$7,500,000	And over	$1,650

If such default is not corrected within seven (7) days after receipt of the notice, the Village may terminate the Contractor's rights under the contract and complete the work by whatever method the Village deems is appropriate. Upon the termination of the contract, the Contractor agrees to promptly and completely remove all equipment and materials from the job site with no damage to the improvements in place and to return all keys to Village buildings, and all employee security passes. In the case of a default, the Contractor shall not be entitled to receive any further payments until the work under the contract has been completed.

Delay

Contractor shall perform the work of this contract expeditiously in cooperation with the Village, its agents, employees and other Contractors and subcontractors. Contractor shall make no claim against Village, and no claim shall be allowed for any damages which may arise out of any delay caused by Village, its agents, employees or other Contractors or subcontractors. Contractor's sole remedy for delay from the Village shall be an extension in the Contract Time.

Entire Agreement

This Contract and its Exhibits contain the entire agreement between the Parties hereto and supersedes any and all prior agreements and understandings, whether written or oral, and whether formal or informal. In addition, this Contract embodies and merges the entire understanding between and among the Parties hereto, and any and all prior correspondence, conversations or memoranda relating to the subject matter stated herein are being merged herein and replaced hereby. This Contract may be modified or amended only by the mutual consent of the Parties and any such modification or amendment must be in writing, signed by the Parties and duly executed, otherwise it is void.

Exceptions

Bidders taking exception to any part or section shall indicate such exceptions on the bid form. Failure to indicate any exception will be interpreted as the bidder's intent to comply fully with the requirements as written. Conditional or qualified bids, unless specifically allowed, shall be subject to rejection in whole or in part.

Expenses Incurred in Preparing Bid

The Village accepts no responsibility for any expense incurred by the bidder in the preparation and presentation of a bid. Such expenses shall be borne exclusively by the bidder.

Failure to Deliver

In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Village, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any resulting additional purchase

and administrative costs. This remedy shall be in addition to any other legal remedies that the Village may have.

Guaranty, Warranties and Representations

A. The prices for the goods, supplies, equipment and/or services are based on the Vendor's standard pricing schedule, are commercially reasonable and competitive prices for the industry, are not artificially inflated, and do not contain any premium or hidden charges, commitments or other undisclosed obligations.

B. All Work shall be performed in a good workmanship manner consistent with industry standards and in accordance with the manufacturers' specifications and instructions.

C. It will exercise the due care and diligence generally associated with the delivery and installation of the goods, supplies, equipment and/or services being provided under this Contract. Due care and diligence shall be applied to all phases of the Vendor's Work.

D. It is authorized to sell and install the goods, supplies, equipment and/or services.

E. The goods, supplies, equipment and/or services are of a good quality, fit for their intended use and purpose, and all express or implied warranties of any kind, including the warranty of merchantability, are in full force and effect and have not been waived.

F. It shall transfer all third party product warranties and guaranties relative to the goods, supplies, equipment and/or services.

G. In addition to any other third party warranty or guaranty, the Vendor shall provide a minimum one (1) year guaranty relative to any equipment and its components. In the event the Vendor's Invoice/Purchase Order provides for a longer guaranty, the longer guaranty shall control.

H. The Vendor shall maintain a current, valid Village business license, and the Vendor shall post with the Village and keep on file and in force for the duration of this Contract a contractor's license bond in the amount required by the Village Code.

I. A written statement containing guaranty for a minimum of one (1) year after final payment or longer for all material and workmanship must be furnished with the bid.

Indemnity/Hold Harmless Provision

To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify and hold harmless the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, against all injuries, deaths, loss, damages, claims, patent claims, suits, actions, liabilities of any kind, including, as allowed by law, liabilities incurred due to joint negligence of the Village and the Contractor, judgments, cost and expenses, which may in anyway accrue against the Village, its officers, appointed and

elected officials, president and trustees, agents, employees, attorneys and volunteers, arising in whole or in part or as a consequence of the performance the contract or any part of the work by the Contractor, its employees, agents, or subcontractors, or which may in anyway result therefore, except that arising out of the sole legal cause of the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. The Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same.

Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as herein provided.

Independent Contractor

The Vendor is retained by the Village only for the purposes and to the extent set forth in this Contract, and the Vendor's relationship to the Village shall, during the term of this Contract and period of its Work hereunder, be that of an independent contractor based on the following: (a) this Contract is a non-exclusive, independent contractor arrangement; (b) the Vendor, in its discretion, is free to set its schedule regarding the performance of the Work, provided such scheduling and performance of the Work results in the timely and efficient delivery of the Work without interruption of the Village's and its employees' ability to perform their functions and duties; (c) the Vendor will utilize a high level of skill necessary to perform the Work; (d) the Vendor shall not be considered as having Village employee status, nor shall the Village make any deductions or withhold any sums for the payment of any and all applicable Federal, State, local and other taxes, income taxes or FICA taxes; (e) the Vendor shall not be entitled to receive or participate in any employee plans, benefit programs, retirement plans or related employee benefit arrangements or distributions by the Village pertaining to or in connection with any pension or retirement plans, or any other benefits for the regular employees of the Village; (f) the Vendor shall file all necessary tax returns (Federal, State, county and local) and to make such required deductions and pay all income tax, social security, and any and all other taxes due as an independent contractor in its profession; (g) the Vendor is ineligible to file a claim for unemployment compensation benefits or for workers compensation benefits against the Village and agrees not to file any such claims in the event this Contract is terminated or if it or any of its employees are injured performing any Work; (h) the Vendor agrees to assume all risk of death, illness and injury relative to performing any Work under this Contract; (i) the Vendor shall provide all of its own equipment required for the performance of the Work under this Contract; (j) the Vendor shall retain the right to perform services for others during the term of this Contract so long as the Work: (i) is not inconsistent or incompatible with the Vendor's obligations under this Contract; or (ii) does not violate any provisions of this Contract; (k) the Vendor and its employees shall maintain all applicable certifications, licensure and training as required for its area of expertise and promptly provide copies of such documents upon request by the Village; (l) this Contract shall not render the

Vendor, or any its employees, an employee, partner, agent of, or joint venturer with the Village for any purpose; and (m) The Vendor shall comply with the Village's Non-Harassment / Discrimination Policy, a copy of which is incorporated herein by reference.

Insurance Requirements

Contractor shall procure and maintain, for the duration of the contract, insurance written on an "occurrence" basis, against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

I. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

A. Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers named as additional insureds, including ISO Additional Insured Endorsement CO 2026, CG 2010; and
B. Owners and Contractors Protective Liability (OCP) policy with the Village as insured; and
C. Insurance Service Office Business Auto Liability coverage form number CA 0001 (Ed. 10/90 or newer), Symbol 01 "Any Auto."
D. Workers' Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.

II. MINIMUM LIMITS OF INSURANCE

Contractor shall maintain limits no less than:

A. Commercial General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate shall be twice the required occurrence limit. Minimum General Aggregate shall be no less than $2,000,000 or a contract specific aggregate of $1,000,000.
B. Business Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.
C. Workers' Compensation and Employers' Liability: Workers Compensation coverage with statutory limits and Employers' Liability limits of $1,000,000 per accident.
D. Excess Liability/Umbrella Coverage: $2,000,000 per occurrence and in the aggregate.

III. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions relative to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers;

or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

IV. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

A. General Liability and Automobile Liability Coverages

1. The Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers are to be covered as specifically listed additional insureds as respects: liability arising out of the Contractor's work, including activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
2. The Contractor's insurance coverage shall be primary as respects the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. Any insurance or self- insurance maintained by the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
4. The Contractor's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that Contractor's insurance shall apply separately to each insured against whom the claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the Contractor shall be required to name the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds. A copy of the actual additional insured endorsement shall be provided to the Village.

B. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Village, its officers, officials, trustees, agents, employees and volunteers for losses arising from work performed by Contractor for the municipality.

C. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Village Manager at the Village's principle office address.

V. ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

VI. VERIFICATION OF COVERAGE

Contractor shall furnish the Village with certificates of insurance naming the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds, and with original endorsements affecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Contractor's Public Liability Insurance shall be written on the Comprehensive form and shall include Contractual Liability, Products and Completed Operations, and Automobile Liability, all to the limits state above. Comprehensive Liability Insurance shall specifically include coverage for Independent Contractors and for both Hired and Non-Owned Automobiles. The insurance shall apply to all activities including spray-painting operations. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

VII. SUBCONTRACTORS

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

VIII. ASSUMPTION OF LIABILITY

The Contractor assumes liability for all injury to or death of any person or persons including employees of the Contractor, any sub-contractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to this contract.

IX. NO PERSONAL LIABILITY.

No appointed official, agents, attorneys, employees, volunteers and representatives of the Village or any of its local government members shall be personally liable, in law or in contract, to the Vendor as the result of the execution of this Contract. Notwithstanding any provision in this Contract to the contrary, the operation of this Section 15 shall survive the termination of this Contract.

Law and Venue

This Agreement provides for services to be performed within the State of Illinois. Accordingly, this Agreement, and all questions of interpretation, maintenance and enforcement hereof, and all controversies hereunder, shall be governed by the applicable statutory and common law of the State of Illinois. The parties agree that for the purpose of any litigation relative to this Agreement and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the parties' consent to the in person and jurisdiction of said Court for any such action or proceeding.

Non-appropriation

All funds for payment by the Village under this contract are subject to the availability of an annual appropriation for this purpose by the Village. In the event of non-appropriation of funds by the Village for the services provided under the contract, the Springs will terminate the contract, without termination charge or responsibility for or obligation to the Contractor or for damages or other liability, on the last day of the then-current fiscal year for the services covered by this contract is spent, whichever event occurs first. If at any time funds are not appropriated for the continuance of this contract, cancellation shall be accepted by the Contractor on thirty days' prior written notice, but failure to give such notice shall be of no effect and the Village shall not be obligated under this contract beyond the date of termination.

Oral Statements

No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this contract. All modifications to the contract must be made in writing by the Village of Western Springs in the form of addenda which shall be mailed to all those that have picked up bid specifications and be made available to the public.

Permits, Licenses

The Contractor shall procure and pay for all permits and licenses necessary for the performance of the work, and/or required federal, state, county, and Village regulations and laws.

Protection and Restoration of Property

The Contractor shall take all necessary precautions for the protection of corporate or private property. The Contractor is responsible for the damage or destruction of real or personal property resulting from neglect, misconduct or omission in his manner or method of execution or non-execution of the work, or caused by defective work or the use of unsatisfactory materials, and such responsibility shall not be released until the work shall have been completed, accepted, and the requirements of the specifications complied with as determined by the Village.

Whenever public or private property is so damaged or destroyed, the Contractor shall, at its own expense, restore such property to a condition equal to that existing before such damage or injury was done by repairing, rebuilding or replacing it as may be directed, or he shall otherwise make good such damage or destruction in an acceptable manner. If the Contractor fails to do so, the Village may, after the expiration of a period of 48 hours after giving notice in writing, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and, in addition to any other remedy, the cost thereof shall be deducted from any compensation due, or which may become due, under the contract.

References

A list of current references for jobs of similar size and scope must be submitted and included with the bid. A minimum of five (5) shall be required. Please fill out reference sheet in the Schedule of Bid Prices section of this document.

Renewal of Contract

Upon written agreement of both parties at least **THIRTY (30)** days prior to anniversary date of the contract, this contract may be renewed by the Village of Western Springs for a period of **FOUR (4)** successive one-year period(s) under the same prices, terms, and conditions as in the original contract.

Responsibility for Work

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

(a) All employees on the work and other persons who may be affected thereby;

(b) All the work and all materials or equipment to be incorporated therein, whether in storage on or off the side; and

(c) Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, maintenance or replacement in the course of work.

The Contractor shall be responsible for complying with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. The Contractor shall be responsible for erecting and maintaining as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. The Contractor shall notify owners of adjacent utilities when performance of the work may affect them. All damage, injury or loss to any property referred to in paragraph (a) or (b) caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and accepted by the Village.

Right to Audit

The Contractor shall maintain such financial records and other records as may be prescribed by the Village of Western Springs or by applicable federal and state laws, rules, and regulations. The Contractor shall retain these records for a period of five years after final payment, or until they are audited by the Village, whichever event occurs first. These records shall be made available during the term of the contract and the subsequent three-year period for examination, transcription, and audit by the Village, its designees, or other authorized bodies.

Severability

In the event any term or provision of this Contract shall be held illegal, invalid, unenforceable or inoperative as a matter of law, the remaining terms and provisions of this Contract shall not be affected thereby, and each such term and provision shall be valid and shall remain in full force and effect.

Smoking Policies

All Contractors, their subcontractors, employees and agents are required to abide by the smoking policies in effect in all municipal buildings owned, leased, or operated by the Village. Failure to abide by these regulations is a violation of this contract; and in addition may subject the violator to civil penalties as prescribed in State law.

Successors/Assigns

This Contract shall ensure to the benefit of and shall be binding upon the transferees, assigns, representatives, owners, insurers, agents, servants, employees, administrators and/or successors in interest of any kind whatsoever of the parties hereto. This Contract and the obligations it impose upon the Contractor are not transferable by Contractor without the written consent of the Village, which may or may not be granted in its exclusive discretion.

Taxes, Benefits and Royalties

The Village of Western Springs is a public body and is exempt from all sales, excise and use taxes and the Village shall supply its sales tax number to the Contractor for its use where appropriate. Each payment by the Village to the Vendor includes all applicable Federal, State and local taxes, fees, surcharges, license fees and tariffs of every kind and nature applicable to the Work, as well as all taxes, contributions, premiums, costs, royalties and fees arising from the use of, or the incorporation into, the Work of patented or copyrighted equipment, materials, supplies, tools, appliances, devices, processes or inventions. All claims or rights to claim additional compensation by reason of the payment of any such tax, contribution, premium, cost, royalty or fee are hereby waived and released by the Vendor.

Termination

If the contract is terminated by a default of the Contractor the Village shall pay the Contractor any amount due for actual, completed and accepted work, and the Village shall not be obligated to pay the Contractor any more money.

Unnecessarily Elaborate and Unresponsive Submittals

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to the solicitation are not desired and may be construed as an indication of the bidder's lack of responsiveness. Further, if the format of the bidder's submittal is prescribed in the bid documents and the bidder fails to follow that format, this may be construed as an indication of the bidder's lack of responsiveness.

Waivers of Lien

The Village requires for each application for payment a properly completed Contractor's Affidavit setting out, under oath, the name, address and amount due or to become due, of each subcontractor, vendor or party included in that payment. For every party listed, the Contractor shall also provide a full or partial waiver of lien, as appropriate, before a payment will be made to the Contractor. The Contractor's partial or final waiver of lien must be included. Payment Certificates shall not be issued without such mechanics' lien waivers and Contractor's sworn statements unless they are conditioned upon receipt of such waivers and statements.

If the rate of progress is satisfactory to the Village, payment requests will be submitted by the Vendor to the Village once a month during the progress of the Work for ninety percent (90%) of the value of the work done and in place at the date of the preparation of the payment estimate. Payment will be made to the Vendor once all required waivers of lien for material suppliers and subcontractors have been submitted to the Village. The waivers of lien will be for the amount of the current payment estimate, except for the final estimate where the waivers of lien shall be for the total contract amount. Pursuant to the provisions of Section 5 of the Mechanics' Lien Act of Illinois, prior to making any payment on this Contract the Village demands that the Vendor furnish a written statement of the names of all parties furnishing labor and/or materials under this Contract and the amounts due or to become due on each. This statement must be made under oath or be verified by an affidavit. Final payment shall not be issued by the Village nor shall any retained percentage become due until releases and waivers of lien have been supplied as the Village designates.

The Contractor will indemnify and save the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers harmless from all claims growing out of the lawful demands of subcontractors, laborers, workers, mechanics, material men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Village's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Village may, after having notified the Contractor, withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents.

The Village shall have the right to enter the premises for the purposes of doing work not covered by the contract. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work, or the restoration of any damage work except such as may be caused by agents or employees of the Village.

Contractor's Drug-Free Workplace Certification

Pursuant to Illinois Compiled Statutes, Chapter 30, Act 580 et. seq. ("Drug-Free Workplace"), the undersigned Contractor hereby certifies to the contracting agency that it will provide a drug-free workplace by:

(A) Publishing a statement:

(1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in the grantee's of Contractor's workplace.

(2) Specifying the actions that will be taken against employees for violations of such prohibition.

(3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

(a) Abide by the terms of the statement; and

(b) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(B) Establishing a drug free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's or Contractor's policy of maintaining a drug-free workplace

(3) Any available drug counseling, rehabilitation, and employee assistance program; and

(4) The penalties that may be imposed upon employees for drug violations.

(C) Making it a requirement to give a copy of the statement required by subsection (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(D) Notifying the contracting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) from an employee or otherwise receiving actual notice of such conviction.

(E) Imposing a sanction on, or requiring the satisfactory participation in a drug assistance or rehabilitation program by any employee who is so convicted, as required by Illinois Compiled Statutes, Chapter 127, Act 580, Paragraph 5.

(F) Assisting employees in selecting a course of action in the event drug counseling treatment and rehabilitation is required and indicating that a trained referral team is in place.

(G) Making a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

Failure to abide by this certification shall subject the Contractor to the penalties provided in Illinois Compiled Statutes, Chapter 30, Act 580, Paragraph 6.

Air Comfort
Contractor
Date: 12/19/24

Attest

Contractor's Certification Regarding
Non-Payment of Compensation

AirComfort/Applied Controls hereby certifies that neither it nor any of its affiliated companies, nor any of its agents, employees or representatives offered or paid any type of compensation or commission to any third party, including any official of the Village of Western Springs, Illinois, to influence the Village of Western Springs.

AirComfort
Contractor

DATED: 12/19/24

ATTEST:

Exhibit A

Agreement

This Agreement (the "Agreement") made this the ___day of_____in the year 2024 by and between the Village of Western Springs, Illinois, 740 Hillgrove Avenue, Western Springs, Illinois, 60558 (the "Village") and _____ (the "Contractor"). The Village and the Contractor are at times referred herein, individually, as the "Party" and, collectively, as the "Parties".

The Village and Contractor agree as set forth below:

1. For the financial consideration hereinafter set forth, the Contractor agrees to furnish and provide and install all commercially necessary labor, materials, equipment and services and to do all other activities commercially required (the "Work") to complete the Village of Western Springs Village Hall – Temperature Control System Upgrade as set forth in the contract requirements, a copy of which is attached here to as exhibit 1 dated 12.05.2024, and as agreed to in the Contractor's Proposal dated 12.19.2024.

2. The Contractor agrees to commence the Work on or before **February 2025,** and will officially, diligently, and expeditiously conduct the Work in a commercially reasonable manner so as to assure completion by **April 2025**.

3. The Village shall pay the Contractor for the performance of the Work to complete the Village of Western Springs Village Hall – Temperature Control System Upgrades a total dollar amount not to exceed _____ in accordance with the Contractor's Proposal dated **December 19, 2024,** subject to further additions and deductions as may be agreed upon in accordance with the terms of the contract documents. Payment shall be made monthly however, the financial payments and any penalties associated with late payments due under the Contract shall be paid by the Village only in accordance with the provisions of the Local Government Prompt Payment Act (50 ILCS 505/).

4. The Contractor represents and warrants that it will comply with the applicable state and federal laws concerning prevailing wage rates and all applicable state and federal laws and requirements concerning equal opportunities.

5. This Agreement shall consist of, incorporate and include each of the following contract documents, whether attached hereto or incorporated by reference herein:

   A. Legal Notice (Advertisement for Bid) published on **December 5, 2024.**

   B. Instructions to Bidders dated **December 5, 2024.**

   C. Contractor's Proposal dated **December 19, 2024.**

D. Contractor's bid bond submitted by _____ in the amount of $_____ dated **December 19, 2024.**

E. General Specifications and all additional provisions **December 5, 2024.**

F. Contractor's Drug Free Workplace Certification dated **December 19, 2024.**

G. Contractor's Certification Regarding Non-Payment of Compensation dated **December 19, 2024.**

H. Exhibit B - Contractor certifications including Certification of Eligibility to Enter into Public Contracts.

I. Exhibit C – Change Order Form

J. Required Performance and Payment Bonds provided by the Contractor.

K. Required Insurance Certificates provided by the Contractor.

L. Rider to Contract- General Conditions

6. Notice to Proceed With the Work. The Vendor shall commence work under this Contract upon issuance of written Notice to Proceed and the duration of the contract shall be one year or as otherwise stated with a completion date.

7. Independent Contractor Status; Reporting. The Vendor is an IRS Form 1099 independent contractor and not an employee of the Village. To comply with the employer reporting requirements of Public Act 103-0343 (amendments to the Illinois Unemployment Insurance Act regarding the Directory of New Hires, 820 ILCS 405/1801.1), upon execution of this Contract, the Village shall submit the Vendor's name and required information to the Illinois Department of Employment Security.

8. Effective Date. After this Contract has been signed by the Vendor, this Contract shall be deemed dated and become effective on the date that the Village President or the Village Manager signs this Contract.

EXCEPTIONS TO THIS BID (THIS PAGE MUST ACCOMPANY BID)

All of the contract documents are a part of this Agreement as if attached hereto or repeated herein.

IN WITNESS WHEREOF, the signatories below, pursuant to properly issued authority, have signed this Contract, which shall become effective on the date that the Village President or Village Manager signs this Contract.

Contractor:	Village of Western Springs
By: _____ (Name and Title)	By: _____ Heidi Rudolph, Village President
*Corporate Seal of corporation	*Village Seal
Attest:	
By: _____ (Name and Title)	By: _____ Ed Tymick, Village Clerk

EXHIBIT B

CERTIFICATION OF ELIGIBILITY TO ENTER INTO PUBLIC CONTRACTS BY THE CONTRACTOR

I, _____, having being first

duly sworn, depose and state that I am the

_____

(insert "sole owner "partner", "president"," other" proper title)

and the authorized agent of _____, which has submitted a proposal to, and is entering into a contract with, the Village of Western Springs for the performance of work in relation to the _____ Project in the Village of Western Springs, and certifies on behalf of said company as follows:

1. The company is not barred from contracting with the Village as a result of a violation of either Section 33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "bid-rigging" or "bid-rotating" of any state or of the United States.

2. The company shall comply with all applicable provisions of the Illinois Human Rights Act and has a written sexual harassment policy in full compliance with that Act.

3. The company is not delinquent in the payment of any tax administered by the Illinois Department of Revenue or,

   a. is contesting such liability or the amount of tax in accordance with procedures established by the appropriate revenue act, or

   b. has entered into an agreement with the Department of Revenue for payment of all taxes due and is in compliance with that agreement.

   c. Not in default, as defined in 5 ILCS 385/2, on an educational loan, as defined in 5 ILCS 385/1.

4. In compliance with the Veterans Preference Act (330 ILCS 55/).

5. In compliance with equal employment opportunities and, during the performance of the Agreement, the Contractor shall:

   a. Not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

b. If it hires additional employees in order to perform the Agreement or any portion hereof, it will determine the availability (in accordance with the Illinois Department of Human Right's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

c. In all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

d. Send to each labor organization or representative of workers, with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the VILLAGE and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

e. Submit reports as required by the Illinois Department of Human Rights, Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

f. Permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

g. Not maintain or provide for its employees any segregated facilities at any of its establishments, and not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. As used in this section, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin because of habit, local custom or otherwise.

6. In compliance with 775 ILCS 5/2-105(A)(4) by having in place and enforcing a written sexual harassment policy.

7. In agreement that, in the event of non-compliance with the provisions of this certification relating to equal employment opportunity, the Illinois Human Rights Act or the Illinois Department of Human Rights, Rules and Regulations, the Contractor may be declared ineligible for future contracts with the VILLAGE, and the Agreement may be canceled or

voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

8. In compliance with the requirements of 30 ILCS 580/ (Drug Free Workplace Act).

9. The Contractor and its officers, employees and agents agree not to commit unlawful discrimination and agree to comply with all applicable provisions of the Illinois Human Rights Act, Title VII of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act, the Age Discrimination in Employment Act, Section 504 of the Federal Rehabilitation Act, and all applicable rules and regulations. The Contractor certifies that it is an "Equal Opportunity Employer" as defined by federal and State laws and regulations, and agrees to comply with the Illinois Department of Human Rights ("IDHR") Equal Opportunity Employment clause as required by the IDHR's Regulations (44 Ill. Adm. Code, Part 750, Appendix A). As required by Illinois law and IDHR Regulation, the Equal Opportunity Employment clause is incorporated by reference in its entirety as though fully set forth herein. The Contractor certifies that it agrees to comply with the Prohibition of Segregated Facilities clause, which is incorporated by reference in its entirety as though fully set forth herein. See, Illinois Human Rights Act (775 ILCS 5/2-105). See also, Illinois Department of Human Rights Rules and Regulations, Title 44, Part 750. Administrative Code, Title 44: Government Contracts, Procurement and Property Management, Subtitle B: Supplemental Procurement Rules, Chapter X: Department of Human Rights, Part 750: Procedures Applicable to All Agencies, Section 750.160: Segregated Facilities (44 Ill. Adm. Code 750.160)

By: _____
Name: _____
Title: Authorized Agent of Contractor

Subscribed and Sworn To
Before Me This _____ Day
Of _____, 2024.

_____
Notary Public

Notary Public

Exhibit C

CHANGE ORDER NO.:

Owner:
Engineer:
Contractor:
Project:
Contract Name:
Date Issued:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

The Contract is modified as follows upon execution of this Change Order:
Description:
Attachments:

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)	Accepted by Contractor
By: _____	_____
Title: _____	_____
Date: _____	_____
_____	Approved by Funding Agency (if applicable)
By: _____	_____
Title: _____	_____
Date: _____	_____

Village of Western Springs
Recreation Center - Temperature Control Upgrades
JOB NO. 24.07.10
Bid Documents due December 19, 2024, 9:00 am

Bidder	Base Bid Number	Alternate 1	Alternate 2	Alternate 3	Alternate 4	Alternate 5	Deduct	Bid Bond	References
Air Comfort	**$84,900.00**	$9,450.00	$1,150.00	$1,150.00	$8,550.00	$1,550.00		Yes	Yes
Interactive Buiding Solutions	$167,100.00	$31,200.00	$2,000.00	$2,000.00	$9,300.00	$6,100.00		Yes	Yes
Building Automation Solutions	$207,280.00	$34,720.00	$4,400.00	$4,000.00	$10,200.00	$6,800.00	$8,600.00	Yes	Yes

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 10.B.

To: Board of Trustees
From: Diana Puga, Municipal Services Coordinator
CC: Ellen Baer, Village Manager, Aleks Briedis, Director of Recreation, William Tomczyk, Ari Albores
RE: 2025 Grand Avenue Community Center Flooring Replacement RFB Recommendation (Report only)

Recommendation

The Properties and Recreation Committee reviewed this item at their meeting on February 4th, 2025 and recommended the approval of the 2025 Grand Avenue Community Center (GACC) Flooring Replacement project to the apparent lowest bidder, NPN Flooring. Staff recommends approval of an amount not to exceed $50,000 (bid plus contingency) and approval of an agreement between the Village and Premier, LLC. (contracted day care provider) allowing for the scheduling of night/evening work as required. The FY2025 budget includes $45,000.00 for this project, however the item will not require a budget amendment as the additional $5,000.00 will be covered by reducing other expenditures within this line item.

Summary

On January 16, 2024, the Village issued a Request for Bids (RFB) for the Grand Avenue Community Center Flooring Replacement for 6 classrooms. A mandatory walk-through was held on January 24, in which interested bidders were provided an overview of the contract document and were encouraged to ask questions. Bids were opened on Tuesday, February 4, 2025, at 10:00 AM. A total of three (3) bids were received. The results for the base bids are summarized as follows:

NPN Flooring:	$ 46,658.61
Mazarini, Inc.:	$ 74,333.33
Tiles in Style:	$ 89,886.00

The Village also requested two alternate bids for consideration.

The first alternate bid for evening/weekend work was requested to ensure no disruptions to the day-to-day activities, such as the day care (Premier, LLC) and after-school programs. The results for the first alternate bids are summarized as follows:

NPN Flooring:	$ 49,047.86

Mazarini, Inc.: $ 124,740.93
Tiles in Style: $ 112,500.00

This alternate is higher than the base bid due to the evening and weekend work. This alternate would allow the preschool to continue its program during the day without disruption. Should the Village move forward with this alternate, staff will return to the Village Board with an agreement between the Village and Premier, LLC (the preschool operator) in which Premier, LLC would be financially responsible for the difference of $4,047.86, The difference exceeds the Village's budgeted amount of $45,000.

The second alternate is for a flooring comparable for alternate material or sizing. The results for the second alternate bid are summarized as follows:

NPN Flooring: $ 44,105.79
Mazarini, Inc.: $ N/A
Tiles in Style: $ 91,150.00

Village staff spoke with five (5) past references and received positive feedback; all references stated they would be willing to rehire the contractor for future projects. Based on the feedback received, staff is confident in NPN Flooring's qualifications to complete this project.

Financial Impact

The Village has $50,000.00 budgeted for this project in the Recreation Fund. The financial impact is pending based on bid results.

Account 6605210-60015
Fund Recreation Fund
2025 Budget $ 50,000.00
Project Cost Pending Bid Selection

Recommended Motion

I move to recommend to the Village Board of Trustees the approval of the award for the 2025 Grand Avenue Community Center Flooring Replacement to NPN Flooring for an amount not to exceed of $50,000.

Strategic Plan Alignment

Infrastructure Improvements

File Attachments

1. 2025 GACC Flooring Replacement Bid Tab
2. NPN Flooring Bid [Redacted]

Base Bid

Location	NPN Flooring	Mazarini Inc.	Tiles in Style
Classrooms 1-6	$ 46,658.61	$ 74,333.33	$ 89,886.00

Alternate Bids

Alternate			
Alternate #1: Pricing for evening or weekend work per classroom	$ 49,047.86	$ 124,740.93	$ 112,500.00
Alternate #2: Flooring Comparable (please include brand and color)	$ 44,105.49	N/A	$ 91,150.00



CONTRACT REQUIREMENTS FOR

2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB

February 4, 2025
10:00 A.M. (Prevailing Time)

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I. Legal Notice

The Village of Western Springs, Cook County, Illinois, does hereby invite sealed bids for the following: **2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB**

Bids will be received until **10:00 AM.** Prevailing Local Time on **Tuesday, February 4, 2025,** by mail or delivered by hand to the drop box located outside the front entrance of Village Hall, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois, 60558-0528 immediately after which time and at such place all bids will be publicly opened.

Those desiring to bid may obtain copies of the contract, specifications and other bidding documents online at wsprings.com/bids. A mandatory pre-bid conference walkthrough will be held at the **Grand Avenue Community Center** located at **4211 Grand Avenue, Western Springs, IL 60558** on **Friday, January 24, 2025,** at **10:00 AM**. The purpose of this conference is to allow potential firms an opportunity to present questions to staff and obtain clarification of the requirements of the bid documents. Minutes of the conference will not be published.

As evidence of good faith, each bid shall be accompanied by a bid bond, bank draft or certified check and made payable to the Village of Western Springs, Illinois, in the amount of five hundred dollars ($500) or 10% of the bid price, whichever is greater, which shall be submitted to secure the Village against loss occasioned by failure of the bidder to abide by and comply with the terms of his bid.

The successful bidder shall be required to furnish payment and performance bonds in the full amount of the bid or proposal, at the time a contract is awarded, to the Village of Western Springs by a surety company authorized to do business in the State of Illinois and approved by the Village. Failure to produce acceptable bonds will constitute default and the bid bond will be forfeited. No bid shall be withdrawn after the opening of bids without the consent of the Village for a period of sixty (60) days after the scheduled time of closing bids.

Bidders will be required to comply with all laws including those related to employment of labor and the payment of local prevailing wage rates. Each bidder shall satisfy the Village as to his ability, financial and otherwise, to perform the work specified.

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

VILLAGE OF WESTERN SPRINGS
By Edward Tymick, Village Clerk

Published in the Sun-Times Newspaper on January 16, 2024
cc: Ellen Baer, Village Manager
Jill Izzo, Deputy Village Clerk

II. Instructions to Bidders

VILLAGE OF WESTERN SPRINGS
DATE: January 16, 2025

Proposals to be entitled to consideration must be made in accordance with the following instructions:

Proposals shall be submitted in an opaque, sealed envelope plainly marked with the words:

2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB
VILLAGE OF WESTERN SPRINGS

and shall be delivered by hand to a drop box or mailed in time for delivery to the Office of Village Clerk, Village of Western Springs, 740 Hillgrove Avenue, Western Springs, Illinois by **10:00 A.M.** Prevailing Local Time on **Tuesday, February 4, 2025**, after which time and at such place all bids will be publicly opened and read aloud.

Proposals received after the time for opening will not be considered.

Proposals must be signed by an authorized official of the contractor's organization, and the name of the official and his title typed below the signature. If the bidder is a corporation, the corporate seal must be affixed.

Bid security in the form of a bid bond, bank draft or certified check made payable to the Village of Western Springs, in the amount of FIVE HUNDRED DOLLARS ($500), shall be submitted with each bid. The proceeds of any bid security shall become the property of the Village if, for any reason, a bidder, within FORTY-FIVE (45) days after the opening of bids withdraws his bid without the consent of the Village, or if on notice of award refuses or is unable to execute the approved contract and obtain the required performance and payment bonds. Bid deposits may be held for a period not exceeding FOURTY FIVE (45) days. (NOTE: For those projects which will not require the performance bonds, consideration should be given to holding the bid security until delivery is made.)

The Village Board reserves the right to reject any applicable bids for any reason, if it decides that such rejection is in the Village's interest, to reject any nonconforming bids, to waive any informalities in bidding, and to make award on that bid, which, in its opinion, is most advantageous to the Village. The contract will be awarded to the lowest responsible bidder.

The successful bidder will be required to furnish and pay for satisfactory Performance and Labor and Material Payment Bonds in the amount of one hundred percent (100%) of the contact sum. Execution of the Contract by the Village is contingent upon receipt of acceptable Performance and Payment Bonds and Insurance Certificates.

The Village reserves the right to require of any bidder, such information necessary to satisfy the Village of the bidder's qualifications and to withhold formal signing of the contract until such information is received.

The successful bidder will be required to execute a contract in the form prescribed by the Village and must certify that the bidder is eligible to enter into public contracts under the Illinois Criminal Code, has a written sexual harassment policy and complies with Illinois Department of Revenue policies regarding taxes by executing the Certification attached hereto as **"Exhibit A"** and made a part hereof.

Bidders will be required to comply with all applicable laws including those relating to the employment of labor and the Illinois Prevailing Wage Act and payment of the applicable prevailing wage.

This contract will be awarded without discrimination in compliance with all applicable local state and federal laws.

Responsibility of the bidders will be determined by factors in addition to financial responsibility, such as past records of its or other entities' transactions with the Village of Western Springs, experience, ability to work cooperatively with the Village and its Administration, adequacy of equipment, ability to complete performance within necessary time limits, and other pertinent considerations, such as, but not limited to, reliability, reputation, competency, skill, efficiency, facilities and resources.

III. Proposal

TO: Village of Western Springs
740 Hillgrove Avenue
Western Springs, IL 60558

RE: 2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB

1. The specifications and directions for the proposed service are those prepared by the Village of Western Springs and designated as Special Provisions and which cover the work described in said document and the "Agreement."

2. In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal as principals are those named herein; and that the proposal is made without collusion with any other person, firm, or corporation.

3. The undersigned further understands and agrees that if this proposal is accepted, the undersigned is to furnish and provide all necessary equipment, machinery, tools, apparatus and other means of maintenance, and to do all of the work and perform all the services, and to furnish all of the materials specified in the bid documents in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth.

4. The undersigned further agrees to execute an Agreement for this work and present the same to the Village within seven (7) days after the date of notice of the award of the Agreement to the Contractor.

5. The undersigned further agrees that he and his surety will execute and present within seven (7) days after the date of notice of the award of Agreement the performance and labor and materials payment bonds in a form satisfactory to the Village of Western Springs, in the amount of one hundred percent (100%) of the contract sum guaranteeing the faithful performance of the work in accordance with the terms of the bid documents.

6. The undersigned further agrees to be available to begin work on **March 28, 2025 and complete the work by April 4, 2025**, as provided for in the Agreement, unless otherwise agreed to by the Village, and to prosecute the work in such manner and with sufficient materials, equipment, and labor as will insure the providing of specified service within the time limit specified herein, it being understood and agreed that the providing of the specified service within the time limit and according to the maintenance schedule is an essential part of the Agreement.

7. This proposal is accompanied by a bid bond, bank draft or certified check complying with the requirements of the specifications and directions, made payable to the "Village of Western Springs, Illinois". The amount of the bid security is Five Hundred ($500.00) Dollars. If this proposal is accepted and the undersigned shall fail to

BID BOND
(Percentage)

Bond No. 67344044

KNOW ALL PERSONS BY THESE PRESENTS, That we Npn Carpet Installation of 3407 Timber Lane, Naperville, IL 60565, hereinafter referred to as the Principal, and WESTERN SURETY COMPANY as Surety, are held and firmly bound unto VILLAGE OF WESTERN SPRINGS, hereinafter referred to as the Obligee, in the amount of TEN Percent of the Amount Bid (10%), for the payment of which we bind ourselves, our legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has submitted or is about to submit a proposal to Obligee on a contract for 2025 GRAND AVENUE COMMUNITY CENTER (GACC) FLOORING REPLACEMENT.

NOW, THEREFORE, if the said contract be awarded to Principal and Principal shall, within such time as may be specified, enter into the contract in writing and give such bond or bonds as may be specified in the bidding or contract documents with surety acceptable to Obligee; or if Principal shall fail to do so, pay to Obligee the damages which Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then this obligation shall be void; otherwise to remain in full force and effect.

SIGNED, SEALED AND DATED this 28TH day of MARCH, 2025.

Principal

Npn Carpet Installation

BY: 

Surety

WESTERN SURETY COMPANY

BY: 

Rolando Gonzalez Jr, Attorney-in-Fact

Form F4595-8-2001

execute an Agreement and said security as required herein, it is hereby agreed that the amount of the bid bonds shall become the property of the Village, and shall be considered as payment of damages due to delay and other causes suffered by the Village because of failure to execute said Agreement or provide the required performance and payment bonds; otherwise said bid security shall be returned to the undersigned pursuant to the bid documents.

ATTACH BID SECURITY HERE

8. The undersigned submits herewith a schedule of prices covering the work to be performed under this Agreement; the undersigned must show in the schedule the prices for which the undersigned proposed to perform.

9. The undersigned further declares to have carefully examined this proposal, the specifications and directions, the Agreement, the legal notice, and special provisions (if any), and to have inspected in detail the site of the proposed work and is familiar with all of the local conditions affecting the Agreement and the detailed requirements of service and understands that in making this proposal waives all right to plead any misunderstanding regarding the same.

Armando Guzman

2/3/2025
Date

NPN Carpet Installation Inc DBA NPN Flooring
Proposed Contractor (Bidder)

Witness

IV. Bid Schedule

Contact Information

All questions concerning this Request for Bids shall be directed to Diana Puga at (708) 246-1800 ext. 204 or dpuga@wsprings.com. Proposals must be submitted in a sealed envelope clearly marked with the title, and opening date on the outside of the envelope, (2025 GACC Flooring Replacement RFB) and Bidder's name as follows: Village of Western Springs, Village Hall, Western Springs, IL 60558.

Anticipated Bid Schedule

The Village expects to adhere to the following time schedule, but may extend the time schedule for any reason, with or without advance public notice.

Issue RFB	January 16, 2025
Pre-Submittal Meeting	10:00 AM on January 24, 2025
Bids Due Date	10:00 AM on February 4, 2025
Village Board Selection of Qualified, Responsive Bidder	February 24, 2025
Begin Contract	March 28, 2025

Schedule of Bid Prices

THE UNDERSIGNED SUBMITS HEREWITH THIS SCHEDULE OF PRICES COVERING THE WORK TO BE PERFORMED UNDER THIS CONTRACT

Bidder, in submitting this proposal, hereby agrees to comply with all provisions and requirements of the specifications and contract documents attached hereto. This proposal shall remain in force and effect for a twelve (12) month period from start date.

BASE BID

Location	Total
Classrooms 1-6	$46,658.61

Alternate Bids

Alternate	Total Bid
Alternate #1: Pricing for evening or weekend work per classroom*	$49,047.86 ← total
Alternate #2: Flooring Comparable (please include brand and color)	$44,105.49

*every room is different size. For sake of bid, $8,174.64 per room

*All bids, including alternates, should include all costs (i.e. labor, removal, and material costs)

Name of Bidder: NPN Carpet Installation Inc DBA NPN Flooring

Address: 9311 Ogden Ave Brookfield IL 60513

Telephone No. 630-201-1991 Fax No. NA

Signature: Armando Guzman

Name and Title: (Please Print) Armando Guzman, Flooring Consultant

Date: 02/03/2025

References

Name of Organization: Village of Flossmoor

Year of Contract: 2024

Contact Name: Dan Milovanovic

Telephone No: 708-957-4100

Email Address: dmilovanovic@flossmoor.org

Name of Organization: Village of Elk Grove Village

Year of Contract: 2023

Contact Name: Scott Santille

Telephone No: 847-734-8052

Email Address: ssantille@elkgrove.org

Name of Organization: Village of Lake Zurich

Year of Contract: 2024

Contact Name: Adam Hartmann

Telephone No: 847-550-1776

Email Address: adam.hartmann@lakezurich.com

Name of Organization: City of Aurora

Year of Contract: 2023

Contact Name: Jessica Price

Telephone No: 630-256-3550

Email Address: jprice@aurora.il.us

Name of Organization: Sugar Grove Fire Department

Year of Contract: 2023

Contact Name: Bren Moran

Telephone No:

Email Address: NA

V. Contract Provisions

Scope of Services

The Village seeks a firm to:

- Supply materials, remove existing flooring and wall bases, prepare flooring for new install including leveling, install new flooring and wall bases, haul and dispose of removed flooring and wall bases, manipulation of furniture (including, but not limited to, file cabinets, desk workstations, and vending machines).

The Village will be responsible for removing personal and electronic items, such as workstation computers and phones, toys, and similar items.

Locations

Flooring to be replaced within this service contract are located at the Grand Avenue Community Center and includes 6 daycare classrooms:

- First Floor
  - Classroom #1: Sunkiss Room
    - 34.5' x 20'
    - SQ FT.: ~ 690
  - Classroom #2: Sunflower Room
    - 27' x 26.5'
    - SQ FT.: ~ 716
  - Classroom #3: Sunrise Room
    - 34.5' x 22'
    - SQ FT.: ~ 759
  - Classroom #4: Sunbeam Room
    - 31' x 35'
    - SQ FT.: ~ 1085
  - Classroom #5: Sunset Room
    - 31' x 24'
    - SQ FT.: ~ 744
- Second Floor
  - Classroom #6: Sunshine Room
    - 33' x 23'
    - SQ FT.: ~ 759

Classrooms total approximately 5500 sq. ft. with a 15% allowance. Closets are not included in the contract.

Scope of Work

For all rooms:

1. Remove existing flooring (carpet and LVT) and cove base.
2. Prep floor and minor floor repairs, including skim coating and floor leveling
3. Install LVT – Shaw 02500 French Grey, brick installation method
4. Install 4.5" dark grey vinyl cove base

5. Install rubber thresholds/transition as need from classrooms to the hallway
6. Leave all work areas clean and debris free

All work requires manager sign off and after photos upon completion.

Materials

- Flooring: LVT – Shaw 02500 French Grey or comparable alternate (color and material)
- Base Cove: Dark Grey

These specifications are not to be construed as exclusive. It is intended that the services provided by the Contractor include all functions normally considered a part of workmanlike, satisfactory work, whether or not specifically listed herein.

Scheduling of Work

Contractor must schedule work with the Building Coordinator, or designee, to ensure preparation of areas prior to work commencing and to coordinate access to the buildings.

Term

The term of this contract shall be a one-time contract, ending upon manager sign-off, after the notice to proceed date, unless the contract is terminated pursuant to the terms herein.

VI. General Specifications

Acceptability of Work

The Village of Western Springs will be sole and final judge of the acceptability of the work to be performed and the services to be rendered under the terms of the Agreement.

Applicable Laws and Regulations

The Vendor agrees to comply with the following laws and to assist the Village in complying with the following laws: the Americans with Disabilities Act (42 U.S.C. 12101 et seq.) and all rules and regulations issued pursuant to the Act. All applicable provisions of Federal, State and local laws, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Vendor agrees to comply with all applicable Federal laws and State laws and regulations including, but not limited to, the Illinois Prevailing Wage Act and such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Vendor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and Federal and State statutes, and the Vendor further agrees to make all required withholdings and deposits therefor. Such requirements shall be included by the Vendor in all its contracts and agreements with any of its subcontractors. The Parties agree that the most recent of such State and Federal requirements will govern the administration of this Contract at any particular time. Likewise, new State and Federal laws, regulations, policies and administrative practices may be

established after the date that this Contract has been executed and may apply to this Contract. The Vendor agrees to maintain full compliance with changing government requirements that govern or apply to its operation. Any complaint of such discrimination received by the Vendor shall be immediately forwarded to the Village. Further, the Vendor certifies that:

A. The Vendor is the only person/entity interested in the above Contract as the sole principal named herein and that no other person/entity than herein mentioned has any interest in the Contract to be entered into; that this Contract is made without connection with any other person, company or parties submitting qualification information; and that it is in all respects fair and in good faith without collusion or fraud.
B. The Vendor is not delinquent in the payment of any tax administered by the Illinois Department of Revenue nor is delinquent in the payment of any money owed to the Village.
C. The Vendor is not barred from contracting with any unit of the State of Illinois or local government, such as the Village, as a result of violating Section 33E-3 or 33E-4 of the Illinois Criminal Code.
D. The Vendor complies with the Illinois Drug Free Work Place Act.
E. The Vendor complies with the Equal Employment Opportunity Clause of the Illinois Human Rights Act and the Rules and Regulations of the Illinois Department of Human Rights.
F. The Vendor complies with the Americans with Disabilities Act.
G. The Vendor states that any work to be performed by it or its contractors on Village-owned property shall be in a good and workmanlike manner and in accordance with all applicable Federal, State and county laws and regulations and the Village codes, ordinances and regulations, including but not limited to all local zoning ordinances and regulations, and other applicable codes.
H. The Vendor also agrees to require any subcontractor doing work under this Contract to agree to adhere to the requirements of this Contract.

Assignment

The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of any award or any or all of its rights, title, or interest therein, without the prior written consent of the Village of Western Springs.

Authority

The Village, as a non-home rule Illinois Municipal Corporation, has the authority to enter into this Contract pursuant to the statutory authority and contracting powers set forth at Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the 1970 Illinois Constitution and the Illinois Intergovernmental Cooperation Act (5 ILCS 220/) and the Illinois Municipal Code (65 ILCS 5/).

Bidder Investigations

Before submitting a bid, each bidder shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village of Western Springs upon which the

bidder will rely. If the bidder receives an award as a result of its bid submission, failure to have made such investigations and examinations will in no way relieve the bidder from its obligation to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

Bonds

If required, Bonds required to guarantee performance and payment for labor and material for the Work shall be in a form acceptable to the Village and shall provide that they shall not terminate on completion of the Work, but shall be reduced to ten percent (10%) of the contract sum upon the date of final payment by the Village for a period of one (1) year to cover a warranty and maintenance period which Vendor agrees shall apply to all material and workmanship for one (1) year from the date of issuance of the final payment by the Village.

Change in Scope of Work

The Village of Western Springs may order changes in the work consisting of additions, deletions, or other revisions within the general scope of the contract. No claims may be made by the Contractor that the scope of the work or of the Contractor's services has been changed, requiring changes to the amount of compensation to the Contractor or other adjustments to the contract, unless such changes or adjustments have been made by written amendment to the contract approved by the Village Board and the Contractor.

If the Contractor believes that any particular work is not within the scope of contract, is a material change, or will otherwise require more compensation to the Contractor, the Contractor must immediately notify the Village Manager in writing of this belief. If the Village Manager believes that the particular work is within the scope of the contract as written, the Contractor will be ordered to and shall continue with the work as changed and at the cost stated for the work within the scope.

Where change orders, or a series of change orders, authorize or necessitate an increase or decrease in either the cost of the work totaling $10,000 or more, or the time of completion of the work by thirty (30) days or more, a written determination must be approved by the Village Board and signed by the Village President or his designee stating that the circumstances necessitating the changes in performance were not reasonably foreseeable at the time the Contract was signed or, the change is germane to the Contract or the change order is in the best interests of the Village.

Collusion among Bidders

Each bidder, by submitting a bid, certifies that it is not a party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any or all bids shall be rejected if there is any reason for believing that collusion exists among the bidders. The Village of Western Springs may or may not, at its discretion, accept future bids for the same work from participants in such collusion.

More than one bid from an individual, firm, partnership, corporation, or association under the same or different names may be rejected. Reasonable grounds for believing that a bidder

has interest in more than one bid for the work being bid may result in rejection of all bids in which the bidder is believed to have interest.

Nothing in this clause shall preclude a firm acting as a subcontractor to be included as a subcontractor for two or more primary Contractors submitting a bid for the work.

Compliance with Freedom Of Information Act Requests

Section 7(2) of the Illinois Freedom of Information Act (FOIA) (5 ILCS 120/7(2)) requires certain records that qualify as "public records," which have been prepared by and are in the possession of a party who has contracted with the Village, be turned over to the Village so that a FOIA requestor can inspect and photocopy the non-exempt portions of the public records pursuant to a FOIA request. The Village has a very short period of time from receipt of a FOIA request to comply with the request, and it requires sufficient time to review the records to decide what information is or is not exempt from disclosure. The Contractor/Consultant acknowledges the requirements of FOIA and agrees to comply with all requests made by the Village for public records (as that term is defined by Section 2(c) of FOIA) in the Contractor/Consultant's possession and to provide the requested public records to the Village within two (2) business days of the request being made by the Village.

The Contractor/Consultant agrees to indemnify and hold harmless the Village from all claims, costs, penalties, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the Village under this Agreement.

The Contractor/Consultant acknowledges that certified payroll records submitted to a public body under Section 5(a)(2) of the Prevailing Wage Act are public records subject to inspection and copying in accordance with the provisions of this Act (See 5 ILCS 140/2.10)."

Compliance with Laws; Employment Discrimination

In the performance of its obligations pursuant to this Agreement, the Contractor shall comply with all applicable provisions of federal, state and local law, including those regulations in regard to all applicable equal employment opportunity requirements, including without limitation, Article 2 of the Illinois Human Rights Act (775 ILCS 5/2-101 et seq.). In addition, the Contractor agrees to comply with all applicable federal laws, state laws and regulations including, but not limited to, such laws and regulations relating to minimum wages to be paid to employees, limitations upon the employment of minors, minimum fair wage standards for minors, payment of wages due employees, and health and safety of employees. The Contractor also agrees to require any contractor doing work or performing professional or consulting services in connection with its program or this Agreement to agree to adhere to the requirements of this Section. The Contractor agrees to pay its employees, if any, all rightful salaries, medical benefits, pensions and social security benefits pursuant to applicable labor agreements and federal and state statutes, including the Illinois Prevailing Wage Act, and the Contractor further agrees to make all required withholdings and deposits therefore. Such requirements shall be included by the Contractor in all its contracts and agreements with contractors and subcontractors for this program. The parties agree that the most recent of

such state and federal requirements will govern the administration of this Agreement at any particular time. Likewise, new state and federal laws, regulations, policies and administrative practices may be established after the date of the Agreement has been executed and may apply to this Agreement. The Contractor agrees to maintain full compliance with changing government requirements that govern or apply to its operation." In addition, the Contractor agrees to comply with the Americans with Disability Act (42 U.S.C. 12101 et seq.), and all rules and regulations issued pursuant to the Act, there shall be no discrimination on the basis of disabilities (as defined in the Act) in the operation of the services and programs provided by the Contractor hereunder. Any complaint of such discrimination received by the Contractor shall be immediately forwarded to the Village Manager.

The Contractor shall comply with all applicable provisions of the Illinois Human Rights Act including the requirement that the Contractor have on file a written sexual harassment policy.

Contractor Personnel

The Village Manager shall, throughout the life of the contract, have the right of reasonable rejection and approval of employees or subcontractors assigned to the work by the Contractor. If the Village of Western Springs reasonably rejects employees or subcontractors, the Contractor must provide replacement staff or subcontractors satisfactory to the Village in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees and subcontractors is the responsibility solely of the Contractor.

Debarment

By submitting a bid, the bidder certifies that it is not currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois and that it is not an agent of a person or entity that is currently debarred from submitting bids for contract issued by any political subdivision or agency of the State of Illinois.

Default Clause

A default shall occur under this contract if the Contractor or Village shall not comply with the terms of this contract. The following list is presented as an example only and does not include a listing of all events of default. Omission of an event does not indicate an intent to excuse such an event as an event of default. Examples are, if the Contractor fails to begin work on the date set forth in the contract (unless the Contractor and Village shall agree in writing to a delay in the start of performance), if the Contractor fails to diligently and consistently perform the work once the contract has started (including but limited to, failing to provide enough properly skilled workers; to supply proper material; to make proper payments to subcontractors, or for materials or labor), or otherwise is guilty of a substantial violation of the contract or specifications, then the Village may declare that a default exists under the contract. The Village shall specify the nature of the default in a written notice mailed to the Contractor or delivered to its employee or agent. Upon receipt of said notice, the Contractor shall be liable and shall pay the Village the amount shown in the following schedule of deductions, not as a penalty but as liquidated damages, for each day until the default is corrected. The liquidated damages for default are approximate, due to the impracticality of calculating and proving actual delay costs. This schedule of deductions establishes the cost of delay to account for administration, engineering, inspection, and supervision during periods of

extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by the Village during extended and delayed performance by the Contractor of the work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of the Contractor. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work off the contract even though the work may be substantially complete. The Village will deduct these liquidated damages from any monies due or to become due to the Contractor from the Village.

Schedule of Deductions for Each Day of Default Original Contract Amount from more than	to and including calendar day	
$0	$25,000	$300
$25,000	$100,000	$375
$100,000	$500,000	$550
$500,000	$1,000,000	$725
$1,000,000	$2,000,000	$900
$2,000,000	$3,000,000	$1,100
$3,000,000	$5,000,000	$1,300
$5,000,000	$7,500,000	$1,450
$7,500,000	And over	$1,650

If such default is not corrected within seven (7) days after receipt of the notice, the Village may terminate the Contractor's rights under the contract and complete the work by whatever method the Village deems is appropriate. Upon the termination of the contract, the Contractor agrees to promptly and completely remove all equipment and materials from the job site with no damage to the improvements in place and to return all keys to Village buildings, and all employee security passes. In the case of a default, the Contractor shall not be entitled to receive any further payments until the work under the contract has been completed.

Delay

Contractor shall perform the work of this contract expeditiously in cooperation with the Village, its agents, employees and other Contractors and subcontractors. Contractor shall make no claim against Village, and no claim shall be allowed for any damages which may arise out of any delay caused by Village, its agents, employees or other Contractors or subcontractors. Contractor's sole remedy for delay from the Village shall be an extension in the Contract Time.

Entire Agreement

This Contract and its Exhibits contain the entire agreement between the Parties hereto and supersedes any and all prior agreements and understandings, whether written or oral, and whether formal or informal. In addition, this Contract embodies and merges the entire

understanding between and among the Parties hereto, and any and all prior correspondence, conversations or memoranda relating to the subject matter stated herein are being merged herein and replaced hereby. This Contract may be modified or amended only by the mutual consent of the Parties and any such modification or amendment must be in writing, signed by the Parties and duly executed, otherwise it is void.

Exceptions

Bidders taking exception to any part or section shall indicate such exceptions on the bid form. Failure to indicate any exception will be interpreted as the bidder's intent to comply fully with the requirements as written. Conditional or qualified bids, unless specifically allowed, shall be subject to rejection in whole or in part.

Expenses Incurred in Preparing Bid

The Village accepts no responsibility for any expense incurred by the bidder in the preparation and presentation of a bid. Such expenses shall be borne exclusively by the bidder.

Failure to Deliver

In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Village, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other legal remedies that the Village may have.

Guaranty, Warranties and Representations

A. The prices for the goods, supplies, equipment and/or services are based on the Vendor's standard pricing schedule, are commercially reasonable and competitive prices for the industry, are not artificially inflated, and do not contain any premium or hidden charges, commitments or other undisclosed obligations.
B. All Work shall be performed in a good workmanship manner consistent with industry standards and in accordance with the manufacturers' specifications and instructions.
C. It will exercise the due care and diligence generally associated with the delivery and installation of the goods, supplies, equipment and/or services being provided under this Contract. Due care and diligence shall be applied to all phases of the Vendor's Work.
D. It is authorized to sell and install the goods, supplies, equipment and/or services.
E. The goods, supplies, equipment and/or services are of a good quality, fit for their intended use and purpose, and all express or implied warranties of any kind, including the warranty of merchantability, are in full force and effect and have not been waived.
F. It shall transfer all third party product warranties and guaranties relative to the goods, supplies, equipment and/or services.
G. In addition to any other third party warranty or guaranty, the Vendor shall provide a minimum one (1) year guaranty relative to any equipment and its components. In the event the Vendor's Invoice/Purchase Order provides for a longer guaranty, the longer guaranty shall control.

H. The Vendor shall maintain a current, valid Village business license, and the Vendor shall post with the Village and keep on file and in force for the duration of this Contract a contractor's license bond in the amount required by the Village Code.
I. A written statement containing guaranty for a minimum of one (1) year after final payment or longer for all material and workmanship must be furnished with the bid.

Indemnity/Hold Harmless Provision

To the fullest extent permitted by law, the Contractor hereby agrees to defend, indemnify and hold harmless the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, against all injuries; deaths, loss, damages, claims, patent claims, suits, actions, liabilities of any kind, including, as allowed by law, liabilities incurred due to joint negligence of the Village and the Contractor, judgments, cost and expenses, which may in anyway accrue against the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, arising in whole or in part or as a consequence of the performance the contract or any part of the work by the Contractor, its employees, agents, or subcontractors, or which may in anyway result therefore, except that arising out of the sole legal cause of the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. The Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connections therewith, and, if any judgment shall be rendered against the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same.

Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as herein provided.

Independent Contractor

The Vendor is retained by the Village only for the purposes and to the extent set forth in this Contract, and the Vendor's relationship to the Village shall, during the term of this Contract and period of its Work hereunder, be that of an independent contractor based on the following: (a) this Contract is a non-exclusive, independent contractor arrangement; (b) the Vendor, in its discretion, is free to set its schedule regarding the performance of the Work, provided such scheduling and performance of the Work results in the timely and efficient delivery of the Work without interruption of the Village's and its employees' ability to perform their functions and duties; (c) the Vendor will utilize a high level of skill necessary to perform the Work; (d) the Vendor shall not be considered as having Village employee status, nor shall the Village make any deductions or withhold any sums for the payment of any and all applicable Federal, State, local and other taxes, income taxes or FICA taxes; (e) the Vendor shall not be entitled to receive or participate in any employee plans, benefit programs, retirement plans or related employee benefit arrangements or distributions by the Village pertaining to or in connection with any pension or retirement plans, or any other benefits for the regular employees of the Village; (f) the Vendor shall file all necessary tax returns (Federal, State, county and local)

and to make such required deductions and pay all income tax, social security, and any and all other taxes due as an independent contractor in its profession; (g) the Vendor is ineligible to file a claim for unemployment compensation benefits or for workers compensation benefits against the Village and agrees not to file any such claims in the event this Contract is terminated or if it or any of its employees are injured performing any Work; (h) the Vendor agrees to assume all risk of death, illness and injury relative to performing any Work under this Contract; (i) the Vendor shall provide all of its own equipment required for the performance of the Work under this Contract; (j) the Vendor shall retain the right to perform services for others during the term of this Contract so long as the Work: (i) is not inconsistent or incompatible with the Vendor's obligations under this Contract; or (ii) does not violate any provisions of this Contract; (k) the Vendor and its employees shall maintain all applicable certifications, licensure and training as required for its area of expertise and promptly provide copies of such documents upon request by the Village; (l) this Contract shall not render the Vendor, or any its employees, an employee, partner, agent of, or joint venturer with the Village for any purpose; and (m) The Vendor shall comply with the Village's Non-Harassment / Discrimination Policy, a copy of which is incorporated herein by reference.

Insurance Requirements

Contractor shall procure and maintain, for the duration of the contract, insurance written on an "occurrence" basis, against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

I. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

A. Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers named as additional insureds, including ISO Additional Insured Endorsement CO 2026, CG 2010; and
B. Owners and Contractors Protective Liability (OCP) policy with the Village as insured; and
C. Insurance Service Office Business Auto Liability coverage form number CA 0001 (Ed. 10/90 or newer), Symbol 01 "Any Auto."
D. Workers' Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.

II. MINIMUM LIMITS OF INSURANCE

Contractor shall maintain limits no less than:

A. Commercial General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate shall be twice the required occurrence limit. Minimum General Aggregate shall be no less than $2,000,000 or a contract specific aggregate of $1,000,000.

B. Business Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.
C. Workers' Compensation and Employers' Liability: Workers Compensation coverage with statutory limits and Employers' Liability limits of $1,000,000 per accident.
D. Excess Liability/Umbrella Coverage: $2,000,000 per occurrence and in the aggregate.

III. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions relative to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

IV. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

A. General Liability and Automobile Liability Coverages
1. The Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers are to be covered as specifically listed additional insureds as respects: liability arising out of the Contractor's work, including activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
2. The Contractor's insurance coverage shall be primary as respects the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers. Any insurance or self- insurance maintained by the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers.
4. The Contractor's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that Contractor's insurance shall apply separately to each insured against whom the

claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5. If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the Contractor shall be required to name the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds. A copy of the actual additional insured endorsement shall be provided to the Village.

B. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Village, its officers, officials, trustees, agents, employees and volunteers for losses arising from work performed by Contractor for the municipality.

C. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the Village Manager at the Village's principle office address.

V. ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

VI. VERIFICATION OF COVERAGE

Contractor shall furnish the Village with certificates of insurance naming the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers as additional insureds, and with original endorsements affecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Contractor's Public Liability Insurance shall be written on the Comprehensive form and shall include Contractual Liability, Products and Completed Operations, and Automobile Liability, all to the limits state above. Comprehensive Liability Insurance shall specifically include coverage for Independent Contractors and for both Hired and Non-Owned Automobiles. The insurance shall apply to all activities including spray-painting operations. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

VII. SUBCONTRACTORS

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

VIII. ASSUMPTION OF LIABILITY

The Contractor assumes liability for all injury to or death of any person or persons including employees of the Contractor, any sub-contractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to this contract.

IX. NO PERSONAL LIABILITY.

No appointed official, agents, attorneys, employees, volunteers and representatives of the Village or any of its local government members shall be personally liable, in law or in contract, to the Vendor as the result of the execution of this Contract. Notwithstanding any provision in this Contract to the contrary, the operation of this Section 15 shall survive the termination of this Contract.

Law and Venue

This Agreement provides for services to be performed within the State of Illinois. Accordingly, this Agreement, and all questions of interpretation, maintenance and enforcement hereof, and all controversies hereunder, shall be governed by the applicable statutory and common law of the State of Illinois. The parties agree that for the purpose of any litigation relative to this Agreement and its enforcement, venue shall be in the Circuit Court of Cook County, Illinois and the parties consent to the in personam jurisdiction of said Court for any such action or proceeding.

Non-appropriation

All funds for payment by the Village under this contract are subject to the availability of an annual appropriation for this purpose by the Village. In the event of non-appropriation of funds by the Village for the services provided under the contract, the Springs will terminate the contract, without termination charge or responsibility for or obligation to the Contractor or for damages or other liability, on the last day of the then-current fiscal year for the services covered by this contract is spent, whichever event occurs first. If at any time funds are not appropriated for the continuance of this contract, cancellation shall be accepted by the Contractor on thirty days' prior written notice, but failure to give such notice shall be of no effect and the Village shall not be obligated under this contract beyond the date of termination.

Oral Statements

No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this contract. All modifications to the contract must be made in writing by the Village of Western Springs in the form of addenda which shall be mailed to all those that have picked up bid specifications and be made available to the public.

Permits, Licenses

The Contractor shall procure and pay for all permits and licenses necessary for the performance of the work, and/or required federal, state, county, and Village regulations and laws.

Protection and Restoration of Property

The Contractor shall take all necessary precautions for the protection of corporate or private property. The Contractor is responsible for the damage or destruction of real or personal property resulting from neglect, misconduct or omission in his manner or method of execution or non-execution of the work, or caused by defective work or the use of unsatisfactory materials, and such responsibility shall not be released until the work shall have been completed, accepted, and the requirements of the specifications complied with as determined by the Village.

Whenever public or private property is so damaged or destroyed, the Contractor shall, at its own expense, restore such property to a condition equal to that existing before such damage or injury was done by repairing, rebuilding or replacing it as may be directed, or he shall otherwise make good such damage or destruction in an acceptable manner. If the Contractor fails to do so, the Village may, after the expiration of a period of 48 hours after giving notice in writing, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary and, in addition to any other remedy, the cost thereof shall be deducted from any compensation due, or which may become due, under the contract.

References

A list of current references for jobs of similar size and scope must be submitted and included with the bid. A minimum of five (5) shall be required. Please fill out reference sheet in the Schedule of Bid Prices section of this document.

Renewal of Contract

The term of this contract shall be a one-time contract, ending upon manager sign-off, after the notice to proceed date, unless the contract is terminated pursuant to the terms herein.

Responsibility for Work

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

(a) All employees on the work and other persons who may be affected thereby;

(b) All the work and all materials or equipment to be incorporated therein, whether in storage on or off the side; and

(c) Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, maintenance or replacement in the course of work.

The Contractor shall be responsible for complying with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. The Contractor shall be responsible for erecting and maintaining as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. The Contractor shall notify owners of adjacent utilities when performance of the work may affect them. All damage, injury or loss to any property referred to in paragraph (a) or (b) caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and accepted by the Village.

Right to Audit

The Contractor shall maintain such financial records and other records as may be prescribed by the Village of Western Springs or by applicable federal and state laws, rules, and regulations. The Contractor shall retain these records for a period of five years after final payment, or until they are audited by the Village, whichever event occurs first. These records shall be made available during the term of the contract and the subsequent three-year period for examination, transcription, and audit by the Village, its designees, or other authorized bodies.

Severability

In the event any term or provision of this Contract shall be held illegal, invalid, unenforceable or inoperative as a matter of law, the remaining terms and provisions of this Contract shall not be affected thereby, and each such term and provision shall be valid and shall remain in full force and effect.

Smoking Policies

All Contractors, their subcontractors, employees and agents are required to abide by the smoking policies in effect in all municipal buildings owned, leased, or operated by the Village. Failure to abide by these regulations is a violation of this contract; and in addition may subject the violator to civil penalties as prescribed in State law.

Successors/Assigns

This Contract shall inure to the benefit of and shall be binding upon the transferees, assigns, representatives, owners, insurers, agents, servants, employees, administrators and/or successors in interest of any kind whatsoever of the parties hereto. This Contract and the obligations it impose upon the Contractor are not transferable by Contractor without the written consent of the Village, which may or may not be granted in its exclusive discretion.

Taxes, Benefits and Royalties

The Village of Western Springs is a public body and is exempt from all sales, excise and use taxes and the Village shall supply its sales tax number to the Contractor for its use where appropriate. Each payment by the Village to the Vendor includes all applicable Federal, State and local taxes, fees, surcharges, license fees and tariffs of every kind and nature applicable

to the Work, as well as all taxes, contributions, premiums, costs, royalties and fees arising from the use of, or the incorporation into, the Work of patented or copyrighted equipment, materials, supplies, tools, appliances, devices, processes or inventions. All claims or rights to claim additional compensation by reason of the payment of any such tax, contribution, premium, cost, royalty or fee are hereby waived and released by the Vendor.

Termination

If the contract is terminated by a default of the Contractor the Village shall pay the Contractor any amount due for actual, completed and accepted work, and the Village shall not be obligated to pay the Contractor any more money.

Unnecessarily Elaborate and Unresponsive Submittals

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to the solicitation are not desired and may be construed as an indication of the bidder's lack of responsiveness. Further, if the format of the bidder's submittal is prescribed in the bid documents and the bidder fails to follow that format, this may be construed as an indication of the bidder's lack of responsiveness.

Waivers of Lien

The Village requires for each application for payment a properly completed Contractor's Affidavit setting out, under oath, the name, address and amount due or to become due, of each subcontractor, vendor or party included in that payment. For every party listed, the Contractor shall also provide a full or partial waiver of lien, as appropriate, before a payment will be made to the Contractor. The Contractor's partial or final waiver of lien must be included. Payment Certificates shall not be issued without such mechanics' lien waivers and Contractor's sworn statements unless they are conditioned upon receipt of such waivers and statements.

If the rate of progress is satisfactory to the Village, payment requests will be submitted by the Vendor to the Village once a month during the progress of the Work for ninety percent (90%) of the value of the work done and in place at the date of the preparation of the payment estimate. Payment will be made to the Vendor once all required waivers of lien for material suppliers and subcontractors have been submitted to the Village. The waivers of lien will be for the amount of the current payment estimate, except for the final estimate where the waivers of lien shall be for the total contract amount. Pursuant to the provisions of Section 5 of the Mechanics' Lien Act of Illinois, prior to making any payment on this Contract the Village demands that the Vendor furnish a written statement of the names of all parties furnishing labor and/or materials under this Contract and the amounts due or to become due on each. This statement must be made under oath or be verified by an affidavit. Final payment shall not be issued by the Village nor shall any retained percentage become due until releases and waivers of lien have been supplied as the Village designates.

The Contractor will indemnify and save the Village, its officers, appointed and elected officials, president and trustees, agents, employees, attorneys and volunteers harmless from all claims growing out of the lawful demands of subcontractors, laborers, workers, mechanics, material

men, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the work. The Contractor shall, at the Village's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Village may, after having notified the Contractor, withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents.

The Village shall have the right to enter the premises for the purposes of doing work not covered by the contract. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work, or the restoration of any damage work except such as may be caused by agents or employees of the Village.

Contractor's Drug-Free Workplace Certification

Pursuant to Illinois Compiled Statutes, Chapter 30, Act 580 et. seq. ("Drug-Free Workplace"), the undersigned Contractor hereby certifies to the contracting agency that it will provide a drug-free workplace by:

(A) Publishing a statement:

(1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance, including cannabis, is prohibited in the grantee's of Contractor's workplace.

(2) Specifying the actions that will be taken against employees for violations of such prohibition.

(3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:

(a) Abide by the terms of the statement; and

(b) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(B) Establishing a drug free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's or Contractor's policy of maintaining a drug-free workplace

(3) Any available drug counseling, rehabilitation, and employee assistance program; and

(4) The penalties that may be imposed upon employees for drug violations.

(C) Making it a requirement to give a copy of the statement required by subsection (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(D) Notifying the contracting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) from an employee or otherwise receiving actual notice of such conviction.

(E) Imposing a sanction on, or requiring the satisfactory participation in a drug assistance or rehabilitation program by any employee who is so convicted, as required by Illinois Compiled Statutes, Chapter 127, Act 580, Paragraph 5.

(F) Assisting employees in selecting a course of action in the event drug counseling treatment and rehabilitation is required and indicating that a trained referral team is in place.

(G) Making a good faith effort to continue to maintain a drug-free workplace through implementation of this Section.

Failure to abide by this certification shall subject the Contractor to the penalties provided in Illinois Compiled Statutes, Chapter 30, Act 580, Paragraph 6.

NPN Flooring, Armando Guzman
Contractor
Date: 02/03/2025 Attest

Contractor's Certification Regarding Non-Payment of Compensation

NPN Carpet Installation Inc, DBA NPN Flooring hereby certifies that neither it nor any of its affiliated companies, nor any of its agents, employees or representatives offered or paid any type of compensation or commission to any third party, including any official of the Village of Western Springs, Illinois, to influence the Village of Western Springs.

NPN Flooring, Armando Gayon
Contractor

DATED: 02/03/2025

ATTEST:

EXCEPTIONS TO THIS BID (THIS PAGE MUST ACCOMPANY BID)

Exhibit A

Agreement

This Agreement (the "Agreement") made this the ___day of **February** in the year **2025** by and between the Village of Western Springs, Illinois, 740 Hillgrove Avenue, Western Springs, Illinois, 60558 (the "Village") and _____ (the "Contractor"). The Village and the Contractor are at times referred herein, individually, as the "Party" and, collectively, as the "Parties".

The Village and Contractor agree as set forth below:

1. For the financial consideration hereinafter set forth, the Contractor agrees to furnish and provide and install all commercially necessary labor, materials, equipment and services and to do all other activities commercially required (the "Work") to complete the 2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB as set forth in the contract requirements, a copy of which is attached here to as exhibit 1 dated February 4, 2025 and as agreed to in the Contractor's Proposal dated February 4, 2025.

2. The Contractor agrees to commence the Work on **March 28, 2025,** and will officially, diligently, and expeditiously conduct the Work in a commercially reasonable manner so as to assure completion by **April 4, 2025**.

3. The Village shall pay the Contractor for the performance of the Work to complete 2025 Grand Avenue Community Center (GACC) Flooring Replacement RFB a total dollar amount not to exceed XXXXXXX THOUSAND AND NO/100 DOLLARS ($XXXXXXXX) in accordance with the Contractor's Proposal dated **February 4, 2025,** subject to further additions and deductions as may be agreed upon in accordance with the terms of the contract documents. Payment shall be made monthly however, the financial payments and any penalties associated with late payments due under the Contract shall be paid by the Village only in accordance with the provisions of the Local Government Prompt Payment Act (50 ILCS 505/).

4. The Contractor represents and warrants that it will comply with the applicable state and federal laws concerning prevailing wage rates and all applicable state and federal laws and requirements concerning equal opportunities.

5. This Agreement shall consist of, incorporate and include each of the following contract documents, whether attached hereto or incorporated by reference herein:

   A. Legal Notice (Advertisement for Bid) published on **January 16, 2025.**

   B. Instructions to Bidders dated **January 16, 2025.**

   C. Contractor's Proposal dated **February 4, 2025.**

D. Contractor's bid bond submitted by _____ in the amount of $_____ dated **February 4, 2025.**

E. General Specifications and all additional provisions **February 4, 2025.**

F. Contractor's Drug Free Workplace Certification dated **February 4, 2025.**

G. Contractor's Certification Regarding Non-Payment of Compensation dated **February 4, 2025.**

H. Exhibit B - Contractor certifications including Certification of Eligibility to Enter into Public Contracts.

I. Exhibit C – Change Order Form

J. Required Performance and Payment Bonds provided by the Contractor.

K. Required Insurance Certificates provided by the Contractor.

L. Rider to Contract- General Conditions

6. Notice to Proceed With the Work. The Vendor shall commence work under this Contract upon issuance of written Notice to Proceed and the duration of the contract shall be one year or as otherwise stated with a completion date.

7. Independent Contractor Status; Reporting. The Vendor is an IRS Form 1099 independent contractor and not an employee of the Village. To comply with the employer reporting requirements of Public Act 103-0343 (amendments to the Illinois Unemployment Insurance Act regarding the Directory of New Hires, 820 ILCS 405/1801.1), upon execution of this Contract, the Village shall submit the Vendor's name and required information to the Illinois Department of Employment Security.

8. Effective Date. After this Contract has been signed by the Vendor, this Contract shall be deemed dated and become effective on the date that the Village President or the Village Manager signs this Contract.

All of the contract documents are a part of this Agreement as if attached hereto or repeated herein.

IN WITNESS WHEREOF, the signatories below, pursuant to properly issued authority, have signed this Contract, which shall become effective on the date that the Village President or Village Manager signs this Contract.

Contractor:	Village of Western Springs
By: _____ (Name and Title)	By: _____ Heidi Rudolph, Village President
*Corporate Seal of corporation	*Village Seal
Attest:	
By: _____ (Name and Title)	By: _____ Jill Izzo, Deputy Village Clerk

Exhibit B

CERTIFICATION OF ELIGIBILITY TO ENTER INTO PUBLIC CONTRACTS BY THE CONTRACTOR

I, _____, having being first

duly sworn, depose and state that I am the

_____
(insert "sole owner "partner", "president"," other" proper title)

and the authorized agent of _____, which has submitted a proposal to, and is entering into a contract with, the Village of Western Springs for the performance of work in relation to the _____ Project in the Village of Western Springs, and certifies on behalf of said company as follows:

1. The company is not barred from contracting with the Village as a result of a violation of either Section 33E-3, or 33E-4 of the Illinois Criminal Code, or of any similar offense of "bid-rigging" or "bid-rotating" of any state or of the United States.

2. The company shall comply with all applicable provisions of the Illinois Human Rights Act and has a written sexual harassment policy in full compliance with that Act.

3. The company is not delinquent in the payment of any tax administered by the Illinois Department of Revenue or,

   a. is contesting such liability or the amount of tax in accordance with procedures established by the appropriate revenue act, or

   b. has entered into an agreement with the Department of Revenue for payment of all taxes due and is in compliance with that agreement.

   c. Not in default, as defined in 5 ILCS 385/2, on an educational loan, as defined in 5 ILCS 385/1.

4. In compliance with the Veterans Preference Act (330 ILCS 55/).

5. In compliance with equal employment opportunities and, during the performance of the Agreement, the Contractor shall:

   a. Not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

b. If it hires additional employees in order to perform the Agreement or any portion hereof, it will determine the availability (in accordance with the Illinois Department of Human Right's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

c. In all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.

d. Send to each labor organization or representative of workers, with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the VILLAGE and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

e. Submit reports as required by the Illinois Department of Human Rights, Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

f. Permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

g. Not maintain or provide for its employees any segregated facilities at any of its establishments, and not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. As used in this section, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color or national origin because of habit, local custom or otherwise.

6. In compliance with 775 ILCS 5/2-105(A)(4) by having in place and enforcing a written sexual harassment policy.

7. In agreement that, in the event of non-compliance with the provisions of this certification relating to equal employment opportunity, the Illinois Human Rights Act or the Illinois Department of Human Rights, Rules and Regulations, the Contractor may be declared ineligible for future contracts with the VILLAGE, and the Agreement may be canceled or

voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

8. In compliance with the requirements of 30 ILCS 580/ (Drug Free Workplace Act).

9. The Contractor and its officers, employees and agents agree not to commit unlawful discrimination and agree to comply with all applicable provisions of the Illinois Human Rights Act, Title VII of the Civil Rights Act of 1964, as amended, the Americans with Disabilities Act, the Age Discrimination in Employment Act, Section 504 of the Federal Rehabilitation Act, and all applicable rules and regulations. The Contractor certifies that it is an "Equal Opportunity Employer" as defined by federal and State laws and regulations, and agrees to comply with the Illinois Department of Human Rights ("IDHR") Equal Opportunity Employment clause as required by the IDHR's Regulations (44 Ill. Adm. Code, Part 750, Appendix A). As required by Illinois law and IDHR Regulation, the Equal Opportunity Employment clause is incorporated by reference in its entirety as though fully set forth herein. The Contractor certifies that it agrees to comply with the Prohibition of Segregated Facilities clause, which is incorporated by reference in its entirety as though fully set forth herein. See, Illinois Human Rights Act (775 ILCS 5/2-105). See also, Illinois Department of Human Rights Rules and Regulations, Title 44, Part 750. Administrative Code, Title 44: Government Contracts, Procurement and Property Management, Subtitle B: Supplemental Procurement Rules, Chapter X: Department of Human Rights, Part 750: Procedures Applicable to All Agencies, Section 750.160: Segregated Facilities (44 Ill. Adm. Code 750.160)

By: _____
Name: _____
Title: Authorized Agent of Contractor

Subscribed and Sworn To
Before Me This _____ Day
Of _____, 20__.

_____
Notary Public

Notary Public

Exhibit C

CHANGE ORDER NO.:

Owner:
Engineer:
Contractor:
Project:
Contract Name:
Date Issued:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

The Contract is modified as follows upon execution of this Change Order:
Description:
Attachments:

Change in Contract Price	Change in Contract Times [State Contract Times as either a specific date or a number of days]
Original Contract Price: $	Original Contract Times: Substantial Completion: Ready for final payment:
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: Ready for final payment:
Contract Price prior to this Change Order: $	Contract Times prior to this Change Order: Substantial Completion: Ready for final payment:
[Increase] [Decrease] this Change Order: $	**[Increase] [Decrease]** this Change Order: Substantial Completion: Ready for final payment:
Contract Price incorporating this Change Order: $	Contract Times with all approved Change Orders: Substantial Completion: Ready for final payment:

Recommended by Engineer (if required)

By:
Title:
Date:

Accepted by Contractor

By:
Title:
Date:

Approved by Funding Agency (if applicable)

By:
Title:
Date:

ALT Floor Option

ShawContract®

Low Embodied Carbon

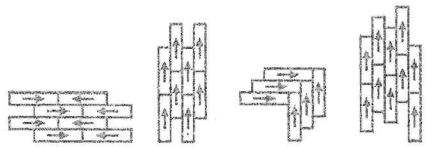
Reside 20 Mil

Collection	**Reside**	
Style Number	**4381V**	
Construction	**Heavy Commercial Luxury Vinyl Tile**	
Class / ASTM F1700	**Class III, Type B**	
Finish	**ExoGuard®**	
	U.S.	Metric
Nominal Dimensions	**6 in w x 47 in l**	**15 cm w x 120 cm l**
Actual Dimensions	**5.91 in w x 47.24 in l**	**15.01 cm w x 119.99 cm l**
Wear Layer Thickness	**20 mil (0.02 in)**	**0.51 mm**
Overall Thickness	**0.098 in**	**2.5 mm**
Edge Profile	**Squared Edge**	
Installation Type	**Dry Back**	
Installation	**Direct Glue**	
Recommended Adhesive	**S150-95 Resilient Tile Spray, , 4200 Resilient Tile 4 Gallon, 2200 Semi-Wet Resilient 4 Gallon Pail, 2200 Semi-Wet Resilient 1 Gallon Pail, or 4151 Multi-Use Premium 4 Gallon**	

Packaging

Pieces per Carton	**22 pcs**	
Area per Carton	**42.65 sq ft**	**3.96 sq m**
Weight per Carton	**38.63 lbs**	**17.52 kg**

Recommended Installation Method



Brick Ashlar Herringbone Stagger

Coordinating Products

LVT: Reside 12 Mil, Reside 8 Mil, Reside 6 Mil

Performance + Testing

Static Load (ASTM F970)	**Passes (Modified), *1500 lbs**
Resistance to Heat (ASTM F1514)	**Passes**
Resistance to Light (ASTM F1515)	**Passes**
Radiant Panel (ASTM E648)	**Passes, Class I**
Coefficient of Friction (ASTM D2047, Slip Resistance)	**>0.6, meets the recommended static coefficient of friction for ADA walking surfaces and accessible routes**

*This test is intended to compare relative properties of different styles and constructions. Results are based on a laboratory test and used for comparative purposes - real life load limit may vary.

Test Reports may be included or listed by the manufacturing/inventory style number as opposed to the noted selling style number.

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February 3, 2025

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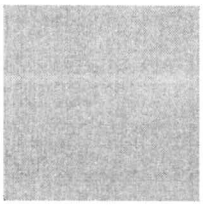
Available Colorways



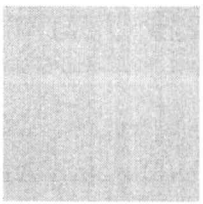
Rest 94121
V3 - Moderate Variation



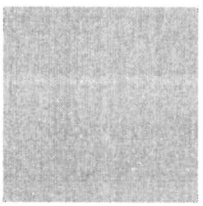
Hearth 94140
V4 - Substantial Variation



Inhabit 94155
V4 - Substantial Variation



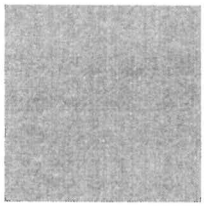
Dwelling 94250
V2 - Slight Variation



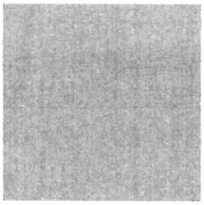
Abode 94606
V4 - Substantial Variation



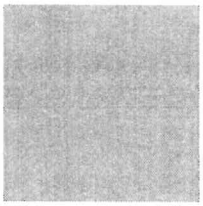
Contentment 94564
V3 - Moderate Variation



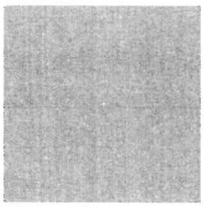
Pause 94580
V2 - Slight Variation



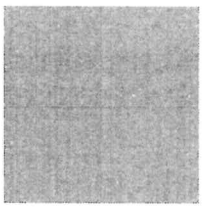
Solace 94700
V2 - Slight Variation



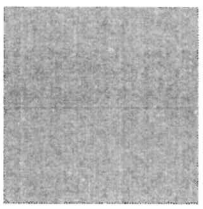
Shelter 94710
V2 - Slight Variation



Assurance 94730
V2 - Slight Variation



Retreat 94740
V3 - Moderate Variation



Fulfill 94790
V3 - Moderate Variation

Quick Ship In Stock - up to 5,000 square feet from USA

Color and Visual Variation Index

Shade and texture variation is inherent in all resilient products and can vary significantly from piece to piece. Samples should be used to assess color.



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February 3, 2025

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NPN FLOORING

02/03/2025

Village of Western Springs
740 Hillgrove Ave
Western Springs IL, 60558

RE: 1-Year Labor Warranty

NPN FLOORING ("Contractor") warrants that all labor provided for flooring installation at the Grand Avenue Community Center shall be free from defects in workmanship under normal use for a period of one (1) year from the date of completion.

During this warranty period, the Contractor will repair, at no cost to the Village of Western Springs, any defects in labor that arise from faulty workmanship. This warranty does not cover defects or damages resulting from:

- Normal wear and tear
- Improper maintenance or misuse
- Structural shifts or settling of the building
- Water damage, flooding, or other natural disasters
- Materials not supplied or installed by the Contractor

All warranty claims must be submitted in writing within the warranty period. The Contractor reserves the right to inspect the work before approving any repairs under this warranty. This warranty is limited to labor only and does not cover materials, which may be subject to separate manufacturer warranties.

This warranty is non-transferable and applies only to the original work performed. No other warranties, expressed or implied, are provided beyond what is stated herein.

Contractor Signature: NPN Flooring, [signature]

Date: 02/03/2025

AGENDA ITEM SUMMARY

BOARD OF TRUSTEES

Regular Meeting: February 10, 2025

AGENDA ITEM 11.A.

To: Board of Trustees
From: Brian Scott, Director of Fire and EMS, Matthew Supert, Director of Municipal Services
CC: Ellen Baer, Village Manager, Casey Biernacki, Deputy Village Manager
RE: 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (Omnibus Item)

Recommendation

The Public Health & Safety Committee reviewed this item at their meeting on February 6, 2025 and recommended the Village Board approve the updated 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (HMP).

Summary

In November 2019, the Village adopted the Cook County Multi-Jurisdictional Hazard Mitigation Plan (HMP). This plan encompasses most of the individual communities within Cook County and aims to assess potential risks in our area. It outlines strategies to address these risks and ensures that both the County and the Village are eligible for federal funding before and after disasters occur, thereby protecting the health, safety, welfare, and economy of our community.

The Disaster Mitigation Act of 2000 mandates that FEMA update these plans every five years. In 2024, Village staff collaborated with representatives from the Cook County Department of Homeland Security and Emergency Management to work on this update. Cook County submitted the revised plan to the Illinois Emergency Management Agency (IEMA) in July and it has since been adopted.

Financial Impact

None

Recommended Motion

I move to approve the adoption of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan.

Strategic Plan Alignment

Organizational Development - Develop Response and Contingency Plans

File Attachments

1. Resolution No. 25-XX RE: Approving 2024 Cook County Hazard Mitigation Plan

2. CookCounty.2024.MJ-HMP.Volume 1 (7-12-2024)-PUBLIC VERSION
3. Western Springs Volume 2 Cook County MJ-HMP Annex

Draft 1.10.2025

RESOLUTION NO. 25-????

VOTE:
AYES: _____
NAYS: _____
ABSENT: _____
ABSTAIN: _____
DATE: February __ , 2025.
OTHER: None.

A RESOLUTION AUTHORIZING THE ADOPTION OF THE UPDATE OF THE 2024 COOK COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN .

WHEREAS, the Village of Western Springs recognizes the threat that natural hazards pose to people and property within our community; and

WHEREAS, the Village of Western Springs ("Village") recognizes the importance of reducing or eliminating vulnerability to disasters caused by natural hazards for the overall good and welfare of the community; and

WHEREAS, on October 10, 2000, the U.S. Congress passed the Disaster Mitigation Act of 2000 ("Act") which provides the legal framework for the Federal Emergency Management Agency ("FEMA") mitigation, planning requirements for state, local, and tribal governments as a condition of mitigation grant assistance emphasizing the need for pre-disaster mitigation of potential hazards; and

WHEREAS, as a condition of future funding for mitigation projects, the Act requires jurisdictions to prepare and adopt a hazard mitigation plan to identify and address certain vulnerabilities that exist prior to and during a disaster; and

WHEREAS, FEMA supports pre- and post-disaster grant funding through the Hazard Mitigation Assistance Grant Program, which has, as a condition of funding eligibility, a requirement for jurisdictions to prepare and adopt a hazard mitigation plan; and

WHEREAS, to maintain continued eligibility for FEMA mitigation grant assistance programs, the Act requires a hazard mitigation plan be updated every five (5) years; and

WHEREAS, in accordance with the Act's requirements, 125 Cook County jurisdictions engaged in the FEMA-prescribed mitigation planning process to prepare the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan ("2024 Plan") and its associated local hazard mitigation plan annexes; and

WHEREAS, the 2024 Plan has been approved by the Illinois Emergency Management Agency and Federal Emergency Management Agency, Region V. A copy of the 2024 Plan is on file with the Village Clerk's Office and is incorporated herein by reference as **Exhibit "A**" and made a part hereof; and

WHEREAS, adoption of the 2024 Plan will allow the Village of Western Springs to receive grant funds through the Cook County Hazard Mitigation Grant Program ("HMGP"); and

WHEREAS, in furtherance of the adoption process, the Village of Western Springs makes the following commitments as required by Cook County:

1. The Village of Western Springs accepts, approves and adopts in their entirety: (1) Volume 1; (2) the Countywide Mitigation Actions in Volume 2; and (3) the Village of Western Springs Jurisdictional Annex of Volume 2 of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan.
2. The Village of Western Springs will continue to participate in updating and revising the 2024 Plan, with another plan review and revision occurring within a five-year cycle. Designated Village staff will provide annual progress reports on the status of implementation of the 2024 Plan to the President of the Village Board.

WHEREAS, at an open public meeting held on **February ___, 2025,** the **Public Health and Safety Committee** (the "Committee") reviewed the terms of the attached 2024 Plan and received input from the Village staff and provided the public with an opportunity to be heard on the matter, and then the Committee favorably recommended that the Village Board approve the 2024 Plan; and

WHEREAS, at open public meetings held on **February __, 2025 and February __, 2025,** the President and Board of Trustees of the Village reviewed and discussed the 2024 Plan and the Committee's recommendation, and received input from the Village staff and provided the public with an opportunity to be heard on the matter. At its **February __, 2025** meeting, the President and Board of Trustees of the Village accepted the Committee's recommendation to approve the attached 2024 Plan; and

WHEREAS, pursuant to the statutory and constitutional powers set forth in Article VII (Local Government), Section 7 (Counties And Municipalities Other Than Home Rule Units) and Section 10 (Intergovernmental Cooperation) of the Illinois Constitution of 1970, as well as the Illinois Intergovernmental Cooperation Act (5 ILCS 220/), the President and Board of Trustees of the Village of Western Springs find that the Village is authorized to approve this Resolution to allow the Village to participate in the 2024 Plan, and further find that it is protective of the health, welfare and safety of and in the best interests of the Village, its residents, property owners, local businesses and the public to authorize the approval and execution of this Resolution to allow the Village to become a participating jurisdiction under the 2024 Plan so that the Village and its residents, property owners and local businesses can apply for and receive the benefits available under the 2024 Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF WESTERN SPRINGS, COOK COUNTY, ILLINOIS, AS FOLLOWS:

SECTION 1: Incorporation. Each Whereas paragraph above is incorporated by reference into this Section 1 and made a part hereof as material and operative provisions of this Resolution.

SECTION 2: Approval and Adoption of the 2024 Plan and Continued Participation in the 2024 Plan and Subsequent Plan Review Process and Progress Reporting. The President and Board of Trustees of the Village of Western Springs accept, approve and adopt in their entirety: (1) Volume 1; (2) the Countywide Mitigation Actions in Volume 2; and (3) the Village of Western Springs Jurisdictional Annex of Volume 2 of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan -- copies of which are incorporated by reference herein and made a part of this Resolution, so that the Village and its residents, property owners and local businesses can apply for and receive the benefits available under the 2024 Plan.

The Village of Western Springs will continue to participate in updating and revising the 2024 Plan, with another Plan review and revision occurring within a five-year cycle. Designated Village staff will provide annual progress reports on the status of implementation of the 2024 Plan to the President of the Village Board.

In addition, the Board of Trustees authorize and direct the Village President, Village Clerk and Village Manager, or their designees, to execute and submit such other documents as are necessary to allow the Village to become a participating jurisdiction under the 2024 Plan and to fulfill the Village's obligations under the 2024 Plan.

SECTION 3: Appropriation and Authorization of Expenditure of Village Funds. The President and Board of Trustees of the Village appropriate and authorize the expenditure of lawful, eligible, budgeted Village funds to pay all costs that are necessary to fulfill the Village's obligations under the 2024 Plan.

SECTION 4: Delivery of Signed Documents. After approval of this Resolution by the Village Board and its execution by the Village President and Village Clerk, a certified copy of this Resolution and any other required documents shall be delivered to Cook County and to any other necessary parties or governmental oversight jurisdiction by the Village Manager, or their designee, to confirm the Village's approval of the 2024 Plan in order to become a participating jurisdiction under the 2024 Plan and for record retention purposes.

SECTION 5: Effective Date. This Resolution shall be in full force and effect from and after its approval and adoption in the manner provided by law.

PASSED by the Board of Trustees of the Village of Western Springs, Cook County, Illinois on a roll call vote at a Regular Meeting thereof held on the __ day of February, 2025, and approved by me as Village President, and attested by the Village Clerk on the same day.

_____
Heidi Rudolph, Village President

ATTEST:

_____
Edward Tymick, Village Clerk

Exhibit "A"

2024 Cook County
Multi-Jurisdictional Hazard Mitigation Plan

(on file with the Village Clerk's Office and incorporated herein by reference)

STATE OF ILLINOIS)
) SS
COUNTY OF C O O K)

CLERK'S CERTIFICATE

I, Edward Tymick, Village Clerk of the Village of Western Springs, Cook County, Illinois, certify that attached hereto is a true and correct copy of the Resolution now on file in my office, entitled:

RESOLUTION NO. 25-????

A RESOLUTION AUTHORIZING THE ADOPTION OF THE UPDATE OF THE 2024 COOK COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

which was passed by a roll call vote of the Board of Trustees of the Village of Western Springs at a Regular Meeting held on the ___ day of February, 2025, at which meeting a quorum was present, and approved by the President of the Village of Western Springs on the ___ day of February, 2025.

I further certify that the vote on the question of the passage of the said Resolution by the Board of Trustees of the Village of Western Springs was taken by the Ayes and Nays and recorded in the Journal of Proceedings of the Board of Trustees of the Village of Western Springs, and that the result of said vote was as follows, to-wit:

AYES:_____

NAYS:_____

ABSENT:_____

I do further certify that the original Resolution, of which the attached is a true copy, is entrusted to my care for safekeeping, and that I am the lawful keeper of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Village of Western Springs, this ___ day of February, 2025.

_____
Edward Tymick, Village Clerk

COOK COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN

VOLUME 1 – PLANNING-AREA-WIDE ELEMENTS

JULY 2024 | PUBLIC VERSION

PREPARED FOR:

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

Cook County
Emergency Management and Regional Security
69 W. Washington St., Suite 2600
Chicago, Illinois 60602

Toni Preckwinkle
President
Cook County Board of Commissioners

Theodore Berger
Executive Director
Cook County Emergency Management and Regional Security

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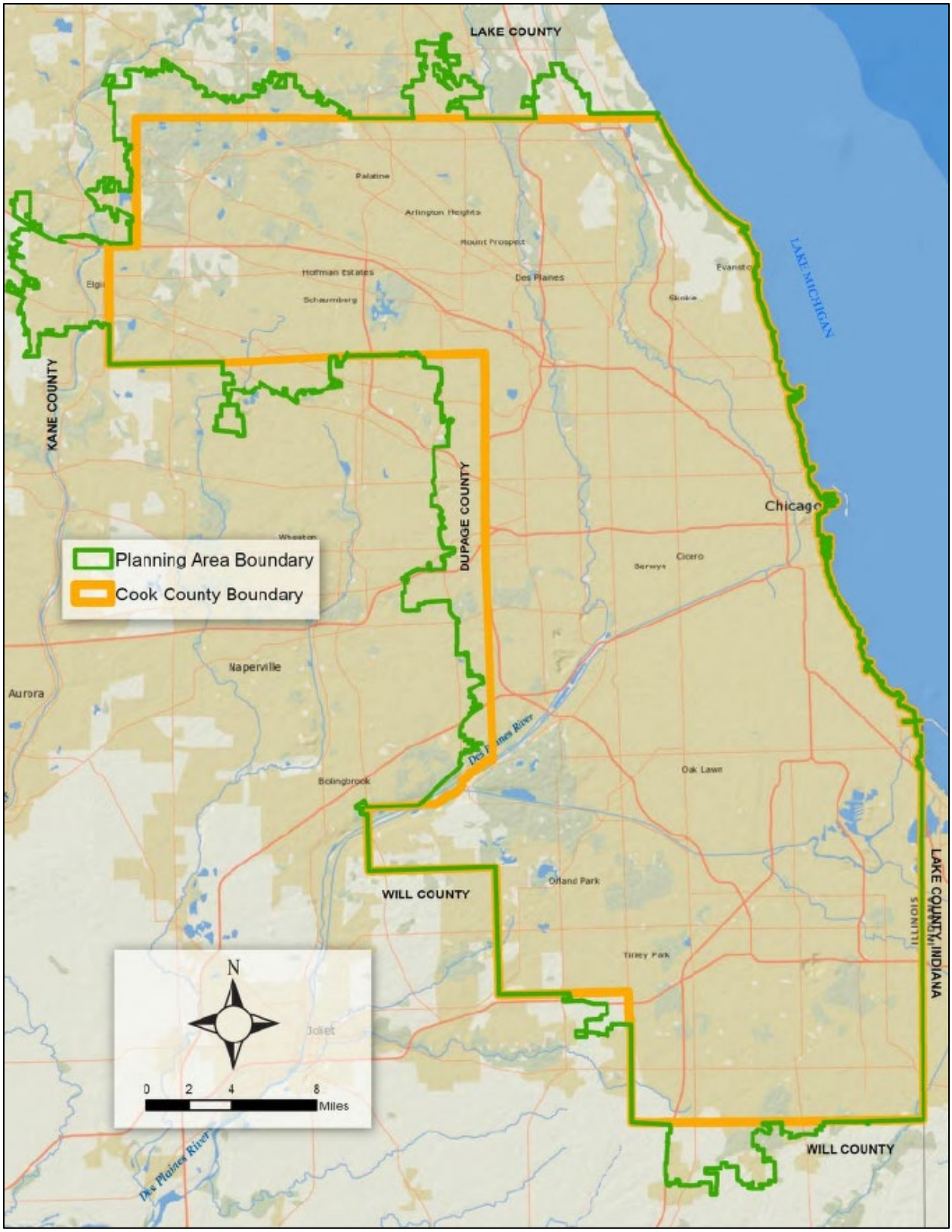
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EXECUTIVE SUMMARY

Hazard mitigation is the use of long-term and short-term policies, programs, projects, and other activities to alleviate the death, injury, and property damage that can result from a disaster. Cook County and a coalition of 125 municipal planning partners prepared and updated the **2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan** (**MJ-HMP**) in order to identify the risks posed by hazards and find ways to reduce their impacts. The plan reduces risk for those who live in, work in, and visit the County.

Participating Partners and the Planning Area

The responsibility for hazard mitigation lies with many, including private property owners, business and industry, and local, state, and federal government. Through multi-jurisdictional partnerships, local jurisdictions within an area with uniform risk exposure can pool resources and eliminate redundant planning activities. Cook County opened this planning effort to all municipalities within the County. *Table: Planning Partners* lists the partners that participated in the planning process and are covered under this plan. The planning area was defined as all incorporated and unincorporated areas of Cook County and the incorporated areas of cities that cross county boundaries. The planning area boundary is shown in the figure below (*Figure: Planning Area*).


LAKE COUNTY
KANE COUNTY
DUPAGE COUNTY
WILL COUNTY
WILL COUNTY
LAKE COUNTY, INDIANA
LAKE MICHIGAN
Chicago
Palatine
Arlington Heights
Mount Prospect
Hoffman Estates
Schaumburg
Des Plaines
Evanston
Cicero
Berwyn
Naperville
Aurora
Bolingbrook
Oak Lawn
Orland Park
Tinley Park
Joliet
Des Plaines River
Planning Area Boundary
Cook County Boundary
N
0 2 4 8
Miles

The jurisdictions not participating in the 2024 MJ-HMP are border jurisdictions and are part of other county mitigation plans.

TABLE: PLANNING PARTNERS PLANNING PARTNERS COVERED BY THIS HAZARD MITIGATION PLAN		
Arlington Heights	Bellwood	Alsip
Barrington	Berkeley	Bedford Park
Buffalo Grove	Berwyn	Blue Island
Des Plaines	Broadview	Bridgeview
Elgin	Brookfield	Burbank
Elk Grove Village	City of Chicago	Burnham
Evanston	Cicero	Calumet City
Glencoe	Countryside	Calumet Park
Glenview	Elmwood Park	Chicago Heights
Golf	Forest Park	Chicago Ridge
Hanover Park	Forest View	Country Club Hills
Hoffman Estates	Franklin Park	Crestwood
Inverness	Harwood Heights	Dixmoor
Kenilworth	Hillside	Dolton
Lincolnwood	Hodgkins	East Hazel Crest
Morton Grove	Indian Head Park	Evergreen Park
Mount Prospect	LaGrange	Flossmoor
Niles	LaGrange Park	Ford Heights
Northbrook	Lyons	Glenwood
Northfield	Maywood	Harvey
Palatine	McCook	Hazel Crest
Park Ridge	Melrose Park	Hickory Hills
Prospect Heights	Norridge	Hometown
Rolling Meadows	Northlake	Homewood
Schaumburg	North Riverside	Justice
Skokie	Oak Park	Lansing
South Barrington	River Forest	Lemont
Streamwood	River Grove	Lynwood
Wheeling	Riverside	Markham
Wilmette	Rosemont	Matteson
Winnetka	Schiller Park	Merrionette Park
Barrington Hills *(Not Participating in 2024 Cook County MJ-HMP)*	Stickney	Midlothian
Bartlett *(Not Participating in 2024 Cook County MJ-HMP)*	Stone Park	Oak Forest
Deerfield *(Not Participating in 2024 Cook County MJ-HMP)*	Summit	Oak Lawn

Deer Park *(Not Participating in 2024 Cook County MJ-HMP)*	Westchester	Olympia Fields
East Dundee *(Not Participating in 2024 Cook County MJ-HMP))*	Western Springs	Orland Hills
Roselle *(Not Participating in 2024 Cook County MJ-HMP)*	Bensenville *(Not Participating in 2024 Cook County MJ-HMP)*	Orland Park
	Burr Ridge *(Not Participating in 2024 Cook County MJ-HMP)*	Palos Heights
	Elmhurst *(Not Participating in 2024 Cook County MJ-HMP)*	Palos Hills
	Hinsdale *(Not Participating in 2024 Cook County MJ-HMP)*	Palos Park
	Oak Brook *(Not Participating in 2024 Cook County MJ-HMP)*	Park Forest
		Phoenix
		Posen
		Richton Park
		Riverdale
		Robbins
		Sauk Village
		South Chicago Heights
		South Holland
		Steger
		Thornton
		Tinley Park
		University Park
		Willow Springs
		Worth
		Frankfort *(Not Participating in 2024 Cook County MJ-HMP)*
		Woodridge *(Not Participating in 2024 Cook County MJ-HMP)*

Plan Development and Organization

The 2024 Cook County MJ-HMP was updated by a planning team of Cook County Department of Emergency Management and Regional Security staff and expert consultants, with guidance from a steering committee representing the planning partners and other local stakeholders. The key steps in updating the plan were as follows:

1. Determine the Planning Area and Resources
2. Build and Reconvene the Planning Team
3. Outreach Strategy
4. Review and Update Community Capabilities
5. Update and Conduct the Risk Assessment
6. Update the Mitigation Strategy
7. Keep the Plan Current

8. Review and Adopt the Plan
9. Create a Safe and Resilient Community

The final plan consists of two volumes. Volume 1 includes all federally required elements of a disaster mitigation plan that apply to the entire planning area. Volume 2 consists of all federally required jurisdiction-specific elements in individual annexes for each participating jurisdiction.

Mission Goals and Objectives

The defined mission for the 2024 Cook County MJ-HMP is to "Identify risks and sustainable, cost-effective actions to mitigate the impact of natural hazards to protect the life, health, safety, welfare, and economy of the communities of Cook County." Mitigation **goals** were established as follows:

1. Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.
2. Protect the lives, health, safety, and property of Cook County residents from natural hazards.
3. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such activities.
4. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.
5. Develop, promote, and integrate mitigation action plans.
6. Promote public understanding of and support for hazard mitigation.

Thirteen **objectives** were established for the plan to meet multiple goals and serve as stand-alone measurements of the effectiveness of the mitigation action. Proposed mitigation actions were evaluated in part based on how many goals and objectives they would help to fulfill.

1. Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management.
2. Increase the resilience of (or protect and maintain) infrastructure and critical facilities.
3. Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.
4. Integrate hazard mitigation policies into land use plans in the planning area.
5. Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.
6. Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety.
7. Retrofit, purchase, or relocate structures in high-hazard areas, including those known to be repetitively damaged.
8. Establish partnerships among all levels of local government, the private sector, and/or nongovernmental organizations to improve and implement methods to protect people, including underserved and underrepresented groups, and property.
9. Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
10. Strengthen codes and land use planning and their enforcement so that new construction or redevelopment can avoid or withstand the impacts of natural hazards.

11. Encourage mitigation through incentive-based programs like the Community Rating System and StormReady programs.
12. Reduce natural hazard-related risks and vulnerability to potentially isolated and underserved populations within the planning area and ensure mitigation strategies result in equitable outcomes.
13. Encourage hazard mitigation measures that have the least adverse effect on the natural environment and use natural processes.

Detailed risk assessments were performed for each of these hazards of concern. Also, a brief qualitative review was conducted of technological and human-caused hazards of interest. Climate Change was addressed for each hazard, as applicable.

Risk Assessment Methodology

The risk assessments of the identified hazards of concern describe the risks associated with each hazard. The following steps were used to define the risk of each hazard:

- Profile and update each hazard, describing the geographic area it affects, its frequency and severity, and the warning time provided before a hazard event occurs.
- Use maps of hazard impact areas, as appropriate, to determine and update the number of structures, facilities, and systems exposed to each hazard.
- Assess the vulnerability of exposed structures and infrastructure based on exposure and the probability of occurrence of a hazard event. Tools such as the Federal Emergency Management Agency's (FEMA's) hazard-modeling program HAZUS-MH were used to perform an assessment for flood and earthquake.

Profiles of Cook County Natural Hazards

The following natural hazards are addressed in the 2024 Cook County MJ-HMP. For a more detailed analysis of each hazard, please refer to Part 2. Risk Assessment.

- Dam/levee failure
    - Dam Failure
    - Levee Failure
- Drought
- Earthquake
- Flood
    - Riverine Flooding
    - Urban Flooding
    - Coastal Flooding
        - Seiche
        - Coastal Erosion
- Severe Summer Storms
    - Extreme Heat
    - Lightning
    - Hail
    - Fog

    - High Winds
- Severe Winter Storms
    - Snow
    - Blizzards
    - Ice Storms
    - Extreme Cold and Wind Chill
- Tornado
- Wildfire

PART 1. THE PLANNING PROCESS

Property damage that can result from a disaster through long- and short-term strategies. It involves strategies such as planning, policy changes, programs, projects, and other activities that can mitigate the impacts of hazards. The responsibility for hazard mitigation lies with many groups including private property owners, business and industry, and local, state, and federal governments.

The 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) was updated by Integrated Solutions Consulting under a contract with the Cook County Department of Emergency Management and Regional Security (EMRS). The Cook County MJ-HMP is organized into two (2) volumes. Volume 1 addresses planning-area-wide elements for Cook County and all jurisdictions; and Volume 2 addresses jurisdiction-specific elements in annexes for each participating jurisdiction.

Chapter 1 Introduction

This chapter provides the following introductory information regarding hazard mitigation planning and its purpose.

- Why Prepare this Plan?
- Who Will Benefit from this Plan?
- How to Use this Plan

1.1 Why Prepare This Plan

This section presents information on the big picture of hazard mitigation planning, the primary hazards of concern in the Cook County area, and the purpose that the hazard mitigation plan and its planning process serves.

1.1.1 The Big Picture

The federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390) required state and local governments to develop hazard mitigation plans as a condition for federal mitigation grant assistance. Prior to 2000, federal disaster funding focused on disaster relief and recovery, with limited funding for hazard mitigation planning. The DMA increased the emphasis on planning for disasters before they occur.

The DMA encourages state and local authorities to work together on pre-disaster planning and promotes sustainability for disaster resistance. “Sustainable hazard mitigation” includes the sound management of natural resources and the recognition that hazards, and mitigation must be understood in the largest possible social and economic context. The enhanced planning network called for by the DMA helps local governments articulate accurate needs for mitigation, resulting in the faster allocation of funding and more cost-effective risk reduction projects.

This plan also meets FEMA planning requirements of the National Flood Insurance Program’s (NFIP) Community Rating System (CRS). CRS allows participating communities to earn credit toward discounts in flood insurance premiums. FEMA requires that mitigation plans be updated and readopted every five years.

1.1.2 Local Concerns

Natural hazards impact citizens, property, the environment, and the economy of Cook County. Dam and levee failure, drought, earthquake, flooding, severe weather, severe winter weather, and tornadoes are examples of hazards that have exposed Cook County residents and businesses to the financial and emotional costs of recovering after natural disasters.

The inevitability of natural hazards, a large and diverse population, and extensive critical infrastructure and critical facilities in Cook County created an urgent need to develop and update strategies, coordinate resources, and increase public awareness to reduce risk and prevent loss from future hazard events. Identifying risks posed by hazards and developing strategies to reduce the impact of a hazard event can help protect the life and property of citizens and communities. To accomplish these objectives, Cook County and a coalition of planning partners prepared this hazard

mitigation plan and are committed to the continual update and maintenance of this important document. Several factors inform this planning effort:

- The Cook County area has significant exposure to numerous natural hazards that have caused hundreds of millions of dollars in past damage.
- Limited local resources make it difficult to be pre-emptive in risk reduction actions. Being able to leverage federal financial assistance is paramount to successful hazard mitigation in the area.
- The partners wanted to be proactive in their preparedness for the probable impacts of natural hazards.

With these factors in mind, Cook County committed to the continued preparation and maintenance of the plan by attaining grant funding for the effort and then securing technical assistance to facilitate a planning process that would comply with all program requirements related to this update.

1.1.3 Purpose for Planning

This hazard mitigation plan identifies resources, information, and strategies for reducing risk from natural hazards. Elements and strategies in the plan were selected because they meet a program requirement and because they best meet the needs of the planning partners and their citizens. One of the benefits of multi-jurisdictional planning is the ability to pool resources and eliminate redundant activities within a planning area with uniform risk exposure and vulnerabilities. The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning under its guidance for the DMA. The plan will help guide and coordinate mitigation activities throughout the planning area. The plan was updated to meet the following objectives:

- Meet or exceed the requirements of the DMA, specifically new guidance that became effective on April 19, 2023.
- Enable all planning partners to continue using federal grant funding to reduce risk through mitigation.
- Meet the needs of each planning partner as well as state and federal requirements.
- Update the risk assessment that focuses on Cook County hazards of concern.
- Create a single planning document that integrates all planning partners into a framework that supports partnerships within the County and puts all partners on the same planning cycle for future updates.
- Meet the planning requirements of FEMA's Community Rating System (CRS), allowing planning partners that participate in the CRS program to maintain or enhance their CRS classifications.
- Coordinate existing plans and programs so that high-priority mitigation actions are funded and implemented.

1.2 Who Will Benefit from this Plan?

All residents and organizations within the defined planning area are the ultimate beneficiaries of this hazard mitigation plan. The plan reduces risk for those who live in, work in, and visit the County and provides a viable planning framework for foreseeable natural hazards that may impact the County as well. It is also highly likely that secondary benefits will fall to those immediately outside of the

planning area as well, not to mention the benefit that comes to state and federal entities and resources by having hazards competently addressed at the local level.

Participation in the development of the plan by key stakeholders in the County helped ensure that outcomes will be mutually beneficial for all involved. The resources and background information in the plan are applicable countywide, and the plan's goals and recommendations can lay groundwork for the development and implementation of further local mitigation activities and partnerships.

1.3 How to Use This Plan

This plan has been set up in two volumes so that elements that are jurisdiction-specific can easily be distinguished from those that apply to the whole planning area:

- **Volume 1** includes all federally required elements of a disaster mitigation plan that apply to the entire planning area. This includes the description of the planning process, public involvement strategy, goals and objectives, countywide hazard risk assessment, countywide mitigation actions, and a plan maintenance strategy. The following appendices at the end of Volume 1 include information or explanations to support the main content of the plan:
    - Appendix A - Acronyms and Definitions
    - Appendix B - Plan Process and Development Documentation
    - Appendix C - Public Participation Documentation
    - Appendix D - Annual Progress Report Template and Process
    - Appendix E - Jurisdictional Linkage Strategy
    - Appendix F - Plan Adoption Resolutions from Planning Partners

- **Volume 2** includes all federally required jurisdiction-specific elements, in annexes for each participating jurisdiction.

All planning partners will adopt Volume 1 and the Countywide annex in (Volume 2) in its entirety. They will also adopt their respective jurisdiction-specific annex within (Volume 2).

Chapter 2 Plan Methodology

To update the 2024 Cook County MJ-HMP, the County followed a process that had the following primary objectives:

- Secure grant funding
- Form a planning team
- Establish a planning partnership
- Define/Reassess the planning area
- Engage the Steering Committee and Participating Jurisdictions
- Coordinate with other agencies
- Review existing programs
- Engage the public

These objectives are discussed in the following sections.

2.1 Grant Funding

This planning effort was supplemented by a grant to the Cook County Department of Emergency Management and Regional Security (EMRS) from FEMA through the Illinois Emergency Management Agency (IEMA). FEMA/IEMA hazard mitigation grants provide 75 percent in federal funds for a plan, or a project and 25 percent non-federal funds are required as matching funds.

2.2 Formation of the Planning Team

Cook County hired Integrated Solutions Consulting (ISC) to assist with the update and implementation of the plan. The Integrated Solutions Consulting project manager and lead project planner reported directly to a County-designated project manager. A planning team was formed to lead the planning effort, made up of the following key members:

- Griffin Byers, Cook County EMRS
- Kim Nowicki, Cook County EMRS
- Caitlin McElroy, Cook County PIO
- Sharon Cuncannan, Cook County Finance
- Daiko Abe, Integrated Solutions Consulting
- George DeTella, Integrated Solutions Consulting
- Melissa Rome, Integrated Solutions Consulting

2.3 Establishment of the Planning Partnership

Each jurisdiction desiring to join the planning partnership was asked to provide a “letter of intent to participate” that designated a point of contact for the jurisdiction and confirmed the jurisdiction’s commitment to the process and understanding of expectations.

Cook County townships were invited to participate in meetings and workshops throughout the planning process. Townships are included, and meet DMA planning requirements, through the County’s adoption of the 2024 Cook County MJ-HMP.

2.4 Defining the Planning Area

The planning area was defined as all incorporated and unincorporated areas of Cook County as well as the incorporated areas of cities that cross county boundaries.

All partners to this plan have jurisdictional authority within this planning area. Other municipalities that are partially in Cook County, and are participating in the mitigation planning efforts of adjacent counties (and not Cook County) are identified below:

- Barrington Hills - Cook, Kane, Lake and McHenry
- Bartlett - Cook, DuPage and Lake
- Bensenville - Cook and DuPage
- Burr Ridge - Cook and DuPage
- Deer Park - Cook and Lake
- Deerfield - Cook and Lake
- East Dundee - Cook and Kane
- Elmhurst - Cook and DuPage
- Frankfort - Cook and Will
- Hinsdale - Cook and DuPage
- Oak Brook - Cook and DuPage
- Roselle - Cook and DuPage
- Woodridge - Cook, DuPage and Will

2.5 The Steering Committee

Hazard mitigation planning enhances collaboration and support among diverse parties whose interests can be affected by hazard losses. In 2014, a steering committee was initially formed to oversee all phases of the plan. The members of this committee included key planning partner staff, elected officials, citizens, and other stakeholders from within the planning area. The steering committee was, again, instrumental in the update of the 2024 Cook County MJ-HMP.

During the 2024 update of the Plan, the steering committee agreed to meet as often as needed throughout the course of the plan's development. The planning team facilitated each steering committee meeting, which addressed a set of objectives based on the work plan established for the plan. The steering committee met multiple times from March 2024 through June 2024.

The steering committee was responsible for:

- The updating and prioritizing of natural hazards that impact Cook County
- Defining critical facilities and providing necessary updates
- Updating the plan's mission, goals, and objectives
- The overall planning area's capability assessment and consideration of mitigation alternatives
- The identification of new mitigation actions and the update of past countywide mitigation action items

The recommendations of the steering committee were provided to the planning partners via a series of webinars and workshops.

The membership of the steering committee that supported the 2024 Cook County MJ-HMP update is detailed in the following table (*Table: Steering Committee Membership*).

Table: Steering Committee Membership 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) Update		
Agency / Organization	***Name***	***Title***
American Red Cross	Joy Medrano	External Relations Manager
American Red Cross	Robb Morford	Senior Disaster Program Manager
Salvation Army	Karen Hanton	Emergency Disaster Services Manager
Army Corp of Engineers	Kira Baltutis	Safety Data Coordinator / Contracts Specialist
Cook County Dept. of Transportation and Highways (DOTH)	John McNelis*	Supervising Engineer / Township Liaison
Cook County Dept. of Environment and Sustainability Hazmat	Kevin Schnoes*	Deputy Director
Cook County Dept. of Environment and Sustainability Hazmat	Ricardo Magallon	Manager, Air Inspection Division
Cook County Environment and Sustainability (Climate)	Sarah Edwards	Program Manager
Cook County Bureau of Asset Management	Andrew Williams-Clark	Director, Build up Cook
Cook County Bureau of Asset Management	Cindy Cambray	Relationship Manager
Cook County Bureau of Economic Development	Dominic Tocci	Deputy Bureau Chief
Cook County Bureau of Economic Development	Cheryl Cooke	Deputy Director of Community Development
Cook County Dept. of Emergency Management and Regional Security (EMRS)	Kim Nowicki	Regional Planner
Cook County Forest Preserves	John McCabe	Resource Manager
Cook County Forest Preserves	Troy Showerman	Resource Project Manager
Cook County Dept. of Building and Zoning	Tim Bleuher	Commissioner
Cook County Dept. of Building and Zoning	Mike Fazio	Deputy Commissioner
Illinois Department of Natural Resources, Office of Water Resources	Marilyn Sucoe	NFIP Coordinator
Mutual Aid Box Alarm System (MABAS)	Kevin Lyne	Operations Section Chief
Mutual Aid Box Alarm System (MABAS)	Spencer Kimura	Supervisor
Metropolitan Water Reclamation District	Rick Fisher	Principal Civil Engineer
Metropolitan Water Reclamation District	Anne Wright	Public Affairs Specialist

Table: Steering Committee Membership 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) Update		
Agency / Organization	***Name***	***Title***
City of Chicago	Matt Doughtie	Mgr. of Emergency Management Services
City of Chicago	Kyra Woods	Project Manager
Village of Homewood/Public Works Association	John Schafer	Director of Public Works
CMAP	Kate Evasic	Senior Planner
Joint Emergency Management System	Mick Fleming	Director
National Oceanic and Atmospheric Administration (NOAA)	Scott Lincoln	Senior Service Hydrologist
National Oceanic and Atmospheric Administration (NOAA)	Mike Bardou	Senior Forecaster
North Region-Schaumburg	Tracy Raimondo	Emergency Manager
Central Region- Maywood	Kendall Silas	Chief
South Region- Markham	Derrick Champion	City Administrator
Cook County Cyber Security (Bureau of Technology)	Christopher Hausken	Business Continuity Program Manager
Cook County Cyber Security (Bureau of Technology)	Hema Sundaram	Chief Technology Officer
Cook County Sheriffs Dept.	Bryan Carr	Director/Law Enforcement Liaison
Cook County Dept. of Public Health	Lori Katich	Interim Director, EPRU

2.6 Coordination with Other Agencies, Partners, and Neighboring Jurisdictions

Opportunities for involvement in the planning process must be provided to neighboring communities, local and regional agencies involved in hazard mitigation, agencies with authority to regulate development, businesses, academia, and other private and nonprofit interests (Title 44 of the Code of Federal Regulations (44 CFR), Section 201.6(b)(2)).

Agency coordination was accomplished by the planning team as follows:

Steering Committee Involvement—Agency representatives were invited to participate on the Steering Committee. The Steering Committee represented a wide range of councils of governments, members of academia, government representatives, watershed management entities, and other stakeholders.

Agency Notification—The following agencies were invited to participate in the plan development process from the beginning and were kept apprised of plan development milestones:

- FEMA Region V
- Illinois Emergency Management Agency
- Metropolitan Water Reclamation District of Greater Chicago

- American Red Cross
- Salvation Army
- Army Corp of Engineers
- Cook County Dept. of Transportation and Highways
- Cook County Dept. of Environment and Sustainability Hazmat
- Cook County Environment and Sustainability
- Cook County Bureau of Asset Management
- Cook County Bureau of Economic Development
- Cook County Dept. of Emergency Management and Regional Security (EMRS)
- Cook County Forest Preserves
- Cook County Dept. of Building and Zoning
- City of Chicago Office of Emergency Management and Communications
- Cook County Cyber Security (Bureau of Technology)
- Cook County Sheriffs Dept.
- Cook County Dept. of Public Health
- Illinois Department of Natural Resources, Office of Water Resources
- Mutual Aid Box Alarm System (MABAS)
- CMAP
- National Oceanic and Atmospheric Administration (NOAA)

These agencies received meeting announcements, meeting agendas, and meeting minutes by e-mail throughout the plan development process. These agencies supported the effort by attending meetings or providing feedback on issues.

These agencies received meeting announcements, meeting agendas, and meeting minutes by e-mail throughout the plan development process. These agencies supported the effort by attending meetings or providing feedback on issues.

Neighboring Counties—The following counties were invited to participate in the plan development process and were kept apprised of plan development milestones. They are Lake County, IL; Will County, IL; DuPage County, IL; McHenry County, IL; and Kane County, IL.

EMRS briefed the Metro-County Emergency Management Coordinators Monthly Meeting on Cook County's ongoing update to its Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP).

Table: Additional Neighboring Community Participation

Neighboring Jurisdiction	Organization	Participation Description
Kane County, IL	Office of Emergency Management	Invited to review and comment on the draft plan. Briefed and updated at the Metro-County Emergency Management Coordinators Monthly Meeting
McHenry County, IL	Emergency Management Agency	Invited to review and comment on the draft plan. Briefed and updated at the Metro-County Emergency Management Coordinators Monthly Meeting
Lake County, IL	Emergency Management Agency	Invited to review and comment on the draft plan. Briefed and updated at the Metro-County Emergency Management Coordinators Monthly Meeting
DuPage County, IL	Office of Homeland Security and Emergency Management	Invited to review and comment on the draft plan. Briefed and updated at the Metro-County Emergency Management Coordinators Monthly Meeting
Will County, IL	Emergency Management Agency	Invited to review and comment on the draft plan. Briefed and updated at the Metro-County Emergency Management Coordinators Monthly Meeting

Border Municipality Outreach and Integration:

The Planning Team determined twenty-two (22) municipalities sharing a border – border municipality – with Cook County and one or more other counties. These counties include DuPage, Kane, Lake, McHenry and Will.

The Planning Team decided the most comprehensive approach for a border municipality was to recommend and encourage each municipality to participate in all appropriate county mitigation planning. This includes municipalities already participating in the Cook County 2019 HMP and the 2024 MJ-HMP Update. In the development of the 2024 MJ-HMP the Planning Team did increase the number of border municipality multi-county participation from eight to nine.

Cook County, once the 2024 MJ-HMP is complete, will continue to support the Mitigation Program, which was implemented in 2019. As part of the Mitigation Program, during the annual review and update process, Cook County will continue to promote and encourage the border counties and municipalities to participate in all appropriate mitigation planning and programs. This inter-county coordination will provide municipalities with more and simplified mitigation funding opportunities.

Table: Border Municipalities

No	Jurisdiction Name	Cook County Region	Counties	2019 Cook Plan Participation	2024 Cook Plan Participation	County Plan Participation
1	Barrington	North Region	Cook and Lake	Yes	Yes	Lake 2022 Cook 2024
2	Barrington Hills	North Region	Cook, Kane, Lake and McHenry	No	No	Lake 2022
3	Bartlett	North Region	Cook, DuPage and Lake	Yes	No	DuPage 2023 Cook 2019
4	Bensenville	Central Region	Cook and DuPage	No	No	DuPage 2023
.5	Buffalo Grove	North Region	Cook and Lake	No	Yes	Lake 2022 Cook 2024
6	Burr Ridge	Central Region	Cook and DuPage	No	No	DuPage 2023
7	Deerfield	North Region	Cook and Lake	No	No	Lake 2022
8	Deer Park	North Region	Cook and Lake	No	No	Lake 2022
9	East Dundee	North Region	Cook and Kane	No	No	Kane 2024
10	Elgin	North Region	Cook and Kane	No	Yes	Kane 2024 Cook 2024
11	Elk Grove Village	North Region	Cook, DuPage and Lake	Yes	Yes	DuPage 2023 Cook 2024
12	Elmhurst	Central Region	Cook and DuPage	No	No	DuPage 2023
13	Frankfort	South Region	Cook and Will	No	No	Will County 2020
14	Hanover Park	North Region	Cook and DuPage	Yes	Yes	DuPage 2023 Cook 2024
15	Hinsdale	Central Region	Cook and DuPage	No	No	DuPage 2024
16	Lemont	South Region	Cook, DuPage and Will	Yes	Yes	DuPage 2023 Cook 2024
17	Oak Brook	Central Region	Cook and DuPage	No	No	DuPage 2023
18	Park Forest	South Region	Cook and Will	Yes	Yes	Will 2020 Cook 2024

No	Jurisdiction Name	Cook County Region	Counties	2019 Cook Plan Participation	2024 Cook Plan Participation	County Plan Participation
19	Roselle	North Region	Cook and DuPage	No	No	DuPage 2023
20	Steger	South Region	Cook and Will	Yes	Yes	Will 2020 Cook 2024
21	University Park	South Region	Cook and Will	Yes	Yes	Will County 2020 Cook 2024
22	Woodridge	South Region	Cook, DuPage and Will	No	No	DuPage 2023

Neighboring Communities and Adverse Impacts

One of the benefits of using the Online Planning System, and organizing jurisdictions by North, Central and South regions, was to ensure neighboring communities had full visibility of each other's mitigation initiatives. This was done to ensure synergies were identified, when applicable, and that mitigation actions in one community would not adversely impact another nearby community. During the mitigation workshops, community representatives were encouraged to collaborate with neighboring jurisdictions during the update and identification of new mitigation strategies.

Pre-Adoption Review—All participating municipalities and the Steering Committee were provided an opportunity to review and comment on this plan. Each agency was sent an e-mail message informing them that draft portions of the plan were available for review.

2.7 Local Jurisdiction Plan Participation

Local Planning Team activities included the following below. Each region in the corresponding subsections (i.e. North Region Participation, Central Region Participation, etc.) indicates the level of participation by each jurisdiction. This section explains, in greater detail, the key activities and supporting documentation. More information about each of these activities is also provided in the following section: Plan Participation Validation.

Annual Report Update

In 2020, due to COVID19, Cook County EMRS did not request all participating jurisdictions of the 2019 Cook County MJ-HMP to submit a 2020 Annual Report Update.

Cook County EMRS requested all participating jurisdictions of the 2019 Cook County MJ-HMP to submit Annual Report Updates for 2021, 2022, and 2023, which included any new hazards, status updates on their mitigation efforts, and any new mitigation projects.

2024 Letter of Intent

Cook County EMRS requested all jurisdictions in Cook County to submit a Letter of Intent, demonstrating their commitment to being part of the 2024 MJ-HMP.

Mitigation Orientation Webinar

A series of webinars to introduce the mitigation planning process to local officials was conducted. In total, seven (7) webinars were conducted over a three-week period, including morning, afternoon, and evening webinars. Of the 125 participating jurisdictions, 116 jurisdictions (including Cook County Departments and Organizations) attended at least one webinar session.

Regional Mitigation Meeting/Workshops

Five (5) workshops were strategically held throughout Cook County to identify hazards and update and consider new mitigation strategies, including one workshop for the City of Chicago. Workshop topics and activities helped participants integrate and consider input from the public regarding key hazards of concerns and potential mitigation strategies. This was done by sharing results from the mitigation survey that was made available to county residents.

As Needed Local Outreach Meetings

The Planning Team worked with individual jurisdictions and planning partners in order to provide one-on-one guidance and support. Local outreach meetings occurred on an as-needed basis.

2024 Municipal HMP Annex

As part of the 2024 MJ-HMP update, all participating jurisdictions and planning partners were required to create and/or update their respective Municipal HMP Annex. Each municipal annex included the following information:

- Hazard Mitigation Plan Point of Contact
- Jurisdiction Profile
- Capability Assessment
- Jurisdiction-Specific Natural Hazard Event History
- Hazard Risk Ranking
- Hazard Mitigation Actions
- Future Needs to Better Understand Risk/Vulnerability
- Additional Comments
- Hazard Mapping

New Mitigation Actions

Each participating jurisdiction was required to consider and, if appropriate and needed, submit at least one new mitigation action as part of the 2024 MJ-HMP. New mitigation actions are documented in each respective Municipal HMP Annex.

2024 MJ-HMP and Municipal Annex Review and Approval

As part of the draft review and approval process, each participating jurisdiction was asked to review the 2024 MJ-HMP and their respective Municipal Annex. Jurisdictions were able to provide their

approval, or any additional changes/improvements, by utilizing the online planning system's "Comment" tool.

Online Planning System

The Online Planning System (https://cookcountydhsem.isc-cemp.com), Cook County EMRS Knowledge Management System (KMS), gave members of the Steering Committee and Local Planning Team access to 2019 MJ-HMP and 2024 MJ-HMP Update resources, including documents and forms, instructions and examples, and contact for Project Team members. In addition, the Online Planning System featured real-time access to the Plan and comment functionality. Crucially, the latter provided users the ability to directly interact with Project Team members, encouraging engagement throughout the planning process and collaboration. The comment function was intuitive, allowing users to quickly acclimate to the system:

To make a comment, users were instructed to click on the Comment link on the bottom of the content page and a pop-up box would appear. The person used the drop-down box to designate whether the comment was a Feedback or an Observation. After entering the comment, they clicked the Send Comments button to submit.

- The comments tool allowed the user to make comments on any page within the manual and mark the comment as an observation or feedback.
- The comments for pages were visible to all administrators and users who had editing privileges for the specific page.
- The comment would appear after the page refreshes (if user is allowed to view comments). An email notification was sent to users who were designated to receive comment notification.

The jurisdictions listed in the table below were represented by one or more municipal officials. Representatives not only attended the meetings, but also participated by gathering appropriate data and historical information, completed the community preparedness survey, participated in their community hazard analysis, identified new mitigation strategies, updated past mitigation strategies, and participated in other efforts (i.e. webinars, phone interviews, and reviewing drafts).

Local mitigation planning team representatives and their contact information and the documentation of participation in the Plan update are available in Volume 2.

2.7.1 North Region Participation

Municipality	2019 MJ-HMP Participation	Annual Reports (Years Participated)	2024 MJ-HMP Letter of Intent (LOI)	FEMA PTAS	Attended Webinar	Attended Mitigation Workshop	As Needed Local Outreach Meeting	Community Mitigation Survey Participation	2024 Annex Updated	2024 MJ-HMP Annex Review/ Approval
Arlington Heights	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Barrington	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Buffalo Grove	No	-	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Des Plaines	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Elgin	No	-	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Elk Grove Village	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Evanston	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Glencoe	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Glenview	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Golf	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Hanover Park	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Hoffman Estates	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Inverness	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Kenilworth	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Lincolnwood	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Morton Grove	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Mount Prospect	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Niles	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Northbrook	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Northfield	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Palatine	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Park Ridge	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Prospect Heights	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes			Yes	Yes
Rolling Meadows	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Schaumburg	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Skokie	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
South Barrington	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes			Yes	Yes
Streamwood	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Wheeling	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Wilmette	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Winnetka	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes

2.7.2 Central Region Participation

Municipality	2019 MJ-HMP Participation	Annual Reports (Years Participated)	2024 MJ-HMP Letter of Intent (LOI)	FEMA PTAS	Attended Webinar	Attended Mitigation Workshop	As Needed Local Outreach Meeting	Community Mitigation Survey Participation	2024 Annex Updated	2024 MJ-HMP Annex Review/ Approval
Bellwood	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Berkeley	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Berwyn	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Broadview	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Brookfield	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
City of Chicago	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Cicero	Yes	2021, 2022, 2023	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Countryside	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Elmwood Park	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Forest Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Forest View	Yes	2021, 2022	Yes		Yes	Yes			Yes	Yes
Franklin Park	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Harwood Heights	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Hillside	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Hodgkins	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Indian Head Park	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
LaGrange	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
LaGrange Park	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Lyons	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Maywood	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
McCook	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Melrose Park	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Norridge	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Northlake	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
North Riverside	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Oak Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes

River Forest	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
River Grove	Yes	2021, 2022, 2023	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Riverside	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Rosemont	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Schiller Park	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Stickney	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Stone Park	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Westchester	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Western Springs	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes

2.7.3 South Region Participation

Municipality	2019 MJ-HMP Participation	Annual Reports (Years Participated)	2024 MJ-HMP Letter of Intent (LOI)	FEMA PTAS	Attended Webinar	Attended Mitigation Workshop	As Needed Local Outreach Meeting	Community Mitigation Survey Participation	2024 Annex Updated	2024 MJ-HMP Annex Review/ Approval
Alsip	Yes	2021, 2022, 2023	Yes			Yes		Yes	Yes	Yes
Bedford Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Blue Island	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Bridgeview	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Burbank	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Burnham	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Calumet City	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Calumet Park	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes
Chicago Heights	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Chicago Ridge	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Country Club Hills	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Crestwood	Yes	2021, 2022, 2023	Yes	Yes	yes	Yes		Yes	Yes	Yes
Dixmoor	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes			Yes	Yes
Dolton	Yes	2021				Yes		Yes	Yes	Yes
East Hazel Crest	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Evergreen Park	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Flossmoor	Yes	2021, 2022, 2023, 2022	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Ford Heights	Yes	2021, 2022	Yes			Yes			Yes	Yes

Municipality	2019 MJ-HMP Participation	Annual Reports (Years Participated)	2024 MJ-HMP Letter of Intent (LOI)	FEMA PTAS	Attended Webinar	Attended Mitigation Workshop	As Needed Local Outreach Meeting	Community Mitigation Survey Participation	2024 Annex Updated	2024 MJ-HMP Annex Review/ Approval
Glenwood	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Harvey	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Hazel Crest	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Hickory Hills	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Hometown	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Homewood	Yes	2021, 2022	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Justice	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Lansing	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Lemont	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Lynwood	Yes	2021	Yes		Yes	Yes		Yes	Yes	Yes
Markham	Yes	2021, 2022, 2023	Yes			Yes		Yes	Yes	Yes
Matteson	Yes	2021, 2022	Yes	Yes		Yes		Yes	Yes	Yes
Merrionette Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Midlothian	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes			Yes	Yes
Oak Forest	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Oak Lawn	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Olympia Fields	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Orland Hills	Yes	2021, 2022, 2023	Yes			Yes		Yes	Yes	Yes
Orland Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Palos Heights	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
Palos Hills	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Palos Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Park Forest	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Phoenix	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Posen	Yes	2021, 2022	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Richton Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Riverdale	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Robbins	Yes	2021, 2022	Yes		Yes	Yes		Yes	Yes	Yes
Sauk Village	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
South Chicago Heights	Yes	2021, 2022, 2023	Yes		Yes	Yes		Yes	Yes	Yes
South Holland	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Steger	Yes	2021. 2023	Yes		Yes		Yes	Yes	Yes	Yes
Summit	Yes	2021, 2022, 2023	Yes		Yes		Yes	Yes	Yes	Yes

Municipality	2019 MJ-HMP Participation	Annual Reports (Years Participated)	2024 MJ-HMP Letter of Intent (LOI)	FEMA PTAS	Attended Webinar	Attended Mitigation Workshop	As Needed Local Outreach Meeting	Community Mitigation Survey Participation	2024 Annex Updated	2024 MJ-HMP Annex Review/ Approval
Thornton	Yes	2021, 2022, 2023	Yes		Yes	Yes			Yes	Yes
Tinley Park	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
University Park	Yes	2021, 2023	Yes	Yes		Yes			Yes	Yes
Willow Springs	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Worth	Yes	2021, 2022, 2023	Yes	Yes	Yes	Yes			Yes	Yes

2.7.4 Plan Participation Validation

Appendix B: Plan Process and Development Documentation provides the necessary detail and documentation of the various plan development activities that took place during the update of the 2024 Cook County MJ-HMP.

The appendix details plan participation validation for local jurisdictions. In accordance with best practices as outlined in CPG 101, Cook County EMRS and its partners embraced the whole community approach throughout the 2024 MJ-HMP Update process, involving civic leaders, community representatives and organizations, and the general public. Understanding that critical infrastructure and key resources (CIKR), as well as public opinion and hazard likeliness, can dramatically change in a five-year period, the EMRS and its partners leveraged in-person, on-site outreach opportunities to educate stakeholders and collect and validate the information. To support the 2024 MJ-HMP Update process, the following were facilitated for jurisdiction leaders and POCs:

- Annual Report Participation
- Letters of Intent
- Local Government Meetings
- Webinars
- Hazard Mitigation Planning Workshops

2.8 Review of Existing Plans and Programs

Hazard mitigation planning must include review and incorporation, if appropriate, of existing plans, studies, reports and technical information (44 CFR, Section 201.6(b)(3)). Chapter 4: Cook County Profile provides a review of laws and ordinances in effect within the planning area that can affect hazard mitigation actions. In addition, the following programs can affect mitigation within the planning area:

- The 2023 Illinois Natural Hazard Mitigation Plan
- Hazard mitigation plans for the adjacent counties of Lake, DuPage, and Will
- The Cook County Stormwater Management Plan and Annual Reports (developed by the Metropolitan Water Reclamation District of Greater Chicago)
- The Cook County Watershed Management Ordinance
- Six detailed watershed plans developed by the Metropolitan Water Reclamation District of Greater Chicago (Lower Des Plaines, Poplar Creek, Upper Salt Creek, Little Calumet River, Cal-Sag Channel, and the Chicago River, North Branch)
- Next Century Conservation Plan for the Forest Preserve District of Cook County.
- Transition Report Mayor Brandon Johnson (2024)

An assessment of all planning partners' regulatory, technical, and financial capabilities to implement hazard mitigation actions is presented in the individual jurisdiction-specific annexes in Volume 2. Many of these relevant plans, studies and regulations are cited in these capability assessments.

2.9 Updates of Prior Plans

Cook County completed its previous MJ-HMP in 2019. Integrated Solutions Consulting and the planning team reviewed the 2019 plan prior to beginning this five-year update process for 2024.

2.10 Public Involvement

Broad public participation in the planning process helps ensure that diverse points of view about the planning area's needs are considered and addressed. The public must have opportunities to comment on disaster mitigation plans during the drafting stages and prior to plan approval (44 CFR, Section 201.6(b)(1)). The Community Rating System (CRS) expands on these requirements by making CRS credits available for optional public involvement activities. The Cook County EMRS with partners Integrated Solutions Consulting, Inc. (ISC), and the Metropolitan Water Reclamation District (MWRD) engaged Cook County stakeholders and its citizens prior to and throughout the 2024 MJ-HMP Update process. Per Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide 101 (CPG 101) guidance, our public outreach efforts encompassed all 125 participating jurisdictions, leveraging our expertise to educate the population and engage them in developing new mitigation actions. The following section details our public outreach strategy, including a combination of in-person and virtual methods.

2.10.1 Public Involvement Strategy

Elements of virtual public outreach included the 2024 Cook County Preparedness Survey, local government meetings, social media, such as Twitter and NextDoor, and hazard mitigation plan public meetings. The physical component of the outreach efforts focused on maximizing attendance at hazard mitigation meetings.

Appendix C: Public Participation Documentation details the specific activities and results from the Planning Team's public outreach efforts.

2024 Cook County Community Preparedness Survey

An integral component of the 2024 MJ-HMP public involvement strategy was the use of a questionnaire. To engage the whole community in the MJ-HMP Update process, EMRS and ISC developed the 2024 Cook County Community Preparedness Survey to engage the general public by providing information on the update process while collecting and validating information from citizens throughout all 135 jurisdictions. The 31-question web-based tool was used to gauge household preparedness for natural hazards and the public's knowledge of tools and techniques that assist in reducing risk and loss from natural hazards. The results of the survey were used by the Steering Committee to guide them in developing objectives and mitigation strategies.

The survey was accessible to the public from April 24, 2024, to May 31, 2024, via multiple websites, including the City of Chicago Office of Emergency Management and Communications (OEMC) website. In addition, a link to the survey was disseminated through various social media platforms, local government websites, and press releases (see Survey Outreach). As emphasized in the National Response Framework (NRF), resilient communities are borne out of prepared individuals and strong leadership across governments, agencies, and businesses. Accordingly, the survey gauged the community's overall resiliency by collecting hundreds of responses from respondents that represent the diverse backgrounds of the County.

1,498 individuals entered the survey with 969 completing the full survey by answering every question. A copy of the survey, as well as a summary of results, is presented in 2024 Cook County Community Preparedness Survey Results in Appendix C.

2024 Hazard Mitigation Plan Meetings

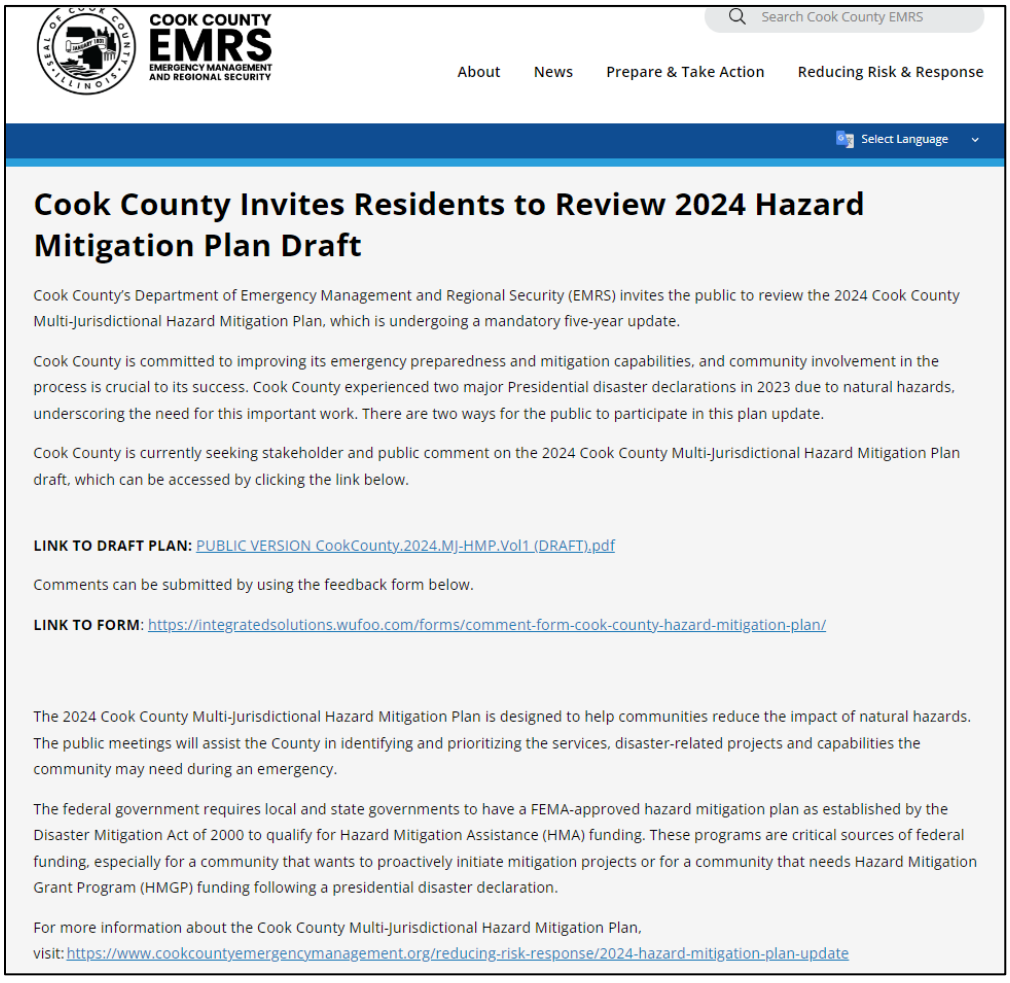
Cook County EMRS, with the help of ISC and MWRD, facilitated four successful public meetings across the North, South, and Central regions of the County.

The public meetings focused on educating the public on what hazard mitigation is, what it means, and how to work together to create a more resilient community. This included formal presentations, interactive group discussions, and defining new mitigation actions within each participants' respective jurisdiction.

2024 Hazard Mitigation Plan Website and Draft

A web site dedicated specifically to hazard mitigation was developed so the public would have continual access to the hazard mitigation plan process and subsequent updates. Bulletins, fact sheets, a draft of the 2024 MJ-HMP, and mitigation success stories were hosted on the dedicated website. The website will be maintained to ensure the public has continual engagement and input on new and ongoing mitigation strategies.

Website: https://www.cookcountyemergencymanagement.org/reducing-risk-response/2024-hazard-mitigation-plan-update



2.10.2 Community Stakeholders and Organizations

Throughout the planning process, key stakeholders and community organizations were involved in providing key input, data, disseminating information about the Plan, meetings, and reviewing the draft of the plan.

Community organizations were invited to participate in the Community Stakeholder Webinar series. This webinar was for key community stakeholders to participate in the planning process of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. Organization given an opportunity to advise on the complexities of natural hazards and their impacts in Cook County and to identify possible mitigation projects needed to address these concerns. The webinar dates were:

- Wednesday, May 22, 2024, | 1 p.m. to 2:30 p.m.
- Friday, May 24, 2024, | 9 a.m. to 10:30 a.m.

74 individuals representing various community organizations attended the two webinars.

Appendix C: Public Participation Documentation details the specific activities and results from the Planning Team's public outreach efforts.

2.11 Plan Development Chronology/Milestones

The table below summarizes important milestones in the 2024 update of the Cook County MJ-HMP.

Plan Development Milestones			
Date	**Event**	**Description (meeting objectives)**	**Attendance**
2019			
2019	Submit and Adopt the 2019 Cook County MJ-HMP		N/A
2020 – No activity			
2021			
2021	Annual Reports begin in 2021 for Cook County MJ-HMP – no reports required in 2020 due to COVID19		N/A
2022			
2022	Annual Reports submitted for the Cook County MJ-HMP		N/A
2023			
2023	Annual Reports submitted for the Cook County MJ-HMP		N/A
2024			
April 2024	Letters of Intent submitted by planning partners		N/A
April and May 2024	Countywide Webinars and Workshops		See Appendix B
May and June 2024	Update the 2024 Cook County MJ-HMP		N/A
July 2024	Submit the 2024 Cook County MJ-HMP		N/A

PART 2. RISK ASSESSMENT

The goal of mitigation is to reduce the future impacts of a hazard including loss of life, injury or disability, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation must be based on a sound risk assessment. A risk assessment involves quantifying the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people.

Chapter 3 Identified Hazards of Cook County

Risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from natural hazards. It allows emergency management personnel to establish early response priorities by identifying potential hazards and vulnerable assets. The process focuses on the following elements:

- **Identify hazards**—Use all available information to determine what types of disasters may affect a jurisdiction, how often they can occur, and their potential severity.
- **Assess vulnerability**—Determine the impact of natural hazard events on the people, property, environment, economy, and lands of the region.
- **Estimate cost**—Estimate the cost of potential damage that could be avoided by mitigation.

The risk assessment for this hazard mitigation plan evaluates the risk of natural hazards prevalent in the planning area and meets requirements of the DMA (44 CFR, Section 201.6(c)(2)).

3.1 Identified Hazards of Concern

For this plan, the Steering Committee considered the full range of natural hazards that could impact the planning area and then listed hazards that present the greatest concern. The process incorporated review of state and local hazard planning documents, as well as information on the frequency, magnitude, and costs associated with hazards that have impacted or could impact the planning area. Anecdotal information regarding natural hazards and the perceived vulnerability of the planning area's assets to them was also used. Based on the review, this plan addresses the following hazards of concern:

- Dam/levee failure
    - Dam Failure
    - Levee Failure
- Drought
- Earthquake
- Flood
    - Riverine Flooding
    - Urban Flooding
    - Coastal Flooding
        - Seiche
        - Coastal Erosion
- Severe Summer Storms
    - Extreme Heat
    - Lightning
    - Hail
    - Fog
    - High Winds
- Severe Winter Storms
    - Snow
    - Blizzards
    - Ice Storms
    - Extreme Cold and Wind Chill

- Tornado
- Wildfire

3.2 Other Hazards of Interest (Human-caused and Technological Hazards)

Although FEMA does not require non-natural hazards for inclusion in a hazard mitigation plan, Cook County wishes to rank and mitigate against a comprehensive list of hazard events that could impact the county. Due to the nature of non-natural hazards and the discretionary status regarding their inclusion, the following hazards of interest have been briefly and qualitatively assessed for public education and informing their inclusion within the hazard ranking and mitigation process:

- Epidemic or Pandemic
- Nuclear Power Plant Incidents
- Secondary Impacts from Incoming Evacuees
- Widespread Power Outage
- Hazardous Material Incident
    - Fixed Site
    - Transportation
    - Nuclear
- Civil Disturbance
- Active Shooter/Active Assailant
- Hostage Situation
- Terrorism & WMD Incident
- Sabotage
- Cyber Attacks
- Fire or Explosion
- Utility Failure: Electrical, Gas, Telecommunications (includes internet), Sewer, Water, and Pipeline
- Commercial/Industrial Transportation Accidents
    - Air
    - Rail
    - Road
- Waterway
- Structural Collapse
- Infrastructure Failure
- Space Weather

Per FEMA's mandate to address all natural hazards, the following natural hazards were not included because these hazards do not directly impact Cook County due to geographic location:

- Avalanche
- Landslide
- Mine Subsidence
- Hurricane
- Sea Level Rise
- Storm Surge
- Tsunami

3.3 Presidential Disaster (DR) & Emergency Declarations (EM) in Cook County

Presidential disaster declarations are typically issued for hazard events that cause more damage than state and local governments can handle without assistance from the federal government, although no specific dollar loss threshold has been established for these declarations. A presidential disaster declaration puts federal recovery programs into motion to help disaster victims, businesses, and public entities. Some of the programs are matched by state programs. Cook County has experienced 22 events since 1967 for which presidential disaster declarations were issued. These events are listed below in the table.

TABLE: FEDERAL DISASTER DECLARATIONS FOR EVENTS IN THE PLANNING AREA

Type of Event	Disaster Declaration Number	Declaration Date
Tornado	DR*-227	4/25/1967
Flood	DR-351	9/4/1972
Flood	DR-373	4/26/1973
Severe Storm	DR-509	6/18/1976
Snow	EM*-3068	1/16/1979
Severe Storm	DR-643	6/30/1981
Flood	DR-776	10/7/1986
Flood	DR-798	8/21/1987
Flood	DR-997	7/9/1993
Severe Storm	DR-1129	7/25/1996
Severe Storm	DR-1188	9/17/1997
Snow	EM-3134	1/8/1999
Snow	EM-3161	1/17/2001
Hurricane	EM-3230	9/7/2005
Severe Storm	DR-1729	9/25/2007
Severe Storm	DR-1800	10/3/2008
Severe Storm	DR-1935	8/19/2010

TABLE: FEDERAL DISASTER DECLARATIONS FOR EVENTS IN THE PLANNING AREA		
Type of Event	**Disaster Declaration Number**	**Declaration Date**
Snow	DR-1960	3/17/2011
Flood	DR-4116	5/10/2013
Biological	ER-3435-IL	3/13/2020
Biological	DR-4489-IL	3/26/2020
Severe Storm	DR-4728-IL	8/15/2023
Flood	DR-4749	11/20/2023

**DR indicates "major disaster declaration." EM indicates "emergency declaration"*
Source: FEMA, 2019

TABLE: STATE DISASTER DECLARATIONS FOR EVENTS IN THE PLANNING AREA	
Date Declared	**Event**
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017 7/14/2017	Thunderstorms, Heavy Rainfall, Flooding
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022	Monkeypox

The National Oceanic and Atmospheric Administration (NOAA) data is the primary source utilized in the Hazard Mitigation Plan. Below is a summary of all the hazards that were counted by NOAA. Further analysis of the data set is available for each hazard under the "Past Events" sections. NOAA does not collect data on Earthquakes and Dam and Levee Failures. Additional data was utilized and is analyzed in the hazard profiles.

TABLE: SUMMARY OF EXTENT OF NATURAL HAZARDS					
Hazard	**Total Events 1950-2023**	**Total Property Damage**	**Total Crop Damage**	**Total Deaths (Direct)**	**Total Injuries (Direct)**
Drought	19	$0	$0	0	0
Extreme Cold/Wind Chill	18	$0	$0	34	5
Extreme Heat	18	$750,000	$0	36	0
Flood: Riverine	168	$7.2M	$0	2	0
Flood: Urban	160	$1.052B	$0	1	0
Flood: Costal	2	$0	$0	0	0
Fog	0	$0	$0	0	0
Hail	577	$18.839M	$0	0	0
High Winds	68	$1.303M	$0	4	15
Ice Storm	3	$0	$0	0	0
Lightning	56	$6.537M	$0	3	18
Tornado	67	$118.338M	$0	39	771
Winter Storm	46	$0	$0	5	0
TOTAL	**1,202**	**$1,204,967,000**	**$0**	**124**	**809**

**Crop damage would only include what has been reported (typically reported to USDA for insurance or grant purposes). Sources: NOAA*

Additionally, NOAA data illustrated two natural hazard incidents resulting death or significant financial loss between 2014 and 2023:

- **Flash Flooding - April 2014:** Scattered thunderstorms produced heavy rain and severe winds across northeastern Illinois during the early evening hours. Additional thunderstorms developed overnight producing heavy rain that resulted in flooding. Several locations reported storm total rains of over four inches, including 4.53 inches by the co-op observer near Midway Airport. Much of this precipitation fell within a short time period. During the storm, the co-op observer near Midway measured several times reporting 1.80 inches at 17 minutes, 2.75 inches at 27 minutes, and 3.60 inches at the 40-minute mark.
    - Major flooding impacted portions of the southwest suburbs of Chicago. Numerous streets were flooded and impassable with several feet of water in Burbank and Oak

Lawn. Numerous cars stalled in the flooded streets and many basements were inundated with water. Multiple lanes and the shoulder were flooded and closed on I-294 at Route 171. Over three feet of water was reported in the viaduct at Kedzie Avenue and 79th Street where a fire truck stalled trying to pass through.
    - **Total Loss:** $50 Million
- **Extreme Cold / Wind Chill – January 2014**: An extremely cold arctic airmass settled over northern Illinois with minimum observed wind chills falling into the -40F to -50F range area-wide. Some of the coldest wind chill reports include Steward at -50F; Aurora at -47F; Rochelle at -47F; DuPage at -46F; Romeoville at -46F; Rockford at -46F; and O'Hare airport at -42F.
    - **Total Loss:** Four deaths were reported in Cook County, with hypothermia due to cold exposure being a contributing factor in each.
- **Extreme Cold / Wind Chill – January 2014:** Following a strong arctic front, temperatures plummeted across northern Illinois with breezy conditions leading to wind chill values falling into the -30F to -35F range.
    - **Total Loss:** An elderly woman died due to complications of hypothermia and cold exposure.

Review of the declared disaster events and loss-causing hazard events helps identify targets for risk reduction and ways to increase a community's capability to avoid large-scale events in the future.

3.4 Risk Assessment Methodology

3.4.1 Probability of Occurrence

The probability of occurrence of a hazard is indicated by a probability factor based on the likelihood of annual occurrence:

- **High**—Significant hazard event is likely to occur annually (Probability Factor = 3)
- **Medium**—Significant hazard event is likely to occur within 25 years (Probability Factor = 2)
- **Low**—Significant hazard event is likely to occur within 100 years (Probability Factor = 1)
- **Unlikely**—There is little to no probability of significant occurrence, or the recurrence interval is greater than every 100 years (Probability Factor = 0)

The assessment of hazard frequency is generally based on past hazard events in the area.

3.4.2 Extent

Extent was assessed in two categories: extent/intensity and catastrophic potential of the hazard. Numerical impact factors were assigned as follows:

Extent/Intensity—Extent is defined as the range of anticipated intensities of the identified hazards. Extent is most commonly expressed using various scientific scales, such as the Enhanced Fujita scale.

- **High**—Historical and/or probabilistic models/studies for this hazard indicate the possibility of a high-intensity incident (Extent Factor = 3)
- **Medium**—Historical and/or probabilistic models/studies for this hazard indicate the possibility of a medium-intensity incident (Extent Factor = 2)
- **Low**—Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident (Extent Factor = 1)

- **Unlikely**—Historical and/or probabilistic models/studies for this hazard indicate the possibility of little to no intensity (Extent Factor = 0)

Catastrophic Factor—The potential that an occurrence of this hazard could be catastrophic.

- **High**—High potential that this hazard could be catastrophic (Extent Factor = 3)
- **Medium**—Medium potential that this hazard could be catastrophic (Extent Factor = 2)
- **Low**—Low potential that this hazard could be catastrophic (Extent Factor = 1)
- **Unlikely**—Virtually no potential that this hazard could be catastrophic (Extent Factor = 0)

Each category was assigned a weighting factor to reflect its significance, consistent with those typically used for measuring the benefits of hazard mitigation actions: a weighting factor of 3 was assigned for *Extent/Intensity* and its potential for *Catastrophe*.

3.4.3 Vulnerability

Vulnerabilities were assessed in three categories: population exposure, property exposure, and exposure based on changes in development. Numerical impact factors were assigned as follows:

People—Values were assigned based on the percentage of the total population exposed to the hazard event.

- **High**—30% or more of the population is exposed to this hazard (Vulnerability Factor = 3)
- **Medium**—15% to 29% of the population is exposed to this hazard (Vulnerability Factor = 2)
- **Low**—14% or less of the population is exposed to this hazard (Vulnerability Factor =1)
- **No Vulnerability**—None of the population is exposed to this hazard (Vulnerability Factor = 0)

Property Exposed—Values were assigned based on the percentage of the total property value exposed to the hazard event.

- **High**—25% or more of the total assessed property value is exposed to the hazard (Vulnerability Factor = 3)
- **Medium**—10% to 24% of the total assessed property value is exposed to the hazard (Vulnerability Factor = 2)
- **Low**—9% or less of the total assessed property value is exposed to the hazard (Vulnerability Factor = 1)
- **No Vulnerability**—None of the total assessed property value is exposed to the hazard (Vulnerability Factor = 0)

Changes in Development Factor—Changes in development since the previous plan was approved have increased or decreased the community's vulnerability/exposure to this hazard.

- **High**—Changes in development have significantly increased the vulnerability/exposure of the community to this hazard (Vulnerability Factor = 3)
- **Medium**—Changes in development have increased the vulnerability/exposure of the community to this hazard, but not significantly (Vulnerability Factor = 2)
- **Low**—Changes in development have minimally increased the vulnerability/exposure of the community to this hazard (Vulnerability Factor = 1)

- **No Vulnerability**—Changes in development have had no effect and/or have decreased the vulnerability/exposure of the community to this hazard (Vulnerability Factor = 0)

Each category was assigned a weighting factor to reflect its significance, consistent with those typically used for measuring the benefits of hazard mitigation actions: a weighting factor of 3 was assigned for *People*, and a weighting factor of 1 was assigned for *Property Exposed* and *Changes in Development*.

3.4.4 Impact

Hazard impacts were assessed in eight categories: population and life/safety, underserved/equity, property damages, economic, environmental, essential operations, future development, and climate change. Numerical impact factors were assigned as follows:

Population and Life/Safety—Values were 1). assigned based on best available data (historical and probabilistic) for populations vulnerable to the hazard event, and 2). are likely to experience adverse impacts from the hazard incident.

- **High**—Populations exposed to this hazard are likely to experience significant adverse impacts (Impact Factor = 3)
- **Medium**—Populations exposed to this hazard are likely to experience some adverse impacts (Impact Factor = 2)
- **Low**—Populations exposed to this hazard are likely to experience minimal adverse impacts (Impact Factor = 1)
- **No impact**—Populations exposed to this hazard are not likely to experience significant adverse impacts (Impact Factor = 0)

Underserved/Equity—Values were 1). assigned based on best available data for underserved populations vulnerable to the hazard event, and 2). are likely to experience adverse/disproportionate impacts from the hazard incident resulting in greater disparity in equity.

- **High**—Underserved populations exposed to this hazard are likely to experience significant adverse/disproportionate impacts (Impact Factor = 3)
- **Medium**—Underserved populations exposed to this hazard are likely to experience some adverse/disproportionate impacts (Impact Factor = 2)
- **Low**—Underserved populations exposed to this hazard are likely to experience minimal adverse/disproportionate impacts (Impact Factor = 1)
- **No impact**—Underserved populations exposed to this hazard are not likely to experience significant adverse/disproportionate impacts (Impact Factor = 0)

Property Damages—Values were assigned based on the expected total property damages incurred from a hazard incident. It is important to note that values represent estimates of the loss from a major incident based on historical data or probabilistic models/studies.

- **High**—More than $5,000,000 in property damages is expected from a single major hazard event, or damages are expected to occur to 15% or more of the property value within the jurisdiction (Impact Factor = 3)

- **Medium**—More than $500,000, but less than $5,000,000 in property damages is expected from a single major hazard event, or expected damages are expected to more than 5%, but less than 15% of the property value within the jurisdiction (Impact Factor = 2)
- **Low**—Less than $500,000 in property damages is expected from a single major hazard event, or less than 5% of the property value within the jurisdiction (Impact Factor = 1)
- **No impact**—Little to no property damage is expected from a single major hazard event (Impact Factor = 0)

Economic Factor—An estimation of the impact, expressed in terms of dollars, on the local economy is based on a loss of business revenue, crops, worker wages and local tax revenues or on the impact on the local gross domestic product (GDP).

- **High**—Where the total economic impact is likely to be greater than $10 million (Impact Factor = 3)
- **Medium**—Total economic impact is likely to be greater than $100,000, but less than or equal to $10 million (Impact Factor = 2)
- **Low**—Total economic impact is not likely to be greater than $100,000 (Impact Factor = 1)
- **No Impact**—Virtually no significant economic impact (Impact Factor = 0)

Environmental Factor—Environmental impact from a single major hazard event requiring outside resources and support; and/or repair, clean-up, restoration, and/or preservation work.

- **High**— Environmental impact from a single major hazard event is likely to be significant, requiring extensive outside resources and support; and/or repair, clean-up, restoration, and/or preservation work (Impact Factor = 3)
- **Medium**—Environmental impact from a single major hazard event is likely to be localized, requiring some outside resources and support; and/or repair, clean-up, restoration, or preservation work (Impact Factor = 2)
- **Low**— Environmental impact from a single major hazard event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, clean-up, restoration, or preservation work (Impact Factor = 1)
- **No impact**— No environmental impacts from a single major hazard event is likely (Impact Factor = 0)

Essential Operations Factor—Impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single major hazard event.

- **High**—Significant impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single major hazard event (Impact Factor = 3)
- **Medium**—Some impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single major hazard event (Impact Factor = 2)
- **Low**—Minimal impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single major hazard event (Impact Factor = 1)

- **No Impact**—No impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single major hazard event (Impact Factor = 0)

Future Development Factor—The potential that future development will have on increasing or decreasing the impact/consequence of this hazard.

- **High**—Future development trends will significantly increase the impact/consequence of this hazard (Impact Factor = 3)
- **Medium**—Future development trends will increase the impact/consequence of this hazard, but not significantly (Impact Factor = 2)
- **Low**—Future development trends will minimally increase impact/consequence of this hazard (Impact Factor = 1)
- **No Impact**—Future development trends will not increase the impact/consequence of this hazard, and/or may even decrease the impact/consequence of this hazard (Impact Factor = 0)

Climate Change Factor—The potential that Climate Change will increase the risk of this hazard (i.e., type, location, and range of anticipated intensities of the identified hazard and impacts).

- **High**—Climate Change trends will significantly increase the risk of this hazard and its impacts (Impact Factor = 3)
- **Medium**—Climate Change trends will increase the risk of this hazard and its impacts, but not significantly (Impact Factor = 2)
- **Low**—Climate Change trends will minimally increase the risk of this hazard and its impacts (Impact Factor = 1)
- **No Impact**—Climate Change trends will not increase the risk of this hazard and its impacts (Impact Factor = 0)

Public Confidence Factor— The impact public confidence and trust will have on the community's ability to effectively manage an incident.

- **High Impact**—The public lacks significance confidence in their local community's ability to manage an incident, increasing the risk of this hazard and its impacts (Impact Factor = 3)
- **Medium Impact**— The public, or segments of the public, lack some confidence in their local community's ability manage an incident, slightly increasing the risk of this hazard and its impacts (Impact Factor = 2)
- **Low Impact**— The public has a fair level of confidence in their local community's ability manage an incident related to this hazard (Impact Factor = 1)
- **No Impact**— The public has a high level of confidence in their local community's ability manage an incident related to this hazard (Impact Factor = 0)

Each category was assigned a weighting factor to reflect its significance, consistent with those typically used for measuring the benefits of hazard mitigation actions: a weighting factor of 3 was assigned for *Population and Life Safety* and *Underserved/Equity*, and a weighting factor of 2 was assigned for *Property Damages*. A weighting factor of 1 was assigned for *Economic*, *Environmental, Essential Operations*, *Future Development, Climate Change,* and *Public Confidence*.

3.4.5 FEMA NRI Risk Scores

The National Risk Index (NRI) is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hail, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. Because not all hazards are applicable to the County, only those hazards with a defined risk to the County are included.

The National Risk Index leverages available source data for Expected Annual Loss due to these 18 hazard types, Social Vulnerability, and Community Resilience to develop a baseline relative risk measurement for each United States county and Census tract. These measurements are calculated using average past conditions, but they cannot be used to predict future outcomes for a community. The National Risk Index is intended to fill gaps in available data and analyses to better inform federal, state, local, tribal, and territorial decision makers as they develop risk reduction strategies.

3.4.6 Social Vulnerability

Social Vulnerability measures the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood.

Per the FEMA National Risk Index, Cook County has a Social Vulnerability Rating of: **Very High**

The "Social Vulnerability Score" and "Rating" represent the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is also proportional to a community's risk. A higher Social Vulnerability Score results in a higher Risk Index Score (FEMA, 2024).

Social vulnerability is also one of five components included in the formulation of the "National Risk Index Score", in addition to community resilience, estimated annual loss (EAL) based on exposure, annualized frequency, and historic Loss Ratio (HLR) factors (FEMA, 2024).

Table: Social Vulnerability FEMA NRI Score

Social Vulnerability for Cook County, IL FEMA NRI SOCIAL VULNERABILITY SCORE	
Social Vulnerability Score	**Social Vulnerability Rating**
80.0	Very High
Social Vulnerability is measured using the Social Vulnerability Index (SVI) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).	
Source: hazards.fema.gov/nri/social-vulnerability	

3.4.7 Community Resilience

Community Resilience measures a community's ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.

Table: Community Resilience FEMA NRI Score

Community Resilience for Cook County, IL FEMA NRI COMMUNITY RESILIENCE SCORE	
Community Resilience Score	**Community Resilience Rating**
72.57	Relatively High
Community Resilience is measured using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).	
Source: hazards.fema.gov/nri/community-resilience	

3.4.8 Expected Annual Loss

Table: Expected Annual Loss FEMA NRI Score (All Natural Hazards)

Expected Annual Loss for Cook County, IL FEMA NRI EXPECTED ANNUAL LOSS SCORE	
Expected Annual Loss Score	**Expected Annual Loss Rating**
99.6	Very High
Expected Annual Loss scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio).	
Source: hazards.fema.gov/nri/expected-annual-loss	

3.4.9 FEMA National Risk Index Score

Table: Overall FEMA NRI Score

FEMA Overall NRI Score for Cook County, IL FEMA OVERALL NRI SCORE	
FEMA Overall NRI Score	**FEMA Overall NRI Rating**
99.6	Very High
Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability and Community Resilience. (Expected Annual Loss X Social Vulnerability / Community Resilience = Risk Index).	
Source: hazards.fema.gov/nri/determining-risk	

3.5 Overall Risk Scores

The following tables represent the new overall risk scores for Cook County based on the methodology described above. Following a data-driven quantitative assessment, the planning team utilized subject matter knowledge and expertise and further refined the scores. FEMA NRI Scores, as appropriate and applicable, were used to inform the analysis.

3.5.1 Cook County Overall Risk Scores

	Probability	Consequence				Total Risk
Hazard Event	**Probability Factor**	**Sum of Weighted Extent Factors**	**Sum of Weighted Vulnerability Factors**	**Sum of Weighted Impact Factors**	**Consequence Score**	**Total Risk Score** (Probability x Consequence)
Flood (Urban/Flash Flood)	3	15	12	30	57	79
Severe Winter Weather: Blizzards	3	15	16	24	55	77
Severe Winter Weather: Snow	3	12	16	21	49	70
Severe Weather: High Winds	3	9	16	16	41	60
Flood (Riverine/Creek)	2	15	11	31	57	56
Severe Winter Weather: Ice Storms	2	15	16	25	56	55
Severe Weather: Extreme Heat	2	12	12	30	54	54
Tornado	2	15	6	30	51	51
Severe Winter Weather: Extreme Cold	2	12	12	20	44	45
Drought	2	12	12	18	42	43
Coastal/Shoreline Flooding	2	12	6	23	41	42
Earthquake	2	9	16	16	41	42
Severe Weather: Lightning	3	6	6	14	26	41
Severe Weather: Hail	2	9	11	16	36	38
Severe Weather: Fog	2	9	6	14	29	32
Wildfire	2	6	6	15	27	30
Dam and levee failure	1	15	6	27	48	27

3.5.2 Hazard Risk Scores Legend

Probability Factor		**Sum of Weighted Extent Factors**		**Sum of Weighted Vulnerability Factors**		**Sum of Weighted Impact Factors**		**Consequence Score**		**Total Risk Score**	
1	Low (L)	0–6	Low (L)	0–6	Low (L)	0–12	Low (L)	0–25	Low (L)	0–24	Low (L)
2	Medium (M)	7–12	Medium (M)	7–12	Medium (M)	13–26	Medium (M)	26–50	Medium (M)	25–59	Medium (M)
3	High (H)	13–18	High (H)	13–18	High (H)	27–39	High (H)	51–75	High (H)	60–100	High (H)

** The **Legend** – specifically the assignment of low, medium, and high—provides an additional means to qualitatively assess the probability factor, sum of weighted factors, and the total risk scores for each hazard.*

** The **Consequence Score** represents the sum of the Extent, Vulnerability, and Impact Factors.*

** The **Total Risk Score** is a measure of Probability and Consequence.*

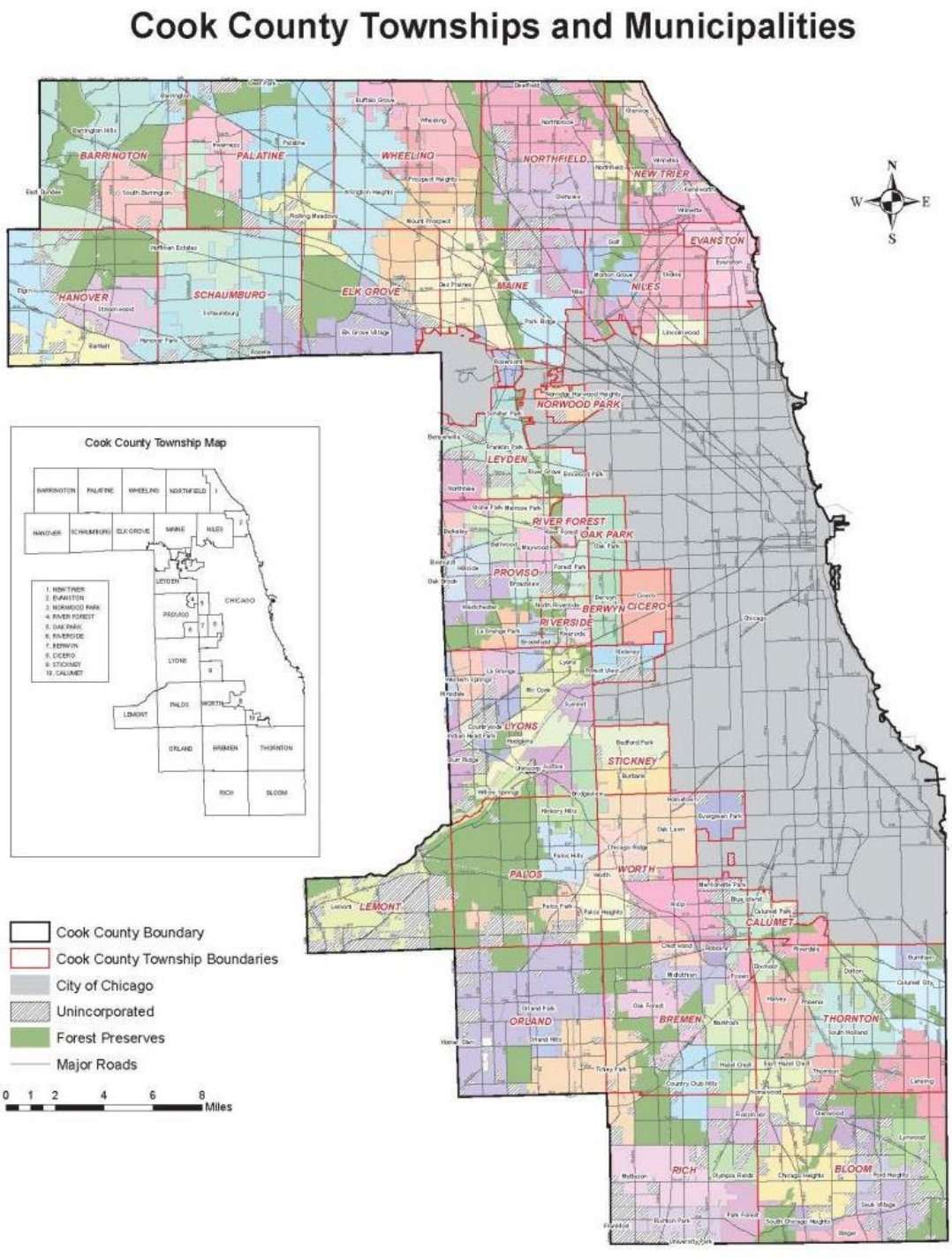
Chapter 4 Cook County Profile

Cook County was created on January 15, 1831. The County is located in the upper northeastern section of the State of Illinois and has more than 800 local governmental units (Cook County Website).

Cook County is located in northeast Illinois on the western shore of Lake Michigan. It is the most populous of Illinois' 102 counties, with a 2013 estimated population of 5.24 million, 2018 estimate of 5.18 million, and 2023 estimate of 5.08 million, according to the U.S. Census Bureau and World Population Review. It is the sixth largest county in the state by area, covering 946 square miles. Cook County makes up approximately 40 percent of the population of Illinois. The surrounding counties are Lake and McHenry to the north, Kane, and DuPage to the west, and Will to the southwest. Lake Michigan is the county's eastern border.

Cook County is the second most populous county in the United States, after Los Angeles County (World Population Review). According to the Cook County Government Website, the County contains 135 municipalities, covering about 85 percent of the area of the county. The remaining unincorporated areas are under the jurisdiction of the Cook County Board of Commissioners, a 17-member board elected by district (Cook County Website).

Figure: Cook County with Municipalities



4.1 Jurisdiction and Attractions

The City of Chicago is the county seat. Based on Census Data, the 2023 estimated population size of Chicago is over 2.6 million. Given that the 2023 population estimate for the entire County was 5.08 million, the City of Chicago makes up more than half of the entire County's population. The land area

of the City of Chicago covers roughly 24 percent of the county's area and is one the nation's top ten most populous cities, currently following only New York City and Los Angeles (US Census). The 135 municipalities in the county range in size from Chicago with over 2.6 million residents to small communities such as Thornton, Kenilworth, East Hazel Crest, East Dundee, and Phoenix with fewer than 3,000 residents. The most populous jurisdictions after Chicago are Elgin, Cicero, Arlington Heights, Evanston, Schaumburg, Palatine, and Skokie (Cook County Government Website Open Data).

In 1914, Cook County was the first place to create a forest preserve. The Forest Preserve District of Cook County, with nearly 70,000 acres, is the largest forest preserve district in the United States and receives an estimated 62 million visitors each year (Forest Preserve District of Cook County, 2019). Other major attractions in the Cook County area include the Lincoln Park Zoo, Brookfield Zoo, Lake Michigan beaches, Chicago's Museum Campus, and the Chicago Botanic Garden.

4.2 Historical Overview

Cook County was established as Illinois' 54th county on January 15, 1831, around the site of the Fort Dearborn settlement at the mouth of the Chicago River. The county was named after Daniel Pope Cook, an early Illinois political figure. Cook County elected its first officials on May 7, 1831. (Cook County, 2013). The following history of subsequent county growth is summarized from the Chicago Historical Society (Chicago Historical Society, 2013):

When the county was organized in 1831 with approximately 100 residents in 2,464 square miles, it encompassed much of today's Lake, DuPage, Will, McHenry, and Cook counties. By 1839, it had reduced in area to its current boundaries and had expanded to a population of over 4,000.

The 1830s and 1840s were dominated in the county by agriculture. Chicago, Wheeling, Gross Point, Lyons, Summit, Brighton, Willow Springs, Calumet, Blue Island, and Thornton were agricultural centers, serving farmers with stores, churches, and schools.

In 1848, Cook County was subdivided into 27 townships, which took on some of the county responsibilities: collecting taxes, running schools, supervising elections, and maintaining local roads.

Urban development spread from 1860 through 1890. Chicago's 1889 annexation shifted more than 225,000 county residents to within the city and expanded the city's physical size from 43 to 169 square miles. About 90 percent of the county's population lived in the city at that time.

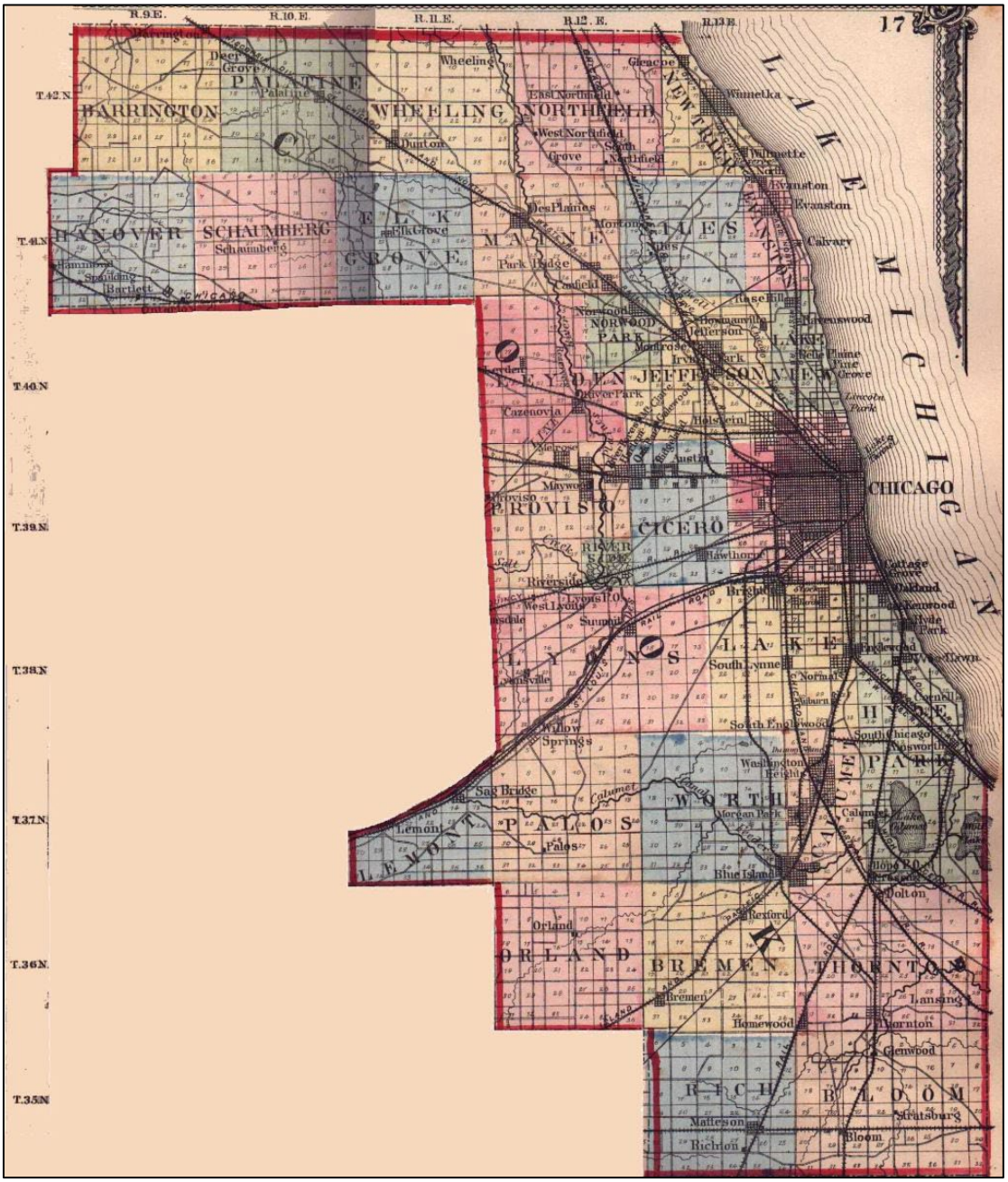
Farming in Cook County did not disappear, but outlying growth by 1900 was largely suburban.

With the spread of the population to suburban communities, the proportion of the county's population living in Chicago dropped to 83 percent by the 1940s. Skokie and Oak Lawn were among the most quickly growing suburbs during the 1950s and 1960s.

The 1970s and 1980s saw the development of most of the remaining farmland in the county. By then, contiguous urban growth had engulfed both the remaining farms and the suburban residential and industrial areas that had once been distinct from the city center.

No further annexation by the city took place, however, and by 1990 Chicago accounted for only 55 percent of the county's population.

Figure: 1870 Cook County Township Map



4.3 Physical Setting

This section addresses the geology of Cook County and climate.

4.3.1 Geology

The landforms of Cook County are mostly the result of glacial processes. Significant topographic features include broad level plains that were once lake beds, ridges formed as moraines marking the outer margins of glaciers, and elongated sandy spits, bars, and beach ridges formed along the shores of the ancestor lakes of present-day Lake Michigan. The highest point in Cook County is almost 1,000 feet above sea level, at the northwest corner of the county. Land over most of the county slopes gradually toward Lake Michigan to the east, intersected by north-south trending stream-cut valleys. Most of the central and southeastern portion of Cook County is a low flat plain (ISGS, 2004).

Upper-level soils are mostly the result of glacial processes. Locally, layers of sand and gravel supply residential users with good quality groundwater. According to the USDA Natural Resource Conservation Service's Web Soil Survey, there are nearly 140 distinct soil types throughout Cook County.

The greatest risk for the groundwater resources in these areas is from surface contamination of relatively shallow aquifers. More than half of Cook County is underlain by glacial till. The low flat plain in the east-central part of the county is mostly silt and clay. These sediments were deposited in the former glacial lake, are composed of silt and clay, and are not considered aquifers (ISGS, 2004).

The top of the bedrock in Cook County consists mainly of pure to silty dolomite, forming a bedrock aquifer. These rocks range in thickness from zero in small areas in the northwestern part of the county to more than 300 feet on the far eastern side along the lakeshore. The porosity and permeability of the rocks are mainly the results of fractures and dissolution cavities in the dolomite. The rock itself has no porosity. The water is recharged locally from precipitation and, where the overlying glacial materials are thin, the upper bedrock aquifer is susceptible to groundwater contamination. Greater groundwater yields are available in deeper sandstone layers (ISGS, 2004).

The Des Plaines Disturbance is in north-central Cook County. It is a roughly circular area of about 25 square miles that is intensely faulted. Some of these faults may have as much as 600 feet of vertical movement. The faulted bedrock is beneath 75 to 200 feet of glacial drift. The disturbance has been indicated as a probable meteorite-impact structure. Seismic reflection data suggest that there are numerous other faults within the bedrock of Cook County, but none are currently active (ISGS, 2004).

Cook County has large deposits of stone, gravel, sand, and clay used as building materials. The Thornton Quarry, located near Thornton in Cook County, is the largest limestone quarry in the world. The County relies on these resources as they provide jobs and millions of dollars in state revenue (USDA, 2012).

4.3.2 Climate

According to the Forest Preserves of Cook County, Illinois has faced a 1˚F increase in average annual temperature since the start of the 20th century. Recent climate projections predict further increases in annual temperatures and an increased frequency of extreme weather events (Sustainability and Climate Resiliency Plan). In the City of Chicago, as well as other highly paved urban areas in Cook

County, the "urban heat island" effect can raise temperatures from 4-10˚F on hot summer days (Chicago Climate Action Plan).

Typically, the Cook County area can be described as a humid continental climate with hot summers and cold winters. Generally, cold dry air from Canada dominates the area in winter, warm humid air from the Gulf of Mexico dominates in summer, and dry warm air from the Pacific Ocean dominates in the fall. High temperatures average 84°F in July and often reach 100°F or more in summer. Low temperatures average 18°F in January and have been recorded as low as the –20s. Humidity in the summer and wind in the winter intensify the problems of extreme temperatures that endanger the population. Average rainfall for the area is 38 inches and average snowfall is 34 inches. The last spring frost typically occurs around May 1 and the first fall frost around October 15. Annually, 13.4 days reach temperatures above 90°F, which is cooler than most places in Illinois, and 113.3 reach nighttime temperatures below freezing, which is still warmer than most places in Illinois. Also on average, 5.4 days of the year, temperatures at nighttime fall below 0°F. August is the wettest month and May is the rainiest. February is both the driest month in terms of inches of rainfall and days with rain. Annually, Cook receives 123.6 days of rain.

Cook County does receive more rain and snowfall than most places in Illinois; however, the County is considered drier than most of Illinois. Typically, 6 months of the year have significant snowfall with January having 10.8 inches of snow on average (NCDC-NOAA cross-referenced to Sperling).

4.4 Land Use

Chicago Metropolitan Agency for Planning (CMAP) produced a “Lands in Transition” paper which highlighted transitioning land use. Out of the regions measured in the report, Cook County had the highest acreage of protected lands.

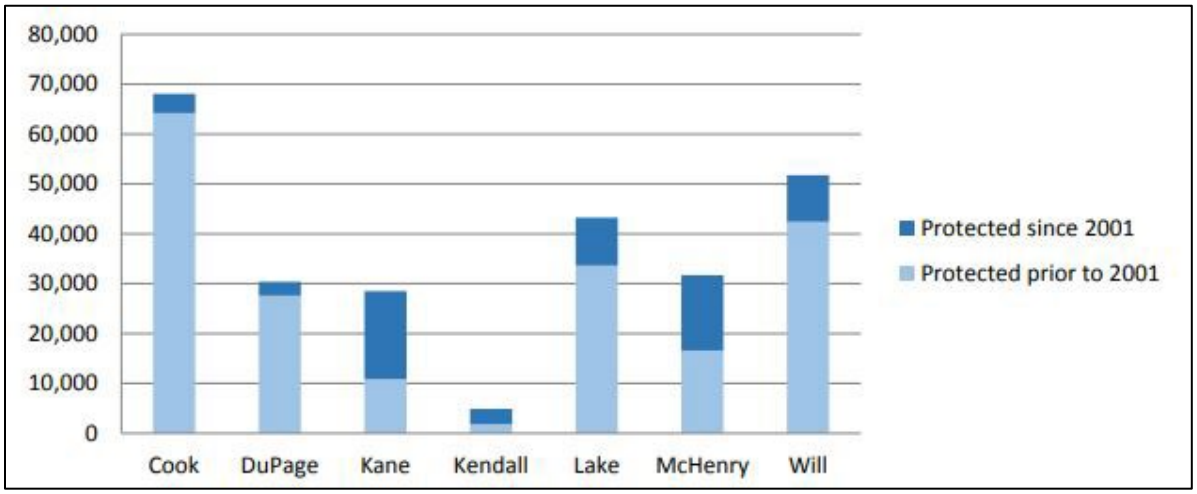


Figure: Protected land by county, in acres
Sources: CMAP Land Use Inventory, Illinois Department of Natural Resources, County Forest Preserves or Conservation Districts, Kendall County Forest Preserve District Master Plan, and I-View: Prairie State Conservation Coalition’s database of Illinois protected natural lands.

For northeastern Illinois (including Cook County), agricultural, natural, and open lands continue to transition in land use. Land use is important to hazard mitigation because combined, land development and protection decisions have impacts on the market viability of area farms, habitat

connectivity of our natural areas, and the costs associated with constructing and maintaining new infrastructure and services. In turn, these decisions have ramifications not only for new residents and businesses in growing areas but also for their existing neighbors, nearby municipalities, and the region as a whole. From 2001 to 2015, nearly 140,000 acres of agricultural and natural lands were developed while 61,500 acres of land were permanently protected. The majority of this development was in DuPage and Kane County; however, development did occur in Cook County. Important to note is the previously already high development on lands in Cook County, particularly in Chicago. In Cook County, from 2011 to 2015, over 10,000 acres of natural land was developed, and 5,000 acres of agricultural land were developed. Since 2001, three-quarters of greenfield development occurred on agricultural lands, leading to a reduction of over 100,000 acres of land involved with agricultural production. While the economic impact of the loss of 100,000 acres of agricultural lands in the region is not known, it is assumed to include not only the loss of production revenues but also cascading effects on the processing and distribution-related industries in the region.

Important to hazard mitigation is understanding the impacts of development. At the watershed scale, impervious cover can lead to water pollution, erosion, and degraded stream health. The majority of Cook County exceeds 10% impervious cover threshold which impacts the health of the streams.

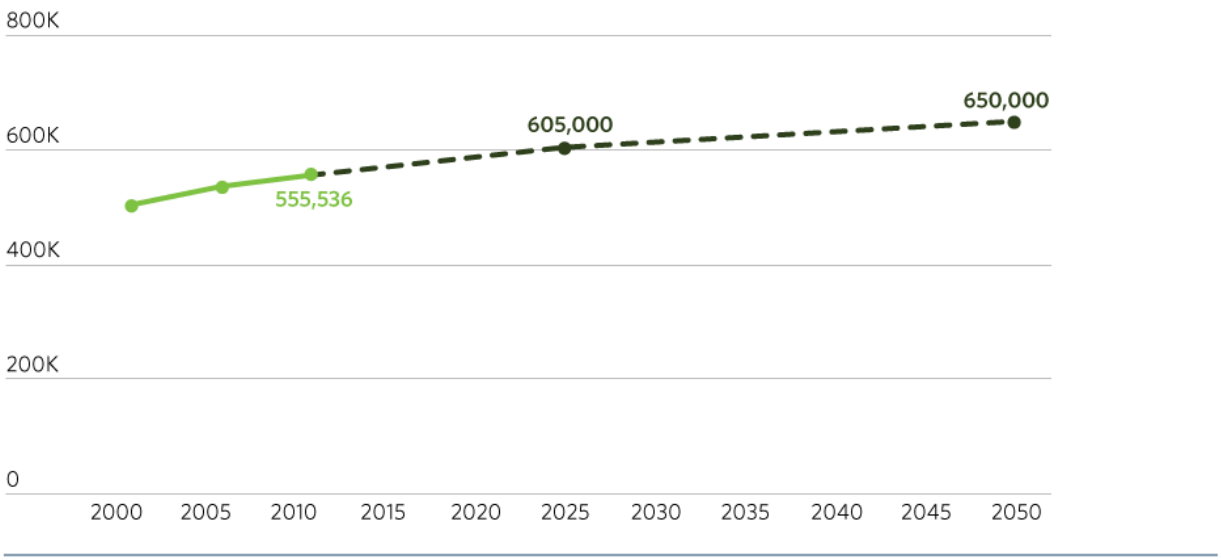


Figure: Acres of impervious area
Source: CMAP analysis of data from the United States Geological Survey (USGS) National Land Cover Database (NLCD)

4.5 Population Data and Characteristics

Information about population is a critical part of planning because it directly relates to land needs such as housing, industry, stores, public facilities and services, and transportation. A detailed population chart is found at the end of this section and the table below highlights general population characteristics.

TABLE: COOK COUNTY POPULATION ESTIMATES, JULY 1, 2023	
Population Characteristic	**Estimate / Percentage**
Population Estimate	5,087,072
Households, 2018-2022	2,066,248
Average Household Size	2.49
% Population Change, April 1, 2020, to July 1, 2023	- 3.6%
% Population Change, April 1, 2020, to July 1, 2022	- 3.1%

Sources: US Census Bureau

As noted in the table above, the U.S. Census Bureau estimates the planning area's population at 5,087,072 as of July 1, 2023 (Census). Cook County is the largest of Illinois' 102 counties by population and has the highest population density in the state, at over 5,495.1 people per square mile in 2010 and 5,583 in 2020. The graph below illustrates that population density in Cook County has been steadily declining between 2017-2023 (Open Data Network).

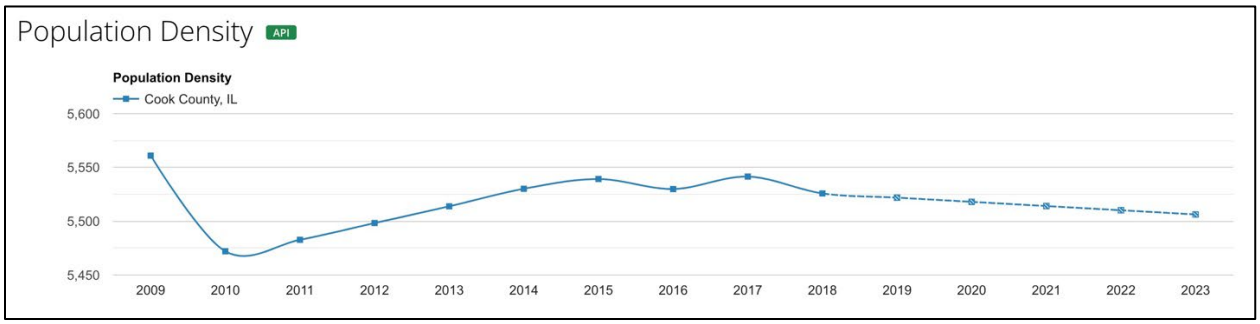
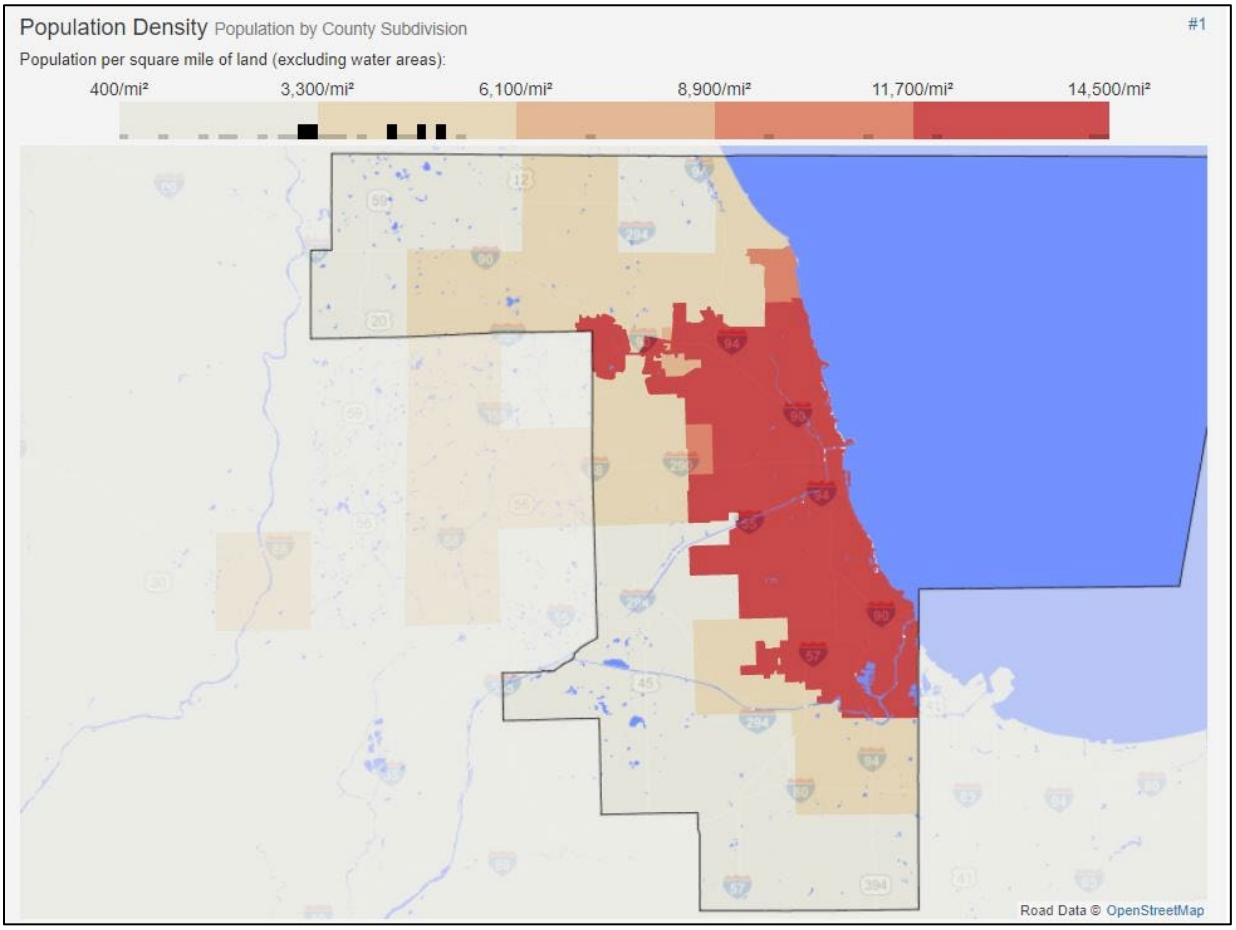


Chart: Population Density Projects
Source: Open Data Network from US Census American Community Survey, ODN Network, and API

As of July 1, 2023, the number of households was estimated to be 2,271,070 with an average of 2.49 persons per household (Census). Homeownership was 57.5% between 2018-2022, which was a slight increase from 2016 value of 56% and slightly below the US average of 57.5% in 2021 (Data USA).

In general, the population per square mile was 5,583.0 (Census, 2020). Population and population density vary drastically across the County and are highlighted in the table and map below. The map shows that the areas in red have the highest population density (11,700 to 14,500 population per square mile of land excluding water areas) and the light beige as the lowest population density (less than 3,3300 population per square mile of land excluding water areas) (Statistical Atlas).



Map: Population Density by County Subdivision
Source: Statistical Atlas *- go to site for an interactive map with population density by subdivision*

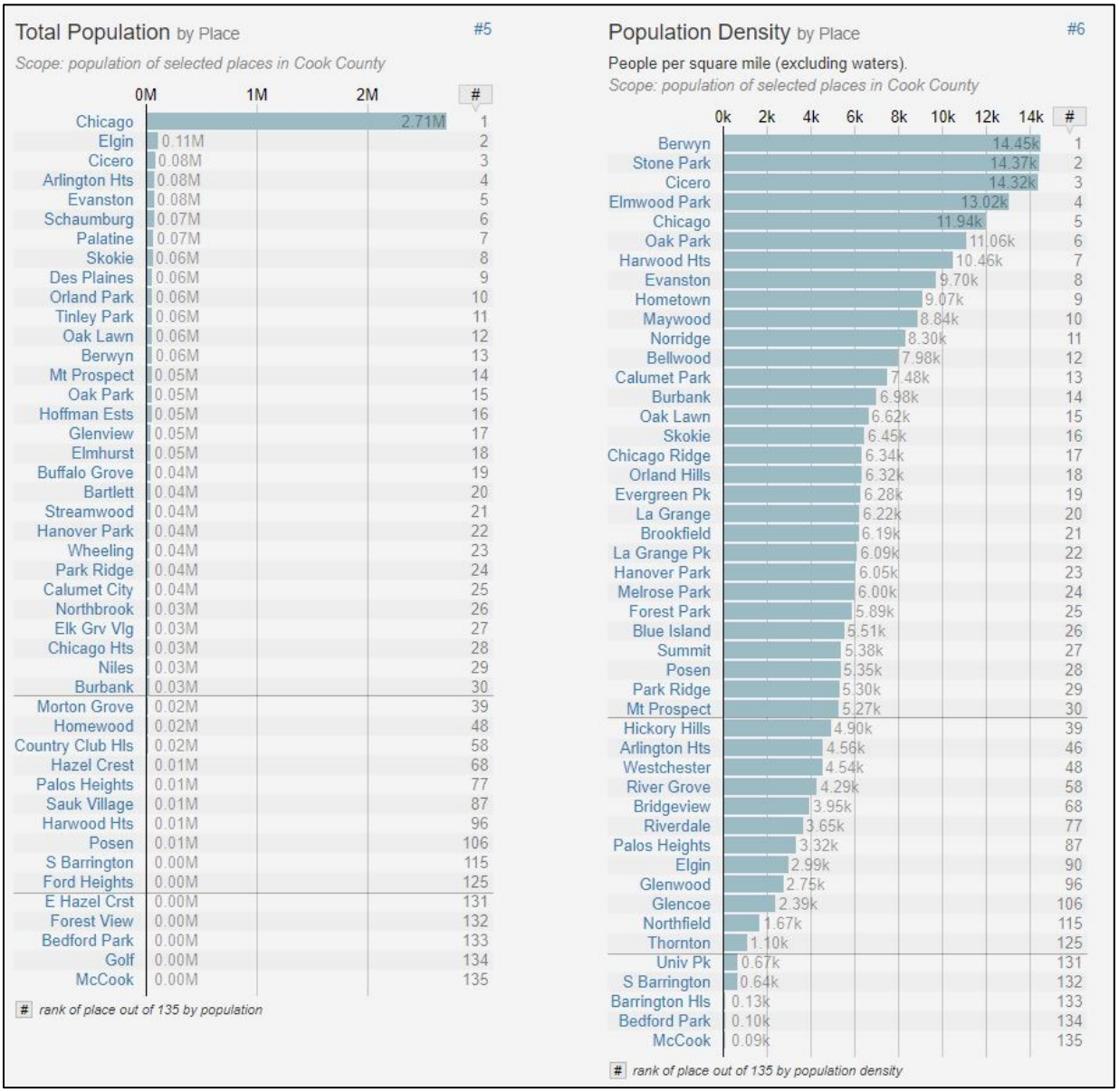


Chart: Population Total Density by County Place
Source: Statistical Atlas

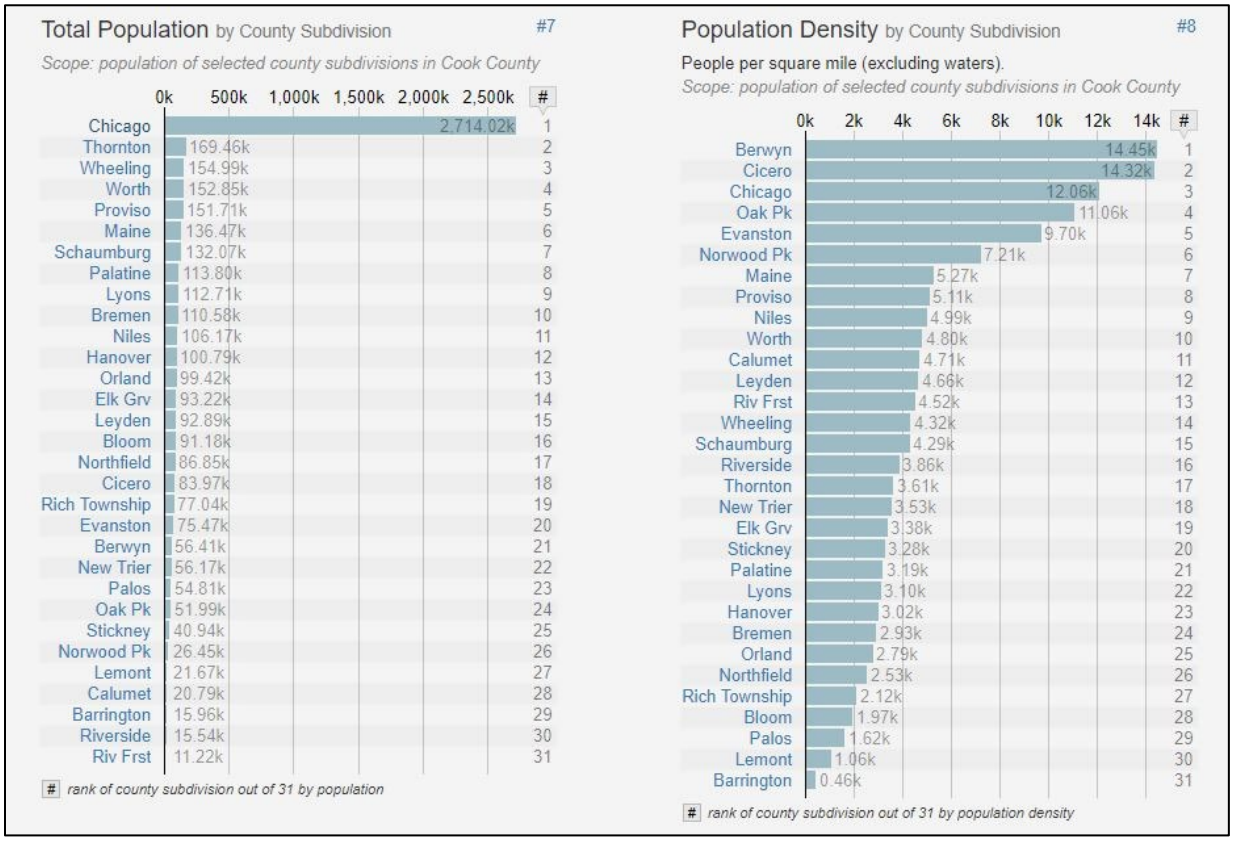


Chart: Population Total Density by County Subdivision
Source: Statistical Atlas

TABLE: HISTORICAL POPULATION DATA			
	Population		
	2000	2010	2022
Alsip	19,725	19,277	18,357
Arlington Heights	76,031	75,101	75,196
Barrington	10,168	—	10,545
Bartlett	36,706	—	40,154
Bedford Park	574	580	589
Bellwood	20,535	19,071	18,081
Berkeley	5,245	5,209	5,145
Berwyn	54,016	56,657	55,051
Blue Island	23,463	23,706	21,714
Bridgeview	15,335	16,446	16,467

TABLE: HISTORICAL POPULATION DATA			
	Population		
	2000	2010	2022
Broadview	8,264	7,932	7,847
Brookfield	19,085	18,978	18,776
Burbank	27,902	28,925	28,443
Burnham	4,170	4,206	4,046
Burr Ridge	10,408	—	11,192
Calumet City	39,071	37,042	34,709
Calumet Park	8,516	7,835	6,755
Chicago	2,896,016	2,695,598	2,665,039
Chicago Ridge	14,127	14,305	13,971
Cicero	85,616	83,891	81,919
Country Club Hills	16,169	16,541	16,170
Countryside	5,991	5,895	6,205
Crestwood	11,251	10,950	10,483
Des Plaines	58,720	58,364	58,594
Dixmoor	3,934	3,644	3,017
Dolton	25,614	23,153	20,621
East Hazel Crest	1,607	1,543	1,297
Elk Grove Village	34,727	—	31,659
Elmwood Park	25,405	24,883	23,604
Evanston	74,239	74,486	75,544
Evergreen Park	20,821	19,852	19,211
Flossmoor	9,301	9,464	9,339
Ford Heights	3,456	2,763	1,618
Forest Park	15,688	14,167	13,802
Forest View	778	698	792
Franklin Park	19,434	18,333	18,059
Glencoe	8,762	8,723	8,612
Glenview	41,847	44,692	47,258
Glenwood	9,000	8,969	8,662

TABLE: HISTORICAL POPULATION DATA			
	Population		
	2000	2010	2022
Golf	451	500	514
Hanover Park	38,278	—	36,376
Harvey	30,000	25,282	19,590
Harwood Heights	8,297	8,612	8,722
Hazel Crest	14,816	14,100	12,897
Hoffman Estates	13,926	51,895	50,682
Hickory Hills	8,155	14,049	14,007
Hillside	2,134	8,157	8,005
Hodgkins	49,495	1,897	1,714
Hometown	4,467	4,349	4,343
Homewood	19,543	19,323	18,735
Indian Head Park	3,685	3,809	4,059
Inverness	6,749	—	7,362
Justice	12,193	12,926	12,199
Kenilworth	2,494	2,513	2,537
La Grange	15,608	15,550	15,821
La Grange Park	13,295	13,579	13,009
Lansing	28,332	28,331	28,000
Lincolnwood	12,359	12,590	12,989
Lynwood	7,377	9,007	9,005
Lyons	10,255	10,729	10,411
Markham	12,620	12,508	11,241
Matteson	12,928	19,009	18,439
Maywood	26,987	24,090	22,932
McCook	254	228	299
Melrose Park	23,171	25,411	23,897
Merrionette Park	1,999	1,900	1,969
Midlothian	14,315	14,819	13,815
Morton Grove	22,451	23,270	24,371

TABLE: HISTORICAL POPULATION DATA			
	Population		
	2000	2010	2022
Mount Prospect	56,265	54,167	54,843
Niles	30,068	29,803	29,805
Norridge	14,582	14,572	14,769
North Riverside	6,688	6,672	7,147
Northbrook	33,435	33,170	34,182
Northfield	—	5,420	5,578
Northlake	11,878	12,323	12,401
Oak Forest	28,051	27,962	26,460
Oak Lawn	55,245	56,690	56,286
Oak Park	52,524	51,878	52,553
Olympia Fields	4,732	4,988	4,922
Palos Heights	11,260	12,515	11,632
Palos Hills	17,665	17,484	17,883
Park Forest	23,462	—	20,954
Park Ridge	37,775	37,480	38,278
Phoenix	2,157	1,964	1,708
Posen	4,730	5,987	5,386
Prospect Heights	17,081	16,256	15,486
Richton Park	12,533	13,646	12,441
River Forest	15,055	11,172	11,327
River Grove	11,635	10,227	10,612
Riverdale	10,668	13,549	10,266
Riverside	8,895	8,875	8,940
Robbins	6,635	5,337	4,804
Rolling Meadows	24,604	24,099	23,564
Rosemont	4,224	4,202	3,864
Sauk Village	10,411	10,506	9,578
Schaumburg	75,386	74,227	76,225
Schiller Park	11,850	11,793	11,283

TABLE: HISTORICAL POPULATION DATA			
	Population		
	2000	2010	2022
Skokie	63,348	64,784	65,497
South Chicago Heights	3,970	4,139	4,026
South Holland	22,147	22,030	20,685
Stickney	6,148	6,786	6,873
Stone Park	5,127	4,946	4,576
Streamwood	36,407	39,858	38,151
Summit	10,637	11,054	10,732
Thornton	2,582	2,338	2,216
Tinley Park	48,401	—	54,287
Westchester	16,824	16,718	16,262
Western Springs	12,493	12,975	13,313
Wheeling	34,496	—	37,936
Willow Springs	5,027	5,524	5,745
Wilmette	27,651	27,087	27,264
Winnetka	12,419	12,187	12,370
Worth	11,047	10,789	10,590
Cook County Total	**5,376,741**	**5,194,675**	
Note: Municipalities with primary area in another county are not shown			

4.5.1 Population Age Cohorts Over Time

TABLE: COOK COUNTY AGE COHORTS, OVER TIME		
Age Cohorts, Over Time	**2007-2011 Percent**	**2017-2021 Percent**
19 and under	26.6	24.2
20 to 34	23.1	22.3
35 to 49	20.8	20.1
50 to 64	17.6	18.6
65 and Over	11.9	14.7
Median Age	**35.2**	**37.3**

Source: CMAP

Many factors in addition to age must be used to make fully informed plans that include the whole community. Within the age demographics, the Census highlights some socioeconomic and disability factors that are key to understanding the needs of vulnerable population members.

Based on 2023 U.S. Census data estimates, 16.2% of the planning area's population is 65 or older.

4.5.2 Race, Ethnicity and Language

Race, ethnicity, primary language, and class are factors that help explain social vulnerability. Planners need to not only look at the natural environment in the development of mitigation programs but also the social environment. The interaction between nature and society produces vulnerability of places. Census data provides a snapshot of the community for a particular timeframe and often lacks information on the most vulnerable community members, such as residents that do not have legal status or the homeless population. To truly provide equitable disaster planning and relief, disaster planners need to understand the community beyond Census data. For an entire community to be prepared for a disaster, planners need to move beyond assessing the aggregate need of a population and understand the resources and vulnerabilities that exist within the community.

TABLE: 2023 POPULATION ESTIMATES	
Race and Hispanic Origin, 2023	**Percent**
White alone	65.1
Black or African American alone	23.6
American Indian and Alaska Native alone	0.80
Asian alone	8.30
Native Hawaiian and Other Pacific Islander alone	0.10
Two or More Races	2.20
Hispanic or Latino	26.3
White alone, not Hispanic or Latino	41.1

Source: *Census*

The table below highlights the percentage of changes in race and ethnicity in Cook County.

TABLE: RACE AND ETHNICITY OF COOK COUNTY, OVER TIME		
Race and Ethnicity, Over Time	**2007-2011 Percent**	**2017-2021 Percent**
White (non-Hispanic)	44.1%	41.6%
Hispanic or Latino	23.6%	25.6%
Black non-Hispanic	24.6%	22.6%
Asian non-Hispanic	6.1%	7.5%
Other/Multiple Races (Non-Hispanic)	1.5%	2.7%

Source: CMAP

4.5.3 Languages Spoken at Home

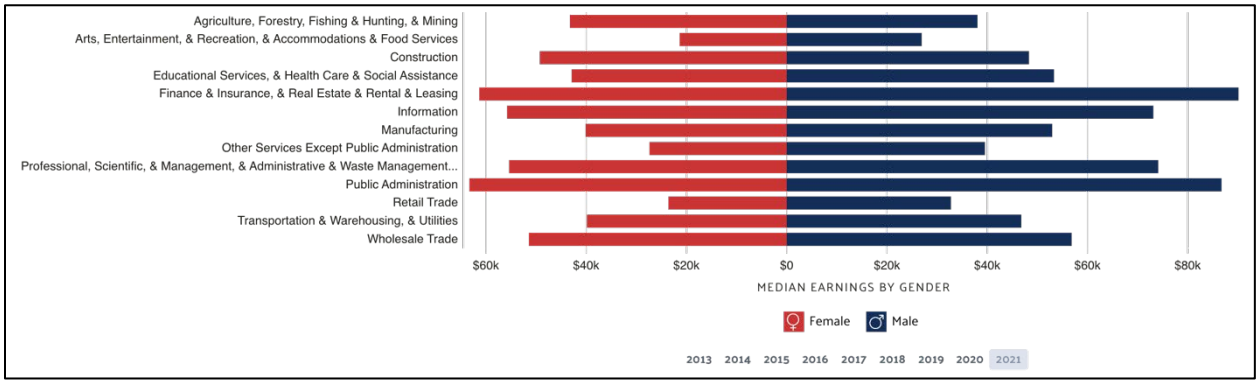
TABLE: LANGUAGE SPOKEN AT HOME, 2017-2021		
Language	**Count**	**Percent**
English	3,215,963	64.9
Spanish	1,020,049	20.6
Slavic Languages	212,400	4.3
Chinese	66,455	1.3
Tagalog	47,051	0.9
Arabic	48,750	1.0
Korean	26,946	0.5
Other Asian Languages	66,005	1.3
Other Indo-European Languages	203,120	4.1
Other/Unspecified Languages	46,521	0.9
TOTAL NON-ENGLISH	1,737,297	35.1
Speak English Less than "Very Well" *	673,502	13.6
**For people who speak a language other than English at home, the ACS asks whether they speak English "very well," "well," "not well," or "not at all."*		

4.5.4 Income

In the United States, individual households are expected to use private resources to prepare for, respond to, and recover from disasters to some extent. This means that households living in poverty are automatically disadvantaged when confronting hazards. Additionally, people lacking adequate resources are also typically living in older structures and inadequately maintained housing. Mobile or modular homes, for example, are more susceptible to damage in earthquakes and floods than other types of housing. In urban areas, the poor often live in older houses and apartment complexes, which are more likely to be made of unreinforced masonry, a building type that is particularly susceptible to damage during earthquakes. Furthermore, residents below the poverty level are less likely to have insurance to compensate for losses incurred from natural disasters. This means that residents below the poverty level have a great deal to lose during an event and are the least prepared to deal with potential losses. The events following Hurricane Katrina in 2005 illustrated that personal household economics significantly impact people's decisions on evacuation. Individuals who cannot afford gas for their cars will likely not have the means to evacuate.

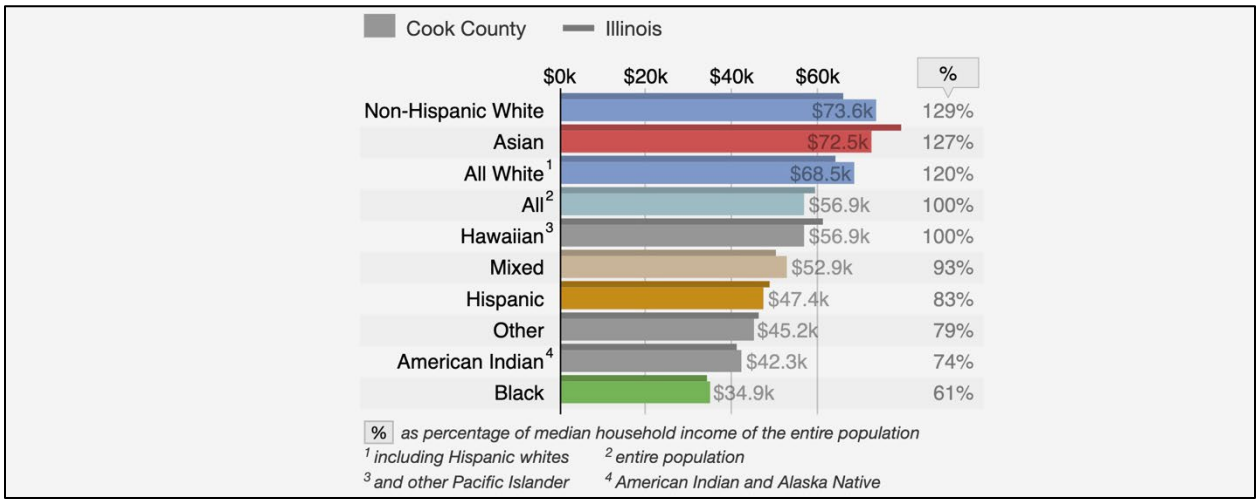
Based on U.S. Census Bureau estimates, per capita income in the planning area in 2018 was $32,722 and has increased to $45,646 (in 2022 dollars) based on the ACS 2018-22. The median household income (in 2022 dollars) is $78,304 based on the ACS 2022.

A graph showing median sector earnings in 2021 by gender is shown below:



Source: (Data USA)

A graph showing median household income by race is shown below:

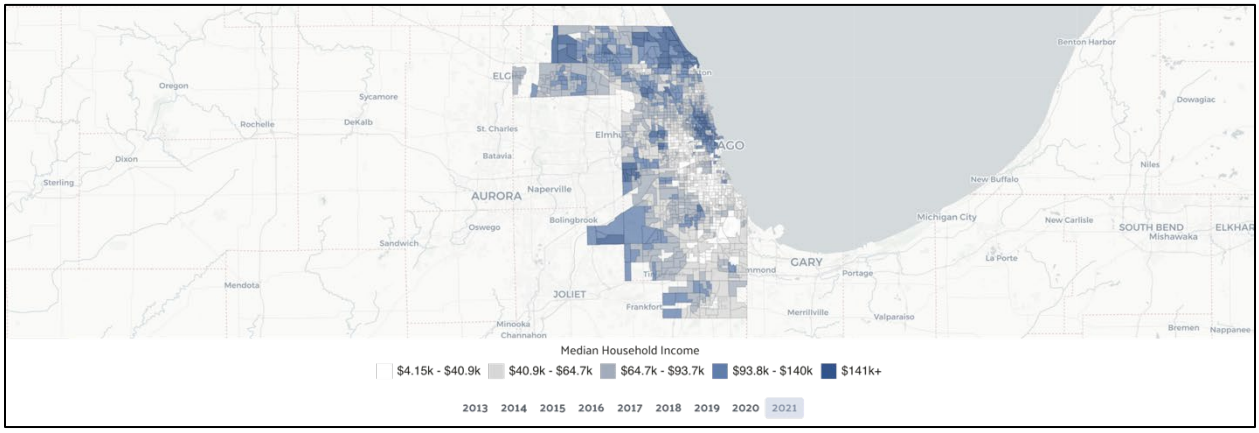


Source: (Statistical Atlas)

TABLE: HOUSEHOLD INCOME, 2017-2021		
Household Income, 2017-2021	**Count**	**Percent**
Less than $25,000	370,516	18.1
$25,000 to $49,999	368,765	18.0
$50,000 to $74,999	317,344	15.5
$75,000 to $99,999	252,760	12.4
$100,000 to $149,999	330,041	16.1
$150,000 and Over	405,232	19.8
Median Household Income, 2017-2021	**$72,121**	**–**

Source: CMAP

Similar to population size, median household income varies widely across Cook County.



Map: Income by Location
Source: Data USA

4.5.5 Poverty

13.5% of the population for whom poverty status is determined in Cook County, IL (698k out of 5.18M people) live below the poverty line, a number that is higher than the national average of 12.6%. The largest demographic living in poverty are Females 25 - 34, followed by Females 18 - 24 and then Females 35 – 44 (Data USA).

The most common racial or ethnic group living below the poverty line in Cook County, IL is Black, followed by White and Hispanic (Data USA).

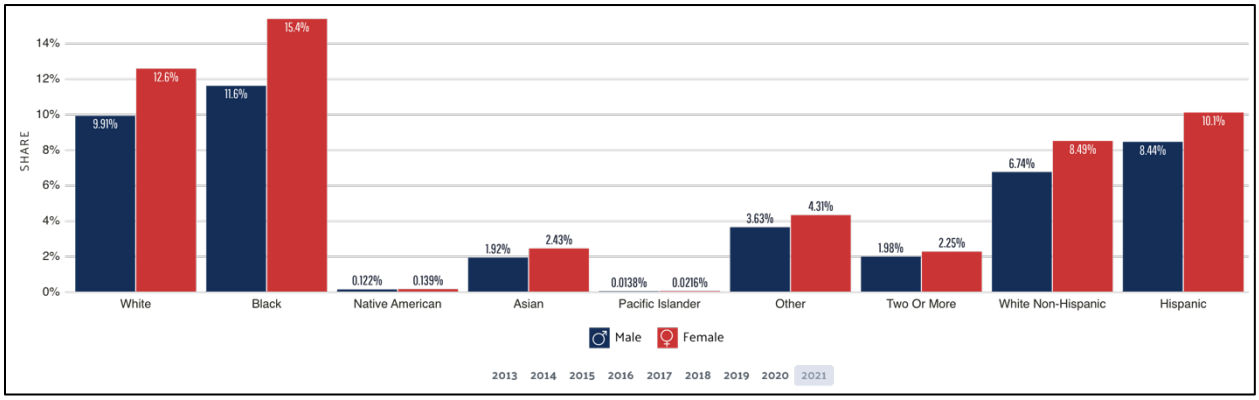


Chart: Poverty by Age, Gender, Ethnicity
Source: Data USA

In total,13.5% of the population for whom poverty status is determined in Cook County, IL (698k out of 5.18M people) live below the poverty line, a number that is higher than the national average of 12.6%. The largest demographic living in poverty are Females 25 - 34, followed by Females 18 - 24 and then Females 35 – 44 (Data USA).

The most common racial or ethnic group living below the poverty line in Cook County, IL is Black, followed by White and Hispanic (Data USA).

An image of a graph below illustrates poverty by race and diversity in Cook County:

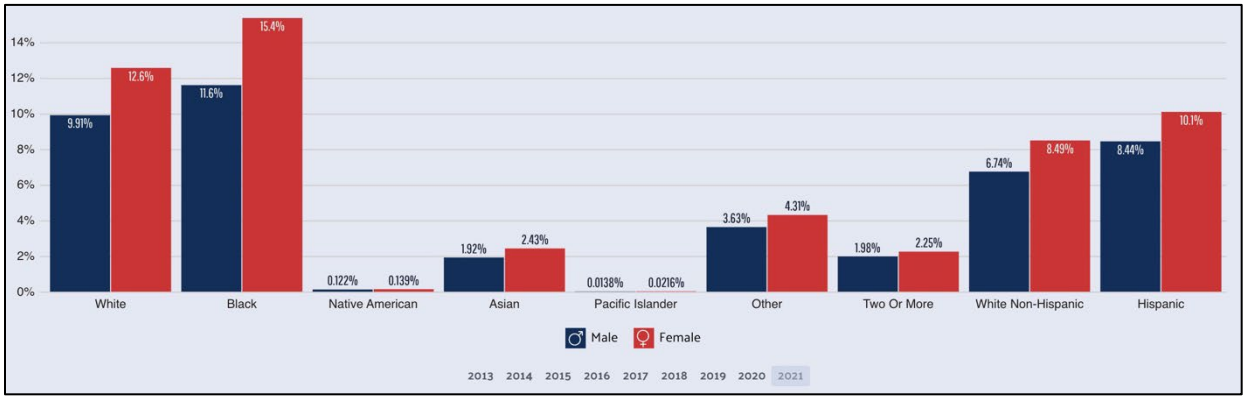


Chart: Poverty by Race and Diversity of Cook County
Source: Data USA

4.5.6 Homelessness

According to the Illinois Office to Prevent & End Homelessness, of the 10,431 Illinoisans experiencing homelessness in 2020, 60 percent reside in Cook County. In Cook County, half of those in deep poverty are under 25 years of age. 3% of all children, and 15% of Black children, spend at least half of their childhoods in deep poverty. Those who are Black or Latinx are most likely to be in deep poverty, with poverty rates of 10.8 and 7.6 respectively.

According to 2019 American Community Survey estimates, some 47.5 percent of renters were housing cost burdened, that is, paying more than 30 percent of their incomes in monthly rent. At the regional level, the highest concentrations of rent burdened households were in Cook County (49.2%).

4.5.7 FEMA Community Risk Index

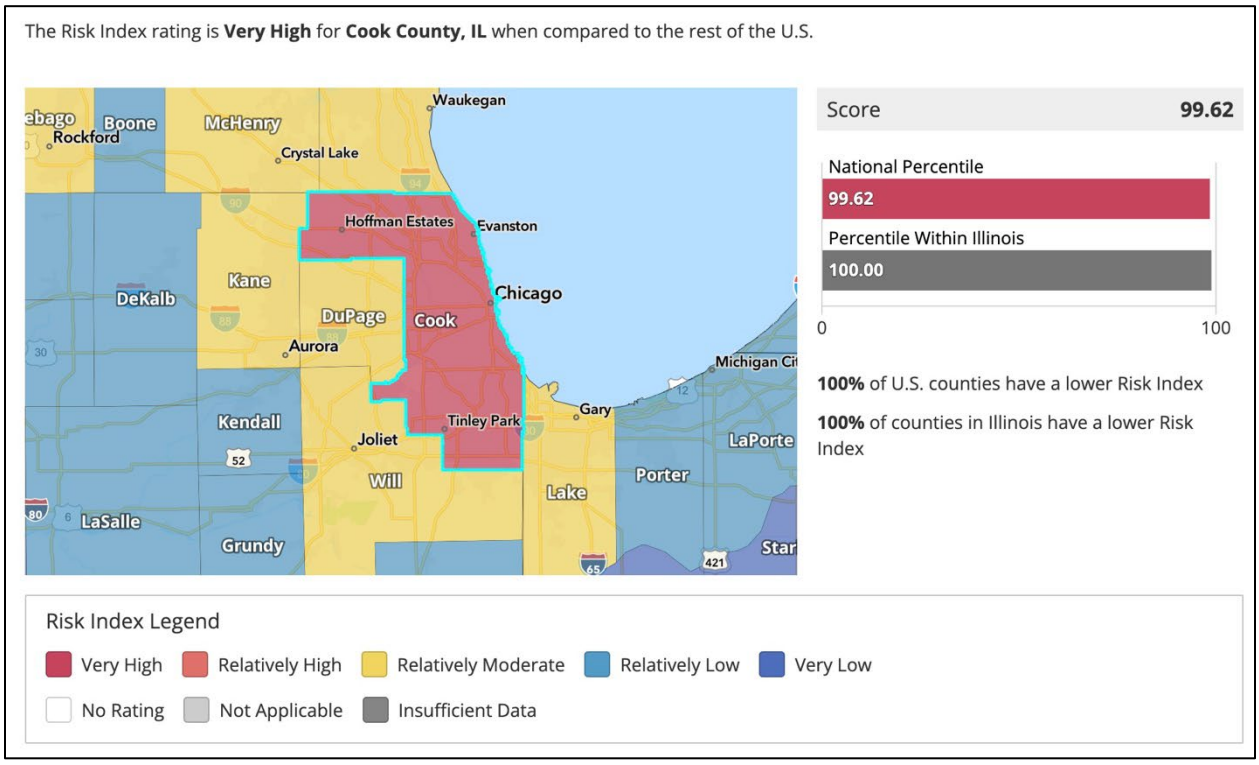
Cook County has a FEMA Community Risk Index Score of **99.62**.

The Risk Index score is based on the following components: Social Vulnerability, Community Resilience, and Estimate Annual Loss (EAL), with EAL based on Exposure, Annualized Frequency, and Historic Loss Ratio (HLR) factors, for a total of five risk factors (FEMA NRI).

Each risk factor contributes to either the likelihood or consequence aspect of risk and can be classified as one of two risk types: risk based on geographic location or risk based on the nature and historical occurrences of natural hazards. The five risk factors are summarized in the table below. (FEMA NRI).

FEMA NATIONAL RISK INDEX				
RISK COMPONENTS & FACTORS				
Risk Component	***Risk Factors***	***Risk Factor Description***	***Risk Contribution***	***Risk Type Assignment***
Social Vulnerability	Social Vulnerability	Consequence Enhancer	Consequence	Geographic Risk
Community Resilience	Community Resilience	Consequence Reducer	Consequence	Geographic Risk
Expected Annual Loss	Exposure	Expected Consequence	Consequence	Natural Hazard Risk
Expected Annual Loss	Annualized Frequency	Probability of Occurrence	Likelihood	Natural Hazard Risk
Expected Annual Loss	Historic Loss Ratio	Expected Consequence	Consequence	Natural Hazard Risk

An image showing the Cook County FEMA Community Risk Index Score is shown below:



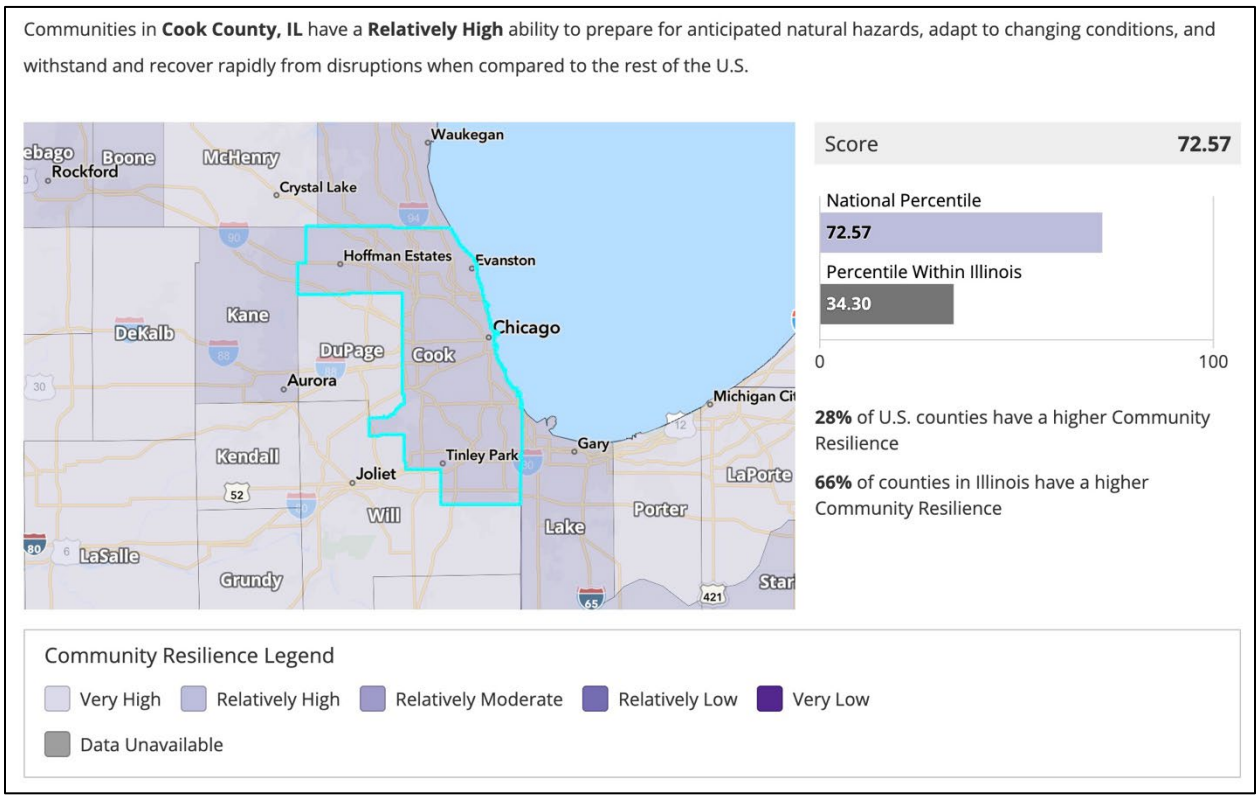
4.5.8 FEMA Community Resilience

Cook County has a FEMA Community Resilience Score of **72.57**.

Community resilience is defined as the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions (FEMA NRI).

The “Community Resilience Score” and “Community Resilience Rating” represent the relative level of a community’s resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community’s risk. A higher Community Resilience Score results in a lower Risk Index Score (FEMA NRI).

An image showing the Cook County FEMA Community Resilience is shown below:



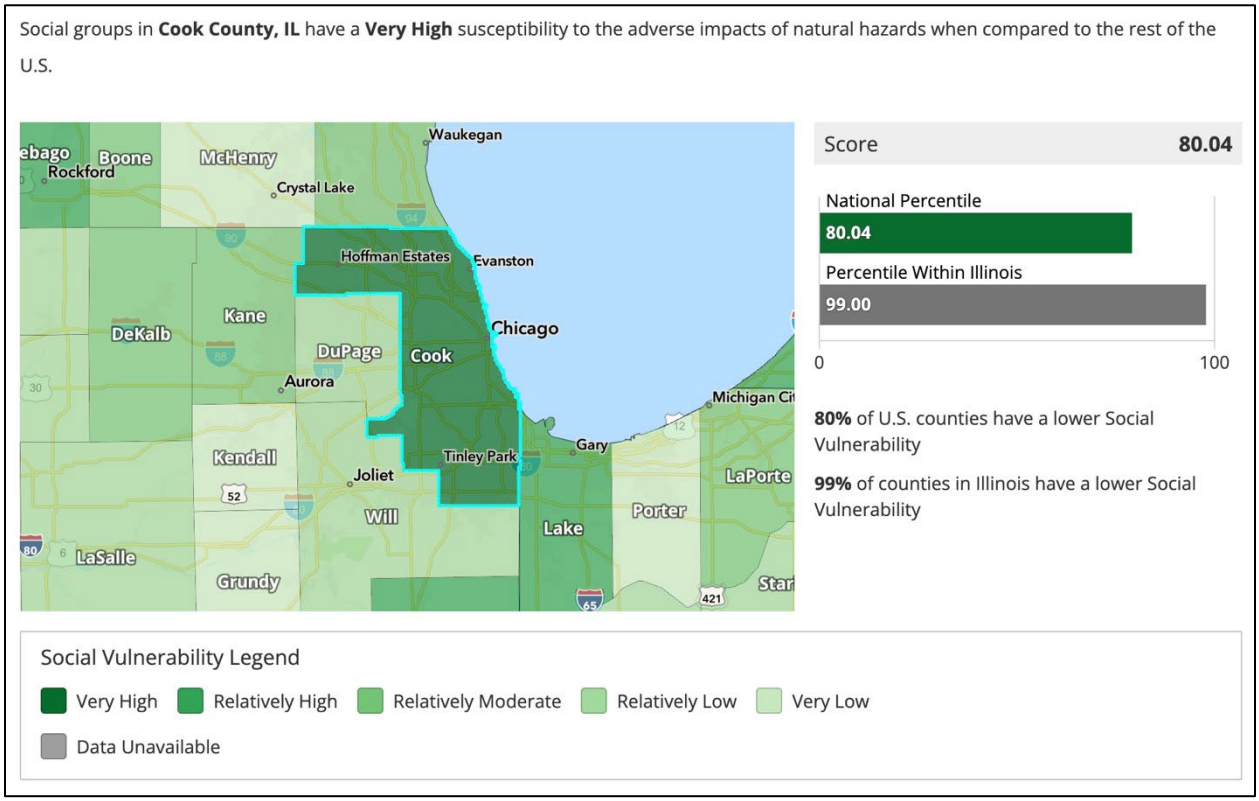
4.5.9 FEMA Social Vulnerability

Cook County has a FEMA Community Resilience Score of **80.04**.

Social vulnerability is defined as the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood (FEMA NRI).

The "Social Vulnerability Score” and “Rating” represent the relative level of a community’s social vulnerability compared to all other communities at the same level. A community’s Social Vulnerability Score is also proportional to a community’s risk. A higher Social Vulnerability Score results in a higher Risk Index Score (FEMA NRI).

Social vulnerability is also one of five components included in the formulation of the “National Risk Index Score” in addition to Community Resilience, Estimated Annual Loss (EAL) based on Exposure, Annualized Frequency, and Historic Loss Ratio (HLR) factors (FEMA NRI).
An image showing the Cook County FEMA Social Vulnerability is shown below:

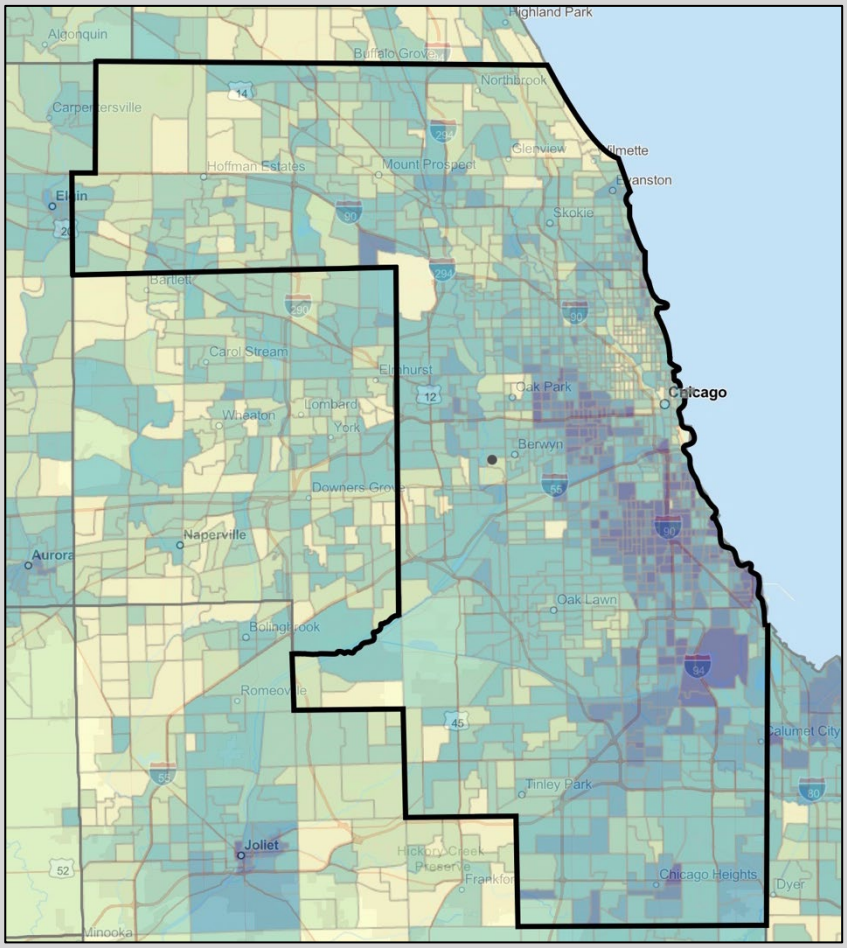


4.5.10 Underserved Communities

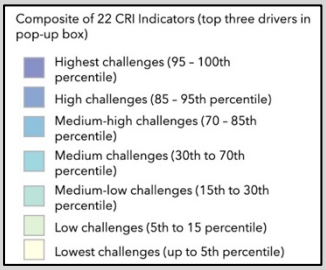
The figure below illustrates the Cook County Community Resilience Index Story Map. This map utilizes density mapping to illustrate community areas that can be overburdened by 22 challenges identified by the FEMA Community Resilience Challenges Index.

COOK COUNTY, ILLINOIS

FEMA COMMUNITY RESILIENCE INDEX STORY MAP







22 CHALLENGE VARIABLES

Population, Household, Housing Characteristics	Economic	Healthcare	Connection to Community
Population without a High School Diploma Population 65 and Older Population with a Disability Households without a Vehicle Households with Limited English Single-parent Households Households without a Smartphone Mobile Homes as Percentage of Housing Owner-Occupied Housing	Population Below Poverty Level Median Household Income Unemployed Labor Force Unemployed Women Labor Force Income Inequality Workforce in Predominant Sector	Number of Hospitals Medical Professional Capacity Population without Health Insurance	Presence of Civic and Social Organizations Population without Religious Affiliation Percent of Inactive Voters Population Change

Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

4.6 Critical Facilities and Infrastructure

Critical facilities and infrastructure are any facility, whether publicly or privately owned, that is vital to the Cook County planning area's ability to provide essential services and protect life and property. Damage to such facilities and infrastructure that causes a short or long-term loss of their function would likely result in severe health and welfare, life-sustainment, economic, or other catastrophic

impacts. The Steering Committee developed a definition for critical facilities to be used in this plan. Critical facilities are facilities that meet the following criteria:

- Facilities that are essential to the ability to respond to, mitigate and recover from the impacts of natural hazards
- Facilities that need an early warning to enable them to prepare for and respond to the impacts of natural hazards
- Facilities that by the nature of their operations, produce, manufacture or store materials that create exposure to secondary hazards of concern.

Critical facilities may include but are not limited to the following:

- **Essential facilities** for the health and welfare of the whole population (e.g., hospitals, police and fire stations, emergency operations centers, evacuation shelters, schools, and universities)
- **Transportation systems**, including airways, highways, railways, and waterways
- **Lifeline utility systems**, such as potable water, wastewater, oil, natural gas, electric power, and communication systems
- **High potential loss facilities**, such as nuclear power plants, dams, and military installations
- **Hazardous material facilities**, producing industrial/hazardous materials (e.g., corrosives, explosives, flammable materials, radioactive materials, and toxins)
- **Community gathering places**, such as parks, museums, libraries, community centers, senior centers, daycare centers, and veterans' halls
- **Facilities housing special needs populations**, such as nursing homes, continuing care retirement facilities, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a hazard event.

By identifying critical facilities before a natural disaster occurs, communities can make better decisions about how to expend resources to protect these key facilities. A detailed inventory of critical facilities and infrastructure was developed for this plan using GIS applications. The starting point for this process was the HAZUS-MH default database. An interactive, secure web portal was created to facilitate the update of this inventory. Over 6,000 facilities were inventoried and uploaded into the HAZUS-MH model to support this plan.

In addition to the facilities and infrastructure listed, Cook County maintains 1,426 miles of paved roadways, 132 bridges, 360 traffic signals, and seven pumping stations from four maintenance facilities (Cook County Transportation and Highways). In 2018, the Department of Transportation and Highways completed the Cook County Freight Plan, Lincoln Highway Logistics Corridor Strategic Plan, and over $23 million in construction projects including pavement preservation and rehabilitation activities at 13 locations, interim bridge repairs at Quentin Road over Salt Creek and East Lake Avenue over the North Branch of the Chicago River, major intersection improvements at Roselle Road and Schaumburg Road, and major improvements to Central Road (2018-23 Improved Transportation Program).

There are approximately 13,000 miles of water lines, 7,850 miles of wastewater lines, 5,200 miles of gas lines, 20 operating pipelines, and nine oil facilities.

Collectively these critical facilities and infrastructure need to be considered in emergency planning, emergency response, and mitigation of impacts from emergencies. For example, in 2018, the newly built $1 billion flood-control reservoir, the largest section of the Deep Tunnel project, was inundated with rain and melting snow. After the 5.1-billion-gallon system swelled to capacity, leftovers from the storm surge began backing up in basements and pouring out of overflow pipes into the Chicago River and other area streams during the next two days (Chicago Tribune). Another report highlights a million gallons being reversed from Chicago Area Waterways to Lake Michigan. While this report highlights a decrease due to the onset of TERP, one 2017 event reversed 2,746.20 million gallons (Reversals to Lake Michigan).

4.7 Economy

The economy of Cook County, IL employs 2.6M people. The largest industries in Cook County, IL are Health Care & Social Assistance (365,461 people), Professional, Scientific, & Technical Services (278,012 people), and Manufacturing (244,952 people), and the highest paying industries are Utilities ($86,405), Finance & Insurance ($82,016), and Professional, Scientific, & Technical Services ($80,988).

Males in Illinois have an average income that is 1.34 times higher than the average income of females, which is $61,278. The income inequality in Illinois (measured using the Gini index) is 0.478, which is higher than the national average.

TABLE: ECONOMY, COOK COUNTY	
Economy	**Total**
In civilian labor force, total, percent of population age 16 years+, 2018-2022	66.1%
In civilian labor force, female, percent of population age 16 years+, 2018-2022	61.4%
Total accommodation and food service sales, 2017 ($1,000)	19,615,953
Total health care and social assistance receipts/revenue, 2017 ($1,000)	45,827,390
Total transportation and warehousing receipts/revenue, 2017 ($1,000)	30,567,885
Total retail sales, 2017 ($1,000)	66,513,549
Total retail sales per capita, 2017	$12,792

Source: Census

4.7.1 Employment and Industries

This chart below shows the share breakdown of the primary industries for residents of Cook County, IL, though some of these residents may live in Cook County, IL and work somewhere else. It should be noted that census data is tagged to a residential address, not a work address.



TABLE: EMPLOYMENT BY INDUSTRY	
Industry Description	**Number of Employees**
Health Care & Social Assistance	365,461
Professional, Scientific, & Technical Services	278,012
Manufacturing	244,952
Educational Services	243,920
Retail Trade	238,801
Transportation and Warehousing	180,889
Accommodation & Food Services	178,582
Finance & Insurance	159,954
Other Services Except Public Administration	125,725
Construction	123,815
Administrative & Support & Waste Management Services	116,333
Public Administration	94,619
Wholesale Trade	66,739
Arts, Entertainment, & Recreation	56,456
Real Estate & Rental & Leasing	55,381
Information	52,587
Utilities	12,198
Agriculture, Forestry, Fishing & Hunting	3,841
Management of Companies & Enterprises	4,517
Mining, Quarrying, & Oil & Gas Extraction	985

TABLE: EMPLOYMENT BY INDUSTRY	
Industry Description	**Number of Employees**
Total Employment	**2,603,767**

Source: Data USA

4.7.2 Employment Trends and Occupations

As shown in the table above, Cook County benefits from a variety of business activities. Major businesses include City Garden, Waldorf School, Walgreens, McDonald's, ArcelorMittal, Boeing, Power Construction, Hyatt Hotels, and Alliance Boots (Zippia).

From 2020 to 2021, employment in Cook County, IL grew at a rate of 1.67%, from 2.56M employees to 2.6M employees.

The most common employment sectors for those who live in Cook County, IL, are Health Care & Social Assistance (365,461 people), Professional, Scientific, & Technical Services (278,012 people), and Manufacturing (244,952 people).

4.7.3 Employment Status

TABLE: EMPLOYMENT STATUS, 2017-2021		
Employment Status	**Count**	**Percent**
In Labor Force	2,809,310	66.2
Employed (1)*	2,603,767	92.7
Unemployed*	203,970	9.7
Not In Labor Force	1,434,949	33.8

Source: CMAP

4.7.4 Businesses

An overview of total businesses in Cook County are shown in the table below.

TABLE: BUSINESSES, COOK COUNTY	
Businesses	**Total/Percent**
Total employer establishments, 2021	134,715
Total employment, 2021	2,292,825
Total annual payroll, 2021 ($1,000)	178,172,447
Total employment, percent change, 2020-2021	-6.4%
Total non-employer establishments, 2021	516,494
All employer firms, Reference year 2017	107,113

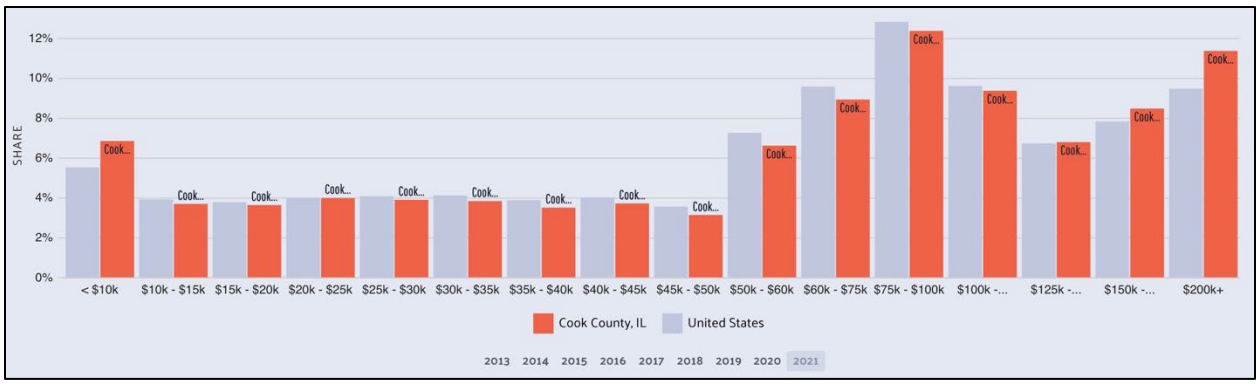
TABLE: BUSINESSES, COOK COUNTY	
Businesses	**Total/Percent**
Men-owned employer firms, Reference year 2017	67,266
Woman-owned employer firms, Reference year 2017	22,204
Minority-owned employer firms, Reference year 2017	22,452
Nonminority-owned employer firms, Reference year 2017	75,768
Veteran-owned employer firms, Reference year 2017	4,412
Nonveteran-owned employer firms, Reference year 2017	93,219

Source: Census

4.7.5 Household Income

In 2021, the median household income of the 2.04M households in Cook County, IL grew to $72,121 from the previous year's value of $67,886.

The following chart displays the households in Cook County, IL distributed between a series of income buckets compared to the national averages for each bucket. The largest share of households have an income in the $75k - $100k range(Data USA).



4.8 Higher Education

In 2021, universities in Cook County, IL awarded 81,319 degrees. The student population of Cook County, IL in 2021 is skewed towards women, with 111,766 male students and 161,008 female students. Most students graduating from Universities in Cook County, IL are White (32,020 and 43.7%), followed by Hispanic or Latino (17,787 and 24.3%), Black or African American (9,677 and 13.2%), and Asian (8,075 and 11%).

The largest universities in Cook County, IL by number of degrees awarded are Northwestern University (9,290 and 11.4%), University of Illinois Chicago (8,910 and 11%), and University of Chicago (6,805 and 8.37%). The most popular majors in Cook County, IL are Liberal Arts & Sciences (8,451 and 10.4%), Management Science (3,472 and 4.27%), and General Business Administration & Management (2,794 and 3.44%).

The median tuition costs in Cook County, IL are $30,661 for private four year colleges, and $10,091 and $20,182 respectively, for public four year colleges for in-state students and out-of-state students (Data USA).

The graph below shows the evolution of awarded higher degrees (shown by degree) in Cook County.

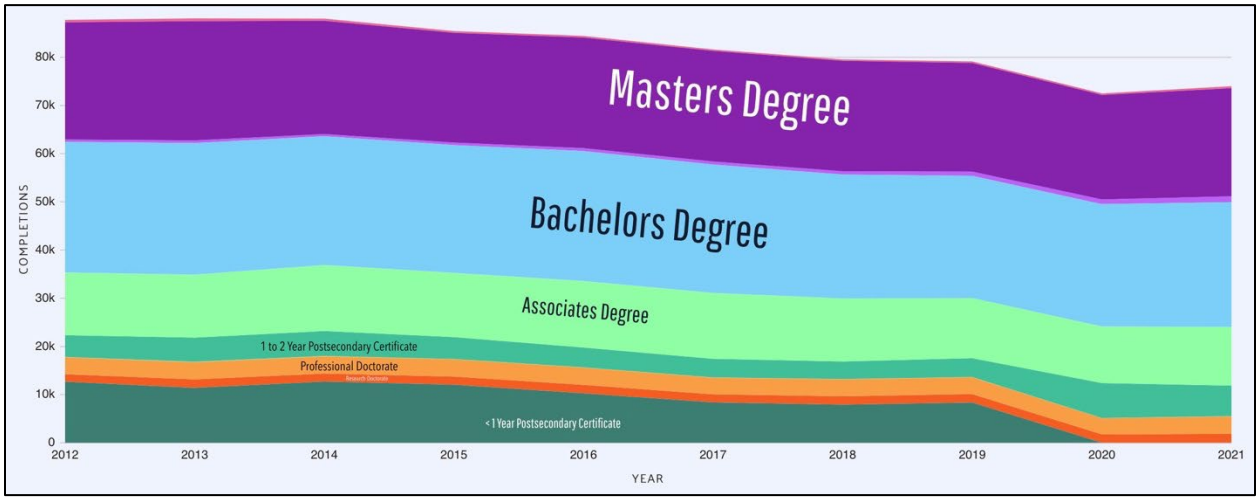
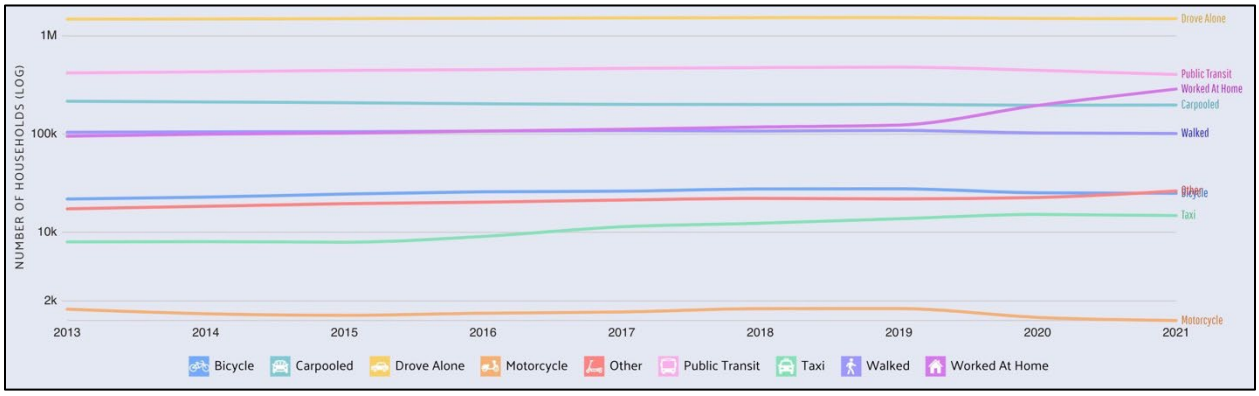


Chart: Awarded Degrees over Time in Cook County
Source: Data USA

4.9 Transportation

In 2021, 58.5% of workers in Cook County, IL drove alone to work, followed by those who used public transit to get to work (15.8%) and those who worked at home (11.3%).

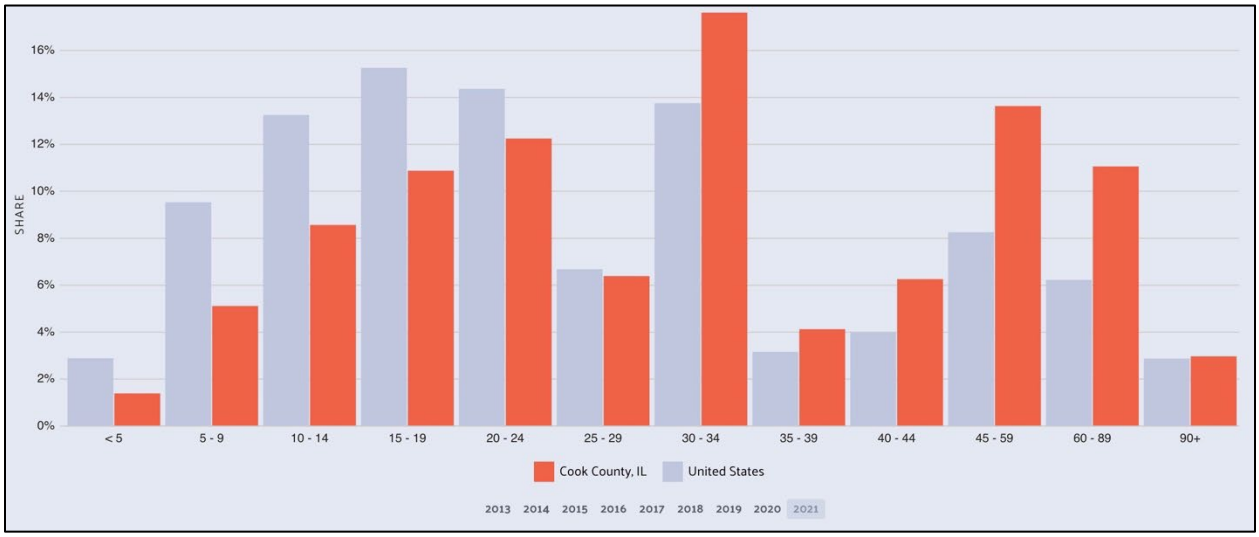
The following chart shows the number of households using each mode of transportation over time, using a logarithmic scale on the y-axis to help better show variations in the smaller means of commuting (Data USA).



4.9.1 Commute Trains

Using averages, employees in Cook County, IL have a longer commute time (32.7 minutes) than the normal US worker (26.8 minutes). Additionally, 2.95% of the workforce in Cook County, IL have "super commutes" in excess of more than 90 minutes.

Commute times in Cook County (shown in minutes) are illustrated in the chart below as compared to United States averages (Data USA).



4.10 Housing and Living

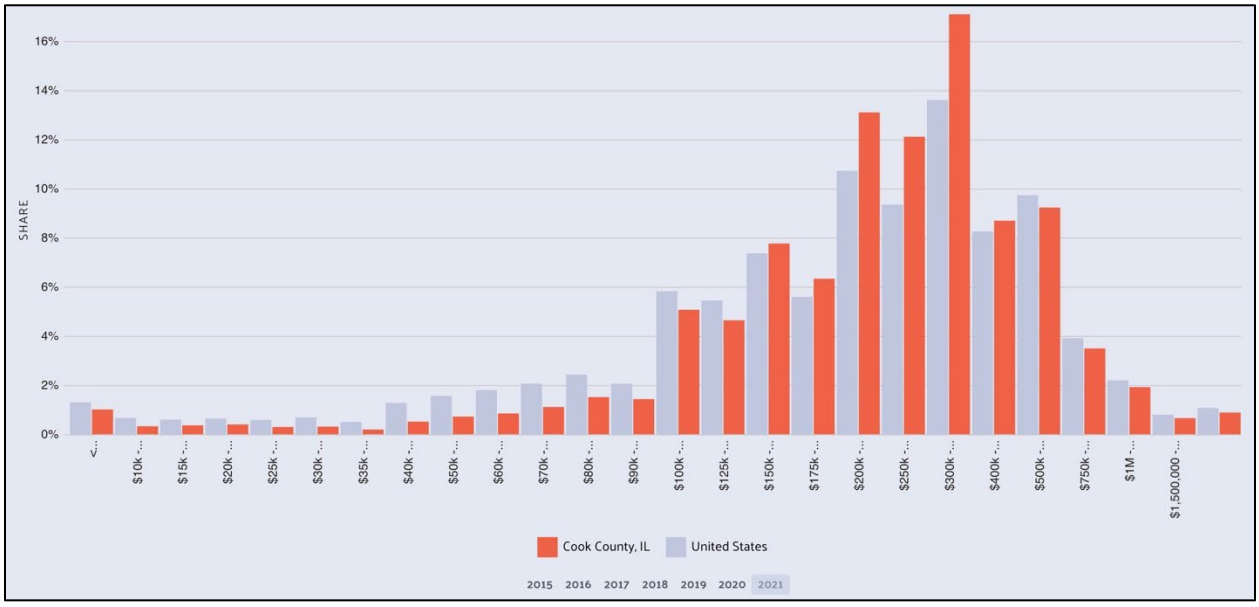
The median property value in Cook County, IL was $266,800 in 2021, which is 1.09 times larger than the national average of $244,900. Between 2020 and 2021 the median property value increased from $255,500 to $266,800, a 4.42% increase. The homeownership rate in Cook County, IL is 57.5%, which is approximately the same as the national average of 64.6%.

People in Cook County, IL have an average commute time of 32.7 minutes, and they drive alone to work. Car ownership in Cook County, IL is approximately the same as the national average, with an average of two cars per household.

Median household income in Cook County, IL is $72,121. In 2021, the tract with the highest Median Household Income in Cook County, IL was Census Tract 706 with a value of $250,001, followed by Census Tract 8004 and Census Tract 8005, with respective values of $250,001 and $250,001.

In 2022, 21% of the population was living with severe housing problems in Cook County, IL. From 2014 to 2022, the indicator declined 2.79%.

The following chart displays the households distributed between a series of property value buckets compared to the national averages for each bucket. In Cook County, IL the largest share of households have a property value in the $300k - $400k range (Data USA).



4.11 Future Trends in Development

According to the 2024-2027 Cook County Policy Roadmap, Cook County marked a substantial achievement in sustainability with the first power purchase agreement for renewable energy, in partnership with Constellation and Swift Current Energy. Starting in March 2025, County-managed buildings will source approximately 24% of electricity from a new, off-site solar project in Illinois. This 12-year agreement will significantly reduce Illinois' greenhouse gas emissions and meet several Clean Energy Plan Goals and create jobs and opportunities, including $432,000 in support for local solar and energy job training programs. The addition of native plants and habitat restoration at the solar site will support pollinators and increase local biodiversity.

4.11.1 Incorporation of the HMP

The municipal planning partners use plans, codes, and ordinances to govern land use decision-making and policymaking within their jurisdictions. All municipal planning partners will incorporate this hazard mitigation plan in their land use plans and programs by reference. This will ensure that future development trends can be established with the benefits of the information on risk and vulnerability to natural hazards identified in this plan.

4.12 Laws, Ordinances, Programs, and Plans

Existing laws, ordinances, and plans at the federal, state, and local level can support or impact hazard mitigation actions identified in this plan. Hazard mitigation plans are required to include a review and incorporation, if appropriate, of existing plans, studies, reports, and technical information as part of the planning process (44 CFR, Section 201.6(b)(3)). Pertinent federal and state laws are described below. Each planning partner has individually reviewed existing local plans, studies, reports, and technical information in its jurisdictional annex, presented in Volume 2.

4.12.1 Federal

Disaster Mitigation Act of 2000

The DMA is the current federal legislation addressing hazard mitigation planning. It emphasizes the importance of strong state and local planning processes and program management in planning for disasters before they occur. It specifically addresses planning at the local level, requiring plans to be in place before Hazard Mitigation Grant Program funds are available to communities. This plan is designed to meet the requirements of DMA, improving the planning partners' eligibility for future hazard mitigation funds.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) provides federally backed flood insurance in exchange for communities enacting floodplain regulations. Participation and good standing under NFIP are prerequisites to grant funding eligibility under the Robert T. Stafford Act. The County and most of the partner cities for this plan participate in the NFIP and have adopted regulations that meet the NFIP requirements. At the time of this plan's preparation, all participating jurisdictions in the partnership were in good standing with NFIP requirements.

The Clean Water Act

The federal Clean Water Act (CWA) employs regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's surface waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The evolution of CWA programs over the last decade has included a shift from a program-by-program, source-by-source, pollutant-by-pollutant approach to more holistic watershed-based strategies. Under the watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones. A full array of issues is addressed, not just those subject to CWA regulatory authority. Involvement of stakeholder groups in the development and implementation of strategies for achieving and maintaining water quality and other environmental goals is a hallmark of this approach.

Endangered Species Act

The federal Endangered Species Act (ESA) was enacted in 1973 to conserve species facing depletion or extinction and the ecosystems that support them. The act sets forth a process for determining which species are threatened and endangered and requires the conservation of the critical habitat in which those species live. The ESA provides broad protection for species of fish, wildlife, and plants that are listed as threatened or endangered. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species. The ESA outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species and contains exceptions and exemptions. It is the enabling legislation for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Criminal and civil penalties are provided for violations of the ESA and the Convention.

Federal agencies must seek to conserve endangered and threatened species and use their authorities in furtherance of the ESA's purposes. The ESA defines three fundamental terms:

- **Endangered** means that a species of fish, animal, or plant is "in danger of extinction throughout all or a significant portion of its range." (For salmon and other vertebrate species, this may include subspecies and distinct population segments.)
- **Threatened** means that a species "is likely to become endangered within the foreseeable future." Regulations may be less restrictive for threatened species than for endangered species.
- **Critical habitat** means "specific geographical areas that are…essential for the conservation and management of a listed species, whether occupied by the species or not."

Five sections of the ESA are of critical importance to understanding it:

- **Section 4: Listing of a Species**—The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) is responsible for listing marine species; the U.S. Fish and Wildlife Service is responsible for listing terrestrial and freshwater aquatic species. The agencies may initiate reviews for listings, or citizens may petition for them. A listing must be made "solely on the basis of the best scientific and commercial data available." After a listing has been proposed, agencies receive comment and conduct further scientific reviews for 12 to 18 months, after which they must decide if the listing is warranted. Economic impacts cannot be considered in this decision, but it may include an evaluation of the adequacy of local and state protections. Critical habitat for the species may be designated at the time of listing.
- **Section 7: Consultation**—Federal agencies must ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed or proposed species or adversely modify its critical habitat. This includes private and public actions that require a federal permit. Once a final listing is made, non-federal actions are subject to the same review, termed a "consultation." If the listing agency finds that an action will "take" a species, it must propose mitigations or "reasonable and prudent" alternatives to the action; if the proponent rejects these, the action cannot proceed.
- **Section 9: Prohibition of Take—**It is unlawful to "take" an endangered species, including killing or injuring it or modifying its habitat in a way that interferes with essential behavioral patterns, including breeding, feeding or sheltering.
- **Section 10: Permitted Take**—Through voluntary agreements with the federal government that provide protections to an endangered species, a non-federal applicant may commit a take that would otherwise be prohibited as long as it is incidental to an otherwise lawful activity (such as developing land or building a road). These agreements often take the form of a "Habitat Conservation Plan."
- **Section 11: Citizen Lawsuits**—Civil actions initiated by any citizen can require the listing agency to enforce the ESA's prohibition of taking or to meet the requirements of the consultation process.

With the listing of salmon and trout species as threatened or endangered, the ESA has impacted most of the Pacific Coast states. Although some of these areas have been more impacted by the ESA than others due to the known presence of listed species, the entire region has been impacted by mandates, programs and policies based on the presumption of the presence of listed species. Most West Coast jurisdictions must now consider the impact of their programs on habitat.

FEMA Administered Grant Programs

Flood Mitigation Assistance Program

The Flood Mitigation Assistance (FMA) program is a cost-share program through which communities can receive grants to develop a comprehensive flood mitigation plan and implement flood mitigation projects. To be eligible for FMA funds, communities must participate in the NFIP and have an approved flood mitigation plan. The goals of FMA program are as follows:

- Fund measures that reduce or eliminate the long-term risk of flood damage to NFIP-insured buildings, manufactured homes, and other structures.
- Reduce the number of repetitively or substantially damaged structures and the associated claims on the NFIP.
- Encourage long-term, comprehensive mitigation planning.
- Respond to the needs of communities participating in the NFIP.

The Hazard Mitigation Grant Program

The Illinois Emergency Management Agency (IEMA) administers the Hazard Mitigation Grant Program (HMGP), making grants available to state and local governments as well as eligible private, non-profit organizations to implement cost-effective and long-term mitigation measures following a major disaster declaration. In order to receive HMGP funds, a community must be participating in and in good standing with the NFIP and have an approved hazard mitigation plan. Projects can protect public and/or private property.

Building Resilient Infrastructure and Communities (BRIC) Program

The Building Resilient Infrastructure and Communities program aims to categorically shift the federal focus away from reactive disaster spending and toward research-supported, proactive investment in community resilience. Examples of BRIC projects are ones that demonstrate innovative approaches to partnerships, such as shared funding mechanisms, and/or project design.

For example, an innovative project may bring multiple funding sources or in-kind resources from a range of private and public sector partners. Or an innovative project may offer multiple benefits to a community in addition to the benefit of risk reduction.

Through BRIC, FEMA continues to invest in a variety of mitigation activities with an added focus on infrastructure projects benefitting disadvantaged communities, nature-based solutions, climate resilience and adaption and adopting hazard resistant building codes.

Flood Mitigation Grant Program

The Flood Mitigation Grant Program provides funding to reduce or eliminate the long-term risk of flood damage to NFIP-insured properties, including but not limited to FEMA-identified repetitive loss and severe repetitive loss properties. The Flood Mitigation Grant Program is a federal cost-share program with states, territories, or federally recognized Indian tribes that have FEMA-approved mitigation plans.

4.12.2 State

2023 Illinois Natural Hazard Mitigation Plan

The Illinois Natural Hazard Mitigation Plan approved by FEMA in 2023 establishes a process for identifying and mitigating the effects of natural hazards in the State of Illinois as required under the Disaster Mitigation Act of 2000 and further provides guidance for hazard mitigation throughout the state. The plan identifies hazard mitigation goals, objectives, and actions for state government to reduce injury and damage from natural hazards. By meeting federal requirements for an enhanced state plan (44 CFR parts 201.4 and 201.5), the plan allows the state to seek significantly higher funding from the Hazard Mitigation Grant Program following presidential declared disasters.

The Illinois Emergency Management Agency Act

The Illinois Emergency Management Agency Act (20 ILCS 3305/5 and 29 ILCS 301) created IEMA and its authority to develop, plan, analyze, conduct, provide, implement and maintain programs for disaster mitigation, preparedness, response and recovery. IEMA is further mandated under 29 Illinois Administrative Code 301 to prepare the State of Illinois to deal with disasters, preserve the lives and property of the people of the state, and protect health and safety in the event of a disaster.

Building and Residential Codes

Illinois communities historically have lacked standardized building codes, which presents challenges in securing funding for many mitigation programs, including BRIC. Recent legislative efforts have been successful in passing a bill that requires jurisdictions to adopt the International Residential Code, and the International Existing Building Code. In 2023, the Illinois Legislature passed a bill (SB2368) to adopt all three codes, paving the way for Illinois access to BRIC Funds.

Illinois Residential Real Property Disclosure Act

The Illinois Residential Real Property Disclosure Act requires home sellers to disclose whether the following are true, to the best of their knowledge:

- I am aware of flooding or recurring leakage problems in the crawl space or basement.
- I am aware that the property is located in a floodplain and that I currently have flood hazard insurance on the property.

Illinois State Floodway Standard

Illinois Administrative Code prohibits development in designated floodways unless the developed is considered an “appropriate use.” The floodway rules, administered by the Illinois Department of Natural Resources, Office of Water Resources also mandates a standard of a 0.10-foot allowable surcharge to delineate the floodway (Title 17, Chapter 1, Subchapter h, Part 3700, Sections 3700.60, 3700.70 and 3700.75; Construction in Floodways and Rivers, Lakes and Streams).

Illinois Mobile Home Tiedown Act

(210 ILCS 120/) Illinois Mobile Home Tiedown Act (from Ch. 111 1/2, par. 4405): Section 5 of the Illinois Mobile Home Tiedown Act indicates that the owner of each mobile home installed in Illinois on or after January 1, 1980, or which is moved from one lot to another after that date, shall be responsible to insure that approved tiedown equipment is obtained and used to secure the mobile home to the surface upon which it is to rest when occupied. After January 1, 1990, the owner of each mobile home park shall make available to the owner of any mobile home moved within or into their mobile home park with a copy of the Mobile Homeowner's Tiedown Guide pamphlet prepared by the Department. This pamphlet shall be made available to the homeowner prior to the installation of the home. The Department shall be responsible for providing these pamphlets to each mobile home park owner. The installer of such equipment shall secure the mobile home in accordance with this Act and all rules and regulations promulgated under the authority of this Act. (Source: P.A. 86-595).

Urban Flood Awareness Act

(PA 098-0858) Urban Flood Awareness Act: This act, effective, 08/04/2014, called for the creation of a report regarding urban flooding in Illinois. It also defines "Urban Flooding" primarily as flooding not mapped by FEMA NFIP floodplain maps. The act outlines requests for information to be addressed in the report and specifies funding from the Capital Development Board and FEMA to fund the studies necessary for the report. (Source PA 098-0858)

4.12.3 Local Programs

Each planning partner has prepared a jurisdiction-specific annex to this plan (see Volume 2). In preparing these annexes, each partner completed a capability assessment that looked at its regulatory, technical, and financial capability to carry out proactive hazard mitigation. Refer to these annexes for a review of regulatory codes and ordinances applicable to each planning partner. This section provides an overview of countywide programs that can support or enhance the actions identified in this plan.

Metropolitan Water Reclamation District of Greater Chicago

The Metropolitan Water Reclamation District of Greater Chicago (District) is located primarily within the boundaries of Cook County, Illinois. The District's corporate limits encompass an area of 883.1 square miles which includes the City of Chicago and 128 suburban communities. The District also has authority for Stormwater Management for all of Cook County, including areas that lie outside the District's corporate limits, but within Cook County. The District's corporate limits are shown in the District's annex section in Volume 2. The mission of the District is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of water in water courses in its service area, protect businesses and homes from flood damage, and manage water as a vital resource for its service area.

In the separate sewered area, stormwater is controlled by a number of stormwater detention reservoirs to reduce flood damage. In the combined sewer area, the District's tunnel and reservoir project reduces basement backup and overflows to local waterways. While exercising no direct control over wastewater collection systems owned and maintained by cities, villages, sewer districts and utilities, the District does control municipal sewer construction by permits outside the City of Chicago. It also owns a network of intercepting sewers to convey wastewater from local collection systems to water reclamation plants.

The District is governed by a nine-member Board of Commissioners. Commissioners are elected at large and serve on a salaried part-time basis. Three Commissioners are elected every two years for six-year terms. Biannually, the board elects from its membership a president, vice president, and chairman of the committee on finance. An executive director who reports directly to the board manages the District's day-to-day operations. Eight appointed department heads report to the executive director. General administration, management & budget, public affairs, and affirmative action are direct staff and support units reporting to the executive director. The treasurer of the District, its chief financial officer, is appointed by and reports directly to the board.

Stormwater Management Program and Cook County Stormwater Management Plan

The District's Board of Commissioners adopted the Cook County Stormwater Management Plan (CCSMP) by ordinance in February 2007, and the CCSMP was amended in July 2014. The Stormwater Management Plan is not a regulatory ordinance and does not set forth any rules, regulations, or standards that a municipality will be held to or be required to enforce. It is a high-level organizational plan wherein the overall framework for the countywide program is established. The District adopted the plan as a first step in establishing the District's countywide stormwater management program. The mission of the countywide stormwater management program is to provide Cook County with rules, regulations, and projects to reduce the potential for stormwater damage to life, public health, safety, property and the environment. Nineteen stormwater management goals have been developed by the District. The goals extend from protecting new and existing developments from flooding to preventing the loss of water quality and habitat.

Cook County Watershed Management Ordinance

The District's Board of Commissioners adopted the Watershed Management Ordinance (WMO) on October 3, 2013, and it became effective on May 1, 2014. The WMO was amended in May 2019. The WMO establishes uniform, minimum, countywide stormwater management regulations throughout Cook County. Components that are regulated under the ordinance include drainage and detention, volume control, floodplain management, isolated wetland protection, riparian environment protection, and soil erosion and sediment control.

The Cook County Consolidated Plan

Each year, Cook County receives Community Development Block Grant, Emergency Solutions Grant, and HOME Investment Partnerships Program funds from the U.S. Department of Housing and Urban Development (HUD). These funds are used to support community development, affordable housing, and economic development in suburban Cook County, primarily for the benefit of low- and moderate-income households. Past initiatives have included housing rehabilitation, down payment assistance, social services, infrastructure, and workforce development. The County must submit a consolidated plan for this funding to HUD every five years, assessing local assets, resources, needs, market conditions, and opportunities. A new plan for 2015 – 2019 must be submitted to HUD by August 2015.

Chapter 5 Risk Assessment

5.1 High Hazard Dams and Levees

5.1.1 Hazard Description

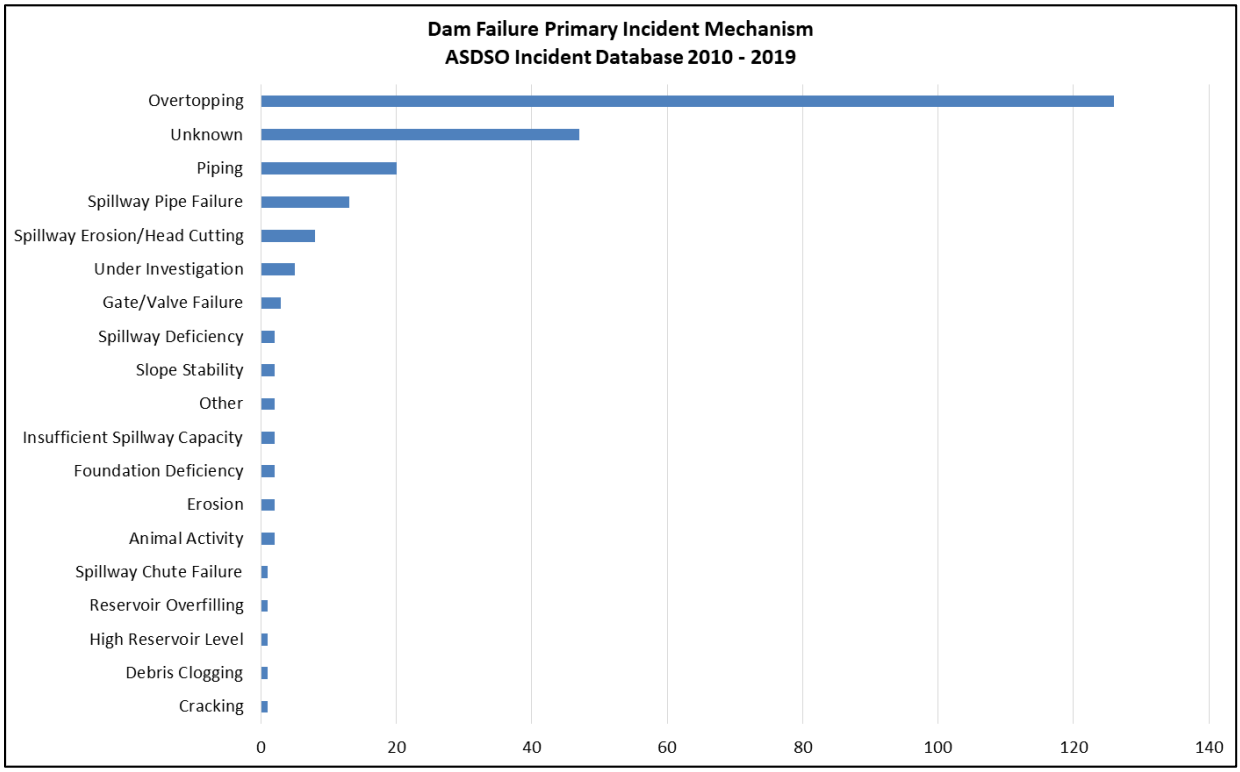
Dam: A barrier constructed across a watercourse for storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings.

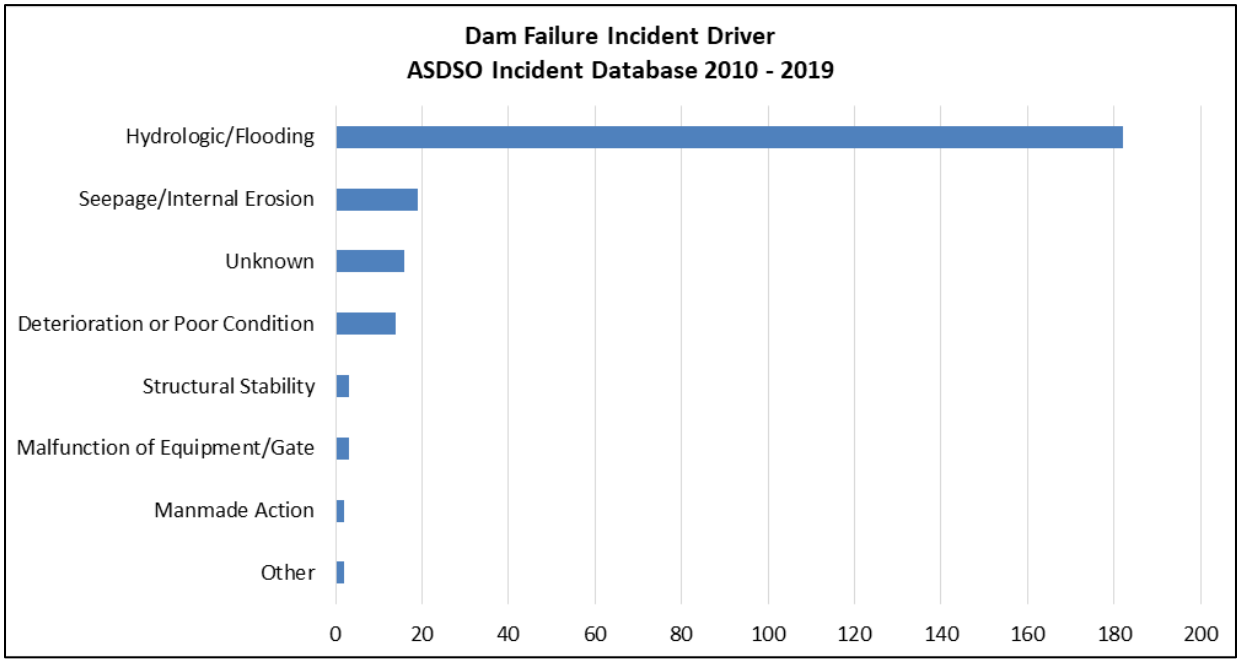
Dam Failure: Failure characterized by the sudden rapid and uncontrolled release of impounded water or liquid-borne solids. It is recognized that there are lesser degrees of failure and that any malfunction or abnormality outside the design assumptions and parameters that adversely affect a dam's primary function of impounding water could be considered a failure.

The Causes of Dam Failure: Dam failures are most likely to happen for one of five reasons (ASDO).

1. Overtopping caused by water spilling over the top of a dam. Overtopping of a dam is often a precursor of dam failure. National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for approximately 34% of all U.S. dam failures.
2. Foundation defects, including settlement and slope instability, cause about 30% of all dam failures.
3. Cracking caused by movements like the natural settling of a dam.
4. Inadequate maintenance and upkeep.
5. Piping is when seepage through a dam is not properly filtered, and soil particles continue to progress, and form sink holes in the dam. Another 20% of U.S. dam failures have been caused by piping (internal erosion caused by seepage). Seepage often occurs around hydraulic structures, such as pipes and spillways; through animal burrows; around roots of woody vegetation; and through cracks in dams, dam appurtenances, and dam foundations.

From the ASDSO Dam Incident Database, the images below illustrate dam failure incidents for the years 2010 through 2019. Incident data is mostly obtained from the state dam safety programs and/or media reports. The incident data is not inclusive of all dam safety incidents.





Levees: A man-made structure, typically an earthen embankment, designed and constructed according to sound engineering practices to contain, control, or divert the flow of water in order to provide protection from temporary flooding. Levees are often built alongside rivers and are used to prevent high water levels from flooding adjacent land. The primary function of a levee is to provide flood risk reduction; however, they may also serve other purposes such as water conservation, irrigation, or to support a roadway or railway.

Levees can vary in size and complexity, from simple mounds of earth to large-scale systems incorporating elements such as floodwalls, gates, and pumps. The effectiveness of a levee can be influenced by its design, construction, and maintenance, as well as by natural factors like river flow and sedimentation.

Causes of Levee Failure: The definition of a "levee failure" according to the National Levee Database (NLD) generally encompasses the following:

1. **Breach:** The most severe form of failure, a breach occurs when a levee fails completely, resulting in an opening that allows water to flow through uncontrolled. This can lead to significant flooding and damage to areas that the levee was intended to protect.
2. **Overtopping:** Occurs when water levels rise above the height of the levee, leading to spillover on the protected side. While technically an overtopping may not be a structural failure of the levee itself, it represents a failure to contain the water as designed.
3. **Structural Damage:** This includes any form of damage that compromises the integrity of the levee, such as erosion, seepage, or structural weakening. These issues may not immediately lead to a breach or overtopping but indicate that the levee is at risk of failing.

Inadequate Performance: This refers to situations where the levee does not perform as designed, even if there's no visible structural damage. This could be due to design flaws or unforeseen environmental conditions.

5.1.2 Hazard Location

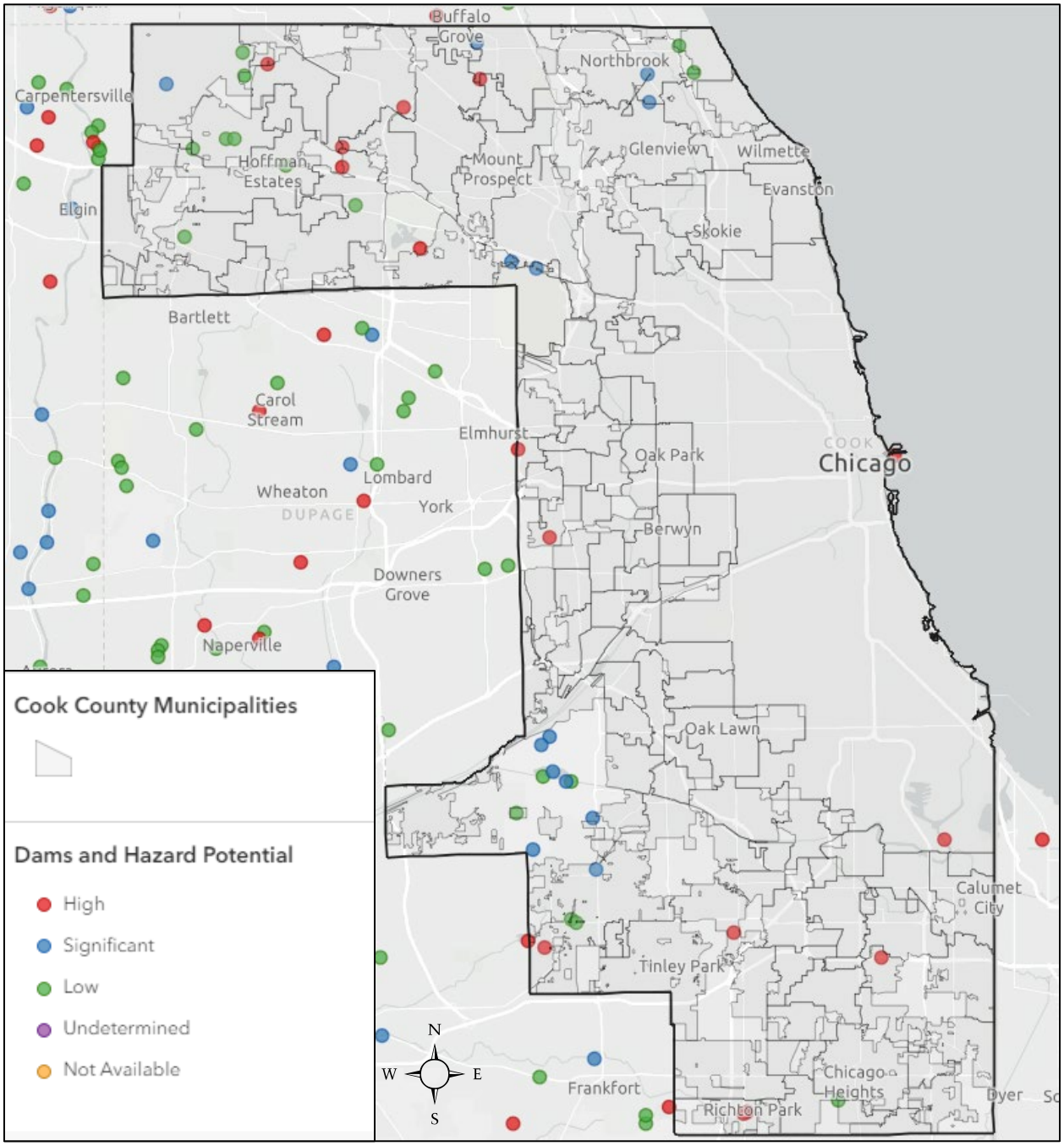
According to the National Inventory of Dams, there are 44 Dams located in Cook County (National Inventory of Dams). The table below lists the location and the details of each dam.

DAMS LOCATED IN COOK COUNTY, IL								
Name	**National ID#**	**Location**	**Owner**	**Year Built**	**Primary Purpose**	**Height (feet)**	**Storage Capacity (acre-feet)**	**Max Discharge (cubic feet/sec)**
Thorton Quarry Gap Dam	IL55136	Cook County	Metropolitan Water Reclamation District	2013	Flood Risk Reduction	116	9,900	-
Thomas J. O'Brien Lock and Controlling Works	IL01013	Cook County	USACE - Chicago District	1960	Navigation, Other, Flood Risk Reduction	37	9,700	2,200
Chicago River and Harbor Controlling Works	IL55094	Cook County	USACE - Chicago District	1938	Navigation, Other, Flood Risk Reduction	31	1,000,000	-
Upper Salt Creek Structure 3 Dam	IL50045	Cook County	Metropolitan Water Reclamation District	1985	Flood Risk Reduction	26	1,584	13,948
Busse Woods	IL01231	Cook County	Illinois Department	1977	Flood Risk Reduction, Recreation	23	17,621	24,272

DAMS LOCATED IN COOK COUNTY, IL								
Name	**National ID#**	**Location**	**Owner**	**Year Built**	**Primary Purpose**	**Height (feet)**	**Storage Capacity (acre-feet)**	**Max Discharge (cubic feet/sec)**
Reservoir South Dam			of Natural Resources					
Upper Salt Creek Structure 2 Dam	IL50021	Cook County	Metropolitan Water Reclamation District	1984	Flood Risk Reduction	23	985	9,582
Midlothian Creek Dam	IL01002	Cook County	Illinois Department of Natural Resources	1975	Flood Risk Reduction, Recreation	22	1,279	8,031
Lake George Dam	IL01083	Cook County	Village of Richton Park	1969	Flood Risk Reduction, Other	20	539	870
Richton Crossing Dam	IL01084	Cook County	Borg Warner Equity Corp	1976	Flood Risk Reduction	16	53	920
Lower Elmhurst Dam	IL50304	Cook County	City of Elmhurst	1994	Flood Risk Reduction	15	93	-
Brentwood Townhome Dam	IL55180	Cook County	Brentwood Townhome Owners Association	1960	Flood Risk Reduction	14	6	164
Upper Salt Creek Structure 4 Dam	IL50054	Cook County	Metropolitan Water Reclamation District	1987	Flood Risk Reduction, Recreation	14	775	1,300
Grasslands Basin Dam	IL55173	Cook County	Village of Orland Park	-	-	10	22	-
Cornell Avenue Dam	IL55079	Cook County	Village of Wheeling	1977	Flood Risk Reduction	8.5	-	-
Maple Lake Dam	IL00878	Cook County	Forest Preserve District of Cook County	1918	Recreation	25	765	-
Bullfrog Lake Dam	IL00869	Cook County	Forest Preserve District of Cook County	1958	Recreation	17	144	-
Saganashkee Slough 1 Dam	IL00870	Cook County	Forest Preserve District of Cook County	1948	Recreation	14	2,379	-
White Pine Ditch Dam	IL01227	Cook County	Metropolitan Water Reclamation District	1975	Flood Risk Reduction	13	5	-
Papoose Lake Dam	IL00867	Cook County	Forest Preserve District of Cook County	1956	Recreation	12	143	-
Willow Higgins	IL55035	Cook County	City of Chicago	-	Flood Risk Reduction	12	32	-

DAMS LOCATED IN COOK COUNTY, IL								
Name	**National ID#**	**Location**	**Owner**	**Year Built**	**Primary Purpose**	**Height (feet)**	**Storage Capacity (acre-feet)**	**Max Discharge (cubic feet/sec)**
Reservoir Dam								
Techny Reservoir Dam	IL01228	Cook County	Metropolitan Water Reclamation District	1979	Flood Risk Reduction	11	350	-
Touhy Avenue Reservoir Dam	IL55104	Cook County	City of Chicago/ Metropolitan Water Reclamation District	2004	Flood Risk Reduction	10	740	-
Galvins Lake Dam	IL00862	Cook County	Marvin Duntemen	1938	Recreation	10	120	-
Tampier Lake Dam	IL00866	Cook County	Forest Preserve District of Cook County	1964	Recreation	9	859	-
Main Street Triangle Dam	IL55123	Cook County	Village of Orland Park	-	Flood Risk Reduction	9	0	-
Saganashkee Slough 6 Dam	IL01216	Cook County	Forest Preserve District of Cook County	1948	Recreation	7	2,375	-
Annets Woods West Basin Dam	IL55179	Cook County	Annets Woods, LLC	-	Flood Risk Reduction	-	-	-
Sauk Trail Lake Dam	IL00868	Cook County	Forest Preserve District of Cook County	1923	Recreation	18	376	-
Skokie Lagoons Dredge Disposal Dam	IL50273	Cook County	Forest Preserve District of Cook County	1990	Debris Control	16	360	6
South Lake of The Coves Dam	IL01130	Cook County	Village of South Barrington	1969	Recreation	16	117	-
Chicago Botanical Gardens South Inlet Dam	IL55082	Cook County	Chicago Botanical Gardens	1970	Flood Risk Reduction, Recreation	15	961	825
Wetfoot Lake Dam	IL55027	Cook County	Forest Preserve District of Cook County	-	Fish and Wildlife Pond	13	633	-
Holy Family Villa Lake Dam	IL00865	Cook County	Holy Family Villa	1927	Recreation	12	84	-

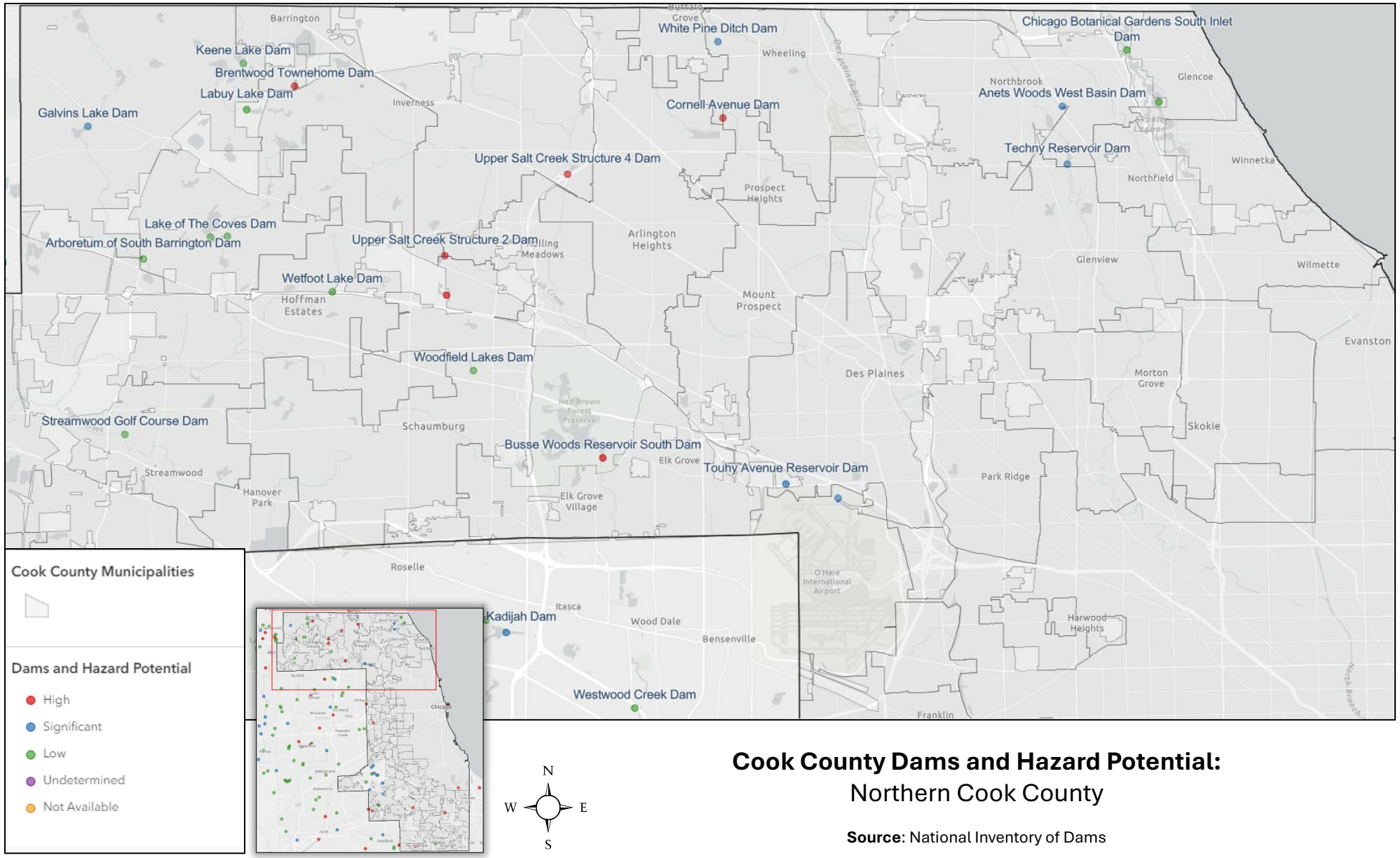
DAMS LOCATED IN COOK COUNTY, IL								
Name	**National ID#**	**Location**	**Owner**	**Year Built**	**Primary Purpose**	**Height (feet)**	**Storage Capacity (acre-feet)**	**Max Discharge (cubic feet/sec)**
Lake of The Coves Dam	IL00863	Cook County	Village of South Barrington	1969	Recreation	10	404	-
Colette Highlands Dam	IL55092	Cook County	Village of Orland Park	-	Flood Risk Reduction	10	84	-
Saganashkee Slough 7 Dam	IL01217	Cook County	Forest Preserve District of Cook County	1948	Recreation	9	2,375	-
Mayfair Reservoir Dam	IL55169	Cook County	Metropolitan Water Reclamation District	1977	Flood Risk Reduction	9	100	-
Saganashkee Slough 2 Dam	IL01212	Cook County	Forest Preserve District of Cook County	1948	Recreation	8	2,375	-
Arboretum of South Barrington Dam	IL55125	Cook County	Arboretum of South Barrington LLC	-	Flood Risk Reduction	8	88	299
Woodfield Lakes Dam	IL50311	Cook County	Woodfield Lake Campus Association	1977	Recreation	8	61	500
Keene Lake Dam	IL00877	Cook County	Unknown	1944	Recreation	8	113	-
Streamwood Golf Course Dam	IL50158	Cook County	Village of Streamwood	1989	Flood Risk Reduction	8	145	390
Labuy Lake Dam	IL55126	Cook County	Forest Preserve District of Cook County	-	Recreation	7	150	380
Orland Park Basin Dam	IL50144	Cook County	Village of Orland Park	1992	Flood Risk Reduction	7	220	476
Source: National Inventory of Dams (2024)								



Cook County Dams

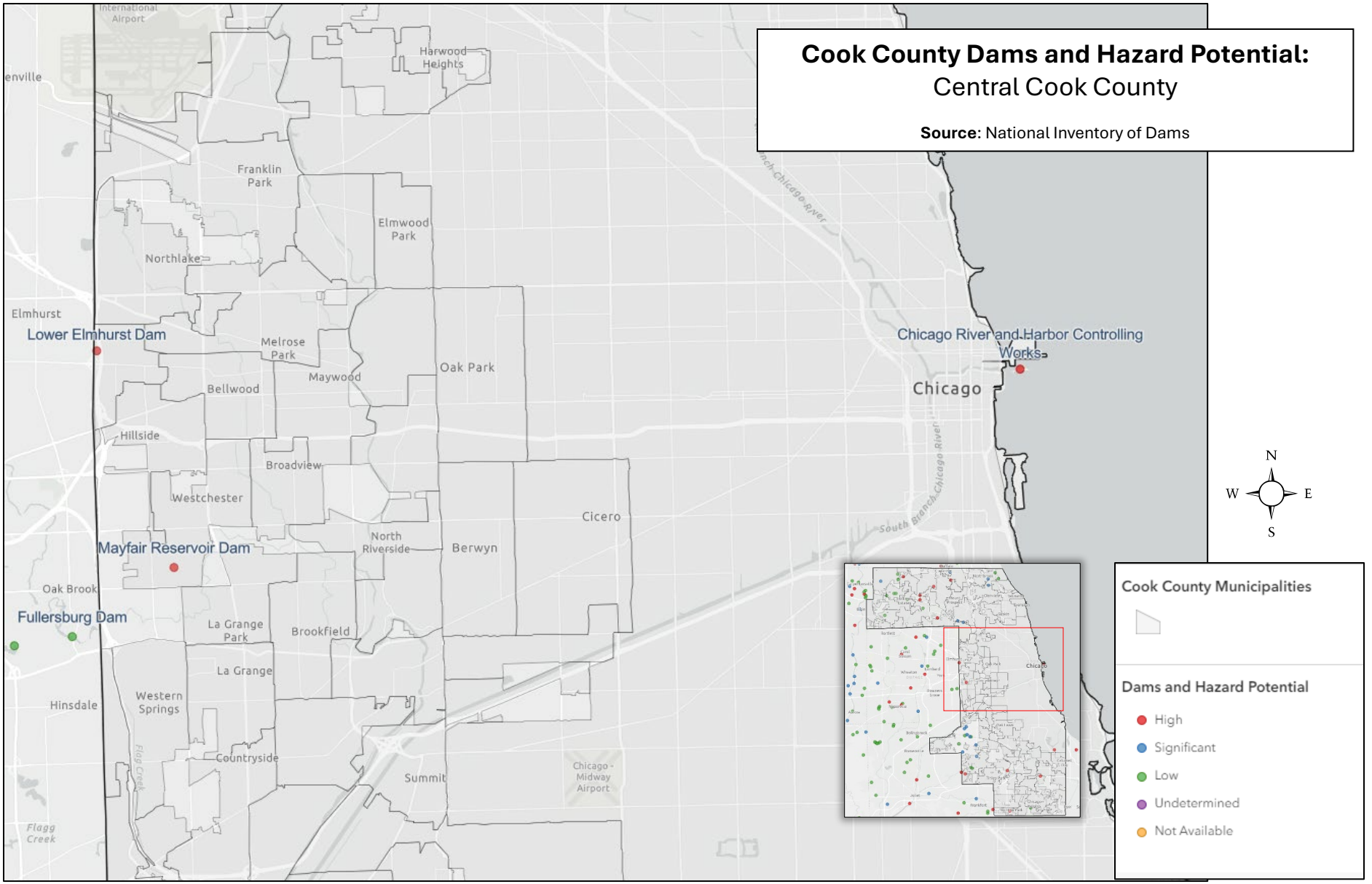
Hazard Potential

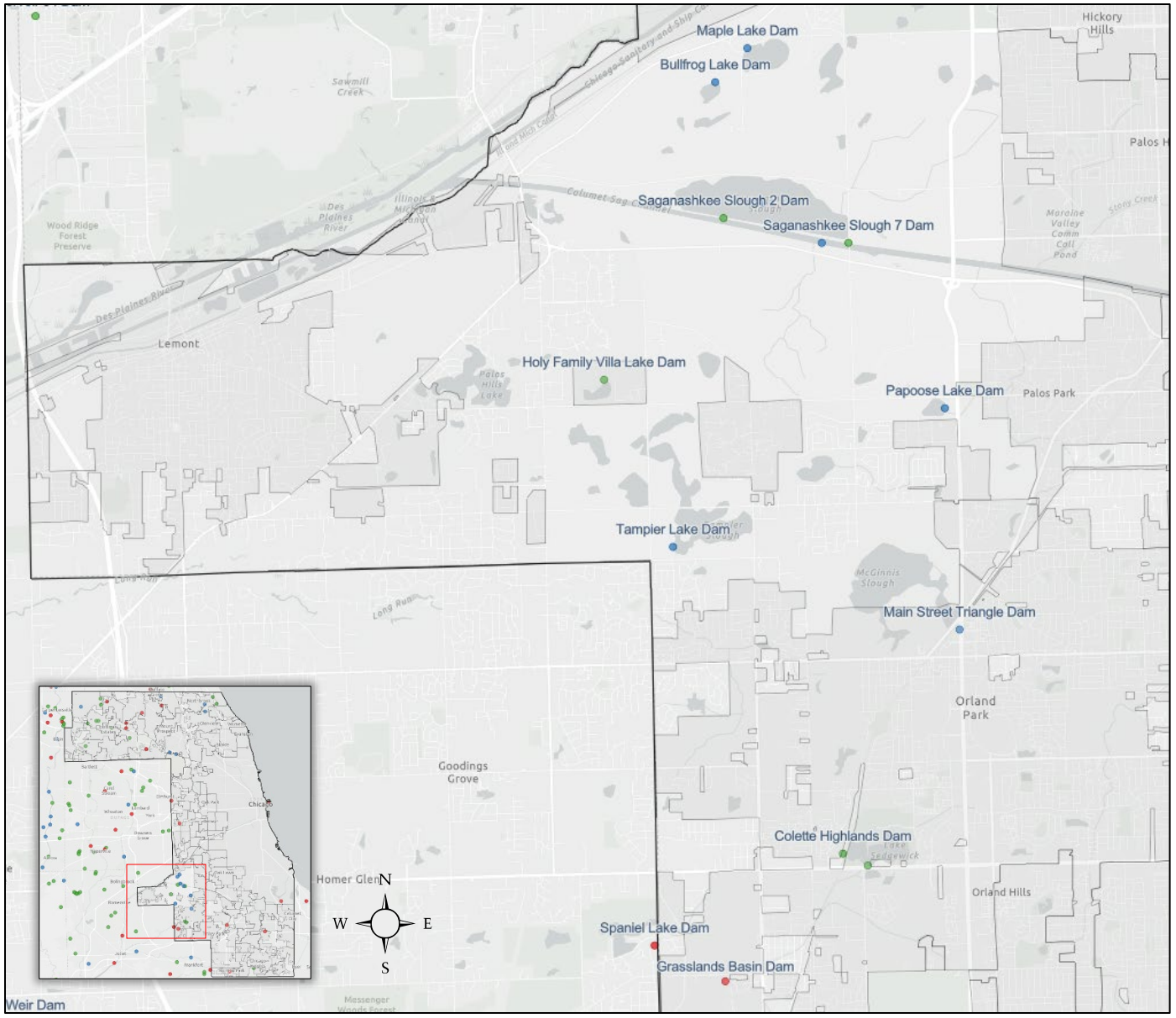
Source: National Inventory of Dams



Cook County Dams and Hazard Potential:
Northern Cook County

Source: National Inventory of Dams


Cook County Dams and Hazard Potential:
Central Cook County
Source: National Inventory of Dams
Harwood Heights
Franklin Park
Elmwood Park
Northlake
Elmhurst
Lower Elmhurst Dam
Melrose Park
Maywood
Oak Park
Bellwood
Hillside
Broadview
Westchester
Cicero
North Riverside
Berwyn
Mayfair Reservoir Dam
Oak Brook
Fullersburg Dam
La Grange Park
Brookfield
La Grange
Western Springs
Hinsdale
Countryside
Summit
Chicago - Midway Airport
Flagg Creek
Chicago River and Harbor Controlling Works
Chicago
South Branch Chicago River
N
W
E
S
Cook County Municipalities
Dams and Hazard Potential
High
Significant
Low
Undetermined
Not Available



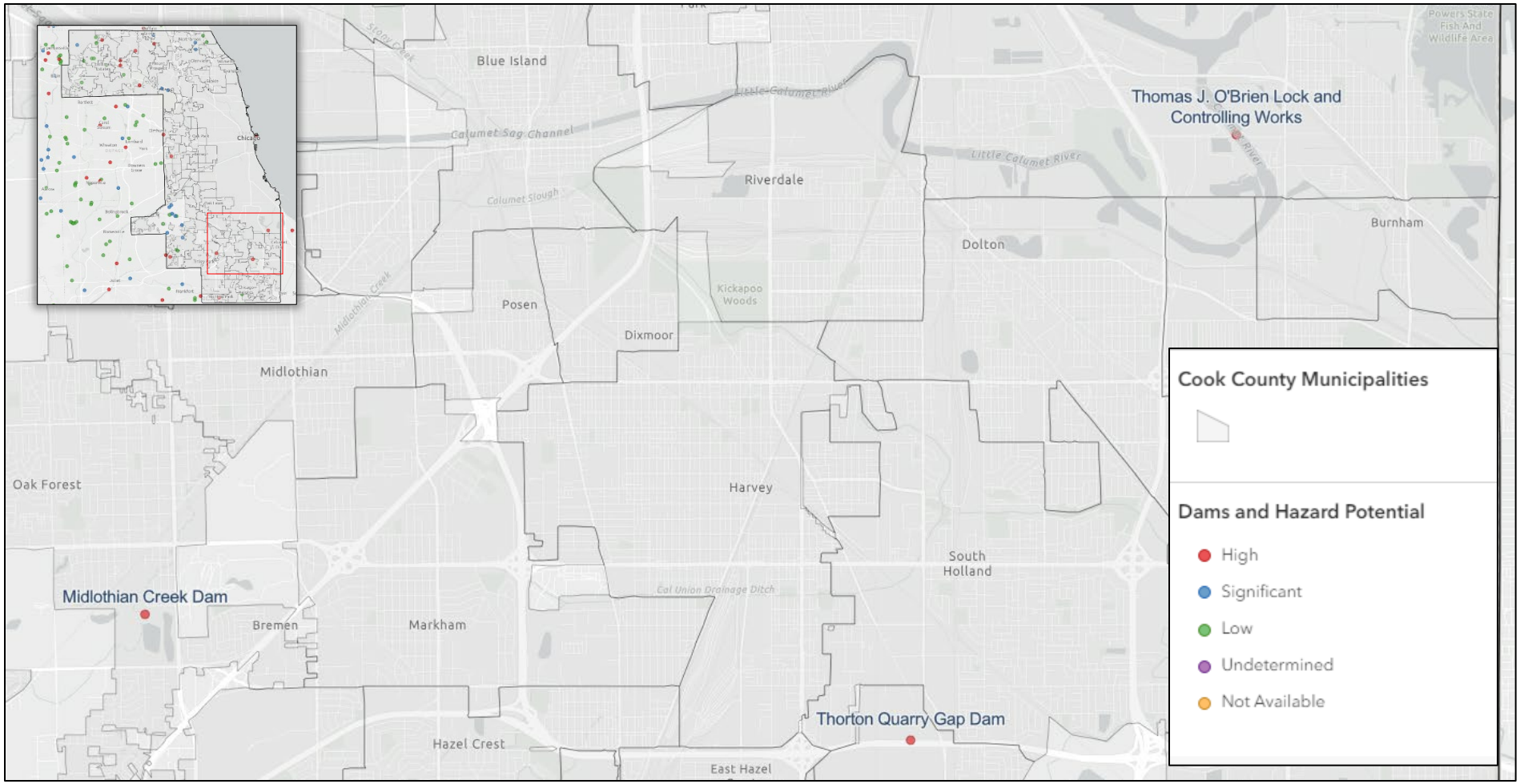
Cook County Dams and Hazard Potential:
Southwest Cook County

Source: National Inventory of Dams

Cook County Municipalities

Dams and Hazard Potential

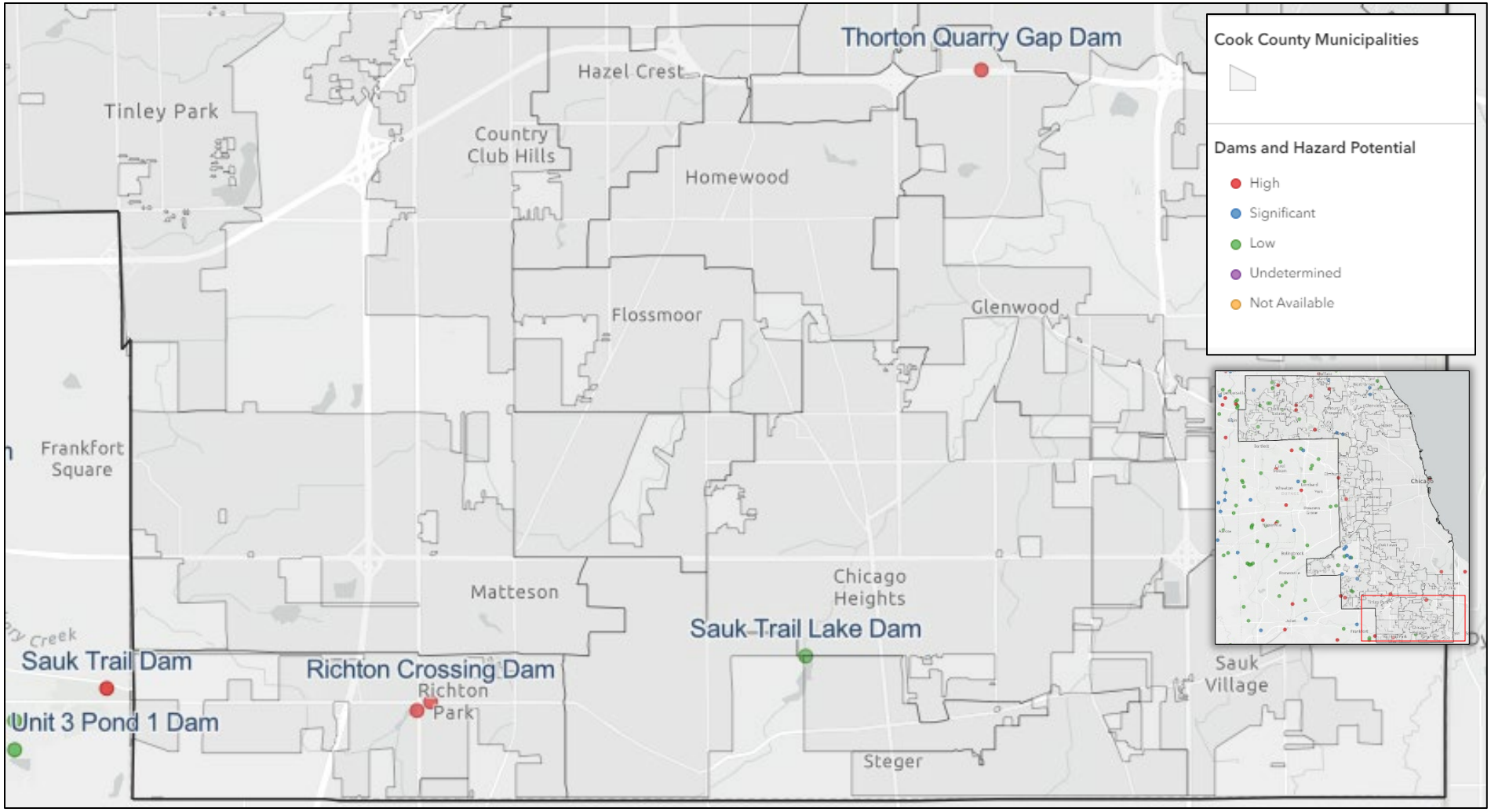
- High
- Significant
- Low
- Undetermined
- Not Available



N
W E
S

Cook County Dams and Hazard Potential:
Southeast Cook County

Source: National Inventory of Dams



Cook County Dams and Hazard Potential:
Southern Cook County

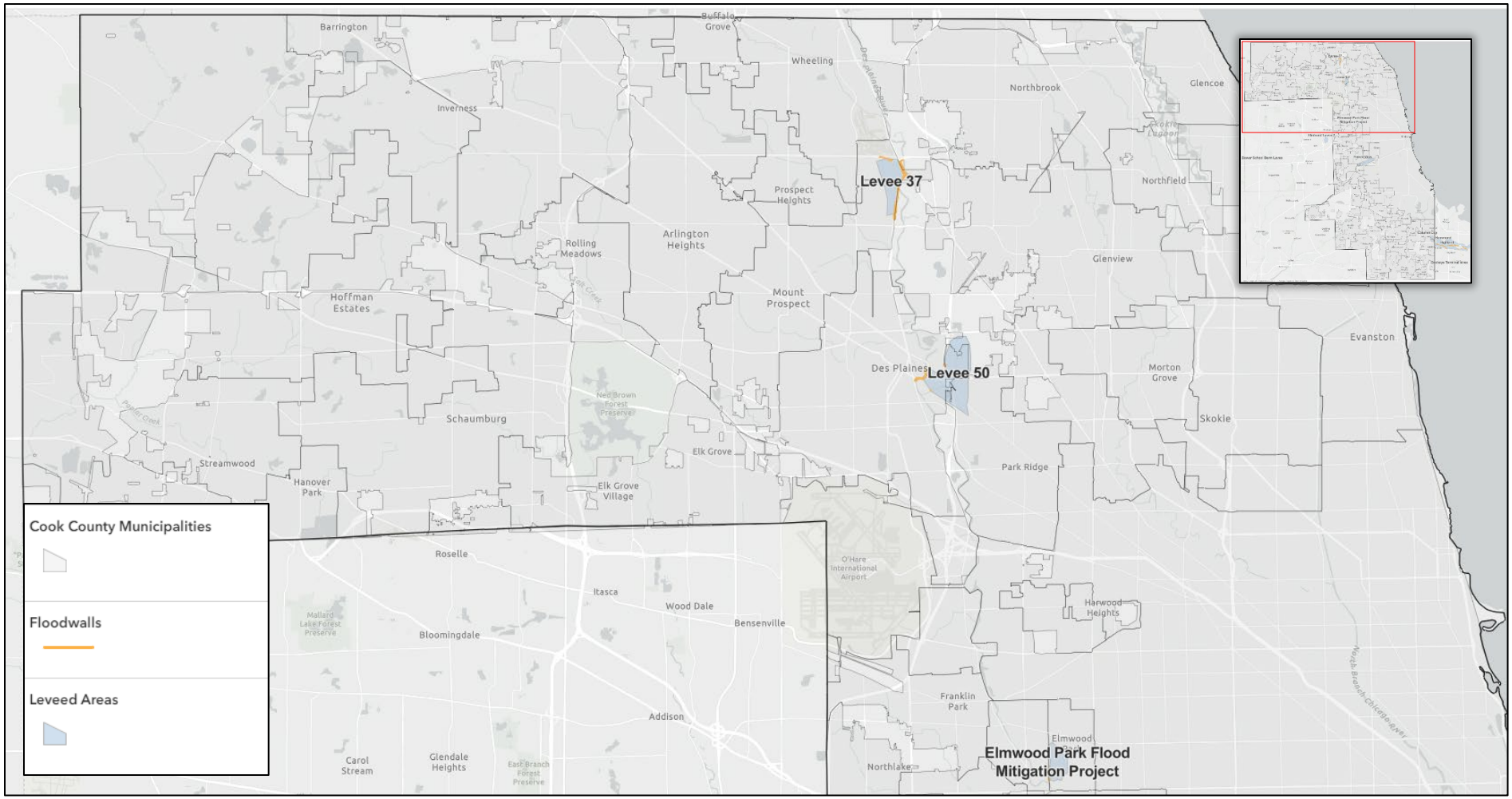
Source: National Inventory of Dams

HIGH HAZARD DAMS IN COOK COUNTY											
Dam Name	**Other Names**	**Owner Names**	**Owner Types**	**Primary Purpose**	**City**	**Distance to Nearest City (Miles)**	**Primary Dam Type**	**Max Storage (Acre-Ft)**	**Drainage Area (Sq Miles)**	**Max Discharge (Cubic Ft/Second)**	**Hazard Potential Classification**
Busse Woods Reservoir South Dam	Busse Woods Reservoir(South Dam On Salt Cr)	ILLINOIS DEPARTMENT OF NATURAL RESOURCES	State	Flood Risk Reduction	ELK GROVE		Earth	17621	52.8	24272	High
Midlothian Creek Dam	Twin Lakes	ILLINOIS DEPARTMENT OF NATURAL RESOURCES	Local Government	Flood Risk Reduction	OAK FOREST	1	Earth	1279	10.7	8031	High
Richton Crossing Dam	Richton Crossing Detention Reservoir	BORG WARNER EQUITY CORP.	Private	Flood Risk Reduction	MATTESON	1	Earth	53	1.7	920	High
Cornell Avenue Dam	Lake of The Winds Detention Basin Dam	VILLAGE OF WHEELING	Private	Flood Risk Reduction	WHEELING	0.1	Earth				High
Upper Salt Creek Structure 4 Dam	Twin Lakes Reservoir	METROPOLITAN WATER RECLAMATION DISTRICT	Local Government	Flood Risk Reduction	PALATINE		Earth	775		1300	High
Lake George Dam	Lake George	VILLAGE OF RICHTON PARK	State	Flood Risk Reduction	MATTESON	1	Earth	539	1.6	870	High
Brentwood Townehome Dam		BRENTWOOD TOWNHOME OWNERS ASSOCIATION	Private	Flood Risk Reduction	BARRINGTON	0.1	Earth	1	11	164	High

Grasslands Basin Dam		VILLAGE OF ORLAND PARK	Local Government	Flood Risk Reduction		0	Earth	22	0.1		High
Upper Salt Creek Structure 2 Dam	Plum Grove Reservoir	METROPOLITAN WATER RECLAMATION DISTRICT	Local Government	Flood Risk Reduction	PALATINE		Earth	985	1.9	9582	High
Lower Elmhurst Dam	Lower Elmhurst Reservoir	CITY OF ELMHURST	Local Government	Flood Risk Reduction	ELMHURST	0.1	Earth	93			High
Upper Salt Creek Structure 3 Dam	St. Michael Reservoir	METROPOLITAN WATER RECLAMATION DISTRICT	Local Government	Flood Risk Reduction	ROLLING MEADOWS		Earth	1584		13948	High
Thorton Quarry Gap Dam		METROPOLITAN WATER RECLAMATION DISTRICT	Private	Flood Risk Reduction	THORNTON	0.1	Concrete	9900	0.1		High
Thomas J. O'Brien Lock and Controlling Works	Lake Calumet	USACE - Chicago District	Federal	Navigation	CHICAGO		Concrete	9700	250	2200	High
Chicago River and Harbor Controlling Works	Chicago Lock	USACE - Chicago District	Federal	Navigation	CHICAGO		Other	1000000	0	0	High

According to the National Inventory of Levees, there are seven major levee systems located in Cook County (National Inventory of Levees). Munster Levee is included due to its proximity to the Cook County border. The table below lists the location and the details of both levees.

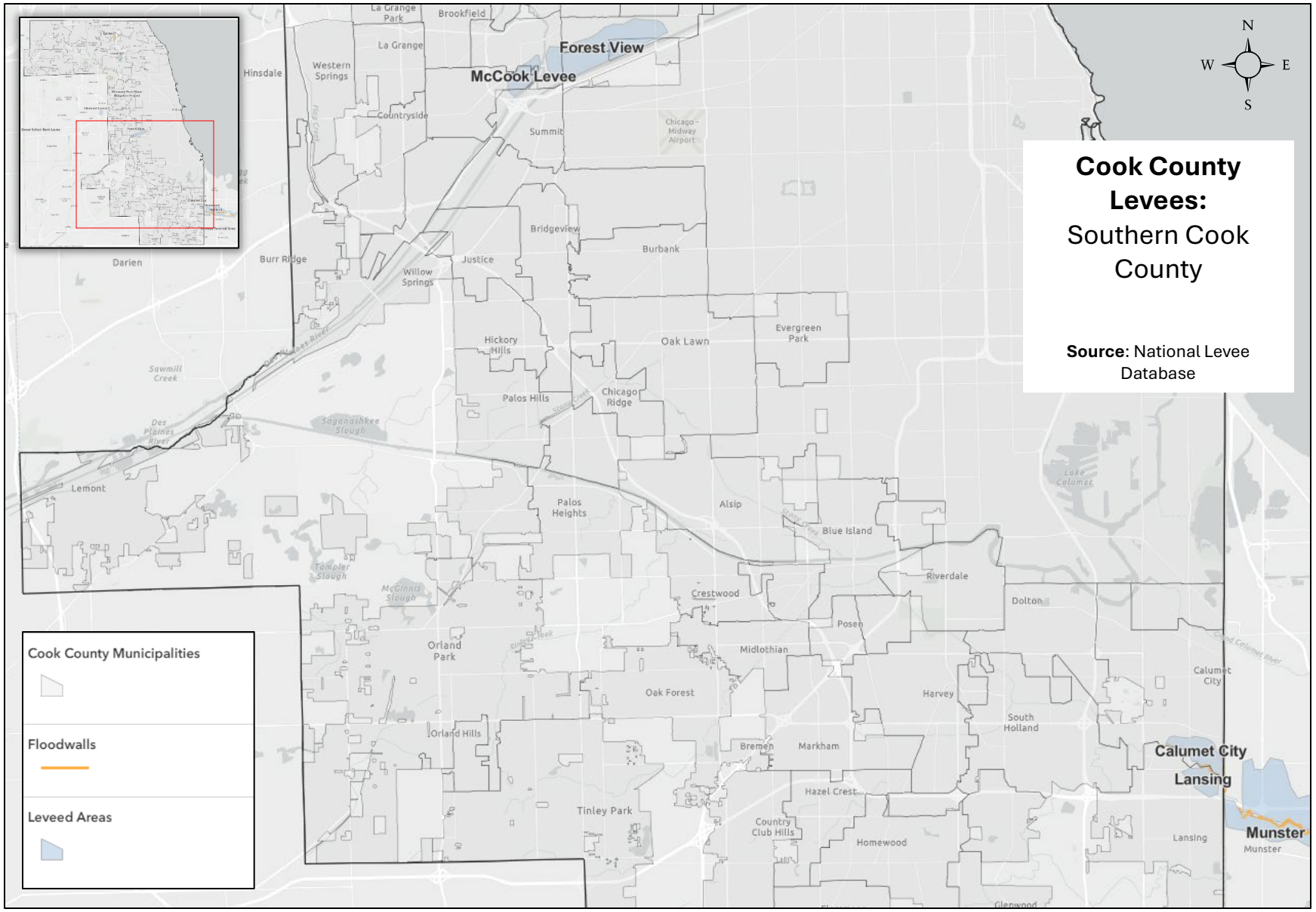
LEVEES IN COOK COUNTY					
Levee	**State**	**County**	**Community**	**Lead Organization**	**Flood Source, if available**
Calumet City	Illinois, Indiana	Cook, Lake	Calumet City, IL; Lansing, IL; Munster, IN	Calumet City	Little Calumet River
Elmwood Park Flood Mitigation Project	Illinois	Cook	River Grove, IL	Elmwood Park Village, River Grove Village	
Forest View	Illinois	Cook	Cook County, IL; Lyons, IL	Metropolitan Water Reclamation District of Greater Chicago	
Lansing	Illinois	Cook	Lansing, IL	Village of Lansing, IL	
Levee 37	Illinois	Cook	Cook County, IL; Prospect Heights, IL	Illinois Department of Natural Resources, Illinois Department of Transportation	Des Plaines River
Levee 50	Illinois	Cook	Des Plaines, IL	Illinois Department of Natural Resources, Illinois Department of Transportation, Union Pacific Railroad	Des Plaines River
McCook Levee	Illinois	Cook	Lyons, IL; McCook, IL; Summit, IL		
Munster*	Indiana	Cook, Lake	Hammond, IN; Munster, IN	INDOT, Little Calumet River Basin Development Commission	Little Calumet River



Cook County Levees:
Northern Cook County

N
W E
S

Source: National Levee Database


Cook County Levees:
Southern Cook County
Source: National Levee Database
N
W
E
S
Forest View
McCook Levee
Cook County Municipalities
Floodwalls
Leveed Areas
Calumet City
Lansing
Munster

Calumet City

The Calumet City Levee System is located on the right (north) bank of the Little Calumet River in Calumet City, Illinois. It consists of two segments that reduce flood risk to Calumet City; Calumet City - East and Calumet City - West. This system relies on the Forest Ave Levee to the east, which was federally constructed and active in the PL 84-99 program. The west end of Calumet City - West connects to the Burnham Greenway, a former railroad embankment, now a bike path at the west end. Burnham Greenway is considered part of the Cal City West segment as it ties into high ground at the end. High ground along Burnham Ave divides the system into the East and West segments. The river runs east to west, with the Calumet City Levee - East starting near the Illinois-Indiana state border at State Line Ave. It continues generally northwest to Burnham Ave. The project starts as earthen embankment from the east (upstream) end for about 1,500 feet until a short ~140-ft long floodwall is present to Wentworth Ave. The embankment resumes west of Wentworth and goes about 3,700 feet to Burnham Ave, where it ties into high ground. According to the plans, the embankments have slopes of 3H:1V, although some slopes appear steeper than this in the field, particularly on the riverside. Similarly, the plans call out the crest as 10 feet wide, but the actual crest is about 5 feet wide. The Burnham Greenway portion of the segment is at least 3 feet taller and has a 20-ft wide asphalt-capped crest. There are 14 gated gravity structures with flap gates and/or sluice gates, as well as, 2 pump stations across the system.

Performance, Condition, and Risk:

The loss of life calculated by the LST is about 2-3 for the East Segment and 1 for the West Segment. When compared to the population in the leveed area (daytime East: 3,524; West: 1,068), is a relatively low percentage. This low rate can be attributed to the depth of the water, which is a maximum of around 5 feet with almost all of the structures subject to a potential of less than 2 ft. There is no Emergency Action Plan and no designated overtopping location. However, there are many evacuation routes that quickly lead to high ground out of the leveed area with a distance of at most, a 1/2 mile. Under a breach scenario, the inundation levels would not pose a great risk to a large number of individuals due to the relatively limited depth of flooding.

If overtopping or breach occurred in the east end near the state border, more overland flow would occur. If a breach occurred in the west end, the east end may not be inundated. There are no designated overflow locations. Any overtopping/breach would have the water spread out and decrease in depth due to the relatively flat and paved nature of the leveed area. The water would generally pond along the levee and on roadways, reducing the risk to homes and residents.

The consequences captured by the LST include monetary value on property within the leveed area. There are no Critical infrastructure identified in the tool or otherwise known that would have regional or national impacts. There are a couple of schools within the leveed area. There are no crops in this urban area.

Elmwood Park Flood Mitigation Project

For decades, flooding along the Des Plaines River and an undersized sewer system bedeviled the Village of Elmwood Park, Illinois. Incorporated in 1914, the Chicago suburb is home to almost 25,000 people living within 1.91 square miles. Until recently, the village was served by a single combined sewer system that lacked the capacity necessary to convey increased runoff generated by major storms. That changed with the adoption and implementation of a flood mitigation plan that required extensive coordination with public and private stakeholders.

The 250-acre project area provides backup protection in the form of a separate storm sewer system constructed at strategic locations throughout the village, a 14.6-acre-foot detention reservoir, a 150-cubic-feet-per-second pumping station, and a 1,500-foot flood wall. The new storm sewers vary in

size from 12 inches in diameter to 3-foot-by-12-foot box culverts, totaling approximately 40,000 feet with a new 17-foot-by-13-foot outfall to the river. The flood wall keeps the river from inundating the southwest portion of the village.

Performance, Condition, and Risk: No data is available on the performance, condition and risk of the flood wall.

Forest View/Lyons

Lyons levee, located along the east bank of the Des Plaines River in the Ottawa Woods and Portage Woods Forest Preserves, provides a line of protection for the communities of Forest View and Stickney, IL.

Performance, Condition, and Risk:

Flood risk in the community is associated with overbank flooding from the Des Plaines River. The area at risk of flooding includes homes, businesses, and roadways. There are approximately 800 homes in the estimated inundation area and businesses include large industrial facilities used for storing fuels, a Commonwealth Edison power substation, and wastewater treatment facilities associated with the MWRDGC Stickney Water Reclamation Plant.

Lansing

The Lansing Levee System is located on the left (south) bank of the Little Calumet River in Lansing, Illinois. It is a single-segment system that ties into high ground at both ends. The river runs east to west, with the Lansing Levee starting near the Illinois-Indiana state border at Bernice Road, just north of I-80/94. It continues generally northwest to just west of Burnham Ave. The project starts as earthen embankment from the east (upstream) end for about 3,300 feet until Wentworth Ave. West of Wentworth, a floodwall is present for about 2,000 feet until it ties into high ground near the end of 169th Ct. The earthen embankment picks up about 300 feet later as the south rim of the reservoir, which goes for about 1,000 feet to Burnham Ave. West of Burnham Ave, the earthen embankment extends for another 500 feet or so until it reaches high ground. The embankment has slopes of 4H: 1V and a crest width of 10 feet. The floodwall is mostly concrete T-Wall, while a short part at the west end is sheetpile with concrete decorative panels. There are 10 gated gravity structures with flap gates and/or sluice gates, as well as, 2 pump stations on either side of Burnham Ave.

Performance, Condition, and Risk:

The loss of life calculated by the LST is low (about 2) and when compared to the population in the leveed area (daytime 1366), is a relatively low percentage. This low rate can be attributed to the height of the water compared to the leveed area, which is a max of around 5 feet with almost all of the structures subject to a potential of less than 2 ft. Although there is no Emergency Action Plan and no overtopping location, there are multiple roadways that lead to high ground out of the leveed area with a distance of, at most, a 1/2 mile. Even under a breach scenario, the inundation levels would not pose a great risk to a large number of individuals. With the condition of the levee and low flood height in occupied areas, the tool may be overestimating the loss of life.

If an overtopping or breach occurred in the east end near the state border, more overland flow would occur. If a breach occurred in the west end, the east end may not be inundated. There are no designated overflow locations. Any overtopping/breach would have the water spread out and decrease in depth due to the relatively flat and paved nature of the leveed area. The water would generally pond along the levee and on roadways, reducing the risk to homes and residents.

The consequences captured by the LST include monetary value on property within the leveed area. I 80/94 is a major thoroughfare that if flooded can cause national impacts to transportation, which is the only Critical Infrastructure identified that could cause these regional/national impacts. Locally, the Lansing Public Works yard and Reavis Elementary School are within the leveed area. There are no crops in this urban area.

Levee 37

Levee 37 is a three-segment system that was constructed along the west bank of the Des Plaines River. The levee is considered three segments because the levee spans two municipalities; Prospect Heights to the north and Mt. Prospect to the south, split at Old Willow Road and includes a non-project segment along the expressway. It reduces flood risk of the leveed area to over 600 structures. The levee was constructed in phases from 2008 to 2017 by the U.S. Army Corps of Engineers (Corps). It consists of almost 9,000 feet of concrete and sheetpile floodwall, with short portions of compacted clay embankment about 700 feet long to tie the wall into high ground. The Palatine Road embankment also acts as part of the levee. There is one road closure gate at Milwaukee Road north of Palatine Rd bridge, which is closed during more extreme events. Three pump stations reduce interior flooding, but do not eliminate nuisance ponding on the land side of the levee.

Performance, Condition, and Risk:

The Corps completed a risk assessment for each of the Levee 37 Segments in 2015. The levee has performed well, including in April 2013 when the local municipalities had to flood-fight the last gap left in the wall before it was finished the following year. The overall condition of Levee 37 is sufficient, but limitations for risk reduction remain. Any given year could result in a flood, which the levee is not designed to handle.

Levee 50

Levee 50 (Rand Park) is a single segment system that was constructed along the east bank of the Des Plaines River within the City of Des Plaines. It reduces flood risk of the leveed area within Des Plaines and Park Ridge, Illinois to over 1,000 structures. The levee was constructed in phases from 1999 to 2011 by IDNR with U.S. Army Corps of Engineers (Corps) review. It consists of a compacted clay embankment about 2,500 feet long near Rand Road, concrete floodwall about 2,100 feet long along the river, and clay blanket along a railroad about 3,800 feet long. The I-294 Tollway also acts as part of the levee. There are two road closure gates (Rand Rd & Ballard Rd) which are closed during more extreme events. One large pump station pumps forces drainage from Farmer's Creek into the Des Plaines River during high water, while two other pump stations help reduce interior flooding. Based on USACE economic analysis, Levee 50 has prevented significant damages in the previous two events; over $6 million in July 2017 and $18 million in April 2013.

Performance, Condition, and Risk:

The Corps completed a risk assessment of the Levee 50 System in 2015. The levee has performed well since completion in 2011, including April 2013 when the system was loaded to within 3.5 feet of the levee top. Part of the reason for successful operation of the levee is active local participation from the City of Des Plaines who operates and maintains the project features. The overall condition of Levee 50 is sufficient, but limitations for risk reduction remain. Any given year could result in a flood, which the levee is not designed to handle. Also, since the area is heavily urban with I-294 partially dividing the leveed area, heavy congestion could be realized if an evacuation were necessary.

McCook Levee

McCook Levee is located on the west bank of the Des Plaines River in western Cook County, about 12 miles southwest of Downtown Chicago. The surrounding area is mostly urbanized, with a strong industrial base.

Performance, Condition, and Risk: No data is available on the performance, condition and risk of the levee.

Munster

The Munster Levee System is part of the Little Calumet River Flood Reduction and Recreation Project. The Munster Levee extends from the Illinois-Indiana State Line to Hart Ditch and provides protection to residential and business areas in the Town of Munster (which is not in Cook County). It consists of two levee segments: the Munster and Borman Non-Project Segment (NPS). The Munster segment is operated and maintained by the Local Sponsor, the Little Calumet River Basin Development Commission (LCRBDC), and the Borman NPS is operated and maintained by the Indiana Department of Transportation (INDOT). The 4-mile levee system includes levees, floodwalls, gates, pump stations, and street closures.

Performance, Condition, and Risk:

USACE Chicago District conducted a risk assessment of the Munster Levee in 2014 and the Borman NPS in 2018. The overall risk was considered low. Munster experienced flooding prior to the construction of the federal levees during the 2008 flood of record due to a breach of existing spoil-bank levees. The federal levees have performed well since constructed. The potential flooding from overtopping and prior to overtopping are similar. There are minor performance issues, such as encroachments and vegetation. During the high-water event in 2018, excessive leakage was observed through a section of floodwall east of Calumet Ave. Evacuation effectiveness is good due to the community being very aware of the levee's role in flood risk reduction, good evacuation planning, and effective flood warning systems. However, traffic congestion can be an issue due to high density population. The two levee segments work together to protect over 4,600 people that live and work behind the levee. A breach could result in flooding depths up to 10 feet, loss of life, and $162 million in economic damages. The Borman NPS is a robust highway embankment with a wide crest that is much higher than the required design elevation. There would be regional impacts from flooding of the Frank Borman Expressway (I-80/94), which is one of the most heavily used truck routes in the United States.

5.1.3 Regulatory Oversight

The potential for catastrophic flooding due to dam failures led to the passage of the National Dam Safety Act (Public Law 92-367). The National Dam Safety Program requires a periodic engineering analysis of every major dam in the country. The goal of this FEMA-monitored effort is to identify and mitigate the risk of dam failure to protect the lives and property of the public.

The National Levee Safety Act of 2007 established the National Committee on Levee Safety, which recommended to Congress the establishment of a national levee safety program, but none currently exists. The recommended program is based on three core concepts (National Committee on Levee Safety, no date):

- National leadership via a national levee safety program that includes an inventory and assessment of all the nation's levees, development of national levee safety standards, comprehensive risk communication and education, and coordination of environmental and safety concerns.
- Strong state levee safety programs that provide oversight, critical levee safety processes, and support for community levee safety activities
- A foundation of well-aligned federal agency programs and processes.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers is responsible for safety inspections of some federal and non-federal dams in the United States that meet the size and storage limitations specified in the National Dam Safety Act. The Corps has inventoried dams; surveyed each state and federal agency's capabilities, practices, and regulations regarding design, construction, operation, and maintenance of the dams; and developed guidelines for inspection and evaluation of dam safety (U.S. Army Corps of Engineers, no date).

The Corps of Engineers inspects and assesses approximately 2,500 levee systems across the country each year (U.S. Army Corps of Engineers, no date); however, that represents only about 10 percent of the nation's levees. None of the levees in the planning area are maintained by the Corps of Engineers; all are the responsibility of state and local agencies.

Federal Energy Regulatory Commission Dam Safety Program

The Federal Energy Regulatory Commission (FERC) cooperates with a large number of federal and state agencies to ensure and promote dam safety. More than 3,000 dams are part of regulated hydroelectric projects in the FERC program. Two-thirds of these are more than 50 years old. As dams age, concern about their safety and integrity grows, so oversight and regular inspection are important. FERC inspects hydroelectric projects on an unscheduled basis to investigate the following:

- Potential dam safety problems
- Complaints about constructing and operating a project.
- Safety concerns related to natural disasters.
- Issues concerning compliance with the terms and conditions of a license.

Every five years, an independent engineer approved by the FERC must inspect and evaluate projects with dams higher than 32.8 feet (10 meters), or with a total storage capacity of more than 2,000 acre-feet.

FERC monitors and evaluates seismic research and applies it in investigating and performing structural analyses of hydroelectric projects. FERC also evaluates the effects of potential and actual large floods on the safety of dams. During and following floods, FERC visits dams and licensed projects, determines the extent of damage, if any, and directs any necessary studies or remedial measures the licensee must undertake. The FERC publication *Engineering Guidelines for the Evaluation of Hydropower Projects* guides the FERC engineering staff and licensees in evaluating dam safety. The publication is frequently revised to reflect current information and methodologies.

FERC requires licensees to prepare emergency action plans and conducts training sessions on how to develop and test these plans. The plans outline an early warning system if there is an actual or potential sudden release of water from a dam due to failure. The plans include operational procedures that may be used, such as reducing reservoir levels and reducing downstream flows, as well as procedures for notifying affected residents and agencies responsible for emergency management. These plans are frequently updated and tested to ensure that everyone knows what to do in emergency situations.

Illinois Department of Natural Resources

The Water Resources Division of the Illinois Department of Natural Resources (IDNR) issues permits for the construction of any structures in a floodway or floodplain (including levees); construction, operation and maintenance of new dams; and the modification, operation, and maintenance of existing dams. Dams are classified into one of three hazard classifications. All dams in the two higher classifications are required to have a permit. Dams in the lower hazard classification require a permit for construction or modification if they meet certain size criteria. Permits are also required for removing dams and transferring ownership of dams (IDNR, 2018). The Water Resources Division also has a Levee Safety Program, which is responsible for issuing permits regarding levees.

5.1.4 Hazard Extent/Intensity

Existing dam classification systems are numerous and vary within and between both federal and state agencies. Although differences in classification systems exist, they share a common thread: each system attempts to classify dams according to the potential impacts from a dam failure or mis-operation, should it occur. The hazard potential classification does not reflect in any way on the current condition of the dam (e.g., safety, structural integrity, flood routing capacity).

State and private classifications are the two primary dam hazard potential classification systems utilized in Cook County. Illinois dam classifications are defined under Ill. Admin. Code tit. 17, § 3702.30)., and used to permit construction, operation, and maintenance of dams by the IDNR Division of Water Resource Management (DWRM). Federal dam safety hazard classifications can be found in FEMA's *Federal Guidelines for Dam Safety Hazard Potential Classification System for Dams* publication.

According to Title 17 Illinois Administrative Code (IAC), dams are categorized by Illinois state dam safety regulators in one of three classes according to the degree of threat to life and property in the event of dam failure:

Class I: Dams that are located where failure has a high probability to cause loss of life or substantial economic loss more than that which would naturally occur downstream of the dam if the dam had not failed. A dam has a high probability for causing loss of life or substantial economic loss if it is located where its failure may cause additional damage to such structures as a home, hospital, a nursing home, a highly traveled roadway, a shopping center, or similar type facilities where people are normally present downstream of a dam. Similar to that of FEMA High Hazard Potential.

Class II: Dams located where failure has a moderate probability of causing loss of life or may cause substantial economic loss more than that which would naturally occur downstream of the dam if the dam had not failed. A dam has a moderate probability for causing loss of life or substantial economic loss if it is located where its failure may cause additional damage to such structures as a water treatment facility, a sewage treatment facility, a power substation, a city park, a U.S. Route, or Illinois Route highway, a railroad or similar type of facilities where people are downstream of the dam for only a portion of the day or on a more sporadic basis. Similar to FEMA Significant Hazard Potential.

Class III: Dams located where failure has a low probability for causing loss of life, where there are no permanent structures for human habitation, or minimal economic loss more than that which would naturally occur downstream of the dam if the dam had not failed. A dam has a low probability for causing loss of life or minimal economic loss if it is located where its failure may cause additional damage to agricultural fields, timber areas, township roads or similar type areas where people are seldom present and where there are few structures. Similar to FEMA Low Hazard Potential.

FEMA categorizes dams according to the degree of adverse incremental consequences of a failure or misoperation of a dam. The National Inventory of Dams uses the federal classification system. Dams are federally categorized into Low, Significant, and High Hazard Potential based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests. Improbable loss of life exists where persons are only temporarily in the potential inundation area.

1. **Low Hazard Potential**: Failure or misoperation results in no probable loss of human life and low economic and environmental losses. Losses are principally limited to the owner's property.
2. **Significant Hazard Potential:** Failure or misoperation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns.
3. **High Hazard Potential**: Failure or misoperation will probably cause loss of human life.

USACE LEVEE SAFETY ACTION CLASSIFICATION TABLE*

RISK	ACTIONS FOR LEVEE SYSTEMS AND LEVEED AREAS IN THIS CLASS (ADAPT ACTIONS TO SPECIFIC LEVEE SYSTEM CONDITIONS.)	RISK CHARACTERISTICS OF THIS CLASS
VERY HIGH (1)	Based on risk drivers, take immediate action to implement interim risk reduction measures. Increase frequency of levee monitoring, communicate risk characteristics to the community within an expedited timeframe; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning systems and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as very high priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in very high risk.
HIGH (2)	Based on risk drivers, implement interim risk reduction measures. Increase frequency of levee monitoring; communicate risk characteristics to the community within an expedited timeframe; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as high priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in high risk.
MODERATE (3)	Based on risk drivers, implement interim risk reduction measures as appropriate. Verify risk information is current and implement routine monitoring program; assure O&M is up to date; communicate risk characteristics to the community in a timely manner; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as a priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in moderate risk.
LOW (4)	Verify risk information is current and implement routine monitoring program; assure O&M is up to date; communicate risk characteristics to the community as appropriate; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions to further reduce risk to as low as practicable.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in low risk.
VERY LOW (5)	Continue to implement routine levee monitoring program, including operation and maintenance, inspections, and monitoring of risk. Communicate risk characteristics to the community as appropriate; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning and evacuation procedures; and recommend purchase of flood insurance.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in very low risk.
NO VERDICT	Not enough information is available to assign an LSAC.	

*LEVEE RISK IS THE RISK THAT EXISTS DUE TO THE PRESENCE OF THE LEVEE SYSTEM, AND THIS IS THE RISK USED TO INFORM THE DECISION ON THE LSAC ASSIGNMENT. THE INFORMATION PRESENTED IN THIS TABLE DOES NOT REFLECT THE OVERTOPPING WITHOUT BREACH RISK ASSOCIATED WITH THE PRESENCE OR OPERATION OF THE LEVEE SYSTEM.

Dams

Dam failure can be catastrophic to all life and property downstream. The IDNR Dam Safety Program classifies dams and reservoirs in a three-class hazard rating system based on the degree of threat to life and property that would result from a dam failure (State of Illinois, 2016). The following table illustrates the hazard extent of each dam in terms of Storage Capacity, Max Discharge, and Hazard Class, if the data was available.

TABLE: DAMS IN THE PLANNING AREA WITH A HAZARD CLASS

Name	Water Course	City	Storage Capacity (acre-feet)	Max Discharge	Hazard Class
Buffalo Creek Reservoir	Buffalo Creek	Buffalo Grove	720	N/A	I
Upper Salt Creek Structure #2	Tributary of Salt Creek	Palatine	297	9582	I
Touhy Reservoir	Higgin's Creek	Chicago	735	N/A	II
Upper Salt Creek Structure #3	St. Michael's Cemetery Tributary	Rolling Meadows	407	13948	I
Upper Salt Creek Structure #4	Salt Creek	Palatine	429	1300	I
Lake George Dam	Tributary to Butterfield Creek	Matteson	539	870	I
Midlothian Creek Dam	Midlothian Creek	Oak Forest	1,279	8031	I
Thornton Quarry Gap Dam	Thornton Quarry	Thornton	9,900	N/A	I
Busse Woods Res. South Dam	Salt Creek	Elk Grove	17,621	24272	I
Richton Crossing Dam	Tributary to Butterfield Creek	Matteson	53	920	I
Lower Elmhurst Dam	Tributary to Addison Creek-off stream	Elmhurst	93	N/A	I
Cornell Ave. Dam	McDonald Creek	Wheeling	--	N/A	I
Techny Reservoir Dam	W. Fork, N. Branch Chicago River	Glenview	250	N/A	II
Saganashkee Slough 1 Dam	Tributary to Calumet SAG Channel	Lemont	2,379	N/A	II
Bullfrog Lake Dam	Tributary to Des Plaines River	Oak Forest	144	N/A	II
Maple Lake Dam	Tributary to Des Plaines River	Lemont	765	N/A	II
Papoose Lake Dam	Tributary to Mill Creek	Palos Park	143	N/A	II

Tampier Lake Dam	Tributary to Long Run Creek	Lemont	859	N/A	II
Galvins Lake Dam	Tributary to Spring Creek	Carpentersville	120	N/A	II
White Pine Ditch Dam	White Pine Ditch	Arlington Heights	65	N/A	II
Chicago Harbor Lock	Chicago River	Chicago	--	N/A	II
Main St. Triangle Dam	Mill Creek-off-stream	Orland Park	--	N/A	II
Saganashkee Slough 6 Dam	Tributary to Calumet SAG Channel	Hastings	2,375	N/A	II
a. RE=Earth, VA=Arch, PG=Gravity, CN=Concrete					

Based on the U.S. Army Corps of Engineers, when dams are assigned the low (L) hazard potential classification, it means that failure or incorrect operation of the dam will result in no human life losses and no economic or environmental losses. Losses are principally limited to the owner's property. Dams assigned the significant (S) hazard classification are those dams in which failure or incorrect operation results in no probable loss of human life; however, it can cause economic loss, environmental damage, and disruption of lifeline facilities. Dams classified as significant hazard potential dams are often located in predominantly rural or agricultural areas but could be located in populated areas with a significant amount of infrastructure. Dams assigned the high (H) hazard potential classification are those dams in which failure or incorrect operation has the highest risk of causing loss of human life and significant damage to buildings and infrastructure.

Levees
To determine the extent of levee failure, additional data regarding the volume and velocity of water that breaches the levee is needed. The planning team and stakeholders were not able to obtain this data, and future efforts will ensure this information is obtained.

5.1.5 Probability and Frequency

Dams: A dam can fail at any time, given the right circumstances. As a dam ages, the likelihood of failure increases as undesirable woody vegetation on the embankment, deteriorated concrete, inoperable gates, and corroded outlet pipes become problems. Since dam failures are often exacerbated by flooding, the probability of dam failures can be associated with projected flood frequencies. The probability of future dam failure for regulated dams can be reduced by proactive preventative actions in compliance with existing dam safety programs.

Levees: Determining levee failure probability depends on the condition and level of protection that levees provide. FEMA and the U.S. Army Corps of Engineers are working together to make sure that flood hazard maps clearly reflect the flood protection capabilities of levees, and that the maps accurately represent the flood risks posed to areas situated behind them. Levee owners— usually states, communities, or in some cases private individuals or organizations—are responsible for ensuring that the levees they own are maintained according to their design.

5.1.6 Past Events

There is no record of Federal Dam Disaster Declarations in Cook County between 1956-2022 (State of Illinois HMP) 2023.

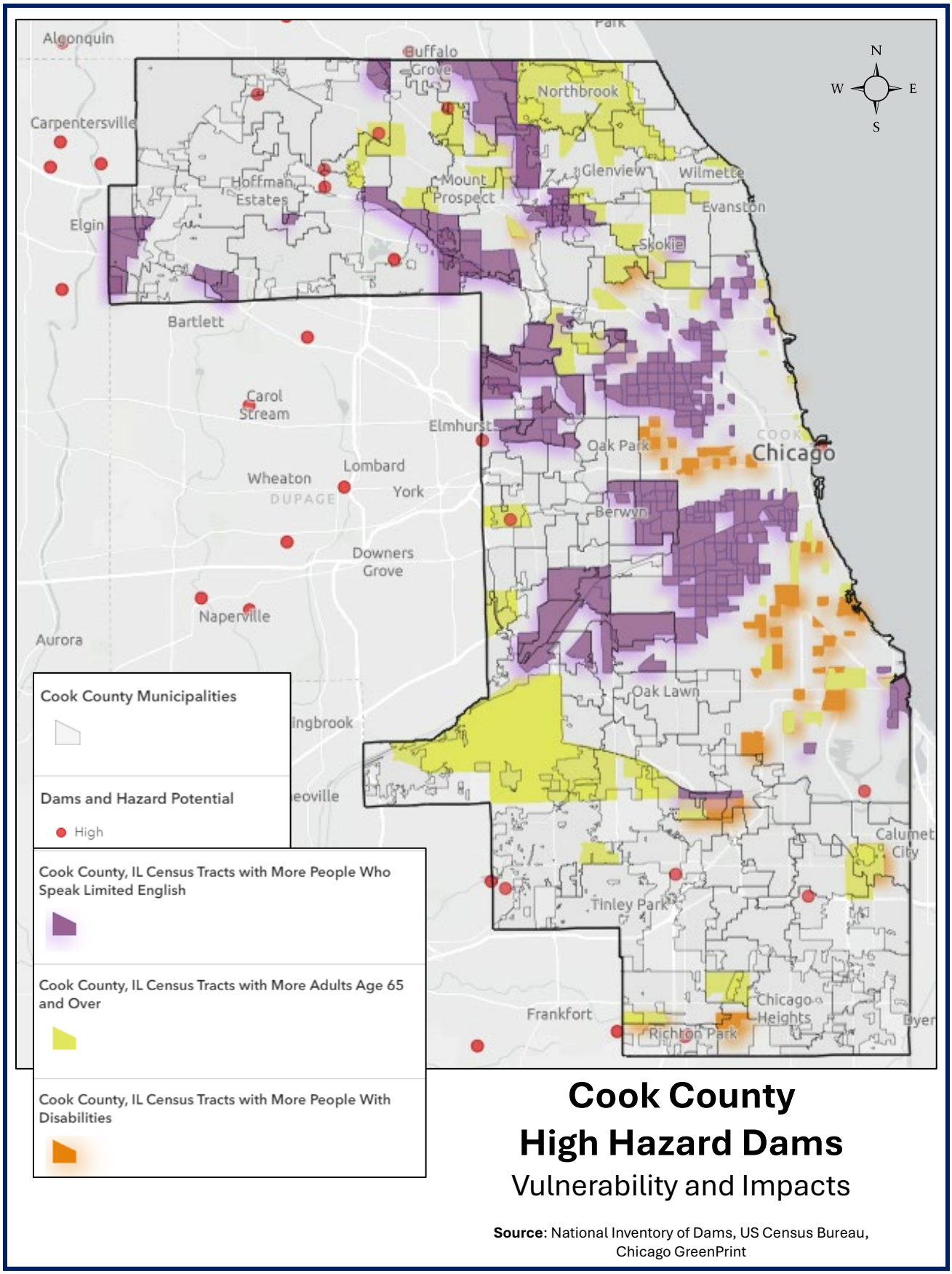
5.1.7 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Moderate**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Minimal**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Moderate**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Significant**
Water Systems Potable Water Infrastructure, Wastewater Management	**Significant**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown	

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

According to FEMA, the public health and life safety impacts of dam or levee failure can be significant and wide-ranging. The primary concerns include:

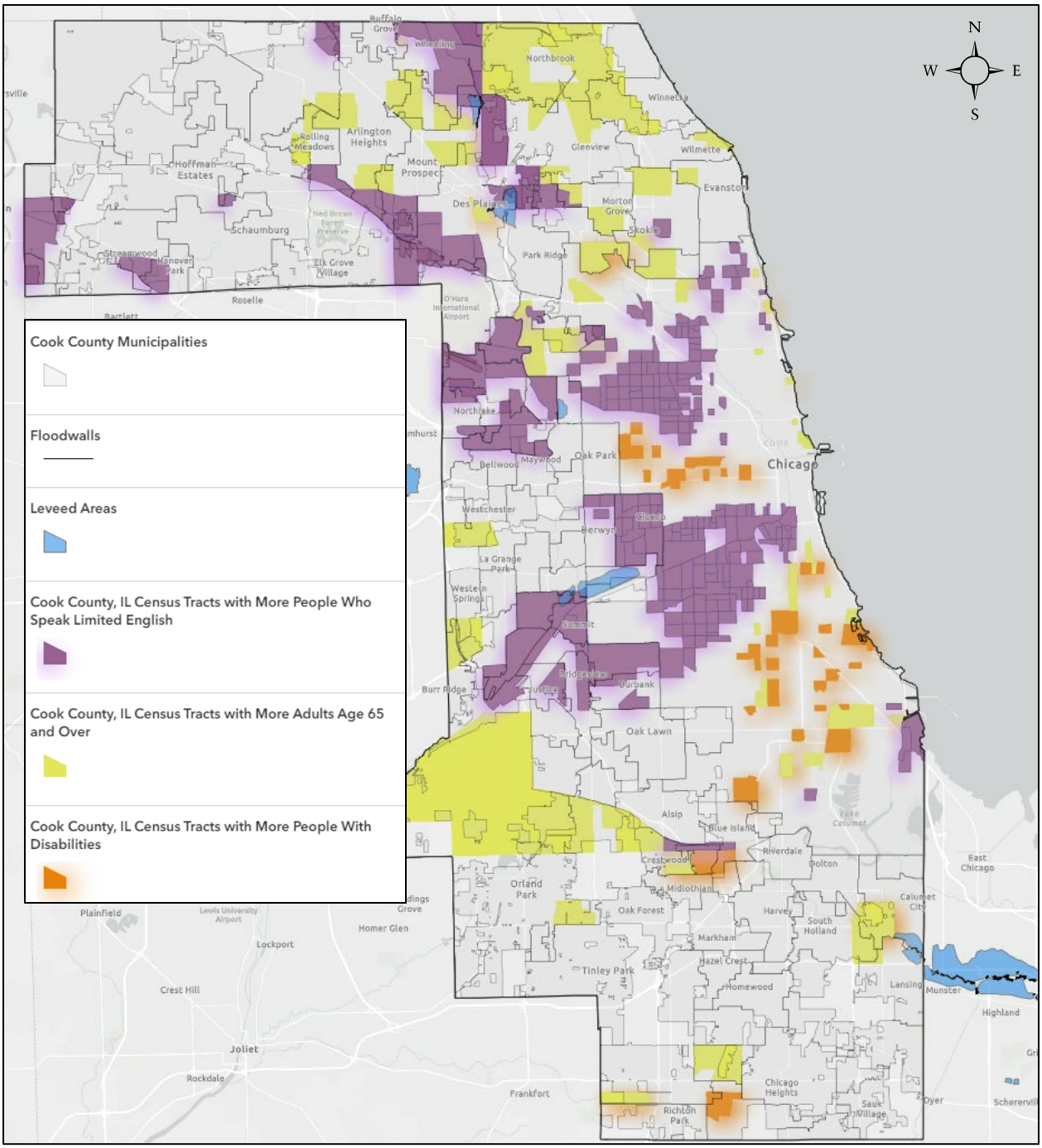
- Loss of Life: This is the most serious impact. A sudden dam or levee failure can lead to fast-moving floods, potentially resulting in loss of life, especially in areas immediately downstream of a dam or in the protected area behind a levee.
- Injuries: The force and unpredictability of floodwaters can result in physical injuries to people in the affected areas.
- Displacement of Populations: Dam or levee failures can lead to the displacement of people from their homes, either temporarily or permanently, due to flood damage. This displacement can have long-term impacts on mental health and community stability.
- Contamination of Water Supplies: Floodwaters can contaminate drinking water sources, leading to waterborne diseases and health complications. This is a particular concern in urban areas or where industrial and agricultural chemicals may be present.
- Sanitation and Hygiene Issues: Flooding can disrupt sewage systems and overwhelm sanitation services, leading to increased risks of diseases, particularly in densely populated areas.
- Disruption of Healthcare Services: Flooding can damage healthcare facilities and disrupt services, making it difficult for injured or ill individuals to receive necessary medical care.
- Mental Health Impacts: The trauma and stress associated with flooding, displacement, loss of property, and potential loss of life can have long-lasting effects on mental health.
- Strain on Emergency Services: Dam or levee failures require significant emergency response efforts, which can strain local resources, especially in smaller or rural communities.



Cook County High Hazard Dams

Vulnerability and Impacts

Source: National Inventory of Dams, US Census Bureau, Chicago GreenPrint



Cook County Levees

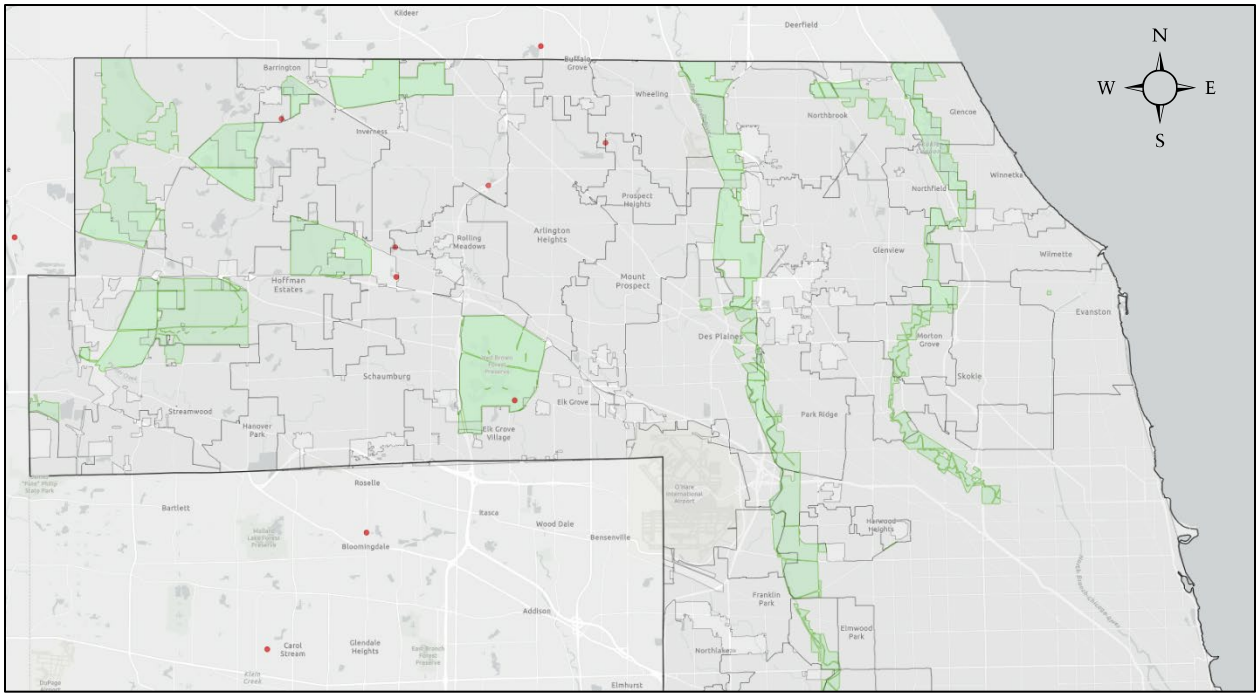
Vulnerability and Impacts

Source: National Inventory of Levees, US Census Bureau, Chicago GreenPrint

Property Damage and Critical Infrastructure

According to FEMA, dam or levee failure can have severe impacts on property and critical infrastructure. These impacts include:

- Extensive Property Damage: The sudden release of water from a dam or levee failure can lead to widespread flooding, resulting in significant damage to residential, commercial, and industrial properties. This includes damage to buildings, homes, and vehicles.
- Critical Infrastructure Damage: Flooding from dam or levee failures can severely impact critical infrastructure such as bridges, roads, railways, and utilities (water and sewage systems, electrical grids, gas lines). This not only causes immediate disruption but can also lead to long-term economic impacts due to the time and cost associated with repairs and reconstruction.
- Agricultural Losses: In rural areas, flooding can inundate farmland, leading to crop destruction, soil erosion, and loss of livestock, which can have a profound impact on local and regional agricultural economies.
- Environmental Contamination: Floodwaters can carry and spread pollutants and hazardous materials from industrial sites, sewage systems, and other sources, leading to environmental contamination of water, soil, and ecosystems.
- Disruption of Services: Essential services such as healthcare, education, emergency services, and transportation can be disrupted, affecting the wellbeing and daily life of the community.
- Economic Impact: The combined effect on property, infrastructure, and services can lead to significant economic losses, both direct and indirect. The cost of repairs, loss of business operations, and decrease in property values can have a lasting impact on affected communities.
- Recovery and Mitigation Costs: The financial burden of recovery and rebuilding can be substantial. In addition to immediate repair costs, there is often a need for investing in mitigation measures to prevent future incidents.



Cook County Municipalities

Dams and Hazard Potential

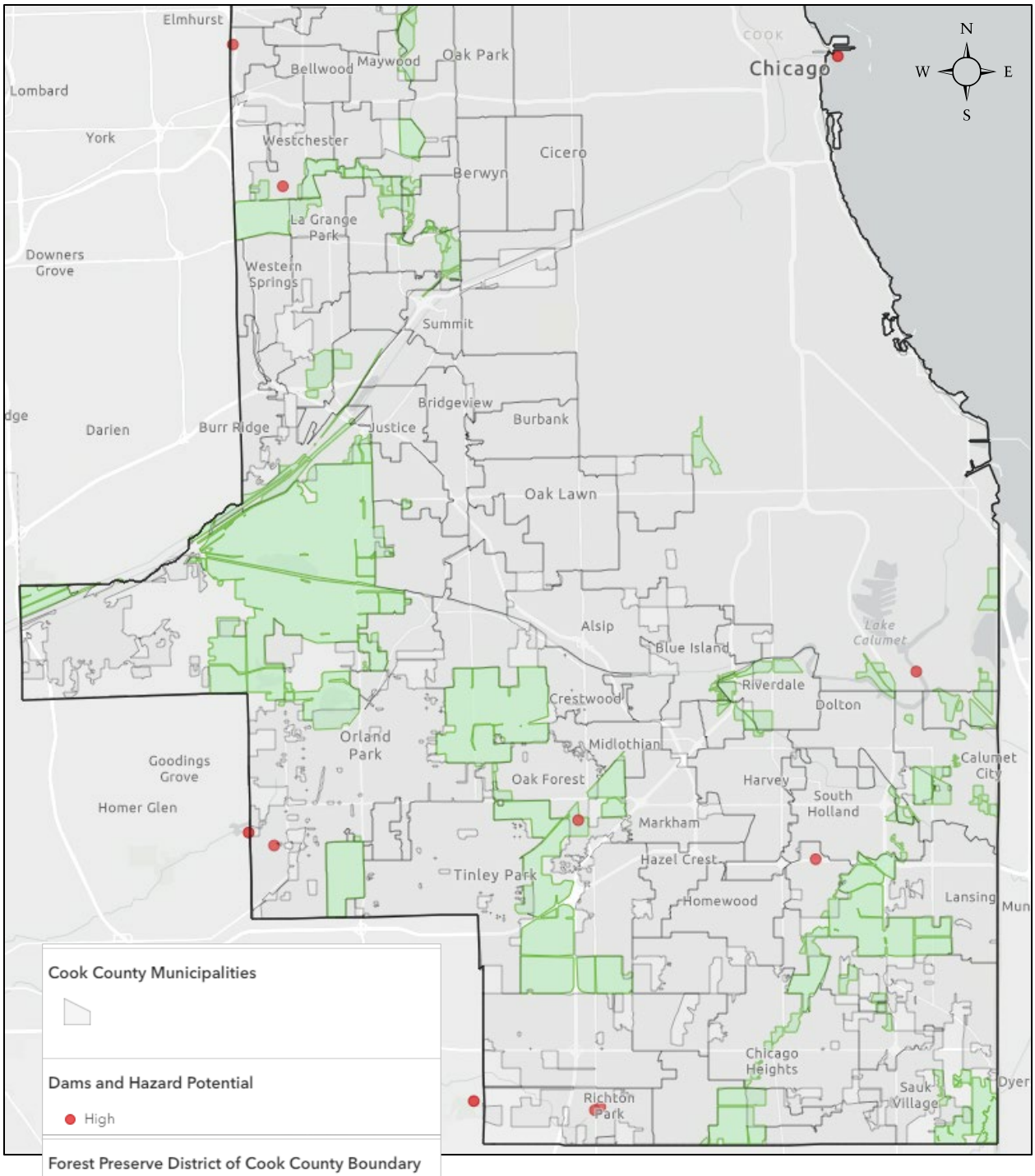
- High

Forest Preserve District of Cook County Boundary

High Hazard Dams in Northern Cook County

Forest Preserves of Cook County

Source: National Inventory of Dams, Cook County



High Hazard Dams in Southern Cook County

Forest Preserves of Cook County

Source: National Inventory of Dams, Cook County

Exposed Structures and Property Value

The HAZUS-MH model estimated that there are 12,762 structures within the mapped dam failure inundation areas in the planning area. The value of exposed buildings is summarized in *Table: Exposure And Value Of Structures In Dam Failure Inundation Areas*. It is estimated that $10.7 billion worth of building-and-contents are exposed to dam failure inundation, representing 0.90 percent of the total building value of the planning area.

TABLE: EXPOSURE AND VALUE OF STRUCTURES IN DAM FAILURE INUNDATION AREAS

Dam	Buildings Exposed	Value Exposed Building	Value Exposed Contents	Total	% of Total Assessed Value
Buffalo Creek Reservoir	4,527	$1,794,369,000	$1,252,212,000	$3,046,581,000	0.26%
Upper Salt Creek Structure #2	3,855	$868,094,000	$658,159,000	$1,526,253,000	0.13%
Touhy Reservoir	490	$765,949,000	$759,825,000	$1,525,774,000	0.13%
Upper Salt Creek Structure #3	1,842	$1,295,532,000	$1,030,007,000	$2,325,539,000	0.19%
Upper Salt Creek Structure #4	2,048	$1,293,667,000	$990,251,000	$2,283,918,000	0.19%
Total	**12,762**	**$6,017,611,000**	**$4,690,454,000**	**$10,708,065,000**	**0.90%**

Land Use in the Inundation Zones

Some land uses are more vulnerable to dam failure inundation, such as single-family homes, while others are less vulnerable, such as agricultural land or parks. *Table: Land Use In The Buffalo Creek Reservoir And Touhy Reservoir Dry-Weather Inundation Zones* and *Table: Land Use Within The Upper Salt Creek Dams Dry-Weather Inundation Zones* show the existing land use of all areas in the modeled dam failure inundation zones. The estimated portion of the inundation zone that contains vacant, developable land ranges from 8 to 17 percent for the five dams evaluated.

TABLE: LAND USE IN THE BUFFALO CREEK RESERVOIR AND TOUHY RESERVOIR DRY-WEATHER INUNDATION ZONES				
Land Use Classification	**Buffalo Creek Reservoir**		**Touhy Reservoir**	
	Area (acres)	**% of total**	**Area (acres)**	**% of total**
Agricultural	5	0.8	0	0.0
Commercial	67	10.1	12	6.3
Education	29	4.3	Less than 1	0.2
Industrial	50	7.4	13	7.2
Institutional	12	1.8	Less than 1	0.1
Open Space	126	18.8	12	6.4
Residential	228	34.2	21	11.3
Utility/Right of Way	34	5.2	103	56.2
Vacant	117	17.4	23	12.3
Total	**668**	**100.0**	**184**	**100.0**

Source: CMAP land-use inventory were aggregated; categories representing major water features were excluded.

TABLE: LAND USE WITHIN THE UPPER SALT CREEK DAMS DRY-WEATHER INUNDATION ZONES						
Land Use Classification	**Upper Salt Creek Structure #2**		**Upper Salt Creek Structure #3**		**Upper Salt Creek Structure #4**	
	Area (acres)	**% of total**	**Area (acres)**	**% of total**	**Area (acres)**	**% of total**
Agricultural	1	0.2	13	1.1	12	6.3
Commercial	8	2.2	160	14.5	0	0.2
Education	6	2.4	25	2.2	0	0
Industrial	0	0	5	0.5	`13	7.2
Institutional	0	0	2	0.2	0	0.1
Open Space	124	51.9	538	48.7	12	6.4
Residential	81	33.8	250	22.6	21	11.3
Utility/Right of Way	1	0.4	13	1.1	103	56.2

TABLE: LAND USE WITHIN THE UPPER SALT CREEK DAMS DRY-WEATHER INUNDATION ZONES						
Land Use Classification	**Upper Salt Creek Structure #2**		**Upper Salt Creek Structure #3**		**Upper Salt Creek Structure #4**	
	Area (acres)	**% of total**	**Area (acres)**	**% of total**	**Area (acres)**	**% of total**
Vacant	19	8.0	99	9.0	23	12.3
Total	**240**	**100.0**	**1,105**	**100.0**	**184**	**100.0**
Source: CMAP land-use inventory were aggregated; categories representing major water features were excluded.						

The HAZUS analysis indicated a total potential loss of $323,643,000 in the planning area for the five dam failures evaluated. This represents 3 percent of the total exposed property, or 0.03 percent of the total assessed value of the planning area. *Table: Loss Estimates For Dam Failure* summarizes the loss estimates for dam failure.

TABLE: LOSS ESTIMATES FOR DAM FAILURE				
Dam	**Estimated Loss Associated with Dam Failure**			**% of Total Value**
	Structure	**Contents**	**Total**	
Buffalo Creek Reservoir	$22,541,000	$42,767,000	$65,308,000	0.01%
Upper Salt Creek Structure #2	$7,581,000	$10,256,000	$17,837,000	0.00%
Touhy Reservoir	$6,107,000	$13,784,000	$19,891,000	0.00%
Upper Salt Creek Structure #3	$35,624,000	$71,118,000	$106,742,000	0.01%
Upper Salt Creek Structure #4	$40,286,000	$73,579,000	$113,865,000	0.01%
Total	**$112,139,000**	**$211,504,000**	**$323,643,000**	**0.03%**

5.1.8 Economy

No data exists demonstrating the economic impact of past dam or levee failure events within Cook County. However, according to FEMA, dam or levee failures can have severe economic impacts, including destruction of property and infrastructure, leading to costly repairs and loss of business revenue. Agricultural areas may suffer from loss of crops and soil erosion, while the interruption of water supply and quality can affect both businesses and residential areas. The overall economic stability of the affected region can be threatened, necessitating significant recovery and rebuilding efforts, often with long-term financial implications.

5.1.9 Changes in Development and Impact of Future Development

According to FEMA, dam failure or levee failure can significantly impact current and future development in several ways:

- Reassessment of Land Use: After a dam or levee failure, there may be a need to reassess land use in affected areas. This can lead to changes in zoning laws and development regulations, especially in areas deemed high-risk for future flooding.
- Impact on Real Estate Values: The perceived risk of flooding due to potential dam or levee failure can affect real estate values. Properties in areas identified as high risk may see a decrease in value, which can impact both current and future development decisions.
- Changes in Insurance and Financing: The risk of flooding may lead to higher insurance premiums for properties in the affected areas. In some cases, insurance may become difficult to obtain. This can influence development decisions, as the cost and availability of insurance are important factors in real estate development and investment.
- Infrastructure Redesign and Reinforcement: Existing and future infrastructure projects may need to be redesigned to withstand potential flood events. This can include strengthening or raising buildings, bridges, and roads, as well as improving drainage systems.
- Mitigation and Resilience Planning: There may be an increased focus on mitigation and resilience in future development to reduce the impact of potential flood events. This can include creating more green spaces, implementing better water management practices, and using flood-resistant building materials and techniques.
- Shift in Development Focus: In some cases, there might be a shift away from developing in high-risk areas. Development might be directed towards safer areas, potentially leading to changes in urban and regional planning strategies.
- Emergency Preparedness and Response Planning: Future development may need to incorporate improved emergency preparedness and response plans, including evacuation routes, emergency shelters, and communication systems.

5.1.10 Effects of Climate Change of Severity of Impacts

FEMA indicates that climate change can exacerbate the risks associated with dam and levee failures due to increased frequency and severity of extreme weather events. This includes heavier rainfall and more intense storms, leading to greater pressure on these structures. The heightened risk of overtopping or structural failure can result in more severe flooding and damage, necessitating improvements in resilience and emergency planning for affected communities.

Dams and levees in Illinois are on average 57 and 72 years old, respectively. Many of these structures were built using less rigorous engineering standards that may not stand up to extreme precipitation and faster streamflow (State of Illinois HMP) 2023.

Illinois does not currently have a funding program to assist dam owners with dam rehabilitation, although the state is removing aging low head dams (State of Illinois HMP) 2023.

Levees also need frequent maintenance and strengthening, which falls to the owner of the levee. As climate changes while dams and levees do not improve to catch up with changing precipitation and streamflow conditions, high-hazard dam failure has the potential to be catastrophic for areas

downstream, and levee failures could flood cities along the Mississippi and Illinois rivers, where most of the state's levees are located (State of Illinois HMP) 2023.

Dams: Dams are designed partly based on historic patterns and assumptions about a river's flow behavior. Changes in weather patterns can have significant effects on a river's hydrograph used for the design of a dam. If the hygrograph changes suddenly or spasmodically, it is conceivable that the dam can lose some or all its designed margin of safety. When this happens, dam operators may be forced to release stored water earlier in a storm cycle or during other seasons to maintain the required margins of safety. Such releases can increase flood potential downstream.

Dams are constructed with spillways that serve as safety measures to help prevent overtopping of the dam in the event of the reservoir filling too quickly. Spillway overflow events at many large, high hazard dams often are referred to as "design or operations failures," resulting in discharges downstream that may increase the localized flooding potential. Although climate change will not increase the probability of catastrophic dam failure, it may increase the probability and/or magnitude of spillway releases (aka design failures).

Levees: According to the National Levee Database (managed by the U.S. Army Corps of Engineers), climate change can increase the severity and likelihood of levee failure in several ways:

1. Increased Frequency and Severity of Flooding: Climate change is associated with more extreme weather events, including heavier and more frequent rainfall. This can lead to higher river levels and increased pressure on levees, raising the risk of overtopping and failure.
2. Sea-Level Rise: For coastal levees, sea-level rise can lead to more frequent and severe flooding, particularly during storm surges and high tides. This increases the risk of levee failure and the inundation of protected areas.
3. Changing Weather Patterns: Shifts in weather patterns can lead to longer and more severe droughts, followed by intense rainfall. Drought conditions can weaken levee structures, making them more susceptible to failure during subsequent heavy rain events.
4. Erosion and Sedimentation Changes: Altered River flows and increased rainfall can affect erosion and sedimentation patterns. This can undermine the structural integrity of levees or necessitate more frequent maintenance and upgrades.
5. Temperature Changes: Higher temperatures can affect the moisture content of soils, potentially weakening earthen levees. Freeze-thaw cycles in colder climates can also be damaging to the structure of levees.
6. Adaptation and Resilience Needs: As the impacts of climate change become more pronounced, there is a growing need to adapt existing levees to withstand these changes. This may include reinforcing levees, increasing their height, improving drainage systems, and incorporating more resilient design features.

Heavy precipitation leads to both riverine flooding and flash floods as the ground fails to absorb the high volume of precipitation that falls in a short period. Increasing annual precipitation contributes to sustained flooding (Neighborhoods At Risk, 2024).

The table below illustrates 25-year precipitation projections for Cook County.

25-YEAR PRECIPITATION PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience a **10% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.8" increase** (from 36.9" to 37.7") in average annual precipitation.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience a **1% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.1" decrease** (from 37.3" to 37.2") in average annual precipitation.
Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

The table below illustrates future climate indicators for Cook County.

FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation:							
Annual Average Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40”**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation (Wet Days)	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Maximum Period of Consecutive Wet Days	**10 days**	**10 days**	**10 days**	**10 days**	**11 days**	**10 days**	**10 days**
	10-12	9-12	9-12	9-12	9-12	9-12	9-13
Annual Days With:							
Annual Days With Total Precipitation > 1 inch	**4 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**6 days**
	3-5	4-6	4-6	4-6	4-7	4-7	5-9
Annual Days With Total Precipitation > 2 inches	**0 days**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**
	0-1	0-1	0-1	0-1	0-1	0-1	0-2
Annual Days With Total Precipitation > 3 inches	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**
	0-0	0-0	0-0	0-0	0-0	0-0	0-0

Annual Days That Exceed 99th Percentile Precipitation	**5 days**	**6 days**	**6 days**	**7 days**	**7 days**	**7 days**	**8 days**
	5-7	5-8	5-8	6-8	6-9	6-9	7-10
*Days With Maximum Temperature Below 32*F*	**41 days**	**30 days**	**28 days**	**25 days**	**22 days**	**21 days**	**12 days**
	37-44	17-40	21-37	13-36	11-32	10-32	2-24
Source: Climate Mapping for Resilience and Adaptation (2023)							

FEMA NRI Expected Annual Loss Estimates

The FEMA National Risk Index does not assess High Hazard Dams and Levees.

FEMA Hazard-Specific Risk

The FEMA National Risk Index does not assess High Hazard Dams and Levees.

5.2 Drought

5.2.1 Hazard Description

Drought is an expected phase in the climactic cycle of almost any geographical region and is certainly the case in Illinois. Objective and quantitative definitions for drought exist, but most authorities agree that because of the many factors contributing to it. None are entirely satisfactory because their onset and relief are slow and indistinct. According to the National Drought Mitigation Center, drought "originates from a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector." What is clear is that a condition perceived as "drought" in a given location results from a significant decrease in water supply relative to what is "normal" in that area.

Drought Types

- **Meteorological Drought** – Defined as below-normal precipitation over a set period. Often, this type of drought is region-specific based on regional climatology. This drought type is often what is thought of as 'drought.'
- **Agricultural Drought** – This type of drought occurs when a reduction in soil moisture results in unmet demand for crops. This drought type is region-, crop-, and time-specific and usually occurs after meteorological droughts. Agricultural drought can cause significant crop losses and economic disruption for agriculture-dependent communities.
- **Hydrological Drought** – This type of drought is driven by a deficiency of surface and subsurface water resources, often indicated by reduced streamflow, lake or reservoir water levels, and groundwater table heights. Due to the complex hydrological network that feeds surface and subsurface water resources, hydrological drought occurs after meteorological drought.
- **Socioeconomic Drought** – This type of drought occurs when physical water shortages impact individuals or communities. Socioeconomic drought impacts can vary according to an individual's or community's ability to adapt or mitigate.

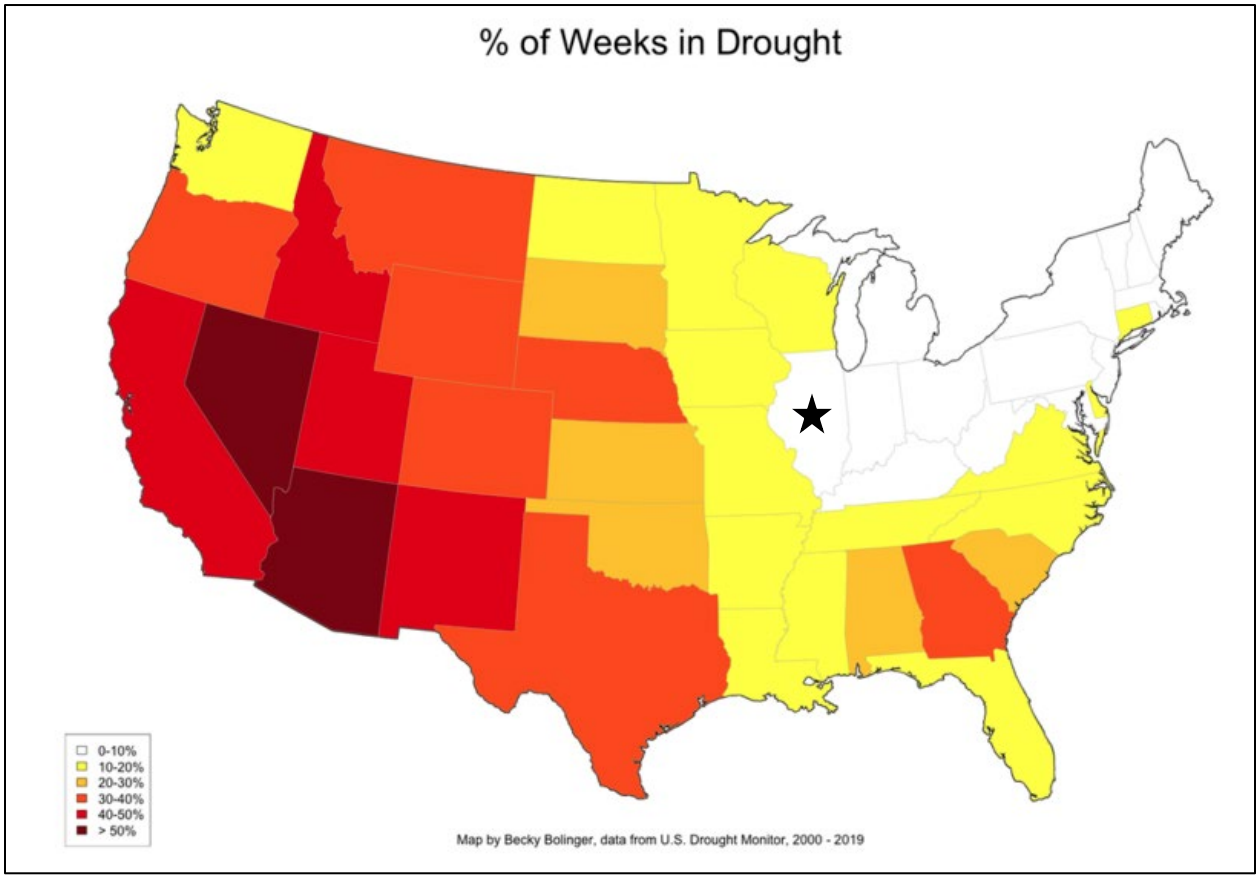
5.2.2 Hazard Location

Drought could occur anywhere in Cook County, likely affecting the entire county.

5.2.3 Hazard Extent/Intensity

Cook County, which is in the State of Illinois, has not historically been severely affected by drought compared to other locations in the United States.

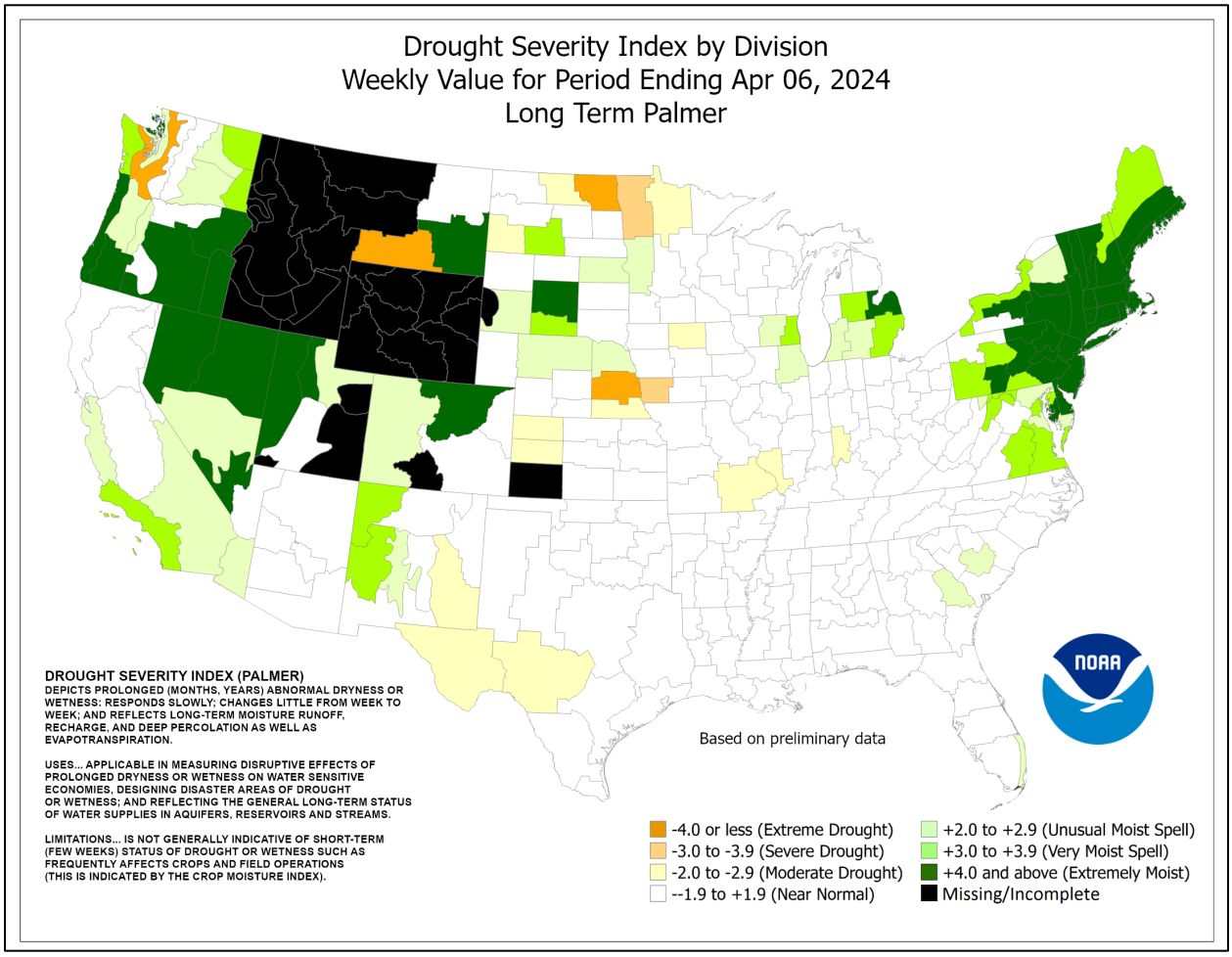
Figure: 2000-2019 Percent Weeks in Drought



The image on the next page displays the precipitation conditions for the United States using the Palmer Drought Severity Index (PDSI), taken from the National Weather Service (NWS). The PDSI quantifies drought in terms of prolonged and abnormal moisture deficiency or excess. This index indicates general conditions and not local variations caused by isolated rain. The PDSI is an important climatological tool for evaluating the scope, severity, and frequency of prolonged periods of abnormally dry or wet weather. In addition, it can help delineate disaster areas and indicate the availability of irrigation water supplies, reservoir levels, range conditions, amount of stock water, and potential intensity of forest fires (NCAR Climate Guide).

The PDSI compares moisture deficiency and excess on a numerical scale that usually ranges from positive five to negative five. Positive values reflect excess moisture supplies, while negative values indicate moisture demands in excess of supplies.

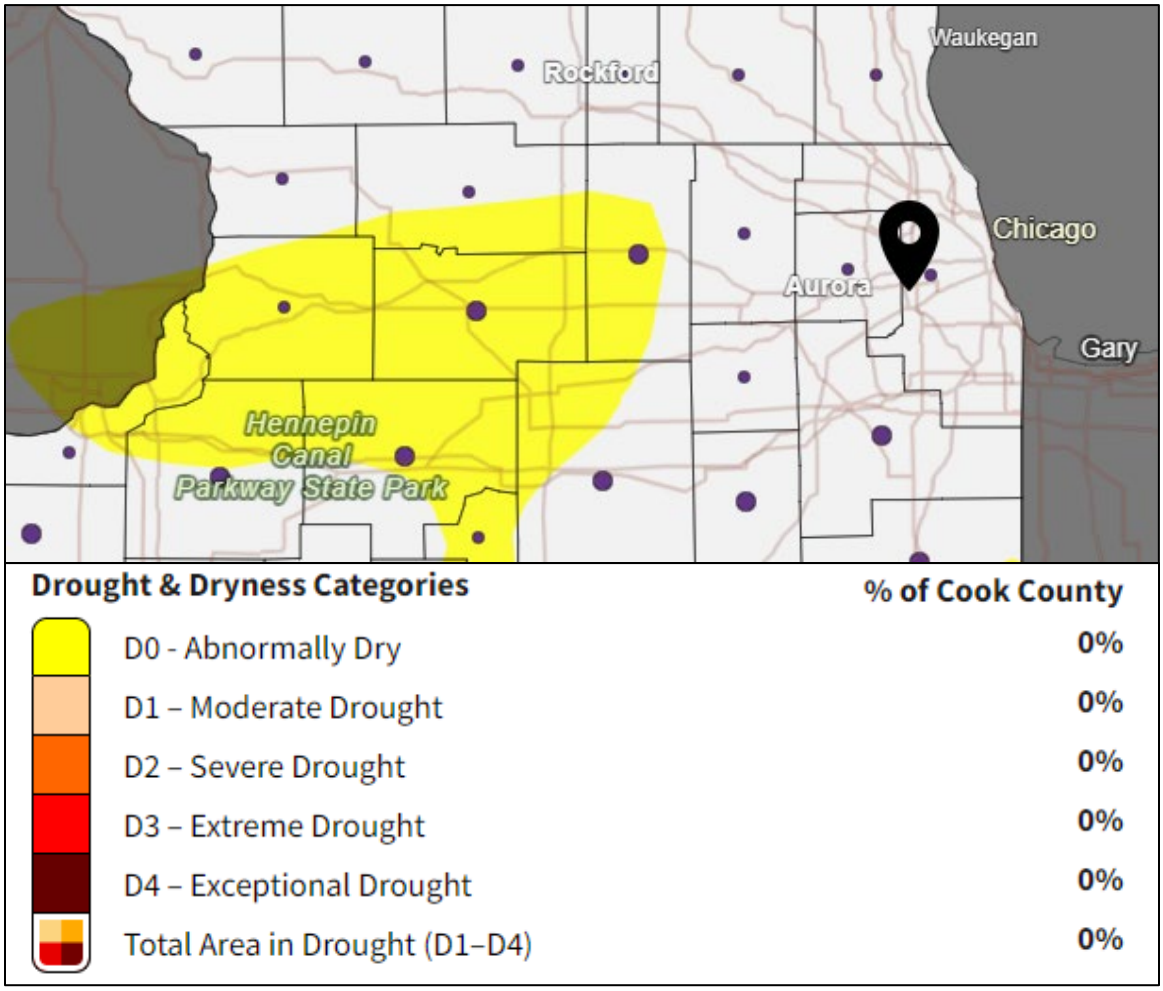
extreme drought	severe drought	moderate drought	mid-range	moderately moist	very moist	extremely moist
-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above



The U.S. Drought Monitor depicts the location and intensity of drought across the country using 5 classifications: Abnormally Dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought (D1–D4).

Category	Description	Example Percentile Range for Most Indicators	Values for Standard Precipitation Index and Standardized Precipitation-Evapotranspiration Index
None	Normal or wet conditions	30.01 or Above	-0.49 or above
D0	Abnormally Dry	20.01 to 30.00	-0.5 to -0.79
D1	Moderate Drought	10.01 to 20.00	-0.8 to -1.29
D2	Severe Drought	5.01 to 10.00	-1.3 to -1.59
D3	Extreme Drought	2.01 to 5.00	-1.6 to -1.99
D4	Exceptional Drought	0.00 to 2.00	-2.0 or less

Figure: US Drought Monitor – Cook County Drought Conditions July 2024



Droughts can be widespread or localized events. The extent of droughts varies both in terms of the extent of the heat and range of precipitation.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT			
Hazard Type	Affected Jurisdictions	Extent (based on historical events)	
		Minimum	Maximum
Drought	County-wide	0	D4 (Exceptional Drought)

5.2.4 Probability and Frequency

"Meteorological drought can begin and end rapidly, while hydrological drought takes much longer to develop and recover. Over the decades, many indices have been developed to measure drought in these various sectors. For example, the U.S. Drought Monitor depicts drought integrated across all time scales and differentiates between agricultural and hydrological impacts (NOAA, 2024)."

The NOAA uses the PDSI to measure drought conditions, illustrated in the images below which illustrate the frequency of drought in Cook County between January 2004 and December 2023. The US Drought Monitor categories for the County between 2000 and 2024 are also displayed below.

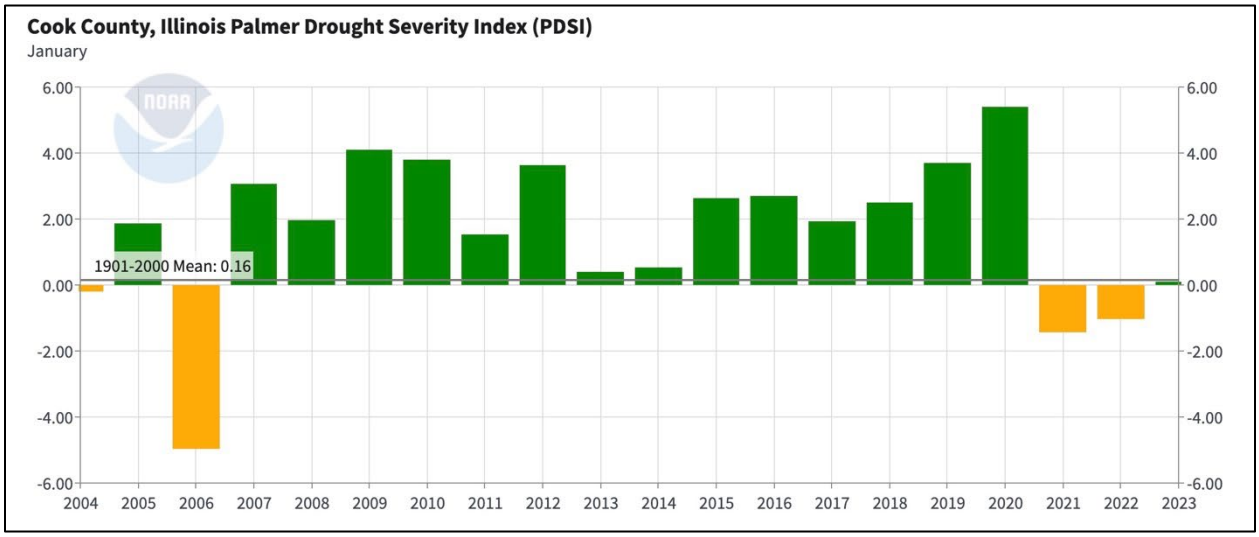
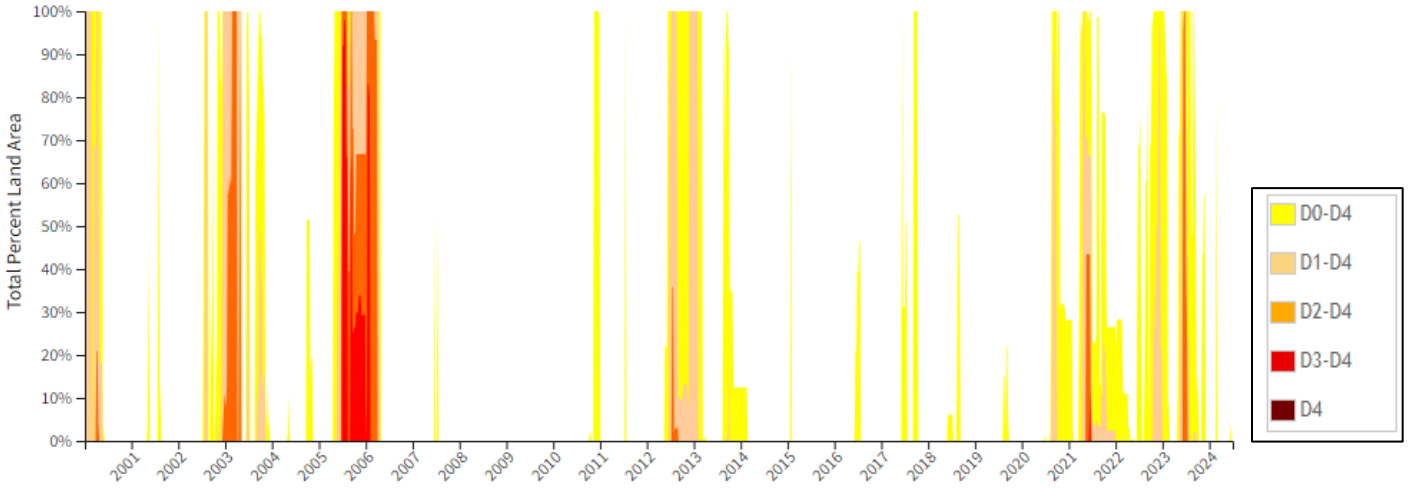


Figure: Cook County Percent Area in US Drought Monitor Categories 2001-2024



Frequency: Between 06/15/2005 and 06/15/2024, Cook County recorded 13 drought events. This equates to an average of 0.65 drought events/year.

(Note: Events are listed in the table on the next page and are based on impacts to an area (zone) of Cook County; impacts to more than one area (zone) will result in multiple entries and were not counted as part of the number of events that informed the average.)

5.2.5 Past Events

Droughts are fairly common in Illinois. In the past century, the state experienced serious drought periods from 1902 to 1915, from 1931 to 1934, and in 1954, 1964, and 1988. The 1930s had the greatest frequency and severity of drought since drought recording using the Palmer Drought Severity Index (PDSI) began in 1895. The worst case was the summer of 1934, with a statewide PDSI of -6.48, followed by the summer of 1931 with -6.39 and 1954 with -6.09. All three of these events fall into the category of extreme drought.

Recent events include drought in 1983 and 1988. In September 1983, all 102 counties were declared state disaster areas because of high temperatures and insufficient precipitation during the summer. In 1988, 54 percent of the state was impacted by drought-like conditions, resulting in disaster relief payments to landowners and farmers exceeding $382 million; however, no state declaration was made.

TABLE: DROUGHT EVENTS IN COOK COUNTY (2005-2023)

Location	County	State	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:							N/A	**0**	**0**	**0.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	06/15/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	08/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	09/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	12/01/2005	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/01/2006	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/01/2006	00:00	CST	Drought	N/A	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	05/18/2021	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	05/18/2021	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	06/01/2021	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	06/01/2021	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K

TABLE: DROUGHT EVENTS IN COOK COUNTY (2005-2023)											
Location	County	State	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	06/13/2023	07:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
SOUTHERN COOK COUNTY (ZO...	SOUTHERN COOK COUNTY (ZO...	IL	06/13/2023	07:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	06/13/2023	07:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	07/01/2023	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
SOUTHERN COOK COUNTY (ZO...	SOUTHERN COOK COUNTY (ZO...	IL	07/01/2023	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	07/01/2023	00:00	CST-6	Drought	N/A	0	0	0.00K	0.00K

5.2.6 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Minimal**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Minimal**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Minimal**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Minimal**

	Water Systems Potable Water Infrastructure, Wastewater Management	**Significant**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown		

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Health: Droughts affect life safety and public health in several ways. Health problems can arise from poor water quality, poor food quality, and increased dust in the air. In addition, droughts make fires more likely, spread more quickly, and make them more challenging. In addition, poor air quality and a lack of water may reduce residents' engagement in recreational activities, reducing overall mental and physical well-being (National Drought Mitigation Center).

Warning Time: Droughts are climatic patterns that occur over long periods of time. Only generalized warning can take place due to the numerous variables that scientists have not pieced together well enough to make accurate and precise predictions.

Empirical studies conducted over the past century have shown that meteorological drought is never the result of a single cause. It is the result of many causes, often synergistic in nature; these include global weather patterns that produce persistent, upper-level high-pressure systems along the West Coast with warm, dry air resulting in less precipitation.

Scientists at this time do not know how to predict drought more than a month in advance for most locations. Predicting drought depends on the ability to forecast precipitation and temperature. Anomalies of precipitation and temperature may last from several months to several decades. How long they last depend on interactions between the atmosphere and the oceans, soil moisture and land surface processes, topography, internal dynamics, and the accumulated influence of weather systems on the global scale.

Property Damage and Critical Infrastructure: Drought has a negligible impact on buildings. Possible losses/impacts to critical facilities include the loss of essential functions due to low water supplies. Severe droughts can negatively affect drinking water supplies. Should a public water system be involved, the losses could total millions if outside water is shipped. Possible losses to infrastructure include the loss of potable water.

Economy: Although no data demonstrates the economic impact of past drought events on Cook County, the most significant financial effect of drought is on agriculture. The table below indicates the agricultural assets impacts currently impacted by drought.

TABLE: COOK COUNTY AGRICULTURE IMPACTED BY DROUGHT	
Acres of Soybean in Drought (D1–D4) in Cook County (estimated)	5,168
Acres of Corn in Drought (D1–D4) in Cook County (estimated)	2,504
Acres of Hay in Drought (D1–D4) in Cook County (estimated)	1,223
Number of Sheep in Drought (D1–D4) in Cook County (estimated)	72
Number of Hogs in Drought (D1–D4) in Cook County (estimated)	28
Source: (NOAA) 2024	

Changes in Development and Impact of Future Development: The Illinois Hazard Mitigation Plan estimated that the annual probability of drought in Cook County is 14% with an estimated $0 annual loss in property or crop damage (Illinois HMP 2018). This estimation demonstrates a higher future probability based on historical records of 9 drought events occurring in the county from 1951 to 2017 and a climatic shift that would increase evaporation rates.

According to the USGS, the primary water use categories are:

- Public Supply
- Domestic
- Irrigation
- Thermoelectric Power
- Industrial
- Mining
- Livestock
- Aquaculture

The U.S. Geological Survey (USGS) collects and releases data every five years on water use. The USGS figures for Cook County show a substantial decrease in the public supply of self-supplied surface water withdrawals from 1985 (1113.29 mgal/d) to 2015 (824.87 mgal/d) even though population numbers in Cook County are similar in 1985 to 2015 (~2.5 million people). The decrease in industrial total self-supplied withdrawals of surface water demonstrates an even greater decline from 232.04 mgal/d in 1985 to 62.5 mgal/d in 2015. In line with the rest of the United States, only thermoelectric power total self-supplied withdrawals have increased and is only from freshwater. Data is not yet available for 2015 however the number increased from 409.18 mgal/d in 1995 to 749.35 mgal/d in 2010 (USGS).

Overall, national water use has declined over the last three decades and experienced a major drop between 2005 and 2010 despite overall national economic gains and an increase in the total population. Water requirements for thermoelectric power production are substantial, representing the single largest use of water — both fresh and saline — in the United States. Water use for agricultural irrigation continued its declining trend in 2010, while irrigated acres continue to increase. A report by Pacific Institute, Water Use Trends in the United States (2015), states that considerable progress has been made in managing the nation's water — but the current pace is not likely to counter the demands of continued population and economic growth, climate change, and increasing

tensions over scarce water resources. While precipitation rates are predicted to increase (especially one-day heavy pour events), evaporation rates as temperature increases and green spaces decline are predicted to increase which would yield a higher frequency of drought events.

While drought is considered a low-risk hazard for Cook County, planners need to consider best practices for land use policies to support water supply sustainability and increase the protection of water resources. Utilizing these practices provides local municipality capability to protect future development from drought.

Effects of Climate Change on Severity of Impacts: According to the University Corporation for Atmospheric Research (UCAR), climate change is causing more extreme weather events, including severe drought. UCAR explains that warmer temperatures cause more evaporation, turning water into vapor in the air and causing drought in some areas of the world. Places prone to drought are expected to become even drier over the following century (UCAR).

Providing projections of future climate change for a specific region is challenging. Shorter-term projections are more closely tied to existing trends, making longer-term projections even more challenging. The further a prediction reaches, the more subject it becomes to changing dynamics. Climate change is already impacting water resources, and resource managers have observed the following:

- Historical hydrologic patterns can no longer be solely relied upon to forecast the water's future.
- Precipitation and runoff patterns are changing, increasing the uncertainty for water supply and quality, flood management, and ecosystem functions.
- Extreme climatic events will become more frequent, necessitating improvement in flood protection, drought preparedness, and emergency response.

According to NOAA, climate change can impact drought conditions by altering precipitation patterns and increasing evaporation rates due to higher temperatures. These changes can lead to more frequent, severe, and prolonged drought periods, affecting water supply, agriculture, natural ecosystems, and urban areas. The shift in climate conditions may necessitate adjustments in water management and conservation strategies to mitigate the adverse effects of drought in Cook County.

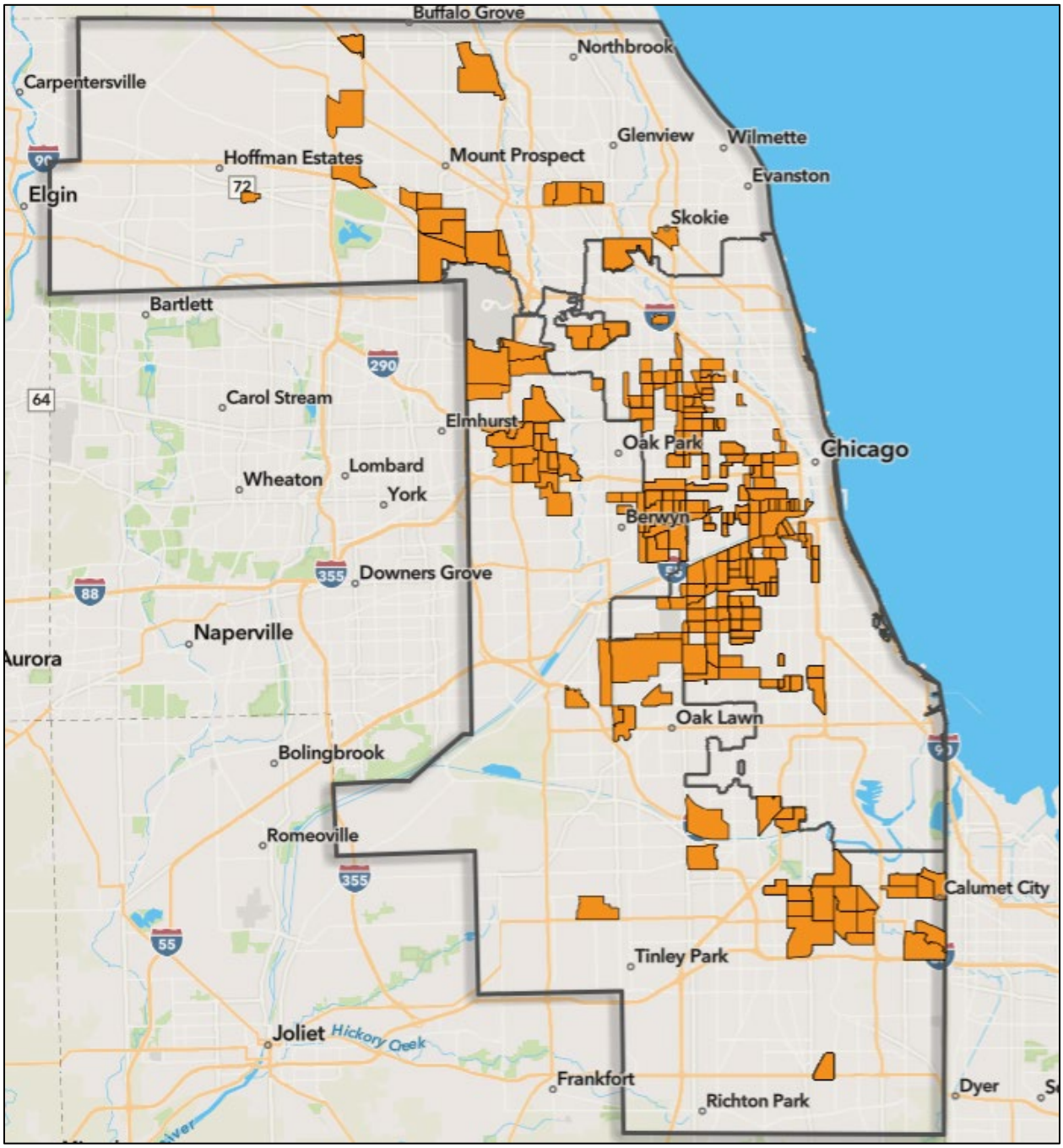
TABLE: 25-YEAR CLIMATE PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience an 115**% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 55°F) in average annual temperatures.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience an **83% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 54°F) in average annual temperatures.

Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation							
Average Annual Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40”**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year with Precipitation	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Days Per Year with No Precipitation	**193 days**	**195 days**	**196 days**	**196 days**	**197 days**	**197 days**	**200 days**
	190-197	187-208	187-212	186-207	184-216	187-208	180-235
Maximum Number of Consecutive Dry Days	**13 days**	**13 days**	**14 days**	**14 days**	**14 days**	**14 days**	**15 days**
	11-14	12-16	12-17	12-16	12-18	12-16	12-20
Temperature Thresholds							
Annual days with Maximum temperature > 90°	**12 days**	**31 days**	**34 days**	**41 days**	**49 days**	**50 days**	**81 days**
	12-18	19-51	21-50	22-69	30-75	26-86	47-113
Annual days with Maximum temperature > 100°	**0 days**	**2 days**	**2 days**	**4 days**	**7 days**	**7 days**	**24 days**
	0-0	0-6	0-7	0-16	1-23	1-16	2-67
Source: Climate Mapping for Resilience and Adaptation (2024)							

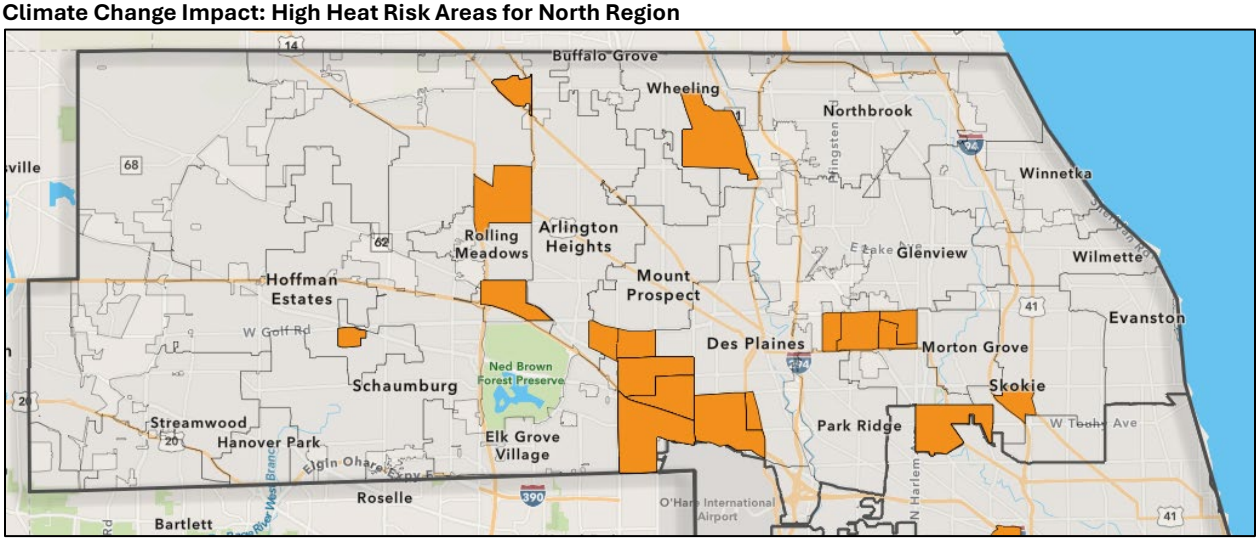
The figure below highlights the highest risk census tracts for extreme heat mitigation and intervention and associated challenges that communities face from climate change. This map examines where areas of high urban heat index, low tree canopy percentage, and high amounts of impervious surface overlap with one of eleven social vulnerability index variables. The resulting data shows census tracts that are at highest risk for extreme heat and contain populations who may be disproportionately affected by extreme heat events caused by climate change.

Climate Change Impact: High Heat Risk Areas for Cook County



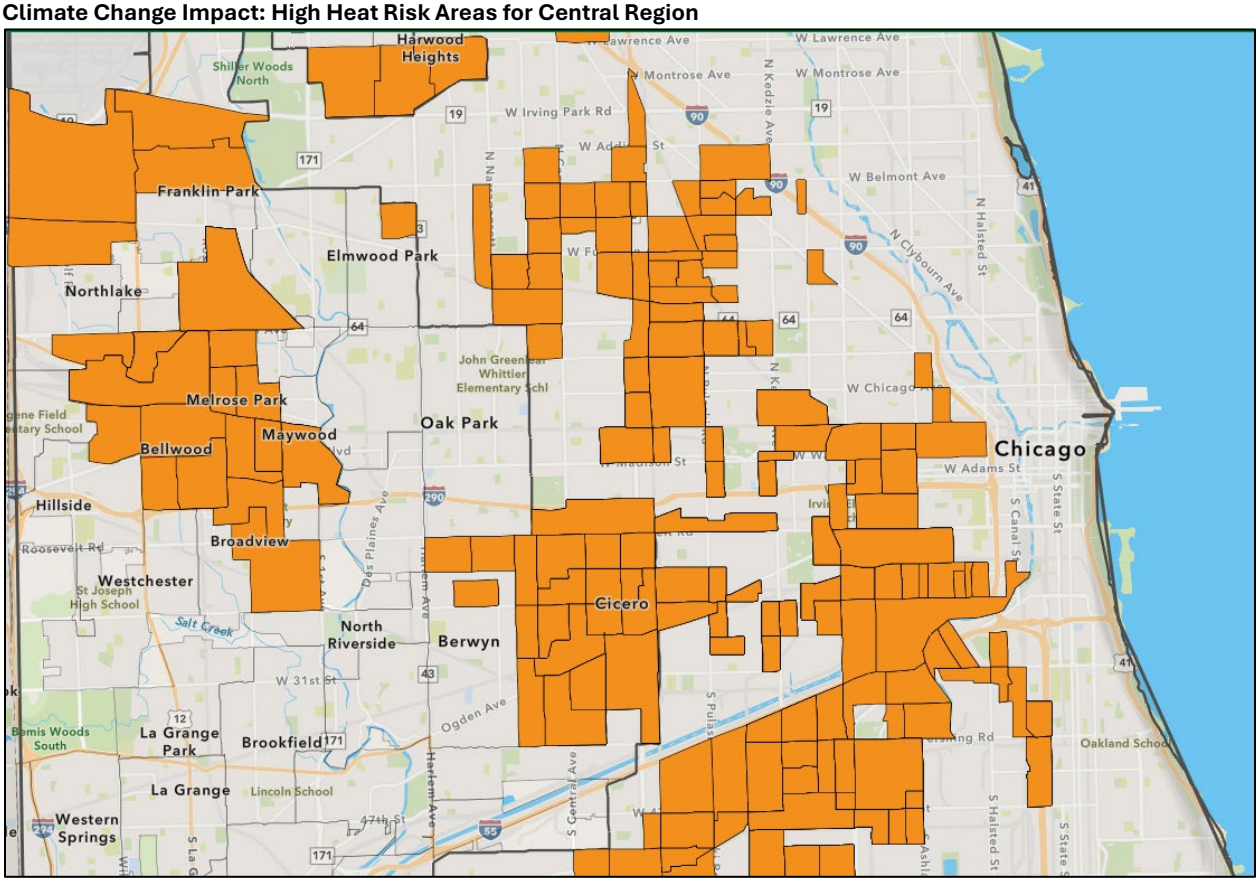
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for North Region



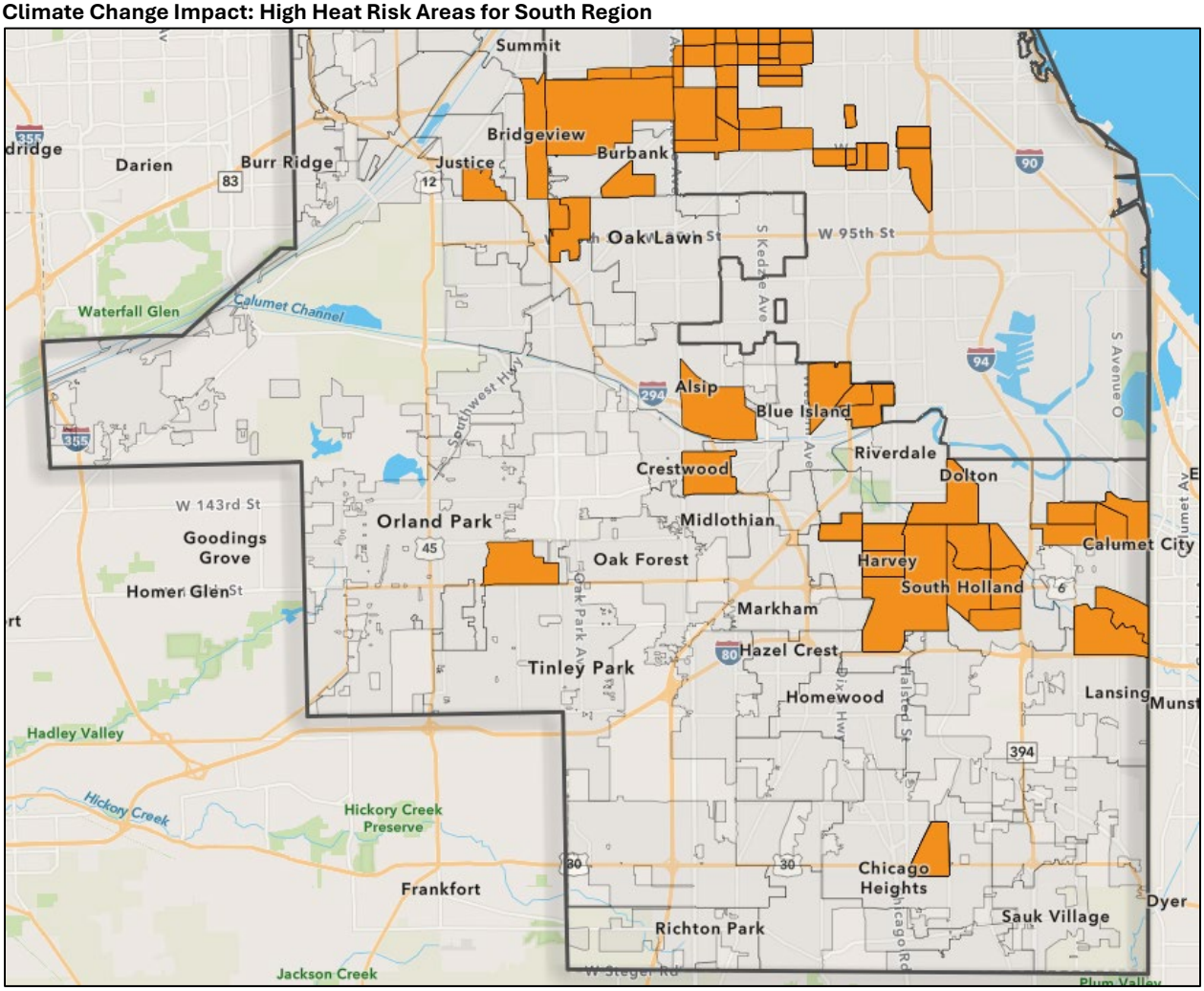
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for Central Region



Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for South Region



5.2.7 FEMA NRI Expected Annual Loss Estimates

TABLE: COOK COUNTY FEMA NRI EXPECTED ANNUAL LOSS TABLE - DROUGHT							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total Value**	**Expected Annual Loss Score**	**Expected Annual Loss Rating**
2.6 events per year	N/A	N/A	N/A	$668	$668	22.0	Very Low

Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.*
Expected Annual Loss *scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*

Period of Record: 2000-2021 (22 years)

Source: FEMA National Risk Index (2024)

5.2.8 FEMA Hazard-Specific Risk Index Table

TABLE: COOK COUNTY FEMA HAZARD SPECIFIC RATING - DROUGHT		
Risk Index Score	**Social Vulnerability Rating**	**Community Resilience Rating**
19.9	Very High	Relatively High

Risk Index Scores: *are a quantitative rating calculated using data for only a single hazard type. Risk Index Scores are calculated using data for only a single hazard type, and reflect a community's Expected Annual Loss value, community risk factors, and the adjustment factor used to calculate the risk value.*

Social Vulnerability Ratings: *are a qualitative rating that describe the community in comparison to all other communities at the same level, ranging from "Very Low" to "Very High." Social Vulnerability is measured using the Social Vulnerability Index (SVI) published by the Centers for Disease Control and Prevention (CDC).*

Community Resilience Ratings: *are a qualitative rating that describe the community in comparison to all other communities at the same level, ranging from "Very Low" to "Very High." Community Resilience is measured using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).*

Source: FEMA National Risk Index (2024)

5.2.9 FEMA NRI Exposure Value

TABLE: COOK COUNTY, IL EXPOSURE VALUE TABLE FOR DROUGHT EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Drought	$16,651,320	N/A	N/A	N/A	$16,651,320

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*

Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million of economic loss (2022 dollars).*

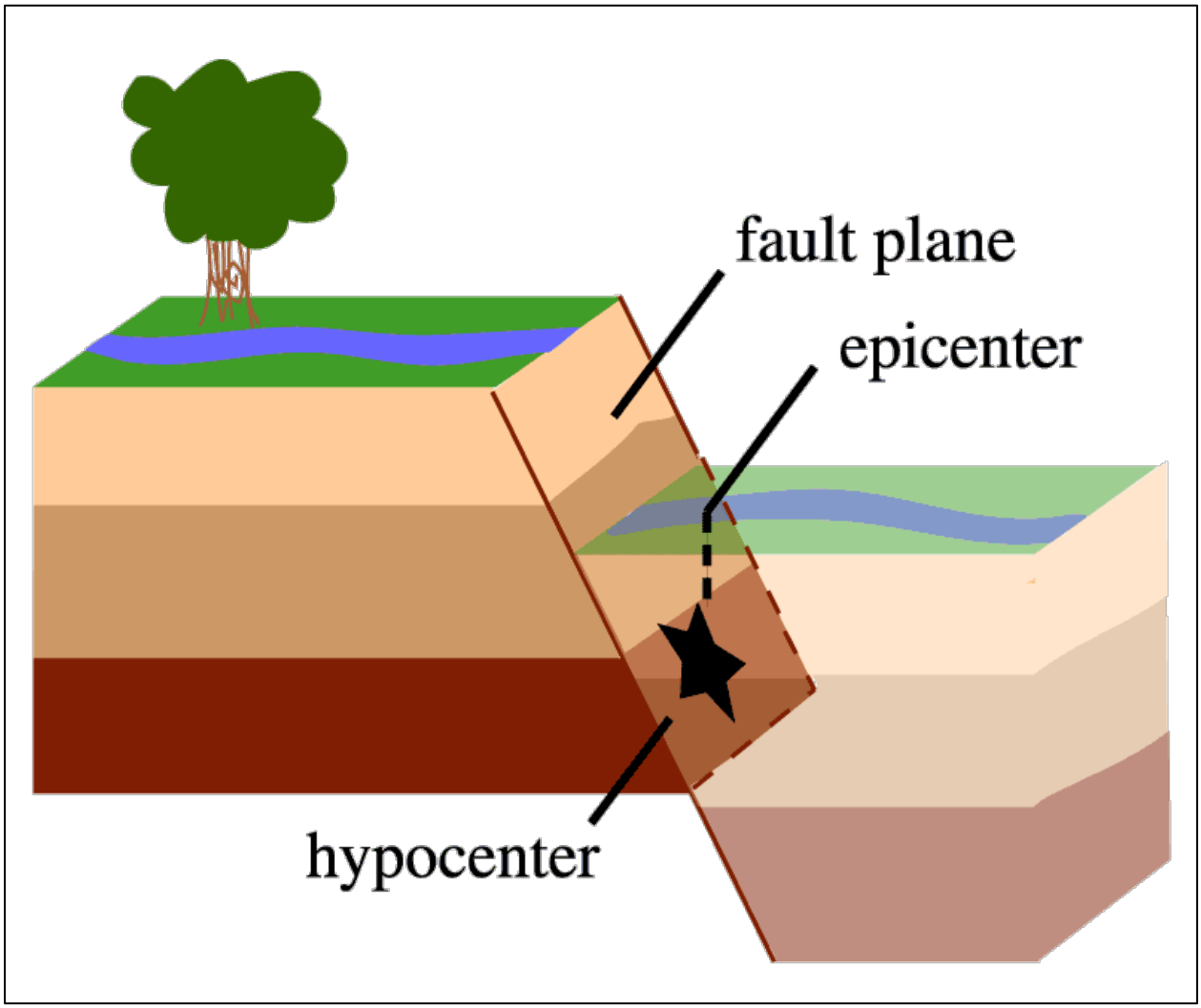
Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

5.3 Earthquake

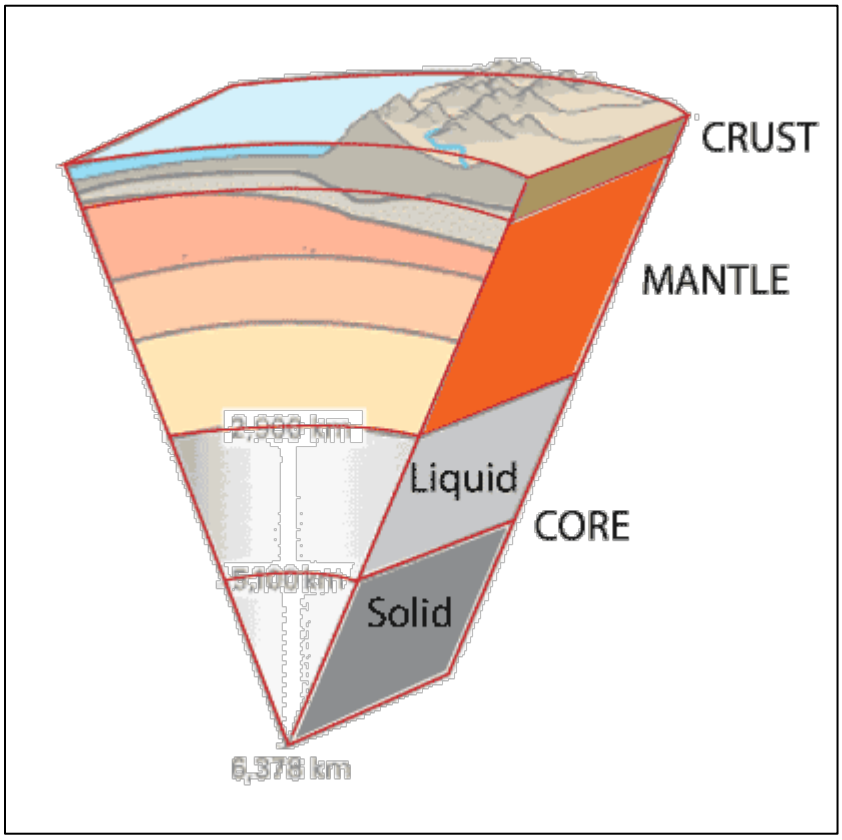
5.3.1 Hazard Description

An earthquake is what happens when two blocks of the earth suddenly slip past one another. The surface where they slip is called the fault or fault plane. The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter (US Geological Survey). This phenomenon is illustrated in the image below.



The earth has four major layers as shown in the image below. These layers are the inner core, outer core, mantle, and crust. The crust and the top of the mantle make up a thin skin on the surface of our planet. But this skin is not all in one piece – it is made up of many pieces like a puzzle covering the surface of the earth. Not only that, but these puzzle pieces keep slowly moving around, sliding past one another, and bumping into each other. These are called puzzle pieces tectonic plates, and the edges of the plates are called the plate boundaries. The plate boundaries are made up of many faults, and most of the earthquakes around the world occur on these faults. Since the edges of the plates

are rough, they get stuck while the rest of the plate keeps moving. Finally, when the plate has moved far enough, the edges unstick on one of the faults and there is an earthquake (US Geological Survey).



Sometimes an earthquake has foreshocks. These are smaller earthquakes that happen in the same place as the larger earthquake that follows. Scientists can't tell that an earthquake is a foreshock until the larger earthquake happens. The largest, main earthquake is called the mainshock. Mainshocks always have aftershocks that follow. These are smaller earthquakes that occur afterwards in the same place as the mainshock. Depending on the size of the mainshock, aftershocks can continue for weeks, months, and even years after the mainshock (US Geological Survey).

5.3.2 Hazard Location

According to USGS, no fault zones are in Cook County; however, numerous reports highlight the fault activity of the Des Plaines Crater located beneath the populated Des Plaines suburb of Chicago.

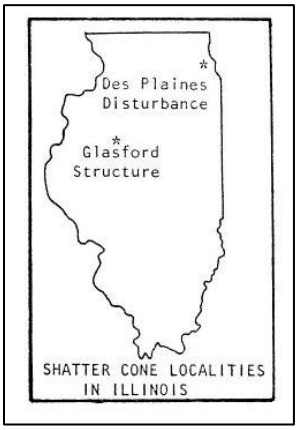
Des Plaines Crater/Disturbance

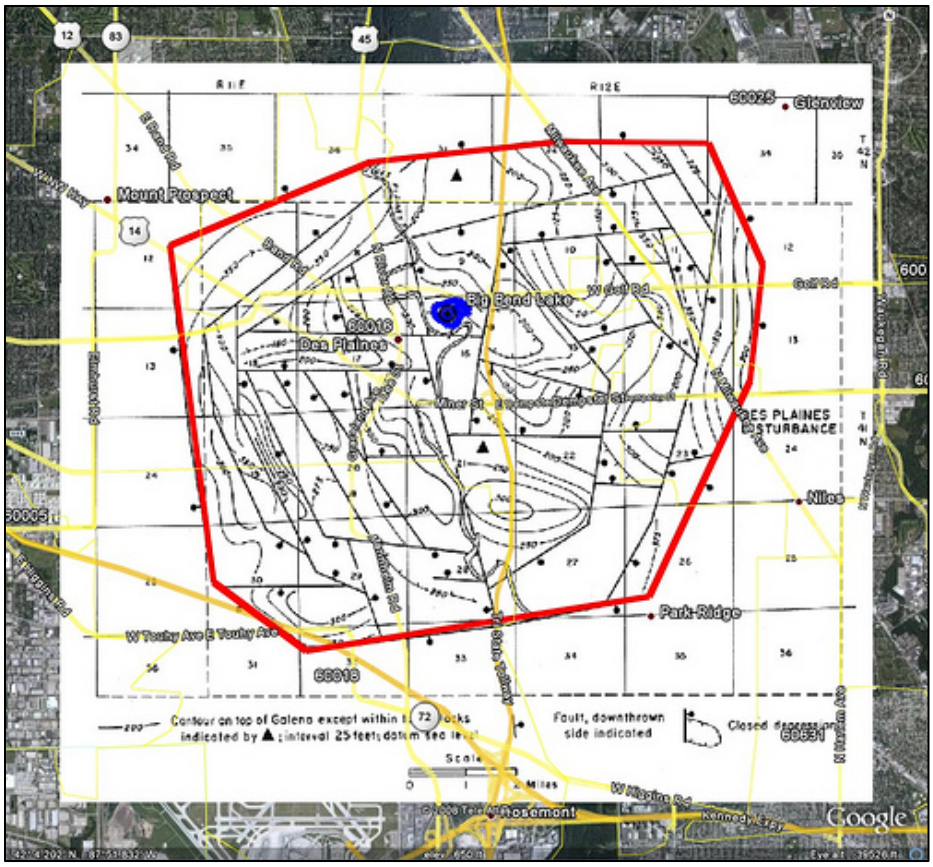
Anomalous geologic conditions in the northwest Chicago suburb of Des Plaines were noted by water well drillers as early as the 1890s. It was first suggested that it was faulting in the area. In 1944, the tectonic map of the United States identified the area of faulting as the "Des Plaines Disturbance", which has generally been used since. The disturbance was labeled a "cryptovolcanic structure" in 1945. The Des Plaines Disturbance is roughly circular and about 5 miles (8 km) in diameter. It lies on

the east flank of the Wisconsin Arch and is surrounded by Silurian bedrock that dips gently eastward (Koeberl *et al* 1996).

The 8-km diameter Des Plaines Structure exhibits complex faulting and shock features such as percussion fractures and strain lamellae, as well as a few shatter cones. The center of the crater lies under Big Bend Lake on the Des Plaines River. Seismic reflection data suggest that there are numerous other faults within the bedrock of Cook County (United States Meteorite Impact Craters). More study is needed to determine the extent and magnitude of this phenomenon as it has not caused significant seismic activity.

Figure: Location of Des Plaines Disturbance





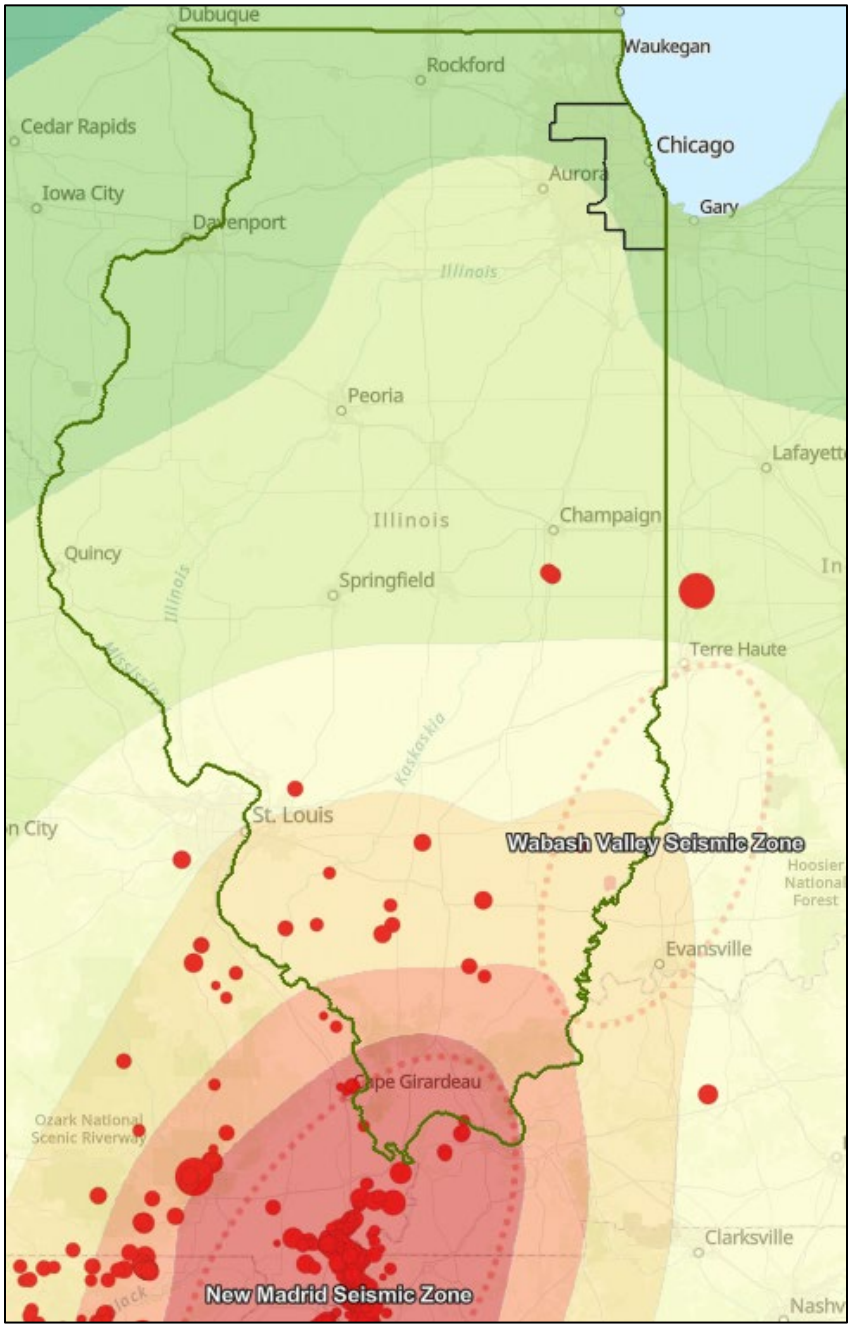
Location and Origin of Seismic Activity

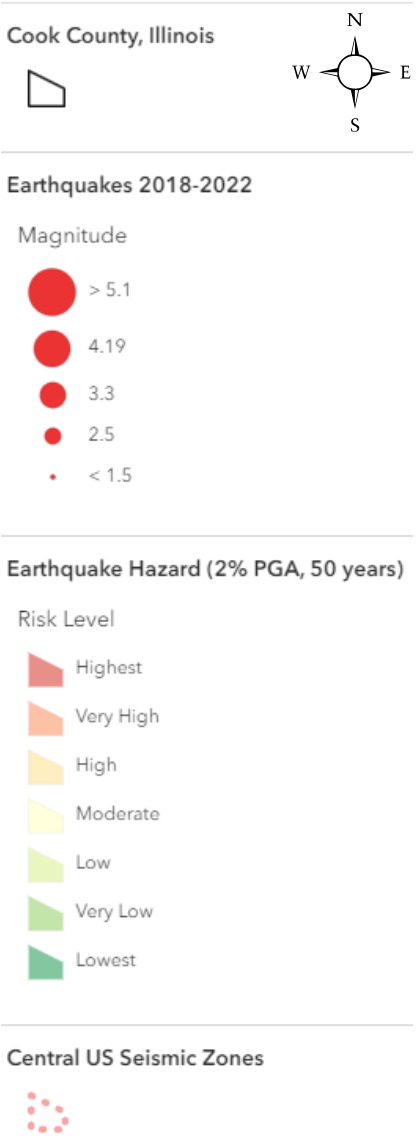
The image on the next page illustrates the seismic hazard in Illinois according to United States Geological Survey (USGS). The image illustrates the location of the New Madrid and Wabash Valley Seismic Zones which are most likely to affect the planning area.

The New Madrid Seismic Zone, in the central Mississippi Valley, extends from northeast Arkansas through southeast Missouri, western Tennessee, and western Kentucky to southern Illinois.

The Wabash Valley Seismic Zone, in southeastern Illinois and southwest Indiana, is capable of producing earthquake events of magnitude similar to those of the New Madrid Seismic Zone. People living in this area experience moderate-sized earthquakes, impacting Illinois, Indiana, and Kentucky. This fault system is about 55 miles long and 31 miles wide. It consists of a series of parallel, high-angle normal faults. The easternmost faults extend into Indiana.

Figure: New Madrid and Wabash Valley Seismic Zones and Past Seismic Events





Earthquake Risk for Cook County

Source: USGS, Central United States Earthquake Consortium

Fault Lines

The figure below shows the major fault systems and other seismic structural features of Illinois and surrounding areas.

Figure: Faults in Illinois (ISGS)

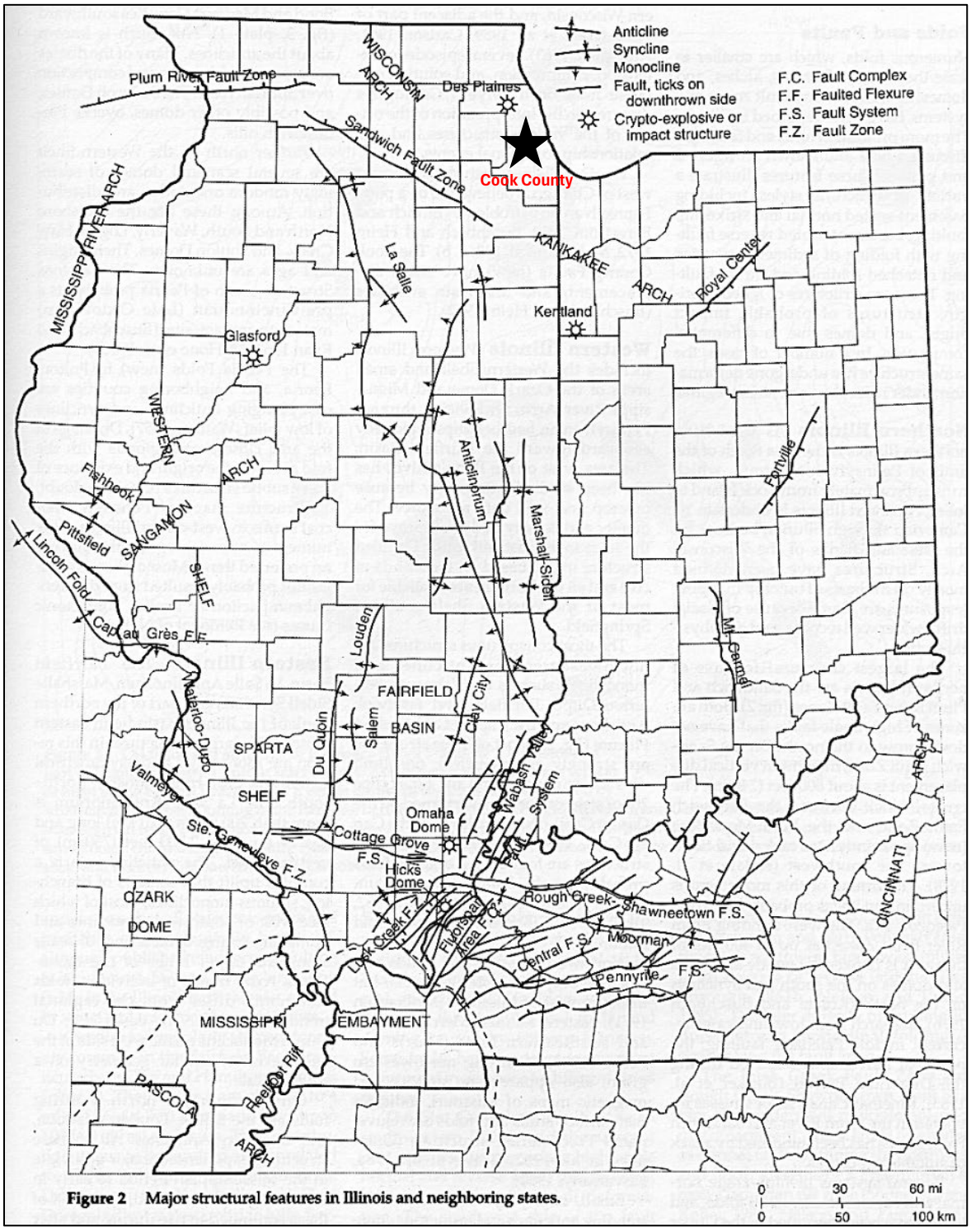


Figure 2 Major structural features in Illinois and neighboring states.

Faults in Close Proximity to Cook County

The Sandwich Fault Zone extends northwesterly from near Manhattan, Will County, to near Oregon, Ogle County, a distance of about 85 miles. Drilling samples from exploratory borings and water wells, drillers' logs, geophysical logs, refraction seismography, earth resistivity profiles, and outcrop studies indicate that the fault zone is about one half to two miles wide and is upthrown to the south throughout most of its extent. The fault zone has a maximum cumulative displacement of about 800 feet at its midpoint in southeastern De Kalb County. At the eastern end, in Will County, the fault zone is downthrown to the south with a total displacement of about 150 feet (The Sandwich Fault Zone of Northern Illinois, 1978).

Earthquakes in Illinois and Surrounding Region

Earthquakes in Illinois originate within the crystalline basement rocks at depths of one to 25 miles, which is below the layers of sedimentary rock where coal, oil, and aggregate (gravel) are mined. They occur in the granitic rocks far below the sedimentary layers of rock where known faults are mapped. The earthquake vibrations move out away from the point of origin (hypocenter or focus) through the bedrock and then up though the overlying soils on top of the bedrock. In the central part of the U.S., the bedrock is flat-lying, old, intact, and strong. Earthquake vibrations travel very far through material such as this in comparison to the young, broken, weak bedrock of the west coast. Because of this difference, central U. S. earthquakes are felt and cause damage over an area 15 to 20 times larger than California earthquakes with similar magnitudes (Illinois State Hazard Mitigation Plan, 2018).

The hazard risk for earthquakes is much more prevalent in Southern Illinois closer to the New Madrid fault, whereas Cook County is located far enough North that the hazard risk is much less.

5.3.3 Hazard Extent/Intensity

The severity of an earthquake can be expressed in terms of both *intensity* and *magnitude*. However, the two terms are quite different, and they are often confused. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. It varies from place to place within the disturbed region depending on the location of the observer with respect to the earthquake epicenter. Magnitude is related to the amount of seismic energy released at the hypocenter of the earthquake. It is based on the amplitude of the earthquake waves recorded on instruments which have a common calibration. The magnitude of an earthquake is thus represented by a single, instrumentally determined value (US Geological Survey).

Earthquake strength has traditionally been measured using the Richter scale, developed by Charles Richter in 1935. The Richter scale went through numerous adjustments since its conception and was eventually replaced by the “Moment Magnitude Scale” for earthquakes larger than 3.5; however, most still refer to both scales as the Richter scale. The Richter magnitude scale, used as an indicator of the force of an earthquake, measures the magnitude, intensity, and energy released by an earthquake with seismographs. Each whole-number increase in magnitude represents a tenfold increase in measured amplitude; as an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value. It is important to note that the Richter Magnitude Scale is not used to express damage (US Geological Survey).

TABLE: THE RICHTER SCALE	
Magnitude	**Description**
< 2.0	Micro earthquakes not felt.
2.0 - 2.9	Minor earthquakes, generally not felt, but are recorded.
3.0 - 3.9	Minor earthquakes, often felt, but rarely cause damage.
4.0 - 4.9	Light earthquakes, noticeable shaking of indoor items, rattling noises, and significant damage is unlikely.
5.0 - 5.9	Moderate earthquakes can cause major damage to poorly constructed buildings over small regions, and possible slight damage to well-designed buildings.
6.0 - 6.9	Strong earthquakes can be destructive in areas up to about 99 miles across populated regions.
7.0 - 7.9	Major earthquakes can cause serious damage over larger regions.
8.0 - 8.9	Great earthquakes can cause serious damage in regions several hundred miles across.
9.0 - 9.9	Great earthquakes, devastating in areas several thousands of miles across.
10 <	Massive earthquakes, never recorded, widespread devastation across vast regions.

The effect of an earthquake on the Earth's surface is called the intensity. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally - total destruction. The Modified Mercalli (MM) Intensity Scale is the common intensity scale used in the United States. This scale is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction. It does not have a mathematical basis; instead, it is an arbitrary ranking based on observed effects. The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the non-scientist than the magnitude because intensity refers to the effects actually experienced at that place (US Geological Survey).

The table below illustrates abbreviated descriptions of the 12 levels of Modified Mercalli Intensity Scale.

TABLE: MODIFIED MERCALLI INTENSITY SCALE	
Level of Intensity	**Observed Earthquake Effects**
I	Not felt except by a very few under especially favorable conditions.
II	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Felt quite noticeably by people indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations are similar to the passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened. Some dishes and windows were broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.

TABLE: MODIFIED MERCALLI INTENSITY SCALE	
Level of Intensity	**Observed Earthquake Effects**
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage is great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage is great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Some well-built wooden structures were destroyed; most masonry and frame structures were destroyed with foundations. Rails bent.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. The rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Earthquakes can trigger other types of ground failures which could contribute to the damage. These include landslides, dam failures, and liquefaction. In the last situation, shaking can mix groundwater and soil, liquefying and weakening the ground that supports buildings and severing utility lines. This is a special problem in floodplains where the water table is relatively high, and the soil is more susceptible to liquefaction (US Geological Survey).

One of the most critical sources of information that is required for accurate assessment of earthquake risk is soils data. Soils along rivers and other bodies of water have higher water tables and higher sand content. As a result, these areas are more susceptible to liquefaction and land shaking. Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking as a result of water filling the space between individual soil particles. This can cause buildings to tilt or sink into the ground, slope failures, lateral spreading, surface subsidence, ground cracking, and sand blows.

NEHRP Soil Maps

NEHRP soil types define the locations that will be significantly impacted by an earthquake. *Figure: NEHRP Soil Classifications of Cook County* shows NEHRP soil classifications in the county.

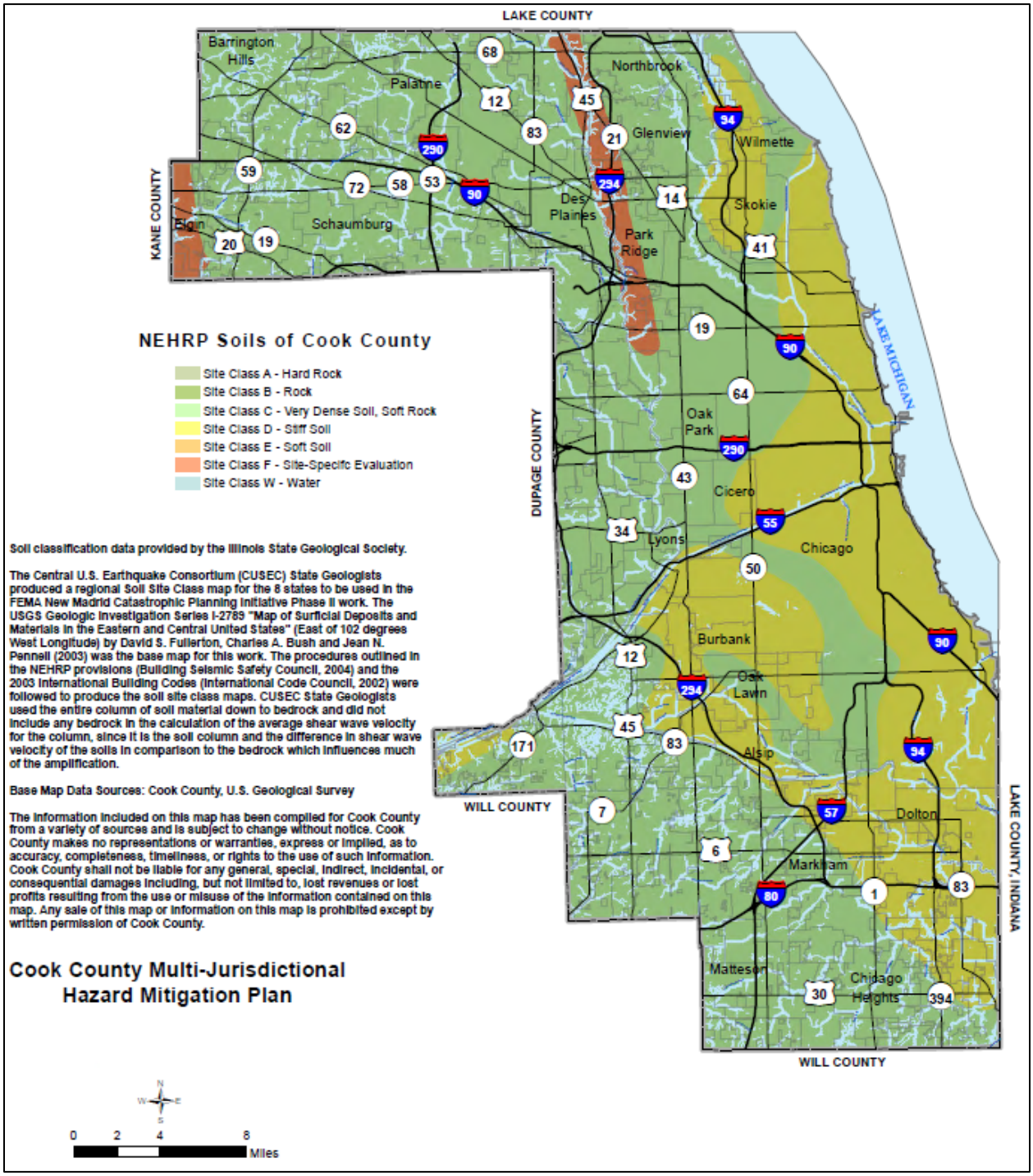
Effect on Soil Types: The impact of an earthquake on structures and infrastructure is largely a function of ground shaking, distance from the source of the quake, and liquefaction, a secondary effect of an earthquake in which soils lose their shear strength and flow or behave as liquid, thereby damaging structures that derive their support from the soil. Liquefaction generally occurs in soft, unconsolidated sedimentary soils.

A program called the National Earthquake Hazard Reduction Program (NEHRP) creates maps based on soil characteristics to help identify locations subject to liquefaction. *Table: NEHRP Soil Classification System* summarizes NEHRP soil classifications. NEHRP Soils B and C typically can

sustain ground shaking without much effect, dependent on the earthquake magnitude. The areas that are commonly most affected by ground shaking have NEHRP Soils D, E and F. In general, these areas are also most susceptible to liquefaction.

TABLE: NEHRP SOIL CLASSIFICATION SYSTEM		
NEHRP Soil Type	**Description**	**Mean Shear Velocity to 30m (m/s)**
A	Hard Rock	1,500
B	Firm to Hard Rock	760-1,500
C	Dense Soil/Soft Rock	360-760
D	Stiff Soil	180-360
E	Soft Clays	< 180
F	Special Study Soils (liquefiable soils, sensitive clays, organic soils, soft clays >36 m thick)	

Figure: NEHRP Soil Classifications of Cook County

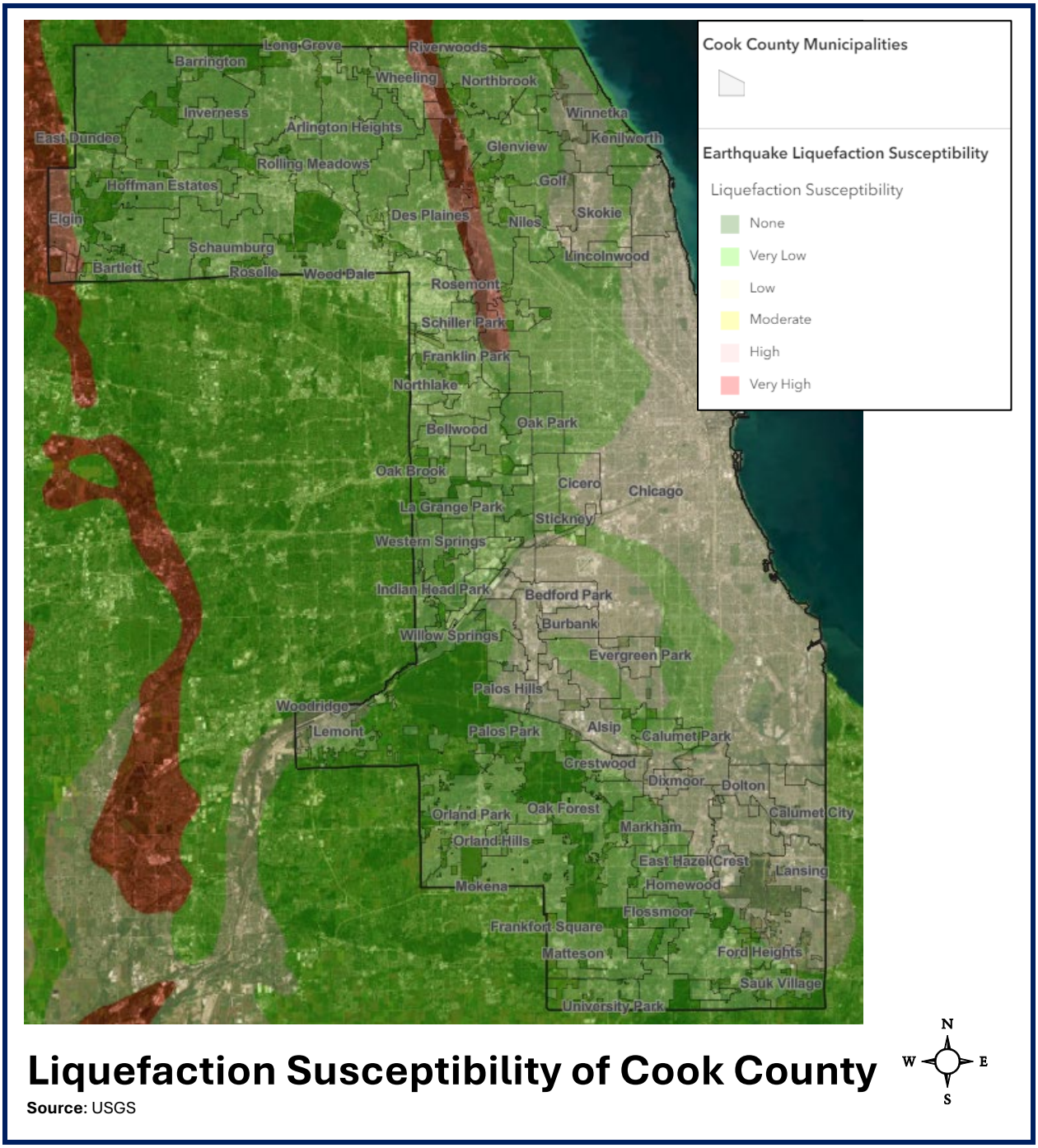


Liquefaction Maps

Soil liquefaction maps are useful tools to assess potential damage from earthquakes. When the ground liquefies, sandy or silty materials saturated with water behave like a liquid, causing pipes to leak, roads and airport runways to buckle, and building foundations to be damaged. In general, areas with NEHRP Soils D, E, and F are also susceptible to liquefaction. If there is a dry soil crust, excess

water will sometimes come to the surface through cracks in the confining layer, bringing liquefied sand with it, creating sand boils. *Figure: Liquefaction Susceptibility of Cook County* shows the liquefaction susceptibility in the planning area.

Figure: Liquefaction Susceptibility of Cook County



Liquefaction Susceptibility of Cook County

Source: USGS

The impacts of an earthquake can be felt be felt throughout the entire county.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT				
Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Earthquake	County-wide	0	4.9	Cook County has experienced three earthquakes ranging from a magnitude of 3 to 4.9. Since the 2018 Hazard Mitigation Plan, Cook County has not experienced any additional significant earthquakes.

5.3.4 Probability and Frequency

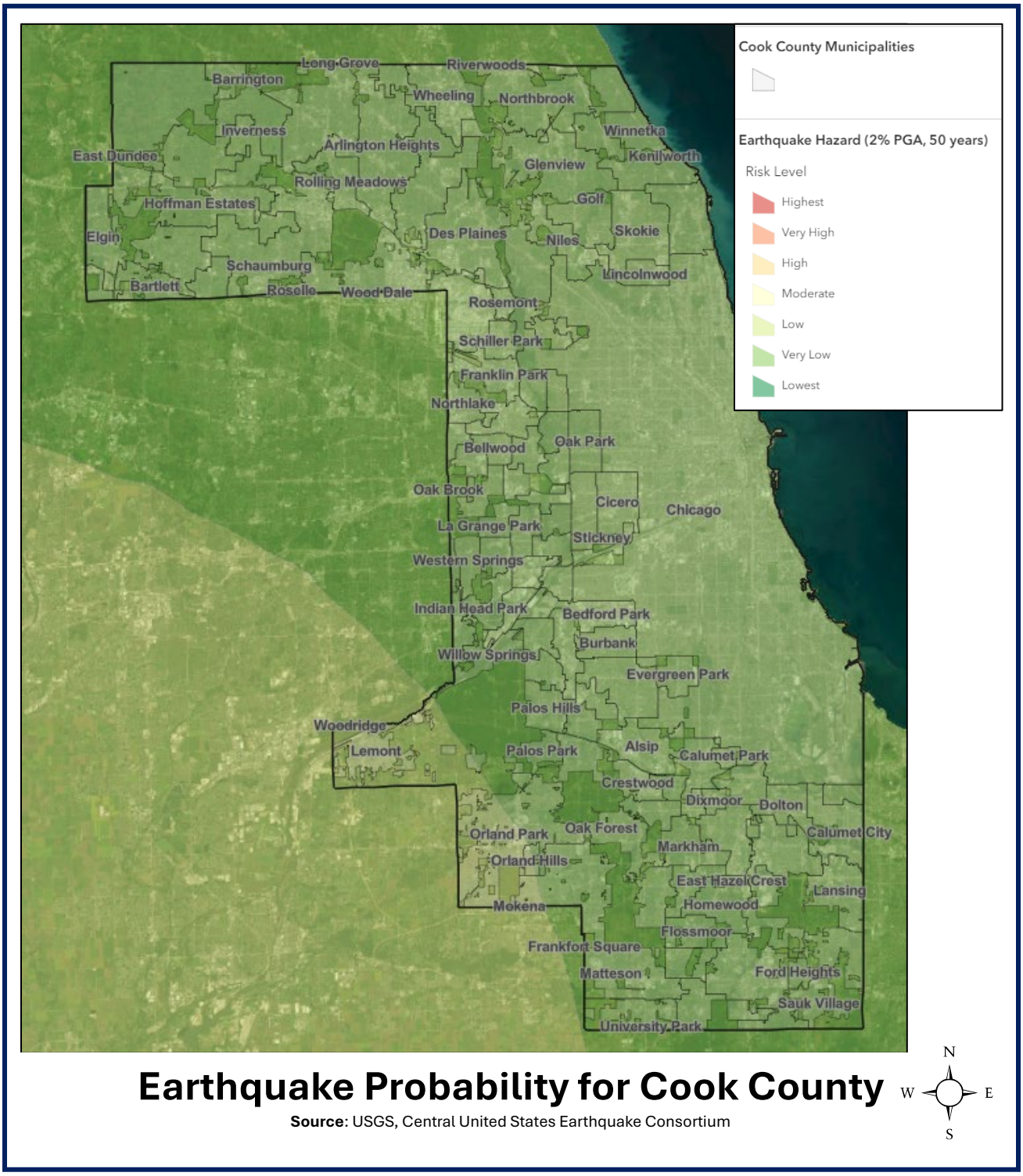
Probability: The United States Geological Survey (USGS) determines the probability of earthquake events through a combination of historical earthquake data, geological and seismological research, and advanced modeling techniques. This process involves analyzing past earthquakes to understand patterns of occurrence, fault line activities, and the distribution of seismic activity across different regions. By studying the behavior of tectonic plates, including their movement and the stress accumulation along faults, scientists can assess where earthquakes are more likely to occur. The USGS also utilizes seismic hazard maps that depict the likelihood of various levels of earthquake shaking in different areas over specific time frames. These maps are based on models that incorporate the rates at which earthquakes occur in different areas and the expected ground shaking from those earthquakes.

In addition, the USGS employs probabilistic seismic hazard analysis (PSHA), a method that quantifies the likelihood of exceeding various levels of earthquake shaking in a given time period, considering the uncertainties inherent in predicting earthquake behavior. PSHA takes into account the location, rate, and magnitude of potential earthquakes, as well as how seismic waves will propagate through the Earth to affect particular locations. The analysis also incorporates the potential for soil amplification and other local effects that can influence ground shaking intensity.

Probabilistic Earthquake Events

A probabilistic seismic hazard map shows the hazard from earthquakes that geologists and seismologists agree could occur. The maps are expressed in terms of probability of exceeding a certain ground motion. The image below illustrates peak ground accelerations having a 2% probability of being exceeded in 50 years, for a firm rock site, which is used by the Central US Earthquake Consortium, and includes Illinois.

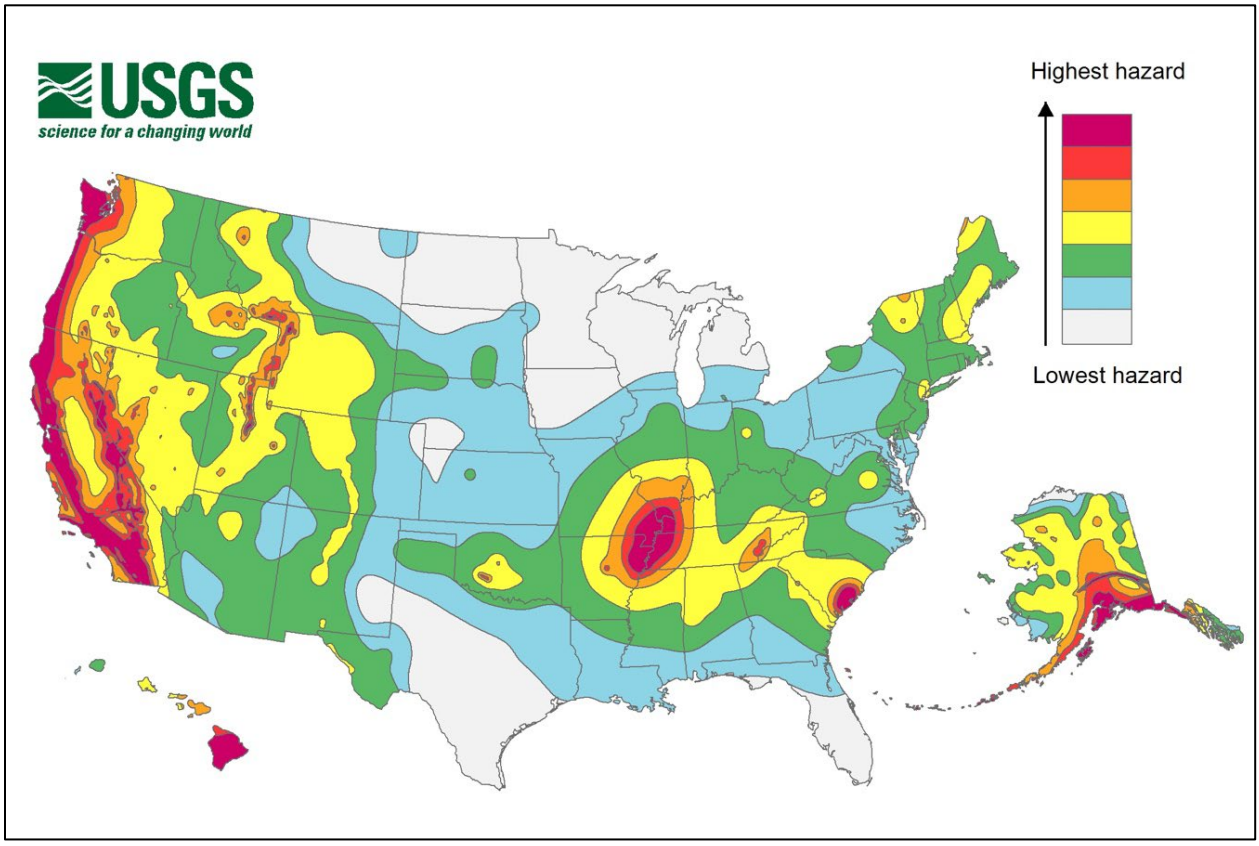
Figure: Earthquake Probability Based on Peak Ground Acceleration for Cook County



Earthquake Probability for Cook County

Source: USGS, Central United States Earthquake Consortium

The 2018 long-term national seismic hazard map is based on the most recent USGS models for the conterminous U.S. (2018), Hawaii (1998), and Alaska (2007). These models are based on seismicity and fault-slip rates and consider the frequency of earthquakes of various magnitudes (US Geological Survey).



Frequency: In the 2023 Illinois State HMP, data from Illinois State Geological Survey provided the number of earthquakes between 1795 to 2022, that were of a magnitude that could be felt or cause possible damage. During this time there were six earthquakes in Cook County as shown in the table below. This averages a frequency of 0.02643172 events per year during this time.

It should be noted that these numbers do not represent the total recorded earthquakes since some counties have had large numbers of small events that were not detected by people (below magnitude 2.0). Earthquakes recorded prior to about 1955 utilized estimated magnitudes and locations for the events based on damage amounts, aerial extent, and location.

TABLE: NUMBER OF EARTHQUAKES IN COOK COUNTY BETWEEN 1795-2022

COUNTY	FELT		SOME POSSIBLE DAMAGE	
	MAGNITUDES		MAGNITUDES	
	2.0–2.9	*3.0–3.9*	*4.0–4.9*	*5.0-5.4*
Cook County	3	2	1	-

Source: Illinois State HMP 2023

5.3.5 Past Events

Earthquakes occur throughout Illinois, with most in the southern third of the state. Over 360 earthquakes have occurred in Illinois during the past 20 years. Damage resulted from 32 of these earthquakes. Sixteen notable events have been recorded in Cook, DuPage, Kane, Kendall, and Will Counties since 1804. Cook County has experienced three earthquakes ranging from a magnitude of 3 to 4.9. Cook County has not experienced significant earthquakes since 2013. The table below lists examples of major past seismic events that have impacted Cook County.

TABLE: EARTHQUAKES THAT IMPACTED COOK COUNTY

Date	Magnitude	Location/Fault Line	Comments
August 1804	4.4	Fort Dearborn (Chicago)	Felt over 30,000 square miles
December 16, 1811	N/A	New Madrid	Earthquake was so severe that it awakened people in Pittsburgh, PA and Norfolk, VA.
1812	N/A	New Madrid	Aftershocks from the December 16, 1811, event
October 13, 1895	6.2	Charlestown, MO	No reference and/or no damage reported
1909	5.1	7 miles southwest of the Village of Lemont, IL	One of the largest earthquakes in Illinois knocked over many chimneys in Aurora. It was felt over 500,000 square miles. Buildings swayed in Chicago.
1968	5.4	New Madrid Fault	Southern Illinois; damage occurred in south-central Illinois, southwest Indiana, and northwest Kentucky; felt over all or parts of 23 states
May 10, 1987	5.0	Near Lawrenceville, IL	No reference and/or no damage reported
April 27, 1989	4.7	15 miles SW of Caruthersville, MO	No reference and/or no damage reported
September 28, 1989	4.5	15 miles south of Cairo, IL	No reference and/or no damage reported
September 26, 1990	4.6	10 miles south of Cape Giradau, MO	No reference and/or no damage reported
May 3, 1991	4.6	10 miles west of New Madrid, MO	No reference and/or no damage reported
September 9, 1985	3.0	2 miles from Lombard, IL	No reference and/or no damage reported

TABLE: EARTHQUAKES THAT IMPACTED COOK COUNTY			
Date	**Magnitude**	**Location/Fault Line**	**Comments**
February 5, 1994	4.2	Lick Creek-Goresville Area	No reference and/or no damage reported
September 2, 1999	3.5	8 miles from Dixon, IL	No reference and/or no damage reported
June 28, 2004	4.2	8 miles from Ot8 miles from Ottawa, IL	Felt throughout Cook County and most of Illinois
April 18, 2008	5.2	7 miles from Mt. Carmel	Felt around the state, including the Chicago area; skyscrapers in downtown Chicago shook but damage was mostly seen downstate
February 11, 2010	3.8	1 mile southeast of Pingree Grove (40 miles northwest of Chicago)	Located 6 miles below the ground surface
2011	3.8	Central Indiana	Residents of Chicago, Naperville, and Buffalo Grove reported having felt the earthquake
January 31, 2012	2.3	East of McHenry, IL	Residents of McHenry County reported having felt this earthquake
March 11, 2013	2.7	Benton, IL – New Madrid Seismic Zone	Occurred around 5 a.m.; no injuries or damage reported

5.3.6 Vulnerability and Impacts

Impacted FEMA Community Lifelines		
	**Safety and Security** Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Significant**
	**Food, Hydration, Shelter** Food, Hydration, Shelter, Agriculture	**Moderate**
	**Health and Medical** Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
	**Energy** Power Grid, Fuel	**Moderate**
	**Communications** Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**

Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Significant**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Moderate**
Water Systems Potable Water Infrastructure, Wastewater Management	**Significant**

Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard
Red = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health: According to FEMA, earthquakes can impact life safety and public health in different ways. Some of the most common impacts are as follows:

- Injuries and Loss of Life: The violent shaking and structural damage caused by earthquakes can result in injuries and, in severe cases, loss of life. Falling debris, structural collapses, and ground ruptures can pose immediate risks to individuals in affected areas.
- Structural Damage: Earthquakes can cause extensive damage to buildings, homes, and infrastructure, making them unsafe for occupancy. This can lead to injuries, homelessness, and the need for temporary shelter.
- Displacement: Earthquake-affected individuals may be forced to evacuate their homes due to damage or the threat of aftershocks. This displacement can lead to overcrowding in emergency shelters and increased stress for affected individuals and families.
- Mental Health Impact: Earthquakes can have long-lasting psychological effects, including trauma, anxiety, and post-traumatic stress disorder (PTSD), which may require mental health support and counseling.
- Strain on Healthcare Systems: Earthquakes can overwhelm healthcare systems with an influx of injured individuals in need of medical attention. Hospitals and medical facilities may face challenges in providing care and resources.
- Infrastructure Disruption: Critical infrastructure, including roads, bridges, utilities, and communication networks, can be damaged, affecting emergency response capabilities and access to essential services.

- Water Supply Contamination: Ground shaking can damage water supply systems, leading to contamination of drinking water sources. This poses health risks and requires water treatment and distribution efforts.
- Fire Hazards: Earthquakes can cause gas leaks and damage to electrical systems, increasing the risk of fires. Fire outbreaks can lead to additional injuries, property damage, and air quality issues.
- Aftershocks: Aftershocks following the initial earthquake can further damage weakened structures, hinder response efforts, and prolong the risks to life safety and public health.
- Warning Time: There is currently no reliable way to predict the day or month that an earthquake will occur at any given location.

Property Damage and Critical Infrastructure: Generally, wood frame buildings and structures on solid ground fare best during an earthquake. Wood frame buildings are flexible enough to withstand ground shaking and swaying. Evaluations of recent earthquakes found that damage was primarily caused to:

- Unreinforced masonry structures.
- Older buildings with some degree of deterioration.
- Buildings without foundation ties.
- Multi-story structures with open or “soft” first floors.

Most building codes have standards related to the first three concerns. This means that the most threatened buildings are older ones (built before current codes), masonry ones, and taller ones with open first floors.

In addition to the building type, damage is related to the underlying soil. Buildings on solid ground fare better, while those on loose or sandy soils will suffer more from shaking. These can be found in floodplains. If there is enough water present, the shaking can liquefy the underlying soils, which removes the support under the foundation.

Secondary Hazards: During earthquakes, river valleys are vulnerable to slope failure, often as a result of loss of soil cohesion. Soil liquefaction occurs when water-saturated sands, silts, or gravelly soils are shaken so violently that the individual grains lose contact with one another and float freely in the water, turning the ground into a pudding-like liquid. Building and road foundations lose load-bearing strength and may sink into what was previously solid ground. Unless properly secured, hazardous materials can be released, causing significant damage to the environment and people. Earthen dams and levees are highly susceptible to seismic events and the impacts of their eventual failures can be considered secondary risks for earthquakes. Additionally, other underground critical infrastructure such as the extensive network of oil and gas pipelines which feed the supply chain and fiber optic communications cable are highly vulnerable.

Economy: According to FEMA, earthquake events can have profound and multifaceted economic impacts, affecting communities, businesses, and governments at all levels. Initially, earthquakes inflict direct damage to infrastructure, including buildings, roads, and bridges, leading to substantial repair and reconstruction costs. These costs not only strain public budgets but also divert resources from other vital community needs. Businesses experience significant disruptions, with some forced to cease operations temporarily or permanently, resulting in lost income, employment, and

productivity. The ripple effects extend to the wider economy, as supply chains are disrupted, and consumer spending patterns shift in the aftermath of the disaster.

According to FEMA, earthquakes can undermine investor confidence and lead to declines in property values, especially in areas deemed at high risk for future seismic events. The insurance sector faces increased claims, which can impact the availability and cost of coverage for businesses and homeowners. Efforts to rebuild and recover from an earthquake often require substantial investment, which can stimulate economic activity in construction and related sectors but also highlight the need for improved resilience and preparedness strategies.

Changes in Development and Impact of Future Development: According to FEMA, earthquake events significantly influence changes in development and future planning strategies, primarily through the lens of enhancing resilience and safety in earthquake-prone areas. In the aftermath of significant seismic activity, there is often a reassessment of building codes and construction practices to reduce the vulnerability of structures to future earthquakes. This includes the adoption of more stringent engineering standards, the use of earthquake-resistant materials, and the incorporation of innovative design techniques that allow buildings and infrastructure to withstand seismic forces. Such measures are crucial in minimizing physical damage and ensuring the safety of occupants during subsequent earthquakes. Lastly, urban planning and zoning regulations may be revised to limit development in high-risk areas, such as fault zones and areas susceptible to soil liquefaction, further mitigating potential damage and loss of life.

According to FEMA, earthquake events also impact long-term planning of communities, through higher building code standards and retrofitting existing structures to improve their earthquake resilience. Efforts to enhance public awareness and preparedness, including earthquake drills and the development of emergency response plans, have become integral components of community planning.

Effects of Climate Change on Severity of Impacts: According to NOAA, the relationship between climate change and the severity of earthquake events is not direct, as earthquakes are primarily caused by geophysical processes related to the movement of tectonic plates beneath the Earth's surface. According to NOAA, earthquakes result from the buildup and release of energy along faults or by volcanic activity, processes that are generally considered to be independent of atmospheric conditions influenced by climate change.

HAZUS-MH Analysis (Cook County 1909 Historic Scenario Event):

Scenario Earthquake Events

Earthquake scenario maps describe the expected ground motions and effects of hypothetical large earthquakes for a region. Maps of these scenarios can be used to support all phases of emergency management. The following scenario was chosen to analyze for this plan:

1909 Historical Earthquake Scenario—A Magnitude 6.2 event with a shallow depth and epicenter approximately 7 miles southwest of the Village of Lemont, IL. The basis for this map and analysis was the historical events database contained within the HAZUS-MH model. For this assessment, the magnitude of the event was changed from 5.0 to 6.0, using the same focal depth and epicenter as the historical event.

Building Damage

HAZUS estimates that about 103,124 buildings will be at least moderately damaged. This is over 8.00% of the buildings in the region. There are an estimated 4,702 buildings that will be damaged beyond repair.

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	303.88	0.03	76.15	0.04	69.86	0.09	33.33	0.17	18.79	0.40
Commercial	54168.79	5.09	14078.39	7.39	10307.11	13.06	3518.72	18.05	824.99	17.54
Education	1747.44	0.16	438.44	0.23	336.14	0.43	99.25	0.51	28.73	0.61
Government	345.54	0.03	94.87	0.05	81.13	0.10	25.40	0.13	8.07	0.17
Industrial	16871.33	1.59	4493.32	2.36	3858.06	4.89	1410.51	7.23	300.78	6.40
Other Residential	249971.16	23.51	39450.02	20.72	14430.84	18.28	3109.49	15.95	548.48	11.66
Religion	1052.30	0.10	222.00	0.12	148.21	0.19	48.75	0.25	12.74	0.27
Single Family	738968.86	69.49	131582.20	69.10	49693.30	62.96	11251.96	57.71	2959.67	62.94
Total	**1,063,429**		**190,435**		**78,925**		**19,497**		**4,702**	

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	819258.31	77.04	123754.59	64.99	28902.06	36.62	2627.38	13.48	143.63	3.05
Steel	19549.46	1.84	5392.82	2.83	6115.28	7.75	2623.49	13.46	636.50	13.54
Concrete	12859.48	1.21	3288.98	1.73	2614.63	3.31	842.38	4.32	206.57	4.39
Precast	7397.31	0.70	1431.61	0.75	1629.09	2.06	690.10	3.54	92.45	1.97
RM	6100.30	0.57	853.10	0.45	857.88	1.09	279.82	1.44	21.54	0.46
URM	197685.68	18.59	55456.14	29.12	38489.67	48.77	12291.11	63.04	3561.64	75.74
MH	578.76	0.05	258.14	0.14	316.02	0.40	143.13	0.73	39.94	0.85
Total	**1,063,429**		**190,435**		**78,925**		**19,497**		**4,702**	

Essential Facility Damage

Before the earthquake, the region had 18,541 hospital beds available for use. On the day of the earthquake, the model estimates that only 12,398 hospital beds (67.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 83.00% of the beds will be back in service. By 30 days, 95.00% will be operational.

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	82	0	0	77
Schools	1,985	16	0	1,835
EOCs	15	1	0	12
PoliceStations	175	2	0	156
FireStations	328	7	0	297

Expected Damage to the Transportation Systems

System	Component		Number of Locations			
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	1,320	0	0	1,320	1,320
	Bridges	1,697	26	0	1,676	1,694
	Tunnels	63	0	0	63	63
Railways	Segments	1,254	0	0	1,254	1,254
	Bridges	509	0	0	509	509
	Tunnels	0	0	0	0	0
	Facilities	97	1	0	96	97
Light Rail	Segments	0	0	0	0	0
	Bridges	35	0	0	35	35
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	2	0	0	2	2
Ferry	Facilities	4	0	0	4	4
Port	Facilities	178	24	0	156	178
Airport	Facilities	10	1	0	9	10
	Runways	17	0	0	17	17

Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	9	0	0	9	9
Waste Water	14	1	0	11	13
Natural Gas	0	0	0	0	0
Oil Systems	9	2	0	7	7
Electrical Power	24	4	0	24	24
Communication	81	0	0	81	81

Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	13,324	1443	361
Waste Water	7,995	725	181
Natural Gas	251	11	3
Oil	0	0	0

Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	2,086,940	30,620	18,709	4,387	0	0
Electric Power		38,557	26,792	14,034	1,850	51

Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. HAZUS uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 64 ignitions that will burn about 0.26 sq. mi 0.03% of the region's total area.) The model also estimates that the fires will displace about 4,063 people and burn about 509 (millions of dollars) of building value.

Debris Generation

HAZUS estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris. The model estimates that a total of 7,413,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 48.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 296,520 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

Shelter Requirement

HAZUS estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 13,754 households to be displaced due to the earthquake.

Casualties

HAZUS estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows:

- Severity Level 1: Injuries will require medical attention, but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening.
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day when different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	18.06	3.81	0.46	0.90
	Commuting	0.09	0.12	0.20	0.04
	Educational	0.00	0.00	0.00	0.00
	Hotels	1.04	0.19	0.02	0.04
	Industrial	24.57	5.07	0.61	1.18
	Other-Residential	1494.34	269.98	31.80	61.81
	Single Family	2350.84	486.21	63.24	123.71
	Total	**3,889**	**765**	**96**	**188**
2 PM	Commercial	1817.78	387.30	48.00	92.01
	Commuting	0.81	1.04	1.79	0.35
	Educational	1975.54	439.00	59.89	115.81
	Hotels	0.20	0.04	0.00	0.01
	Industrial	181.15	37.50	4.52	8.69
	Other-Residential	472.23	88.15	10.86	20.22
	Single Family	719.58	153.42	20.79	38.91
	Total	**5,167**	**1,106**	**146**	**276**
5 PM	Commercial	1603.80	344.46	43.36	81.72
	Commuting	15.34	19.81	34.23	6.59
	Educational	182.85	37.05	4.76	9.07
	Hotels	0.31	0.06	0.01	0.01
	Industrial	113.22	23.44	2.82	5.43
	Other-Residential	595.51	111.05	13.67	25.46
	Single Family	939.83	200.75	27.24	50.97
	Total	**3,451**	**737**	**126**	**179**

Economic Loss

The total economic loss estimated for the earthquake is 30,964.30 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake. The total building-related losses were 29,885.38 (millions of dollars); 16% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies, which made up over 45% of the total loss. The table below provides a summary of the losses associated with the building damage.

Building-Related Economic Loss Estimates (Millions of Dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	36.7337	654.4305	53.9330	122.7293	867.8265
	Capital-Related	0.0000	15.6216	552.0556	32.7437	42.1132	642.5341
	Rental	163.1330	288.0514	450.9451	42.7533	43.3086	988.1914
	Relocation	582.2212	202.9194	637.1662	238.5650	533.0738	2,193.9456
	Subtotal	**745.3542**	**543.3261**	**2294.5974**	**367.9950**	**741.2249**	**4692.4976**
Capital Stock Losses							
	Structural	1520.9950	506.5449	1969.5182	681.6558	594.5965	5,273.3104
	Non_Structural	4942.5627	2825.7122	2681.7074	1660.3785	1806.1021	13,916.4629
	Content	1548.6772	752.7877	1268.5270	1134.4000	846.0152	5,550.4071
	Inventory	0.0000	0.0000	308.9610	135.7536	7.9860	452.7006
	Subtotal	**8012.2349**	**4085.0448**	**6228.7136**	**3612.1879**	**3254.6998**	**25192.8810**
	Total	**8757.59**	**4628.37**	**8523.31**	**3980.18**	**3995.92**	**29885.38**

Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, HAZUS computes the direct repair cost for each component only. There are no losses computed by HAZUS for business interruption due to lifeline outages. The next two tables provide a detailed breakdown in the expected lifeline losses.

Transportation System Economic Losses (Millions of Dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	12738.3535	0.0000	0.00
	Bridges	17816.5051	146.6044	0.82
	Tunnels	1192.7998	0.4493	0.04
	Subtotal	**31747.6584**	**147.0537**	
Railways	Segments	34835.6058	0.0000	0.00
	Bridges	2578.0850	6.2607	0.24
	Tunnels	0.0000	0.0000	0.00
	Facilities	258.3110	29.5690	11.45
	Subtotal	**37672.0018**	**35.8297**	
Light Rail	Segments	0.0000	0.0000	0.00
	Bridges	4.3656	0.0022	0.05
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**4.3656**	**0.0022**	
Bus	Facilities	4.5699	0.4602	10.07
	Subtotal	**4.5699**	**0.4602**	
Ferry	Facilities	5.3240	0.3639	6.84
	Subtotal	**5.3240**	**0.3639**	
Port	Facilities	603.9797	92.8180	15.37
	Subtotal	**603.9797**	**92.8180**	
Airport	Facilities	2872.1139	281.4308	9.80
	Runways	253.8872	0.0000	0.00
	Subtotal	**3126.0011**	**281.4308**	
	Total	**73,163.90**	**557.96**	

Utility System Economic Losses (Millions of Dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	332.6670	14.4383	4.34
	Distribution Lines	428.8687	6.4934	1.51
	Subtotal	**761.5357**	**20.9317**	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	2142.9002	161.6443	7.54
	Distribution Lines	257.3212	3.2618	1.27
	Subtotal	**2400.2214**	**164.9061**	
Natural Gas	Pipelines	1813.3109	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	171.5475	1.1175	0.65
	Subtotal	**1984.8584**	**1.1175**	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.9990	0.1312	13.13
	Subtotal	**0.9990**	**0.1312**	
Electrical Power	Facilities	4163.6312	333.3646	8.01
	Subtotal	**4163.6312**	**333.3646**	
Communication	Facilities	8.9910	0.5057	5.62
	Subtotal	**8.9910**	**0.5057**	
	Total	**9,320.24**	**520.96**	

5.3.7 FEMA NRI Expected Annual Loss Estimates

TABLE: COOK COUNTY - EXPECTED ANNUAL LOSS FOR EARTHQUAKE EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
0.051% chance per year	0.33	$3,857,819	$13,280,151	N/A	$17,137,969	Relatively Moderate	96.4

Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.*
Expected Annual Loss Scores *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*

Period of Record: 2021 dataset

Source: FEMA National Risk Index (2024)

5.3.8 FEMA Hazard-Specific Risk Index

TABLE: COOK COUNTY - FEMA HAZARD SPECIFIC RISK INDEX – EARTHQUAKE EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$17,137,969	Very High	Relatively High	$20,828,989	96.7

FEMA Hazard-Type **Risk Index Scores** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.*
FEMA Hazard-Type ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.*
FEMA Hazard-Type ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*

Source: FEMA National Risk Index (2024)

5.3.9 FEMA NRI Exposure Values

TABLE: COOK COUNTY, IL EXPOSURE VALUE TABLE FOR EARTHQUAKE EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Earthquake	$62,089,381,870,000	$893,106,270,000	$61,196,275,600,000	5,275,541.00	N/A

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population*

equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million of economic loss (2022 dollars).
Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

5.4 Flooding

5.4.1 Hazard Description

Flooding is defined by the National Weather Service (NWS) as "the inundation of normally dry areas as a result of increased water levels in an established water course." River flooding, the condition where the river rises to overflow its natural banks, may occur due to a number of causes, including prolonged, general rainfall, locally intense thunderstorms, snowmelt, and ice jams. In addition to these natural events, there are a number of factors controlled by human activity that may cause or contribute to flooding. These include dam failure (discussed below) and activities that increase the rate and amount of runoff, such as paving, reducing ground cover, and clearing forested areas. Flooding is a periodic event along most rivers, with the frequency depending on local conditions and controls, such as dams and levees. The land along rivers that is identified as being susceptible to flooding is called the floodplain.

Flooding is a dynamic natural process. Along rivers and streams, a cycle of erosion and deposition is continuously rearranging and rejuvenating the aquatic and terrestrial systems. Although many plants, animals, and insects have evolved to accommodate and take advantage of these ever-changing environments, property and infrastructure damage often occurs when people develop floodplains and natural processes are altered or ignored.

Flooding can also threaten life, safety, and health and often results in substantial damage to infrastructure, homes, and other property. The extent of damage caused by a flood depends on the topography, soils, and vegetation in an area, and the depth and duration of flooding, velocity of flow, rate of rise, and the amount and type of development in the floodplain.

Floodplains are areas adjacent to a river, creek, or lake that become inundated during a flood. Floodplains may be broad, as when a river crosses an extensive flat landscape, or narrow, as when a river is confined in a canyon.

When floodwaters recede after a flood event, they leave behind layers of rock and mud. These gradually build up to create a new floor of the floodplain. Floodplains generally contain unconsolidated sediments (accumulations of sand, gravel, loam, silt, and/or clay), often extending below the bed of the stream. These sediments provide a natural filtering system, with water percolating back into the ground and replenishing groundwater. These are often important aquifers, the water drawn from them being filtered compared to the water in the stream. Fertile, flat reclaimed floodplain lands are commonly used for agriculture, commerce, and residential development.

Connections between a river and its floodplain are most apparent during and after major flood events. These areas form a complex physical and biological system that not only supports a variety of natural resources but also provides natural flood and erosion control. When a river is separated from its floodplain with levees and other flood control facilities, natural, built-in benefits can be lost, altered, or significantly reduced.

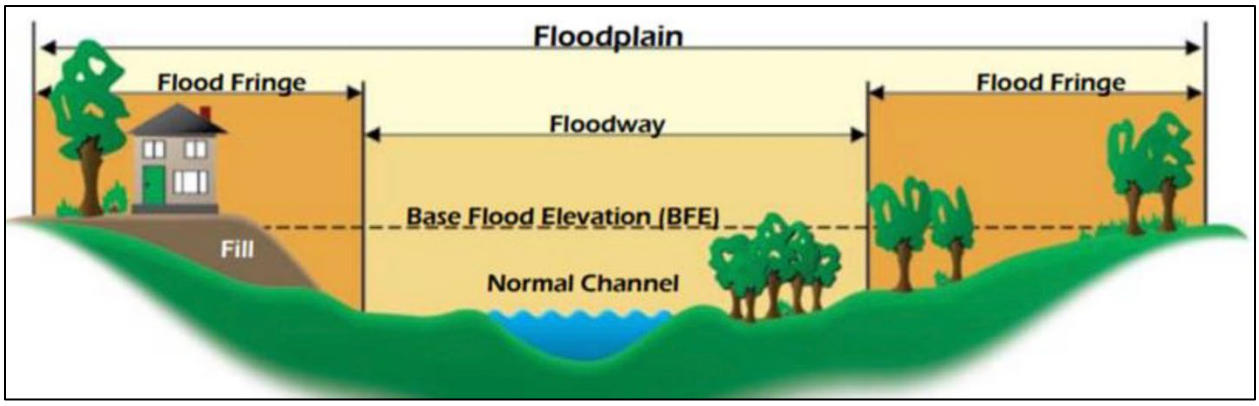
Types of Flooding

Flooding can occur in a number of ways, and many instances are not independent of each other and can occur simultaneously during a flood event. The types of flooding considered for this plan include:

- Heavy rainfall

- Urban stormwater overflow
- Rapid snowmelt
- Rising groundwater (generally in conjunction with heavy prolonged rainfall and saturated conditions)
- Riverine ice jams
- Flash floods
- Alluvial fan flooding
- Flooding from dam failure
- Coastal/Shoreline flooding
    - Seiche
    - Meteotsunami
    - Coastal Erosion

Riverine Flooding: Riverine flooding originates from a body of water, typically a river, creek, or stream, as water levels rise onto normally dry land. Water from snowmelt, rainfall, freezing streams, ice flows, or a combination thereof, causes the river or stream to overflow its banks onto adjacent floodplains. Winter flooding usually occurs when ice in the rivers creates dams or streams freeze from the bottom up during extreme cold spells. Spring flooding is usually the direct result of melting winter snowpacks, heavy spring rains, or a combination of the two.



Urban/Flash/Stormwater Flooding: Urban (or "Flash") flooding, as defined in the Urban Flooding Awareness Act, is "the inundation of property in a built environment, particularly in more densely populated areas, caused by rainfall overwhelming the capacity of drainage systems, such as storm sewers. 'Urban flooding' does not include flooding in undeveloped or agricultural areas. 'Urban flooding' includes (i) situations in which stormwater enters buildings through windows, doors, or other openings, (ii) water backup through sewer pipes, showers, toilets, sinks, and floor drains, (iii) seepage through walls and floors, and (iv) the accumulation of water on property or public rights-of-way. Urban flooding is characterized by its repetitive, costly, and systemic impacts on communities, regardless of whether or not these communities are located within formally designated floodplains or near any body of water. These impacts include damage to buildings and infrastructure, economic disruption, and negative effects on health and safety.

Coastal/Shoreline Flooding: According to NOAA, coastal or shoreline flooding is defined as the inundation of land areas along the coast by seawater, which can occur due to various factors including sea level rise, storm surges, and high tides. This type of flooding is exacerbated by climate

change, leading to more frequent and severe occurrences, impacting coastal ecosystems, infrastructure, and communities.

- **Seiche:** is a standing wave in a body of water, often created by strong winds, rapid atmospheric pressure changes, or seismic activity. These forces displace water in enclosed or partially enclosed bodies like lakes or bays. When the initial force subsides, the water oscillates back and forth between the boundaries, forming the seiche. This phenomenon can last for hours or days, depending on the size of the water body and initial energy (NOAA).
- **Meteotsunami:** a large wave generated by air pressure disturbances often associated with fast-moving weather events, such as severe thunderstorms. Unlike tsunamis caused by seismic activity, meteotsunamis are primarily driven by atmospheric conditions. These waves can be amplified by geographical features like shallow continental shelves and bays, and they can travel long distances along coastlines. Meteotsunamis pose challenges in prediction and public warning due to their similarities with other oceanic phenomena (NOAA).
- **Coastal Erosion:** is the process where rising sea levels, strong wave action, and coastal flooding contribute to the wearing down and removal of rocks, soils, and sands along the coastline. This erosion is exacerbated by storm surges and high tides during tropical storms, leading to significant land and property loss (US Climate Resilience Toolkit).

Watershed: is the land area that drains to a particular waterbody, such as a river, lake, or ocean. It is a geographic region that collects and channels precipitation and surface water to a common outlet, a stream, river, or other waterbody. Watersheds can vary in size, from a small drainage basin encompassing only a few acres to a large river basin spanning thousands of square miles. The health and quality of a watershed are critical for the sustainability of the ecosystem and the organisms that depend on it, including humans (US Environmental Protection Agency).

A healthy watershed is one in which natural land cover supports:

- Dynamic hydrologic and geomorphologic processes within their natural range of variation
- Habitat of sufficient size and connectivity to support native aquatic and riparian species
- Physical and chemical water quality conditions can support healthy biological communities.

Natural vegetative cover in the landscape, including the riparian zone, helps maintain the natural flow regime and fluctuations in water levels in lakes and wetlands. This, in turn, helps maintain natural geomorphic processes, such as sediment storage and deposition, which form the basis of aquatic habitats. The connectivity of aquatic and riparian habitats in the longitudinal, lateral, vertical, and temporal dimensions helps ensure the flow of chemical and physical materials and the movement of biota among habitats.

A healthy watershed has the structure and function in place to support healthy aquatic ecosystems. Key components of a healthy watershed include:

- Intact and functioning headwater streams, floodplains, riparian. corridors, biotic refugia, instream habitat, and biotic communities.
- Natural vegetation in the landscape; and

- Hydrology, sediment transport, fluvial geomorphology, and disturbance regimes are expected for its location.

A stream's flow regime refers to its characteristic pattern of flow magnitude, timing, frequency, duration, and rate of change. The flow regime plays a central role in shaping aquatic ecosystems and the health of biological communities. Alteration of natural flow regimes (e.g., more frequent floods) can reduce the quantity and quality of aquatic habitat, degrade aquatic life, and result in the loss of ecosystem services (US Environmental Protection Agency).

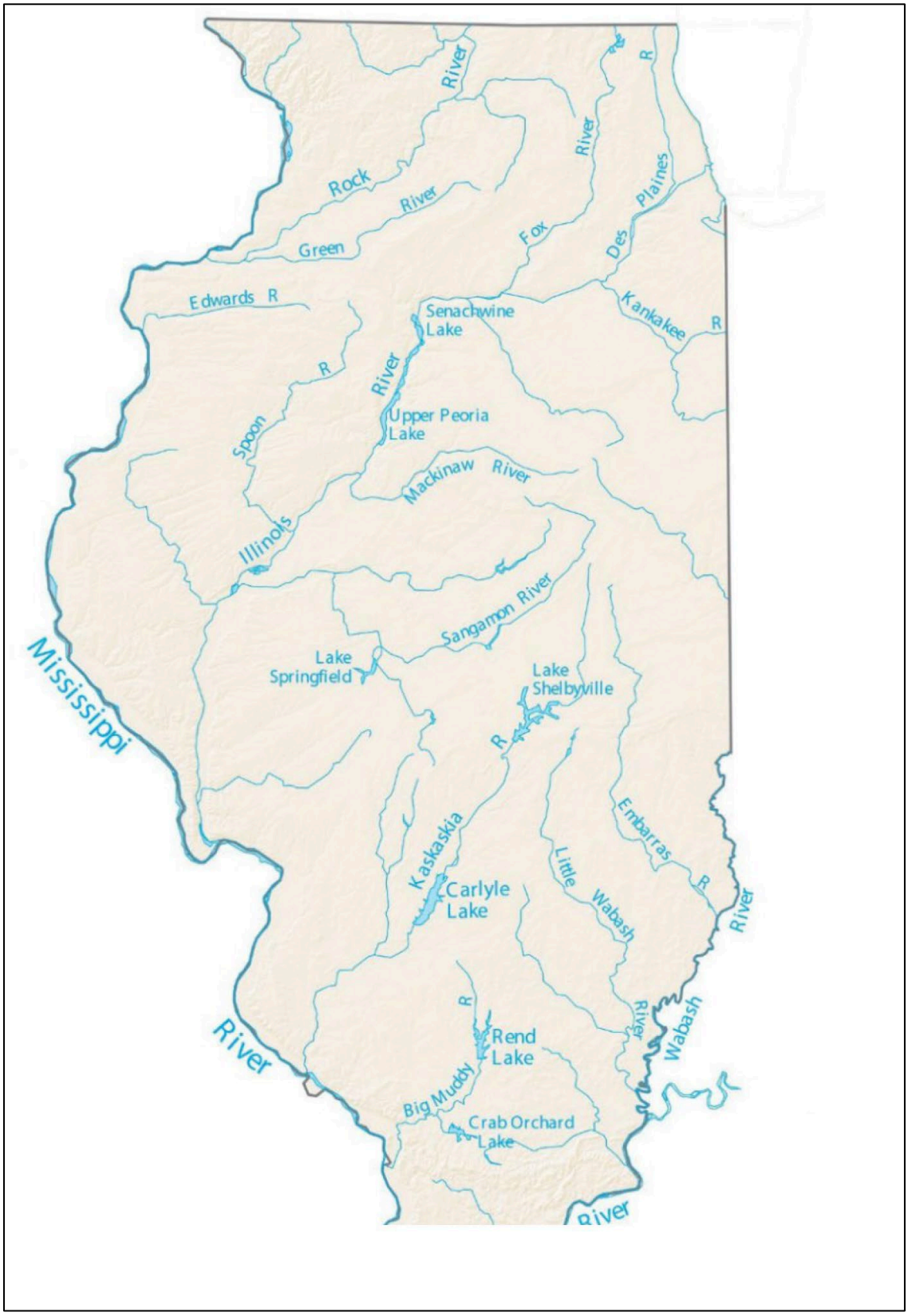
Floodplain Ecosystems

Floodplains can support ecosystems that are rich in plant and animal species. A floodplain can contain 100 or even 1,000 times as many species as a river. Wetting of the floodplain soil releases an immediate surge of nutrients: those left over from the last flood, and those that result from the rapid decomposition of organic matter that has accumulated since then. Microscopic organisms thrive and larger species enter a rapid breeding cycle. Opportunistic feeders (particularly birds) move in to take advantage. The production of nutrients peaks and falls away quickly, but the surge of new growth endures for some time. This makes floodplains valuable for agriculture. Species growing in floodplains are markedly different from those that grow outside floodplains. For instance, riparian trees (trees that grow in floodplains) tend to be very tolerant of root disturbance and very quick growing compared to non-riparian trees.

5.4.2 Hazard Location

Floods in Cook County are caused by rainfall from large frontal storms, which may be in combination with some snowmelt, runoff, and ice jams. The principal contributor to flooding in the area is the inadequate capacity of some of the natural stream channels to contain runoff resulting from intense thunderstorm precipitation over the stream basins. Inundation of lands adjoining stream channels has been aggravated over the years by the gradual accumulation of silt. The buildup of sand bars and island channels has resulted in the loss of channel capacity. Another factor lending itself to the poor flow characteristics of some portions of channels is the excessive growth of brush, light timber, and aquatic vegetation.

The image below illustrates the major rivers and lakes in Illinois.



Source: (2023 Illinois State HMP)

FEMA has mapped over 78 square miles of the 100-year floodplain and 99 square miles of 500-year floodplain along 172 water courses within the Cook County planning area. This includes floodplains within jurisdictions that intersect multiple counties. Whiles these maps do not cover all the flood risks within the planning area, they do represent a large percentage of the risk. A brief description of some of these riverine flood sources is provided below.

Addison Creek

Addison Creek is a tributary to Salt Creek and the principal flood source for the Village of Bellwood. Addison Creek caused substantial flooding following a storm in March 1948. In 1951 and 1952, the channel was deepened and widened by IDNR from the mouth to Lake Street in Northlake. Flooding in the 1960s led to channel improvements in the reaches upstream from Bellwood in 1970. A peak stream flow of 1,120 cubic feet per second (cfs) with a river stage of 12.84 feet was observed on August 14, 1987.

North Branch of the Chicago River

Large magnitude floods occurred on the Chicago River, North Branch, West Fork in 1938, 1954, 1957, 1960, 1967, 1982, 1987, 1994 and 2001. Flood damage in the Chicago River, North Branch watershed have been most severe in the Chicago River, North Branch, West Fork because of relatively greater levels of floodplain development, such as that which has occurred along the 2.6-mile West Fork stream reach in Glenview. The 1967 flood, approximately a 5-percent-annual-chance flood event, caused damage along the entire Chicago River, North Branch, West Fork. A peak stream flow of 1,190 cfs, with a river stage of 10.10 feet, was observed on the West Fork of this riverine system on August 14, 1987.

The Chicago River, North Branch, West Fork flooded in the Village of Northbrook on July 22, 1982, when more than 7 inches of rain fell over 12 hours. The flood was the most extreme event recorded since the early 1950s when systematic streamflow records were first recorded on the West Fork. The peak discharge recorded at the Dundee Road gauge in Northbrook was 1,070 cfs, which had an estimated recurrence interval of 25 years. A major storm, which had been preceded by a very wet 30-day period, occurred on December 2, 1982. Rainfall amounts from 3 to 4 inches were recorded over a 1- to 2-day period. The peak discharge of 740 cfs was recorded at the Dundee Road gauge.

Flood damage is increasing in the Chicago River, North Branch watershed. The change can be attributed to a number of factors, the most notable of which is urbanization of upland areas, increasing the rate and volume of storm runoff. Another factor is floodplain development, which reduces natural floodplain storage and often obstructs conveyance of flood flows. Both urbanization and floodplain filling are expected to continue. In combination, these factors cause more frequent flooding and higher flood stages.

It should be noted that in July 2018, the Albany Park Stormwater Diversion Tunnel was completed in Chicago's Albany Park neighborhood. As of July 2019, the tunnel had successfully diverted stormwater during several heavy rainfall events that have historically created flooding issues in the immediate area.

Des Plaines River

Damaging floods in the primarily urban Des Plaines River watershed occurred in 1938, 1948, 1950, 1954, 1957, 1960, 1965, 1972, 1974, 1976, 1979, 1986, 1987, 2000, 2004, and 2013. Despite numerous flood control efforts, the Des Plaines River remains one of the most flood-prone waterways in the region. Two floods (September-October 1986 and August 1987) caused more than $100 million in damage to more than 10,000 residential, commercial or public structures. More than 15,000 residents were evacuated during the 1986 flood. Communities along the Des Plaines River that were affected include Gurnee, Lincolnshire, and Wadsworth, as well as the unincorporated areas of Cook County. Flooding in these communities has impacted the transportation network, homes, commercial/industrial sites, public/municipal sites, streets, golf courses, cemeteries, and recreation/open space areas. According to the National Weather Service, the Des Plaines River near Gurnee has a flood stage of 7 feet; at 11 feet the flood category becomes major. Major floods occurred in 1986 and 2004, with crests at 11.95 feet and 11.76 feet, respectively.

West Branch of the DuPage River

Flooding is frequent and severe along the DuPage River, West Branch in Hanover Park. Rapid urbanization in the drainage areas since 1960 has led to increasing stormwater runoff. At the same time, development in the floodplain in the north portion of the village has obstructed overbank flows during floods, raising water-surface elevations in the vicinity and generally worsening the damage. A major storm in October 1954 caused record flooding in the Chicago area, but Hanover Park was sparsely developed at that time. Other significant floods occurred on June 10, 1967, and on September 6, 1970, when an estimated 2.7 inches of rain fell in the drainage area. Peak discharges at the crest-stage gauge at Lake Street on the river reached 570 cfs in 1967 and 450 cfs in 1970. Damage in Hanover Park resulting from the 1970 flood was estimated at $470,000. In addition to flooding due to major storms, more frequent flooding occurs due to high waters in the river blocking storm sewer outlets and causing basement flooding. Data from the recording gauge on the river near North Avenue in the Village of Bartlett indicated that the June 1967 flood had a 1-percent-annual-chance probability.

Little Calumet River

The Little Calumet River in Calumet City, Illinois, had severe flooding in June 1981, December 1982, November 1990, and July 1996. The highest flood on record occurred in November 1990 when the river reached a stage between 20 and 21 feet. This flood was below the 1-percent-annual-chance probability.

Flagg Creek

The most severe floods on Flagg Creek near Indian Head Park, and their approximate recurrence intervals can be documented from records for the USGS Flag Creek at Willow Springs gauge downstream of Indian Head Park. This gauge (No. 05533000, drainage area 16.5 square miles) was established in 1949.

A peak stream flow of 2,680 cfs with a river stage of 13.814 feet was observed on September 14, 1961. This peak was approached again on April 18, 2013, with a flow of 2,610 cfs and a stage of 10.57 feet.

Flint Creek

Flint Creek Tributary, in the Village of Barrington, can flood upstream of bridges, apparently due to restrictive culverts. The storm on December 2-3, 1982, resulted in Elm Road being covered by approximately 18 inches of water.

Midlothian Creek

One of the earliest recorded floods in Cook County occurred on Midlothian Creek in April 1947; it had a 2-percent-annual-chance recurrence probability. Other major floods of Midlothian Creek in the City of Blue Island occurred in April 1973, October 1954, July 1957, September 1961, and July 1996. A peak stream flow of 627 cfs with a river stage of 7.67 feet was observed on April 22, 1973.

Salt Creek

Salt Creek, as measured by USGS Gauge No. 05531500, located approximately 4 miles upstream of the Village of Broadview at Western Springs, had a peak discharge for the period of record of 3,980 cfs on April 18, 2013. The river stage for this event was 10.65 feet. Flooding on Salt Creek in the Village of Broadview creates backwater in the lower reaches of Addison Creek. Flooding on Salt Creek and other streams in the Village of Schaumburg is principally caused by inadequate sewers. The most common problem during a major storm is street flooding.

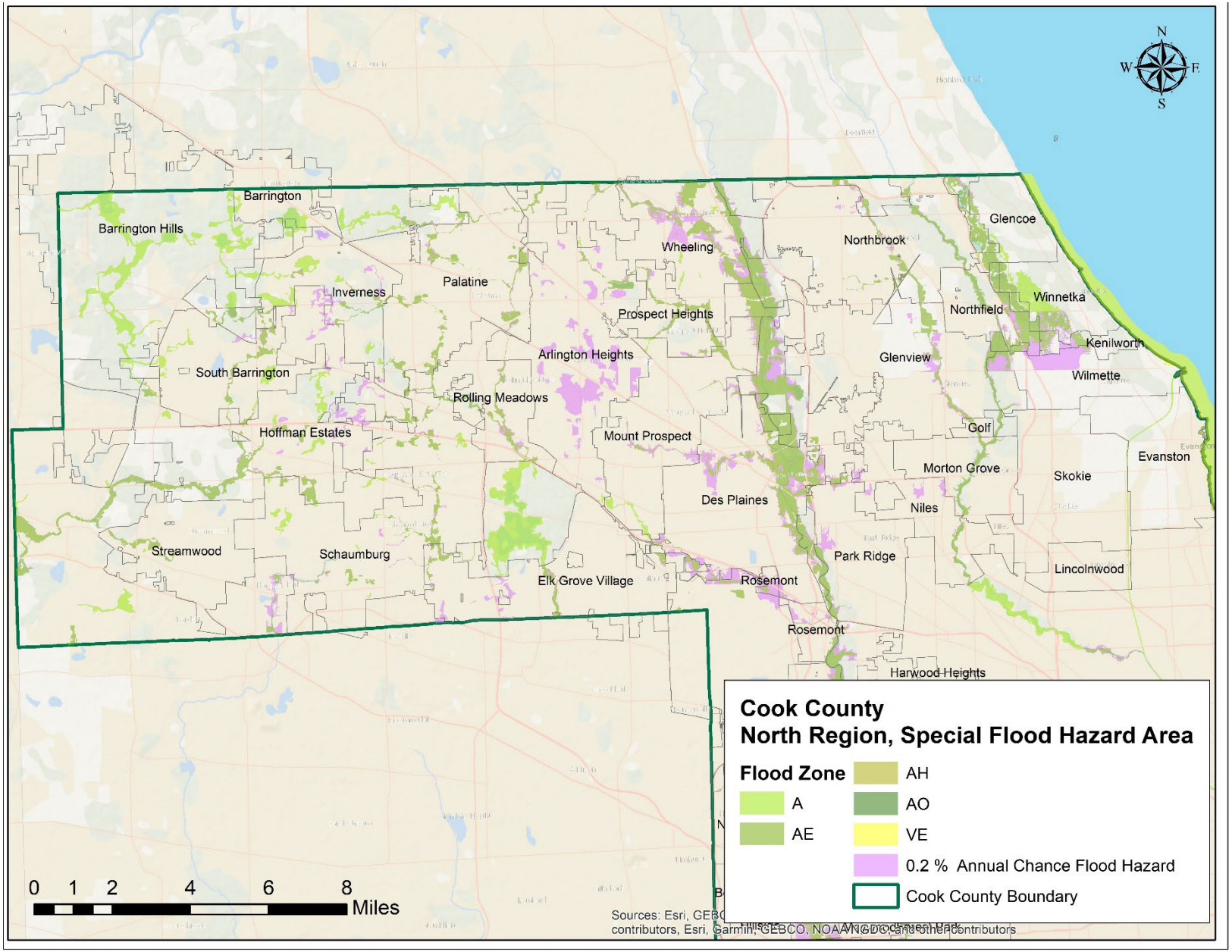
Stoney Creek (East)

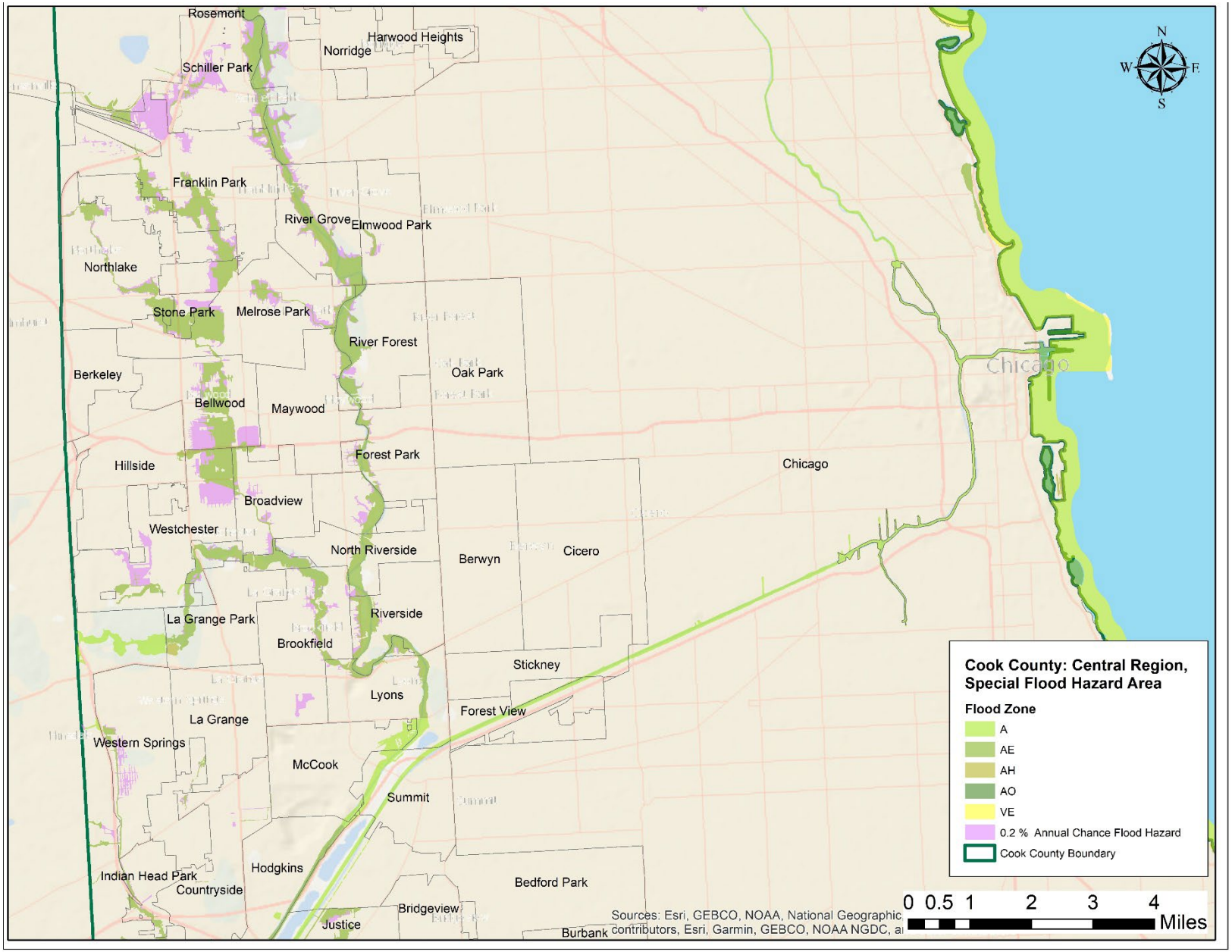
Stony Creek (East) is formed by a confluence of local, natural, and sewered tributaries. Although low-lying areas in the vicinity of the channel in the Village of Alsip have a record of extensive flooding, the channel has been the recipient of varied state, county, and local improvements that have reduced most of the flooding problems. There are two prominent areas along Stony Creek (East) that still present a flood hazard in Alsip: one at Central Park Avenue, at the confluence of Merrionette Park Ditch, and the other downstream of Cicero Avenue. Major damage during these floods can be attributed to basement flooding by flowing through windows or doors, wall seepage, and backup of combined sewers. The worst flood on record in Alsip prior to 1965 was in October 1954, which was estimated to be a 2-percent-annual-chance flood. Other floods of significance occurred in July 1957 and September 1961. All of these floods affected Stony Creek (East) and Merrionette Park Ditch. In 1977, improvements to the flow in the creek and discharge into the Calumet Sag Channel were completed.

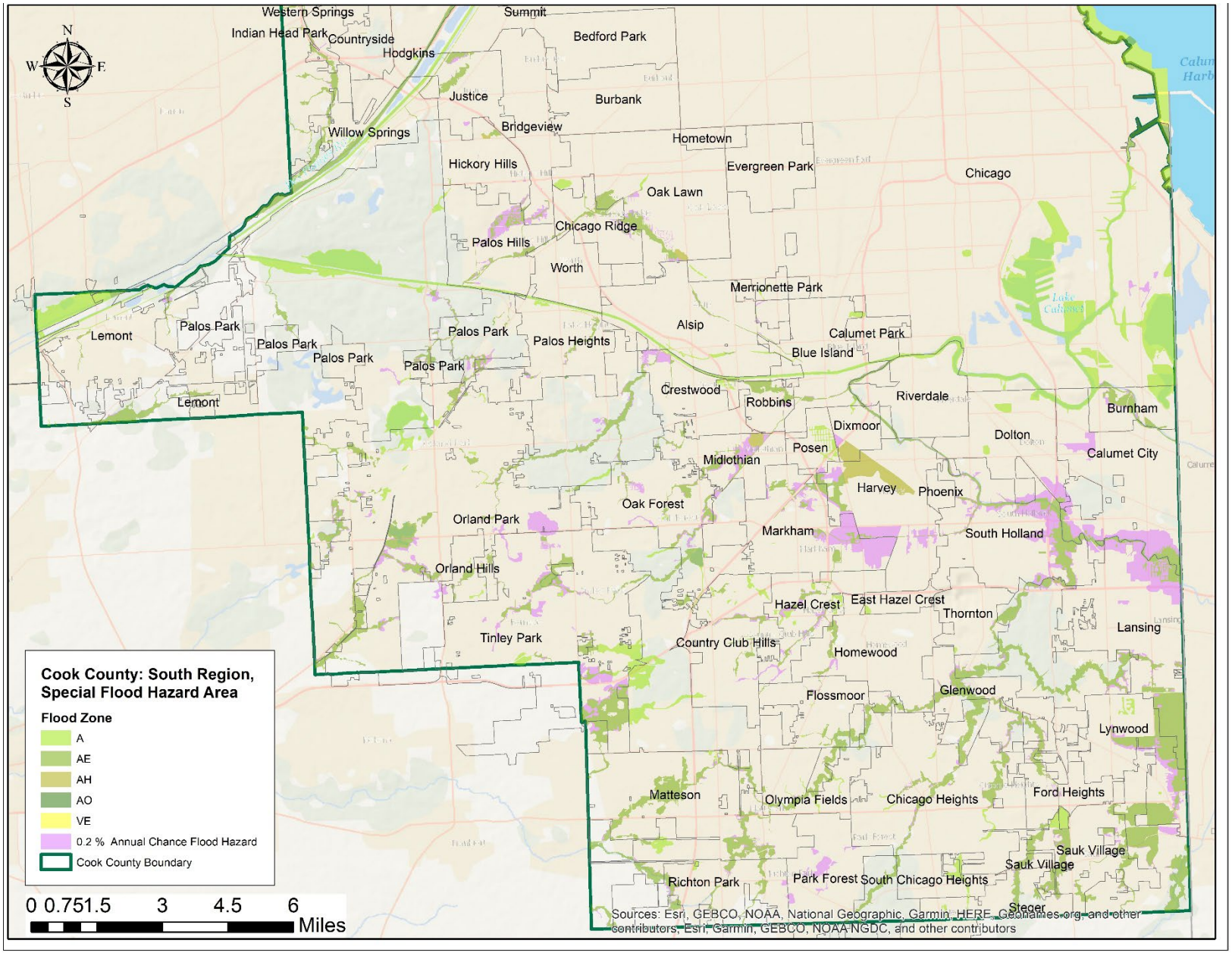
FIRM SFHA

The following are maps to show the Special Flood Hazard Areas (SFHA), which are areas having special flood, mudflow or flood-related erosion hazards and shown on a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM) as Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V). 1 FIRM SFHAs can be viewed on the National Flood Hazard Layer (NFHL).

The FIRM SFHA maps are illustrated below.


N
W
E
S
Barrington
Barrington Hills
Inverness
Palatine
Wheeling
Northbrook
Glencoe
Winnetka
Northfield
Kenilworth
Wilmette
Glenview
Prospect Heights
Arlington Heights
South Barrington
Rolling Meadows
Hoffman Estates
Mount Prospect
Golf
Evanston
Morton Grove
Skokie
Des Plaines
Niles
Streamwood
Schaumburg
Elk Grove Village
Park Ridge
Lincolnwood
Rosemont
Harwood Heights
Cook County
North Region, Special Flood Hazard Area
Flood Zone
AH
A
AO
AE
VE
0.2 % Annual Chance Flood Hazard
Cook County Boundary
0 1 2 4 6 8
Miles
Sources: Esri, GEBCO, NOAA, NGDC, and other contributors
contributors, Esri, Garmin, GEBCO, NOAA, NGDC, and other contributors


Rosemont
Harwood Heights
Norridge
Schiller Park
Franklin Park
River Grove
Elmwood Park
Northlake
Stone Park
Melrose Park
River Forest
Berkeley
Oak Park
Bellwood
Maywood
Forest Park
Hillside
Chicago
Broadview
Westchester
North Riverside
Berwyn
Cicero
La Grange Park
Riverside
Brookfield
Stickney
Lyons
Forest View
La Grange
Western Springs
McCook
Summit
Indian Head Park
Countryside
Hodgkins
Bedford Park
Bridgeview
Justice
Burbank
N
W
E
S
Cook County: Central Region, Special Flood Hazard Area
Flood Zone
A
AE
AH
AO
VE
0.2 % Annual Chance Flood Hazard
Cook County Boundary
0 0.5 1 2 3 4
Miles
Sources: Esri, GEBCO, NOAA, National Geographic contributors, Esri, Garmin, GEBCO, NOAA NGDC, a


Western Springs
Indian Head Park
Countryside
Hodgkins
Summit
Bedford Park
Justice
Burbank
Willow Springs
Bridgeview
Hometown
Hickory Hills
Evergreen Park
Chicago
Oak Lawn
Chicago Ridge
Palos Hills
Worth
Merrionette Park
Alsip
Calumet Park
Blue Island
Lemont
Palos Park
Palos Heights
Crestwood
Robbins
Riverdale
Burnham
Dixmoor
Dolton
Posen
Calumet City
Midlothian
Harvey
Phoenix
Oak Forest
Orland Park
Markham
South Holland
Orland Hills
Hazel Crest
East Hazel Crest
Thornton
Lansing
Tinley Park
Country Club Hills
Homewood
Flossmoor
Glenwood
Lynwood
Matteson
Olympia Fields
Chicago Heights
Ford Heights
Sauk Village
Richton Park
Park Forest
South Chicago Heights
Steger
N
W
E
S
Cook County: South Region, Special Flood Hazard Area
Flood Zone
A
AE
AH
AO
VE
0.2 % Annual Chance Flood Hazard
Cook County Boundary
0 0.751.5 3 4.5 6
Miles
Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, GeoNames.org, and other contributors, Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Watersheds in Cook County

Each Cook County watershed has unique qualities that affect its response to rainfall. Stream gauges are used to monitor stream levels or stages. Data collected from stream gauges are used to develop hydrograph models to help predict potential flood conditions and flood heights. A hydrograph is a graph or chart illustrating stream flow in relation to time (see *Figure: Des Plaines River Hydrograph*).

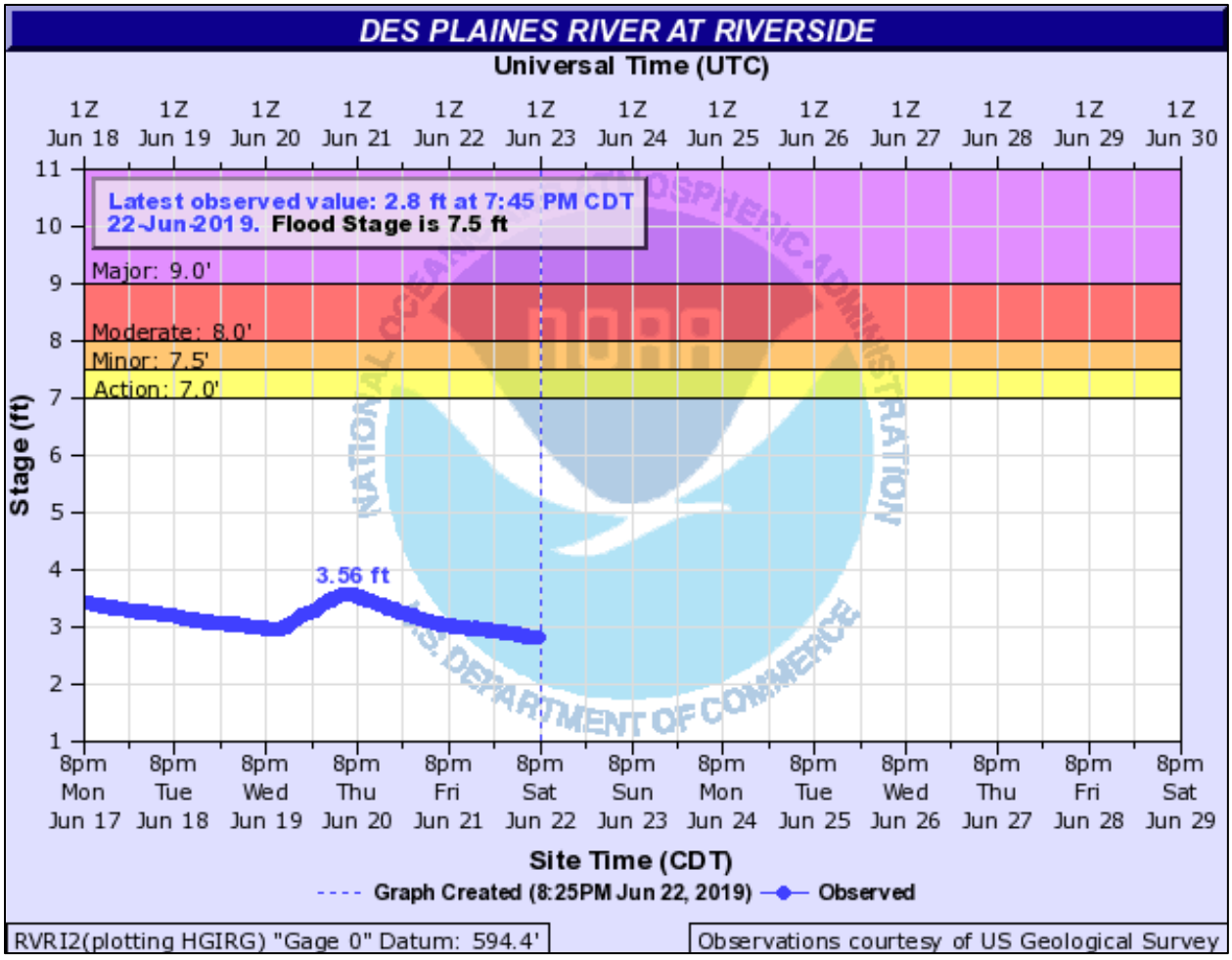


Figure: Des Plaines River Hydrograph

Once rainfall starts falling over a watershed, runoff begins, and the stream begins to rise. Water depth in the stream channel (stage of flow) will continue to rise in response to runoff even after rainfall ends. Eventually, the runoff will reach a peak, and the stage of flow will crest. The flooding eventually subsides, and the stream flow decreases to a level below the flooding stage.

Metropolitan Water Reclamation District of Greater Chicago

The frequency and the magnitude of stormwater/urban drainage flooding in Cook County dictated the assignment of stormwater management within the County to a single entity—the Metropolitan Water Reclamation District of Greater Chicago. The District's mission is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan),

improve the quality of water in watercourses in its service area, protect businesses and homes from flood damage, and manage water as a vital resource for its service area. The District has developed a stormwater management program that includes a detailed watershed plan (DWP) for the six principal watersheds that make up Cook County (see figures below). The purpose of each DWP was to identify the stormwater-related problems in a watershed, develop regional alternative solutions to those problems, and then evaluate the regional alternatives to determine the most effective alternative solutions in addressing the watershed's needs. Each DWP contains a summary of the watershed's areas of concern and a listing of proposed regional capital improvement projects to address those concerns. After DWPs were completed, the District again solicited information for its Phase II Program from each municipality, township and regional agency having jurisdiction in Cook County. Summary descriptions of each watershed are provided.

The Calumet-Sag Channel Watershed

The Calumet-Sag Channel Watershed in southwestern Cook County drains an area of 151 square miles that includes 27 communities. The watershed area north of the Calumet-Sag Channel is heavily developed and characterized by low relief. It is drained principally by the East and West branches of Stony Creek, which both discharge into the Calumet-Sag Channel.

Several smaller streams discharge westward into the I&M Canal or southward into the Calumet-Sag Channel. The watershed area south of the Calumet-Sag Channel is less intensely developed and characterized by greater topographic relief. Spring Creek, Long Run Creek, and Marley Creek all drain southwest into Will County and are tributary to Hickory Creek, which drains to the Lower Des Plaines River. These streams are included in the scope of the Calumet-Sag Channel DWP, along with tributaries that flow north to the Calumet-Sag Channel and several tributaries that flow west to the I&M Canal.

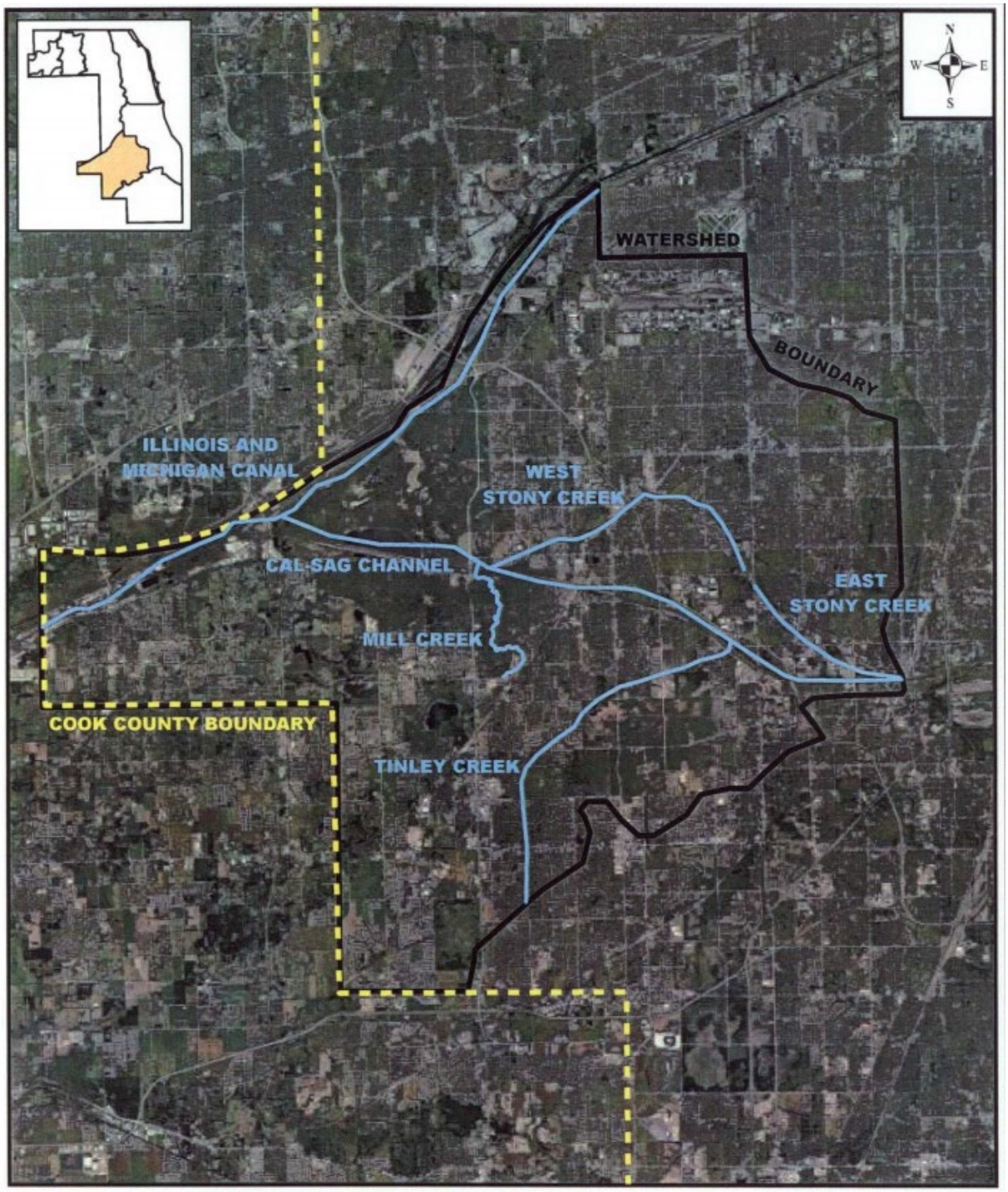


Figure: Calumet-Sag Channel Watershed (Cook County Stormwater Management Plan, 2014)

The Little Calumet River Watershed

The Little Calumet River Watershed is predominantly in the southeast portion of Cook County and has a total area of 264.6 square miles: 159.6 square miles in Cook County, 61.4 square miles in Will County, and 43.6 square miles in Lake County, Indiana. The watershed is bounded on the north by Blue Island, on the south by Monee, on the west by Tinley Park, and on the east by Gary, Indiana. The

watershed includes nine sub-watersheds: Butterfield Creek, Cady Marsh Ditch, Calumet Union Drainage Ditch, Deer Creek, Little Calumet River, Midlothian Creek, North Creek, Plum Creek/Hart Ditch, and Thorn Creek. The predominant land use in the watershed (Cook and Will Counties, Illinois) is residential (35 percent). Approximately 20 percent of the watershed is undeveloped land (agriculture and vacant land) and 28 percent is classified as open space (parks, cemeteries, golf courses, wetlands, etc.). The remaining land is mostly classified as commercial, industrial, and institutional. Locations with historical flooding and stream bank erosion problems on regional waterways exist throughout the watershed.

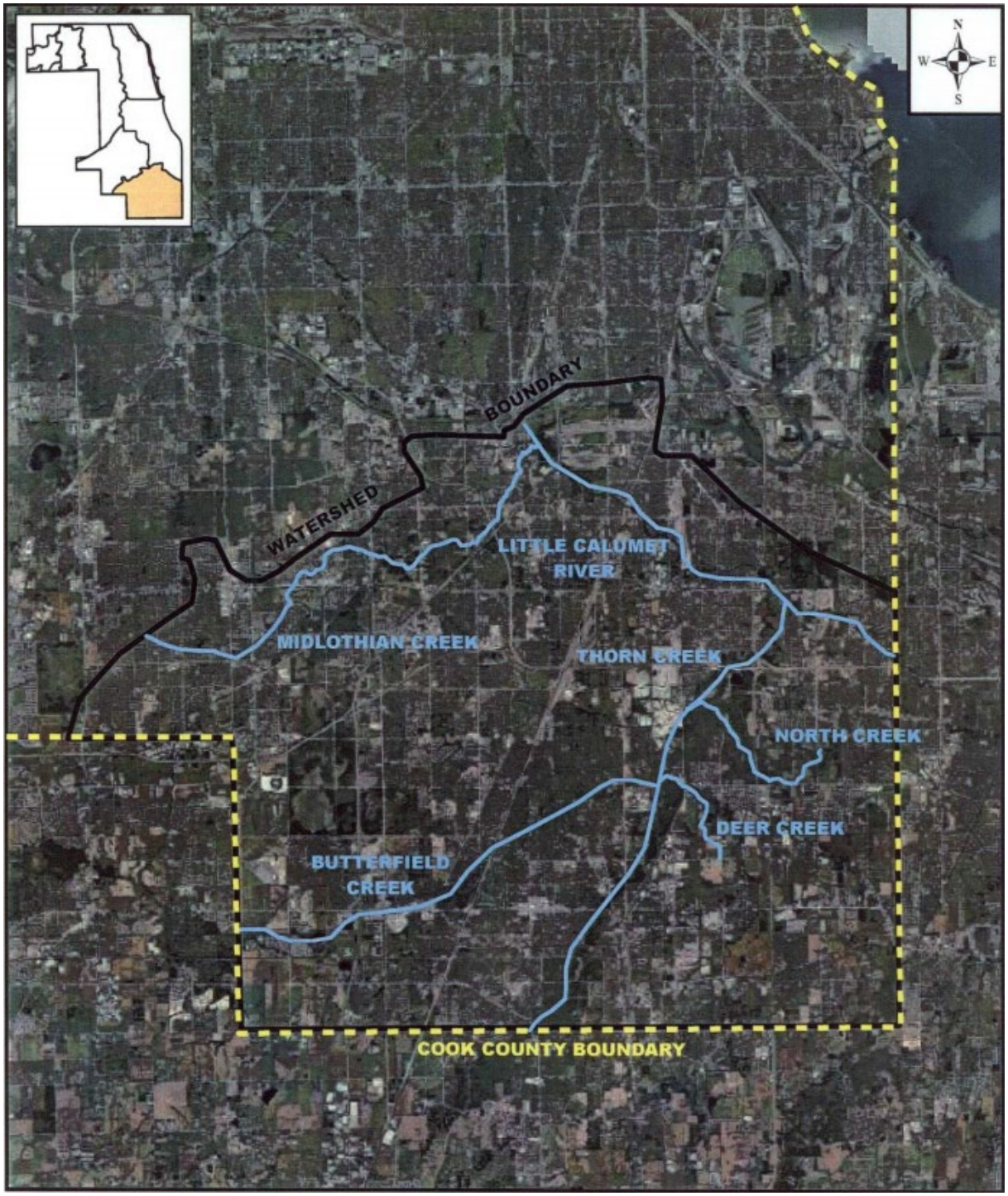


Figure: Little Calumet River Watershed (Cook County Stormwater Management Plan, 2014)

Lower Des Plaines River Watershed

The Des Plaines River Watershed is located in portions of Racine and Kenosha Counties in Wisconsin and Lake, Cook, DuPage, and Will Counties in Illinois. The majority of the watershed is an urban developed area within the Chicago metropolitan area, with most remaining agricultural lands in Lake

and Will Counties. Approximately 680 square miles of the watershed area is a tributary to the Des Plaines River at the Cook-Will County border.

Tributary sub-watersheds within the Lower Des Plaines River Watershed study area include 67th Street Ditch, Addison Creek, Buffalo Creek, Chicago Sanitary and Ship Canal, Crystal Creek, Des Plaines River Main Stem, Des Plaines River Tributary A, East Avenue Ditch, Farmers-Prairie Creek, Feehanville Ditch, Flagg Creek, Golf Course Tributary, McDonald Creek, Lower Salt Creek, Silver Creek, Weller Creek, and Willow Creek. The tributary sub-watersheds are generally on the west side of the Lower Des Plaines River and flow east toward the Lower Des Plaines River main stem, except for the Farmers-Prairie Creek and Golf Course Tributary Sub-watersheds, which are on the east side of the Lower Des Plaines River Main Stem. Locations with historical flooding and streambank erosion problems on regional waterways exist throughout the watershed.

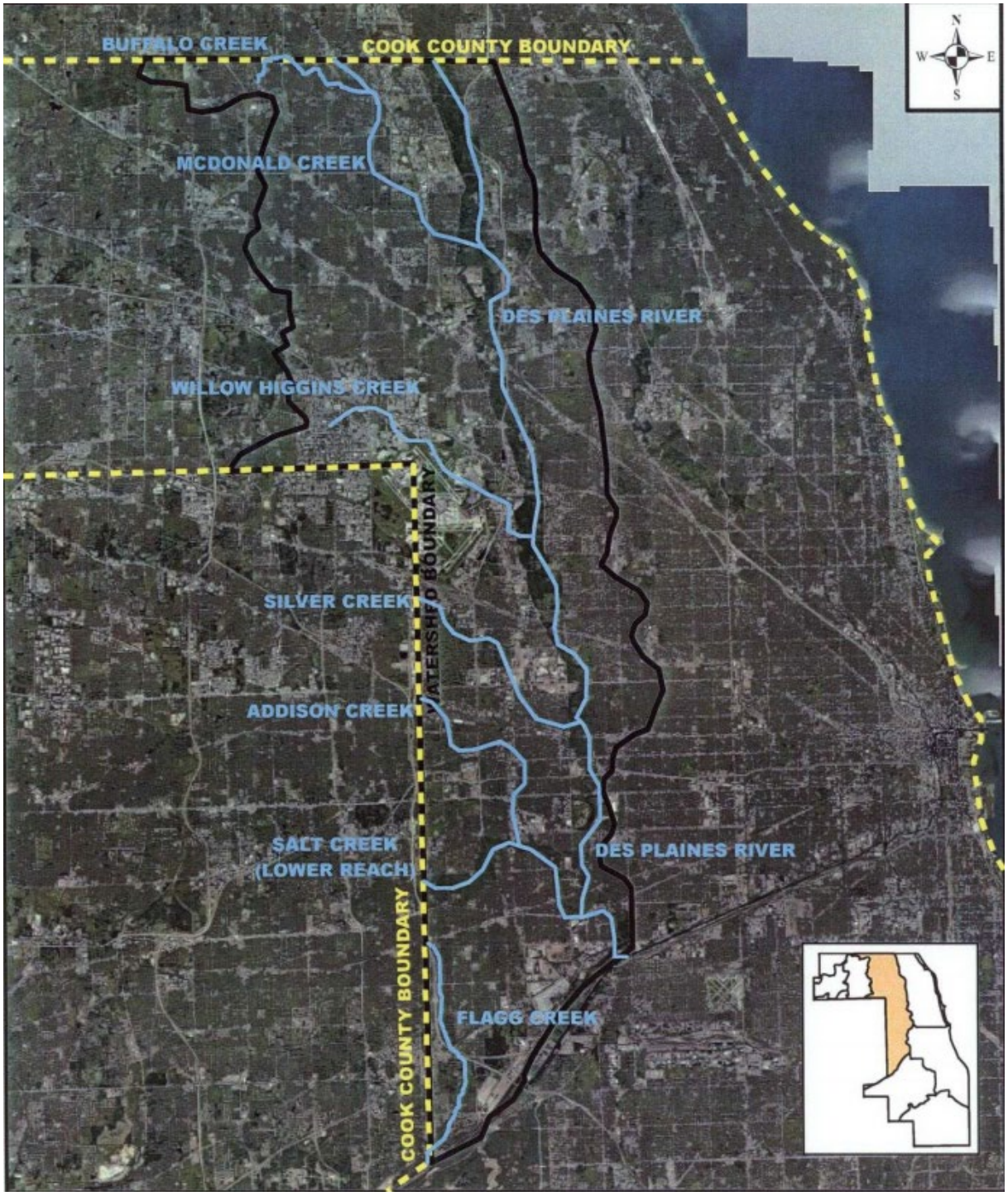


Figure: Lower Des Plaines River Watershed (Cook County Stormwater Management Plan, 2014)

Chicago River, North Branch Watershed

The Chicago River, North Branch watershed is located in northeastern Cook County. The headwaters of the three major tributaries—the West Fork, the Middle Fork, and the Skokie River—are located in Lake County. These tributaries flow south and combine with the Chicago River, North Branch at two

separate confluence points. Another tributary, the NSC, enters the system near Albany Avenue in Chicago. Twenty municipalities are located entirely, or in part, in the watershed, and the entire watershed covers 141 square miles. The downstream limit of the Chicago River, North Branch is at the confluence with the Chicago River, South Branch near West Lake Street. This reach has been widened and dredged, with widths up to 300 feet and depths of 10 to 15 feet. For the next 7 miles upstream to the North Branch Dam, the river is about 90 feet wide with a depth of 10 feet. The Chicago River, North Branch watershed area is a heavily urbanized area, characterized by low relief, with small portions of forest preserve and park areas. Locations with historical flooding and stream bank erosion problems on regional waterways exist throughout the watershed.

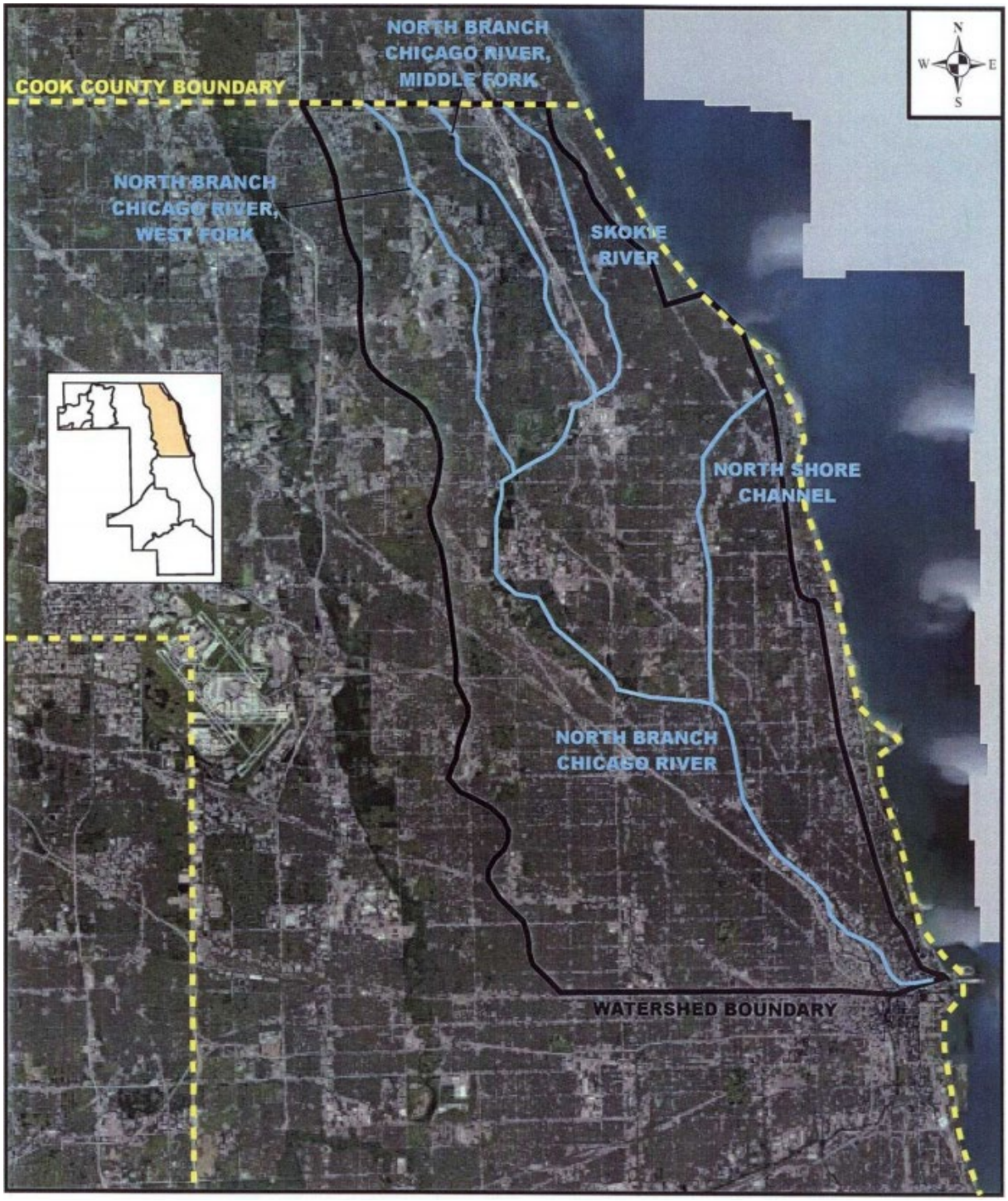


Figure: Chicago River, North Branch, Watershed (Cook County Stormwater Management Plan, 2014)

Poplar Creek Watershed

The Poplar Creek Watershed study area covers 83.5 square miles in northwestern Cook County and includes the Cook County portions of the Poplar Creek, Flint Creek, Spring Creek, Brewster Creek,

and West Branch DuPage River watersheds. The District has established boundaries of the Poplar Creek Watershed study area for purposes of its stormwater management program. The main stem of Poplar Creek has six major tributaries: Tributary A, Poplar Creek East Branch, Poplar Creek Schaumburg Branch, Railroad Tributary, Poplar Creek South Branch, and Lord's Park Tributary. Flint Creek Tributary is tributary to Flint Creek, exiting Cook County upstream of its confluence with Flint Creek. Locations with historical flooding and stream bank erosion problems on regional waterways exist throughout the watershed.

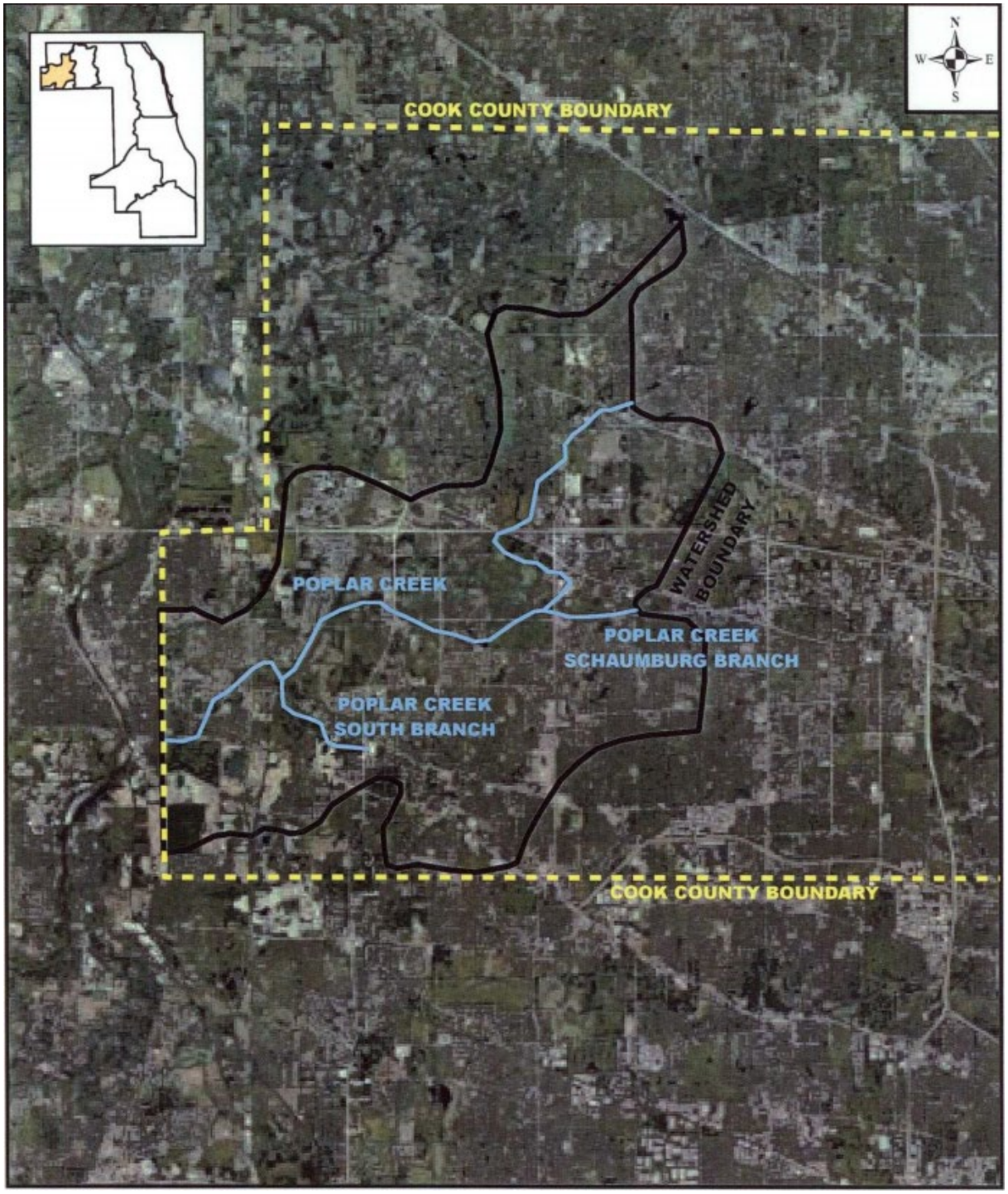


Figure: Poplar Creek Watershed (Cook County Stormwater Management Plan, 2014)

Upper Salt Creek Watershed

Salt Creek is divided into two hydrologic parts by Busse Woods Dam: Upper Salt Creek and Lower Salt Creek. In the DWP, "Upper Salt Creek" refers to the Salt Creek stream reaches and tributaries upstream of the DuPage County/Cook County border. The total watershed area is 55 square miles.

Land use is predominantly residential, with concentrations of commercial, light manufacturing and trucking facilities. Several large forest preserves are also present, notably Ned Brown Preserve (also known as Busse Woods), Paul Douglas Forest Preserve and Deer Grove Forest Preserve.

The watershed is composed of three sub-watersheds: the Arlington Heights branch, the Main Stem, and the West Branch. The Arlington Heights Branch sub-watershed covers the north and northeast portion of the watershed and flows directly into the main stem upstream of Algonquin Road in the City of Rolling Meadows. The West Branch sub-watershed covers the southwest portion of the watershed and joins the main stem at the Busse Woods Reservoir. Locations with historical flooding and stream bank erosion problems on regional waterways exist throughout the watershed.

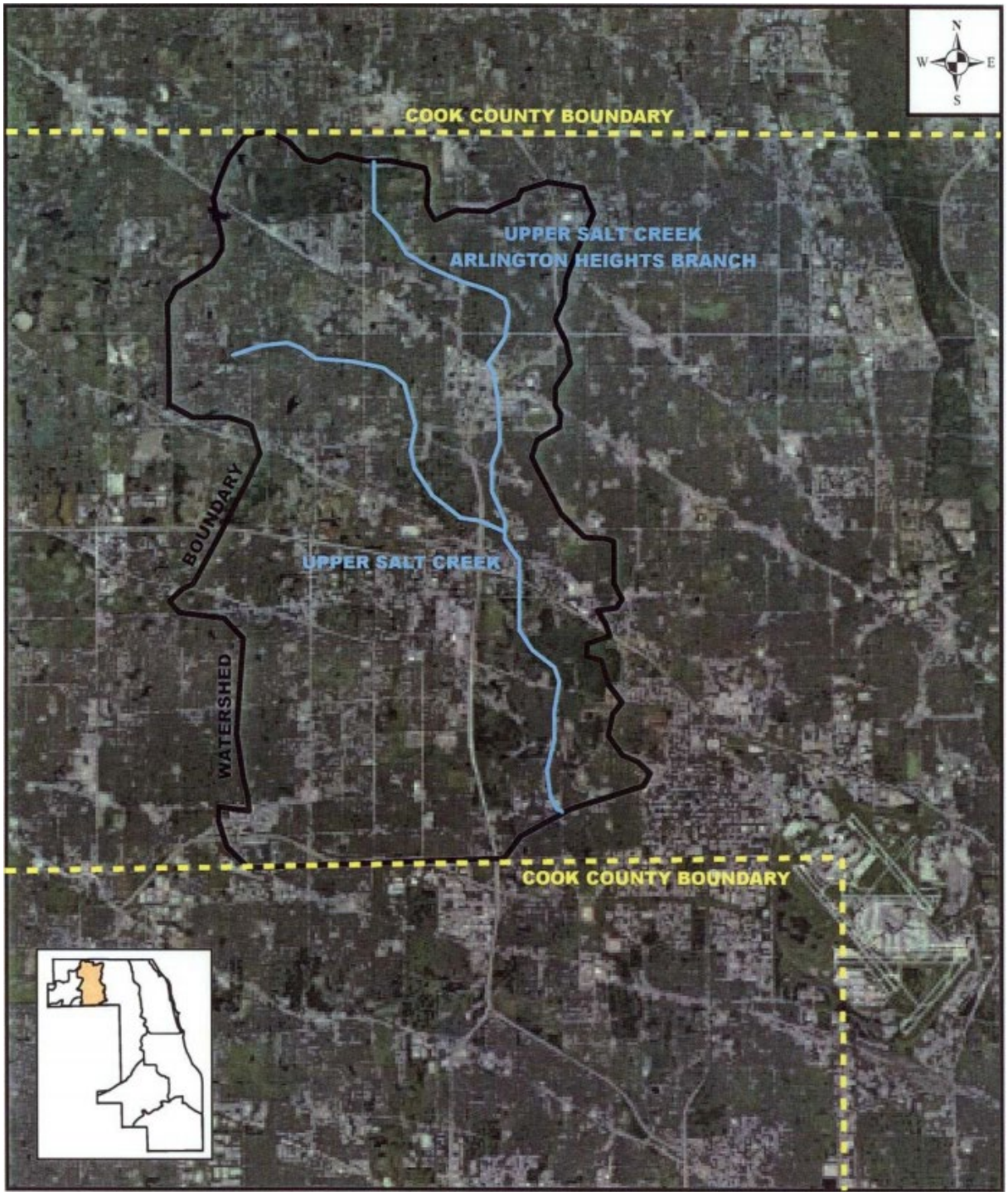


Figure: Upper Salt Creek Watershed (Cook County Stormwater Management Plan, 2014)

Combined Sewer Area

The combined sewer area is the conglomeration of all combined sewer areas within Cook County, rather than a geographical feature of the county as are the six watersheds listed above. The combined sewer area encompasses a significant portion of the City of Chicago and overlaps areas of four of the six primary watersheds listed above. Stormwater/urban drainage flooding issues are prevalent in this

area, as indicated by a large number of individual assistance claims paid following the flooding in 2013 (see *Figure: Individual Assistance Claims for DR-4116*).

Overview of Existing Problems

During the development of the DWPs and Phase II Program, information on existing problem areas was solicited from Watershed Planning Council members, municipalities, townships, federal and state agencies, and other stakeholders. Responses were used to help identify locations of concern and where field assessment, surveys, and modeling were needed to support alternative solutions. A review of these identified problems found a consistent set of flooding issues across the watersheds:

- Undersized or restrictive sewers or culverts
- Undersized ditches
- Undersized detention basins
- Poorly managed stormwater facilities
- Clogged sewers or culverts
- Overgrowth in drainage ditches
- Overgrowth at outfalls of storm sewers
- Overbank flooding
- Erosion
- Ponding or flooding in streets, alleys, parking lots, or yards
- Structural flooding from ponding or sheet flow
- No detention because the area was developed before detention requirements.
- Basement backups and sanitary backups
- Sump pumps connected to sanitary sewers.
- Depressional areas with no overland drainage routes
- Lack of inlets in low-lying areas
- No storm sewers or ditches.

5.4.3 Hazard Extent/Intensity

The extent of flooding associated with a 1-percent annual probability of occurrence (the base flood or 100-year flood) is used as the regulatory boundary by many agencies. Also referred to as the special flood hazard area (SFHA), this boundary is a convenient tool for assessing vulnerability and risk in flood-prone communities. Many communities have maps that show the extent and likely depth of flooding for the base flood. Corresponding water-surface elevations describe the elevation of water that will result from a given discharge level, which is one of the most important factors used in estimating flood damage.

The NFIP classifies floods through the use of recurrence intervals as seen in the figure below:

Flood Recurrence Interval	Chance of occurrence during any given year
5 year	20%
10 year	10%
50 year	2%
100 year	1%
500 year	0.20%

The federal standard for floodplain management under the National Flood Insurance Plan (NFIP) is the 100-year floodplain. This area is chosen using historical data such that in any given year there is a 1% chance of a "base flood (also known as 100-year flood or regulatory flood). A base flood is one that covers or exceeds the 100-year floodplain. A 500-year floodplain is an area with at least a .2% chance of flood occurrence in any given year.

When surface water runoff introduced into streams and rivers exceeds the capacity of the natural or constructed channels to accommodate the flow, water overflows the stream banks, spilling out into adjacent low-lying areas. Riverine flooding occurs as a consequence (FEMA).

Riverine flooding can cause two types of floods: overbank flooding and flash floods. Overbank flooding is the "increase in volume of water within a river channel and the overflow of water from the channel onto the adjacent floodplain (FEMA, 2024).

Flash flooding can occur suddenly within six hours of intense rainfall from a thunderstorm or several thunderstorms. Flash floods are common near canyons, cliffs, and creek beds, making these areas especially hazardous during rainfall.

NATIONAL WEATHER SERVICE – UNDERSTANDING FLOODING					
Urban/Small Stream Advisory	***Flood Watch***	***Flash Flood Watch***	***Flood Warning***	***Flash Flood Warning***	***Flash Flood Emergency***
WHAT IS IT?	**WHAT IS IT?**	**WHAT IS IT?**	**WHAT IS IT?**	**WHAT IS IT?**	**WHAT IS IT?**
Flooding of small streams, streets and low-lying areas.	Flooding is possible – typically within 6 to 48 hours before rain is expected to reach the area.	Flash flooding is possible – typically 6 to 48 hours before rain is expected to reach the area.	Flooding impacts are occurring or imminent.	Flooding impacts are occurring or imminent.	Flash flood situation that presents a clear threat to human life due to extremely dangerous flooding conditions.
WHAT TO DO?	**WHAT TO DO?**	**WHAT TO DO?**	**WHAT TO DO?**	**WHAT TO DO?**	**WHAT TO DO?**
Stay away from areas that are prone to flooding and stay clear of rapidly moving water.	Stay tuned to local river forecasts; prepared for areas near rivers to spread towards nearby roads and buildings	Have a way to receive local warnings, expect hazardous travel conditions and have alternate routes available	Stay ***alert*** for inundated roadways and follow all local signage. Additional impacts include homes and structures could become clouded and need to be evacuated.	Conditions will ***rapidly*** become hazardous! Do not cross flooded roadways or approach inundated areas as water may still be rising.	***Immediately*** reach higher ground by any means possible.
Flash floods are characterized by rapid rise of water on the order of a few minutes to 6 hours that can occur anywhere. A flood watch or warning pertains to larger streams and rivers that take much longer to respond (3 hours to weeks) but move much larger amounts of water through sensitive areas.					
Source: National Weather Service (2024)					

The HAZUS-MH flood model is designed to generate a flood depth grid and flood boundary polygon by deriving hydrologic and hydraulic information based on user-provided elevation data or by incorporating selected output from other flood models. HAZUS-MH also has the ability to clip a Digital Elevation Model (DEM) with a user-provided flood boundary, thus creating a flood depth grid. For Cook County, HAZUS-MH was used to extract flood depth by clipping the DEM with the DFIRMs Base Flood Elevation (BFE) boundary. The BFE is defined as the area that has a 1% chance of flooding in any given year.

Flood hazard scenarios were modeled using GIS analysis and Hazus-MH. The flood hazard modeling was based on historical occurrences and current threats. Existing flood maps were used to identify the areas of study. These digital files, although not official FIRMs, provided the boundary which was the basis for this analysis. Planning team input and a review of historical information provided additional information on specific flood events.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Flood (Riverine)	Jurisdictions near rivers, streams, and waterways	0-feet	See Peak Discharge Table below	

Flood (Flash)	County-wide	0 inches of rain	9.35 inches (24-hour)	August 13-14, 1987

The principal factors affecting flood damage are flood depth and velocity. The deeper and faster flood flows become, the more damage they can cause. Shallow flooding with high velocities can cause as much damage as deep flooding with slow velocity. This is especially true when a channel migrates over a broad floodplain, redirecting high-velocity flows and transporting debris and sediment. Flood severity is often evaluated by examining peak discharges; *Table: Summary Of Peak Discharges Within The Planning Area* lists some of the peak flows used by FEMA to map the floodplains of Cook County.

TABLE:
SUMMARY OF PEAK DISCHARGES WITHIN THE PLANNING AREA

Source/Location	Discharge (cubic feet/second)			
	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
79th Street Ditch				
At County Line Rd	91	141	165	226
Addison Creek				
At Confluence with Salt Creek	1,727	2,337	2,530	3,070
Approximately 650' downstream of Tri-state Tollway	517	802	951	1,370
Belaire Creek				
At confluence with Dixie Creek	68	103	119	154
Boca Rio Ditch				
Just downstream of 147th Street	336	490	562	730
Buffalo Creek				
At Elmhurst Rd.	870	1,430	1,680	2,470
At Lake-Cook Road	715	1,187	1,430	2,088
Buffalo Creek Tributary A				
At confluence with Buffalo Creek	370	580	690	940
At Staples Road	0	0	40	110
Butterfield Creek		--		
At confluence with Thorn Creek	1,720		2,740	3,725
At I-57	345		470	540
Butterfield Creek East Branch		--		
At confluence with Thorn Creek	1,000		1,400	1,715
Butterfield Creek Tributary No. 3				
Just upstream of confluence with Butterfield Creek	196	281	317	402
Calumet Sag Channel Tributary A				
At State Route 83	230	365	425	595
Calumet Sag Channel Tributary B				
At confluence with Calumet Sag Channel	213	411	545	716
Calumet Union Drainage Ditch				
At Halsted Street	415	746	1,024	1,460
At St. Louis Avenue	96	173	219	282
Calumet Union Drainage Ditch Southwest Branch				
At Central Park Avenue	360	660	920	1,330
Chicago River, North Branch				
At confluence of North Shore Channel	2,375	3,600	4,180	5,600
Just upstream of Glenview Road	1,830	1,967	2,361	2,897
Chicago River, North Branch, Middle Fork				

At confluence with Skokie River	418	847	1,004	1,479
At Lake-Cook Road	521	879	1,098	1,569
Chicago River, North Branch, West Fork				
At confluence with Chicago River, North Branch	741	1,295	1,494	2,341
At confluence of Underwriters Tributary	364	509	593	1,199
Crestwood Drainage Ditch West				
At State Route 83	242	343	384	500
Crystal Creek				
At the confluence with the Des Plaines River	333	469	502	590
Approximately 900 feet upstream of Mannheim Road	17	28	34	51
Crystal Creek Tributary				
At confluence with Crystal Creek	194	271	321	389
Just upstream of confluence of Sexton Ditch	72	83	89	100
Deer Creek				
At Young Street	1,195	1,810	2,079	2,800
Des Plaines River				
At Interstate Route 55	6,000	7,500	8,400	9,300
Approximately 1,600 feet downstream of Dundee Road	3,727	5,367	6,018	7,511
Dixie Creek				
At Dixie Highway	66	100	135	250
DuPage River West Branch				
At Irving Park Road	322	594	807	1,150
Farmer's Creek				
At confluence with Des Plaines River	317	505	643	1,987
Flag Creek				
At the mouth	1,660	2,650	3,180	4,500
At 47th Street	400	620	740	1,020
Grand Calumet River				
At CSX Transportation	415	460	470	500
Hickory Creek				
At Harlem Avenue	550	860	1,014	1,400
Higgins Creek				
At Old Mt. Prospect Road	454	503	730	1,666
At upstream side of Wille Road	450	755	975	1,365
Little Calumet River				
At confluence with Calumet-Sag Channel	3,090	4,290	4,670	6,110
At Illinois/Indiana State Line	1,010	1,250	1,290	1,551
Long Run				
At State Street	1,460	2,300	2,670	3,500
Marley Creek				
At 179th Street	530	830	976	1,370
McDonald Creek				
At confluence with the Des Plaines River	535	800	913	1,240
At Cornell Avenue	115	129	141	473
McDonald Creek North Branch				
Just upstream of Windsor Drive	965	1,443	1,630	2,220
McDonald Creek South Branch				
Upstream of Buffalo Grove Road	902	1,190	1,261	1,502
Midlothian Creek				
At mouth	264	495	637	951

At 84th Avenue	254	573	728	1,078
Midlothian Creek Western Branch				
At confluence with Midlothian Creek	155	225	255	335
Mill Creek				
At 119th Street	485	840	1,030	1,510
At 131st Street	242	355	406	535
Mill Creek West Branch				
At 123rd Street, approximately 1,000 feet east of U.S. Route 45	295	415	469	600
Natalie Creek				
At Crawford Avenue	187	313	450	763
Navajo Creek				
At confluence with Calumet-Sag Channel	516	741	836	1,080
North Creek				
At confluence with Thorn Creek	722	1,127	1,332	1,891
At Wentworth Avenue	28	44	51	62
Plum Creek				
At Steger Road	1,152	1,594	1,800	2,370
Poplar Creek				
At the mouth	1,085	1,709	2,010	2,794
At Stover Road	76	119	140	195
Prairie Creek				
At Kennedy Drive	137	210	269	1,336
Salt Creek (Lower Reach)				
At the mouth	1,570	2,780	3,400	4,920
At Elk Grove Village	1,653	2,300	2,590	3,350
Salt Creek (Upper Reach)				
At Golf Road	1,136	1,845	2,221	3,031
Just upstream of confluence of Salt Creek Tributary B	69	130	169	256
Salt Creek, Arlington Heights Branch				
At confluence with Salt Creek (Upper Reach)	446	686	818	1,174
At Quentin Road	57	149	210	359
Salt Creek Middle Fork				
At the mouth	45	82	100	110
Salt Creek South Fork				
At the mouth	38	47	64	130
Salt Creek West Branch				
At Interstate Route 290	674	1,197	1,505	2,200
At Wiley Road	50	94	122	185
Silver Creek				
At mouth at Des Plaines River	465	712	842	1,125
At Railroad yard	350	535	640	850
Skokie River				
At Willow Road	429	1,202	1,624	2,197
At Lake-Cook Road	1,084	1,559	1,844	2,401
Spring Creek				
At 118th Avenue	108	205	259	396
Stony Creek (East)				
At confluence with Calumet-Sag Channel	260	395	459	620
At Cicero Avenue	50	75	100	150
Stony Creek (West)				

At the mouth At Norfolk & Western Railway	1,420 935	1,900 1,250	2,100 1,405	2,620 1,720
Third Creek Approximately 2,400 feet upstream of confluence with Deer Creek	98	172	221	325
Thorn Creek At the confluence with the Little Calumet River At Sauk Trail	1,156 525	2,020 880	2,870 1,100	5,450 1,520
Tinley Creek At confluence with Calumet-Sag Channel At 167th Street	1,368 127	1,665 204	1,770 253	2,005 360
Weller Creek Upstream entrance to diversion conduit	789	1,281	1,611	2,683
Willow Creek At confluence with the Des Plaines River Confluence of Willow Creek and Higgins Creek	1,337 1,348	1,670 1,960	1,800 2,206	3,055

Urban Flooding Susceptibility Index Chart

The chart below is based on the CMAP-developed urban flood susceptibility index (FSI). This was constructed with data from FEMA, counties, and the City of Chicago collected and put into an address-level database of documented flood locations. This database consisted of 165,000 unique locations, with the majority of these locations experiencing flooding between 2007 and 2017. The index is categorized into 10 risk levels based on the combined frequency ratio scores from the following flood-related factors: Topographic Wetness Index, combined sewer service areas, property elevation compared to nearest Base Flood Elevation, impervious coverage, age of first development, and precipitation variation. 1 is the lowest susceptibility and 10 is the highest.

Note: Because depth has not been recorded for incidents of urban flooding, this is considered a data deficiency, and new mitigation actions have been created related to high water markings throughout this plan.

TABLE: URBAN FLOODING SUSCEPTIBILITY INDEX CHART

Jurisdiction	FSI	Jurisdiction	FSI
Alsip	9	Lemont	5
Arlington Heights	7	Lincolnwood	9
Barrington	5	Lynwood	5
Barrington Hills	2	Lyons	10
Bartlett	4	Marionette Park	8
Bedford Park	9	Markham	7
Bellwood	8	Matteson	5
Bensenville	7	Maywood	10
Berkeley	7	McCook	8
Berwyn	10	Melrose Park	9
Blue Island	10	Midlothian	9
Bridgeview	9	Morton Grove	8
Broadview	9	Mount Prospect	8
Brookfield	10	Niles	9

Buffalo Grove	7	Norridge	8
Burbank	9	North Riverside	10
Burnham	8	Northbrook	4
Burr Ridge	N/A	Northfield	3
Calumet Park	10	Northlake	7
Chicago	10	Oak Brook	5
Chicago Heights	7	Oak Forest	7
Chicago Ridge	9	Oak Lawn	9
Cicero	10	Oak Park	10
Country Club Hills	6	Olympia Fields	5
Countryside	6	Orland Park	5
Crestwood	9	Orlando Hills	5
Deer Park	2	Palatine	5
Deerfield	3	Palos Heights	7
Des Plaines	8	Palos Hills	8
Dixmoor	10	Palos Park	4
Dolton	10	Park Forest	7
East Dundee	6	Park Ridge	10
East Hazel Crest	7	Phoenix	10
Elgin	6	Posen	10
Elk Grove Village	7	Prospect Heights	7
Elmhurst	6	Richton Park	5
Elmwood Park	10	River Forest	8
Evanston	8	River Grove	9
Evergreen Park	9	Riverdale	10
Flossmoor	5	Riverside	9
Ford Heights	4	Robbins	7
Forest Park	9	Rolling Meadows	6
Forest View	10	Roselle	5
Franklin Park	9	Rosemont	7
Glencoe	4	Sauk Village	7
Glenview	5	Schaumburg	6
Glenwood	7	Schiller Park	7
Golf	N/A	Skokie	9
Hanover Park	7	South Barrington	2
Harvey	10	South Chicago Heights	7
Harwood Heights	9	South Holland	9
Hazel Crest	8	Steger	3
Hickory Hills	8	Stickney	10
Hillside	7	Stone Park	7
Hinsdale	5	Streamwood	5
Hodgkins	7	Summit	9
Hoffman Estates	4	Thornton	5
Hometown	10	Tinley Park	6
Homewood	7	University Park	3

Indian Head	4	Westchester	7
Inverness	2	Western Springs	9
Justice	8	Wheeling	7
Kenilworth	8	Willow Springs	2
La Grange	9	Wilmette	7
La Grange Park	9	Winnetka	3
Lansing	9	Worth	9

5.4.4 Probability and Frequency

The frequency and severity of flooding are measured using a discharge probability, which is the probability that a certain river discharge (flow) level will be equaled or exceeded in a given year. Flood studies use historical records to determine the probability of occurrence for the different discharge levels. The flood frequency equals 100 divided by the discharge probability. For example, the 100-year discharge has a 1-percent chance of being equaled or exceeded in any given year. The "annual flood" is the greatest flood event expected to occur in a typical year. These measurements reflect statistical averages only; it is possible for two or more floods with a 100-year or higher recurrence interval to occur in a short time period. The same flood can have different recurrence intervals at different points on a river.

Riverine Flooding: Between 1997 and 2024, Cook County experienced 68 Riverine Flooding incidents. This equates to an average of 2.42857143 riverine flooding events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

Urban/Flash/Stormwater Flooding: Between 1996 and 2023, Cook County experienced 97 Urban/Flash/Stormwater Flooding incidents (as recorded by NOAA). This equates to an average of 3.46428571 urban/flash/stormwater flooding incidents/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

According to NOAA, the frequency of flash flooding depends on seasonal weather patterns. Flash flooding is typically caused by inadequate drainage following heavy rainfall or rapid snowmelt and is more likely to occur in spring when thunderstorms and snow melt are more prominent.

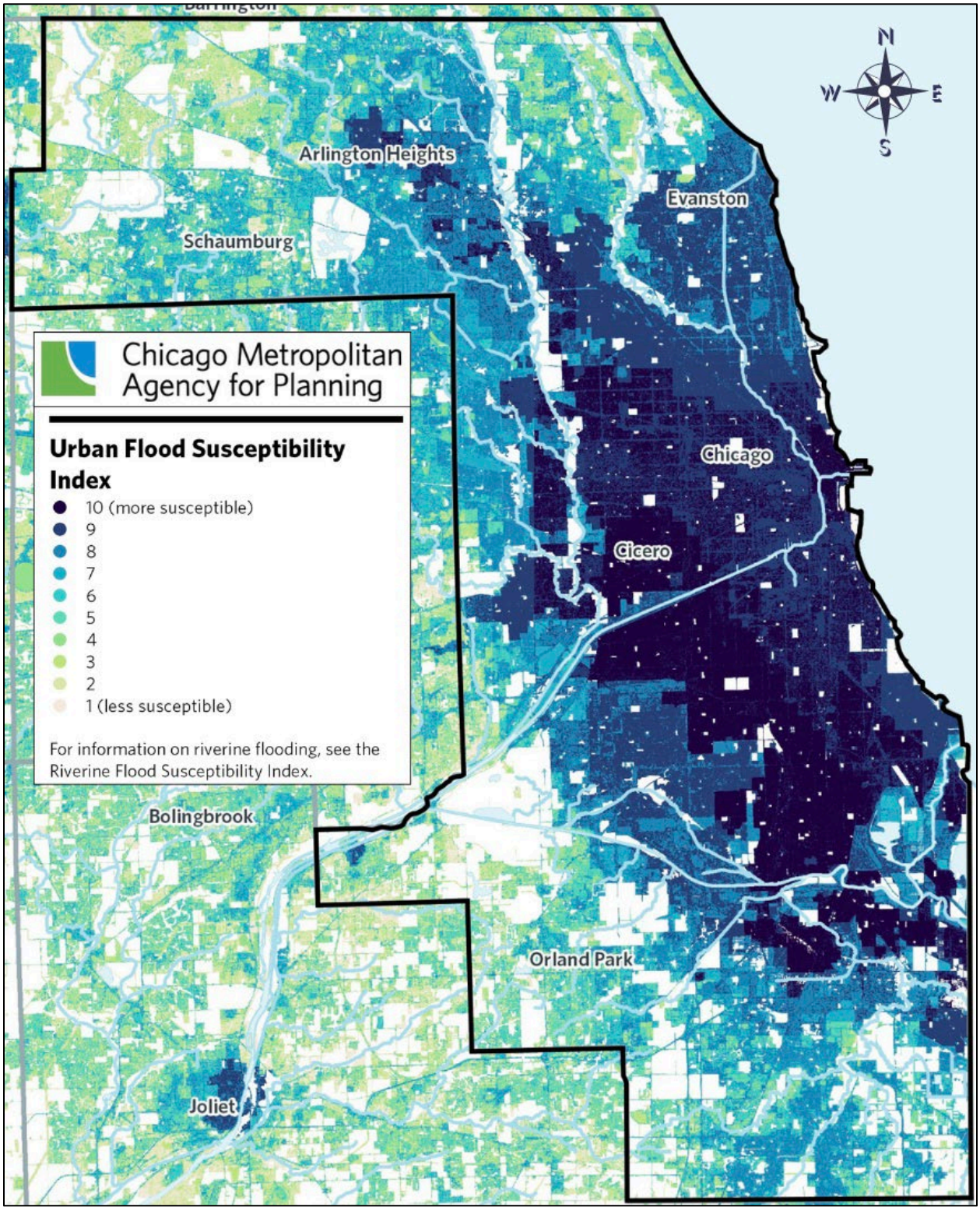
Urban areas (such as Chicago) are typically connected to municipal sewer systems (stormwater and/or sanitary sewer). For this reason, it is more probable that flash flooding will occur within this area.

The map below is based on the CMAP-developed urban flood susceptibility index (FSI). The FSI was constructed using a statistical method based on the observed relationship between the distribution

of reported flood locations and a variety of flood-related factors. With data assistance from Federal Emergency Management Agency, counties, and the City of Chicago, CMAP created an address-level database of documented flood locations to cross-reference with flooding-related factors. CMAP's database consists of over 165,000 unique locations, with the majority of the reported locations experiencing flooding within the past ten years (2007-17).

The index is categorized into 10 risk levels based on the combined frequency ratio scores from the following flood-related factors: Topographic Wetness Index, combined sewer service areas, property elevation compared to nearest Base Flood Elevation, impervious coverage, age of first development, and precipitation variation. One is the lowest susceptibility and 10 is the highest.

More information about FSI methodology, as well as the FSI index rasters and flood-related factor data, are available for download on (CMAP).



Source: (CMAP) 2024

Costal/Shoreline Flooding: From 2013 through 2022, two Coastal Flooding incidents occurred in Cook County and were recorded by NOAA. This frequency averages to 0.2 flooding incidents annually and would indicate a similar trend moving forward.

In the image below, there is a 1% annual chance of coastal flooding. Flooding is shown along Cook and Lake counties' coastline (left), including Northwestern University's campus (top right), and residential structures in Chicago's South Shore neighborhood (bottom right) (2023 Illinois State HMP).



Source: (2023 Illinois State HMP)

5.4.5 National Flood Insurance Program (NFIP) Participation

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. For most participating communities, FEMA has prepared a

detailed Flood Insurance Study. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-year flood). Base flood elevations and the boundaries of the 100- and 500-year floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principal tool for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities, they represent the minimum area of oversight under their floodplain management program.

Participants in the NFIP must, at a minimum, regulate development in floodplain areas in accordance with NFIP criteria. Before issuing a permit to build in a floodplain, participating jurisdictions must ensure that three criteria are met:

New buildings and those undergoing substantial improvements must, at a minimum, be elevated to protect against damage by the 100-year flood.

New floodplain development must not aggravate existing flood problems or increase damage to other properties.

The communities in Cook County that participate in the NFIP are shown in *Table: NFIP Participating Communities in Cook County*.

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY

CID	Community Name	County	Initial FIRM Identified	Current Effective Map Date
170055J	ALSIP, VILLAGE OF	COOK COUNTY	09/17/80	11/1/19
170056#	ARLINGTON HEIGHTS, VILLAGE OF	LAKE COUNTY/COOK COUNTY	5/1/78	9/18/13
170057#	BARRINGTON, VILLAGE OF	LAKE COUNTY/COOK COUNTY	10/16/84	9/18/13
170059#	BARTLETT, VILLAGE OF	KANE COUNTY/DUPAGE COUNTY/COOK COUNTY	6/15/1981	8/1/2019
171007#	BEDFORD PARK, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08
170061#	BELLWOOD, VILLAGE OF	COOK COUNTY	12/4/79	08/19/08
170200#	BENSENVILLE, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	2/4/1981	8/1/2019
171039#	BERKELEY, VILLAGE OF	COOK COUNTY	11/6/00	(NSFHA)
171036#	BERWYN, CITY OF	COOK COUNTY	11/6/00	(NSFHA)
170064#	BLUE ISLAND, CITY OF	COOK COUNTY	07/02/80	08/19/08
170065#	BRIDGEVIEW, VILLAGE OF	COOK COUNTY	02/04/81	08/19/08
170067#	BROADVIEW, VILLAGE OF	COOK COUNTY	01/16/81	08/19/08

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY				
CID	**Community Name**	**County**	**Initial FIRM Identified**	**Current Effective Map Date**
170066#	BROOKFIELD, VILLAGE OF	COOK COUNTY	12/16/80	08/19/08
170068#	BUFFALO GROVE, VILLAGE OF	LAKE COUNTY/COOK COUNTY	9/14/1979	9/18/2013
170069#	BURBANK, CITY OF	COOK COUNTY	11/6/00	(NSFHA)
170070#	BURNHAM, VILLAGE OF	COOK COUNTY	06/01/81	08/19/08
170071B	BURR RIDGE, VILLAGE OF	COOK COUNTY/DUPAGE COUNTY	10/15/81	08/01/19
170072#	CALUMET CITY, CITY OF	COOK COUNTY	04/01/80	08/19/08
170073#	CALUMET PARK, VILLAGE OF	COOK COUNTY	02/16/79	08/19/08
170074#	CHICAGO, CITY OF	DUPAGE COUNTY/COOK COUNTY	6/1/1981	9/10/2021
170075#	CHICAGO HEIGHTS, CITY OF	COOK COUNTY	11/15/79	08/19/08
170076#	CHICAGO RIDGE, VILLAGE OF	COOK COUNTY	11/19/80	08/19/08
170077#	CICERO, TOWN OF	COOK COUNTY	11/6/00	(NSFHA)
170054J	COOK COUNTY *	COOK COUNTY	04/15/81	09/10/21
170078#	COUNTRY CLUB HILLS, CITY OF	COOK COUNTY	07/16/80	08/19/08
170079#	COUNTRYSIDE, CITY OF	COOK COUNTY	09/03/80	08/19/08
170080J	CRESTWOOD, VILLAGE OF	COOK COUNTY	02/18/81	11/1/19
171028#	DEER PARK, VILLAGE OF	COOK COUNTY/LAKE COUNTY	09/03/97	09/18/13(M)
170361#	DEERFIELD, VILLAGE OF	COOK COUNTY/LAKE COUNTY	09/30/77	09/18/13
170081#	DES PLAINES, CITY OF	COOK COUNTY	06/15/81	08/19/08
170082#	DIXMOOR, VILLAGE OF	COOK COUNTY	06/04/80	08/19/08
170083#	DOLTON, VILLAGE OF	COOK COUNTY	07/16/80	08/19/08
170323#	EAST DUNDEE, VILLAGE OF	COOK COUNTY/KANE COUNTY	03/16/81	08/03/09
170085#	EAST HAZEL CREST, VILLAGE OF	COOK COUNTY	09/22/78	08/19/08
170087#	ELGIN, CITY OF	KANE COUNTY/COOK COUNTY	3/1/1982	6/2/2015
170088#	ELK GROVE, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	6/15/1979	8/1/2019

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY				
CID	**Community Name**	**County**	**Initial FIRM Identified**	**Current Effective Map Date**
170205B	ELMHURST, CITY OF	COOK COUNTY/DUPAGE COUNTY	02/04/81	08/01/19
170089#	ELMWOOD PARK, VILLAGE OF	COOK COUNTY	08/15/80	08/19/08
170090J	EVANSTON, CITY OF	COOK COUNTY	11/26/82	09/10/21
170733#	EVERGREEN PARK, VILLAGE OF	COOK COUNTY	11/6/00	(NSFHA)
170091#	FLOSSMOOR, VILLAGE OF	COOK COUNTY	11/5/80	08/19/08
170084#	FORD HEIGHTS, VILLAGE OF	COOK COUNTY	09/29/78	08/19/08
170092#	FOREST PARK, VILLAGE OF	COOK COUNTY	09/22/78	08/19/08
170093#	FOREST VIEW, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08
170701B	FRANKFORT, VILLAGE OF	COOK COUNTY/WILL COUNTY	11/1/79	02/15/19
170094#	FRANKLIN PARK, VILLAGE OF	COOK COUNTY	09/15/78	08/19/08
170095J	GLENCOE, VILLAGE OF	COOK COUNTY	12/16/80	09/10/21
170096#	GLENVIEW, VILLAGE OF	COOK COUNTY	06/15/79	08/19/08
170097#	GLENWOOD, VILLAGE OF	COOK COUNTY	06/15/78	08/19/08
170098#	GOLF, VILLAGE OF	COOK COUNTY	11/15/79	08/19/08
170099#	HANOVER PARK, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	11/15/1978	8/1/2019
170100#	HARVEY, CITY OF	COOK COUNTY	04/17/78	08/19/08
170101#	HARWOOD HEIGHTS, VILLAGE OF	COOK COUNTY	11/6/00	(NSFHA)
170102#	HAZEL CREST, VILLAGE OF	COOK COUNTY	12/2/80	08/19/08
170103#	HICKORY HILLS, CITY OF	COOK COUNTY	07/16/80	08/19/08
170104#	HILLSIDE, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08
170105#	HINSDALE, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	1/16/1981	8/1/2019
170106#	HODGKINS, VILLAGE OF	COOK COUNTY	09/14/79	08/19/08
170107#	HOFFMAN ESTATES, VILLAGE OF	KANE COUNTY/COOK COUNTY	5/19/1981	8/3/2009
171080B	HOMER GLEN, VILLAGE OF	COOK COUNTY/WILL COUNTY	04/15/82	02/15/19
170109#	HOMEWOOD, VILLAGE OF	COOK COUNTY	08/15/77	08/19/08

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY				
CID	**Community Name**	**County**	**Initial FIRM Identified**	**Current Effective Map Date**
170110#	INDIAN HEAD PARK, VILLAGE OF	COOK COUNTY	12/4/79	08/19/08
170111#	INVERNESS, VILLAGE OF	COOK COUNTY	06/01/81	08/19/08
170112#	JUSTICE, VILLAGE OF	COOK COUNTY	05/19/81	08/19/08
170113J	KENILWORTH, VILLAGE OF	COOK COUNTY	11/6/00	09/10/21
170115#	LA GRANGE PARK, VILLAGE OF	COOK COUNTY	11/15/78	08/19/08
170114#	LA GRANGE, VILLAGE OF	COOK COUNTY	11/9/79	08/19/08
170116#	LANSING, VILLAGE OF	COOK COUNTY	06/01/81	08/19/08
170117#	LEMONT, VILLAGE OF	WILL COUNTY/DUPAGE COUNTY/COOK COUNTY	6/30/1976	8/1/2019
171001#	LINCOLNWOOD, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08
170119#	LYNWOOD, VILLAGE OF	COOK COUNTY	08/03/81	08/19/08
170120#	LYONS, VILLAGE OF	COOK COUNTY	11/1/79	08/19/08
175169#	MARKHAM, CITY OF	COOK COUNTY	09/12/75	08/19/08
170123#	MATTESON, VILLAGE OF	COOK COUNTY	08/16/82	08/19/08
170124#	MAYWOOD, VILLAGE OF	COOK COUNTY	08/11/78	08/19/08
170121#	MCCOOK, VILLAGE OF	COOK COUNTY	07/16/91	08/19/08
170125#	MELROSE PARK, VILLAGE OF	COOK COUNTY	01/02/81	08/19/08
170126#	MERRIONETTE PARK, VILLAGE OF	COOK COUNTY	09/04/88	08/19/08
170127J	MIDLOTHIAN, VILLAGE OF	COOK COUNTY	08/01/79	11/1/19
170128#	MORTON GROVE, VILLAGE OF	COOK COUNTY	06/15/79	08/19/08
170129#	MOUNT PROSPECT, VILLAGE OF	COOK COUNTY	08/02/82	08/19/08
170130#	NILES, VILLAGE OF	COOK COUNTY	06/15/79	08/19/08
170131#	NORRIDGE, VILLAGE OF	COOK COUNTY	11/6/00	(NSFHA)
170135#	NORTH RIVERSIDE, VILLAGE OF	COOK COUNTY	12/16/80	08/19/08
170132#	NORTHBROOK, VILLAGE OF	LAKE COUNTY/COOK COUNTY	1/17/1979	9/18/2013
170133#	NORTHFIELD, VILLAGE OF	COOK COUNTY	12/18/79	08/19/08
170134#	NORTHLAKE, CITY OF	COOK COUNTY	01/03/86	08/19/08

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY				
CID	**Community Name**	**County**	**Initial FIRM Identified**	**Current Effective Map Date**
170214B	OAK BROOK, VILLAGE OF	COOK COUNTY/DUPAGE COUNTY	02/18/81	08/01/19
170136J	OAK FOREST, CITY OF	COOK COUNTY	12/4/79	11/1/19
170137J	OAK LAWN, VILLAGE OF	COOK COUNTY	01/02/81	11/1/19
170139#	OLYMPIA FIELDS, VILLAGE OF	COOK COUNTY	08/01/80	08/19/08
170172J	ORLAND HILLS, VILLAGE OF	COOK COUNTY	03/15/82	11/1/19
170140#	ORLAND PARK, VILLAGE OF	WILL COUNTY/COOK COUNTY	2/4/1981	11/1/2019
175170#	PALATINE, VILLAGE OF	COOK COUNTY	12/31/74	08/19/08
170142J	PALOS HEIGHTS, CITY OF	COOK COUNTY	07/16/80	11/1/19
170143J	PALOS HILLS, CITY OF	COOK COUNTY	01/16/81	11/1/19
170144J	PALOS PARK, VILLAGE OF	COOK COUNTY	07/16/80	11/1/19
170145#	PARK FOREST, VILLAGE OF	WILL COUNTY/COOK COUNTY	7/16/1980	2/15/2019
170146#	PARK RIDGE, CITY OF	COOK COUNTY	11/6/00	08/19/08
170147#	PHOENIX, VILLAGE OF	COOK COUNTY	06/01/95	08/19/08
170148#	POSEN, VILLAGE OF	COOK COUNTY	02/27/84	08/19/08
170919#	PROSPECT HEIGHTS, CITY OF	COOK COUNTY	08/01/79	08/19/08
170149#	RICHTON PARK, VILLAGE OF	COOK COUNTY	01/16/81	08/19/08
170151#	RIVER FOREST, VILLAGE OF	COOK COUNTY	08/11/78	08/19/08
170152#	RIVER GROVE, VILLAGE OF	COOK COUNTY	12/16/80	08/19/08
170150#	RIVERDALE, VILLAGE OF	COOK COUNTY	09/29/78	08/19/08
170153#	RIVERSIDE, VILLAGE OF	COOK COUNTY	12/16/80	08/19/08
170154#	ROBBINS, VILLAGE OF	COOK COUNTY	09/29/78	08/19/08
170155#	ROLLING MEADOWS, CITY OF	COOK COUNTY	10/17/78	08/19/08
170216#	ROSELLE, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	5/19/1981	8/1/2019
170156#	ROSEMONT, VILLAGE OF	COOK COUNTY	11/15/79	08/19/08
170157#	SAUK, VILLAGE OF	WILL COUNTY/COOK COUNTY	5/5/1981	2/15/2019

TABLE: NFIP PARTICIPATING COMMUNITIES IN COOK COUNTY				
CID	**Community Name**	**County**	**Initial FIRM Identified**	**Current Effective Map Date**
170158#	SCHAUMBURG, VILLAGE OF	DUPAGE COUNTY/COOK COUNTY	2/15/1979	8/1/2019
170159#	SCHILLER PARK, VILLAGE OF	COOK COUNTY	09/15/78	08/19/08
171000#	SKOKIE, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08(M)
170161#	SOUTH BARRINGTON, VILLAGE OF	COOK COUNTY	07/16/81	08/19/08
170162#	SOUTH CHICAGO HEIGHTS, VILLAGE OF	COOK COUNTY	05/02/80	08/19/08
170163#	SOUTH HOLLAND, VILLAGE OF	COOK COUNTY	08/01/80	08/19/08
170713#	STEGER, VILLAGE OF	WILL COUNTY/COOK COUNTY	2/18/1983	2/15/2019
170164#	STICKNEY, VILLAGE OF	COOK COUNTY	11/6/00	08/19/08(M)
170165#	STONE PARK, VILLAGE OF	COOK COUNTY	07/16/80	08/19/08
170166#	STREAMWOOD, VILLAGE OF	COOK COUNTY	11/19/80	08/19/08
170167#	SUMMIT, VILLAGE OF	COOK COUNTY	05/01/94	08/19/08
170168#	THORNTON, VILLAGE OF	COOK COUNTY	08/01/80	08/19/08
170169#	TINLEY PARK, VILLAGE OF	WILL COUNTY/COOK COUNTY	12/4/1979	11/1/2019
170708B	UNIVERSITY PARK, VILLAGE OF	COOK COUNTY/WILL COUNTY	07/16/80	02/15/19
170170#	WESTCHESTER, VILLAGE OF	COOK COUNTY	06/04/80	08/19/08
170171#	WESTERN SPRINGS, VILLAGE OF	COOK COUNTY	01/02/81	08/19/08
170173#	WHEELING, VILLAGE OF	LAKE COUNTY/COOK COUNTY	9/15/1978	9/18/2013
170174#	WILLOW SPRINGS, VILLAGE OF	COOK COUNTY	07/16/79	08/19/08
170175J	WILMETTE, VILLAGE OF	COOK COUNTY	01/14/83	09/10/21
170176J	WINNETKA, VILLAGE OF	COOK COUNTY	11/19/80	09/10/21
170737#	WOODRIDGE, VILLAGE OF	WILL COUNTY/COOK COUNTY/DUPAGE COUNTY	6/15/1979	8/1/2019
170177J	WORTH, VILLAGE OF	COOK COUNTY	07/07/78	11/1/19

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. Cook County entered the NFIP on April 15, 1981. The effective

date for the current countywide Flood Insurance Rate Map is August 19, 2008. In addition to the County, most Cook County municipalities participate in the NFIP.

August 31, 2023: According to FEMA, Cook County has 12,083 flood insurance policies providing over $2.644 billion in insurance coverage. In comparison, the State of Illinois has 32,840 flood insurance policies providing over $7.06 billion in insurance coverage.

The table below illustrates Cook County flood insurance policies in force as of 8/31/23.

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES

Community Name/CID	Policies in Force	Insurance in force in $	Written Premium In-Force in $
ALSIP, VILLAGE OF (170055)	14	3,666,000	31,107
ARLINGTON HEIGHTS, VILLAGE OF (170056)	57	16,196,000	36,330
ASHLAND, VILLAGE OF (171025)	1	329,000	2,778
BARRINGTON HILLS, VILLAGE OF (170058)	7	2,180,000	4,030
BARRINGTON, VILLAGE OF (170057)	7	2,404,000	4,550
BARTLETT, VILLAGE OF (170059)	4	816,000	1,729
BELLWOOD, VILLAGE OF (170061)	380	70,322,000	498,566
BENSENVILLE, VILLAGE OF (170200)	1	500,000	1,677
BERKELEY, VILLAGE OF (171039)	3	683,000	1,643
BERWYN, CITY OF (171036)	4	1,300,000	2,656
BLUE ISLAND, CITY OF (170064)	2	950,000	1,385
BRIDGEVIEW, VILLAGE OF (170065)	7	2,660,000	9,066
BROADVIEW, VILLAGE OF (170067)	21	7,953,000	33,639
BROOKFIELD, VILLAGE OF (170066)	35	9,254,000	24,667
BUFFALO GROVE, VILLAGE OF (170068)	19	4,402,000	22,338
BURBANK, CITY OF (170069)	8	1,482,000	7,216
BURNHAM, VILLAGE OF (170070)	2	378,000	913
BURR RIDGE, VILLAGE OF (170071)	7	2,257,000	6,159
CALUMET CITY, CITY OF (170072)	143	22,390,000	103,712

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES			
Community Name/CID	**Policies in Force**	**Insurance in force in $**	**Written Premium In-Force in $**
CALUMET PARK, VILLAGE OF (170073)	2	378,000	1,015
CHICAGO, CITY OF (170074)	811	198,295,000	552,036
CHICAGO HEIGHTS, CITY OF (170075)	15	3,251,000	18,195
CHICAGO RIDGE, VILLAGE OF (170076)	11	3,591,000	15,674
CICERO, TOWN OF (170077)	1	191,000	525
COOK COUNTY * (170054)	296	60,826,000	238,502
COOK COUNTY * (270619)	12	3,655,000	6,797
COUNTRY CLUB HILLS, CITY OF (170078)	15	2,548,000	9,288
COUNTRYSIDE, CITY OF (170079)	3	922,000	1,725
CRESTWOOD, VILLAGE OF (170080)	21	2,403,000	16,264
DEERFIELD, VILLAGE OF (170361)	1	500,000	959
DES PLAINES, CITY OF (170081)	1,110	248,320,000	546,321
DIXMOOR, VILLAGE OF (170082)	35	5,130,000	43,245
DOLTON, VILLAGE OF (170083)	13	3,213,000	17,249
ELGIN, CITY OF (170087)	17	3,297,000	24,945
ELK GROVE VILLAGE, VILLAGE OF (170088)	34	18,975,000	48,590
ELMWOOD PARK, VILLAGE OF (170089)	7	2,130,000	4,370
EVANSTON, CITY OF (170090)	59	16,819,000	34,915
EVERGREEN PARK, VILLAGE OF (170733)	1	42,000	294
FLOSSMOOR, VILLAGE OF (170091)	58	16,206,000	68,561
FORD HEIGHTS, VILLAGE OF (170084)	3	201,000	1,236
FOREST PARK, VILLAGE OF (170092)	3	728,000	1,675
FOREST VIEW, VILLAGE OF (170093)	16	4,107,000	11,137
FRANKLIN PARK, VILLAGE OF (170094)	150	33,031,000	234,656

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES			
Community Name/CID	**Policies in Force**	**Insurance in force in $**	**Written Premium In-Force in $**
GLENCOE, VILLAGE OF (170095)	32	10,009,000	16,290
GLENVIEW, VILLAGE OF (170096)	163	44,785,000	148,942
GLENWOOD, VILLAGE OF (170097)	8	2,427,000	7,804
HANOVER PARK, VILLAGE OF (170099)	10	2,136,000	5,425
HARVEY, CITY OF (170100)	89	11,790,000	102,559
HARWOOD HEIGHTS, VILLAGE OF (170101)	1	350,000	465
HAZEL CREST, VILLAGE OF (170102)	11	2,256,000	7,854
HICKORY HILLS, CITY OF (170103)	5	2,418,000	11,734
HILLSIDE, VILLAGE OF (170104)	14	5,130,000	8,121
HINSDALE, VILLAGE OF (170105)	1	350,000	631
HOFFMAN ESTATES, VILLAGE OF (170107)	53	10,793,000	19,970
HOMEWOOD, VILLAGE OF (170109)	28	6,316,000	43,524
HULL, VILLAGE OF (170553)	1	350,000	717
INDIAN HEAD PARK, VILLAGE OF (170110)	4	1,400,000	2,699
INVERNESS, VILLAGE OF (170111)	12	3,706,000	6,010
JUSTICE, VILLAGE OF (170112)	77	13,825,000	69,363
KENILWORTH, VILLAGE OF (170113)	6	2,100,000	2,436
LA GRANGE PARK, VILLAGE OF (170115)	16	4,790,000	10,470
LA GRANGE, VILLAGE OF (170114)	34	9,771,000	20,410
LANSING, VILLAGE OF (170116)	128	27,863,000	69,423
LEMONT, VILLAGE OF (170117)	3	1,050,000	1,898
LINCOLNWOOD, VILLAGE OF (171001)	15	4,365,000	8,998
LYNWOOD, VILLAGE OF (170119)	17	4,215,000	13,231
LYONS, VILLAGE OF (170120)	18	3,838,000	24,279

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES			
Community Name/CID	**Policies in Force**	**Insurance in force in $**	**Written Premium In-Force in $**
MARKHAM, CITY OF (175169)	10	1,660,000	8,149
MATTESON, VILLAGE OF (170123)	38	9,355,000	45,523
MAYWOOD, VILLAGE OF (170124)	8	1,661,000	5,065
MCCOOK, VILLAGE OF (170121)	1	500,000	3,301
MELROSE PARK, VILLAGE OF (170125)	158	33,897,000	275,469
MERRIONETTE PARK, VILLAGE OF (170126)	1	210,000	490
MIDLOTHIAN, VILLAGE OF (170127)	111	18,999,000	78,038
MORTON GROVE, VILLAGE OF (170128)	11	3,486,000	7,359
MOUNT PROSPECT, VILLAGE OF (170129)	85	21,818,000	54,880
NILES, VILLAGE OF (170130)	34	10,722,000	26,077
NORRIDGE, VILLAGE OF (170131)	4	1,031,000	2,140
NORTHBROOK, VILLAGE OF (170132)	114	34,977,000	75,624
NORTHFIELD, VILLAGE OF (170133)	122	33,348,000	99,277
NORTHLAKE, CITY OF (170134)	89	18,178,000	132,940
NORTH RIVERSIDE, VILLAGE OF (170135)	6	2,013,000	6,432
OAK FOREST, CITY OF (170136)	40	7,630,000	33,781
OAK LAWN, VILLAGE OF (170137)	349	54,447,000	195,528
OLYMPIA FIELDS, VILLAGE OF (170139)	14	4,763,000	20,825
ORLAND HILLS, VILLAGE OF (170172)	11	2,321,000	5,374
ORLAND PARK, VILLAGE OF (170140)	35	10,336,000	22,235
PALATINE, VILLAGE OF (175170)	70	18,198,000	34,967
PALOS HEIGHTS, CITY OF (170142)	20	4,951,000	23,183
PALOS HILLS, CITY OF (170143)	68	13,722,000	52,225
PALOS PARK, VILLAGE OF (170144)	16	4,465,000	10,537

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES			
Community Name/CID	**Policies in Force**	**Insurance in force in $**	**Written Premium In-Force in $**
PARK FOREST, VILLAGE OF (170145)	6	811,000	2,796
PARK RIDGE, CITY OF (170146)	80	21,656,000	46,952
POSEN, VILLAGE OF (170148)	50	7,131,000	78,816
PROSPECT HEIGHTS, CITY OF (170919)	632	67,338,000	102,038
RICHTON PARK, VILLAGE OF (170149)	12	2,869,000	10,138
RIVERDALE, VILLAGE OF (170150)	1	200,000	1,604
RIVER FOREST, VILLAGE OF (170151)	34	10,378,000	30,504
RIVER GROVE, VILLAGE OF (170152)	31	6,422,000	32,118
RIVERSIDE, VILLAGE OF (170153)	105	24,319,000	98,369
ROBBINS, VILLAGE OF (170154)	15	2,208,000	17,946
ROLLING MEADOWS, CITY OF (170155)	588	58,540,000	116,327
ROSELLE, VILLAGE OF (170216)	1	195,000	521
ROSEMONT, VILLAGE OF (170156)	15	6,480,000	33,155
SAUK VILLAGE, VILLAGE OF (170157)	7	1,589,000	3,286
SCHAUMBURG, VILLAGE OF (170158)	32	13,036,000	22,898
SCHILLER PARK, VILLAGE OF (170159)	18	3,707,000	16,362
SKOKIE, VILLAGE OF (171000)	45	11,848,000	31,731
SOUTH BARRINGTON, VILLAGE OF (170161)	8	2,350,000	4,794
SOUTH HOLLAND, VILLAGE OF (170163)	61	16,522,000	48,865
STEGER, VILLAGE OF (170713)	6	1,207,000	4,221
STICKNEY, VILLAGE OF (170164)	2	426,000	1,119
STONE PARK, VILLAGE OF (170165)	69	11,296,000	115,840
STREAMWOOD, VILLAGE OF (170166)	9	2,791,000	5,271
SUMMIT, VILLAGE OF (170167)	1	42,000	331

TABLE: COOK COUNTY FLOOD INSURANCE POLICIES			
Community Name/CID	**Policies in Force**	**Insurance in force in $**	**Written Premium In-Force in $**
TINLEY PARK, VILLAGE OF (170169)	153	30,995,000	67,814
WESTCHESTER, VILLAGE OF (170170)	227	45,074,000	261,239
WESTERN SPRINGS, VILLAGE OF (170171)	25	7,579,000	14,761
WHEELING, VILLAGE OF (170173)	177	41,860,000	186,426
WHITESIDE COUNTY* (170687)	1	196,000	1,755
WILLOW SPRINGS, VILLAGE OF (170174)	14	3,466,000	12,167
WILMETTE, VILLAGE OF (170175)	88	25,146,000	57,995
WINNETKA, VILLAGE OF (170176)	188	57,096,000	146,806
WORTH, VILLAGE OF (170177)	3	570,000	2,807
Unknown (Unknown)	3,799	890,727,000	2,777,498
TOTALS	**12,083**	**2,644,380,000**	**8,871,734**
Source: (FEMA NFIP 2024)			

The Community Rating System: The CRS is a voluntary program within the NFIP that encourages floodplain management activities that exceed the minimum NFIP requirements. Flood insurance premiums are discounted to reflect the reduced flood risk resulting from community actions meeting the following three goals of the CRS:

- Reduce flood losses.
- Facilitate accurate insurance rating.
- Promote awareness of flood insurance.

For participating communities, flood insurance premium rates are discounted in increments of 5 percent. For example, a Class 1 community would receive a 45 percent premium discount, and a Class 9 community would receive a 5 percent discount. (Class 10 communities are those that do not participate in the CRS; they receive no discount.) The CRS classes for local communities are based on 18 creditable activities in the following categories:

- Public information
- Mapping and regulations
- Flood damage reduction
- Flood preparedness.

Although CRS communities represent only a small minority of the communities participating in the NFIP, more than 67 percent of all flood insurance policies are written in CRS communities. CRS

activities can help to save lives and reduce property damage. Communities participating in the CRS range from small to large and represent a broad mixture of flood risks, including both coastal and riverine flood risks.

Communities participating in the CRS represent a significant portion of the nation's flood risk; over 66 percent of the NFIP's policy base is located in these communities. Communities receiving premium discounts through the CRS range from small to large and represent a broad mixture of flood risks, including both coastal and riverine flood risks.

As of March 17, 2022, there are 20 communities currently participating in CRS within the planning area. Each community CRS status is summarized in the table below. Many of the mitigation actions identified in Volume 2 of this plan are creditable activities under the CRS program. Therefore, successful implementation of this plan offers the potential for these communities to enhance their CRS classifications and for currently non-participating communities to join the program.

TABLE: CRS COMMUNITY STATUS IN THE PLANNING AREA

Community	CID#	CRS Entry Date	Current Effective Date	Current CRS Classification	% Disc SFHA	% Disc Non SFHA
BARTLETT, VILLAGE OF	170059#	10/01/91	10/01/18	6	20%	10%
BUFFALO GROVE, VILLAGE OF	170068#	10/01/21	10/01/21	7	15%	05%
CALUMET CITY, CITY OF	170072#	10/01/00	04/01/22	5	25%	10%
COUNTRY CLUB HILLS, CITY OF	170078#	10/01/93	10/01/22	7	15%	05%
DEERFIELD, VILLAGE OF	170361#	10/01/95	05/01/08	6	20%	10%
DES PLAINES, CITY OF	170081#	10/01/93	04/01/24	5	25%	10%
FLOSSMOOR, VILLAGE OF	170091#	10/01/93	05/01/13	7	15%	05%
GLENVIEW, VILLAGE OF	170096#	10/01/11	10/01/20	6	20%	10%
HOFFMAN ESTATES, VILLAGE OF	170107#	10/01/92	04/01/23	7	15%	05%
LANSING, VILLAGE OF	170116#	10/01/93	04/01/22	5	25%	10%
MELROSE PARK, VILLAGE OF	170125#	10/01/15	10/01/21	7	15%	05%
MIDLOTHIAN, VILLAGE OF	170127J	05/01/18	10/01/23	6	20%	10%
MOUNT PROSPECT, VILLAGE OF	170129#	10/01/91	10/01/17	6	20%	10%
NILES, VILLAGE OF	170130#	10/01/13	10/01/19	5	25%	10%
NORTHBROOK, VILLAGE OF	170132#	10/01/94	04/01/21	7	15%	05%

TABLE: CRS COMMUNITY STATUS IN THE PLANNING AREA						
Community	CID#	CRS Entry Date	Current Effective Date	Current CRS Classification	% Disc SFHA	% Disc Non SFHA
NORTHFIELD, VILLAGE OF	170133#	10/01/16	10/01/16	7	15%	05%
OAK BROOK, VILLAGE OF	170214B	10/01/92	10/01/97	7	15%	05%
ORLAND HILLS, VILLAGE OF	170172J	10/01/96	10/01/02	5	25%	10%
PALATINE, VILLAGE OF	175170#	10/01/94	05/01/04	7	15%	05%
PROSPECT HEIGHTS, CITY OF	170919#	10/01/94	04/01/22	6	20%	10%
RIVER FOREST, VILLAGE OF	170151#	05/01/12	05/01/12	7	15%	05%
SOUTH HOLLAND, VILLAGE OF	170163#	10/01/92	10/01/02	5	25%	10%
TINLEY PARK, VILLAGE OF	170169#	10/01/05	04/01/22	6	20%	10%
WESTCHESTER, VILLAGE OF	170170#	10/01/12	05/01/20	7	15%	05%
WHEELING, VILLAGE OF	170173#	10/01/91	05/01/14	6	20%	10%
WINNETKA, VILLAGE OF	170176J	05/01/15	05/01/15	6	20%	10%

5.4.6 Past Flooding Events

Riverine Flooding

The table below illustrates all historical riverine flood events in Cook County recorded by NOAA between 1997-2024.

TABLE: RIVERINE FLOOD EVENTS IN COOK COUNTY (1997-2024)							
Location	County	State	Date	Dth	Inj	PrD	CrD
COOK (ZONE)	COOK (ZONE)	IL	02/20/1997	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	08/03/1998	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	08/04/1998	1	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	10/17/1998	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	04/27/1999	0	0	0.00K	0.00K
WILMETTE	COOK CO.	IL	09/11/2000	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	09/11/2000	0	0	0.00K	0.00K
ROLLING MEADOWS	COOK CO.	IL	08/22/2001	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	10/24/2001	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	06/04/2002	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	08/22/2002	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/28/2004	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/15/2005	0	0	0.00K	0.00K
MIDLOTHIAN	COOK CO.	IL	07/27/2006	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	10/02/2006	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	04/25/2007	0	0	0.00K	0.00K
MIDLOTHIAN	COOK CO.	IL	04/25/2007	0	0	0.00K	0.00K

TABLE: RIVERINE FLOOD EVENTS IN COOK COUNTY (1997-2024)							
Location	County	State	Date	Dth	Inj	PrD	CrD
LANSING	COOK CO.	IL	04/25/2007	0	0	0.00K	0.00K
RICHTON PARK	COOK CO.	IL	04/25/2007	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	05/26/2007	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	06/27/2007	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	07/18/2007	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	08/23/2007	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/23/2007	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	08/23/2007	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	08/23/2007	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	08/24/2007	0	0	100.00K	0.00K
FERNWAY	COOK CO.	IL	01/08/2008	0	0	0.00K	0.00K
GLENCOE	COOK CO.	IL	02/17/2008	0	0	2.000M	0.00K
TINLEY PARK	COOK CO.	IL	08/04/2008	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	08/04/2008	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	09/13/2008	0	0	0.00K	0.00K
KIMBERLY HGTS	COOK CO.	IL	09/13/2008	1	0	0.00K	0.00K
NORTH NORTHFIELD	COOK CO.	IL	09/13/2008	0	0	5.000M	0.00K
BRYN MAWR	COOK CO.	IL	09/14/2008	0	0	0.00K	0.00K
SAUK VLG	COOK CO.	IL	09/14/2008	0	0	0.00K	0.00K
SOUTH HOLLAND	COOK CO.	IL	09/14/2008	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	12/27/2008	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	12/27/2008	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	02/26/2009	0	0	0.00K	0.00K
COLEHOUR	COOK CO.	IL	03/08/2009	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	03/08/2009	0	0	0.00K	0.00K
CHIPPEWA	COOK CO.	IL	03/08/2009	0	0	0.00K	0.00K
MORGAN PARK	COOK CO.	IL	03/08/2009	0	0	0.00K	0.00K
TECHNY	COOK CO.	IL	03/10/2009	0	0	0.00K	0.00K
LAMBERT	COOK CO.	IL	03/10/2009	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	04/26/2009	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	04/27/2009	0	0	0.00K	0.00K
NOTTINGHAM PARK	COOK CO.	IL	05/26/2009	0	0	0.00K	0.00K
CHATHAM	COOK CO.	IL	06/11/2009	0	0	0.00K	0.00K
COLEHOUR	COOK CO.	IL	06/19/2009	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	06/19/2009	0	0	0.00K	0.00K
SPAULDING	COOK CO.	IL	06/19/2009	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	06/24/2009	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	06/24/2009	0	0	0.00K	0.00K
FOREST GLEN	COOK CO.	IL	07/23/2009	0	0	0.00K	0.00K
OAK LAWN	COOK CO.	IL	06/02/2010	0	0	0.00K	0.00K
CALUMET	COOK CO.	IL	06/23/2010	0	0	0.00K	0.00K
BROADVIEW	COOK CO.	IL	06/23/2010	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	07/24/2010	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	11/22/2010	0	0	0.00K	0.00K
THE GREENS	COOK CO.	IL	05/25/2011	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	05/29/2011	0	0	0.00K	0.00K
WESTERN SPGS	COOK CO.	IL	06/09/2011	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	06/09/2011	0	0	0.00K	0.00K
GOLDEN ACRES	COOK CO.	IL	07/22/2011	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	07/18/2012	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	05/20/2013	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	09/18/2013	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	09/18/2013	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	09/18/2013	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	11/17/2013	0	0	0.00K	0.00K

TABLE: RIVERINE FLOOD EVENTS IN COOK COUNTY (1997-2024)							
Location	County	State	Date	Dth	Inj	PrD	CrD
BERNICE	COOK CO.	IL	05/11/2014	0	0	100.00K	0.00K
CALUMET	COOK CO.	IL	05/20/2014	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/21/2014	0	0	0.00K	0.00K
ROSEMONT	COOK CO.	IL	07/01/2014	0	0	0.00K	0.00K
HAWTHORNE	COOK CO.	IL	07/12/2014	0	0	0.00K	0.00K
CONGRESS PARK	COOK CO.	IL	08/04/2014	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	07/07/2016	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	07/12/2017	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/21/2017	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/23/2017	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	10/14/2017	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	10/14/2017	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	05/02/2018	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
CUMBERLAND	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
SCHILLER PARK	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
RHODES	COOK CO.	IL	05/21/2018	0	0	0.00K	0.00K
SUTTON	COOK CO.	IL	05/30/2018	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/30/2018	0	0	0.00K	0.00K
WEBER	COOK CO.	IL	06/22/2018	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	09/02/2018	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	09/03/2018	0	0	0.00K	0.00K
BLUE IS	COOK CO.	IL	09/03/2018	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	05/01/2019	0	0	0.00K	0.00K
SHOREWOOD VLG	COOK CO.	IL	05/01/2019	0	0	0.00K	0.00K
LAMBERT	COOK CO.	IL	05/01/2019	0	0	0.00K	0.00K
VILLA WEST	COOK CO.	IL	05/01/2019	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	05/01/2019	0	0	0.00K	0.00K
PALOS HILLS	COOK CO.	IL	05/27/2019	0	0	0.00K	0.00K
HICKORY HILLS	COOK CO.	IL	05/27/2019	0	0	0.00K	0.00K
ENGLEWOOD	COOK CO.	IL	06/01/2019	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/05/2019	0	0	0.00K	0.00K
NORTHBROOK	COOK CO.	IL	06/05/2019	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	07/02/2019	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	07/02/2019	0	0	0.00K	0.00K
PHOENIX	COOK CO.	IL	07/13/2019	0	0	0.00K	0.00K
MC COOK	COOK CO.	IL	07/18/2019	0	0	0.00K	0.00K
HANSON PARK	COOK CO.	IL	08/18/2019	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	08/18/2019	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	08/18/2019	0	0	0.00K	0.00K
VALLEY	COOK CO.	IL	09/13/2019	0	0	0.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	10/02/2019	0	0	0.00K	0.00K
MANNHEIM	COOK CO.	IL	10/03/2019	0	0	0.00K	0.00K
ELK GROVE	COOK CO.	IL	10/26/2019	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	04/29/2020	0	0	0.00K	0.00K
BERKELEY	COOK CO.	IL	04/29/2020	0	0	0.00K	0.00K
JUSTICE	COOK CO.	IL	04/29/2020	0	0	0.00K	0.00K
CHIPPEWA	COOK CO.	IL	04/30/2020	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	04/30/2020	0	0	0.00K	0.00K
LAMBERT	COOK CO.	IL	04/30/2020	0	0	0.00K	0.00K
ELK GROVE	COOK CO.	IL	05/15/2020	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K

TABLE: RIVERINE FLOOD EVENTS IN COOK COUNTY (1997-2024)							
Location	County	State	Date	Dth	Inj	PrD	CrD
SPAULDING	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K
CLABURN	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K
ELK GROVE	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K
BROADVIEW	COOK CO.	IL	05/17/2020	0	0	0.00K	0.00K
CHICAGO HGTS	COOK CO.	IL	06/21/2020	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	06/26/2020	0	0	0.00K	0.00K
ENGLEWOOD	COOK CO.	IL	08/02/2020	0	0	0.00K	0.00K
NORTH AUSTIN	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
FULLER PARK	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
BRIGHTON PARK	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
FULLER PARK	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
EAST GARFIELD PARK	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
GOOSE ISLAND	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
BEDFORD PARK	COOK CO.	IL	10/22/2020	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	06/12/2021	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	06/20/2021	0	0	0.00K	0.00K
BRIGHTON PARK	COOK CO.	IL	06/20/2021	0	0	0.00K	0.00K
BRIGHTON PARK	COOK CO.	IL	08/10/2021	0	0	0.00K	0.00K
EDGEWATER	COOK CO.	IL	08/24/2021	0	0	0.00K	0.00K
RAVENSWOOD	COOK CO.	IL	08/24/2021	0	0	0.00K	0.00K
LINCOLN PARK	COOK CO.	IL	10/11/2021	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	10/24/2021	0	0	0.00K	0.00K
BROADVIEW	COOK CO.	IL	04/30/2022	0	0	0.00K	0.00K
EDGEBROOK	COOK CO.	IL	05/03/2022	0	0	0.00K	0.00K
ALPINE	COOK CO.	IL	05/03/2022	0	0	0.00K	0.00K
PORTAGE PARK	COOK CO.	IL	06/13/2022	0	0	0.00K	0.00K
ELSDON	COOK CO.	IL	07/23/2022	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	09/11/2022	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	03/31/2023	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	03/31/2023	0	0	0.00K	0.00K
KENILWORTH	COOK CO.	IL	03/31/2023	0	0	0.00K	0.00K
NORTHFIELD	COOK CO.	IL	03/31/2023	0	0	0.00K	0.00K
GOLF	COOK CO.	IL	03/31/2023	0	0	0.00K	0.00K
PLUM GROVE ESTATES	COOK CO.	IL	04/04/2023	0	0	0.00K	0.00K
SUMMIT	COOK CO.	IL	07/11/2023	0	0	0.00K	0.00K
HEGEWISCH	COOK CO.	IL	09/17/2023	0	0	0.00K	0.00K
PILSEN	COOK CO.	IL	09/26/2023	0	0	0.00K	0.00K
GREATER GRAND CROSSING	COOK CO.	IL	09/26/2023	0	0	0.00K	0.00K
KENWOOD	COOK CO.	IL	09/26/2023	0	0	0.00K	0.00K
ARCHER HEIGHTS	COOK CO.	IL	02/27/2024	0	0	0.00K	0.00K
BURR RIDGE	COOK CO.	IL	03/14/2024	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	03/14/2024	0	0	0.00K	0.00K
ENGLEWOOD	COOK CO.	IL	03/14/2024	0	0	0.00K	0.00K

Urban/Flash/Stormwater Flooding

The table below illustrates all historical urban/flash/stormwater flood events in Cook County recorded by NOAA between 1996-2023.

TABLE: FLASH FLOOD EVENTS IN COOK COUNTY (1996-2023)								
Location	County	State	Date	Type	Dth	Inj	PrD	CrD
NORTHERN	COOK CO.	IL	05/20/1996	Flash Flood	0	0	0.00K	0.00K
SOUTHERN	COOK CO.	IL	05/28/1996	Flash Flood	0	0	0.00K	0.00K
SOUTHERN	COOK CO.	IL	06/17/1996	Flash Flood	0	0	0.00K	0.00K
SOUTHERN	COOK CO.	IL	07/17/1996	Flash Flood	0	0	44.700M	0.00K
COUNTYWIDE	COOK CO.	IL	08/16/1997	Flash Flood	0	0	0.00K	0.00K
SOUTH PORTION	COOK CO.	IL	05/06/1998	Flash Flood	0	0	0.00K	0.00K
SOUTHWEST PORTION	COOK CO.	IL	07/21/2001	Flash Flood	0	0	500.00K	0.00K
COUNTYWIDE	COOK CO.	IL	08/02/2001	Flash Flood	0	0	37.000M	0.00K
NORTH PORTION	COOK CO.	IL	08/30/2001	Flash Flood	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	10/13/2001	Flash Flood	0	0	0.00K	0.00K
NORTH CENTRAL PORTION	COOK CO.	IL	08/22/2002	Flash Flood	0	0	0.00K	0.00K
SOUTH PORTION	COOK CO.	IL	07/27/2003	Flash Flood	0	0	1.000M	0.00K
NORTH CENTRAL PORTION	COOK CO.	IL	08/03/2003	Flash Flood	0	0	1.000M	0.00K
CENTRAL PORTION	COOK CO.	IL	11/04/2003	Flash Flood	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	05/13/2004	Flash Flood	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/20/2004	Flash Flood	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	05/21/2004	Flash Flood	0	0	0.00K	0.00K
SOUTH PORTION	COOK CO.	IL	05/22/2004	Flash Flood	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/30/2004	Flash Flood	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	05/30/2004	Flash Flood	0	0	0.00K	0.00K
COUNTYWIDE	COOK CO.	IL	06/10/2004	Flash Flood	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	06/11/2004	Flash Flood	0	0	0.00K	0.00K
SOUTHEAST PORTION	COOK CO.	IL	04/17/2006	Flash Flood	0	0	1.000M	0.00K
ORLAND PARK	COOK CO.	IL	07/27/2006	Flash Flood	0	0	0.00K	0.00K
SOUTH CENTRAL PORTION	COOK CO.	IL	08/10/2006	Flash Flood	0	0	50.00K	0.00K
MATTESON	COOK CO.	IL	08/28/2006	Flash Flood	0	0	250.00K	0.00K
SOUTH PORTION	COOK CO.	IL	09/13/2006	Flash Flood	0	0	250.00K	0.00K
NORTH PORTION	COOK CO.	IL	09/22/2006	Flash Flood	0	0	100.00K	0.00K

TABLE: FLASH FLOOD EVENTS IN COOK COUNTY (1996-2023)								
Location	County	State	Date	Type	Dth	Inj	PrD	CrD
NORTHFIELD	COOK CO.	IL	10/02/2006	Flash Flood	0	0	250.00K	0.00K
CHICAGO	COOK CO.	IL	06/26/2007	Flash Flood	0	0	1.000M	0.00K
STONE PARK	COOK CO.	IL	06/27/2007	Flash Flood	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	07/18/2007	Flash Flood	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	08/22/2007	Flash Flood	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	07/18/2008	Flash Flood	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	08/04/2008	Flash Flood	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	09/13/2008	Flash Flood	0	0	1.000M	0.00K
BRYN MAWR	COOK CO.	IL	09/13/2008	Flash Flood	1	0	35.000M	0.00K
BRYN MAWR	COOK CO.	IL	09/14/2008	Flash Flood	0	0	0.00K	0.00K
BRYN MAWR	COOK CO.	IL	09/14/2008	Flash Flood	0	0	20.000M	0.00K
CHIPPEWA	COOK CO.	IL	12/27/2008	Flash Flood	0	0	0.00K	0.00K
GOLDEN ACRES	COOK CO.	IL	02/26/2009	Flash Flood	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	02/26/2009	Flash Flood	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	06/19/2009	Flash Flood	0	0	0.00K	0.00K
BARRINGTON HILLS	COOK CO.	IL	06/19/2009	Flash Flood	0	0	500.00K	0.00K
SCHILLER PARK	COOK CO.	IL	06/19/2009	Flash Flood	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	05/13/2010	Flash Flood	0	0	50.00K	0.00K
WESTERN SPGS	COOK CO.	IL	06/15/2010	Flash Flood	0	0	100.00K	0.00K
MANNHEIM	COOK CO.	IL	06/23/2010	Flash Flood	0	0	500.00K	0.00K
CHATHAM	COOK CO.	IL	06/27/2010	Flash Flood	0	0	1.000M	0.00K
BRYN MAWR	COOK CO.	IL	07/24/2010	Flash Flood	0	0	253.380M	0.00K
MC COOK	COOK CO.	IL	08/03/2010	Flash Flood	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	08/03/2010	Flash Flood	0	0	500.00K	0.00K
BAY COLONY	COOK CO.	IL	05/29/2011	Flash Flood	0	0	0.00K	0.00K
LAMBERT	COOK CO.	IL	06/09/2011	Flash Flood	0	0	0.00K	0.00K
BEVERLY HILLS	COOK CO.	IL	06/09/2011	Flash Flood	0	0	1.000M	0.00K
PARK FOREST SOUTH	COOK CO.	IL	06/09/2011	Flash Flood	0	0	0.00K	0.00K
SPAULDING	COOK CO.	IL	07/23/2011	Flash Flood	0	0	20.000M	0.00K
ELK GROVE	COOK CO.	IL	07/23/2011	Flash Flood	0	0	10.000M	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	07/29/2011	Flash Flood	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	05/03/2012	Flash Flood	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	05/03/2012	Flash Flood	0	0	0.00K	0.00K
ENGLEWOOD	COOK CO.	IL	05/03/2012	Flash Flood	0	0	0.00K	0.00K
BROOKFIELD	COOK CO.	IL	05/03/2012	Flash Flood	0	0	0.00K	0.00K

TABLE: FLASH FLOOD EVENTS IN COOK COUNTY (1996-2023)								
Location	County	State	Date	Type	Dth	Inj	PrD	CrD
OAK LAWN	COOK CO.	IL	05/03/2012	Flash Flood	0	0	0.00K	0.00K
GLENCOE	COOK CO.	IL	07/18/2012	Flash Flood	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	08/26/2012	Flash Flood	0	0	0.00K	0.00K
GLENCOE	COOK CO.	IL	04/18/2013	Flash Flood	0	0	12.000M	0.00K
ELK GROVE	COOK CO.	IL	04/18/2013	Flash Flood	0	0	6.000M	0.00K
CLABURN	COOK CO.	IL	04/18/2013	Flash Flood	0	0	0.00K	0.00K
HILLSIDE	COOK CO.	IL	05/28/2013	Flash Flood	0	0	0.00K	0.00K
HASTINGS	COOK CO.	IL	05/28/2013	Flash Flood	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
(NBU)GLENVIEW NAS	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
EDGEBROOK	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
CUMBERLAND	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
BAY COLONY	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	06/26/2013	Flash Flood	0	0	0.00K	0.00K
STICKNEY	COOK CO.	IL	06/27/2013	Flash Flood	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	10/05/2013	Flash Flood	0	0	0.00K	0.00K
WESTERN SPGS	COOK CO.	IL	05/11/2014	Flash Flood	0	0	0.00K	0.00K
HUBBARD WOODS	COOK CO.	IL	05/12/2014	Flash Flood	0	0	0.00K	0.00K
EAST HAZEL CREST	COOK CO.	IL	05/20/2014	Flash Flood	0	0	20.00K	0.00K
HAWTHORNE	COOK CO.	IL	05/20/2014	Flash Flood	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	06/21/2014	Flash Flood	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	06/21/2014	Flash Flood	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	06/24/2014	Flash Flood	0	0	0.00K	0.00K
BELLWOOD	COOK CO.	IL	06/24/2014	Flash Flood	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	06/30/2014	Flash Flood	0	0	0.00K	0.00K
STICKNEY	COOK CO.	IL	06/30/2014	Flash Flood	0	0	0.00K	0.00K
CONGRESS PARK	COOK CO.	IL	06/30/2014	Flash Flood	0	0	0.00K	0.00K
STONE PARK	COOK CO.	IL	07/01/2014	Flash Flood	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	08/04/2014	Flash Flood	0	0	150.00K	0.00K
JUSTICE	COOK CO.	IL	08/22/2014	Flash Flood	0	0	50.000M	0.00K
COLEHOUR	COOK CO.	IL	08/22/2014	Flash Flood	0	0	50.00K	0.00K
MAYWOOD	COOK CO.	IL	08/22/2014	Flash Flood	0	0	0.00K	0.00K
SCHILLER PARK	COOK CO.	IL	06/13/2015	Flash Flood	0	0	0.00K	0.00K
SCHILLER PARK	COOK CO.	IL	06/15/2015	Flash Flood	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	06/15/2015	Flash Flood	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	08/17/2015	Flash Flood	0	0	0.00K	0.00K
BRAINERD	COOK CO.	IL	09/18/2015	Flash Flood	0	0	10.00K	0.00K
KENILWORTH	COOK CO.	IL	07/23/2016	Flash Flood	0	0	0.00K	0.00K

TABLE: FLASH FLOOD EVENTS IN COOK COUNTY (1996-2023)								
Location	County	State	Date	Type	Dth	Inj	PrD	CrD
NORTHFIELD	COOK CO.	IL	07/23/2016	Flash Flood	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/24/2016	Flash Flood	0	0	0.00K	0.00K
BERGER	COOK CO.	IL	07/29/2016	Flash Flood	0	0	0.00K	0.00K
NORTHFIELD	COOK CO.	IL	08/18/2016	Flash Flood	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	10/14/2017	Flash Flood	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	05/30/2018	Flash Flood	0	0	50.00K	0.00K
DUNHURST	COOK CO.	IL	06/09/2018	Flash Flood	0	0	0.00K	0.00K
BLUE IS JCT	COOK CO.	IL	07/04/2018	Flash Flood	0	0	0.00K	0.00K
ELK GROVE	COOK CO.	IL	08/07/2018	Flash Flood	0	0	100.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	09/03/2018	Flash Flood	0	0	0.00K	0.00K
(IGQ) LANSING MUNICIPAL ...	COOK CO.	IL	06/26/2019	Flash Flood	0	0	0.00K	0.00K
OLYMPIA FIELDS	COOK CO.	IL	06/26/2019	Flash Flood	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	06/27/2019	Flash Flood	0	0	0.00K	0.00K
CHICAGO HEIGHTS	COOK CO.	IL	06/27/2019	Flash Flood	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	07/02/2019	Flash Flood	0	0	0.00K	0.00K
WESTCHESTER	COOK CO.	IL	07/02/2019	Flash Flood	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	09/27/2019	Flash Flood	0	0	0.00K	0.00K
HANSON PARK	COOK CO.	IL	10/02/2019	Flash Flood	0	0	0.00K	0.00K
BERKELEY	COOK CO.	IL	05/14/2020	Flash Flood	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	05/14/2020	Flash Flood	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/15/2020	Flash Flood	0	0	0.00K	0.00K
WILLOW SPGS	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
HAWTHORNE	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
HASTINGS	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
BERKELEY	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
BROADVIEW	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
HAWTHORNE	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
ROBBINS	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	05/17/2020	Flash Flood	0	0	0.00K	0.00K
AUSTIN PARK	COOK CO.	IL	06/26/2020	Flash Flood	0	0	0.00K	0.00K
JEFFERSON PARK	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
NORTH AUSTIN	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K

TABLE: FLASH FLOOD EVENTS IN COOK COUNTY (1996-2023)								
Location	County	State	Date	Type	Dth	Inj	PrD	CrD
AVONDALE	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
HOMEWOOD	COOK CO.	IL	06/26/2021	Flash Flood	0	0	0.00K	0.00K
EDGEWATER	COOK CO.	IL	08/24/2021	Flash Flood	0	0	0.00K	0.00K
GOOSE ISLAND	COOK CO.	IL	08/24/2021	Flash Flood	0	0	0.00K	0.00K
EAST GARFIELD PARK	COOK CO.	IL	08/24/2021	Flash Flood	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	08/07/2022	Flash Flood	0	0	0.00K	0.00K
ROBBINS	COOK CO.	IL	08/07/2022	Flash Flood	0	0	0.00K	0.00K
MONT CLARE	COOK CO.	IL	09/11/2022	Flash Flood	0	0	3.100M	0.00K
MAYWOOD	COOK CO.	IL	09/11/2022	Flash Flood	0	0	0.00K	0.00K
ARCHER HEIGHTS	COOK CO.	IL	07/02/2023	Flash Flood	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	07/02/2023	Flash Flood	0	0	500.000M	0.00K
CALUMET PARK	COOK CO.	IL	07/05/2023	Flash Flood	0	0	0.00K	0.00K
BROOKFIELD	COOK CO.	IL	07/05/2023	Flash Flood	0	0	0.00K	0.00K
CALUMET CITY	COOK CO.	IL	07/05/2023	Flash Flood	0	0	0.00K	0.00K
LANSING	COOK CO.	IL	07/05/2023	Flash Flood	0	0	0.00K	0.00K
GARFIELD PARK	COOK CO.	IL	08/14/2023	Flash Flood	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	09/06/2023	Flash Flood	0	0	0.00K	0.00K
WEST TOWN	COOK CO.	IL	09/17/2023	Flash Flood	0	0	0.00K	0.00K
HEGEWISCH	COOK CO.	IL	09/17/2023	Flash Flood	0	0	50.000M	0.00K

Coastal Flooding

The table below illustrates all historical coastal flooding events in Cook County recorded by NOAA between 2013-2022.

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
COOK (ZONE)	COOK (ZONE)	IL	11/26/18	1:30	Coastal Flood	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	6/13/19	10:00	Coastal Flood	0	0	0.00K	0.00K
Totals:						**0**	**0**	**0.00K**	**0.00K**

5.4.7 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Significant**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Moderate**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Moderate**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Moderate**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Significant**
Water Systems Potable Water Infrastructure, Wastewater Management	**Significant**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown	

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health: Safety and health concerns during a flood range greatly. One of the primary issues communities experience, especially during flash floods, is vehicles getting stuck and/or swept away by rapidly moving waters. These scenarios also present danger to first responders and bystanders attempting to rescue vehicle occupants.

According to FEMA:

- Six inches of water will reach the bottom of most passenger cars, causing loss of control and potential stalling.
- A foot of water will float many vehicles.
- Two feet of rushing water will carry away most vehicles, including SUVs and pickups.

Just as vehicles are recommended to stay away from standing and/or moving flood waters, the same is recommended for individuals. Flood waters can be both unsanitary and dangerous. When individuals do get stuck within flood waters, some experience heart attacks and other medical conditions while trying to free themselves from the water. Contact with flood waters can increase the possibility of contracting a communicable disease (and other medical issues due to pollutants, chemicals, waste, and an increased number of insects) (CDC, 2024).

When receding, flood waters can also saturate the ground, leading to infiltration into sanitary sewer lines. When wastewater treatment facilities are flooded, there is often nowhere for the treated sewage to be discharged or inflowing sewage to be stored. Infiltration and lack of treatment lead to overloaded sewer lines, which back up into low-lying areas and some homes. Even though diluted by flood waters, raw sewage can be a breeding ground for bacteria, such as E. coli, and other disease-causing agents. Because of this threat, tetanus shots are given to people affected by a flood (CDC).

Stagnant water is often a perfect breeding ground for insects, specifically mosquitoes, known to carry and distribute various types of diseases. Standing water also creates mold, which can be a health issue for everyone but is an extreme hazard to those with breathing issues, children, and the elderly. If forced-air systems are affected by floods and are not subsequently cleaned properly, individuals may inadvertently breathe in pollutants. If the water system loses pressure, a boil order may be issued to protect people and animals from contaminated water (CDC).

The force of flood waters can damage gas lines, which creates the potential for secondary hazards such as gas leaks and fires. This force, along with standing water, can also damage the structural integrity of buildings, which can cause injuries if issues go unnoticed or unrepaired. While fires have not resulted from flooding within Cook County, history shows that floods can prevent fire departments and protection agencies from successfully combating and sometimes even accessing a fire, allowing it to spread (CDC).

According to FEMA, flooding can also disproportionately impact disadvantaged or challenged communities in the following ways:

- Lack of Resilience Infrastructure: Disadvantaged communities often lack the infrastructure necessary to mitigate flood impacts, such as well-maintained levees, flood barriers, and stormwater management systems. The absence of these protective measures can make these areas more susceptible to flooding and its consequences.
- Inadequate Housing: Residents of disadvantaged communities may be more likely to live in substandard or low-lying areas prone to flooding. Such housing may lack flood-resistant construction and provide inadequate protection during floods.

- Limited Financial Resources: These communities often have fewer financial resources to prepare for, respond to, and recover from flooding. This can lead to difficulty purchasing flood insurance, repairing flood-damaged homes, or accessing emergency resources.
- Health Vulnerabilities: Residents of disadvantaged communities may have higher rates of pre-existing health conditions or limited access to healthcare services. Flooding can exacerbate these health vulnerabilities, especially if contaminated floodwater spreads diseases or disrupts medical care.
- Transportation Challenges: Limited access to reliable transportation can hinder evacuation efforts during flooding events, placing residents in these areas at greater risk. Public transportation options may be insufficient or inaccessible, leaving residents stranded.
- Information Access: Disadvantaged communities may have limited access to timely, accurate information about flood risks and preparedness measures. This lack of information can lead to delayed or inadequate responses to flood warnings.
- Environmental Justice Concerns: Flooding can lead to the release of hazardous materials, contaminating soil and water. Disadvantaged communities are likelier to be located near industrial sites or toxic facilities, exacerbating environmental justice concerns.
- Community Disruption: Flooding can displace residents from their homes, disrupting communities and increasing social and economic hardships. The recovery and rebuilding process may take longer in these areas due to limited resources.

Warning Time: Floods are generally classed as either slow-rise or flash floods. Due to the sequential pattern of meteorological conditions needed to cause serious slow-rise flooding, it is unusual for a slow-rise flood to occur without warning. Slow-rise floods may be preceded by a warning time from several hours, to days, to possibly weeks. Evacuation and sandbagging for a slow-rise flood may lessen flood damage.

Flash floods are more difficult to prepare for, due to the extremely short warning time given, if any. Flash flood warnings usually require evacuation within an hour. However, potential hazard areas can be warned in advance of potential flash flooding danger.

The potential warning time a community has to respond to a flooding threat is a function of the time between the first measurable rainfall and the first occurrence of flooding. The time it takes to recognize a flooding threat reduces the potential warning time that a community has to take actions to protect lives and property. Another element that characterizes a community's flood threat is the length of time floodwaters remain above flood stage.

The Cook County flood threat system consists of a network of precipitation gages throughout the watershed and stream gages at strategic locations that constantly monitor and report stream levels. Stream gage networks and hydrograph models are available on the major streams for Cook County, including the Des Plaines River, Salt Creek, Little Calumet River, Thorn Creek, Plum Creek, and the Chicago River, North Branch. This information is fed into USGS forecasting models that assess the flood threat based on the amount of flow in the stream (measured in cubic feet per second). In addition to this program, data and flood warning information are provided by the National Weather Service.

All of this information is analyzed to evaluate the flood threat and possible evacuation needs. It is monitored by agencies in the planning area such as Cook County DEMRS and Metropolitan Water

Reclamation District. Data is used for the operation of flood control facilities in Cook County. The response to warnings from these systems is also dictated by emergency response plans developed by the County and municipalities.

Secondary Hazards

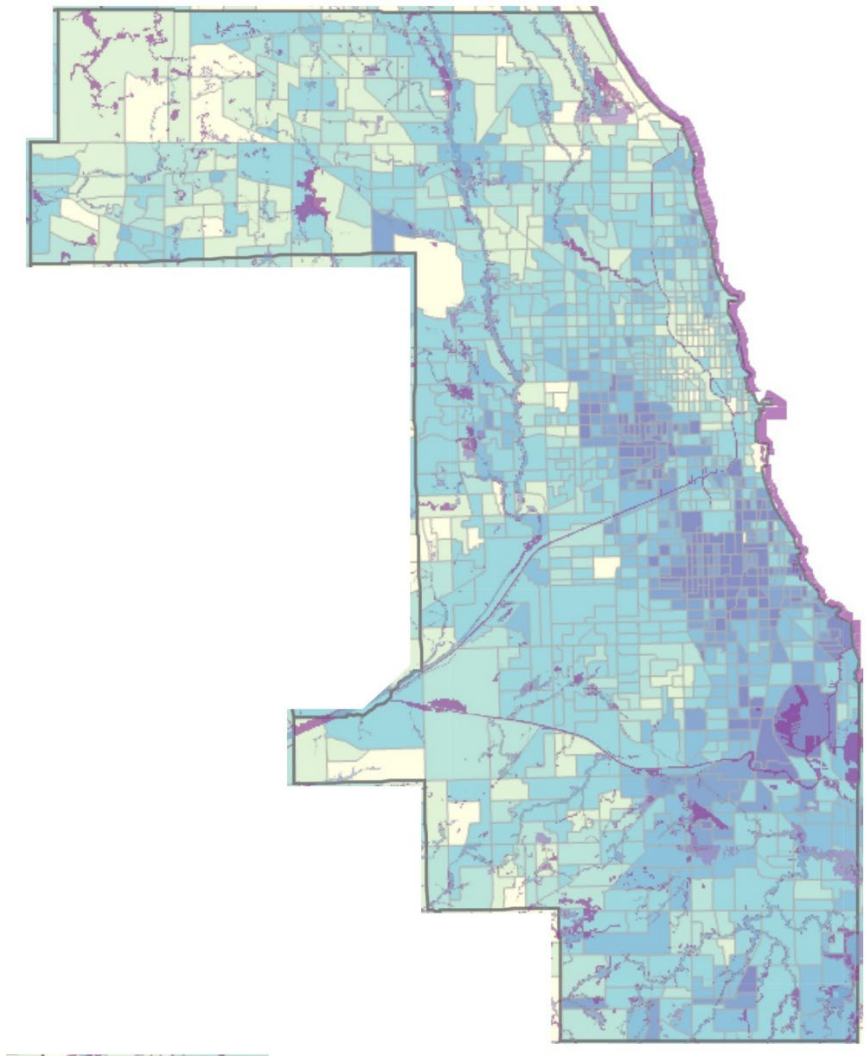
One of the most problematic secondary hazards for flooding is bank erosion, which in some cases can be more harmful than the actual flooding itself. This is especially true in the upper courses of rivers with steep gradients, where floodwaters may pass quickly and without much damage, but scour the banks, edging properties closer to the floodplain or causing them to fall in. This may also happen in areas with soft soils that are prone to erosion. Hazardous materials spills are also a secondary hazard of flooding if storage tanks rupture and spill into streams, rivers, or storm sewers.

The FEMA Community Resilience Challenges Index (CRCI) provides a relative assessment of a community's potential resilience and gives insights into population and community characteristics from which to build emergency operations plans and targeted outreach strategies. The figure below illustrates the impact of flooding on Cook County.

A FEMA Community Resilience Index Story Map of Cook County is shown below.

FEMA COMMUNITY RESILIENCE INDEX STORY MAP

COOK COUNTY, ILLINOIS



Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

Property Damage and Critical Infrastructure: A HAZUS analysis was conducted for a 100-year and 500-year flood to examine the exposure and damages of buildings to flooding.

100-year Flood Analysis:
HAZUS estimates that about 2,952 buildings will be at least moderately damaged. This is over 67% of the total number of buildings in the scenario.

TABLE: HAZUS 100-year Expected Building Damage by Occupancy

Damage Level	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Agriculture	0	0	1	100	0	0	0	0	0	0	0	0
Commercial	297	78	76	20	3	1	4	1	3	1	0	0
Education	4	100	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	122	62	68	35	5	3	1	1	0	0	0	0
Religion	5	83	1	17	0	0	0	0	0	0	0	0
Residential	5,588	67	2,255	27	361	4	110	1	41	0	23	0
Total	**6,016**	**-**	**2,401**	**-**	**369**	**-**	**115**	**-**	**44**	**-**	**23**	**-**

TABLE: HAZUS 100-year Expected Damage to # of Essential Facilities

	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operations Center	15	0	0	0
Fire Stations	328	0	0	0
Hospitals	82	0	0	0
Police Stations	175	0	0	0
Schools	1,985	0	0	0

TABLE: HAZUS 100-year Building-Related Economic Loss Estimates
(millions of dollars)

	Area	Residential	Commercial	Industrial	Others	Total
Building Loss	Building	598.09	139.11	125.43	37.77	900.38
	Content	369.80	374.82	272.25	239.44	1,256.30
	Inventory	0.00	71.99	32.11	4.88	108.98
	Subtotal	**967.89**	**585.91**	**429.78**	**282.08**	**2,265.66**
Business Interruption	Income	18.32	385.25	8.44	261.38	673.39
	Relocation	278.88	128.90	18.90	118.62	545.30
	Rental Income	217.23	95.46	3.16	8.29	324.13
	Wage	43.09	358.71	14.06	680.79	1,096.64
	Subtotal	**557.51**	**968.33**	**44.55**	**1,069.08**	**2,639.47**
All	**Total**	**1,525.40**	**1,554.24**	**474.34**	**1,351.16**	**4,905.13**

The total economic loss estimated for the flood is $4,905.13 million, representing 11.52% of the total replacement value of the scenario buildings.

The total building-related losses were $2,265.66 million. 54% of the estimated losses were related to business interruption in the region. The residential occupancies made up 31.10% of the total loss.

HAZUS estimates the number of households expected to be displaced due to the flood and the associated potential evacuation. HAZUS also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates that 24,605 households (73,816 people) will be displaced due to the flood. Displacement includes households evacuated from within or very near the inundated area. Of these, 11,729 (out of a total population of 5,272,775) will seek temporary shelter in public shelters.

500-year Flood Analysis:
HAZUS estimates that about 3,890 buildings will be at least moderately damaged. This is over 74% of the total number of buildings in the scenario.

TABLE: HAZUS 500-year Expected Building Damage by Occupancy

Damage Level	1-10		11-20		21-30		31-40		41-50		50>	
Occupancy	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Agriculture	1	100	0	0	0	0	0	0	0	0	0	0
Commercial	434	78	104	19	9	2	3	1	3	1	0	0
Education	8	100	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	151	62	84	34	7	3	2	1	0	0	0	0
Religion	7	88	1	13	0	0	0	0	0	0	0	0
Residential	8,914	71	2,896	23	516	4	173	1	54	0	38	0
Total												

TABLE: HAZUS 500-year Expected Damage to # of Essential Facilities

	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operations Center	15	0	0	0
Fire Stations	328	0	0	0
Hospitals	82	0	0	0
Police Stations	175	0	0	0
Schools	1,985	0	0	0

TABLE: HAZUS 500-year Building-Related Economic Loss Estimates
(millions of dollars)

	Area	Residential	Commercial	Industrial	Others	Total
Building Loss	Building	823.15	190.72	156.38	46.85	1217.10
	Content	493.70	511.86	344.50	268.85	1618.91
	Inventory	0.00	106.38	40.16	6.11	152.65
	Subtotal	**1316.84**	**808.96**	**541.04**	**321.81**	**2,988.65**
Business Interruption	Income	20.15	465.83	9.83	268.25	764.06
	Relocation	367.24	165.97	21.65	130.33	685.19

	Rental Income	286.19	122.68	3.62	8.36	420.85
	Wage	47.41	449.91	16.26	709.35	1222.93
	Subtotal	**720.98**	**1204.39**	**51.36**	**1116.30**	**3093.03**
All	**Total**	**2037.82**	**2013.36**	**592.40**	**1438.10**	**6081.68**

The total economic loss estimated for the flood is $6,081.68 million, representing 13.01% of the full replacement value of the scenario buildings.

The total building-related losses were $2,988.65 million. 51% of the estimated losses were related to business interruption in the region. The residential occupancies made up 33.51% of the total loss.

HAZUS estimates the number of households expected to be displaced due to a flood and the associated potential evacuation. HAZUS also estimates the number of people requiring accommodations in temporary public shelters. The model estimates that 32,237 households (96,710 people) will be displaced due to a flood. Displacement includes households evacuated from within or very near the inundated area. Of these, 14,917 people are expected to seek temporary shelter in public shelters.

Repetitive Loss Properties*:* There are several different definitions of a "repetitive loss property." The current FEMA definition of a repetitive loss property is:

"**Repetitive Loss Structure:** An NFIP-insured structure that has had at least two paid flood losses of more than $1,000 each in any 10-year period since 1978" (FEMA).

Additionally, the definitions of a severe repetitive loss building, and severe repetitive loss property are:

"Severe Repetitive Loss Building: Any building that:

1. Is covered under a Standard Flood Insurance Policy made available under this title.
2. Has incurred flood damage for which:

    a. Four or more separate claim payments have been made under a Standard Flood Insurance Policy issued pursuant to this title, with the amount of each such claim exceeding $5,000 and with the cumulative amount of such claims payments exceeding $20,000; or
    b. At least two separate claims payments have been made under a Standard Flood Insurance Policy, with the cumulative amount of such claim payments exceeding the fair market value of the insured building on the day before each loss" (FEMA).

"Severe Repetitive Loss Property: Either a severe repetitive loss building or the contents within a severe repetitive loss building, or both" (FEMA).

FEMA encourages the mitigation of severe repetitive loss and repetitive loss properties through the distribution of mitigation grants, the NFIP's Increased Cost of the Compliance program, and the Community Rating System (CRS) program. Depending on the number of repetitive loss properties within a CRS community, the community may be required to develop a specific plan to determine the causes of the repetitive claims and ways to mitigate the causes of the repetitive claims. At a

minimum, each CRS community must conduct an annual outreach project to these properties advising the owners of their location in the regulatory floodplain, property protection measures, and any funding options for property protection and flood insurance.

FEMA offers several programs to support communities in identifying and addressing the root causes of their repetitive losses. One such program is the Community Rating System (CRS).

FEMA-sponsored programs, such as the CRS, require participating communities to identify repetitive loss areas. A repetitive loss area is the portion of a floodplain holding structures that FEMA has identified as meeting the definition of repetitive loss. Identifying repetitive loss areas helps to identify structures that are at risk but are not on FEMA's list of repetitive loss structures because no flood insurance policy was in force at the time of loss. FEMA's list of repetitive loss properties identifies 1,741 such properties in the planning area as of May 2024. The breakdown of the properties by jurisdiction is presented in *Table: Repetitive Loss Properties*. A request was made to receive a more up-to-date breakdown of repetitive loss information, but at the time of publication, this data has not been made available. A review of the data indicated the following key findings:

TABLE: REPETITIVE LOSS PROPERTIES

Jurisdiction	Repetitive Loss Properties	Severe Repetitive Loss Properties	Number of Properties Mitigated
Arlington Heights	3 (2 Single Family, 1 Other Residential)	0	(1 Single Family, 1 Two-Four Family Residence, 1 Other Residential, 1 Business-Nonresidential)
Barrington	2 (2 Single Family)	0	0
Bellwood	240 (231 Single Family, 5 Two-Four Family Residence, 2 Other Residential, 2 Business-Nonresidential)	5 (5 Single Family)	0
Bensenville	12 (7 Single Family, 4 Other Residential, 1 Business-Nonresidential)	4 (1 Single Family, 2 Other Residential, 1 Business-Nonresidential)	0
Berwyn	2 (1 Single Family, 1 Other Residential)	0	0
Bridgeview	1 (1 Business-Nonresidential)	0	0
Broadview	3 (3 Single Family)	1 (1 Single Family)	0

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Brookfield	9 (4 Single Family, 3 Two-Four Family Residence, 2 Business-Nonresidential)	3 (3 Single Family)	0
Buffalo Grove	1 (1 Single Family)	0	0
Burbank	4 (4 Single Family)	0	0
Bur Ridge	0	1 (1 Business-Nonresidential)	0
Calumet City	24 (22 Single Family, 1 Other Residential, 1 Other Nonresidential)	1 (1 Single Family)	0
Chicago Heights	4 (3 Single Family, 1 Two-Four Family Residence)	0	1
Chicago	70 (45 Single Family, 10 Two-Four Family Residence, 14 Other Residential, 1 Other-Nonresidential)	0	1
Cook County	101 (91 Single Family, 5 Two-Four Family Residence, 3 Other Residential, 2 Other-Nonresidential)	12 (11 Single Family, 1 Two-Four Family Residence)	1
Country Club Hills	1 (1 Single Family)	0	0
Crestwood	1 (1 Single Family)	0	0
Deerfield	11 (11 Single Family)	0	0
Des Plaines	223 (195 Single Family, 7 Two-Four Family Residence, 6 Other Residential, 7 Other-Nonresidential, 8 Business-Nonresidential)	17 (12 Single Family, 1 Two-Four Family Residence, 1 Other Residential, 3 Other-Nonresidential)	28

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Dixmoor	4 (4 Single Family)	0	0
Dolton	34 (32 Single Family, 2 Two-Four Family Residence)	2 (2 Single Family)	0
Elgin	20 (19 Single Family, 1 Two-Four Family Residence)	3 (2 Single Family, 1 Other-Nonresidential)	0
Elk Grove Village	5 (5 Other-Nonresidential)	1 (1 Single Family)	0
Elmhurst	17 (15 Single Family, 2 Other-Nonresidential)	0	0
Elmwood Park	15 (13 Single Family, 2 Two-Four Family Residence)	1 (1 Two-Four Family)	0
Flossmoor	10 (10 Single Family)	0	0
Ford Heights	9 (8 Single Family, 1 Two-Four Family Residence)	1 (1 Single Family)	0
Franklin Park	33 (27 Single Family, 6 Other-Nonresidential)	2 (2 Single Family)	0
Glencoe	2 (2 Single Family)	0	0
Glenview	30 (29 Single Family, 1 Other-Nonresidential)	2 (1 Single Family, 1 Other Residential)	7
Glenwood	3 (3 Single Family)	0	0
Hanover Park	1 (1 Single Family)	1 (1 Single Family)	0
Harvey	33 (27 Single Family, 5 Two-Four Family Residence, 1 Other Residential)	0	0
Hazel Crest	2 (2 Single Family)	0	0

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Hinsdale	8 (2 Single Family, 6 Other Residential)	2 (2 Other Residential)	0
Homewood	6 (6 Single Family)	0	0
Inverness	3 (3 Single Family)	0	0
Justice	2 (1 Single Family, 1 Two-Four Family Residence)	0	0
LaGrange	7 (7 Single Family)	0	0
Lansing	15 (14 Single Family, 1 Other-Nonresidential)	0	0
Lincolnwood	2 (2 Single Family)	0	0
Lynwood	1 (1 Single Family)	0	0
Lyons	12 (8 Single Family, 4 Two-Four Family Residence)	4 (2 Single Family, 2 Two-Four Family Residence)	0
Markham	v	1 (1 Other Nonresidential)	0
Matteson	2 (2 Single Family)	0	0
Maywood	8 (8 Single Family)	0	0
Melrose Park	63 (49 Single Family, 8 Two-Four Family Residence, 3 Other Residential, 2 Business-Nonresidential, 1 Other-Nonresidential)	5 (4 Single Family, 1 Other Nonresidential)	0
Midlothian	6 (6 Single Family)	0	0
Morton Grove	3 (3 Single Family)	0	0
Mount Prospect	5 (5 Single Family)	3 (3 Single Family)	1

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Niles	16 (12 Single Family, 3 Other Residential, 1 Other-Nonresidential)	2 (2 Other Residential)	0
North Riverside	1 (1 Single Family)	1 (1 Business-Nonresidential)	0
Northbrook	7 (6 Single Family, 1 Two-Four Family Residence)	1 (1 Two-Four Family Residence)	1
Northfield	21 (15 Single Family, 6 Two-Four Family Residence)	0	1
Northlake	38 (35 Single Family, 2 Two-Four Family Residence, 1 Other Residential)	5 (5 Single Family)	0
Oak Brook	1 (1 Other-Nonresidential)	3 (3 Single Family)	1
Oak Forest	11 (11 Single Family)	1 (1 Single Family)	0
Oak Lawn	6 (6 Single Family)	1 (1 Single Family)	0
Olympia Fields	0	0	0
Orland Park	5 (5 Single Family)	1 (1 Single Family)	0
Palatine	3 (3 Single Family)	0	0
Palos Hills	3 (2 Single Family, 1 Other-Nonresidential)	0	0
Palos Park	2 (2 Single Family)	0	0
Park Ridge	17 (16 Single Family, 1 Other-Nonresidential)	0	0
Posen	4 (2 Single Family, 1 Two-Four Family Residence, 1 Business-Nonresidential)	0	0

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Prospect Heights	5 (4 Single Family, 1 Other Residential)	0	0
Richton Park	1 (1 Single Family)	0	0
River Grove	26 (23 Single Family, 2 Two-Four Family Residence, 1 Business-Nonresidential)	4 (2 Single Family, 1 Two-Four Family Residence, 1 Business Nonresidential)	0
Riverside	32 (26 Single Family, 3 Two-Four Family Residence, 3 Other-Residential)	3 (2 Single Family, 1 Other Residential)	0
Robbins	5 (5 Single Family)	0	0
Rolling Meadows	2 (2 Single Family)	0	0
Rosemont	3 (1 Single Family, 2 Other Residential)	0	0
Schaumburg	2 (1 Single Family, 1 Other Residential)	1 (1 Single Family)	0
Schiller Park	19 (19 Single Family)	6 (5 Single Family, 1 Two-Four Family Residence)	0
Skokie	23 (22 Single Family, 1 Two-Four Family Residence)	2 (2 Other-Residential)	0
South Holland	22 (21 Single Family, 1 Other Nonresidential)	1 (1 Single Family)	1
Steger	1 (1 Single Family)	0	0
Stone Park	73 (54 Single Family, 17 Two-Four Family Residence, 2 Business-Nonresidential)	23 (16 Single Family, 6 Two-Four Family Residence, 1 Other-Residential)	0
Summit	1 (1 Single Family)	0	0

TABLE: REPETITIVE LOSS PROPERTIES			
Jurisdiction	**Repetitive Loss Properties**	**Severe Repetitive Loss Properties**	**Number of Properties Mitigated**
Westchester	89 (88 Single Family, 1 Other-Nonresidential)	1 (1 Single Family)	0
Western Springs	1 (1 Single Family)	0	0
Wheeling	17 (16 Single Family, 1 Other-Nonresidential)	1 (1 Single Family)	2
Wilmette	17 (15 Single Family, 2 Other Residential)	0	0
Winnetka	25 (25 Single Family)	0	0
Total	**1612**	**129**	45

5.4.8 Critical Facilities and Infrastructure

Flooding can also disproportionately damage property and critical infrastructure within disadvantaged or challenged communities. Here are some of the ways in which flooding can affect these communities more severely:

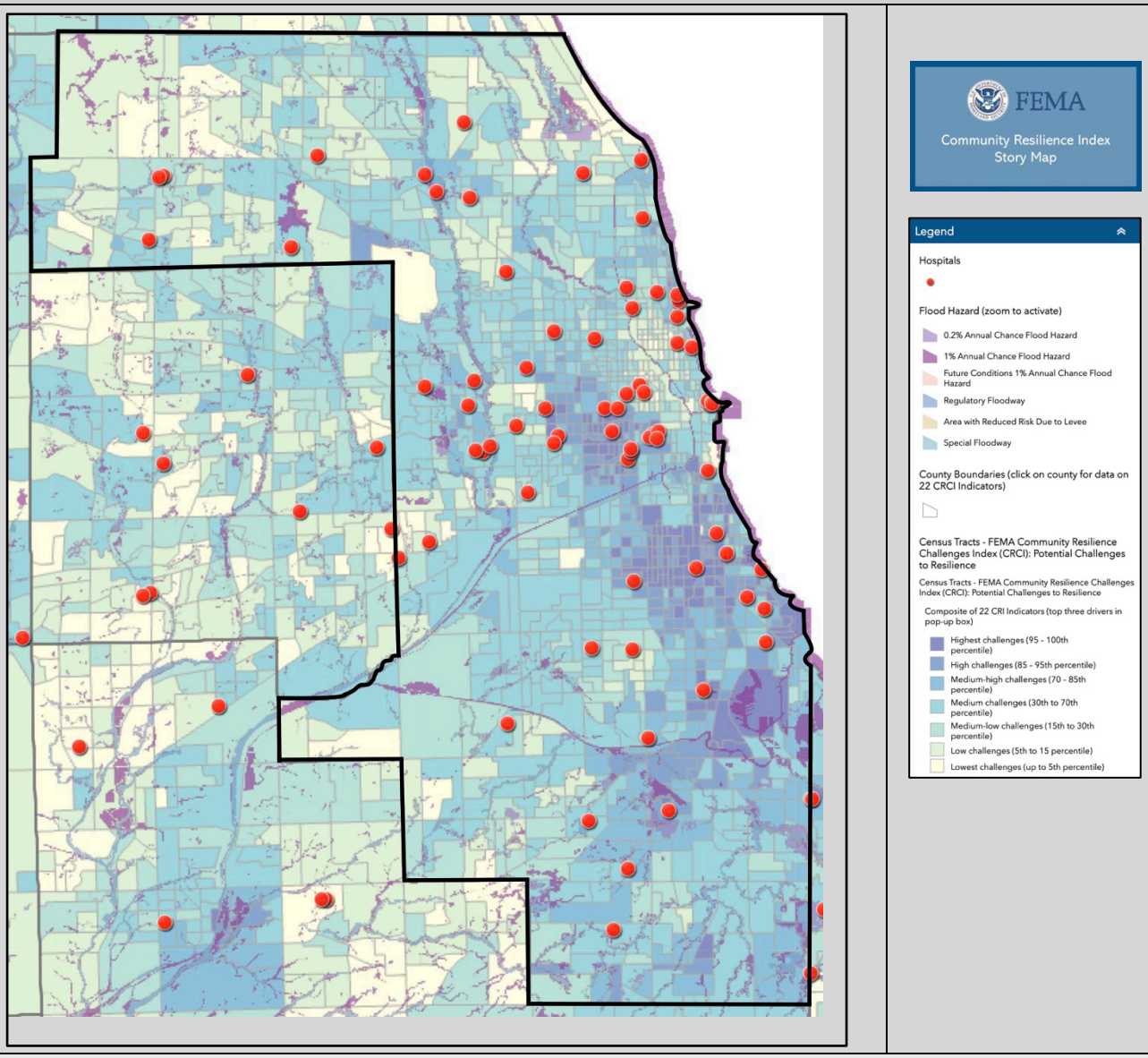
- Housing Vulnerability: Disadvantaged communities often have a higher percentage of residents living in substandard or poorly constructed housing. These homes are more susceptible to flood damage, leading to significant property losses and displacement of residents.
- Limited Insurance Coverage: Residents in disadvantaged communities may be less likely to have flood insurance, either due to affordability issues or lack of awareness. This leaves property owners financially vulnerable when flooding occurs, resulting in a heavier burden of property damage.
- Inadequate Infrastructure: Critical infrastructure, such as roads, bridges, sewage systems, and utilities, may be subpar or outdated in disadvantaged areas. Flooding can damage or disrupt these systems, impeding emergency response efforts and hindering recovery.
- Healthcare Facilities: These communities may have limited access to healthcare facilities and services. Flooding can damage or inundate healthcare facilities, making it challenging for residents to access medical care during and after a flood event.
- Schools and Education: Flood damage to schools can disrupt education for children in these communities. It may take longer for schools to reopen, affecting students' academic progress and overall well-being.
- Economic Impact: Flooding can devastate local economies, including small businesses, which are often the backbone of disadvantaged communities. Loss of income and job displacement can have long-lasting economic consequences.

- Transportation Disruptions: Inadequate transportation infrastructure can be overwhelmed by floodwaters, making it difficult for residents to evacuate or access emergency services. This can also impede the delivery of essential supplies and aid.

The following figures also illustrate critical facilities in Cook County according to FEMA.

FIGURE: HOSPITALS IN COOK COUNTY, ILLINOIS

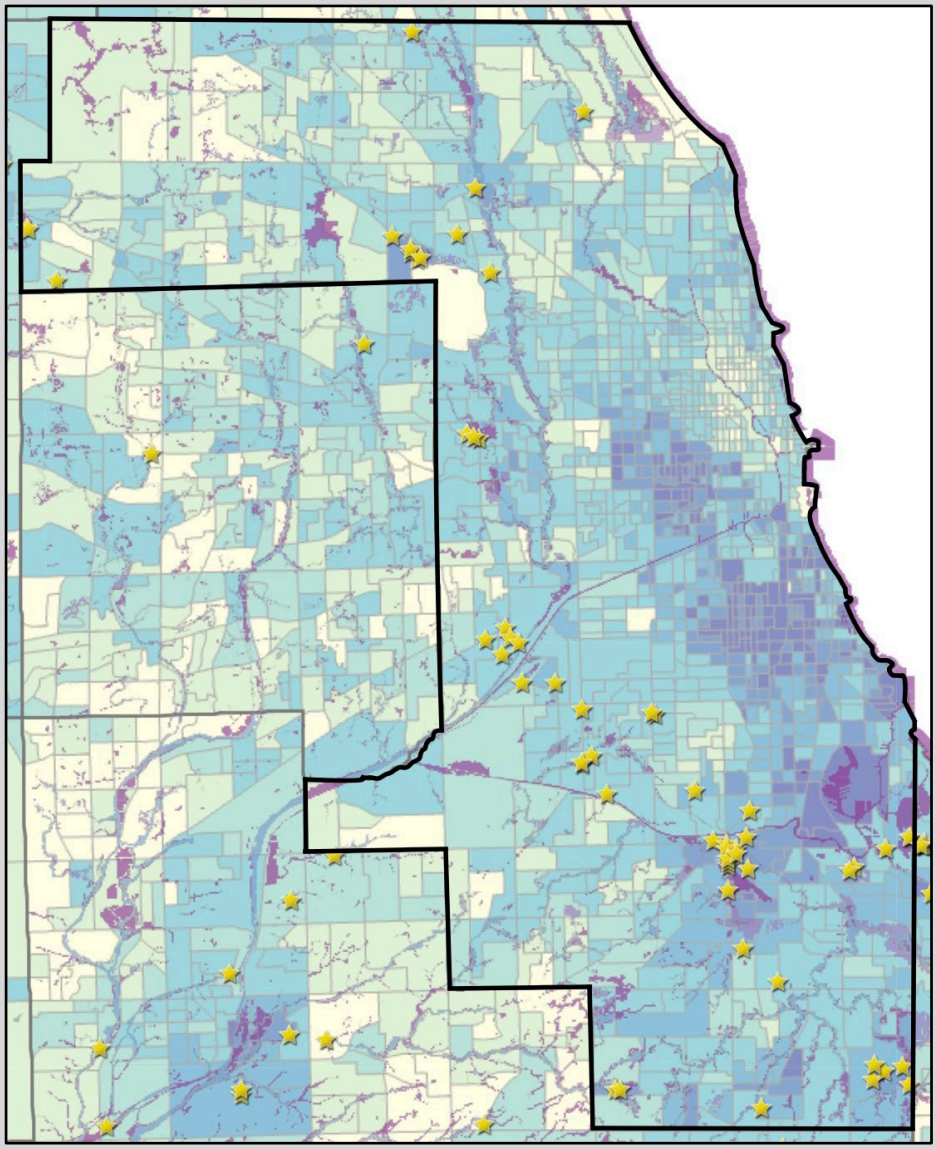
FEMA COMMUNITY RESILIENCE INDEX STORY MAP



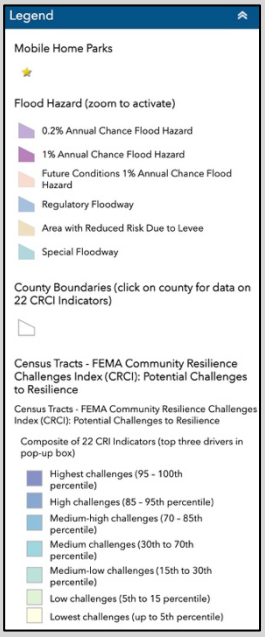
Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

FIGURE: MANUFACTURED HOMES IN COOK COUNTY, ILLINOIS

FEMA COMMUNITY RESILIENCE INDEX STORY MAP



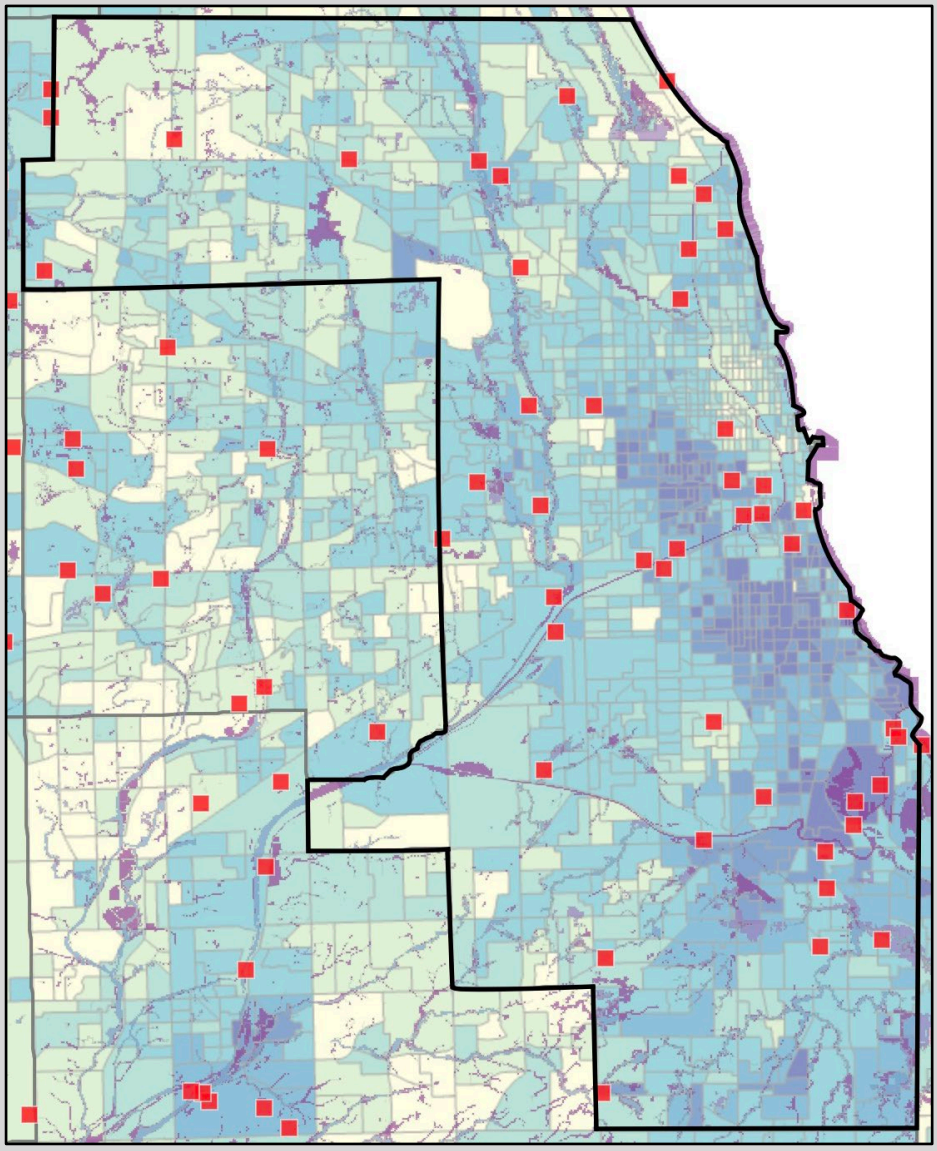




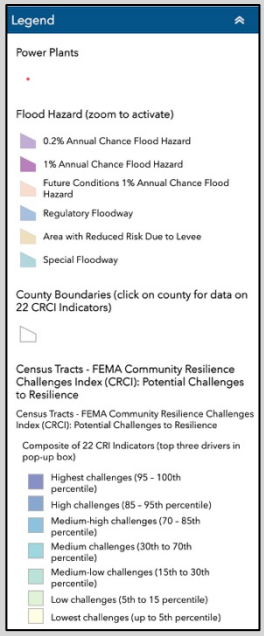
Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

FIGURE: POWER PLANTS IN COOK COUNTY, ILLINOIS

FEMA COMMUNITY RESILIENCE INDEX STORY MAP



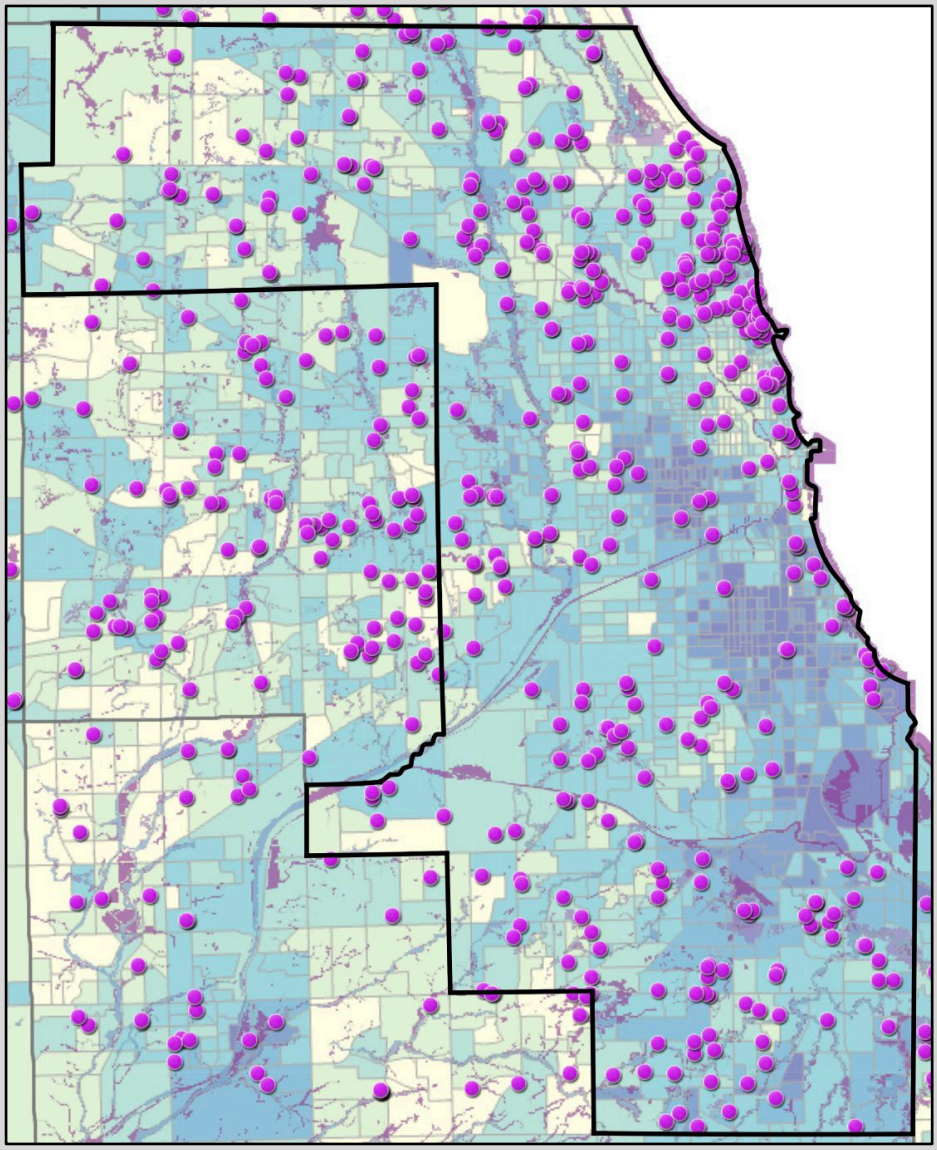




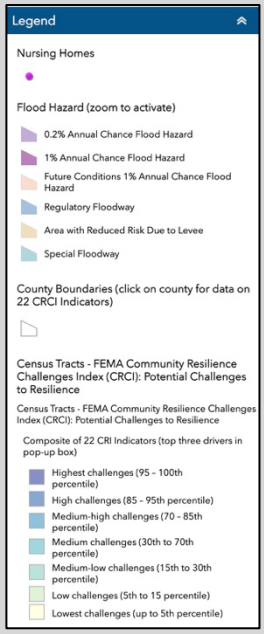
Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

FIGURE: NURSING HOMES IN COOK COUNTY, ILLINOIS

FEMA COMMUNITY RESILIENCE INDEX STORY MAP







Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

Economy: The economic impacts of flooding in Cook County include significant property damage and substantial financial losses. Urban areas within the county are highly susceptible to flooding, which can lead to costly disruptions. The severity of these impacts is influenced by various factors, including the density of the population and infrastructure. Effective management and mitigation strategies are crucial to reducing the economic burden of flooding events in this region (Urban Flooding Impacts in Cook County).

Another economic impact includes local area property values and insurance rates. Properties located in flood-prone areas may decline in value, and insurance rates may increase as the risk of flooding increases. This can make it more difficult for homeowners and businesses to secure loans and other forms of financing.

Changes in Development and Impact of Future Development: The risks associated with flooding are directly related to the population and infrastructure located within the boundaries of the riverine floodplains. Development should be limited in these potential impact areas. Infrastructure improvements should also consider potential impacts. Existing floodplain and construction regulations are in place to help reduce the impacts of flooding. Stormwater infrastructure should also be looked at to determine the impact of flash flooding. This infrastructure does not always take into effect the growth of a community. Increasing impervious surfaces (e.g., concrete parking lots) may cause increased stormwater runoff during short rain events.

Effects of Climate Change on Severity of Impacts: According to NOAA, climate change impacts flooding by increasing the frequency and intensity of extreme weather events. This results in more severe and frequent flooding, affecting ecosystems, communities, and infrastructure. Climate change also leads to sea level rise and more intense precipitation events, further exacerbating the risk and impact of floods (NOAA).

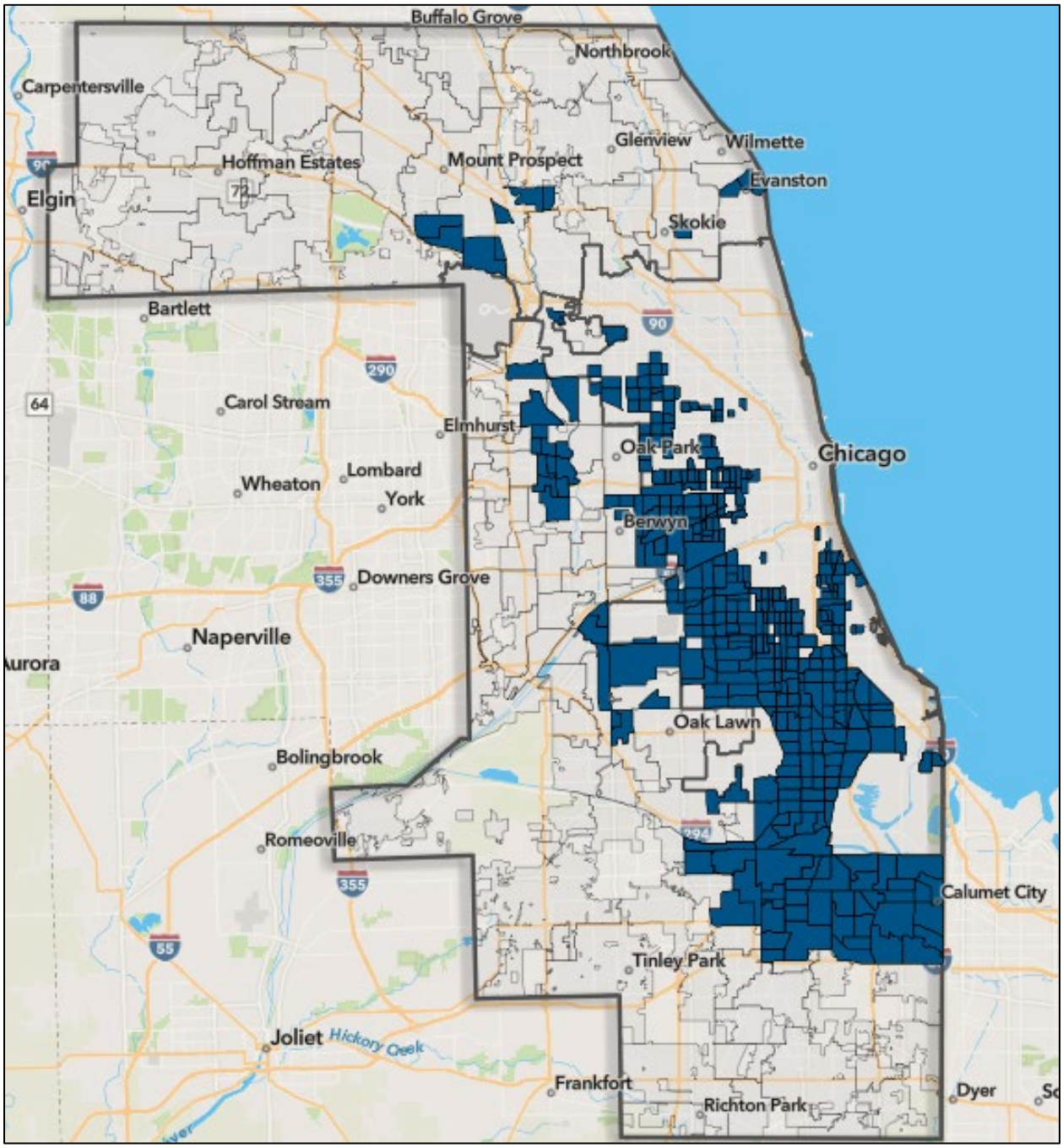
Heavy precipitation leads to riverine flooding and flash floods as the ground fails to absorb the high volume of precipitation that falls in a short period. Increasing annual precipitation contributes to sustained flooding (Neighborhoods At Risk).

TABLE: 25-YEAR PRECIPITATION PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience a **10% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.8" increase** (from 36.9" to 37.7") in average annual precipitation.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience a **1% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.1" decrease** (from 37.3" to 37.2") in average annual precipitation.
Source: Neighborhoods at Risk: (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation:							
Annual Average Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40“**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation (Wet Days)	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Maximum Period of Consecutive Wet Days	**10 days**	**10 days**	**10 days**	**10 days**	**11 days**	**10 days**	**10 days**
	10-12	9-12	9-12	9-12	9-12	9-12	9-13
Annual Days With:							
Annual Days With Total Precipitation > 1 inch	**4 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**6 days**
	3-5	4-6	4-6	4-6	4-7	4-7	5-9
Annual Days With Total Precipitation > 2 inches	**0 days**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**
	0-1	0-1	0-1	0-1	0-1	0-1	0-2
Annual Days With Total Precipitation > 3 inches	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**
	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Annual Days That Exceed 99th Percentile Precipitation	**5 days**	**6 days**	**6 days**	**7 days**	**7 days**	**7 days**	**8 days**
	5-7	5-8	5-8	6-8	6-9	6-9	7-10
*Days With Maximum Temperature Below 32*F*	**41 days**	**30 days**	**28 days**	**25 days**	**22 days**	**21 days**	**12 days**
	37-44	17-40	21-37	13-36	11-32	10-32	2-24
Source: Climate Mapping for Resilience and Adaptation (2024)							

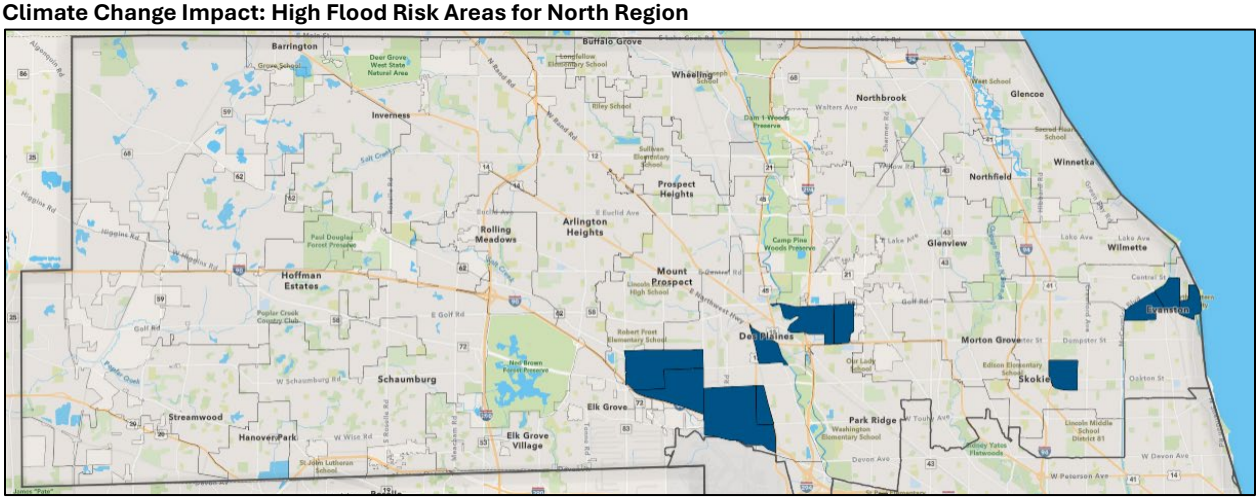
The figure below highlights the highest risk census tracts for flood mitigation and flood risk intervention and associated challenges that communities face from climate change. The resulting data examines where census tracts with the highest flood susceptibility overlap with one of six key variables from the CDC social vulnerability index, which were selected as those most likely to influence a population's vulnerability to extreme or prolonged flood events caused by climate change.

Climate Change Impact: High Flood Risk Areas for Cook County



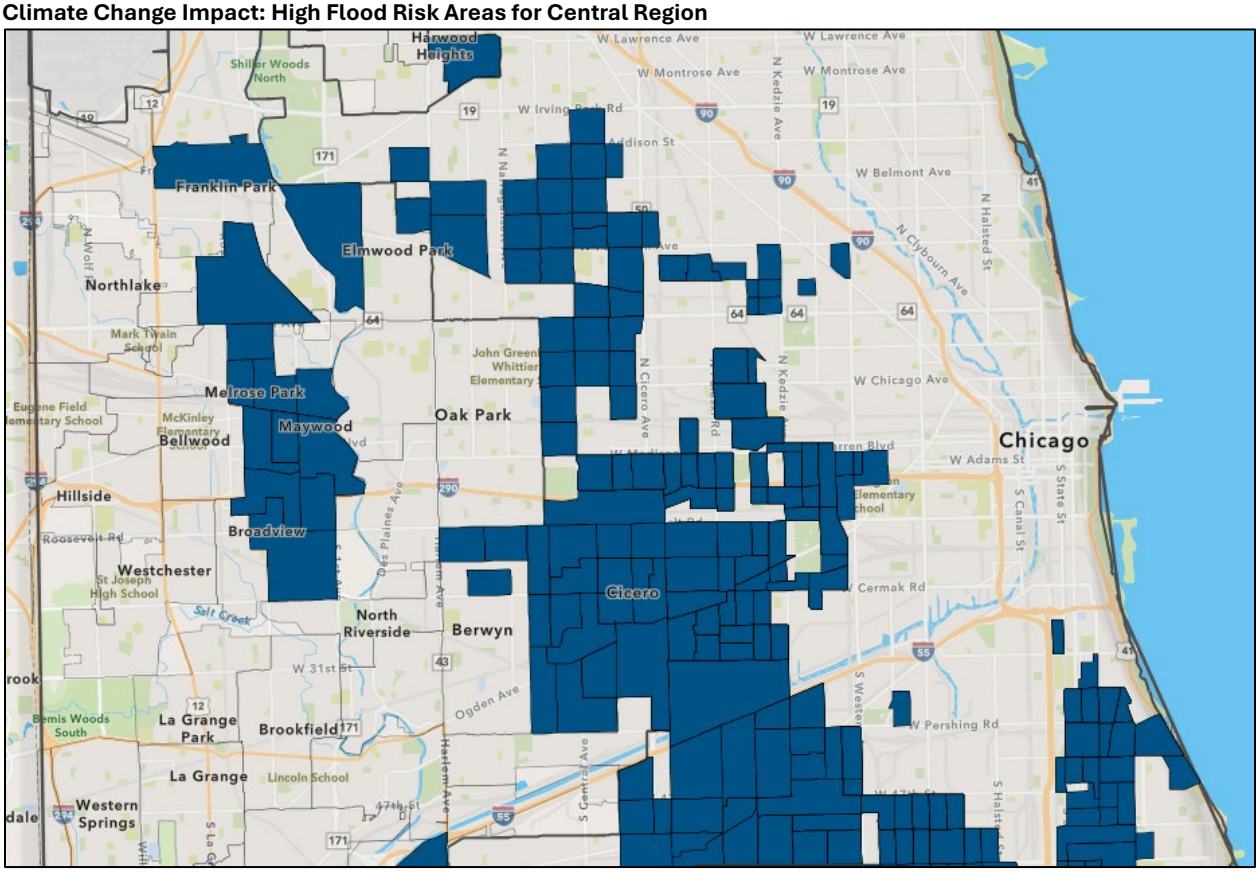
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Flood Risk Areas for North Region



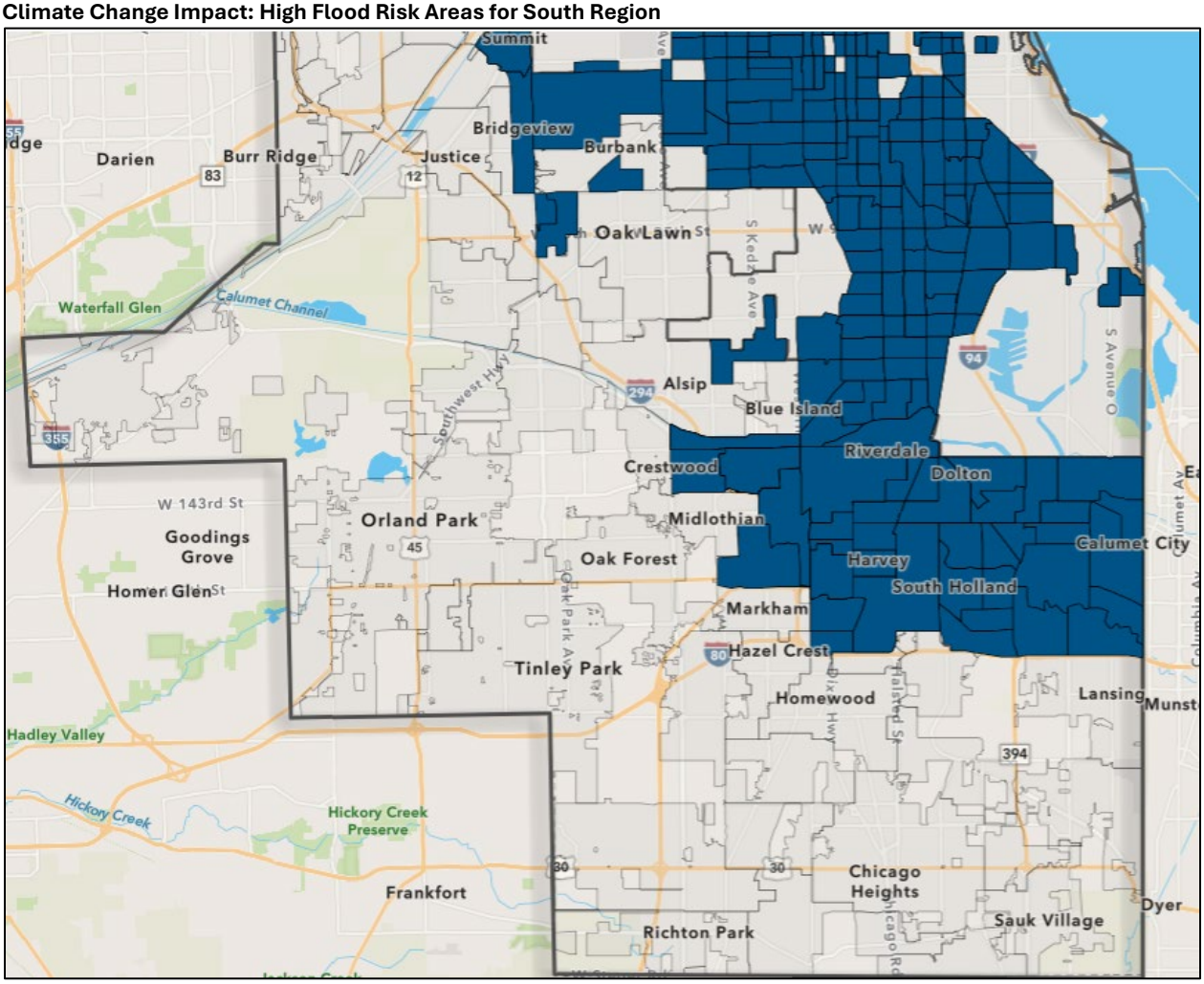
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Flood Risk Areas for Central Region



Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Flood Risk Areas for South Region



5.4.9 FEMA NRI Expected Annual Loss Estimates

TABLE: COOK COUNTY, IL EXPECTED ANNUAL LOSS TABLE FOR RIVERINE FLOODING EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
5.9 events per year	0.12	$1,382,439	$26,195,222	$223,649	$27,801,310	Relatively High	99.0
Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.* ***Population:*** *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.* ***Expected Annual Loss Scores*** *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*							
Source: FEMA National Risk Index (2024)							

TABLE: COOK COUNTY, IL EXPECTED ANNUAL LOSS TABLE FOR COSTAL FLOODING EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
0 events per year	0.0	$438	$45,638	N/A	$46,076	Very Low	44.4
Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.* ***Population:*** *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.* ***Expected Annual Loss Scores*** *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*							
Source: FEMA National Risk Index (2024)							

Note: *The FEMA National Risk Index does not assess Urban/Flash/Stormwater Flooding.*

5.4.10 FEMA Hazard-Specific Risk

TABLE: COOK COUNTY, IL FEMA HAZARD SPECIFIC RISK INDEX – RIVERINE FLOODING				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$27,801,310	Very High	Relatively High	$34,280,232	99.2
FEMA Hazard-Type **Risk Index Scores** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.* *FEMA Hazard-Type* ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.* *FEMA Hazard-Type* ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*				
Source: FEMA National Risk Index (2024)				

TABLE: COOK COUNTY, IL FEMA HAZARD SPECIFIC RISK INDEX – COSTAL FLOODING				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$46,076	Very High	Relatively High	$59,601	44.3
FEMA Hazard-Type **Risk Index Scores** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.* *FEMA Hazard-Type* ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.* *FEMA Hazard-Type* ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*				
Source: FEMA National Risk Index (2024)				

Note: *The FEMA National Risk Index does not assess Urban/Flash/Stormwater Flooding*

5.4.11 FEMA NRI Exposure Values

TABLE: COOK COUNTY, IL EXPOSURE VALUE TABLE FOR RIVERINE FLOODING EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Riverine Flooding	$751,804,205,845	$12,301,603,335	$739,498,813,627	63,749.90	$3,788,883

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*
Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

TABLE: COOK COUNTY, IL EXPOSURE VALUE TABLE FOR COSTAL FLOODING EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Coastal Flooding	$19,767,211,679	$233,718,088	$19,533,493,591	1,683.92	N/A

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*
Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

5.5 Severe Weather

5.5.1 Hazard Description

In this *Plan*, Severe Weather is considered to be extreme heat, lightning, hailstorms, dense fog, and strong wind.

Extreme Heat: A period of excessively high temperatures that significantly exceeds the long-term average for a particular location. This definition takes into account the local climate and expected temperature ranges for a given region. Extreme heat events are typically characterized by several consecutive days of high temperatures that can pose significant health and safety risks. NOAA often uses specific temperature thresholds, such as heat indices or heat advisories, to define extreme heat conditions. During such events, there is an increased likelihood of heat-related illnesses, including heat exhaustion and heatstroke, as well as potential stress on critical infrastructure, power grids, and water resources. Extreme heat events are becoming more frequent and severe due to climate change, making them a growing concern for public health and safety.

Lightning: A giant spark of electricity in the atmosphere or between the atmosphere and the ground. It occurs when the differences in electrical charges become too great, and the air's insulating capacity breaks down, leading to a rapid discharge of electricity. This discharge is what we see as lightning during thunderstorms, which is typically associated with heavy rainfall and sometimes other weather phenomena like hail. Lightning is an essential component that defines a thunderstorm.

Hailstorms: A form of precipitation that occurs when thunderstorm updrafts carry raindrops upward into extremely cold areas of the atmosphere, where they freeze into ice balls. Hail can damage aircraft, homes, and cars and kill livestock and people. The table below illustrates potential hail sizes and describes physical items for comparison.

TABLE: NATIONAL WEATHER SERVICE HAIL DESCRIPTIONS	
DESCRIPTION	**DIAMETER (INCHES)**
Pea	0.25”
Marble or Mothball	0.5”
Penny or Dime	0.75”
Nickel	0.88”
Quarter	1.0”
Half Dollar	1.25”
Walnut or Ping Pong Ball	1.5”
Golf Ball	1.75”
Hen’s Egg	2.0”
Tennis Ball	2.5”
Baseball	2.75”
Teacup	3.0”
Grapefruit	4.0”
Softball	4.5”
SOURCE: National Weather Service (2024)	

Hailstones grow by colliding with supercooled water drops. Supercooled water will freeze in contact with ice crystals, frozen raindrops, dust, or some other nuclei. Thunderstorms with a strong updraft keep lifting the hailstones to the top of the cloud, where they encounter more supercooled water and continue to grow. The hail falls when the thunderstorm's updraft can no longer support the weight of the ice, or the updraft weakens. Subsequently, the stronger the updraft, the more significant the hailstone can grow before falling to the ground.

"Hailstones can have layers like an onion if they travel up and down in an updraft, or they can have few or no layers if they are "balanced" in an updraft. Counting the layers, one can tell how many times a hailstone traveled to the top of the storm. In addition, hailstones can begin to melt and re-freeze together – forming large and very irregularly shaped hail.

Dense Fog: A weather condition that reduces visibility to less than ¼ mile. This can severely impact transportation and safety, making driving, boating, and flying conditions dangerous due to the significantly reduced visibility. Dense fog advisories are often issued to alert the public and mitigate risks associated with such low visibility conditions.

Strong Wind: Defined as wind gusts that are significant enough to cause damage. When measured, NOAA often categorizes winds as "strong" when they are between 39 mph and 57 mph. These are non-tornadic winds, referred to as "straight-line" winds, which can originate from thunderstorms and are powerful enough to cause substantial damage to structures and natural environments. This type of wind is distinguished from more severe gusts that can exceed these speeds, which are categorized separately under severe weather criteria.

5.5.2 Hazard Location

Severe weather could occur anywhere in Cook County, Illinois.

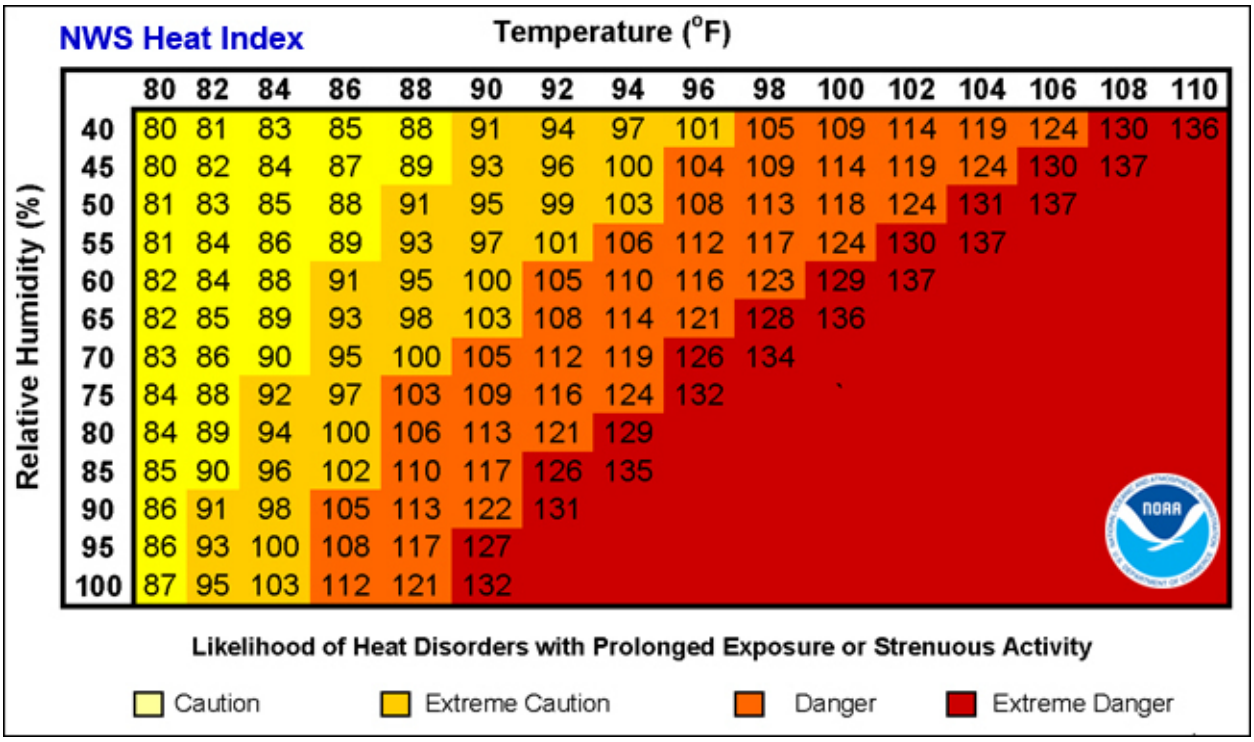
5.5.3 Hazard Extent/Intensity

Extreme Heat: When an extreme heat event occurs, the National Weather Service (NWS) may issue an excessive heat warning, an excessive heat watch, a heat advisory, or a heat outlook. The NWS defines these as the following:

- Excessive Heat Warning – Take Action. An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Warning is when the maximum heat index temperature is expected to be 105° or higher for at least two days and nighttime air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas not used to extreme heat conditions. If you don't take precautions immediately when conditions are extreme, you may become seriously ill or die (NOAA).
- Excessive Heat Watches—Be Prepared. Heat watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain (NOAA).
- Heat Advisory – Take Action. A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Advisory is when the maximum heat index temperature is expected to be 100° or higher for at least two days, and nighttime air temperatures will not drop below 75°; however, these criteria vary across the

country, especially for areas that are not used to dangerous heat conditions. Take precautions to avoid heat illness. If you don't take precautions, you may become seriously ill or even die (NOAA).

- Excessive Heat Outlooks are issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead-time to prepare for the event (NOAA).



Source: (NOAA)

Lightning: The extent and intensity of lightning is measured using the NWS Lightning Activity Level (LAL). The LAL is a scale that describes the frequency of lightning strikes in a specific area. The Lightning Activity Level scale below describes the extent of lightning activity.

Lightning Activity Level (LAL)	
Is a scale which describes lightning activity. Values are labeled 1-6:	
LAL 1	No thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a five minute period.
LAL 3	Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud to ground strikes in a 5 minute period.
LAL 4	Scattered thunderstorms. Moderate rain is commonly produced Lightning is frequent, 11 to 15 cloud to ground strikes in a 5 minute period.
LAL 5	Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater then 15 cloud to ground strikes in a 5 minute period.
LAL 6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag Warning.

Hailstorms: The TORRO Hailstorm Intensity Scale was developed by Jonathan Webb to measure and categorize hailstorms. It extends from H0 (hard hail, no damage) to H10 (super hailstorm, extensive structural damage, risk of severe/fatal injuries) with its increments of intensity or damage potential related to hail size (distribution and maximum), texture, numbers, fall speed, speed of storm translation, and strength of the accompanying wind. The scale could be modified depending on factors such as building materials and types (e.g., whether roofing tiles are predominantly slate, shingle, or concrete).

The TORRO Hailstorm Intensity Scale is shown below.

Scale	Intensity category	Typical hail diameter (mm)*	Probable kinetic energy J m^{-2}	Typical damage impacts
H0	Hard hail	5	0-20	No damage
H1	Potentially damaging	5-15	>20	Slight general damage to plants, crops
H2	Significant	10-20	>100	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		Bodywork of grounded aircraft dented, brick walls pitted
H7	Destructive	50-75		Severe roof damage, risk of serious injuries
H8	Destructive	60-90		(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100		Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Hail is considered severe when reaching a size of 0.75 inches in diameter or greater. The NWS Severe Hail Threat Level scale outlines different hail sizes with a description for comparison.

The NWS also defines the local threat of severe hail for specified areas based on the likelihood that severe hail will occur combined with the anticipated size or diameter of the largest hailstones illustrated in the chart below.

Severe Hail Threat Level	Threat Level Descriptions
Extreme	**"An Extreme Threat to Life and Property from Severe Hail."** Within 12 miles of a location, a moderate likelihood or greater (16% probability or greater) of severe hail, with storms capable of baseball to softball sized stones. *See diameter description below.* AND/OR...a high likelihood or greater (26% probability or greater) of severe hail, with storms capable of golf ball to baseball sized hail stones. *See diameter description below.* AND/OR...a very high likelihood (36% or greater) of severe hail, with storms capable of quarter to golf ball sized hail stones. *See diameter description below.*
High	**"A High Threat to Life and Property from Severe Hail."** Within 12 miles of a location, a low likelihood (6% to 15% probability) of severe hail, with storms capable of baseball to softball sized stones. *See diameter description below.* AND/OR...a moderate likelihood (16% to 25% probability) of very large hail (golf ball to baseball sized hail stones). *See diameter description below.* AND/OR...a high likelihood (26% to 35% probability) of large hail (quarter to golf ball sized hail stones). *See diameter description below.*
Moderate	**"A Moderate Threat to Life and Property from Severe Hail."** Within 12 miles of a location, a very low likelihood (2% to 5% probability) of severe hail, with storms capable of baseball to softball sized stones. *See description below.* AND/OR...a low likelihood (6% to 15% probability) of severe hail, with storms capable of golf ball to baseball sized hail stones. *See description below.* AND/OR...a moderate likelihood (16% to 25% probability) of severe hail, with storms capable of quarter to golf ball sized hail stones. *See diameter description below.*
Low	**"A Low Threat to Life and Property from Severe Hail."** Within 12 miles of a location, a very low likelihood (2% to 5% probability) of severe hail, with storms capable of golf ball to baseball sized hail stones. *See diameter description below.* AND/OR...a low likelihood (6% to 15% probability) of severe hail, with storms capable of quarter to golf ball sized hail stones. *See diameter description below.*
Very Low	**" A Very Low Threat to Life and Property from Severe Hail."** Within 12 miles of a location, a very low likelihood (2% to 5% probability) of severe hail, with storms capable of nickel to golf ball sized hail stones. *See diameter description below.* AND/OR...a low likelihood or greater (6% or greater) of small hail (less than 1 inch). *See diameter description below.*
Non-Threatening	**" No Discernable Threat to Life and Property from Severe Hail."** Within 12 miles of a location, environmental conditions do not support the occurrence of severe hail.

Note: To be considered severe, hail stones must be at least 1 inch in diameter.

Dense Fog: The intensity and extent of dense fog are generally measured by visibility. Dense fog specifically refers to conditions where visibility is reduced to 1/4 mile (0.4 kilometers) or less. This

measurement of visibility determines the severity of the fog, with lower visibility indicating denser fog, which can significantly impact transportation and safety due to reduced sight distances.

The Dense Fog/Smoke Hazard chart below depicts the threat of dense fog or smoke for an impacted area. It is largely based on coverage and visibility.

Dense Fog/Smoke Threat Level	Threat Level Descriptions
Extreme	**"An Extreme Threat to Life and Property from Dense Fog or Smoke."** Widespread very dense fog or smoke with the predominate visibility near zero and the coverage greater than 55% within a defined area, persisting for at least 1 hour.
High	**"A High Threat to Life and Property from Dense Fog or Smoke."** Areas of very dense fog or smoke with the visibility near zero and the coverage 25 - 54% within a defined area, persisting for at least 1 hour.
Moderate	**"A Moderate Threat to Life and Property from Dense Fog or Smoke."** Widespread dense fog or smoke with the predominate visibility 1/8 - 1/4 mile and the coverage greater than 55% within a defined area, persisting for at least 1 hour...OR...patchy very dense fog or smoke with the visibility near zero and the coverage less than 25% within a defined area, persisting for at least 1 hour. Surrounding fog may or may not be present.
Low	**"A Low Threat to Life and Property from Dense Fog or Smoke."** Areas of dense fog or smoke with the visibility 1/8 - 1/4 mile and the coverage 25 - 54% within a defined area, persisting for at least 1 hour.
Very Low	**" A Very Low Threat to Life and Property from Dense Fog or Smoke."** Patchy dense fog or smoke with the visibility 1/8 - 1/4 mile and the coverage less than 25% within a defined area, persisting for at least 1 hour.
Non-Threatening	**" No Discernable Threat to Life and Property from Dense Fog or Smoke."** Visibility greater than 1/4 mile and non-threatening. Fog/smoke may still be present, but not dense.

Note: Fog or smoke becomes hazardous when it is considered "dense" and obscures visibility to 1/4 mile or less. This results in decreased response time for operators of motor vehicles, especially at higher speeds. Motorists should adjust driving speed accordingly, while using low-beam headlights.

Source: National Weather Service (2024)

Strong Winds: The NOAA Beaufort Wind Scale (shown in the table below) is a system used to estimate wind speeds based on observed sea conditions or the effects of the wind on land features. The scale ranges from 0 to 12, with each number corresponding to a specific range of wind speeds and associated sea or land conditions.

TABLE: NOAA BEAUFORT WIND SCALE

ESTIMATING WIND SPEED AND SEA STATE WITH VISUAL CLUES

Beaufort Number	Wind Description	Wind Speed (Knots)	Wave Height	Visual Clues
0	Calm	0 kts	0 feet	Sea is like a mirror. Smoke rises vertically.
1	Light Air	1-3 kts	< 1/2	Ripples with the appearance of scales are formed, but without foam crests. Smoke drifts from funnel.

TABLE: NOAA BEAUFORT WIND SCALE				
ESTIMATING WIND SPEED AND SEA STATE WITH VISUAL CLUES				
Beaufort Number	**Wind Description**	**Wind Speed (Knots)**	**Wave Height**	**Visual Clues**
2	Light breeze	4-6 kts	1/2 ft (max 1)	Small wavelets, still short but more pronounced, crests have glassy appearance and do not break. Wind felt on face. Smoke rises at about 80 degrees.
3	Gentle Breeze	7-10 kts	2 ft (max 3)	Large wavelets and crests begin to break. Foam of glassy appearance. Perhaps scattered white horses (white caps). Wind extends light flags and pennants. Smoke rises at about 70 deg.
4	Moderate Breeze	11-16 kts	3 ft (max 5)	Small waves, becoming longer. Fairly frequent white horses (white caps). Wind raises dust and loose paper on the deck. Smoke rises at about 50 deg. No noticeable sound in the rigging. Slack halyards curve and sway. Heavy flag flaps limply.
5	Fresh Breeze	17-21 kts	6 ft (max 8)	Moderate waves, taking more pronounced long form. Many white horses (white caps) are formed (chance of some spray). Wind felt strongly on face. Smoke rises at about 30 deg. Slack halyards whip while bending continuously to leeward. Taut halyards maintain slightly bent position. Low whistle in the rigging. Heavy flag doesn't extend but flaps over entire length.
6	Strong Breeze	22-27 kts	9 ft (max 12)	Large waves begin to form. White foam crests are more extensive everywhere (probably some spray). Wind stings face in temperatures below 35 deg F (2C). Slight effort in maintaining balance against wind. Smoke rises at about 15 deg. Both slack and taut halyards whip slightly in bent position. Low moaning, rather than whistle, in the rigging. Heavy flag extends and flaps more vigorously.
7	Near Gale	28-33 kts	13 ft (max 19)	The sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of wind. It is necessary to lean slightly into the wind to maintain balance. Smoke rises at about 5 to 10 deg. Higher pitched moaning and whistling heard from rigging. Halyards still whip slightly. Heavy flag extends fully and flaps only at the end. Oilskins and loose clothing inflate and pull against the body.
8	Gale	34-40 kts	18 ft (max 25)	Moderately high waves of greater length. Edges of crests begin to break into the spindrift. The foam is blown in well-marked streaks along the direction of the wind. Head pushed back by the force of the wind if allowed to relax. Oilskins and loose clothing inflate and pull strongly. Halyards rigidly bent. Loud whistle from rigging. Heavy flag straight out and whipping.
9	Strong Gale	41-47 kts	23 ft (max 32)	High waves. Dense streaks of foam along the direction of wind. Crests of waves begin to topple, tumble and roll over. Spray may affect visibility.
10	Storm	48-55 kts	29 ft (max 41)	Very high waves with long overhanging crests. The resulting foam, in great patches, is blown in dense streaks along the direction of the wind. On the whole, the sea takes on a whitish appearance. Tumbling of the sea becomes heavy and shock-like. Visibility affected.
11	Violent Storm	56-63 kts	37 ft (max 52)	Exceptionally high waves (small and medium-sized ships might be for time lost to view behind the waves). The sea is completely covered with long white patches of foam lying in the direction of

TABLE: NOAA BEAUFORT WIND SCALE				
ESTIMATING WIND SPEED AND SEA STATE WITH VISUAL CLUES				
Beaufort Number	**Wind Description**	**Wind Speed (Knots)**	**Wave Height**	**Visual Clues**
				the wind. Everywhere, the edges of the wave crests are blown into froth. Visibility greatly affected.
12	Hurricane	64+ kts	45+ ft	The air is filled with foam and spray. The sea is completely white with driving spray. Visibility is seriously affected.
Source: National Weather Service (2024)				

TABLE: COOK COUNTY JURISDICTIONAL EXTENT				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Severe Weather (Lightning, Hail, Fog, High Winds)	County-wide	No Property Damage Recorded	$100,000	Multiple severe weather events have occurred throughout Cook County (2018-2023), ranging from 1.00 in. Hail to 70kts. Thunderstorm wind. A notable storm in 2018 caused $100,000 worth of damage to the affected area.

- **Extreme Heat:** Excessive heat events typically occur in the summer months. The extent of Extreme Heat Events varies in terms of the Heat Index and duration of the event.
- **Extreme Cold**: Extreme cold events typically occur in the winter months. The extent of extreme cold varies in terms of the Wind Chill Temperature and duration of the event.
- **High Winds:** The extent of the hazard varies in terms of the extent of the path and the wind speed. Extent is addressed at the county level due to the nature of the hazard.
- **Thunderstorms, Lightning, and Hail:** The extent of the historical thunderstorms varies in terms of the size of the storm, the wind speed, and the size of hailstones. Thunderstorms can occur at any location within the county.
- **Precipitation:** Precipitation (rainfall) occurs year-round. The extent of rainfall varies depending on seasonal patterns such as dryer or wetter months of the year.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT – Extreme Temperatures				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Extreme Heat & Extreme Cold	Arlington Heights	-3°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from 17°F to 84°F and is rarely below -3°F or above 93°F.
Extreme Heat & Extreme Cold	Alsip	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course

				of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Barrington	-7°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *14°F* to *85°F* and is rarely below *-7°F* or above *93°F*.
Extreme Heat & Extreme Cold	Bedford Park			Not Available
Extreme Heat & Extreme Cold	Bellwood	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Berkeley	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Berwyn	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Blue Island	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Bridgeview	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *85°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Broadview	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Brookfield	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from

				19°F to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Buffalo Grove	-3°F	93°F	the summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-3°F* or above *93°F*.
Extreme Heat & Extreme Cold	Burbank	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Burnham	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Calumet City	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Calumet Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Chicago Heights	-1°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Chicago Ridge	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Cicero	3°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *3°F* or above *92°F*.

Extreme Heat & Extreme Cold	City of Chicago	5°F	91°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *22°F* to *83°F* and is rarely below *5°F* or above *91°F*.
Extreme Heat & Extreme Cold	Country Club Hills	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Countryside	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Crestwood	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Des Plaines	-1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Dixmoor	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Dolton	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	East Hazel Crest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Elgin	-4°F	91°F	The summers are long, warm, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *16°F* to *84°F* and is rarely below *-4°F* or above *91°F*.
Extreme Heat & Extreme Cold	Elk Grove Village	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Elmwood Park	2°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Evanston	4°F	90°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *4°F* or above *90°F*.
Extreme Heat & Extreme Cold	Evergreen Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Flossmoor	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Ford Heights	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.
Extreme Heat & Extreme Cold	Forest Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Forest View			Not Available
Extreme Heat & Extreme Cold	Franklin Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Glencoe	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.
Extreme Heat & Extreme Cold	Glenview	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Glenwood	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Golf			Not Available
Extreme Heat & Extreme Cold	Hanover Park	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *84°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Harvey	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Harwood Heights	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.
Extreme Heat & Extreme Cold	Hazel Crest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hickory Hills	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from

				19°F to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Hillside	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hodgkins	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hoffman Estates	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Hometown	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Homewood	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Indian Head Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Inverness	-5°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *15°F* to *85°F* and is rarely below *-5°F* or above *93°F*.
Extreme Heat & Extreme Cold	Justice	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.

Extreme Heat & Extreme Cold	Kenilworth	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	LaGrange			Not Available
Extreme Heat & Extreme Cold	LaGrange Park			Not Available
Extreme Heat & Extreme Cold	Lansing	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Lemont	-1°F	92°F	The summers are long, warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Lincolnwood	3°F	90°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *3°F* or above *90°F*.
Extreme Heat & Extreme Cold	Lynwood	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.
Extreme Heat & Extreme Cold	Lyons	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Markham	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Matteson	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Maywood	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	McCook			Not Available
Extreme Heat & Extreme Cold	Melrose Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Merrionette Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Midlothian	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Morton Grove	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.
Extreme Heat & Extreme Cold	Mount Prospect	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	MWRD			Not Available
Extreme Heat & Extreme Cold	Niles	1°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *1°F* or above *91°F*.

Extreme Heat & Extreme Cold	Norridge	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	North Riverside	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northbrook	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northfield	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northlake	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Oak Forest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Oak Lawn	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Oak Park	3°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *3°F* or above *92°F*.
Extreme Heat & Extreme Cold	Olympia Fields	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Orland Hills	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Orland Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palatine	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Palos Heights	0°F	°92F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palos Hills	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palos Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Park Forest	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Park Ridge	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.

Extreme Heat & Extreme Cold	Phoenix	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Posen	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Prospect Heights	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Richton Park	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	River Forest	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	River Grove	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Riverdale	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Riverside	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Robbins	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Rolling Meadows	-3°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *85°F* and is rarely below *-3°F* or above *93°F*.
Extreme Heat & Extreme Cold	Rosemont	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Sauk Village	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.
Extreme Heat & Extreme Cold	Schaumburg	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Schiller Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Skokie	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *83°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	South Barrington	-6°F	94°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *15°F* to *85°F* and is rarely below *-6°F* or above *94°F*.
Extreme Heat & Extreme Cold	South Chicago Heights	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.

Extreme Heat & Extreme Cold	South Holland	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Steger	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Stickney	2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Stone Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Streamwood	-4°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *84°F* and is rarely below *-4°F* or above *92°F*.
Extreme Heat & Extreme Cold	Summit	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *85°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Thornton	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Tinley Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	University Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Unincorporated Cook County			Not Available
Extreme Heat & Extreme Cold	Westchester	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Western Springs	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Wheeling	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Willow Springs	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Wilmette	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *83°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	Winnetka	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *82°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	Worth	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Cook County Forest Preserve District (New for 2024)			Not Available

Source: https://weatherspark.com/

TABLE: COOK COUNTY JURISDICTIONAL EXTENT – Rain Events				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Precipitation (Rainfall)	Arlington Heights	0.8 inches	3.6 inches	Rain falls throughout the year in Arlington Heights. The month with the most rain in Arlington Heights is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Arlington Heights is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Alsip	1.0 inches.	3.6 inches.	Rain falls throughout the year in Alsip. The month with the most rain in Alsip is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Alsip is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Barrington	0.7 inches.	3.7 inches.	Rain falls throughout the year in Barrington. The month with the most rain in Barrington is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Barrington is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Bedford Park			Not Available
Precipitation (Rainfall)	Bellwood	0.9 inches.	3.6 inches.	Rain falls throughout the year in Bellwood. The month with the most rain in Bellwood is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Bellwood is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Berkeley	0.9 inches.	3.6 inches.	Rain falls throughout the year in Berkeley. The month with the most rain in Berkeley is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Berkeley is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Berwyn	0.9 inches.	3.5 inches.	Rain falls throughout the year in Berwyn. The month with the most rain in Berwyn is *June*, with an average rainfall of *3.5 inches*.

				The month with the least rain in Berwyn is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Blue Island	1.0 inches.	3.6 inches.	Rain falls throughout the year in Blue Island. The month with the most rain in Blue Island is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Blue Island is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Bridgeview	0.9 inches.	3.6 inches.	Rain falls throughout the year in Bridgeview. The month with the most rain in Bridgeview is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Bridgeview is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Broadview	0.9 inches.	3.6 inches.	Rain falls throughout the year in Broadview. The month with the most rain in Broadview is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Broadview is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Brookfield	0.9 inches.	3.6 inches.	Rain falls throughout the year in Brookfield. The month with the most rain in Brookfield is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Brookfield is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Buffalo Grove	0.8 inches.	3.6 inches.	Rain falls throughout the year in Buffalo Grove. The month with the most rain in Buffalo Grove is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Buffalo Grove is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Burbank	0.9 inches.	3.6 inches.	Rain falls throughout the year in Burbank. The month with the most rain in Burbank is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Burbank is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	Burnham	1.0 inches.	3.6 inches.	Rain falls throughout the year in Burnham. The month with the most rain in Burnham is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Burnham is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Calumet City	1.0 inches.	3.6 inches.	Rain falls throughout the year in Calumet City. The month with the most rain in Calumet City is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Calumet City is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Calumet Park	1.0 inches.	3.6 inches.	Rain falls throughout the year in Calumet Park. The month with the most rain in Calumet Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Calumet Park is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Chicago Heights	1.0 inches.	3.7 inches.	Rain falls throughout the year in Chicago Heights. The month with the most rain in Chicago Heights is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Chicago Heights is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Chicago Ridge	0.9 inches.	3.6 inches.	Rain falls throughout the year in Chicago Ridge. The month with the most rain in Chicago Ridge is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Chicago Ridge is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Cicero	0.9 inches.	3.5 inches.	Rain falls throughout the year in Cicero. The month with the most rain in Cicero is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Cicero is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	City of Chicago	1.0 inches.	3.5 inches.	Rain falls throughout the year in Chicago. The month with the most rain

				in Chicago is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Chicago is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Country Club Hills	1.0 inches.	3.7 inches.	Rain falls throughout the year in Country Club Hills. The month with the most rain in Country Club Hills is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Country Club Hills is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Countryside	0.9 inches.	3.6 inches.	Rain falls throughout the year in Countryside. The month with the most rain in Countryside is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Countryside is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Crestwood	1.0 inches.	3.6 inches.	Rain falls throughout the year in Crestwood. The month with the most rain in Crestwood is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Crestwood is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Des Plaines	0.8 inches.	3.6 inches.	Rain falls throughout the year in Des Plaines. The month with the most rain in Des Plaines is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Des Plaines is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Dixmoor	1.0 inches.	3.6 inches.	Rain falls throughout the year in Dixmoor. The month with the most rain in Dixmoor is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Dixmoor is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Dolton	1.0 inches.	3.6 inches.	Rain falls throughout the year in Dolton. The month with the most rain in Dolton is *June*, with an average rainfall of *3.6 inches*.

				The month with the least rain in Dolton is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	East Hazel Crest	1.0 inches.	3.6 inches.	Rain falls throughout the year in East Hazel Crest. The month with the most rain in East Hazel Crest is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in East Hazel Crest is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Elgin	0.7 inches.	3.7 inches.	Rain falls throughout the year in Elgin. The month with the most rain in Elgin is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Elgin is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Elk Grove Village	0.8 inches.	3.6 inches.	Rain falls throughout the year in Elk Grove Village. The month with the most rain in Elk Grove Village is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Elk Grove Village is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Elmwood Park	0.9 inches.	3.5 inches.	Rain falls throughout the year in Elmwood Park. The month with the most rain in Elmwood Park is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Elmwood Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Evanston	0.9 inches.	3.5 inches.	Rain falls throughout the year in Evanston. The month with the most rain in Evanston is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Evanston is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Evergreen Park	1.0 inches.	3.6 inches.	Rain falls throughout the year in Evergreen Park. The month with the most rain in Evergreen Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Evergreen Park is *January*, with an average rainfall of *1.0 inches*.

Precipitation (Rainfall)	Flossmoor	1.0 inches.	3.7 inches.	Rain falls throughout the year in Flossmoor. The month with the most rain in Flossmoor is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Flossmoor is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Ford Heights	1.0 inches.	3.7 inches.	Rain falls throughout the year in Ford Heights. The month with the most rain in Ford Heights is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Ford Heights is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Forest Park	0.9 inches.	3.5 inches.	Rain falls throughout the year in Forest Park. The month with the most rain in Forest Park is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Forest Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Forest View			Not Applicable
Precipitation (Rainfall)	Franklin Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Franklin Park. The month with the most rain in Franklin Park is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Franklin Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Glencoe	0.9 inches.	3.5 inches.	Rain falls throughout the year in Glencoe. The month with the most rain in Glencoe is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Glencoe is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Glenview	0.9 inches.	3.5 inches.	Rain falls throughout the year in Glenview. The month with the most rain in Glenview is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Glenview is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	Glenwood	1.0 inches.	3.7 inches.	Rain falls throughout the year in Glenwood. The month with the most rain in Glenwood is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Glenwood is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Golf			Not Available
Precipitation (Rainfall)	Hanover Park	0.8 inches.	3.7 inches.	Rain falls throughout the year in Hanover Park. The month with the most rain in Hanover Park is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Hanover Park is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Harvey	1.0 inches.	3.6 inches.	Rain falls throughout the year in Harvey. The month with the most rain in Harvey is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Harvey is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Harwood Heights	0.9 inches.	3.6 inches.	Rain falls throughout the year in Harwood Heights. The month with the most rain in Harwood Heights is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Harwood Heights is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Hazel Crest	1.0 inches.	3.7 inches.	Rain falls throughout the year in Hazel Crest. The month with the most rain in Hazel Crest is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Hazel Crest is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Hickory Hills	0.9 inches.	3.6 inches.	Rain falls throughout the year in Hickory Hills. The month with the most rain in Hickory Hills is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Hickory Hills is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	Hillside	0.9 inches.	3.6 inches.	Rain falls throughout the year in Hillside. The month with the most rain in Hillside is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Hillside is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Hodgkins	0.9 inches.	3.6 inches.	Rain falls throughout the year in Hodgkins. The month with the most rain in Hodgkins is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Hodgkins is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Hoffman Estates	0.7 inches.	3.6 inches.	Rain falls throughout the year in Hoffman Estates. The month with the most rain in Hoffman Estates is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Hoffman Estates is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Hometown	1.0 inches.	I3.6nches.	Rain falls throughout the year in Hometown. The month with the most rain in Hometown is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Hometown is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Homewood	1.0 inches.	3.7 inches.	Rain falls throughout the year in Homewood. The month with the most rain in Homewood is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Homewood is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Indian Head Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Indian Head Park. The month with the most rain in Indian Head Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Indian Head Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Inverness	0.7 inches.	3.7 inches.	Rain falls throughout the year in Inverness. The month with the most rain

				in Inverness is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Inverness is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Justice	0.9 inches.	3.6 inches.	Rain falls throughout the year in Justice. The month with the most rain in Justice is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Justice is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Kenilworth	0.9 inches.	3.5 inches.	Rain falls throughout the year in Kenilworth. The month with the most rain in Kenilworth is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Kenilworth is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	LaGrange			Not Available.
Precipitation (Rainfall)	LaGrange Park			Not Available.
Precipitation (Rainfall)	Lansing	1.0 inches.	3.6 inches.	Rain falls throughout the year in Lansing. The month with the most rain in Lansing is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Lansing is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Lemont	0.9 inches.	3.7 inches.	Rain falls throughout the year in Lemont. The month with the most rain in Lemont is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Lemont is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Lincolnwood	0.9 inches.	3.6 inches.	Rain falls throughout the year in Lincolnwood. The month with the most rain in Lincolnwood is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Lincolnwood is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	Lynwood	1.0 inches.	3.7 inches.	Rain falls throughout the year in Lynwood. The month with the most rain in Lynwood is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Lynwood is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Lyons	0.9 inches.	3.6 inches.	Rain falls throughout the year in Lyons. The month with the most rain in Lyons is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Lyons is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Markham	1.0 inches.	3.6 inches.	Rain falls throughout the year in Markham. The month with the most rain in Markham is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Markham is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Matteson	1.0 inches.	3.7 inches.	Rain falls throughout the year in Matteson. The month with the most rain in Matteson is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Matteson is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Maywood	0.9 inches.	3.5 inches.	Rain falls throughout the year in Maywood. The month with the most rain in Maywood is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Maywood is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	McCook			Not Available.
Precipitation (Rainfall)	Melrose Park	0.9 inches.	3.5 inches.	Rain falls throughout the year in Melrose Park. The month with the most rain in Melrose Park is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Melrose Park is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	Merrionette Park	1.0 inches.	3.6 inches.	Rain falls throughout the year in Merrionette Park. The month with the most rain in Merrionette Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Merrionette Park is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Midlothian	1.0 inches.	3.6 inches.	Rain falls throughout the year in Midlothian. The month with the most rain in Midlothian is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Midlothian is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Morton Grove	0.9 inches.	3.5 inches.	Rain falls throughout the year in Morton Grove. The month with the most rain in Morton Grove is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Morton Grove is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Mount Prospect	0.8 inches.	3.6 inches.	Rain falls throughout the year in Mount Prospect. The month with the most rain in Mount Prospect is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Mount Prospect is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	MWRD			Not Available.
Precipitation (Rainfall)	Niles	0.9 inches.	3.9 inches.	Rain falls throughout the year in Niles. The month with the most rain in Niles is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Niles is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Norridge	0.9 inches.	3.6 inches.	Rain falls throughout the year in Norridge. The month with the most rain in Norridge is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Norridge is *January*, with an average rainfall of *0.9 inches*.

Precipitation (Rainfall)	North Riverside	0.9 inches.	3.5 inches.	Rain falls throughout the year in North Riverside. The month with the most rain in North Riverside is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in North Riverside is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Northbrook	0.8 inches.	3.5 inches.	Rain falls throughout the year in Northbrook. The month with the most rain in Northbrook is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Northbrook is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Northfield	0.9 inches.	3.5 inches.	Rain falls throughout the year in Northfield. The month with the most rain in Northfield is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Northfield is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Northlake	0.9 inches.	3.6 inches.	Rain falls throughout the year in Northlake. The month with the most rain in Northlake is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Northlake is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Oak Forest	1.0 inches.	3.6 inches.	Rain falls throughout the year in Oak Forest. The month with the most rain in Oak Forest is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Oak Forest is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Oak Lawn	0.9 inches.	3.6 inches.	Rain falls throughout the year in Oak Lawn. The month with the most rain in Oak Lawn is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Oak Lawn is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Oak Park	0.9 inches.	3.5 inches.	Rain falls throughout the year in Oak Park. The month with the most rain in

				Oak Park is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Oak Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Olympia Fields	1.0 inches.	3.6 inches.	Rain falls throughout the year in Olympia Fields. The month with the most rain in Olympia Fields is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Olympia Fields is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Orland Hills	0.9 inches.	3.7 inches.	Rain falls throughout the year in Orland Hills. The month with the most rain in Orland Hills is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Orland Hills is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Orland Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Orland Park. The month with the most rain in Orland Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Orland Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Palatine	0.7 inches.	3.6 inches.	Rain falls throughout the year in Palatine. The month with the most rain in Palatine is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Palatine is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Palos Heights	0.9 inches.	3.6 inches.	Rain falls throughout the year in Palos Heights. The month with the most rain in Palos Heights is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Palos Heights is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Palos Hills	0.9 inches.	3.6 inches.	Rain falls throughout the year in Palos Hills. The month with the most rain in Palos Hills is *June*, with an average rainfall of *3.6 inches*.

				The month with the least rain in Palos Hills is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Palos Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Palos Park. The month with the most rain in Palos Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Palos Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Park Forest	0.9 inches.	3.5 inches.	Rain falls throughout the year in Forest Park. The month with the most rain in Forest Park is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Forest Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Park Ridge	0.9 inches.	3.6 inches.	Rain falls throughout the year in Park Ridge. The month with the most rain in Park Ridge is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Park Ridge is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Phoenix	1.0 inches.	3.6 inches.	Rain falls throughout the year in Phoenix. The month with the most rain in Phoenix is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Phoenix is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Posen	1.0 inches.	3.6 inches.	Rain falls throughout the year in Posen. The month with the most rain in Posen is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Posen is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Prospect Heights	3.6 inches.	0.8 inches.	Rain falls throughout the year in Prospect Heights. The month with the most rain in Prospect Heights is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Prospect Heights is *January*, with an average rainfall of *0.8 inches*.

Precipitation (Rainfall)	Richton Park	1.0 inches.	3.7 inches.	Rain falls throughout the year in Richton Park. The month with the most rain in Richton Park is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Richton Park is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	River Forest	0.9 inches.	3.5 inches.	Rain falls throughout the year in River Forest. The month with the most rain in River Forest is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in River Forest is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	River Grove	0.9 inches.	3.5 inches.	Rain falls throughout the year in River Grove. The month with the most rain in River Grove is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in River Grove is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Riverdale	1.0 inches.	3.6 inches.	Rain falls throughout the year in Riverdale. The month with the most rain in Riverdale is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Riverdale is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Riverside	0.9 inches.	3.6 inches.	Rain falls throughout the year in Riverside. The month with the most rain in Riverside is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Riverside is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Robbins	1.0 inches.	3.6 inches.	Rain falls throughout the year in Robbins. The month with the most rain in Robbins is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Robbins is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Rolling Meadows	0.8 inches.	3.6 inches.	Rain falls throughout the year in Rolling Meadows. The month with the most rain

				in Rolling Meadows is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Rolling Meadows is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Rosemont	0.9 inches.	3.6 inches.	Rain falls throughout the year in Rosemont. The month with the most rain in Rosemont is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Rosemont is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Sauk Village	1.0 inches.	3.7 inches.	Rain falls throughout the year in Sauk Village. The month with the most rain in Sauk Village is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Sauk Village is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Schaumburg	0.7 inches.	3.7 inches.	Rain falls throughout the year in Schaumburg. The month with the most rain in Schaumburg is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Schaumburg is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Schiller Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Schiller Park. The month with the most rain in Schiller Park is *August*, with an average rainfall of *3.6 inches*. The month with the least rain in Schiller Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Skokie	0.9 inches.	3.5 inches.	Rain falls throughout the year in Skokie. The month with the most rain in Skokie is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Skokie is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	South Barrington	0.7 inches.	3.7 inches.	Rain falls throughout the year in South Barrington. The month with the most rain in South Barrington is *June*, with an average rainfall of *3.7 inches*.

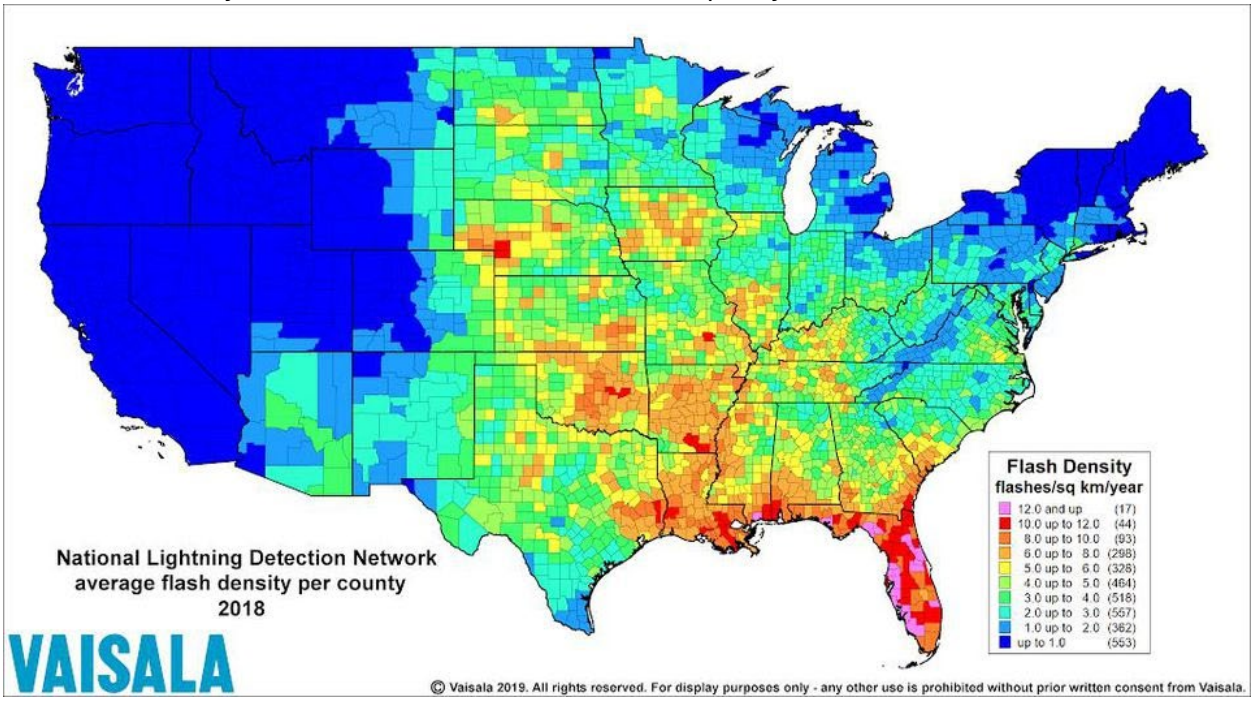
				The month with the least rain in South Barrington is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	South Chicago Heights	1.0 inches.	3.7 inches.	Rain falls throughout the year in South Chicago Heights. The month with the most rain in South Chicago Heights is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in South Chicago Heights is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	South Holland	1.0 inches.	3.6 inches.	Rain falls throughout the year in South Holland. The month with the most rain in South Holland is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in South Holland is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Steger	1.0 inches.	3.7 inches.	Rain falls throughout the year in Steger. The month with the most rain in Steger is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Steger is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Stickney	0.9 inches.	3.5 inches.	Rain falls throughout the year in Stickney. The month with the most rain in Stickney is *June*, with an average rainfall of *3.5 inches*. The month with the least rain in Stickney is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Stone Park	0.9 inches.	3.6 inches.	Rain falls throughout the year in Stone Park. The month with the most rain in Stone Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Stone Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Streamwood	0.7 inches.	3.7 inches.	Rain falls throughout the year in Streamwood. The month with the most rain in Streamwood is *June*, with an average rainfall of *3.7 inches*.

				The month with the least rain in Streamwood is *January*, with an average rainfall of *0.7 inches*.
Precipitation (Rainfall)	Summit	0.9 inches.	3.6 inches.	Rain falls throughout the year in Summit. The month with the most rain in Summit is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Summit is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Thornton	1.0 inches.	3.6 inches.	Rain falls throughout the year in Thornton. The month with the most rain in Thornton is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Thornton is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Tinley Park	0.9 inches.	3.7 inches.	Rain falls throughout the year in Tinley Park. The month with the most rain in Tinley Park is *June*, with an average rainfall of *3.7 inches*. The month with the least rain in Tinley Park is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	University Park	1.0 inches.	3.6 inches.	Rain falls throughout the year in University Park. The month with the most rain in University Park is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in University Park is *January*, with an average rainfall of *1.0 inches*.
Precipitation (Rainfall)	Unincorporated Cook County			Not Available.
Precipitation (Rainfall)	Westchester	0.9 inches.	3.6 inches.	Rain falls throughout the year in Westchester. The month with the most rain in Westchester is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Westchester is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Western Springs	0.9 inches.	3.6 inches.	Rain falls throughout the year in Western Springs. The month with the most rain in Western Springs is *June*, with an average rainfall of *3.6 inches*.

				The month with the least rain in Western Springs is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Wheeling	0.8 inches.	3.6 inches.	Rain falls throughout the year in Wheeling. The month with the most rain in Wheeling is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Wheeling is *January*, with an average rainfall of *0.8 inches*.
Precipitation (Rainfall)	Willow Springs	0.9 inches.	3.6 inches.	Rain falls throughout the year in Willow Springs. The month with the most rain in Willow Springs is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Willow Springs is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Wilmette	0.9 inches.	3.5 inches.	Rain falls throughout the year in Wilmette. The month with the most rain in Wilmette is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Wilmette is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Winnetka	0.9 inches.	3.5 inches.	Rain falls throughout the year in Winnetka. The month with the most rain in Winnetka is *August*, with an average rainfall of *3.5 inches*. The month with the least rain in Winnetka is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Worth	0.9 inches.	3.6 inches.	Rain falls throughout the year in Worth. The month with the most rain in Worth is *June*, with an average rainfall of *3.6 inches*. The month with the least rain in Worth is *January*, with an average rainfall of *0.9 inches*.
Precipitation (Rainfall)	Cook County Forest Preserve District (New for 2024)			Not Available.

Source: https://weatherspark.com/

Below is a map depicting the average lightning flash density per county in the United States. Flash density is defined as the number of flashes of a specific type occurring on or over unit area in unit time. Cook County is between a 4.0 and 5.0 in flashes/sq.km/year



5.5.4 Probability and Frequency

Extreme Heat Probability: NOAA measures the probability of extreme heat by integrating meteorological tools and data analysis. This includes closely monitoring temperature forecasts, heat index values, and the output of advanced meteorological models to assess the potential for extreme heat events. Comparisons to historical climate data help determine the likelihood of such events. NOAA also considers the duration and intensity of extreme heat conditions, with a focus on nighttime warmth, which can significantly affect public health. Collaboration with public health agencies contributes to the analysis of heat-related illnesses. Ultimately, NOAA issues Heat Advisories and Excessive Heat Warnings to provide the public with information on the probability of extreme heat, associated health risks, and recommended safety measures.

Extreme Heat Frequency: Between 2007 and 2023, Cook County experienced 15 extreme heat events. This equates to an average of 0.88235294 extreme heat events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

Lightning Probability: NOAA measures the probability of lightning using observations of current weather conditions, data from the Geostationary Lightning Mapper (GLM), and advanced forecasting models that utilize machine learning. The GLM, positioned on geostationary satellites, detects lightning activity across the Americas and provides data to predict future lightning strikes. This tool

is also capable of forecasting lightning occurrences up to 60 minutes before it happens, enhancing weather prediction accuracy and public safety measures. NOAA also uses climatology data to map lightning activity patterns and probabilities, to support long-term planning and immediate weather forecasting. The combination of real-time data from satellite observations and historical lightning data enables NOAA to create reliable forecasts of where and when lightning is likely to occur.

Lightning Frequency: Between 1996 and 2022, Cook County experienced 47 lightning events. This equates to an average of 1.74074074 lightning events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

Hailstorms Probability: NOAA assesses the probability of hail through atmospheric data from weather satellites, radar systems, and ground stations. This data provides insights into conditions conducive to hail formation, such as temperature, humidity, wind patterns, and atmospheric pressure. Additionally, data feeds into advanced weather prediction models that simulate potential weather scenarios, using complex mathematical equations to foresee changes in weather conditions, including the likelihood of hail.

NOAA presents hail probabilities as percentages to indicate the chance of hail occurring in a particular area and timeframe, taking into account the inherent uncertainties of weather forecasting. When conditions indicate the potential for hail, NOAA issues warnings and alerts particularly in areas where hail poses a substantial threat to property and agriculture.

Hailstorms Frequency: Between 1955 and 2023, Cook County experienced 216 hailstorms. This equates to an average of 3.17647059 hailstorms/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

Dense Fog Probability: NOAA measures the probability of dense fog through weather observations and forecasting models. NWS, issues Dense Fog Advisories when visibility is expected to frequently drop to one-quarter of a mile or less, using data from ground-based observations and satellite images. Advanced models and tools are utilized to predict fog development based on current weather patterns and historical data, enhancing the accuracy of fog forecasts.

Dense Fog Frequency: According to NOAA, Cook County did not record any dense fog events between 2014-2023.

Strong Wind Probability: NOAA utilizes data from atmospheric weather satellites, radar systems, ground-based stations, and weather balloons. This collected data includes temperature, humidity, atmospheric pressure, and wind speed and direction at various altitudes. NOAA analyzes this data to identify conditions that may lead to strong winds, focusing on indicators like pressure gradients, the presence of strong weather fronts, jet stream patterns, and approaching storm systems.

The probability of strong winds is often expressed as a percentage, reflecting the likelihood of occurrence within a specific area and timeframe, and accounting for the uncertainties inherent in weather forecasting. When there is significant risk, NOAA issues wind advisories, watches, or warnings through the NWS.

Strong Wind Frequency: Between 1996 and 2024, Cook County experienced 49 strong wind events. This equates to an average of 1.75 strong wind events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

5.5.5 Past Events

TABLE: EXTREME HEAT EVENTS IN COOK COUNTY (2007-2023)

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**36**	**0**	**750.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	06/14/2007	10:00	Excessive Heat	4	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/08/2007	08:00	Excessive Heat	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	06/22/2009	12:00	Excessive Heat	3	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	08/09/2009	10:00	Excessive Heat	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	08/12/2010	13:00	Excessive Heat	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/04/2012	12:00	Excessive Heat	23	0	750.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/19/2013	00:00	Excessive Heat	3	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	06/16/2018	15:53	Excessive Heat	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	06/29/2018	11:53	Excessive Heat	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/01/2018	00:00	Excessive Heat	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	07/18/2019	17:00	Excessive Heat	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	06/13/2022	16:00	Excessive Heat	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	07/26/2023	15:00	Excessive Heat	0	0	0.00K	0.00K
SOUTHERN COOK	SOUTHERN COOK COUNTY (ZO...	IL	07/26/2023	15:00	Excessive Heat	0	0	0.00K	0.00K

TABLE: EXTREME HEAT EVENTS IN COOK COUNTY (2007-2023)									
Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
COUNTY (ZO...									
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	07/26/2023	15:00	Excessive Heat	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	08/23/2023	11:00	Excessive Heat	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	08/23/2023	11:00	Excessive Heat	0	0	0.00K	0.00K
SOUTHERN COOK COUNTY (ZO...	SOUTHERN COOK COUNTY (ZO...	IL	08/23/2023	11:00	Excessive Heat	0	0	0.00K	0.00K

TABLE: LIGHTNING EVENTS IN COOK COUNTY (1996-2022)									
Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**3**	**18**	**6.537M**	**0.00K**
NORTHBROOK	COOK CO.	IL	05/09/1996	21:00	Lightning	1	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	05/24/1996	12:45	Lightning	0	1	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/24/1996	13:00	Lightning	0	1	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	06/17/1996	17:00	Lightning	1	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	09/07/1996	13:00	Lightning	0	1	0.00K	0.00K
CHICAGO	COOK CO.	IL	09/19/1997	14:30	Lightning	0	1	0.00K	0.00K
CHICAGO	COOK CO.	IL	06/11/1999	15:30	Lightning	0	2	0.00K	0.00K
PALOS HGTS	COOK CO.	IL	06/21/2000	14:00	Lightning	0	1	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	07/21/2001	17:15	Lightning	0	0	20.00K	0.00K
MAYWOOD	COOK CO.	IL	07/22/2001	15:00	Lightning	1	0	0.00K	0.00K
CALUMET CITY	COOK CO.	IL	07/23/2001	15:30	Lightning	0	1	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	01/22/2002	21:30	Lightning	0	1	5.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	04/04/2003	15:30	Lightning	0	1	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	05/09/2003	23:10	Lightning	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	07/20/2003	22:00	Lightning	0	0	25.00K	0.00K
WORTH	COOK CO.	IL	08/03/2003	17:20	Lightning	0	0	5.00K	0.00K
CHICAGO	COOK CO.	IL	05/11/2005	06:00	Lightning	0	1	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	07/25/2005	18:30	Lightning	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	08/02/2006	20:27	Lightning	0	1	25.00K	0.00K
CHICAGO	COOK CO.	IL	08/02/2006	20:30	Lightning	0	0	10.00K	0.00K
TINLEY PARK	COOK CO.	IL	08/02/2006	20:41	Lightning	0	1	50.00K	0.00K
SCHILLER PARK	COOK CO.	IL	09/22/2006	17:15	Lightning	0	0	3.00K	0.00K
MC COOK	COOK CO.	IL	10/18/2007	18:00	Lightning	0	1	0.00K	0.00K
BARTLETT	COOK CO.	IL	05/02/2008	10:58	Lightning	0	0	10.00K	0.00K
HEALY	COOK CO.	IL	08/04/2008	07:00	Lightning	0	0	10.00K	0.00K
CRAGIN	COOK CO.	IL	07/24/2009	22:55	Lightning	0	0	20.00K	0.00K
BARTLETT	COOK CO.	IL	04/05/2010	21:30	Lightning	0	0	5.00K	0.00K
BARRINGTON	COOK CO.	IL	05/26/2010	15:20	Lightning	0	0	200.00K	0.00K
WILMETTE	COOK CO.	IL	06/18/2010	15:15	Lightning	0	0	100.00K	0.00K

TABLE: LIGHTNING EVENTS IN COOK COUNTY (1996-2022)									
Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
LA GRANGE PARK	COOK CO.	IL	07/23/2010	17:10	Lightning	0	0	30.00K	0.00K
PARK RIDGE	COOK CO.	IL	10/13/2010	08:18	Lightning	0	0	2.00K	0.00K
INVERNESS	COOK CO.	IL	05/12/2011	04:19	Lightning	0	0	15.00K	0.00K
PALATINE	COOK CO.	IL	05/12/2011	04:19	Lightning	0	0	35.00K	0.00K
TECHNY	COOK CO.	IL	05/22/2011	21:10	Lightning	0	0	250.00K	0.00K
NORTH RIVERSIDE	COOK CO.	IL	06/09/2011	00:30	Lightning	0	0	15.00K	0.00K
CONGRESS PARK	COOK CO.	IL	06/20/2011	06:00	Lightning	0	0	10.00K	0.00K
HANSON PARK	COOK CO.	IL	07/11/2011	08:10	Lightning	0	0	10.00K	0.00K
GLENCOE	COOK CO.	IL	07/23/2011	02:00	Lightning	0	0	1.000M	0.00K
ELK GROVE VLG	COOK CO.	IL	07/23/2011	02:30	Lightning	0	0	3.500M	0.00K
VILLA WEST	COOK CO.	IL	07/24/2011	09:00	Lightning	0	0	20.00K	0.00K
BROOKFIELD	COOK CO.	IL	07/28/2011	23:20	Lightning	0	0	250.00K	0.00K
PALATINE	COOK CO.	IL	07/29/2011	08:00	Lightning	0	0	5.00K	0.00K
PALATINE	COOK CO.	IL	08/20/2011	09:27	Lightning	0	0	150.00K	0.00K
HAWTHORNE	COOK CO.	IL	05/20/2014	20:00	Lightning	0	0	500.00K	0.00K
SCHAUMBURG	COOK CO.	IL	06/19/2014	00:30	Lightning	0	0	50.00K	0.00K
INVERNESS	COOK CO.	IL	06/30/2014	18:30	Lightning	0	0	50.00K	0.00K
PALATINE	COOK CO.	IL	06/30/2014	18:30	Lightning	0	0	25.00K	0.00K
HAWTHORNE	COOK CO.	IL	06/30/2014	19:00	Lightning	0	1	50.00K	0.00K
MT PROSPECT	COOK CO.	IL	04/09/2015	09:42	Lightning	0	0	50.00K	0.00K
WILMETTE	COOK CO.	IL	07/18/2015	14:45	Lightning	0	0	15.00K	0.00K
MAYWOOD	COOK CO.	IL	08/17/2015	19:26	Lightning	0	0	2.00K	0.00K
DEERING	COOK CO.	IL	07/04/2018	21:00	Lightning	0	1	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	07/04/2018	21:30	Lightning	0	1	0.00K	0.00K
BROOKFIELD	COOK CO.	IL	09/03/2018	13:00	Lightning	0	0	5.00K	0.00K
DUNNING	COOK CO.	IL	09/03/2018	13:25	Lightning	0	0	10.00K	0.00K
GARFIELD PARK	COOK CO.	IL	08/03/2022	12:54	Lightning	0	1	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
Totals:						**0**	**0**	**18.839M**	**0.00K**
COOK CO.	COOK CO.	IL	03/03/1955	16:00	2.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/05/1956	23:02	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/06/1956	18:00	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/19/1956	16:50	1.25 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/12/1957	17:00	1.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/02/1957	15:30	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	10/09/1958	00:45	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/03/1959	17:25	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/15/1960	14:00	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/24/1961	17:30	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/22/1962	14:45	2.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/17/1963	15:04	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/17/1963	16:25	1.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/10/1963	14:00	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/21/1963	18:00	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/22/1963	17:30	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/16/1963	23:00	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
COOK CO.	COOK CO.	IL	11/17/1963	19:45	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/24/1964	16:45	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/05/1965	15:33	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/08/1965	17:00	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	11/12/1965	14:30	1.25 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/21/1966	17:55	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/18/1966	18:00	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/10/1967	13:00	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/16/1967	12:10	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/16/1967	18:04	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/11/1967	14:00	0.60 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/11/1967	14:00	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/15/1968	11:45	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/19/1969	22:17	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/29/1970	23:45	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	02/19/1971	13:55	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	09/28/1972	19:20	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/03/1974	13:30	1.25 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/03/1974	14:00	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/21/1974	12:05	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/20/1974	18:49	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/20/1975	14:55	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/20/1975	16:06	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/20/1975	16:58	1.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/04/1975	17:45	1.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/20/1975	13:30	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/20/1975	13:30	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/24/1975	14:25	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/11/1975	14:35	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/01/1976	16:35	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/13/1976	18:35	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/05/1977	20:00	1.25 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/08/1977	13:37	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/07/1978	17:52	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/13/1980	21:23	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/01/1982	21:15	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/01/1982	21:30	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/06/1983	17:22	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/29/1983	12:00	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	09/18/1983	18:45	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/29/1984	21:20	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/20/1984	16:25	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/20/1984	17:15	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/28/1985	14:22	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/23/1985	11:12	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/23/1985	11:13	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/19/1986	15:00	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	05/31/1987	17:35	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	08/16/1987	22:32	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/22/1988	16:54	1.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/22/1988	17:30	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
COOK CO.	COOK CO.	IL	04/25/1989	02:46	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/11/1989	08:25	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/30/1990	14:05	0.75 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/27/1991	02:35	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	03/27/1991	16:13	1.00 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/07/1991	21:40	1.50 in.	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/15/1992	19:00	2.00 in.	0	0	0.00K	0.00K
Hazel Crest	COOK CO.	IL	04/26/1994	18:00	1.00 in.	0	0	0.00K	0.00K
Markham	COOK CO.	IL	04/26/1994	18:03	1.75 in.	0	0	0.00K	0.00K
Lake Calumet	COOK CO.	IL	04/26/1994	18:07	1.75 in.	0	0	0.00K	0.00K
Dixmoor	COOK CO.	IL	04/26/1994	19:00	1.75 in.	0	0	0.00K	0.00K
Park Forest	COOK CO.	IL	04/26/1994	20:05	0.75 in.	0	0	0.00K	0.00K
Chicago	COOK CO.	IL	04/10/1995	15:00	1.25 in.	0	0	0.00K	0.00K
O'Hare Airport	COOK CO.	IL	06/07/1995	19:49	1.75 in.	0	0	0.00K	0.00K
Cicero	COOK CO.	IL	08/15/1995	10:35	1.75 in.	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	04/12/1996	09:50	1.00 in.	0	0	0.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	04/12/1996	10:10	1.00 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	04/12/1996	10:20	1.00 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	04/12/1996	10:20	1.75 in.	0	0	0.00K	0.00K
MIDLOTHIAN	COOK CO.	IL	04/12/1996	10:24	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	04/12/1996	10:25	1.75 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	04/12/1996	10:30	0.75 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	04/19/1996	20:46	1.75 in.	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	04/19/1996	20:46	1.00 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	04/19/1996	20:50	1.00 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	04/19/1996	22:08	1.00 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	05/05/1997	13:15	0.75 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	06/20/1997	19:00	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/18/1997	12:00	1.00 in.	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	07/26/1997	18:25	0.88 in.	0	0	0.00K	0.00K
HAZEL CREST	COOK CO.	IL	06/26/1998	02:52	2.00 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	04/10/1999	16:15	1.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/21/1999	20:10	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/17/1999	01:30	0.75 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	06/01/1999	17:07	1.25 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	06/09/1999	16:22	1.75 in.	0	0	0.00K	0.00K
BARRINGTON HILLS	COOK CO.	IL	03/08/2000	18:15	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	04/20/2000	07:15	1.75 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	05/12/2000	17:05	0.75 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	05/18/2000	10:40	1.75 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	05/18/2000	10:57	1.50 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	05/18/2000	11:00	2.75 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	05/18/2000	11:05	0.75 in.	0	0	0.00K	0.00K
CALUMET CITY	COOK CO.	IL	05/18/2000	17:44	1.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	09/11/2000	14:25	0.75 in.	0	0	0.00K	0.00K
MARKHAM	COOK CO.	IL	09/11/2000	14:56	0.88 in.	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	09/11/2000	15:20	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	06/11/2001	23:20	0.75 in.	0	0	0.00K	0.00K
WINNETKA	COOK CO.	IL	07/22/2001	15:45	1.00 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	08/22/2001	17:15	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	10/24/2001	08:05	0.88 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
ALSIP	COOK CO.	IL	06/14/2002	10:43	0.75 in.	0	0	0.00K	0.00K
BLUE IS	COOK CO.	IL	06/25/2002	11:20	2.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/30/2003	13:50	0.88 in.	0	0	0.00K	0.00K
WILLOW SPGS	COOK CO.	IL	04/30/2003	21:15	1.00 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	05/09/2003	22:35	1.25 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	05/10/2003	22:13	1.50 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	05/28/2003	15:14	0.75 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	07/06/2003	12:59	1.75 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	07/06/2003	17:00	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/06/2003	17:26	0.88 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	07/08/2003	09:00	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/15/2003	03:22	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/15/2003	04:05	0.75 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	07/17/2003	16:15	1.75 in.	0	0	0.00K	0.00K
NORTHBROOK	COOK CO.	IL	07/17/2003	16:20	2.50 in.	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	07/17/2003	16:20	1.75 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	07/17/2003	16:25	1.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	07/17/2003	16:30	0.75 in.	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	07/17/2003	16:45	1.00 in.	0	0	0.00K	0.00K
NORRIDGE	COOK CO.	IL	07/17/2003	16:47	1.50 in.	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	07/17/2003	16:55	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/17/2003	16:55	1.00 in.	0	0	0.00K	0.00K
AUSTIN	COOK CO.	IL	07/17/2003	16:55	1.25 in.	0	0	0.00K	0.00K
(MDW)MIDWAY ARPT CHI	COOK CO.	IL	07/17/2003	17:00	1.00 in.	0	0	0.00K	0.00K
ELSDON	COOK CO.	IL	07/17/2003	17:00	1.75 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	07/17/2003	17:00	1.00 in.	0	0	0.00K	0.00K
LANSING	COOK CO.	IL	07/17/2003	17:40	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	07/20/2003	21:50	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	07/20/2003	21:52	0.75 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	07/20/2003	21:52	0.75 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	07/20/2003	22:05	0.75 in.	0	0	0.00K	0.00K
LANSING	COOK CO.	IL	07/20/2003	23:50	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	08/01/2003	12:25	1.00 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/01/2003	12:27	1.00 in.	0	0	0.00K	0.00K
ROLLING MEADOWS	COOK CO.	IL	08/01/2003	12:28	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	08/01/2003	12:32	1.00 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	08/01/2003	12:40	0.88 in.	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	08/01/2003	12:44	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	08/01/2003	12:45	1.75 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	08/01/2003	12:47	1.25 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/01/2003	13:10	1.25 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/01/2003	14:00	1.00 in.	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	08/01/2003	14:01	0.88 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/01/2003	14:19	1.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	08/01/2003	14:20	1.75 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	08/01/2003	14:25	0.75 in.	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	08/01/2003	14:26	1.75 in.	0	0	0.00K	0.00K
BARTLETT	COOK CO.	IL	08/01/2003	14:30	1.00 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	08/01/2003	14:38	0.75 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	08/01/2003	14:45	0.75 in.	0	0	0.00K	0.00K
FRANKLIN PARK	COOK CO.	IL	08/01/2003	14:45	0.75 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
ELK GROVE VLG	COOK CO.	IL	08/01/2003	14:49	1.75 in.	0	0	0.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	08/01/2003	14:53	1.00 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	08/01/2003	16:08	1.00 in.	0	0	0.00K	0.00K
EVERGREEN PARK	COOK CO.	IL	08/01/2003	16:15	1.00 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	08/03/2003	12:00	0.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	08/03/2003	12:20	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	08/03/2003	12:35	1.75 in.	0	0	0.00K	0.00K
FRANKLIN PARK	COOK CO.	IL	08/03/2003	12:50	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	08/03/2003	12:55	1.00 in.	0	0	0.00K	0.00K
(ORD)O'HARE INTL ARP	COOK CO.	IL	08/03/2003	13:15	1.25 in.	0	0	0.00K	0.00K
BARTLETT	COOK CO.	IL	03/01/2004	14:50	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	03/01/2004	15:00	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	03/01/2004	15:20	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	03/01/2004	15:20	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	03/01/2004	15:20	1.00 in.	0	0	0.00K	0.00K
LA GRANGE	COOK CO.	IL	03/01/2004	16:00	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	03/13/2004	15:30	0.75 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	04/17/2004	02:20	0.75 in.	0	0	0.00K	0.00K
NORTHFIELD	COOK CO.	IL	04/17/2004	02:20	1.00 in.	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	04/17/2004	02:25	0.75 in.	0	0	0.00K	0.00K
HOMEWOOD	COOK CO.	IL	04/17/2004	02:40	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	04/17/2004	02:40	0.75 in.	0	0	0.00K	0.00K
EVERGREEN PARK	COOK CO.	IL	04/17/2004	02:45	1.00 in.	0	0	0.00K	0.00K
HICKORY HILLS	COOK CO.	IL	04/20/2004	19:25	0.75 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	04/20/2004	20:03	1.00 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	04/20/2004	20:05	0.75 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	05/09/2004	17:20	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/09/2004	17:30	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/20/2004	19:04	0.75 in.	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	05/20/2004	20:45	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/21/2004	08:58	0.75 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	05/21/2004	09:05	0.75 in.	0	0	0.00K	0.00K
ALSIP	COOK CO.	IL	05/23/2004	19:30	0.75 in.	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	05/23/2004	19:43	0.75 in.	0	0	0.00K	0.00K
BURBANK	COOK CO.	IL	05/23/2004	19:49	0.88 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/23/2004	19:50	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	06/11/2004	21:45	0.88 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	07/21/2004	15:55	0.75 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	03/30/2005	17:25	1.00 in.	0	0	0.00K	0.00K
SCHILLER PARK	COOK CO.	IL	03/30/2005	17:30	0.75 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	03/30/2005	18:30	0.88 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	03/30/2005	19:22	1.75 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	03/30/2005	19:30	0.75 in.	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	05/19/2005	11:46	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	05/19/2005	16:44	0.75 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	06/04/2005	19:22	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	06/10/2005	18:36	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	09/22/2005	16:23	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	09/22/2005	16:39	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	09/22/2005	16:43	0.75 in.	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	09/22/2005	16:45	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
MELROSE PARK	COOK CO.	IL	10/02/2005	15:12	0.75 in.	0	0	0.00K	0.00K
WESTCHESTER	COOK CO.	IL	04/02/2006	18:41	1.00 in.	0	0	0.00K	0.00K
BRIDGEVIEW	COOK CO.	IL	04/02/2006	19:04	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	04/02/2006	19:23	1.00 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	05/17/2006	16:04	1.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	05/17/2006	16:09	1.00 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	05/17/2006	16:11	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/17/2006	16:19	1.00 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	05/17/2006	16:22	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	05/17/2006	16:22	1.00 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	05/17/2006	16:30	1.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	05/24/2006	20:19	0.88 in.	0	0	0.00K	0.00K
HOMEWOOD	COOK CO.	IL	05/24/2006	21:14	0.88 in.	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	05/24/2006	21:29	0.75 in.	0	0	0.00K	0.00K
POSEN	COOK CO.	IL	05/29/2006	13:18	1.75 in.	0	0	1.00K	0.00K
ORLAND PARK	COOK CO.	IL	05/29/2006	13:55	0.75 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	06/22/2006	08:03	0.75 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	06/26/2006	01:41	0.88 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	06/28/2006	05:06	0.75 in.	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	06/28/2006	20:15	1.00 in.	0	0	15.00K	0.00K
RIVER FOREST	COOK CO.	IL	06/28/2006	20:31	0.75 in.	0	0	0.00K	0.00K
HAZEL CREST	COOK CO.	IL	07/20/2006	08:30	0.88 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	09/22/2006	16:14	0.75 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	09/22/2006	16:54	0.75 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	09/22/2006	16:59	1.00 in.	0	0	0.00K	0.00K
WILMETTE	COOK CO.	IL	09/22/2006	17:04	1.00 in.	0	0	0.00K	0.00K
WINNETKA	COOK CO.	IL	09/22/2006	17:09	0.75 in.	0	0	0.00K	0.00K
RIVER GROVE	COOK CO.	IL	10/02/2006	12:43	1.00 in.	0	0	0.00K	0.00K
WILLOW SPGS	COOK CO.	IL	10/02/2006	12:58	1.00 in.	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	10/02/2006	13:06	0.88 in.	0	0	0.00K	0.00K
BRIDGEVIEW	COOK CO.	IL	10/02/2006	13:09	0.88 in.	0	0	0.00K	0.00K
OLYMPIA FIELDS	COOK CO.	IL	10/02/2006	14:03	0.75 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	10/02/2006	14:09	0.88 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	10/02/2006	18:59	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	10/02/2006	19:00	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	10/02/2006	19:00	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	10/02/2006	19:13	1.00 in.	0	0	0.00K	0.00K
MAYWOOD	COOK CO.	IL	10/02/2006	19:26	0.88 in.	0	0	0.00K	0.00K
MANNHEIM	COOK CO.	IL	10/02/2006	19:32	1.00 in.	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	10/02/2006	19:44	0.88 in.	0	0	0.00K	0.00K
JUSTICE	COOK CO.	IL	10/02/2006	19:49	0.75 in.	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	10/02/2006	19:51	1.00 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	10/02/2006	19:56	1.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	10/02/2006	20:09	1.50 in.	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	10/02/2006	20:23	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	10/02/2006	20:29	0.75 in.	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	03/21/2007	16:02	0.88 in.	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	03/22/2007	02:40	1.75 in.	0	0	50.00K	0.00K
PALATINE	COOK CO.	IL	05/16/2007	17:00	0.75 in.	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	06/01/2007	19:24	0.75 in.	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	06/27/2007	15:14	0.88 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
LEMONT	COOK CO.	IL	07/09/2007	15:24	0.88 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/18/2007	19:29	1.00 in.	0	0	0.00K	0.00K
ALSIP	COOK CO.	IL	10/18/2007	16:21	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	10/18/2007	16:31	0.75 in.	0	0	0.00K	0.00K
BLUE IS	COOK CO.	IL	10/18/2007	16:32	0.88 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	10/18/2007	16:35	0.75 in.	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	10/18/2007	16:44	0.75 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	10/18/2007	17:11	0.88 in.	0	0	0.00K	0.00K
MIDLOTHIAN	COOK CO.	IL	10/18/2007	17:13	1.00 in.	0	0	0.00K	0.00K
BLUE IS	COOK CO.	IL	10/18/2007	17:19	0.88 in.	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	10/18/2007	17:46	0.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	04/25/2008	16:44	0.88 in.	0	0	0.00K	0.00K
CHICAGO HGTS	COOK CO.	IL	06/04/2008	20:49	1.00 in.	0	0	0.00K	0.00K
SAUK VLG	COOK CO.	IL	06/04/2008	20:54	1.75 in.	0	0	0.00K	0.00K
FOREST GLEN	COOK CO.	IL	06/05/2008	01:09	0.75 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	06/15/2008	06:43	0.75 in.	0	0	0.00K	0.00K
HERMOSA	COOK CO.	IL	06/15/2008	06:44	1.00 in.	0	0	0.00K	0.00K
BURBANK	COOK CO.	IL	06/21/2008	13:05	0.75 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	06/22/2008	16:17	1.00 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	06/22/2008	16:20	0.75 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/22/2008	16:24	0.88 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	06/28/2008	16:23	1.00 in.	0	0	0.00K	0.00K
DUNHURST	COOK CO.	IL	07/02/2008	15:41	1.00 in.	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	08/04/2008	21:20	0.88 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	08/04/2008	21:55	0.75 in.	0	0	0.00K	0.00K
CICERO	COOK CO.	IL	08/04/2008	23:03	0.75 in.	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	03/08/2009	08:02	0.75 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	06/01/2009	17:24	0.75 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	06/19/2009	08:00	0.75 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	06/19/2009	08:46	1.00 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	06/19/2009	09:15	0.75 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/19/2009	09:22	1.50 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/19/2009	09:27	1.00 in.	0	0	0.00K	0.00K
GRAYLAND	COOK CO.	IL	06/19/2009	09:59	1.00 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	06/19/2009	11:40	1.00 in.	0	0	0.00K	0.00K
HERMOSA	COOK CO.	IL	06/24/2009	12:38	0.75 in.	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	07/23/2009	15:46	0.88 in.	0	0	0.00K	0.00K
HARWOOD HGTS	COOK CO.	IL	07/23/2009	16:14	1.00 in.	0	0	0.00K	0.00K
FERNWAY	COOK CO.	IL	04/04/2010	15:21	0.75 in.	0	0	0.00K	0.00K
WORTH	COOK CO.	IL	04/04/2010	16:49	0.75 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	04/05/2010	20:30	0.88 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	04/05/2010	20:35	1.25 in.	0	0	50.00K	0.00K
STREAMWOOD	COOK CO.	IL	04/05/2010	21:30	1.00 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	04/05/2010	21:32	1.50 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	04/05/2010	21:35	1.00 in.	0	0	0.00K	0.00K
ROLLING MEADOWS	COOK CO.	IL	04/05/2010	21:35	1.00 in.	0	0	0.00K	0.00K
ROSEMONT	COOK CO.	IL	04/05/2010	21:37	1.50 in.	0	0	868.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	04/05/2010	21:38	0.88 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	04/05/2010	21:41	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/05/2010	21:48	0.88 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	04/05/2010	21:49	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
EVANSTON	COOK CO.	IL	04/05/2010	21:50	0.88 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	04/05/2010	21:50	1.75 in.	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	04/05/2010	21:50	1.25 in.	0	0	0.00K	0.00K
CUMBERLAND	COOK CO.	IL	04/05/2010	21:52	2.75 in.	0	0	5.00K	0.00K
FOREST GLEN	COOK CO.	IL	04/05/2010	21:53	0.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	04/05/2010	21:54	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	04/05/2010	21:55	0.75 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	04/05/2010	21:55	1.50 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	04/05/2010	21:55	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	04/05/2010	21:57	1.00 in.	0	0	0.00K	0.00K
LA GRANGE	COOK CO.	IL	06/23/2010	16:55	1.00 in.	0	0	0.00K	0.00K
HOMETOWN	COOK CO.	IL	10/24/2010	19:49	0.88 in.	0	0	0.00K	0.00K
EVERGREEN PARK	COOK CO.	IL	10/24/2010	19:50	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	04/19/2011	18:15	0.88 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	04/19/2011	18:30	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/19/2011	18:34	0.88 in.	0	0	0.00K	0.00K
NORTHBROOK	COOK CO.	IL	05/11/2011	17:00	0.75 in.	0	0	0.00K	0.00K
HOMETOWN	COOK CO.	IL	05/11/2011	18:47	1.00 in.	0	0	0.00K	0.00K
GOLDEN ACRES	COOK CO.	IL	05/22/2011	14:07	1.00 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	05/22/2011	14:45	0.75 in.	0	0	0.00K	0.00K
RICHTON PARK	COOK CO.	IL	05/25/2011	08:00	0.75 in.	0	0	0.00K	0.00K
MELROSE PARK	COOK CO.	IL	06/04/2011	14:29	0.88 in.	0	0	0.00K	0.00K
LYONS	COOK CO.	IL	06/04/2011	14:47	0.75 in.	0	0	0.00K	0.00K
NORTH RIVERSIDE	COOK CO.	IL	06/04/2011	14:47	0.75 in.	0	0	0.00K	0.00K
TINLEY PARK	COOK CO.	IL	06/04/2011	15:15	1.75 in.	0	0	0.00K	0.00K
RICHTON PARK	COOK CO.	IL	06/04/2011	15:21	1.00 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/30/2011	20:23	0.88 in.	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	06/30/2011	20:25	1.50 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/30/2011	20:26	1.25 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	06/30/2011	20:29	1.00 in.	0	0	0.00K	0.00K
CRAGIN	COOK CO.	IL	06/30/2011	20:30	2.00 in.	0	0	0.00K	0.00K
AUSTIN	COOK CO.	IL	06/30/2011	20:32	2.00 in.	0	0	17.000M	0.00K
AUSTIN	COOK CO.	IL	06/30/2011	20:33	2.00 in.	0	0	0.00K	0.00K
CORWITH	COOK CO.	IL	06/30/2011	20:33	2.00 in.	0	0	0.00K	0.00K
BRIGHTON PARK	COOK CO.	IL	06/30/2011	20:35	2.75 in.	0	0	750.00K	0.00K
EVERGREEN PARK	COOK CO.	IL	06/30/2011	20:45	1.50 in.	0	0	0.00K	0.00K
HARVEY	COOK CO.	IL	06/30/2011	21:00	1.75 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	08/13/2011	12:30	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	08/13/2011	12:48	0.75 in.	0	0	0.00K	0.00K
HANSON PARK	COOK CO.	IL	08/13/2011	12:57	1.00 in.	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	08/13/2011	13:21	0.75 in.	0	0	0.00K	0.00K
LAMBERT	COOK CO.	IL	09/03/2011	13:43	1.00 in.	0	0	0.00K	0.00K
WORTH	COOK CO.	IL	09/03/2011	13:47	1.00 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	05/03/2012	17:35	1.25 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	05/03/2012	17:52	1.25 in.	0	0	0.00K	0.00K
DES PLAINES	COOK CO.	IL	05/03/2012	18:12	1.00 in.	0	0	0.00K	0.00K
NORRIDGE	COOK CO.	IL	05/03/2012	18:18	0.88 in.	0	0	0.00K	0.00K
WEST GLENVIEW	COOK CO.	IL	05/03/2012	19:05	0.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	05/03/2012	19:15	1.00 in.	0	0	0.00K	0.00K
DUNNING	COOK CO.	IL	05/03/2012	19:38	1.75 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	05/03/2012	20:02	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
OAK LAWN	COOK CO.	IL	05/03/2012	20:54	1.00 in.	0	0	0.00K	0.00K
WORTH	COOK CO.	IL	05/03/2012	21:50	0.88 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	05/06/2012	12:00	0.88 in.	0	0	0.00K	0.00K
KEDZIE	COOK CO.	IL	05/06/2012	13:52	0.88 in.	0	0	0.00K	0.00K
BARTLETT	COOK CO.	IL	06/28/2012	16:25	1.00 in.	0	0	0.00K	0.00K
ALSIP	COOK CO.	IL	06/28/2012	17:53	1.75 in.	0	0	0.00K	0.00K
PALOS GARDENS	COOK CO.	IL	06/28/2012	17:56	1.25 in.	0	0	0.00K	0.00K
CHICAGO HOWELL ARPT	COOK CO.	IL	06/28/2012	18:00	1.75 in.	0	0	0.00K	0.00K
BERGER	COOK CO.	IL	06/28/2012	18:05	1.75 in.	0	0	0.00K	0.00K
BURNHAM	COOK CO.	IL	06/28/2012	18:17	0.88 in.	0	0	0.00K	0.00K
LANSING	COOK CO.	IL	06/28/2012	18:21	1.75 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	06/28/2012	18:33	1.00 in.	0	0	0.00K	0.00K
HOMEWOOD	COOK CO.	IL	06/28/2012	18:39	1.00 in.	0	0	0.00K	0.00K
SOUTH HOLLAND	COOK CO.	IL	06/29/2012	10:55	1.00 in.	0	0	0.00K	0.00K
WESTCHESTER	COOK CO.	IL	07/01/2012	11:45	0.75 in.	0	0	0.00K	0.00K
BROOKFIELD	COOK CO.	IL	07/01/2012	11:45	1.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	08/04/2012	15:00	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	10/14/2012	13:16	1.00 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	01/28/2013	23:07	0.88 in.	0	0	0.00K	0.00K
CHICAGO HGTS	COOK CO.	IL	01/28/2013	23:11	1.00 in.	0	0	0.00K	0.00K
CALUMET CITY	COOK CO.	IL	01/28/2013	23:18	0.75 in.	0	0	0.00K	0.00K
RIVERDALE	COOK CO.	IL	01/28/2013	23:33	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/17/2013	10:19	0.75 in.	0	0	0.00K	0.00K
LYNWOOD	COOK CO.	IL	05/30/2013	13:50	1.25 in.	0	0	0.00K	0.00K
EAST CHICAGO HGTS	COOK CO.	IL	05/30/2013	15:38	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	06/12/2013	17:00	1.00 in.	0	0	0.00K	0.00K
FLOSSMOOR	COOK CO.	IL	06/12/2013	17:20	0.75 in.	0	0	0.00K	0.00K
DUNNING	COOK CO.	IL	06/12/2013	17:30	0.75 in.	0	0	0.00K	0.00K
HARWOOD HGTS	COOK CO.	IL	06/12/2013	17:31	0.88 in.	0	0	0.00K	0.00K
SAUK VLG	COOK CO.	IL	06/12/2013	17:35	1.75 in.	0	0	0.00K	0.00K
CHATHAM	COOK CO.	IL	06/27/2013	17:15	1.00 in.	0	0	0.00K	0.00K
CHICAGO HGTS	COOK CO.	IL	08/12/2013	16:05	0.75 in.	0	0	0.00K	0.00K
EDISON PARK	COOK CO.	IL	08/30/2013	17:02	1.00 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	08/30/2013	17:05	0.75 in.	0	0	0.00K	0.00K
CRAGIN JCT	COOK CO.	IL	08/30/2013	17:09	1.00 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	09/18/2013	19:51	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	10/03/2013	19:58	0.88 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	11/17/2013	12:00	0.75 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	11/17/2013	12:35	1.00 in.	0	0	0.00K	0.00K
BRIDGEVIEW	COOK CO.	IL	11/17/2013	12:45	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	11/17/2013	13:36	1.00 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	04/12/2014	10:20	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	04/12/2014	10:21	2.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	04/12/2014	10:25	1.75 in.	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	04/12/2014	10:30	1.00 in.	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	04/12/2014	10:30	1.00 in.	0	0	0.00K	0.00K
NORTHBROOK	COOK CO.	IL	04/12/2014	10:47	1.00 in.	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	04/29/2014	11:03	0.75 in.	0	0	0.00K	0.00K
BURNHAM	COOK CO.	IL	05/11/2014	17:39	1.00 in.	0	0	0.00K	0.00K
NORTHBROOK	COOK CO.	IL	05/12/2014	17:41	1.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	05/12/2014	18:13	0.75 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
NORTHBROOK	COOK CO.	IL	05/12/2014	18:20	1.00 in.	0	0	0.00K	0.00K
BEVERLY HILLS	COOK CO.	IL	05/20/2014	19:00	1.00 in.	0	0	0.00K	0.00K
CHESTERFIELD	COOK CO.	IL	05/20/2014	19:01	1.00 in.	0	0	0.00K	0.00K
DEARBORN HGTS	COOK CO.	IL	05/20/2014	19:20	0.88 in.	0	0	0.00K	0.00K
WORTH	COOK CO.	IL	05/20/2014	19:32	1.00 in.	0	0	0.00K	0.00K
FERNWAY	COOK CO.	IL	05/20/2014	19:48	1.00 in.	0	0	0.00K	0.00K
GOESELVILLE	COOK CO.	IL	05/20/2014	19:49	1.75 in.	0	0	0.00K	0.00K
PALOS HGTS	COOK CO.	IL	05/20/2014	19:50	1.00 in.	0	0	0.00K	0.00K
KIMBERLY HGTS	COOK CO.	IL	05/20/2014	19:51	2.00 in.	0	0	0.00K	0.00K
WORTH	COOK CO.	IL	05/20/2014	19:55	0.75 in.	0	0	0.00K	0.00K
COUNTRY CLUB HILLS	COOK CO.	IL	05/20/2014	19:59	1.00 in.	0	0	0.00K	0.00K
CALUMET	COOK CO.	IL	05/20/2014	20:02	2.00 in.	0	0	0.00K	0.00K
LANSING	COOK CO.	IL	05/20/2014	20:25	1.75 in.	0	0	0.00K	0.00K
GLENWOOD	COOK CO.	IL	05/20/2014	20:25	1.75 in.	0	0	0.00K	0.00K
PALOS HILLS	COOK CO.	IL	06/28/2014	17:45	0.75 in.	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	08/01/2014	13:30	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	04/08/2015	23:48	0.75 in.	0	0	0.00K	0.00K
INVERNESS	COOK CO.	IL	04/09/2015	17:45	1.00 in.	0	0	0.00K	0.00K
BRIDGEVIEW	COOK CO.	IL	06/08/2015	14:01	0.75 in.	0	0	0.00K	0.00K
FERNWAY	COOK CO.	IL	07/13/2015	18:20	0.88 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	07/13/2015	18:23	0.88 in.	0	0	0.00K	0.00K
CLABURN	COOK CO.	IL	07/13/2015	18:39	2.50 in.	0	0	100.00K	0.00K
BURNHAM	COOK CO.	IL	07/13/2015	18:40	1.75 in.	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	07/17/2015	16:28	1.00 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	07/17/2015	16:30	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/17/2015	16:34	0.75 in.	0	0	0.00K	0.00K
SPAULDING	COOK CO.	IL	07/17/2015	16:34	0.75 in.	0	0	0.00K	0.00K
ROSEMONT	COOK CO.	IL	08/02/2015	13:40	0.88 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	08/02/2015	13:45	1.00 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	08/02/2015	13:50	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	08/02/2015	13:53	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	08/02/2015	13:56	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	08/02/2015	21:25	1.25 in.	0	0	0.00K	0.00K
BARRINGTON WOODS	COOK CO.	IL	08/02/2015	21:30	2.00 in.	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	08/02/2015	21:36	1.00 in.	0	0	0.00K	0.00K
PALOS HILLS	COOK CO.	IL	08/02/2015	22:43	1.00 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	04/25/2016	17:25	1.00 in.	0	0	0.00K	0.00K
FOREST GLEN	COOK CO.	IL	04/25/2016	20:31	1.00 in.	0	0	0.00K	0.00K
NORRIDGE	COOK CO.	IL	04/25/2016	20:32	1.00 in.	0	0	0.00K	0.00K
HARWOOD HGTS	COOK CO.	IL	04/25/2016	20:40	1.00 in.	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	04/25/2016	20:45	1.00 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	07/24/2016	17:38	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	02/24/2017	01:20	1.00 in.	0	0	0.00K	0.00K
ALSIP	COOK CO.	IL	02/28/2017	18:12	1.00 in.	0	0	0.00K	0.00K
CHICAGO HAMMOND ARPT	COOK CO.	IL	02/28/2017	20:23	0.88 in.	0	0	0.00K	0.00K
OLYMPIA FIELDS	COOK CO.	IL	02/28/2017	20:52	1.75 in.	0	0	0.00K	0.00K
FLOSSMOOR	COOK CO.	IL	02/28/2017	20:58	0.88 in.	0	0	0.00K	0.00K
ORLAND PARK	COOK CO.	IL	02/28/2017	21:42	1.00 in.	0	0	0.00K	0.00K
ALSIP	COOK CO.	IL	02/28/2017	21:47	1.00 in.	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	03/20/2017	00:40	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	03/20/2017	00:56	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
LAMBERT	COOK CO.	IL	03/20/2017	01:42	1.00 in.	0	0	0.00K	0.00K
OAK LAWN	COOK CO.	IL	03/20/2017	01:45	1.00 in.	0	0	0.00K	0.00K
OAK LAWN	COOK CO.	IL	04/10/2017	12:18	1.00 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	04/10/2017	16:50	0.75 in.	0	0	0.00K	0.00K
ARLINGTON HGTS	COOK CO.	IL	04/10/2017	16:56	0.75 in.	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	07/07/2017	07:03	1.00 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	07/07/2017	07:20	1.25 in.	0	0	0.00K	0.00K
MORTON GROVE	COOK CO.	IL	07/07/2017	07:25	1.00 in.	0	0	0.00K	0.00K
SAUK VLG	COOK CO.	IL	07/07/2017	10:58	1.50 in.	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	07/12/2017	07:40	0.75 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	07/12/2017	08:35	0.75 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	07/21/2017	15:49	1.25 in.	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	07/21/2017	15:50	1.00 in.	0	0	0.00K	0.00K
ELK GROVE VLG	COOK CO.	IL	07/21/2017	16:00	1.25 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	07/23/2017	15:04	0.88 in.	0	0	0.00K	0.00K
MC COOK	COOK CO.	IL	05/02/2018	15:46	1.00 in.	0	0	0.00K	0.00K
(MDW)MIDWAY ARPT CHI	COOK CO.	IL	05/02/2018	15:53	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	05/14/2018	17:08	0.75 in.	0	0	0.00K	0.00K
CHICAGO RIDGE	COOK CO.	IL	05/16/2019	21:32	0.75 in.	0	0	0.00K	0.00K
AVONDALE	COOK CO.	IL	05/17/2019	00:01	1.50 in.	0	0	0.00K	0.00K
HASTINGS	COOK CO.	IL	05/27/2019	13:23	1.50 in.	0	0	0.00K	0.00K
PALOS HILLS	COOK CO.	IL	05/27/2019	13:39	1.50 in.	0	0	0.00K	0.00K
PARK FOREST	COOK CO.	IL	05/27/2019	15:06	1.25 in.	0	0	0.00K	0.00K
BROOKFIELD	COOK CO.	IL	06/01/2019	14:33	0.88 in.	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	06/01/2019	14:36	1.50 in.	0	0	0.00K	0.00K
RIVER FOREST	COOK CO.	IL	06/01/2019	14:56	1.25 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/01/2019	15:03	0.88 in.	0	0	0.00K	0.00K
HOMETOWN	COOK CO.	IL	06/01/2019	15:12	1.00 in.	0	0	0.00K	0.00K
(CGX)MEIGS FLD CHICA	COOK CO.	IL	06/01/2019	15:13	0.88 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	06/01/2019	16:50	0.88 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/25/2019	15:40	1.00 in.	0	0	0.00K	0.00K
CLYBOURN	COOK CO.	IL	06/25/2019	15:42	0.88 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	06/26/2019	18:31	2.00 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	06/26/2019	18:35	1.50 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	06/28/2019	17:04	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	06/28/2019	17:12	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	06/28/2019	17:12	1.75 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/28/2019	17:50	1.25 in.	0	0	0.00K	0.00K
DEERING	COOK CO.	IL	06/28/2019	17:50	1.25 in.	0	0	0.00K	0.00K
GLENCOE	COOK CO.	IL	04/07/2020	19:12	1.00 in.	0	0	0.00K	0.00K
SUNSET PARK	COOK CO.	IL	04/07/2020	19:25	1.00 in.	0	0	0.00K	0.00K
KENILWORTH	COOK CO.	IL	04/07/2020	19:27	1.50 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	04/07/2020	19:28	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	04/07/2020	19:32	2.75 in.	0	0	0.00K	0.00K
BURBANK	COOK CO.	IL	04/07/2020	19:32	1.00 in.	0	0	0.00K	0.00K
(IGQ) LANSING MUNICIPAL ...	COOK CO.	IL	06/10/2020	07:59	2.00 in.	0	0	0.00K	0.00K
(IGQ) LANSING MUNICIPAL ...	COOK CO.	IL	06/10/2020	08:03	1.00 in.	0	0	0.00K	0.00K
WEST DALE	COOK CO.	IL	06/22/2020	15:22	1.00 in.	0	0	0.00K	0.00K
WEST DALE	COOK CO.	IL	07/07/2020	17:20	1.00 in.	0	0	0.00K	0.00K
GLENCOE	COOK CO.	IL	08/10/2020	14:50	0.88 in.	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	08/23/2020	15:30	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
ARLINGTON PARK	COOK CO.	IL	08/23/2020	15:41	1.25 in.	0	0	0.00K	0.00K
ARLINGTON PARK	COOK CO.	IL	08/23/2020	16:00	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	08/23/2020	18:40	1.00 in.	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	06/12/2021	13:15	1.00 in.	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	08/24/2021	16:20	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	02/22/2022	06:17	0.88 in.	0	0	0.00K	0.00K
MT PROSPECT	COOK CO.	IL	06/13/2022	17:28	1.00 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	06/13/2022	17:35	1.00 in.	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	06/13/2022	17:45	1.00 in.	0	0	0.00K	0.00K
MELROSE PARK	COOK CO.	IL	06/13/2022	17:55	1.00 in.	0	0	0.00K	0.00K
IRVING PARK	COOK CO.	IL	07/22/2022	22:05	1.00 in.	0	0	0.00K	0.00K
MATTESON	COOK CO.	IL	03/31/2023	15:46	1.00 in.	0	0	0.00K	0.00K
SPAULDING	COOK CO.	IL	04/04/2023	12:49	1.75 in.	0	0	0.00K	0.00K
BARTLETT	COOK CO.	IL	04/04/2023	12:51	1.00 in.	0	0	0.00K	0.00K
FRANKLIN PARK	COOK CO.	IL	04/04/2023	12:53	1.00 in.	0	0	0.00K	0.00K
HARWOOD HEIGHTS	COOK CO.	IL	04/04/2023	12:54	1.50 in.	0	0	0.00K	0.00K
OLD IRVING PARK	COOK CO.	IL	04/04/2023	12:58	1.25 in.	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	04/04/2023	12:58	1.00 in.	0	0	0.00K	0.00K
EDISON PARK	COOK CO.	IL	04/04/2023	13:00	1.25 in.	0	0	0.00K	0.00K
IRVING PARK	COOK CO.	IL	04/04/2023	13:00	1.25 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	04/04/2023	13:01	1.75 in.	0	0	0.00K	0.00K
NILES	COOK CO.	IL	04/04/2023	13:01	1.50 in.	0	0	0.00K	0.00K
NORWOOD PARK	COOK CO.	IL	04/04/2023	13:01	1.00 in.	0	0	0.00K	0.00K
HARWOOD HEIGHTS	COOK CO.	IL	04/04/2023	13:01	1.75 in.	0	0	0.00K	0.00K
JEFFERSON PARK	COOK CO.	IL	04/04/2023	13:03	1.50 in.	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	04/04/2023	13:03	1.25 in.	0	0	0.00K	0.00K
ROGERS PARK	COOK CO.	IL	04/04/2023	13:05	1.00 in.	0	0	0.00K	0.00K
ROGERS PARK	COOK CO.	IL	04/04/2023	13:06	1.00 in.	0	0	0.00K	0.00K
ROGERS PARK	COOK CO.	IL	04/04/2023	13:06	1.25 in.	0	0	0.00K	0.00K
SKOKIE	COOK CO.	IL	04/04/2023	13:07	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	04/04/2023	13:07	1.50 in.	0	0	0.00K	0.00K
PARK RIDGE	COOK CO.	IL	04/04/2023	13:08	1.75 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	04/04/2023	13:10	1.00 in.	0	0	0.00K	0.00K
EVANSTON	COOK CO.	IL	04/04/2023	13:10	1.00 in.	0	0	0.00K	0.00K
ARLINGTON HEIGHTS	COOK CO.	IL	04/04/2023	13:11	1.50 in.	0	0	0.00K	0.00K
NORTHFIELD	COOK CO.	IL	04/04/2023	13:12	1.50 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	04/04/2023	13:17	1.75 in.	0	0	0.00K	0.00K
CHICAGO BOTANIC GARDEN	COOK CO.	IL	04/04/2023	13:19	1.00 in.	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	04/04/2023	13:22	1.00 in.	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	04/20/2023	16:55	1.75 in.	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	04/20/2023	16:58	1.25 in.	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	04/20/2023	17:02	1.00 in.	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	04/20/2023	17:05	1.25 in.	0	0	0.00K	0.00K
PALATINE	COOK CO.	IL	04/20/2023	17:10	1.00 in.	0	0	0.00K	0.00K
BARRINGTON	COOK CO.	IL	04/20/2023	17:17	1.00 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	04/20/2023	17:36	1.50 in.	0	0	0.00K	0.00K
GLENVIEW	COOK CO.	IL	04/20/2023	17:39	1.00 in.	0	0	0.00K	0.00K
HUBBARD WOODS	COOK CO.	IL	04/20/2023	17:42	1.00 in.	0	0	0.00K	0.00K
IRVING PARK	COOK CO.	IL	06/29/2023	14:25	1.00 in.	0	0	0.00K	0.00K
NORWOOD PARK	COOK CO.	IL	02/08/2024	19:38	1.00 in.	0	0	0.00K	0.00K
ELGIN	COOK CO.	IL	02/27/2024	19:30	1.00 in.	0	0	0.00K	0.00K

TABLE: HAILSTORM EVENTS IN COOK COUNTY (1955-2023)									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
HOFFMAN ESTATES	COOK CO.	IL	02/27/2024	19:34	1.00 in.	0	0	0.00K	0.00K
LA GRANGE PARK	COOK CO.	IL	02/27/2024	20:10	1.00 in.	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	02/27/2024	20:13	1.00 in.	0	0	0.00K	0.00K
BURBANK	COOK CO.	IL	02/27/2024	20:30	1.00 in.	0	0	0.00K	0.00K
OAK LAWN	COOK CO.	IL	02/27/2024	20:36	1.50 in.	0	0	0.00K	0.00K
ORLAND HILLS	COOK CO.	IL	02/27/2024	20:37	1.25 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	02/27/2024	20:40	1.50 in.	0	0	0.00K	0.00K
OAK FOREST	COOK CO.	IL	02/27/2024	20:44	2.00 in.	0	0	0.00K	0.00K
MIDLOTHIAN	COOK CO.	IL	02/27/2024	20:46	1.50 in.	0	0	0.00K	0.00K
HEGEWISCH	COOK CO.	IL	02/27/2024	20:54	1.75 in.	0	0	0.00K	0.00K
LA GRANGE	COOK CO.	IL	03/04/2024	21:23	1.00 in.	0	0	0.00K	0.00K

*** Note: According to NOAA, Cook County did not record any dense fog events between 2014-2023.*

TABLE: STRONG WINDS EVENTS IN COOK COUNTY (1996-2024)										
Location	County	State	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
Totals:							**4**	**15**	**1.303M**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	03/20/1996	03:00	High Wind	55 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/25/1996	00:00	High Wind	48 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	04/06/1997	13:15	High Wind	61 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	04/30/1997	18:16	High Wind	40 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	09/29/1997	12:00	High Wind	41 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/26/1997	09:00	High Wind	50 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/10/1998	07:30	High Wind	53 kts.	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	04/12/2001	04:00	High Wind	43 kts. M	0	0	50.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/25/2001	14:47	High Wind	51 kts. M	0	2	50.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/09/2002	11:52	High Wind	50 kts. M	4	4	200.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/04/2002	16:00	High Wind	50 kts. E	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/22/2003	17:00	High Wind	54 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	05/11/2003	13:00	High Wind	50 kts. MG	0	0	10.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/13/2003	15:00	High Wind	50 kts. EG	0	1	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/05/2004	11:15	High Wind	52 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/13/2005	11:30	High Wind	50 kts. EG	0	0	100.00K	0.00K

COOK (ZONE)	COOK (ZONE)	IL	03/31/2006	12:00	High Wind	55 kts. EG	0	4	100.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/31/2006	13:26	High Wind	52 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	12/23/2007	08:00	High Wind	50 kts. EG	0	0	10.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	05/13/2008	18:00	High Wind	51 kts. MG	0	0	1.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/26/2008	14:00	High Wind	50 kts. EG	0	1	40.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/26/2010	08:00	High Wind	50 kts. EG	0	0	500.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/19/2011	11:45	High Wind	53 kts. MG	0	0	2.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	04/16/2012	12:42	High Wind	52 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/11/2012	16:00	High Wind	50 kts. MG	0	0	25.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/11/2013	10:48	High Wind	50 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/17/2013	15:51	High Wind	51 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/20/2014	20:24	High Wind	51 kts. MG	0	0	5.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/31/2014	13:54	High Wind	50 kts. EG	0	0	50.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/31/2014	15:17	High Wind	50 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/12/2015	04:00	High Wind	60 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/19/2016	12:17	High Wind	50 kts. MG	0	1	100.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/16/2016	12:00	High Wind	50 kts. EG	0	0	15.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/16/2016	12:00	High Wind	50 kts. EG	0	0	20.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	04/02/2016	10:30	High Wind	51 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/08/2017	14:30	High Wind	55 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/20/2018	12:37	High Wind	53 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/20/2018	12:40	High Wind	50 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/20/2018	12:55	High Wind	55 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	10/20/2018	12:56	High Wind	52 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/24/2019	08:00	High Wind	54 kts. MG	0	0	25.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/14/2019	14:04	High Wind	52 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	07:07	High Wind	52 kts. MG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	07:10	High Wind	50 kts. MG	0	0	0.00K	0.00K

COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	07:40	High Wind	50 kts. EG	0	1	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	09:09	High Wind	50 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	13:00	High Wind	50 kts. EG	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/27/2019	13:45	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENRTRAL COOK COUNTY (ZO...	CENRTRAL COOK COUNTY (ZO...	IL	03/29/2020	09:00	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENRTRAL COOK COUNTY (ZO...	CENRTRAL COOK COUNTY (ZO...	IL	03/29/2020	16:05	High Wind	53 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	11/15/2020	11:45	High Wind	60 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	11/15/2020	13:55	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	11/15/2020	16:00	High Wind	56 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	05/01/2021	15:15	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	10/25/2021	06:30	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/11/2021	04:48	High Wind	56 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/11/2021	05:15	High Wind	50 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/11/2021	05:20	High Wind	51 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/15/2021	21:46	High Wind	57 kts. MG	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	12/15/2021	23:30	High Wind	55 kts. EG	0	0	0.00K	0.00K

CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/16/2021	00:05	High Wind	53 kts. MG	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	12/16/2021	01:17	High Wind	58 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	04/14/2022	14:40	High Wind	51 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	11/05/2022	03:30	High Wind	50 kts. EG	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	11/05/2022	09:30	High Wind	60 kts. EG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	11/05/2022	13:14	High Wind	51 kts. MG	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	11/05/2022	16:57	High Wind	51 kts. MG	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	02/27/2023	21:35	High Wind	50 kts. EG	0	1	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	01/12/2024	08:04	High Wind	50 kts. MG	0	0	0.00K	0.00K

5.5.6 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Moderate**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Moderate**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**

	**Transportation** Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Moderate**
	**Hazardous Materials** Facilities, HAZMAT, Pollutants, Contaminants	**Minimal**
	**Water Systems** Potable Water Infrastructure, Wastewater Management	**Moderate**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown		

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health (Extreme Heat): According to NOAA, extreme heat events carry significant health and life safety risks, notably heat-related illnesses such as heat exhaustion and heatstroke. These conditions can be life-threatening if not promptly addressed, with the elderly, young children, and individuals with pre-existing health conditions being particularly susceptible. Dehydration is a common and dangerous consequence of high temperatures, leading to symptoms like dizziness and confusion, and exacerbating the effects of heat-related illnesses. Respiratory problems are also aggravated by the heat, especially in areas with poor air quality, increasing the likelihood of respiratory distress for individuals with chronic respiratory diseases.

Extreme heat also places strain on both the human body and critical infrastructure. The cardiovascular system can be overburdened, heightening the risk of heart-related issues in individuals with underlying heart conditions. Physical and cognitive functions can be impaired due to excessive body strain, which raises the risk of accidents and injuries. Infrastructure such as roads and power lines may fail, causing widespread disruptions. Heatwaves intensify water scarcity, affecting potable water availability and agriculture, and increase the propensity for wildfires, endangering both life and property. These conditions can also lead to a spike in heat-related mortality rates, particularly in vulnerable groups, underscoring the importance of effective heatwave preparedness and response strategies.

Life Safety and Public Health (Lightning): According to NOAA, lightning can cause fatalities, with an average of 49 reported deaths in the United States each year. In addition to the risk of fatalities, lightning also results in numerous injuries that can have long-lasting effects. These include severe burns, neurological injuries, and other serious health issues. Beyond personal injury, lightning can

cause fires and electrical outages, further endangering lives and property. NOAA emphasizes the importance of safety measures such as seeking shelter during storms and avoiding open areas, tall trees, and metal objects to minimize these risks.

Life Safety and Public Health (Hailstorms): According to NOAA, hail events can have several life safety and public health implications. Hailstones, which vary in size from small pellets to golf ball size or larger, can inflict bodily injury to those caught outside during a hailstorm. Such injuries can range from minor bruises to more serious trauma, especially if the hail is large. The risk extends to animals as well, both livestock and pets, which can be severely injured or killed in extreme cases. For the public, hail can pose a significant hazard, prompting advisories for individuals to seek shelter during severe hailstorms. Beyond direct physical harm, hail can cause substantial property damage, affecting homes, vehicles, and critical infrastructure like power lines and roofing. The resulting debris from damaged structures can lead to secondary public health concerns, such as obstructed roadways that impede emergency and medical services. Crop damage is another significant impact of hail events, which can compromise local food supplies and economic stability in agricultural communities. In the aftermath of severe hail, cleanup and repair efforts pose additional health risks, with individuals potentially exposed to injury from debris removal or structural repairs. NOAA emphasizes preparedness and timely weather warnings to mitigate these risks, urging the public to heed hailstorm advisories and take protective actions.

Life Safety and Public Health (Dense Fog): According to NOAA, dense fog impacts life safety and public health by severely reducing visibility, which can lead to dangerous driving, boating, and flying conditions. Fog, particularly when it is dense, contributes to numerous travel accidents each year, including vehicle collisions and maritime incidents. It also complicates aviation operations, affecting both takeoff and landing procedures and leading to delays and cancellations. Lastly, dense fog can hinder emergency response efforts by limiting visibility for first responders during critical situations.

Life Safety and Public Health (Strong Winds): Strong winds pose significant life safety and public health risks, particularly during severe weather events. Strong winds can cause extensive damage to infrastructure, such as homes, power lines, and trees, leading to power outages and blocking access to emergency services. The risk extends to personal safety, where high winds can turn debris into projectiles, posing dangers to life and increasing the likelihood of injury. For those living in manufactured homes or temporary structures, the risk is even more pronounced, as these can be severely damaged or destroyed in high wind conditions. The aftermath of strong winds also includes economic impacts, where communities need significant resources and time to recover and rebuild.

Property Damage and Critical Infrastructure (Extreme Heat): According to NOAA, extreme heat can lead to property damage and critical infrastructure impacts. Prolonged exposure to high temperatures can cause structural damage to buildings and transportation networks, affecting road surfaces and railway tracks. High demand for electricity during heatwaves can strain electrical grids, resulting in power outages that impact homes, businesses, and critical facilities. Water supply shortages and reduced water quality may occur due to drought conditions. Healthcare facilities may be overwhelmed with patients suffering from heat-related illnesses, affecting critical healthcare infrastructure. Extreme heat can also disrupt telecommunications equipment and communication systems and contribute to the ignition and spread of wildfires, resulting in property damage and environmental impacts. Lastly, vulnerable populations are at increased risk of heat-related illnesses, and public safety concerns arise, regarding strained emergency response and healthcare systems.

Property Damage and Critical Infrastructure (Lightning): According to NOAA, lightning can impact property damage and critical infrastructure in various ways. It can directly strike buildings, causing structural damage, igniting fires, and disrupting power systems, which can lead to broader electrical outages. Lightning strikes are also a hazard to telecommunications and other technological systems due to the electrical surges they produce, potentially leading to costly repairs and downtime. Additionally, critical infrastructure such as power plants, substations, and airports are particularly vulnerable to lightning strikes, which can result in extensive operational disruptions and safety hazards. Overall, the economic and functional impact of lightning on infrastructure necessitates the implementation of protective measures such as lightning rods, surge protectors, and other mitigation strategies to safeguard both property and public safety.

Property Damage and Critical Infrastructure (Hailstorms): According to NOAA, hailstorms can cause extensive property damage and have significant repercussions for critical infrastructure. Hail can vary in size from small pellets to the size of softballs, and larger hailstones can shatter windows, dent vehicles, and damage roofs of homes and businesses, leading to costly repairs and insurance claims. Agricultural sectors are particularly vulnerable, as hail can decimate crops, resulting in substantial economic losses for farmers. The impact on personal property and commercial assets can be severe, depending on the storm's intensity, hail size, and duration.

Critical infrastructure is also vulnerable to hail. Examples include energy infrastructure, including power lines and solar panels, which can suffer damage, leading to power outages and affecting energy production. Communication infrastructures, such as cell towers and satellite dishes, can also be impaired during hail events, disrupting communication networks. Transportation can be affected as well, with hail impairing visibility and surface conditions, potentially leading to accidents and damage to transportation systems like railways and airports.

Property Damage and Critical Infrastructure (Dense Fog): According to NOAA, dense fog impacts property damage and critical infrastructure primarily by reducing visibility, which can lead to accidents and disrupt transportation systems. Dense fog can cause major delays and hazards in road, air, and marine transportation, increasing the risk of collisions and other accidents. This disruption affects both daily commuters and emergency services' ability to respond to incidents promptly. Finally, dense fog can lead to economic losses due to delayed flights, shipping, and other logistics-related activities. The accumulation of fog on electrical equipment, such as power lines, can also lead to short circuits and power outages, affecting residential and commercial areas.

Property Damage and Critical Infrastructure (Strong Winds): According to NOAA, strong winds can impact property damage and critical infrastructure in several ways. Strong winds, often categorized as having speeds exceeding 50-60 mph, can cause structural damage to buildings by tearing off roofs, breaking windows, and uprooting trees. Strong winds can also disrupt electrical power lines and communication infrastructure, leading to widespread power outages and affecting emergency services. Lastly, strong winds can impair transportation systems, including grounding flights, toppling vehicles, and creating hazardous driving conditions due to flying debris.

5.5.7 Economy

Extreme Heat: According to NOAA, there are many economic impacts associated with extreme heat. These impacts can include increased healthcare costs resulting from a surge in heat-related illnesses, which necessitate medical treatment and contribute to healthcare expenditures.

Furthermore, the scorching temperatures can lead to reduced productivity in various economic sectors, impacting labor efficiency and overall economic output. During heatwaves, cooling demands soar, driving up energy consumption, elevating utility bills, and placing strain on energy infrastructure. The agricultural sector is not immune, as extreme heat can damage crops, reducing yields and affecting agriculture, thereby disrupting food supply chains and causing financial losses for farmers. Additionally, high temperatures can stress transportation infrastructure, causing road buckling, rail deformation, and necessitating repairs. Water resources may also face increased demand, requiring additional treatment and distribution efforts, which come with associated costs. The tourism and outdoor recreation industries can be adversely affected as extreme heat deters tourists and outdoor enthusiasts, impacting local economies dependent on these sectors. In the realm of insurance, heightened heat-related property and infrastructure damage may lead to higher premiums for individuals and businesses. Lastly, prolonged periods of extreme heat heighten the risk of wildfires, incurring costs associated with property damage, ecosystem disruption, firefighting efforts, and resource allocation.

Lightning: According to NOAA, lightning can cause direct damage to buildings and electrical systems, ignite fires, and disrupt power and communication services. These incidents can result in costly repairs and significant economic losses, not just from the physical damage but also from the secondary effects such as business interruptions and loss of service delivery. Lastly, the insurance and reinsurance industries incorporate this data to evaluate and manage risks associated with lightning and other severe weather events.

Hailstorms: According to NOAA, hail events can have significant economic impacts, particularly due to the damage they inflict on vehicles, homes, and agriculture. Automobiles exposed to hail can sustain dents and broken glass, leading to expensive repairs and insurance claims. Residential and commercial roofing can be severely damaged, necessitating costly repairs or replacements. For the insurance industry, hailstorms often result in a high volume of claims, impacting their financial reserves and potentially leading to higher insurance premiums for customers in hail-prone areas.

The agricultural sector is especially vulnerable to hail events. Crops can be devastated by hail, leading to a loss of yield for farmers and affecting the local and regional food supply, which can drive up food prices. Hail can also damage greenhouses and farm equipment, adding to the financial burden on agricultural businesses. The cumulative economic effect of hail includes not only the direct costs of damage and repairs but also the indirect costs associated with business interruptions and the increased prices of goods and services affected by the loss of crops and property damage.

Dense Fog: According to NOAA, dense fog can severely reduce visibility, leading to delays and closures in air, road, and maritime transport. This disruption affects airline operations, causing flight delays and cancellations, which in turn impacts passenger transit and cargo shipments. On roads, reduced visibility increases the risk of accidents, leading to potential human and material losses. In maritime settings, fog can delay shipping activities, affecting the supply chain and leading to economic losses.

Strong Wind: According to NOAA, strong wind events (including derechos and severe thunderstorm winds), can have economic impacts due to property damage over widespread areas. These impacts can include structural damage to buildings and homes, leading to substantial repair costs and insurance claims. The agricultural sector can be significantly affected, with damage to crops and farming infrastructure potentially resulting in lost income for farmers and increased commodity

prices. Businesses may suffer interruptions that disrupt economic activity and incur losses, particularly when power outages affect operations and supply chains.

The costs associated with strong wind events typically include cleanup and restoration efforts, which can be extensive and require significant municipal and state resources. Utility companies may face substantial expenses in repairing downed power lines and restoring service to customers. Moreover, the transportation sector can experience disruptions, with damaged roads and railways impeding travel and logistics. The cumulative effect of these events on the economy includes direct costs, such as damage repair and lost revenue, and indirect costs, like increased insurance rates and the potential for long-term economic downturn in severely affected areas.

5.5.8 Changes in Development and Impact to Future Development

Extreme Heat: According to NOAA, extreme heat events can impact changes in development and future urban planning and construction. As temperatures rise, cities and developers are increasingly considering the heat resilience of buildings and infrastructure. Currently, there's an increasing emphasis on designing structures that can withstand high temperatures while minimizing the need for energy-intensive cooling methods. This includes integrating materials that reflect rather than absorb heat, enhancing natural ventilation, and increasing green spaces to reduce the urban heat island effect. Additionally, there's a trend toward "cool roofs," urban tree canopies, and permeable pavements to manage heat.

In many areas, climate-resilient urban planning is becoming a priority to accommodate the anticipated increase in frequency and severity of heatwaves due to climate change. This planning involves the creation of heat action plans, the development of early warning systems, and the construction of cool refuges to protect vulnerable populations. Water resource management also becomes more critical in the design of new developments, as extreme heat can exacerbate water scarcity. Communities are also re-evaluating building codes, zoning laws, and development policies to ensure that new constructions and city expansions are both sustainable and resilient in the face of rising temperatures.

Lightning: According to NOAA, lightning events impact development decisions by impacting building codes and infrastructure planning, enhancing both safety and resilience. In regions prone to frequent lightning, such as Southeastern U.S. states, developers and urban planners incorporate advanced lightning protection systems in buildings and infrastructure. This initiative extends to the design of electrical systems, with a focus on minimizing outages and damage from lightning-induced power surges through the integration of robust surge protectors and other resistant technologies. The insurance industry also adjusts its standards in high-lightning areas, influencing building practices with modified coverage requirements and premium calculations.

Hailstorms: According to NOAA, hail events can impact development and construction practices, particularly in hail-prone regions. The frequency and intensity of hailstorms can influence the choice of building materials or design considerations in new constructions. In addition, there is an increasing emphasis on using hail-resistant materials, especially for roofing and siding. For instance, the adoption of impact-resistant shingles and reinforced glass is becoming more common to reduce damage and subsequent repair costs. Lastly, architectural designs are evolving to include features that can minimize hail damage, such as protective overhangs and the strategic placement of vulnerable elements like windows and skylights.

Urban and regional planning is also accounting for the risk of hail events. This involves selecting appropriate materials and designs for buildings and considering the broader impact on infrastructure such as transportation and utilities. Finally, the agricultural sector is particularly vulnerable to hail, and is also adapting through the use of protective structures like hail nets over crops.

Dense Fog: According to NOAA, dense fog can influence urban and infrastructure development primarily through its implications for transportation and public safety. In turn, urban planners and developers might consider these impacts when designing infrastructure, particularly in areas prone to frequent dense fog. This can include the implementation of advanced traffic management and navigation systems designed to operate effectively in reduced visibility conditions. This means that road designs may incorporate better lighting and signage, while airports and ports might invest in sophisticated navigational aids to prevent disruptions caused by fog. Lastly, building codes could require that structures in high-risk areas be designed to minimize accidents and enhance safety during dense fog conditions.

Strong Wind: According to NOAA, strong wind events *(including derechos and severe thunderstorm winds)* can impact current and future development practices. Physical damage from historical straight-line wind events is prompting changes in building design and construction. There is also a focus on wind-resistant construction techniques, such as strengthening building envelopes, using more durable roofing materials, and securing outdoor objects to prevent them from becoming airborne projectiles. In areas frequently affected by straight-line winds, there is a growing emphasis on adopting building codes that require wind-resistant features, aiming to reduce damage and ensure the safety of structures.

For future development, urban and regional planning are evaluating this placement and orientation of buildings to minimize wind impact, enhancing vegetation cover to serve as windbreaks, and implementing robust infrastructure designs, especially for utilities and transportation networks. Planning also includes the development of emergency response strategies and the installation of early warning systems to mitigate the impact of such events on communities.

5.5.9 Effects of Climate Change on the Severity of Impacts

Extreme Heat: According to the NOAA, climate change is impacting the severity and frequency of extreme heat events. As global temperatures rise due to increasing greenhouse gas emissions, extreme heat events are becoming more intense, frequent, and prolonged. NOAA data indicates that heatwaves are occurring earlier in the year and lasting longer, leading to higher temperatures than historically recorded. This increase in temperature exacerbates the urban heat island effect in cities, where concrete and asphalt store and re-radiate heat, further intensifying the impact of extreme heat events in these areas.

The compounding effects of climate change on extreme heat also have broader ecological impacts, such as altering natural ecosystems and increasing the risk of wildfires. Higher temperatures contribute to more significant evaporation and soil dryness, which in turn can lead to drought conditions, affecting water supplies and agriculture. Lastly, the changing patterns of extreme heat are impacting public health, with increases in heat-related illnesses and deaths, particularly among vulnerable populations such as the elderly, children, and those with pre-existing health conditions.

Lightning: Climate change is projected to increase the frequency and intensity of "hot lightning," a type of lightning strike that is particularly effective at sparking wildfires. This increase is due to higher temperatures driving up the rate of these intense lightning strikes. As a result, regions may face heightened risks of lightning-induced wildfires, making it imperative for development and urban planning to consider these changes, especially in areas prone to such natural disasters. This adaptation could involve enhancing fire management strategies and updating building codes to mitigate the risks associated with more frequent and severe lightning events.

Hailstorms: According to NOAA, climate change is impacting the severity of hail events. One impact is the increase in the intensity of hailstorms. As global temperatures rise, the atmosphere can hold more moisture, leading to greater instability and energy, which are critical factors for the formation of thunderstorms that produce hail. This can result in stronger updrafts in thunderstorms, essential for the formation of larger hailstones. Consequently, while the frequency of hail events may not necessarily increase, the intensity and size of the hail produced during these events could also escalate, leading to more significant damage.

According to NOAA, the relationship between climate change and hail is intricate and varies by region. In some areas, warming temperatures might actually reduce the likelihood of hail by increasing the height at which hail melts before reaching the ground. This could lead to a decrease in the number of hail events or a shift in their geographical distribution. Finally, climate change may affect the seasonality of hail, potentially altering the timing of hailstorms and impacting agricultural planning and preparedness.

Dense Fog: According to NOAA, climate change can impact fog formation through alterations in temperature, humidity, and local weather patterns, which might affect the frequency and density of fog events. Warmer temperatures can increase evaporation rates, potentially leading to more fog under the right conditions, while other factors, such as changing wind patterns and urbanization, can also play significant roles.

Strong Wind: According to NOAA, climate change impacts the severity of strong wind events, although the specific effects are complex and subject to ongoing research. Straight-line winds, such as those associated with severe thunderstorms, derechos, and downbursts, can be influenced by atmospheric conditions that are affected by climate change. As global temperatures rise, the atmosphere can hold more moisture and become more unstable, potentially leading to more powerful and frequent thunderstorms capable of producing severe straight-line winds. This increased instability can contribute to the intensity of storm systems and the energy available for severe weather events, including those with damaging winds.

According to NOAA, the relationship between climate change and strong wind events is not straightforward. Factors such as changes in the jet stream, regional variations in temperature and moisture patterns, and the complex dynamics of storm formation all play a role in determining how these events may change in a warming climate. While some models suggest an increase in the frequency and intensity of storms capable of producing strong straight-line winds, there is still uncertainty regarding the extent and geographical distribution of these changes.

TABLE: 25-YEAR PRECIPITATION PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience a **10% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.8" increase** (from 36.9" to 37.7") in average annual precipitation.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience a **1% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.1" decrease** (from 37.3" to 37.2") in average annual precipitation.
Source: Neighborhoods at Risk: (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: 25-YEAR CLIMATE PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience **an 115% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 55°F) in average annual temperatures.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience an **83% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 54°F) in average annual temperatures.
Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation							
Average Annual Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40”**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Days Per Year With No Precipitation	**193 days**	**195 days**	**196 days**	**196 days**	**197 days**	**197 days**	**200 days**
	190-197	187-208	187-212	186-207	184-216	187-208	180-235
Maximum Number Of Consecutive Dry Days	**13 days**	**13 days**	**14 days**	**14 days**	**14 days**	**14 days**	**15 days**
	11-14	12-16	12-17	12-16	12-18	12-16	12-20
Temperature Thresholds							
	12 days	**31 days**	**34 days**	**41 days**	**49 days**	**50 days**	**81 days**

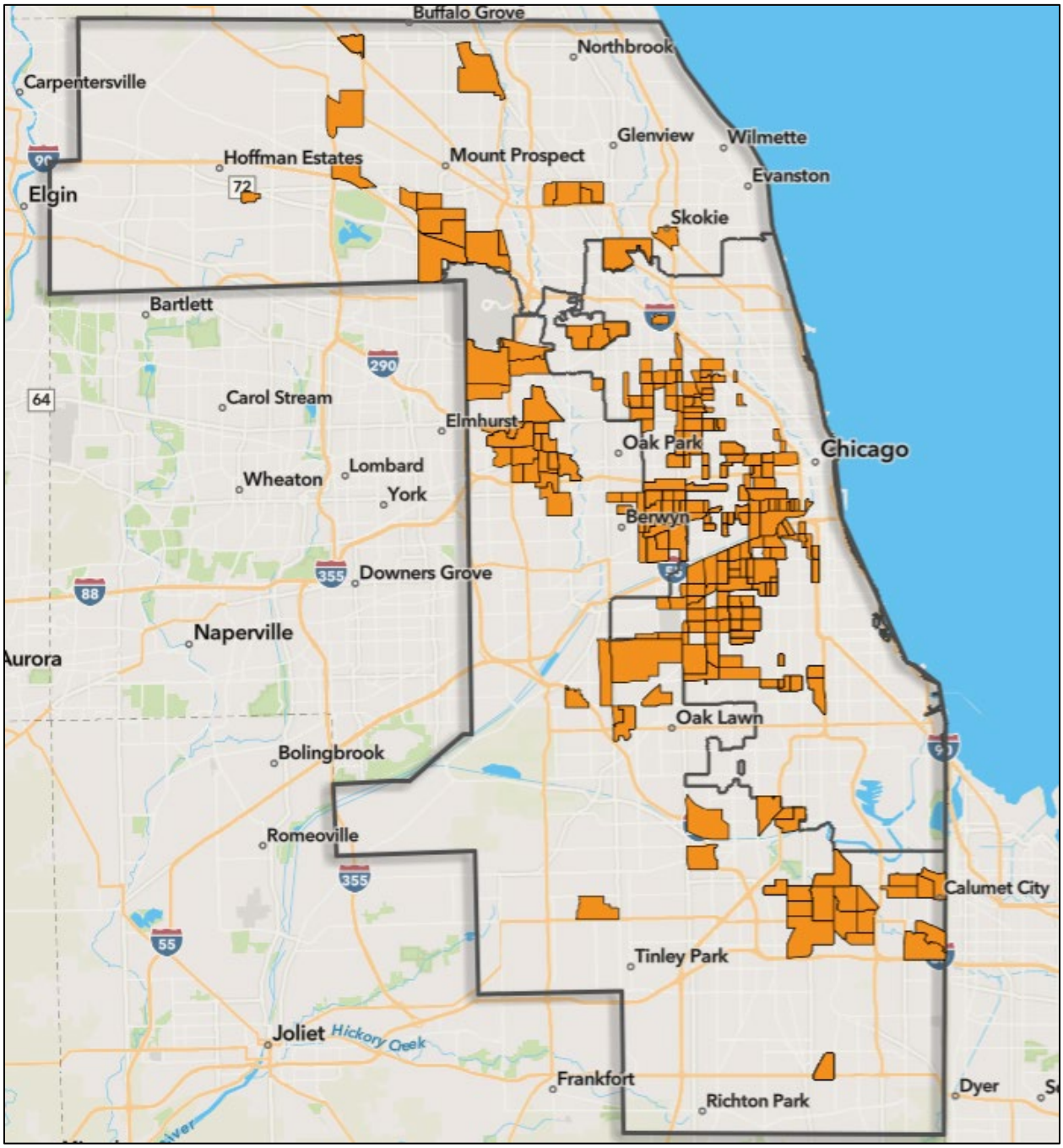
Annual days with Maximum temperature > 90°	12-18	19-51	21-50	22-69	30-75	26-86	47-113
Annual days with Maximum temperature > 100°	**0 days**	**2 days**	**2 days**	**4 days**	**7 days**	**7 days**	**24 days**
	0-0	0-6	0-7	0-16	1-23	1-16	2-67
Source: Climate Mapping for Resilience and Adaptation (2024)							

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL

Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation:							
Annual Average Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40“**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation (Wet Days)	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Maximum Period of Consecutive Wet Days	**10 days**	**10 days**	**10 days**	**10 days**	**11 days**	**10 days**	**10 days**
	10-12	9-12	9-12	9-12	9-12	9-12	9-13
Annual Days With:							
Annual Days With Total Precipitation > 1 inch	**4 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**6 days**
	3-5	4-6	4-6	4-6	4-7	4-7	5-9
Annual Days With Total Precipitation > 2 inches	**0 days**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**
	0-1	0-1	0-1	0-1	0-1	0-1	0-2
Annual Days With Total Precipitation > 3 inches	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**
	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Annual Days That Exceed 99th Percentile Precipitation	**5 days**	**6 days**	**6 days**	**7 days**	**7 days**	**7 days**	**8 days**
	5-7	5-8	5-8	6-8	6-9	6-9	7-10
*Days With Maximum Temperature Below 32*F*	**41 days**	**30 days**	**28 days**	**25 days**	**22 days**	**21 days**	**12 days**
	37-44	17-40	21-37	13-36	11-32	10-32	2-24
Source: Climate Mapping for Resilience and Adaptation (2024)							

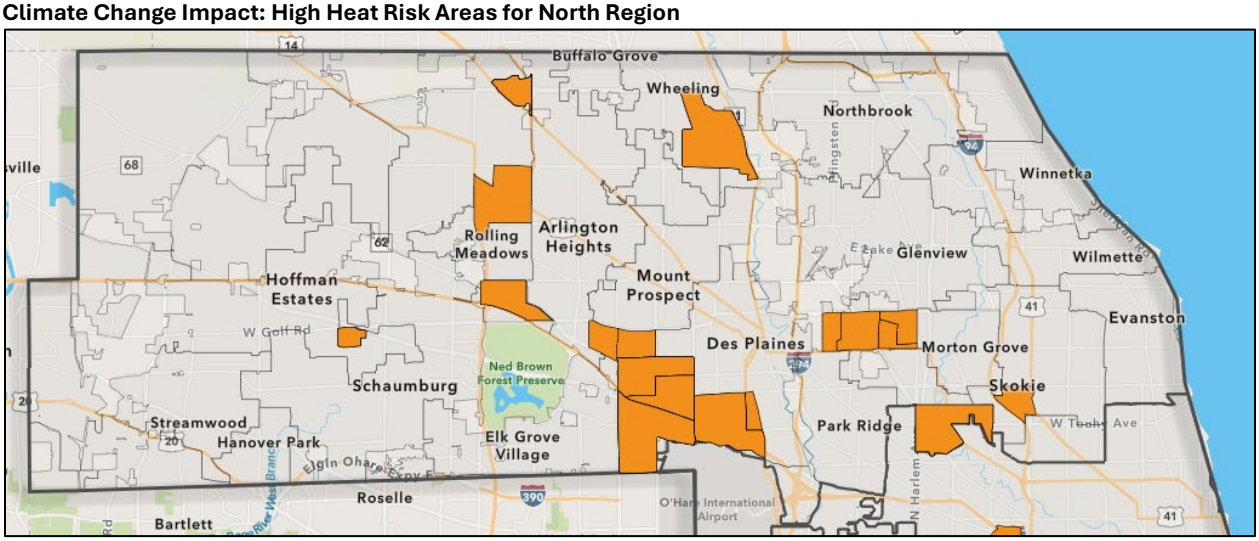
The figure below highlights the highest risk census tracts for extreme heat mitigation and intervention and associated challenges that communities face from climate change. This map examines where areas of high urban heat index, low tree canopy percentage, and high amounts of impervious surface overlap with one of eleven social vulnerability index variables. The resulting data shows census tracts that are at highest risk for extreme heat and contain populations who may be disproportionately affected by extreme heat events caused by climate change.

Climate Change Impact: High Heat Risk Areas for Cook County



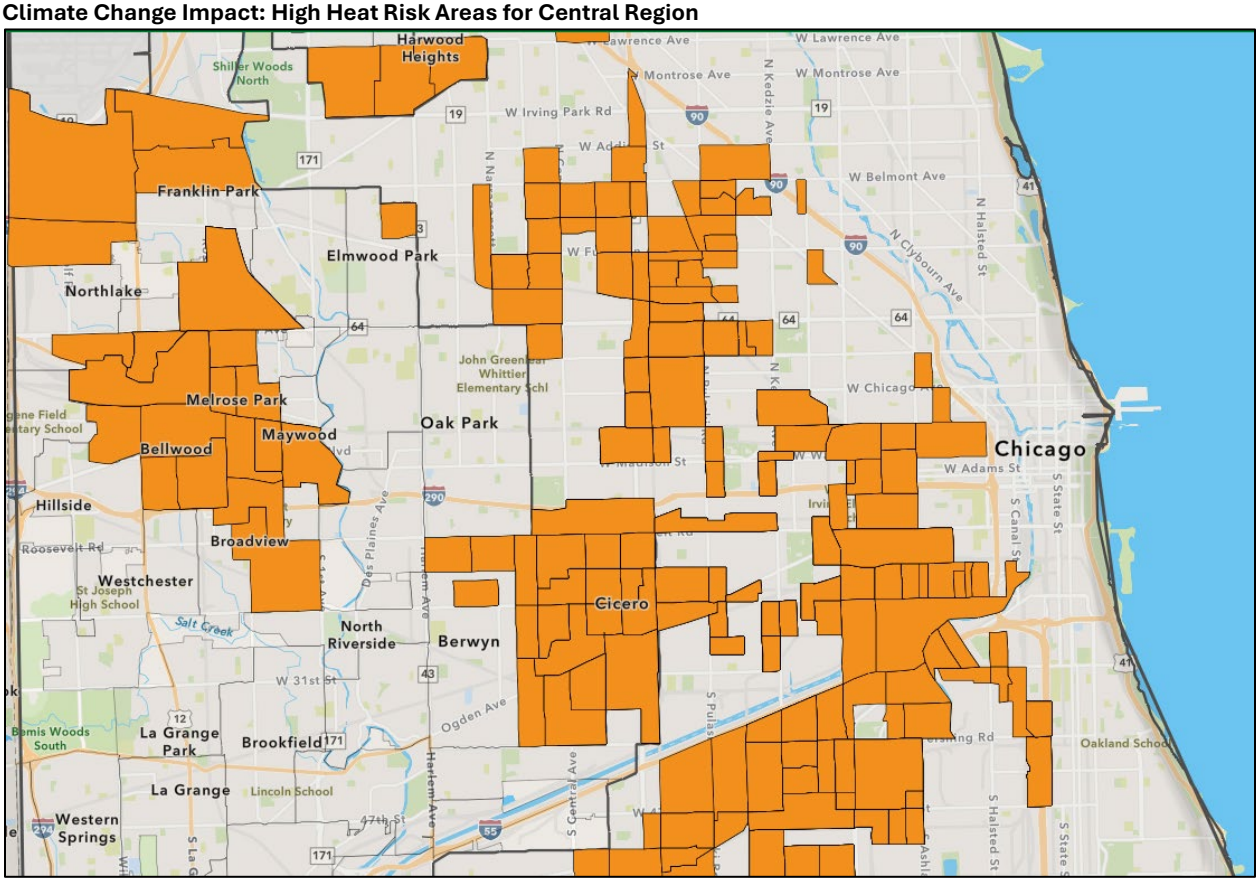
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for North Region



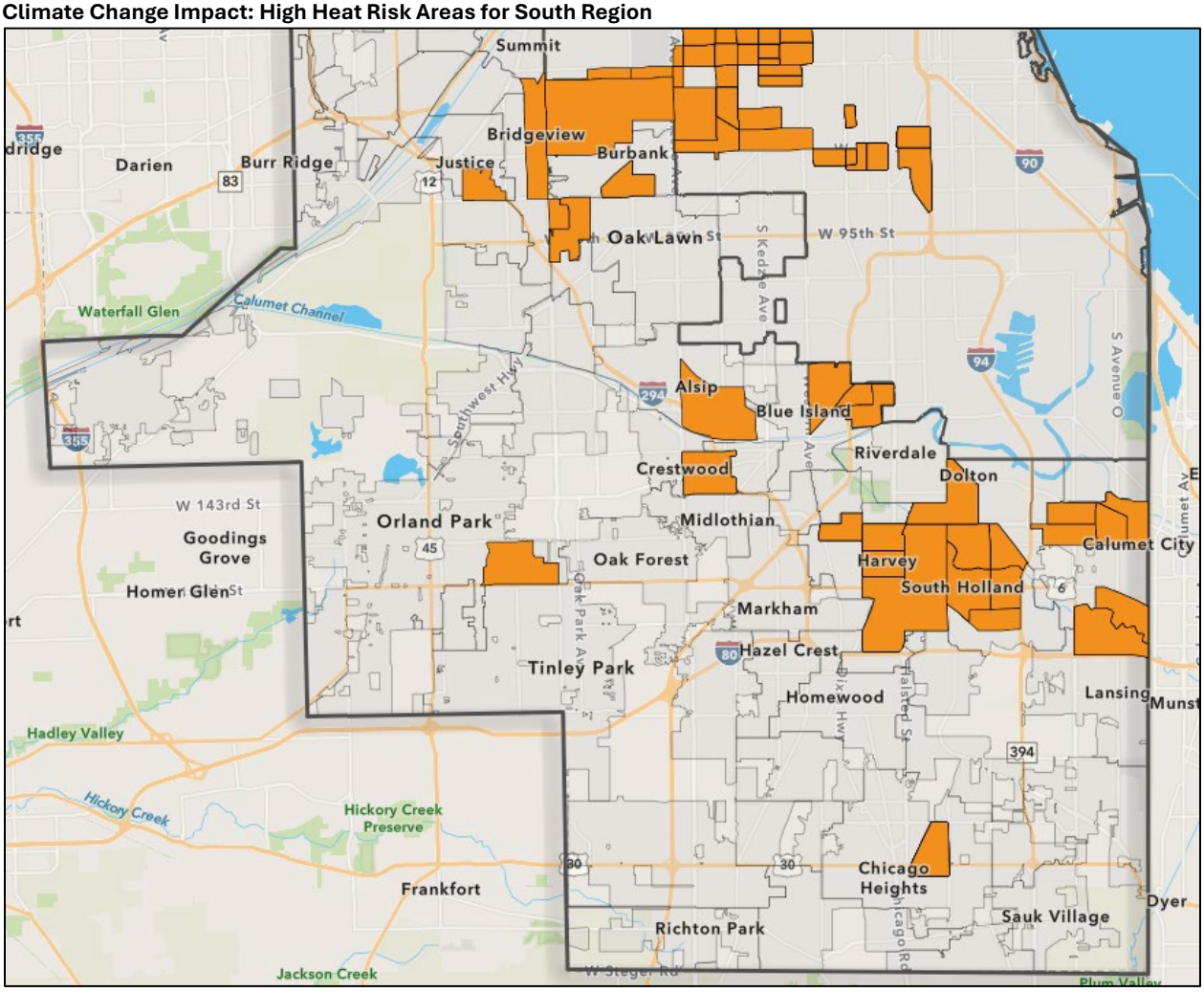
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for Central Region



Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for South Region



5.5.10 FEMA NRI Expected Annual Loss Estimates

COOK COUNTY, ILLINOIS
EXPECTED ANNUAL LOSS TABLE FOR EXTREME HEAT EVENTS

Annualized Frequency	Population	Population Equivalence	Building Value	Agriculture Value	Total EAL Value	Expected Annual Loss Rating	Expected Annual Loss Score
1.5 events per year	13.33	$154,608,948	$3,425	$1,827	$154,614,200	Very High	100.0

Period of Record: 2005-2021 (16 years)

COOK COUNTY, ILLINOIS
EXPECTED ANNUAL LOSS TABLE FOR LIGHTNING EVENTS

Annualized Frequency	Population	Population Equivalence	Building Value	Agriculture Value	Total EAL Value	Expected Annual Loss Rating	Expected Annual Loss Score
73.9 events per year	0.21	$2,492,830	$476,976	N/A	$2,969,805	Very High	99.1

Period of Record: 1991-2012 (22 years)

COOK COUNTY, ILLINOIS
EXPECTED ANNUAL LOSS TABLE FOR HAILSTORM EVENTS

Annualized Frequency	Population	Population Equivalence	Building Value	Agriculture Value	Total EAL Value	Expected Annual Loss Rating	Expected Annual Loss Score
4.1 events per year	0.04	$412,586	$1,129,266	$2,163	$1,544,015	Relatively Moderate	93.7

Period of Record: 1986-2021 (34 years)

COOK COUNTY, ILLINOIS
EXPECTED ANNUAL LOSS TABLE FOR STRONG WIND EVENTS

Annualized Frequency	Population	Population Equivalence	Building Value	Agriculture Value	Total EAL Value	Expected Annual Loss Rating	Expected Annual Loss Score
5.6 events per year	0.92	$10,673,065	$1,723,156	$1,315	$12,397,536	Very High	99.6

Period of Record: 1986-2021 (34 years)

Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.*
Expected Annual Loss Scores *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*

Source: FEMA National Risk Index (2024)

*** Note: The FEMA National Risk Index does not assess expected annual loss for dense fog events.*

5.5.11 FEMA NRI Hazard Specific Risk Index

COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – EXTREME HEAT EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$154,614,200	Very High	Relatively High	$187,764,913	100.0
COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – LIGHTNING EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$2,969,805	Very High	Relatively High	$3,600,856	99.1
COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – HAILSTORM EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$1,544,015	Very High	Relatively High	$1,824,094	93.9
COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – STRONG WIND EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$12,397,536	Very High	Relatively High	$14,964,947	99.7
FEMA Hazard-Type **Risk Index Scores** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.* *FEMA Hazard-Type* ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.* *FEMA Hazard-Type* ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*				
Source: FEMA National Risk Index (2024)				

*** Note: The FEMA National Risk Index does not assess hazard-specific risk for dense fog events.*

5.5.12 FEMA NRI Exposure Value Table

TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR EXTREME HEAT EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Extreme Heat	$61,228,367,602,051	$882,318,117,526	$60,346,027,604,756	5,202,243.76	$21,879,769
TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR LIGHTNING EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Lightning	$62,057,306,815,354	$893,116,815,354	$61,164,190,000,000	5,272,775.00	N/A
TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR HAILSTORM EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Hailstorm	$62,057,329,400,253	$893,116,815,354	$61,164,190,000,000	5,272,775.00	$22,584,899
TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR STRONG WIND EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Strong Wind	$62,057,329,400,253	$893,116,815,354	$61,164,190,000,000	5,272,775.00	$22,584,899

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*

Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*

Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

*** Note: The FEMA National Risk Index does not assess exposure value for dense fog events*

5.6 Severe Winter Weather

5.6.1 Hazard Description

In this *Plan*, Severe Winter Storms are considered to be heavy snow, blizzards, ice storms, and extreme cold/wind chill.

Heavy Snow: According to NOAA, a "Heavy Snow Warning" is issued when there is an imminent or occurring snowfall of 6 inches (15 cm) or more in 12 hours, or 8 inches (20 cm) or more in 24 hours. These criteria are specifically noted for the Midwest but may vary regionally across different parts of the United States, accommodating the varying climatic conditions and the impacts that such snowfall can have on those regions.

Blizzards: According to NOAA, a blizzard is defined by several specific conditions that must occur simultaneously for a period of 3 hours or longer. These conditions include sustained wind or frequent gusts reaching 35 miles per hour or more, and considerable falling and/or blowing snow that reduces visibility to less than one quarter of a mile. This severe weather event is characterized by its ability to significantly impair visibility and mobility, impacting transportation and safety over extended periods.

Ice Storms: According to NOAA, an ice storm is defined as a storm which results in the accumulation of at least 0.25 inches (about 6.4 mm) of ice on exposed surfaces. Ice storms are significant due to their ability to create hazardous driving and walking conditions, and they can easily cause tree branches and power lines to snap under the weight of the ice. This definition highlights the dangers posed by such storms, particularly regarding safety and the potential for widespread power outages.

Extreme Cold/Wind Chill: According to NOAA, "extreme cold" or "wind chill" is defined based on the effect of the wind on air temperature as it feels to exposed skin. The wind chill factor describes the combined effect of the wind and cold temperatures on exposed skin, which can increase the risk of frostbite and hypothermia. NOAA typically issues warnings related to extreme cold or wind chill when these conditions pose significant health risks, such as when wind chill values are expected to fall to dangerously low temperatures that could cause frostbite within minutes.

5.6.2 Hazard Location

Severe winter storms could occur anywhere within Cook County, Illinois.

5.6.3 Hazard Extent/Intensity

Heavy Snow: NWS measures the weight of snow on a given area, in pounds per square foot/kilogram, per square meter. In the table below, Snow Load accounts for the density and depth of accumulated snow on a surface, such as a roof or structure, and is crucial for assessing the potential stress and load-bearing capacity of buildings.

TABLE: NATIONAL WEATHER SERVICE SNOW LOAD INFORMATION			
WATER = 62.4 pounds/cubic foot			
INCHES	**WE=lbs./sq ft.**	**INCHES**	**WE=lbs./sq ft.**
1.0	5.2	21.0	109.2
2.0	10.4	22.0	114.4
3.0	15.6	23.0	119.6
4.0	20.8	24.0	124.8
5.0	26.0	25.0	130.0
6.0	31.2	26.0	135.2
7.0	36.4	27.0	140.4
8.0	41.6	28.0	145.6
9.0	46.8	29.0	150.8
10.0	52.0	30.0	156.0
11.0	57.2	31.0	161.2
12.0	62.4	32.0	166.4
13.0	67.6	33.0	171.6
14.0	72.8	34.0	176.8
15.0	78.0	35.0	182.0
16.0	83.2	36.0	187.2
17.0	88.4	37.0	192.4
18.0	93.6	38.0	197.6
19.0	98.8	39.0	202.8
20.0	104.0	40.0	208.0
Source: NWS Snow Load (2024)			

In addition, NOAA also produces the Regional Snowfall Index (RSI) (shown below) for significant snowstorms that impact the eastern two thirds of the U.S. The Regional Snowfall Index, however, can still be a useful tool for considering extent values of snowfall throughput in Cook County.

TABLE: NOAA REGIONAL SNOWFALL INDEX (RSI)		
Category	**RSI Value**	**Description**
1	1-3	Notable
2	3-6	Significant
3	6-10	Major
4	10-18	Crippling
5	18.0+	Extreme
Source: Regional Snowfall Index (RSI) | National Centers for Environmental Information (NCEI) (noaa.gov)		

Blizzards: NOAA measures the extent and intensity of a blizzard by assessing several meteorological variables over a minimum duration of three hours. These include sustained winds or frequent gusts of 35 miles per hour or more and considerable falling and/or blowing snow reducing visibility to less than one-quarter mile. This combination of high winds and low visibility must persist for at least three hours to qualify as a blizzard. These criteria are crucial for issuing blizzard warnings, which are based on forecasts and observations using advanced weather tracking and prediction technologies.

Ice Storms: To measure the extent and intensity of ice storms, NOAA considers the amount of ice accumulation resulting from the storm, typically using the threshold of 0.25 inches (about 6.4 mm) of ice on exposed surfaces to define a significant ice storm event. This accumulation can be estimated using various meteorological data and observations. Additionally, the Sperry–Piltz Ice Accumulation Index (SPIA Index) is used for rating ice storm intensity based on expected ice accumulation and the potential damage to human-built structures, particularly utility systems like power lines. This index helps categorize the severity of ice storms and predict their likely impacts on infrastructure and public safety.

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 – 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

Source: SPIA Index

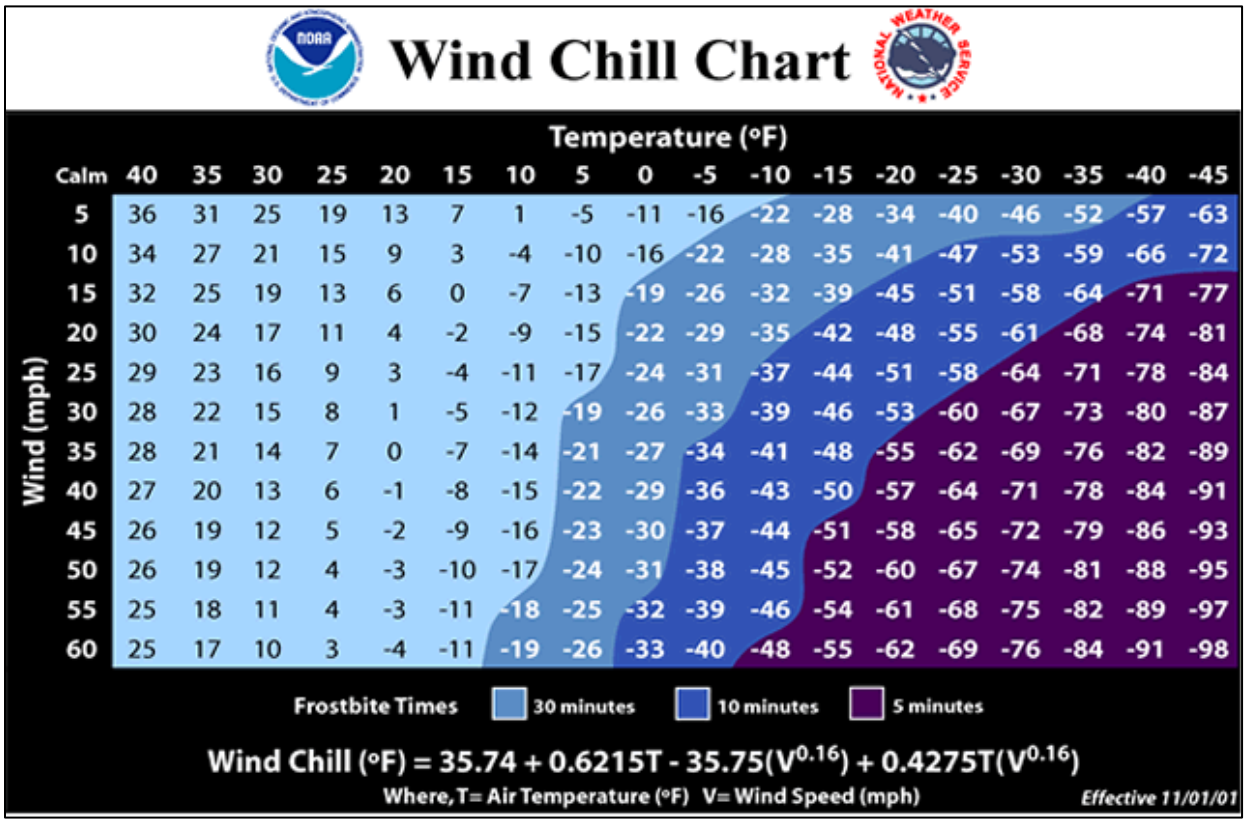
Extreme Cold: NOAA measures the extent and intensity of extreme cold using a combination of meteorological tools and observation networks. The assessment of extreme cold conditions involves analyzing various data points and indicators, including:

- Temperature Readings: NOAA uses a network of weather stations and temperature sensors to record air temperature data. During extreme cold events, temperature readings well below the normal or seasonal averages are noted. Extremely low temperatures are a primary indicator of the intensity of extreme cold conditions.
- Wind Chill Index: In addition to actual air temperature, NOAA calculates the wind chill index. This index reflects how cold it feels to the human body and is determined by a combination

of air temperature and wind speed. A lower wind chill index indicates more severe cold conditions.

- Historical Climate Data: NOAA maintains extensive records of historical climate data, including records of the lowest temperatures ever recorded in specific locations. Comparing current temperatures to historical records helps assess the extremeness of the cold event.
- Duration of Extreme Cold: The length of time that extreme cold conditions persist is another factor in assessing their intensity. Prolonged periods of extreme cold can have more significant impacts on both the environment and human health.
- Wind Speed and Gusts: Wind speed and gusts can exacerbate the intensity of extreme cold. NOAA monitors these parameters to determine whether wind-driven cold temperatures are causing more significant issues.
- Real-Time Monitoring: NOAA continuously collects real-time data from weather stations and sensors to monitor the current conditions during an extreme cold event. These data points provide insights into the extent and intensity of the event.
- Public Reports: Reports from the public, including trained weather spotters and community members, are valuable sources of information regarding the extent and impacts of extreme cold. Public reports contribute to NOAA's understanding of the real-time conditions on the ground.

NOAA uses all of these tools and data sources to assess the extent and intensity of extreme cold conditions and to issue appropriate advisories and warnings, such as Wind Chill Warnings and Extreme Cold Warnings, to inform the public and provide guidance on how to stay safe during extreme cold events.



- **Severe Winter Storms**: The extent of the historical winter storms varies in terms of storm location, temperature, and ice or snowfall. A severe winter storm can occur anywhere in Cook County.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Severe Winter Weather	County-wide	No property Damage	$500,000 Property damage	Multiple instances of severe winter weather have occurred (2018-2023), one storm causing $500,000 in property damage.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT – Snow Events				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Precipitation (Snow)	Arlington Heights	0.0 inches	4.2 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 15* to *March 30*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Arlington Heights is *February*, with an average snowfall of *4.2 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 30* to *November 15*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Alsip	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Alsip is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Barrington	0.0 inches	4.8 inches	The *snowy* period of the year lasts for *4.7 months*, from *November 10* to *April 2*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Barrington is *January*, with an average snowfall of *4.8 inches*. The *snowless* period of the year lasts for *7.3 months*, from *April 2* to *November 10*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Bedford Park	0.0 inches		Not Available.
Precipitation (Snow)	Bellwood	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Bellwood is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Berkeley	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Berkeley is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 27* to *November 19*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Berwyn	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 23* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Berwyn is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 23*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Blue Island	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Blue Island is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 22*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Bridgeview	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Bridgeview is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Broadview	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Broadview is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Brookfield	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Brookfield is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Buffalo Grove	0.0 inches	4.2 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 15* to *March 30*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Buffalo Grove is *February*, with an average snowfall of *4.2 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 30* to *November 15*. The *least snow* falls around *July 18*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Burbank	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Burbank is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Burnham	0.0 inches	3.5 inches	The *snowy* period of the year lasts for *3.9 months*, from *November 26* to *March 23*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Burnham is *February*, with an average snowfall of *3.5 inches*. The *snowless* period of the year lasts for *8.1 months*, from *March 23* to *November 26*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Calumet City	0.0 inches	3.5 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 25* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Calumet City is *February*, with an average snowfall of *3.5 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 25*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Calumet Park	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 23* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Calumet Park is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 23*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Chicago Heights	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Chicago Heights is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Chicago Ridge	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Chicago Ridge is *February*, with an average snowfall of *3.9 inches*.

				The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Cicero	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 24* to *March 23*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Cicero is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 23* to *November 24*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	City of Chicago	0.0 inches	3.2 inches	The *snowy* period of the year lasts for *3.5 months*, from *December 1* to *March 18*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Chicago is *February*, with an average snowfall of *3.2 inches*. The *snowless* period of the year lasts for *8.5 months*, from *March 18* to *December 1*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Country Club Hills	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Country Club Hills is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Countryside	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Countryside is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Crestwood	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Crestwood is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Des Plaines	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 11* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Des Plaines is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 27* to *November 11*. The *least snow* falls around *July 28*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Dixmoor	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Dixmoor is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Dolton	0.0 inches	3.5 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 25* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Dolton is *February*, with an average snowfall of *3.5 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 25*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	East Hazel Crest	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in East Hazel Crest is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Elgin (New for 2024)	0.0 inches	4.3 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 14* to *March 30*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Elgin is *January*, with an average snowfall of *4.3 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 30* to *November 14*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Elk Grove Village	0.0 inches	4.3 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 15* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Elk Grove Village is *February*, with an average snowfall of *4.3 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 15*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Elmwood Park	0.0 inches	3.7 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 17* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Elmwood Park is *February*, with an average snowfall of *3.7 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 25* to *November 17*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Evanston	0.0 inches	3.4 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 9* to *March 23*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Evanston is *February*, with an average snowfall of *3.4 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 23* to *November 9*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Evergreen Park	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Evergreen Park is *February*, with an average snowfall of *3.8 inches*.

				The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 22*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Flossmoor	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Flossmoor is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Ford Heights	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Ford Heights is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Forest Park	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 23* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Forest Park is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 23*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Forest View			Not Available.
Precipitation (Snow)	Franklin Park	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Franklin Park is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Glencoe	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 6* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Glencoe is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.3 months*, from *March 27* to *November 6*. The *least snow* falls around *July 16*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Glenview	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 5* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Glenview is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.3 months*, from *March 26* to *November 5*. The *least snow* falls around *July 13*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Glenwood	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Glenwood is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Golf			Not Available.
Precipitation (Snow)	Hanover Park	0.0 inches	4.5 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 13* to *March 31*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hanover Park is *February*, with an average snowfall of *4.5 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 31* to *November 13*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Harvey	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Harvey is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Harwood Heights	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 14* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Harwood Heights is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 26* to *November 14*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Hazel Crest	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hazel Crest is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 28* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Hickory Hills	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hickory Hills is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Hillside	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hillside is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 27* to *November 19*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Hodgkins	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hodgkins is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Hoffman Estates	0.0 inches	4.5 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 12* to *April 1*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hoffman Estates is *January*, with an average snowfall of *4.5 inches*. The *snowless* period of the year lasts for *7.4 months*, from *April 1* to *November 12*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Hometown	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Hometown is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 22*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Homewood	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 20* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Homewood is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Indian Head Park	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 19* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Indian Head Park is *February*, with an average snowfall of *4.0 inches*.

				The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 19*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Inverness	0.0 inches	4.7 inches	The *snowy* period of the year lasts for *4.7 months*, from *November 11* to *April 2*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Inverness is *January*, with an average snowfall of *4.7 inches*. The *snowless* period of the year lasts for *7.3 months*, from *April 2* to *November 11*. The *least snow* falls around *July 22*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Justice	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Justice is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Kenilworth	0.0 inches	3.5 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 8* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Kenilworth is *February*, with an average snowfall of *3.5 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 24* to *November 8*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	LaGrange			Not Available.
Precipitation (Snow)	LaGrange Park			Not Available.
Precipitation (Snow)	Lansing	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Lansing is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 28* to *November 21*.

				The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Lemont	0.0 inches	4.2 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 17* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Lemont is *February*, with an average snowfall of *4.2 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 17*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Lincolnwood	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 13* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Lincolnwood is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 24* to *November 13*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Lynwood	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Lynwood is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 29* to *November 19*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Lyons	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Lyons is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Markham	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Markham is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Matteson	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Matteson is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Maywood	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Maywood is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 28*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	McCook			Not Available.
Precipitation (Snow)	Melrose Park	0.0 inches	3.7 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Melrose Park is *February*, with an average snowfall of *3.7 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 22*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Merrionette Park	0.0 inches	3.7 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Merrionette Park is *February*, with an average snowfall of *3.7 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 22*.

				The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Midlothian	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Midlothian is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Morton Grove	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 8* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Morton Grove is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 26* to *November 8*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Mount Prospect	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 11* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Mount Prospect is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 28* to *November 11*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	MWRD			Not Available.
Precipitation (Snow)	Niles	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 9* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Niles is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 26* to *November 9*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Norridge	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 14* to *March 26*, with a sliding 31-day snowfall of at least *1.0*

				inches. The month with the most snow in Norridge is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 26* to *November 14*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	North Riverside	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in North Riverside is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Northbrook	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 8* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Northbrook is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 27* to *November 8*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Northfield	0.0 inches	3.7 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 5* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Northfield is *February*, with an average snowfall of *3.7 inches*. The *snowless* period of the year lasts for *7.3 months*, from *March 26* to *November 5*. The *least snow* falls around *July 13*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Northlake	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 18* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Northlake is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 18*.

				The *least snow* falls around *July 28*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Oak Forest	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Oak Forest is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Oak Lawn	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Oak Lawn is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Oak Park	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 24* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Oak Park is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 24*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Olympia Fields	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Olympia Fields is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Orland Hills	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Orland Hills is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Orland Park	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Orland Park is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Palatine	0.0 inches	4.3 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 13* to *March 31*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Palatine is *February*, with an average snowfall of *4.3 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 31* to *November 13*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Palos Heights	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Palos Heights is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 20*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Palos Hills	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Palos Hills is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Palos Park	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Palos Park is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 28* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Park Forest	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 23* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Forest Park is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 23*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Park Ridge	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 10* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Park Ridge is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 27* to *November 10*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Phoenix	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Phoenix is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Posen	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Posen is *February*, with an average snowfall of *3.9 inches*.

				The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Prospect Heights	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 16* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Prospect Heights is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 16*. The *least snow* falls around *July 22*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Richton Park	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Richton Park is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	River Forest	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 24* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in River Forest is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 24*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*
Precipitation (Snow)	River Grove	0.0 inches	3.8 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 22* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in River Grove is *February*, with an average snowfall of *3.8 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 22*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Riverdale	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 23* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Riverdale is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 23*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Riverside	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 23* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Riverdale is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 25* to *November 23*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Robbins	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Robbins is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Rolling Meadows	0.0 inches	4.3 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 14* to *March 30*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Rolling Meadows is *February*, with an average snowfall of *4.3 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 30* to *November 14*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Rosemont	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 14* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Rosemont is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 27* to *November 14*. The *least snow* falls around *July 28*, with an average total accumulation of *0.0 inches*.

Precipitation (Snow)	Sauk Village	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Sauk Village is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Schaumburg	0.0 inches	4.5 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 12* to *April 1*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Schaumburg is *January*, with an average snowfall of *4.5 inches*. The *snowless* period of the year lasts for *7.4 months*, from *April 1* to *November 12*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Schiller Park	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 15* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Schiller Park is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 26* to *November 15*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Skokie	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 8* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Skokie is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 24* to *November 8*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	South Barrington	0.0 inches	4.7 inches	The *snowy* period of the year lasts for *4.7 months*, from *November 11* to *April 2*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in South Barrington is *January*, with an average snowfall of *4.7 inches*.

				The *snowless* period of the year lasts for *7.3 months*, from *April 2* to *November 11*. The *least snow* falls around *July 22*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	South Chicago Heights	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in South Chicago Heights is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	South Holland	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in South Holland is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Steger	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 18* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Steger is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 18*. The *least snow* falls around *July 17*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Stickney	0.0 inches	3.7 inches	The *snowy* period of the year lasts for *4.0 months*, from *November 23* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Stickney is *February*, with an average snowfall of *3.7 inches*. The *snowless* period of the year lasts for *8.0 months*, from *March 24* to *November 23*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Stone Park	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in

				Stone Park is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 27* to *November 19*. The *least snow* falls around *July 28*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Streamwood	0.0 inches	4.4 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 13* to *March 31*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Streamwood is *January*, with an average snowfall of *4.4 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 31* to *November 13*. The *least snow* falls around *July 23*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Summit	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Summit is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 21*. The *least snow* falls around *July 26*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Thornton	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Thornton is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 28* to *November 20*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Tinley Park	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.3 months*, from *November 19* to *March 28*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Tinley Park is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.7 months*, from *March 28* to *November 19*.

				The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	University Park	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 21* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in University Park is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 21*. The *least snow* falls around *July 21*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Unincorporated Cook County			Not Available.
Precipitation (Snow)	Westchester	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Westchester is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Western Springs	0.0 inches	4.0 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 27*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Western Springs is *February*, with an average snowfall of *4.0 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 27* to *November 20*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Wheeling	0.0 inches	4.1 inches	The *snowy* period of the year lasts for *4.4 months*, from *November 16* to *March 29*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Wheeling is *February*, with an average snowfall of *4.1 inches*. The *snowless* period of the year lasts for *7.6 months*, from *March 29* to *November 16*. The *least snow* falls around *July 22*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Willow Springs	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.2 months*, from *November 20* to *March 26*, with a sliding 31-day snowfall of at least *1.0*

				inches. The month with the most snow in Willow Springs is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.8 months*, from *March 26* to *November 20*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Wilmette	0.0 inches	3.5 inches	The *snowy* period of the year lasts for *4.5 months*, from *November 7* to *March 24*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Wilmette is *February*, with an average snowfall of *3.5 inches*. The *snowless* period of the year lasts for *7.5 months*, from *March 24* to *November 7*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Winnetka	0.0 inches	3.6 inches	The *snowy* period of the year lasts for *4.6 months*, from *November 7* to *March 25*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Winnetka is *February*, with an average snowfall of *3.6 inches*. The *snowless* period of the year lasts for *7.4 months*, from *March 25* to *November 7*. The *least snow* falls around *July 24*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Worth	0.0 inches	3.9 inches	The *snowy* period of the year lasts for *4.1 months*, from *November 21* to *March 26*, with a sliding 31-day snowfall of at least *1.0 inches*. The month with the most snow in Worth is *February*, with an average snowfall of *3.9 inches*. The *snowless* period of the year lasts for *7.9 months*, from *March 26* to *November 21*. The *least snow* falls around *July 19*, with an average total accumulation of *0.0 inches*.
Precipitation (Snow)	Cook County Forest Preserve District (New for 2024)			Not Available.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT – Extreme Temperatures				
Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Extreme Heat & Extreme Cold	Arlington Heights	-3°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from 17°F to 84°F and is rarely below -3°F or above 93°F.
Extreme Heat & Extreme Cold	Alsip	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Barrington	-7°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *14°F* to *85°F* and is rarely below *-7°F* or above *93°F*.
Extreme Heat & Extreme Cold	Bedford Park			Not Available
Extreme Heat & Extreme Cold	Bellwood	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Berkeley	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Berwyn	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Blue Island	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.

Extreme Heat & Extreme Cold	Bridgeview	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *85°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Broadview	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Brookfield	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Buffalo Grove	-3°F	93°F	the summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-3°F* or above *93°F*.
Extreme Heat & Extreme Cold	Burbank	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Burnham	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Calumet City	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Calumet Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Chicago Heights	-1°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *18°F* to *84°F* and is rarely below *-1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Chicago Ridge	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Cicero	3°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *3°F* or above *92°F*.
Extreme Heat & Extreme Cold	City of Chicago	5°F	91°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *22°F* to *83°F* and is rarely below *5°F* or above *91°F*.
Extreme Heat & Extreme Cold	Country Club Hills	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Countryside	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Crestwood	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Des Plaines	-1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Dixmoor	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.

Extreme Heat & Extreme Cold	Dolton	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	East Hazel Crest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Elgin	-4°F	91°F	The summers are long, warm, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *84°F* and is rarely below *-4°F* or above *91°F*.
Extreme Heat & Extreme Cold	Elk Grove Village	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Elmwood Park	2°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Evanston	4°F	90°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *4°F* or above *90°F*.
Extreme Heat & Extreme Cold	Evergreen Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Flossmoor	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Ford Heights	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.
Extreme Heat & Extreme Cold	Forest Park	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Forest View			Not Available
Extreme Heat & Extreme Cold	Franklin Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Glencoe	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.
Extreme Heat & Extreme Cold	Glenview	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Glenwood	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Golf			Not Available
Extreme Heat & Extreme Cold	Hanover Park	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *84°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Harvey	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.

Extreme Heat & Extreme Cold	Harwood Heights	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.
Extreme Heat & Extreme Cold	Hazel Crest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hickory Hills	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Hillside	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hodgkins	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Hoffman Estates	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Hometown	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Homewood	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Indian Head Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from

				18°F to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Inverness	-5°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *15°F* to *85°F* and is rarely below *-5°F* or above *93°F*.
Extreme Heat & Extreme Cold	Justice	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Kenilworth	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	LaGrange			Not Available
Extreme Heat & Extreme Cold	LaGrange Park			Not Available
Extreme Heat & Extreme Cold	Lansing	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Lemont	-1°F	92°F	The summers are long, warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Lincolnwood	3°F	90°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *82°F* and is rarely below *3°F* or above *90°F*.
Extreme Heat & Extreme Cold	Lynwood	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.

Extreme Heat & Extreme Cold	Lyons	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Markham	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Matteson	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Maywood	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	McCook			Not Available
Extreme Heat & Extreme Cold	Melrose Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Merrionette Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Midlothian	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Morton Grove	2°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *2°F* or above *91°F*.

Extreme Heat & Extreme Cold	Mount Prospect	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	MWRD			Not Available
Extreme Heat & Extreme Cold	Niles	1°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *1°F* or above *91°F*.
Extreme Heat & Extreme Cold	Norridge	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	North Riverside	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northbrook	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northfield	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Northlake	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Oak Forest	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.

Extreme Heat & Extreme Cold	Oak Lawn	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *93°F*.
Extreme Heat & Extreme Cold	Oak Park	3°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *83°F* and is rarely below *3°F* or above *92°F*.
Extreme Heat & Extreme Cold	Olympia Fields	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Orland Hills	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Orland Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palatine	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Palos Heights	0°F	°92F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palos Hills	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Palos Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies

				from *18°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Park Forest	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	Park Ridge	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Phoenix	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Posen	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Prospect Heights	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Richton Park	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	River Forest	2°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *92°F*.
Extreme Heat & Extreme Cold	River Grove	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *83°F* and is rarely below *1°F* or above *92°F*.

Extreme Heat & Extreme Cold	Riverdale	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Riverside	1°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Robbins	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Rolling Meadows	-3°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *85°F* and is rarely below *-3°F* or above *93°F*.
Extreme Heat & Extreme Cold	Rosemont	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Sauk Village	0°F	93°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *93°F*.
Extreme Heat & Extreme Cold	Schaumburg	-4°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *85°F* and is rarely below *-4°F* or above *93°F*.
Extreme Heat & Extreme Cold	Schiller Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Skokie	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from

				21°F to *83°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	South Barrington	-6°F	94°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *15°F* to *85°F* and is rarely below *-6°F* or above *94°F*.
Extreme Heat & Extreme Cold	South Chicago Heights	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	South Holland	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Steger	-1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Stickney	2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *84°F* and is rarely below *2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Stone Park	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Streamwood	-4°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *16°F* to *84°F* and is rarely below *-4°F* or above *92°F*.
Extreme Heat & Extreme Cold	Summit	1°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *85°F* and is rarely below *1°F* or above *93°F*.

Extreme Heat & Extreme Cold	Thornton	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Tinley Park	0°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	University Park	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Unincorporated Cook County			Not Available
Extreme Heat & Extreme Cold	Westchester	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Western Springs	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *18°F* to *84°F* and is rarely below *-0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Wheeling	-2°F	93°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *17°F* to *84°F* and is rarely below *-2°F* or above *93°F*.
Extreme Heat & Extreme Cold	Willow Springs	0°F	92°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *0°F* or above *92°F*.
Extreme Heat & Extreme Cold	Wilmette	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *21°F* to *83°F* and is rarely below *3°F* or above *91°F*.

Extreme Heat & Extreme Cold	Winnetka	3°F	91°F	The summers are warm and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *20°F* to *82°F* and is rarely below *3°F* or above *91°F*.
Extreme Heat & Extreme Cold	Worth	1°F	92°F	The summers are warm, humid, and wet; the winters are freezing, snowy, and windy; and it is partly cloudy year-round. Over the course of the year, the temperature typically varies from *19°F* to *84°F* and is rarely below *1°F* or above *92°F*.
Extreme Heat & Extreme Cold	Cook County Forest Preserve District (New for 2024)			Not Available

5.6.4 Frequency and Probability

Heavy Snow Frequency: Between 1997 and 2023, Cook County experienced 24 heavy snow events. This equates to an average of 0.92307692 heavy snow events/year.

Heavy Snow Probability: NOAA measures the probability of heavy snow by using probabilistic snowfall forecasts that estimate the likelihood of reaching specific snow accumulation thresholds. This approach involves analyzing data from various meteorological sources including computer models, satellite observations, and historical weather patterns. Forecasts are often presented in multi-panel charts that show the probabilities of snow reaching or exceeding accumulation levels such as 4, 8, and 12 inches over a set period, typically spanning from one to three days.

Blizzard Frequency: Between 2000 and 2023, Cook County experienced 4 blizzard events. This equates to an average of 0.17391304 blizzard events/year.

Blizzard Probability: NOAA measures the probability of a blizzard by analyzing combined probabilities of low visibility and high sustained wind speeds, specifically where visibility is less than a quarter mile and winds are at or exceed 35 miles per hour. This analysis is contingent upon at least one ensemble member indicating snowfall during the previous hour. These combined factors are essential in determining the likelihood of blizzard conditions, enabling NOAA to provide accurate forecasts and warnings.

Ice Storms Frequency: Between 2007 and 2023, Cook County experienced 3 ice storm events. This equates to an average of 0.1875 ice storm events/year.

Ice Storm Probability: The probability of an ice storm is measured by NOAA through the use of various forecasting tools and models. One such tool is the Winter Storm Severity Index (WSSI), which assesses the likelihood and potential severity of winter precipitation, including ice accumulation. This index helps forecast the impacts of ice storms by considering factors such as expected ice accumulation, temperatures, and wind speeds during the event.

Moreover, NOAA employs the SPIA Index (shown above), which utilizes key parameters like storm total rainfall converted to ice accumulation, wind, and temperatures during the event period. These measurements are used in conjunction with digital forecasts to accurately predict the duration and severity of ice storms, aiding in the preparation and response efforts.

Extreme Cold/Wind Chill Frequency: Between 2006 and 2024, Cook County experienced 17 extreme cold/wind chill events. This equates to an average of 0.94444444 extreme cold/wind chill events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

Extreme Cold/Wind Chill Probability: NOAA measures the probability of extreme cold using meteorological tools and data analysis. It closely monitors temperature forecasts and calculates the Wind Chill Index, which assesses the impact of temperature and wind speed on human comfort. Advanced meteorological models are used to forecast extreme cold events by considering atmospheric conditions, high-pressure systems, temperature anomalies, and other relevant factors. Historical climate data and records of the lowest temperatures recorded in specific areas aid in evaluating the probability of extreme cold. NOAA also examines the expected duration and intensity of extreme cold, particularly during prolonged periods of low temperatures. Collaboration with public health agencies enhances the analysis of cold-related illnesses, and advisories and warnings are issued to provide the public with information about the likelihood of extreme cold, health risks, and recommended safety measures.

5.6.5 Past Events

(Note: Events are listed in the table based on impacts to an area (zone) of Cook County; impacts to more than one area (zone) will result in multiple entries.)

Table: Past Heavy Snow Events in Cook County from 1997-2023

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**1**	**0**	**0.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	12/09/1997	18:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/08/1998	06:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/09/1998	04:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/01/1999	19:00	Heavy Snow	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/05/1999	17:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/08/1999	17:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/18/2000	03:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/04/2004	07:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/04/2005	19:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/21/2005	16:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	12/15/2007	15:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	12/31/2007	14:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/26/2013	10:30	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/04/2014	09:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/01/2014	04:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/04/2014	12:00	Heavy Snow	0	0	0.00K	0.00K

COOK (ZONE)	COOK (ZONE)	IL	02/17/2014	07:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/11/2014	22:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/01/2015	00:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/25/2015	16:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/23/2015	01:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	11/20/2015	16:00	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/24/2016	11:17	Heavy Snow	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	12/04/2016	09:02	Heavy Snow	0	0	0.00K	0.00K

Table: Past Blizzard Events in Cook County from 2000-2023

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**1**	**0**	**200.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	12/11/2000	03:00	Blizzard	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/13/2007	02:00	Blizzard	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/02/2007	14:00	Blizzard	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/01/2011	09:00	Blizzard	1	0	200.00K	0.00K

Table: Past Ice Storm Events in Cook County from 2014-2023

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**0**	**0**	**0.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	12/01/2007	12:30	Ice Storm	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/11/2019	16:15	Ice Storm	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	02/22/2023	08:00	Ice Storm	0	0	0.00K	0.00K

Table: Past Extreme Cold/Wind Chill Events in Cook County from 2006-2024

Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
Totals:						**34**	**5**	**0.00K**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	12/02/2006	22:00	Extreme Cold/wind Chill	7	5	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/28/2007	00:00	Extreme Cold/wind Chill	2	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/01/2007	00:00	Extreme Cold/wind Chill	10	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	03/02/2007	16:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/22/2008	12:00	Extreme Cold/wind Chill	5	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/29/2008	19:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	02/10/2008	03:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K

Table: Past Extreme Cold/Wind Chill Events in Cook County from 2006-2024									
Location	County	State	Date	Time	Type	Dth	Inj	PrD	CrD
COOK (ZONE)	COOK (ZONE)	IL	12/21/2008	07:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/05/2009	00:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/15/2009	09:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/21/2009	00:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/25/2009	00:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/06/2014	02:00	Extreme Cold/wind Chill	4	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/28/2014	07:00	Extreme Cold/wind Chill	1	0	0.00K	0.00K
COOK (ZONE)	COOK (ZONE)	IL	01/29/2019	22:51	Extreme Cold/wind Chill	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	12/23/2022	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
SOUTHERN COOK COUNTY (ZO...	SOUTHERN COOK COUNTY (ZO...	IL	12/23/2022	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	12/23/2022	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
NORTHERN COOK COUNTY (ZO...	NORTHERN COOK COUNTY (ZO...	IL	01/14/2024	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
CENTRAL COOK COUNTY (ZON...	CENTRAL COOK COUNTY (ZON...	IL	01/14/2024	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K
SOUTHERN COOK COUNTY (ZO...	SOUTHERN COOK COUNTY (ZO...	IL	01/14/2024	00:00	Extreme Cold/wind Chill	0	0	0.00K	0.00K

5.6.6 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Moderate**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Moderate**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Significant**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Minimal**
Water Systems Potable Water Infrastructure, Wastewater Management	**Moderate**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown	

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health (Heavy Snow): According to NOAA, the life safety and public health impacts of heavy snow are as follows:

- Increased Accidents and Injuries: Heavy snow can lead to treacherous driving conditions, resulting in higher accident rates. Roads become slippery and visibility is reduced, increasing the risk of vehicular accidents. Pedestrians also face risks from slippery sidewalks and the potential for falling icicles and snow from buildings.
- Health Risks from Cold Exposure: Exposure to cold temperatures can lead to frostbite and hypothermia, especially for vulnerable populations such as the elderly and homeless. These conditions occur when the body is exposed to cold and begins to lose heat faster than it can be produced.
- Cardiac Issues: Shoveling snow is a physically demanding task that significantly raises the heart rate and blood pressure. This strenuous activity can lead to heart attacks, particularly in those who are not accustomed to regular physical activity or who have pre-existing heart conditions.
- Strain on Public Health Systems: During heavy snowfalls, access to medical facilities can be compromised. The demand for emergency services increases, while the ability to provide these services is often hindered by the weather conditions. This can delay treatment for acute health emergencies.
- Mental Health Impact: The isolating effect of heavy snow can lead to increased anxiety and depression for individuals cut off from social contact and regular activities, particularly during prolonged snow events.

Life Safety and Public Health (Blizzards): According to NOAA, the life safety and public health impacts of blizzards are as follows:

- Health Risks: Blizzards can lead to dangerous conditions such as hypothermia and frostbite due to the extreme cold and wind. The risks are heightened for vulnerable populations like the elderly, those without adequate heating, or individuals who are stranded or homeless during a blizzard.
- Accidents and Injuries: The combination of ice, snow, and poor visibility significantly increases the risk of vehicular accidents. Slippery roads and reduced visibility make driving perilous. Similarly, walking conditions become treacherous, leading to a higher incidence of falls and related injuries.
- Isolation and Mental Health Effects: Heavy snowfall and the subsequent cleanup can lead to extended periods of isolation for individuals, particularly in rural areas. This isolation can exacerbate feelings of loneliness and depression, especially among the elderly and those living alone.
- Strain on Emergency Services: Access to emergency services and medical care can be severely hindered during blizzards. Emergency responders may have difficulty reaching those in need, and power outages can affect medical facilities, further complicating the response to medical emergencies.
- Resource Scarcity: The demand for and strain on resources such as food, heating fuel, and emergency supplies increase during blizzard conditions. Power outages and blocked roads can prevent the resupply of essential goods, leading to shortages.

Life Safety and Public Health (Ice Storms): According to NOAA, the life safety and public health impacts of ice storms are as follows:

- Power Outages: Ice can accumulate on power lines and tree limbs, causing them to break and resulting in widespread power outages. Loss of electricity impacts heating, which is critical during cold weather conditions.
- Travel Hazards: Ice storms lead to extremely slippery conditions on roads, walkways, and bridges, making driving and walking hazardous. This increases the risk of accidents and injuries.
- Tree Damage: The weight of ice can cause branches and even entire trees to fall, posing dangers to people, animals, and property, and potentially blocking roads and damaging power lines.
- Health Risks: The cold weather associated with ice storms can pose health risks, particularly hypothermia and frostbite. Power outages may also prevent people from heating their homes adequately.
- Emergency Response Delays: The hazardous conditions can delay emergency and medical services, impacting their ability to respond quickly to accidents or health issues exacerbated by the storm.
- Communication Disruptions: Ice and wind can damage communication infrastructure, leading to disruptions in internet and telephone services.

Life Safety and Public Health (Extreme Cold): According to NOAA, the life safety and public health impacts of extreme cold are as follows:

- Hypothermia: Exposure to extreme cold can lead to hypothermia, a life-threatening condition where the body loses heat faster than it can produce it. Hypothermia can cause confusion, loss of consciousness, and, if not treated promptly, death.
- Frostbite: Frostbite occurs when skin and underlying tissues freeze, typically affecting extremities like fingers, toes, ears, and the nose. Severe frostbite can result in tissue damage and the need for amputation.
- Respiratory Issues: Cold air can exacerbate respiratory conditions, such as asthma, and increase the risk of respiratory distress, particularly in areas with high levels of air pollution.
- Cardiovascular Stress: Extreme cold can strain the cardiovascular system, increasing the risk of heart-related complications, especially in individuals with heart conditions.
- Slips and Falls: Icy and slippery conditions increase the risk of slips, trips, and falls, which can lead to injuries, fractures, and head trauma.
- Transportation Disruption: Cold weather can impact transportation systems, causing road closures, flight cancellations, and delays, which can pose safety risks for travelers.
- Power Outages: Extreme cold can damage power lines and electrical infrastructure, leading to power outages that can affect critical services, including heating and medical equipment.
- Water Infrastructure Issues: Freezing temperatures can damage water supply systems and lead to water shortages or frozen pipes, affecting drinking water availability.
- Snow-Related Hazards: Heavy snowfall and blizzards can lead to snow accumulation, road closures, and the risk of being trapped in vehicles or homes.
- Shelter and Homelessness: Extreme cold poses particular risks to individuals experiencing homelessness, who may lack access to shelter and adequate protection from the elements.

Property Damage and Critical Infrastructure (Heavy Snow): According to NOAA, the property damage and critical infrastructure impacts of heavy snow are as follows:

- Structural Damage: Heavy snow can lead to structural damage due to the weight of snow accumulation, especially on roofs and overhangs. This can result in costly repairs and safety hazards.
- Transportation Disruptions: Snow can disrupt transportation systems, making roads impassable and leading to closures of airports and railways. This impacts not just daily commuting but also the delivery of essential goods and services.
- Power Outages: The weight of snow and ice can down trees and power lines, leading to widespread power outages. This disrupts heating and telecommunications and can cause further economic losses.
- Water Damage: Snowmelt or ice dams can lead to water damage in buildings. As snow melts, it can penetrate structures, leading to mold, mildew, and deterioration of building materials.

Property Damage and Critical Infrastructure (Blizzards): According to NOAA, the property damage and critical infrastructure impacts of blizzards are as follows:

- Infrastructure Strain: Blizzards can overburden infrastructures like power lines and trees with ice and snow accumulation, leading to power outages and broken lines, which can take considerable time and resources to repair.
- Transportation Halts: The heavy snowfall and strong winds typical of blizzards can make roads impassable, disrupt air and rail travel, and halt public transportation, leading to economic losses and delayed emergency and medical services.
- Building Damage: Accumulated snow can be heavy enough to cause structural damage to homes and buildings. The weight of snow can collapse roofs and break windows, leading to costly repairs.
- Economic Disruptions: The combination of closed businesses, transportation delays, and the need for extensive snow removal and repairs contribute to substantial economic disruption.
- Emergency Services: The hazardous conditions created by blizzards significantly impact the response time and effectiveness of emergency services, complicating rescue and medical assistance efforts during and after the storm.

Property Damage and Critical Infrastructure (Ice Storms): According to NOAA, ice storms can cause significant property damage and impacts to critical infrastructure. These impacts include damage to residential, commercial, and governmental buildings, as well as vehicles and essential public infrastructure such as roads and bridges. The economic burden of these events can be substantial, often reaching into billions of dollars for significant storms.

Property Damage and Critical Infrastructure (Extreme Cold/Wind Chill): Extreme cold/wind chill can lead to property damage and critical infrastructure impacts including frozen and burst water pipes, heating system failures, road and transportation infrastructure damage, and power outages, affecting homes, businesses, and critical facilities like hospitals. Healthcare facilities may struggle to provide care in frigid conditions, and transportation disruptions, including road closures and accidents, can impact critical infrastructure and supply chains. Communication equipment can be affected, potentially hindering emergency communication systems, and snow accumulation can stress roofs and structures, leading to damage. Lastly, extreme cold poses health risks, particularly for vulnerable populations, and can strain emergency response and healthcare systems.

All Cook County critical facilities and infrastructure are listed in Section 4.6.

5.6.7 Economy

Heavy Snow: According to NOAA, the economic impacts of heavy snow incidents can vary depending on the severity and duration of the storm. These effects often include direct costs like physical damage to buildings and infrastructure, as well as indirect costs such as business interruptions and lost productivity. Additionally, winter storms are among the weather events that can cause extensive financial loss, reflecting a combination of direct impacts on transportation, energy, and residential and commercial properties, along with broader economic disruptions.

Severe winter storms can also lead to extensive power outages, disrupting normal business operations and causing economic losses both from the immediate impacts and longer-term recovery and repair costs. The closure of roads and airports can halt the flow of goods and services, further exacerbating economic losses. In more severe cases, structural damage from heavy snow loads on buildings and infrastructures, like the collapse of roofs or breaking of pipes, can lead to significant repair costs and economic disturbances.

Blizzards: According to NOAA, the economic impacts of blizzards include substantial physical damage to infrastructure and buildings, including residential, commercial, and government properties. This damage often extends to vehicles and public utilities, necessitating costly repairs. Blizzard conditions also disrupt business operations, leading to significant interruptions and revenue losses due to closures and reduced consumer activity. Additionally, local governments incur high costs in managing the aftermath, such as snow removal and emergency services. In agricultural areas, blizzards can cause direct losses to livestock and crops, further straining local economies. Lastly, the recovery and restoration efforts following blizzard events involve considerable financial expenditures across multiple sectors, emphasizing the need for effective disaster preparedness and risk management strategies.

Ice Storms: According to NOAA, the economic impacts of ice storms are multifaceted and have significant implications for communities. Ice storms have caused extensive damage to infrastructure, including power lines and roadways, due to the heavy weight of ice and falling tree branches. This often results in prolonged power outages and hazardous road conditions, which disrupt daily life and commerce. Businesses, especially those dependent on foot traffic, face substantial losses due to decreased customer visits and forced closures.

Local governments and emergency services also bear substantial costs in responding to these events, encompassing road clearance and infrastructure repairs. Residential areas suffer as homes are damaged by ice accumulation and debris, leading to costly repairs. Lastly, the agriculture sector is not spared, as crops and farm structures can be severely damaged. These factors collectively highlight the economic burden of ice storms, emphasizing the importance of preparedness and effective response strategies to mitigate their impacts.

Extreme Cold/Wind Chill: According to NOAA, the economic impacts of extreme cold/wind chill events include significant disruptions to infrastructure and public safety. During periods of extreme cold, infrastructure can fail, including power systems. Losing power then leads to a lack of heating and can also impact other utilities such as water supply, with frozen pipes bursting can lead to widespread damage and boil water advisories.

In parallel, the transportation sector is impacted by icy conditions which can lead to hazardous roads, increasing the likelihood of accidents and impeding normal travel and commerce. These conditions result in economic disruptions from halted transportation and emergency responses to accidents and road maintenance. The agriculture sector also experiences significant impacts due to extreme cold. Livestock and winter crops can suffer greatly without adequate protection from the severe weather, leading to losses in production and income. Lastly, extreme cold conditions necessitate increased energy use for heating, which can lead to higher energy costs for residents and strain on the energy supply systems, particularly if they are not prepared for unusual demand spikes.

5.6.8 Changes In Development and Impact to Future Development

Heavy Snow: According to NOAA, heavy snow events can significantly impact current and future development trends in several ways. First, the increased frequency and intensity of heavy snowstorms can necessitate changes in building codes and infrastructure resilience planning. Warmer-than-average ocean surface temperatures contribute to higher moisture levels in storms, exacerbating snowfall and the severity of snowstorms. This has led to shifts in building standards to accommodate the greater load from heavy snow, impacting architectural designs and construction materials used, particularly in areas prone to these extreme weather events.

The implications of heavy snow for urban planning can be substantial. Communities in Cook County may need to enhance their snow removal capabilities and stormwater management systems to handle the increased runoff from snow melting, which can be a significant issue, especially during rapid thaw periods. This could lead to more investment in snow removal equipment and technologies, as well as modifications to landscaping and drainage systems in urban areas to prevent flooding and maintain accessibility during winter months.

Lastly, planning for and management of transportation infrastructure must also adapt, considering the likelihood of more frequent severe snow events. This includes enhancing road design, maintenance protocols, and public transit systems to withstand harsher winter conditions. For future development, considerations might include more robust transportation networks that can remain operational despite heavy snowfalls, potentially incorporating heated roadways or more efficient public transit solutions to reduce the reliance on individual car travel during winter storms.

Blizzards: According to NOAA, blizzard events can impact both current and future development trends. These impacts stem primarily from the increased frequency and intensity of these events due to climate changes. Blizzard conditions can necessitate changes in infrastructure resilience and building codes to accommodate heavier snow loads and more extreme temperature fluctuations. For example, developments may require more robust heating systems, enhanced insulation, and snow-resistant building designs to cope with the demands of increased snowfall and colder temperatures.

Urban planning must consider the logistical challenges posed by blizzards, including the need for effective snow removal strategies and emergency services accessibility during severe weather events. This can influence the planning of road networks, the allocation of resources for snow removal, and the placement of critical infrastructure to ensure it remains operational during and after blizzard events.

Lastly, transportation systems, particularly in cities prone to blizzard conditions (e.g. Chicago), may also need to adapt to maintain functionality in harsh weather. This could include the installation of heating elements on critical roadways and railways to prevent ice buildup and the integration of weather-resistant materials in the construction of transit facilities.

Ice Storms: According to NOAA, ice storm events can impact current and future development trends, mainly due to the impact on infrastructure resilience and emergency preparedness. Ice storms, characterized by their ability to cause extensive damage to power lines and trees, lead to significant economic losses and disrupt lives. These impacts necessitate enhancements in infrastructure design and maintenance, such as the use of more robust materials capable of withstanding heavy ice loads and improved utility line designs to prevent widespread power outages.

In terms of urban planning, areas prone to ice storms may need to revise their emergency response strategies. This could include investing in more efficient ice and snow removal equipment and enhancing road designs to improve safety during icy conditions. Additionally, building codes may be updated to ensure that new constructions can withstand the severe conditions brought on by ice storms, focusing on factors like roof load capacity and the stability of structures under ice accumulation.

Finally, the increasing frequency and intensity of ice storms underscores the need for sustainable development practices that consider changing weather patterns. This includes creating more resilient urban landscapes that can cope with the challenges posed by severe weather events, ensuring that communities can recover more quickly and effectively from their impacts.

Extreme Cold/Wind Chill: According to NOAA, extreme cold/wind chill events can impact current and future development. In areas prone to such conditions, there is an increasing emphasis on constructing buildings and infrastructure that can withstand the rigors of extreme cold. This includes enhanced insulation, robust heating systems, and materials resistant to freezing and thawing cycles. Building codes are also being revised to incorporate these considerations, ensuring structures are not only energy-efficient but also resilient to cold-related damages like burst pipes and ice accumulation. Urban planning is also focusing on ensuring essential services and transportation remain operational during severe cold events, and that communities, (especially vulnerable populations), have access to adequate heating and emergency services.

In addition, the frequency and intensity of extreme cold events can potentially be exacerbated by climate change and are being factored into long-term development strategies. This involves planning for increased energy demands during cold snaps, incorporating sustainable and renewable energy sources, and developing emergency response protocols for cold weather events. Additionally, environmental considerations, such as the ecological impact of road salt and other ice-melting agents, are also becoming a part of the planning process.

5.6.9 Effects of Climate Change on the Severity of Impacts

Heavy Snow: According to NOAA, climate change is influencing the severity and frequency of heavy snow events in various ways. One significant factor is the increase in warmer-than-average ocean surface temperatures, particularly in the Atlantic, which leads to higher moisture content in storm systems. This extra moisture can result in more intense snowfall during storm events, as observed with events like the "Snowmageddon" that occurred in 2010. Changes in the Arctic, such as

reductions in sea ice, are affecting atmospheric circulation patterns. These changes may lead to more frequent occurrences of atmospheric blocking patterns over the North Atlantic, which can cause cold air outbreaks in the eastern United States and potentially enhance the conditions needed for severe snowstorms. Research also suggests that while the overall mean snowfall may decrease due to a warmer climate, extreme snowfall events might see different trends. In some areas, particularly at higher latitudes and elevations, the frequency of extreme snowfall events could actually increase, creating a more complex and variable pattern of winter weather. These observations highlight the dynamic and paradoxical effects of climate change on winter weather, suggesting that regions, especially in eastern North America, could experience both declines in average snowfall but increases in extreme snowfall events due to a warmer atmosphere's ability to hold more moisture. (NOAA NCEI) (NOAA Institutional Repository).

Blizzards: According to NOAA, climate change can impact the severity of blizzard events in different ways. This includes increasing global temperatures which leads to warmer-than-average ocean surface temperatures, which contribute to higher moisture availability in the atmosphere. This additional moisture can intensify snowfall during blizzards, resulting in more severe snowstorm events. In addition, reductions in sea ice are altering atmospheric circulation patterns. These changes can lead to the increased prevalence of high-pressure blocking patterns resulting in colder air outbreaks which can exacerbate the persistence and severity of blizzards by slowing down storm systems and prolonging the duration of snowfall. Climate models and historical data both indicate that while there might be a decrease in the overall frequency of snowfall, the instances of extreme snowfall events could increase due to these climatic changes. This means that while regions might experience fewer snow days overall, the snowstorms that do occur could be more intense, presenting significant challenges for infrastructure and emergency services (NOAA) (NOAA NCEI).

Ice Storms: According to NOAA, climate change can impact the severity of ice storm events through several mechanisms. One factor is the increase in atmospheric moisture driven by warmer global temperatures. This increase can lead to more freezing rain events, as warmer air can hold more water vapor that, when meeting cold surfaces, freezes and results in ice accumulation. In addition, changes in weather patterns due to climate change can lead to more frequent and severe cold air outbreaks. As Arctic ice melts and global heat distribution changes, this can alter the jet stream, making cold air from the Arctic more likely to move further south, where it can contribute to creating conditions suitable for ice storms. Finally, the increasing frequency of extreme weather events, including both heavier precipitation and extreme cold snaps, can combine to increase the frequency and intensity of ice storm conditions. As climate change progresses, such conditions are expected to become more common, posing increased risks to areas traditionally affected by ice storms as well as introducing these conditions to new regions (NOAA) (NOAA NCEI) (NOAA).

Extreme Cold/Wind Chill: Climate change can lead to various effects on the severity of extreme cold events. While global temperatures are generally rising, shifts in atmospheric circulation patterns and disruptions in polar vortex behavior can contribute to more variable and severe cold weather in specific regions. These changes can result in intense cold snaps and frigid conditions, even during overall warming trends. Extreme cold events can have adverse effects on public safety, infrastructure, and agriculture (NOAA).

TABLE: 25-YEAR PRECIPITATION PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience a **10% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.8" increase** (from 36.9" to 37.7") in average annual precipitation.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience a **1% increase** in heavy precipitation within 25 years.
By 2049, Cook County is expected to have a **0.1" decrease** (from 37.3" to 37.2") in average annual precipitation.
Source: Neighborhoods at Risk: (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: 25-YEAR CLIMATE PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience **an 115% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 55°F) in average annual temperatures.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience an **83% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 54°F) in average annual temperatures.
Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation							
Average Annual Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40”**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Days Per Year With No Precipitation	**193 days**	**195 days**	**196 days**	**196 days**	**197 days**	**197 days**	**200 days**
	190-197	187-208	187-212	186-207	184-216	187-208	180-235
Maximum Number Of Consecutive Dry Days	**13 days**	**13 days**	**14 days**	**14 days**	**14 days**	**14 days**	**15 days**
	11-14	12-16	12-17	12-16	12-18	12-16	12-20
Temperature Thresholds							
	12 days	**31 days**	**34 days**	**41 days**	**49 days**	**50 days**	**81 days**

Annual days with Maximum temperature > 90°	12-18	19-51	21-50	22-69	30-75	26-86	47-113
Annual days with Maximum temperature > 100°	**0 days**	**2 days**	**2 days**	**4 days**	**7 days**	**7 days**	**24 days**
	0-0	0-6	0-7	0-16	1-23	1-16	2-67
Source: Climate Mapping for Resilience and Adaptation (2024)							

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL

Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation:							
Annual Average Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40“**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation (Wet Days)	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Maximum Period of Consecutive Wet Days	**10 days**	**10 days**	**10 days**	**10 days**	**11 days**	**10 days**	**10 days**
	10-12	9-12	9-12	9-12	9-12	9-12	9-13
Annual Days With:							
Annual Days With Total Precipitation > 1 inch	**4 days**	**5 days**	**5 days**	**5 days**	**5 days**	**5 days**	**6 days**
	3-5	4-6	4-6	4-6	4-7	4-7	5-9
Annual Days With Total Precipitation > 2 inches	**0 days**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**	**1 day**
	0-1	0-1	0-1	0-1	0-1	0-1	0-2
Annual Days With Total Precipitation > 3 inches	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**	**0 days**
	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Annual Days That Exceed 99th Percentile Precipitation	**5 days**	**6 days**	**6 days**	**7 days**	**7 days**	**7 days**	**8 days**
	5-7	5-8	5-8	6-8	6-9	6-9	7-10
*Days With Maximum Temperature Below 32*F*	**41 days**	**30 days**	**28 days**	**25 days**	**22 days**	**21 days**	**12 days**
	37-44	17-40	21-37	13-36	11-32	10-32	2-24
Source: Climate Mapping for Resilience and Adaptation (2024)							

5.6.10 FEMA NRI Expected Annual Loss Estimates

COOK COUNTY, ILLINOIS EXPECTED ANNUAL LOSS TABLE FOR WINTER WEATHER EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
4.1 events per year	0.21	$2,465,817	$36,878	$103	$2,502,799	Very High	99.6
Period of Record: 2005-2021 (16 years)							
COOK COUNTY, ILLINOIS EXPECTED ANNUAL LOSS TABLE FOR ICE STORM EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
0.6 events per year	0.00	$19,018	$577,363	N/A	$596,381	Relatively High	90.7
Period of Record: 1946-2014 (67 years)							
COOK COUNTY, ILLINOIS EXPECTED ANNUAL LOSS TABLE FOR COLD WAVE EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
0.9 events per year	5.86	$67,989,216	$51,372	$7,456	$68,048,044	Very High	100.0
Period of Record: 2005-2021 (16 years)							
Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.* ***Population:*** *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.* ***Expected Annual Loss Scores*** *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*							
Source: FEMA National Risk Index (2024)							

*** Note: The FEMA National Risk Index does not assess expected annual loss for heavy snow events.*

5.6.11 FEMA Hazard Specific Risk

COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – WINTER WEATHER EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$2,502,799	Very High	Relatively High	$3,036,624	99.7
COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – ICE STORM EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$596,381	Very High	Relatively High	$701,955	90.9
COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – COLD WAVE EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$68,048,044	Very High	Relatively High	$82,635,463	100

FEMA Hazard-Type ***Risk Index Scores*** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.*
FEMA Hazard-Type ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.*
FEMA Hazard-Type ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*

Source: FEMA National Risk Index (2024)

*** Note: The FEMA National Risk Index does not assess hazard-specific risk for heavy snow events.*

5.6.12 FEMA NRI Exposure Value Table

TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR WINTER WEATHER EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Winter Weather	$62,057,329,400,253	$893,116,815,354	$61,164,190,000,000	5,272,775.00	$22,584,899
TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR – ICE STORM EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Ice Storm	$61,668,922,697,404	$888,265,410,431	$60,780,657,286,972	5,239,711.84	N/A
TABLE: COOK COUNTY, ILLINOIS EXPOSURE VALUE TABLE FOR COLD WAVE EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Cold Wave	$61,232,738,229,870	$882,369,637,442	$60,350,346,712,638	5,202,616.10	$21,879,791

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*

Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*

Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

** *Note: The FEMA National Risk Index does not assess exposure value for heavy snow events.*

5.7 Tornado

5.7.1 Hazard Description

The National Weather Service describes a tornado as a violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground. It nearly always starts as a funnel cloud and may be accompanied by a loud roaring noise. On a local scale, it is the most destructive of all atmospheric phenomena. Like hail, most tornadoes are spawned by supercell thunderstorms. They usually last only a few minutes, although some have lasted more than an hour and traveled several miles.

Tornado Types

Multiple Vortex Tornadoes: A multiple-vortex tornado is a tornado that contains several vortices rotating around, inside of, and as part of the main vortex. The only times multiple vortices may be visible are when the tornado is first forming or when condensation and debris are balanced enough so that sub-vortices are apparent without being obscured. They are responsible for most (if not all) cases where narrow arcs of extreme destruction lie right next to weak damage within tornado paths. Multi-vortex tornadoes should not be confused with cyclically tornadic super-cells, which are systems that produce many, separate tornadoes at the same time or in succession.

Suction vortices are substructures of many, perhaps all, tornadoes but are not always easily visible. They usually occur where the tornado makes contact with the surface. Sub-vortices tend to form after vortex breakdown reaches the surface and result from the ratio of cyclonically incoming and rising air motions. Multi-vortex structure is not unique to tornadoes, occurring in other circulations such as dust devils; it is a natural result of the physics of vortex dynamics.

The largest tornado ever documented was a multiple-vortex tornado; it struck near the town of El Reno, Oklahoma on May 31, 2013. This storm had a maximum width of 2.6 miles and a maximum recorded wind speed of 295 miles per hour, rating it an EF3 on the Enhanced Fujita scale, second only to the 1999 Bridge Creek–Moore tornado (another multiple-vortex tornado) in terms of maximum recorded wind speed. The May 2011 destructive EF5 Joplin tornado is another example of a multiple-vortex tornado.

A phenomenon similar to multiple vortices is the satellite tornado. It is different from a multiple-vortex tornado in that it exists outside of the main tornado and forms via a different mechanism.

Water Spouts: characterized by a spiraling funnel-shaped wind current, connecting to a large cumulus or cumulonimbus cloud. They are generally classified as non-super cellular tornadoes that develop over bodies of water, but there is disagreement over whether to classify them as true tornadoes. These spiraling columns of air frequently develop in tropical areas close to the equator and are less common at high latitudes. There are two methods of water spout formation:

Waterspouts can form on a clear day with the right amount of instability and wind shear. These can have wind speeds of 60 to 100 mph, but since they do not move very far, they can often be navigated around. They can become a threat to land if they drift onshore.

A tornadic waterspout is a true tornado that is moving over water at the time that it forms. These form from the same processes that cause tornadoes (see section above). The National Weather Service issues a Special Marine Warning for waterspouts over the coastal waters. The Service issues a Tornado Warning if a waterspout shows signs of moving toward land.

Landspout: A landspout is a colloquial term for a kind of tornado not associated with the mesocyclone of a thunderstorm. Landspouts are considered tornadoes since a rotating column of air is in contact with both the surface and a cumuliform cloud. The Glossary of Meteorology defines landspouts as follows: tornadoes occurring with a parent cloud in its growth stage and with its vorticity originating in the boundary layer. The parent cloud does not contain a preexisting midlevel mesocyclone. The landspout was so named because it looks like a weak Florida Keys waterspout over land.

Landspouts form during the growth stage of convective clouds by stretching boundary layer vorticity upward and into the cumuliform tower's updraft. They generally are smaller and weaker than super-cellular tornadoes and do not contain a mesocyclone or pre-existing rotation in the cloud. Because of this, landspouts are rarely detected by Doppler weather radar. Landspouts develop similarly to waterspouts and bear a strong resemblance to them, usually taking the form of a translucent and highly laminar helical tube. Not all landspouts are visible, and many are first sighted as debris swirling at the surface before eventually filling in with condensation and dust. Landspouts are most common in semi-arid climates characterized by high cloud bases and considerable low-level instability. These conditions tend to favor the High Plains of the United States from spring through summer.

5.7.2 Hazard Location

A tornado could occur anywhere in Cook County.

5.7.3 Hazard Extent/Intensity

The Enhanced Fujita Scale, or the "EF-Scale," measures tornado strength and associated damage. This Enhanced Fujita Scale is illustrated in the table below. The EF-Scale is an update to the earlier Fujita scale published in 1971. It classifies tornadoes in the United States into six intensity categories based on the estimated maximum winds within the wind vortex. The EF-Scale has become the definitive metric for assessing wind speeds within tornadoes based on the damage done to buildings and structures since it was implemented through the National Weather Service in 2007.

TABLE: ENHANCED FUJITA SCALE AND ASSOCIATED DAMAGE

EF-Scale Number	Wind Speed (MPH)	Type of Damage Possible
EF0	**65-85**	**Minor damage**: Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e., those that remain in open fields) are always rated EF0.
EF1	**86-110**	**Moderate damage**: Roofs severely stripped; manufactured homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	**111-135**	**Considerable damage**: Roofs torn off well-constructed houses; foundations of frame homes shifted; manufactured homes destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.

TABLE: ENHANCED FUJITA SCALE AND ASSOCIATED DAMAGE		
EF-Scale Number	**Wind Speed (MPH)**	**Type of Damage Possible**
EF3	**136-165**	**Severe damage**: Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	**166-200**	**Devastating damage**: Well-constructed houses and whole frame houses completely leveled; cars thrown, and small missiles generated.
EF5	**>200**	**Extreme damage**: Sturdy frame houses leveled off foundations and swept away; automobile-sized missiles fly more than 100 m (300 ft.); steel reinforced concrete structure badly damaged; high-rise buildings have significant structural deformation.

The extent of the hazard varies in terms of the extent of the path and the wind speed. Extent is addressed at the county level due to the nature of the hazard.

TABLE: COOK COUNTY JURISDICTIONAL EXTENT				
Hazard Type	**Affected Jurisdictions**	**Extent (based on historical events)**		**Comments**
		Minimum	**Maximum**	
Severe Winter Weather	County-wide	EF0	EF4	Multiple tornadoes have occurred within Cook County (2018-2023), ranging from EF0-EF3. EF3 or greater tornadoes are possible.

5.7.4 Probability and Frequency

Probability: To measure tornado probability, NOAA uses atmospheric data from satellites, radar systems, weather stations, and weather balloons. This includes information on temperature, humidity, atmospheric pressure, and wind patterns at various altitudes.

Typically, the probability of tornadoes is presented in percentages, reflecting the likelihood of occurrence in specific areas and timeframes. This probabilistic forecasting accounts for the inherent uncertainties in weather prediction. Meteorologists interpret this data and model outputs, considering both the current atmospheric situation and historical weather patterns, to assess tornado risks and generate accurate forecasts.

NWS issues tornado watches or warnings based on current conditions for tornadoes. A tornado watch indicates favorable conditions for tornadoes, while a warning signifies an imminent threat, often based on sightings or radar detection. This process involves continuous monitoring and updating of forecasts and warnings to adapt to rapidly changing weather conditions.

Frequency: Between 1954 and 2024, Cook County experienced 52 tornado events. This equates to an average of 0.74285714 tornado events/year.

(Note: Events listed in the Past Events table are based on impacts to an area (zone) of Cook County; as such, impacts to more than one area (zone) will result in multiple entries. When determining probability estimates, efforts were made to delineate single events from events that impacted a number of areas.)

5.7.5 Past Events

Table: Past Tornado Events in Cook County from 1954-2024									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
Totals:						**39**	**772**	**118.338M**	**0.00K**
COOK CO.	COOK CO.	IL	10/10/1954	16:00	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	05/26/1955	16:00	F1	0	2	250.00K	0.00K
COOK CO.	COOK CO.	IL	04/02/1956	01:30	F1	0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	08/23/1956	14:40	F2	0	3	250.00K	0.00K
COOK CO.	COOK CO.	IL	08/30/1958	22:55	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	05/26/1959	19:34		0	0	0.25K	0.00K
COOK CO.	COOK CO.	IL	09/21/1959	14:47	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	09/26/1959	18:00	F1	0	14	250.00K	0.00K
COOK CO.	COOK CO.	IL	03/04/1961	17:04	F2	1	115	25.000M	0.00K
COOK CO.	COOK CO.	IL	06/23/1962	16:52	F2	0	10	250.00K	0.00K
COOK CO.	COOK CO.	IL	05/26/1965	08:15	F2	0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	05/26/1965	08:22	F2	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	08/26/1965	23:10	F1	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	11/12/1965	15:45	F2	0	0	25.000M	0.00K
COOK CO.	COOK CO.	IL	06/09/1966	05:10	F0	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/09/1966	05:15	F2	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/09/1966	05:20	F2	1	30	0.00K	0.00K
COOK CO.	COOK CO.	IL	04/21/1967	17:24	F4	33	500	25.000M	0.00K
COOK CO.	COOK CO.	IL	04/21/1967	17:40	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	04/30/1970	14:25	F2	0	9	25.00K	0.00K
COOK CO.	COOK CO.	IL	06/19/1972	15:00	F1	0	2	25.00K	0.00K
COOK CO.	COOK CO.	IL	07/14/1972	23:00	F1	0	0	2.500M	0.00K

Table: Past Tornado Events in Cook County from 1954-2024									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
COOK CO.	COOK CO.	IL	08/25/1972	21:30	F2	0	1	2.500M	0.00K
COOK CO.	COOK CO.	IL	04/21/1973	21:00	F2	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	04/21/1973	21:15	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	06/16/1973	15:15	F0	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/20/1974	18:40		0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	07/14/1974	12:15	F0	0	0	0.00K	0.00K
COOK CO.	COOK CO.	IL	06/17/1975	11:54	F2	0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	03/12/1976	13:25	F2	2	41	2.500M	0.00K
COOK CO.	COOK CO.	IL	06/13/1976	16:18	F4	2	23	2.500M	0.00K
COOK CO.	COOK CO.	IL	06/30/1977	13:45		0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	09/07/1977	14:10	F1	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	04/18/1978	16:55	F1	0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	09/22/1980	14:28	F0	0	0	25.00K	0.00K
COOK CO.	COOK CO.	IL	05/29/1983	12:39	F1	0	1	25.00K	0.00K
COOK CO.	COOK CO.	IL	05/29/1983	12:42	F0	0	2	2.50K	0.00K
COOK CO.	COOK CO.	IL	07/04/1985	21:56	F1	0	0	250.00K	0.00K
COOK CO.	COOK CO.	IL	09/29/1986	13:30	F1	0	10	250.00K	0.00K
COOK CO.	COOK CO.	IL	03/27/1991	16:07	F3	0	7	25.000M	0.00K
COOK CO.	COOK CO.	IL	05/05/1991	17:00	F0	0	0	0.00K	0.00K
LEMONT	COOK CO.	IL	05/30/2003	19:30	F0	0	0	0.00K	0.00K
CHICAGO	COOK CO.	IL	09/22/2006	17:02	F0	0	0	0.00K	0.00K
SCHAUMBURG	COOK CO.	IL	05/16/2007	16:52	EF0	0	0	50.00K	0.00K
PARK FOREST SOUTH	COOK CO.	IL	06/07/2008	17:19	EF2	0	0	4.000M	0.00K
PARK FOREST	COOK CO.	IL	06/07/2008	17:32	EF1	0	0	1.000M	0.00K
LANSING	COOK CO.	IL	06/07/2008	17:48	EF0	0	0	10.00K	0.00K
ORLAND PARK	COOK CO.	IL	08/04/2008	18:59	EF0	0	0	30.00K	0.00K
MATTESON	COOK CO.	IL	06/23/2010	17:26	EF1	0	0	100.00K	0.00K

Table: Past Tornado Events in Cook County from 1954-2024									
Location	County	State	Date	Time	Mag	Dth	Inj	PrD	CrD
BERGER	COOK CO.	IL	06/15/2011	17:18	EF0	0	0	25.00K	0.00K
CUMBERLAND	COOK CO.	IL	06/21/2011	19:48	EF1	0	0	50.00K	0.00K
MC COOK	COOK CO.	IL	05/26/2015	12:08	EF0	0	0	10.00K	0.00K
CICERO	COOK CO.	IL	08/09/2016	14:48	EF0	0	0	0.00K	0.00K
BERWYN	COOK CO.	IL	09/03/2018	13:14	EF0	0	0	10.00K	0.00K
SAUK VLG	COOK CO.	IL	05/27/2019	15:27	EF0	0	0	0.00K	0.00K
GOESELVILLE	COOK CO.	IL	08/10/2020	14:54	EF1	0	0	0.00K	0.00K
PARK FOREST SOUTH	COOK CO.	IL	08/10/2020	14:57	EF0	0	0	0.00K	0.00K
LINCOLNWOOD	COOK CO.	IL	08/10/2020	14:59	EF1	0	0	0.00K	0.00K
BURR RIDGE	COOK CO.	IL	06/20/2021	22:21	EF3	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	06/13/2022	17:13	EF0	0	0	0.00K	0.00K
(O6C) SCHAUMBURG REGIONA...	COOK CO.	IL	06/13/2022	17:27	EF0	0	0	0.00K	0.00K
BURR RIDGE	COOK CO.	IL	07/12/2023	17:10	EF1	0	1	0.00K	0.00K
SPAULDING	COOK CO.	IL	07/12/2023	17:32	EF1	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	07/12/2023	17:41	EF0	0	0	0.00K	0.00K
HANOVER PARK	COOK CO.	IL	07/12/2023	17:43	EF0	0	0	0.00K	0.00K
ELK GROVE VILLAGE	COOK CO.	IL	07/12/2023	17:59	EF0	0	0	0.00K	0.00K
(ORD) CHICAGO O'HARE AIR...	COOK CO.	IL	07/12/2023	18:02	EF0	0	0	0.00K	0.00K
STREAMWOOD	COOK CO.	IL	02/27/2024	19:29	EF0	0	0	0.00K	0.00K
HOFFMAN ESTATES	COOK CO.	IL	02/27/2024	19:32	EF1	0	0	0.00K	0.00K
SOUTH BARRINGTON	COOK CO.	IL	02/27/2024	19:34	EF1	0	0	0.00K	0.00K
WHEELING	COOK CO.	IL	02/27/2024	19:55	EF1	0	1	0.00K	0.00K

5.7.6 Vulnerabilities and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Significant**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Moderate**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Significant**
Energy Power Grid, Fuel	**Moderate**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Moderate**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Moderate**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Moderate**
Water Systems Potable Water Infrastructure, Wastewater Management	**Moderate**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown	

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health: According to NOAA, Tornadoes have potential to cause catastrophic life safety and public health impacts. The immediate threat to life from tornadoes can result in fatalities and injuries to humans and animals due to flying debris, collapsing structures, and the sheer force of the tornado itself. The risk to individuals in the path of a tornado is extremely high, as the rapid onset of these events often allows little time for seeking adequate shelter. Post-event,

survivors may face a range of health concerns, including trauma, emotional distress, and the potential for injury during rescue efforts or cleanup operations.

Beyond personal safety, tornadoes can devastate critical infrastructure, leading to extended power outages, water supply contamination, and the disruption of healthcare services and emergency response capabilities. The destruction of homes and businesses contributes to public health concerns, displacing residents and potentially causing long-term socioeconomic challenges. The public health system can be strained as medical facilities cope with the influx of casualties and the broader needs of the affected community.

Property Damage and Critical Infrastructure: According to NOAA, tornadoes are among the most destructive weather events, with the potential to cause catastrophic property damage and critical infrastructure impacts. The intense winds of a tornado, which can exceed 200 miles per hour in the most severe cases, have the force to destroy buildings, homes, and vegetation, leaving a trail of debris. They can displace or overturn vehicles, rip apart roofs, and even lift and destroy well-built structures. The resultant debris can compound the damage by becoming airborne projectiles. For businesses, this means not only structural loss but also potential disruption of operations and economic activity, with recovery and rebuilding efforts often costing significantly.

When it comes to critical infrastructure, tornadoes can result in widespread destruction, compromising public safety and community functionality. They can severely damage power lines and utilities, leading to prolonged power outages and water supply contamination. Transportation infrastructure such as roads, bridges, and railways may be rendered unusable, hindering emergency response efforts and recovery operations. Tornadoes also pose a risk to healthcare infrastructure by damaging hospitals and medical facilities, thereby limiting access to medical care when it is most needed. The extensive damage to infrastructure necessitates comprehensive disaster response plans and resilient construction practices to mitigate the impacts of tornadoes.

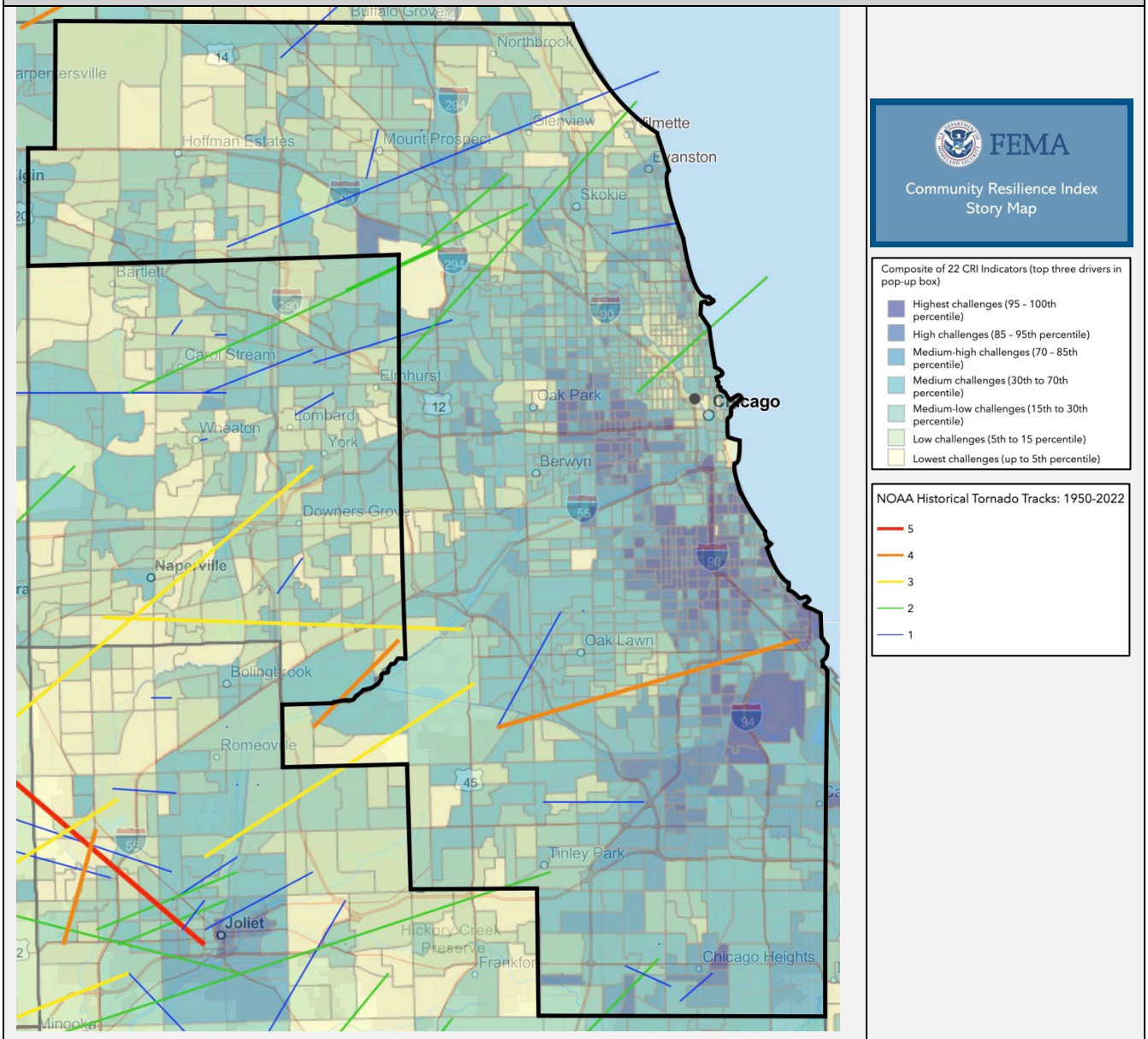
All Cook County critical facilities and infrastructure are listed in Section 4.6.

The FEMA Community Resilience Challenges Index (CRCI) provides a relative assessment of a community's potential resilience and gives insights into population and community characteristics from which to build emergency operations plans and targeted outreach strategies.

The figure below illustrates the impact of EF1 to EF5 tornadoes on CCRI tracts in Cook County.

FIGURE: TORNADO IMPACTS TO CRCI TRACTS IN COOK COUNTY, ILLINOIS

FEMA COMMUNITY RESILIENCE INDEX STORY MAP



Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

According to FEMA, in areas subject to extreme wind events, those responsible for public safety—including building owners, schools, hospitals, and neighborhood associations—should consider building accessible community safe rooms. In addition, people who live or work in structures with inadequate protection, such as manufactured homes or buildings with long-span roofs, also should discuss the option of building a community safe room or shelter. Because a tornado can hit anywhere in the county, all structures are susceptible to being hit. Schools are a particular concern, though, for two reasons:

- Many people are present, either during school or as a storm shelter.
- They have large span areas, such as gyms and theaters.

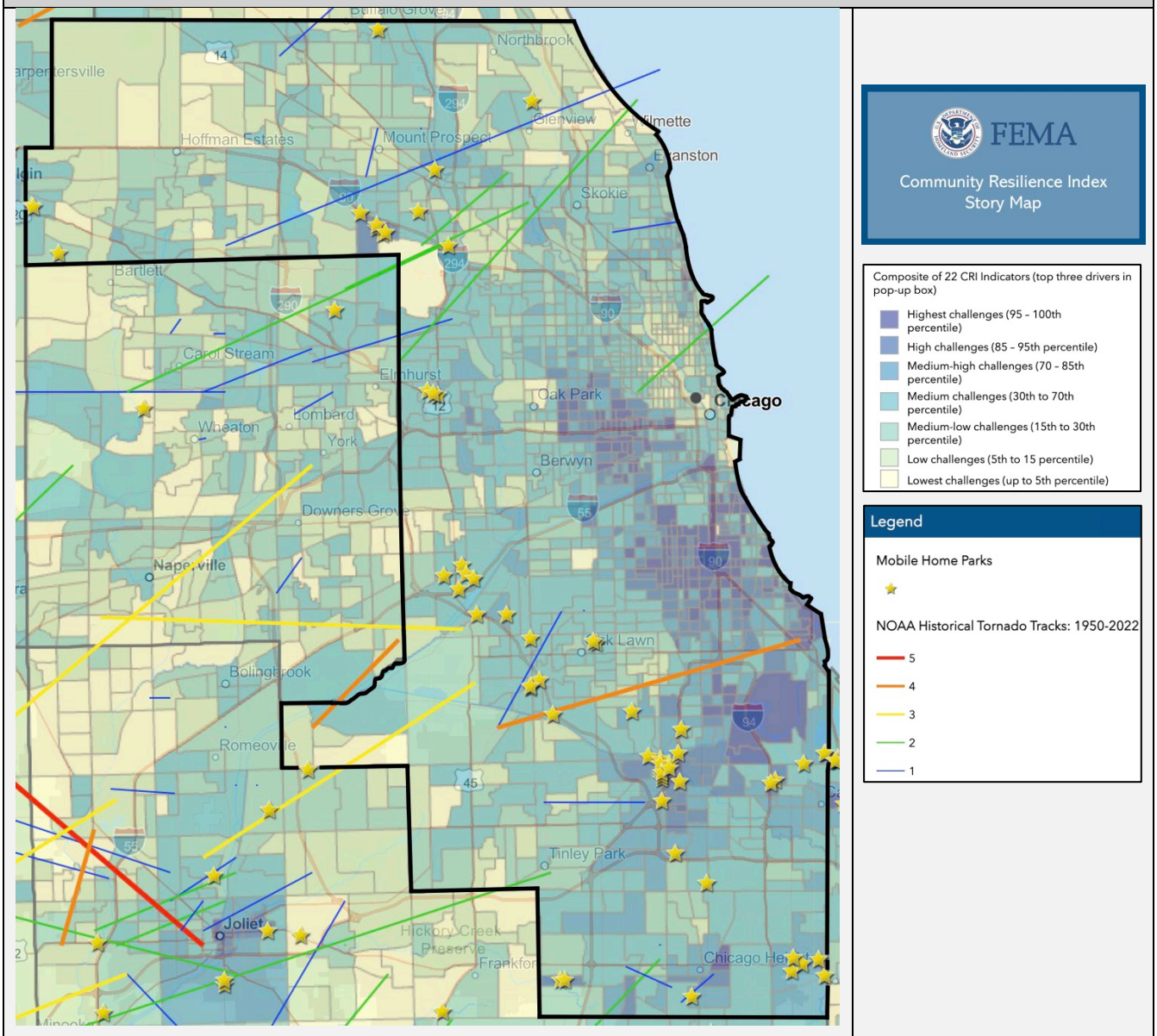
Although tornadoes strike at random, making all buildings vulnerable, three types of structures are more likely to suffer damage:

- Manufactured homes,
- Homes on crawlspaces (more susceptible to lift), and
- Buildings with large spans include airplane hangars, gymnasiums, and factories.

Residents living in manufactured homes are more vulnerable than people in permanent homes. Cook County has approximately 15,435 manufactured homes that could be impacted by a tornadic event (Neighborhoods At Risk). The figure below illustrates tornadic impact to manufactured home areas in Cook County.

FIGURE: FEMA COMMUNITY RESILIENCE INDEX STORY MAP

COOK COUNTY, ILLINOIS



Source: FEMA Resilience Analysis and Planning Tool (RAPT) 2024

Economy: According to NOAA, tornadoes can have severe economic impacts resulting in long-term recovery efforts. Tornadoes can obliterate buildings, homes, infrastructure, and agricultural fields in mere moments, resulting in significant repair and reconstruction costs. The destruction of commercial and industrial facilities can disrupt local economies, leading to job losses, business interruptions, and a reduction in tax revenues for affected communities. The cost burden can often be shared by insurance companies, who face substantial claims following a tornado, potentially increasing premiums for customers and influencing the insurance market's stability.

In addition to property damage, the economic repercussions of tornadoes include the expense of emergency response, debris cleanup, and temporary housing for displaced residents. Long-term economic impacts can be exacerbated by the loss of public services and utilities, reduced property values, and the potential for displaced businesses and residents to relocate permanently. These factors contribute to a complex economic aftermath, which can persist long after the physical debris has been cleared.

Changes in Development and Impact to Future Development: According to NOAA, tornadic events can impact changes in development and future construction practices, particularly in tornado-prone regions. Historical patterns and frequency of occurrence have also led to a focus on building resilience, with an emphasis on stronger construction standards to withstand high winds. This includes reinforcing the structural integrity of buildings, using wind-resistant materials, and incorporating tornado-safe rooms or shelters in both new and existing structures. Architects and engineers are increasingly adopting these enhanced safety measures in building designs, considering factors such as roof shapes and anchoring methods that can reduce wind damage. Finally, there's a growing trend towards community-wide tornado preparedness planning, which includes the development of emergency response strategies and the establishment of public storm shelters.

For future development, understanding and mapping tornado risk areas play a crucial role in urban planning decisions. This can influence zoning regulations, with potential restrictions on development in high-risk areas or requirements for specific building codes in such regions. The increasing frequency and intensity of tornadoes, possibly linked to climate change, also necessitates the integration of tornado risk assessments in long-term development plans.

Effects of Climate Change on Severity of Impacts: According to NOAA, climate change is impacting the severity and behavior of tornadic events, although the exact nature of these effects is complex and still a subject of ongoing research. One of the primary challenges in understanding the relationship between climate change and tornadoes is the complexity of tornado formation. Tornadoes require specific atmospheric conditions, including a combination of high instability and strong wind shear. Climate change may affect these conditions, but how these changes will influence tornado occurrence and intensity is not yet fully understood.

According to NOAA, climate change is expected to increase atmospheric instability by warming the Earth’s surface and may also lead to a decrease in wind shear, particularly in areas where tornadoes are most common. This could potentially lead to a change in the number or intensity of tornadoes, but the evidence is not yet conclusive. Second, shifts in climate patterns could affect the geographical distribution and seasonality of tornadoes, potentially leading to tornadoes in regions where they were previously less common or during times of the year when they were less expected.

In a 2021 thesis study, pseudo-global warming (PGW) methodology was used to analyze two historical tornadic events within environments influenced by anthropogenic climate change (ACC). In the findings of this study, weather research and forecasting modeling (WRF) suggested that more convective and intense storms would occur under ACC. In addition, accumulated precipitation also generally increased, and more areas received measurable rainfall, where extreme rainfall – more than 100 mm – increased by more than 50% on average (Woods, 2021).

TABLE: 25-YEAR CLIMATE PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience **an 115% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 55°F) in average annual temperatures.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience an **83% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 54°F) in average annual temperatures.
Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation							
Average Annual Total Precipitation	**36”**	**37”**	**37”**	**38”**	**38”**	**38”**	**40”**
	34-37	34-41	34-41	34-42	33-44	34-43	34-46
Days Per Year With Precipitation	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Days Per Year With No Precipitation	**193 days**	**195 days**	**196 days**	**196 days**	**197 days**	**197 days**	**200 days**
	190-197	187-208	187-212	186-207	184-216	187-208	180-235
Maximum Number Of Consecutive Dry Days	**13 days**	**13 days**	**14 days**	**14 days**	**14 days**	**14 days**	**15 days**
	11-14	12-16	12-17	12-16	12-18	12-16	12-20
Temperature Thresholds							
Annual days with Maximum temperature > 90°	**12 days**	**31 days**	**34 days**	**41 days**	**49 days**	**50 days**	**81 days**
	12-18	19-51	21-50	22-69	30-75	26-86	47-113
Annual days with Maximum temperature > 100°	**0 days**	**2 days**	**2 days**	**4 days**	**7 days**	**7 days**	**24 days**
	0-0	0-6	0-7	0-16	1-23	1-16	2-67
Source: Climate Mapping for Resilience and Adaptation (2024)							

Using Woods' thesis study and 25-Year climate projections in the table above, it is possible to conclude that increasing climate conditions will impact the connectivity and intensity of future tornadic events in Cook County.

5.7.7 FEMA NRI Expected Annual Loss Estimates

TABLE: COOK COUNTY - EXPECTED ANNUAL LOSS FOR TORNADIC EVENTS

Annualized Frequency	Population	Population Equivalence	Building Value	Agriculture Value	Total EAL Value	Expected Annual Loss Rating	Expected Annual Loss Score
0.6 events per year	17.16	$199,094,447	$104,973,215	$203	$304,067,865	Very High	99.9

Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.*
Expected Annual Loss Scores *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*

Period of Record: 2021 dataset

Source: FEMA National Risk Index (2024)

5.7.8 FEMA Hazard-Specific Risk Index

TABLE: COOK COUNTY - FEMA HAZARD SPECIFIC RISK INDEX – TORNADIC EVENTS

EAL Value	Social Vulnerability Score	Community Resilience Score	Risk Value	Risk Index Score
304,067,865	Very High	Relatively High	$364,927,286	100

FEMA Hazard-Type ***Risk Index Scores*** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.*
FEMA Hazard-Type ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.*
FEMA Hazard-Type ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*

Source: FEMA National Risk Index (2024)

5.7.9 FEMA NRI Exposure Values

TABLE: COOK COUNTY - EXPOSURE VALUE TABLE FOR TORNADIC EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Tornado	$62,057,329,400,253	$893,116,815,354	$61,164,190,000,000	5,272,775	$22,584,899

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*

Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*

Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

5.8 Wildfire

5.8.1 Hazard Description

Wildfire is an uncontrolled fire that burns in forests, grasslands, and other natural areas. Wildfires can spread quickly, driven by factors like wind and dry conditions, and they often pose significant threats to life, property, and the environment. These fires can be ignited by various sources, including lightning, human activities, and other natural causes. Wildfires can result in widespread devastation and require coordinated efforts for containment, suppression, and recovery.

5.8.2 Hazard Location

Wildland-Urban Intermix/Interface (WUI/I) are defined as any area where potentially combustible wildland fuels are found adjacent to or in the vicinity of combustible homes, businesses, and other structures. It is a zone where man-made improvements intermix with wildland fuels.

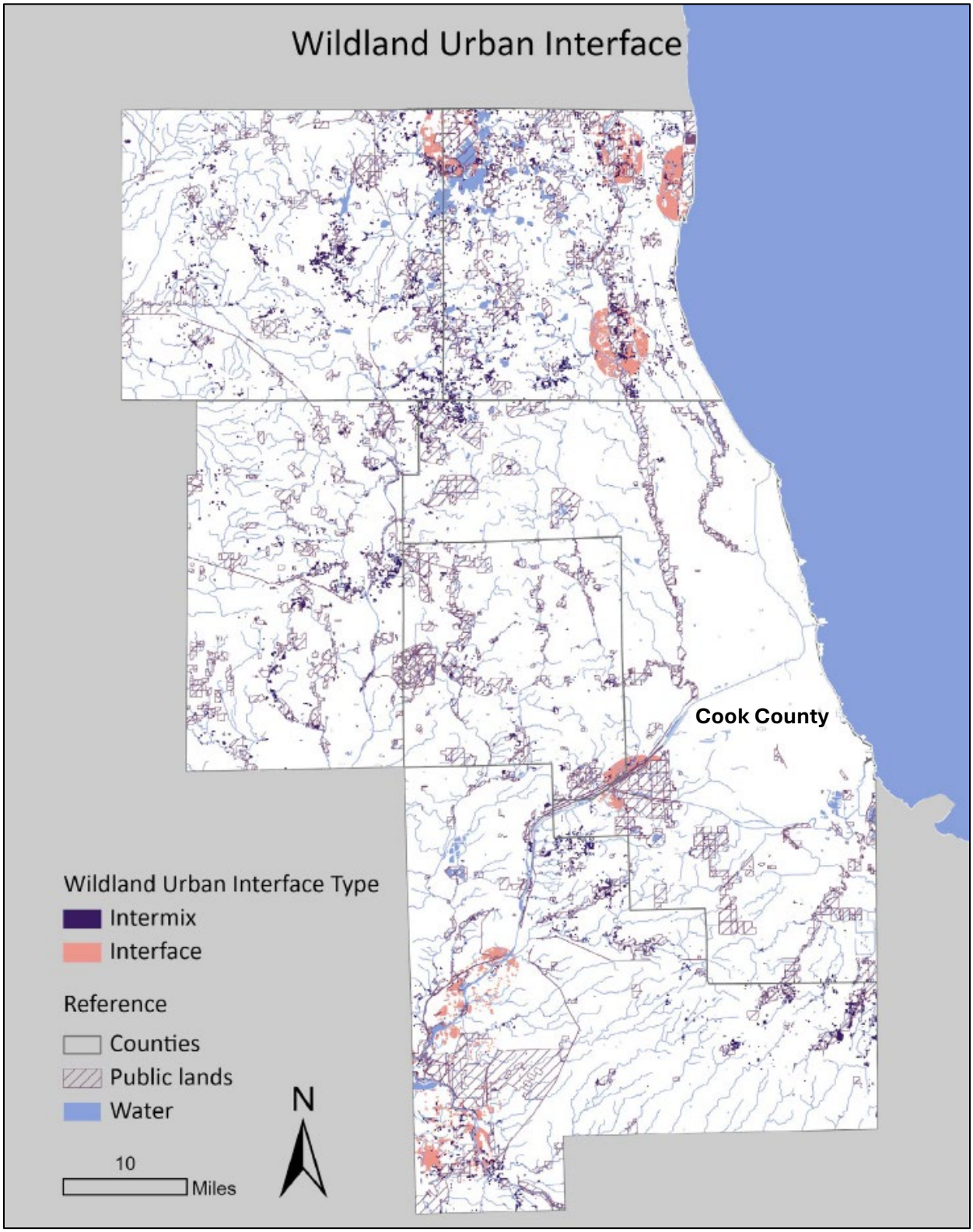
In 2024, Chicago Wilderness initiated a study to look at wildland urban intermix/interface (WUI/I) vulnerability in a six-county area surrounding Chicago, Illinois. The counties participating in this study include Cook, DuPage, Kane, Lake, McHenry and Will, which total 2,397,675 acres. These six counties were selected due to: 1) their proximity to the metropolitan Chicago area; 2) their continuity to one another; and, 3) presence of representative fuels with interspersed residential housing. The goal was to develop a process for identifying WUI/I with an analytical template so other entities within the Chicago Wilderness area could utilize the process to initiate their own plans.

Because wildfire is not a common hazard associated with this region, the Chicago Wilderness Community Wildfire Preparedness Plan provides the most in-depth analysis of the risks and concerns associated with this hazard. As such, the mitigation planning team has been given permission to utilize these regional findings to articulate the risk of wildfire for the planning area.

The following map shows the WUI areas for Cook County, which represents a very small portion of the county.

TABLE: COOK COUNTY WUI

County	Size (Acres)	Wildland Fuels (acres)	WUI/I (acres)	WUI/I Percent
Cook	611,610	84,602	7,951	1.3%



Source: 2024 Chicago Wilderness Community Wildfire Preparedness Plan

5.8.3 Hazard Extent/Intensity

The National Interagency Fire Center (NIFC) employs several measures and tools to assess the extent and intensity of wildfires. These include the acreage burned, which quantifies the size of the affected area, with larger acreage indicating more extensive wildfires. Fire behavior indicators such as the rate of spread, fireline intensity, and flame length offer insights into the wildfire's intensity, with rapid spread and high-intensity flames signifying a more severe fire. The table below illustrates fire suppression interpretations of flame length and fireline intensity.

TABLE: US DOA FLAME LENGTH AND FIRELINE INTENSITY TABLE

Fire Suppression Interpretations of Flame Length and Fireline Intensity

Flame Length	Fire Intensity	Interpretation
Feet	*Btu/ft/s*	Fire can generally be attacked at the head or flanks by persons using hand tools. Handline should hold the lire
< 4	< 100	
4-8	100-500	Fires are too intense for direct attack on the head by persons using hand tools. Handline cannot be relied on to hold fire. Equipment such as plows, dozers, pumpers, and retardant aircraft can be effective.
8-11	500-1,000	Fires may present serious control problems-torching out, crowning, and spotting. Control efforts at the fire head will probably be ineffective.
>11	>1,000	Crowning, spotting, and major fire runs are probable. Control efforts at head of fire are ineffective.

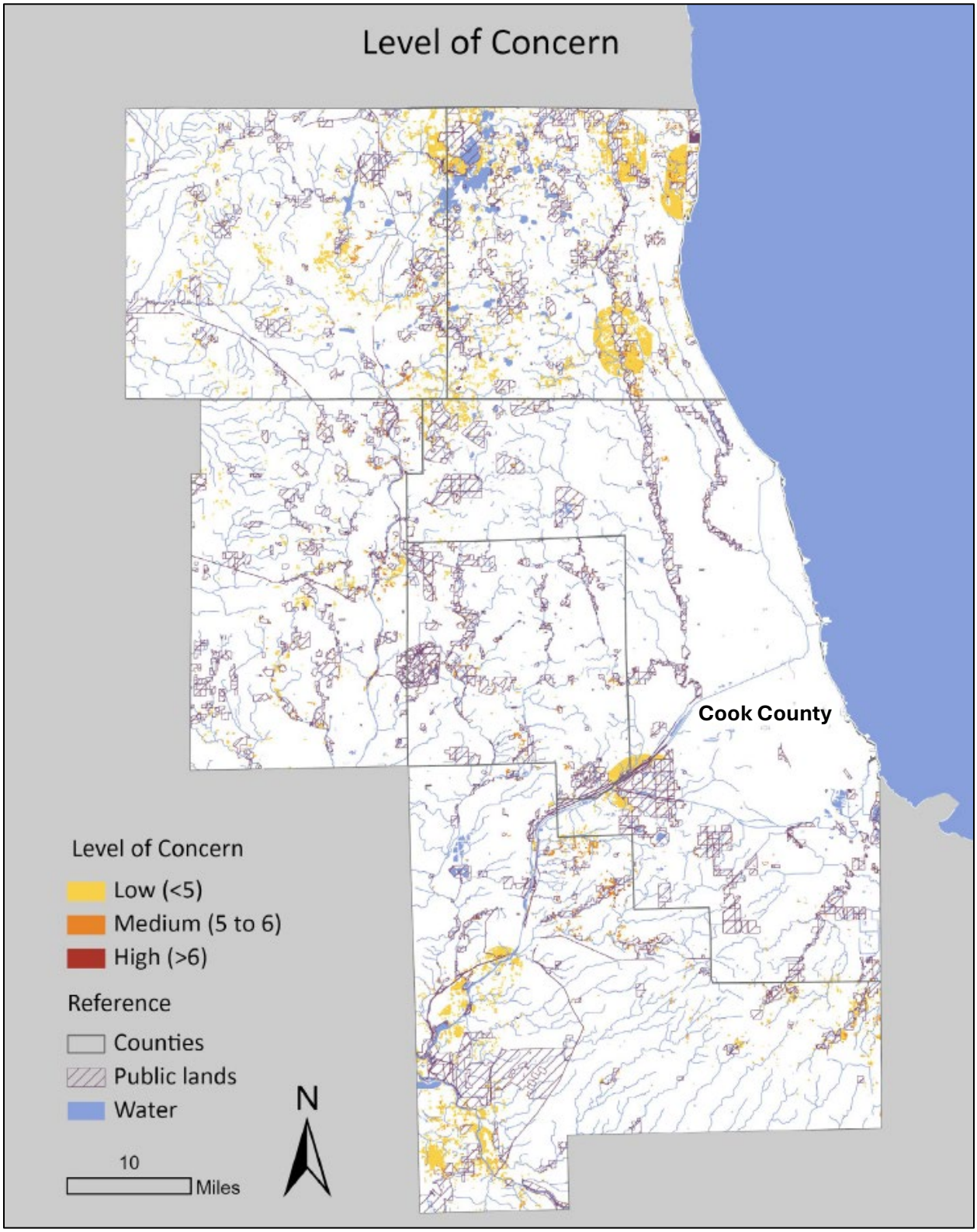
Source: US Department of Agriculture – Forest Service

The containment status, measured as the percentage of the fire's perimeter under control, tracks the progress in limiting the wildfire's spread. Meteorological data on temperature, humidity, wind speed, and direction are crucial for understanding fire potential, with critical fire weather conditions contributing to more intense wildfires. The extent of damage to homes, infrastructure, and communities, as well as the scale of evacuation orders issued, reflects the wildfire's impact. Lastly, resource deployment and fire danger ratings are considered, enabling NIFC to assess wildfire severity and effectively manage response efforts (US Department of the Interior, 2024).

The majority of Cook County is considered “Low Level of Concern” as reported by the 2024 Chicago Wilderness Community Wildfire Preparedness Plan. This is determined by assessing levels of fuel volatility and fire occurrence.

TABLE: COOK COUNTY WILDFIRE LEVEL OF CONCERN

County	Low (acres)	Medium (acres)	High (acres)	Total (acres)
Cook	5,777	2,005	252	8,034



Source: 2024 Chicago Wilderness Community Wildfire Preparedness Plan

5.8.4 Probability and Frequency

Probability: The National Interagency Fire Center (NIFC) measures the probability of wildfires by considering various factors and conditions that contribute to the likelihood of ignition and fire spread. Key elements in assessing this probability include:

- Weather Conditions: NIFC monitors weather data, including temperature, humidity, wind speed, and precipitation, to evaluate the fire weather outlook. Dry and windy conditions with low humidity increase the likelihood of wildfires.
- Fuel Moisture: The moisture content of vegetation, such as grasses, shrubs, and trees, is a critical factor. Dry or drought-affected fuels are more susceptible to ignition.
- Lightning Activity: NIFC tracks lightning activity in wildfire-prone regions, as lightning strikes are a common natural cause of wildfires.
- Human Activities: Monitoring human activities that can lead to unintentional ignitions, such as campfires, discarded cigarettes, and equipment sparks, helps assess the human-related wildfire risk.
- Historical Data: Historical wildfire data, including the frequency and size of past wildfires, can inform the probability of future incidents.
- Fire Danger Ratings: Fire danger ratings, such as the Fire Weather Index, provide a standardized assessment of fire risk based on weather and fuel conditions.

Frequency: Between 2004 and 2024, Cook County experienced 1 wildfire event according to the National Centers for Environmental Information. This equates to an average of 0.05 wildfire events/year. The 2024 Chicago Wilderness Community Wildfire Preparedness Plan reports 9,994 fires occurring in the region from January 1, 2013, to December 31, 2022 if the following are considered:

- Brush, or brush and grass mixture fire
- Grass fire
- Natural vegetation fire, other
- Cultivated vegetation, crop fire, other
- Cultivated grain or crop fire
- Cultivated orchard or vineyard fire

Most localized wildland fire reports lack a site-specific address, which makes it difficult to pinpoint location and frequency of events in a given locale.

TABLE: COOK COUNTY FIRES

County	Number of Fires
Cook	9,994

5.8.5 Past Major Events

TABLE: PAST WILDFIRE EVENTS IN COOK COUNTY, ILLINOIS As reported by the National Centers for Environmental Information									
Location	**County**	**State**	**Date**	**Time**	**Type**	**Dth**	**Inj**	**PrD**	**CrD**
Totals:						**0**	0	**2.00M**	**0.00K**
COOK (ZONE)	COOK (ZONE)	IL	05/24/2007	09:40	Wildfire	0	0	2.00M	0
Totals:						**0**	0	**2.00M**	**0.00K**

5.8.6 Vulnerability and Impacts

Impacted FEMA Community Lifelines	
Safety and Security Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	**Moderate**
Food, Hydration, Shelter Food, Hydration, Shelter, Agriculture	**Minimal**
Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	**Moderate**
Energy Power Grid, Fuel	**Minimal**
Communications Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	**Minimal**
Transportation Highway/ Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	**Minimal**
Hazardous Materials Facilities, HAZMAT, Pollutants, Contaminants	**Minimal**
Water Systems Potable Water Infrastructure, Wastewater Management	**Minimal**
Possible Extent of Disruption and Impacts to Community Lifelines from this Hazard **Red** = Significant | **Yellow** = Moderate | **Minimal** = Green | **Grey** = Unknown	

Community Lifelines: Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day to day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. Lifelines were developed to support response planning and operations, but the concept can be applied to the entire emergency management cycle, ***including mitigation***. This basic analysis above is a representation of the hazard's potential impact and disruption to the eight Community Lifeline sectors in Cook County as defined by the planning team and based on an analysis of the potential impacts in this section. Future updates to this plan will continue to integrate Community Lifelines by ensuring all lifeline sectors have active stakeholders in the MJ-HMP and that the plan identifies the vulnerability

and impacts to specific lifeline assets in the County, including root cause analyses, interdependencies, and restoration/recovery prioritization based on criticality.

Life Safety and Public Health: Wildfires can have significant life safety and public health impacts. First, wildfires produce smoke and particulate matter that can degrade air quality over large areas, potentially leading to respiratory issues, exacerbating pre-existing conditions, and causing symptoms such as coughing, shortness of breath, and irritation of the eyes and throat. Secondly, wildfires often necessitate the evacuation of communities, temporarily displacing residents from their homes. This displacement can result in stress, anxiety, and potential health risks, particularly for vulnerable populations.

Additionally, the dynamic nature of wildfires can lead to injuries and fatalities among responders and the public. These incidents may occur during evacuations, firefighting efforts, or while navigating hazardous fire conditions. Furthermore, the mental health impact of wildfires is noteworthy, as they can cause stress, anxiety, and trauma for those affected. The loss of homes and possessions, coupled with the uncertainty of wildfire impacts, can contribute to long-term mental health challenges. Wildfires also have the potential to disrupt the food supply chain and water infrastructure, potentially leading to contamination of drinking water sources and causing shortages of essential supplies. Lastly, evacuation centers and crowded living conditions can facilitate the spread of infectious diseases, making disease control and public health management a priority during and after wildfires.

Property Damage and Critical Infrastructure: Overall, wildfires have far-reaching consequences on both property and critical infrastructure, emphasizing the importance of fire prevention and mitigation measures. Wildfires can cause extensive destruction to homes, buildings, and infrastructure, resulting in significant financial losses. Homes and properties situated in or near the path of a wildfire are particularly vulnerable, and even with firefighting efforts, many structures may be lost. In addition to property damage, wildfires can disrupt critical infrastructure such as power lines, electrical substations, transportation networks, and communication facilities.

Power outages can occur as a result of infrastructure damage, impacting not only residents but also essential services like hospitals, water treatment plants, and emergency communication systems. Roads and bridges may be compromised or rendered impassable due to the force of the wildfires, hindering access to affected areas. The aftermath of wildfires can also lead to environmental damage, with erosion, sedimentation, and water quality issues affecting ecosystems and water sources. Cleanup and restoration efforts can be costly and time-consuming, and the long-term economic impact on communities and regions is a significant concern.

All Cook County critical facilities and infrastructure are listed in Section 4.6.

Economy: Wildfires can result in significant economic losses for communities and regions affected by these disasters. Some of the primary economic impacts include property damage and loss, the cost of firefighting efforts, and the expenses associated with recovery and rebuilding. Property damage encompasses homes, businesses, and infrastructure, leading to insurance claims and financial burdens on individuals and organizations. The cost of deploying firefighting resources, including personnel, equipment, and air support, is another significant economic factor. Additionally, post-fire efforts such as erosion control, reforestation, and repair of damaged

infrastructure contribute to the economic toll. The disruption of economic activities, such as agriculture, tourism, and outdoor recreation, can further affect the local and regional economies.

Changes in Development and Impact of Future Development: Wildfires can significantly impact changes in development and future development in several ways. The effects of wildfires on communities, infrastructure, and ecosystems can influence land use planning and development decisions. After a wildfire, local authorities may reassess land use and zoning regulations, especially in areas prone to wildfires. They may impose stricter building codes, setback requirements, and vegetation management rules to reduce fire risk in future developments.

Wildfires can also expose vulnerabilities in critical infrastructure, such as power lines, roads, and water supply systems. This can lead to investment in infrastructure upgrades to enhance resilience and prevent future damage. Communities affected by wildfires often face the decision of whether to rebuild in the same location or relocate to safer areas. The experience of a wildfire can influence the choices made by property owners and developers. The increased frequency and severity of wildfires may impact the availability and cost of property insurance. Insurers may adjust premiums or coverage terms, affecting property development decisions. Moreover, wildfires can lead to increased community awareness and preparedness efforts, influencing development decisions. Communities may implement Firewise practices and community wildfire protection plans that affect future development.

Lastly, wildfires can alter ecosystems and natural landscapes. Land managers and conservationists may adjust their plans for ecological restoration and habitat conservation, which can, in turn, influence land development in affected areas. Lastly, the cumulative impact of wildfires on a region can inform long-term planning strategies, influencing where and how future development occurs. It may lead to regional development policies that prioritize resilience and fire risk reduction. In summary, wildfires can prompt changes in development and future development by affecting land use regulations, infrastructure investment, community resilience, and long-term planning. These changes are often driven by the need to reduce the risks associated with wildfires and their potential impacts on communities and the environment.

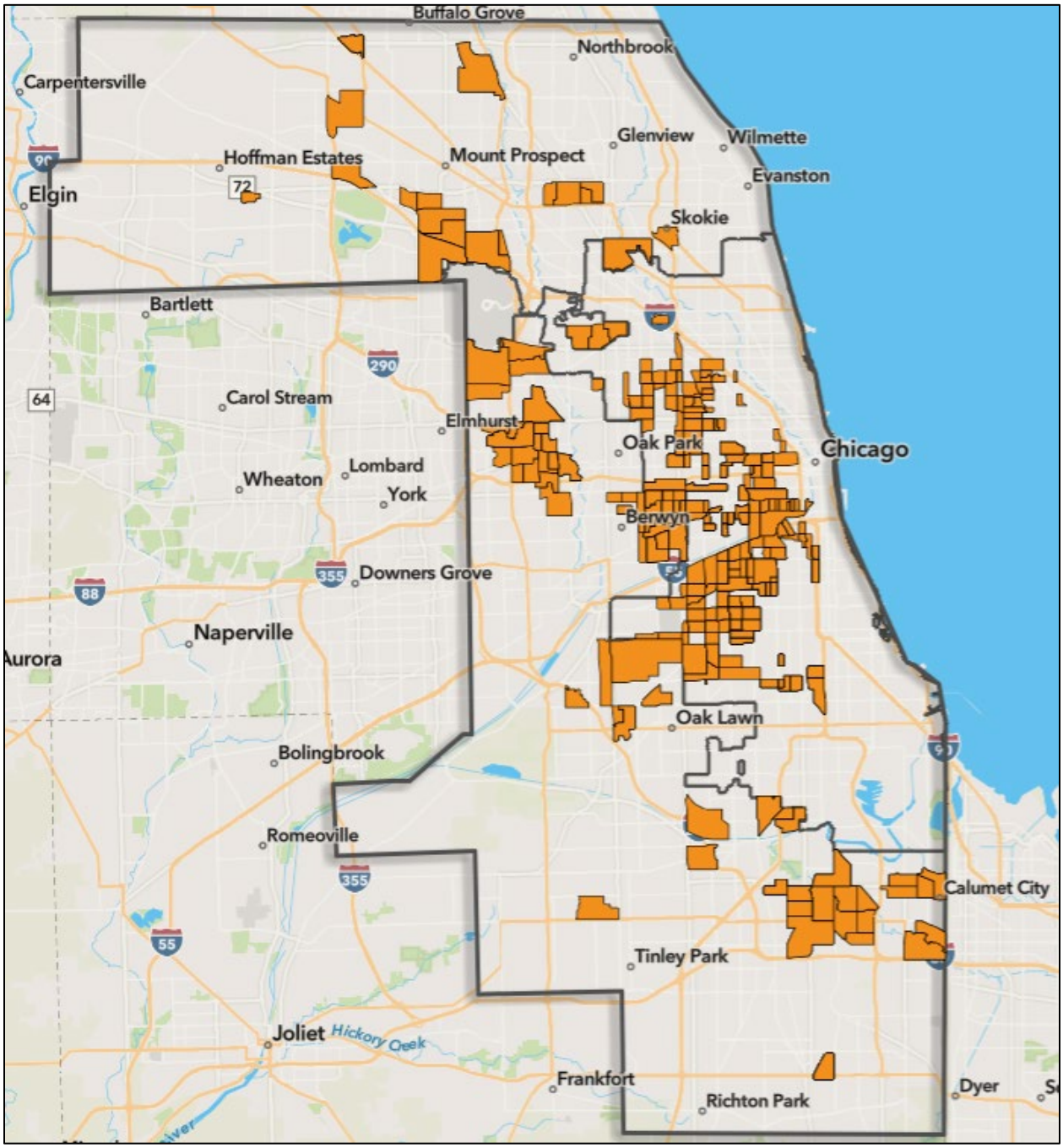
Effects of Climate Change on Severity of Impacts: According to NOAA, climate change is having a profound influence on wildfires. Climate change can manifest its impact in various ways, significantly intensifying the frequency and severity of wildfires. Firstly, escalating global temperatures lead to heightened evaporation rates, causing vegetation to dry out and become more susceptible to ignition. This prolonged warmth results in an extended fire season, providing more opportunities for wildfires to occur. Secondly, climate change can exacerbate drought conditions in many regions, depleting soil moisture and rendering vegetation more flammable. As a result, severe and extended droughts increase the ease with which wildfires ignite and spread. Additionally, alterations in precipitation patterns, driven by climate change, can lead to more intense rainfall events, followed by prolonged dry periods. This cycle promotes rapid vegetation growth, which, in turn, creates additional fuel for wildfires. The impact of climate change is further exacerbated by an increase in extreme weather events, like thunderstorms and lightning strikes, which often serve as ignition sources for wildfires. Changes in wind patterns, brought about by shifting atmospheric circulation, can result in more frequent and intense wind events, facilitating the rapid spread of wildfires. Warmer temperatures can also contribute to increased insect outbreaks, weakening and killing trees, thus providing more fuel for fires. Lastly, climate change can extend the fire season in many regions, heightening the likelihood of wildfires (NOAA).

TABLE: 25-YEAR CLIMATE PROJECTIONS FOR COOK COUNTY, IL
HIGHER EMISSIONS (RCP8.5)
Cook County is expected to experience an **115% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 55°F) in average annual temperatures.
LOWER EMISSIONS (RCP4.5)
Cook County is expected to experience an **83% increase** in extremely hot days within 25 years.
By 2049, Cook County is expected to have a **2°F increase** (from 53°F to 54°F) in average annual temperatures.
Source: Neighborhoods at Risk (https://nar.headwaterseconomics.org/17031/explore/climate)

TABLE: FUTURE CLIMATE INDICATORS FOR COOK COUNTY, IL							
Indicator	**Modeled History** (1976-2005)	**Early Century** (2015-2044)		**Mid Century** (2035-2064)		**Late Century** (2070-2099)	
		Lower Emissions	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**	**Lower Emissions**	**Higher Emissions**
	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max	Min-Max
Precipitation							
Days per Year with No Precipitation	**193 days**	**195 days**	**196 days**	**196 days**	**197 days**	**197 days**	**200 days**
	190-197	187-208	187-212	186-207	184-216	187-208	180-235
Maximum Number of Consecutive Dry Days	**13 days**	**13 days**	**14 days**	**14 days**	**14 days**	**14 days**	**15 days**
	11-14	12-16	12-17	12-16	12-18	12-16	12-20
Days per Year w/ Precipitation	**172 days**	**170 days**	**169 days**	**169 days**	**168 days**	**168 days**	**165 days**
	168-175	157-178	153-178	158-179	149-182	158-179	130-185
Temperature Thresholds							
Annual Days with Maximum Temperature > 90°F	**12 days**	**31 days**	**34 days**	**41 days**	**49 days**	**50 days**	**81 days**
	12-18	19-51	21-50	22-69	30-75	26-86	47-113
Annual Days with Maximum Temperature > 100°F	**0 days**	**2 days**	**2 days**	**4 days**	**7 days**	**7 days**	**24 days**
	0-0	0-6	0-7	0-16	1-23	1-16	2-67
Source: Climate Mapping for Resilience and Adaptation (2024)							

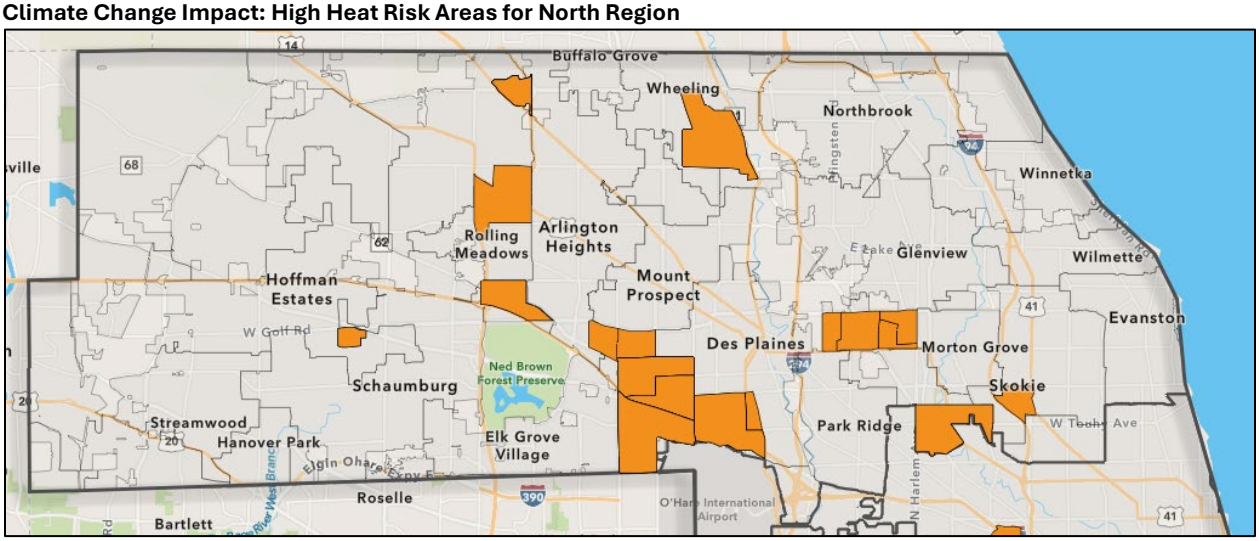
The figure below highlights the highest risk census tracts for extreme heat mitigation and intervention and associated challenges that communities face from climate change. This map examines where areas of high urban heat index, low tree canopy percentage, and high amounts of impervious surface overlap with one of eleven social vulnerability index variables. The resulting data shows census tracts that are at highest risk for extreme heat and contain populations who may be disproportionately affected by extreme heat events caused by climate change.

Climate Change Impact: High Heat Risk Areas for Cook County



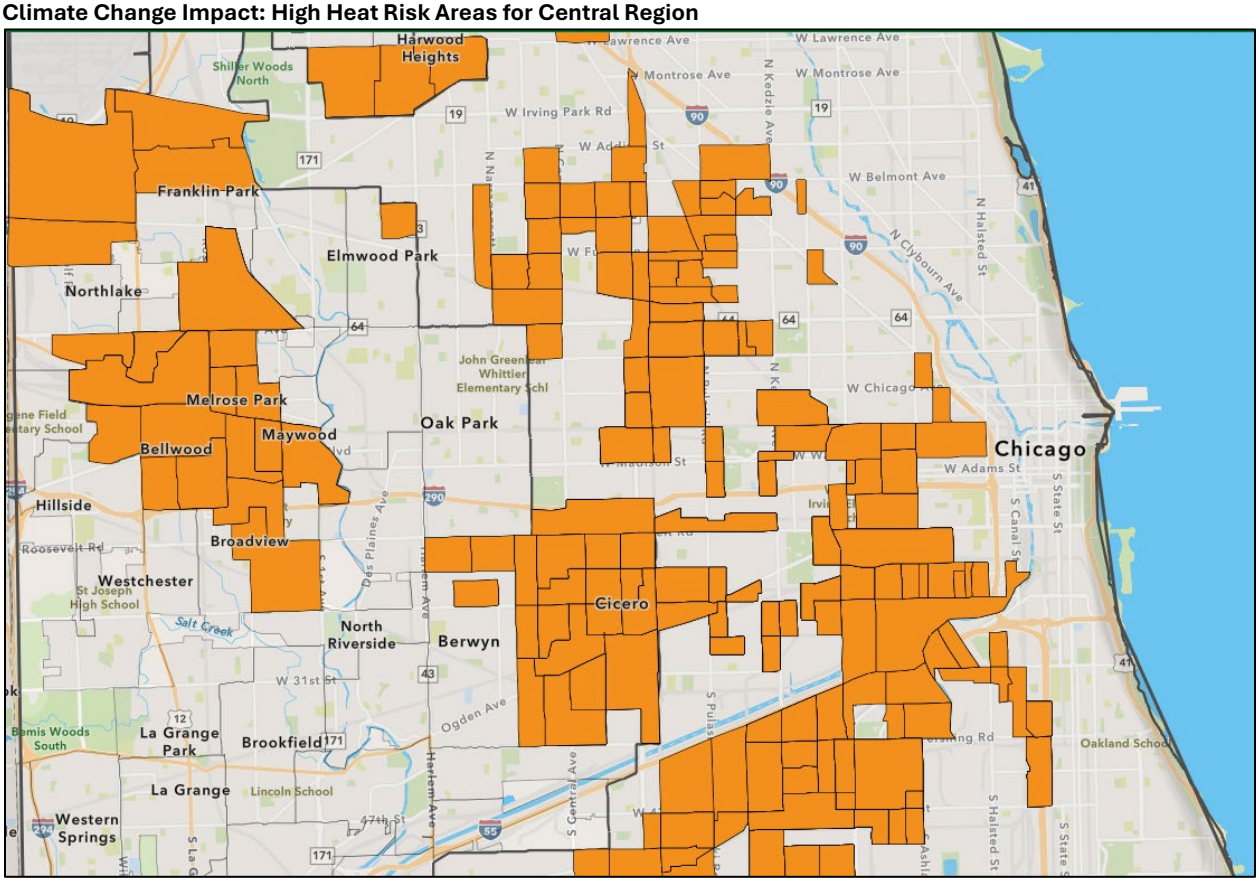
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for North Region



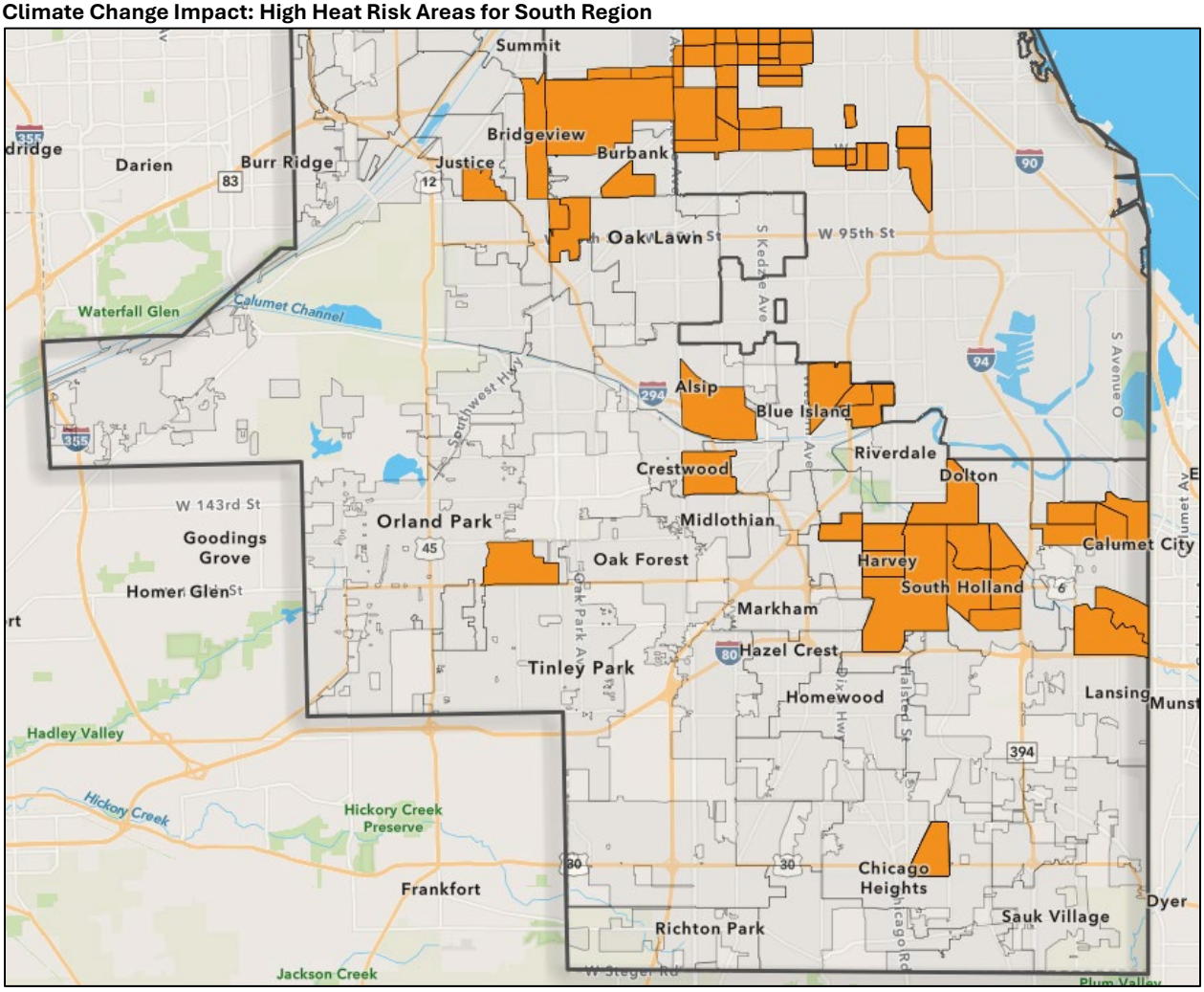
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for Central Region



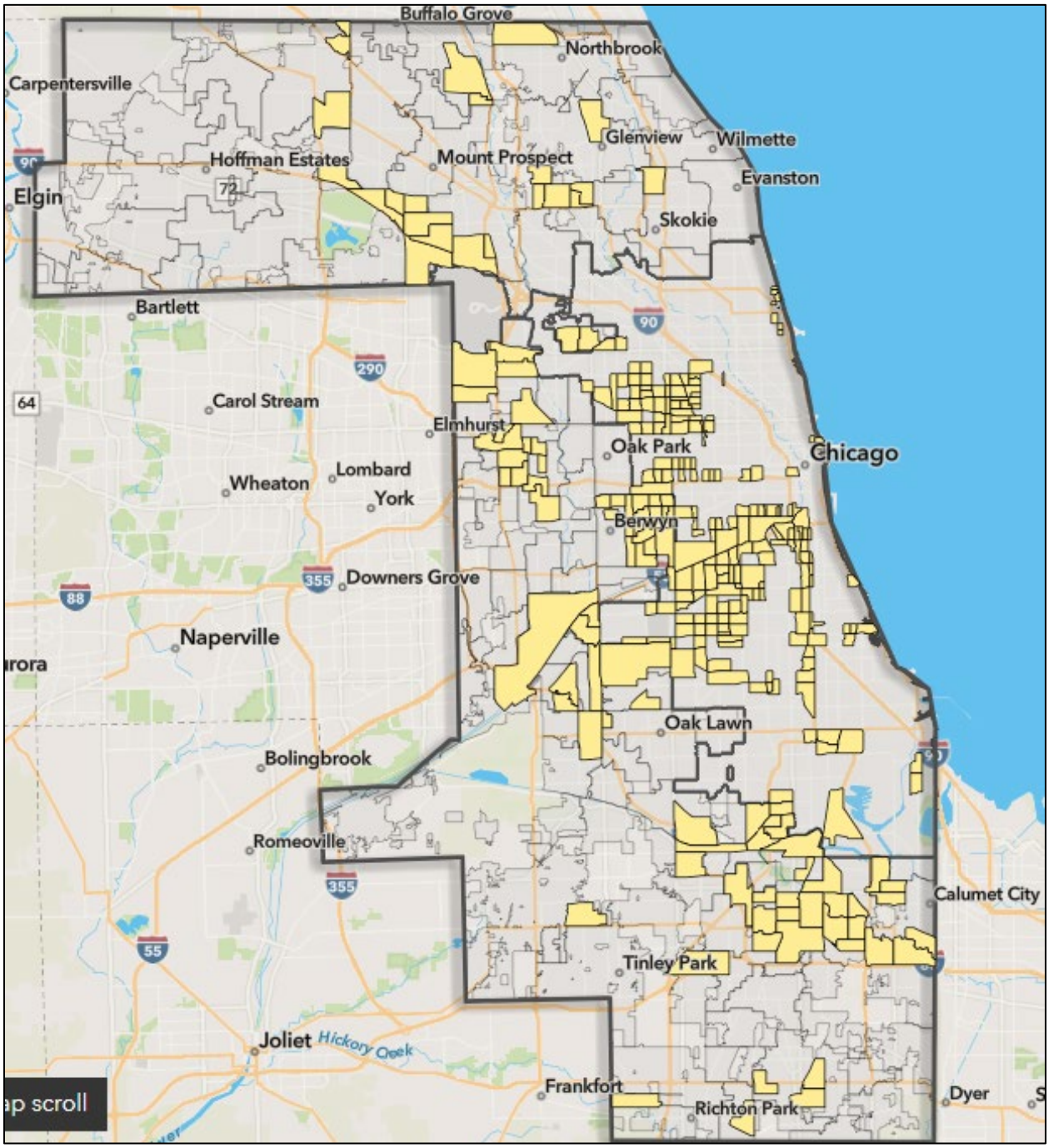
Source: Chicago and Cook County Greenprint Heat Risk Vulnerability Assessment

Climate Change Impact: High Heat Risk Areas for South Region

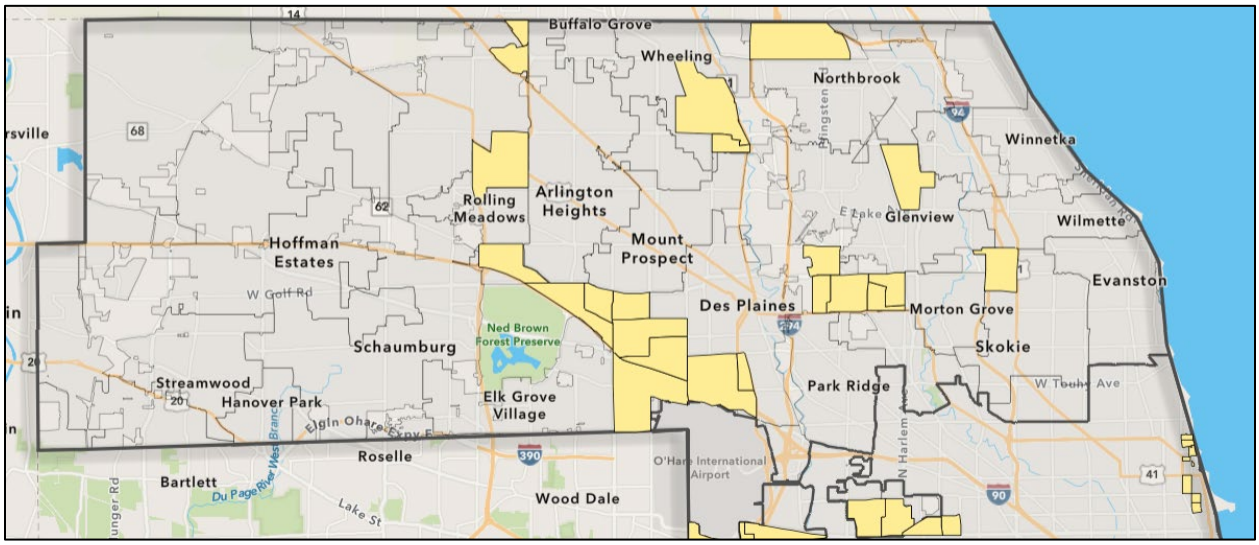


The figure below highlights the highest risk census tracts for poor air quality mitigation and intervention and associated challenges that communities face from climate change. This map examines where areas of high particulate matter, low tree canopy percentage, and high vehicle traffic overlap with one of eleven social vulnerability index variables. The resulting data shows census tracts that are at high risk for poor air quality and contain populations who may be disproportionately affected by prolonged pollution and poor air. Wildfires in Cook County or poor air quality caused by wildfires in other areas may exacerbate air quality conditions.

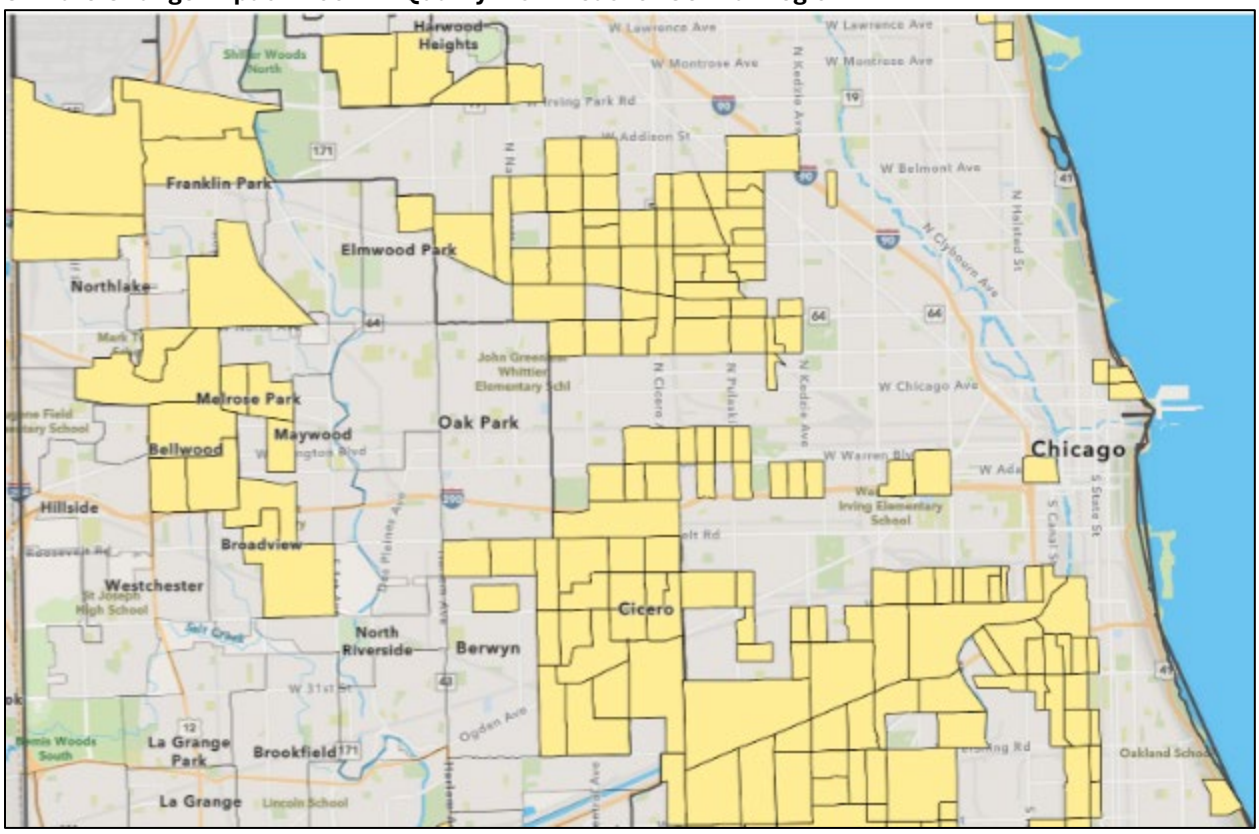
Climate Change Impact: Poor Air Quality Risk Areas for Cook County



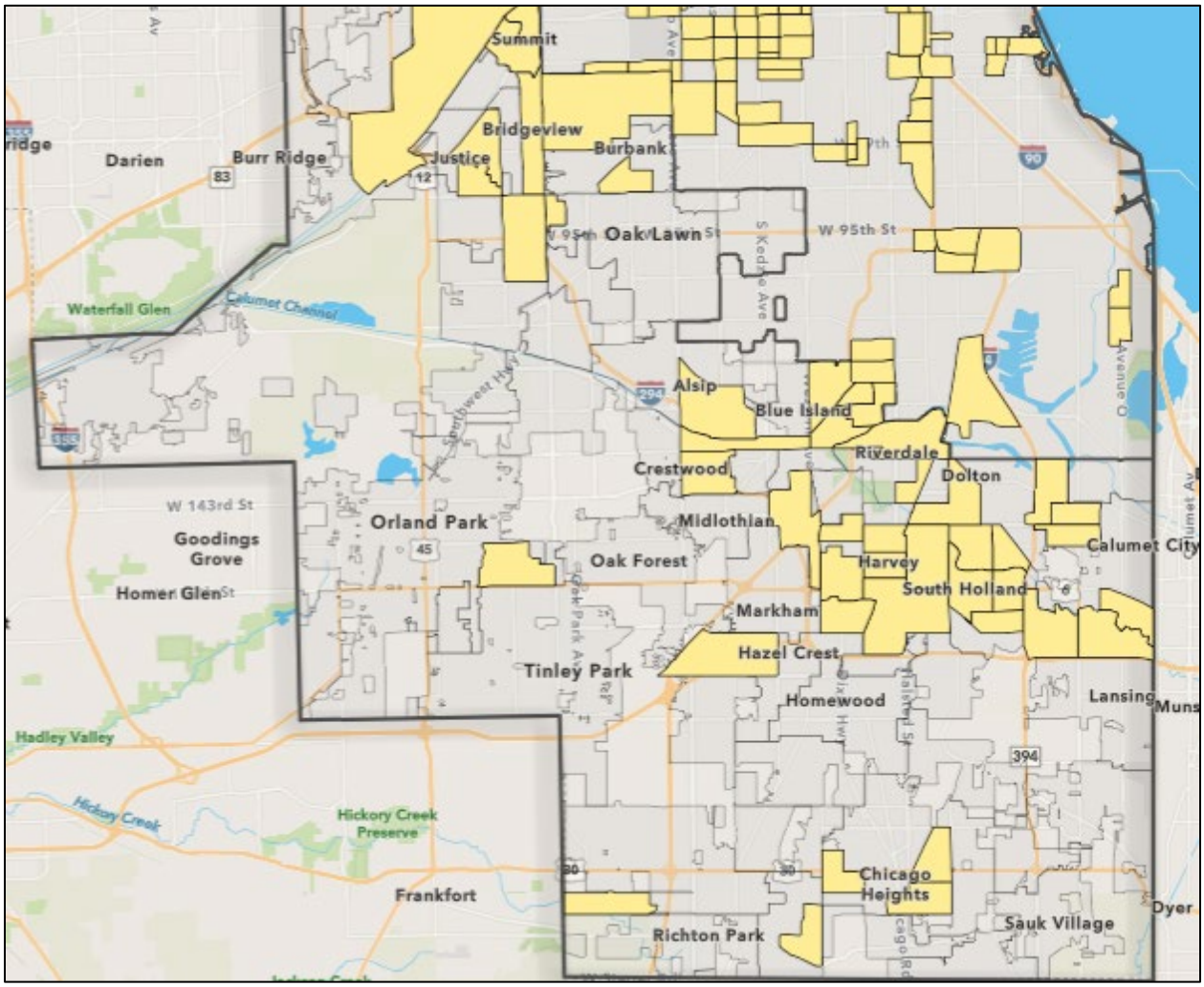
Climate Change Impact: Poor Air Quality Risk Areas for North Region



Climate Change Impact: Poor Air Quality Risk Areas for Central Region



Climate Change Impact: Poor Air Quality Risk Areas for South Region



5.8.7 FEMA Expected Annual Loss Table

COOK COUNTY, ILLINOIS EXPECTED ANNUAL LOSS TABLE FOR WILDFIRE EVENTS							
Annualized Frequency	**Population**	**Population Equivalence**	**Building Value**	**Agriculture Value**	**Total EAL Value**	**Expected Annual Loss Rating**	**Expected Annual Loss Score**
0.010% chance per year	0.00	$3,973	$71,542	$4	$75,519	Very Low	60.8

Annualized Frequency: *The natural hazard annualized frequency is defined as the expected frequency or probability of a hazard occurrence per year. Annualized frequency is derived either from the number of recorded hazard occurrences each year over a given period or the modeled probability of a hazard occurrence each year.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology.*
Expected Annual Loss Scores *are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios (Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio). Source: hazards.fema.gov/nri/expected-annual-loss*

Source: FEMA National Risk Index (2024)

5.8.8 FEMA Hazard Specific Risk Index Table

COOK COUNTY, ILLINOIS FEMA HAZARD SPECIFIC RISK INDEX – WILDFIRE EVENTS				
EAL Value	**Social Vulnerability Score**	**Community Resilience Score**	**Risk Value**	**Risk Index Score**
$75,519	Very High	Relatively High	$84,769	60.7

FEMA Hazard-Type **Risk Index Scores** *are calculated using data for only a single hazard type and reflect a community's relative risk for only that hazard type.*
FEMA Hazard-Type ***Social Vulnerability Score*** *represents the relative level of a community's social vulnerability compared to all other communities at the same level. A community's Social Vulnerability Score is proportional to a community's risk.*
FEMA Hazard-Type ***Community Resilience Score*** *represents the relative level of a community's resilience compared to all other communities at the same level. The Community Resilience Score is inversely proportional to a community's risk.*

Source: FEMA National Risk Index (2024)

5.8.9 FEMA NRI Exposure Values

TABLE: COOK COUNTY, IL EXPOSURE VALUE TABLE - WILDFIRE EVENTS					
Hazard Type	**Total Value**	**Building Value**	**Population Equivalence**	**Population**	**Agriculture Value**
Wildfire	$112,637,067,536	$2,691,094,106	$109,944,068,454	9,477.94	$1,904,976

Buildings: *Building exposure value is defined as the dollar value of the buildings determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible building exposure of an area (Census block, Census tract, or county) is its building value as recorded in HAZUS 6.0, which provides 2022 valuations of the 2020 Census.*
Population: *Population exposure is defined as the estimated number of people determined to be exposed to a hazard according to a hazard type-specific methodology. The maximum possible population exposure of an area (Census block, Census tract, or county) is its population as recorded in HAZUS 6.0. Population loss is monetized into a population equivalence value using a VSL approach in which each fatality or ten injuries is treated as $11.6 million dollars of economic loss (2022 dollars).*
Agriculture: *Agriculture exposure value is defined as the estimated dollar value of the crops and livestock determined to be exposed to a hazard according to a hazard type-specific methodology. This is derived from the USDA 2017 Census of Agriculture county-level value of crop and pastureland with 2018 values for the US territories. All dollar values are inflation-adjusted to 2022 dollars.*

Source: FEMA National Risk Index (2024)

5.9 Other Hazards of Concern

Although FEMA does not require non-natural hazards for inclusion in a hazard mitigation plan, Cook County wishes to rank and mitigate against a comprehensive list of hazard events that could impact the county. Due to the nature of non-natural hazards and the discretionary status regarding their inclusion, the following hazards of interest have been briefly and qualitatively assessed for public education and informing their inclusion within the hazard ranking and mitigation process:

- Epidemic or Pandemic
- Nuclear Power Plant Incidents
- Regional Migration Impacts
- Widespread Power Outage
- HAZMAT Incidents
    - Fixed Site
    - Transportation
    - Nuclear
- Civil Disturbance/Riot
- Active Shooter/Active Assailant
- Hostage Situation
- Terrorism & WMD Incident
- Sabotage
- Cyber Attacks
- Fire or Explosion
- Utility Failure: Gas, Phone, Sewer, Water, and Pipeline
- Commercial Transportation Accidents
    - Air
    - Rail
    - Road
    - Waterway
- Structural Collapse
- Special Events Incidents
- Space Weather

5.9.1 Epidemic or Pandemic

5.9.1.4 Hazard Description

Epidemic: the occurrence of more cases of a disease than what is normally expected within a specific group of people or a given area over a particular period of time. This can apply to a variety of conditions, not just infectious diseases, and doesn't necessarily mean that the diseases are contagious. Epidemics are characterized by their increase in cases compared to what is typically expected under normal circumstances.

Pandemic: a global outbreak of a new disease, specifically one that is able to spread easily and sustainably from person to person across a wide geographic area, often worldwide. The term typically refers to new (novel) viruses to which most people do not have immunity, such as a new strain of influenza. The key characteristics of a pandemic include its ability to infect people easily and its efficient and sustained transmission among people.

5.9.1.5 Hazard Extent/Intensity

The Centers for Disease Control and Prevention (CDC) measures the extent or intensity of a public health emergency through a combination of surveillance systems, epidemiological data analysis, and health indicators. Surveillance systems collect data on various health-related events, including the incidence and prevalence of diseases, hospitalization rates, and mortality rates. These systems are crucial for tracking the spread of infectious diseases, identifying outbreaks, and monitoring ongoing health threats. Epidemiological data analysis involves studying the distribution and determinants of health states or events in specific populations, helping to understand the scope and impact of a public health emergency. This analysis can reveal trends, risk factors, and populations most at risk, guiding targeted interventions and resource allocation.

In addition to surveillance and epidemiology, the CDC also uses specific health indicators to gauge the intensity of a public health emergency. These indicators may include the rate of disease transmission, the proportion of healthcare resources utilized, and the effectiveness of public health interventions. The CDC collaborates with local, state, and *international* partners to gather and analyze data, ensuring a comprehensive understanding of the situation. The integration of these methods allows the CDC to assess the severity of a public health emergency accurately, inform decision-making, and communicate risks to the public and policymakers.

5.9.1.3. Probability and Frequency

Public health emergencies vary in their probability and frequency over time. Factors such as emerging infectious diseases, natural disasters, or other health-related events can influence the occurrence of public health emergencies. While the exact probability and frequency of such emergencies over the last ten years can vary, it is essential to note that the World Health Organization (WHO) and other public health agencies continuously monitor and prepare for potential threats.

WHO collects and analyzes data from affected countries and regions to assess health emergencies' magnitude, severity, and impact. They monitor disease outbreaks, conduct epidemiological investigations, and provide technical expertise to understand the dynamics of the crisis. The WHO also collaborates with partners to develop standardized tools and methodologies for data collection and analysis. In addition, they facilitate information sharing, research collaboration, and the dissemination of best practices among countries and stakeholders.

5.9.1.6 Past Events

Over the last five years, the most notable public health emergency is the COVID-19 pandemic, which began in late 2019 and continues to have a global impact at the time of this plan. Another significant international event was the Ebola outbreak in the Democratic Republic of Congo, which persisted from 2018 to 2020. The ongoing crisis of opioid overdoses and addiction in various countries, including the United States, has also been considered a public health emergency. Additionally, the Zika virus outbreak occurred in 2015-2016, primarily affecting the Americas, and raised significant concerns.

Vulnerability and Impacts

Health and Safety: Public health emergencies significantly impact health and safety. These emergencies often result in increased morbidity and mortality rates, posing a threat to the well-being of individuals and communities. They can lead to the rapid spread of infectious diseases, causing widespread illness and potentially overwhelming healthcare systems. Public health emergencies may also disrupt routine healthcare services, delay access to necessary treatments, and hinder the management of chronic conditions. Additionally, these emergencies can result in psychological distress, fear, and social disruption within affected populations.

Property Damage and Critical Infrastructure: Public health emergencies can disrupt essential services and infrastructure systems critical for public health and safety. For instance, healthcare facilities may experience increased demands and strains on resources, potentially affecting their capacity to provide adequate care. In addition, transportation networks, including airports, seaports, and roadways, may face disruptions, impacting the movement of supplies, personnel, and patients. Public health emergencies can also affect the functioning of utilities such as water and wastewater systems, power grids, and communication networks.

Economy: Public health emergencies can often lead to disruptions in various sectors of the economy. For instance, lockdowns, travel restrictions, and social distancing guidelines can result in business closures, reduced consumer spending, and job losses. Industries directly impacted by public health emergencies, such as hospitality, tourism, and retail, may experience a decline in revenue and profitability. Additionally, healthcare systems and public health agencies may face increased financial burdens due to the surge in service demand and the need to invest in emergency response capabilities.

5.9.2 Nuclear Power Plant Incidents

5.9.1.7 Hazard Description

A nuclear power plant accident would involve an actual or potential release of radioactive material at a nuclear facility in a quantity sufficient to threaten off-site populations' health and safety.

5.9.1.8 Hazard Location

There are currently six nuclear power plants in operation within the State of Illinois, providing nearly 50 percent of the electric power to the state. There are no such plants within the borders of Cook County. According to the United States Nuclear Regulatory Commission, the three sites nearest to Cook County and still in operation are in Will County, Grundy County, and LaSalle County. These sites are approximately 55 miles, 40 miles, and 70 miles from Cook County, respectively. Nuclear plants have an Emergency Planning Zone (EPZ) requirement of 10 miles and 50 miles as set by the Nuclear Regulatory Commission. The 10-mile EPZ correlates to the plume pathway for inhalation exposure and airborne contamination exposure. The 50-mile EPZ correlates to potential ingestion pathway exposure. The only site within 50 miles of Cook County is the Dresden Nuclear Power Plant located in Grundy County. Locations within the 50-Mile EPZ are not projected to be at risk for any direct radiological contamination, even in the most severe event. They would only possibly be impacted by residual/indirect contamination, which could enter the region (50-mile EPZ) via waterways, vegetation, or animals originating from within the 10-mile EPZ.

According to 2010 U.S. Census data, there were 7,305,482 people within 50 miles of the Dresden Facility. Chicago is included in this 50-mile area. The Nuclear Regulatory Commission's estimate of the risk each year of an earthquake intense enough to cause core damage to the reactor at Dresden is 1 in 52,632 (Nuclear Regulatory Commission, 2010)



Hazard Extent/Intensity

Hazards related to a nuclear event are:

- **Bright FLASH** can cause temporary blindness for less than a minute.
- **BLAST WAVE** can cause death, injury, and damage to structures several miles from the blast.
- **Radiation** can damage cells of the body. Significant exposures can cause radiation sickness.
- **FIRE AND HEAT** can cause death, burn injuries, and damage to structures several miles out.
- **ELECTROMAGNETIC PULSE (EMP)** can damage electrical power equipment and electronics several miles from the detonation and cause temporary disruptions.
- **FALLOUT** is radioactive, visible dirt and debris raining down from several miles up that can cause sickness to those outside.

Vulnerability and Impacts

Health and Safety: Power plant accidents can result in exposure to harmful radioactive material, causing acute and chronic health effects, including radiation sickness, cancer, and genetic damage. Releasing radioactive materials can also contaminate the environment, making it unsafe for human habitation and wildlife. Additionally, the psychological impact of a nuclear incident on affected individuals and communities can be severe and long-lasting.

Property Damage and Critical Infrastructure: The release of radioactive materials can contaminate nearby buildings, roads, and farmland, rendering them unusable for extended periods. In addition, power plant accidents can lead to power outages and disruptions to transportation networks and communication systems, making it difficult for emergency responders to access the affected areas.

Economy: There is no data demonstrating the impact of nuclear power plant accidents on Cook County. However, estimated costs associated with the loss of property and/or infrastructure can be substantial, and recovery efforts may take years. In addition, the long-term economic impacts of a power plant accident can also be severe, as industries and businesses in the affected region may suffer long-term financial losses.

5.9.3 Regional Migration Impacts

Hazard Description

People evacuated from an outside area can have significant impacts if local receiving jurisdictions are not prepared and lack the capacity to handle the amount of people and their belongings. Under certain conditions, the effects of a large influx of people can lead to a secondary disaster of sorts for a receiving jurisdiction ill-equipped to provide services to evacuees. For Cook County evacuees from the earthquake hazard along the New Madrid Fault line in southern Illinois and other Central U.S. Earthquake Consortium (CUSEC) states, this represents a very significant potential exposure.

In general, evacuees have undergone traumatic events; most likely they have lost most of their belongings. In addition to needing mass basic care services, evacuees may be separated from family, pets, and all that is familiar to them, necessitating evacuee tracking and some type of emotional or psychological support services. Additionally, evacuees will likely have medical needs based on incident-related injuries or because they were evacuated without medications, equipment, etc.

The effects of this were most visible following Hurricane Katrina in 2005, when over 200,000 residents of the area around New Orleans were evacuees. Evacuees were scattered around the country, with most taken to the City of Houston. During the month of September immediately following the

hurricane, Houston emergency departments reported treating 4,518 evacuees, with an additional 20,000 cared for at medical clinics set up in area shelters (Med Care, 2008). The top three cities that took in evacuees reported increases in crime in the months following the influx of people, though there is no proof that the crime was caused by evacuees. Once provided with long-term shelter, many evacuees chose not to return to the impacted area and to establish themselves in the host city.

In 2012, the IL-IN-WI Regional Catastrophic Grant Program's Regional Hub Reception Center (RHRC) Plan was created to address a large influx of evacuees from within or outside of the planned area. This regional plan, which includes Cook County and its local jurisdictions, provides a regional and local concept of operation to process, track, and care for evacuees and further spread them out to a much larger area for long-term shelter. The RHRC concept is meant to alleviate the burden to a receiving jurisdiction's existing infrastructure by providing the short-term services needed by evacuees in an ad-hoc setting and then distributing evacuees out of that initial receiving jurisdiction. Services anticipated within an RHRC include the following:

- Evacuee tracking via the National Mass Evacuation Tracking System
- Mass care services
- Pet tracking, support, and care
- Basic medical needs/triage
- Decontamination (as needed)
- Functional and access needs and support services
- Translation services
- Social services for unaccompanied minors
- Emotional/spiritual support services
- Transportation coordination
- Site security.

It is important for the planning partners to develop plans for evacuees, as this will help increase their capabilities for both internal and external evacuees. The following should be considered in the planning process to address the issues:

Duration Variability—Jurisdictions need to ask how long the displacement is expected and whether their resources can sustain evacuees for the anticipated time:

- Short term (< 4 weeks)—Shelters with health and medical support will most likely be adequate.
- Mid-term (4 weeks to 6 months)—Apartments, schooling, financial support will start to be a planning factor.
- Long term to permanent (> 6 months e.g. catastrophic earthquake, tsunami)—Complete integration into community is needed such as jobs, increased capacity for schools, hospitals, law enforcement, etc.

Coordination—The U.S. Department of Homeland Security is the lead for identifying and soliciting states and local jurisdiction to accept evacuees, coordinating transportation to reception area, and staffing support to the receiving jurisdiction.

- Receiving jurisdictions should immediately request and receive a federal disaster declaration for inclusion with an existing declaration for the incident to ensure:

- Actions by receiving jurisdiction will be reimbursed (if properly documented)
- Displaced persons will receive Individual Assistance
- State or receiving jurisdiction should ask for Disaster Case Management from FEMA.
- State and local emergency management should act as lead coordinator for receiving jurisdiction with full emergency operation center activation.
- The State should request a FEMA Type 1 Incident Management Team to assist with coordination as needed.

Evacuee Reception—One or more reception centers as discussed above should be established prior to evacuee arrival and it must be appropriately sized and equipped to handle the anticipated number of evacuees. The reception center should offer all necessary services for evacuee processing as discussed above.

Joint Information Center—A joint information center should be set up immediately within the receiving jurisdiction or at the reception center to ensure clear messaging to the public (both general public and incoming evacuees) and to ensure protection of evacuees from media intrusion during the traumatic time.

Capacity of Local Jurisdiction—Receiving jurisdictions need to consider their existing capacity to care for their citizens and the extent to which they can provide services to incoming evacuees. A census of the local surge capacity for hospitals, shelters, hotels, law enforcement, etc. may be necessary, and then jurisdictions can begin to consider where additional resources can be brought from to support the effort.

Hazard Location

Regional migration is occurring throughout Cook County and greater United States. This is a current crisis due to the significant and unsustainable levels of migration across the Western Hemisphere. The crisis is defined by a combination of factors, including the strain on resources at the U.S. border, the humanitarian implications of mass migration, and the security concerns related to irregular migration flows.

The table below illustrates the approximate number of individuals in the planning area.

TABLE: PROFILE OF THE UNAUTHORIZED POPULATION COOK COUNTY, ILLINOIS

Demographics	Estimate	% of Total
Unauthorized Population	257,000	100%
Top Countries of Birth		
Mexico	166,000	64%
India	15,000	6%
Philippines	10,000	4%
China/Hong Kong	8,000	3%
Poland	8,000	3%
Regions of Birth		
Mexico/Central America	180,000	70%

TABLE: PROFILE OF THE UNAUTHORIZED POPULATION COOK COUNTY, ILLINOIS		
Caribbean	-	-
South American	11,000	4%
Europe/Canada/Oceania	18,000	7%
Asia	40,000	16%
Africa	6,000	2%
Years of U.S. Residence		
Less Than 5	38,000	15%
5 to 9	34,000	13%
10 to 14	46,000	18%
15 to 19	66,000	26%
20 or more	72,000	28%
Age		
Under 16	9,000	3%
16 to 24	31,000	12%
25 to 34	71,000	28%
35 to 44	75,000	29%
45 to 54	46,000	18%
55 and over	25,000	10%
Gender		
Female	118,000	46%

Source: Migration Policy Institute (2024)

These 2019 data result from Migration Policy Institute (MPI) analysis of U.S. Census Bureau data from the pooled 2015-19 American Community Survey (ACS) and the 2008 Survey of Income and Program Participation (SIPP), weighted to 2019 unauthorized immigrant population estimates provided by Jennifer Van Hook of The Pennsylvania State University.

Hazard Extent / Intensity

DHS measures the extent and intensity of regional migration by tracking the number of unlawful entries, the effectiveness of enforcement actions, and the use of lawful pathways for migration. This includes assessing the impact of various measures including the implementation of Title 8 immigration authorities, which focuses expediting the removal of individuals who arrive at the U.S. border unlawfully. DHS also monitors the strain on border management resources, the number of migrants processed under expedited and standard immigration procedures, and the impact of public health measures such as the Title 42 order and its transition to Title 8 processing.

Probability and Frequency

DHS measures the probability and frequency of regional migration through data collection and analysis of border encounters, as well as through evaluating the effectiveness of immigration enforcement strategies. DHS utilizes various surveillance and tracking technologies to monitor the number of individuals attempting to cross the border unlawfully. Additionally, DHS assesses the impact of its policies and operational strategies to understand migration trends and pressures on

border security. This includes analyzing the success of legal pathways for migration and the efficiency of the expedited removal process under immigration law.

For more detailed insights, DHS conducts comprehensive threat assessments and uses these analyses to forecast migration trends and potential challenges, which helps in strategic planning and resource allocation. The Homeland Threat Assessment is a critical document that provides insights from across the Department, focusing on the most pressing threats to homeland security, including challenges related to migration.

Vulnerability and Impacts

Health and Life Safety: According to the DHS, the primary health and life safety concern of regional migration is the spread of communicable diseases, which is exacerbated by high volumes of people moving across borders. To address this, the DHS has implemented various health and safety measures at border facilities and within immigration processes. These include enhanced medical screenings, the provision of personal protective equipment, and increased access to COVID-19 vaccinations for migrants. Additionally, DHS aims to improve the capacity of border processing facilities to handle large numbers of migrants humanely and efficiently, reducing the risk of overcrowding and ensuring better access to medical care.

Property Damage and/or Critical Infrastructure: According to DHS, regional migration impacts critical infrastructure in several ways. The first concern is to ensure critical infrastructure sectors remain secure and resilient despite the additional strains placed by large movements of people. These sectors include energy, transportation, and public health systems, all of which are crucial for national security and economic stability. Increased migration can strain these systems by increasing demands on services and resources, potentially leading to escalated risks of disruptions or security breaches. For example, higher population densities can put additional pressure on transportation systems and public utilities, requiring enhanced measures to ensure their security and functionality. Similarly, the healthcare sector must be able to manage increased demands without compromising service quality or accessibility.

Economy: According to DHS, there are several economic impacts of regional migration. One of the primary concerns is the strain on border security and immigration processing systems, which has significant financial implications. The increased need for resources to manage and process migrants has led to substantial expenditures on border infrastructure, staffing, and technology. Regional migration also impacts local economies, especially in border areas where the influx of migrants can strain local services and resources.

5.9.4 Widespread Power Outage

Hazard Description

Power Outage: an electric power outage (also power failure or power loss) is the loss of the electricity supply to a geographic area. The area of an outage (scale) can range from a single facility or neighborhood to a multi-state region. The length of the outage (scope) is determined by combination of factors to include the scale of the outage, weather, and redundant equipment and capacity.

A power outage can be described as a blackout if power is lost completely or as a brownout if the voltage level is below the normal minimum level specified for the system. The reasons for a power outage can, for instance, be a defect in a power station, damage to a power line or other part of the distribution system, a short circuit, or the overloading of electricity mains. “Load shedding” is a common term for a controlled way of rotating available generation capacity between various districts or customers, thus avoiding total wide area blackouts.

Power outages are particularly serious for hospitals and other critical facilities and operations. Our society is extremely reliant upon life-critical medical devices, communications, and electronic information all of which require reliable (uninterrupted) electric power.

The entire energy system is complex and consists of three major parts: generation, transmission, and distribution. The control and communication between these parts are extremely important as the failure of one part could disrupt the entire system. The energy system is reliant upon the following factors: continual maintenance, equipment replacement and redundancy, and additional high-load capacity. These factors have to be carefully balanced against operating cost and profit. These initiatives are expensive, but the costs cannot be readily pushed down to the consumer due to public pressure and opinion.

Widespread Power Outage: is typically defined as affecting over 50,000 customers or causing an unplanned loss of 300 megawatts of electric power.

Hazard Extent/Intensity

The U.S. Energy Information Administration (EIA) measures the extent and intensity of widespread power outages primarily through the System Average Interruption Duration Index (SAIDI), which calculates the total duration of power interruptions experienced by an average customer over a year. SAIDI is calculated by dividing the total minutes of customer interruptions in a year by the number of customers served during that year.

Table 11.1 Reliability Metrics of U.S. Distribution System

	IEEE									Any Method					
	All Events (With Major Event Days)			Without Major Event Days			Loss of Supply Removed			All Events (With Major Events)			Without Major Events		
Year	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)	SAIDI (minutes per year)	SAIFI (times per year)	CAIDI (minutes per interruption)
2013	227.2	1.187	191.5	111.9	0.994	112.6	225.5	1.113	202.6	215.7	1.2	179.8	106.1	0.992	106.9
2014	236.2	1.257	188	114.2	1.038	110	244.8	1.202	203.7	219	1.22	179.6	109.7	1.019	107.7
2015	209	1.275	163.9	117	1.073	109.1	198.2	1.163	170.4	205	1.246	164.5	113.1	1.046	108.1
2016	268.4	1.327	202.2	119.8	1.082	110.7	257	1.23	209	249.2	1.292	192.9	116.9	1.062	110
2017	505.9	1.42	356.2	117	1.023	114.3	489.6	1.254	390.6	473.1	1.394	339.3	114.4	1.007	113.6
2018	349.2	1.34	260.5	121.4	1.051	115.5	338.5	1.193	283.8	346.4	1.325	261.5	117.2	1.028	114
2019	295.5	1.332	221.8	122.2	1.04	117.5	289.1	1.189	243	284.6	1.325	214.8	118.6	1.017	116.6
2020	456.1	1.385	329.3	116	1.013	114.5	460.5	1.238	371.9	491.9	1.44	341.7	119	1.037	114.7
2021	475.8	1.436	331.2	125.7	1.039	120.9	404.5	1.294	312.6	440	1.425	308.8	121.5	1.025	118.5
2022	333	1.426	233.5	131.1	1.09	120.2	324.7	1.315	246.9	335.5	1.405	238.8	125.7	1.064	118.1

SAIDI = System Average Interruption Duration Index. It is the minutes of non-momentary electric interruptions, per year, the average customer experienced.
SAIFI = System Average Interruption Frequency Index. It is the number of non-momentary electric interruptions, per year, the average customer experienced.
CAIDI = Customer Average Interruption Duration Index. It is average number of minutes it takes to restore non-momentary electric interruptions.
IEEE refers to the IEEE 1366-2003 or the IEEE 1366-2012 standard. Any method combines data from utilities that use IEEE standard with data from utilities that do not.
For utilities using the IEEE method, a Major Event Day is any day that exceeds a daily SAIDI threshold called Tmed. Tmed is a duration statistic calculated from daily SAIDI values from the past five years. For utilities not using IEEE methods, Major Events are self-determined by the reporting utility.
Loss of Supply Removed excludes outages due to loss of supply from the high-voltage/bulk power system.
For a five minute video explanation of these metrics, go to https://youtu.be/aVY9L0fCMTU.
Source: U.S. Energy Information Administration, Form EIA-861, Annual Electric Power Industry Report.

Probability

Probability: The U.S. Department of Energy (DOE) determines the probability of power outages by analyzing the physical condition of infrastructure, such as power plants, transmission lines, and distribution networks, as well as the likelihood of extreme weather events, natural disasters, and human-induced threats that could lead to disruptions. The DOE also utilizes historical data on past outages, weather patterns, and infrastructure vulnerabilities to model potential scenarios and identify areas at higher risk of prolonged outages. Technological advancements and the integration of renewable energy sources are also considered, as they can influence the grid's adaptability and response to power demands and potential threats.

The DOE also collaborates with other federal agencies, state and local governments, and the private sector to gather comprehensive data on threats to the energy sector. This includes cybersecurity threats to the grid's operational technology systems, which are critical for maintaining power supply and distribution. By employing predictive analytics and risk assessment models, the DOE can estimate the likelihood and potential duration of power outages under various conditions.

Vulnerability and Impacts

Public Health and Safety: According to the Centers for Disease Control and Prevention (CDC), widespread power outages can have significant public health and safety impacts. One of the primary concerns is the loss of refrigeration, which jeopardizes the safety of stored food and vaccines, potentially leading to foodborne illnesses and disruption of essential medical services. Additionally, the lack of heating or cooling systems during extreme weather conditions can result in temperature-related health issues, including hypothermia during cold spells and heat-related illnesses during heatwaves. The absence of power also affects the functionality of medical devices, water treatment plants, and sewage systems, increasing the risk of medical emergencies and waterborne diseases.

Moreover, widespread power outages can hinder communication and access to information, complicating emergency response efforts and public health advisories. The inability to charge electronic devices can leave individuals isolated, especially those who are vulnerable or require special care. The CDC also highlights the increased risk of accidents and injuries in the dark, including falls, burns from candles or generators, and carbon monoxide poisoning from improper use of alternative heating or power sources.

Property Damage and Critical Infrastructure: According to the DOE, widespread power outages can lead to significant property damage and critically impact infrastructure systems. For residential and commercial properties, the absence of electrical power affects heating, cooling, and ventilation systems, potentially leading to water pipes freezing and bursting in cold weather or exacerbating heat-related deterioration and mold growth in warmer climates. Electronic devices and appliances may suffer damage from power surges when electricity is restored, and the lack of lighting and security systems increases the vulnerability of properties to theft and vandalism.

On a larger scale, critical infrastructure such as water treatment facilities, communication networks, transportation systems, and hospitals rely heavily on continuous power supply. Widespread outages compromise the delivery of essential services, including public transportation, emergency response, healthcare services, and water supply, posing significant risks to public health and safety.

Furthermore, the economic impact of outages on businesses and industries can be substantial, affecting local and national economies.

Economy: According to the DOE, widespread power outages can impact the economy, affecting various sectors in both direct and indirect ways. Directly, businesses that rely on electric power for production, storage, and operations may experience significant losses due to halted operations, spoilage of perishable goods, and damage to sensitive equipment. The service sector, particularly those that depend on electronic transactions and digital communications, can also be severely disrupted. This immediate halt in business activities not only affects the revenue of individual companies but also impacts the wages of employees who may be unable to work during outages.

Indirectly, widespread power outages can erode consumer confidence and deter investment, leading to broader economic repercussions beyond the immediate areas affected. Critical infrastructure failures, such as those in transportation, communication, and financial services, can disrupt supply chains and logistics, affecting local and national markets. The cumulative effect of these disruptions can contribute to economic downturns, particularly in regions where the economy is heavily reliant on industries vulnerable to power outages.

Changes in Development and Impact of Future Development: According to the DOE, widespread power outages can impact changes in development and future development strategies, particularly in terms of enhancing resilience and sustainability in urban planning and infrastructure design. The experience of widespread outages highlights the vulnerabilities in existing energy systems and underscores the need for integrating more resilient power solutions. This realization is driving a shift towards the development of smart grids, renewable energy sources, and microgrid technologies that can operate independently of the main grid during outages. Such advancements not only aim to minimize the impact of future power outages but also contribute to sustainable development goals by incorporating clean energy solutions. Lastly, the DOE emphasizes the importance of adaptive infrastructure that can withstand various disruptions, including power outages. This includes designing buildings and communities that are energy-efficient and capable of utilizing backup power systems such as solar panels and battery storage.

Effects of Climate Change on Severity of Impacts: There is no data illustrating the impact of climate change on the severity of widespread power outages.

5.9.5 Hazardous Materials Incident

Hazard Definition

Hazardous Materials (HAZMAT): are substances that, because of their chemical or physical characteristics, are hazardous to humans and living organisms, property, and the environment are regulated by the U.S. Environmental Protection Agency (EPA) and, when transported in commerce, by the U.S. Department of Transportation (DOT). The EPA regulations address “hazardous substances” and “extremely hazardous substances.”

The EPA chooses to specifically list hazardous substances and extremely hazardous substances rather than providing objective definitions. Hazardous substances, as listed, are generally materials that, if released into the environment, tend to persist for long periods and pose long-term health hazards for living organisms. They are primarily chronic rather than acute health hazards.

Regulations require that spills of these materials into the environment in amounts at or above their individual "reportable quantities" must be reported to the EPA. Extremely hazardous substances, on the other hand, while also generally toxic materials, are acute health hazards that, when released, are immediately dangerous to the life of humans and animals and can cause serious damage to the environment. There are currently 355 specifically listed extremely hazardous substances listed along with their individual threshold planning quantities (TPQ) (eCFR, 2023).

When facilities have these materials in quantities at or above the TPQ, they must submit "Tier II" information to appropriate state and/or local agencies to facilitate emergency planning.

DOT regulations provide the following definition for the term "hazardous material": A hazardous material is "a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" and has been designated as hazardous under section 5103 of federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of subchapter C of the same chapter (U.S. Compliance, 2023).

When a substance meets the DOT definition of a hazardous material, it must be transported under safety regulations providing for appropriate packaging, communication of hazards, and proper shipping controls.

In addition to EPA and DOT regulations, the National Fire Protection Association (NFPA) develops codes and standards for the safe storage and use of hazardous materials. These codes and standards are generally adopted locally and include the use of the NFPA 704 standard for communication of chemical hazards in terms of health, fire, instability (previously called "reactivity"), and other special hazards (such as water reactivity and oxidizer characteristics).

While somewhat differently defined by the above organizations, the term "hazardous material" may be generally understood to encompass substances that have the capability to harm humans and other living organisms, property, and/or the environment. There is also no universally accepted, objective definition of the term "hazardous material event." A useful working definition, however, might be framed as "any actual or threatened uncontrolled release of a hazardous material, its hazardous reaction products, or the energy released by its reactions that poses a significant risk to human life and health, property, and/or the environment."

Materials that are generally of concern for exposure in a hazardous material incident include, but are not limited to the following:

- Ammonia
- Sulfuric acid
- Nitric acid
- Hydrofluoric acid
- Bromine
- Chlorine

- Cyanide solutions.

Many hazardous-material facilities have specific reporting and emergency planning guidelines mandated by the Emergency Planning and Community Right-to-Know Act and regulated by the state emergency response agency. These reporting requirements are known as Tier II reporting requirements. The Illinois Emergency Management Agency maintains Tier II reports for the state, so IEMA has a clear understanding of the materials located within its jurisdiction. Reports are also generally required to be on file with local emergency planning committees or fire departments.

In 2013, the City of Chicago undertook a risk assessment of hazardous material transportation routes to better inform planners on the risks to the city and its inhabitants in the shipment of hazardous materials through its borders by road, water, and rail. *Table: Chemical Buffer Zone And Spill Size* describes the recommended buffer zone for various hazardous chemicals and spills of a certain size.

Types of HAZMAT Incidents

- **Fixed Site HAZMAT Incident:** is defined as an uncontrolled release of a hazardous material originating from a building, structure, or fixed equipment capable of posing a risk to life, health, safety, property, or the environment.
- **Transportation HAZMAT Incident:** is an uncontrolled release of a hazardous material during transport capable of posing a risk to life, health, safety, property, or the environment.
- **Nuclear HAZMAT Incident:** involves a release or potential release of radioactive materials that could pose significant risks to health, safety, or property. These incidents require immediate reporting and specific response actions to mitigate any potential dangers associated with the release of nuclear materials.

Hazard Extent/Intensity

Diamond-shaped NFPA 704 signs ranking the health, fire, and instability hazards on a numerical scale from zero (least) to four (greatest) along with any special hazards are usually required to be posted on chemical storage buildings, tanks, and other facilities. Similar NFPA 704 labels may also be required on individual containers stored and/or used inside facilities.

The Environmental Protection Agency (EPA) uses several factors to assess the extent and intensity of HAZMAT incidents. First, the EPA considers the type and quantity of hazardous materials involved in the incident, recognizing that different substances present varying risks to human health and the environment. Second, they assess the incident's location and geographic scope, determining whether it is localized to a laboratory, industrial facility, or if it has broader implications for densely populated areas or sensitive ecosystems.

Next, the EPA examines the release or exposure pathways to understand how hazardous materials are released and the potential routes of exposure to humans and wildlife. This includes evaluating whether the substances have become airborne, entered water bodies, or contaminated the soil. In addition, the agency investigates the immediate and long-term health and environmental effects stemming from the incident, encompassing the impact on air and water quality, ecosystems, and human health.

The response and cleanup measures taken during and after the incident play a pivotal role in assessing its extent and intensity. This involves evaluating the effectiveness of containment, control, and remediation efforts. Regulatory compliance is another crucial aspect, determining whether the incident involves non-compliance with environmental regulations and whether enforcement actions are necessary. The EPA also considers the impact on local communities, including evacuation orders, shelter-in-place advisories, public health consequences, and economic impacts. Lastly, the duration of the incident and the persistence of hazardous materials in the environment are taken into account to understand its intensity and the potential for prolonged consequences.

In planning for hazardous materials incidents, local jurisdictions should consider conducting a risk assessment to profile the potential hazardous concerns within their jurisdiction and to further assess health and safety impacts on their population, potential economic impacts, consequences, and the overall probably or frequency of incident.

TABLE: CHEMICAL BUFFER ZONE AND SPILL SIZE

Hazardous Material	Amount (gallons)	Buffer Zone Distance
Ammonia	800	2,640 feet
Hydrofluoric Acid Solution (12%)	700	4,752 feet
Sulfuric Acid	800	9,504 feet
Ammonia	2,000	2,640 feet
Ammonia	600	2,640 feet
Sodium Cyanide	833	1,056 feet
Ammonia	100	528 feet
Nitric Acid	3,781	1,584 feet
Sulfuric Acid	2,594	9,504 feet
Ethylenediamine	4,000	2,640 feet
Hydrofluoric Acid Solutions	4,000	4,752 feet
Ammonia	1,000	2,640 feet
Bromine	115	9,504 feet
Epichlorohydrin	420	2,640 feet
Ammonia, Solution (27%)	4,000	2,640 feet
Ammonia, Solution (27%)	4,000	2,640 feet
Anhydrous Ammonia	600	2,640 feet
Nitric Acid	142	1,584 feet
Sulfuric Acid	311	9,504 feet
Anhydrous Ammonia	1,200	2,640 feet
Sodium Cyanide	500	1,056 feet

Probability

Probability: The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) determines the probability of hazardous incidents through risk assessment, data analysis, and regulatory compliance monitoring. PHMSA employs risk assessment methodologies that consider the physical condition of pipelines, the nature of the materials transported, historical incident data, environmental conditions, and human factors. This analysis

identifies potential vulnerabilities and the likelihood of incidents occurring. PHMSA also relies on extensive data collection from pipeline operators and hazardous materials handlers, including reports on incidents, safety violations, and maintenance activities. This data is analyzed to identify trends, assess risk levels, and prioritize safety measures.

Vulnerabilities and Impacts

Life Safety and Public Health: According to the EPA, HAZMAT incidents can have substantial life safety and public health impacts. These impacts encompass immediate health risks due to exposure to hazardous materials, resulting in injuries, respiratory problems, chemical burns, or physical harm. In addition, long-term health effects may occur from prolonged exposure to contaminants, leading to respiratory diseases, cancers, and other chronic illnesses. Evacuations and displacement are often necessary in severe incidents, which can disrupt residents' lives, causing stress and mental health concerns. Contaminants released during such incidents can pollute air and water sources, affecting air quality and posing risks to communities through water contamination.

Soil and crops may also become contaminated, impacting local agriculture and posing food safety risks. The need for emergency healthcare resources may overwhelm hospitals and healthcare facilities, affecting the availability of medical care for various health issues. The psychological impacts, such as fear and uncertainty, can result in stress, anxiety, and mental health challenges among affected individuals and communities.

Property Damage and Critical Infrastructure: HAZMAT incidents can result in significant property damage and critical infrastructure impacts. Property damage occurs when hazardous materials are released, leading to contamination and destruction of structures, both residential and commercial. The extent of property damage can be severe, particularly in cases of chemical spills, explosions, or fires.

Critical infrastructure, including water treatment facilities, power plants, transportation systems, and communication networks, can also be affected. Hazardous materials may contaminate water sources, disrupting water treatment plants and affecting the supply of clean water to communities. Power outages or damage to electrical infrastructure can result from fires or explosions, impacting energy supply and potentially causing additional safety risks. Transportation networks, including roads and bridges, can be compromised due to accidents or contamination, hindering access for emergency responders and the general public.

Economy: HAZMAT incidents can result in costs associated with emergency response, containment, cleanup, and environmental remediation. The financial burden of addressing the incident and managing hazardous materials can also be substantial. These costs can include expenses related to deploying first responders, hazmat teams, and emergency services to the scene. This encompasses personnel, equipment, and resources necessary to contain and mitigate the incident promptly.

There are also costs related to cleaning up and decontaminating an affected area, which can involve the removal and disposal of hazardous materials. In addition, there can be financial repercussions, damage to research facilities, scientific equipment, and valuable experimental materials can be expensive to replace or repair.

Changes in Development and Impact of Future Development: Changes in development and future development can be impacted by HAMZAT incidents in several ways. First, such incidents may trigger a reassessment of environmental compliance and regulations in the university's laboratory and research facilities. This may lead to stricter oversight and increased regulatory requirements for handling hazardous materials and waste management, affecting the design and operation of future development projects.

Effects of Climate Change on Severity of Impacts: Changes in climate patterns can lead to extreme weather events such as floods, which can directly damage or disrupt HAZMAT storage facilities. For example, flooding can result in the release of hazardous materials from storage tanks or laboratories, posing significant risks to public health and the environment.

Climate change can also affect the transportation of hazardous materials. Increased temperatures can lead to heat-related transportation incidents, such as the overheating of vehicles carrying hazardous cargo, potentially causing leaks or accidents.

Lastly, changes in climate can alter the risk landscape by affecting the types and quantities of hazardous materials used in various industries. For example, changes in temperature and humidity levels can impact the stability of certain chemicals, making them more susceptible to accidental spills or reactions.

5.9.6 Civil Disturbance

Hazard Definition

The FBI defines a civil disturbance as a collective act of public disorder or violence by a group of individuals which is aimed at challenging government authority or obstructing the functioning of governmental institutions. This can encompass a wide range of activities, including protests, riots, demonstrations, and other forms of public unrest. Civil disturbances are characterized by their potential to disrupt the peace and security of a community, potentially leading to harm to persons, damage to property, and a general state of chaos if not managed properly. Civil disturbances are often driven by social, economic, political, or environmental grievances, where participants seek to draw attention to their cause or demand change from governmental or societal structures. In cases where civil disturbances escalate to violence or criminal activities, law enforcement may intervene to restore order, protect lives and property, and uphold the rule of law.

Hazard Extent/Intensity

The FBI measures the extent or intensity of a civil disturbance through situational assessments, intelligence gathering, and analysis of the level of disruption caused. The extent of a civil disturbance is determined by several factors, including the number of participants, the geographic area affected, the duration of the event, and the presence of any violent activities or significant property damage. The intensity is further assessed by evaluating the level of aggression displayed, the use of weapons or destructive devices, and the response required by law enforcement and emergency services.

Probability

The FBI determines the probability of civil disturbance incidents through intelligence gathering, monitoring of social and political trends, and evaluation of specific triggers or events that could incite public unrest. This involves collecting and analyzing data from a wide range of sources, including law enforcement agencies, social media, public forums, and intelligence networks, to identify potential threats and assess the mood and sentiments of communities. The FBI also monitors upcoming events of political, social, or economic significance that might serve as catalysts for civil disturbances, such as elections, court decisions, or incidents of perceived injustice.

Vulnerability and Impacts

Health and Safety: According to the FBI, civil disturbance incidents can impact health and safety, posing both immediate and long-term risks to communities. In the short term, events can lead to injuries among participants, law enforcement personnel, and bystanders, resulting from physical confrontations, the use of crowd-control measures, or accidents in chaotic environments. Additionally, civil disturbances often result in the destruction of property, including homes, businesses, and public infrastructure, which can disrupt essential services such as healthcare, transportation, and access to food and water, further endangering public health and safety.

In the longer term, the impacts of civil disturbances can extend to the mental health and well-being of individuals and communities. The stress and trauma associated with experiencing or witnessing violence and destruction can lead to a range of psychological issues, including anxiety, depression, and post-traumatic stress disorder (PTSD). Finally, the disruption of community cohesion and trust in public institutions can have lasting effects, potentially hindering recovery efforts and resilience-building.

Property Damage and Critical Infrastructure: According to the FBI, civil disturbance incidents can impact property damage and critical infrastructure. Civil disturbance incidents can often lead to vandalism, looting, arson, and the destruction of buildings, vehicles, and storefronts, which can result in substantial financial losses for businesses and homeowners. The impact on critical infrastructure, such as utilities, transportation networks, emergency services, and communication systems, can disrupt essential services and pose serious challenges to public safety and the overall functioning of communities. Such disruptions can hinder emergency and law enforcement responses, complicating efforts to restore order and provide assistance to those affected by the disturbance.

According to the FBI, the extent of property damage and infrastructure impact can vary widely depending on the scale and intensity of the civil disturbance, as well as the preparedness and response of law enforcement and emergency services. In the aftermath of such incidents, rebuilding and repairing damaged infrastructure and properties can be a lengthy and costly process, often requiring coordination between government agencies, private sector entities, and community organizations. The psychological impact on communities, including a sense of insecurity and decreased trust in public institutions, can also have lasting effects.

Economy: According to the FBI, civil disturbance incidents can impact the economy with immediate and long-term effects. In the short term, civil disturbance incidents can disrupt business operations, leading to significant losses in revenue, especially for small businesses that may not have the

resources to recover quickly. The physical damage to property and infrastructure necessitates costly repairs and can deter future investment and tourism in the affected areas. Additionally, civil disturbances can strain public resources, as local and state governments may need to allocate significant funds towards law enforcement, emergency response, and rebuilding efforts, diverting funds from other public services and development projects.

In the long term, the economic impact of civil disturbances can extend beyond the immediate area of the incidents. The perception of instability can decrease investor confidence, potentially leading to a decline in investment at both local and national levels. Insurance premiums in affected areas may rise, imposing additional costs on businesses and property owners. Lastly, the disruption to supply chains during civil disturbances can have ripple effects on the broader economy, affecting industries and markets beyond the immediate region.

5.9.7 Active Shooter/Active Assailant

Hazard Description

Active Shooter: an individual actively engaged in killing or attempting to kill people in a populated area. This definition often implies that the shooter uses firearms and does so in a confined and populated area, but it can extend to similar behaviors in more open spaces. The emphasis is on the ongoing nature of the threat, indicating that the situation is in progress and law enforcement responses are typically urgent and immediate.

Active Assailant: an individual actively engaged in killing or attempting to kill people in a confined and populated area. This definition is broader than that of an "active shooter" as it can include attacks carried out with methods other than firearms, such as knives, vehicles, or other weapons. The key aspect of this definition is the active, ongoing threat posed by the assailant, necessitating an immediate response to stop the violence and mitigate harm to civilians.

Hazard Location

An active shooter/active assailant could occur anywhere in Cook County. However, incidents tend to occur in places of (former) employment or at schools/universities. Mass Shootings can also occur in other crowded venues such as shopping centers and arenas. However, mass shootings in residential neighborhoods typically center around individuals the gunmen are familiar with.

Hazard Extent/Intensity

The FBI measures the extent and intensity of an active shooter or active assailant incident using several key metrics:

1. **Number of Casualties**: This includes the count of fatalities and injuries. The FBI often differentiates between victims killed by the assailant and those who were injured.
2. **Location and Setting**: The environment in which the incident occurs (e.g., schools, places of worship, businesses) is considered, as it affects the response and the impact of the event.
3. **Duration**: The length of the incident from the beginning of the attack to the end of active threat can indicate the intensity and potential for higher casualty numbers.

4. **Assailant's Methodology and Motivation**: Understanding the weapons used, the level of planning, and the motivation behind the attack helps in categorizing and analyzing the intensity of the incident.
5. **Law Enforcement Response**: The response time of law enforcement and the methods used to stop the assailant are important metrics that influence the outcomes of active shooter incidents.

Vulnerability and Impacts

Life Safety and Public Health: Active shooter/active assailant incidents encompassing a wide spectrum of short and long-term consequences. The most immediate and severe consequence is the loss of life, with incidents often resulting in multiple fatalities that deeply affect not just the victims but also their families and wider communities. Alongside loss of life, these events frequently cause a variety of physical injuries, ranging from minor to critical, necessitating long-term medical care and rehabilitation for many survivors.

The psychological toll on survivors, witnesses, and first responders can also be significant. Many individuals affected by such events suffer from acute stress reactions, post-traumatic stress disorder (PTSD), anxiety, and depression. These mental health issues can persist long after the incident, impacting individuals' ability to function and their overall quality of life. The broader community also faces substantial impacts; the pervasive sense of vulnerability and fear following such incidents can alter everyday behaviors and diminish the public's sense of safety in communal spaces. This often leads to a grieving process and a disruption of community cohesion and social interactions.

First responders, who face the dual risk of physical injury and long-term psychological stress, experience additional burdens. The intense nature of their work during these incidents can lead to significant mental health challenges and affect their longevity and effectiveness in their roles.

Property Damage and Critical Infrastructure: Active shooter incidents result in a range of impacts on property and critical infrastructure, which extend beyond immediate physical damage to encompass longer-term economic and operational disruptions. These events often cause significant physical damage to the venues they occur in, such as bullet holes in walls and windows, and furniture destruction. Additionally, the necessary law enforcement interventions can further damage properties through breaches and the use of tactical equipment. Facilities such as hospitals, schools, and government buildings may experience temporary halts in essential services due to evacuations or lockdowns, further compounding the disruption.

In the aftermath of active shooter/active assailant incidents, affected locations frequently invest in enhanced security measures. This includes upgrading surveillance systems, strengthening entry points, and improving access controls, which all require substantial financial investments. Economically, the costs associated with repairs and security upgrades can be significant, alongside potential business downturns caused by temporary closures or diminished consumer confidence. This is particularly true if the event targets critical infrastructure, where the economic repercussions can have broader regional effects.

Moreover, these events can undermine public confidence in the safety of key infrastructures, leading to changes in public behavior and heightened demands for security. In response, there may be a

prolonged period of recovery as communities reassess and revise their emergency response and preparedness plans. This often involves changes to local policies, building codes, and safety practices aimed at bolstering the resilience of public spaces and infrastructure against future threats.

Economy: Active shooter incidents cause economic impacts that are both immediate and long-lasting, encompassing a broad range of direct and indirect costs. The immediate financial burdens include substantial expenses related to emergency response mobilization, which involves law enforcement, emergency medical services, and other first responders. Additionally, medical expenses can be considerable, covering everything from emergency treatments to long-term rehabilitation for those injured. The investigative processes following such incidents also generate significant costs, encompassing criminal investigations, forensic analyses, and subsequent legal proceedings.

The indirect economic impacts can also be substantial. Local businesses can face disruptions due to forced closures or reduced customer traffic, particularly in areas directly affected by the incidents or perceived as unsafe. Property values in such areas may decline due to heightened safety concerns, potentially affecting the local real estate market for an extended period. Insurance premiums may also rise for properties and businesses in the vicinity of the incidents, reflecting an increased risk profile.

In a long-term sense, businesses and institutions frequently invest in extensive security upgrades, including the installation of advanced surveillance systems, employment of additional security personnel, and physical infrastructural modifications to enhance safety. The local tourism sector can also suffer, especially in regions where such incidents are highly publicized, leading to a downturn in visitor numbers and impacting economies reliant on tourism. Lastly, the broader community impacts, including the psychological well-being of the affected population, can lead to diminished workforce productivity and increased demand for mental health services.

Changes in Development and Impact of Future Development

Active shooter/assailant incidents can influence development strategies and future developments across various sectors. There has been a pronounced shift towards integrating security enhancements directly into building designs. This approach includes features such as secure entry points, advanced surveillance systems, and layouts optimized for safe evacuation and minimal vulnerabilities, becoming integral to the initial planning phases of new constructions.

Active shooter/assailant incidents have also necessitated revisions to emergency preparedness and response plans. Organizations and communities are now placing greater emphasis on comprehensive training for employees, alongside regular implementation of emergency drills, which are increasingly viewed as critical components of operational planning.

Legislative responses to active shooter/assailant incidents have led to changes in building codes and safety standards. New laws may mandate specific security measures in both public and private structures, such as the installation of reinforced safe havens or specialized door locks that enhance security during emergencies.

In terms of public space design, there is a growing trend to create environments that prioritize safety without compromising on functionality and aesthetic appeal. Designs now often feature less dense layouts, improved sightlines, and enhanced access to multiple exits to facilitate quicker evacuations when necessary.

5.9.8 Hostage Situation

Hazard Description

According to the FBI, a hostage situation is defined as an incident in which a person or group of people are held against their will by one or more hostage-takers. The captors usually threaten to harm the hostages in order to gain leverage over a third party, typically for fulfilling certain demands. These demands can be varied, including monetary ransom, political concessions, or the release of other prisoners.

The key elements that distinguish a hostage situation include the use of threat or actual force to detain individuals, the presence of demands made by the captors as conditions for the release of the hostages, and the involvement of a third party that the hostage-takers believe can fulfill these demands. The situation is usually highly volatile and dynamic, requiring careful negotiation and often law enforcement intervention to ensure the safety and release of the hostages.

Hazard Extent/Intensity

The extent and intensity of hostage situations are typically evaluated based on the following key factors:

1. Number of Hostages: The number of individuals taken hostage can significantly impact the resources and strategies required to manage the situation. More hostages might necessitate a larger response team and more complex negotiation strategies.
2. Number of Hostage-Takers: The dynamics of the situation can change based on whether there is a single hostage-taker, or multiple individuals involved. Multiple hostage-takers can complicate the negotiation process and increase the potential for violence.
3. Demands of the Hostage-Takers: The nature and scale of demands made by the hostage-takers can indicate the intensity of a situation. Demands involving significant political or monetary stakes, or those that are particularly extreme, can escalate the severity of the situation.
4. Location and Duration: The location of the hostage-taking, whether in a public space, a private residence, or a high-security facility, affects the response strategy and the operation's complexity. The duration of the hostage situation also plays a critical role, as longer durations can increase the risk to hostages' safety and complicate rescue operations.
5. Background and Motivation of the Hostage-Takers: Understanding the hostage-takers' motivation—whether political, criminal, or personal—helps in assessing the threat level and potential for violence. This also influences the negotiation approach and the urgency of resolving the situation.
6. Potential for Violence: The weaponry and readiness to use violence displayed by the hostage-takers are critical in assessing the situation's intensity. The presence of firearms or explosives significantly increases the risk of harm to the hostages and responders.

7. Impact on the Surrounding Community: The broader impact on the local community, such as disruptions, evacuations, and the general climate of fear, can also be indicators of the situation's intensity.

Vulnerability and Impacts

Life Safety and Public Health: Hostage situations can have significant life safety and public health impacts, affecting hostages, first responders, and the broader community in both immediate and long-term capacities. Hostages are at direct risk of physical harm, which can include injury or death from violence by the hostage-takers or during rescue efforts. The health of hostages can also deteriorate due to inadequate access to medical care, medication, or proper nutrition, particularly in prolonged hostage scenarios. Other public health concerns include unsanitary conditions, which can exacerbate the risk of communicable diseases.

The psychological impact of hostage situations can also be significant, with hostages potentially suffering from acute stress reactions and long-term conditions such as post-traumatic stress disorder (PTSD), anxiety, and depression. This psychological trauma can extend beyond the hostages themselves to affect their families and the wider community, including the perpetrators of the hostage situation. First responders also face considerable stress and physical danger, tasked with making critical decisions quickly under high-pressure conditions, which can lead to both immediate and delayed psychological strain. County-wide impacts can include a heightened sense of vulnerability and fear, impacting community cohesion and overall mental health.

Property Damage and Critical Infrastructure: Hostage situations can impact property and critical infrastructure in different ways depending on the specifics of each incident, such as its location, duration, and the actions of the hostage-takers. Direct property damage is a common consequence, including structural damage from forced entries and exchanges of gunfire, as well as internal destruction affecting furnishings, windows, and utilities. Hostage situations can also disrupt essential services, particularly when they occur in facilities housing critical infrastructure like hospitals, schools, government buildings, or utilities. The necessity for security perimeters and potential evacuations can halt normal operations, impacting not only the immediate area but also the broader community relying on these services.

If critical infrastructure such as power, water, and telecommunications services are directly involved or are located near the hostage situation, the resulting interruptions or damage can extend disruptions well beyond the vicinity of the incident. Economically, the repercussions include both the immediate costs associated with damage repairs and security enhancements, as well as potential long-term effects if public perceptions of safety are negatively affected, which can influence local business activities and property values.

Economy: Hostage situations can cause economic impacts that encompass immediate and long-term consequences affecting individuals, businesses, and the broader community. Initially, significant resources are mobilized for the emergency response, including the deployment of police, SWAT teams, and other specialized units, which incur considerable expenses related to personnel, equipment, and operational activities. Additionally, those injured during the incident may face substantial medical costs, encompassing emergency care, hospitalization, and ongoing rehabilitation. Local businesses in proximity to the incident often experience temporary closures or reduced operations, leading to revenue losses and affecting employees and supply chains. Such

disruptions can also result in increased insurance claims for business interruption and property damage, potentially driving up premiums for area businesses.

Over the longer term, hostage situations can adversely affect investor confidence, leading to hesitancy in new investments or business expansions in the area. This can contribute to declining property values if the locale is perceived as unsafe. In addition, if the incident receives extensive media coverage, the perceived safety of the area might deter tourists, negatively impacting local businesses that depend on tourism. Post-incident, there can be surges in investments toward enhanced security measures. Businesses and public facilities might allocate significant funds to upgrade surveillance systems, hire additional security personnel, and tighten access controls. These security upgrades, while necessary, add to the economic strain on local entities.

Changes in Development and Impacts to Future Development

Hostage situations can impact development strategies and future urban and architectural planning, prompting a comprehensive reevaluation of security measures. After an incident occurs, there can be a shift towards incorporating enhanced security features into building design, including advanced surveillance systems, reinforced entry points, and evacuation-friendly layouts. These considerations increasingly become standard practice, particularly in sectors such as finance, government, and education that may be viewed as high-risk.

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Urban planners, in response to hostage scenarios, often redesign public spaces to improve safety and reduce vulnerabilities. This includes enhancing visibility with open sightlines and minimizing hidden areas where threats could potentially hide, alongside integrating modern technology for real-time monitoring and swift response capabilities. Legislative and policy changes may follow significant incidents, leading to stricter building and safety regulations that mandate specific security measures in new and existing structures, thus influencing the broader development standards.

5.9.9 Terrorism and WMD Incidents

Hazard Definition

According to the FBI, terrorism is defined as the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. This definition encompasses both domestic and international terrorism, emphasizing the intent behind the acts more than the scale or the methods used.

Domestic terrorism: characterized by acts that are dangerous to human life that violate federal or state law and are intended to intimidate or coerce a civilian population, influence the policy of a government by intimidation or coercion, or affect the conduct of a government by mass destruction, assassination, or kidnapping. These acts must occur primarily within the jurisdictional boundaries of the U.S.

International terrorism: involves violent, criminal acts committed by individuals and/or groups who are inspired by or associated with designated foreign terrorist organizations or nations. These acts are intended to intimidate or coerce a civilian population, influence the policy of a government, or

affect the conduct of a government by mass destruction, assassination, or kidnapping, and occur outside the jurisdiction of the U.S., or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to coerce or intimidate, or the locale in which their perpetrators operate or seek asylum.

Weapons of mass destruction (WMD) Incident: defined as an event that involves the release, dissemination, or impact of a chemical, biological, radiological, or nuclear (CBRN) agent that is capable of causing a high order of destruction or mass casualties. Additionally, the term can also refer to the use of explosive devices intended to cause a high number of deaths or significant damage to structures or the environment.

CBRNE Incident refers to an event involving the use, release, or discovery of chemical (C), biological (B), radiological (R), nuclear (N), or explosive (E) materials that pose significant risks to public safety and security. These materials can cause widespread harm to people, property, and the environment. The FBI categorizes CBRNE incidents based on the type of hazardous material involved and the potential scale of the threat:

- **Chemical incidents** involve the release or potential release of hazardous chemicals that can cause toxic effects, physical damage, or contamination.
- **Biological incidents** relate to the deliberate or accidental release of viruses, bacteria, or other microorganisms that can cause illness, death, or contamination.
- **Radiological incidents** are characterized by the dispersion of radioactive materials, which can cause radiation poisoning and long-term health effects.
- **Nuclear incidents** involve the release of nuclear energy as a result of an explosion or nuclear reactor accident, leading to immediate and severe radiation threats.
- **Explosive incidents** pertain to the use of conventional explosives that can cause destruction through blast effects, often targeted at causing casualties, structural damage, or creating fear.

Improvised Nuclear Device (IND): involves the detonation or attempted detonation of a device that incorporates nuclear material without the sophistication of a traditional nuclear weapon. These devices can be constructed by non-state actors using diverted or stolen nuclear material, and they are intended to cause mass casualties, significant physical destruction, and widespread psychological impact through the explosive release of nuclear energy and radiation.
The key characteristics of an IND include:

- **Use of Fissile Material**: INDs typically incorporate fissile materials such as highly enriched uranium or plutonium, which can be obtained illicitly.
- **Simpler Design and Construction**: Unlike advanced nuclear weapons developed by nation-states, INDs are more rudimentary in design and construction, reflecting the technical limitations of the builders.
- **Intent to Cause Widespread Harm**: The primary intent behind deploying an IND is to create mass casualties, extensive physical damage, and instill fear and disruption.

The Center for Terrorism and Disaster Preparedness at the Fire Department of the City of New York frames **Vertical Terrorism** in terms of the use of semi-automatic weapons, explosives, or fire as weapons in attacks on high-rise buildings.

Except for the September 11 attacks, where terrorists flew commercial airplanes into high-rise buildings, Vertical Terrorism remains a theoretical potentiality in a context of evolving terrorists' tactics and dynamic methods of attack. Vertical Terrorism is seen as an operational strategy that can be used to exploit the physical characteristics of tall buildings that contain large numbers of people to cause a greater number of casualties.

Hazard Extent/Intensity

The extent/intensity of terrorism can be measured through different quantitative and qualitative criteria. This includes the number of casualties, including deaths and injuries, which serves as a primary indicator of an attack's severity, with high-casualty events generally considered more significant. The economic impact is also crucial, encompassing damage to infrastructure and the broader economic disruptions at local and national levels. The geographic scope of an attack—whether it is localized or has national or international ramifications—helps determine its scale.

Vulnerability and Impacts

Health and Safety: Acts of terrorism or WMD can have severe consequences regarding loss of life and injuries, leading to physical harm, trauma, and long-term health effects for victims and their families. Such acts' psychological and emotional impact can be profound, generating fear, uncertainty, and anxiety within individuals and communities, potentially resulting in increased stress, PTSD, anxiety disorders, and other mental health issues. Additionally, attacks targeting critical infrastructure, including transportation systems, energy, and healthcare facilities, can disrupt essential services and compromise public safety. Disruptions in these areas can impede travel, commerce, and access to medical care during emergencies. Lastly, acts of terrorism and sabotage are designed to instill fear and panic and disrupt societal order, potentially leading to public alarm, social unrest, and a breakdown of trust within communities. These consequences can hinder effective emergency responses and compromise community resilience, further impacting public health and safety.

Property Damage and Critical Infrastructure: Acts of terrorism or WMD can result in extensive property damage, with explosions, arson, and other destructive methods destroying buildings, infrastructure, and physical assets. Additionally, terrorists and saboteurs often target critical infrastructure, encompassing systems, and facilities vital for societal functioning, such as power plants, transportation networks, communication systems, water treatment plants, and healthcare facilities. Damage to or disruption of critical infrastructure has wide-ranging consequences, affecting public safety, essential services, and economic stability. Social disorder occurs as critical infrastructure becomes a target, resulting in a breakdown of normal functioning. For example, transportation system disruptions hinder the movement of people and goods, affecting daily routines, commerce, and emergency response capabilities. Damage to healthcare facilities hampers access to medical care during emergencies, posing public health and safety risks. Such disruptions can have cascading effects on the overall functioning of society.

Economy: The economic impacts of terrorism or WMD can be profound and multifaceted, affecting local, national, and even global economies. These impacts include:

1. **Direct Costs**:

- Infrastructure Damage: Terrorist attacks or WMD incidents can cause substantial damage to infrastructure, including buildings, transportation systems, and utilities, requiring significant funds for repairs and reconstruction.
- Emergency Response: The immediate response to an incident, including emergency services, healthcare, and law enforcement mobilization, entails substantial financial expenditures.

2. **Business Impact**:
   - Business Disruptions: Attacks can disrupt business operations, resulting in lost productivity, lost income, and sometimes permanent closure of businesses.
   - Insurance Costs: These incidents often lead to higher insurance claims, which in turn can result in increased premiums for businesses in affected and even potentially unaffected areas.
3. **Economic Activity**:
   - Investment: Terrorism and WMD threats can deter investment in regions perceived to be at high risk. The uncertainty and increased risk associated can make both local and foreign investors hesitant to invest in affected areas.
   - Tourism: Tourist destinations often suffer significant declines in visitor numbers after high-profile attacks, which can have a lasting impact on the local economy.
4. **Long-Term Economic Growth**:
   - Economic Growth: The long-term economic growth of a region can be stunted due to the destruction of infrastructure and a decline in investment and tourism. Recovery from such incidents can take years, during which growth opportunities are lost.
   - Market Volatility: Financial markets can react negatively to terrorism or WMD incidents, leading to volatility. This can affect national and global markets, influencing economic stability worldwide.
5. **Government Spending**:
   - Increased Security and Defense Spending: Governments often increase spending on security and defense in the aftermath of terrorist attacks or WMD incidents, which might divert funds from other important areas like education, health, and welfare.
6. **Public Confidence**:
   - Consumer Confidence: Such incidents can significantly affect consumer confidence, leading to decreased spending and saving, which further slows economic growth.

5.9.10 Sabotage

Hazard Definition

Sabotage refers to the deliberate damage, destruction, or disruption of property, equipment, or services intended to harm the national defense or war effort of a country. In broader terms, sabotage is often aimed at disrupting or harming the operations of government, organizations, or specific industries. This can include acts such as damaging machinery, software, or infrastructure to hinder a company's operations or a country's capability to function effectively, especially in a military or strategic context.

Sabotage can be motivated by a variety of reasons including political, economic, or social objectives, and it is considered a serious federal crime when it endangers national security or public safety. The intent behind sabotage is typically to weaken the target while avoiding large-scale violence or direct

confrontation, making it a preferred tactic in asymmetric warfare situations or in efforts by insiders within an organization to cause disruption.

Hazard Extent/Intensity

The extent and intensity of sabotage incidents are typically based on the following:

1. Scope of Damage: This includes the physical extent of the destruction caused by the sabotage, such as the amount of property destroyed, the cost of the damage, and the disruption to services or operations. The more extensive the damage and disruption, the higher the intensity of the incident.
2. Target Significance: The nature and significance of the targeted asset play a crucial role in assessing the incident's severity. Sabotage of critical infrastructure, military assets, or key industries would be considered more severe due to the potential national security implications.
3. Economic Impact: The economic repercussions of the sabotage, including repair costs, lost productivity, and the broader economic effects on the local or national economy, are significant indicators of the incident's intensity.
4. Impact on Public Safety and National Security: The degree to which the sabotage affects public safety or compromises national security is a critical measure. Incidents that pose a direct threat to public safety or have the potential to significantly weaken national defense are treated with heightened seriousness.
5. Method and Sophistication: The complexity and sophistication of the methods used in the sabotage also reflect its intensity. More elaborate and technically advanced methods suggest higher planning and capability, indicating a more serious threat level.
6. Motive and Intent: Understanding the perpetrators' motives and the strategic intent behind the sabotage can also influence the assessment of its severity. Acts driven by high-stakes political, social, or economic objectives might be evaluated as more impactful.
7. Duration and Frequency: The duration of the sabotage (whether it is a single, isolated incident or part of an ongoing campaign) and its frequency also affect the overall assessment of its intensity and scope.

Vulnerability and Impacts

Health and Safety: According to the FBI, sabotage can involve critical infrastructure such as power plants, water treatment facilities, or transportation systems, and can directly endanger lives. For example, sabotage that compromises the safety of a chemical plant could lead to toxic releases, posing immediate health risks to nearby populations. Additionally, sabotage targeting utilities or essential services can disrupt vital functions like electricity, water supply, and healthcare services, which can have cascading effects on public health, particularly if it impedes access to medical care or sanitation.

Environmental damage resulting from sabotage can lead to long-term health issues. This could include contamination of air, water, or soil contamination causing chronic health problems for communities exposed to these elements and/or disrupting ecosystems that support public health.

The psychological impact of sabotage can also impact national stability or critical community infrastructure and can create widespread anxiety and fear, affecting mental health and overall community well-being.

Property Damage and Critical Infrastructure: Sabotage incidents can impact property and critical infrastructure, with consequences that extend beyond immediate physical damage. Sabotage can lead to substantial destruction of infrastructure, including transportation systems such as bridges and railways, utilities like power plants and water treatment facilities, and communication systems including telecommunication towers and data centers. The damage to such essential structures and technology not only incurs high repair costs but also disrupts the functionality of societal systems.

The disruption of services is another significant impact of sabotage. For instance, damaging a power grid can result in widespread power outages, while targeting a water facility might compromise the water supply, affecting not just the immediate area but potentially causing ripple effects throughout a broader region. Such disruptions can impede economic activities and daily living, highlighting the interconnectedness of modern infrastructure.

The recovery from a sabotage incident can also be a long and challenging process. Infrastructure projects, particularly those involving utilities or major transportation hubs, may require months or even years to fully rebuild. During this recovery period, sustained impacts on service delivery and economic activities are common. Additionally, in response to sabotage incidents, there is often an increase in spending on security measures aimed at protecting critical infrastructure. This includes not only physical security enhancements, such as barriers and surveillance systems but also cybersecurity measures to safeguard digital infrastructure.

Economy: Sabotage incidents have significant economic impacts that can reverberate through various sectors and levels of society. The most immediate impact is the direct cost associated with repairing or replacing damaged infrastructure, which can include vital physical structures, machinery, and technology crucial for daily operations across industries. The financial burden to restore functionality can be considerable, especially when major infrastructure is involved.

Beyond the direct costs, business disruptions resulting from sabotage can lead to extensive losses in productivity and revenue. In severe cases, these disruptions can force businesses to close temporarily or permanently, adversely affecting local and national economies. Additionally, insurance premiums tend to rise following sabotage incidents, affecting not only the entities directly impacted but potentially across the sector as insurers adjust to the heightened risk. This increase in operational costs can deter further investment in regions perceived as high-risk.

Investor confidence is also notably affected by sabotage, particularly if such incidents are frequent or highly disruptive. The hesitancy to invest in vulnerable regions or sectors can stifle economic growth and innovation. Moreover, in the aftermath of sabotage, there is often a significant reallocation of resources, with increased spending on security measures potentially diverting funds from other critical areas such as research and development, education, or social services.

In the long term, repeated or high-profile sabotage incidents can hinder economic growth and development. Regions or countries perceived as unstable may struggle to attract and retain businesses and skilled workers, which are crucial for economic expansion.

5.9.11 Cyber-attacks

Hazard Definition

Cyber-attacks are "deliberate exploitation of computer systems, technology-dependent enterprises, and networks." Cyber-attacks use malicious code to alter computer operations or data. The vulnerability of computer systems to attacks is a growing concern as people and institutions become more dependent upon networked technologies. The FBI reports that, "cyber intrusions are becoming more commonplace, more dangerous, and more sophisticated," with implications for private- and public-sector networks.

Malware, or malicious software, can cause numerous problems once on a computer or network, from taking control of users' machines to discreetly sending out confidential information. Ransomware is a specific type of malware that blocks access to digital files and demands a payment to release them. Hospitals, schools, state and local governments, law enforcement agencies, businesses, and even individuals can be targeted by ransomware.

Cyber spying or espionage is the act of illicitly obtaining intellectual property, government secrets, or other confidential digital information, and often is associated with attacks carried out by professional agents working on behalf of a foreign government or corporation.

According to cybersecurity firm Symantec, in 2016 "…the world of cyber espionage experienced a notable shift towards more overt activity, designed to destabilize and disrupt targeted organizations and countries." A major data breach is when hackers gain access to large amounts of personal, sensitive, or confidential information and have become increasingly common. A 2018 report from the security firm Symantec found that more than seven billion identities have been exposed in data breaches over the last eight years. In addition to networked systems, data breaches can occur due to the mishandling of external drives.

Cyber-crime can refer to any of the above incidents when motivated primarily by financial gain or other criminal intent. The most severe type of attack is cyber terrorism, which aims to disrupt or damage systems in order to cause fear, injury, and loss to advance a political agenda.

Cyber-attacks can be divided into two main categories: attacks against data, and attacks against physical infrastructure. Because our society is so dependent on technology, a large-scale cyberattack could overwhelm government and/or private-sector resources quickly, as well as threaten lives, property, the economy and national security.

Phishing is a technique employed in many of the above attacks and involves sending fraudulent emails purporting to be from known contacts or reputable companies to induce individuals to reveal personal information, such as passwords and credit card numbers, or to click on links that put the user at risk.

Hazard Location

Cyber-attacks are not central to one geographic area; they can occur anywhere across Idaho where technological systems exist or are utilized. A breach can originate at one computer and affect any

other computer in the world. Targets include individual computers, networks, organizations, business sectors, or governments.

Hazard Extent/Intensity

The extent of a cybersecurity breach is dependent on various factors. These factors include the system that is attacked, protective measures put in place, training of the people involved, warning time, and the firewalls that exist to protect different levels of the system.

Probability and Frequency

Cyberattacks have increased nationwide in recent years, particularly targeting the energy sector. Cyberattacks have also increased in the banking and finance sectors. Hackers have attacked company computers by distracting employees and interfering with Internet Security Providers (ISP) to divert resources, to steal proprietary information and PII. Small devices can wreak havoc and disrupt systems. Some USBs have been manufactured with viruses or may become infected and spread viruses to multiple computers. Firewalls, access via signatures, and anti-virus are becoming antiquated security methods.

While specific data on the number of occurrences is not known, the probability of future cyberattacks is high.

Other jurisdictions have been impacted by ransomware attacks in recent years. The City of Atlanta was hit by a major ransomware attack in 2018, recovery from which wound up costing a reported $2.6 million, significantly more than the $52,000 ransom demand. A similar attack against the City of Baltimore in 2019 affected the city government's email, voicemail, property tax portal, water bill and parking ticket payment systems, and delayed more than 1,000 pending home sales. In March 2019, Orange County, North Carolina was attacked with a ransomware virus, causing slowdowns and service problems at key public offices such as the Register of Deeds, the sheriff's office and county libraries. The attack impacted a variety of county services, including disrupting the county's capability to process real estate closings, issue marriage licenses, process fees or permits, process housing vouchers, and verify tax bills.

Vulnerability and Impacts

Cyber-attacks can have a wide range of impacts, ranging from minimal to significant, depending on if Cook County or its jurisdictions are the main target for the attack or if they are one of many targets. Some of these attacks may be malicious and can result in catastrophic damage to the nervous system of a community's cyber infrastructure. Back-up systems, redundancy, heightened awareness, integrity restoration, and recovery will provide means to adequately manage the consequence of an attack.

Direct Damage: Cyber-attacks can inflict damage on physical systems by manipulating the technology supporting the built environment.

Economic Damage: Cyber-attacks can inflict huge amounts of economic damage in many different ways. Cyber-attacks targeting financial institutions (banks, stock markets, etc.) can directly impact the overall economy while other attacks may target individual businesses. Large scale cyber-attacks

can greatly affect the economy. Symantec reports that in the last three years, businesses have lost $3 billion due to phishing email scams alone. In an electronic-based commerce society, any disruption to daily activities can have disastrous impacts to the economy. It is difficult to measure the true extent of the impact.

5.9.12 Fire or Explosion

Hazard Description

A **fire incident** refers to any occurrence in which a fire breaks out and poses a threat to life, property, or the environment. This definition covers a wide range of situations, from small accidental fires in a residential setting to large-scale industrial or wildland fires. Key components of a fire incident typically include:

1. **Ignition Source**: The element or event that initiated the fire, which could be due to human activity (such as cooking or smoking), mechanical or electrical malfunction, or natural causes (like lightning or spontaneous combustion).
2. **Fuel**: Materials that feed the fire, which can be anything combustible such as wood, paper, gasoline, or chemicals.
3. **Oxygen**: The air that sustains the combustion process.

Fire incidents are categorized by their nature, cause, and where they occur, such as residential fires, commercial fires, industrial fires, transportation fires, and wildland fires. Each type of fire incident may require different responses and mitigation strategies, depending on the specific risks and potential for damage to life and property. Fire incidents can lead to serious injuries, fatalities, significant property damage, and environmental degradation, thereby necessitating robust fire prevention, response, and investigation efforts to manage and mitigate their impacts effectively.

An **explosion incident** refers to an event where a sudden and violent release of energy occurs, typically in the form of a rapid expansion of gases or high-pressure shock waves. This release of energy can result from chemical reactions, mechanical failures, or other processes that generate a rapid increase in volume and release of energy in an extreme manner. Key elements of an explosion incident include:

1. **Cause**: The source of the explosion, which could be chemical (such as explosives or reactive chemicals), mechanical (due to pressure vessel failure, for example), or even nuclear.
2. **Medium**: The environment in which the explosion takes place, which can influence the extent and nature of the explosion. This includes confined spaces which can amplify the effects of the explosion, or open areas where the dispersion of energy might be different.
3. **Impact**: The immediate physical effects of the explosion, including shock waves, fragmentation, and heat, which can cause destruction of structures, ignite fires, and result in injuries or fatalities.

Hazard Extent/Intensity

Fire: The United States Fire Administration (USFA) measures the extent and intensity of a fire using the following metrics:

1. Size of the Fire: This is often measured in terms of the area affected, usually expressed in square feet or acres, depending on the type of structure or land involved. For wildfires, acres burned is a common metric.
2. Fire Growth and Spread Rate: The rate at which a fire expands, including how quickly it moves through materials or across areas, is a critical measure of its intensity. This rate can indicate how challenging a fire will be to control and extinguish.
3. Heat Release Rate (HRR): This is a measure of the energy output of a fire and is considered one of the most important quantitative descriptors of a fire's physical characteristics. The higher the heat release rate, the more intense the fire, and the greater the potential for structural damage and danger to life.
4. Structural Damage: The extent of damage to structures, including both the primary structure involved and any secondary structures affected, provides a measure of a fire's intensity and impact.
5. Flame Height and Length: Observing the flame characteristics can also provide insights into the fire's intensity. Longer and higher flames typically indicate a more intense fire.
6. Smoke Production: The amount and type of smoke produced can indicate the nature of the fire, including what materials are burning, which can affect both firefighting tactics and safety measures.
7. Casualties and Evacuations: The number of injuries, fatalities, and the necessity for evacuations are also indirect measures of a fire's severity.

Explosion: The U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) assesses the extent and intensity of an explosion through the following metrics:

1. Blast Effects: The ATF evaluates the radius of the explosion's effect, which includes the blast wave (overpressure), fragmentation range, and thermal effects. The extent of damage within these zones provides a measure of the explosion's intensity.
2. Material Damage: This includes assessing the damage to buildings, vehicles, and other structures. Structural integrity studies and the pattern of debris dispersion help determine the power of the explosion. Damage assessments can indicate the amount of explosive material used and the effectiveness of the device.
3. Casualties: The number of injuries and fatalities is a direct indicator of the explosion's severity. This aspect also involves examining the nature of injuries to understand the blast's impact.
4. Cratering: If the explosion creates a crater, its size and depth can be analyzed to gauge the strength and composition of the explosive used. Crater dimensions help reconstruct the event and understand the explosion dynamics.
5. Seismic and Acoustic Data: The ATF might use data from seismic and acoustic sensors to measure the energy release of the explosion. These readings can provide objective data on the blast's power and range.
6. Chemical Residue Analysis: Post-explosion, chemical residues are analyzed to identify the type of explosives used. This information can relate to the explosive's potential energy and, by extension, the intensity of the explosion.
7. Investigation of Detonation Mechanism: Understanding how the explosion was initiated is crucial. The type of detonator and the method of delivery can influence the efficiency and intensity of the explosion.

Vulnerability and Impacts

Life Safety and Public Health: According to USFA, fires and explosions can have profound impacts on life safety and public health. The most immediate and severe consequence of these incidents is the potential for fatalities and a range of injuries, including burns, trauma from blasts, and respiratory issues due to smoke inhalation. Additionally, these events often displace people from their homes, leading to both short-term and sometimes long-term housing instability, further exacerbating the stress and challenges faced by affected individuals and families.

Beyond immediate physical injury, long-term health effects of exposure to smoke and chemicals released during fires and explosions can be significant. This exposure can lead to respiratory problems, cardiovascular issues, and chronic conditions resulting from contact with toxic substances. The psychological impact is also notable, with victims and first responders potentially suffering from post-traumatic stress disorder (PTSD), anxiety, depression, and other mental health issues that can persist well beyond the actual event.

The strain on public health and emergency response infrastructure is another critical concern. Large-scale fires and explosions can overwhelm medical facilities and emergency services, compromising the care available to the broader community and reducing the accessibility of healthcare services. Additionally, the environmental health risks associated with the release of pollutants into air, water, and soil require extensive cleanup and remediation efforts, posing further public health challenges.

Critical Facilities and Infrastructure: According to USFA, fires and explosions can severely impact critical facilities and infrastructure, with significant repercussions for communities and regions. These incidents can disrupt essential services provided by critical infrastructure like power plants, water treatment facilities, or communication hubs. The interruption of these services can affect large populations, leading to considerable safety concerns and inconveniences, such as loss of electricity, water contamination, or communication breakdowns.

Fires and explosions involving chemicals can cause extensive environmental damage by releasing harmful pollutants into the air and water, as well as contaminating the soil. This not only affects the immediate area but also requires extensive cleanup efforts and has broader ecological impacts. Beyond the immediate life safety threats posed by the fire or explosion itself, there are significant public health risks associated with the exposure to toxic substances released during such incidents. These substances can lead to both acute and chronic health effects on the exposed populations.

Damage to critical infrastructure can also expose vulnerabilities in a community's or nation’s security, especially if the infrastructure is integral to security or emergency services. This can compromise the ability to respond to future emergencies and protect against various threats. Moreover, recovering from a fire or explosion that affects critical infrastructure involves a long and complex process, requiring coordinated efforts between various levels of government and private sector entities.

Economy: According to the USFA, the economic impacts of fire or explosion incidents are extensive and varied, affecting immediate areas and broader regions. Direct costs for damage and repairs following such incidents are significant, encompassing the restoration of buildings, infrastructure, and personal property. This often necessitates a substantial financial commitment from businesses, homeowners, insurance companies, and government bodies.

Business disruptions due to fires or explosions can lead to profound financial losses, characterized by lost productivity and revenue during downtime, as well as the permanent loss of critical business assets. This impact is particularly severe in industries that rely heavily on physical infrastructure, such as manufacturing. Additionally, these incidents typically result in high insurance claims, driving up premiums across the board in the affected industries or areas and impacting long-term business operations.

The employment sector also faces negative consequences, with potential job losses either temporarily during rebuilding and recovery phases or permanently if businesses fail to reopen. This affects not just the individuals employed but also the local economy, which may depend on these jobs.

5.9.13 Utility Failure: Electrical, Gas, Telecommunications, Sewer, Water, and Pipeline

Hazard Description

Electrical Failure: any disruption or malfunction within the systems operated by an electrical utility company that prevents the normal delivery of electrical power. This can include failures in generation, transmission, or distribution systems that result in a loss of service to customers.
Specifically, an electrical utility failure might involve:

- Power outages or blackouts caused by equipment failure, severe weather, or operational errors.
- Failures at power plants or other generation facilities decrease the power supply below demand levels.
- Problems in the transmission network, such as downed lines or substation failures, which prevent power from being efficiently distributed across a region.
- Distribution failures that directly affect the final delivery of electricity to homes and businesses.

Gas Failure: any disruption within the gas supply system that prevents the normal delivery of gas to consumers. This can encompass a range of issues from the production stage through to the end user, including:

- Breakdowns in infrastructure such as pipelines, storage facilities, or processing plants that impede gas flow.
- Failures due to operational errors or maintenance issues that cause interruptions in service.
- External influences such as severe weather, natural disasters, or third-party damage that result in leaks, ruptures, or complete shutdowns of parts of the gas distribution network.

Telecommunications Failure: a disruption or breakdown in the systems and networks that provide communication services, such as telephone, cellular, and internet services. This type of failure can result from a variety of causes, including:

- Technical malfunctions**:** Faults in the hardware or software components that manage and facilitate communication services.
- Network congestion**:** Overloading of network resources leading to significant slowdowns or total cessation of service.

- Physical damage**:** Damage to physical infrastructure such as cables, antennae, and satellites due to natural disasters, accidents, or vandalism.
- Operational errors**:** Mistakes or oversight in the management and operation of telecommunications systems.
- Cyber-attacks**:** Deliberate targeting of communication networks by malicious entities attempting to disrupt services.

Sewer Failure: any breakdown or malfunction within the sewer system that impedes its normal operation of collecting and transporting wastewater from residential, commercial, and industrial sources to treatment facilities.

Water Failure: a disruption in the systems and services that supply water for residential, commercial, or industrial use. This kind of failure can significantly impact daily life and operations and may arise from various issues, including the following:

- Infrastructure breakdowns**:** This includes the failure of pipes, pumps, or reservoirs due to aging materials, corrosion, or external damage such as from construction or natural events.
- Contamination**:** The presence of pollutants in the water supply that make it unsafe for use. This can be due to chemical spills, backflow incidents, or breaches in the system that allow contaminants to enter.
- Service interruptions**:** Loss of water supply caused by power outages, severe weather conditions, or operational errors that affect water treatment plants or distribution systems.
- System overloads**:** High demand that exceeds the system's capacity to supply water, often occurring during heatwaves or droughts when usage spikes unexpectedly.

Pipeline Failure: a significant disruption or malfunction in the systems used to transport gas, oil, water, or other substances through pipelines. This type of failure can involve various scenarios:

- Leaks and ruptures**:** These occur due to corrosion, material failure, or external damage (e.g., from construction activities or natural disasters) that compromise the structural integrity of the pipeline.
- Blockages: Obstructions within the pipeline can impede the flow of the transported substance, potentially leading to pressure build-up and ruptures.
- Operational failures**:** Issues with the equipment or systems that control the flow and pressure within the pipelines, including valve failures or malfunctions in monitoring systems.
- External impacts**:** Natural disasters such as earthquakes, landslides, or severe weather conditions can damage pipelines, as can human activities like digging without proper clearances.

Vulnerability and Impacts

Life Safety and Public Health: Utility failure presents significant public health and life safety risks. Electrical failures pose critical health risks for those reliant on power for medical devices and increase accident risks in darkened environments. They can also elevate crime and traffic incidents due to non-functional streetlights and security systems. Gas utility failures can lead to poisoning or asphyxiation from leaks and raise the potential for explosions and fires. Telecommunications failures compromise access to emergency services and information, crucial during health crises or for vulnerable populations, and impede emergency response and recovery during disasters.

Sewer system failures introduce severe health hazards by contaminating environments and water supplies with raw sewage, leading to waterborne diseases and costly cleanups. Water utility disruptions inhibit hydration, sanitation, and firefighting efforts, facilitating disease spread and increasing fire risks. Lastly, pipeline failures, particularly those involving hazardous materials, pose risks of toxic exposure and environmental damage, with consequent fire and explosion hazards.

Critical Facilities and Infrastructure: Utility failure can significantly impact critical facilities and infrastructure, disrupting essential services across multiple sectors.
Electrical failures can compromise the functionality of hospitals and emergency services that depend on steady power for life-saving equipment and operations, as well as transportation systems that require electricity for traffic lights and railway signals. This can result in operational disruptions and increased accidents.

Gas utility failures may pose risks to facilities like hospitals and residential buildings that rely on natural gas for heating and potentially for power generation, especially during cold weather. Industrial plants that use gas as a primary energy source can experience shutdowns, leading to economic losses.

Telecommunications failures can critically affect emergency response capabilities, which depend on reliable communication networks to coordinate and manage crisis responses effectively. Additionally, sectors such as banking, security, and transportation, which rely on uninterrupted telecommunications, face significant operational challenges during such failures.

Sewer system disruptions can impact facilities like hospitals, where sanitation is crucial to prevent infections and maintain hygiene. Wastewater treatment plants, essential for public health, when compromised by sewer failures, can lead to environmental contamination and public health crises.

Water utility failures may jeopardize hygiene and healthcare in critical facilities like hospitals and can cause cooling systems in data centers to fail, risking overheating and technological damage. Public water supply disruptions also hinder firefighting efforts, exacerbating other emergencies.

Pipeline failures can disrupt the continuous supply of fuels and chemicals, affecting facilities that rely on these materials. They can also cause environmental damage and lead to widespread energy shortages, affecting broader infrastructure and energy availability.

Economy: The economic impacts of utility failure can often include the following:

1. Productivity Losses:
    - Business Interruptions: Utility failures often lead to direct downtime for businesses, resulting in lost productivity and revenue. Industries that rely heavily on continuous power, water, or telecommunications—such as manufacturing, tech, and service sectors—are particularly vulnerable.
    - Work Disruptions**:** In the modern economy, many jobs depend on stable internet and telecommunications. Failures here can halt remote work, disrupt communication, and delay services.
2. Increased Operational Costs:
    - Repairs and Maintenance**:** Following a utility failure, the costs of repair and restoration of service can be substantial for businesses and utility companies alike.

- Backup Systems**:** Investing in generators, water tanks, and other contingency systems to mitigate the effects of future failures adds financial strain on businesses and public services.

3. Consumer Spending:
    - Reduced Consumer Confidence**:** Frequent or prolonged utility disruptions can lead to decreased consumer and business confidence, which in turn can affect local and regional economies.
    - Direct Costs to Consumers**:** Households may face higher costs due to spoiled food, damaged electronics, and the need for temporary accommodation or alternative water supplies.
4. Economic Growth Impacts**:**
    - Investment Deterrence**:** Persistent instability in utility services can deter investment in affected regions. Investors often seek stability and predictability, which are undermined by frequent utility failures.
    - Tourism and Attractions**:** Areas reliant on tourism can suffer if utility issues affect tourists' experiences, leading to a decrease in visitor numbers and spending.
5. Insurance and Risk Management**:**
    - Insurance Claims**:** Businesses and homeowners often face higher insurance premiums following frequent claims related to utility failures. Moreover, insurers may be reluctant to cover businesses in high-risk areas without significant cost adjustments.
    - Legal and Compliance Costs**:** Companies must also navigate the regulatory implications of failures, which can include fines and mandatory upgrades.
6. Long-term Strategic Shifts:
    - Infrastructure Investment**:** Long-term economic planning may shift towards enhancing resilience and sustainability, requiring significant investment in infrastructure upgrades and new technologies, further straining public and private financial resources.

5.9.14 Commercial/Industrial Transportation Accidents

Hazard Description

Air Accident: an incident involving an aircraft that is operated by a commercial airline or for industrial purposes, which results in significant damage to the aircraft, injury to its occupants, or both. This can include a range of situations including:

- Crashes during takeoff, flight, or landing**:** Any situation where an aircraft fails to complete its journey as planned due to a crash.
- Incidents on the ground**:** This can involve collisions with other aircraft, vehicles, or structures at an airport.
- System or mechanical failures**:** Failures of critical aircraft systems while in operation that could lead to emergency landings or other hazardous situations.
- External factors**:** Such as severe weather conditions, bird strikes, or other environmental issues that impact the safe operation of the flight.

Rail Accident: any incident involving trains that are used for commercial (passenger or freight services) or industrial purposes (such as those in mining or manufacturing environments), resulting in damage, injury, or disruption. Types of incidents include:

1. Collisions: When trains collide with each other, vehicles, or obstacles on the tracks.
2. Derailments: When trains come off their tracks, which can be caused by mechanical failures, track problems, or external factors.
3. Infrastructure Failures: Damage to or failure of rail infrastructure, such as bridges, tracks, or signaling systems.
4. Human Factors: Errors made by train operators, maintenance crews, or other personnel involved in the train's operation and maintenance.

Roadway Accident: any incident involving vehicles used for business purposes, such as transporting goods or passengers and typically occurring on public roads or within industrial facilities. Typical elements include:

1. Vehicle Types: The vehicles involved can range from large trucks and buses to vans and specialized industrial vehicles used within manufacturing plants or construction sites.
2. Incidents: These can include collisions between vehicles, collisions with pedestrians, single-vehicle accidents where a vehicle crashes into an obstacle or rolls over, and accidents involving the spilling of hazardous materials.
3. Causes: Common causes include driver error, mechanical failures, adverse road conditions, and insufficient maintenance of vehicles or infrastructure.
4. Consequences: Such accidents can lead to injuries or fatalities, significant property damage, environmental damage (especially in the case of hazardous material spills), and economic losses due to interrupted services and legal liabilities.

Waterway Accident: refer to incidents occurring on navigable waters, involving vessels used for purposes such as cargo and passenger transport, fishing, offshore drilling, or towing operations. These accidents can include collisions with other vessels, stationary objects, or navigational aids, and groundings on sandbanks, reefs, or shorelines. Other common types of incidents are capsizing and sinking, which may be due to factors like poor stability, overloading, or hull breaches. Additionally, onboard fires or explosions pose severe risks, especially on vessels carrying flammable or explosive materials. Environmental spills are also a significant concern, with the potential release of oil, chemicals, or other hazardous substances into the water, leading to ecological risks. Equipment and mechanical failures, such as those affecting steering or propulsion, can further contribute to these accidents.

Vulnerability and Impacts

Life Safety and Public Health: Commercial and industrial transportation accidents can significantly impact public health and life safety. These incidents frequently result in fatalities and a wide spectrum of injuries, ranging from minor to severe. Air accidents, for instance, often have a high fatality rate, while road accidents are notable for their high incidence of injuries and fatalities due to dense traffic and proximity to pedestrian areas. Rail and maritime accidents, though less common, can also lead to considerable casualties, particularly in high-speed rail incidents or large-scale maritime disasters.

The psychological aftermath of these accidents can be profound, affecting survivors, witnesses, and emergency responders with long-term effects such as post-traumatic stress disorder (PTSD), anxiety, and depression. The impact is especially acute following sudden and large-scale disasters like plane crashes and shipwrecks.

Accidents involving hazardous materials pose additional public health risks, leading to emergencies that can contaminate air, water, and soil. This contamination can cause both acute and chronic health problems for local populations, potentially necessitating prolonged public health interventions.

Such incidents also place a heavy burden on local healthcare and emergency services, often overwhelming them and disrupting routine health care delivery in the affected areas. The strain on these resources highlights the critical need for robust emergency preparedness and response strategies.

Lastly, the environmental and community health ramifications of significant contaminations are substantial, leading to long-term health issues within affected communities and necessitating ongoing public health measures to mitigate these effects.

Critical Facilities and Infrastructure: Commercial and industrial transportation accidents can often result in substantial physical damage to essential infrastructure, including bridges, roads, railway tracks, airports, and ports. For example, derailments can devastate rail infrastructure, while accidents involving ships can disrupt operations at ports. These accidents can also lead to temporary or long-term disruptions in transportation services, which can ripple throughout the economy. A significant accident at a major airport, for instance, could disrupt air services regionally or globally, while incidents on key highways or railway lines might block routes, causing delays and necessitating the rerouting of traffic and goods.

Commercial and industrial transportation accidents can also strain local emergency services and utilities. Significant accidents requiring extensive firefighting resources or medical responses can overextend local emergency capabilities. In addition, collisions that impact utility infrastructure can disrupt essential services like electricity and water, compounding the challenges for emergency response and recovery.

The environmental impacts of such accidents, particularly those involving hazardous materials, can also be severe. Spills in waterways, for example, might contaminate water supplies, and toxic fumes from fires could require the shutdown of air handling systems, posing broader environmental risks. Lastly, these accidents can pose direct risks to public safety and security, especially if critical infrastructure is damaged or hazardous materials are involved. This can lead to extensive public safety concerns, necessitating rigorous security measures and safety protocols to protect the public.

Economy: The economic impacts of commercial and industrial transportation accidents can be substantial, including expenses related to emergency response, medical care for injuries, environmental cleanup for accidents involving hazardous materials, and the repair of damaged infrastructure and vehicles. Additionally, such accidents often disrupt business operations, leading to significant losses in productivity and revenue. This is particularly evident when key trade routes are affected, disrupting supply chains and affecting businesses down the line.

Insurance costs also rise as these incidents increase claims, leading to higher premiums for businesses within the transportation sectors. Moreover, the aftermath of these accidents typically involves substantial legal and liability expenses as parties seek to determine fault and settle claims, which can include hefty compensation or fines for regulatory violations.

High-profile accidents can shake consumer and investor confidence, potentially reducing the market value of affected companies or sectors and deterring investment. In response to accidents, regulatory bodies often enhance safety regulations, imposing additional costs on businesses as they strive to comply with new standards through equipment upgrades, staff training, or procedural changes. Accidents in tourist-frequented areas or routes can deter visitors, negatively impacting local economies dependent on tourism revenue.

5.9.15 Structural Collapse

Hazard Definition

A structural collapse is defined as an event where one or more building components lose their structural integrity, resulting in part or all of the structure failing or falling. This type of incident typically occurs suddenly and can be caused by various factors, including natural disasters (such as earthquakes), accidents (like explosions or vehicle impacts), or structural failure due to poor design, construction faults, or lack of maintenance. There are four (4) different types of structural collapse as follows:

1. **Type 1 Collapse**: This involves light damage where components of the structure are partially damaged. It typically includes non-structural elements and does not pose significant risks to trapped individuals regarding additional collapses. The rescue operations might be simpler, involving fewer hazards to both victims and responders.
2. **Type 2 Collapse**: This category includes a moderate level of damage where key structural components are affected but the overall structural integrity may still partially support rescue operations. Rescues in a Type 2 collapse are more complex and riskier than Type 1, often requiring more technical skills and equipment to stabilize the structure and access victims.
3. **Type 3 Collapse**: This represents heavy damage where the structure is extensively compromised and there is a high risk of further collapse. These scenes are the most hazardous and challenging, demanding a high level of technical expertise and stabilization equipment to conduct rescue operations safely. The structure is largely unstable, and accessing trapped individuals is significantly more difficult and dangerous.
4. **Type 4 Collapse**: Sometimes recognized in various descriptions, this refers to total or near-total collapses with extremely limited chances of survival for anyone caught within, and operations may shift more towards recovery rather than rescue.

PART 3. MITIGATION STRATEGY

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation goals and objectives were reevaluated and updated; and mitigation actions/projects were updated/amended, identified, evaluated, and prioritized.

Chapter 6 Mission, Goals, and Objectives

Hazard mitigation plans must identify goals for reducing long-term vulnerabilities to identified hazards (44 CFR Section 201.6(c)(3)(i). The Steering Committee established a mission, a set of goals, and measurable objectives for this plan update, based on data from the preliminary risk assessment and the results of the public involvement strategy. The mission, goals, objectives, and actions in this plan all support each other. Goals were updated to support the mission. Objectives were selected that met multiple goals. Actions were prioritized based on the action addressing multiple goals and objectives.

6.1 Mission

A mission focuses on the range of objectives and actions to be considered. This is not a goal because it does not describe a hazard mitigation outcome, and it is broader than a hazard-specific objective. The mission for the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan is as follows:

- Identify risks and sustainable cost-effective actions to mitigate the impact of natural hazards in order to protect the life, health, safety, welfare, and economy of the communities of Cook County.

6.2 Goals

The following are the mitigation goals for this plan:

1. Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.
2. Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.
3. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such events.
4. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.
5. Develop, promote, and integrate mitigation action plans.
6. Promote public understanding of and support for hazard mitigation.

The effectiveness of a mitigation strategy is assessed by determining how well these goals are achieved.

6.3 Objectives

Each selected objective meets multiple goals, serving as a stand-alone measurement of the effectiveness of a mitigation action, rather than as a subset of a goal. The objectives also are used to help establish priorities. The objectives are as follows:

1. Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management.
2. Increase the resilience of (or protect and maintain) infrastructure and critical facilities.

3. Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.
4. Integrate hazard mitigation policies into land use plans in the planning area.
5. Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.
6. Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety.
7. Retrofit, purchase, or relocate structures in high-hazard areas, including those known to be repetitively damaged.
8. Establish partnerships among all levels of local government, the private sector, and/or nongovernmental organizations to improve and implement methods to protect people, including underserved and underrepresented groups, and property.
9. Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
10. Strengthen codes and land use planning and their enforcement so that new construction or redevelopment can avoid or withstand the impacts of natural hazards.
11. Encourage mitigation through incentive-based programs like the Community Rating System and StormReady programs.
12. Reduce natural hazard-related risks and vulnerability to potentially isolated and underserved populations within the planning area and ensure mitigation strategies result in equitable outcomes.
13. Encourage hazard mitigation measures that have the least adverse effect on the natural environment and use natural processes.

6.4 Community Lifelines

FEMA developed the community lifelines construct to increase effectiveness in disaster operations and better position the jurisdictions to respond to incidents. Lifelines are the most fundamental services in a community that, when stabilized, enable all other aspects of society. A lifeline enables the continuous operation of critical business and government functions and is essential to human health and safety or economic security. There are seven FEMA-identified lifeline categories, each of which has its own components:

- Safety and Security
- Food, Hydration, Shelter
- Health and Medical
- Energy
- Communications
- Transportation
- Hazardous Materials
- Water Systems

The goals and objectives of this plan promote using mitigation to reduce the risk to community lifelines before a disaster and to quickly stabilize a community after a disaster by preventing cascading impacts.

FEMA's Building Resilient Infrastructure and Communities grant program focuses on projects and initiatives that reduce the likelihood that community lifelines will fail as a result of an incident. During the HMP planning process, the vulnerability of these lifelines was analyzed in relation to each hazard to determine any gaps and opportunities for mitigation that may exist and be identified in the jurisdictional annexes. As part of the planning process, plan participants were encouraged to identify mitigation strategies that addressed their community lifelines.

Chapter 7 Mitigation Action Plan

The action plan helps to prioritize mitigation initiatives according to a benefit/cost analysis of the proposed projects and their associated costs (44 CFR, Section 201.6(c)(3)(iii)). The action plan also provides the framework for how the proposed projects and initiatives will be implemented and administered over the next five years. It is also meant to programmatically guide the annual updates and progress for each mitigation initiative.

Each **new** mitigation project identified during the 2024 plan update has been organized based on the following table below.

TABLE: NEW MITIGATION ACTION FORM

Mitigation Action:					
Lead Agency/Department Organization:	**Supporting Agencies/ Organizations:**	**Estimated Cost:**	**Potential Funding Source:**	**Estimated Projected Completion Date:**	**Hazard(s) Mitigated:**
Year Initiated		2024			
Applicable Jurisdiction					
Applicable Goal					
Applicable Objective					
Cost Analysis (Low, Medium, High)					
Priority and Level of Importance (Low, Medium, High)					
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)					
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed					

7.1 Mitigation Strategy/Action Timeline Parameters

While the preference is to provide definitive project completion dates, this is not possible for every mitigation strategy/action. Therefore, the parameters for the timeline (**Projected Completion Date**) are as follows:

- **Short Term** = to be completed in 1 to 5 years
- **Long Term** = to be completed in greater than 5 years
- **Ongoing** = currently being funded and implemented under existing programs.

7.2 Mitigation Strategy/Action Benefit Parameters

Benefit ratings were defined as follows:

- **High**—Project will provide an immediate reduction of risk exposure for life and property.
- **Medium**—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.
- **Low**—Long-term benefits of the project are difficult to quantify in the short term.

7.3 Mitigation Strategy/Action Estimated Cost Parameters

While the preference is to provide definitive costs (dollar figures) for each mitigation strategy/action, this is not possible for every mitigation strategy/action. Therefore, the estimated costs for the mitigation initiatives identified in this Plan were identified as high, medium, or low, using the following ranges:

- **High**—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
- **Medium**—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- **Low**—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

7.4 Mitigation Strategy/Action Prioritization Process

The action plan must be prioritized according to a benefit/cost analysis of the proposed projects and their associated costs (44 CFR, Section 201.6(c)(3)(iii)). The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Building Resilient Infrastructure and Communities (BRIC) grant program. A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

The priorities are defined as follows:

- **High Priority**—A project that meets multiple objectives (i.e., multiple hazards), has benefits that exceed cost, has funding secured or is an ongoing project and meets eligibility requirements for the HMGP or BRIC grant program. High priority projects can be completed in the short term (1 to 5 years).
- **Medium Priority**—A project that meets goals and objectives, which has benefits that exceed costs, and for which funding has not been secured but that is grant eligible under HMGP, BRIC or other grant programs. The project can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured.
- **Low Priority**—A project that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for HMGP or BRIC grant funding, and for which the timeline for completion is long term (1 to 10 years). Low priority projects may be eligible for other sources of grant funding from other programs.

For many of the strategies identified in this action plan, the partners may seek financial assistance under the HMA programs, which require detailed benefit/cost analyses. These analyses will be performed on projects at the time of application using the FEMA benefit-cost model. For projects not seeking financial assistance from grant programs that require detailed analysis, the partners reserve the right to define "benefits" according to parameters that meet the goals and objectives of this plan.

Chapter 8 Mitigation Alternatives and Strategies

Plan participants assessed and included a comprehensive range of hazard mitigation strategies/actions, including strategies from FEMA documents, strategies from the 2019 Cook County Multi-Hazard Mitigation Plan and suggestions from participating communities and their respective stakeholders during a series of workshops that took place throughout the County in April of 2024.

Each of the participating communities, including Cook County, were invited to participate in a series of workshops in which goals, objectives, and strategies were discussed, identified, updated and prioritized. Each participant in this session was provided with a number of resources to help them identify relevant mitigation strategies. These include the following documents:

- FEMA Mitigation Ideas Handout (see Appendix B. Plan Process and Development Documentation)
- Cook County Mitigation Examples Handout (see Appendix B. Plan Process and Development Documentation)

All potential strategies that arose through this process are included in this Plan. A final draft of the Plan was presented to all stakeholders to allow them to provide final edits and approval of the strategies and their priority.

One of the benefits of using the Online Planning System, and organizing jurisdictions by North, Central and South regions, was to ensure neighboring communities had full visibility of each other's mitigation initiatives. This was done to ensure synergies were identified, when applicable, and that mitigation actions in one community would not adversely impact another nearby community.

The following form was used to determine new mitigation strategies for 2024.

2024 Cook County New Mitigation Action Form

Instructions: Please complete one (1) Mitigation Action Form for each proposed mitigation action or project with as much detail as possible.

Name: _____ **Jurisdiction/Organization:** _____

E-mail: _____ **Phone:** _____

New Mitigation Action (Please Describe)

Year Initiated (i.e. 2024)	
Applicable Jurisdiction/Special District	
Lead Agency/Organization	
Supporting Agencies/Organizations (if applicable)	
Potential Funding Source **Examples:** Local Budgeted Funds, Local or State Special Taxes, Private/Non-Profit Funds, State Special Funds, Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA) Program, Community Development Block Grant (CDBG), FEMA Public Assistance (PA)	
Estimated Cost (If estimated cost is unknown, indicate Low, Medium, or High)	
Benefits (Indicate Low, Medium, or High)	
Projected Duration (If estimated duration is unknown, indicate Short Term, Long Term, or Ongoing)	
PRIORITY (High, Medium, Low)	

Please indicate if the mitigation goals below are applicable to the new mitigation action/project). Check All That Apply.

X	Place an "X" by the applicable goals, if applicable
	Goal 1: Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.
	Goal 2: Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.
	Goal 3: Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such events.
	Goal 4: Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.
	Goal 5: Develop, promote, and integrate mitigation action plans.
	Goal 6: Promote public understanding of and support for hazard mitigation.

2024 Cook County New Mitigation Action Form

This mitigation action:

The mitigation strategies/actions will be prioritized and evaluated using the STAPLEE+E method, which uses eight (8) criteria for evaluating a mitigation action – Social, Technical, Administrative, Political, Legal, Economic, Environmental, and Equity. Additional considerations are within each of these criteria. Each criterion is evaluated on a scale from one (1) to five (5), with one (1) defined as strongly disagree and five (5) as strongly agree. The summation will result in the STAPLEE+E Prioritization Score.

Instructions: Circle the best option

	Strongly Disagree (1)	Disagree (2)	Neither Agree or Disagree (3)	Agree (4)	Strongly Agree (5)
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community, does not adversely affect a particular segment of the population, does not cause relocation of lower-income people, and is compatible with the community's social and cultural values?	1	2	3	4	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts?	1	2	3	4	5
Administrative: Do you agree or disagree that your jurisdiction/organization has the necessary staffing and funding to carry-out this mitigation action?	1	2	3	4	5
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process?	1	2	3	4	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action?	1	2	3	4	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund?	1	2	3	4	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals?	1	2	3	4	5
Equity: Do you agree or disagree that the mitigation actions are consistent and systematically fair? (i.e., Does not create an opportunity for unequal distribution of resources; racism; affect a particular segment of the population, including communities of color, communities that face discrimination based on sex, sexual orientation or gender identity, persons with disabilities, persons who identify with a certain religion, persons with Limited English Proficiency, or rural communities, etc.).	1	2	3	4	5

Place an "X" by the hazard(s) this action/project will mitigate:

Mitigated Hazards			
X	Place an "X" by the applicable hazard		
	All Hazards		Severe Weather (Extreme Heat, Lightning. Hail, Fog, High Winds)
	Dam and Levee Failure		Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold)
	Drought		Tornado
	Earthquake		Wildfire/Wildfire Smoke
	Flood (Riverine, Urban, Coastal/Shoreline)		Other

8.1 Mitigation Strategies by County or Regional Agencies/Departments

The mitigation strategies and actions from county departments/agencies are included in **Volume 2**. Mitigation strategies that are applicable for **all participating jurisdictions** are also included in **Volume 2**. They include:

- Cook County - Unincorporated 2024 MJ-HMP Jurisdictional Annex: Mitigation Strategies and Actions
- MWRD 2024 MJ-HMP Jurisdictional Annex: Mitigation Strategies and Actions
- Countywide Mitigation Actions

Each entities' Mitigation Strategies & Actions are organized as follows:

- **New Mitigation Actions**—New actions identified during this 2024 update process.
- **Ongoing Mitigation Actions**—These ongoing actions were included in the previous update and have yet to be completed. Some of these actions have no definitive end. During the 2024 update, these "ongoing" mitigation strategies/actions were modified and/or amended, as needed, to better define the strategy/action.
- **Completed Mitigation Actions**—Completed actions since 2014. Completed actions also included a brief description of the "Resulting Reduction or Limitation of Hazard Impact(s) Achieved" in order to show the resulting benefits of implementing the mitigation initiative.

8.2 Mitigation Strategies by Community

The mitigation strategies and actions from the participating jurisdictions are included in **Volume 2**.

Each entities' Mitigation Strategies & Actions are organized as follows:

- **New Mitigation Actions**—New actions identified during this 2024 update process.
- **Ongoing Mitigation Actions**—These ongoing actions were included in the previous update and have yet to be completed. Some of these actions have no definitive end. During the 2024 update, these "ongoing" mitigation strategies/actions were modified and/or amended, as needed, to better define the strategy/action.
- **Completed Mitigation Actions**—Completed actions since 2014. Completed actions also included a brief description of the "Resulting Reduction or Limitation of Hazard Impact(s) Achieved" in order to show the resulting benefits of implementing the mitigation initiative.

8.3 NFIP-Specific Mitigation Actions and Implementation

The following mitigation strategies demonstrate Cook County and its participating jurisdictions' continued support and compliance with NFIP requirements, as appropriate. Only those actions that demonstrate specific support and compliance to the program are included. Other flood-related projects were not included in this section.

- **Countywide Action 15**—Identify and promote local, state, and federal funding sources for local flood mitigation projects.

- **Countywide Action 19**—Support planning partner education by requesting mobile training courses covering the National Flood Insurance Program and Community Rating System information during the period of this plan.

Other priorities within the county related to NFIP include: 1) Increased CRS participation throughout the county; 2) Increase in the number of flood insurance policies; 3) Increased number of CFMs throughout the county; 4) Post-flood damage estimate training for county and municipal staff; 5) Acquisition of severe repetitive loss and repetitive loss properties; 6) Higher regulatory standards including higher freeboard, cumulative substantial damage and substantial improvement threshold, and enforcing floodplain regulations in areas of known urban, typically shallow depth, flooding.

Chapter 9 Plan Integration Strategy

Plan integration is the process by which communities look critically at their existing planning framework and align efforts with the goal of building a safer, smarter community. Plan integration involves a two-way exchange of information and incorporation of ideas and concepts between the Cook County Multi-Jurisdictional Multi-Hazard Mitigation Plan and other community plans. Specifically, plan integration involves the incorporation of hazard mitigation principles and actions into community plans and community planning mechanisms.

The following demonstrates Cook County's and its participating jurisdictions' continued effort to integrate mitigation into other community plans and efforts:

- **Goal #5**: Develop, promote, and integrate mitigation action plans.
- **Objective #4**: Integrate hazard mitigation policies into land use plans in the planning area.
- In 2014, Cook County committed to the "Develop of a countywide hazards task force to create a collective approach to natural hazard mitigation through the unification of plans, actions, and data" (Countywide Action #14). This task force is now the Cook County Hazard Mitigation Steering Committee and has been tasked with ensuring the integration of mitigation strategies across all plans and actions throughout the County.
- In 2019, Cook County committed to the "Implementation of the Cook County Multi-Jurisdictional Hazard Mitigation Plan to more effectively establish a "programmatic" approach that integrates new and existing mitigation initiatives throughout the County by maximizing regional coordination and two-way information sharing of stakeholders" (Countywide Action #23). This action will ensure the County proactively enhances their information-sharing networks, meetings, and outreach efforts among key stakeholders to ensure mitigation initiatives are considered in all planning engagements. This effort will continue in 2024.

9.1 Process and Mechanism for Plan Integration

Each participating jurisdiction annex in Volume II includes a Plan Integration section. This section in each jurisdiction/special district’s annex describes the process and mechanism to integrate the Cook County MJ-HMP into other planning mechanisms. This will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The goals and actions of the Hazard Mitigation Plan will be considered in the next capital improvement planning process.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the Comprehensive Plan.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction’s land use plans, zoning, and subdivision codes.

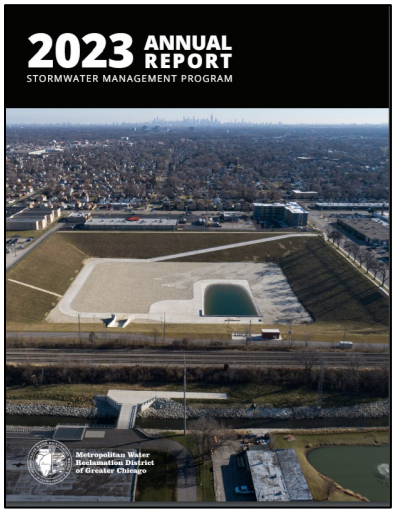
9.2 Examples of Plan Integration

9.2.1 Emergency Planning

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. The Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into each of the aforementioned plans, as appropriate.

9.2.2 MWRD

An example of this effort to continue integrating across all plans can be found in the most recent MWRD Stormwater Management Program: 2023 Annual Report.



COOK COUNTY HAZARD MITIGATION PLAN

The Cook County Hazard Mitigation Plan is the use of long-term and short-term policies, programs, projects, and other activities to alleviate the death, injury and property damage that can result from a disaster. Cook County, the MWRD, and a coalition of planning partners prepared the Cook County Multi-Jurisdictional Hazard Mitigation Plan in order to identify the risks posed by hazards and find ways to reduce their impacts. The plan reduces risk for those who live in, work in, and visit the County. MWRD continues to work closely with Cook County and our other planning partners to mitigate flooding through projects identified in our annual report.



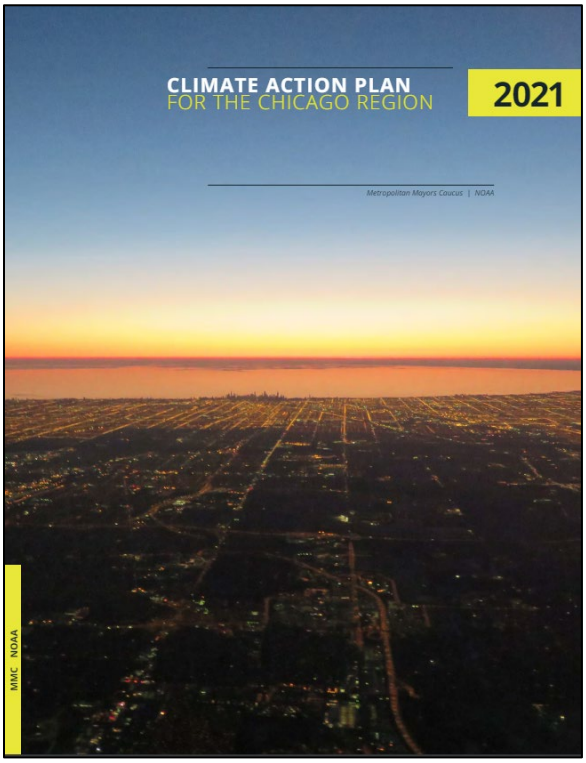
A view to the west shows a flood-prone section of Willow Road along Hillcrest Lake in Prospect Heights, which becomes unpassable during heavy rain events.

9.2.3 Climate Resiliency Planning

Another example is the integration of Climate Resiliency Planning for communities in Cook County. Cook County allocated nearly $16 million in American Rescue Plan Act (ARPA) funds to support suburban municipalities in developing Climate Resiliency Plans and to fund initial implementation of those plans. On August 10, 2023, the County announced the five communities selected to participate including the Villages of Bellwood, Franklin Park, Justice, Lynwood and the City of Markham. Through this program, Cook County hopes to help communities prepare for these extreme events to prevent damage and losses, while maintaining the well-being and health of residents. Transforming infrastructure, implementing nature-based solutions and ensuring social structures are adaptable are imperative for resiliency, but the costs and time associated with planning and funding such measures can be a barrier to completion and success.

9.2.4 Climate Action Plan for the Chicago Region

The Climate Action Plan for the Chicago Region is built on a foundation of work by the Metropolitan Mayors Caucus (Caucus) to lead local and regional climate action. The strategies contained in this plan are specifically tailored for action at the municipal level. The plan spotlights six high-priority climate hazards and their potential impacts to people, assets, and resources: Heat and Health; Flooding and Homes; Flooding and Infrastructure; Flooding and Transportation; Drought and Water Supply; and Air Quality, Flooding, and Public Health. The following are excerpts from the plan to link directly with the Cook County Multi-Jurisdictional Hazard Mitigation Plan goals and objectives.


CLIMATE ACTION PLAN
FOR THE CHICAGO REGION
2021
Metropolitan Mayors Caucus | NOAA
MMC NOAA

OVERARCHING ACTIONS TO BUILD RESILIENCE

ENGAGE AND EDUCATE THE COMMUNITY:

- Inform the community about changing weather hazards and risks.
- Encourage families to prepare an emergency response plan.
- Foster community spirit to recover, adapt and "bounce forward" from disaster.
- Employ an effective early warning and response system.

INCORPORATE EQUITY AND INCLUSION:

- Collaborate to ensure residents most vulnerable to heat, air pollution and flooding are connected to emergency relief services.
- Include vulnerable populations in planning and prioritize investments to protect them.
- Assure community education messages are accessible in all languages and formats.

COLLABORATE AND BUILD CAPACITY:

- Coordinate resiliency efforts with federal, state, and regional agencies.
- Access and share timely weather data.
- Manage public and private landscapes to optimize ecosystem services and support biodiversity
- Strengthen emergency and adaptive response skills among staff, civic leaders, and allied organizations.

ENACT PLANS AND POLICIES:

- Assess climate vulnerability and risks to local infrastructure.
- Adopt and integrate county hazard mitigation plan into local plans and policies.
- Integrate climate impacts and vulnerability into relevant plans and regulations.
- Proactively update codes to reflect evolving climate conditions.
- Incentivize or require resilient building design.
- Reduce sprawl by promoting infill development.
- Prioritize transit-oriented development and transit-supportive land uses.
- Participate in the Community Rating System and National Flood Insurance Program.
- Guide future development plans to conserve and restore open space, soil, trees, and native landscapes to preserve ecosystem services.

ADAPT OPERATIONS AND INVESTMENTS:

- Integrate climate resiliency into decision-making about capital expenditures.

FLOODING AND TRANSPORTATION

Flooding limits emergency access to neighborhoods. Roads provide vitally important access for safety, essential goods, and emergency services, and many neighborhoods and businesses can become isolated during flood events.

Of course, roads are also essential for people to move from where they live to where they work and meet with others. Flooding can be both acute due to heavy precipitation or chronic due to failing infrastructure. Both issues need to be addressed to create a truly resilient community.

MITIGATION CO-BENEFITS:

Resilient transit systems reduce vehicle miles traveled.



Image credit, above: CMAP, Image credit, right: Lake County Stormwater Management Commission

ACTIONS TO BUILD RESILIENCE

INCORPORATE EQUITY AND INCLUSION:

Assure transit along routes serving vulnerable populations is accessible and operable during a flood. Include vulnerable residents in planning and prioritize investments to protect them.

COLLABORATE AND BUILD CAPACITY:

Coordinate resiliency efforts with federal, state, county, and regional planning agencies. Collaborate on emergency transportation and logistics plans to move vital resources. Monitor and share real-time roadway conditions.

ENACT PLANS AND POLICIES:

Conduct climate vulnerability assessment and risks to local transportation infrastructure. Adopt and integrate county hazard mitigation plan into local plans and policies. Promote connected and walkable neighborhoods. Prioritize transit-oriented development.

ADAPT OPERATIONS AND INVESTMENTS:

Assess and adapt vulnerable transportation infrastructure to be responsive to changing climate conditions. Integrate stormwater management into transportation projects. Respond to weather events to ensure mobility.



STORMWATER AND INFRASTRUCTURE

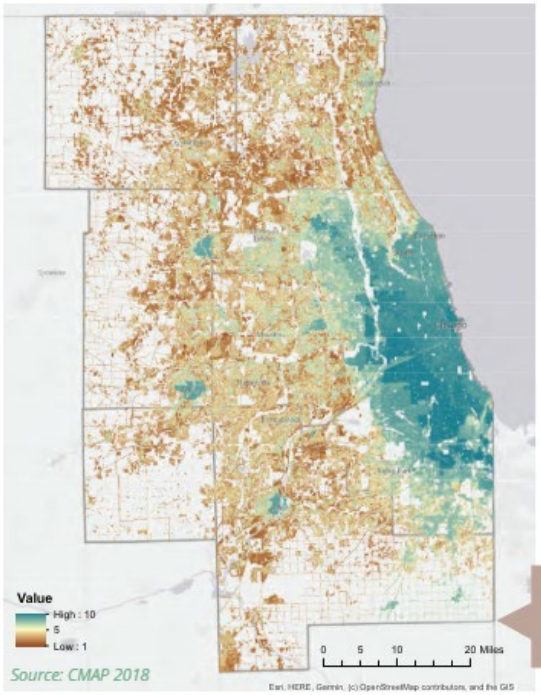
Floods are the most common and most costly disasters in Illinois. Heavy rainfall events are increasing in frequency and severity, pushing existing bridges and culverts beyond capacity and causing more flooding across the region. Cities and towns struggle to maintain that infrastructure, let alone replace it. Many structures are in floodplains and urban flood risk areas.

Stormwater management must be part of regional planning. Green infrastructure includes preserved habitat, open space, and wetlands, each of which buffers these problems and improves quality of life. Gray infrastructure includes basins, sewers, and other engineering solutions, such as those included in the Tunnel and Reservoir Plan (TARP).



Image credit: CMAP

URBAN FLOOD SUSCEPTIBILITY INDEX 2017



The Urban Flood Susceptibility Index highlights areas with attributes associated with an elevated risk of urban flooding.

ACTIONS TO BUILD RESILIENCE

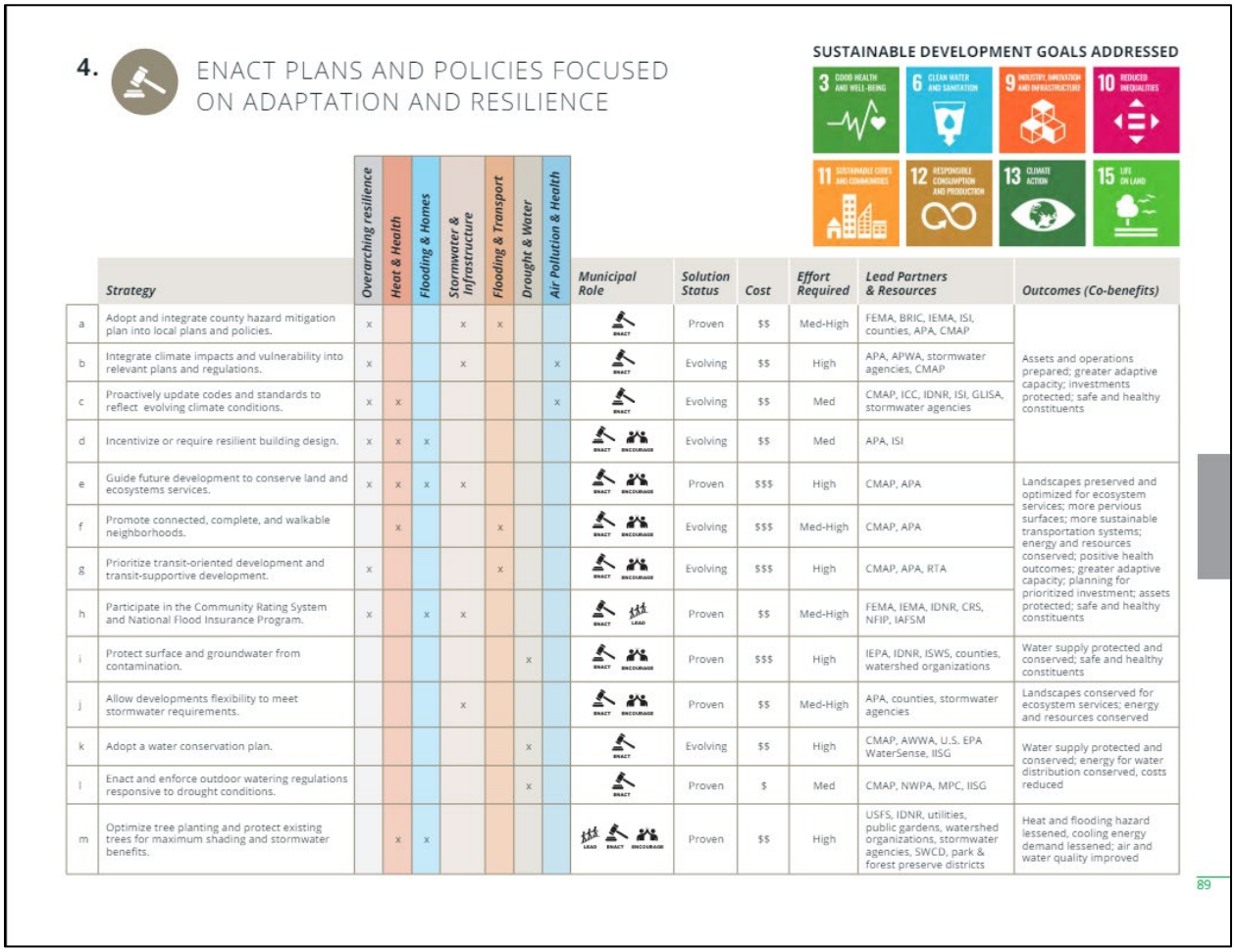
ENGAGE AND EDUCATE THE COMMUNITY:
Foster community spirit to recover, adapt and "bounce forward" from disaster. Encourage residents and businesses to disconnect downspouts from sewers and adopt water efficient behaviors.

INCORPORATE EQUITY AND INCLUSION:
Include vulnerable populations in planning and prioritize investments to protect them.

COLLABORATE AND BUILD CAPACITY:
Coordinate with federal, state, and regional agencies to manage stormwater.

ENACT PLANS AND POLICIES:
Integrate climate impacts and vulnerability into relevant plans and regulations. Adopt and integrate county hazard mitigation plan into local plans and policies. Participate in the Community Rating System and National Flood Insurance Programs. Guide development to conserve land and ecosystem services. Allow developments flexibility to meet stormwater requirements.

ADAPT OPERATIONS AND INVESTMENTS
Assess and adapt stormwater systems to respond to future rainfall projections. Establish green infrastructure and include maintenance in capital improvement plans.



4. ENACT PLANS AND POLICIES FOCUSED ON ADAPTATION AND RESILIENCE

SUSTAINABLE DEVELOPMENT GOALS ADDRESSED

	Strategy	Overarching resilience	Heat & Health	Flooding & Homes	Stormwater & Infrastructure	Flooding & Transport	Drought & Water	Air Pollution & Health	Municipal Role	Solution Status	Cost	Effort Required	Lead Partners & Resources	Outcomes (Co-benefits)
a	Adopt and integrate county hazard mitigation plan into local plans and policies.	x			x	x			ENACT	Proven	$$	Med-High	FEMA, BRIC, IEMA, ISI, counties, APA, CMAP	Assets and operations prepared; greater adaptive capacity; investments protected; safe and healthy constituents
b	Integrate climate impacts and vulnerability into relevant plans and regulations.	x			x			x	ENACT	Evolving	$$	High	APA, APWA, stormwater agencies, CMAP	
c	Proactively update codes and standards to reflect evolving climate conditions.	x	x					x	ENACT	Evolving	$$	Med	CMAP, ICC, IDNR, ISI, GLISA, stormwater agencies	
d	Incentivize or require resilient building design.	x	x	x					ENACT ENCOURAGE	Evolving	$$	Med	APA, ISI	
e	Guide future development to conserve land and ecosystems services.	x	x	x	x				ENACT ENCOURAGE	Proven	$$$	High	CMAP, APA	Landscapes preserved and optimized for ecosystem services; more pervious surfaces; more sustainable transportation systems; energy and resources conserved; positive health outcomes; greater adaptive capacity; planning for prioritized investment; assets protected; safe and healthy constituents
f	Promote connected, complete, and walkable neighborhoods.		x			x			ENACT ENCOURAGE	Evolving	$$$	Med-High	CMAP, APA	
g	Prioritize transit-oriented development and transit-supportive development.	x				x			ENACT ENCOURAGE	Evolving	$$$	High	CMAP, APA, RTA	
h	Participate in the Community Rating System and National Flood Insurance Program.	x		x	x				ENACT LEAD	Proven	$$	Med-High	FEMA, IEMA, IDNR, CRS, NFIP, IAFSM	
i	Protect surface and groundwater from contamination.						x		ENACT ENCOURAGE	Proven	$$$	High	IEPA, IDNR, ISWS, counties, watershed organizations	Water supply protected and conserved; safe and healthy constituents
j	Allow developments flexibility to meet stormwater requirements.				x				ENACT ENCOURAGE	Proven	$$	Med-High	APA, counties, stormwater agencies	Landscapes conserved for ecosystem services; energy and resources conserved
k	Adopt a water conservation plan.						x		ENACT	Evolving	$$	High	CMAP, AWWA, U.S. EPA WaterSense, IISG	Water supply protected and conserved; energy for water distribution conserved, costs reduced
l	Enact and enforce outdoor watering regulations responsive to drought conditions.						x		ENACT	Proven	$	Med	CMAP, NWPA, MPC, IISG	
m	Optimize tree planting and protect existing trees for maximum shading and stormwater benefits.		x	x					LEAD ENACT ENCOURAGE	Proven	$$	High	USFS, IDNR, utilities, public gardens, watershed organizations, stormwater agencies, SWCD, park & forest preserve districts	Heat and flooding hazard lessened, cooling energy demand lessened; air and water quality improved

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9.2.5 ARPA Sustainability Initiatives

Cook County received over $1 billion through the American Rescue Plan Act (ARPA). The County's robust planning process developed a responsible, comprehensive spending plan to use ARPA one-time resources to support immediate recovery from the effects of COVID-19 and long-term transformative initiatives, and to promote equitable recovery for populations that were historically disinvested or disproportionally impacted by COVID-19.

Cook County Board President Toni Preckwinkle announced over $100 million in ARPA funding to support a clean environment for all and fight climate change. These projects are found throughout the County's bureaus and departments, reflecting President Preckwinkle's commitment to Sustainable Communities as one of the six pillars of her Policy Roadmap. Examples include the Bureau of Economic Development's project to replace dangerous lead water service lines, the Department of Transportation and Highway's partnership with the Metropolitan Water Reclamation District to reduce flooding, and the Forest Preserves' acquisition of land in underserved areas.

ARPA projects that support the goals of the mitigation plan include:

Rain Ready Green Infrastructure Plan implementation for Calumet area municipalities
This project will implement green infrastructure projects already identified through a Rain Ready Plan for Blue Island, Calumet City, Calumet Park, Dolton, Riverdale and Robbins, which have a history of

disinvestment and flooding. DES will partner with community leaders to put these six communities on a path towards greater resilience by improving stormwater management through green infrastructure and sustainable economic development.

Resilience hubs to better serve communities in disaster and non-disaster times.
DES and the Department of Emergency Management and Regional Security will work through a bottom-up approach with south suburban communities to create three Resilience Hubs. Resilience Hubs are existing physical facilities that provide day-to-day services to address chronic community stressors and provide support during disaster events. These hubs address building emergency functions, capacity and local power and leadership.

PART 4. PLAN MAINTENANCE STRATEGY

A hazard mitigation plan must present a plan maintenance process that includes the following (44 CFR Section 201.6(c)(4)):

- A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan over a five-year cycle.
- A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate
- A discussion on how the community will continue public participation in the plan maintenance process.

This section details the formal process that will ensure that the Cook County Multi-Jurisdictional Hazard Mitigation Plan remains an active and relevant document and that the planning partners maintain their eligibility for applicable funding sources. The plan's format allows sections to be reviewed and updated when new data becomes available, resulting in a plan that will remain current and relevant.

Chapter 10 Steering Committee

The steering committee is a volunteer body that oversaw the update of the plan and made recommendations on key elements of the plan, including the maintenance strategy. The steering committee will have an active role in the plan maintenance strategy. The steering committee will remain a viable body involved in key elements of the plan maintenance strategy. The steering committee should strive to include representation from the planning partners, as well as other stakeholders in the planning area.

The steering committee will convene to perform annual reviews at a place and time to be determined. The make-up of this committee will be dynamic, allowing differing views to have a say in the implementation of the plan. EMRS will strive for diverse stakeholder representation on this committee. Current Steering Committee members, planning partners and other stakeholders involved in this planning process will be contacted and given the option to remain involved in the process.

Chapter 11 Plan Implementation

The effectiveness of the hazard mitigation plan depends on its implementation and incorporation of its action items into partner jurisdictions' existing plans, policies, and programs. Together, the action items in the plan provide a framework for activities that the partnership can implement over the next five years. The planning team and the Steering Committee have established goals and objectives and have prioritized mitigation actions that will be implemented through existing plans, policies, and programs.

Cook County Emergency Management and Regional Security (EMRS) will assume lead responsibility for **implementation** and **monitoring** of this plan maintenance strategy. Although EMRS will have primary responsibility, plan implementation and **evaluation** will be a shared responsibility among all planning partners and agencies identified as lead agencies in the mitigation action plans. Completion of this strategy is the responsibility of each planning partner. This was conveyed to each planning partner as an expectation at the beginning of the planning process.

The Steering Committee will continue to monitor, evaluate, and update the plan, specifically focusing on progress toward each action item within the Hazard Mitigation Plan (Plan). The Steering Committee will dedicate one meeting annually to discuss the report's findings, progress each community has made, issues each community has experienced, and proposed projects. The annual meeting will also give the Steering Committee the opportunity to discuss needed revisions/amendments to this Plan.

Developing an annual report and meeting annually to discuss progress keeps the Steering Committee involved in the plan maintenance process, formalizes the maintenance process, and provides a level of accountability to work toward accomplishing the action items within the MJ-HMP. EMRS and staff assigned shall be responsible for coordinating and overseeing the development of the annual report and its associated meeting. In addition, to continue to encourage community participation, annual meetings will be open to the public and a public comment period will be incorporated into each meeting.

11.1 Formal Review Process

The Plan will be reviewed on an annual basis by the Steering Committee to determine the effectiveness of programs and to reflect changes that may affect mitigation priorities. EMRS will be responsible for contacting the Steering Committee and organizing the review. The Steering Committee will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan. The Steering Committee will review the goals and action items to determine their relevance to changing situations in the county as well as changes in Federal policy and to ensure they are addressing current and expected conditions. The Steering Committee will also review the risk assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. The organizations responsible for the various action items will report on the status of the projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised or removed.

11.2 Monitoring, Evaluation, and Assessing Plan Effectiveness

To ensure the MJ-HMP continues to provide an appropriate path for risk reduction throughout the county, it is necessary to regularly evaluate and update it. EMRS and the Steering Committee will be responsible for monitoring the status of the plan and gathering appropriate parties to report the status of mitigation actions. As stated previously, the Steering Committee will convene on an annual basis to determine the progress of the identified mitigation actions. The Steering Committee will also be an active participant in the next plan update. As the MJ-HMP matures, new stakeholders, specifically those stakeholders and organizations that represent underserved populations and groups in the county, will be identified and encouraged to join the existing Steering Committee.

EMRS is responsible for contacting Steering Committee members and organizing the annual meeting. The Steering Committee's responsibilities include:

- Annually reviewing each goal to determine its relevance and appropriateness.
- Monitor and evaluate the mitigation strategies in this Plan to ensure the document reflects current hazard analyses, development trends, code changes and risk analyses and perceptions.
- Ensure the appropriate implementation of annual reports and regular maintenance of the plan.
- Create future action plans and mitigation strategies. These should be carefully assessed and prioritized using benefit-cost analysis (BCA) methodology that FEMA has developed.
- Ensure the public is invited to comment and be involved in mitigation plan updates.
- Ensure that the county complies with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 CFR.
- Reassess the plan in light of any major hazard event. The Steering Committee will convene within 45 days of any major event to review all applicable data and to consider the risk assessment, plan goals, and action items given the impact of the hazard event.
- Review the plan in connection to other plans, projects, developments, and other significant initiatives.
- Coordinate with appropriate municipalities and authorities to incorporate regional initiatives that transcend the boundaries of the county.
- Update the plan every five years and submit for FEMA approval.
- Amend the plan whenever necessary to reflect changes in State or Federal laws and statutes required in 44 CFR.

11.3 Annual Steering Committee Planning Meetings

During each annual Steering Committee meeting, the Steering Committee will be responsible for a brief evaluation of the 2024 MJ-HMP and to review the progress on mitigation actions.

11.3.1 Plan Evaluation

To evaluate the plan, the Steering Committee should answer the following questions:

- Are the goals still relevant?

- Is the risk assessment still appropriate, or has the nature of the hazard and/or vulnerability changed over time?
- Are current resources appropriate for implementing this Plan?
- Have lead agencies participated as originally proposed?
- Has the public been adequately involved in the process? Are their comments being heard?
- Have county departments and participating jurisdictions been integrating mitigation into their planning documents?

If the answer to each of the above questions is "yes," the plan evaluation is complete. If any questions are answered with a "no," the identified gap must be addressed.

11.3.2 Review of Mitigation Actions

Once the plan evaluation is complete, the Steering Committee will review the status of the mitigation actions. To do so, the Steering Committee should answer the following questions:

- Have the mitigation actions been implemented as planned?
- Have outcomes been adequate?
- What problems have occurred in the implementation process?

11.3.3 Meeting Documentation

Each annual Steering Committee meeting must be documented, including the plan evaluation and review of mitigation actions.

Chapter 12 Annual Progress Report

An annual progress report will be prepared for the Cook County Multi-Jurisdiction Hazard Mitigation Plan. The purpose of the annual progress report is to enhance the opportunities for the implementation of action items and opportunities for funding. The annual progress report will include the following:

- A summary of any hazard events that occurred during the prior year and their impact on the planning area.
- A review of mitigation actions identified in the plan. Each newly identified mitigation action/strategy in the 2024 Cook County MJ-HMP includes the following table (Mitigation Action and Project Maintenance) to track annual updates and progress for each mitigation action. Lead agencies/organizations will be tasked to provide an annual status update for each action. In addition to utilizing the Annual Progress Report (Appendix E) to track the status of each of the actions, the Online Planning System, of which each planning partner has their own system, can be utilized to allow planning partners to comment and provide the status of each mitigation action. The comments tool can be used to encourage collaboration and transparency. Comments for each of the actions are visible to all administrators and users who have editing privileges for a given page. To make a comment, users click on the Comment link on the bottom of the content page and a pop-up box appears. The person uses the drop-down box to designate whether the comment is Feedback or an Observation. After entering the comment, they click the Send Comments button to submit. The comment appears after the page refreshes (if user is allowed to view comments). An email notification is sent to users who are designated to receive comment notifications.

Annual Report Status Update

Completion status legend:
N = New I = In Progress Toward Completion O = Ongoing Indefinitely
C = Project Completed R = Want Removed from Annex X = No Action Taken/Delayed

Annual Report Year	Status:	Comments/Description of Progress Made
2025		
2026		
2027		
2028		
2029		

N = New
Indicates a mitigation project/action that has not previously been identified in the annex/plan.

I = In Progress Toward Completion
Indicates a mitigation project/action that has **been initiated** and that steps have been taken toward completion.

O = Ongoing Indefinitely
This applies to projects that have made **progress** but do not necessarily have a definitive end (i.e. some projects, like educating the public, are always ongoing and do not have a definitive completion date).

R = Want Removed from Annex
Indicates a mitigation project/action that is no longer relevant and can be **removed** from the annex/plan.

X = No Action Taken
Indicates a mitigation project/action in which **no substantial actions** have been taken. For example, this would apply to projects that are dependent on a funding source in order to initiate.

C = Project Completed
Indicates a mitigation project/action that has been **completed/finished** and no additional mitigation measures are needed.

As stated above, the annual progress report will include:

- A re-evaluation of the action plans to determine if the timeline for identified projects needs to be amended (for example, changing a long-term project to a short-term project because of funding availability)
- A list of recommendations for new projects
- A summary of changes in or potential for new funding options (grant opportunities)
- A brief discussion of the impact of any other planning programs or actions within the planning partnership that involve hazard mitigation.
- A brief discussion about why targeted strategies were not completed.

EMRS will assume the responsibility of initiating the annual progress reporting process. A template to guide planning partners in preparing a progress report is included in Appendix E. The plan maintenance steering committee will provide feedback to the planning team on items included in the template. EMRS will then prepare a formal annual report on the progress of the plan. The framework for the annual report is as follows:

- The reporting period shall cover January through December of each reporting year (one calendar year).
- The timeframe for the Steering Committee review of the annual progress report will be June to August of each reporting period.
- A final annual progress report will be produced no later than October 1 of each reporting year.
- The annual progress report will be posted on the Cook County Hazard Mitigation Plan website.
- Notice of the annual progress report will be provided to the local media through a press release.
- The annual progress report will be provided to all planning partners to inform them of the actions implemented during the reporting period.
- For planning partners that participate in the Community Rating System, the report can be provided as part of the CRS annual re-certification package. The CRS requires an annual

recertification to be submitted by October 1 of every calendar year for which the community has not received a formal audit.

- For planning partners that participate in the Community Rating System, the report can be provided as part of the CRS annual re-certification package. The CRS requires an annual recertification to be submitted by October 1 of every calendar year for which the community has not received a formal audit.

Each planning partner will have discretion in how to use the annual progress report. Annual progress reporting is not a requirement specified under 44 CFR, but it may enhance the planning partnership's opportunities for funding. While failure to implement this component of the plan maintenance strategy will not jeopardize a planning partner's compliance under the DMA, it may jeopardize its opportunity to partner and leverage funding opportunities with the other planning partners. Each planning partner was informed of these protocols at the beginning of this planning process and acknowledged these expectations by submitting a letter of intent to participate in this process.

Chapter 13 Plan Update Process

Local hazard mitigation plans must be reviewed, revised if appropriate, and resubmitted for approval in order to remain eligible for benefits under the DMA (44 CFR, Section 201.6(d)(3)). The planning partnership intends to update the hazard mitigation plan on a five-year cycle from the date of initial plan adoption. This cycle may be accelerated to less than five years based on the following triggers:

- A Presidential Disaster Declaration that impacts the planning area
- A hazard event that causes loss of life
- A comprehensive update of the County or participating municipality's comprehensive plan

It will not be the intent of future updates to develop a completely new hazard mitigation plan for the planning area. The update will, at a minimum, include the following elements:

- The update process will be convened through a steering committee.
- The hazard risk assessment will be reviewed and, if necessary, updated using the best available information and technologies.
- The action plans will be reviewed and revised to account for any actions completed, dropped, or changed and to account for changes in the risk assessment or new partnership policies identified under other planning mechanisms (such as the comprehensive plan).
- The draft update will be sent to appropriate agencies and organizations for comment.
- The public will be given an opportunity to comment on the update prior to adoption.
- The partnership governing bodies will adopt their respective portions of the updated plan.

13.1 Five-Year Action Plan

This section outlines the implementation agenda that the Hazard Mitigation Steering Committee, led by Cook County EMRS, should follow five (5) years after adoption of this Plan, and then every five (5) years thereafter.

The Steering Committee will consider the following action plan for the five (5) year planning cycle. It should be noted that the schedule can be modified as necessary and does not include any meetings and/or activities that would be necessary following a disaster event (e.g., reconvening the Hazard Mitigation Steering Committee within 45 days of a disaster or emergency to determine what mitigation projects should be prioritized during the community recovery). If an emergency meeting of the Hazard Mitigation Steering Committee occurs, this proposed schedule may be altered to fit any new needs.

Year 0	
2024	Update the 2019 Hazard Mitigation Plan and submit it to IEMA and FEMA Region 5 for approval.
Year 1	
2025	• Work on mitigation actions. • Cook County EMRS will stay in contact with its key stakeholders and plan participants to keep track of project status. • Encourage Plan integration efforts.

	• Reconvene the Steering Committee for an annual meeting. • Discuss opportunities for Plan integration with other planning documents. • Discuss recent hazard events. • Update the status of projects. • Hosting a public meeting.
Year 2	
2026	• Work on mitigation actions. • Cook County EMRS will stay in contact with its key stakeholders and plan participants to keep track of project status. • Encourage Plan integration efforts.
	• Reconvene the Steering Committee for an annual meeting. • Discuss opportunities for Plan integration with other planning documents. • Discuss recent hazard events. • Update the status of projects. • Hosting a public meeting.
Year 3	
2027	• Work on mitigation actions. • Cook County EMRS will stay in contact with its key stakeholders and plan participants to keep track of project status. • Encourage Plan integration efforts.
	Apply for hazard mitigation grant funds (e.g., HMGP, BRIC) to update the next iteration of the Hazard Mitigation Plan.
	• Reconvene the Steering Committee for an annual meeting. • Discuss opportunities for Plan integration with other planning documents. • Discuss recent hazard events. • Update the status of projects. • Hosting a public meeting.
Year 4	
2028	• Work on mitigation actions. • Cook County EMRS will stay in contact with its key stakeholders and plan participants to keep track of project status. • Encourage Plan integration efforts.
	Update the 2024 Hazard Mitigation Plan and conduct a series of meetings with stakeholders, plan participants, and the public.

Year 5	
2029	• Update the 2024 Hazard Mitigation Plan and submit it to IEMA and FEMA Region 5 for approval. • Repeat.

Chapter 14 Continuing Public Involvement

The public will continue to be apprised of the plan's progress through the Cook County hazard mitigation website and by copies of annual progress reports provided to the media. Each planning partner has agreed to provide links to the County hazard mitigation plan website on their individual jurisdictional websites to increase avenues of public access to the plan. EMRS has agreed to maintain the hazard mitigation plan website. This site will not only house the final plan, but it will also become the one-stop shop for information regarding the plan, the partnership, and plan implementation. EMRS will make copies of the plan for the Cook County Library system.

Additionally, the Steering Committee, led by EMRS, will look for opportunities to raise community awareness about the 2024 Cook County MJ-HMP and the hazards that affect the County. This effort will include attendance and provision of materials at County and planning partner-sponsored preparedness events and social media posts (such as Facebook, X, and NextDoor). Participating jurisdictions will be encouraged annually to inform EMRS and the Steering Committee of upcoming and planned events.

The County, on behalf of all planning partners, will circulate the Community Preparedness and Hazard Mitigation Questionnaire annually every fall to engage the public and gather data about the planning area's priorities, level of resilience, hazards of concern, and what mitigation activities should be prioritized. The Community Preparedness and Hazard Mitigation Questionnaire will be circulated via regional EMRS meetings (planning partners will be asked to disseminate), shared with key community organizations, and social media. A flyer and hard copies of the questionnaire will also be available to community organizations to ensure underserved and underrepresented population groups have an opportunity to participate. The Hazard Mitigation Questionnaire will be available in multiple languages. Results will be shared to all plan participants as part of the annual reporting process to ensure all jurisdictions have an opportunity to consider public input.

EMRS, on behalf of all planning partners, will hold an annual townhall meeting to engage the public and provide them with an opportunity to inform EMRS and the Steering Committee about hazards of concern and mitigation priorities. The townhall-style meeting will be advertised via the media, invitations to community organizations, and social media. Partnerships with organizations, such as Build Up Cook, will be leveraged to ensure underserved communities are represented.

Upon initiation of future update processes, a new public involvement strategy will be initiated based on guidance from a new steering committee. This strategy will be based on the needs and capabilities of the planning partnership at the time of the update. At a minimum, this strategy will include the use of local media outlets within the planning area.

Chapter 15 Incorporation into Other Planning Mechanisms

The information on hazard, risk, vulnerability, and mitigation contained in this plan is based on the best science and technology available at the time this plan was prepared. The Cook County Comprehensive Plan and the comprehensive plans of the planning partners are considered to be integral parts of this plan. The County and partner municipalities, through adoption of comprehensive plans and zoning ordinances, have planned for the impact of natural hazards. The plan development process provided the County and the municipalities with the opportunity to review and expand on policies contained within these planning mechanisms. The planning partners used their comprehensive plans and the hazard mitigation plan as complementary documents that work together to achieve the goal of reducing risk exposure to the citizens of the planning area. An update to a comprehensive plan may trigger an update to the hazard mitigation plan.

All municipal planning partners are committed to creating a linkage between the hazard mitigation plan and their individual comprehensive plans by identifying a mitigation action as such and giving that action a high priority. Other planning processes and programs to be coordinated with the recommendations of the hazard mitigation plan include the following:

- Partners' emergency response plans
- Capital improvement programs
- Municipal codes
- Community design guidelines
- Water-efficient landscape design guidelines
- Stormwater management programs
- Water system vulnerability assessments

Some action items do not need to be implemented through regulation. Instead, they can be implemented through the creation of new educational programs, continued interagency coordination, or improved public participation. As information becomes available from other planning mechanisms that can enhance this plan, that information will be incorporated via the update process.

PART 5. PLAN ADOPTION

A hazard mitigation plan must document that it has been formally adopted by the governing body of the jurisdiction requesting federal approval of the plan (44 CFR Section 201.6(c)(5)). For multi-jurisdictional plans, each jurisdiction requesting approval must document that it has been formally adopted. This plan will be submitted for a pre-adoption review to the Illinois Emergency Management Agency (IEMA) and FEMA prior to adoption. Once pre-adoption approval has been provided, all planning partners will formally adopt the plan. All partners understand that DMA compliance and its benefits cannot be achieved until the plan is adopted.

After a thorough review, the Cook County Board of Commissioners adopted the plan on July 25, 2024.

Copies of the resolutions adopting this plan for all planning partners can be found in **Appendix G** of this volume.

Appendices

Appendix A Acronyms and Definitions

Acronyms

44 CFR—Title 44 of the Code of Federal Regulations

AQI—Air quality index

CCSPM—Cook County Stormwater Management Plan

CFR—Code of Federal Regulations

cfs—Cubic feet per second

CIP—Capital Improvement Plan

CMAP—Chicago Metropolitan Agency for Planning

CRS—Community Rating System

CWA—Clean Water Act

DFIRM—Digital Flood Insurance Rate Maps

DMA —Disaster Mitigation Act

DWP—Detailed watershed plan

EF—Enhanced Fujita (tornado rating scale)

EMRS— Cook County Department of Emergency Management and Regional Security

EPA—U.S. Environmental Protection Agency

EPZ—Emergency planning zone

ESA—Endangered Species Act

FEMA—Federal Emergency Management Agency

FERC—Federal Energy Regulatory Commission

FIRM—Flood Insurance Rate Map

FMA—Flood Mitigation Assistance program

GIS—Geographic Information System

HAZUS-MH—Hazards, United States-Multi Hazard

HUD—U.S. Department of Housing and Urban Development

HMGP—Hazard Mitigation Grant Program

IBC—International Building Code

IDNR—Illinois Department of Natural Resources

IEMA—Illinois Emergency Management Agency

ILCS—Illinois Compiled Statutes

IPCC—Intergovernmental Panel on Climate Change

IRC—International Residential Code

ISGS—Illinois State Geological Survey

MABAS— Mutual Aid Box Alarm System

MM—Modified Mercalli Scale

MWRD—Metropolitan Water Reclamation District of Greater Chicago

NASA—National Aeronautics and Space Administration

NCDC—National Climatic Data Center

NEHRP—National Earthquake Hazards Reduction Program

NFIP—National Flood Insurance Program

NFPA—National Fire Protection Association

NOAA—National Oceanic and Atmospheric Administration

NRC—National Research Council

NWS—National Weather Service

OTA—Congressional Office of Technology Assessment

PDM—Pre-Disaster Mitigation Grant Program

PDSI—Palmer Drought Severity Index

PGA—Peak Ground Acceleration

RHRC—Regional Hub Reception Center

RSI—Regional Snowfall Index

SFHA—Special Flood Hazard Area

SHELDUS—Spatial Hazard Events and Losses Database for the U.S.

SPI—Standardized Precipitation Index

USACE—United States Army Corps of Engineers

USGCRP—United States Global Change Research Program

USGS—U.S. Geological Survey

Definitions

100- Year Flood: The term "100-year flood" can be misleading. The 100-year flood does not necessarily occur once every 100 years. Rather, it is the flood that has a 1 percent chance of being equaled or exceeded in any given year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The Federal Emergency Management Agency (FEMA) defines it as the 1 percent annual chance flood, which is now the standard definition used by most federal and state agencies and by the National Flood Insurance Program (NFIP).

Acre-Foot: An acre-foot is the amount of water it takes to cover 1 acre to a depth of 1 foot. This measure is used to describe the quantity of storage in a water reservoir. An acre-foot is a unit of volume. One acre foot equals 7,758 barrels; 325,829 gallons; or 43,560 cubic feet. An average household of four will use approximately 1 acre-foot of water per year.

Asset: An asset is any man-made or natural feature that has value, including, but not limited to, people; buildings; infrastructure, such as bridges, roads, sewers, and water systems; lifelines, such as electricity and communication resources; and environmental, cultural, or recreational features such as parks, wetlands, and landmarks.

Base Flood: The flood having a 1% chance of being equaled or exceeded in any given year, also known as the "100-year" or "1-percent-annual-chance" flood. The base flood is a statistical concept used to ensure that all properties subject to the National Flood Insurance Program (NFIP) are protected to the same degree against flooding.

Basin: A basin is the area within which all surface water—whether from rainfall, snowmelt, springs, or other sources—flows to a single water body or watercourse. The boundary of a river basin is defined by natural topography, such as hills, mountains, and ridges. Basins are also referred to as "watersheds" and "drainage basins."

Benefit: A benefit is a net project outcome and is usually defined in monetary terms. Benefits may include direct and indirect effects. For the purposes of benefit-cost analysis of proposed mitigation measures, benefits are limited to specific, measurable, risk reduction factors, including reduction in expected property losses (buildings, contents, and functions) and protection of human life.

Benefit/Cost Analysis: A benefit/cost analysis is a systematic, quantitative method of comparing projected benefits to projected costs of a project or policy. It is used as a measure of cost-effectiveness.

Building: A building is defined as a structure that is walled and roofed, principally aboveground, and permanently fixed to a site. The term includes manufactured homes on permanent foundations on which the wheels and axles carry no weight.

Capability Assessment: A capability assessment provides a description and analysis of a community's current capacity to address threats associated with hazards. The assessment includes two components: an inventory of an agency's mission, programs, and policies, and an analysis of its capacity to carry them out. A capability assessment is an integral part of the planning process in which a community's actions to reduce losses are identified, reviewed, and analyzed, and the framework for implementation is identified. The following capabilities were reviewed under this assessment:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability

Community Rating System (CRS): The CRS is a voluntary program under the NFIP that rewards participating communities (provides incentives) for exceeding the minimum requirements of the NFIP and completing activities that reduce flood hazard risk by providing flood insurance premium discounts.

Critical Area: An area defined by state or local regulations as deserving special protection because of unique natural features or its value as habitat for a wide range of species of flora and fauna. A sensitive/critical area is usually subject to more restrictive development regulations.

Critical Facility: Facilities and infrastructure that are critical to the health and welfare of the population. These become especially important after any hazard event occurs. For the purposes of this plan, critical facilities include:

- Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic and/or water-reactive materials;
- Hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a hazard event.
- Police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for disaster response before, during, and after hazard events, and
- Public and private utilities, facilities and infrastructure that are vital to maintaining or restoring normal services to areas damaged by hazard events.

- Government facilities.

Dam: Any artificial barrier or controlling mechanism that can or does impound 10 acre-feet or more of water.

Dam Failure: Dam failure refers to a partial or complete breach in a dam (or levee) that impacts its integrity. Dam failures occur for a number of reasons, such as flash flooding, inadequate spillway size, mechanical failure of valves or other equipment, freezing and thawing cycles, earthquakes, and intentional destruction.

Debris Slide: Debris slides consist of unconsolidated rock or soil that has moved rapidly down slope. They occur on slopes greater than 65 percent.

Disaster Mitigation Act of 2000 (DMA): The DMA is Public Law 106-390 and is the latest federal legislation enacted to encourage and promote proactive, pre-disaster planning as a condition of receiving financial assistance under the Robert T. Stafford Act. The DMA emphasizes planning for disasters before they occur. Under the DMA, a pre-disaster hazard mitigation program and new requirements for the national post-disaster hazard mitigation grant program (HMGP) were established.

Drainage Basin: A basin is the area within which all surface water- whether from rainfall, snowmelt, springs or other sources- flows to a single water body or watercourse. The boundary of a river basin is defined by natural topography, such as hills, mountains and ridges. Drainage basins are also referred to as **watersheds** or **basins**.

Drought: Drought is a period of time without substantial rainfall or snowfall from one year to the next. Drought can also be defined as the cumulative impacts of several dry years or a deficiency of precipitation over an extended period of time, which in turn results in water shortages for some activity, group, or environmental function. A hydrological drought is caused by deficiencies in surface and subsurface water supplies. A socioeconomic drought impacts the health, well-being, and quality of life or starts to have an adverse impact on a region. Drought is a normal, recurrent feature of climate and occurs almost everywhere.

Earthquake: An earthquake is defined as a sudden slip on a fault, volcanic or magmatic activity, and sudden stress changes in the earth that result in ground shaking and radiated seismic energy. Earthquakes can last from a few seconds to over 5 minutes and have been known to occur as a series of tremors over a period of several days. The actual movement of the ground in an earthquake is seldom the direct cause of injury or death. Casualties may result from falling objects and debris as shocks shake, damage, or demolish buildings and other structures.

Enhanced Fujita Scale: The Enhanced Fujita Scale or EF Scale, which became operational on February 1, 2007, is used to assign a tornado a 'rating' based on estimated wind speeds and related damage. When tornado-related damage is surveyed, it is compared to a list of Damage Indicators (DIs) and Degrees of Damage (DoD) which help estimate better the range of wind speeds the tornado likely produced. From that, a rating (from EF0 to EF5) is assigned.

The EF Scale was revised from the original Fujita Scale to reflect better examinations of tornado damage surveys so as to align wind speeds more closely with associated storm damage. The new scale has to do with how most structures are designed.

Exposure: Exposure is defined as the number and dollar value of assets considered to be at risk during the occurrence of a specific hazard.

Extent: The extent is the size of an area affected by a hazard.

Firewise Communities Program: A program of the National Fire Protection Association that encourages local solutions for safety by involving homeowners in taking individual responsibility for preparing their homes from the risk of wildfire. Firewise is a key component of Fire Adapted Communities – a collaborative approach that connects all those who play a role in wildfire education, planning and action with comprehensive resources to help reduce risk. The program is co-sponsored by the USDA Forest Service, the US Department of the Interior, and the National Association of State Foresters.

Flash Flood: A flash flood occurs with little or no warning when water levels rise at an extremely fast rate.

Flood Insurance Rate Map (FIRM): FIRMs are the official maps on which the Federal Emergency Management Agency (FEMA) has delineated the Special Flood Hazard Area (SFHA).

Flood Insurance Study: A report published by the Federal Insurance and Mitigation Administration for a community in conjunction with the community's Flood Insurance rate Map. The study contains background data such as the base flood discharges and water surface elevations that were used to prepare the FIRM. In most cases, a community FIRM with detailed mapping will have a corresponding flood insurance study.

Floodplain: Any land area susceptible to being inundated by flood waters from any source. A flood insurance rate map identifies most, but not necessarily all, of a community's floodplain as the Special Flood Hazard Area (SFHA).

Floodway: Floodways are areas within a floodplain that are reserved for the purpose of conveying flood discharge without increasing the base flood elevation by more than 1 foot. Generally speaking, no development is allowed in floodways, as any structures located there would block the flow of floodwater.

Floodway Fringe: Floodway fringe areas are located in the floodplain but outside of the floodway. Some development is generally allowed in these areas, with a variety of restrictions. On maps that have identified and delineated a floodway, this would be the area beyond the floodway boundary that can be subject to different regulations.

Fog: Fog refers to a cloud (or condensed water droplets) near the ground. Fog forms when air close to the ground can no longer hold all the moisture it contains. Fog occurs either when air is cooled to its dew point or the amount of moisture in the air increases. Heavy fog is particularly hazardous because it can restrict surface visibility. Severe fog incidents can close roads, cause vehicle accidents, cause airport delays, and impair the effectiveness of emergency response. Financial losses associated with transportation delays caused by fog have not been calculated in the United States but are known to be substantial.

Freeboard: Freeboard is the margin of safety added to the base flood elevation.

Frequency: For the purposes of this plan, frequency refers to how often a hazard of specific magnitude, duration, and/or extent is expected to occur on average. Statistically, a hazard with a 100-year frequency is expected to occur about once every 100 years on average and has a 1 percent chance of occurring any given year. Frequency reliability varies depending on the type of hazard considered.

Goal: A goal is a general guideline that explains what is to be achieved. Goals are usually broad-based, long-term, policy-type statements and represent global visions. Goals help define the benefits that a plan is trying to achieve. The success of a hazard mitigation plan is measured by the degree to which its goals have been met (that is, by the actual benefits in terms of actual hazard mitigation).

Geographic Information System (GIS): GIS is a computer software application that relates data regarding physical and other features on the earth to a database for mapping and analysis.

Hazard: A hazard is a source of potential danger or adverse condition that could harm people and/or cause property damage.

Hazard Mitigation Grant Program (HMGP): Authorized under Section 202 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the HMGP is administered by FEMA and provides grants to states, tribes, and local governments to implement hazard mitigation actions after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to disasters and to enable mitigation activities to be implemented as a community recovers from a disaster.

Hazards U.S. Multi-Hazard (HAZUS**-MH) Loss Estimation Program**: HAZUS-MH is a GIS-based program used to support the development of risk assessments as required under the DMA. The HAZUS-MH software program assesses risk in a quantitative manner to estimate damage and losses associated with natural hazards. HAZUS-MH is FEMA's nationally applicable, standardized methodology and software program and contains modules for estimating potential losses from earthquakes, floods, and wind hazards. HAZUS-MH has also been used to assess vulnerability (exposure) for other hazards.

Hydraulics: Hydraulics is the branch of science or engineering that addresses fluids (especially water) in motion in rivers or canals, works and machinery for conducting or raising water, the use of water as a prime mover, and other fluid-related areas.

Hydrology: Hydrology is the analysis of the waters of the earth. For example, a flood discharge estimate is developed by conducting a hydrologic study.

Intensity: For the purposes of this plan, intensity refers to the measure of the effects of a hazard.

Inventory: The assets identified in a study region comprise an inventory. Inventories include assets that could be lost when a disaster occurs, and community resources are at risk. Assets include people, buildings, transportation, and other valued community resources.

Landspout: Tornado occurring with a parent cloud in its growth stage and with its vorticity originating in the boundary layer. The parent cloud does not contain a preexisting midlevel mesocyclone. The landspout was so named because it looks like a weak Florida Keys waterspout over land.

Lightning: Lightning is an electrical discharge resulting from the buildup of positive and negative charges within a thunderstorm. When the buildup becomes strong enough, lightning appears as a "bolt," usually within or between clouds and the ground. A bolt of lightning instantaneously reaches temperatures approaching 50,000ºF. The rapid heating and cooling of air near lightning causes thunder. Lightning is a major threat during thunderstorms. In the United States, 75 to 100 Americans are struck and killed by lightning each year (see http://www.fema.gov/hazard/thunderstorms/thunder.shtm).

Liquefaction: Liquefaction is the complete failure of soils, occurring when soils lose shear strength and flow horizontally. It is most likely to occur in fine grain sands and silts, which behave like viscous fluids when liquefaction occurs. This situation is extremely hazardous to development on the soils that liquefy, and generally results in extreme property damage and threats to life and safety.

Local Government: Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.

Magnitude: Magnitude is the measure of the strength of an earthquake and is typically measured by the Richter scale. As an estimate of energy, each whole number step in the magnitude scale corresponds to the release of about 31 times more energy than the amount associated with the preceding whole number value.

Mitigation: A preventive action that can be taken in advance of an event that will reduce or eliminate the risk to life or property.

Mitigation Actions: Mitigation actions are specific actions to achieve goals and objectives that minimize the effects from a disaster and reduce the loss of life and property.

Objective: For the purposes of this plan, an objective is defined as a short-term aim that, when combined with other objectives, forms a strategy or course of action to meet a goal. Unlike goals, objectives are specific and measurable.

Peak Ground Acceleration: Peak Ground Acceleration (PGA) is a measure of the highest amplitude of ground shaking that accompanies an earthquake, based on a percentage of the force of gravity.

Preparedness: Preparedness refers to actions that strengthen the capability of government, citizens, and communities to respond to disasters.

Presidential Disaster Declaration: These declarations are typically made for events that cause more damage than state and local governments and resources can handle without federal government assistance. Generally, no specific dollar loss threshold has been established for such

declarations. A Presidential Disaster Declaration puts into motion long-term federal recovery programs, some of which are matched by state programs, designed to help disaster victims, businesses, and public entities.

Probability of Occurrence: The probability of occurrence is a statistical measure or estimate of the likelihood that a hazard will occur. This probability is generally based on past hazard events in the area and a forecast of events that could occur in the future. A probability factor based on yearly values of occurrence is used to estimate probability of occurrence.

Repetitive Loss Property: Any NFIP-insured property that, since 1978 and regardless of any changes of ownership during that period, has experienced:

- Four or more paid flood losses in excess of $1000.00; or
- Two paid flood losses in excess of $1000.00 within any 10-year period since 1978 or
- Three or more paid losses that equal or exceed the current value of the insured property.

Return Period (or Mean Return Period): This term refers to the average period of time in years between occurrences of a particular hazard (equal to the inverse of the annual frequency of occurrence).

Riverine: Of or produced by a river. Riverine floodplains have readily identifiable channels. Floodway maps can only be prepared for riverine floodplains.

Risk: Risk is the estimated impact that a hazard would have on people, services, facilities, and structures in a community. Risk measures the likelihood of a hazard occurring and resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to occurrence of a specific type of hazard. Risk also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

Risk Assessment: Risk assessment is the process of measuring potential loss of life, personal injury, economic injury, and property damage resulting from hazards. This process assesses the vulnerability of people, buildings, and infrastructure to hazards and focuses on (1) hazard identification; (2) impacts of hazards on physical, social, and economic assets; (3) vulnerability identification; and (4) estimates of the cost of damage or costs that could be avoided through mitigation.

Robert T. Stafford Act: The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-107, was signed into law on November 23, 1988. This law amended the Disaster Relief Act of 1974, Public Law 93-288. The Stafford Act is the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and its programs.

Sinkhole: A collapse depression in the ground with no visible outlet. Its drainage is subterranean. It is commonly vertical-sided or funnel-shaped.

Special Flood Hazard Area: The base floodplain delineated on a Flood Insurance Rate Map. The SFHA is mapped as a Zone A in riverine situations and zone V in coastal situations. The SFHA may or may not encompass all of a community's flood problems.

Stakeholder: Business leaders, civic groups, academia, non-profit organizations, major employers, managers of critical facilities, farmers, developers, special purpose districts, and others whose actions could impact hazard mitigation.

StormReady Program: A program of the National Weather Service that helps arm America's communities with the communication and safety skills needed to save lives and property--before and during a storm event. StormReady helps community leaders and emergency managers strengthen local safety programs. StormReady communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness.

Stream Bank Erosion: Stream bank erosion is common along rivers, streams and drains where banks have been eroded, sloughed or undercut. However, it is important to remember that a stream is a dynamic and constantly changing system. It is natural for a stream to want to meander, so not all eroding banks are "bad" and in need of repair. Generally, stream bank erosion becomes a problem where development has limited the meandering nature of streams, where streams have been channelized, or where stream bank structures (like bridges, culverts, etc.) are located in places where they can actually cause damage to downstream areas. Stabilizing these areas can help protect watercourses from continued sedimentation, damage to adjacent land uses, control unwanted meander, and improvement of habitat for fish and wildlife.

Steep Slope: Different communities and agencies define it differently, depending on what it is being applied to, but generally a steep slope is a slope in which the percent slope equals or exceeds 25%. For this study, steep slopes are defined as slopes greater than 33%.

Sustainable Hazard Mitigation: This concept includes the sound management of natural resources, local economic and social resiliency, and the recognition that hazards, and mitigation must be understood in the largest possible social and economic context.

Thunderstorm: A thunderstorm is a storm with lightning and thunder produced by cumulonimbus clouds. Thunderstorms usually produce gusty winds, heavy rains, and sometimes hail. Thunderstorms are usually short in duration (seldom more than 2 hours). Heavy rains associated with thunderstorms can lead to flash flooding during the wet or dry seasons.

Tornado: A tornado is a violently rotating column of air extending between and in contact with a cloud and the surface of the earth. Tornadoes are often (but not always) visible as funnel clouds. On a local scale, tornadoes are the most intense of all atmospheric circulations, and winds can reach destructive speeds of more than 300 mph. A tornado's vortex is typically a few hundred meters in diameter, and damage paths can be up to 1 mile wide and 50 miles long.

Vulnerability: Vulnerability describes how exposed or susceptible an asset is to damage. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. Like indirect damage, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power. Flooding of an electric substation would affect not only the substation itself but businesses as well. Often, indirect effects can be much more widespread and damaging than direct effects.

Watershed: A watershed is an area that drains downgradient from areas of higher land to areas of lower land to the lowest point, a common drainage basin.

Windstorm: Windstorms are generally short-duration events involving straight-line winds or gusts exceeding 50 mph. These gusts can produce winds of sufficient strength to cause property damage. Windstorms are especially dangerous in areas with significant tree stands, exposed property, poorly constructed buildings, mobile homes (manufactured housing units), major infrastructure, and aboveground utility lines. A windstorm can topple trees and power lines; cause damage to residential, commercial, critical facilities; and leave tons of debris in its wake.

Zoning Ordinance: The zoning ordinance designates allowable land use and intensities for a local jurisdiction. Zoning ordinances consist of two components: a zoning text and a zoning map.

Appendix B Plan Process and Development

This section details plan participation validation for local jurisdictions. In accordance with best practices as outlined in CPG 101, Cook County EMRS and its partners embraced the whole community approach throughout the 2024 MJ-HMP Update process, involving civic leaders, community representatives and organizations, and the general public. Understanding that critical infrastructure and key resources (CIKR), as well as public opinion and hazard likeliness, can dramatically change in a five-year period, the EMRS and its partners leveraged in-person, on-site outreach opportunities to educate stakeholders and collect and validate the information. To support the 2024 MJ-HMP Update process, the following were facilitated for jurisdiction leaders and Point of Contacts (POC):

- Local Government Meetings
- Webinars
- Hazard Mitigation Planning Workshops

Further information about plan participation validation is included below.

2020 HMP Annual Report and Update

The annual update for 2020 was not required for any municipality due to COVID-19.

2021 HMP Annual Report and Update

Annual updates were conducted to maintain up-to-date data and vital information for participating jurisdiction, increase the number of participating jurisdictions in the overall HMP and increase Cook County's resilience. Regardless of previous participation in the 2019 HMP, **all** municipalities opted to participate in the 2021 HMP Annual Report and Update.

2022 HMP Annual Report and Update

During the 2022 HMP Annual Report and Update, a few jurisdictions did not complete the process. The following jurisdictions in the southern region of the County did not submit a 2022 annual report:

1. Dolton
2. Lynwood

2023 HMP Annual Report and Update

All municipalities participated in the 2023 HMP Annual Report and Update. This was partly due to aligning the annual report with the 2024 MJ-HMP plan update.

2024 Letter of Intent

A Letter of Intent (LOI) is a legally binding agreement that outlines and confirms a jurisdiction's participation in the 2024 MJ-HMP Update with the County. For 2024, 121 were received by Cook County EMRS. In the case of bordering jurisdictions, EMRS personnel and their partners formally

reached out to each of the bordering jurisdictions' POC. Out of the fourteen (14) border jurisdictions, two (2) (Buffalo Grove, Elgin) joined the 2024 MJ-HMP Update.

Cook County Hazard Mitigation Webinar Series

Description

The webinar provides an overview of the steps involved in mitigation planning and the actions required by a jurisdiction to meet the planning requirements.

Webinar 1:

- **Date:** 04/10/2024
- **Scheduled Time:** 14:00 – 15:30 Hours CDT
- **Registrants:33**
- **Actual Time:** 1 Hour 35 Minutes
- **Attendees:** 35

Webinar 2:

- **Date:** 04/12/2024
- **Time:** 0900 - 1030 Hours CDT
- **Registrants:** 44
- **Actual Time:** 1 Hour 36 Minutes
- **Attendees:** 38

Webinar 3:

- **Date:** 04/15/2024
- **Time:** 0900 - 1030 Hours CDT
- **Registrants:** 39
- **Actual Time:** 1 Hour 35 Minutes
- **Attendees:** 38

Webinar 4:

- **Date:** 04/15/2024
- **Time:** 1800-1930 Hours CDT
- **Registrants:** 13
- **Actual Time:** 1 Hours 35 Minutes
- **Attendees:** 10

Webinar 5:

- **Date:** 04/16/2024
- **Time:** 0900 - 1030 Hours CDT

- **Registrants:** 43
- **Actual Time:** 1 Hour 36 Minutes
- **Attendees:** 33

Webinar 6:

- **Date:** 04/17/2024
- **Time:** 0900 - 1030 Hours CDT
- **Registrants:** 67
- **Actual Time:** 1 Hour 36 Minutes
- **Attendees:** 59

Webinar 7:

- **Date:** 04/25/2024
- **Time:** 0900 - 1030 Hours CDT
- **Actual Time:** 1 Hour 36 Minutes
- **Attendees:** 37

Webinar Series Statistics:

- **Days:** 6
  Number of Webinars: 7
- **Registrants:** 206
- **Attendees:** 215

Webinar Participation List

Name	Municipality / Organization	Title
David Roberts	Arlington Heights / Arlington Heights Fire Department	Division Chief
Michael Pagones	Arlington Heights / Village of Arlington Heights	Village Engineer
Mike Casper	Barrington / Barrington Fire Department	Fire Chief / EM Coordinator
John Christian	Barrington / Village of Barrington	Assistant Director of Public Works
Thomas Hansen	Bedford Park / Bedford Park PD	Chief of Police
Pete Lettiere	Bedford Park / Bedford Park Police Department	Deputy Police Chief
Timothy Wheeler	Bellwood / Bellwood Homeland Security	Lieutenant
Michael Sabel	Bellwood / DHS	Chief
Scott Waszak	Berwyn / Berwyn Fire Dept	Division Chief
Michael Schroeder	Blue Island / City of Blue Island	Assistant Public Works Director
Mark Kraft	Bridgeview / Bridgeview EMA	Director

Name	Municipality / Organization	Title
Derek Bryan	Broadview / Broadview Fire Department	Fire Chief
Vincent Smith	Brookfield / Village of Brookfield	Director of Public Works
Cari Sheehan	Brookfield / Village of Brookfield	Administrative Assistant
Kate Portillo	Brookfield / Village of Brookfield	Village Planner
Vincent Smith	Brookfield / Village of Brookfield	Public Works Director
Andrea Larson	Buffalo Grove / Public Works Department	Civil Engineer
Martin Kreil	Burbank / Burbank Fire Department	Fire Chief
Steven Powers	Burnham / Village of Burnham	Administrative Assistant
Pete Bendinelli	Calumet City / Calumet City Fire Department	Deputy Fire Chief
Jonathan Shaw	Calumet Park / Village of Calumet Park	Grants and Community Development Coordinator
David Olsen	CCEMRS	Regional Coordinator
Wendell Thomas	Chicago Heights / Chicago Heights Fire Department	Assistant Fire Chief / EMA Coordinator
Andrew Smith	Chicago Heights / City of Chicago Heights	City Engineer
Karen Zerante	Chicago Heights / City of Chicago Heights	Chief of Staff
Kevin Schoenhofen	Chicago Ridge / Chicago Ridge EM	Commander / Director
TJ Santoro	Cicero / Cicero Fire Department	Assistant Chief
Matt Doughtie	City of Chicago / Chicago OEMC	Manager of EM Services
Afif Marouf	City of Chicago / Chicago OEMC	Senior Emergency Management Coordinator
Kyra Woods	City of Chicago / Dept. of Environment	Project Manager
Anne Wright	City of Chicago / MWRD	Public Affairs Specialist
Kim Nowicki	Cook County EMRS	Regional Planner
Griffin Byers	Cook County EMRS	Chief
John Daniel	Cook County EMRS	Regional Coordinator
Jerry Townsend	Country Club Hills / City of Country Club Hills	Project Manager
Michelle Hullinger	Country Club Hills / Country Club Hills Fire Department	Fire Chief
Gail Paul	Countryside / City of Countryside	City Administrator
Kevin Wagner	Countryside / City of Countryside	Building Commissioner
Dave Schutter	Countryside / City of Countryside	Assistant City Administrator, Finance Director
Jesus Serna	Countryside / City of Countryside	Public Works Superintendent
Richard Trent	Countryside / City of Countryside	Planning Manager
Paul Klimek	Countryside / Countryside Police Department	Chief of Police
Jim Stern	Countryside / Countryside Police Department	Assistant Chief

Name	Municipality / Organization	Title
John Fitzgerald	Countryside and North Riverside / Novotny Engineering	Municipal Engineer
Kevin McAuliffe	Crestwood / Crestwood Fire Department	Asst. Fire Chief
Patrick Tennant	Des Plaines / Des Plaines EMA	Emergency Management Team Member
Lionel Smith	Dixmoor / Dixmoor Police Department	Chief of Police
Judnita Smith	Dixmoor / Village of Dixmoor	Trustee
Patricia Lazuka	East Hazel Crest / Village of East Hazel Crest	Village Administrator
Amanda Olsen	Elgin / City of Elgin	Engineer I
Ronald Rudd	Elgin / City of Elgin	City Engineer
Michael Oine	Elgin / City of Elgin Fire Department	Division Chief
Logan Gilbertsen	Elgin / HR Green	Regional Manager - IL Water Resources
Clint Cunz	Elk Grove Village / Elk Grove Village Fire Department	Battalion Chief
Kim Parrilli	Elmwood Park / Village of Elmwood	Assistant Village Manager
Edgar Cano	Evanston / City of Evanston	Public Works Director
Kimberly Krull	Evanston / City of Evanston Fire Department	Division Chief of Emergency Management / Logistics / PIO
Bob Murphy III	Evergreen Park / Evergreen Park Fire Department	Division Chief
Corey Hojek	Evergreen Park / Evergreen Park Fire Department	Assistant Chief
Ronald Kleinhaus	Evergreen Park / Village of Evergreen Park	Fire Chief
Tim Filkins	Flossmoor / Flossmoor Police Department	Police Commander
John Brunke	Flossmoor / Village of Flossmoor	Public Works Director
Matt Humes	Flossmoor/Tinley Park / MGP	GIS Analyst
Mark Maylath	Forest Park / Forest Park Fire Dept.	Deputy Fire Chief
Dora Murphy	Forest Park / Police Department	Assistant to the Chief of Police
Lindsey Hankus	Forest Park/ Forest Park Fire Department	Fire Lieutenant
Bianel Zarate	Forest View / Forest View Police Department	Chief
Ben Smith	Frankfort / Robinson Engineering	Senior Project Manager
Mark Steward	Franklin Park / Village of Franklin Park	Fire Chief
Sammy Hanzel	Glencoe / Village of Glencoe	Communications Manager
Benjamin Wiberg	Glencoe / Village of Glencoe	Assistant Village Manager
Monica Sarna	Glencoe / Village of Glencoe	Public Works Director
Mike Rutkowski	Glenview / Glenview Fire Department	Deputy Chief

Name	Municipality / Organization	Title
Jeff Brady	Glenview / Village of Glenview	Director of Community Development
Derek Peddycord	Glenwood / Village of Glenwood	Chief of Police
Dennis McEnerney	Golf / Golf Police Department	Chief of Police
Eric Fors	Hanover Park / Hanover Park Fire Department	Fire Chief/Emergency Management Coordinator
Thomas " TJ" Moore	Hanover Park / Village of Hanover Park	Director of Public Works
Howard Fisher	Harvey / Harvey Fire Department	Deputy Fire Chief
Rick Seput	Harvey / Harvey Public Works	Superintendent
George Assimakopoulos	Harwood Heights / Village of Harwood Heights	Project Director
Jim Shields	Hazel Crest / Hazel Crest Fire Department	Deputy Fire Chief
Susan Lehr	Hickory Hills / City of Hickory Hills	Director of Public Works
Ken Carling	Hillside / Hillside Fire Department	Fire Chief
Laith Ibrahim	Hillside / Hillside Police Dept.	Deputy Chief of Police
Dan Murphy	Hillside / Hillside Police Dept.	Chief of Police
Paul Smith	Hillside / Village of Hillside	Director of Public Works
Joe Pisano	Hillside / Village of Hillside	Village Administrator
Ken Tucker	Hodgkins / Village of Hodgkins Public Works	Deputy Superintendent of Public Works
Sarah Marcucci	Hoffman Estates / Village of Hanover Park	Emergency Management Coordinator
Mark Trlak	Hometown / City of Hometown	Director of Public Works
Mary Jo Hacker	Hometown / City of Hometown	City Clerk / Collector
Robert Grabowski	Homewood / Homewood Fire Department	Fire Chief
Gavin Morgan	Indian Head Park / Village of Indian Head Park	Village Administrator
Kyle Ingebrigtsen	Inverness / Inverness Police Department	Chief
Sam Trakas	Inverness / Village of Inverness	Village Administrator
Matthew Zarebczan	Justice / Village of Justice	Director of Economic Development
Oscar Padilla	Kenilworth / Kenilworth Police Department	Sergeant
Dan Reda	La Grange / La Grange Fire Department	Fire Chief
Karl Argast	La Grange Highlands / Pleasantview Fire	Fire Chief
Tim Donatucci	La Grange Highlands / Pleasantview Fire	Deputy Fire Chief
Dean Maggos	La Grange Park / La Grange Fire Department	Director of Fire and Emergency Management (Fire Chief)

Name	Municipality / Organization	Title
Chad Kooyenga	Lansing / Lansing Fire Department	Fire Chief
Scott Bailey	Lansing / Lansing Police Department	Deputy Chief
Thomas Ballard	Lemont / Lemont EMA	Director
Barry Liss	Lincolnwood / Village of Lincolnwood	Fire Chief
Samuel Garcia	Lynwood / Village of Lynwood	Director of Public Works
Lily Dillon	Lyons / Village of Lyons	Finance
Gordon Hardin	Matteson / Village of Matteson Public Works	Superintendent of Public Works
Kendall Silas	Maywood / Maywood homeland security and emergency mgmt	Chief
Elijah Willis	Maywood / Maywood Police Department	Chief
LaSondra Banks	Maywood / Village of Maywood	Director of Community Engagement
Greg Buchanan	Maywood / Village of Maywood	Director of Public Works
Walter Duncan	Maywood / Village of Maywood	Building and Code Director
Marvin Savage	Maywood / Village of Maywood	IT Director
Frank Torres	Maywood / Village of Maywood	Assistant Village Manager
Rachel Huedepohl	McCook / Police Department	Police Lieutenant
George Stevenson	Melrose Park / Melrose Park Departments of Homeland Security ~ Public Safety	Staff Major
Phil Schwartz	Melrose Park / Melrose Park Departments of Homeland Security ~ Public Safety	Chief
Bill Kovats	Merrionette Park / Merrionette Park Fire Dept.	Fire Chief
David Krell	Midlothian / Midlothian EMA	Director
Tye Swanson	Midlothian / Midlothian Public Works	Asst. Superintendent
Ralph Ensign	Morton Grove / Morton Grove Fire Department	Fire Chief
Mitchell Winkelmann	Mount Prospect / Mount Prospect Fire Department	Emergency Management Assistant
Charles Lindelof	Mount Prospect / Village of Mount Prospect	Project Engineer
Matthew Lawrie	Mount Prospect / Village of Mount Prospect	Village Engineer
Martin Feld	Niles / Niles Fire Department	Fire Chief
Robert Greiner	Niles / Niles Fire Department	Deputy Fire Chief
Martin Feld	Niles / Niles Fire Department	Battalion Chief
Joe Spain	Norridge / Village of Norridge Public Works	Superintendent of Public Works
Bob McDermott	North Riverside / North Riverside Fire Department	Fire Chief

Name	Municipality / Organization	Title
Vince Ranieri	North Riverside / Village of North Riverside	Director of Public Works
Kelly Hamill	Northbrook / Village of Northbrook	Director of Public Works
Matt Morrison	Northbrook / Village of Northbrook	Deputy Public Works Director
David Schweihs	Northbrook / Village of Northbrook Fire Department	Fire Chief
Thomas Burke	Northfield / Northfield Fire-Rescue Department	Asst. Fire Chief
Anthony Faciano	Northlake / City of Northlake	Superintendent of Public works
Jeffrey Sherwin	Northlake / City of Northlake	Mayor
Ken Beres	Northlake / Northlake PD	Chief of Police
Joe Pilch	Oak Forest / Oak Forest EMA	Director
Katie Meck	Oak Lawn / Village of Oak Lawn	Assistant to the Public Works Director
Coleen Barkmeier	Oak Lawn / Village of Oak Lawn	Grants Administrator
Erin Duffy	Oak Park / Village of Oak Park	Deputy Public Works Director
JT Terry	Oak Park / Village of Oak Park	Deputy Fire Chief of EMS Operations
Lee Christenson	Oak Park / Village of Oak Park	Emergency Preparedness and Response Coordinator
Rob Sproule	Oak Park / Village of Oak Park	Public Works Director
Anna Stawski	Olympia Fields / Baxter & Woodman, Inc	Senior Infrastructure Engineer
Alex Strack	Olympia Fields / Baxter & Woodman, Inc.	Project Engineer / Water resources engineer
Jesus Vargas	Olympia Fields / Olympia Fields Park District	Executive Director
Art Jones	Olympia Fields / Public Works	Acting Director
Reginald Ford	Olympia Fields / Village of Olympia Fields	Code Enforcement Officer
Kelvin Oliver	Olympia Fields / Village of Olympia Fields	Village Trustee / Public Safety
Drella Savage	Olympia Fields / Village of Olympia Fields	Village Administrator / Chief of Staff
Jennifer Beasley	Olympia Fields / Village of Olympia Fields	Trustee
Jessica Washington	Olympia Fields / Village of Olympia Fields	Deputy Village Clerk / Executive Assistant
John McDonnell	Olympia Fields / Village of Olympia Fields	Building Commissioner
Kenneth Smith	Olympia Fields / Village of Olympia Fields	Trustee
Michael Hoffman	Olympia Fields / Village of Olympia Fields	Village Planner

Name	Municipality / Organization	Title
Sandra Finley	Olympia Fields / Village of Olympia Fields	Trustee
Brian Fei	Orland Park / Village of Orland Park	Assistant Public Works Director
Joel Van Essen	Orland Park / Village of Orland Park Public Works	Public Works Director
Sarah McKillop	Palatine / Village of Palatine	EMA Coordinator
Adam Jasinski	Palos Heights / City of Palos Heights	Director of Public Works
Nicholas Oeffling	Palos Hills / City of Palos Hills	Commissioner of Public Works
Jeff Cucio	Palos Hills / Palos Hills Police Department	Chief of Police
Fernando Flores	Palos Park / Palos Park Police Department	Emergency Management Coordinator
Roderick Ysaguirre	Park Forest / Village of Park Forest	Director of Public Works
Paul Lisowski	Park Ridge / Park Ridge Fire Department	Executive Officer
Paul Lisowski	Park Ridge Fire Department	Executive Officer
Antonio Cooper	Phoenix / Village of Phoenix	Village Administrator
Kristopher Marroquin	Posen / Village of Posen	Public Works Superintendent
Kevin Szewcyk	Posen / Village of Posen Fire Department	Fire Chief
Daniel Peterson	Prospect Heights / City of Prospect Heights	Director of Building and Development
Mark Roscoe	Prospect Heights / City of Prospect Heights	Director of Public Works
Michael Wegrzyn	Richton Park / Village of Richton Park	Director of Public Works
Dave Bochenek	River Forest / River Forest Fire Department	Deputy Chief
Thomas Gaetner	River Forest / River Forest Fire Department	Fire Chief
Dave Bochenek	River Forest / River Forest Fire Department	Deputy Fire Chief
Tom Gaertner	River Forest / River Forest Fire Department	Fire Chief
Sean Flynn	River Grove / River Grove Fire Department	Fire Chief
John Brennan	Riverdale / Riverdale Fire Department	Deputy Fire Chief
Ethan Sowl	Riverside / Village of Riverside	Special Assistant to Administration and Finance
Jessica Frances	Riverside / Village of Riverside	Village Manager
Larry Hall	Robbins /Robbins Police Department	Deputy Chief of Police
Corey Baker	Robbins / Robbins Building Department	Code Enforcement Officer
Chris Bollinger	Robbins / Robbins Fire Department	Deputy Fire Chief

Name	Municipality / Organization	Title
Nic Malley Sr.	Robbins / Robbins Fire Department	Fire Chief
Emani Hollingsworth	Robbins / Village of Robbins	Water Superintendent
Gerald Stewart	Robbins / Village of Robbins	Building Department Director
Telicia Shelton	Robbins / Village of Robbins	Human Resources Director
Ryan Rivard	Rolling Meadows / City of Rolling Meadows	Utilities Supervisor
Jonathan Mishory	Rolling Meadows / City of Rolling Meadows	Management Analyst
Benjamin Dwyer	Rolling Meadows / Rolling Meadows Fire Dept. / EMA	Battalion Chief / Emergency Management Coordinator
Joe Balogh	Rosemont / Rosemont Public Safety Department	Sergeant
Stephen Barrett	Sauk Village / Sauk Village Fire Department	Fire Chief
Renee Lewis	Sauk Village / Village of Sauk Village	Director of Finance
Tracy Raimondo	Schaumburg / Village of Schaumburg	Emergency Manager
Jeffrey Leiser	Schiller Park / Schiller Park Fire Department	Lieutenant
Paul Ryan	Skokie / Engineering Dept.	Civil Engineer
Jeff Hoeflich	Skokie / Skokie Fire Department	Fire Chief
Rolando Ithier	Skokie / Skokie Fire Department	Management Analyst
Rachel Blut	Skokie / Skokie Health and Human Services	Emergency Preparedness Coordinator / Public Health Nurse
Angelique Schnur	Skokie / Village of Skokie	Building and Inspection Services Manager
Robert Palmer	South Barrington / Village of South Barrington	Administrator
Daniel Walenda	South Barrington / Village of South Barrington	Operations Associate / Evidence Custodian
Clint Wagner	South Chicago Heights / South Chicago Heights Police Dept.	Police Chief
Brian Kolosh	South Holland / Village of South Holland Fire Department	Fire Chief
Brian Kolosh	South Holland / Village of South Holland Fire Department	Fire Chief
Jason Stevenson	Steger / Steger Emergency Management	Chief
Jeffrey Boyajian	Stickney / Village of Stickney	Fire Chief
Christopher Pavini	Stone Park / Stone Park Police Department	Chief of Police
Christine Villanueva	Stone Park / Stone Park Police Department	Administrative Assistant
Michael Meyer	Streamwood / Streamwood Fire Department	Fire Chief

Name	Municipality / Organization	Title
Tom Sammons	Streamwood / Streamwood Fire Department	Fire Fighter
Joe Markowski	Streamwood / Streamwood Fire Department	Deputy Fire Chief
Stephanie Cole	Summit / Summit Fire Department	EMS Coordinator / Fire Inspector
Art Schweitzer	Thornton / Village of Thornton	Fire Chief
Lisa Kortum	Tinley Park / Tinley Park Emergency Management /911 Communications	Director EMA / 911
Emma Kraus	Village of Glencoe / Public Safety	Administrative Services Coordinator
Michael Mavrogeorge	Westchester / Westchester Fire Department	Fire Chief
Matthew Supert	Western Springs / Village of Western Springs	Director of Municipal Services
Ileen Bryer	Wheeling / Village of Wheeling	Executive Officer
Scott Salela	Wheeling / Wheeling Fire Department	Fire Chief
Michael Spolar	Willow Springs / Robinson Engineering	Senior Engineer
Melissa Neddermeyer	Willow Springs / Village of Willow Springs	Village President
James Bernahl	Winnetka / Village of Winnetka	Director of Engineering / Village Engineer
Obaid Khalid	Winnetka / Village of Winnetka	Assistant Village Engineer
Stephanie Wells	Winnetka / Winnetka Fire Department	Public Safety Analyst
John Ripka	Winnetka / Winnetka Fire Department	Fire Chief
Ed Urban	Worth / Village of Worth	Superintendent

Community Stakeholder Webinars

Community organizations were invited to participate in the Community Stakeholder Webinar series, which also contributed to the public engagement efforts. This webinar was for key community stakeholders to participate in the planning process of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan.

Organization given an opportunity to advise on the complexities of natural hazards and their impacts in Cook County and to identify possible mitigation projects needed to address these concerns.

- Wednesday, May 22, 2024, | 1 p.m. to 2:30 p.m.
- Friday, May 24, 2024, | 9 a.m. to 10:30 a.m.

74 individuals representing various community organizations attended the two webinars. Efforts were made to ensure organizations representing underserved/underrepresented groups, academia, private sector, and major nonprofits were invited to attend. In all 121 registered for the webinars.

5/22/2024

Name	Municipality / Organization	Title
Mitzi Almaraz	SGA Youth and Family Services	Lead Case Manager
Ariadnie Alvarez	ICNA Relief	
Beata Arceo	Chicago Public Schools, District 299	International Students Services Director
Jose Balboa	Illinois Venezuelan Alliance	President
Joseph Butkovich	Society of St. Vincent de Paul, NE IL COAD	Chair, Vice Chair
Karem Daw Arias	IVA	Secretary
Roger Dart	Illinois Conference, United Church of Christ Disaster Ministry	Conference Disaster Response Coordinator
Leon Denton		Social Services Director
Dale Evans	New Generation Harvest Church	Senior Pastor
Johannes Favi	Illinois Community for Displaced Immigrants	Deputy Director
Annie Franco	Spanish Community Center	Case Manager
Daniel Gomez	Rincon Family Services	Program Manager
Noemy Guzman	Spanish Community Center	Case Manager
Scott Hagedorn	United Church of Christ Disaster Ministry	Volunteer
Erica Jackson	Rush University Medical Center	Community Health Worker
Lori Katich	Cook County Department of Public Health	Assistant Director, Emergency Preparedness and Response Unit
Lydia A Krupinski	The Anti-Cruelty Society	Anti-Cruelty Society
Elizabeth Lockhart	4941 Chicago Ave	Executive Director
Cynthia Love		
Alka Lyall	Broadway UMC	pastor
Connie Marquez	New Life Centers	Director of Warehouse Inventory
Karina Marquez	Xilin Association	CASE MANAGER
Joy McCann	Project Loose Change Nonprofit Organization	president of the board

Name	Municipality / Organization	Title
Nicole Meeuwse Tienou	Catholic Charities of the Archdiocese of Chicago	Director, Community Impact
Isis Millward	CPS	Social Worker
Jane Norton	Rincon Family Services	
Kim Nowicki	Cook County EMRS	Regional Planner
Stella Okere-Amadi	United African Organization (UAO)	Family Support Services Coordinator
Mariana Perdomo	LRII	BILINGUAL CASE MANAGER
Connie Polke	Collaborative Healthcare Urgency Group	CEO
Nellie Quintana	Pilsen Via Crucis: Living Way of the Cross	
Blanca Rivas	Latino Resource Institute of Illinois	case manager
Alisa Rodriguez	THE SALVATION ARMY	Director
Jacqueline Reed	Westside Long Term Recovery Group	Chairman
Loida Rosario	Rincon Family Services ERC	FACILITIES DIRECTOR
Brenda SCC	Spanish Community Center	Case Manager
Dr Nicole Scott	American Association of Single Parents, Inc.	Chief Executive Officer
Michael Specht	Chicago Police Department	Police Officer
Ali Tarokh	Trellus	
Emlyn Thomas	Operation BBQ Relief	Area Coordinator-Illinois
William Townsell	Chicago Police Department	Assistant Director
Andrew Wang	Lawndale Christian Health Center	
Audrey Woodley	Changing Oasis Inc	Executive Director
Kurrin Beamon		

5/24/2024

Name	Municipality / Organization	Title
Delia Barahas		Volunteer
Karen Bowen		
Lori Burns	Chesterfield Community Council	Board Member

Denise Cunill	CCH	Associate Medical Director of Ambulatory Pediatrics
Kenneth Esters	Victory Outreach Southeast Chicago Church	Pastor
Marc Fainman	Northbrook Police	Deputy Chief
Alicia Feistamel	WestCare Foundation	Project Director of Workforce Support
Laura Garcia	Carole Robertson Center for Learning	
Maya Hardy	United Way of Metra Chicago	Regional Director of Development, South-Southwest Suburbs
Ashley Hatcher	City of Chicago-Department of Aviation	Emergency Management Coordinator
Chelsey Jennings	IEMA - OHS	Individual and Community Assistance Manager
Marisol Jimenez	Erie Family Health Centers	Sr. Operations Director Facilities and Emergency Preparedness
Valishia Johnson	R'Lara Property Ventures LLC	President
Gillian Knight	Healthy Communities Foundation - Private Funder	
Deana Liss	Elderwerks	Executive Director
Barbara Maloof	Church of Jesus Christ Latter Day Saints in Hyde Park	Director of Community Outreach
Katherine Martin	Casa Central Social Services	Safety and Risk Management Coordinator
Kim Nowicki	Cook County EMRS	Regional Planner
Julius Ntow	Christ Temple Apostolic Church	Security Director
Elida Ortiz	Cicero Community Collaborative	Director
Carmen Ramirez	Central States Services	CHW
Matthew Raymond	IEMA	Volunteer Services Coordinator
Gustavo Rodriguez Sotero	Instituto Del Progreso Latino	Financial Coach
Princess Shaw	Light UP Lawndale	
Gina Strafford-Ahmed	DuPage County Department of Community Services	Administrator of Intake and Referral
Barb Sullivan Thurlby	Catholic Charities, Diocese of Joliet	Division Director of Community Services
Bryan Thomas	Chicago Department of Aviation	Emergency Management Coordinator
Darnell Thomas	CDA	Manager of Emergency Management Services
Marilu Villa	Casa Central	Director of Operations
Chris White	ASE Chicago	Organizing Director

Regional Hazard Mitigation Planning Workshops

A series of Regional Hazard Mitigation Planning Workshop Meetings were facilitated throughout the County, engaging key stakeholders throughout the North, South, and Central Regions, as well as the City of Chicago. The objective of these workshops was straightforward: educate stakeholders about mitigation and the mitigation process, collect and verify jurisdiction-specific information, and collect contact information for POCs for further outreach and follow-up activities. The following provides information and pictures documenting each of these workshops. In addition to these meetings, it is important to note that another component of the public involvement strategy included Hazard

Mitigation Planning Webinars--an important engagement and educational tool referenced earlier in the plan.

South Region Hazard Mitigation Planning Workshop

April 29, 2024; 9am-12pm

Calumet City Public Safety Training Center
24 State Street
Calumet City, IL



City of Chicago Region Hazard Mitigation Planning Workshop

May 1, 2024; 9am-10:30am

OEMC
1411 W. Madison St. Room 154
Chicago, IL



North Region Hazard Mitigation Planning Workshop

May 2, 2024; 9am-12pm

MABAS 233 West Hintz Road
Wheeling, IL



Central Region Hazard Mitigation Planning Workshop

May 3, 2019; 9am-12pm

Maywood Village Recreation/Temple Building
200 South 5th Avenue
Maywood, IL



Make Up Hazard Mitigation Planning Workshop

May 17, 2024; 9am-12pm

Cook County EMRS Emergency Operations Center
15900 S. Cicero Avenue
Oak Forest, IL



Workshop Participation List

Name	Municipality / Organization	Title
Chuck Geraci	Alsip / Department of Emergency Preparedness	DEP Director
David Roberts	Arlington Heights / Arlington Heights Fire Department	Division Chief
Mike Pagones	Arlington Heights / Public Works and Engineering Department	Village Engineer
John Christian	Barrington / Barrington Fire Department	Fire Chief / Emergency Management Coordinator
Pete Lettiere	Bedford Park / Bedford Park PD	Deputy Police Chief
Tom Hansen	Bedford Park / Bedford Park Pd	Chief of Police
Edwin Stoelinga	Bellwood / Hancock Engineering	Consultant Village Engineer
Tonita LeShore	Bellwood / Village of Bellwood	Director of Human Resources
Aric Swaney	Bellwood / Village of Bellwood	Assistant Director of Economic Development
Michael Sabel	Bellwood / Village of Bellwood	Chief OHS

Name	Municipality / Organization	Title
Timothy Larem	Berkeley / Village of Berkely Public Safety	Public Safety Director
Dan Bresnahan	Berkeley / Village of Berkely Public Safety	Deputy Chief of Police
Scott Waszak	Berwyn / Berwyn Fire Department	Division Chief
Michael Schroeder	Blue Island / City of Blue Island	Supervisor of Public Works
Travis Parry	Blue Island / City of Blue Island	City Engineer
Matthew Martin	Broadview / Broadview Fire Department	Deputy Fire Chief
Spanish Bush	Broadview / Public Works Department	Foreman
Jeff Glen	Broadview / Public Works Department	Foreman
Aaron Hannah	Broadview / Village of Broadview	Building Inspector/Code Enforcement Officer
Tom Hood	Broadview / Village of Broadview	Finance Director
Jim Adams	Brookfield / Brookfield Fire Department	Fire Chief
Kate Portillo	Brookfield / Village of Brookfield	Village Planner
Vincent Smith	Brookfield / Village of Brookfield	Director of Public Works
Jordan Isenberg	Brookfield / Village of Brookfield Building Department	Building Inspector
Andrea Larson	Buffalo Grove / Village of Buffalo Grove Public Works / Engineering	Civil Engineer
Martin Kreil	Burbank / Burbank Fire Department	Fire Chief
Steven Powers	Burnham / Village of Burnham	Administrative Assistant
Glenn Bachert	Calumet City / Calumet City FD	Fire Chief
Kenny Jones	Calumet City / city of Calumet City	Director
Antonio Magana	Calumet City / City of Calumet City	ESDA Official
Dominick Argumedo	Calumet City / Farnsworth Group	Senior Planner

Name	Municipality / Organization	Title
Wendell Thomas	Chicago Heights / Chicago Heights Fire Department	Assistant Fire Chief / EMA Coordinator
Kevin Schoenhofen	Chicago Ridge / Village of Chicago Ridge Emergency Management	Commander / Director
Matt Doughtie	City of Chicago/ OEMC	MEMS
Jason Roberts	City of Chicago / 2FM	Director of Logistics / Supply
Cam Anton	City of Chicago / CDPH	SEMC
Beth Taderse	City of Chicago / CDPH	Projects Admin
Emily Zaran	City of Chicago / CDPH	Director of Planning
Sarah Murray	City of Chicago / CDPH	MEMS
Jannita Cane	City of Chicago / CDPH	Public Health Nurse IV
Ralph Chiczewski	City of Chicago / CDWM	Asst. Commissioner
Jamar Sullivan	City of Chicago / CFD	District Chief
Bethany Hand	City of Chicago / CFD	Asst. Commissioner
Mike Torres	City of Chicago / Chicago Park District	Security / SP Projects
Caleb Rehberg	City of Chicago / Chicago Public Schools	Director of Facility Management OPS
Esther Walker	City of Chicago / CPS	Director
Rob Christlieb	City of Chicago / CPS FAC	ED - FAC OPS
Rich Schleyer	City of Chicago / CPT - Facilities	Director of Environmental Health and Safety
Robert Lopez	City of Chicago / DOA	Dept. Comm.
Ben Stammis	City of Chicago / DOB - Stormwater	Stormwater Consultant
Luis Zepeda	City of Chicago / DSS	1st Deputy Commander
Matt Quinn	City of Chicago / OEM	Man. Dep Comm.

Name	Municipality / Organization	Title
Theresa Daniel	City of Chicago / OEMC	Senior Emergency Management Coordinator
Afif Marouf	City of Chicago / OEMC	SEMC
Cindy Cambray	Cook County BUC	Relationship Manager
Shontell Hemphill	Cook County EMRS	Regional Coordinator
Jerry Townsend	Country Club Hills / Village of Country Club Hills	Project Manager
Paul Klimek	Countryside / City of Countryside Police Department	Chief of Police
Kevin Wagner	Countryside / City of Countryside	Building Commissioner
Jesse Serna	Countryside / City of Countryside	Public Works Director
Kevin McAuliffe	Crestwood / Village of Crestwood	Asst. Chief
Sam Foster	Des Plaines / City of Des Plaines	Deputy Chief
John Thompson	Dixmoor / Village of Dixmoor	Economic Development Director
Donald Rush	Dolton / Village of Dolton	Director of ESDA
Robert Mrjenovich	East Hazel Crest / East Hazel Crest Police Department	Police Sergeant
Patricia Lazuka	East Hazel Crest / Village of East Hazel Crest	Village Administrator
Grant Mills	East Hazel Crest / Village of East Hazel Crest Fire Department	Deputy Fire Chief
Amanda Olsen	Elgin / City of Elgin	Staff Engineer
Chris Kennedy	Elgin / Elgin Fire Department	Captain
Michael Oine	Elgin / Elgin Fire Department	Division Chief
Clint Cunz	Elk Grove Village / Village of Elk Grove	Battalion Chief
Kevin Flaherty	Elmwood Park / Elmwood Park Fire Department	Deputy Fire Chief
Kim Nowicki	EMRS	Senior Regional Planner

Name	Municipality / Organization	Title
Griffin Byers	EMRS	Chief
Shontell Hemphill	EMRS	Regional Coordinator
Kimberly Kull	Evanston / Evanston Fire Department	Division Chief of Emergency Management / Logistics / PIO
Corey Hosek	Evergreen Park / Evergreen Park FD	Assistant Chief
Ronald Kleinhaus	Evergreen Park / Evergreen Park Fire Department	Chief
John Brunke	Flossmoor / Village of Flossmoor	Public Works Director
Chelsea Thomas	Ford Heights / Ford Heights Emergency Shelter	Facility Coordinator
Dora Murphy	Forest Park / Forest Park Police Department	Admin Assistant
Mark Jones	Forest View / Forest View FD	Chief
Bianel Zarate	Forest View / Forest View PD	Chief of Police
Francis Fila	Forest View / Forest View PW	Director of Public Works
Mike Dropka	Forest View / Village of Forest View	Village Administrator
Mark Stewart	Franklin Park / Franklin Park Fire Department	Fire Chief
Mark Weber	Franklin Park / Smith La Salle Inc.	Asst. Village Engineer
Kenneth Paczosa	Glencoe / Glencoe Public Safety	Lieutenant
Taylor Baxter	Glencoe / Village of Glencoe	Development Services Director
James Tigue	Glencoe / Village of Glencoe	Village Engineer
Monica Sarna	Glencoe / Village of Glencoe Public Works	Public Works Director
Mark Ciesla	Glenview / Village of Glenview Police Department	Deputy Chief
Adrianna Webb	Glenview / Village of Glenview	Engineering Division Manager
Mike Rutkowski	Glenview / Village of Glenview	Deputy Fire Chief

Name	Municipality / Organization	Title
Kyle Wilbanks	Glenwood / Glenwood Police Department	Deputy Chief
Kevin Welsh	Glenwood / Village of Glenwood Fire Department	Deputy Fire Chief
Cindy Eriks	Glenwood / Village of Glenwood Fire Department	Fire Secretary
Dennis McEnerney	Golf / Golf Police Department	Police Chief
Carlos Ruiz	Harvey / University Park / Ford Heights - Antero Group	Staff Engineer
Emily Eng	Harvey / University Park / Ford Heights - Antero Group	Staff Engineer
James Shields	Hazel Crest / Village of Hazel Crest Fire Department	Deputy Fire Chief
Susan Lehr	Hickory Hills / City of Hickory Hills	Director of Public Works
Ryan Wyckoff	Hillside / Hillside Fire Department	Fire Captain
Ken Carling	Hillside / Hillside Fire Department	Fire Chief
Dan Murphy	Hillside / Hillside Police Department	Chief of Police
Laith Ibrahim	Hillside / Hillside Police Dept.	Deputy Chief of Police
Paul Smith	Hillside / Village of Hillside	Director of Public Works
Joe Pisano	Hillside / Village of Hillside	Village Administrator
Ken Tucker	Hodgkins / Village of Hodgkins Public Works	Deputy Superintendent of Public Works
Mary Jo Hacker	Hometown / City of Hometown	City Clerk
Mark Trlak	Hometown / City of Hometown	PW Director
Joshua Burman	Homewood / Village of Homewood	Assistant Director
John Schaefer	Homewood / Village of Homewood	Director of Public Works
Gavin Morgan	Indian Head Park / Village of Indian Head Park	Village Administrator
Mike Hish	Inverness / Inverness Police Department	Emergency Management Director

Name	Municipality / Organization	Title
Matthew Zarebczan	Justice / Village of Justice	Director Economic Development
Oscar Padilla	Kenilworth / Kenilworth Police Department	Sergeant
Dan Reda	La Grange / Village of La Grange Fire Department	Fire Chief
Larry Noller	La Grange Park / Village of La Grange Park	Finance Director
Maggie Jarr	La Grange Park / Village of La Grange Park	Deputy Village Manager
John Jandek	La Grange Park / Village of La Grange Park	Public Works Superintendent
Ed Hurst	La Grange Park / Village of La Grange Park	Director of Building & Inspectional Services
Dean Maggos	La Grange Park / Village of La Grange Park Fire Dept. / EMA	Director of Fire and EMA
Tim Contois	La Grange Park / Village of La Grange Park Police Department	Police Chief
Dana Tatsenhorst	Lansing / Lansing	Sergeant
Thomas Ballard	Lemont / Lemont Emergency Management Agency	Director
James Boyer	Lemont / Lemont Emergency Management Agency	Deputy Director
Barry Liss	Lincolnwood / Village of Lincolnwood	Fire Chief
Samuel Garcia	Lynwood / Village of Lynwood	Director of Public Works
Gordon Nord	Lyons / Lyons Fire Department	Fire Chief
Spencer Kimura	MABAS	Supervisor
Kevin Lyne	MABAS	Operations Section Chief
Derrick Champion	Markham / City of Markham	City Administrator
Edgar Deisch	Matteson / Village of Matteson	Assistant Superintendent
William "Bill" Peterhansen	Maywood / Hancock Engineering Co.	Village Engineer
Joseph Ducibella	Maywood / Maywood DHSEM	Deputy Chief

Name	Municipality / Organization	Title
Amy Malina	Maywood / Maywood DHSEM	PIO / Lt.
Kendal Silas	Maywood / Village of Maywood Homeland Security and Emergency Management	Chief
Brendan Meskill	McCook / McCook Fire Department	Deputy Fire Chief
Bill Kovats	Merrionette Park / Merrionette Park Fire Department	Emergency Manager
Tye Swanson	Midlothian / Village of Midlothian	Asst. Superintendent
George Carlson	Morton Grove / Morton Grove Fire Department	Lieutenant / Paramedic
Matt Lawrie	Mount Prospect / Village of Mount Prosect	Village Engineer
Mitch Winkelmann	Mount Prospect / Village of Mount Prosect	Assistant Emergency Manager
Chuck Lindelof	Mount Prospect / Village of Mount Prosect	Project Engineer
Richard Fisher	MWRD	Principal Civil Engineer
Robert Greiner	Niles / Niles Fire Department	Deputy Fire Chief
Mark Janeck	Niles / Village of Niles	Director Public Works
Joe Spain	Norridge / Village of Norridge	Director of Public Works
Peter Hughes	North Riverside / Village of North Riverside	Community Development
Sue Scarpiniti	North Riverside / Village of North Riverside	Village Administrator
Vince Raneri	North Riverside / Village of North Riverside	Public Works Director
David Schweihs	Northbrook / Northbrook Fire Department	Fire Chief
Kelly Hamill	Northbrook / Village of Northbrook Public Works	Director of Public Works
Peter Tennant	Northlake / Christopher B. Burke Engineering, Ltd.	Civil Engineer
Ken Beres	Northlake / Northlake Police Department	Chief of Police

Name	Municipality / Organization	Title
Jeff Sherwin	Northlake / Village of Northlake	Mayor
Joseph Pilch	Oak Forest / City of Oak Forest Emergency Management	Director
Michael McMillin	Oak Lawn / Oak Lawn Fire Department	Interim Fire Chief
Lee Christenson	Oak Park / Village of Oak Park	Emergency Preparedness and Response Coordinator
Rob Sproule	Oak Park / Village of Oak Park	Public Works Director
Erin Duffy	Oak Park / Village of Oak Park	Deputy Director of Public Works
Joseph Terry	Oak Park / Village of Oak Park Fire Department	Deputy Chief
Drella Savage	Olympia Fields / Village of Olympia Fields	Village Administrator / Chief of Staff
Art Jones	Olympia Fields / Village of Olympia Fields	Public Works Director
Jessica Washington	Olympia Fields / Village of Olympia Fields	Exec. Asst. / Deputy Clerk
Jacqueline Tuma	Orland Hills / Village of Orland Hills	Assistant Village Administrator
Joel VanEssen	Orland Park / Public Works	Public Works Director
Sarah McKillop	Palatine / Village of Palatine	EMA Coordinator
Katie Lapid	Palatine / Village of Palatine Public Works Department	Assistant Public Works Director
Adam Jasinski	Palos Heights / Public Works Department	Director of Public Works
Nick Oeffling	Palos Hills / City of Palos Hills	Commissioner of Public Works
Jeffrey Cucio	Palos Hills / Palos Hills Police Department	Chief of Police
Fernando Flores	Palos Park / Palos Park PD	Emergency Management Coordinator
Pat Hisel	Park Forest / Park Forest Fire Department	Shift Commander / Paramedic
Mark Contrano	Park Forest / Park Forest Fire Department	Deputy Chief
Roderick Ysaguirre	Park Forest / Village of Park Forest	Director of Public Works

Name	Municipality / Organization	Title
Jeff Sorensen	Park Ridge / Park Ridge Fire Department	Fire Chief
Paul Lisowski	Park Ridge / Park Ridge Fire Department	FD Exercise Officer
Antonio Cooper	Phoenix / Village of Phoenix	Administrator
Kris Marroquin	Posen / Village of Posen	DPW Superintendant
Frank Podbielniak	Posen / Village of Posen	Mayor
Daniel Peterson	Prospect Heights / City of Prospect Heights Building & Development Director	Director
Mark Roscoe	Prospect Heights / City of Prospect Heights	Director of Public Works
Michael Wegrzyn	Richton Park / Village of Richton Park	Director of Public Works
Thomas Gaertner	River Forest / River Forest Fire Department	Fire Chief
David Bochenek	River Forest / River Forest Fire Department	Deputy Fire Chief
John Brennan	Riverdale / Riverdale Fire Department	Deputy Fire Chief
Matt Buckley	Riverside / Riverside Public Safety	Director of Public Safety
Emani Hollingsworth	Robbins / Village of Robbins	Water Superintendent
Ryan Rivard	Rolling Meadows / City of Rolling Meadows	Utilities Supervisor
Jonathan Mishory	Rolling Meadows / Public Works Department	Public Works Management Analyst
Joe Balogh	Rosemont / Public Safety Department	Sergeant
Stephen Barrett	Sauk Village / Sauk Village Fire Department	Fire Chief
Tracy Raimondo	Schaumburg / Village of Schaumburg	Emergency Manager
Liz Zimmerman	Skokie / Public Works	Assistant to the Public Works Director
Nicholas Eschner	Skokie / Skokie Fire Department	Deputy Fire Chief

Name	Municipality / Organization	Title
Rolando Ithier	Skokie / Skokie Fire Department	Management Analyst
John Oakley	Skokie / Skokie Police Department	Deputy Chief
Paul Ryan	Skokie / Village of Skokie Engineering	Civil Engineer
Rachel Blut	Skokie / Village of Skokie Health and Human Services	Emergency Preparedness Coordinator / Public Health Nurse
Daniel Walenda	South Barrington / Village of South Barrington	Operations Associate / Evidence Custodian
Clinton Wagner	South Chicago Heights / Village of South Chicago Heights PD	Chief of Police
Brian Kolosh	South Holland / Village of South Holland Fire Department	Fire Chief
Brian Smith	South Holland / Village of South Holland Fire Department	Manager of Building Services
Mike Cramer	South Holland / Village of South Holland Fire Department	Director of Public Works
Jeffrey Boyajian	Stickney / Village of Stickney Fire Department	Fire Chief
Jose Lopez	Stickney / Village of Stickney Public Works	Director of Public Works
Christine Villanueva	Stone Park / Stone Park Police Department	Administrative Assistant
Tom Sammons	Streamwood / Streamwood Fire Department	Firefighter / Paramedic
Art Schweitzer	Thornton / Thornton Fire Department	Fire Chief
Lisa Kortum	Tinley Park / Tinley Park Emergency Management /911 Communications	Director of EMA
Kelly Mulqueeny	Tinley Park / Village of Tinley Park	Street Superintendent
Dale Mitchel	University Park / University Park Police Department	Chief of Police
Mike Mavrogeorge	Westchester / Westchester Fire Department	Fire Chief
Matt Supert	Western Springs / Village of Western Springs	Director of Municipal Services
Brian Scott	Western Springs / Western Springs FD	Deputy Chief FD

Name	Municipality / Organization	Title
Mike Kelly	Western Springs / Western Springs FD	Fire Chief
Ileen Bryer	Wheeling / Wheeling Fire Department	Executive Officer
Melissa Neddermeyer	Willow Springs / Village of Willow Springs	Mayor
Brian Lambel	Wilmette / Wilmette Fire Department	Fire Chief
Obaid Khalid	Winnetka / Village of Winnetka Engineering Dept.	Assistant Village Engineer
John Ripka	Winnetka / Winnetka Fire Department	Fire Chief
Andy MacArthur	Winnetka / Winnetka Fire Department	Interim Deputy Fire Chief
Stephanie Wells	Winnetka / Winnetka Fire Department	Public Safety Analyst
Ed Urban	Worth / Village of Worth	Superintendent

One on One In-Person / Virtual Meetings

The Planning team met with jurisdictions that could not attend the webinars/workshops or requested additional assistance with either an on-site or a virtual meeting.

Name	Municipality / Organization	Title	Type of Meeting
Jerry Hurckes	Summit / Village of Summit	Village Administrator	On-site
Tony Anderson	Summit / Fire Department	Fire Chief/EMA Director	On-site
Thomas Burke	Northfield / Fire Department	Fire Chief	On-site
Sarah Marcucci	Hanover Park / Village of Hanover Park	Emergency Management Coordinator	Virtual
Sarah Marcucci	Hoffman Estates / Village of Hoffman Estates	Emergency Management Coordinator	Virtual
George Assimakopoulos	Harwood Heights / Village of Harwood Heights	Project Director	On-site
Jason Stevenson	Steger / Village of Steger	EMA Chief	On-site
Jeff Leiser	Schiller Park / Fire Department	Lieutenant	On-site
Mark Kraft	Bridgeview / Village of Bridgeview	Deputy Director of EMA	On-site
John Volletter	Calumet Park / Fire Department	Fire Chief	On-site

Name	Municipality / Organization	Title	Type of Meeting
Timothy Geary	Cicero / Novotny Engineering	Engineer	On-site
Jeff Penzkofer	Cicero / Fire Department	Fire Chief	On-site
T.J. Santoro	Cicero / Fire Department	Asst. Fire Chief	On-site
Tom Tomschin	Cicero / City of Cicero Dept. of Housing	Executive Director	On-site
Derek Dominick	Cicero / City of Cicero Dept. of Public Works	Superintendent	On-site
Sean Flynn	River Grove / River Grove Fire Department	Fire Chief	On-site
Phil Schwartz	Melrose Park / Village of Melrose Park	Chief of Homeland Security	On-site

Watershed Planning Council (WPC) Meetings attended by Kim Nowicki, EMRS Regional Planner):

- Upper Salt Creek and Poplar Creek WPC Meeting
- Lower Des Plaines River WPC Meeting
- Cal-Sag WPC Meeting
- Little Calumet WPC
- North Branch of the Chicago River WPC (handout presentation provided by MWRD)

Appendix C Public Participation Documentation

In accordance with best practices as outlined in CPG 101, this public-private effort engaged the whole community, reaching citizens and key stakeholders across all 135 jurisdictions. Elements of virtual public outreach included the 2024 Cook County Preparedness Survey, webinars, and social media such as Twitter and Nextdoor. The physical component of the outreach efforts focused on maximizing attendance at hazard mitigation meetings.

The remainder of this section provides an overview as well as outreach documentation for:

- 2024 Cook County Community Preparedness Survey,
- Local Government Meetings,
- Hazard Mitigation Plan Public Meetings, and
- Hazard Mitigation Plan Draft Review Meetings

2024 Cook County Community Preparedness Survey

To engage the whole community in the 2024 MJ-HMP Update process, EMRS and ISC developed the 2024 Cook County Community Preparedness Survey to engage the general public by providing information on the update process while collecting and validating information from citizens throughout all 135 jurisdictions. The 31-question web-based tool was used to gauge household preparedness for natural hazards and the public's knowledge of tools and techniques that assist in reducing risk and loss from natural hazards. The results of the survey were used by the Steering Committee to guide them in developing objectives and mitigation strategies.

2024 Cook County Community Preparedness Survey Outreach Efforts

As previously noted, the survey was disseminated across multiple platforms, including social media and press releases by EMRS as well as the participating municipalities. The following provides chronological documentation of survey outreach efforts with a brief summary of the activities categorized as Press Releases or Multimedia Outreach. It is important to note that the survey advertisements included references to the public meeting series.

Community Preparedness Survey and Public Meeting Outreach

Social media platforms such as Twitter, Facebook and Nextdoor were leveraged to increase survey participation. In addition, flyers for the Public Meeting Series provided access to the survey via Quick Response (QR) Codes - a machine-readable barcode containing data that links a user to a website. The following provides documentation of multimedia-based survey and public meeting outreach efforts.

Press Releases

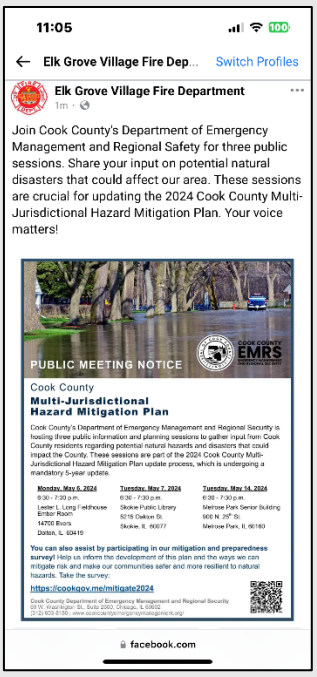
Date	Jurisdiction
05/16/24	Park Ridge
Link / Image	



Social Media / Community Calendar Links / Website

Date	Jurisdiction
05/02/24	Elk Grove Village
Link / Image	

Social Media Post

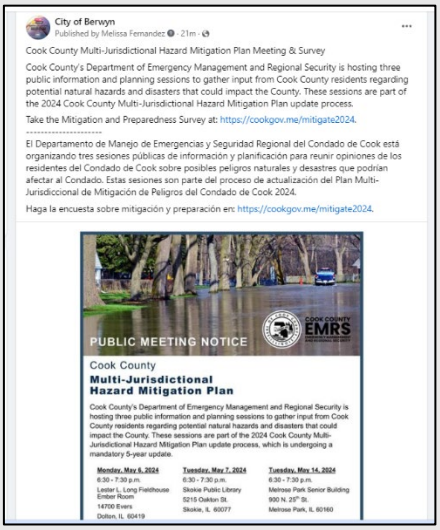


Date	Jurisdiction
05/02/24	City of Berwyn

Link / Image

Public Meeting Posted in Community Calendar - Link

Social Media Post – FB, Instagram, Twitter

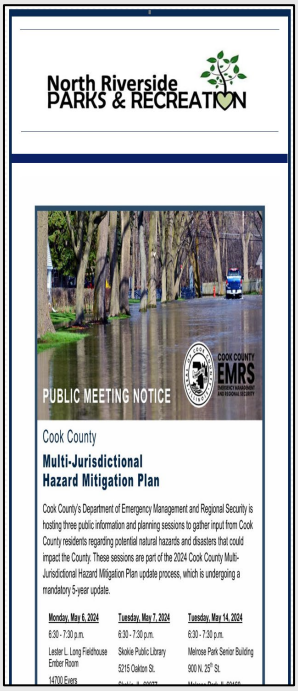


Date	Jurisdiction
05/02/24	North Riverside

Link / Image

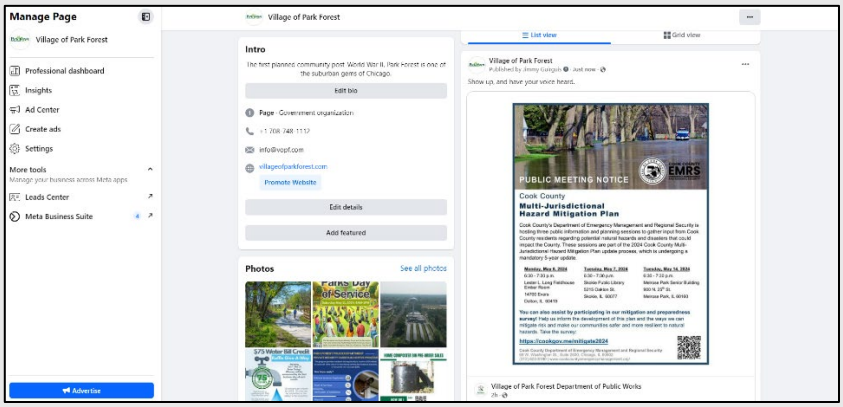
Social Media Post – FB / North Riverside Parks & Recreation (Constant Contact)

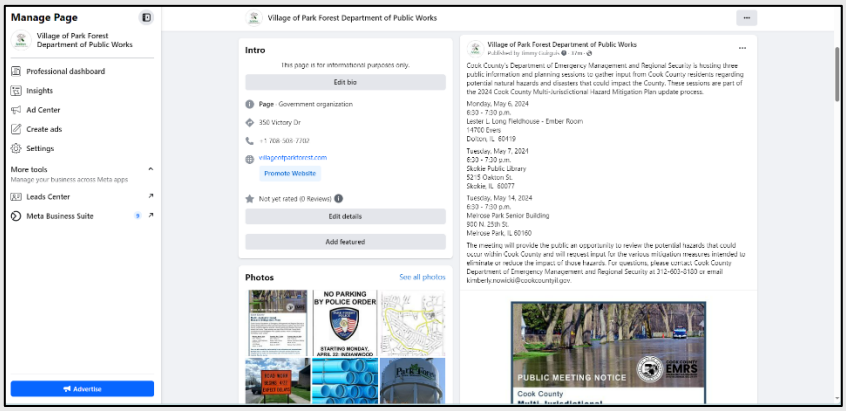




Date	Jurisdiction
05/02/24	Village of Park Forest
Link / Image	

Social Media Post – FB





Date	Jurisdiction
05/03/24	Des Plaines

Link / Image

Public Meeting Outreach FB Post



The full post text is: *The Cook County Department of Emergency Management and Regional Security (EMRS) wants to know how it can better prepare you for disasters. They're holding three public meetings to review potential hazards in our area and gather input on mitigation measures. This meeting will be on Tuesday, May 7, 2024, at the Skokie Public Library from 6:30-7:30 p.m.*

Please contact the @Cook County Department of Emergency Management and Regional Security at 312-603-8180 or email kimberly.nowicki@cookcountyil.gov with any questions.

Date	Jurisdiction
05/07/24	Village of River Forest
Link / Image	

Notice posted on Village Website – Link



Date	Jurisdiction
05/07/24	Village of Stone Park

Link / Image

Public Outreach Social Media – FB

Village of Stone Park
May 7 at 11:36 AM ·

Cook County's Department of Emergency Management and Regional Security is hosting three public information and planning sessions to gather input from Cook County residents regarding potential natural hazards and disasters that could impact the County. These sessions are part of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan update process.

Monday, May 6, 2024
6:30 - 7:30 p.m.
Lester L. Long Fieldhouse - Ember Room
14700 Evers
Dolton, IL 60419

Tuesday, May 7, 2024
6:30 - 7:30 p.m.
Skokie Public Library
5215 Oakton St.
Skokie, IL 60077

Tuesday, May 14, 2024
6:30 - 7:30 p.m.
Melrose Park Senior Building
900 N. 25th St.
Melrose Park, IL 60160

The meeting will provide the public an opportunity to review the potential hazards that could occur within Cook County and will request input for the various mitigation measures intended to eliminate or reduce the impact of those hazards. For questions, please contact Cook County Department of Emergency Management and Regional Security at (312) 603-8180 or email kimberly.nowicki@cookcountyil.gov



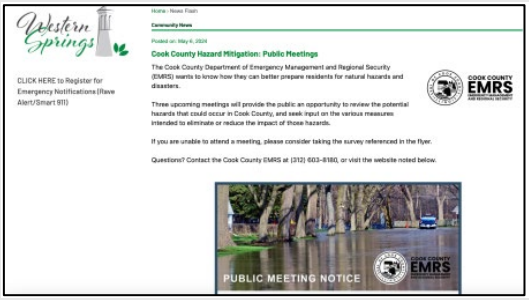
Date	Jurisdiction
05/07/24	Western Springs

Link / Image

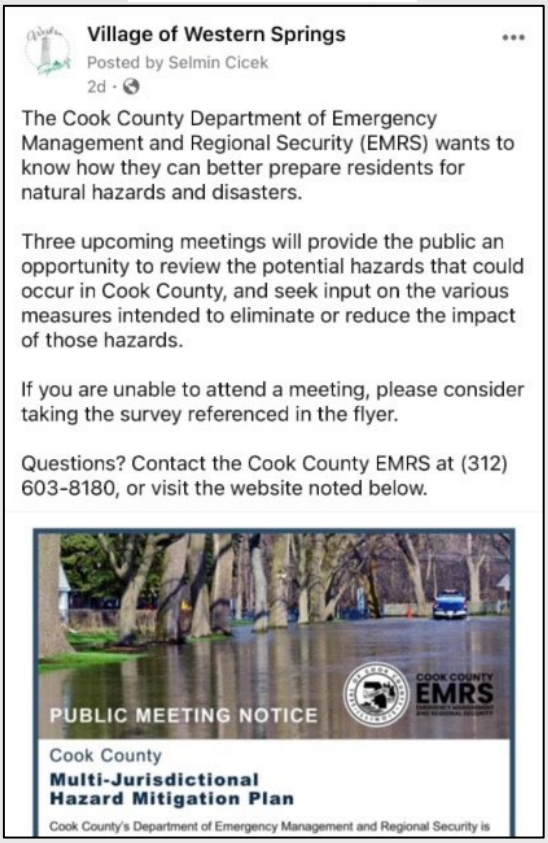
Multiple Outreach Methods: The Village of Western Springs posted/mentioned the Cook County Department of Emergency Management and Regional Security (EMRS) Multi-jurisdictional Hazard Mitigation Plan in the following ways:

Board Meeting Announcement: Village Manager Baer announced the meetings and survey at the May 5, 2024, Board Meeting during her report near the end:
https://vimeo.com/943672086?share=copy

Website News Flash w Flyer: (live until 5/31/24 with screen shot below)
https://wsprings.com/CivicAlerts.aspx?AID=2645



Facebook Post w Flyer:

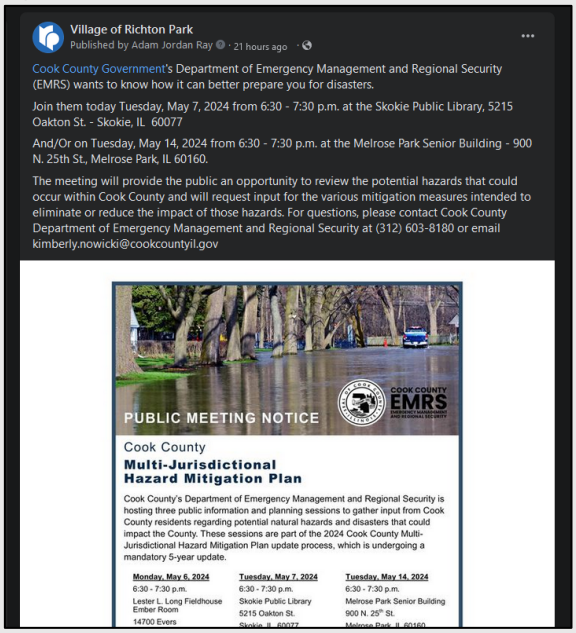


Date	Jurisdiction
05/08/24	Richton Park

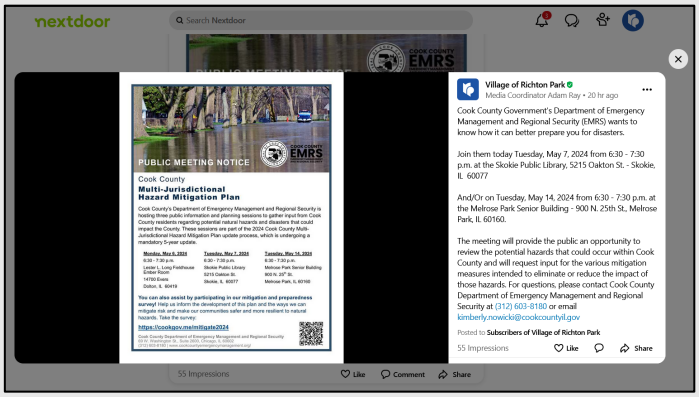
Link / Image

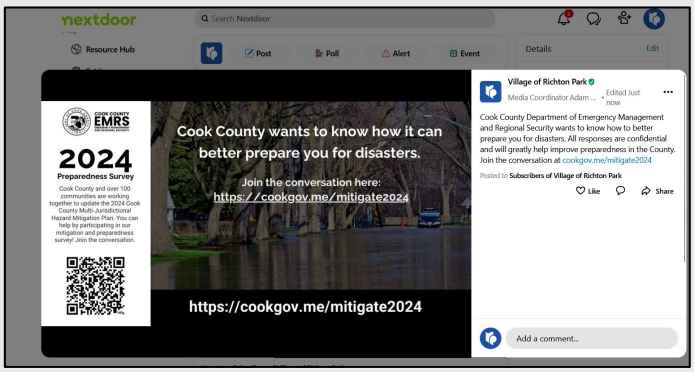
Public Meeting/Survey Outreach – FB





Next Door Outreach

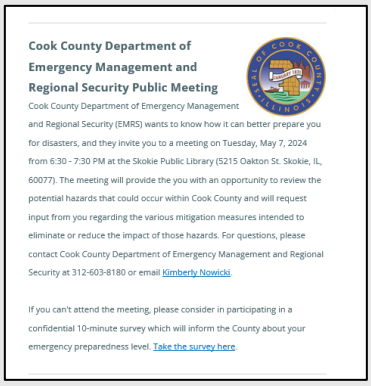




Date	Jurisdiction
05/08/24	Winnetka

Link / Image

Winnetka Newsletter (send date 5/3) / Posted Flyers (5/6/24)



Cook County Department of Emergency Management and Regional Security Public Meeting

Cook County Department of Emergency Management and Regional Security (EMRS) wants to know how it can better prepare you for disasters, and they invite you to a meeting on Tuesday, May 7, 2024 from 6:30 - 7:30 PM at the Skokie Public Library (5215 Oakton St. Skokie, IL, 60077). The meeting will provide the you with an opportunity to review the potential hazards that could occur within Cook County and will request input from you regarding the various mitigation measures intended to eliminate or reduce the impact of those hazards. For questions, please contact Cook County Department of Emergency Management and Regional Security at 312-603-8180 or email Kimberly Nowicki.

If you can't attend the meeting, please consider in participating in a confidential 10-minute survey which will inform the County about your emergency preparedness level. Take the survey here.



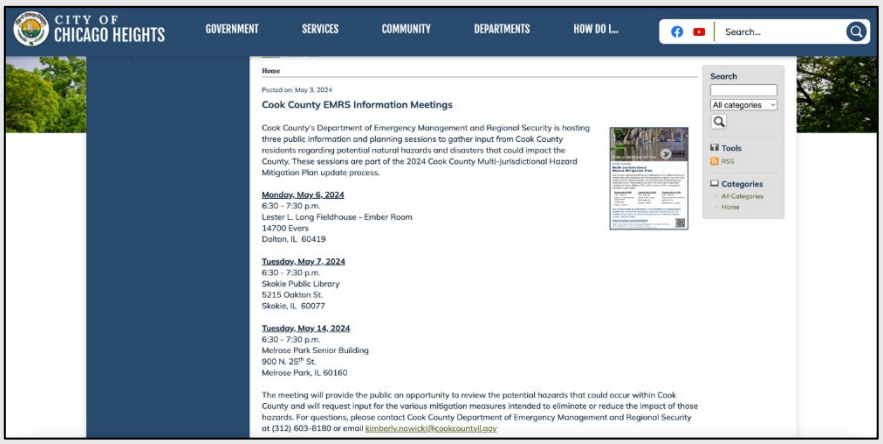
Social Media Post – FB (5/6/2024)

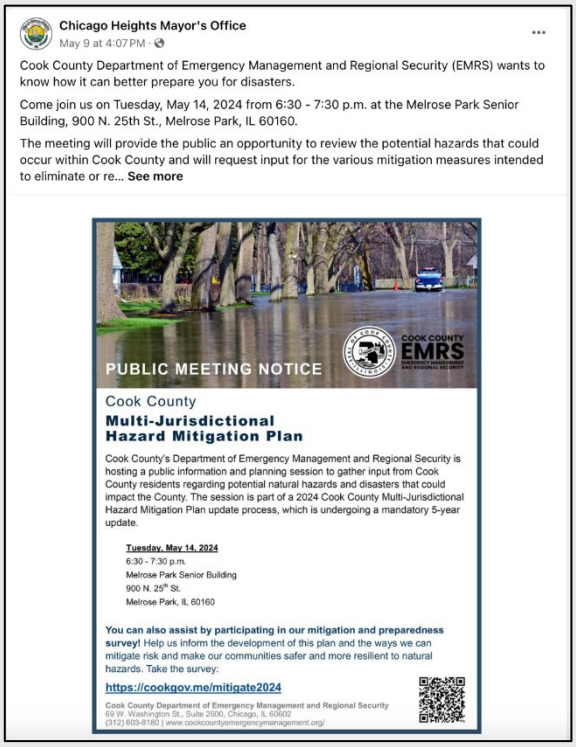


Date	Jurisdiction
05/09/24	Chicago Heights

Link / Image

Public Outreach – Social Media Posts








Chicago Heights Mayor's Office
May 17 at 9:00 AM
Cook County Department of Emergency Management and Regional Security wants to know how to better prepare you for disasters. All responses are confidential and will greatly help improve preparedness in the County. Join the conversation at cookgov.me/mitigate2024
EMRS
2024
Preparedness Survey
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey! Join the conversation.
Cook County wants to know how it can better prepare you for disasters.
Join the conversation here:
https://cookgov.me/mitigate2024
https://cookgov.me/mitigate2024


Chicago Heights Mayor's Office
5 days ago
Cook County Department of Emergency Management and Regional Security wants you to take a disaster preparedness survey. Don't miss out on your opportunity to join the conversation.
https://cookgov.me/mitigate2024
Natural Disaster
EMRS
Cook County
Multi-Jurisdictional
Hazard Mitigation Plan
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey. Join the conversation. Help us inform the development of this plan and the ways we can mitigate risk and make our communities safer and more resilient to natural hazards.
Take the survey:
https://cookgov.me/mitigate2024
Cook County Department of Emergency Management and Regional Security
69 W. Washington St., Suite 2600, Chicago, IL 60602
(312) 603-8180 | www.cookcountyemergencymanagement.org/


Chicago Heights Mayor's Office
2 days ago
What have you done to prepare for the next disaster? How can Cook County help? Let them know by completing this 10-minute survey. https://cookgov.me/mitigate2024
EMRS
2024
Preparedness Survey
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey! Join the conversation.
Cook County wants to know how it can better prepare you for disasters.
Join the conversation here:
https://cookgov.me/mitigate2024
https://cookgov.me/mitigate2024

Date	Jurisdiction
05/06/24	MWRD
Link / Image	

Public Outreach Social Media Post – Twitter



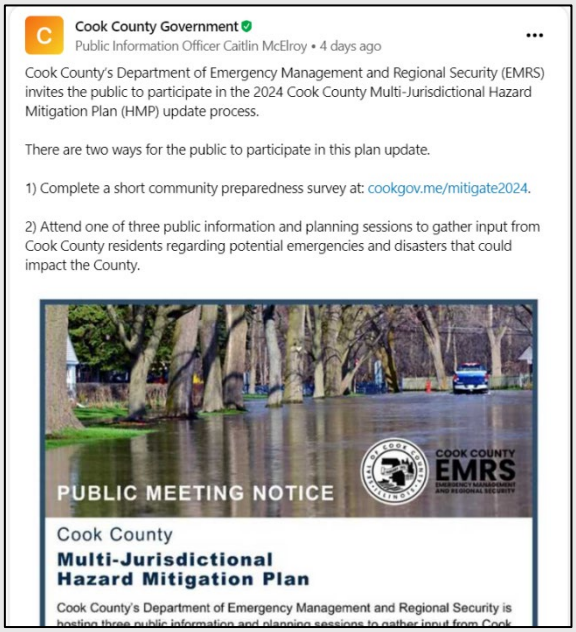
Date	Jurisdiction
05/06/24	Palatine
Link / Image	

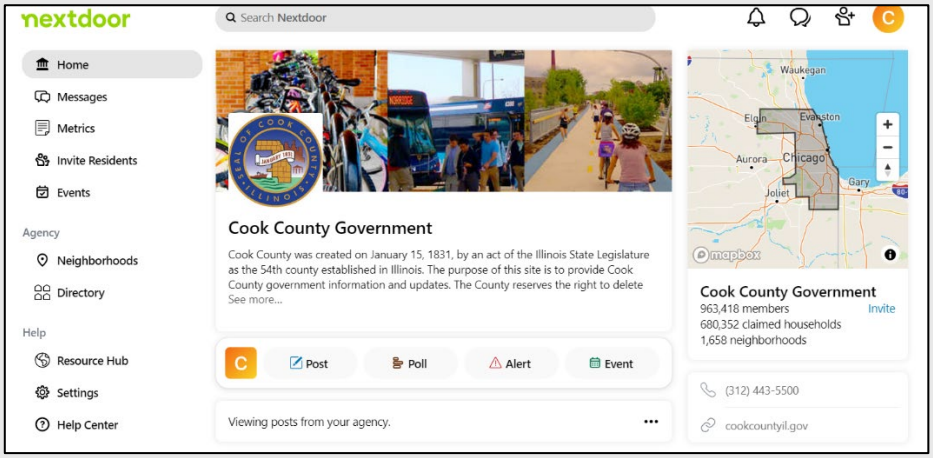
Public Outreach Social Media Post- Twitter



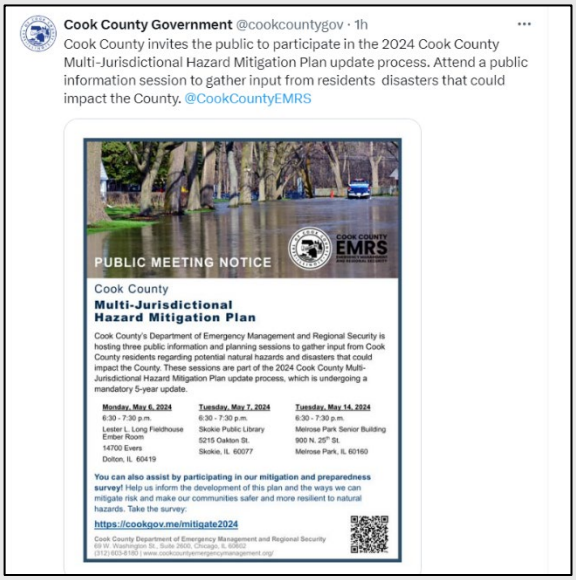
Date	Jurisdiction
05/01/24	Cook County
Link / Image	

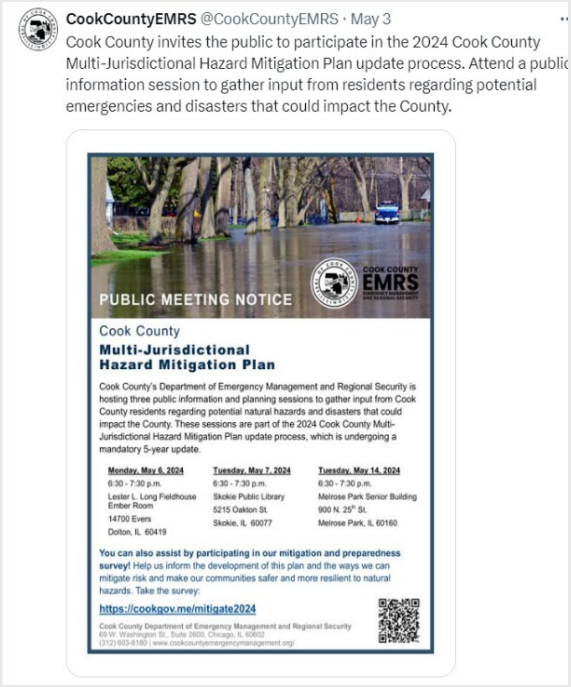
Public Outreach Social Media Post- Nextdoor





Public Outreach Social Media Post – Twitter





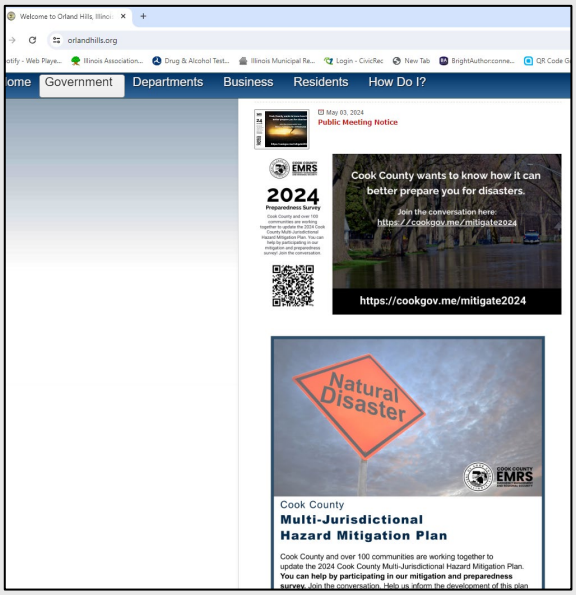
Public Outreach Social Media Post – FB / Public Outreach Social Media Post – LinkedIn

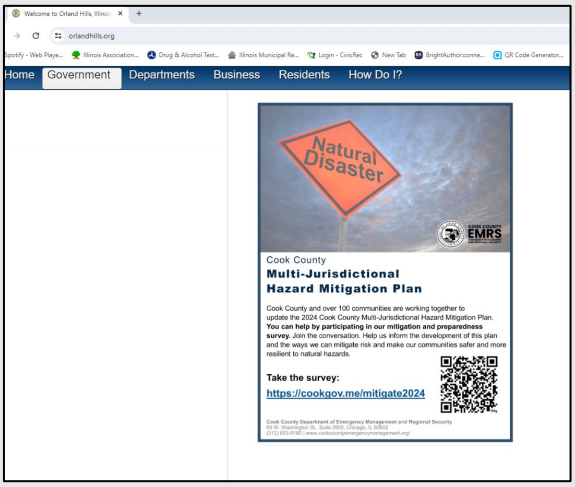


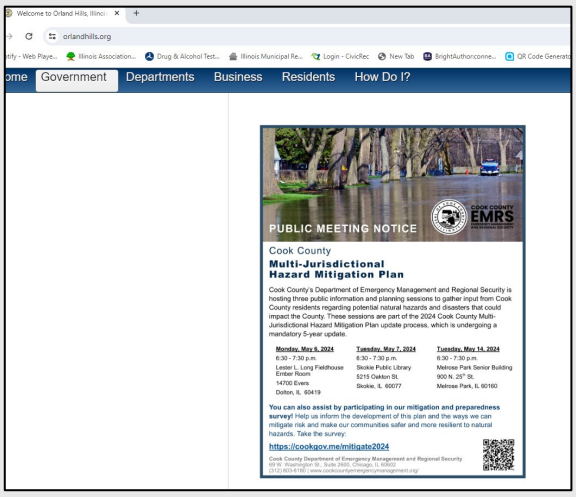


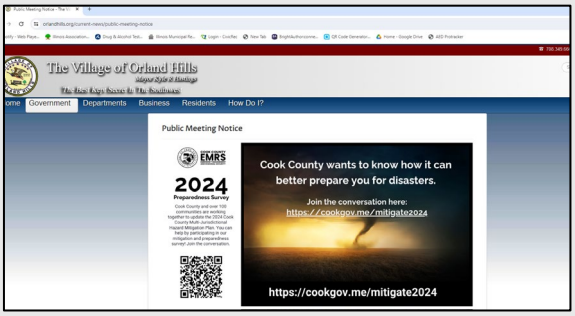
Date	Jurisdiction
05/06/24	Orland Hills
Link / Image	

Website:

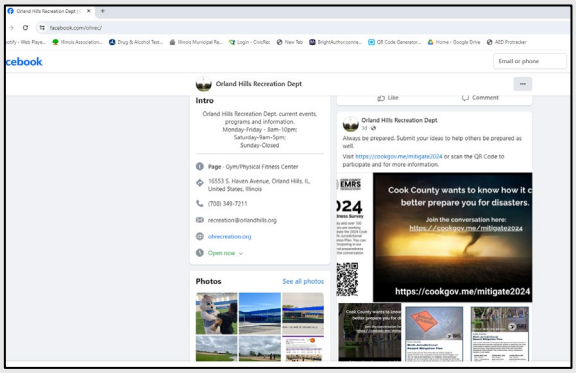






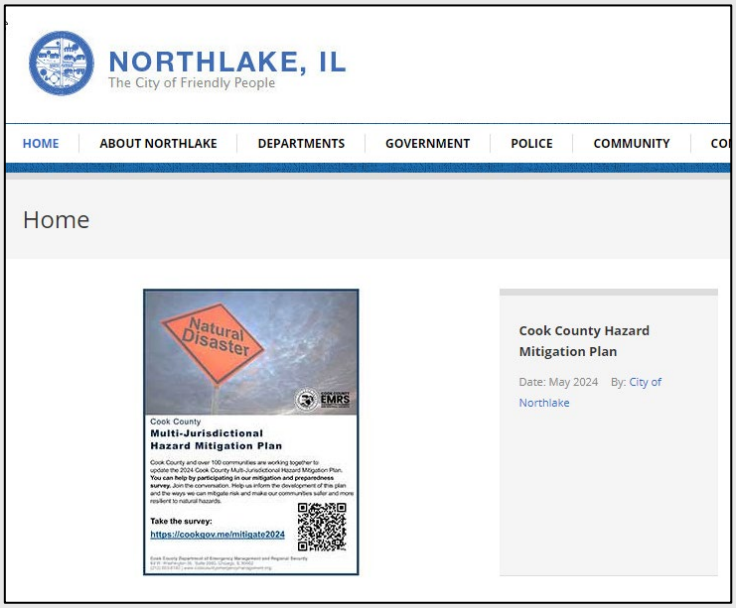


Facebook Posting



Date	Jurisdiction
05/06/24	Northlake
Link / Image	

Public Outreach Website Post



Date	Jurisdiction
05/10/24	Chicago Ridge

Link / Image

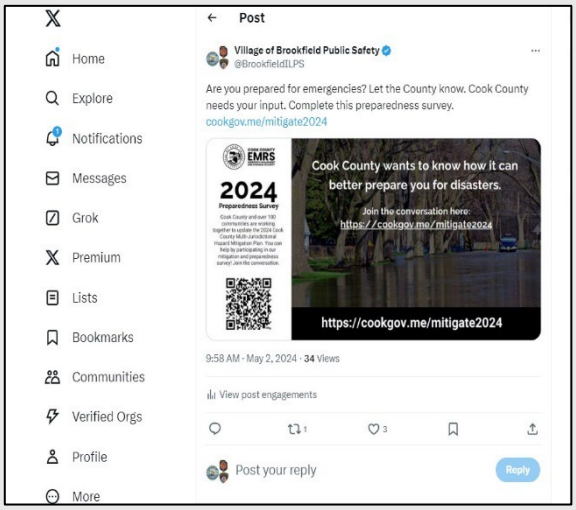
Public Outreach Social Media Post – FB

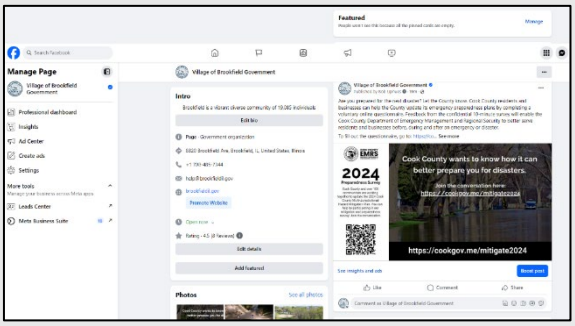


Date	Jurisdiction
(Multiple)	Brookfield

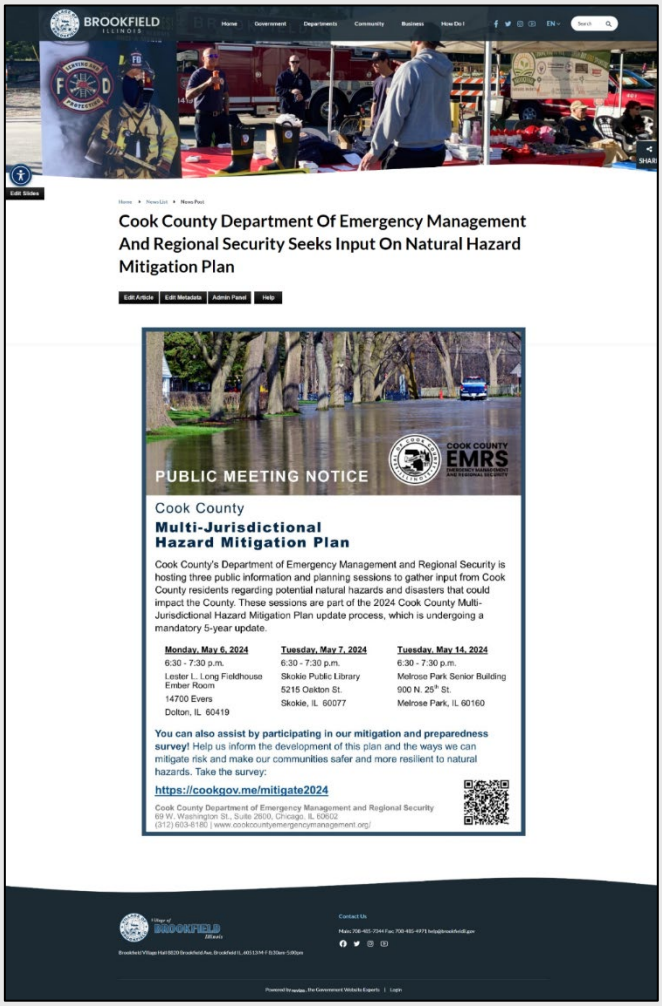
Link / Image

Social Media Posts – May 2 (Twitter / Facebook)

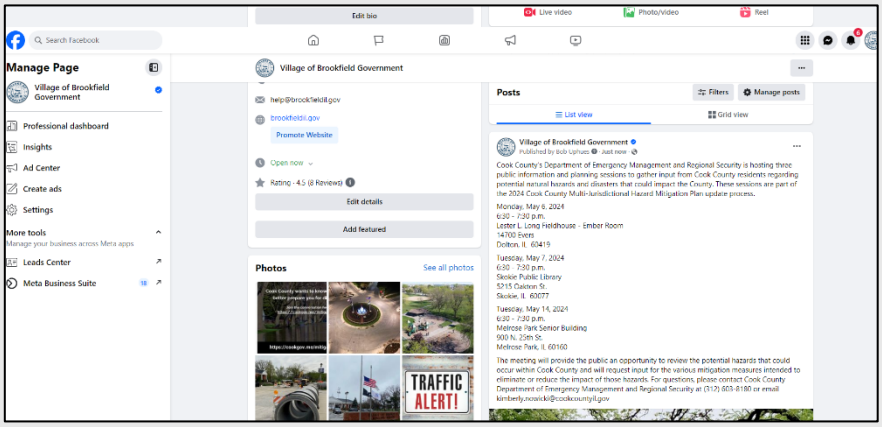




News Article on the Village of Brookfield website, May 2:



Facebook post, May 3

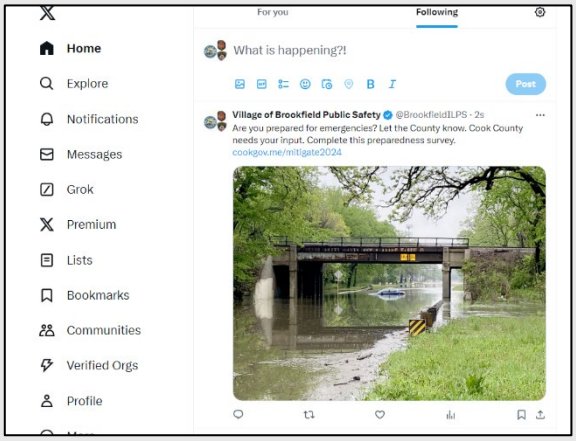


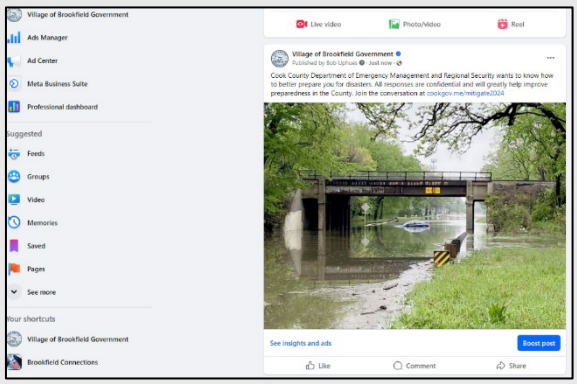
EMAIL MESSAGE: The following is the content of an email blast on May 4 sent to more than 3,000 recipients.

Cook County Department of Emergency Management and Regional Security Seeks Input

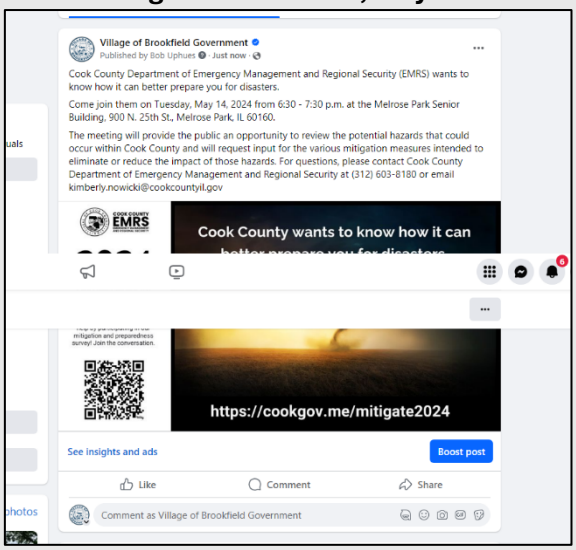


Social Media Posts – May 7 (Twitter / Facebook)

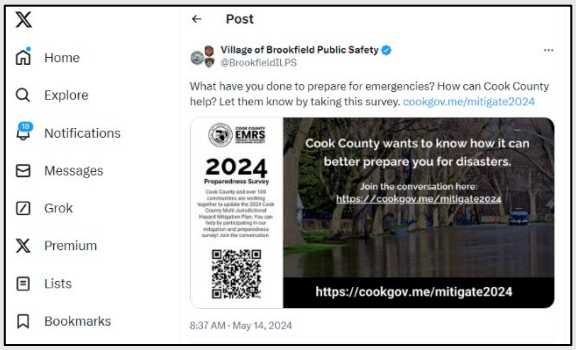


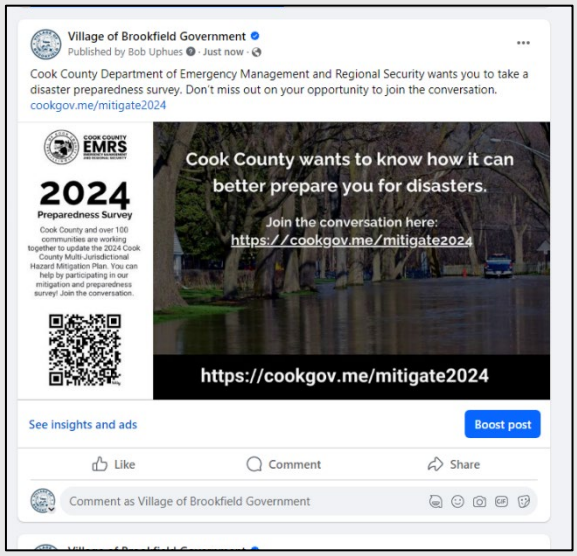


Targeted Facebook, May 10

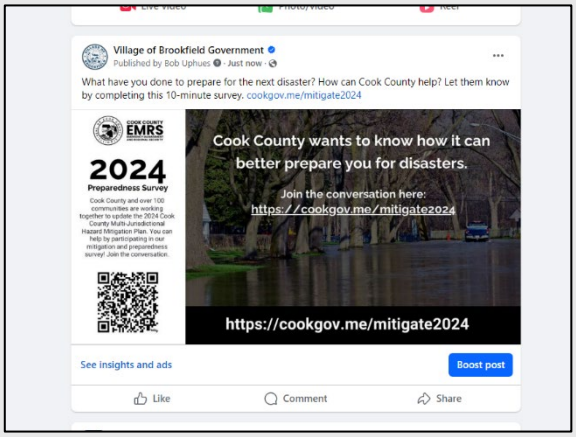


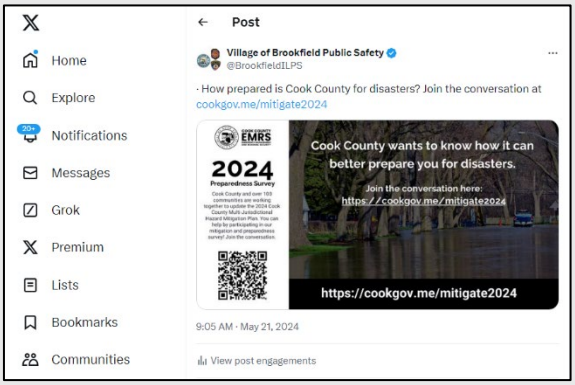
Social Media Posts – May 14 (Twitter / Facebook)





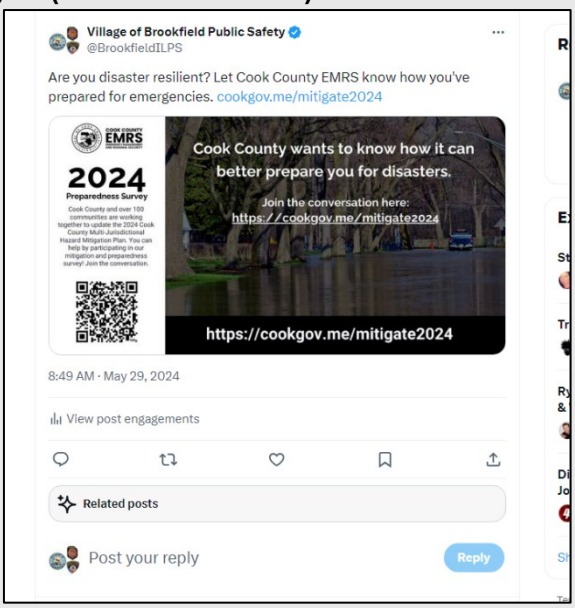
Social Media Posts – May 21 (Twitter / Facebook)





Social Media Posts – May 29 (Twitter / Facebook)

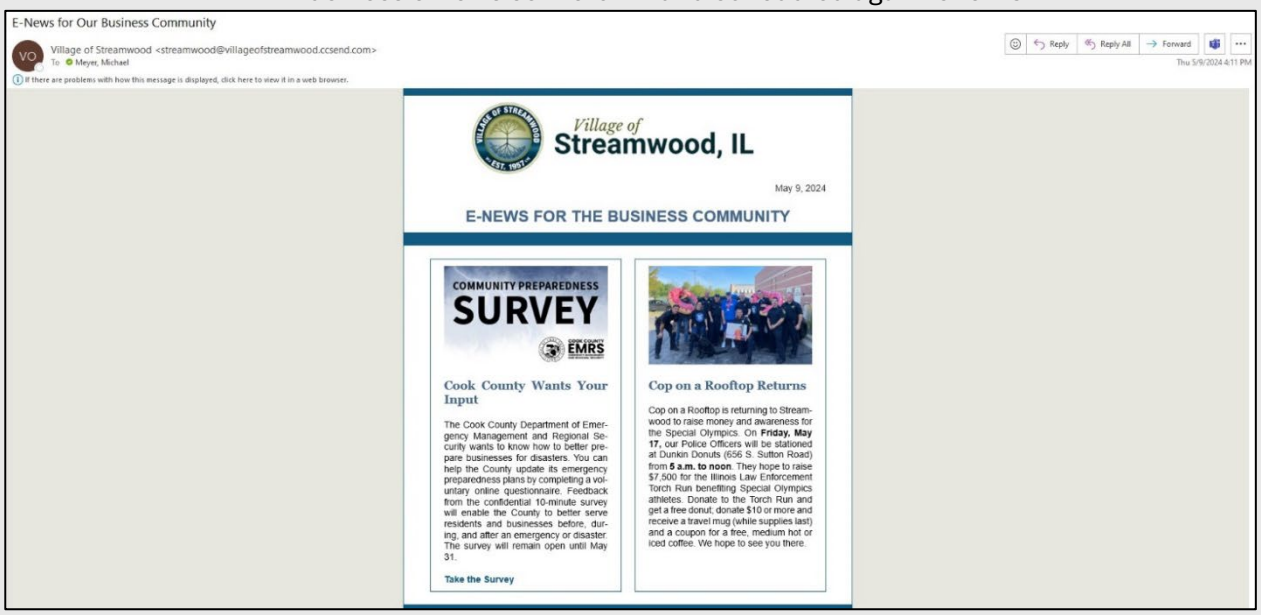




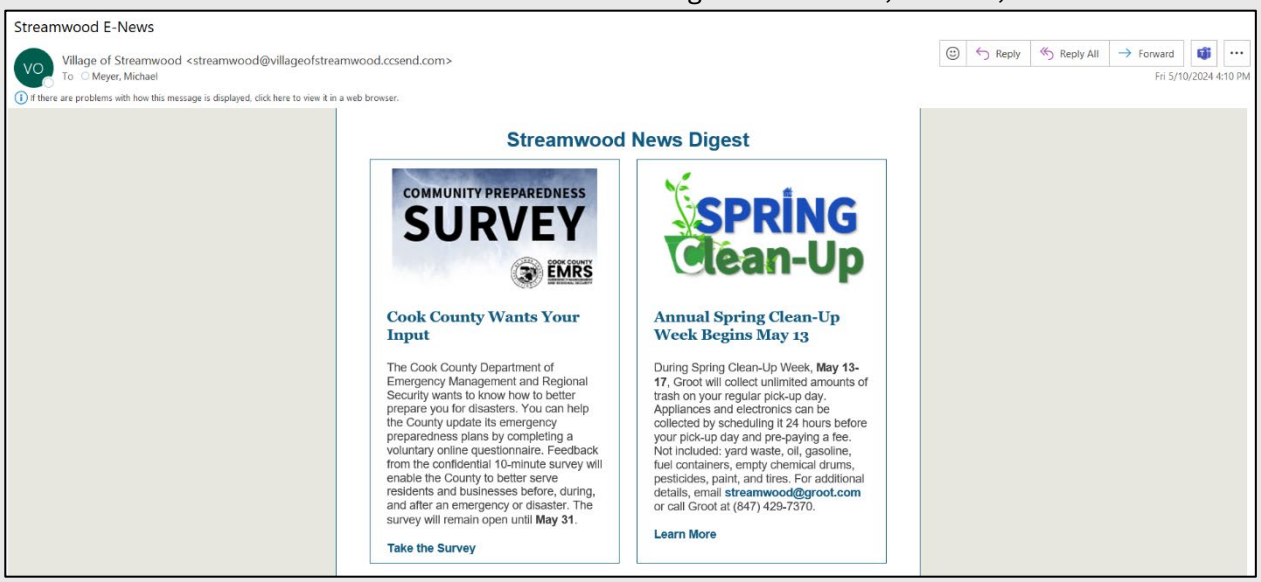
Date	Jurisdiction
05/13/24	Streamwood

Link / Image

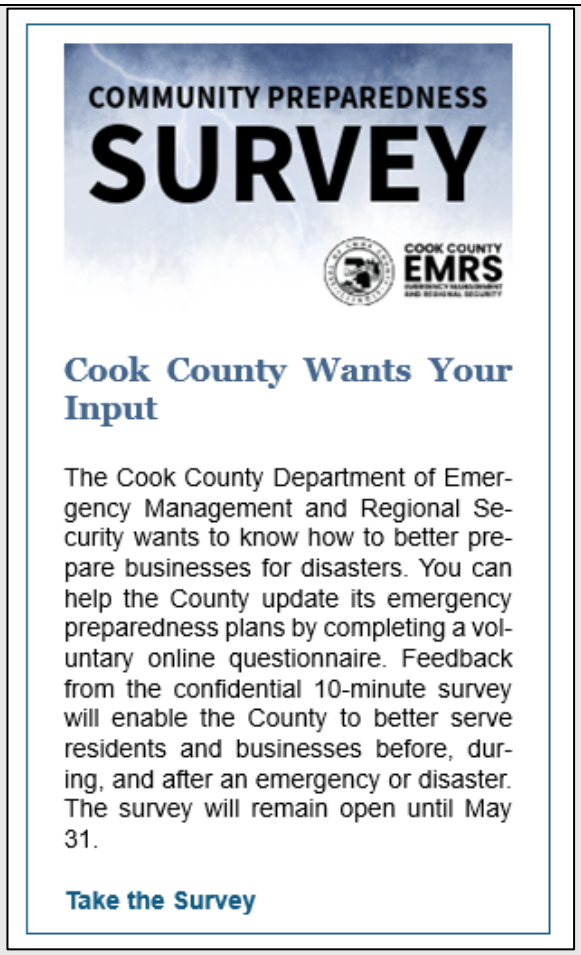
Business e-news sent 5/9/24 and scheduled again for 5/23/24



Resident e-news sent 5/10/24 and scheduled again for 5/17/24, 5/23/24, and 5/31/24



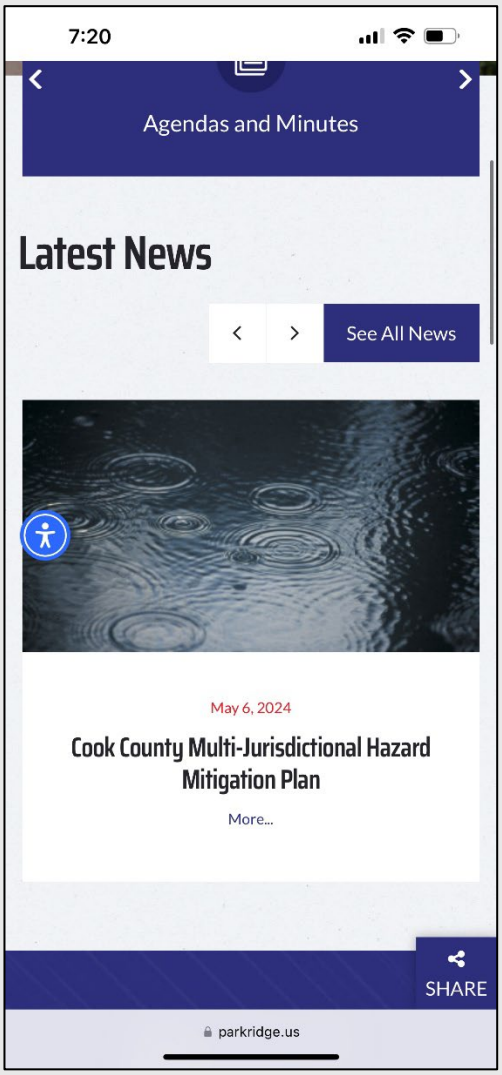
Zoomed in:


COMMUNITY PREPAREDNESS
SURVEY
COOK COUNTY
EMRS
Cook County Wants Your Input
The Cook County Department of Emergency Management and Regional Security wants to know how to better prepare businesses for disasters. You can help the County update its emergency preparedness plans by completing a voluntary online questionnaire. Feedback from the confidential 10-minute survey will enable the County to better serve residents and businesses before, during, and after an emergency or disaster. The survey will remain open until May 31.
Take the Survey

Date	Jurisdiction
05/16/24	Park Ridge

Link / Image

Public Outreach Website



Public Outreach – Social Media


7:15
Your story 10m
PUBLIC MEETING NOTICE
COOK COUNTY EMRS
Cook County
Multi-Jurisdictional Hazard Mitigation Plan
Cook County's Department of Emergency Management and Regional Security is hosting three public information and planning sessions to gather input from Cook County residents regarding potential natural hazards and disasters that could impact the County. These sessions are part of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan update process, which is undergoing a mandatory 5-year update.
Monday, May 6, 2024
6:30 - 7:30 p.m.
Lester L. Long Fieldhouse Ember Room
14700 Evers
Dolton, IL 60419
Tuesday, May 7, 2024
6:30 - 7:30 p.m.
Skokie Public Library
5215 Oakton St.
Skokie, IL 60077
Tuesday, May 14, 2024
6:30 - 7:30 p.m.
Melrose Park Senior Building
900 N. 25th St.
Melrose Park, IL 60160
You can also assist by participating in our mitigation and preparedness survey! Help us inform the development of this plan and the ways we can mitigate risk and make our communities safer and more resilient to natural hazards. Take the survey:
https://cookgov.me/mitigate2024
Cook County Department of Emergency Management and Regional Security
69 W. Washington St., Suite 2600, Chicago, IL 60602
(312) 603-8180 | www.cookcountyemergencymanagement.org/
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7:15
City of Park Ridge
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City of Park Ridge
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Cook County Department of Emergency Management and Regional Security (EMRS) wants to know how it can better prepare you for disasters.... See more
PUBLIC MEETING NOTICE
COOK COUNTY EMRS
Cook County
Multi-Jurisdictional Hazard Mitigation Plan
Cook County's Department of Emergency Management and Regional Security is hosting three public information and planning sessions to gather input from Cook County residents regarding potential natural hazards and disasters that could impact the County. These sessions are part of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan update process, which is undergoing a mandatory 5-year update.
Monday, May 6, 2024
6:30 - 7:30 p.m.
Lester L. Long Fieldhouse Ember Room
14700 Evers
Dolton, IL 60419
Tuesday, May 7, 2024
6:30 - 7:30 p.m.
Skokie Public Library
5215 Oakton St.
Skokie, IL 60077
Tuesday, May 14, 2024
6:30 - 7:30 p.m.
Melrose Park Senior Building
900 N. 25th St.
Melrose Park, IL 60160
You can also assist by participating in our mitigation and preparedness survey! Help us inform the development of this plan and the ways we can mitigate risk and make our communities safer and more resilient to natural hazards. Take the survey:
https://cookgov.me/mitigate2024
Cook County Department of Emergency Management and Regional Security
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Date	Jurisdiction
05/21/24	Willow Springs

Link / Image

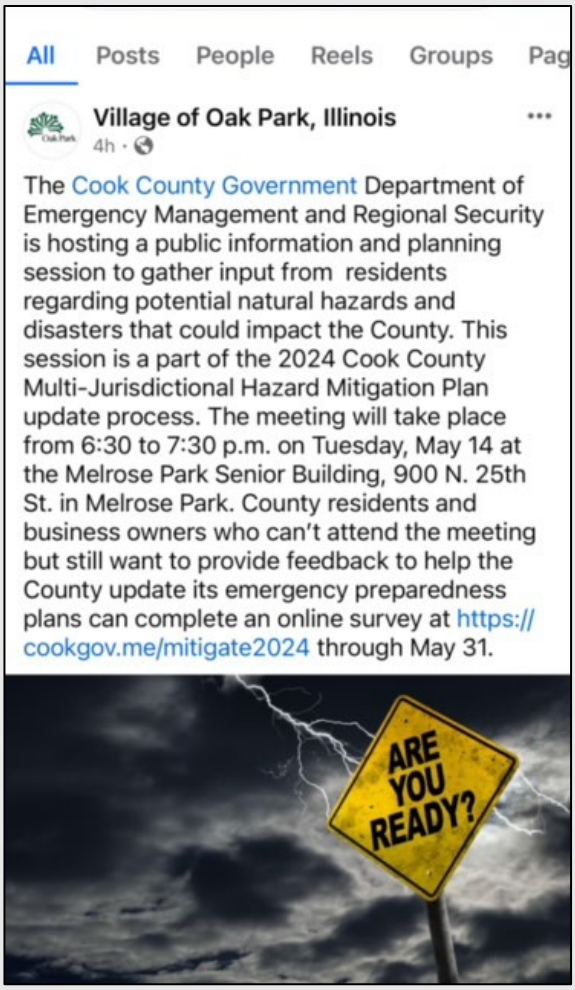
Public Outreach Social Media



Date	Jurisdiction
05/21/24	Village of Oak Park

Link / Image

Public Outreach Oak Park Newsletter May 10, 2024
Public Outreach Social Media

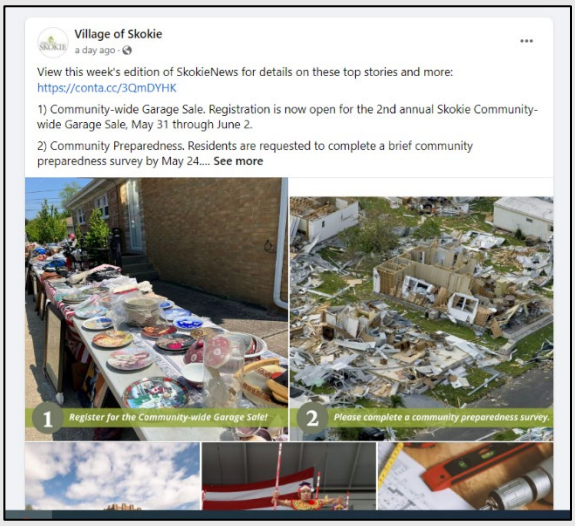


Date	Jurisdiction
5/2/2024- 5/21/2024	Skokie

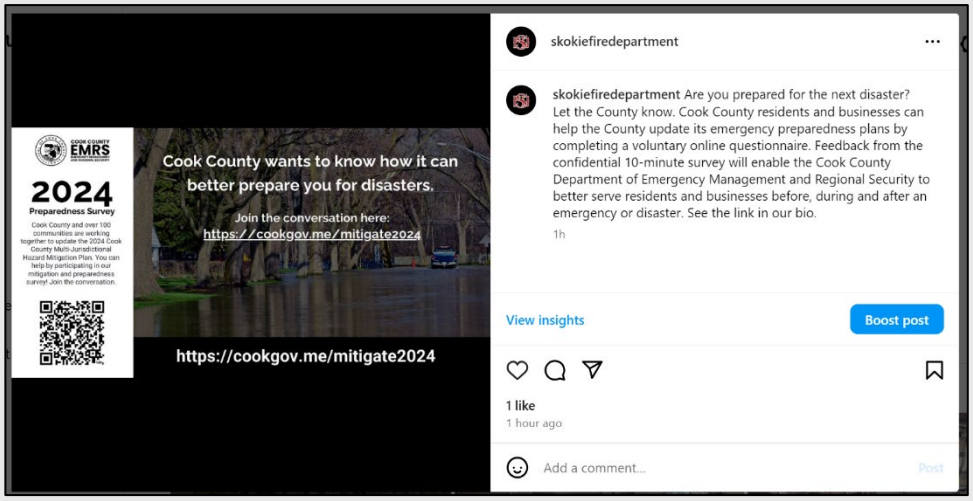
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Public Outreach Social Media

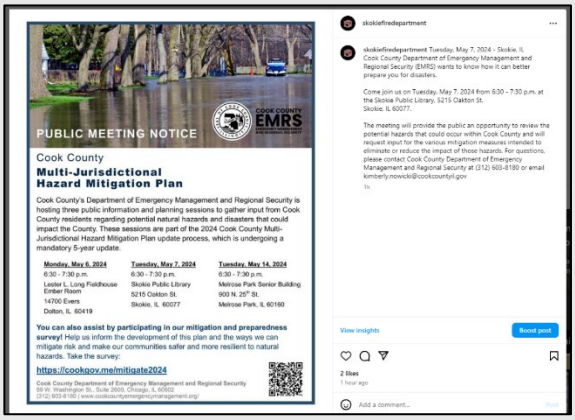
May 1, 2024 / May 2, 2024





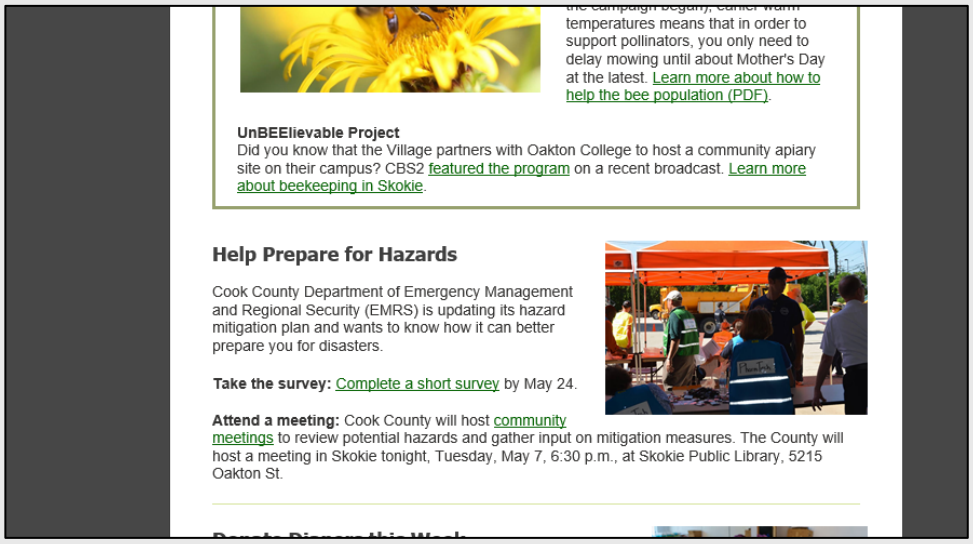


May 6, 2024

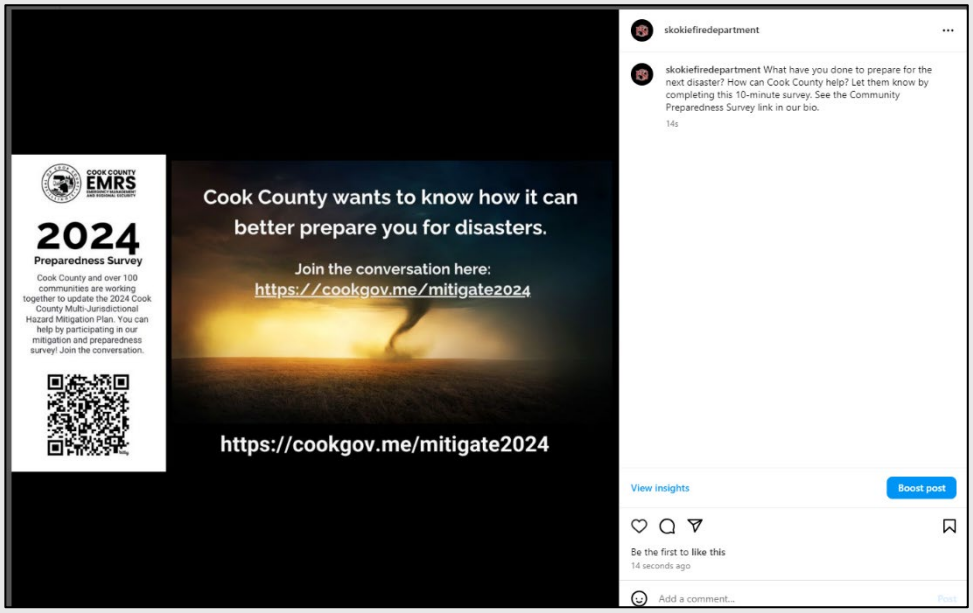


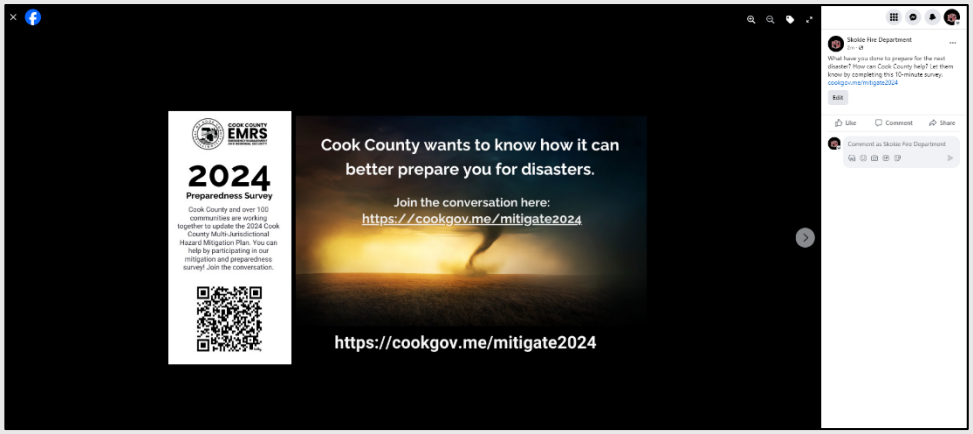


May 7, 2024

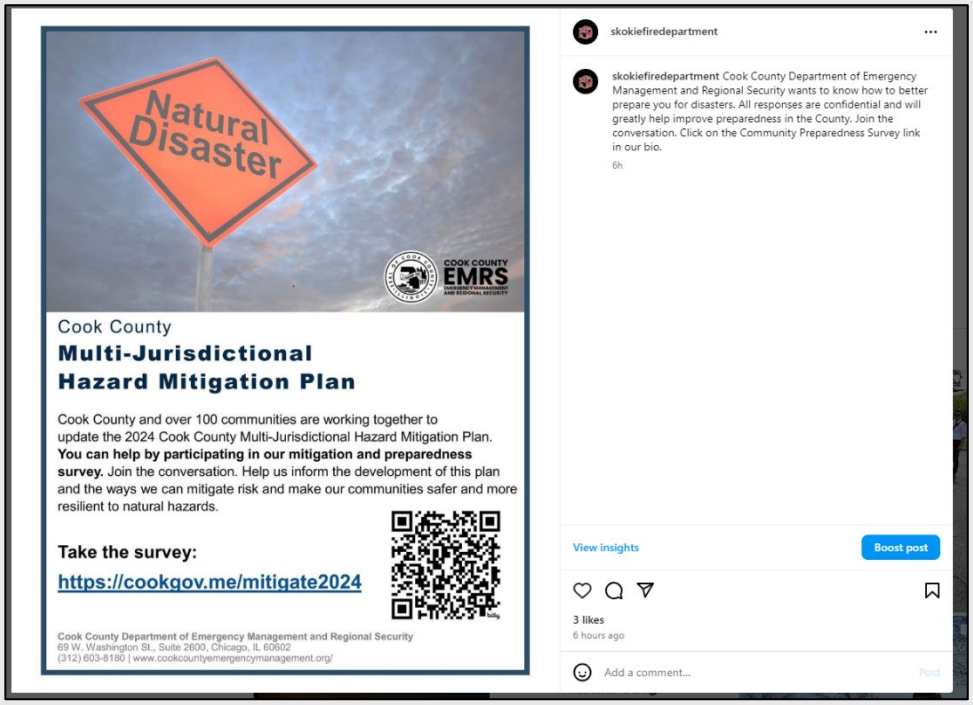


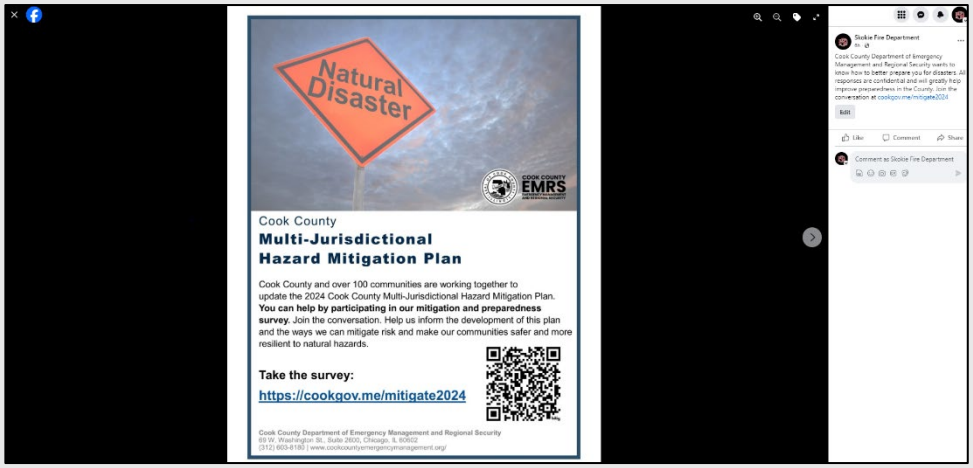
May 13, 2024


COOK COUNTY EMRS
2024
Preparedness Survey
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey! Join the conversation.
Cook County wants to know how it can better prepare you for disasters.
Join the conversation here:
https://cookgov.me/mitigate2024
https://cookgov.me/mitigate2024
skokiefiredepartment
skokiefiredepartment What have you done to prepare for the next disaster? How can Cook County help? Let them know by completing this 10-minute survey. See the Community Preparedness Survey link in our bio.
14s
View insights
Boost post
Be the first to like this
14 seconds ago
Add a comment...


COOK COUNTY EMRS
2024
Preparedness Survey
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey! Join the conversation.
Cook County wants to know how it can better prepare you for disasters.
Join the conversation here:
https://cookgov.me/mitigate2024
https://cookgov.me/mitigate2024
Skokie Fire Department
What have you done to prepare for the next disaster? How can Cook County help? Let them know by completing this 10-minute survey.
cookgov.me/mitigate2024
Edit
Like
Comment
Share
Comment as Skokie Fire Department

May 21, 2024


Natural Disaster
COOK COUNTY EMRS
Cook County
Multi-Jurisdictional
Hazard Mitigation Plan
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey. Join the conversation. Help us inform the development of this plan and the ways we can mitigate risk and make our communities safer and more resilient to natural hazards.
Take the survey:
https://cookgov.me/mitigate2024
Cook County Department of Emergency Management and Regional Security
69 W. Washington St., Suite 2600, Chicago, IL 60602
(312) 603-8180 | www.cookcountyemergencymanagement.org/
skokiefiredepartment
skokiefiredepartment Cook County Department of Emergency Management and Regional Security wants to know how to better prepare you for disasters. All responses are confidential and will greatly help improve preparedness in the County. Join the conversation. Click on the Community Preparedness Survey link in our bio.
6h
View insights
Boost post
3 likes
6 hours ago
Add a comment...
Post


Natural Disaster
COOK COUNTY EMRS
Cook County
Multi-Jurisdictional
Hazard Mitigation Plan
Cook County and over 100 communities are working together to update the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan. You can help by participating in our mitigation and preparedness survey. Join the conversation. Help us inform the development of this plan and the ways we can mitigate risk and make our communities safer and more resilient to natural hazards.
Take the survey:
https://cookgov.me/mitigate2024

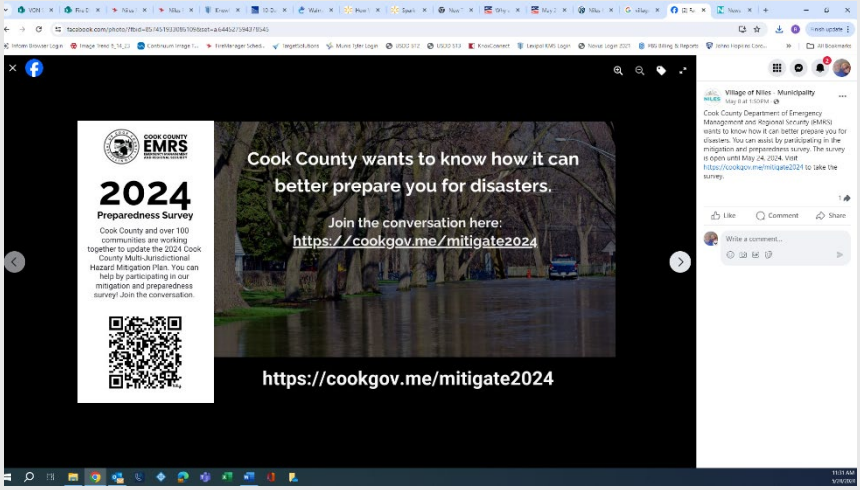
Date	Jurisdiction
5/3/2024-5/8/2024	Niles

Link / Image

Public Outreach

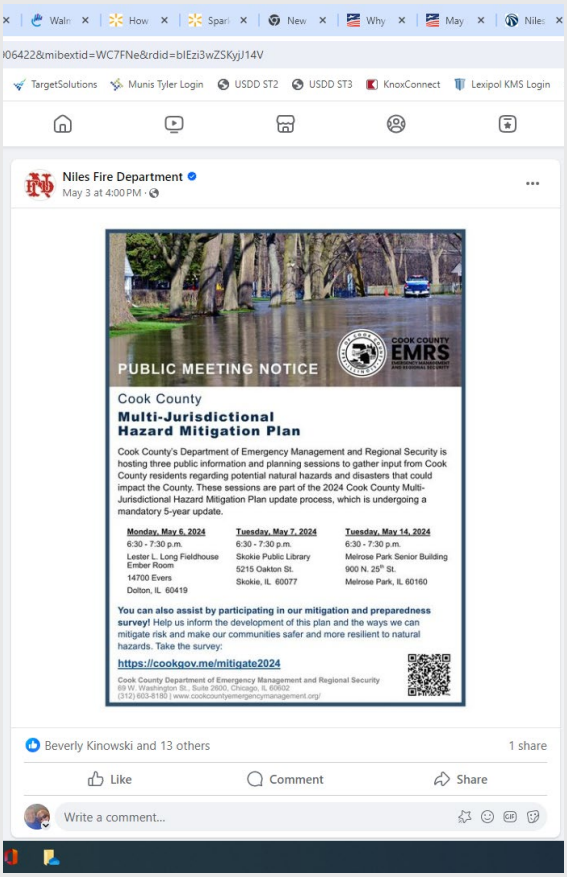
Village of Niles Facebook Page, May 8, 2024, at 1:50pm

https://www.facebook.com/photo/?fbid=857451933086109&set=a.644527594378545



Niles Fire Department Facebook Page, May 3, 2024, at 4:00pm

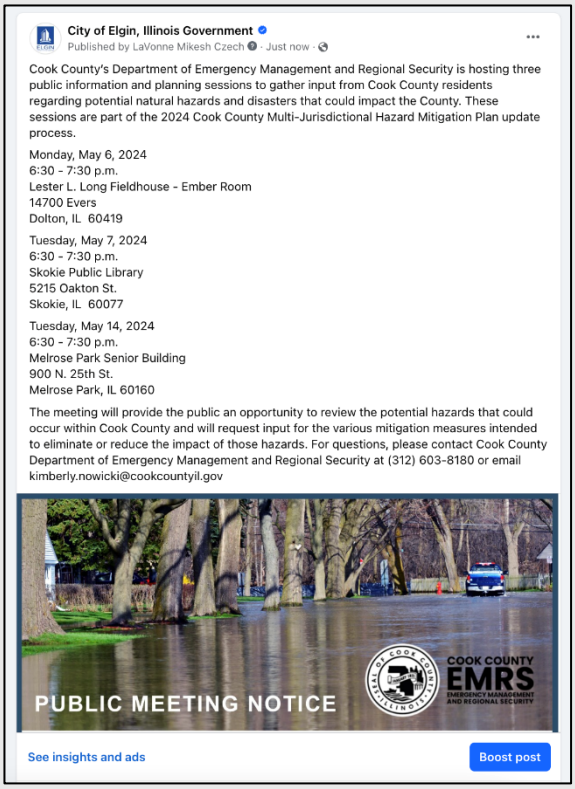
Link to Post



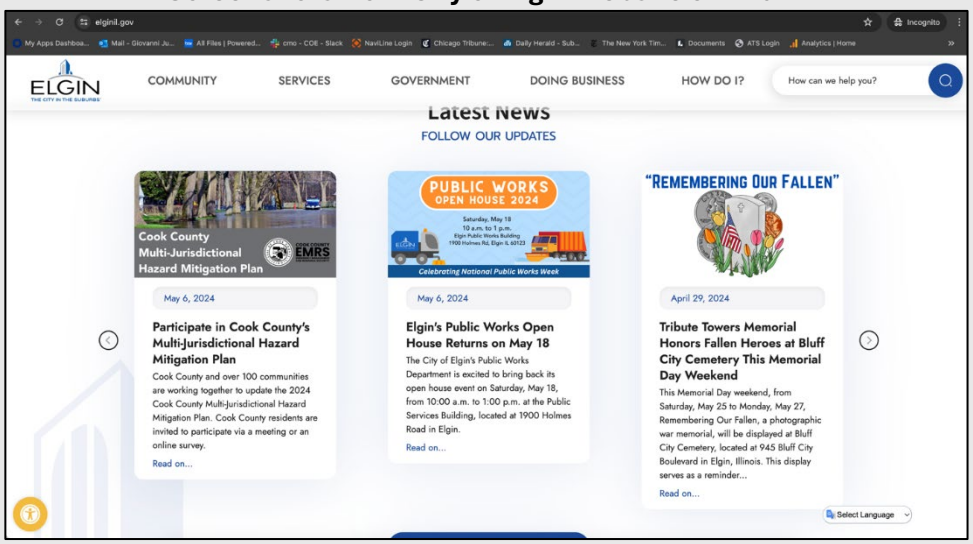
Date	Jurisdiction
5/6/2024- 5/29/2024	Elgin

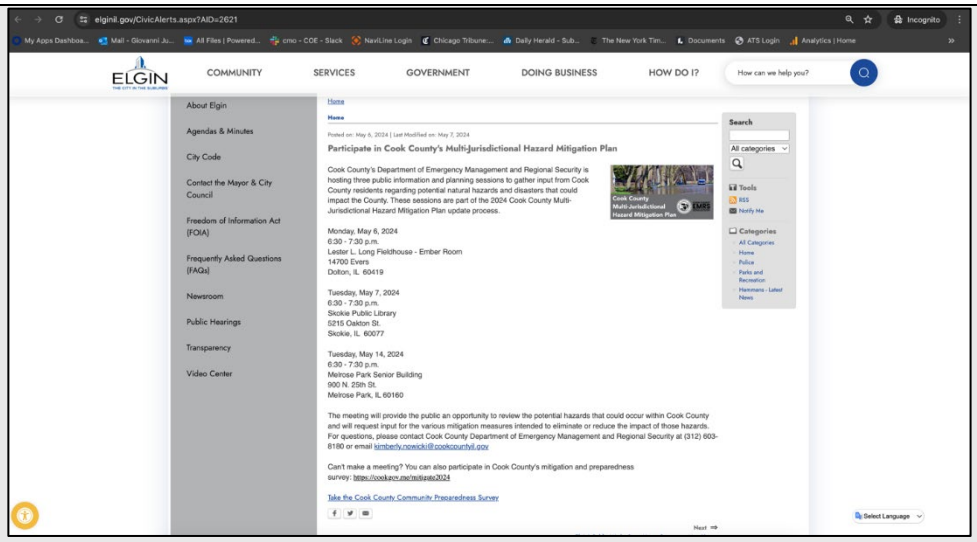
Link / Image

Public Outreach – Social Media/Websites
Screenshot from Facebook on 5/6/2024

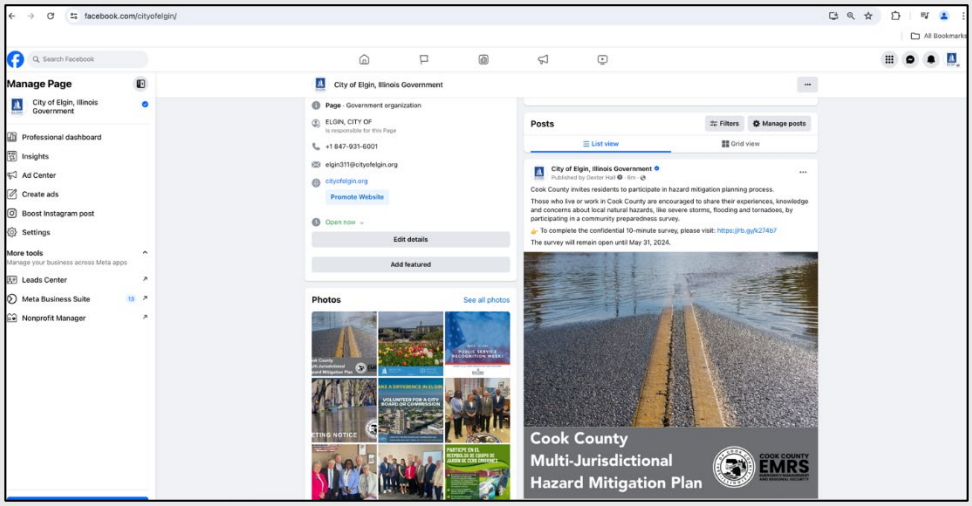


Screenshots from City of Elgin Website 5/7/2024

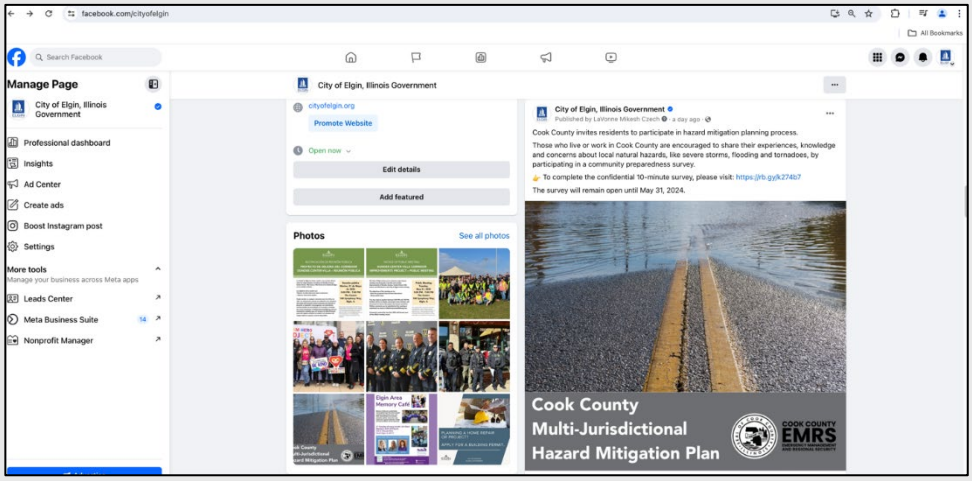




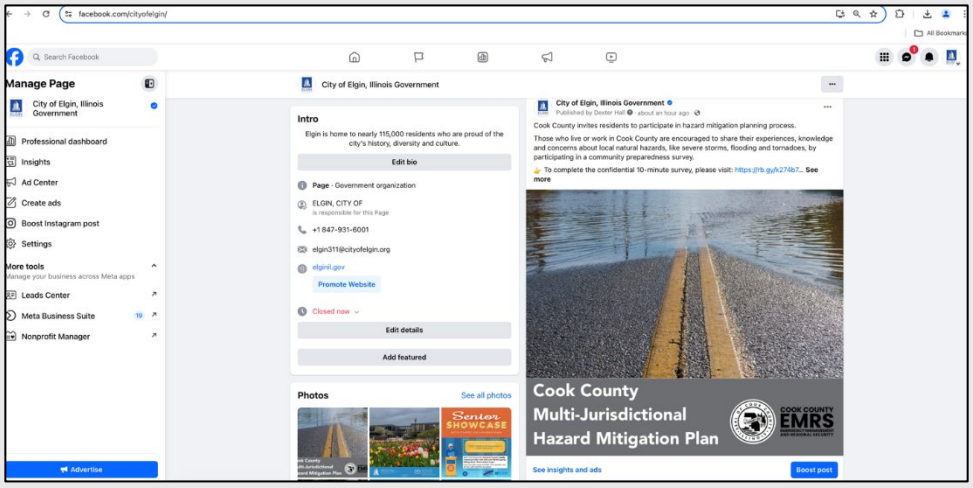
Screenshot from Facebook on 5/8/2024



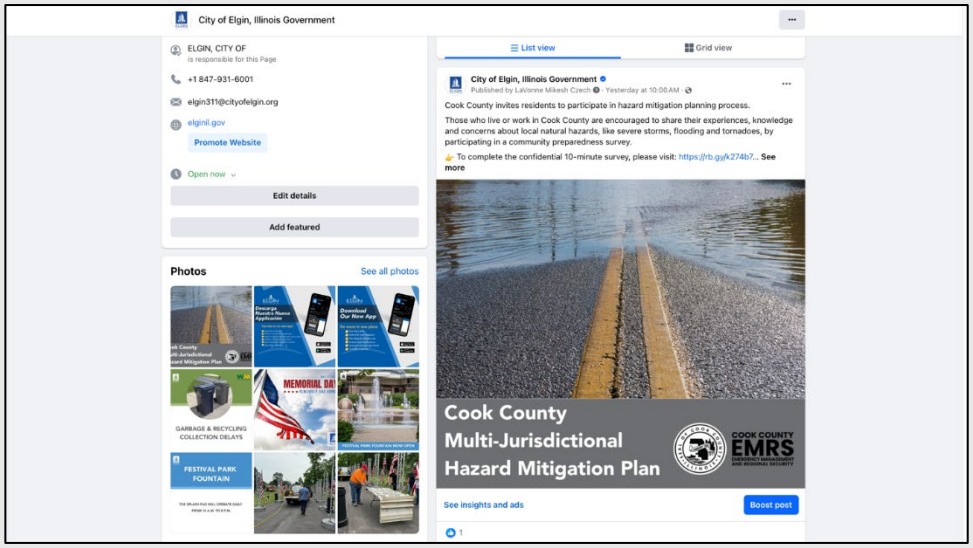
Screenshot from Facebook on 5/15/2024



Screenshot from Facebook on 5/22/2024



Screenshot from Facebook on 5/29/2024



Hazard Mitigation Plan Public Meetings

The public meetings focused on educating the public on what hazard mitigation is, what it means, and how to work together to create a more resilient community. This included formal presentations, interactive group discussions, and defining new mitigation actions within each participants' respective jurisdiction.

May 6, 2024
Lester L Long Fieldhouse Ember Room
14700 Evers
Dolton, IL 60419

May 7, 2019
Skokie Public Library
5215 Oakton Street
Skokie, IL 60077

May 14, 2019
Melrose Park Senior Building
900 N. 24th St.
Melrose Park, IL 60160



Figure: Melrose Park Senior Building

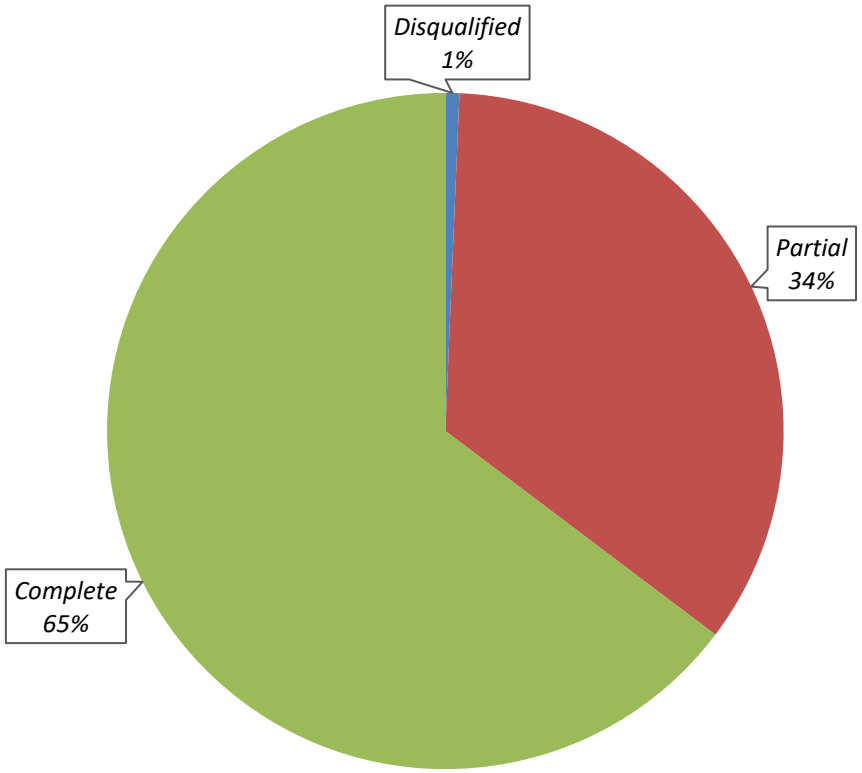
May 17, 2024
By the Hand Club for Kids
415 N. Laramie Ave
Chicago, IL

Cook County Community Preparedness Survey

The public involvement strategy was able to meet its objectives by educating the public about hazard mitigation planning while collecting input from the public to assist the Steering Committee in making informed decisions.

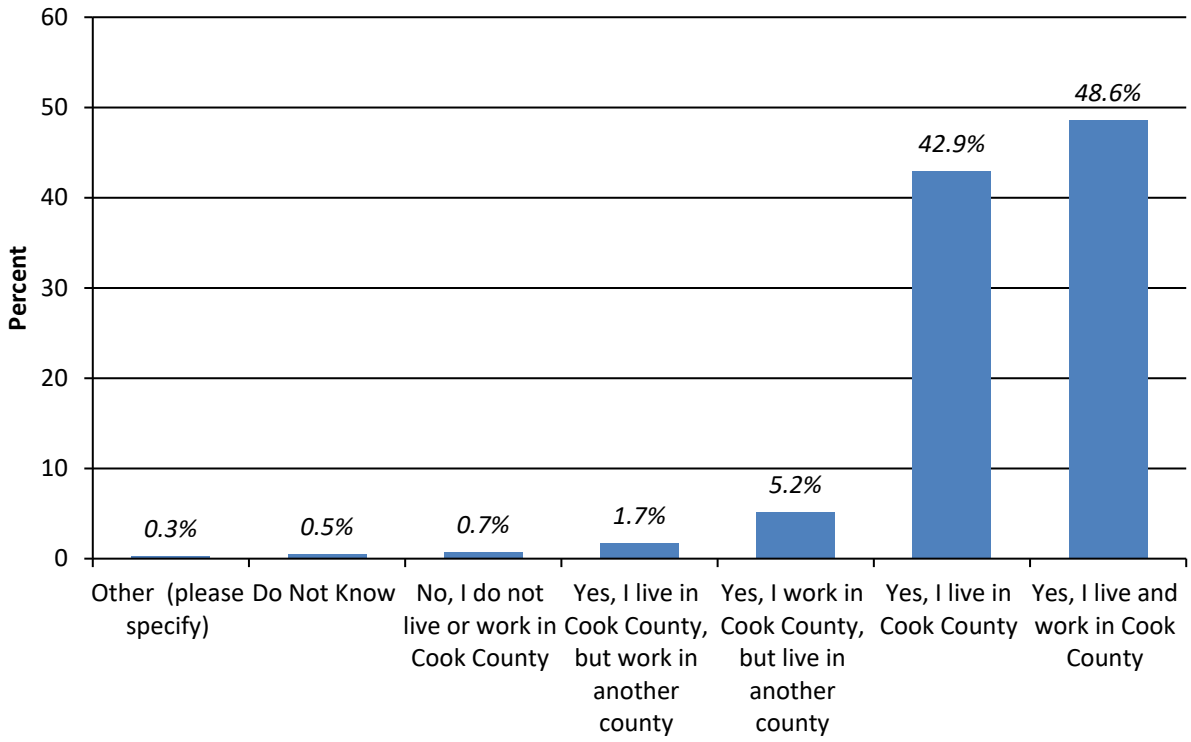
Results - 2024 Cook County Community Preparedness Survey

Response Statistics



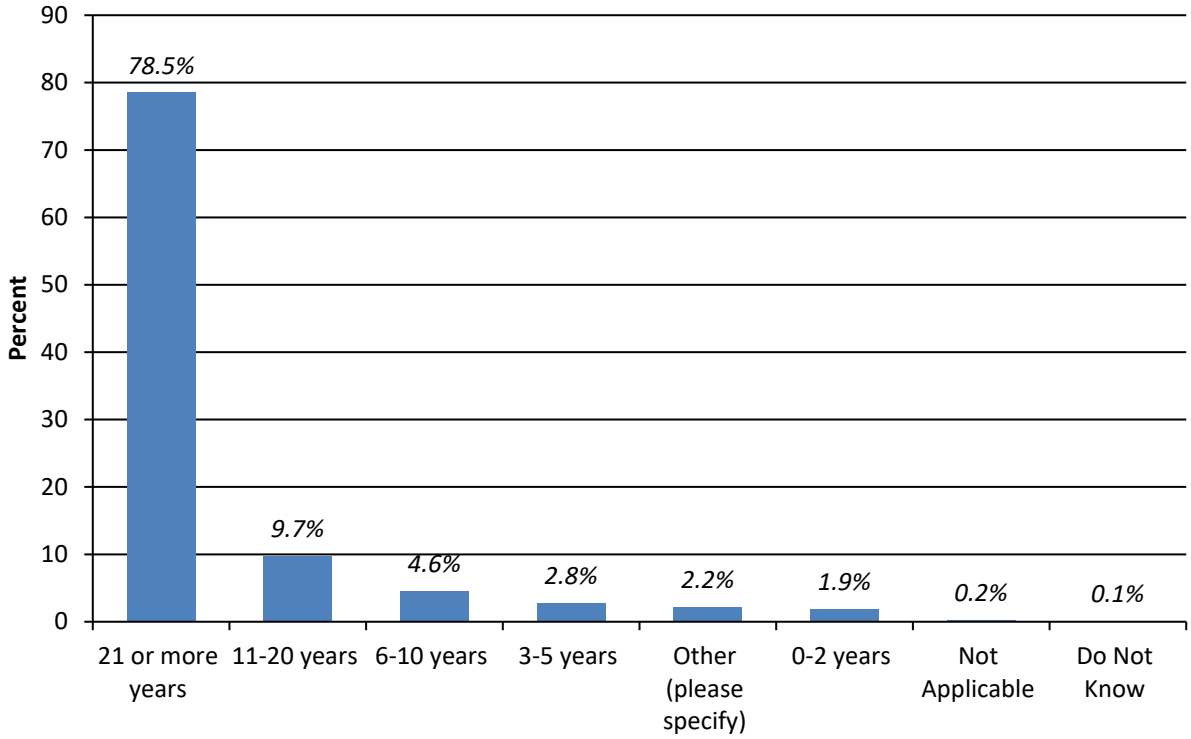
	Count	Percent
Complete	972	64.7
Partial	520	34.6
Disqualified	10	0.7
Total	1,502	

1. Do you live and/or work in Cook County? Please select the best answer that applies to your current situation.



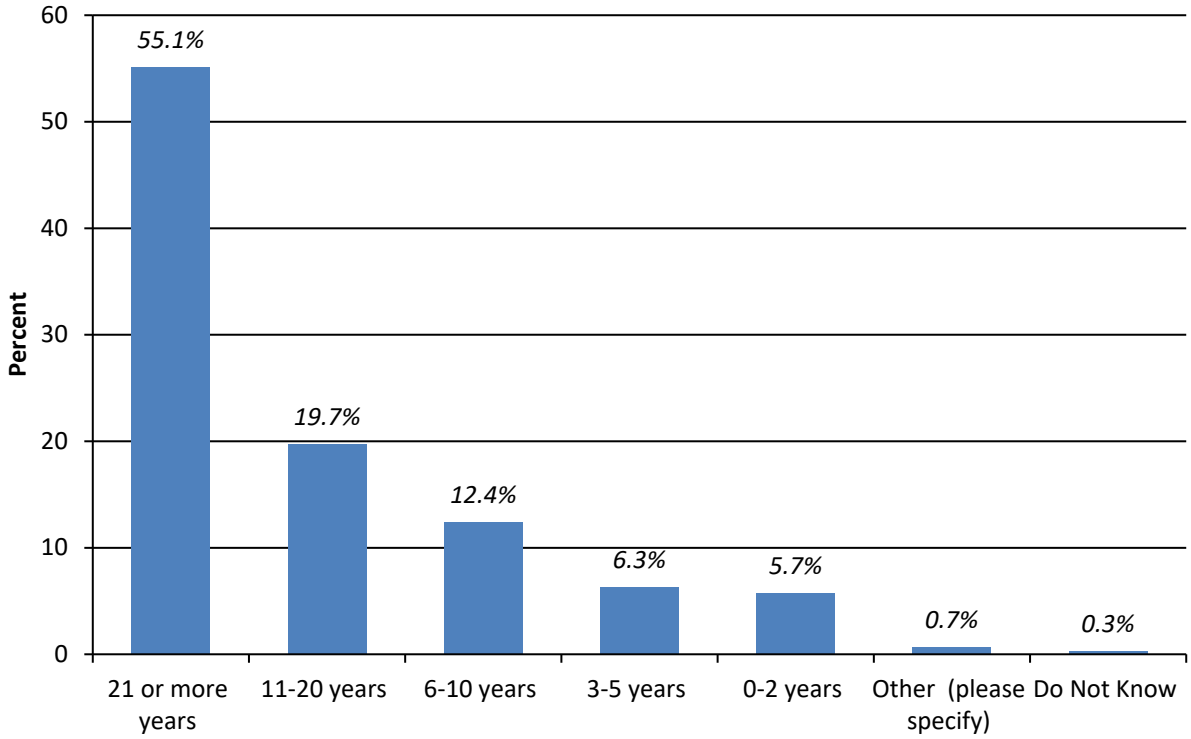
Value	Percent	Count
Yes, I live in Cook County	42.9%	617
Yes, I live and work in Cook County	48.6%	699
Yes, I live in Cook County, but work in another county	1.7%	24
Yes, I work in Cook County, but live in another county	5.2%	75
No, I do not live or work in Cook County	0.7%	10
Do Not Know	0.5%	7
Other (please specify)	0.3%	5
	Total	1,437

2. Approximately how many years have you lived in Cook County?



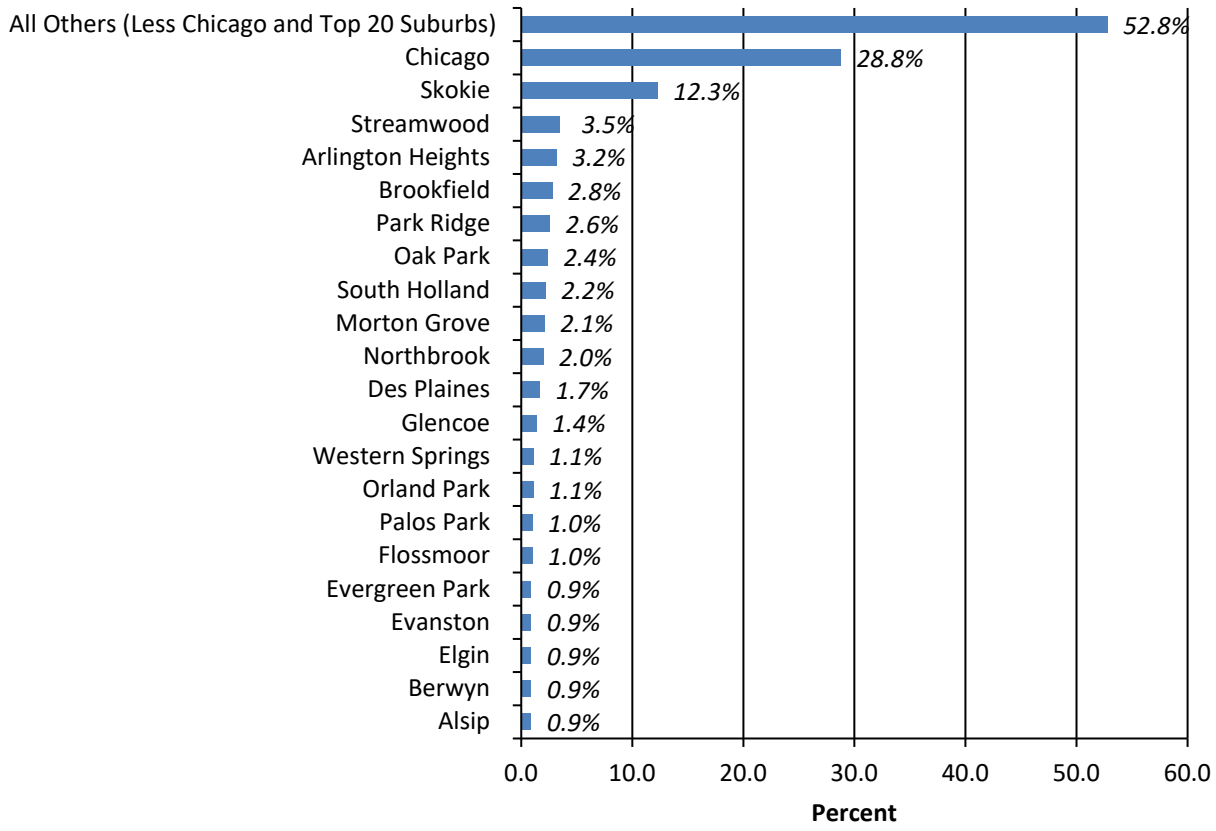
Value	Percent	Count
21 or more years	78.5%	1,021
11-20 years	9.7%	126
6-10 years	4.6%	60
3-5 years	2.8%	37
Other (please specify)	2.2%	28
0-2 years	1.9%	25
Not Applicable	0.2%	3
Do Not Know	0.1%	1
	Total	1,301

3. Approximately how many years have you worked in Cook County?



Value	Percent	Count
21 or more years	55.1%	414
11-20 years	19.7%	148
6-10 years	12.4%	93
3-5 years	6.3%	47
0-2 years	5.7%	43
Other (please specify)	0.7%	5
Do Not Know	0.3%	2
	Total	752

4. Please indicate which community in Cook County you live in.



Value	Percent	Count
Chicago	28.8%	366
Skokie	12.3%	157
Streamwood	3.5%	45
Arlington Heights	3.2%	41
Brookfield	2.8%	36
Park Ridge	2.6%	33
Oak Park	2.4%	31
South Holland	2.2%	28
Morton Grove	2.1%	27

Northbrook	2.0%	26
Des Plaines	1.7%	22
Glencoe	1.4%	18
Orland Park	1.1%	14
Western Springs	1.1%	14
Flossmoor	1.0%	13
Palos Park	1.0%	13
Alsip	0.9%	11
Berwyn	0.9%	12
Elgin	0.9%	11
Evanston	0.9%	11
Evergreen Park	0.9%	12
South Barrington	0.9%	11
Calumet City	0.8%	10
Palatine	0.8%	10
Schaumburg	0.8%	10
LaGrange	0.7%	9
Oak Forest	0.7%	9
Other	0.7%	9
Chicago Heights	0.6%	8
Elmwood Park	0.6%	7
Glenview	0.6%	7
Homewood	0.6%	8

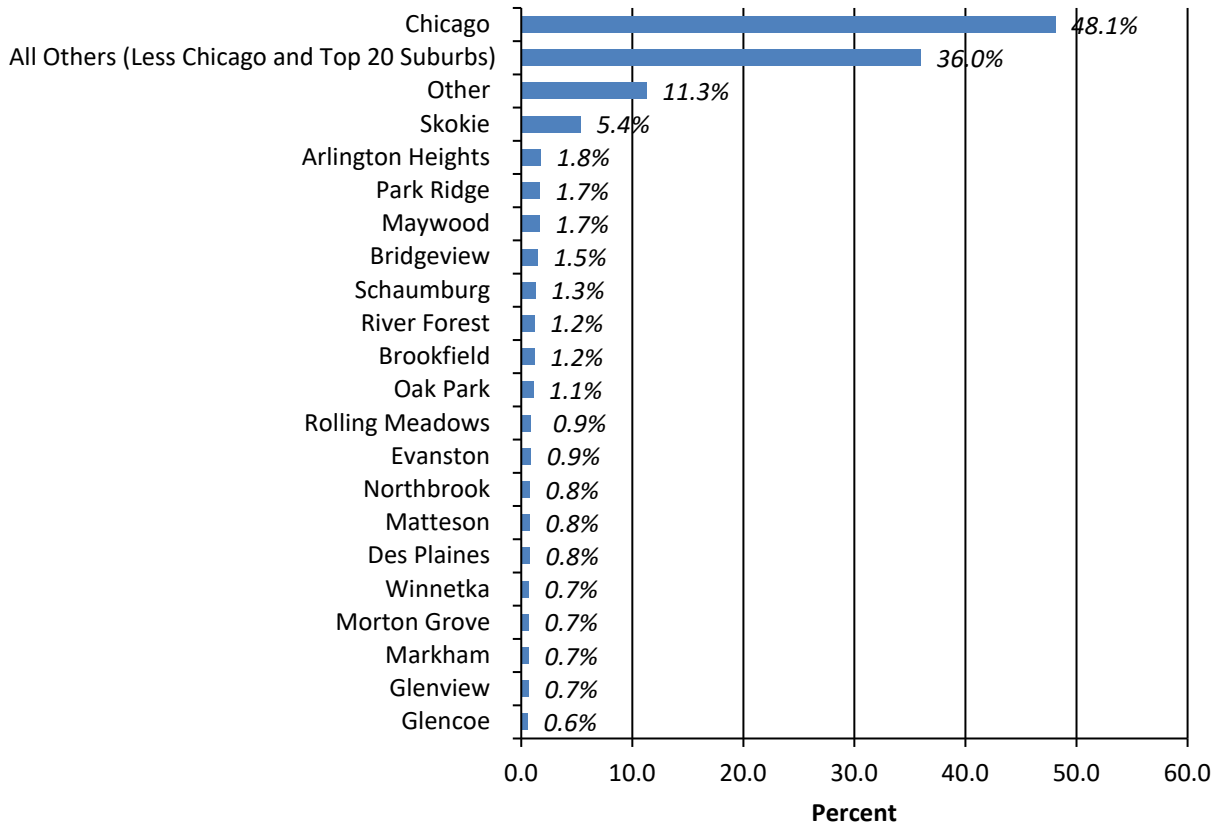
Mount Prospect	0.6%	7
Niles	0.6%	7
North Riverside	0.6%	7
Oak Lawn	0.6%	8
Orland Hills	0.6%	8
River Forest	0.6%	8
Blue Island	0.5%	6
Hoffman Estates	0.5%	6
Lemont	0.5%	6
Tinley Park	0.5%	6
Wheeling	0.5%	6
Wilmette	0.5%	6
LaGrange Park	0.4%	5
Maywood	0.4%	5
Northlake	0.4%	5
Palos Heights	0.4%	5
Park Forest	0.4%	5
Willow Springs	0.4%	5
Bellwood	0.3%	4
Burbank	0.3%	4
Crestwood	0.3%	4
Elk Grove Village	0.3%	4
Lansing	0.3%	4

Matteson	0.3%	4
Palos Hills	0.3%	4
Richton Park	0.3%	4
Rolling Meadows	0.3%	4
Westchester	0.3%	4
Winnetka	0.3%	4
Barrington	0.2%	3
Barrington Hills	0.2%	2
Buffalo Grove	0.2%	2
Burnham	0.2%	2
Calumet Park	0.2%	2
Chicago Ridge	0.2%	3
Cicero	0.2%	2
Countryside	0.2%	3
Glenwood	0.2%	2
Harvey	0.2%	3
Harwood Heights	0.2%	3
Hazel Crest	0.2%	3
Hickory Hills	0.2%	2
Hometown	0.2%	2
Indian Head Park	0.2%	3
Justice	0.2%	2
Kenilworth	0.2%	2

Lynwood	0.2%	2
Markham	0.2%	3
Melrose Park	0.2%	3
Olympia Fields	0.2%	3
River Grove	0.2%	2
Steger	0.2%	2
Unincorporated Cook	0.2%	2
Bartlett	0.1%	1
Bedford Park	0.1%	1
Broadview	0.1%	1
Country Club Hills	0.1%	1
Dolton	0.1%	1
Forest Park	0.1%	1
Lincolnwood	0.1%	1
Lyons	0.1%	1
Merrionette Park	0.1%	1
Norridge	0.1%	1
Northfield	0.1%	1
Phoenix	0.1%	1
Posen	0.1%	1
Riverside	0.1%	1
Rosemont	0.1%	1
Sauk Village	0.1%	1

Schiller Park	0.1%	1
South Chicago Heights	0.1%	1
Stickney	0.1%	1
Summit	0.1%	1
	Total	1,272

5. Please indicate which community in Cook County you work in.



Value	Percent	Count
Chicago	48.1%	541
Other	11.3%	127
Skokie	5.4%	61
Arlington Heights	1.8%	20
Maywood	1.7%	19
Park Ridge	1.7%	19
Bridgeview	1.5%	17
Schaumburg	1.3%	15
Brookfield	1.2%	14

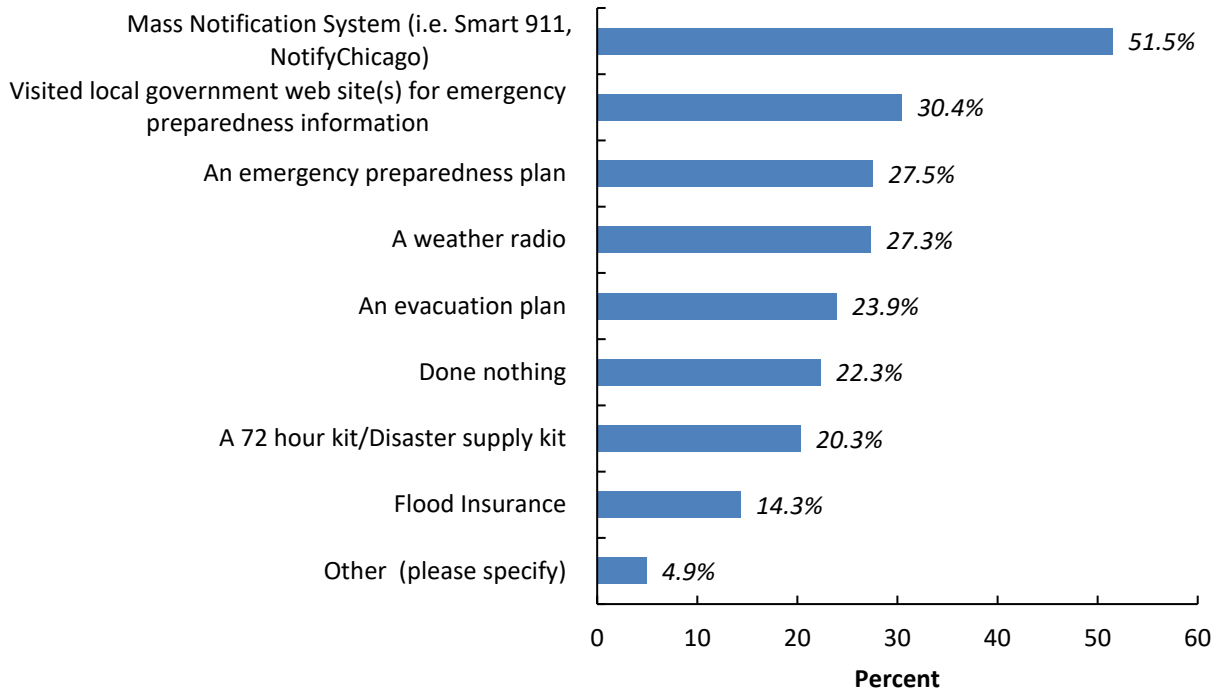
River Forest	1.2%	13
Oak Park	1.1%	12
Evanston	0.9%	10
Rolling Meadows	0.9%	10
Des Plaines	0.8%	9
Matteson	0.8%	9
Northbrook	0.8%	9
Glenview	0.7%	8
Markham	0.7%	8
Morton Grove	0.7%	8
Winnetka	0.7%	8
Glencoe	0.6%	7
South Holland	0.6%	7
Streamwood	0.6%	7
Blue Island	0.5%	6
Elk Grove Village	0.5%	6
Niles	0.5%	6
Oak Forest	0.5%	6
Western Springs	0.5%	6
Willow Springs	0.5%	6
Unincorporated Cook	0.5%	6
Barrington Hills	0.4%	5
Calumet City	0.4%	4

Chicago Heights	0.4%	4
Cicero	0.4%	4
Flossmoor	0.4%	5
Hoffman Estates	0.4%	5
Palos Hills	0.4%	4
Palos Park	0.4%	4
Wilmette	0.4%	4
Alsip	0.3%	3
Berwyn	0.3%	3
Elgin	0.3%	3
Forest Park	0.3%	3
Mount Prospect	0.3%	3
Northfield	0.3%	3
Palatine	0.3%	3
Tinley Park	0.3%	3
Bensenville	0.2%	2
Buffalo Grove	0.2%	2
Elmhurst	0.2%	2
Evergreen Park	0.2%	2
Harvey	0.2%	2
Hinsdale	0.2%	2
Kenilworth	0.2%	2
LaGrange	0.2%	2

Lansing	0.2%	2
Lyons	0.2%	2
Melrose Park	0.2%	2
Orland Hills	0.2%	2
Orland Park	0.2%	2
River Grove	0.2%	2
Robbins	0.2%	2
Barrington	0.1%	1
Bartlett	0.1%	1
Berkeley	0.1%	1
Broadview	0.1%	1
Burr Ridge	0.1%	1
Country Club Hills	0.1%	1
Deerfield	0.1%	1
Franklin Park	0.1%	1
Hanover Park	0.1%	1
Hazel Crest	0.1%	1
Indian Head Park	0.1%	1
LaGrange Park	0.1%	1
Lemont	0.1%	1
Lincolnwood	0.1%	1
Lynwood	0.1%	1
McCook	0.1%	1

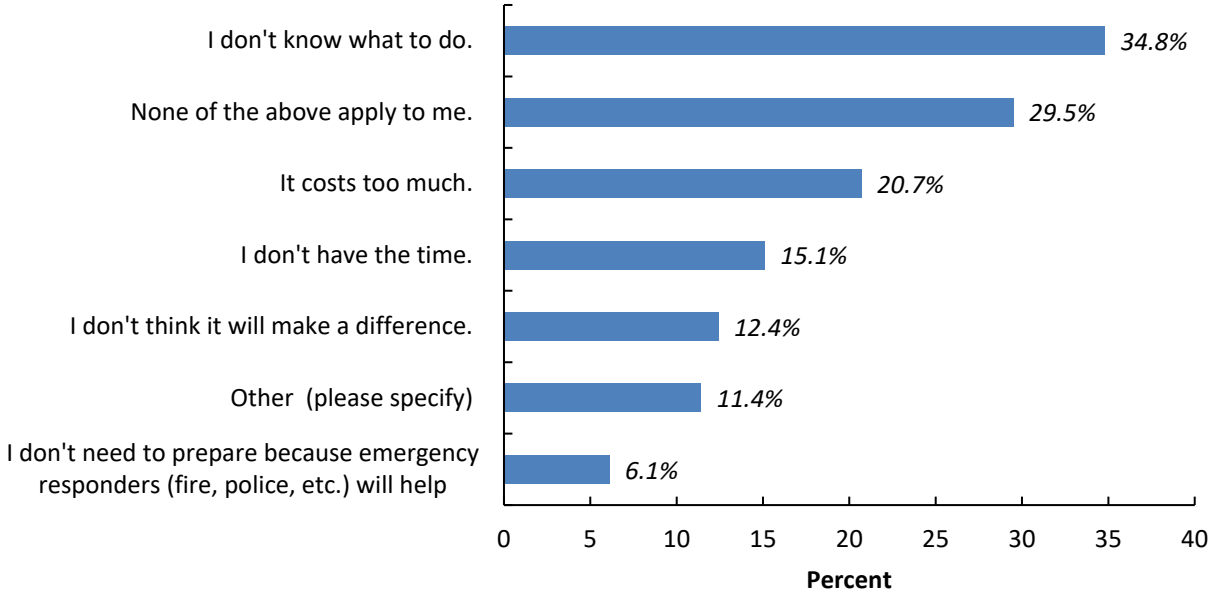
Norridge	0.1%	1
North Riverside	0.1%	1
Northlake	0.1%	1
Oak Brook	0.1%	1
Oak Lawn	0.1%	1
Palos Heights	0.1%	1
Park Forest	0.1%	1
Phoenix	0.1%	1
Riverdale	0.1%	1
Rosemont	0.1%	1
Sauk Village	0.1%	1
Schiller Park	0.1%	1
South Chicago Heights	0.1%	1
Steger	0.1%	1
Westchester	0.1%	1
Wheeling	0.1%	1
	Total	1,125

6. Please indicate those activities you have done to prepare for emergencies and disasters. Please select ALL that apply. I have…



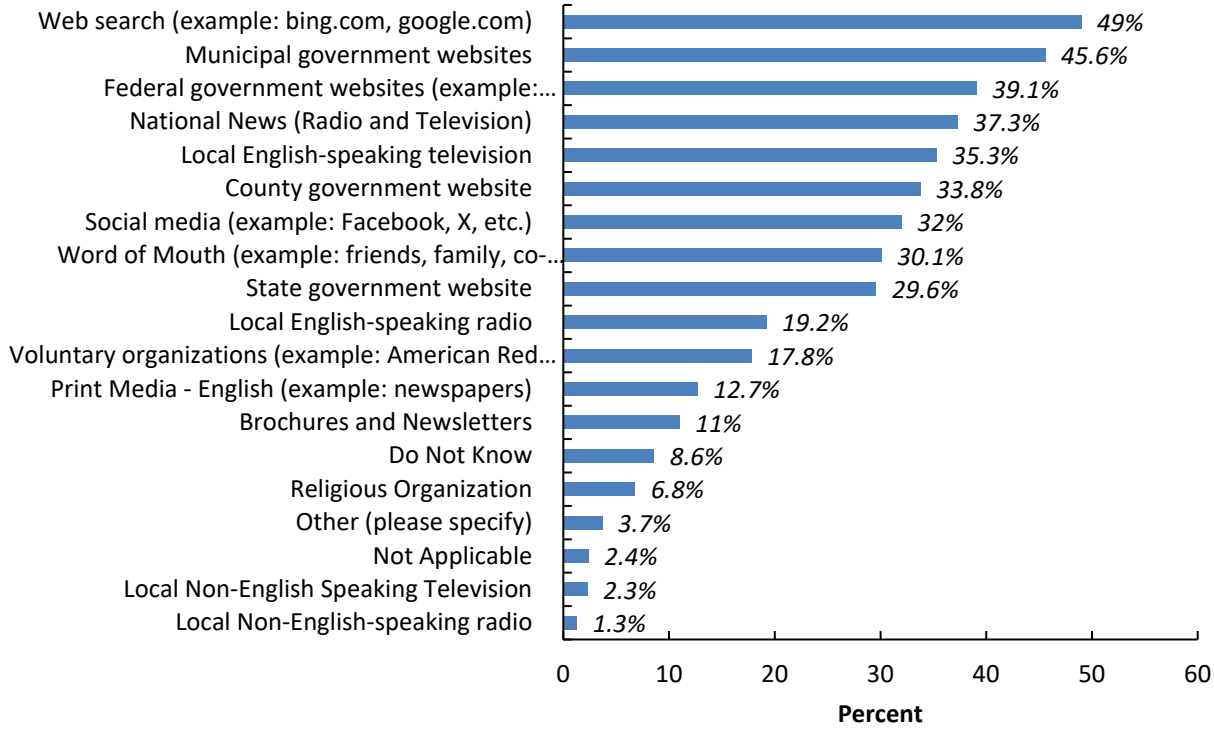
Value	Percent	Count
Mass Notification System (i.e. Smart 911, Notify Chicago)	51.5%	596
visited local government web site(s) for emergency preparedness information	30.4%	352
an emergency preparedness plan	27.5%	318
a weather radio	27.3%	316
an evacuation plan	23.9%	277
done nothing	22.3%	258
a 72-hour kit/Disaster supply kit	20.3%	235
flood Insurance	14.3%	166
Other (please specify)	4.9%	57

7. Have any of the reasons below prevented you from pursuing additional preparedness activities? Please select ALL that apply.



Value	Percent	Count
I don't know what to do.	34.8%	394
None of the above applies to me.	29.5%	334
It costs too much.	20.7%	234
I don't have the time.	15.1%	171
I don't think it will make a difference.	12.4%	141
Other (please specify)	11.4%	129
I don't need to prepare because emergency responders (fire, police, etc.) will help me during an emergency.	6.1%	69

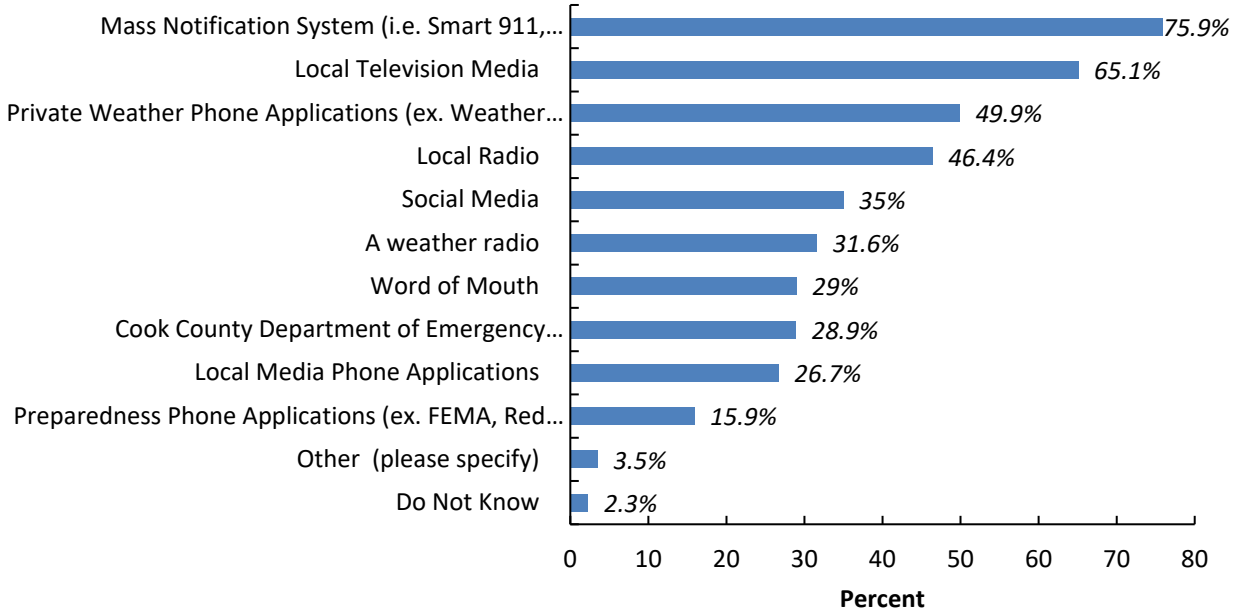
8. Please indicate where you go to obtain emergency and disaster preparedness related information? Please select ALL that apply.



Value	Percent	Count
Web search (example: bing.com, google.com)	49.0%	566
Municipal government websites	45.6%	526
Federal government websites (example: www.fema.gov)	39.1%	451
National News (Radio and Television)	37.3%	431
Local English-speaking television	35.3%	407
County government website	33.8%	390
Social media (example: Facebook, X, etc.)	32.0%	369
Word of Mouth (example: friends, family, co-workers)	30.1%	347
State government website	29.6%	342
Local English-speaking radio	19.2%	222

Voluntary organizations (example: American Red Cross, Salvation Army, etc.)	17.8%	205
Print Media - English (example: newspapers)	12.7%	146
Brochures and Newsletters	11.0%	127
Do Not Know	8.6%	99
Religious Organization	6.8%	79
Other (please specify)	3.7%	43
Not Applicable	2.4%	28
Local Non-English-Speaking Television	2.3%	26
Local non-English-speaking radio	1.3%	15

9. Please indicate how you expect to receive alerts and information during an emergency. Please select ALL that apply.



Value	Percent	Count
Mass Notification System (i.e. Smart 911, Notify Chicago)	75.9%	877
Local Television Media	65.1%	752
Private Weather Phone Applications (ex. Weather Channel, Wunderground, Weather Bug, AccuWeather, etc.)	49.9%	576
Local Radio	46.4%	536
Social Media	35.0%	404
A weather radio	31.6%	365
Word of Mouth	29.0%	335
Cook County Department of Emergency Management and Regional Security (EMRS) website	28.9%	334
Local Media Phone Applications	26.7%	308
Preparedness Phone Applications (ex. FEMA, Red Cross, etc.)	15.9%	184

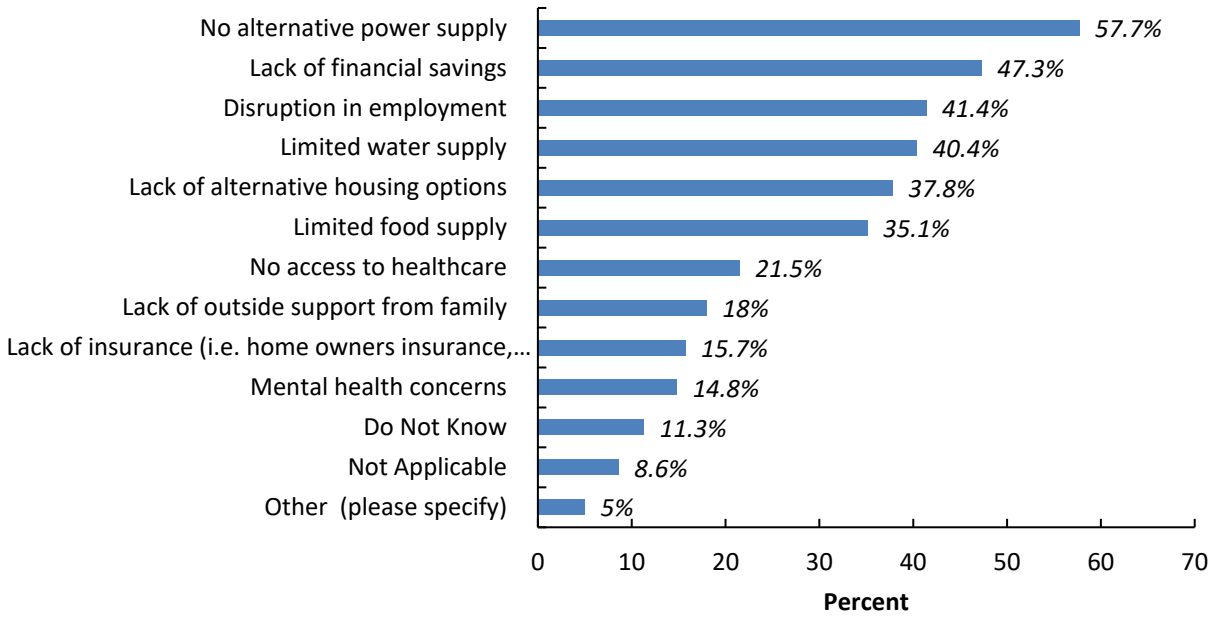
Other (please specify)	3.5%	40
Do Not Know	2.3%	26

10. Would you agree or disagree with the following statements?

	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree		Do Not Know		Responses
STATEMENT	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
My jurisdiction is providing the services necessary to prepare me for a disaster.	119	10.4%	303	26.4%	361	31.4%	117	10.2%	83	7.2%	165	14.4%	1,148
I am familiar with my jurisdiction's website and can easily obtain information about emergencies and disasters.	125	11.0%	346	30.4%	251	22.0%	208	18.3%	110	9.7%	99	8.7%	1,139
During times of emergency, information is provided in a language and format I can understand.	479	41.8%	436	38.0%	115	10.0%	25	2.2%	21	1.8%	71	6.2%	1,147
I can easily obtain emergency information in times of crisis.	197	17.3%	463	40.5%	243	21.3%	76	6.7%	49	4.3%	114	10.0%	1,142
I am familiar with the website of Cook County Department of Emergency Management and Regional Security and	84	7.4%	191	16.9%	244	21.6%	322	28.5%	197	17.4%	93	8.2%	1,131

use it to obtain information about emergencies.													

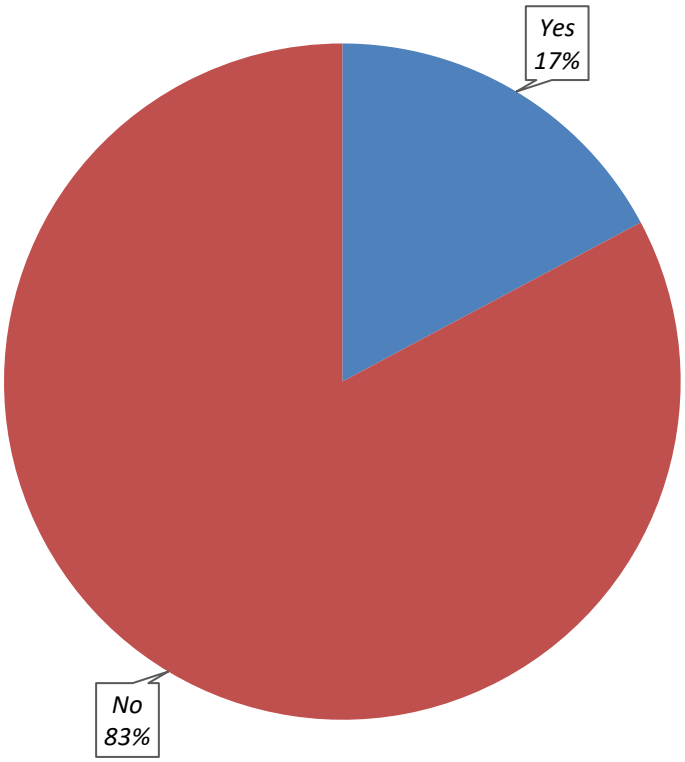
11. Which of the following may prevent you from recovering from a disaster? Please select ALL that apply.



Value	Percent	Count
No alternative power supply	57.7%	659
Lack of financial savings	47.3%	540
Disruption in employment	41.4%	473
Limited water supply	40.4%	461
Lack of alternative housing options	37.8%	432
Limited food supply	35.1%	401
No access to healthcare	21.5%	246
Lack of outside support from family	18.0%	205
Lack of insurance (i.e. homeowners insurance, renter's insurance, flood insurance, etc.)	15.7%	179
Mental health concerns	14.8%	169
Do Not Know	11.3%	129

Not Applicable	8.6%	98
Other (please specify)	5.0%	57

12. Do you or does anyone in your household have any special access or other special needs that would require early warning or specialized response during natural hazard events? (For example, a wheelchair, walker or oxygen.)



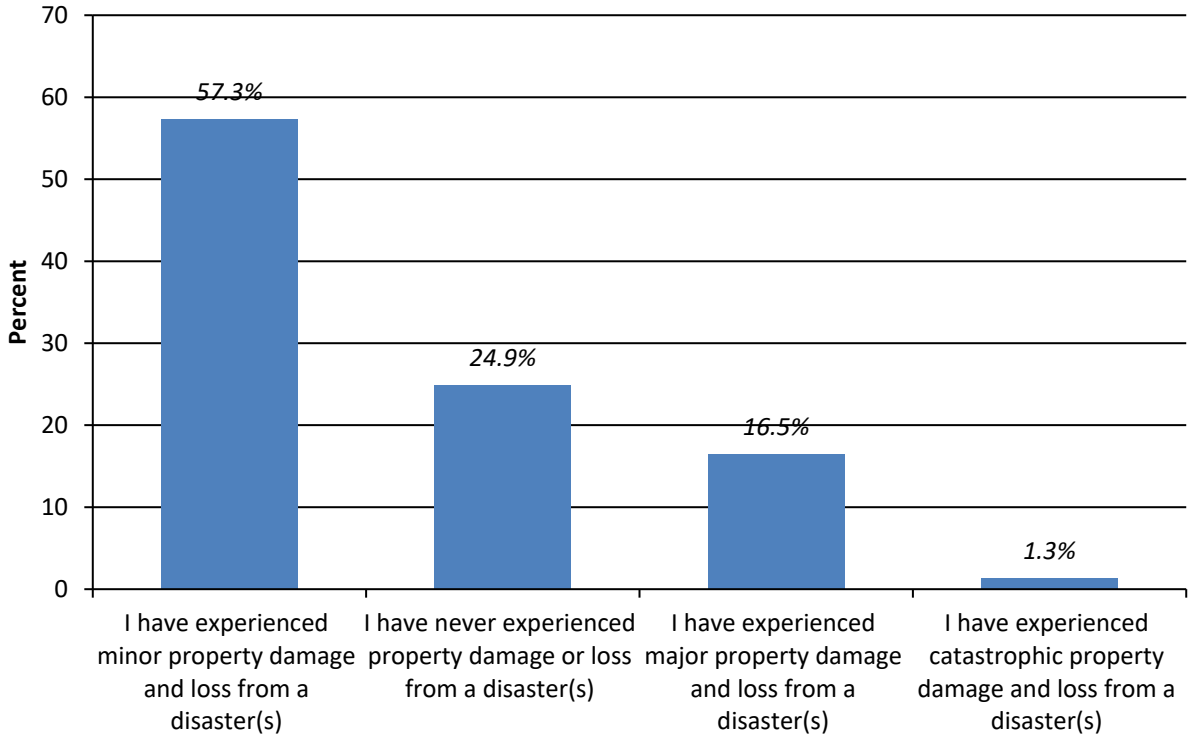
Value	Percent	Count
No	82.8%	951
Yes	17.2%	198
	Total	1,149

13. Do you believe that your household and/or place of business might ever be threatened by the following hazards? Please rate what hazards present the greatest risk. Low Risk = Low impact on threat to life and property damage Medium Risk = Medium impact on threat to life and property damage High Risk = High impact on threat to life and property damage

	Low Risk		Medium Risk		High Risk		Not Applicable		Responses
HAZARD	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Dam/Levee Failure	568	58.7%	73	7.5%	30	3.1%	296	30.6%	967
Drought	523	53.8%	299	30.8%	68	7.0%	82	8.4%	972
Earthquake	676	69.3%	195	20.0%	45	4.6%	59	6.1%	975
Flood	230	23.4%	432	43.9%	307	31.2%	15	1.5%	984
Extreme Heat	165	16.8%	401	40.8%	405	41.2%	12	1.2%	983
Lightning	201	20.5%	445	45.3%	324	33.0%	12	1.2%	982
Hail	158	16.1%	486	49.4%	324	33.0%	15	1.5%	983
Fog	396	40.7%	351	36.1%	204	21.0%	22	2.3%	973
High Winds	92	9.3%	399	40.4%	482	48.8%	14	1.4%	987

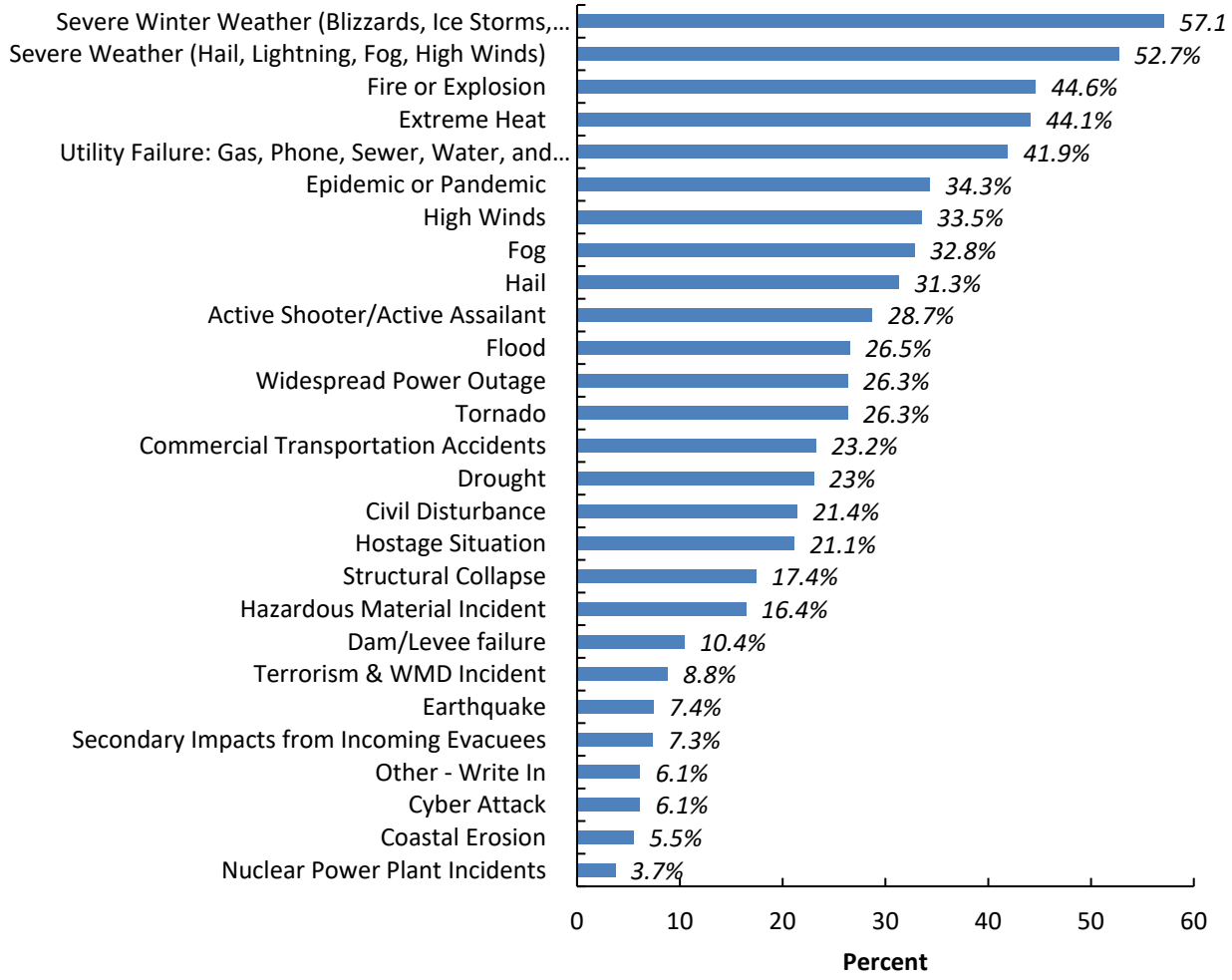
Snow	121	12.2%	359	36.3%	494	50.0%	14	1.4%	988
Extreme Cold	104	10.5%	347	35.1%	519	52.5%	18	1.8%	988
Blizzards	125	12.7%	379	38.6%	465	47.3%	14	1.4%	983
Ice Storms	141	14.3%	394	40.0%	430	43.7%	19	1.9%	984
Tornado	182	18.7%	471	48.4%	302	31.0%	19	2.0%	974

14. Please select the answer that best describes your experience.



Value	Percent	Count
I have never experienced property damage or loss from a disaster(s)	24.9%	247
I have experienced minor property damage and loss from a disaster(s)	57.3%	567
I have experienced major property damage and loss from a disaster(s)	16.5%	163
I have experienced catastrophic property damage and loss from a disaster(s)	1.3%	13
	Total	990

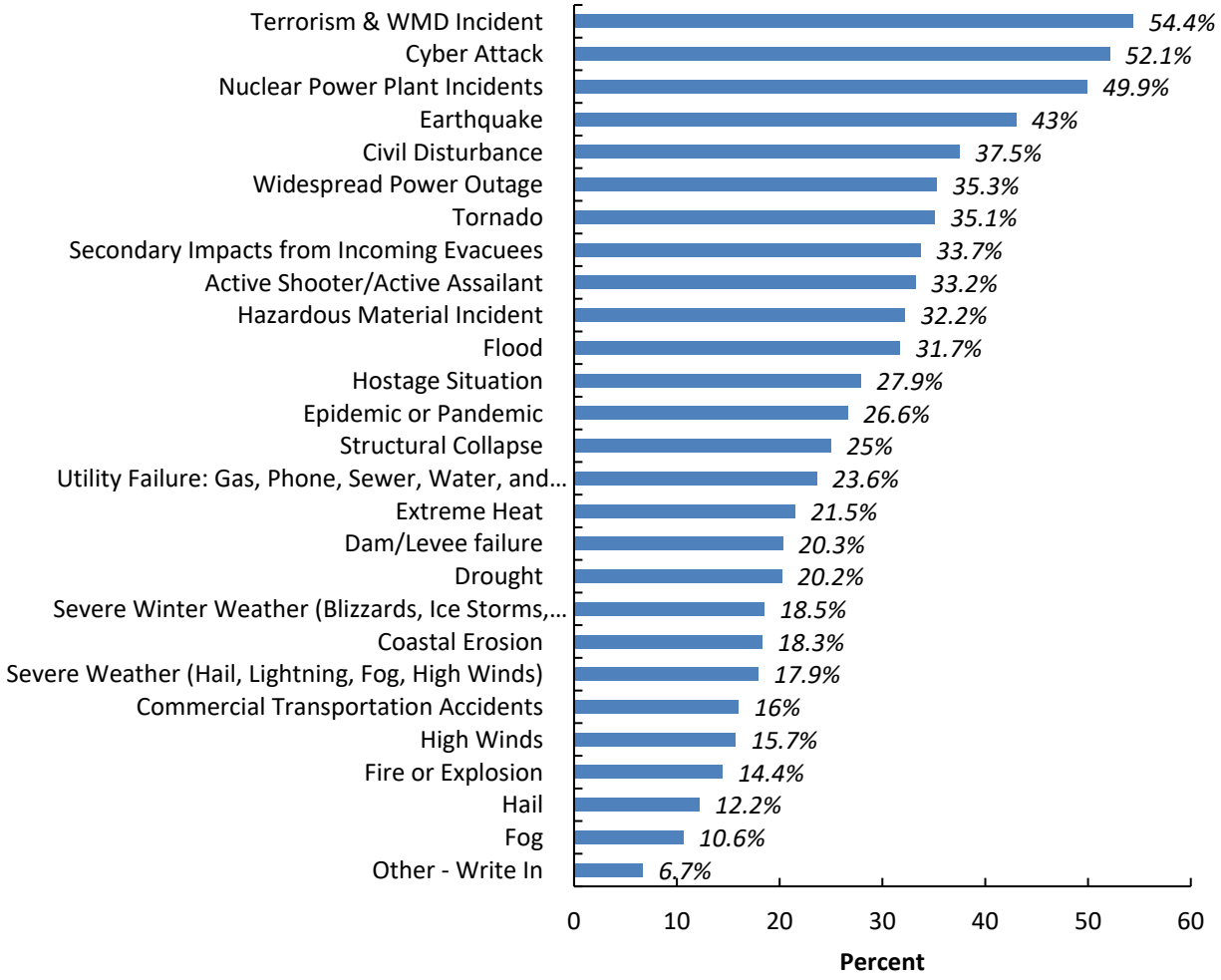
15. Which hazards are you most confident that your jurisdiction can successfully manage during an emergency? Please select all that apply.



Value	Percent	Count
Severe Winter Weather (Blizzards, Ice Storms, Extreme Cold)	57.1%	532
Severe Weather (Hail, Lightning, Fog, High Winds)	52.7%	491
Fire or Explosion	44.6%	415
Extreme Heat	44.1%	411
Utility Failure: Gas, Phone, Sewer, Water, and Pipeline	41.9%	390
Epidemic or Pandemic	34.3%	319
High Winds	33.5%	312

Fog	32.8%	305
Hail	31.3%	291
Active Shooter/Active Assailant	28.7%	267
Flood	26.5%	247
Tornado	26.3%	245
Widespread Power Outage	26.3%	245
Commercial Transportation Accidents	23.2%	216
Drought	23.0%	214
Civil Disturbance	21.4%	199
Hostage Situation	21.1%	196
Structural Collapse	17.4%	162
Hazardous Material Incident	16.4%	153
Dam/Levee failure	10.4%	97
Terrorism & WMD Incident	8.8%	82
Earthquake	7.4%	69
Secondary Impacts from Incoming Evacuees	7.3%	68
Cyber Attack	6.1%	57
Other - Write In	6.1%	57
Coastal Erosion	5.5%	51
Nuclear Power Plant Incidents	3.7%	34

16. Which hazards are you least confident that your jurisdiction can successfully manage during an emergency? Please select all that apply.



Value	Percent	Count
Terrorism & WMD Incident	54.4%	506
Cyber Attack	52.1%	485
Nuclear Power Plant Incidents	49.9%	465
Earthquake	43.0%	400
Civil Disturbance	37.5%	349
Widespread Power Outage	35.3%	329
Tornado	35.1%	327

Secondary Impacts from Incoming Evacuees	33.7%	314
Active Shooter/Active Assailant	33.2%	309
Hazardous Material Incident	32.2%	300
Flood	31.7%	295
Hostage Situation	27.9%	260
Epidemic or Pandemic	26.6%	248
Structural Collapse	25.0%	233
Utility Failure: Gas, Phone, Sewer, Water, and Pipeline	23.6%	220
Extreme Heat	21.5%	200
Dam/Levee failure	20.3%	189
Drought	20.2%	188
Severe Winter Weather (Blizzards, Ice Storms, Extreme Cold)	18.5%	172
Coastal Erosion	18.3%	170
Severe Weather (Hail, Lightning, Fog, High Winds)	17.9%	167
Commercial Transportation Accidents	16.0%	149
High Winds	15.7%	146
Fire or Explosion	14.4%	134
Hail	12.2%	114
Fog	10.6%	99
Other - Write In	6.7%	62

17. Based on YOUR PERCEPTION, to what degree of emphasis would you expect your jurisdiction to mitigate the following hazards? Mitigation definition: The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage. No Mitigation Needed = No mitigation on this hazard is expected or needed Low Priority = This hazard should be mitigated, but is not a high priority compared to other hazards Medium Priority = It is important to mitigate this hazard High Priority = It is a high priority to emphasize mitigation for this hazard

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
HAZARD	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Dam/levee failure	434	46.8%	274	29.5%	109	11.7%	111	12.0%	928
Drought	167	18.0%	432	46.6%	237	25.5%	92	9.9%	928
Earthquake	160	17.1%	480	51.4%	161	17.2%	133	14.2%	934
Flood	26	2.8%	131	13.9%	335	35.6%	450	47.8%	942
Extreme Heat	37	4.0%	165	17.6%	347	37.1%	387	41.3%	936
Lightning	104	11.2%	363	39.0%	301	32.3%	163	17.5%	931
Hail	116	12.5%	389	42.1%	293	31.7%	127	13.7%	925

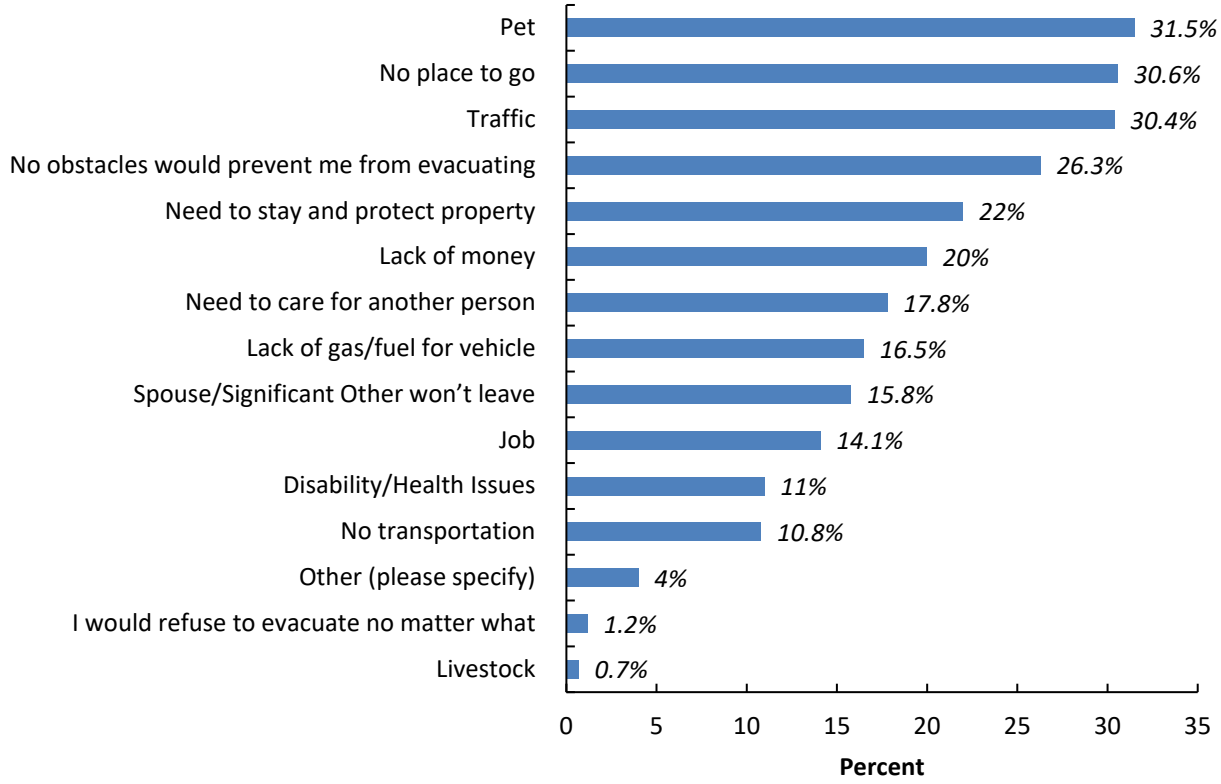
Fog	248	26.7%	416	44.8%	195	21.0%	69	7.4%	928
High Winds	75	8.0%	261	27.9%	352	37.6%	247	26.4%	935
Snow	35	3.8%	158	17.0%	353	38.0%	383	41.2%	929
Blizzards	26	2.8%	131	14.0%	328	35.2%	448	48.0%	933
Extreme Cold	31	3.3%	145	15.6%	296	31.8%	458	49.2%	930
Ice Storms	36	3.9%	182	19.7%	347	37.5%	360	38.9%	925
Tornado	37	4.0%	174	18.7%	324	34.9%	394	42.4%	929

18. If an evacuation was ordered for your area, please indicate how likely you would be to do the following.

	Very Likely		Somewhat Likely		Not Very Likely		Not Likely at All		Do Not Know		Not Applicable		Responses
ACTION	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Immediately evacuate as instructed.	517	53.8%	302	31.4%	60	6.2%	28	2.9%	48	5.0%	6	0.6%	961
I would first consult with family and friends outside my household	310	33.5%	304	32.8%	119	12.9%	152	16.4%	23	2.5%	18	1.9%	926

before making a decision to evacuate.													
Wait and see how bad the situation is going to be before deciding to evacuate.	122	13.2%	301	32.7%	245	26.6%	214	23.2%	29	3.1%	10	1.1%	921
Refuse to evacuate no matter what.	22	2.4%	30	3.3%	146	15.9%	629	68.3%	59	6.4%	35	3.8%	921

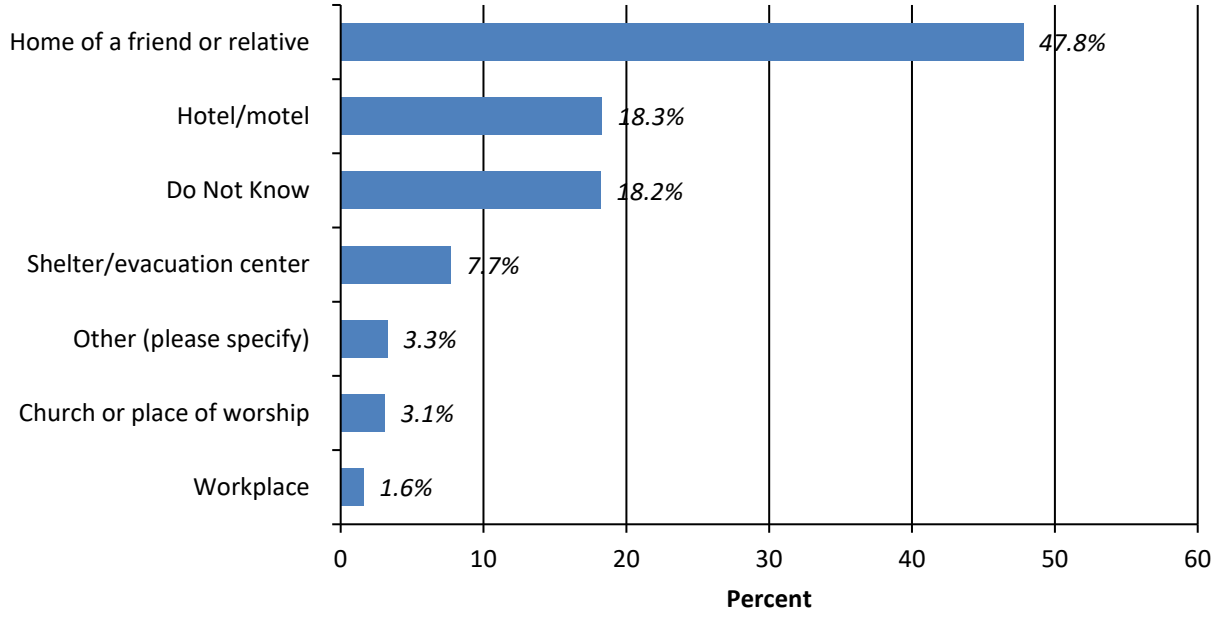
19. What might prevent you from leaving your place of residence if there was an evacuation order? Please select ALL that apply.



Value	Percent	Count
Pet	31.5%	301
No place to go	30.6%	293
Traffic	30.4%	291
No obstacles would prevent me from evacuating	26.3%	251
Need to stay and protect property	22.0%	210
Lack of money	20.0%	191
Need to care for another person	17.8%	170
Lack of gas/fuel for vehicle	16.5%	158
Spouse/Significant Other won't leave	15.8%	151

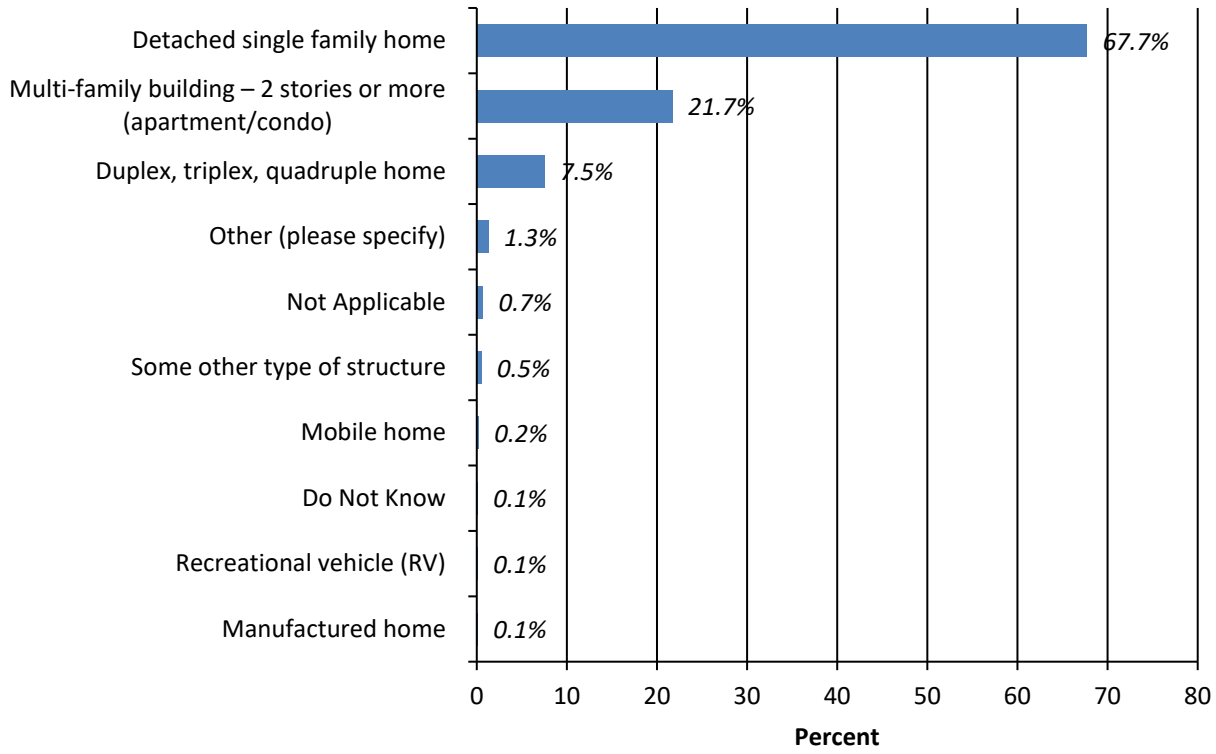
Job	14.1%	135
Disability/Health Issues	11.0%	105
No transportation	10.8%	103
Other (please specify)	4.0%	38
Livestock	0.7%	7
I would refuse to evacuate no matter what	1.2%	11

20.If you were to evacuate, where would you most likely stay? Please select the best answer.



Value	Percent	Count
Home of a friend or relative	47.8%	465
Hotel/motel	18.3%	178
Do Not Know	18.2%	177
Shelter/evacuation center	7.7%	75
Other (please specify)	3.3%	32
Church or place of worship	3.1%	30
Workplace	1.6%	16
	Total	973

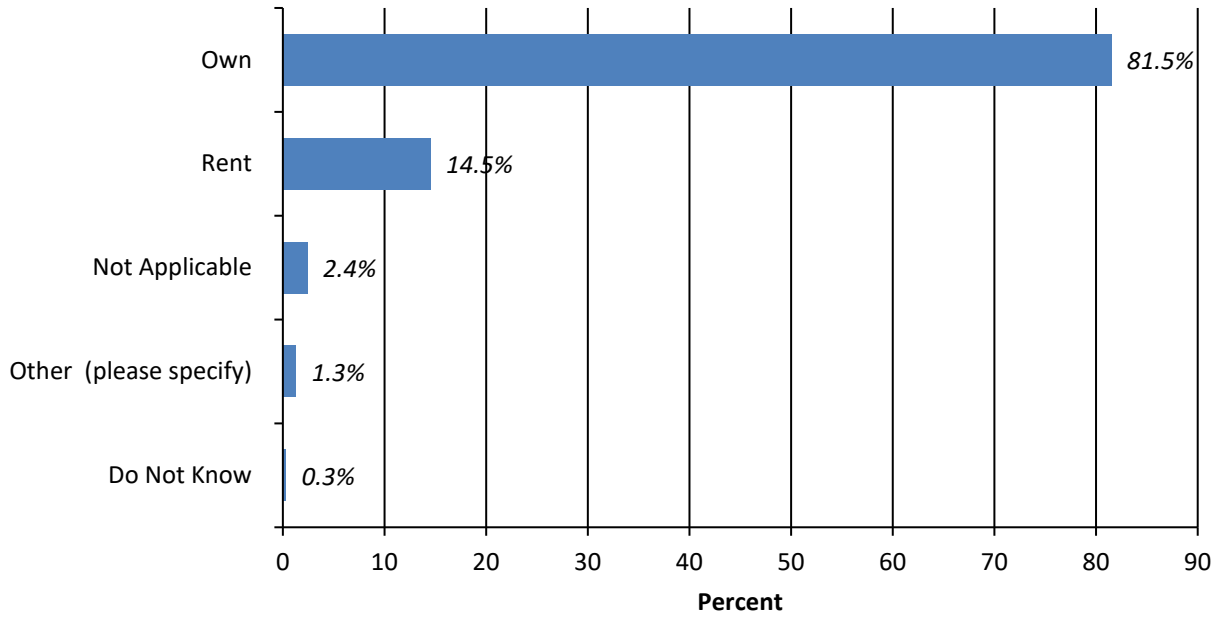
21. What type of structure do you live in?



Value	Percent	Count
Detached single family home	67.7%	653
Multi-family building – 2 stories or more (apartment/condo)	21.7%	209
Duplex, triplex, quadruple home	7.5%	72
Other (please specify)	1.3%	13
Not Applicable	0.7%	7
Some other type of structure	0.5%	5
Mobile home	0.2%	2
Manufactured home	0.1%	1
Recreational vehicle (RV)	0.1%	1
Do Not Know	0.1%	1

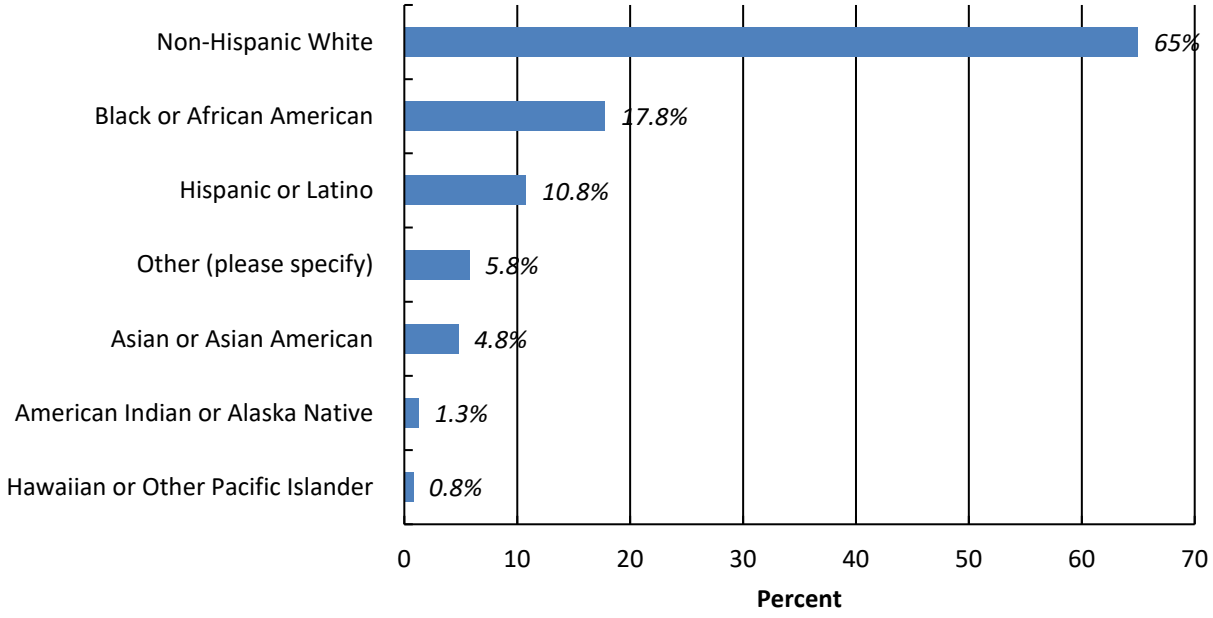
	Total	964

22. Do you own or rent your home/place of residence?



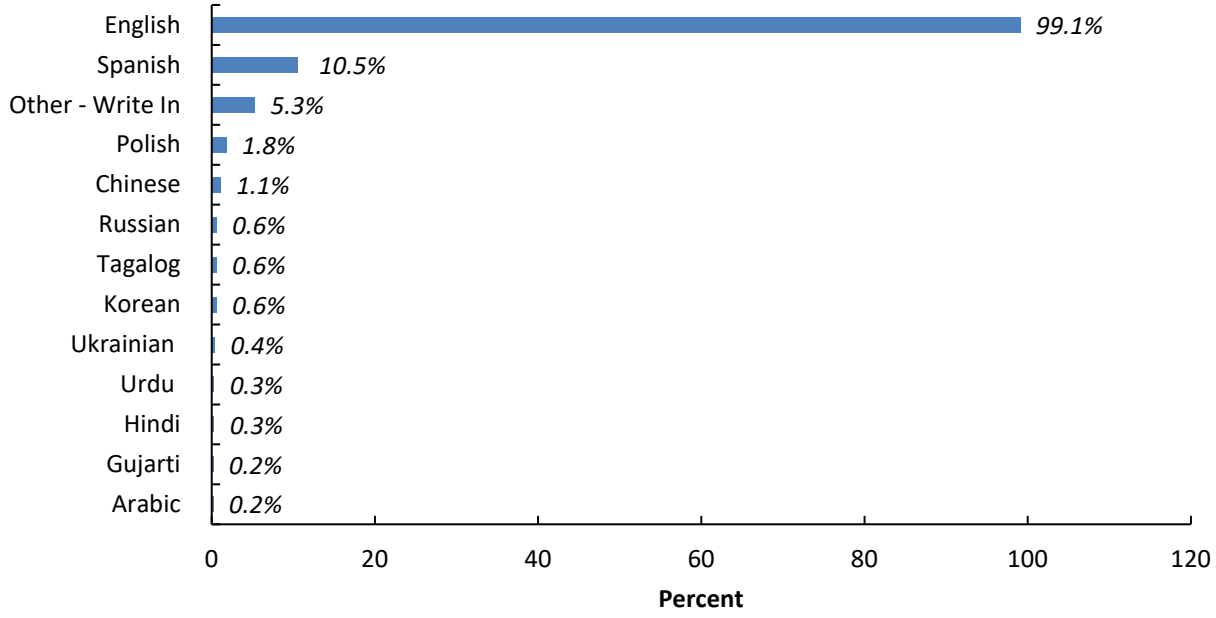
Value	Percent	Count
Own	81.5%	786
Rent	14.5%	140
Not Applicable	2.4%	23
Other (please specify)	1.3%	13
Do Not Know	0.3%	3
	Total	965

23. Which of the following best describes your race/ethnicity? Please select ALL that apply.



Value	Percent	Count
Non-Hispanic White	65.0%	618
Black or African American	17.8%	169
Hispanic or Latino	10.8%	103
Other (please specify)	5.8%	55
Asian or Asian American	4.8%	46
American Indian or Alaska Native	1.3%	12
Hawaiian or Other Pacific Islander	0.8%	8

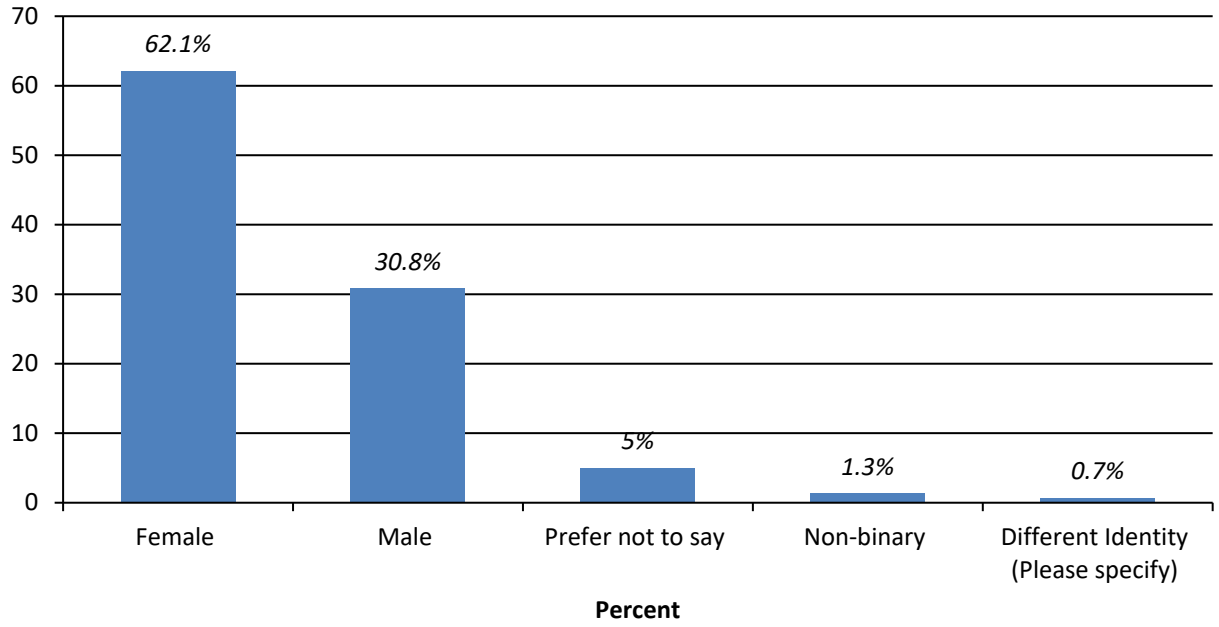
24. Please indicate the language(s) spoken in your household. Please select ALL that apply.



Value	Percent	Count
English	99.1%	957
Spanish	10.5%	101
Other - Write In	5.3%	51
Polish	1.8%	17
Chinese	1.1%	11
Korean	0.6%	6
Tagalog	0.6%	6
Russian	0.6%	6
Ukrainian	0.4%	4
Hindi	0.3%	3
Urdu	0.3%	3

Arabic	0.2%	2
Gujarti	0.2%	2

25. Please indicate your gender identity



Value	Percent	Count
Female	62.1%	599
Male	30.8%	297
Prefer not to say	5.0%	48
Non-binary	1.3%	13

Different Identity (Please specify)	0.7%	7
	Total	964

Appendix D Concepts, Methods and Data Sources Used for Hazard Mapping

Information and methodologies used to develop the hazard maps included in the Cook County Multi-Jurisdictional Hazard Mitigation Plan were taken from a range of sources as summarized in this appendix.

EARTHQUAKE MAPPING

Probabilistic Peak Ground Acceleration

Probabilistic peak ground acceleration data was generated by HAZUS-MH 2.1. In the model's probabilistic analysis procedure, the ground shaking demand is characterized by spectral contour maps developed by the United States Geological Survey as part of a 2008 update of the National Seismic Hazard Maps. USGS probabilistic seismic hazard maps are revised about every six years to reflect newly published or thoroughly reviewed earthquake science and to keep pace with regular updates of the building code. HAZUS includes maps for eight probabilistic hazard levels: ranging from ground shaking with a 39-percent probability of being exceeded in 50 years (100-year return period) to the ground shaking with a 2-percent probability of being exceeded in 50 years (2,500-year return period). Probabilistic peak ground acceleration maps were developed for the following earthquakes:

- 100-year return period
- 500-year return period.

Event-Based

1909 Historical Earthquake Scenario

An epicenter map was derived from a database of historical earthquakes developed from three sources (Composite Earthquake Catalog, 2002, Earthquake Data Base, 2002, and Earthquake Seismicity Catalog, 1996). The database was sorted to remove historical earthquakes with magnitudes less than 5.0. The epicenter map is based on the following historical earthquake epicenter, selected from the database:

- Event Date: May 26, 1909
- Event ID from HAZUS: 3991
- Magnitude: The original magnitude in the database was 5.0, but modeling of this magnitude showed no damage; the magnitude was increased to 6.0 to generate damage results for the earthquake risk assessment
- Depth: 10 km
- Epicenter: Approximately 7 miles southwest of the Village of Lemont, IL
- (41.6N 88.1W)

Wabash M 7.1

A shake map portrays the extent and variation of ground shaking throughout an affected region immediately following significant earthquakes. Ground motion and intensity maps are derived from peak ground motion amplitudes recorded on seismic sensors (accelerometers), with interpolation based on both estimated amplitudes where data are lacking and site amplification corrections. Color-coded instrumental intensity maps are derived from empirical relations between peak ground motions and Modified Mercalli intensity. A shake map was developed for the following earthquake:

- Magnitude: 7.1
- The epicenter along the Wabash Valley Fault System centered on the Lower Wabash River Valley in southeastern Illinois.

Liquefaction

Liquefaction is a phenomenon in which strong earthquake shaking causes soil to rapidly lose its strength and behave like quicksand. Liquefaction typically occurs in artificial fills and in areas of loose sandy soils that are saturated with water, such as low-lying coastal areas, lakeshores, and river valleys. When soil strength is lost during liquefaction, the consequences can be catastrophic. Movement of liquefied soils can rupture pipelines, move bridge abutments and road and railway alignments, and pull apart the foundations and walls of buildings.

A liquefaction susceptibility map provides an estimate of the likelihood that soil will liquefy as a result of earthquake shaking. This type of map depicts the relative susceptibility in a range that varies from very low to high. Areas underlain by bedrock or peat are mapped separately, as these earth materials are not liquefiable, although peat deposits may be subject to permanent ground deformation caused by earthquake shaking.

Liquefaction data was provided by the Illinois State Geological Survey, based on methods from “Mapping Liquefaction-Induced Ground Failure Potential” (Youd, T.L., and Perkins, D.M., 1978. Journal of the Geotechnical Engineering Division, p. 443-446).

NEHRP Soils

Soil classification data was provided by the Illinois State Geological Society. State geologists of the Central U.S. Earthquake Consortium produced a regional Soil Site Class map for the eight states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The base map for this work was the 2003 USGS Geologic Investigation Series I-2789 “Map of Surficial Deposits and Materials in the Eastern and Central United States” (east of 102 degrees west longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell.

Procedures outlined in the 2004 NEHRP provisions by the Building Seismic Safety Council and the 2003 International Building Codes were followed to produce the soil site class maps. The state geologists used the entire column of soil material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

FLOOD MAPPING

FEMA Flood Hazard Areas

FEMA flood hazard area mapping was taken from Digital Flood Insurance Rate Maps.

Repetitive Loss Areas

Repetitive loss data was originally obtained from Illinois Department of Natural Resources and further verified using the state's most up-to-date hazard mitigation plan and is considered sensitive information.

Appendix E Annual Progress Report Template and Process

Reporting Period: *(Insert reporting period)*

Background: Cook County and participating municipalities in the county developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the participating partners organized resources, assessed risks from natural hazards within the county, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, these jurisdictions-maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act. The plan can be viewed online at:

Summary Overview of the Plan's Progress: The performance period for the Hazard Mitigation Plan became effective on, ___2024, with the final approval of the plan by FEMA. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before, ___2029. As of this reporting period, the performance period for this plan is considered to be ___% complete. The Hazard Mitigation Plan has targeted ___ hazard mitigation actions to be pursued during the five-year performance period. As of the reporting period, the following overall progress can be reported:

- out of___actions (%) reported ongoing action toward completion.
- out of___actions (%) were reported as being complete.
- out of___actions (%) reported no action taken.

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Cook County Multi-Jurisdictional Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of the partner jurisdiction. This report discusses the following:

- Natural hazard events that have occurred within the last year
- Changes in risk exposure within the planning area (all of Cook County)
- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement

The Hazard Mitigation Plan Steering Committee: The Hazard Mitigation Plan Steering Committee, made up of planning partners and stakeholders within the planning area, reviewed and approved this progress report at its annual meeting held on ___, 201_. It was determined through the plan's development process that a steering committee would remain in service to oversee maintenance of the plan. At a minimum, the Steering Committee will provide technical review and oversight on the development of the annual progress report. It is anticipated that there will be turnover in the

membership annually, which will be documented in the progress reports. For this reporting period, the Steering Committee membership is as indicated in Table 1.

Natural Hazard Events within the Planning Area: During the reporting period, there were natural hazard events in the planning area that had a measurable impact on people or property. A summary of these events is as follows:

- ___
- ___

Changes in Risk Exposure in the Planning Area: *(Insert brief overview of any natural hazard event in the planning area that changed the probability of occurrence or ranking of risk for the hazards addressed in the hazard mitigation plan)*

Mitigation Success Stories: *(Insert brief overview of mitigation accomplishments during the reporting period)*

Review of the Action Plan: Table 2 reviews the action plan, reporting the status of each action. Reviewers of this report should refer to the Hazard Mitigation Plan for more detailed descriptions of each action and the prioritization process.

Address the following in the "status" column of the following table:

- *Was any element of the action carried out during the reporting period?*
- *If no action was completed, why?*
- *Is the timeline for implementation for the action still appropriate?*
- *If the action was completed, does it need to be changed or removed from the action plan?*

Annual Report Status Update **Completion status legend:** **N = New I = In Progress Toward Completion O = Ongoing Indefinitely** **C = Project Completed R = Want Removed from Annex X = No Action Taken/Delayed**		
Annual Report Year	**Status:**	**Comments/Description of Progress Made**
2025		
2026		
2027		
2028		
2029		

Changes That May Impact Implementation of the Plan: *(Insert brief overview of any significant changes in the planning area that would have a profound impact on the implementation of the plan.*

Specify any changes in technical, regulatory and financial capabilities identified during the plan's development)

Recommendations for Changes or Enhancements: Based on the review of this report by the Hazard Mitigation Plan Steering Committee, the following recommendations will be noted for future updates or revisions to the plan:

- ___
- ___
- ___
- ___
- ___
- ___

Public review notice: *The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the governing boards of all planning partners and to local media outlets and the report is posted on the Cook County hazard mitigation website. Any questions or comments regarding the contents of this report should be directed to:*

Insert Contact Info Here

Appendix F Jurisdictional Linkage Strategy

PROCEDURES FOR LINKING TO THIS PLAN FOR MUNICIPALITIES NOT CURRENTLY INCLUDED

Not all eligible local governments in Cook County are included in the Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP). It is assumed that some or all of these non-participating local governments may choose to "link" to the Plan at some point to gain eligibility for programs under the DMA 2000. In addition, some of the current partnerships may not continue to meet eligibility requirements due to a lack of participation as prescribed by the Plan. The following "linkage" procedures define the requirements established by the Plan's Steering Committee and all Planning Partners for dealing with an increase or decrease in the number of Planning Partners linked to this Plan. It should be noted that a currently non-participating jurisdiction within the defined planning area is not obligated to link to the Plan. These jurisdictions can choose to do their own "complete" plan that addresses all required elements of Section 201.6 of Chapter 44, the Code of Federal Regulations (44 CFR).

INCREASING THE PARTNERSHIP THROUGH LINKAGE

The time period for the linkage process will be during **each annual update timeframe**. Eligible linking jurisdictions are instructed to complete all of the following procedures during this time frame:

- The eligible jurisdiction requests a "Linkage Package" by contacting the Point of Contact (POC) for the Plan:

DESIGNATED POINT OF CONTACT (POC)

Name: Kim Nowicki
Title: Senior Regional Planner
Address: 69 W. Washington, Suite 2600 Chicago, IL 60602
Phone: 312-639-9683
E-mail: Kimberly.Nowicki@cookcountyil.gov

The POC will provide a linkage package that includes:

- Copy of Volume 1 and 2 of the MJ-HMP
- Planning Partner Expectations Package
- A sample letter of intent to link to the MJ-HMP
- A jurisdictional template and instructions
- Catalog of hazard mitigation alternatives
- A request for technical assistance form
- The most current Local Mitigation Plan Review Tool

The new jurisdiction will be required to review both volumes of the MJ-HMP, which includes the following key components for the planning area:

- The planning area risk assessment
- Goals and objectives
- Plan implementation and maintenance procedures
- A comprehensive review of mitigation alternatives/strategies
- Countywide actions

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC. Technical Assistance can be provided upon request by completing the request for technical assistance (TA) form provided in the linkage package. This TA may be provided by the POC or any other resource within the Planning Partnership, such as a member of the Steering Committee or a currently participating municipality partner. The POC will determine who will provide the TA and the possible level of TA based on resources available at the time of the request.

Public Participation Requirement: The new jurisdiction will be required to **develop a public involvement strategy that ensures the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process** and a minimum of one public meeting to present their **draft** jurisdiction-specific annex for comment, prior to adoption by the governing body. The planning partnership will have resources available to aid in the public involvement strategy, such as the plan website and sample survey. However, it will be the new jurisdiction's responsibility to implement and document this strategy for incorporation into its annex. It should be noted that the jurisdictional annex templates do not include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the plan. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and **add a description of that strategy to their annex**. For consistency, new partners are encouraged to follow the public involvement format used by the initial planning effort as described in Volume 1 of the Plan.

> The new jurisdiction will be **required to develop a public involvement strategy that ensures the public's ability to participate in the plan development process**.

- Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the regional format.

- The POC will review for the following [Note: the text in green represents key compliance metrics from the Local Mitigation Plan Review Tool]:

    - **Documentation of public involvement strategy**
        - *[A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))]*
    - **Conformance of template entries with guidelines outlined in the instructions**. The template has been designed to ensure compliance with the Local Mitigation Plan Review Tool.

- Chosen **mitigation actions** are consistent with goals and objectives defined in the MJ-HMP.
- A designated **point of contact**
- A **ranking of risk** specific to the jurisdiction
    - *[B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))]*
- A narrative and analysis describing **hazard risks and previous occurrences and vulnerabilities unique and specific to the jurisdiction.**
    - *[B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))];*
    - *[B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))]*
    - *[B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))]*
- Make the completed annex available to **neighboring communities** and local and regional agencies.
    - *[A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))]*

The POC may utilize members of the Steering Committee or other resources to complete this review. All proposed linked annexes will be submitted to the Steering Committee for review and comment prior to submittal to the Illinois Emergency Management Agency (IEMA).

- Plans approved and accepted by the Steering Committee will be forwarded to IEMA for review with a cover letter stating the forwarded plan meets locally approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.

- IEMA will review plans for federal compliance. Non-compliant plans will be returned to the jurisdiction for correction. Compliant plans will be forwarded to FEMA for review with annotation as to the adoption status.
- FEMA will review the new jurisdiction's annex in association with the approved MJ-HMP to ensure DMA compliance. FEMA will notify the new jurisdiction of the results of its review with copies to IEMA and the planning authority.

- The new jurisdiction will correct plan shortfalls, if necessary, and resubmit the plan to IEMA through the approved plan lead agency.

- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction's governing authority will adopt the plan (if not already accomplished) and forward the adoption resolution to FEMA with copies to the lead agency and IEMA.

- The FEMA will notify the new jurisdiction governing authority of plan approval.

The new jurisdiction annex will then be included with the Cook County MJ-HMP with the commitment from the new jurisdiction to participate in the ongoing plan implementation and maintenance.

RESCINDING THE PARTNERSHIP

The eligibility afforded under this process to the planning partnership can be rescinded in two ways. First, a participating planning partner can ask to be removed from the partnership. This may be done because the partner has decided to develop its own plan or has identified a different planning process for which it can gain eligibility. A partner that wishes to voluntarily leave the partnership shall inform the POC of this desire in writing. This notification can occur anytime during the calendar year. A jurisdiction wishing to pursue this avenue is advised to make sure that it is eligible under the new planning effort, to avoid any period of being out of compliance with the Disaster Mitigation Act.

After receiving this notification, the POC shall immediately notify both IEMA and FEMA in writing that the partner in question is no longer covered by the MJ-HMP, and that the eligibility afforded that partner under this plan should be rescinded based on this notification.

The second way a partner can be removed from the partnership is by failure to meet the participation requirements specified in the "Planning Partner Expectations Package" provided to each partner at the beginning of the process, or the planned maintenance and implementation procedures specified in Volume 1 of this Plan. Each partner agrees to these terms by adopting the Plan.

The eligibility status of the planning partnership will be monitored by the POC. The determination of whether a partner is meeting its participation requirements will be based on the following parameters:

- Are progress reports being submitted annually by specific time frames?
- Are partners notifying the POC of changes in designated points of contact?
- Are the partners supporting the Steering Committee by attending designated meetings or responding to needs identified by the body?
- Are the partners continuing to be supportive as specified in the "Planning Partner Expectations Package" provided to them at the beginning of the process?

Participation in the Plan does not end with plan approval and adoption. This partnership was formed on the premise that a group of Planning Partners would pool resources and work together to strive to reduce risk within the planning area. Failure to support this premise lessens the effectiveness of this effort. The following procedures will be followed to remove a partner due to the lack of participation:

- The POC will advise the Steering Committee of this pending action and provide evidence or justification for the action. Justification may include multiple failures to submit annual progress reports, failure to attend meetings determined to be mandatory by the Steering Committee, failure to act on the partner's action plan, or inability to reach designated point of contact after a minimum of five (5) attempts.
- The Steering Committee will review the information provided by the POC and determine action by a vote. The Steering Committee will invoke the voting process established in the ground rules established during the formation of this body.
- Once the Steering Committee has approved an action, the POC will notify the planning partner of the pending action in writing via certified mail. This notification will outline the grounds for the action and ask the partner if it is their desire to remain as a partner. This

notification shall also clearly identify the ramifications of removal from the partnership. The partner will be given 30 days to respond to the notification.

- Confirmation by the partner that they no longer wish to participate or failure to respond to the notification shall trigger the procedures for voluntary removal discussed above.
- Should the partner respond that they would like to continue participation in the partnership, they must clearly articulate an action plan to address the deficiencies identified by the POC. This action plan shall be reviewed by the Steering Committee to determine whether the actions are appropriate to rescind the action. Those partners that satisfy the Steering Committees review remain in the partnership, and no further action is required period.
- Automatic removal from the partnership will be implemented for partners where these actions have to be initiated more than once in a 5-year planning cycle.

Steps or Municipal Linkage to the Cook County MJ-HMP

1. Eligible jurisdiction requests "linkage package" from the POC

- Linkage Package includes:
  - Copy of Volume 1 and 2 of the Cook County MJ-HMP
  - Planning Partner Expectations package
  - A "sample" letter of intent to link to the MJ-HMP
  - A jurisdictional template and instructions
  - Catalog of mitigation alternatives and ideas
  - A "request for technical assistance" form
  - A copy of the most current Local Mitigation Plan Review Tool

2. The new jurisdiction will review both volumes of the MJ-HMP, which includes the following key components:

- The planning area risk assessment
- Goals and objectives
- Plan implementation and maintenance procedures.
- A comprehensive review of mitigation alternatives/strategies
- Countywide actions

3. Once the review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC.

4. The new jurisdiction will be responsible for developing a public involvement strategy that ensures the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must attempt to solicit public opinion at the onset of the linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by governing body.

5. Once the public involvement strategy is complete and the template has been completed, the new jurisdiction will submit the package to the POC for review to ensure conformity with the Cook County MJ-HMP format.

6. The POC will review for the following [Note: the text in green represents key compliance metrics from the Local Mitigation Plan Review Tool]:

- **Documentation of public involvement strategy**
  - *[A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))]*
- **Conformance of template entries with guidelines outlined in the instructions**. The template has been designed to ensure compliance with the Local Mitigation Plan Review Tool.
- Chosen **mitigation actions** are consistent with goals and objectives defined in the MJ-HMP.
- A designated **point of contact**
- A **ranking of risk** specific to the jurisdiction
  - *[B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))]*
- A narrative and analysis describing **hazard risks and previous occurrences and vulnerabilities unique and specific to the jurisdiction.**
  - *[B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))].*
  - *[B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))]*
  - *[B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))]*
- Make the completed annex available to **neighboring communities** and local and regional agencies.
  - *[A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))]*

7. Annexes approved and accepted by the Steering Committee will be forwarded to IEMA for review with a cover letter stating the annex meets locally approved plan standards and whether the annex is submitted with local adoption or for criteria met/plan not adopted review.

8. IEMA will review annexes for federal compliance. Non-compliant annexes will be returned for corrections. Compliant annexes will be submitted to FEMA for review with annotation as to the adoption status.

9. FEMA will review the new jurisdiction's annex in association with the approved MJ-HMP to ensure DMA compliance. FEMA will notify the new jurisdiction of the results of its review with copies to IEMA and the planning authority.

10. Without shortfalls from FEMA, the new governing authority will adopt the annex and forward adoption resolution to FEMA and copies to lead agency and IEMA.

11. FEMA will notify new jurisdiction of approval

Public Participation Requirement and Rationale

Local jurisdictions seeking to link to the Cook County MJ-HMP must be fully and/or partially within the boundaries of Cook County. "The public" of these jurisdictions are Cook County residents as

well as residents of these local jurisdictions. Thereby, these residents have already been given the opportunity to participate in the planning process and provide feedback during the development of the Cook County MJ-HMP, prior to the comment period and prior to the plan approval/ adoption, as required by FEMA and defined in the Local Mitigation Plan Review Guide. The linkage of these residents' local jurisdictions simply allows mitigation funding to more directly benefit their communities.

- However, to ensure that the contents of the new jurisdictional annex is also consistent with Federal requirements, the linking jurisdiction will be required to develop a public involvement strategy that gives the public an opportunity to be involved in the annex development. This participation must occur during the drafting stage, which is prior to annex approval/ jurisdictional adoption of the plan. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction-specific annex for comment, prior to adoption by the governing body. It should be noted that this is the same process required of jurisdictions participating in the original Cook County MJ-HMP. The planning partnership will have resources available to aid in the public involvement strategy, such as surveys and other outreach materials. However, it will be the new jurisdiction's responsibility to implement and document this strategy for incorporation into its annex.
- It should be noted that the jurisdictional annex templates do not include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the planning area described in Volume 1 of the Cook County MJ-HMP. Since new partners were not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format used by the initial planning effort as described in Volume 1 of the Cook County MJ-HMP.

Appendix G Plan Adoption Resolution from Planning Partners

This section will include the plan adoption resolutions for each jurisdiction. Adoption resolutions will be included upon receiving FEMA's "approval pending adoption" notification.

Western Springs

Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Matthew Supert, Director of Municipal Services 740 Hillgrove Western Springs, IL 60558 708-246-1800 x 205 msupert@wsprings.com	Michael Kelly, Director of Fire and EMS 4353 Wolf Rd Western Springs, IL 60558 708-246-1800 x 171 mkelly@wsprings.com

Jurisdiction Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation: 1886

Current Population: The 2020 U.S. Census population was 13,629. The 2022 U.S. Census estimate indicated the population was 13,313.

Population Growth: The overall population has decreased by 0.68% between 2018 and 2022.

Location and Description: Western Springs, a suburb located along the Chicago, Burlington & Quincy Railroad (now the Burlington Northern Santa Fe) between Western Springs and Aurora, encompasses roughly the area among Willow Springs Road (Gilbert Avenue), Ogden Avenue, Interstate 294, and West Plainfield Road. Suburbs adjacent to Western Springs include La Grange Park and Westchester to the north, Indian Head Park to the south, Countryside and McCook to the east, and Hinsdale and Willowbrook to the west. Named for local mineral springs on the southwest side of town, Western Springs originally consisted of flat prairie land with a swamp on its western border. According to the US Census Bureau, Western Springs has a total land area of 2.79 square miles

Brief History: Western Springs was incorporated in 1886 and built services over time, including a fire department (1894), electric plant (1898), telephone services (1899), a park district (1923), and a library (1926). The Village expanded south of 47th Street, annexing the subdivisions of Forest Hills (1927), Springdale (1955), and Ridgewood (1973). On March 21, 2005, the Village of Western Springs annexed the former Timber Trails golf course which is now being developed into a new community of single-family homes and townhomes. The property added 105.9 acres (0.429 square kilometers) to the village.

Climate: The climate of Western Springs and the Chicago area is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite

variable. Seasonal snowfall in the Village has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (−4.0 °C), and temperatures often stay below freezing for several consecutive days or weeks in January and February. Temperatures drop to or below 0 °F (−18 °C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the area's wettest and unpredictable season. Winter-like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the springtime as the areas lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into the autumn season. Temperatures have reached 100 °F high and subzero lows below −18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around November 19.

Governing Body Format: Western Springs operates with a Council-Manager form of government. In Western Springs, the Village President and the Board of Trustees make policy decisions for the Village. Whereas the Village Manager and his/her staff see that those policies are implemented into the day-to-day activities of the Village. The Village President and Board are elected in April of odd-numbered years on four-year, staggered terms. The Village of Western Springs has officially employed a full-time Village Manager since the position was created by ordinance in 1948. The Village Manager is appointed by the President and Board of Trustees. The Manager works under their direction and serves as the chief administrative officer of the Village, providing public availability as well as administrative and financial management. The Manager is responsible for the direct and indirect supervision of all Village personnel. This body of Government will assume the responsibility for the adoption and implementation of this plan. Aside from the Village Manager and staff, the Village President and Board of Trustees are also assisted by the Village's boards and commissions. Boards and commissions are established to give a special review to specific types of issues (e.g. economic development, infrastructure, and appearance) and provide the Village Board with a recommended course of action.

Development Trends: The development of Western Springs has primarily been residential development however the Village's downtown area is a mix of retail, commercial, service and institutional uses. Downtown is the core of the community and serves as a formal and informal gathering place. The Village has a Comprehensive Plan for future development which addresses commercial development in the downtown area.

Changes in Community Priorities: Severe weather and urban flooding have increased in their priority from a Village response and planning perspective.

Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in the *Administrative and Technical Capability Table* below.

Information on the community's National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

TABLE: LEGAL AND REGULATORY CAPABILITY					
	Local Authority	**State or Federal Prohibitions**	**Other Jurisdictional Authority**	**State Mandated**	**Comments**
Codes, Ordinances & Requirements					
Building Code	Yes	No	No	Yes	BOCA International Code 1999. 11/26/2001
Zonings	Yes	No	No	No	Western Springs Municipal Code 10-5-1. 10/12/2009
Subdivisions	Yes	No	No	No	Western Springs Municipal Code 10-10-1. 12/14/1992
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Western Springs Municipal Code 10-11-1. 8/11/2008
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act
Growth Management	Yes	No	No	No	Western Springs Municipal Code 10-8-1. 12-14-1992
Site Plan Review	Yes	No	No	No	Western Springs Municipal Code 9-1A-1. 7/1/2004
Public Health and Safety	Yes	No	Yes	No	Cook County Board of Health. Western Springs Municipal Code Title 5. 1997

Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Village of Western Springs Comprehensive Land use Plan. 2/24/2003.
Is the plan equipped to provide integration to this mitigation plan?					Yes, Plan includes land use element.
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	Yes	No	Yes	No	Regional storm water impacts are managed by MWRD. The Village lies within the Lower DesPlaines River watershed planning area of MWRD's comprehensive Stormwater Master Planning Program
Capital Improvement Plan	Yes	No	No	No	
What types of capital facilities does the plan address?					Building & Equipment
How often is the plan revised/updated?					Annually
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	Yes	No	Yes	Yes	The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program.

					Western Springs Municipal Code. 6/22/2009
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Village of Western Springs Emergency Operations Plan. 6/2013
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County EMRS Preparing THIRA
Terrorism Plan	Yes	No	Yes	Yes	Village of Western Springs Emergency Operations Plan. 6/2013
Post-Disaster Recovery Plan	Yes	No	No	No	Village of Western Springs Emergency Operations Plan. 6/2013
Continuity of Operations Plan	Yes	No	No	No	Village of Western Springs Emergency Operations Plan 6/2013
Public Health Plans	yes	No	Yes	Yes	Cook County DPH Village of Western Springs Emergency Operations Plan. 6/2013

TABLE: FISCAL CAPABILITY	
Financial Resources	**Accessible or Eligible to Use?**
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes (Water, Sewer)
Incur Debt through General Obligation Bonds	Yes (Referendum)
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No

State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available?**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development/Village Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development/Village Engineer
Planners or engineers with an understanding of natural hazards	Yes	Community Development/Village Engineer
Staff with training in benefit/cost analysis	Yes	Finance Department/Director
Surveyors	Yes	Community Development
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Emergency Management/Director
Grant writers	Yes	Fire & EMS/Municipal Services

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Community Development
Who is your jurisdiction's floodplain administrator? (department/position)	Community Development/ Village Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	8/11/2008
When was the most recent Community Assistance Visit or Community Assistance Contact?	9/06/2000
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No; Undecided

NFIP Participation Activities

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called "pre-FIRM" structures, and structures built afterwards are called

"post-FIRM." The insurance rate is different for the two types of structures. The effective date for the current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in ***Table: NFIP Participating Communities in Cook County*** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in ***Table: Cook County Flood Insurance Policies*** in **Volume I** of the Cook County MJ-HMP.

- Our staff provide the following services: permit reviews, GIS, inspections, engineering capability.
- My community's Floodplain Administrator is a Certified Floodplain Manager (CFM).
- Our community enforces local floodplain regulations and monitors compliance.

Substantial Improvement Rule and the Substantial Damage Rule

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

Existing Municipal Code:

10-11-3 Definitions

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the cumulative percentage of damage during a ten (10) year period equals or exceeds fifty percent (50%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes repetitive loss buildings (see definition of repetitive loss).

SUBSTANTIAL IMPROVEMENT: Any reconstruction, rehabilitation, addition, or improvement of a structure taking place subsequent to the adoption hereof in which the cumulative percentage of improvements equals or exceeds fifty percent (50%) of the market value of the structure during a ten (10) year period before the improvement or repair is started.

10-11-5 Duties of the Village Engineer

The Village Engineer shall be responsible for the general administration and enforcement of this chapter, including, but not limited to, the following duties:

A. Determining The Floodplain Designation: Check all new development sites to determine whether they are in a special flood hazard area (SFHA). If they are in an SFHA, determine whether they are in a floodway, flood fringe or in a floodplain for which a detailed study has not been conducted and

which drains more than one square mile. Check whether the development is potentially within an extended SFHA (with a drainage area less than 1 square mile), indicating that the development would have adverse impacts regarding storage, conveyance, or inundation which would be the basis for the applicant being required to delineate the floodplain and floodway and be subject to the remaining sections of this chapter.

B. Professional Engineer Review: If the development site is within a floodway or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile, the permit shall be referred to a licensed professional engineer under the employ or contract of the Village for review to ensure that the development meets the requirements of section 10-11-9 or 10-11-10 of this chapter. In the case of an appropriate use, the PE shall state in writing that the development meets the requirements of section 10-11-9 of this chapter.

G. Damage Determinations: Make damage determinations of all damaged buildings in the SFHA after a flood to determine substantially damaged structures, which must comply with section 10-11-3 of this chapter.

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	**Classification**	**Date Classified**
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	10	12/20/2013
Public Protection/ISO	Yes	3	3/1/2013
StormReady	Yes	Gold (countywide)	2014
Tree City USA	Yes	29 years	4/2013

Opportunities to Expand and Improve Capabilities

At this time, the Village of Western Springs has not identified opportunities to expand or improve our current capabilities. Should such opportunities be identified in the future, this Capability Assessment will be updated accordingly.

Known Challenge: The Village of Western Springs is predominantly residential, with a very low sales tax base. Due to the affluence of the population, the town is not eligible for most grant programs and does not have capability or funding mechanisms to provide matching funds. The community is also under 25,000 in population and therefore is a non-home rule community. As such, it cannot implement additional funding taxes or fees.

Plan Integration

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The goals and actions of the Hazard Mitigation Plan will be considered in the next capital improvement planning process.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the Comprehensive Plan.

- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction's land use plans, zoning, and subdivision codes.

Emergency Plan Integration:
Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

Emergency Operations Plan (EOP)
An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

Continuity of Operations Plan (COOP)
The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

Recovery Plan
The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

Jurisdiction-Specific Natural Hazard Event History

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 1 (1 Single Family)
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

Federal Disasters Declared

Disaster Declaration Number	Date Declared	Event
DR-227	4/25/1967	Tornado

DR-351	9/4/1972	Flood
DR-373	4/26/1973	Flood
DR-509	6/18/1976	Severe Storm(s)
DR-643	6/30/1981	Severe Storm(s)
DR-776	10/7/1986	Flood
DR-798	8/21/1987	Flood
DR-997	7/9/1993	Flood
DR-1129	7/25/1996	Severe Storm(s)
DR-1188	9/17/1997	Severe Storm(s)
DR-1729	9/25/2007	Severe Storm(s)
DR-1800	10/3/2008	Severe Storm(s)
DR-1935	8/19/2010	Severe Storm(s)
DR-1960	3/17/2011	Snow
EM-3068	1/16/1979	Snow
EM-3134	1/8/1999	Snow
EM-3161	1/17/2001	Snow
EM-3230	9/7/2005	Hurricane – Katrina Evacuation
EM-3435	3/13/2020	Biological
DR-4116	5/10/2013	Flood
DR-4489	3/26/2020	Biological
DR-4728	8/15/2023	Severe Storm(s)
DR-4749	11/20/2023	Flood

State Disaster Declarations

Date Declared	Event
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017 7/14/2017	Thunderstorms, Heavy Rainfall, Flooding
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020 – present (reissued monthly)	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022 (reissued monthly through 10/28/2022)	Monkeypox

TABLE: NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment/ Event Narrative
Flash Flood	-	5/11/2014	-
Severe Winter	-	12/2013 - 3/2014	Snow Removal, Emergency Measures and Water Main Repair
Flood Event	-	11/17/2013	-
Severe Weather/Wind			Winds were estimated to near 70 mph caused extensive tree damage in Western Springs
Flood Event	-	4/18/2013	-
Power Outage	-	11/27/2012	-
Severe Weather	-	7/24/2012	-
Severe Weather	-	7/11/2011	-
Severe Weather	-	6/21/2011	Emergency Measures
Severe Winter	DR-1960 IL	2/1/2011 - 2/3/2011	$45,000 in Snow Removal and Emergency Measures
Severe Weather/Flood	DR-1935	7/24/2010	$9,500 in Emergency Measures and Drain Cleaning - widespread flooding
Severe Weather/Flood	-	6/23/2010	Almost every street in Western Springs had standing water with three to four feet of standing water on Hampton and Hillgrove Avenues. Several motorists were rescued from their cars after the cars were submerged in flood waters. A Western Springs fire truck stalled in flood waters and had to be towed.
Severe Weather	-	6/18/2010	-
Severe Weather	-	6/19/2009	-
Winter Weather		12/8/2008	Low temperatures dropped to 5 below to 10 below zero on the 21st and 22nd, and were in the low single digits on the 23rd, 24th and 25th. 1 person died in Western Springs
Severe Weather	-	6/15/2008	-
Severe Weather/Flood	-	10/2/2006	-
Severe Weather	-	5/10/2003	-

Jurisdiction-Specific Hazards: Vulnerabilities and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

Drought: Village services its own water system with deep aquifer wells and water treatment plant. Water plant has maximum output capacity that can be stressed when drought conditions arise.
Flood: The Village is approximately 40% combined sewers. Several portions of the community south of 47th Street (Springdale, Forest Hills and Ridgewood subdivisions) are susceptible to urban flooding which has resulted in water infiltrating into residential homes on multiple occasions. Flooding included basement and ground floor flooding. Flooding also impacts the south fire station which serves as a channel way for overland flow.
The southwest part of the Village - specifically Ridgewood and Forest Hills residents - is vulnerable to flooding. In 2010, very heavy rain fell across much of north central Cook County producing widespread flooding and flash flooding during the early morning hours of July 24th. Hundreds of streets and thousands of basements were flooded. Numerous homes were surrounded by flood waters with water damage on the first floor. Several hundred vehicles were submerged or floating in flood waters, many were a total loss. Areas that suffered some of the most widespread flooding and extensive damage included Western Springs.
High Winds: Previously, the Village has experienced loss of power due to high winds, exposing key Village operations (that do not have 24/7 generator power) to impacts. In 2013, winds were estimated to near 70 mph caused extensive tree damage in the communities of Western Springs, La Grange, and Riverside. Extensive tree damage was reported along the railroad. A six inch diameter tree was blown down at 55th Street and La Grange Road. A six inch diameter tree limb was blown down on the 2300 block of 1st Avenue. Multiple lanes were blocked.
Snow: The Village has experienced the impacts of snow at the major route to two hospitals. The heavy snow delays emergency vehicles to calls and ambulances to hospitals.
Blizzards: The Village's elderly population would likely be homebound in the event of a blizzard.
Extreme Cold: Similar to the impacts of high winds, previously, the Village has experienced loss of power due to extreme cold, exposing key Village operations (that do not have 24/7 generator power). In 2008, very cold air spread across northern Illinois starting on December 21st and continuing through December 25th. Low temperatures dropped to 5 below to 10 below zero on the 21st and 22nd, and were in the low single digits on the 23rd, 24th and 25th. One person died due to cold exposure in Western Springs.
Ice Storms: See High Winds narrative.
Tornado: Small-tightly built community so tornado would have huge impact on life safety as well as business interruption. The Village is a predominately residential community with small, tightly built single family homes that would be highly impacted by a tornado. Critical Village facilities, such as Public Works, Rec Center and Community Center do not have backup power. Rec Center and Community Center serve as warming and emergency distribution locations for emergency events.
Earthquake: The tightly built nature of the community could yield extensive damage if an earthquake happens. The Village owns and maintains a historic water tower constructed in 1896 that is listed on the national historic register made of brick and stone. Building is approximately 100' and would be susceptible to earthquake damage and could result in a catastrophic collapse as a result of an earthquake.
Severe Winter Weather: The community does experience community power loss as a result of extreme cold, ice, and high winds. The community is predominately overhead power lines.

Indicator	Number	Percent

Families in poverty	141	2.2%
People with disabilities	2,096	9.4%
People over 65 years	4,647	20.4%
People under 5 years	1,671	7.3%
People of color	2,358	10.4%
Black	279	1.2%
Native American	63	0.3%
Hispanic	1,202	5.3%
Difficulty with English	155	0.7%
Households with no car	294	3.6%
Mobile homes	0	0%

Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

Jurisdiction-Specific Climate Change Vulnerability and Impacts

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

Future studies are needed to better understand the impact of climate change on the community's assets.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Increased
Earthquake	Unknown
Flood (Riverine, Urban, Shoreline)	Increased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increased
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Increased
Tornado	Unknown
Wildfire (Wildfire Smoke)	Not Applicable

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Increase

Earthquake	Unknown
Flood (Riverine, Urban, Shoreline)	Increase
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increase
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Increase
Tornado	Unknown
Wildfire (Wildfire Smoke)	Not Applicable

Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability / exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Not Applicable
Drought	Unknown
Earthquake	Unknown
Flood (Riverine, Urban, Shoreline)	Increased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Remained the Same
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Remained the Same
Wildfire (Wildfire Smoke)	Not Applicable

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	No Change is Anticipated
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	No Change is Anticipated
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	No Change is Anticipated
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	No Change is Anticipated
Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	No Change is Anticipated

Our community anticipates that the following future major assets may be exposed or vulnerable to any of the natural hazards identified in this Hazard Mitigation Plan:

- Possible new Village Hall and Public Safety buildings to be constructed on west end of community near I-294 could be impacted due to relocation of facilities and proximity to major transportation networks.

Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

TABLE: HAZARD RISK RANKING	
Rank	**Hazard Type**
1	Severe Weather
2	Severe Winter
3	Tornado
4	Earthquake
5	Flood
6	Drought
7	Dam Failure

New Mitigation Actions

The following are new mitigation actions created during the 2024 update.

Action W-2.12

Mitigation Action #12: Storm Outfall Rehabilitation					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund Hazard Mitigation Grant Program (HMGP) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flood (Riverine, Urban, Coastal/Shoreline)
Year Initiated		2024			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3,5			
Applicable Objective		4,6,9			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			

Action/Implementation Plan and Project Description:	Storm Outfall Rehabilitation
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Action W-2.13

Mitigation Action #13: Monitoring water supply and leaks in distribution system.					
Lead Agency/Department Organization: Municipal Services	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund Water Fund	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** Drought
Year Initiated		2024			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,3,4,6			
Applicable Objective		1,2,3			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		Monitoring water supply and leaks in distribution system.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed;		N			

R = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action W-2.14

Mitigation Action #14: Springdale Detention Basin					
Lead Agency/Department Organization: Municipal Services Department	**Supporting Agencies/ Organizations:** Park District, MWRD	**Estimated Cost:** High	**Potential Funding Source:** General Fund MWRD Grant Funding	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Flood (Riverine, Urban, Coastal/Shoreline)
Year Initiated		2025			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		2,3			
Applicable Objective		2			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		Springdale Detention Basin (Ongoing) Est $5.5M Construction of new storm sewer separation project in the Springdale subdivision to alleviate urban flooding. Includes construction of new detention basin in local park in cooperation with Park District and installation of new storm sewer through portions of the subdivision.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion;		N			

O = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action W-2.4

Mitigation Action #4: Snow Removal Equipment Enhancement					
Lead Agency/Department Organization: Public Works	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $10,000	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Annual, Long-term	**Hazard(s) Mitigated:** Winter Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3			
Applicable Objective		1,3			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		Provide a snow removal plan with includes acquisition of additional equipment to relocate snow piles from the business district.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority		O 2020: Ongoing with no substantial changes at this time.			

Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	2024: Village tentatively has purchase of new equipment (End Loader) and (Backhoe) for CBD removal planned for 2024 and 2025.

Action W-2.6

Mitigation Action #6: Emergency Notification					
Lead Agency/Department Organization: Law Enforcement	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $2,000, Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Annual, Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		5,6			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		Maintain Code Red Emergency public notification systems for advanced warning and time sensitive notification of all Village residents of emergency measures. - SEE Project Status for change to Rave911			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O 2024: Village has migrated from "CodeRed" system to "Rave911" mass notification system.			

Action W-2.7

Mitigation Action #7: Village Water Management Plans					
Lead Agency/Department Organization: Municipal Services Department	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** HMGP, BRIC, FMA	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3,5			
Applicable Objective		3, 4, 12, 13			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		Regular updates and maintenance has been completed and will continue to be completed. A new plan was created for Ridgewood (subdivision) but has not been tested yet.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O 2024: Additional updates and revisions to response plan, including review and analysis of emergency water inter-connects anticipated for 2024. Village is targeted to complete hydraulic model and assessment of distribution system and emergency water interconnects in 2024. ($55,000) Targeted to begin assessment of water production system, including water treatment plant, wells in 2024. (Est cost $75,000) 2023: Completion of Capital Infrastructure Plan anticipated for Q1 2024, which included identification of replacement and priorioty for capital replacement of various infrastructure, including water mains, hydrants, and valves. 2021: The emergency response plan has been completed and is anticipating additional revision in 2022.			

	2020:The Village is currently completing an emergency response and critical facilities plan for its potable water infrastructure. The plan is anticipated to be completed in the first half of 2021.

Action W-2.8

Mitigation Action #8: Village Emergency Operations Plans					
Lead Agency/Department Organization: Fire and Emergency Services	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3,5			
Applicable Objective		1,4			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		All Village Emergency Plans have been reviewed and updated but will be continually updated.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action W-2.9

Mitigation Action #9: Sewer Maintenance and Storm Preparations					
Lead Agency/Department Organization: Municipal Services Department	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** BRIC, HMGP, FMA	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flooding, Severe Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Western Springs			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		All			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		Clear storm drains and culverts on a regular basis and prior to predicted events to help control flood waters.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O 2023: Design for storm water improvements for locations in in the Springdale Subdivision and Ridgewood subdivisions ongoing. Village completed installation of 1000 feet of 66" storm sewer in the Old Town South subdivision which included the separation of portions of the combined sewer system and allows for future separation of the combined sewer system in this subdivision. 2022: The Village is beginning design for stormwater improvements at various locations within the community, however, construction funding is currently unavailable. The enhancement project with MWRD funds identified in 2020 is anticipated to begin construction in 2022. A new storm sewer outfall located near Spring Rock Park for portions of Basin 3 of the combined sewer areas is anticipated to go online in early 2022. 2020: The Village has completed three stormwater studies for portions of the community negatively affected by stormwater. Costs at this time require			

	significant capital improvement investment, and the Village is currently investigating funding avenues. The Village has received grant funds from the Metropolitan Water Reclamation District (MWRD) for combined sewer separation and enhancements for a project in the Village scheduled for 2021.

Completed Actions

Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

Completed Action Items
Tornado and Severe Weather Siren
Public Education
Emergency Power
Fire and Building Code
Provide emergency generators for the Water Plant and Headquarters Fire Station
Construct Old Town South Combined Sewer Separation

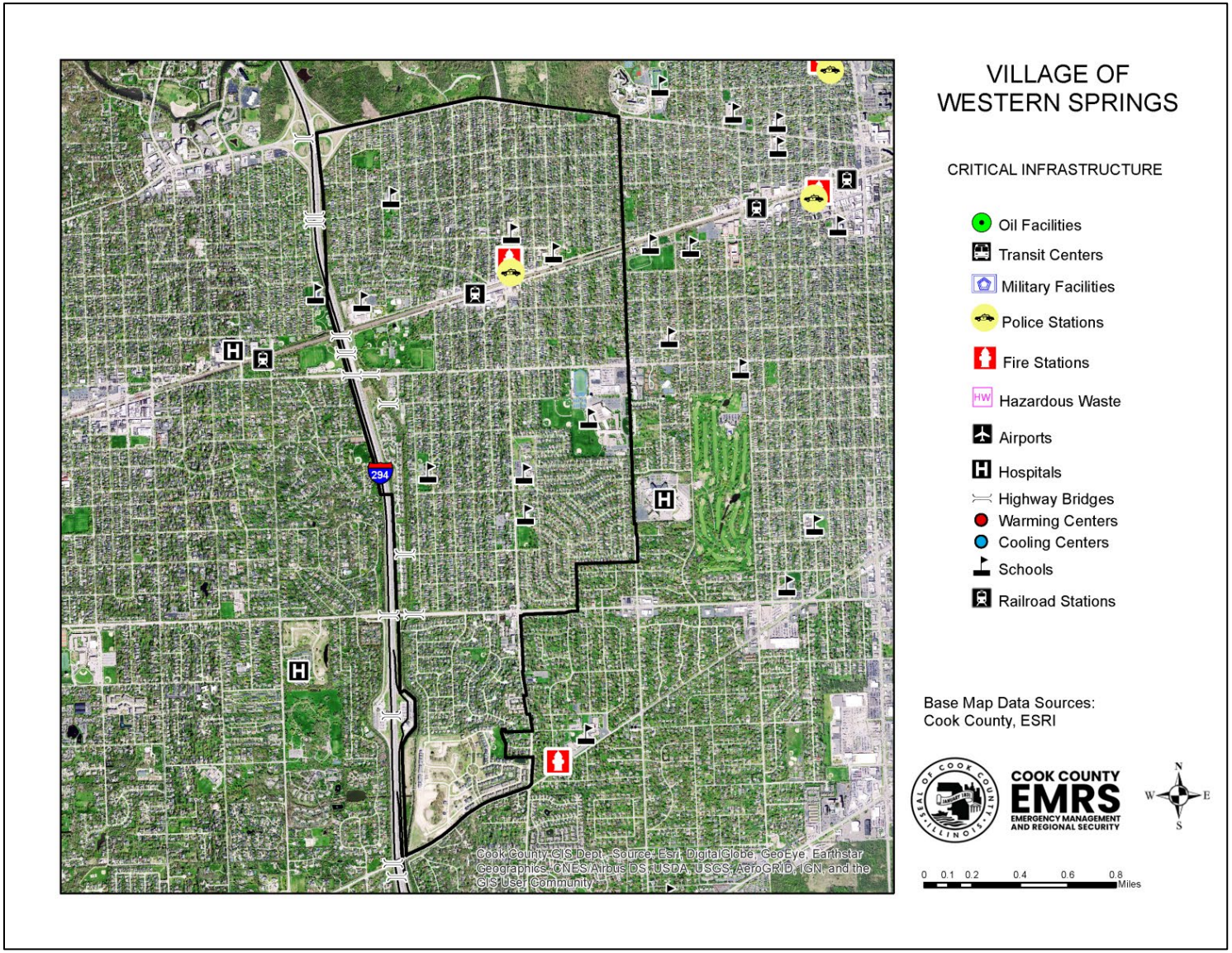
Future Needs to Better Understand Risk/Vulnerability

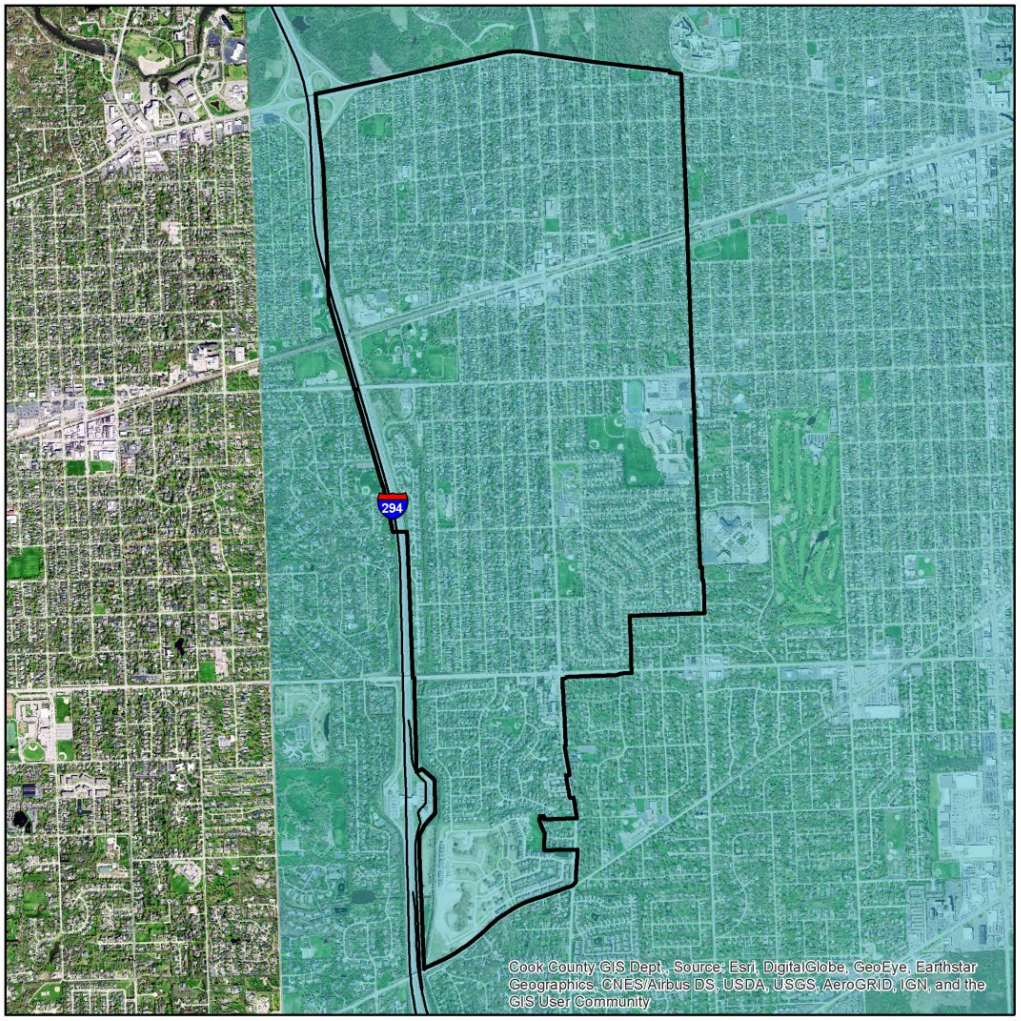
No needs have been identified at this time.

Additional Comments

No additional comments at this time.

Hazard Mapping





VILLAGE OF WESTERN SPRINGS

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County.

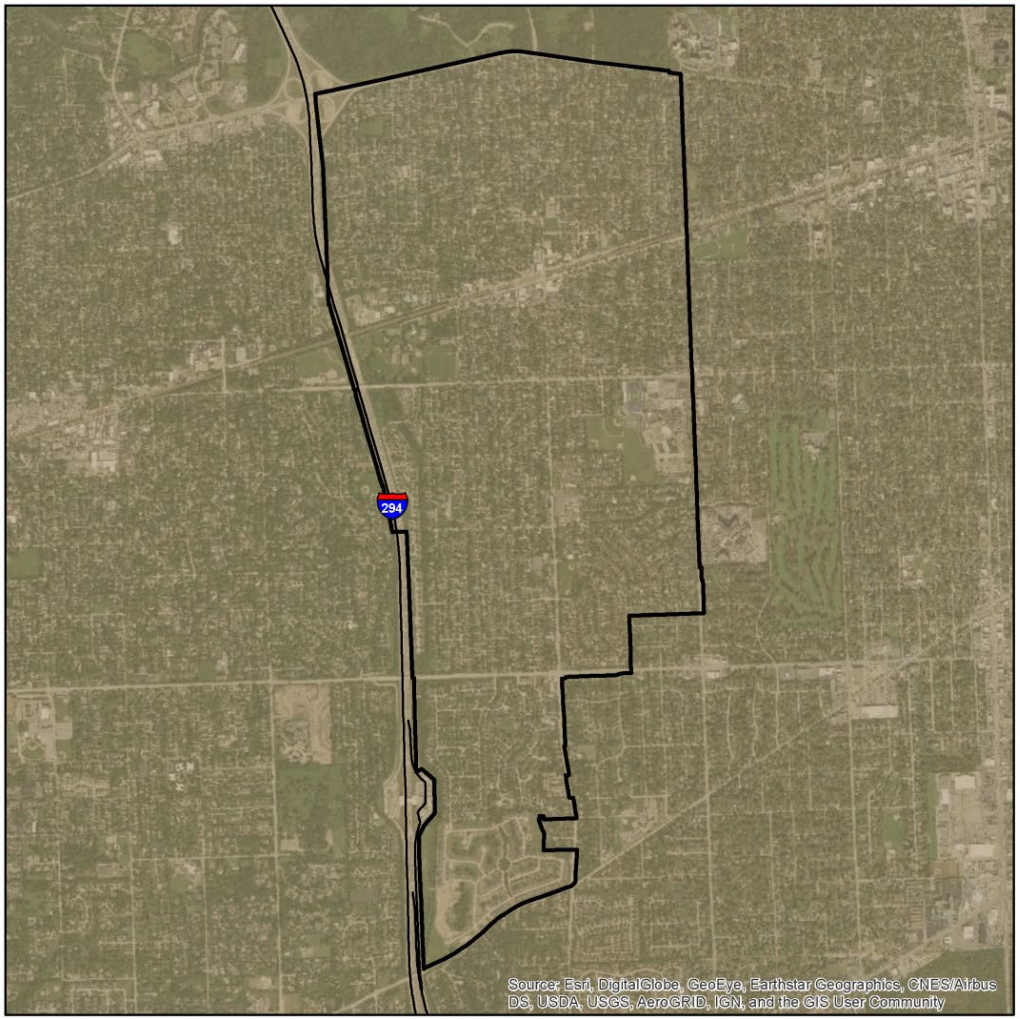
Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction program) site classes B and C.

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COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles



VILLAGE OF WESTERN SPRINGS

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

TYPE

- C - Very Dense Soil, Soft Rock
- D - Stiff Soil
- F- Site Specific Evaluation

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

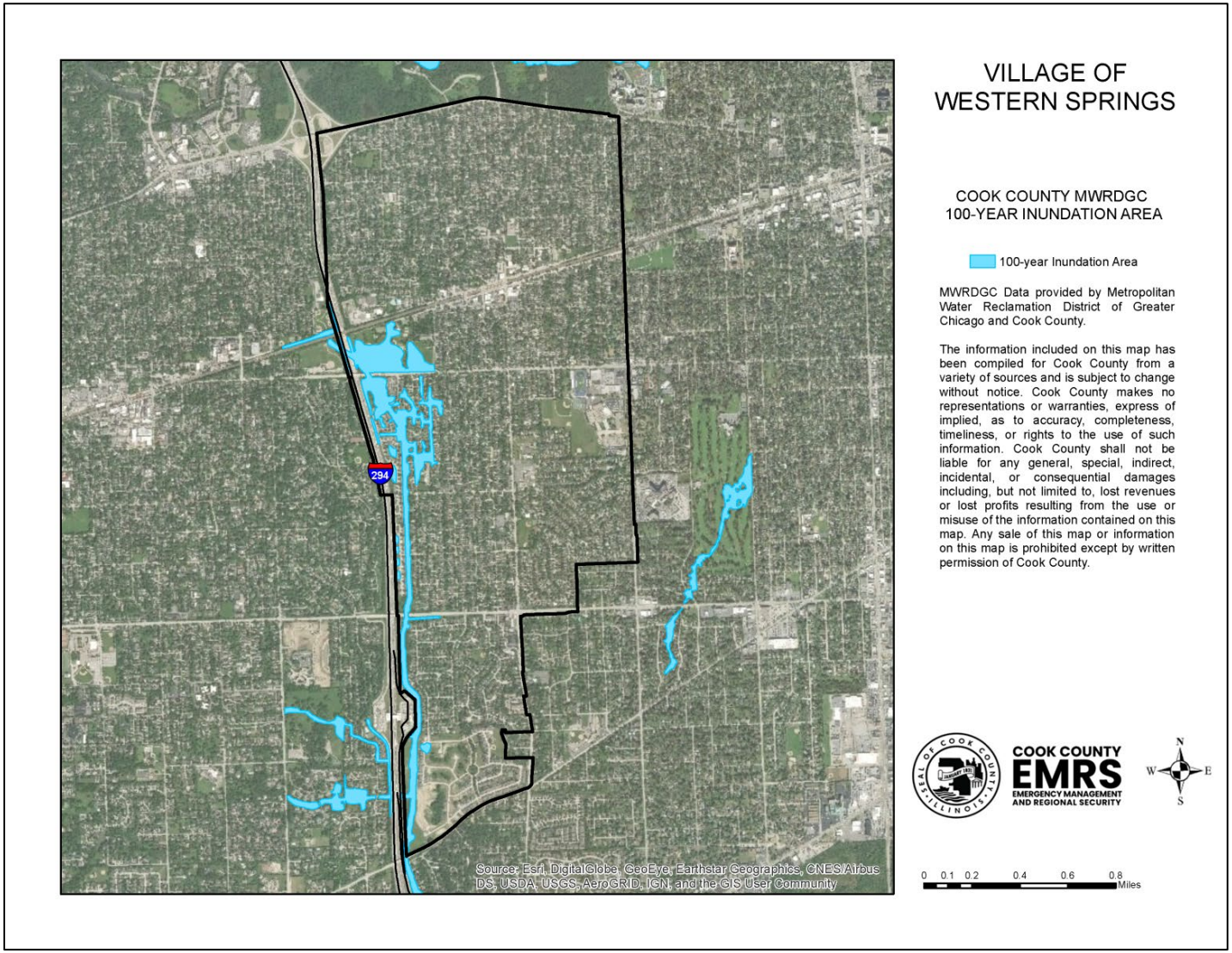
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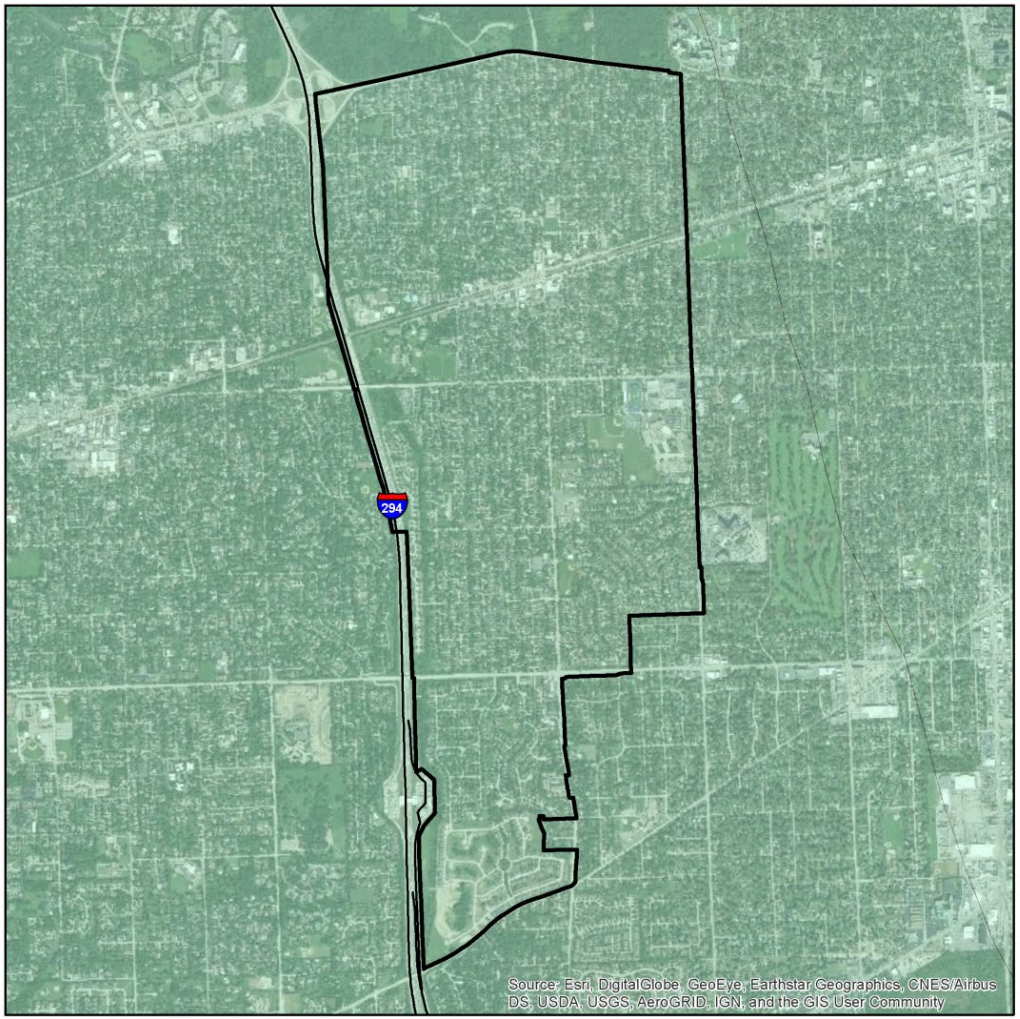
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0 0.1 0.2 0.4 0.6 0.8 Miles

DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from http://www.fema.gov.





VILLAGE OF WESTERN SPRINGS

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

Data provided by the Illinois State Geological Survey and Cook County.

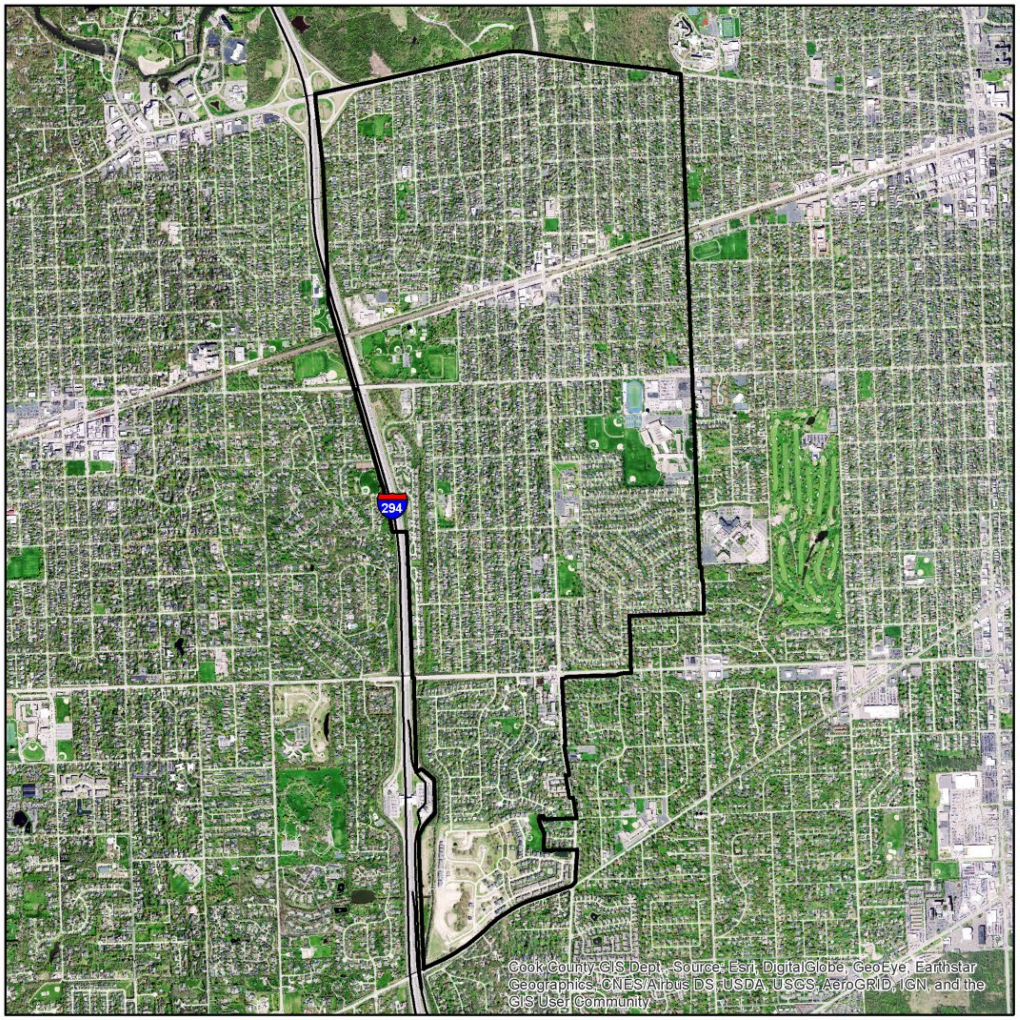
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N
W E
S

0 0.1 0.2 0.4 0.6 0.8 Miles



VILLAGE OF WESTERN SPRINGS

100- AND 500- YEAR TORNADO EVENTS

Magnitude

4 (100 year event)

5 (500 year event)

Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.

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N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles